APPENDIX 10-A
2008 TO 2012 CUMULATIVE GEOCHEMISTRY BASELINE REPORT

Seabridge Gold Inc.

KSM PROJECT
2008 to 2012 Cumulative Geochemistry Baseline Report

SEABRIDGE GOLD







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KSM PROJECT

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Executive Summary

Project Description

This report describes the geochemistry of KSM Project materials: mine waste rock and pit wall material, tailing material from pilot plant metallurgical testing, non-deposit material, and groundwater seeps related to the KSM Project (the Project). The Project is centred on a gold/copper deposit located in mountainous north-western British Columbia (BC); approximately 950 km northwest of Vancouver and 20 km southwest of Barrick Gold's recently closed Eskay Creek Mine. The proponent for the Project is Seabridge Gold Inc. (Seabridge).

The overall objective of the Project geochemistry baseline is to provide sufficient data for waste rock and water management plans, and an environmental effects assessment. The KSM geochemistry program started in 2008 and has followed a phased approach to metal leaching (ML) and acid rock drainage (ARD) prediction and management. This report includes a cumulative update on baseline data (2008-2012).

The Project has components in two geographically separated areas: the Mine Site and the Processing and Tailing Management Area (PTMA). The proposed Mine Site is located in the drainage basin of Sulphurets Creek, a major tributary of the Unuk River. Waste rock from the development of four deposits (Kerr, Sulphurets, Mitchell, and Iron Cap) will be stored in engineered facilities, and contact water will be collected at a Water Storage Facility (WSF) and treated at a Water Treatment Plant (WTP). Ore material will be crushed in the Mitchell Creek Valley and transported through a 23-km long Mitchell-Treaty Tunnel (MTT) to a Process Plant located in the upper reaches of Teigen and Treaty Creeks. The Process Plant will process approximately 130,000 tonnes of ore per day, generating approximately 1,200 tonnes of concentrate per day. Tailing material will be stored in a multi-stage TMF, which will have a separate lined sulphide containment unit.

Provincial policy suggests that ML /ARD prediction should be undertaken whenever significant amounts of bedrock or unconsolidated material is excavated or disturbed so that, if necessary, prevention, mitigation, and monitoring plans can be implemented. Long-term environmental management at the Project will include ML/ARD prediction, ML/ARD prevention, mitigation strategies, and adherence to receiving environment guidelines (e.g., Metal Mining Effluent Regulations (SOR/2002-222).

Geology

The Sulphurets District is located along the eastern side of the Coast Mountains (Cretaceous to Early Tertiary intrusions and high grade metamorphics) and the western edge of the middle Jurassic to Cretaceous Bowser basin. The District is centred over the breached core of the northerly plunging McTagg anticlinorium, which exposes rocks of the Stuhini Group, unconformably overlain by the Hazelton Group rocks. The upper Triassic Stuhini Group has two main subdivisions: (1) lower dominantly sedimentary units and (2) upper dominantly volcanic and volcanoclastic units. The lower Jurassic Hazelton Group is inferred to represent a volcanosedimentary island arc and back arc complex containing basal sediments overlain successively by volcanic/volcanoclastic units, felsic pyroclastic units, and marine sedimentary units.

The northern portions of the Project are dominated by rocks of the Middle Jurassic to Middle Cretaceous Bowser Lake Group, a marine and continental sedimentary succession inferred to have accumulated in a back arc environment. The Hazelton sequence is intruded by Early Jurassic porphyritic intrusions collectively referred to as the Mitchell Intrusion or Texas Creek Plutonic Suite.

Regional tectonic events attributed to the accretion of terranes have resulted in thrust faulting and widespread folding in the district.

Mike Lechner, of Resource Modelling Inc., constructed acid-base accounting (ABA) block models for the KSM Project in 2010 and 2011. The resolution of individual model blocks is 25 m x 25 m x 15 m; this represents a volume suitable for large excavators to segregate materials on a pit-bench. The block model codes used in the 2011 program are summarized in Table 1.

Table 1. Block Model Codes and Associated Descriptions

Block Model Codes	Description
Kerr	
KERR	All of the Kerr Deposit
Sulphurets	
Overburden	> 50% soil or glaciofluvial material
UP Hazelton	Default for Sulphurets material above STF
Monzonite	Monzonite intrusion
LP Hazelton	Default for Sulphurets below STF
Lower Au zone	Sulphurets low grade ore zone
Au, leach, Raewyn zones	Default for Sulphurets ore zones
Undefined	Default for edge effects or minor units
Mitchell	
Overburden	> 50% soil or glaciofluvial material
Monzonite	Monzonite intrusion
UP Hazelton	Default material above MTF on north or south side of Mitchell Creek
Leach breccia/bornite breccia	Mitchell ore zone
LP Hazelton	Default material below MTF on north or south side of Mitchell Creek
Undefined	Default for edge effects or minor units
Iron Cap	
IRON CAP	All of the Iron Cap deposit

LP = lower panel
UP = upper panel
MTF – Mitchell Thrust Fault
STF = Sulphurets Thrust Fault

Summary of Sampling Plan

Waste rock and potential pit wall material were assessed in 2,030 acid-base accounting (ABA) tests, 40 humidity cells, four sub-aerial drip columns, 17 field leach barrels, three meteoric water mobility protocol leachates (MWMP), and 84 net acid generating (NAG) tests. Tailing material was assessed in eight humidity cells, six subaqueous columns (SAC), and three aging tests. Non-deposit material was assessed in 223 ABA tests, and four shake flask extraction (SFE) leachate tests. Water from 38 groundwater seeps was sampled during the 2009, 2010 and 2012 field programs.

Waste Rock and Pit Wall Characterization – Static Testing

ABA test results of the 2,030 waste rock and pit wall material samples are summarized, by deposit, in Table 2 below.

Table 2. Summary of ABA Test Results for Waste Rock and Potential Pit Wall Material

Deposit	% Samples with Paste pH > 6.0	Range Total-Sulphur (%)	Total-Sulphur and Sulphide-Sulphur Relationship	Range of Sobek NP (kg $CaCO_3$/t)	Sobek NP Correlation	% Samples with Adjusted SNPR < 2.0	% of Deposits Waste Rock with Adjusted SNPR < 2.0
Kerr	81.3	0.01-13.81	Strong	0-259	Strong Ca CaNP	81.3	99.2
Sulphurets	100.0	0.01-7.50	Strong	5-350	Strong Ca CaNP	43.0	33.0
Mitchell UP	100.0	0.03-12.75	Strong	125-342	Moderate Inorg NP	75.3	79.0
Mitchell LP	91.5	0.07-19.05	Moderate	0-263	Strong Inorg NP	92.4	
Iron Cap	92.1	0.11-11.86	Strong	0-258	Strong Ca CaNP	92.0	100.0

NP = neutralization potential
SNPR = sulphide net potential ratio
Ca CaNP = calcium calculated neutralization potential
Inorg NP = inorganic neutralization potential
UP = upper panel
LP = lower panel

Waste Rock and Pit Wall Characterization – Humidity Cell Testing

The 40 humidity cells of waste rock and pit walls represent 99% of Kerr waste rock, 36% of Sulphurets waste rock, 94% of Mitchell waste rock, and 100% of Iron Cap waste rock (Table 3).

Table 3. KSM Waste Rock Model Codes Represented by Humidity Cells

Humidity Cell Identification	Waste/Ore	Weeks Operated	Status
Kerr			
HC 20 KERR	Waste	129	Ongoing monthly sampling
HC 21 KERR	Waste	61	Cell Terminated
HC 22 KERR	Ore	129	Ongoing monthly sampling
HC 23 KERR	Waste	61	Cell Terminated
Sulphurets			
HC S-06-04 UP Hazelton	Waste	112	Cell Terminated
HC S-06-05 Overburden	Waste	179	Ongoing monthly sampling
HC 17 UP Hazelton	Waste	129	Ongoing monthly sampling
HC 18 Undefined	Waste	61	Cell Terminated
HC 19 Undefined	Waste	129	Ongoing monthly sampling
HC 24 Lower Au zone	Ore	56	Cell Terminated
HC 25 Lower Au zone	Ore	124	Ongoing monthly sampling
Mitchell			
HC M-06-14 LP Hazelton	Ore	104	Cell Terminated
HC M-07-30 Monzonite	Waste	104	Cell Terminated
HC M-07-33 UP Hazelton	Waste	104	Cell Terminated
HC M-07-43 LP Hazelton	Ore	104	Cell Terminated
HC M-07-44 UP Hazelton	Waste	179	Ongoing monthly sampling
HC NM-05-03 Monzonite	Waste	104	Cell Terminated

(continued)

Table 3. KSM Waste Rock Model Codes Represented by Humidity Cells (completed)

Humidity Cell Identification	Waste/Ore	Weeks Operated	Status
HC 1 LP Hazelton	Ore	61	Cell Terminated
HC 2 UP Hazelton	Waste	129	Ongoing monthly sampling
HC 3 UP Hazelton	Waste	129	Ongoing monthly sampling
HC 4 UP Hazelton	Waste	129	Ongoing monthly sampling
HC 5 LP Hazelton	Waste	129	Ongoing monthly sampling
HC 6 LP Hazelton	Waste	129	Ongoing monthly sampling
HC 7 LP Hazelton	Waste	129	Ongoing monthly sampling
HC 8 LP Hazelton	Ore	129	Ongoing monthly sampling
HC 9 LP Hazelton	Ore	61	Cell Terminated
HC 10 UP Hazelton	Waste	129	Ongoing monthly sampling
HC 11 LP Hazelton	Waste	129	Ongoing monthly sampling
HC 12 LP Hazelton	Ore	129	Ongoing monthly sampling
HC 13 UP Hazelton	Waste	61	Cell Terminated
HC 14 UP Hazelton	Waste	61	Cell Terminated
HC 15 Leach breccia/bornite breccia	Waste	61	Cell Terminated
HC 16 LP Hazelton	Waste	129	Ongoing monthly sampling
HC 26 LP Hazelton	Ore	124	Ongoing monthly sampling
Iron Cap			
HCT-1 IRON CAP	Waste	74	Ongoing monthly sampling
HCT-2 IRON CAP	Waste	74	Ongoing monthly sampling
HCT-3 IRON CAP	Waste	74	Ongoing monthly sampling
HCT-4 IRON CAP	Waste	74	Ongoing monthly sampling
HCT-5 IRON CAP	Waste	74	Ongoing monthly sampling
HCT-6 IRON CAP	Ore	74	Ongoing monthly sampling

UP = upper panel
LP = lower panel

ABA testing of humidity cell material completed prior to initializing the kinetic tests was compared to the range of all static test results for the model code that the humidity cell represents. The paste pH values for humidity cells was within the interquartile range of all static results, but slightly biased toward the lower end of the range. The adjusted sulphide net potential ratio (SNPR) values for humidity cells spanned the interquartile range of all static results for most model codes; Sulphurets overburden, Mitchell UP Hazelton, and Mitchell LP Hazelton had some adjusted SNPR values that were well below the interquartile range.

In general, sulphate production was high for the 40 waste rock humidity cells, there was no detectable alkalinity, and acidity followed pH trends in the acidic humidity cells. Aluminum and iron concentrations were controlled by pH, with acidic humidity cells producing leachate with higher concentrations. Elements associated with neutralization (calcium and magnesium) had slowly decreasing leach rates or were stable, indicating consumption of available neutralization potential (NP), while acidic cells where pH decreased below 3, had increased calcium and magnesium leach rates concomitant with increased sulphate production.

Four humidity cells were initiated to assess the KERR model code (Table 2). All four cells are predicted to become acidic based on adjusted SNPR values. Cells HC20 and HC22 are near-neutral after 89 weeks, and HC21 and HC23 were acidic early in the test.

Seven humidity cells were initiated to assess Sulphurets material (Table 3). Based on adjusted SNPR values, humidity cell S-06-04 (UP Hazelton) is the only cell predicted to remain at a near-neutral pH. To date, the only cell to produce an acidic leachate is S-06-05 (Overburden); this cell represents potential ore-grade material.

Twenty three humidity cells — eight upper panel and 15 lower panel — were initiated to assess Mitchell material (Table 3). Based on adjusted SNPR values, only two cells are not expected to become acid-generating (NM-05-03 and M-07-30). Currently five humidity cells (HC2, M-06-14, M-07-43, HC1, and HC15) are producing leachate with a pH less than 6.0.

Six humidity cells were initiated to assess Iron Cap material (Table 3). Based on adjusted SNPR values, all cells will become acid-generating; three cells (HCT-3, -4, and -6) are already producing leachate with a pH less than 6.0.

Based on production rates of sulphate, calcium, and magnesium, a predicted time to the depletion of bulk NP or carbonate NP can be calculated. For the samples assessed from the Project area, there was disagreement between results from the two calculation methods. Notably, two monzonite humidity cells with adjusted SNPR values greater than 2.0 are predicted to become acid-generating based on the carbonate NP depletion calculation, but will never become acidic based on the bulk NP calculation.

Waste Rock and Pit Wall Characterization – Field Leach Barrel Testing

Between 2009 and 2010 seventeen field leach barrels were constructed to represent waste rock and pit wall material from the Kerr, Sulphurets, and Mitchell Deposits. ABA pre-test results of field leach barrel material indicated that most of the material chosen is within the interquartile range for material of the same model code. In October 2010, the original 12 field leach barrels were reconstructed to increase the surface area to volume ratio of the material, and to allow for greater air circulation within the barrel.

Kerr and Sulphurets material is represented by four barrels (Table 4). The pH of Kerr and Sulphurets field leach barrel leachate dropped below 6.5 at least once for each barrel. The barrels had variable pH values for the first 20 months, but stabilized during the 2011 field season.

Mitchell upper panel material is represented by seven field leach barrels; Mitchell lower panel is represented by six field leach barrels (Table 4). The leachate pH for Mitchell material was variable and dropped below 6.5 at least once per barrel. Barrels 13 and 17 immediately produced leachate with a pH less than 3.0. Sulphate loadings followed the same general trend, increasing from June to September and then decreasing September to November. This cyclic trend is weakly expressed in some of the trace elements, most notably in Barrel 17.

Waste Rock and Pit Wall Characterization – Sub-Aerial Drip Column Testing

Four sub-aerial drip columns were initiated to assess waste rock and pit wall material from the Mitchell Pit. The sub-aerial drip columns contained the same material as four field leach barrels (Mitchell UP Hazelton, Mitchell Monzonite, and Mitchell LP Hazelton). ABA pre-test results of the sub-aerial drip column material demonstrate that the material chosen is within the interquartile range for material of the same model code.

The leachate pH for all four sub-aerial drip columns across 107 weeks was near-neutral, at approximately 8, and the sulphate concentrations were less than 100 mg/L.

Table 4. Field Leach Barrel Construction Materials

Barrel ID	Zone	Model Code	Barrel ID	Zone	Model Code
Barrel 9	Kerr	KERR	Barrel 4	Mitchell LP	LP Hazelton UP Hazelton
Barrel 10	Sulphurets	Monzonite Lower Au zone Au, leach, Sulphurets zone LP Hazelton UP Hazelton	Barrel 5	Mitchell LP	LP Hazelton Bornite breccia/leach breccia
Barrel 11	Sulphurets/ Kerr	Sulphurets undefined KERR UP Hazelton LP Hazelton Au, leach, Sulphurets zone	Barrel 6	Mitchell LP	LP Hazelton
Barrel 14	Sulphurets	UP Hazelton	Barrel 7	Mitchell LP	LP Hazelton
Barrel 1	Mitchell UP	Monzonite UP Hazelton	Barrel 13	Mitchell LP	LP Hazelton
Barrel 2	Mitchell UP	UP Hazelton Monzonite	Barrel 17	Mitchell LP	LP Hazelton
Barrel 3	Mitchell UP	UP Hazelton Monzonite			
Barrel 8	Mitchell UP	UP Hazelton LP Hazelton Monzonite			
Barrel 12	Mitchell UP	UP Hazelton			
Barrel 15	Mitchell UP	UP Hazelton			
Barrel 16	Mitchell UP	UP Hazelton			

Waste Rock and Pit Wall Characterization – Leachate Testing

NAG tests were performed on six Kerr, seven Sulphurets, and 36 Mitchell samples. The ABA pre-test results displayed a range of paste pH values (3.2 to 9.9). The net neutralization potential (NNP) of all 49 samples indicated that the samples should be classified as potentially acid-generating (PAG). All 49 samples went through an initial two-cycle NAG test, and then through the modified single addition test. All samples were classified as potentially acid-forming (PAF).

NAG test liquor was analyzed by inductively coupled plasma – mass spectroscopy (ICP-MS) and compared to the pre-test concentrations. Based on the assumption that the hydrogen peroxide preferentially oxidizes sulphide phases, sulphide phases were the primary reservoir for cadmium and copper, but not for aluminum and iron.

Tailing Material Characterization – Static Testing

Static tests were performed on 35 tailing samples: Mitchell Rougher tailing (1), Mitchell Rougher-coarse tailing (1), Mitchell Rougher-fine tailing (1), Mitchell Sulphide (pyrite) tailing (1), Mitchell Rougher/Sulphide tailing (1) (combined at a ratio equivalent (90:10) to the relative contributions of Rougher and cleaner tailing predicted to report to the TMF) Mitchell/Sulphurets Rougher (4), Mitchell/Kerr Rougher (16) blended tailing, and Iron Cap Rougher tailing (8).

Paste pH values of non-sulphide tailing material from Kerr, Sulphurets, and Mitchell were between 7.8 and 11.1. Iron Cap Rougher tailing samples had paste pH values between 8.4 and 8.8. The Mitchell Sulphide and Rougher/Sulphide tailing had a paste pH of 5.8 and 6.6 respectively.

The median total-sulphur value was 0.35% for Mitchell/Kerr Rougher tailing, 0.12% for Mitchell/Sulphurets Rougher tailing, 0.38% for Mitchell Rougher tailing, 0.07% for Iron Cap Rougher tailing, 3.1% for Mitchell Rougher/Sulphide tailing, and 22.4% for Mitchell Sulphide tailing. The contribution of sulphide-sulphur to total-sulphur varied between 10 and 90%.

NP values were low to moderate for all tailing material; the total range was 1 to 46 kg $CaCO_3$/t. The Mitchell Sulphide tailing had a paste pH of less than 6.0 and a Sobek NP of 6 kg $CaCO_3$/t; all tailing material was assumed to have an unavailable NP of 6 kg $CaCO_3$/t. This assumption resulted in a few samples to have an adjusted NP of zero, indicating no available NP to offset any acid generation. With the exception of Iron Cap Rougher tailing, the bulk of Sobek NP results correlated well with Inorg NP. The Iron Cap Rougher tailing had a better correlation with calcium calculated NP (Ca CaNP), indicating that the NP was related to a mixture of carbonate and Ca-bearing non-carbonate minerals.

Adjusted SNPR values for tailing ranged between a default minimum of 0.01 and a maximum of 24.8. Mitchell Sulphide and Mitchell Rougher/Sulphide samples were classified as PAG as their adjusted SNPR values are less than 2.0.

Mitchell Sulphide and Mitchell Rougher/Sulphide tailing material typically had silver, arsenic, cadmium, copper, iron, molybdenum, sulphur, antimony, and selenium concentrations that were greater than three times the global average. The non-sulphide tailing material typically had silver, copper, molybdenum, antimony, and selenium concentrations that were greater than three times the global average.

In general, the mineralogy of the non-sulphide tailing was dominated by quartz, plagioclase, and K-feldspar. The sulphide-bearing tailing had large amounts of pyrite, with some chalcopyrite and molybdenite. Minor amounts of calcite, dolomite, ankerite, and magnesite were noted, typically amounting to less than 1%.

Table 5 summarizes the wet sieve and laser diffraction particle size analysis of the tailing material, displaying the maximum particle size that was found in 50 and 80% of the sample by weight.

Table 5. Maximum Particle Size of Material Comprising up to 50 and 80% of Sample by Weight in Tailing Material

	Max Particle Size (microns)	
Tailing	**50%**	**80%**
Mitchell Rougher-fine	5	12
Mitchell Rougher	44	75
Mitchell Rougher-coarse	100	150
Mitchell/Kerr Rougher	12	16
Mitchell/Sulphurets Rougher	20	89

Tailing Material Characterization – Humidity Cell Testing

Eight humidity cells were established to assess tailing material. Based on adjusted SNPR values, the two sulphide-bearing humidity cells (Mitchell Sulphide and Mitchell Rougher/Sulphide) were expected to become acidic. After an initial three-week stabilization period, the pH of the leachate from all

humidity cells was near-neutral, remaining around pH 8. This trend continued for the non-sulphide-bearing humidity cells. The Mitchell Sulphide humidity cell rapidly became acidic after 12 weeks and stabilized at pH 2.5. The Mitchell Rougher/Sulphide humidity cell leachate gradually became acidic between weeks 12 and 89, before rapidly decreasing to a stable pH of 3. The non-sulphide-bearing humidity cells had a gradual two order of magnitude decrease in sulphate production rates between weeks 3 and 73. The acidic, sulphide-bearing humidity cells had high sulphate production rates consistent with sulphide oxidation. Acidity and alkalinity production rates followed pH trends.

The rates of depletion of sulphide, bulk Sobek NP, and carbonate NP were calculated and used to estimate the time to the onset of ARD and the time to the end of ARD for sub-aerial deposit of tailing. The non-sulphide-bearing humidity cells are predicted to never become acidic. The Mitchell Sulphide and Mitchell Rougher/Sulphide tailing humidity cells are predicted to have a very short time to the onset of ARD (less than 5 years), but the ARD will not extend for a relatively long period of time (less than 20 years).

Tailing Material Characterization – Subaqueous Column Testing

Six subaqueous columns of tailing material were initiated: Mitchell Sulphide, Mitchell Sulphide/Rougher, Mitchell Rougher, Mitchell/Kerr Rougher, Mitchell/Sulphurets Rougher, and Iron Cap Rougher. Porewater pH was higher than supernatant for all subaqueous columns. Mitchell/Sulphurets Rougher porewater produced the only alkaline pH values. Supernatant from Mitchell Sulphide and Mitchell Rougher/Sulphide subaqueous columns became acidic after 40 and 64 weeks, reaching a pH of 3.8, and a pH of 5.17 after 110 weeks in the Mitchell Sulphide and Mitchell Rougher/Sulphide columns respectively. Sulphate concentrations were typically orders of magnitude higher in porewater compared with supernatant.

Tailing Material Characterization – Aging Testing

Three aging tests were conducted on tailing material: Mitchell Sulphide, Mitchell Rougher/Sulphide, and Mitchell Rougher. These materials were allowed to equilibrate with their supernatants for up to 120 days and then periodically sampled. The pH was near-neutral to weakly alkaline for all samples. The sulphate concentration increased gradually, indicating sulphide oxidation.

Metal leaching typically reflected drainage pH and there was generally good agreement across tests. Aluminum, arsenic, cadmium, copper, fluoride, selenium, sulphate, and zinc exceeded guidelines most frequently across various tailing types and under both near-neutral and acidic pH drainage conditions.

Non-Deposit Overburden Material Characterization

Sixty-one overburden samples were collected from the proposed Mine Site, PTMA, and access road locations. The paste pH values for the samples were between 5.9 and 9.0, with mean and median values greater than 6.0. The lowest values were from the vicinity of the proposed Mitchell pit. Total-sulphur was dominated by sulphide-sulphur and varied from below detection limit (0.01%) to 6.78%. Median values from the different locations ranged between 0.04 and 1.22%. Bulk Sobek NP results ranged from 6 to 214 kg $CaCO_3$/t. Teigen Creek Valley and Mitchell Pit had slightly lower values than other locations. The Sobek NP correlated reasonably well with Inorg NP and Ca CaNP, but not with calcium-magnesium calculated NP (CaMg CaNP), indicating that most of the NP is from Ca-bearing carbonates. Mean and median unadjusted SNPR values were consistently above 4.0 for non-deposit overburden located outside the Mitchell Pit, indicating that the majority of overburden material is not-PAG.

Four overburden shake flask extractions were run and the resultant leachate had elevated values for nitrite, pH, sulphate, aluminum, arsenic, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, selenium, and zinc.

Non-Deposit Rock Material Characterization

161 rock samples were collected from the three major stratigraphic groups at the Project: Stuhini, Hazelton, and Bowser. One sample represents the Zippa Mountain Plutonic Complex. Paste pH values were typically above 7.0, indicating that most of the material is not currently acid-generating. Approximately 25% of the MP and proposed Sulphurets pit samples had a paste pH ≤ 6. Most of the rock material had low total-sulphur contents. Proposed Mitchell Diversion Tunnel (MDT), Mitchell Pit, Sulphurets Pit, and Sulphurets Laydown Area locations had mean and median total-sulphur values above 0.5%. Sulphide-sulphur was the largest contributor to total-sulphur. Bulk Sobek NP values varied between and within sample locations. Coulter Creek Access Road (CCAR), MDT, Mitchell Pit, and Sulphurets Pit had paste pH values < 6.0 indicating some unavailable NP. Based on adjusted SNPR, samples from the proposed Treaty Creek Access Road (TCAR), McTagg Diversion Tunnel (MTDT), and Sulphurets Laydown Area demonstrated a low potential for acid generation.

Three Mitchell Pit highwall composites were subjected to a meteoric water mobility protocol leachate extraction. The resultant leachate had elevated values for sulphate, aluminum, arsenic, boron, chromium, copper, phosphorus, selenium, vanadium, and zinc.

Groundwater Seep Characterization

Naturally occurring groundwater seeps were sampled at the Kerr Deposit (five seeps), Sulphurets Deposit (one seep), Mitchell Deposit (23 seeps), McTagg Creek Valley (three seeps), and Ted Morris Creek Valley (five seeps). The Mitchell Deposit seeps were classified according to the prevailing model code in the area: LP Hazelton (South), or UP Hazelton volcanics (North).

The pH of all Kerr, Sulphurets, and Mitchell seeps were acidic. Sulphate concentrations at the Kerr and Mitchell seeps frequently exceeded the BC MOE guideline, with values as high as 7,400 mg/L. In general, the trace metal concentrations were very high. Seep flow rates varied greatly between seeps, e.g., K-3 at 0.03 L/s and MS-G at 77.01 L/s. The flow rates at seeps were usually within an order of magnitude at repeat sampling events.

Conclusion

The 2,030 potential waste rock and highwall material samples underwent static ABA testing; selected samples underwent leachate and kinetic tests. Almost all potential waste rock and highwall material collected is considered PAG, except for those with Sulphurets UP Hazelton, Sulphurets Monzonite, and Mitchell Monzonite model codes. Material for 17 tailing kinetic tests underwent static ABA testing; Mitchell Sulphide and Mitchell Rougher/Sulphide material should be classified as PAG material with very short lag times to the onset and depletion of ARD. Overburden and non-deposit rock material had a lower potential for ARD outside of the mine area.

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The data presented in this report is the cumulative work of several individuals and organizations over a few years.

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This program was laid out through the work of two primary individuals: Kevin Morin and Keith Mountjoy, who spent considerable amounts of time setting up the field program and laying the groundwork.

This cumulative baseline report is the work of three primary contributors: Vivian Ferrera for the static test work, Kelsey Norlund for the kinetic test work, and Mark Nelson for the non-deposit test work.

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Acronyms and Abbreviations

ABA	Acid-base accounting
Adjusted NPR	mathematically adjusted NPR value (see NPR) incorporating unavailable NP (see NP)
AP	Acid potential (based on sulphur species)
ARD	Acid rock drainage
BC	British Columbia
$CaCO_3$	Calcium carbonate
CaNP	Calculated carbonate NP (see NP)
Ca CaNP	Calcium CaNP
CaMg CaNP	Calcium-magnesium CaNP
CCAR	Coulter Creek Access Road
CCME	Canadian Council of Ministers of the Environment
cm	Centimetre
FAL	Freshwater aquatic life
HC	Humidity cell
HCl	Hydrochloric acid
ICP-MS	Inductively coupled plasma – mass spectroscopy
Inorg CaNP	Inorganic carbon calculated carbonate NP
kg	Kilogram
KSM	Kerr-Sulphurets-Mitchell
km	Kilometre
LP	lower panel
m	Metre
MC	Main Copper (Sulphurets Deposit above Sulphurets Thrust Fault)
MoE	Ministry of Environment, Land, and Parks (British Columbia)
MEM	Ministry of Energy and Mines (British Columbia)
MEND	Mine Environmental Neutral Drainage Program
mg	Milligram
ml	Millilitre
ML	Metal leaching
MDT	Mitchell Diversion Tunnel
MTDT	McTagg Diversion Tunnel
MTF	Mitchell thrust fault
MTT	Mitchell-Treaty Tunnel

MWMP	Meteoric water mobility protocol
NaOH	Sodium hydroxide
not-PAG	Not potentially acid-generating
NP	Neutralization potential (measured or calculated)
NPR	Net potential ratio (ratio of NP to AP)
OPC	Ore Preparation Complex
ORP	Oxidation Reduction Potential
PAG	Potentially acid-generating
ppm	Parts per million
Rescan	Rescan Environmental Services Ltd.
RSF	Rock storage facility
SAC	Subaqueous column
SAP	Sulphide acid potential (AP based on sulphide [*% sulphide-sulphur × 31.25*])
SFE	Shake flask extraction
SNPR	Sulphide net potential ratio (NPR calculated with AP based on sulphide [*bulk NP / SAP*])
STF	Sulphurets thrust fault
t	Tonne
TMF	Tailing management facility
TAP	Total acid potential (AP based on total-sulphur [*% total-sulphur × 31.25*])
TAR	Teigen Access Road
TCAR	Treaty Creek Access Road
TDPR	Tunnel Divide Portals Spur Road
TOC	Total organic carbon
TNPR	Net potential ratio (NPR calculated with AP based on total-sulphur [*bulk NP / TAP*])
UPAG	Uncertain acid generating potential
UP	upper panel
WQG	Water quality guideline
WTP	Water treatment plant
WSF	Water storage facility
XRD	X-ray diffraction
XRF	X-ray fluorescence

1. Introduction

The overall objective of the Project geochemistry baseline is to provide data for waste rock and water management plans, and an environmental effects assessment. KSM geochemistry program started in 2008 and is following a phased approach to ML/ARD prediction and management.

1.1 PROJECT PROPONENT

Seabridge Gold Inc. (Seabridge) is the proponent for the proposed KSM Project (the Project), a gold, copper, silver, molybdenum mine.

1.2 PROJECT LOCATION

The Project is located in the coastal mountains of northwestern British Columbia. It is approximately 950 km northwest of Vancouver and 65 km northwest of Stewart, within 30 km of the British Columbia-Alaska border (Figure 1.2-1).

1.3 PROJECT OVERVIEW

The Project is located in two geographical areas: the Mine Site and Processing and Tailing Management Area (PTMA), connected by twin 23-km tunnels, the Mitchell-Treaty Twinned Tunnels (Figure 1.3-1). The Mine Site is located south of the closed Eskay Creek Mine, within the Mitchell, McTagg, and Sulphurets Creek valleys. Sulphurets Creek is a main tributary of the Unuk River, which flows to the Pacific Ocean. The PTMA is located in the upper tributaries of Teigen and Treaty creeks. Both creeks are tributaries of the Bell-Irving River, which flows to the Nass River and into the Pacific Ocean. The PTMA is located about 19 km southwest of Bell II on Highway 37.

The Mine Site will be accessed by a new road, the Coulter Creek Access Road, which will be built from km 70 on the Eskay Creek Mine Road. This road will follow Coulter and Sulphurets creeks to the Mine Site. The PTMA will also be accessed by a new road, the Treaty Creek Access Road, the first 3-km segment of which is a forest service road off of Highway 37. The Treaty Creek Access Road will parallel Treaty Creek.

Four deposits will be mined at the KSM Project—Kerr, Sulphurets, Mitchell, and Iron Cap—using a combination of open pit and underground mining methods. Waste rock will be stored in engineered rock storage facilities located in the Mitchell and McTagg valleys at the Mine Site. Ore will be crushed and transported through one of the Mitchell-Treaty Twinned Tunnels to the PTMA. This tunnel will also be used to route the electrical power transmission lines. The second tunnel will be used to transport personnel and bulk materials. The Process Plant will process an average of 130,000 tpd of ore to produce a daily average of 1,200 t of concentrate. Tailing will be pumped to the Tailing Management Facility from the Process Plant. Copper concentrate will be trucked from the PTMA along highways 37 and 37A to the Port of Stewart, which is approximately 170 km away via road.

The mine operating life is estimated at 51.5 years. Approximately 1,800 people will be employed annually during the Operation Phase. Project Construction will take about five years, and the capital cost of the Project is approximately US$5.3 billion.



Figure 1.2-1

SEABRIDGE GOLD
KSM PROJECT

KSM Project Location

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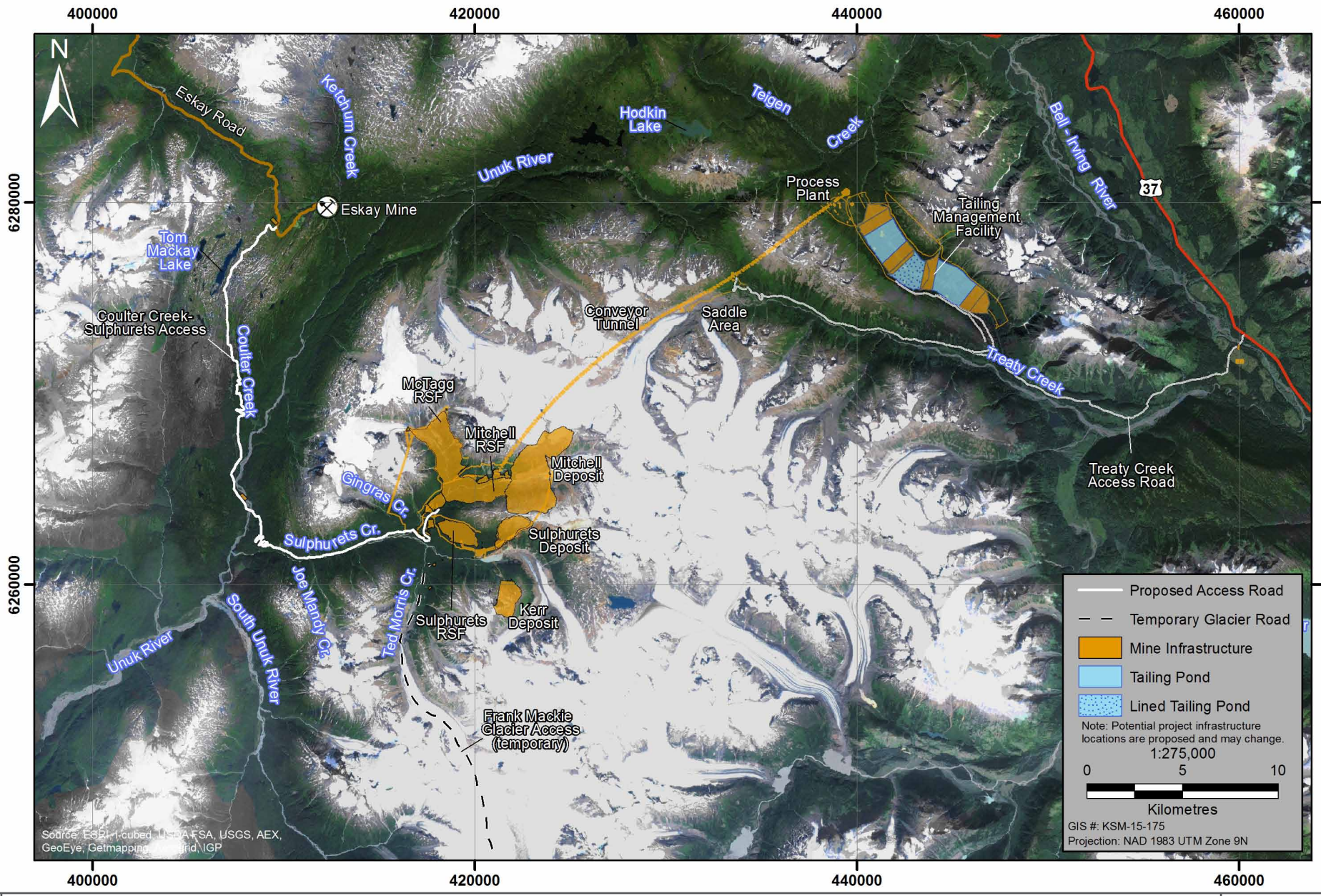


Figure 1.3-1

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KSM PROJECT

KSM Project Layout

Figure 1.3-1

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2. Regulatory Framework

Whenever significant bedrock or unconsolidated material will be excavated or disturbed in British Columbia an ML/ARD program must be conducted so that, if necessary, prevention, mitigation and monitoring plans can be implemented.

The guiding BC provincial and federal principles for ML/ARD applicable to the long-term environmental management of the proposed KSM Project include:

- The prevention of ML/ARD. Prevention should be achieved through prediction, appropriate design, and effective implementation of appropriate mitigation strategies throughout the life of the proposed Project;
- The demonstration that the proposed mitigation strategies meet the environmental objectives for the proposed Project and are compatible with the proposed Project plan and site conditions;
- The ML/ARD potential is evaluated on a site-specific basis; and
- The requirement for water discharge into the receiving environment meets applicable Provincial and Federal water quality guidelines.

The federal Ministry of Environment's *Environmental Code of Practice for Metal Mines* sections 3 and 4 provide recommendations on predicting acidic drainage and metal leaching and creating environmental management plans for water and wastewater management at metal mines. In British Columbia, mining activities are regulated under the *Mines Act* (1996) and the Health, Safety and Reclamation Code for Mines in British Columbia (BCMEMPR 2008). Part 10 of the Health, Safety and Reclamation Code contains requirements for acid rock drainage and metal leaching prediction and prevention and reporting. ML/ARD prediction, prevention and mitigation in British Columbia are further guided by the following documents:

- Draft Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia (Price 1997).
- Policy for Metal Leaching and Acid Rock Drainage in British Columbia (BCMEM and BCMELP 1998)
- Guidelines for Metal Leaching and Acid Rock Drainage at Minesites in British Columbia (Price and Errington 1998);
- MEND Manual. Volume 3 – Prediction (MEND 2000);
- List of Potential Information Requirements in Metal Leaching/Acid Rock Drainage Assessment and Mitigation Work. MEND Report 5.10E (Price 2005); and
- Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials (Price 2009).

The general principles, policies, guidelines and recommended methods were applied to this assessment of the ML/ARD potential for the KSM Project.

3. Geology

3.1 GEOLOGICAL SETTING

The setting provided in this report is a summary of previously completed descriptions of the regional geology (Ditson, Wells, and Bridge 1995; Fowler and Wells 1995; Kirkham and Margolis 1995; Lechner 2008). A detailed description of the local lithologies, alteration, mineralization, and structures can be found in the 2012 Pre-Feasibility Study Update { Wardrop, 2012 #756}. The project scale geology is presented in Figure 3.1-1.

The Sulphurets District is located along the eastern side of the Coast Mountains, approximately 25km east of the Coast Plutonic Complex, a north-northwesterly trending belt of Cretaceous to Early Tertiary intrusions and high grade metamorphic rocks. The area lies near the western edge of the middle Jurassic to Cretaceous age Bowser Basin within the Stikine terrane, also known as Stikinia, which was possibly accreted to the North American continental margin in the Middle Jurassic period. Stikinia is interpreted as Triassic and Jurassic volcanic arcs resting on Palaeozoic basement (not present at site) and overlain by Jurassic basinal sedimentary rocks. The district is centred over the breached core of the northerly plunging McTagg anticlinorium, which exposes rocks of the upper Triassic Stuhini Group, unconformably overlain by lower Jurassic Hazelton Group rocks.

The upper Triassic Stuhini Group has two major subdivisions: (1) lower dominantly sedimentary turbidites and sandstones and (2) upper dominantly volcanic pillowed flows and volcaniclastic breccias.

The lower Jurassic Hazelton Group is inferred to represent a volcanosedimentary island arc and back-arc complex. The sedimentary sequence consists of a coarse basal sedimentary sequence overlain by a lower volcanic/volcaniclastic sequence, an upper felsic volcanic-pyroclastic unit (Mount Dilworth Formation), and an uppermost marine sedimentary sequence containing subaqueous mafic volcanic flows. The upper contact of the Hazelton Group is gradational with the Bowser Lake Group.

The middle Jurassic to middle Cretaceous Bowser Lake Group is a marine and continental clastic sedimentary succession consisting of basinal mudstone, sandstone and conglomerates that accumulated in a back-arc environment.

The Hazelton sedimentary sequence is intruded by a suite of porphyritic, early Jurassic (189 to 195 million years) rocks including alkali feldspar granite, quartz monzonite, seyenite, and granodiorite collectively referred to as the Mitchell Intrusions or Texas Creek Plutonic Suite. Below the Sulphurets and Mitchell thrust faults (STF and MTF), pre- and intra-mineral intrusives have historically been exploration targets.

The region has undergone a number of regional tectonic events starting with the accretion of Stikinia in the Middle Jurassic. The next major event was during the Late Jurassic through Late Cretaceous, possibly coinciding with the accretion of the Insular terranes west of the Coast Plutonic Complex. This latter event resulted in a widespread, generally east-verging fold and thrust belt affecting the Bowser Lake Group and older sequences.

3.2 DEPOSIT GEOLOGY

The following description of the deposit geology is taken from Savell (Savell 2012):

Kerr Zone

The Kerr deposit is a strongly deformed copper-gold porphyry, where copper and gold grades have been upgraded due to remobilization of metals during later and/or possibly syn-intrusive deformation. Alteration is the result of a relatively shallow, long lived hydrothermal system generated by intrusion of monzonite. Subsequent regional deformation along the Sulphurets thrust was diverted into Kerr area along pre-existing structures and altered rocks with low competency.

The mineralized area forms a mostly continuous, north-south trending and westerly dipping, irregular body at least 1700 meters long, and up to 200 meters thick. Higher grades are associated with crackled quartz stockwork, anhydrite veining, and chlorite alteration. It is enveloped by a schistose, pyrite rich phyllic alteration with low to moderate grades. Mineralization is open at depth and along strike.

Sulphurets Zone

The deposit is comprised of two distinct zones, Raewyn and Breccia Gold. The Raewyn Copper-Gold zone hosts mostly porphyry style disseminated chalcopyrite and associated gold mineralization in moderately quartz stockworked, chlorite-biotite-sericite-magnetite altered volcanics. The alteration and mineralization are centered on a narrow, apparently conformable body of porphyritic quartz monzonite. It has an apparent northeasterly strike and dips about 45 degrees to the north. It may be offset in en echelon style by several north-northeasterly trending vertical structures. The mineralization is open at down-dip and along strike to the southwest. The Breccia Gold zone hosts mostly gold bearing pyritic mineralization with minor chalcopyrite and sulfosalts in a K-feldspar-siliceous hydrothermal breccia that apparently crosscuts the Raewyn porphyry copper-gold deposit. It comprises altered intrusive clasts in a matrix of mainly silica and sulfides. Both zones have an intense phyllic overprint that nearly masks all earlier alteration phases.

Mitchell Zone

The Mitchell zone is exposed in Mitchell valley through an erosional window exposing the footwall of the Mitchell Thrust Fault. The zone is a moderately dipping, roughly tabular gold-copper deposit measuring approximately 1,600 meters along strike, 400 to 900 meters down dip, and at least 300 to 600 meters thick. It consists of a foliated, schistose or mylonitic zone of intensely altered and sulfide bearing rocks, with a variably distributed stockwork of deformed and flattened quartz veinlets. The schistosity generally follows an east-southeast direction, and dips moderately steep to the north. In general, the core area of mineralization has a moderate plunge to the north or northwest, and is lineated in a east-southeast direction.

Recent glacial melt back has provided exceptional surface exposure of a relatively fresh gold-copper porphyry system. A zone of intense quartz and sulfide veining ("High Quartz") forms resistant bluffs in Mitchell valley. However, the higher grade core area is mostly covered by talus and moraine west of the bluffs. Active oxidation and leaching of sulfides has produced prominent gossans and extensive copper sulfate precipitates at the surface.

SEABRIDGE GOLD

KSM GEOLOGIC MAP

UTM Nad83 Zn.09 ms / 20/03/11

0 0.5 1 kilometers

N

Altered and Mineralized Units

Iron Cap - Porphyritic
moderately mineralize
Iron Cap - A distinct zo
Iron Cap fault, in rock
Iron Cap - Steep, meter
Iron Cap - lower zone
generally ~0.2% Cu and
sediments, and intru
Iron Cap - upper zone
generally >0.1% Cu w
Iron Cap - low grade m
quite variable, but or
sediments, and intru
Iron Cap - fine grained
chloritized, patchy re
intrusive observed in
Mitchell Zone - fine gra
and vein hosted fine
remnant potassic alte
Kerr Zone - Indistinguis
disseminated, stockw
potassic alteration, va
Sulphurets Breccia Gol
sulphosalts in a K-felds
overprint
Sulphurets Leached zon
depleted in gold and
Sulphurets Lower Gold
Copper zone, with a
Recwyn Copper-Gold
mineralization in mod
sediments, alteration
monzonite
Silicified and Hornfelse
Silicified and Hornfelser
Intensely quartz-sericit
zone, it may host mu
gold mineralization
Altered, mineralized ro
crackled, sulfide bear
Snowfield zone advanc
Propylitic hornfelsed,
Propylitic hornfelsed,
and MTF
Propylitic hornfelsed,
Gossanous weathering

Late Jurrasic Intrusions

Jurassic Hazelton Group

Triassic Stuhini Group

Mineralized Zones
Near Surface Block Model
Au Equivalent (g/t)

IRON CAP ZONE

IRON CAP FAULT

BRUCEJACK FAULT

Modified from Margolis, 1991

MITCHELL THRUST FAULT

MITCHELL ZONE

SNOWFIELD ZONE

Modified from Tech. Rpt. and Prelim Assess. of the Snowfield-Brucejack Project, Pretium Res., 2010

SULPHURETS ZONE

Modified from Tech. Rpt. and Prelim. Assess. of the Snowfield-Brucejack Project, Pretium Res., 2010

SEABRIDGE PROPERTY BOUNDARY

Sulphurets Lake

CAMP

KERR ZONE

Modified from MDRU Spec. Pub. No. 1, Ch. 22, Bridge+1995

BRIDGE/BRUCEJACK ZONES

Figure 3.1-1

SEABRIDGE GOLD
KSM PROJECT

Generalized Geology of the Kerr-Sulphurets-Mitchell Mine Project Area

Figure 3.1-1

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The Mitchell zone is considered to lie within the spectrum of the gold-enriched copper porphyry environment. Metals, chiefly gold and copper (in terms of economic value), are generally at low concentrations, finely disseminated, stockwork or sheeted veinlet controlled, and pervasively dispersed over dimensions of hundreds of meters. Grades diminish slowly over large distances; sub-economic grades are encountered at distances of several hundreds of meters beyond the interpreted centre of the system. This is distinct from the Sulphurets and Kerr zones, where there are more abrupt breaks in grade due to higher structural complexity and juxtaposition of weak and moderate grade domains by faulting, both syn-mineral structures controlling breccia contacts, and post-mineral faulting and displacements. A property scale geological plan is presented on Figure 7.

Iron Cap Zone

The Iron Cap deposit is a separate but related mineralized system within the KSM district, and occurs structurally above the Mitchell deposit, in the panel of rocks between the Mitchell and Sulphurets thrust faults. It differs from the Mitchell deposit primarily in that much of the host rock is hydrothermally altered intrusive (porphyritic monzonite to diorite) rather than volcanics and sediments. The volcanics are mostly andesitic porphyry, generally similar to the main host of the Mitchell deposit. There is a high degree of silicification which overprints earlier potassic and chloritic alteration. Intense phyllic alteration and high density stockwork veining, which are pervasive at Mitchell are less pervasive at Iron Cap. Copper bearing zones at Iron Cap demonstrate higher grades than Mitchell, which is consistent with the intrusive setting and potassic alteration indicating a deeper and hotter environment.

Associated with the silicification are wide zones of hydrothermal brecciation, scattered meter-scale quartz-pyrite-chalcopyrite veins and centimeter-scale quartz-pyrite-chalcopyrite-sphalerite-galena-tetrahedrite veins that are interpreted to be superimposed on earlier stockwork and disseminated mineralization associated with the intrusion. Microscopic examinations of polished thin sections confirm that Iron Cap was also subjected to a post-mineral deformational event evidenced by widespread mylonitic textures. "Mylonite" and "Ultramylonite" are terms used as rock names in petrographic descriptions of several Iron Cap mineralized samples.

Generally intense silicification at the higher, eastern portions gives way to chloritization with some preserved k-spar alteration at depth and towards the west which correlates with increasing proportion of intrusive rock. Relative to Mitchell, stockwork veining is much weaker. There is a distinct overprint of structurally controlled, centimeter scale quartz-carbonate veins with chalcopyrite, galena, sphalerite, and tetrahedrite, but the distribution is not clear. It does not seem to effect the gold and copper distribution on a large scale, but at the vein scale there is often correlation. High silver values are generally associated with presence of galena and sphalerite.

4. Methods

4.1 PROGRAM DESIGN AND OBJECTIVES

This section describes the geochemical program designed to characterize and predict the potential for ML/ARD of the KSM Project deposit rock, tailing, and non-deposit rock. The geochemical program includes waste rock, pit walls, tailing, non-deposit or construction materials, and groundwater seep geochemistry. A summary of the design basis for characterization of ML/ARD potential is provided in Table 4-1.

Table 4-1. ML/ARD Characterization Program Design

Mine Component	Geochemical Questions	Data Needed	Methods
Waste Rock and Ore	ML/ARD potential	ABA	Core sampling, paste pH, acid potential, neutralization potential, solid-phase elemental analysis
		Mineralogy	Rietveld XRD and petrographic analysis
		Source of NP	Neutralization potential, Rietveld XRD, calcium and magnesium content, total carbon and inorganic carbon content
		Sulphur form interpretation	Sulphur species analysis, barium content
	Waste distribution (project scale)	Spatial variation of ML/ARD characteristics	Core sampling, paste pH, acid potential, neutralization potential, solid-phase elemental analysis
	Waste segregation (within a deposit)	Spatial variation of ML/ARD characteristics	Core sampling, composite continuous core samples, paste pH, acid potential, neutralization potential, solid-phase elemental analysis, ABA block model
	Development of site-specific ARD criteria	Rate of depletion of sulphides and acid neutralizing minerals	Humidity cells, field leach barrels
	Variability of characteristics within a deposit and between deposits	Lithological composition of waste rock over mine life	Core sampling, ABA and solid-phase elemental analysis, ABA block model
		Chemical composition of waste rock	Core sampling, ABA and solid-phase elemental analysis, ABA block model
	Onset of acidic conditions	Rate of depletion of sulphides and acid neutralizing minerals	Humidity cells and lag-time calculations
	Contact water chemistry	Leaching rates under non-acidic and acidic conditions	Humidity cells, sub-aerial drip columns
		Site-specific water quality data	Field leach barrels, groundwater seeps
Pit Walls	Variability of characteristics within a deposit and between deposits	Lithological composition of pit walls over mine life	ABA block model and mine plan
	Release of potential parameters of concern	Leaching rates under non-acidic and acidic conditions	Humidity cells
	Chemistry of runoff	See waste rock program	See waste rock program

(continued)

Table 4-1. ML/ARD Characterization Program Design (completed)

Mine Component	Geochemical Questions	Data Needed	Methods
Tailing	ML/ARD potential	ABA	Metallurgical testing, paste pH, acid potential, neutralization potential, solid-phase elemental analysis
		Mineralogy	Rietveld XRD, petrographic and QEMSCAN analyses
		Particle size analysis	Wet sieving and laser diffraction
		Source of NP	Neutralization potential, Rietveld XRD, calcium and magnesium content, total carbon and inorganic carbon content
		Sulphur form interpretation	Sulphur species analysis, barium content
	Variability of characteristics within a deposit and between deposits	Source of tailing (deposit)	Metallurgical testing, kinetic testing of composite samples, mine plan
	Onset of acidic conditions	Rate of depletion of sulphides and acid neutralizing minerals	Humidity cells, aging tests, subaqueous columns
	Chemistry of tailing management facility ponds and porewater	Leaching rates under non-acidic and acidic conditions	Humidity cells, aging tests, subaqueous columns
		Leaching rates under sub-aerial and sub-aqueous conditions	Humidity cells, aging tests, subaqueous columns
Non-deposit Material	ML/ARD potential	ABA	Overburden and outcrop sampling, paste pH, acid potential, neutralization potential, solid-phase elemental analysis
		Surface-soluble leaching from non-deposit or construction materials	Overburden and outcrop sampling, shake-flask extraction of overburden, and meteoric water mobility procedure of non-deposit rock

The overall objective of the ML/ARD prediction program for the KSM Project was to obtain a correlation between the geological and geochemical data that can be used for:

- waste and water management planning; and
- environmental effect assessment.

The ML/ARD prediction program was developed using a phased approach. As a result, this 2008-2012 cumulative baseline reports the results of the sampling and testing from 2008 until April 2012 and incorporates results reported in the 2008 baseline report (Rescan 2009). The cut-off date for sampling and analytical data inclusion in this report is July 2012 for all data sets except the groundwater seeps which include all 2012 analytical data.

A summary of samples collected and laboratory testing performed for ML/ARD prediction for the Project is provided in Appendix 4.1-1. Only data that passed QA/QC are presented in this baseline; historical data from before 2008 did not meet standards and is presented in appendix 4.1-2.

4.1.1 Waste Rock and Pit Walls

To achieve the waste management planning objective, 2,030 samples were collected from diamond drill holes of waste rock and potential pit wall material. Table 4.1-1 outlines the development of the sampling program.

Table 4.1-1. Summary of Waste Rock and Pit Wall Sampling Program

Deposit	2008	2009	2010	2011	2012	Total
Kerr	17	71	78	0	139	305
Sulphurets	87	79	132	0	135	433
Mitchell	277	462	189	0	8	936
Iron Cap	0	0	50	149	157	356
Total	381	612	449	149	439	2030

Between 2008 and 2010, deposit sampling focussed on the ML/ARD prediction of waste rock and pit wall rock of the Mitchell, Sulphurets, and Kerr Deposits. The selection of samples was based on primary lithologies used by Seabridge geologists for core logging of the KSM deposits. However, based on consultation with Seabridge geologists in early 2009, sampling selection was changed to include primary alteration types. The rationale for changing to this approach, particularly below the Mitchell Thrust Fault (MTF), was based on the intensity of alterations that obscured and inhibited the identification of primary protoliths, and close associations between alteration types, mineralization, and gold and copper ore grades. In 2011 and 2012, the focus of the deposit sampling for the ML/ARD prediction program was on the Sulphurets and Iron Cap deposits to more thoroughly characterize the potential pit walls of these deposits. Additionally, the Sulphurets Canyon Zone underwent exploration drilling in 2011 to expand the boundaries of the deposit. Since early 2012 selection of samples has been based on the geological block model codes as provided by Seabridge.

Humidity cells and drip columns containing waste rock were initiated in 2008, 2009, and 2010.

4.1.2 Tailing

Several metallurgical test programs were completed for the KSM Project from 2007 to 2010. Further details regarding these metallurgical programs are contained in Section 16 of the Pre-Feasibility Study Update ({Wardrop, 2012 #756}) and will be included in the 2012 update to the Pre-Feasibility Study.

A comprehensive ML/ARD prediction program was developed and initiated for the KSM Project tailing. This program was developed in conjunction with comprehensive metallurgical testing being carried out for Seabridge. The tailing-specific objective of the KSM ML/ARD prediction program was to characterize the geochemical variability and behaviour of tailing products that would be generated by the Process Plant and included:

- Mitchell RougherRougher tailing;
- Mitchell RougherRougher tailing coarse;
- Mitchell RougherRougher tailing fine;
- Mitchell Cleaner (sulphide/pyrite) tailing;
- Mitchell RougherRougher/Sulphide tailing combined at a 9:1 ratio - equivalent to the relative contributions of Rougher and cleaner tailing to the TMF;
- Mitchell/Sulphurets RougherRougher tailing and tailing composite;

- Mitchell/Kerr RougherRougher tailing and tailing composite; and
- Iron Cap RougherRougher tailing and tailing composite.

The tailing combinations reflect that given the size and duration of projected mining of the Mitchell deposit, Mitchell tailing geochemistry will be dominant compared to the other deposits. Humidity cell tests, subaqueous tests and aging tests were also included in the KSM tailing ML/ARD prediction program.

4.1.3 Non-deposit Material

This section describes the geochemical program designed to characterize and predict the potential for ML/ARD of the KSM construction material.

During construction of the KSM Project, clearing and excavation of surficial and bedrock materials will be required. Additionally, borrow sources of unconsolidated overburden will potentially be required for dams, roads, infrastructure footings and foundations and other features. Samples of overburden, outcrop, and drill core were collected to assess the ML/ARD potential of the construction material and to identify potential sources for borrow material.

A summary of the non-deposit sampling program performed for ML/ARD prediction for the Project is provided in Table 4.1-2.

Table 4.1-2. Summary of Non-Deposit Sampling Program

Location	Overburden		Rock	
Sample Type	Drill Hole	Grab	Drill Hole	Grab
Coulter Creek Access Road (CCAR)		1		47
Kerr Haul Rd		4		
Mitchell Diversion Tunnel (MDT)				13
Mitchell Pit		4		27
Mitchell Rock Storage Facility (MRSF)	16	8		
McTagg Diversion Tunnel (MTDT)				5
McTagg Rock Storage Facility (MTRSF)		2		
Mitchell-Teigen Tunnel (MTT)				15
Sulphurets Laydown Area	1		4	
Sulphurets Pit				14
Teigen Access Road (TAR)				13
Treaty Creek Access Road (TCAR)		3		6
Treaty Creek Spur Road				15
Ted Morris Valley		5		
Teigen Creek Valley		6		
Processing and Tailing Management Area (PTMA)	2		3	
Water Storage Facility (WSF)	6	3		
Sub-total	25	36	7	155
Total = 223				

The overburden grab sample set was tested for grain size distribution, ABA including surface rinse pH on whole sample and separately on the minus 2 mm fraction, paste pH, sulphur species, Sobek

neutralization potential (NP) and carbon species, as well as solid-phase elemental analyses (ICP and whole rock) and shake flask leach extraction tests on a subset of samples. The drill core and outcrop samples were tested for ABA (paste pH, sulphur species, Sobek NP, carbon species) and solid-phase elemental analysis.

4.1.4 Groundwater Seep Geochemistry

Naturally-occurring groundwater seeps within the Project area were sampled in order to assess:

- the variability in aqueous chemistry associated with groundwater seeps derived from various lithologies and alteration types; and
- the geochemical loading contribution to the local watershed.

It is reasonable to assume that a given unit of water in a seep will have a greater residence time in contact with bedrock than water from humidity cells and field barrels. In this regard, the seeps provide an opportunity to evaluate site-specific geochemistry at a larger field scale than both humidity cells and field barrels, and may be more representative of full scale near equilibrium mine drainage aqueous concentrations.

Naturally-occurring seeps occur at the Kerr Deposit, Sulphurets Deposit, Mitchell Deposit, McTagg Creek (location of McTagg Rock Storage Facility), and Ted Morris Creek Valley (outside of the KSM Project footprint but a north-flowing tributary of Sulphurets Creek near the confluence of Mitchell Creek with Sulphurets Creek). The Ted Morris Creek Valley seeps represent a reference location with little mineralization. At the Kerr, Sulphurets, and Mitchell Deposits, the seeps represent groundwater that has reacted with potential ore, waste rock and pit wall material and discharges into the local watershed. The seeps at the Kerr and Mitchell Deposits discharge where there is moderate to intense deposit weathering and the development of a young gossan at the surface. The Mitchell Deposit was exposed due to glacial recession within the last 50 years. Glacier studies conducted for Seabridge indicate that the Mitchell Glacier has retreated about 800 m and decreased about 100 m in thickness since 1982 (Rescan 2010{Rescan, 2010 #692}). As a result of the recent glacial recession, the Mitchell Deposit gossan is quite young and remains highly reactive. Copper and iron staining were observed on outcrop samples at several locations within the Sulphurets Deposit. In general, the Sulphurets Deposit is located at a high elevation in a zone of groundwater recharge.

Sampled KSM groundwater seeps included:

- Kerr Deposit seeps: 5;
- Sulphurets Deposit seeps:1;
- Mitchell Deposit seeps: 23;
- McTagg Creek seeps: 3; and
- Ted Morris seeps: 5

4.2 FIELD SAMPLING

4.2.1 Deposit Sampling

From 2008 to 2012, a total of 305 drill core samples from the Kerr Deposit, 433 drill core samples from the Sulphurets Deposit, 936 drill core samples from the Mitchell Deposit, and 356 drill core samples from the Iron Cap deposit were collected for the purpose of ML/ARD predictions. Drill core intervals

samples were typically 1.0 or 2.0 metres length; however, where a drill hole had poor recovery or sampling for laboratory assays had removed intervals of interest, adjustments were made accordingly.

The summary of the samples tested for ABA and solid-phase elemental analysis is presented in Table 4.2-1.

Table 4.2-1. Summary of KSM Samples Tested for ABA and Elemental Analysis

Classification	Number of Samples Kerr Deposit	Number of Samples Sulphurets Deposit	Number of Samples Mitchell Deposit	Number of Samples Iron Cap Deposit
Ore				
Not-PAG	18	59	42	6
PAG	109	103	421	153
Sub Total Ore Samples	127	162	463	159
Waste				
Not-PAG	38	185	91	24
PAG	140	85	382	172
Sub Total Waste Samples	178	270	473	196
Total of Samples	**305**	**433**	**936**	**356**
Number of drill holes	22	40	102	40

Forty samples from 29 drill holes were selected for laboratory humidity cells testing to assess the primary reaction rates under aerobic weathering condition, including the rates of metal leaching, acid generation, and acid neutralization.

Samples of split drill core and outcrop material of different lithologies were collected for field kinetic testing. The material sampled represents:

- Material from the proposed Mitchell Pit highwall above the MTF;
- A composite of different alteration types intersecting the pit wall from the proposed Mitchell Pit from below the MTF; and
- Different alteration types for the Mitchell, Sulphurets and Kerr Deposits: intermediate argillic (IARG), silica flooding, pervasive silicification (SIL), silicification due to hornfelsing, silica flooding (SIH), chlorite alteration (CL) and potassic alteration (KP).

Samples of split drill core of material from the proposed Mitchell Pit highwall above the MTF were also used for sub-aerial column testing.

4.2.2 Non-deposit Sampling

A total of 223 non-deposit samples were collected from overburden and rock in the KSM Project area for assessment of ML/ARD potential. The sampled overburden areas included those that may potentially be disturbed, exposed, or excavated during proposed mining activities.

The overburden samples consist of 36 grabs of unconsolidated material (e.g. gravel, colluvium, and alluvium), and 25 drill core samples. The rock samples consist of 155 rock grabs and seven samples from drill holes.

4.2.3 Groundwater Seep Sampling

The location of the seeps in the Kerr Deposit, Sulphurets Deposit, Mitchell Deposit, McTagg Creek Valley, and Ted Morris Creek Valley are shown in Figures 4.2-1 to 4.2-5, respectively. Photos of Mitchell and Kerr Deposit seeps are shown in Plates 4.2-1 to 4.2-3.

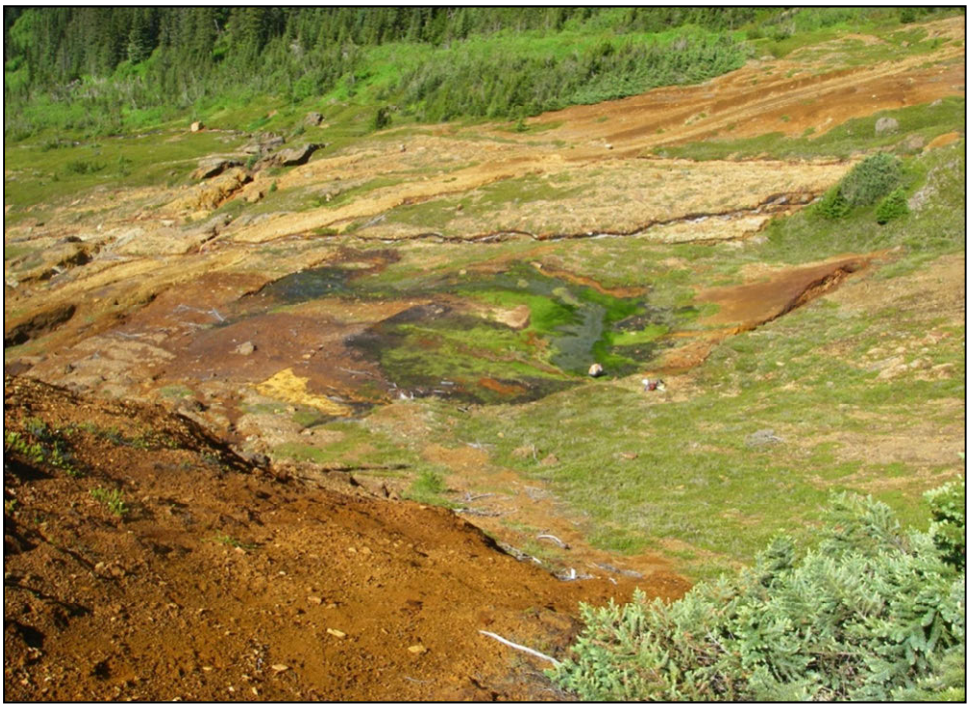
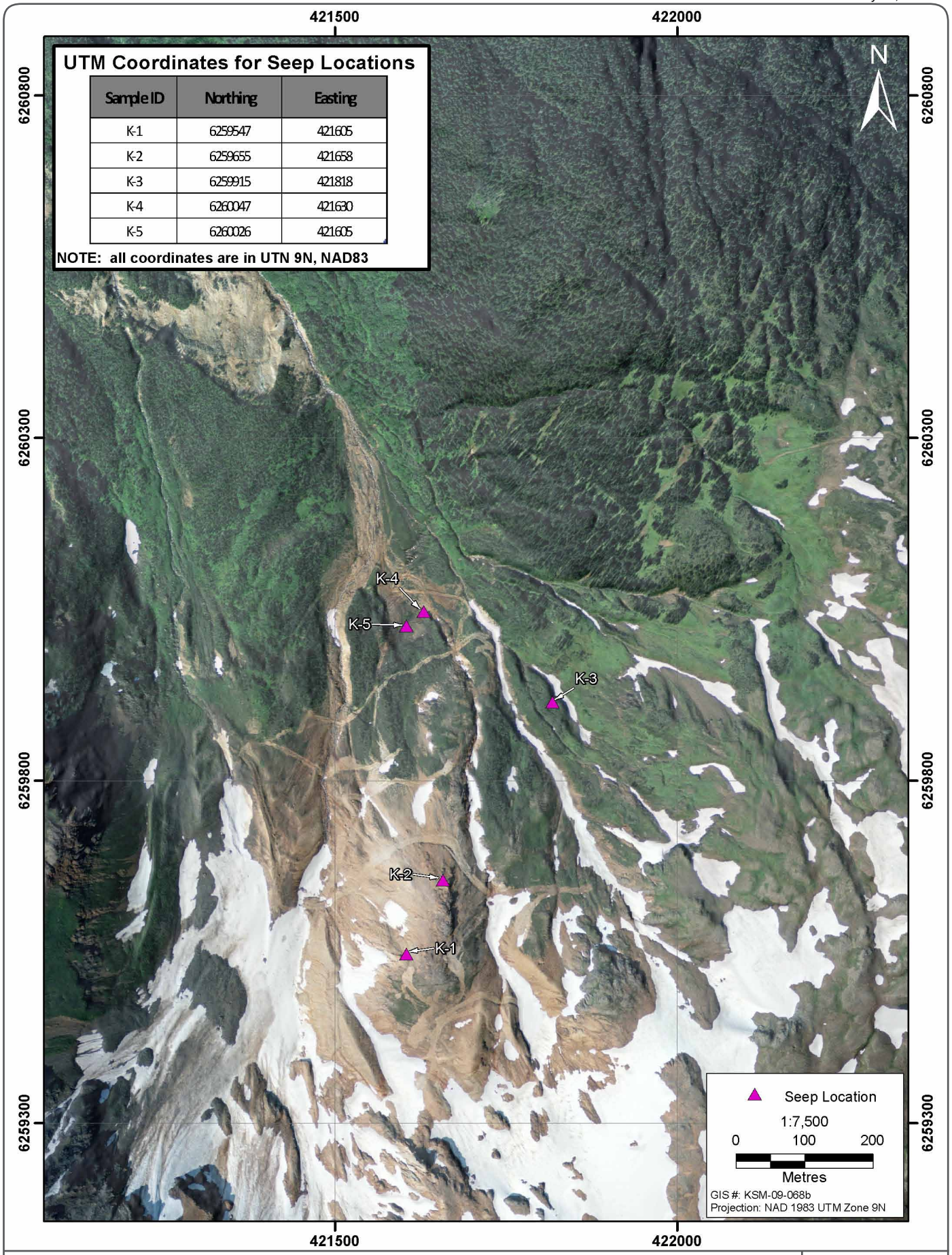


Plate 4.2-1. K4 overview, July 1, 2010.



Plate 4.2-2. MN_A (downstream), July 2010.



UTM Coordinates for Seep Locations

Sample ID	Northing	Easting
K-1	6259547	421605
K-2	6259655	421658
K-3	6259915	421818
K-4	6260047	421630
K-5	6260026	421605

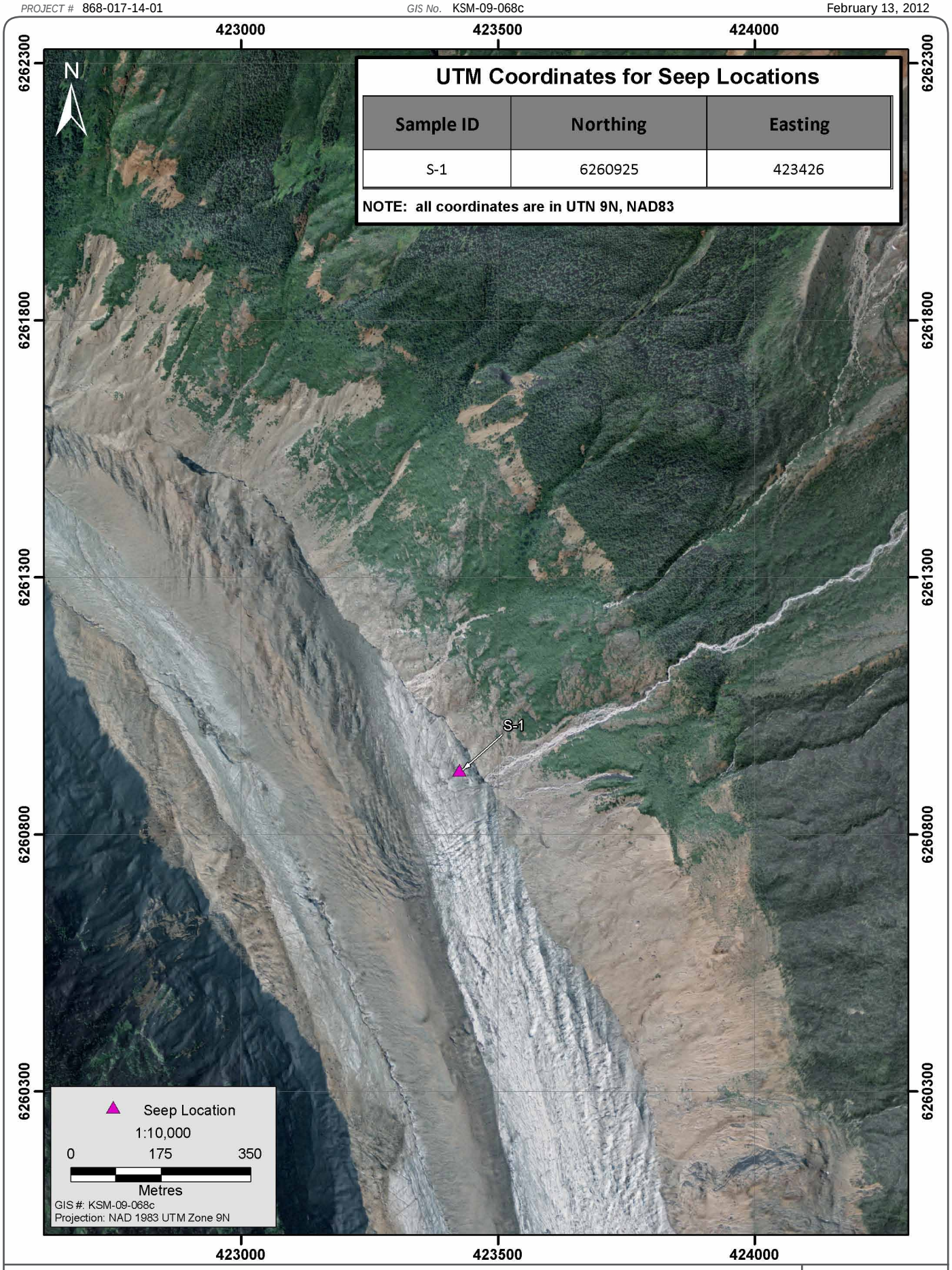
NOTE: all coordinates are in UTN 9N, NAD83

Figure 4.2-1

SEABRIDGE GOLD
KSM PROJECT

Groundwater Seeps, Kerr Deposit

Rescan™
Engineers & Scientists



UTM Coordinates for Seep Locations

Sample ID	Northing	Easting
S-1	6260925	423426

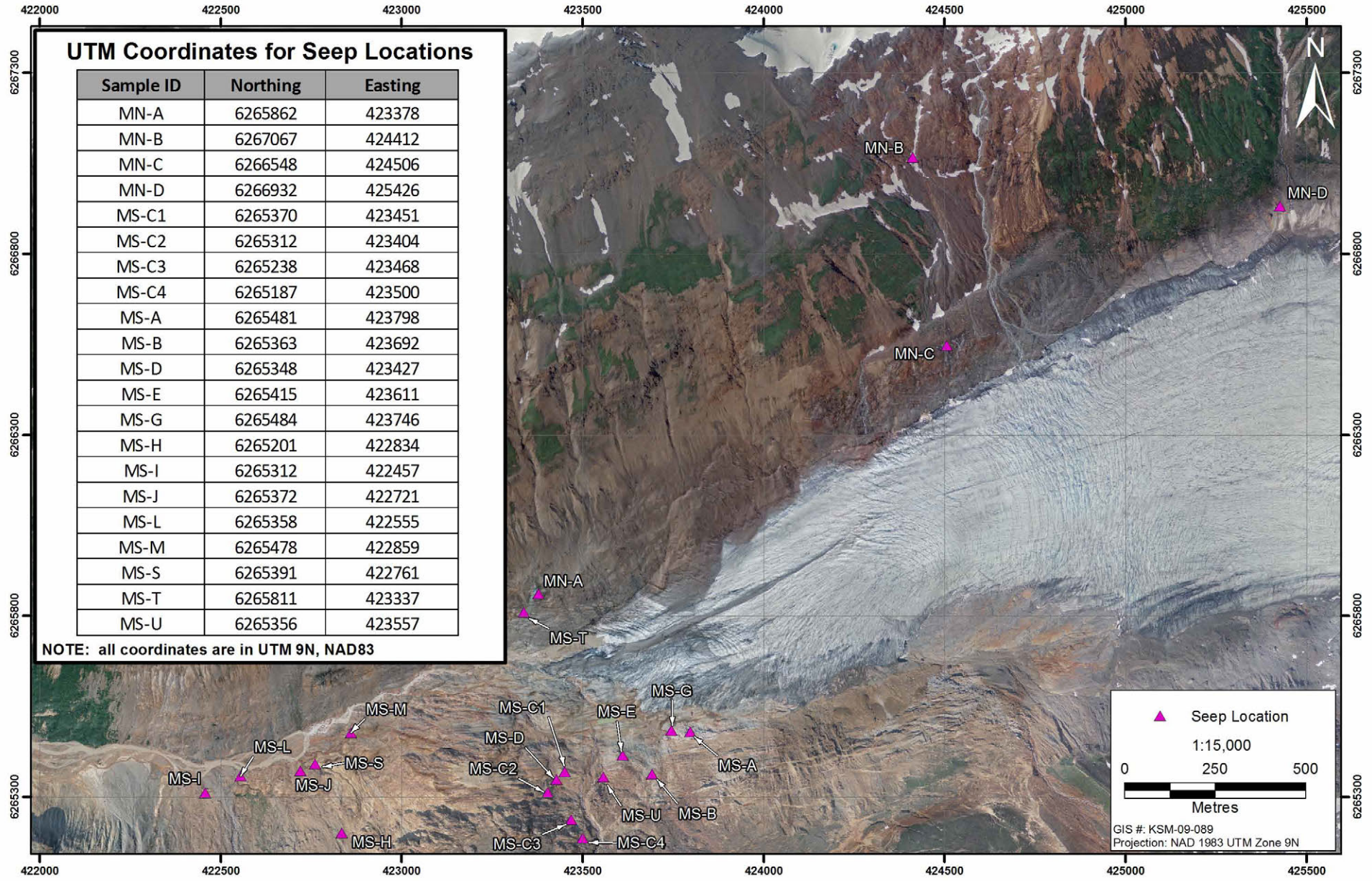
NOTE: all coordinates are in UTN 9N, NAD83

Figure 4.2-2

SEABRIDGE GOLD
KSM PROJECT

Groundwater Seeps, Sulphurets Deposit

Rescan
Engineers & Scientists



UTM Coordinates for Seep Locations

Sample ID	Northing	Easting
MN-A	6265862	423378
MN-B	6267067	424412
MN-C	6266548	424506
MN-D	6266932	425426
MS-C1	6265370	423451
MS-C2	6265312	423404
MS-C3	6265238	423468
MS-C4	6265187	423500
MS-A	6265481	423798
MS-B	6265363	423692
MS-D	6265348	423427
MS-E	6265415	423611
MS-G	6265484	423746
MS-H	6265201	422834
MS-I	6265312	422457
MS-J	6265372	422721
MS-L	6265358	422555
MS-M	6265478	422859
MS-S	6265391	422761
MS-T	6265811	423337
MS-U	6265356	423557

NOTE: all coordinates are in UTM 9N, NAD83

Figure 4.2-3

SEABRIDGE GOLD
KSM PROJECT

Groundwater Seeps, Mitchell Deposit

Figure 4.2-3

Rescan
Engineers & Scientists

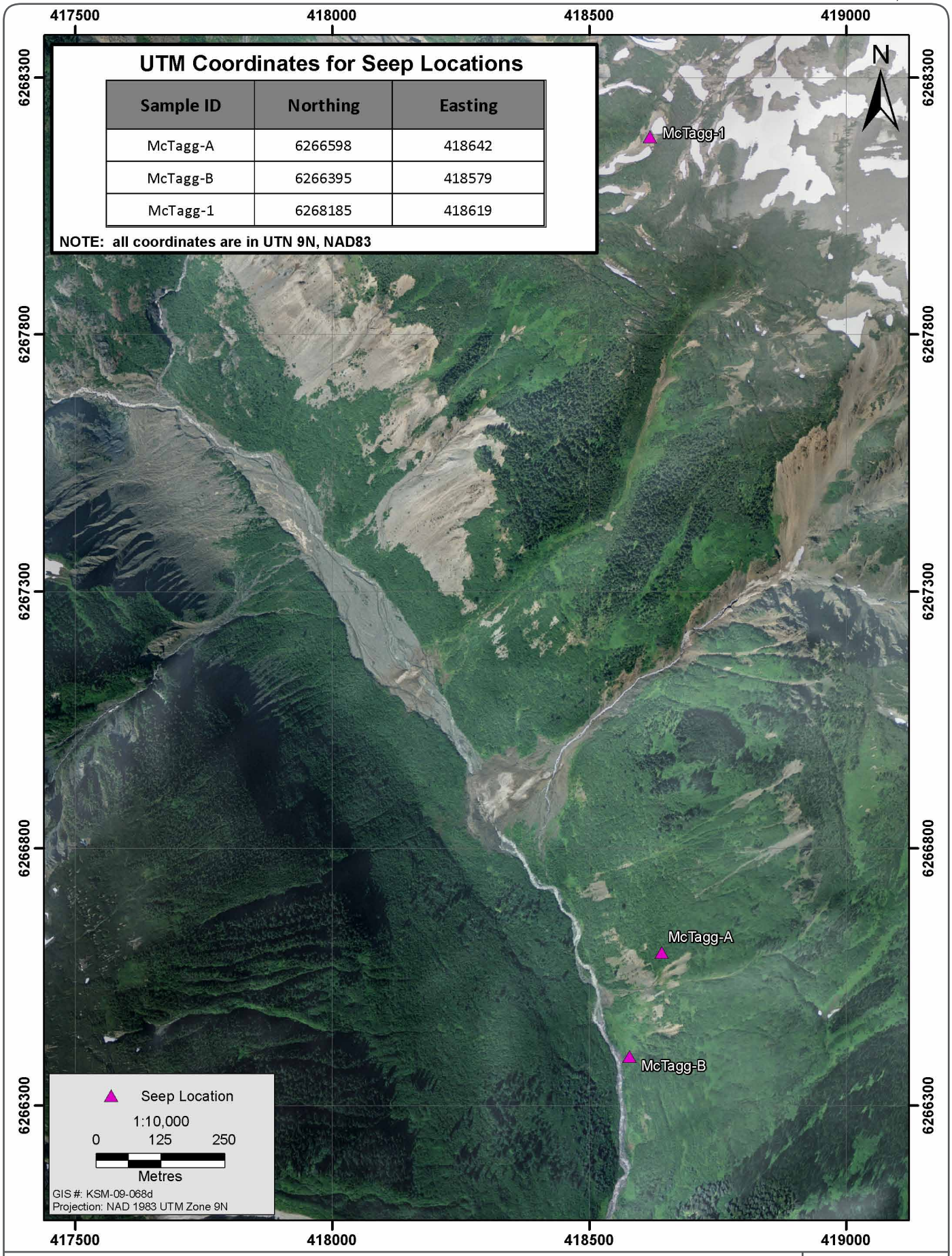
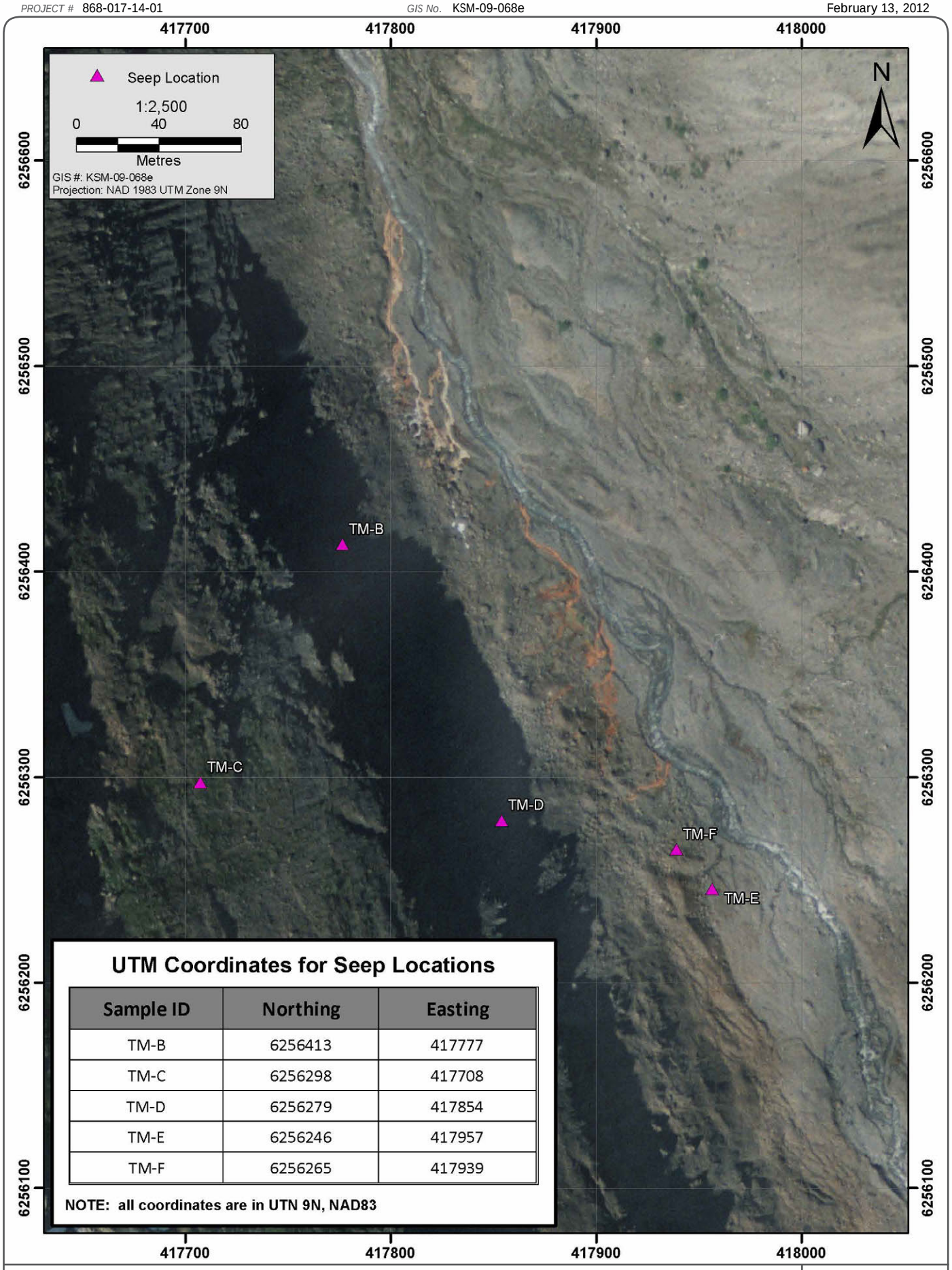


Figure 4.2-4

SEABRIDGE GOLD
KSM PROJECT

Groundwater Seeps, McTagg Creek Valley

Rescan
Engineers & Scientists



UTM Coordinates for Seep Locations

Sample ID	Northing	Easting
TM-B	6256413	417777
TM-C	6256298	417708
TM-D	6256279	417854
TM-E	6256246	417957
TM-F	6256265	417939

NOTE: all coordinates are in UTN 9N, NAD83

Figure 4.2-5

SEABRIDGE GOLD
KSM PROJECT

Groundwater Seeps, Ted Morris Creek Valley

Rescan
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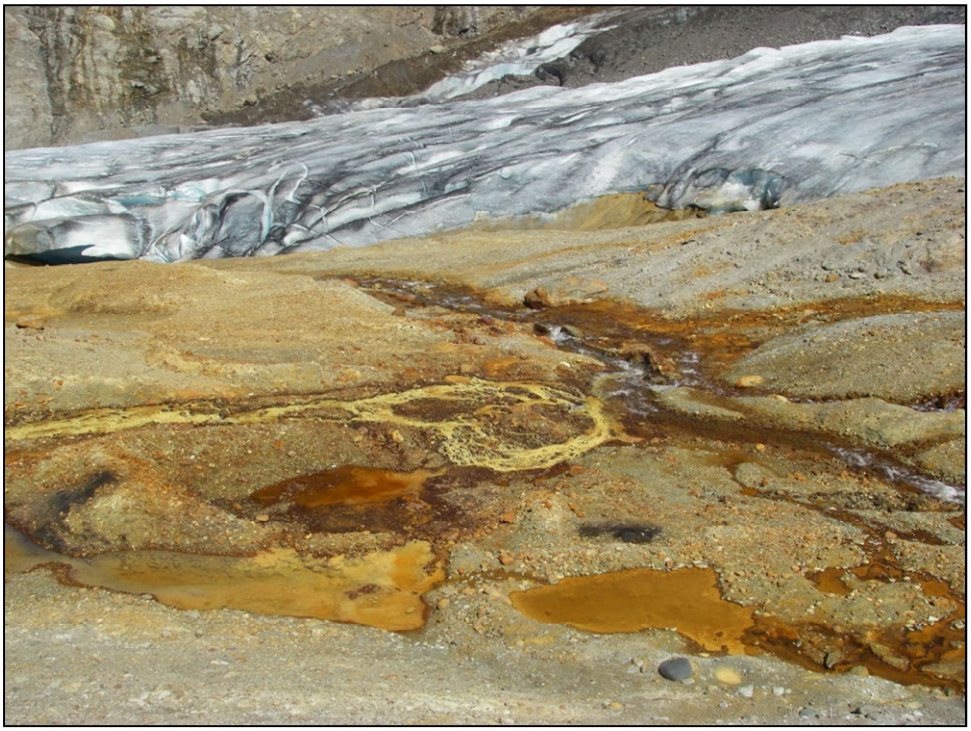


Plate 4.2-3. Area of Seep MS_G, July 2010.

When compared to humidity cells and field leach barrels, the seep water has reacted with a larger mass of rock for a longer period of time. In this regard, the seep water is expected to be a closer representation to the aqueous geochemistry that can be expected from the weathering of waste and pit wall rock over the life of the mine. The chemical composition of seep water will be influenced by the type and mass of reactive material encountered as well as the order in which different reactive materials are encountered (Morin and Hutt 1997). The seep water is a composite of water that has taken multiple flow paths where scales of reaction from mesoscale (path) and microscale (pore) reactions occur.

Groundwater seeps in and around the KSM Project area were sampled up to four times in 2009 (July, August, September, and October), up to three times in 2010 (June, July, and August), and four times in 2012 (July, August, September, and October). Data for two seeps collected in 2011 at the toe of the Mitchell glacier are included in the stream dataset in the KSM Project: 2007-2011 Surface Water Quality Baseline (Rescan 2012a).

4.2.3.1 Seep Flow Measurements

Flow rates were measured for seeps in September and October of 2009 and in July 2010 using a Swoffer meter to measure flow velocity directly or using a container of known volume and a stopwatch to estimate the rate of discharge.

4.2.3.2 Seep Water Sampling

Seeps were sampled as close to the source as possible to reduce the amount of atmospheric interaction. The parameters pH, dissolved oxygen (DO), conductivity, temperature and oxygen-reduction potential (ORP) were measured in the field with an YSI Multi-Parameter System (Model #556) that was calibrated daily. The values were recorded once they had stabilized. Aqueous samples were obtained by syringe and filtered with a 0.45 micron cellulose-nitrate filter and preserved with nitric acid for dissolved metals. Non-filtered samples were obtained for total metals, total organic carbon (TOC) and general

parameters (including pH, conductivity, and major anions). Total metals and TOC samples were preserved in the field with nitric and hydrochloric acids, respectively. All samples were refrigerated or stored on ice in a cooler and were shipped to a certified lab within one week of collection. Duplicate samples were obtained at a minimum 10% frequency.

4.3 STATIC TESTS

4.3.1 Sampling

Composites were prepared where required according to instructions provided. Rock samples were crushed to -9.52 mm. Each sample was mixed by passing through a ½ inch splitter box and recombined. A 200 g split was made and pulverized in a ring pulverizer to 80% -200 mesh. Splits of the pulverized sample were then submitted for analysis.

4.3.2 Acid-Base Accounting

ABA was conducted according to the Sobek NP procedure. The procedure is outlined in Price (2009): Approximately 0.5 g of sample was treated with 1 or 2 drops of 25% hydrochloric acid (HCl) to determine its "fizz rating", which determined the volume and normality of HCl to be used in the titration. A 2.0 g sample was then treated with the appropriate volume and normality of HCl by gentle heating until reaction was complete, followed by the addition of carbon-dioxide free de-ionized water and a one minute boiling period. The solution was covered tightly to cool, and then titrated with the appropriate normality of sodium hydroxide solution until the pH reading remained at 7.0 for at least 30 seconds.

4.3.2.1 Paste pH and Rinse pH

Paste pH was determined according to the procedure in Price (2009). Typically the sample was pulverized to <250 µm size or smaller and distilled water added at approximately 1:2 water to solid weight ratio. In the field the pulverized material frequently was not as fine as <250 µm. Paste pH was conducted on both lithified (drill core, bedrock, mine wall materials) and weathered non lithified samples. If samples had undergone weathering and sulphide oxidation prior to analysis, then paste pH values less than 6.0 were measured and indicated acidity was previously generated and net acidity stored within the sample.

Rinse pH was conducted on a dry sieve sorted <2 mm particle size fraction with no particle comminution. Distilled water was added at approximately 1:1 water to solid weight ratio.

4.3.2.2 Sulphur Species

A wide range of sulphide minerals have been identified in the deposit rock that have been subject to various levels of oxidation ranging from nil to extensive that result in numerous sulphur species being present. The sulphur species that occur include: sulphide-sulphur (e.g., pyrite), leachable sulphate-sulphur (e.g., gypsum or anhydrite), and non-leachable sulphate-sulphur (e.g., barite or elemental sulphur). Total-sulphur is an analytical measure that represents the sum of all sulphur species present.

Total-sulphur was determined by a Leco induction furnace method (Price 2009). In the Leco method, the furnace was operated at or above 1650^{o}C, and all sulphur species were volatilized. Leco systems used chemical filters to ensure accurate analysis and protect the instrument from damage. The sulphur dioxide generated from the sample was measured with an infrared (IR) detector. The total-sulphur content of the sample was calculated by the instrument and reported.

Sulphide-sulphur was determined directly by Leco induction furnace method (Price 2009) after the sulphates were removed by heating the sample in sodium carbonate solution. The insoluble carbonates

and sulphides were separated from the sulphates by filtration. The sulphide residue was subsequently washed free of carbonate solution and analyzed by a Leco analyzer.

Sulphide-sulphur was determined indirectly by subtraction of sulphate-sulphur species from total-sulphur.

Sulphate-sulphur was determined using two different procedures (Price 2009): hydrochloric acid (HCl) leach and carbonate leach.

In the HCl leach method, the sample was exposed to heated HCl for 30 minutes. Silica and acid-insoluble material were removed by filtration and ferric iron was reduced to ferrous iron by the addition of hydroxylamine hydrochloride. The sulphate in the resulting filtrate was then precipitated with barium chloride in a dilute HCl medium. The barium sulphate precipitate was filtered, ignited, weighed, and calculated as %S.

In the carbonate leach method, the sample was boiled with a sodium carbonate solution for 30 minutes. Any insoluble materials were removed by filtration and ferric iron was reduced to ferrous iron by the addition of hydroxylamine hydrochloride. The sulphate in the resulting filtrate was then precipitated with barium chloride in a dilute HCl acid medium. The barium sulphate precipitate was filtered, ignited, weighed, and calculated as %S.

4.3.2.3 Neutralization Potential

All samples, except the Treaty Creek Access Road samples, were analyzed by the Sobek NP.

Sobek "bulk neutralization potential" (NP) is based on digestion of the rock sample in a hot (near boiling) acid (HCl) bath. The amount of acid consumed was determined by back titration with sodium hydroxide (NaOH) to a pH endpoint of 7.0.

The estimation of unavailable NP, i.e the maximum NP that corresponds to a paste pH below 6.0, was used as a standard practice (Price 2009). Bulk Sobek NP is used in the estimation of the unavailable NP because there is a strong correlation between Bulk Sobek NP and calculated NP indicating that most of the NP of the deposits is provided by calcium carbonate minerals. Based on the relationship between paste pH and Bulk Sobek NP values, up to 15 kg $CaCO_3$/t of measured NP could be associated with acidic paste pH values. This value was derived from the complete 2008 to 2012 KSM Project static test database. The data indicate that the unavailable NP of 15 kg $CaCO_3$/t is valid for the Kerr, Mitchell, and Iron Cap Deposits. An unavailable NP of 8 kg $CaCO_3$/t is valid for the Sulphurets Deposit. The Rock Storage Facilities (RSFs) will be composed of a mix of alteration types and rocks from several deposits and therefore the conservative estimate of unavailable NP is applied across all deposits model codes. The neutralization potential was adjusted by this estimate of unavailable NP to calculate an adjusted neutralization potential (Adjusted NP or AdjNP; Price, 2009). The mean Adjusted NP values predictably decrease by approximately 15 kg $CaCO_3$/t; however, where neutralization potentials were below 15 kg $CaCO_3$/t, the adjusted neutralization potential was set to a default value of 0 kg $CaCO_3$/t.

The site-specific unavailable NP for the non-deposit materials at the KSM Project was determined to be:

- 8 kg $CaCO_3$/t in PTMA non-deposit samples;
- 9 kg $CaCO_3$/t in CCAR non-deposit samples; and
- 15 kg $CaCO_3$/t in Mine Site tunnels, Mitchell Pit, Sulphurets Laydown Area, and Sulphurets Pit non deposit samples.

4.3.2.4 Carbon Species

Total-carbon was determined by a Leco induction furnace method (Price 2009). In the Leco method, the furnace was operated at or above 1650°C, and all carbon species were volatilized. The carbon dioxide generated from the sample was measured with an infrared (IR) detector. The total carbon content of the sample was calculated by the instrument and reported.

Inorganic Carbon (CO_2) was determined by coulometry (Price 2009). A prepared sample (0.01 – 0.03 g) was acidified in a heated reaction vessel to evolve inorganic carbon as carbon dioxide. Carbon dioxide-free air was then used to move the evolved carbon dioxide into the CO_2 coulometer. In the coulometer, CO_2 was quantitatively absorbed and reacted with monoethanolamine to form a titratable acid, which caused the colour of the solution to fade. A photodetector was used to measure the change in colour as percent transmittance, and from this value µg of carbon dioxide was calculated.

4.3.2.5 Calculated Parameters

The list of the ABA calculated parameters is presented in Table 4.3-1.

Table 4.3-1. Table of Acid Base Accounting (ABA) Calculated Parameters

Parameter	Units	Calculation
Sulphide-sulphur ($S(S_2)CALC$)	%	%S(S2)CALC = total-sulphur - sulphate-sulphur
Barium-bound sulphate-sulphur ($S\text{-}BaSO_4$)	%	%$S\text{-}BaSO_4$ =Ba (ppm) x 0.0001 x 32.06/137.37
S-del (any analytically unaccounted for-sulphur forms)	%	S-del = %Total-Sulphur - %sulphide-sulphur - %leachable sulphate-sulphur(HCl leach) - %barium bound sulphate-sulphur
Total Acid Potential (TAP)	kg $CaCO_3$/t	TAP = %Total-Sulphur x 31.25
Sulphide Acid Potential (SAP)	kg $CaCO_3$/t	SAP = (%Sulphide-Sulphur + %del-Sulphur) x 31.25
Adjusted NP	kg $CaCO_3$/t	AdjNP = Sobek NP- Unavailable NP
Organic carbon (C-del-calc)	%	C-del-calc = % Total carbon - % Inorganic carbon
Total NP (CaNP-TTL)	kg $CaCO_3$/t	CaNP-TTL = %C x 10 x 100.09/12.01
Inorg NP (CANP-INORG)	kg $CaCO_3$/t	CaNP-Inorg = %CO_2 x 10 x 100.09/44.01
CaNP (CANP-CA)	kg $CaCO_3$/t	CANP-CA = (%Ca x 10000) x (100.09/40.08)/1000
CaMgNP (CANP-CAMG)	kg $CaCO_3$/t	CANP-CAMG = (%Ca+%Mg) x 10000) x (100.09/40.08)/1000
Total Net Neutralization potential (TNNP)	kg $CaCO_3$/t	TNNP = NP - TAP
Adjusted TNNP	kg $CaCO_3$/t	TNNP = Adjusted NP - TAP
Sulphide Net Neutralization Potential (SNNP)	kg $CaCO_3$/t	SNNP = NP - SAP
Adjusted SNNP	kg $CaCO_3$/t	SNNP = Adjusted NP - SAP
Inorganic Carbon Net Neutralization Potential (ICNNP)	kg $CaCO_3$/t	ICNNP = Inorganic CaNP - TAP
Total Net Potential Ratio (TNPR)	unitless	TNPR = Sobek NP / TAP
Adjusted TNPR	unitless	TNPR = Adjusted Sobek NP / TAP
Sulphide Net Potential Ratio (SNPR)	unitless	SNPR = Sobek NP / SAP
Adjusted SNPR	unitless	SNPR = Adjusted Sobek NP / SAP
Inorganic Carbon Net Potential Ration (ICNPR)	unitless	ICNPR = Inorganic CaNP / TAP

4.3.3 Whole Rock and Solid-Phase Elemental Analysis

The multi-element concentrations in the ML/ARD samples were measured by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS) analysis after strong four-acid digestion and by X-ray fluorescence spectroscopy (XRF) whole-rock analysis.

For total metals analysis, a prepared sample was digested with perchloric, nitric, hydrofluoric and hydrochloric acids. The residue was topped up with dilute hydrochloric acid and analyzed by inductively coupled plasma-atomic emission spectrometry. Following this analysis, the results were reviewed for high concentrations of bismuth, mercury, molybdenum, silver and tungsten and diluted accordingly. Samples meeting this criterion were then analyzed by inductively coupled plasma-mass spectrometry. Results were corrected for spectral inter-element interferences.

Some sample duplicates were analyzed for total metals by using aqua regia (3:1 mixture of hydrochloric and nitric acid) digestion followed by ICP-MS analysis. These results will not be further presented in this report.

Whole-rock analysis was performed by Lithium Metaborate Fusion followed by XRF Analysis for major oxides.

4.3.4 Mineralogy

The mineralogical analyses were performed by X-ray diffraction (XRD) analyses, petrographic examinations, and quantitative evaluation of minerals by scanning electron microscopy (QEMSCAN) analyses (tailing only).

The XRD analyses were carried out at the Department of Earth & Ocean Sciences, University of British Columbia (UBC) using a Bruker D8 Focus Bragg-Brentano diffractometer. The samples were reduced to the optimum grain size for quantitative X-ray analysis (<10 μm) by grinding under ethanol in a vibratory McCrone Micronising Mill for seven minutes. The X-ray diffractograms were analyzed using the International Centre for Diffraction Database PDF-4 and Search-Match software by Siemens (Bruker). X-ray powder-diffraction data of the samples were refined with Rietveld program Topas 4.2 (Bruker AXS). The results of quantitative phase analysis by Rietveld refinements represent the relative amounts of crystalline phases normalized to 100%.

The samples were forwarded to Vancouver Petrographics, where a 30 μm thick polished thin section of each sample was prepared. Petrographic descriptions were performed by Mineral Services Canada Inc. using a Nikon Eclipse E400 microscope equipped with transmitted and reflected light.

The mineralogical composition in tailing samples was also determined at G&T Metallurgical Services Ltd by using particle mineral analysis (PMA) techniques by QEMSCAN. Spectra for each mineral present, as well as back scatter micrographs for mineral phases of interest were also detected. The analysis was performed on unsized samples, but provided useful quantitative measurements of mineral content.

4.3.5 Particle Size Analysis

The particle size distribution of the tailing samples submitted for humidity cell tests was determined by wet sieving method (Mitchell tailing) and by laser diffraction method (Mitchell/Kerr Rougher, Mitchell/Sulphurets Rougher, and Iron Cap Rougher tailing) using the Malvern Mastersizer 2000 at the N.B. Keevil Institute of Mining Engineering, UBC.

4.4 KINETIC TESTS

Kinetic and leachate tests were designed to encompass water-to-rock ratios of 0.2 to 3.3 and water-material contact times of 1 to 120 days. This range represents the natural ranges found in the various RSF and TMF project components.

4.4.1 Humidity Cells

Humidity kinetic tests were performed according to the MEND Procedure (Price 2009). The waste rock humidity cells were made from acrylic tubing, with an 8 inch (20 cm) height and 4 inch (10 cm) diameter for a 1 kg sample. The cells had a fixed base plate with a leachate drainage hole fitted with a tubing nipple. Approximately one inch (2.5 cm) above the base, a perforated plexiglass plate was fitted to support the sample. The plate was covered with 6 layers of nylon mesh to prevent loss of fines while still allowing upward flow of air and downward flow of leachate. A hose nipple was fitted to the side wall below the support plate for the dry and humid air inlet. The cells were equipped with a removable lid with a central hole for an air outlet. The air inlets and leachate drains were equipped with suitable pinch valves. Tailing humidity cells are shorter and wider to allow timely fluid flow through the finer grained material.

Waste rock samples were crushed to 70 percent of <6 mm. Tailing material was added to the humidity cell without any additional crushing. One kilogram was split out from each sample and placed in a cell. For the initial leach cycle, 750 mL of nanopure water was added with the leachate drain closed. After one hour the cell was drained, the volume recorded and the leachate submitted for analysis.

Each cell was operated on a seven day cycle. For the first three days dry air was passed through the cell. Then for the next three days humidified air was passed through the cell from a humidifier. On the seventh day of the cycle the airflow was disconnected and the leaching cycle was repeated using 500 mL of nanopure water. The leachate volume was recorded and the sample submitted for analysis.

Analysis of the leachate included pH, conductivity, acidity, alkalinity, sulphate, and dissolved metals. The pH was measured using an Orion pH meter; conductivity was determined using a Fisher Scientific conductivity meter; acidity was determined by titration with base to an end point of either pH 4.5 (free acidity) or pH 8.3 (total acidity); alkalinity was determined by titration with an acid to an end point of pH 4.5.

Metal analysis on the leachate was conducted on a preserved sample by ICP-MS. Standard procedures were followed (APHA-AWWA-WEF 1998). Table 4.4-1 presents the detection limits for the metal analyses method.

A total of 40 laboratory humidity cells were initiated and operated to assess the ML/ARD properties of potential waste rock and pit wall rock from the Kerr, Mitchell, Sulphurets, and Iron Cap deposits of the proposed KSM Project. Eight of the humidity cells were initiated in February 2009, 26 were initiated in February and March 2010, and six were initiated in February 2011.

The humidity cells were constructed at ALS Environmental in Burnaby, BC, SGS Canada Inc. in Burnaby, BC and Maxxam Analytics in Burnaby, BC to provide temporal data to aid the prediction of future drainage chemistry from waste rock and pit wall rock.

Tables 4.4-2 present a summary of the KSM humidity cells characteristics. For the purpose of this discussion, the humidity cells have been divided by deposit and position relative to the MTF, and are further subdivided by model code (Section 4.6, M. Lechner, pers. comm.). The number of cycles of humidity cell operation presented here ranges from 57 to 163 weekly cycles.

Table 4.4-1. Detection Limits for the Metal Analyses Method in KSM Humidity Cells Leachate

Dissolved Metal	Realized Detection Limits	Dissolved Metal	Realized Detection Limits
Aluminum	0.01	Mercury	0.000001-0.01
Antimony	0.0001 - 0.01	Molybdenum	0.00001 - 0.0005
Arsenic	0.0002 - 0.005	Nickel	0.00002 - 0.005
Barium	0.0005	Phosphorus	0.002 - 0.3
Beryllium	0.00001 - 0.005	Potassium	0.5 - 2.5
Bismuth	0.00001 - 0.005	Selenium	0.0004 - 0.010
Boron	0.002 -0.3	Silicon	0.05
Cadmium	0.000003 -0.005	Silver	0.000005 - 0.0001
Calcium	0.05	Sodium	0.05 - 2.5
Chromium	0.0001 - 0.010	Strontium	0.01
Cobalt	0.01	Thallium	0.0001 - 0.010
Copper	0.0005 - 0.01	Tin	0.00001 - 0.010
Iron	0.002 - 0. 03	Titanium	0.0001 - 0.010
Lead	0.00002 - 0.0005	Tungsten	0.00001 - 0.00005
Lithium	0.01 - 0.01	Uranium	0.0000001- 0.0001
Magnesium	0.05	Vanadium	0.00003-0.05
Manganese	0.0005	Zinc	0.01 - 0.005

All units are in mg/L

Table 4.4-2. KSM Humidity Cells Characteristics

Humidity Cell Identification	Waste/Ore	Weeks Operated	Status
Kerr			
HC 20 KERR	-	115	Ongoing monthly sampling
HC 21 KERR	-	61	Cell Terminated
HC 22 KERR	-	115	Ongoing monthly sampling
HC 23 KERR	-	61	Cell Terminated
Sulphurets			
HC S-06-04 UP Hazelton	Waste	112	Cell Terminated
HC S-06-05 Overburden	Ore	163	Ongoing monthly sampling
HC 17 UP Hazelton	Ore	115	Ongoing monthly sampling
HC 18 Undefined	Waste	61	Cell Terminated
HC 19 Undefined	Waste	115	Ongoing monthly sampling
HC 24 Lower Au zone	Ore	56	Cell Terminated
HC 25 Lower Au zone	Marginal	110	Ongoing monthly sampling
Mitchell			
HC M-06-14 LP Hazelton	Ore	104	Cell Terminated
HC M-07-30 Monzonite	Waste	104	Cell Terminated
HC M-07-33 UP Hazelton	Waste	104	Cell Terminated
HC M-07-43 LP Hazelton	Ore	104	Cell Terminated
HC M-07-44 UP Hazelton	Ore	163	Ongoing monthly sampling

(continued)

Table 4.4-2. KSM Humidity Cells Characteristics (completed)

Humidity Cell Identification	Waste/Ore	Weeks Operated	Status
HC NM-05-03 Monzonite	Waste	104	Cell Terminated
HC 1 LP Hazelton	Ore	61	Cell Terminated
HC 2 UP Hazelton	Ore	115	Ongoing monthly sampling
HC 3 UP Hazelton	Ore	115	Ongoing monthly sampling
HC 4 UP Hazelton	Marginal	115	Ongoing monthly sampling
HC 5 LP Hazelton	Waste	115	Ongoing monthly sampling
HC 6 LP Hazelton	Waste	115	Ongoing monthly sampling
HC 7 LP Hazelton	Waste	115	Ongoing monthly sampling
HC 8 LP Hazelton	Marginal	115	Ongoing monthly sampling
HC 9 LP Hazelton	Ore	61	Cell Terminated
HC 10 UP Hazelton	Ore	115	Ongoing monthly sampling
HC 11 LP Hazelton	Ore	115	Ongoing monthly sampling
HC 12 LP Hazelton	Ore	115	Ongoing monthly sampling
HC 13 UP Hazelton	Marginal	61	Cell Terminated
HC 14 UP Hazelton	Waste	61	Cell Terminated
HC 15 Leach breccia/bornite breccia	Waste	61	Cell Terminated
HC 16 LP Hazelton	Waste	115	Ongoing monthly sampling
HC 26 LP Hazelton	Ore	110	Ongoing monthly sampling
Iron Cap			
HCT-1 IRON CAP	Waste	57	Ongoing monthly sampling
HCT-2 IRON CAP	Waste	57	Ongoing monthly sampling
HCT-3 IRON CAP	Waste	57	Ongoing monthly sampling
HCT-4 IRON CAP	Waste	57	Ongoing monthly sampling
HCT-5 IRON CAP	Ore	57	Ongoing monthly sampling
HCT-6 IRON CAP	Waste	57	Ongoing monthly sampling

The rationale for the selection of humidity cell samples was to achieve variability of leachate in PAG material of different lithologies and alterations. Table 4.4-3 present a summary of the KSM humidity representativity. The humidity cell leach rates represent the majority of the 2012 block model codes.

Original construction of the humidity cells was based on lithology and alteration codes from exploration drill logs, and the definition of model codes was updated in the ABA block model generated in 2011 and 2012 (Section 4.6).

4.4.2 Sub-Aerial Drip Columns

In March 2009, four laboratory columns were constructed using Mitchell Deposit drill core samples of the same deposit lithologies as were used for field leach barrels 1 to 4. The columns were operated for 88 weeks and terminated on November 24, 2010.

The purpose of these columns was to determine if aqueous concentrations would be obtained under laboratory controlled conditions that would approach and provide a comparison of aqueous concentrations obtained from full-scale site-specific field conditions in the field leach barrels. Waste rock from the Mitchell Deposit will dominate the chemistry of the RSF; therefore, only Mitchell Deposit material was selected for this test.

Table 4.4-3. KSM Waste Rock Representivity of Humidity Cells

	Percent of Total Waste Rock		Number of Humidity Cells		% Represented	
	SNPR ≤ 2	SNPR > 2	SNPR ≤ 2	SNPR > 2	SNPR ≤ 2	SNPR > 2
Kerr	99.2%	0.8%	4	0	**99.2%**	**0.0%**
Sulphurets						
Overburden	0.1%	2.1%	1	0	0.1%	0.0%
Au, Leach, Raewyn zones	4.6%	0.1%	0	0	0.0%	0.0%
Lower Au zone	9.5%	0.0%	2	0	9.5%	0.0%
LP Hazelton	5.2%	0.3%	0	0	0.0%	0.0%
UP Hazelton	5.5%	14.0%	1	1	5.5%	14.0%
Monzonite	1.5%	18.1%	0	0	0.0%	0.0%
Undefined	6.6%	32.4%	2	0	6.6%	0.0%
Total					**21.7%**	**14.0%**
Mitchell						
Overburden	1.5%	0.0%	0	0	0.0%	0.0%
UP Hazelton	58.9%	1.2%	8	0	58.9%	0.0%
LP Hazelton	15.8%	0.4%	12	0	15.8%	0.0%
Monzonite	2.4%	19.1%	0	2	0.0%	19.1%
Leach breccia/bornite breccia	0.4%	0.0%	1	0	0.4%	0.0%
Undefined	0.0%	0.0%	0	0	0.0%	0.0%
Total					**75.1%**	**19.1%**
Iron Cap	100.0%	0.0%	6	0	**100.0%**	**0.0%**

4.4.2.1 Sample Selection

In September 2008, four field kinetic barrels, Barrels 1 through 4, were constructed. These barrels are composites of split drill core of different lithologies: porphyritic monzonite or syenite, andesite, undifferentiated sediments and volcanics of unknown protolith. The material in these barrels represents material from the proposed Mitchell Pit highwall above the MTF. Material was chosen as an intermediate step between humidity cells and field kinetic barrels for scaling purposes for high wall Subsamples of composited material used to create the four field kinetic barrels were collected and used to construct four laboratory sub-aerial drip columns.

4.4.2.2 Methodology

The laboratory sub-aerial drip column dimensions were 12.8 cm inside diameter by 38.0 cm high and filled with 5.0 kg of drill core crushed to 0.635 cm with minimal fines.

The columns were operated by maintaining a constant feed reservoir of 3,000 mL of deionized water. During each weekly cycle, deionized water was dripped at a constant rate into the top of the columns. The quantity of water recovered each week from the bottom of the column varied from a minimum of 2,680 to a maximum of 3,000 mL. Once sufficient leachate was collected for physical measurements and analysis, the remaining leachate was recirculated back into the feed reservoir. Therefore the leachate chemistry reflects a cumulative loading from successive cycles of flushing through the rock in the column. It should be noted that a small amount of dilution occurred each cycle as the feed reservoir was replenished with additional deionized water to make up the feed solution to 3,000 mL.

The amount of leachate used for weekly analyses was dependent on the leachate volume recovered and the parameter suite analyzed. Initially, weekly analysis of a full suite of parameters was conducted. From week 33 to week 59, a full suite of parameters was analyzed weekly, after which full analysis was reduced to a monthly frequency, with intermediate weeks consisting of pH and conductivity measurements. The changes in analytical frequency were made in response to column geochemical behaviour: either steady trends with no significant changes or continuing temporal changes.

4.4.3 Field Leach Barrels

Eighteen field leach barrels were constructed at the KSM Camp to provide field kinetic test data for the prediction of future mine drainage chemistry that includes primary mineral weathering, secondary mineral precipitation and dissolution (Price 1997), from waste rock and pit walls in the proposed KSM Project mine site. The barrels represent scaled-up leach tests that are conducted under site-specific field conditions (Morin and Hutt 1997). In the barrels, temperatures and water-rock ratios are generally lower than laboratory tests and exhibit seasonal fluctuations. The barrels contain more material (100's of kg) than corresponding laboratory humidity cells (1 kg) and rely on meteoric water flushing to generate leachate. The material in the barrels is coarser (minus 2.54 cm) than in the humidity cells (minus 0.63 cm), resulting in a lower reactivity per unit volume due to decreased surface area.

The barrels were constructed using either 200 L (Barrels 1-13, 18) or 100 L (Barrels 14-17) HDPE barrels with a 5.08 cm PVC outlet pipe and 19 L leachate collection buckets (Plate 4.4-1). Field kinetic barrels 1-17 were filled with split drill core or rock outcrop samples as follows:

- Barrels 1-4: Mitchell Deposit lithologies from above the Mitchell Thrust Fault;
- Barrel 5: Mitchell Deposit pit wall composite from below the Mitchell Thrust Fault;
- Barrels 6-13, and 17: Alteration types for the Mitchell, Sulphurets and Kerr Deposits; and
- Barrels 14-16: Highwall outcrop material from Mitchell and Sulphurets Deposits.



Plate 4.4-1. Photo of initial field kinetic barrel set-up.

Barrel 18 is a blank (or control) barrel that was constructed in September 2010 to quantify the chemistry of meteoric input water and ensure that the barrel construction materials are not contributing significantly to the leachate chemistry. An Iron Cap field barrel was not established due to the relatively small volume of waste rock expected to be produced from the Iron Cap deposit compared to the other three deposits due to block caving. Waste rock chemistry will be dominated by waste rock from the Mitchell deposit.

Barrels 1 through 4 were constructed in September of 2008. These barrels are composed of split drill core of different lithologies: porphyritic monzonite or syenite, andesite, undifferentiated sediments and volcanics of unknown protolith. The material in these barrels represents the rock that will be exposed in the proposed Mitchell Pit (MP) highwall above the Mitchell Thrust Fault. Barrel 5 was constructed in August 2009 and contains split drill core representing a composite of different alteration types intersecting the pitwall of the proposed Mitchell Pit (MP) below the Mitchell Thrust Fault. Due to the obscuring of the primary protolith lithologies in the deposits by intense alteration, seven field kinetic barrels were constructed from split drill core samples of different alteration types in September 2009. These barrels are composed of: intermediate argillic, silica flooding, pervasive silicification, silicification due to hornfelsing, silica flooding, chlorite alteration and potassic alteration. Barrels 13-17 were constructed in September 2010 with material obtained from rock outcrop from the Mitchell and Sulphurets Deposits. The material in Barrels 13 and 17 represent weathered “gossan” of intermediate argillic or phyllic alteration-type from the Mitchell Deposit. Barrels 14-16 are composite outcrop samples of Sulphurets, Mitchell North and Mitchell South highwall rock, respectively.

Table 4.4-4 summarizes the construction date, lithologies, primary alteration type and height of material contained within each field kinetic barrel. In all cases, the source of material in the barrel is denoted with the first letter of the deposit from which it was obtained. For example, Barrel 7 contains intermediate argillic altered material from the Mitchell Valley and is labelled M-IARG.

Barrels 1 to 12 were modified in September 2010 in order to increase the reactivity of the split drill core material (i.e., increase (reactive) surface area) following the advice provided by an external peer reviewer. Prior to modification, the material in the barrels was split core predominantly ranging in length from approximately 10 to 50 cm but also containing “fines” collected from the drill core boxes when sampled. The modifications consisted of:

- physically breaking the drill core splits into smaller sizes (i.e., minus 2.5 cm);
- adding air ports consisting of three sections of 5.08 cm slotted PVC well screen to ensure material at depth in the field kinetic barrels was well oxygenated;
- securing geotextile to the inlet of the outlet pipe to stop fine particulate matter escaping; and
- placing a layer of silica sand on the bottom of the field kinetic barrel to the top of the inlet pipe to raise the drill core material out of any standing water and covering the sand with geotextile.

A photo of the barrel reconfigurations is shown in Plate 4.4-2.

During the construction of the barrels, solid samples were obtained for ABA and solid-phase elemental concentration analysis consisting of ICP-MS elemental and whole rock oxide analyses. The number of samples (core intervals) obtained, ranged from a minimum of nine samples for Barrel 3, M-SEDS to a maximum of 57 samples from Barrel 7, M-IARG. Static testing of samples for barrels constructed in September 2010 was not completed.

Table 4.4-4. KSM Field Leach Barrels Characteristics

	Construction Date	Zone	Material	Lithology	Alteration	Deposit Code	Barrel Size	Material Height (cm)
Barrel 1	September-08	Mitchell	Drill core	Porphyritic monzonite/syenite	Chlorite alteration Pervasive silicification Hematization of intrusives	Monzonite UP Hazelton	200 L	79
Barrel 2	September-08	Mitchell	Drill core	Andesite	Silicification due to hornfelsing Chlorite alteration	UP Hazelton Monzonite	200 L	79
Barrel 3	September-08	Mitchell	Drill core	Undifferentiated sediments	Silicification due to hornfelsing Pervasive silicification	UP Hazelton Monzonite	200 L	79
Barrel 4	September-08	Mitchell	Drill core	Volcanic, unknown protolith	Phyllic alteration Intermediate argillic Chlorite alteration	LP Hazelton UP Hazelton	200 L	79
Barrel 5	August-09	Mitchell	Drill core	Volcanic, unknown protolith Unknown tuff	Chlorite alteration Phyllic alteration	LP Hazelton Bornite breccia/leach breccia	200 L	63
Barrel 6	September-09	Mitchell	Drill core	Volcanic, unknown protolith	Chlorite alteration	LP Hazelton	200 L	60
Barrel 7	September-09	Mitchell	Drill core	Unknown tuff	Intermediate argillic	LP Hazelton	200 L	64
Barrel 8	September-09	Mitchell	Drill core	Porphyritic monzonite/syenite	Silicification due to hornfelsing Pervasive silicification Silica flooding	UP Hazelton LP Hazelton Monzonite	200 L	72
Barrel 9	September-09	Kerr	Drill core	Volcanic, unknown protolith	Intermediate argillic	Kerr	200 L	78
Barrel 10	September-09	Sulphurets	Drill core	Volcanic, unknown protolith Porphyritic monzonite/syenite	Silicification due to hornfelsing Pervasive silicification	Monzonite Lower Au zone Au, leach, Sulphurets zone LP Hazelton UP Hazelton	200 L	40

(continued)

Table 4.4-4. KSM Field Leach Barrels Characteristics (completed)

	Construction Date	Zone	Material	Lithology	Alteration	Deposit Code	Barrel Size	Material Height (cm)
Barrel 11	September-09	Sulphurets/ Kerr	Drill core	Volcanic, unknown protolith Porphyritic monzonite/syenite Andesite ash tuff	Chlorite alteration Phyllic alteration	Sulphurets undefined Kerr UP Hazelton LP Hazelton Au, leach, Sulphurets zone	200 L	40
Barrel 12	September-09	Mitchell	Drill core	Porphyritic monzonite/syenite	Potassic alteration	UP Hazelton	200 L	34
Barrel 13	September-10	Mitchell	Outcrop	Mitchell gossan	Intermediate argillic	LP Hazelton	200 L	22
Barrel 14	September-10	Sulphurets	Outcrop	Sulphurets highwall composite		UP Hazelton	100 L	25
Barrel 15	September-10	Mitchell	Outcrop	Mitchell North highwall composite		UP Hazelton	100 L	21
Barrel 16	September-10	Mitchell	Outcrop	Mitchell South highwall composite		UP Hazelton	100 L	30
Barrel 17	September-10	Mitchell	Outcrop	Mitchell gossan	Phyllic alteration	LP Hazelton	100 L	33
Barrel 18	September-10	-	-	-	-		200 L	0



Plate 4.4-2. Photo of field kinetic barrel reconfiguration.

The barrel leachate was sampled monthly from July to November in 2009, June to September in 2010, and June to October in 2011. Barrel leachate will be sampled from June to October 2012. The data from July 2009 to October 2011 are presented here. Subsequent results will be reported separately and used to verify and confirm these results and predict mine site drainage and aqueous chemistry at a field scale.

The parameters pH, dissolved oxygen (DO), conductivity, temperature and oxygen-reduction potential (ORP) were measured in the field with an YSI Multi-Parameter System (Model #556) that was calibrated daily. The values were recorded once they had stabilized. Aqueous samples were obtained by syringe and filtered with a 0.45 micron cellulose-nitrate filter and preserved with nitric acid for dissolved metals. Non-filtered samples were obtained for total metals, total organic carbon (TOC) and general parameters. Total metals and TOC samples were preserved in the field with nitric and hydrochloric acids, respectively. Samples were refrigerated or stored on ice in a cooler and were shipped to a certified lab in Vancouver within one week of being collected. Duplicate samples were obtained at a minimum 1 in 10 frequency.

4.4.4 Aging Tests

Tailing aging tests, where the tailing and its supernatant were allowed to age over 30 to 120 days, were carried out on the Mitchell Rougher, Rougher/Sulphide and Sulphide tailing. The tailing combinations reflect that given the size and duration of projected mining of the Mitchell deposit, Mitchell tailing geochemistry will be dominant compared to the other deposits.

The supernatants were analysed at days 0, 7, 14, 30, 60, 90, and 120 for conductivity, pH, acidity (as $CaCO_3$), alkalinity total (as $CaCO_3$), bromide, chloride, fluoride, nitrite, nitrate, sulphate, and dissolved metals.

4.4.5 Subaqueous Columns

Subaqueous column tests were undertaken on the following tailing samples with the purpose of evaluating the geochemical behaviour of tailing submerged under water:

- Mitchell Rougher;
- Mitchell Rougher/Sulphide;
- Mitchell Sulphide;
- Mitchell/Kerr Rougher; and
- Mitchell/Sulphurets Rougher.

The subaqueous columns consisted of cylindrical Plexiglas™ plastic cells (12.5 cm inside diameter by 48.3 cm long). A five kilogram sample of tailing solid of each type described above was placed in individual subaqueous columns and covered by 14 cm of de-ionized water at all times. The placed tailing solids created a column approximately 22.9 cm to 25.4 cm high. The column was loosely covered with a Plexiglas™ plastic plate that had a 0.6 cm hole in the middle for the weekly addition of make-up de-ionized water to replace the volume of water sampled. No air flow was forced over the cover water.

During each weekly sampling cycle, 250 ml of the pore water was extracted through a valve situated at the base of the columns, using a vacuum. This procedure took between one and four hours depending on the particle size of the tailing sample. In addition, 250 ml of cover water was collected using a second valve located approximately 0.6 cm above the tailing solid top. After the weekly water sampling was completed, approximately 500 ml of de-ionized water was slowly added to the top of the column in order to keep the surface water cover constant at 14 cm of above the tailing solids. The weekly sampling procedure and sample analyses were the same as for the tailing humidity cells. The following analyses were conducted:

- Conductivity, pH, acidity (as $CaCO_3$), alkalinity total (as $CaCO_3$), bromide, chloride, fluoride, nitrite, nitrate, sulphate; and
- Dissolved metals: aluminum, antimony, arsenic, barium, beryllium, bismuth, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, mercury, molybdenum, nickel, phosphorus, potassium, selenium, silicon, silver, sodium, strontium, thallium, tin, titanium, uranium, vanadium, zinc.

A photograph of a typical subaqueous column test setup is shown in Plate 4.4-3.

4.5 LEACHATE TESTS

Several leachate tests were performed on samples from the KSM Project. Leachate tests include:

- soluble constituents analysis (as part of elemental analysis) in the non-deposit overburden and rock by:
  - Leachate extraction using the shake flask extraction (SFE);
  - Selective-dissolution analysis by sequential extraction using the Meteoric Water Mobility Procedure (MWMP); and
- Net Acid Generation (NAG) procedures on the deposit waste rock.

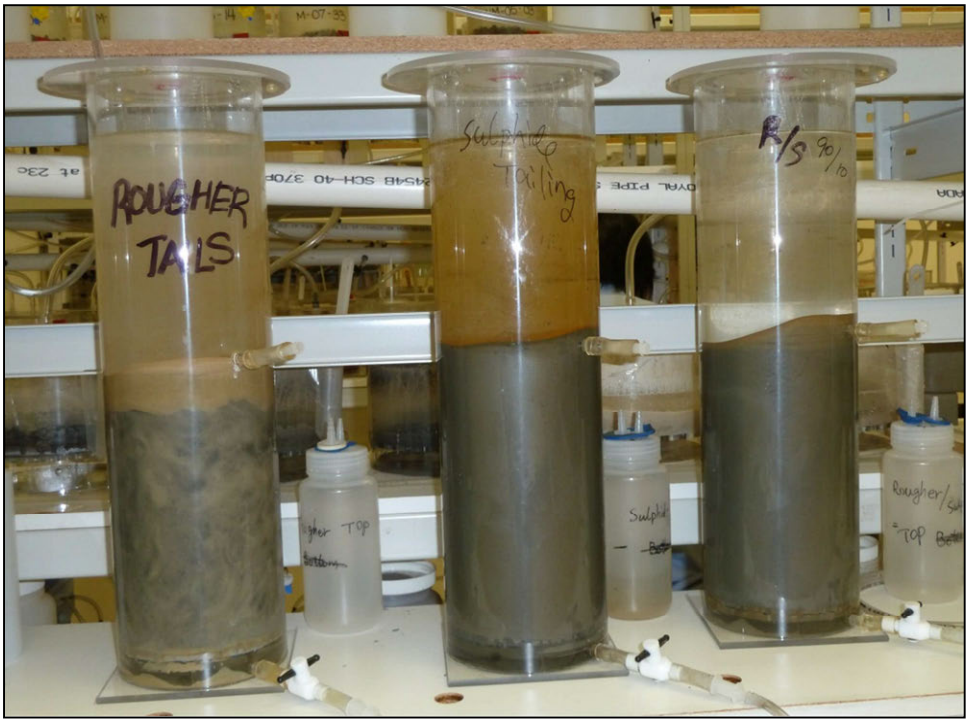


Plate 4.4-3. Photo of subaqueous column kinetic test configuration.

4.5.1 Leachate Extraction

The analysis for soluble constituents was carried out by leachate extraction using the SFE procedure (Price 2009). The shake flask extraction tests were undertaken using a 3:1 water to solids ratio and shaken for 24 hours

The purpose of the MWMP is to evaluate the potential for dissolution and mobility of certain constituents from a non-deposit rock sample by meteoric water. The procedure consists of a single-pass column leach over a 24 hour period using a mine rock sample to extraction fluid (effluent) ratio of 1:1. The extraction fluid is Type II reagent grade water.

4.5.2 NAG Procedures

NAG tests use hydrogen peroxide (H_2O_2), a strong oxidizing agent capable of rapidly oxidizing sulphide minerals, to assess whether a sample is capable of neutralizing the potential acidity.

A preliminary two-cycle sequential NAG test (Price 2009) was performed on 84 samples of deposit rock from the Kerr, Sulphurets, and Mitchell Deposits to determine the volumes of hydrogen peroxide needed to reach a complete sulphide oxidation. A single addition NAG test (Price 2009) was carried out on a sub-set of 49 samples using the volumes of hydrogen peroxide determined by the two-cycle tests. The results from the modified single addition NAG were used to identify potentially acid-forming (PAF) and not acid-forming (NAF) material and the percentage of metals associated with sulphide-mineral phases.

In the two-cycle NAG tests, 2.5 g of sample was reacted two times with 250 mL aliquots of 15% hydrogen peroxide. At the end of each stage, the sample was filtered and the solution was used for measurements of NAG pH and NAG acidity. The resulting solid residue was rinsed with deionized water to remove any excess of unreacted hydrogen peroxide. The rinsed solid residue was then filtered and the liquor was discarded. The NAG test was then repeated on the solid residue.

In the modified single addition NAG test, 2.5 g of sample was reacted with a determined volume of 15% hydrogen peroxide. The hydrogen peroxide volumes ranged from 500 mL to 3000 mL.

In both the two-cycle and single addition procedures:

- The NAG liquor was analyzed for pH, conductivity, sulphate, acidity, fluoride (SIE), chloride (IC), and dissolved metals (ICP-MS).
- The NAG solid residue was analysed for total-sulphur (by Leco), sulphide-sulphur (Na_2CO_3 Leach method), and total metals using four-acid digestion followed by ICP-MS ICP.

4.6 GEOLOGIC AND ABA BLOCK MODEL

Acid-base accounting (ABA) block models for the KSM Project were constructed by Mike Lechner, of Resource Modeling Inc., in 2010 and 2011. The ABA block models were constructed with data collected from relatively widely spaced drill holes from materials thought to be representative of "ore", "low-grade", and "waste". The resolution of individual model blocks is 25 m x 25 m x 15 m. An ABA block model is not required to characterize the ML/ARD potential of waste material. However, the block model allows for mapping of large zones of material that have similar ML/ARD potential and can allow segregation in the waste rock schedule. Planning the waste rock schedule based on the ABA block model allows for effective modelling of hauling and dumping costs of material that can be segregated. A general outline of the method used to generate the ABA block model is given below (M. Lechner [pers. comm.]):

> *"The ABA models are based on samples that were selected by Rescan employees which were collected from existing drill hole assay pulps. Basic descriptive statistics were tabulated for sulphide acid potential (SAP), adjusted neutralization potential (NPADJ), total sulphur, and sulphide sulphur based on block model codes, alteration types, degree of mineralization, and stratigraphic position relative to major thrust faults.*
>
> *The models were constructed using three distinct methods: 1) direct assignment of ABA values to blocks "pierced" by ABA samples; 2) two-pass inverse distance estimation methods and 3) assignment of ABA values based on average values calculated by rock/alteration/mineralization type. Individual model blocks which were pierced by an ABA sample were assigned neutralization potential (NP) and sulphide acid potential (SAP) values from those samples and flagged as being estimated and off limits for subsequent estimation methods. After that ABA assignment was completed, a two pass inverse distance estimation method was implemented. The first pass used a 100 m x 100 m x 60 m search ellipse to locate eligible ABA samples. A minimum of one sample was required with a maximum of eight samples used to interpolate NP and SAP values. Blocks estimated by this method were flagged as being estimated and not subjected to subsequent estimates. The second estimation pass used a 200 m x 200 m x 120 m search ellipse with the same sample selection used for the first pass. Strict block/sample matching was used in both inverse distance estimation passes. This means that blocks of a certain rock type could only be estimated by samples with the same rock type. Unique search ellipse orientations were used for the Kerr, Sulphurets, and Mitchell zones [including Iron Cap]. A minimum of one sample was required, with a maximum of eight samples allowed with no more than two samples from each drill hole. An inverse distance weighting power of two was selected.*
>
> *For blocks beyond 200 m of ABA sample data, class average values were assigned to blocks based on rock, alteration, or mineralization codes. The average values for NP*

and SAP for these static samples are influenced by mineralization intensity. Typically, as gold and/or copper grades increase NP values decrease and SAP values increase. Commingling mineralized and unmineralized ABA samples has provided a certain degree of conservatism since most of the mineralized material will be processed and not sent to a waste rock disposal area.

After the estimate and assignment of block ABA values was completed, a simple ratio (SNPRA) was calculated. This ratio is based on neutralization potential (NPADJ) divided by acid potential (SAP). Blocks with ratios greater than 2.0 were considered to be acid neutral while all other blocks are considered to have the potential of being acid generating."

Table 4.6-1, below, lists the different rock model codes that are used in this report. These are the same codes that Seabridge and engineering design firms will be using, allowing for more efficient cross-discipline communications. Included in the table are the 2011 block codes and a linkage between the two model code versions. This linkage is not definitive but represents the most common conversion pathway between the two versions of the block model.

4.7 METHODS USED TO CALCULATED DEPLETION TIMES AND ARD ONSET

The leachate concentrations and initial concentrations in the solid phase were used to calculate the depletion rates of sulphide, bulk Sobek NP, and carbonate NP to estimate the depletion times and the onset of ARD. The leachate concentrations have reached a steady state, therefore the data from the last 10 weekly cycles are used for the calculation of the mean production rates.

Sulphide depletion time was calculated as follow:

$$Sulphide\ Depletion\ \ (Years) = Remaining\ Sulphide\ (mmol/kg) / Mean\ Rate\ of\ Sulphur\ Depletion\ per\ week\ (based\ on\ last\ 10\ weeks) * 52$$

$$Remaining\ Sulphide\ (mmol) = Initial\ Sulphide\ (Sulphide + Del)(mmol) - Total\ Sulphur\ Lost\ (mmol)$$

$$Mean\ Rate\ of\ \ Sulphur\ Depletion\ per\ week\ (based\ on\ last\ 10\ weeks)\ (mmol/kg) = Sum\ of\ Sulphur\ Production\ Rate\ over\ last\ 10\ weeks/10\ weeks$$

$$Total\ Sulphur\ Lost\ (mmol/kg) = Sum\ of\ Sulphur\ Production\ Rate(mmol/kg)$$

$$Sulphate\ Production\ Rate\ (mg/kg) * (32.06/96.06)/1000 = SulphurProduction\ Rate\ (g/kg)/32.06 * 1000 = SulphurProduction\ Rate(mmol/kg)$$

Bulk Sobek NP and Carbonate NP depletion time was calculated as follow:

$$Bulk\ Sobek\ NP\ Depletion\ \ (Years) = (Remaining\ Bulk\ Sobek\ NP\ ((mmol/kg)) /(Mean\ Rate\ of\ \ NP\ Depletion\ per\ week\ (based\ on\ last\ 10\ weeks)\ ) * 52$$

$$Remaining\ Bulk\ Sobek\ NP\ (mmol) = Initial\ Adjusted\ Bulk\ Sobek\ NP\ (Bulk\ Sobek\ NP\ as\ Ca)(mmol) - Total\ \ NP\ Lost\ (mmol)$$

$$Carbonate\ NP\ Depletion\ \ (Years) = (Remaining\ Carbonate\ NP\ ((mmol/kg)) /(Mean\ Rate\ of\ NP\ Depletion\ per\ week\ (based\ on\ las\ 10\ weeks)\ ) * 52$$

Table 4.6-1. Block Model Codes and Associated Descriptions

2011 Block Model Codes	Description	2012 Block Model Codes	Description
Kerr			
KERR	All of the Kerr Deposit	KERR	All of the Kerr Deposit
Sulphurets			
		Overburden	≥ 50% soil or glaciofluvial material
HAZVOLC_HW	Default Sulphurets material above STF	UP Hazelton	Default Sulphurets material above STF
MCMONZ	Monzonite above and below MTF	Monzonite	Monzonite above and below MTF and SFT
HAZVOLC_FW	Default Sulphurets material below STF	LP Hazelton	Default Sulphurets material below STF
LWSUL_AU	Ore	Lower Au zone	Sulphurets low-grade ore zone
LEACH_AU	Ore	Au, Leach, Raewyn zones	Default for Sulphurets ore zones
RAEWYN_CU	Ore		
SULPH_AU	Ore		
Mafic	Minor mafic dikes		
Uncategorized	Default for edge effect or minor units below MTF	Undefined	Default for edge effects or minor units
Mitchell			
		Overburden	≥ 50% soil or glaciofluvial material
SW Monzonite UP	Monzonite above MTF south of Mitchell Creek	Monzonite	Monzonite above or below MTF on north or south side of Mitchell Creek
NM Monzonite UP	Monzonite above MTF north of Mitchell Creek		
SW Hazelton UP	Everything else above MTF south of Mitchell Creek, also known as 'Hornfels Upper'	UP Hazelton	Default material above MTF on north or south side of Mitchell Creek
NM Hazelton UP	Everything else above MTF north of Mitchell Creek, also known as 'Hornfels Upper'		
IARG LP	Intermediate argillic below MTF	Leach breccia/bornite breccia	Mitchell ore zone
QSP LP	Quartz-sericite-pyrite below MTF	LP Hazelton	Default material below MTF on north or south side of Mitchell Creek
HIGHQTZ LP	High quartz below MTF		
CL-PR LP	Chlorite-propylitic below MTF		
Uncategorized LP	Default for edge effect or minor units below MTF, also known as 'Hornfels Lower'	Undefined	Default for edge effects or minor units
Iron Cap			
IRON CAP	All of the Iron Cap deposit	IRON CAP	All of the Iron Cap deposit

$$\begin{aligned}&Remaining\ Carbonate\ NP\ (mmol)\\&\quad = Initial\ NP(NP\ as\ Total\ Inorganic\ Carbon)(mmol) - Total\ NP\ Lost\ (mmol)\end{aligned}$$

$$\begin{aligned}&Mean\ Rate\ of\ \ NP\ Depletion\ per\ week\ (based\ on\ last\ 10\ weeks)(mmol/kg)\\&\quad = Mean\ of\ Calcium\ \ Production\ Rate\ over\ last\ 10\ weeks(mmol/kg)\\&\quad + Mean\ of\ Magnesium\ \ Production\ Rate\ over\ last\ 10\ weeks(mmol/kg)\end{aligned}$$

$$\begin{aligned}&Total\ \ NP\ Lost\ (mmol/kg)\\&\quad = Sum\ of\ Calcium\ Production\ Rate(mmol/kg)\\&\quad +\ Sum\ of\ Magnesium\ Production\ Rate(mmol/kg)\end{aligned}$$

5. Deposit Waste Rock Results

5.1 STATIC TESTS

This section describes the geochemical characteristics of the KSM Project waste rock and its potential for ML/ARD based on the geochemical static test analysis results.

This report includes all the static tests results from 2008 to July 2012 including the previous static results presented in the KSM 2008 Baseline Report (Rescan 2009). The ABA and solid-phase elemental analysis were conducted on a total of 166 samples from the Kerr Deposit, 371 samples from the Sulphurets Deposit, 928 samples from the Mitchell Deposit and 356 samples from the Iron Cap deposit.

The distribution of the samples by deposits was:

- 305 samples from Kerr Deposit (127 ore samples and 178 waste rock samples);
- 432 samples from Sulphurets Deposit (162 ore samples, 270 waste rock samples);
- 936 samples from Mitchell Deposit (463 ore samples, 473 waste rock samples); and
- 356 samples from the Iron Cap Deposit (160 ore samples, 196 waste rock samples)

5.1.1 Kerr Deposit

The ABA and solid-phase elemental analyses were conducted on a total of 305 samples from the Kerr Deposit (293 drill core samples and 12 pulp samples from drill core samples). Detailed results of the static tests and statistical summaries for the Kerr Deposit are presented in Appendix 5.1-1.

The ABA and solid-phase elemental analyses were conducted on a total of 166 samples from the Kerr Deposit. Detailed results of the static tests and statistical summaries for the Kerr Deposit are presented in Appendix 5.1-1.

5.1.1.1 Paste pH

The paste pH of 305 Kerr Deposit samples ranged from a minimum of 3.3 to a maximum of 9.6, with a mean of 7.4 and a median of 7.7 (Figure 5.1-1).

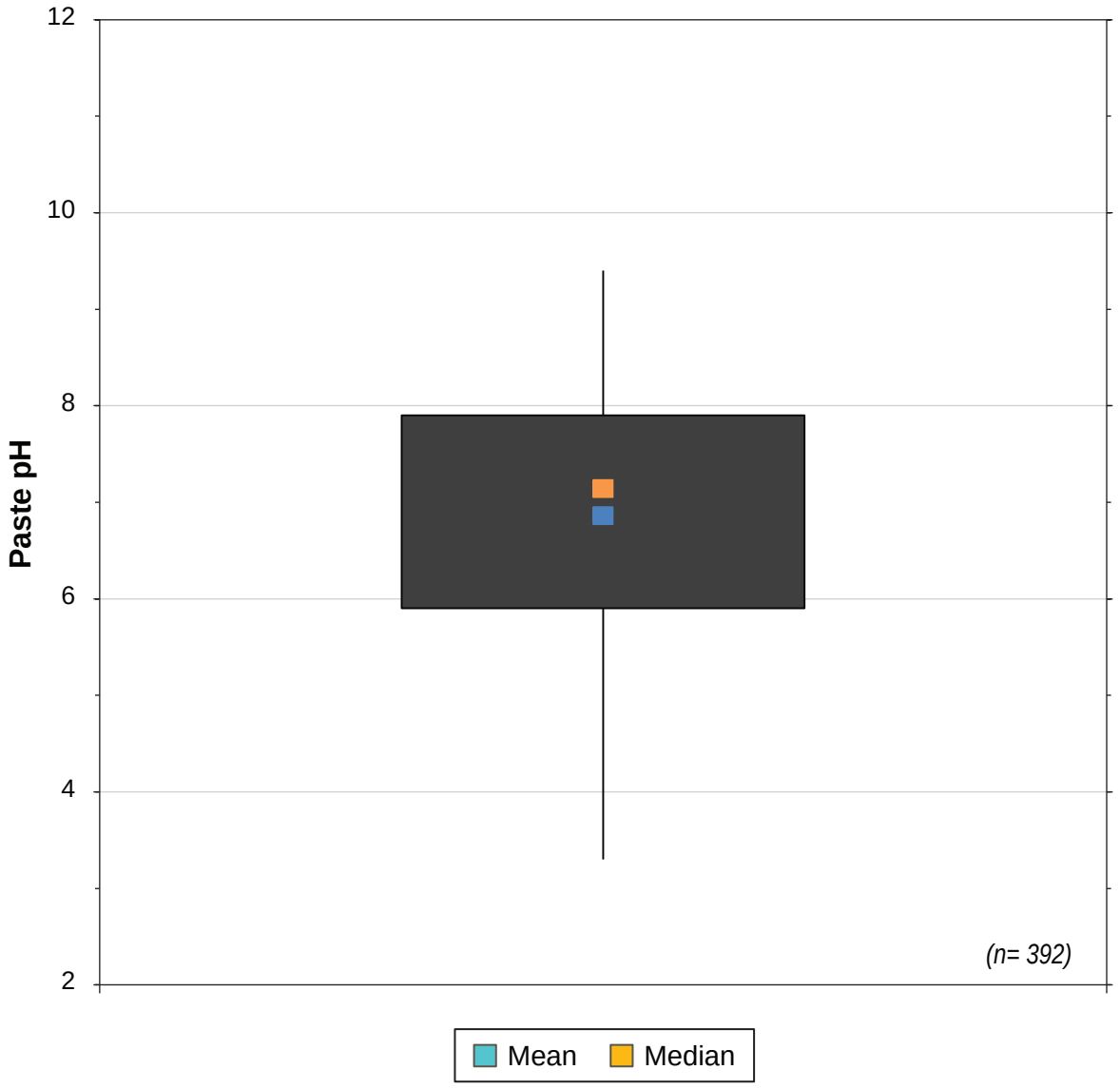
Static test results of the Kerr Deposit drill core samples revealed that 18% of samples had a paste pH less than 6.0 at the time of laboratory testing, indicating sulphide oxidation and net acid generation had already occurred.

5.1.1.2 Sulphur Species

A statistical summary of the total-sulphur concentrations for the Kerr Deposit is shown in Figure 5.1-2. The total-sulphur content results of 305 samples from the Kerr Deposit ranged from a minimum of 0.01% to a maximum of 13.81%, with a mean of 4.53% and a median of 4.73%.

A statistical summary of the sulphide-sulphur concentrations for the Kerr Deposit is shown in Figure 5.1-3. The sulphide-sulphur content of 239 samples from the Kerr Deposit ranged from a minimum of 0.02% to a maximum of 10.3%, with a mean of 3.64% and a median of 3.57%.

The relationship between sulphide-sulphur and total-sulphur concentrations for the Kerr Deposit is shown in Figure 5.1-4.



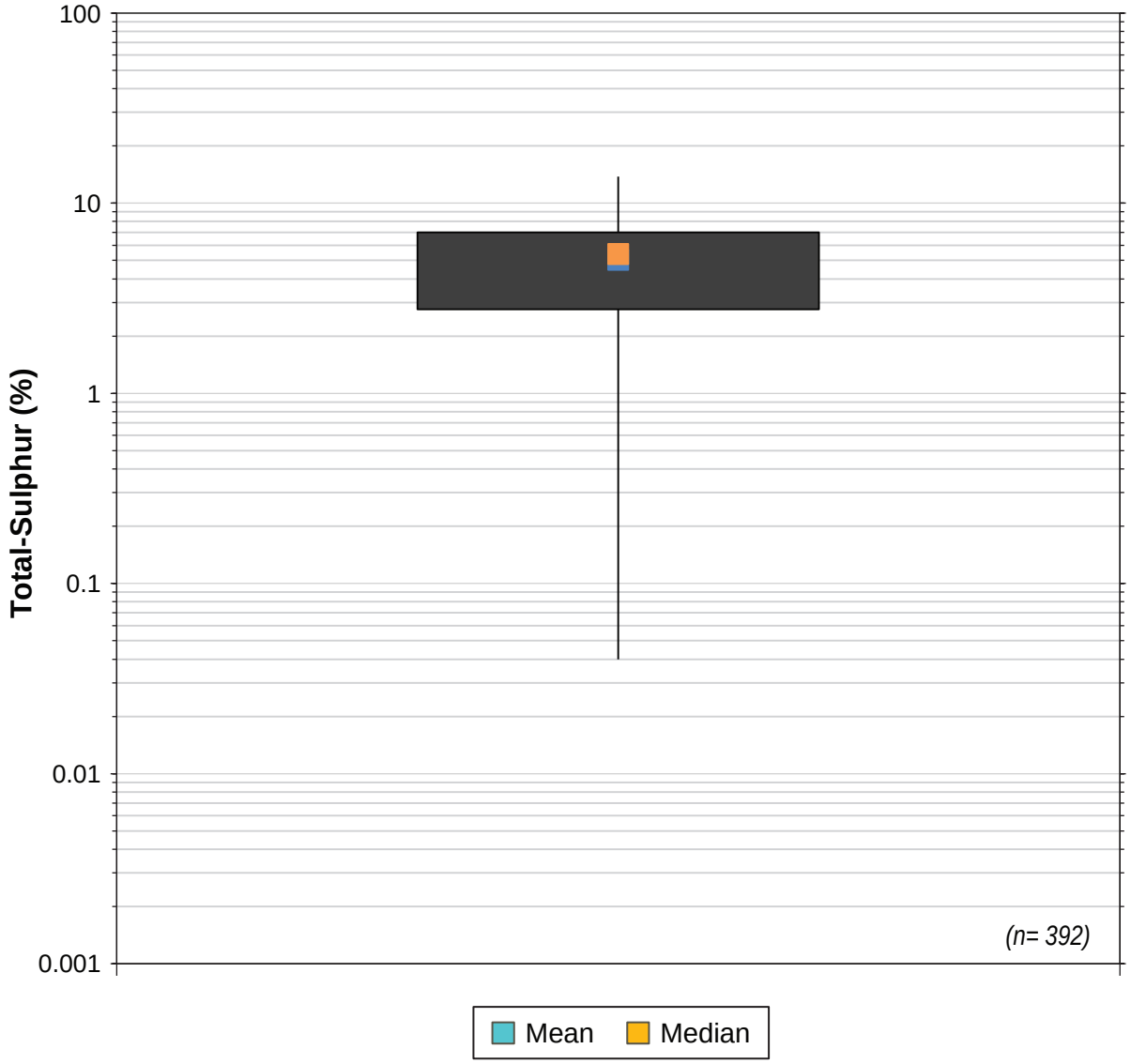
Note: 25th to 75th percentile is represented by the shaded box.

Figure 5.1-1

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Statistical Summary of Kerr Deposit Paste pH

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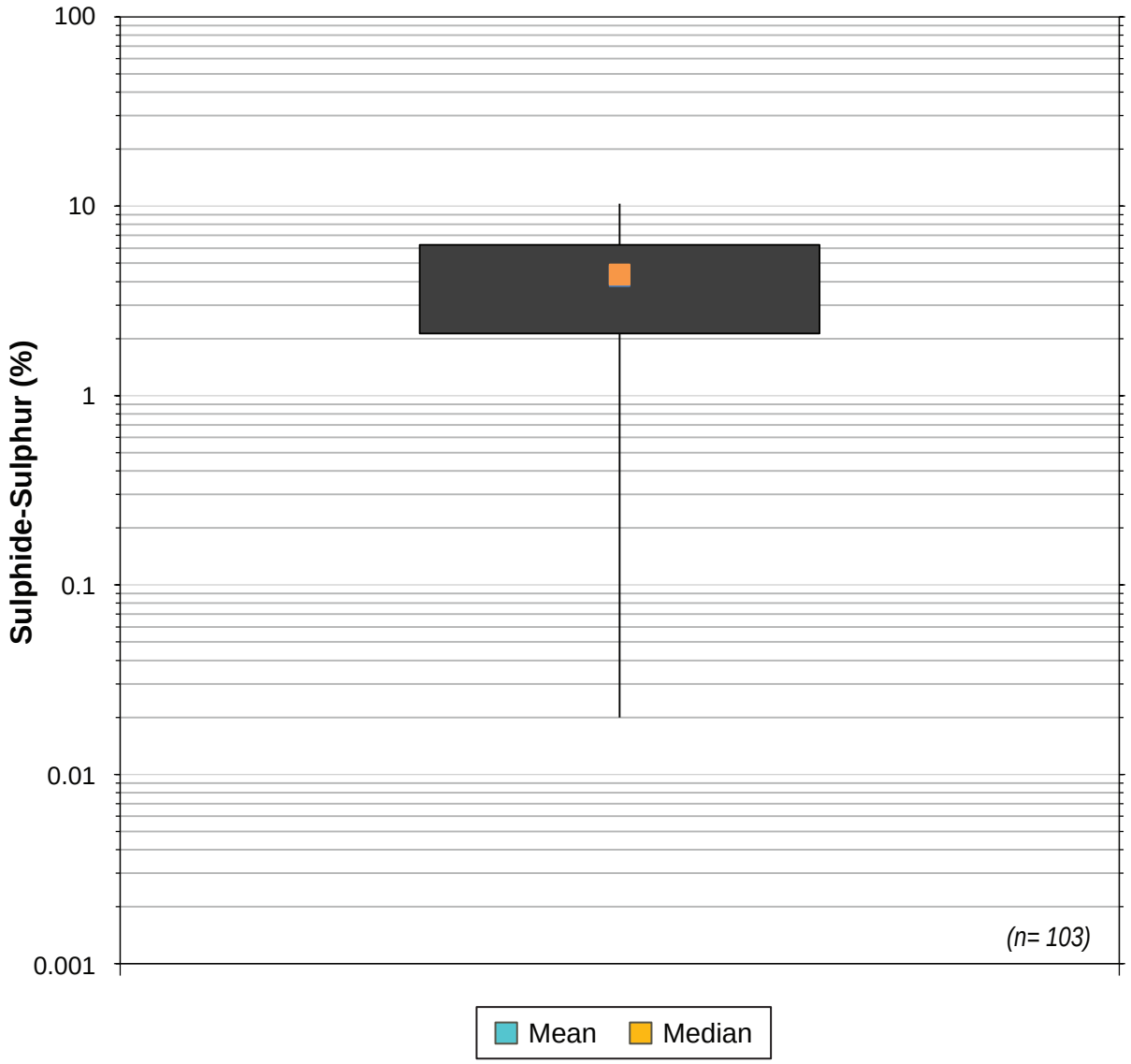
Note: 25th to 75th percentile is represented by the shaded box.

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Statistical Summary of Kerr Deposit
Total-Sulphur Concentrations

Figure 5.1-2

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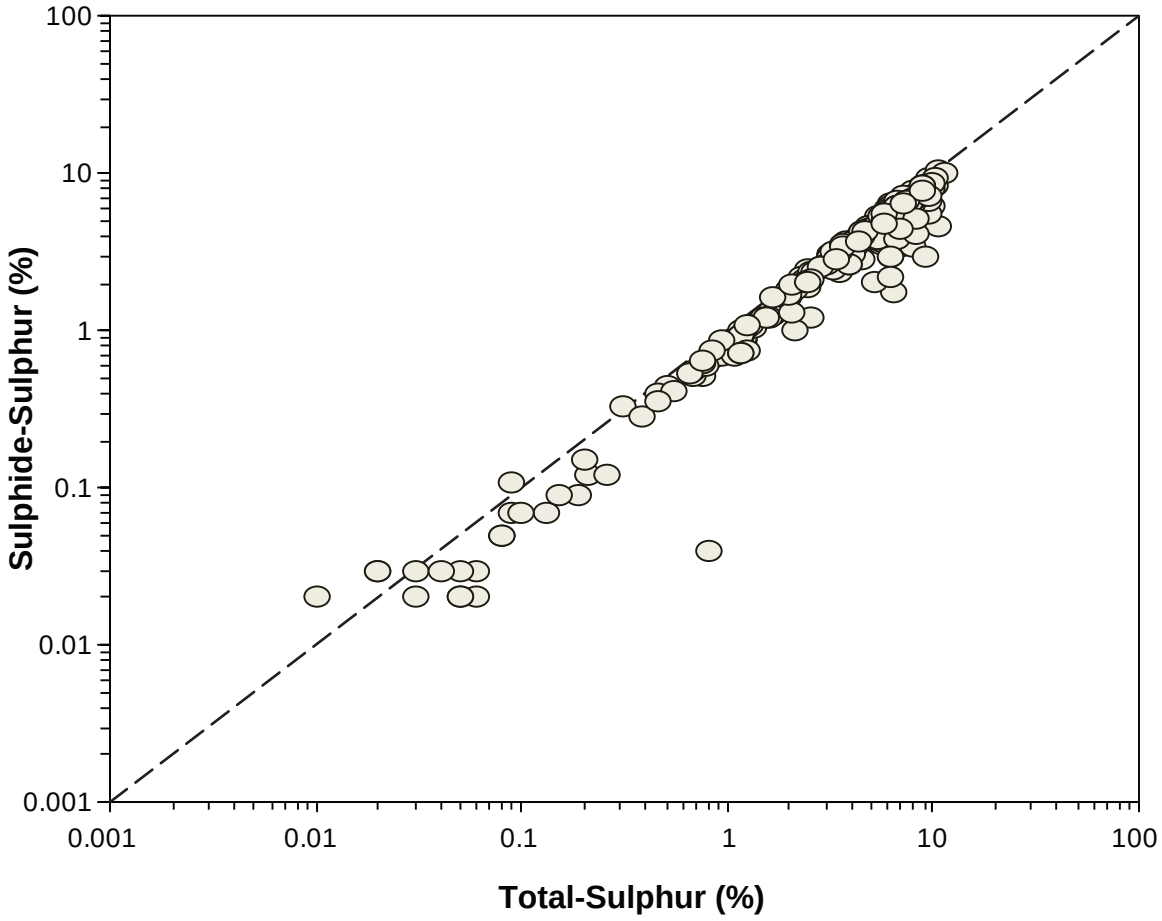
Note: 25th to 75th percentile is represented by the shaded box.

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Statistical Summary of Kerr Deposit Sulphide-Sulphur Concentrations

Figure 5.1-3

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Sulphide-Sulphur versus Total-Sulphur in the Kerr Deposit

Figure 5.1-4

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In general, there is a strong relationship between sulphide-sulphur and total-sulphur for total-sulphur concentrations greater than 0.3%. However, the results show a weak correlation in a few samples. Moderately soluble sulphate-sulphur species such as gypsum were reported by XRD analysis in the Kerr Deposit. Figure 5.1-5 shows the relationship between acid-soluble sulphate-sulphur and total-sulphur concentrations indicating that there are high concentrations of acid-soluble sulphate-sulphur present in some of the Kerr Deposit samples.

5.1.1.3 Neutralization Potential

A statistical summary of the Bulk Sobek neutralization potential (NP) values for the Kerr Deposit is shown in Figure 5.1-6. The Sobek NP values for 305 samples from the Kerr Deposit range from a minimum of -1 to a maximum of 482 kg $CaCO_3$/t, with a mean of 53 kg $CaCO_3$/t and a median of 20 kg $CaCO_3$/t.

Based on the relationship between paste pH and Bulk Sobek NP values shown in Figure 5.1-7, up to 15 kg $CaCO_3$/t of measured NP could be associated with acidic paste pH values. This value was derived from the complete 2008 to 2012 KSM Project static test database. The data indicate that the unavailable NP of 15 kg $CaCO_3$/t is valid for the Kerr Deposit. The Rock Storage Facilities (RSFs) will be composed of a mix of alteration types and rocks from several deposits and therefore the conservative estimate of unavailable NP is applied across all deposits model codes. The neutralization potential was adjusted by this estimate of unavailable NP to calculate an adjusted neutralization potential (Adjusted NP).

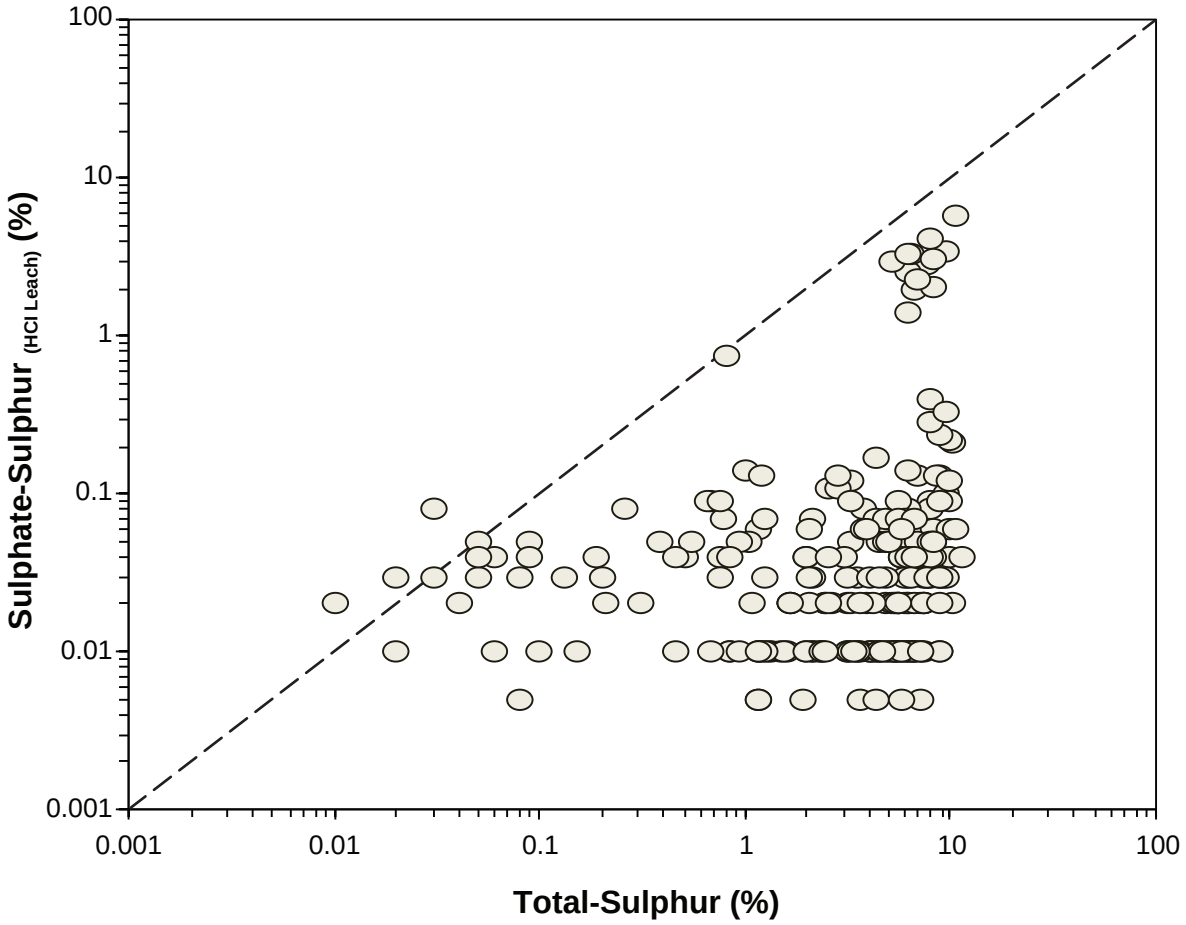
The correlation between Bulk Sobek NP and Inorg NP is shown in Figure 5.1-8. Below the unavailable NP line, the Inorg NP shows a poor correlation to Sobek NP, suggesting unavailable Sobek NP is comprised of a mixture of carbonate and non-carbonate minerals. Above the unavailable NP line of 15 kg $CaCO_3$/t, the Inorg NP shows a strong correlation to Sobek NP, suggesting that most of the available Sobek NP in the Kerr Deposit occurs as carbonate minerals. Therefore the Inorg NP can be used for estimating the available NP in the Kerr Deposit.

A plot of a Calcium CaNP (Ca CaNP), assuming that the elemental calcium is present as calcite, versus Sobek NP is shown in Figure 5.1-9. Below the unavailable NP line, the Ca CaNP shows a poor correlation to Sobek NP indicating a measurable portion of Ca CaNP is not providing neutralization or is unreactive. This poor correlation indicates a greater proportion of calcium from non-carbonate mineral phases. Above the unavailable NP line, the Ca CaNP shows a strong correlation to Sobek NP, indicating that most of the available Sobek NP in the Kerr Deposit occurs as calcium carbonate minerals. Therefore the Ca CaNP can be used for estimating the available NP in the Kerr Deposit.

A plot of a Calcium-Magnesium CaNP (CaMg CaNP), assuming that the elemental calcium and magnesium are present as dolomite, versus Sobek NP is shown in Figure 5.1-10. The correlation between CaMg CaNP and Sobek NP was poorer than for Ca CaNP, indicating that a measurable portion of CaMg CaNP is not providing neutralization or is unreactive (Figure 5.1-10). This poor correlation indicates that magnesium occurs predominantly in non-carbonate magnesium-bearing mineral phases. Therefore the CaMg CaNP cannot be used reliably for estimating the available NP in the Kerr Deposit.

5.1.1.4 Sulphide Net Potential Ratios

A statistical summary of the adjusted SNPR for the Kerr Deposit is shown in Figure 5.1-11. The adjusted SNPR for 305 samples from the Kerr Deposit range from a minimum of 0.01 to a maximum of 515, with a mean of 6 and a median of 0.041.

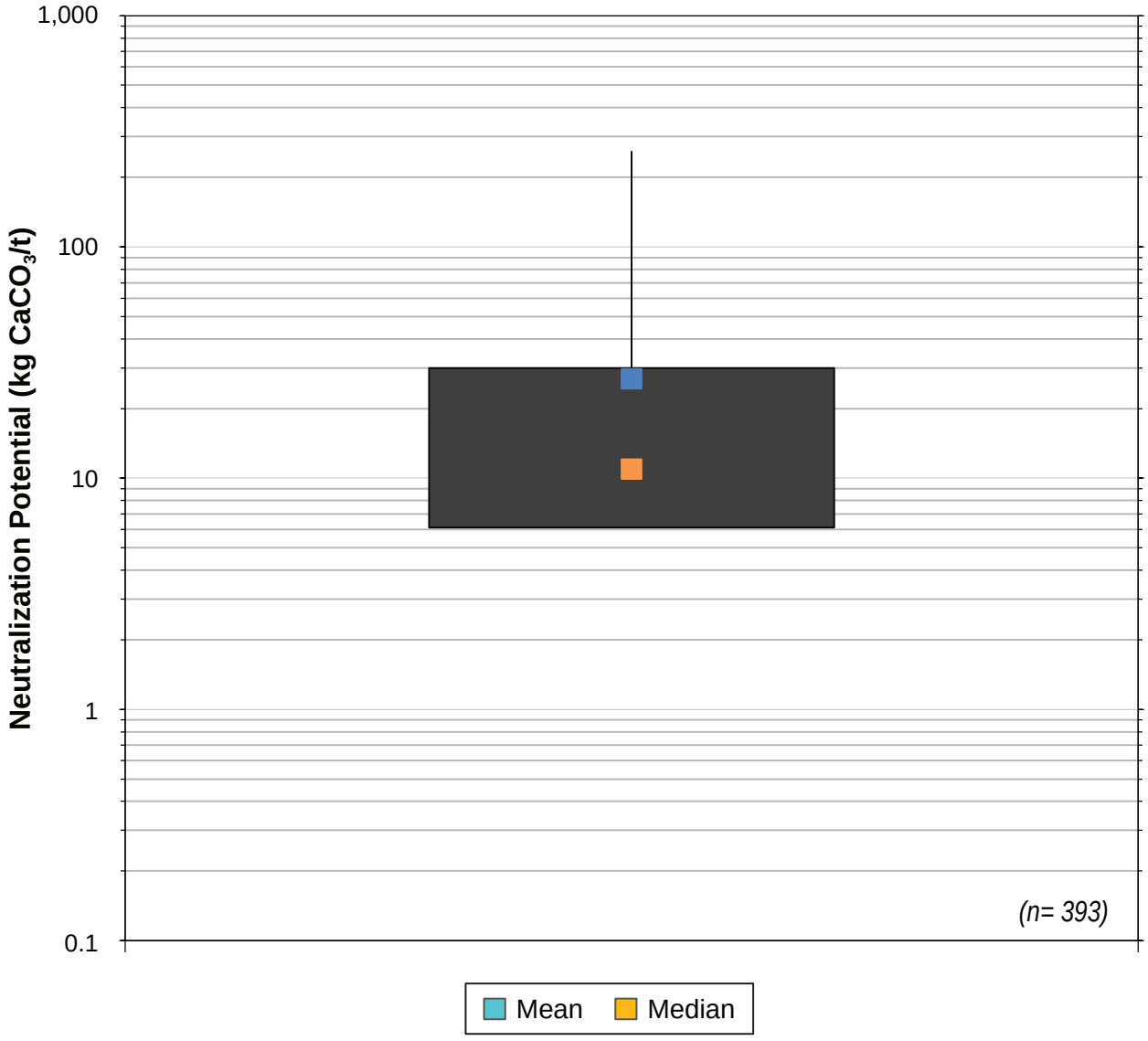


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Sulphate-Sulphur (HCl Leach) versus Total-Sulphur in the Kerr Deposit

Figure 5.1-5

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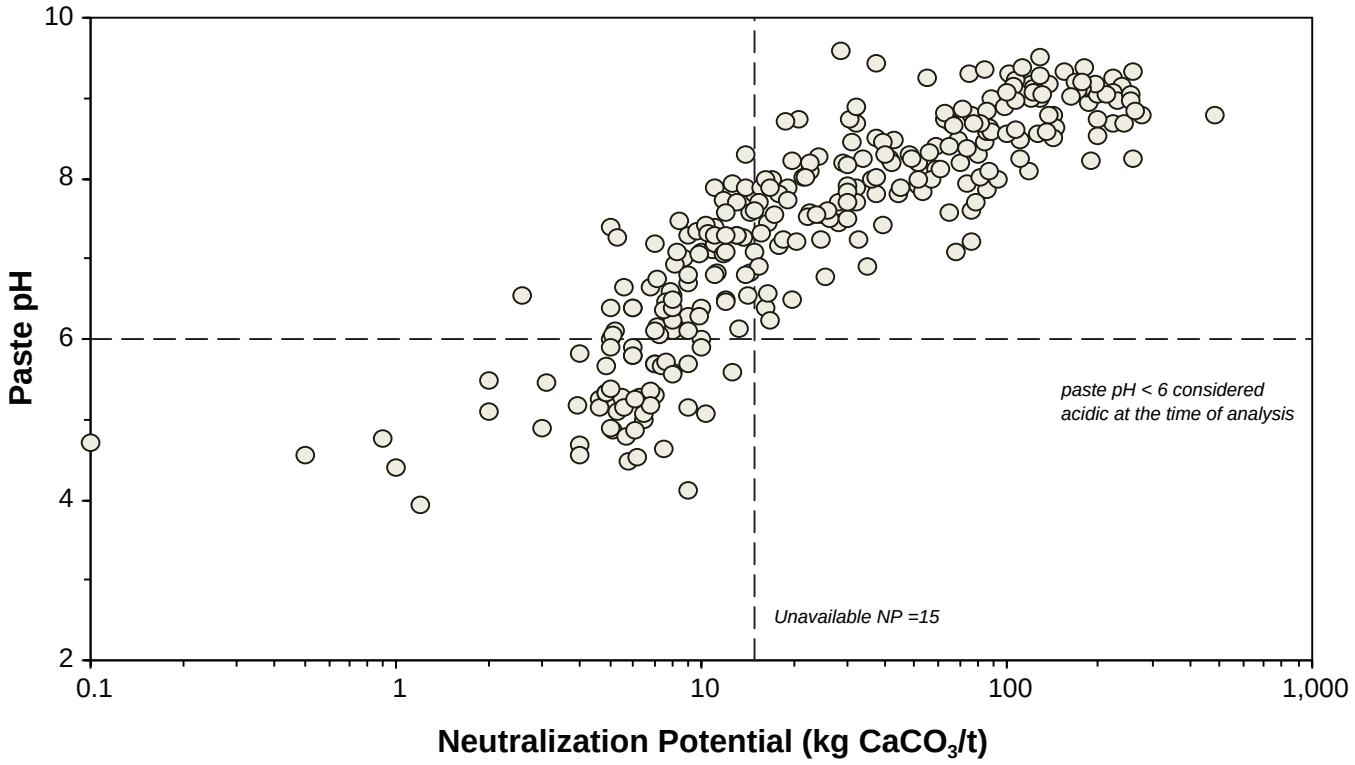
Note: 25th to 75th percentile is represented by the shaded box.

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Statistical Summary of Kerr Deposit
Bulk Sobek Neutralization Potential Values

Figure 5.1-6

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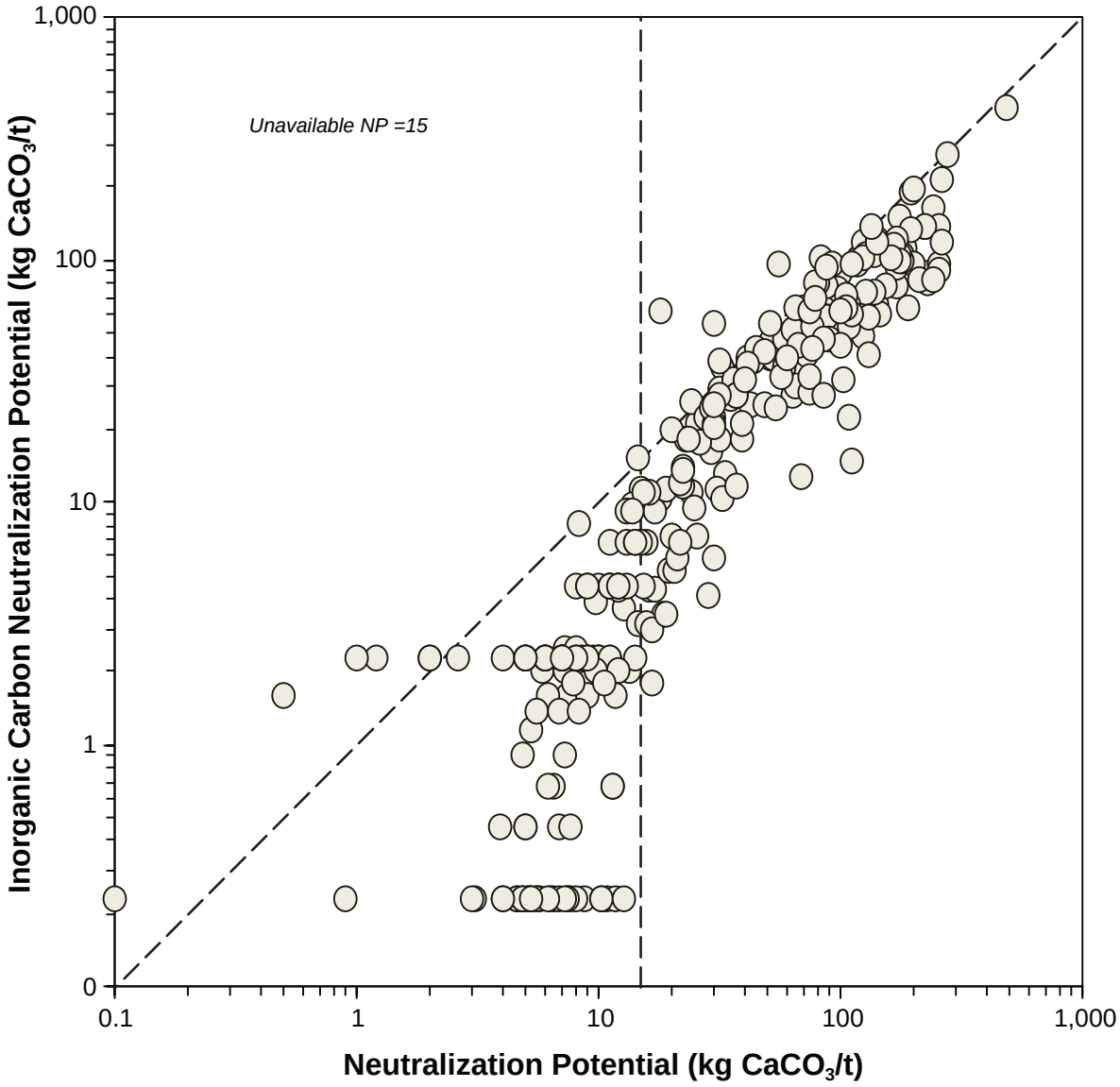


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Paste pH versus Bulk Sobek Neutralization Potential in the Kerr Deposit

Figure 5.1-7

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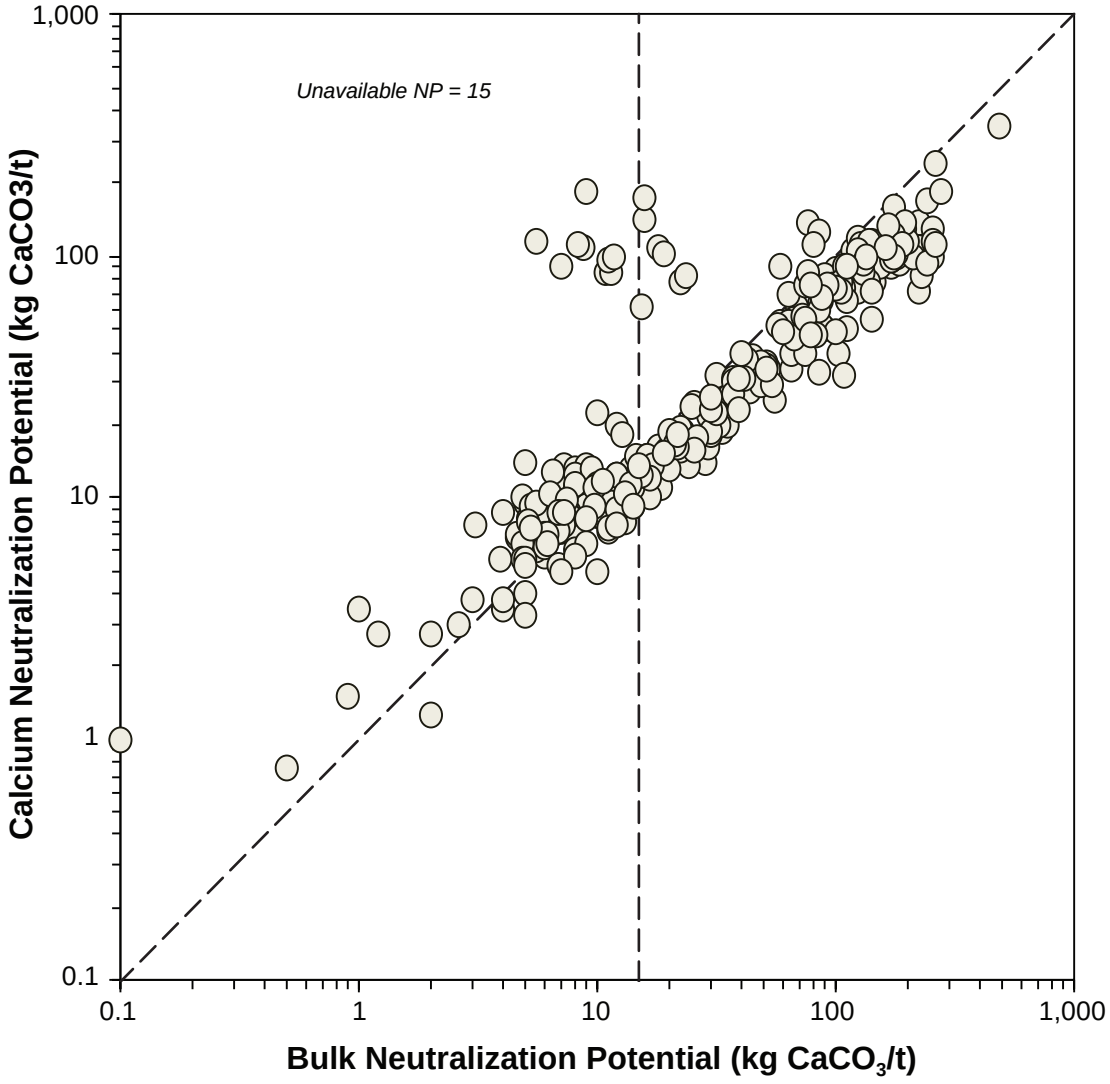


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Inorganic Carbon Neutralization Potential versus Bulk Sobek Neutralization Potential in the Kerr Deposit

Figure 5.1-8

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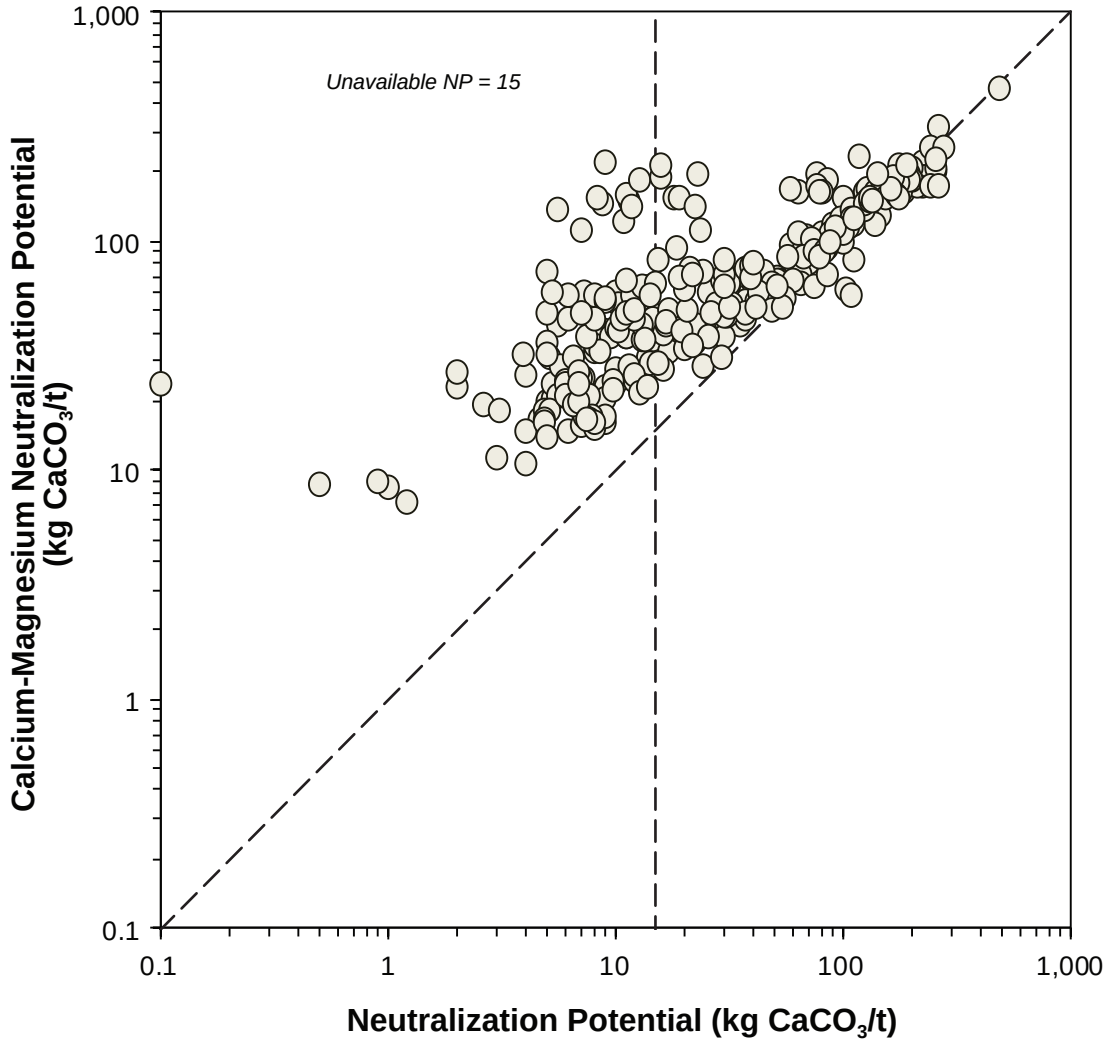


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Calcium Neutralization Potential versus Bulk Sobek Neutralization Potential in the Kerr Deposit

Figure 5.1-9

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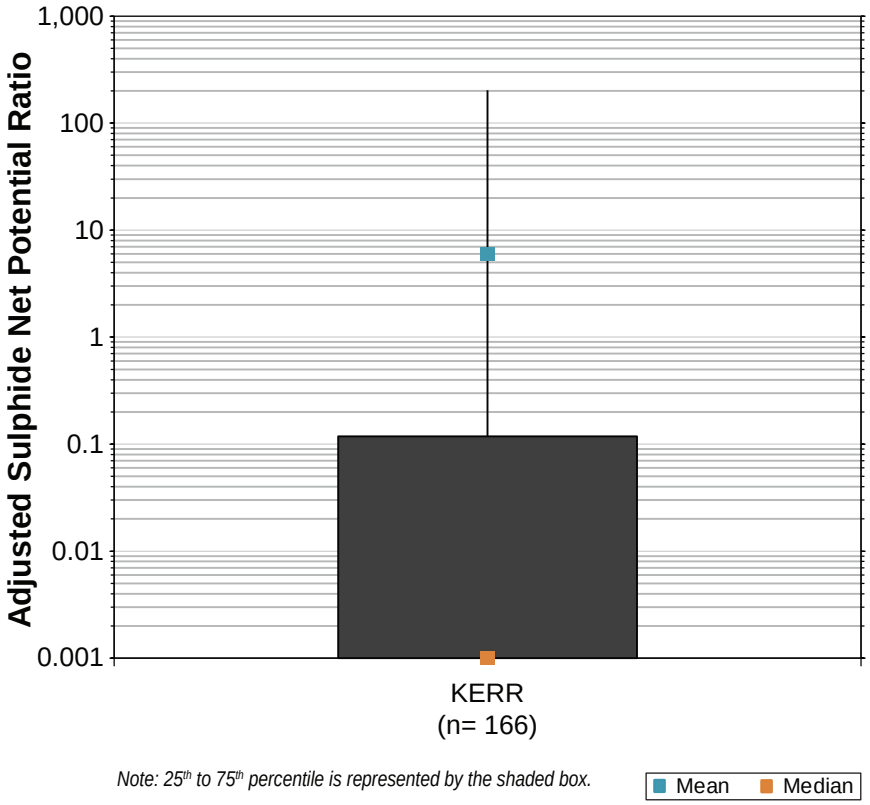


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KSM PROJECT

Calcium-Magnesium Neutralization Potential versus Bulk Sobek Neutralization Potential in the Kerr Deposit

Figure 5.1-10

Rescan™ Engineers & Scientists



Note: 25th to 75th percentile is represented by the shaded box.

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KSM PROJECT

Statistical Summary of Kerr Deposit Adjusted Net Potential Ratios

Figure 5.1-11

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The ABA screening criteria (Price, 1997) were applied. Seventy seven percent of the samples have adjusted SNPR<1, indicating that they are potentially acid generating (PAG). From those samples 132 samples (56%) were assigned SNPR default values of 0.01, indicating that the samples had NP values equal to or lower than 15 kg$CaCO_3$/t. Samples with an adjusted SNPR of 0.01 are predicted to have rapid onset of acidic conditions. Four percent of the samples have adjusted SNPR between 1.0 and 2.0, indicating they are possibly acid generating (UPAG) and 18 % of the samples have adjusted SNPR>2, indicating that they are not potentially acid generating (not-PAG).

The relationship between paste pH and adjusted SNPR of Kerr Deposit samples is shown in Figure 5.1-12. Samples with adjusted SNPR of 0.01 were associated with both acidic and neutral/alkaline paste pH, indicating that part of the samples are in an advanced stage of acid generation (acidic samples) and part of the samples are in the early stage of acid generation (no acidic samples).

The relationship between sulphide-sulphur and adjusted SNPR of Kerr Deposit samples is shown in Figure 5.1-13. The samples with a combination of sulphide-sulphur greater than 0.1% and an adjusted SNPR<2 are the most likely net ARD generating samples in the long term.

5.1.1.5 Whole Rock and Solid-phase Elemental Analysis

The multi-element concentrations in the ML/ARD samples from the Kerr Deposit were measured by ICP-MS analysis after strong four-acid digestion and by XRF whole-rock analysis. The results are found in Appendix 5.1-1.

Most of the Kerr Deposit rock was comprised of oxide-equivalents of SiO_2 and Al_2O_3, which is consistent with the dominant presence of quartz, feldspar minerals, and other aluminosilicate minerals in Kerr Deposit rock based on XRD analysis. Also consistent with the general mineralogy, there were lesser but still significant amounts of Fe_2O_3, K_2O, CaO, MgO, and Na_2O.

The solid-phase concentrations of each element were compared with concentrations found in the earth's crust (crustal abundance) in order to determine which elements occur in anomalously high concentrations (Price 1997). Any elemental concentration higher than three times its crustal abundance was considered an anomalously high concentration.

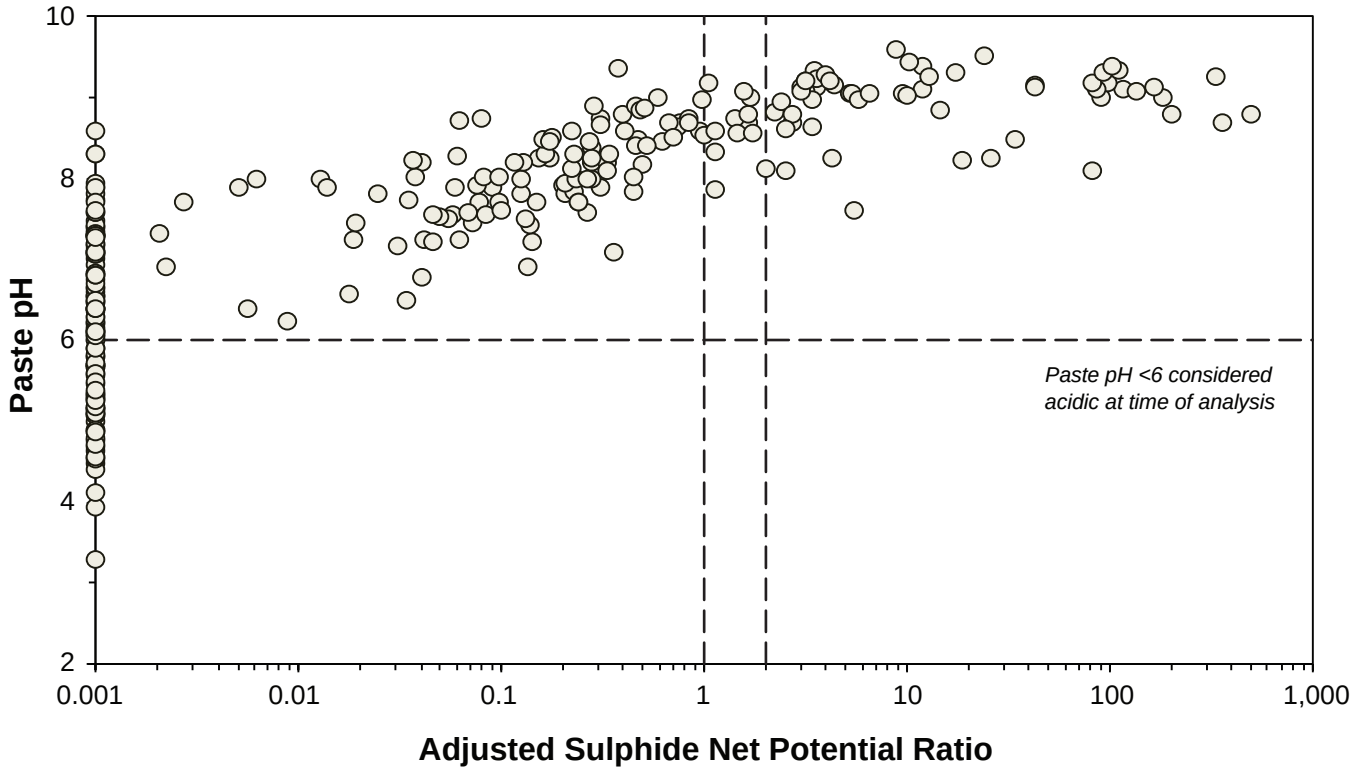
Table 5.1-1 shows the statistical summary of the results for elements with median values exceeding three times the crustal abundance for the Kerr Deposit. The results showed that the elements frequently exceeding three times basalt crustal abundance were: silver, arsenic, barium, bismuth, cadmium, cesium, copper, mercury, potassium, molybdenum, lead, rubidium, sulphur, antimony, selenium, thallium, tungsten, and zinc.

Elements frequently exceeding three times shale crustal abundance were silver, arsenic, barium, cadmium, copper, mercury, molybdenum, lead, sulphur, antimony, selenium, tungsten and zinc.

5.1.1.6 Mineralogy

Mineralogical composition of waste rock samples at the Kerr Deposit was determined by Rietveld XRD and petrographic analysis (transmitted light microscopy).

Appendix 5.1-2 provides the XRD analysis results for the KSM Project. The more common primary minerals identified in four samples from the Kerr Deposit were quartz, muscovite, K-feldspar, clinochlore, and plagioclase. The most common sulphide mineral was pyrite with lesser amounts of chalcopyrite and tennantite ($Cu_{12}As_4S_{13}$). Gypsum was identified as another sulphur-bearing mineral. The most common carbonate minerals were calcite, dolomite, and lesser amounts of siderite.

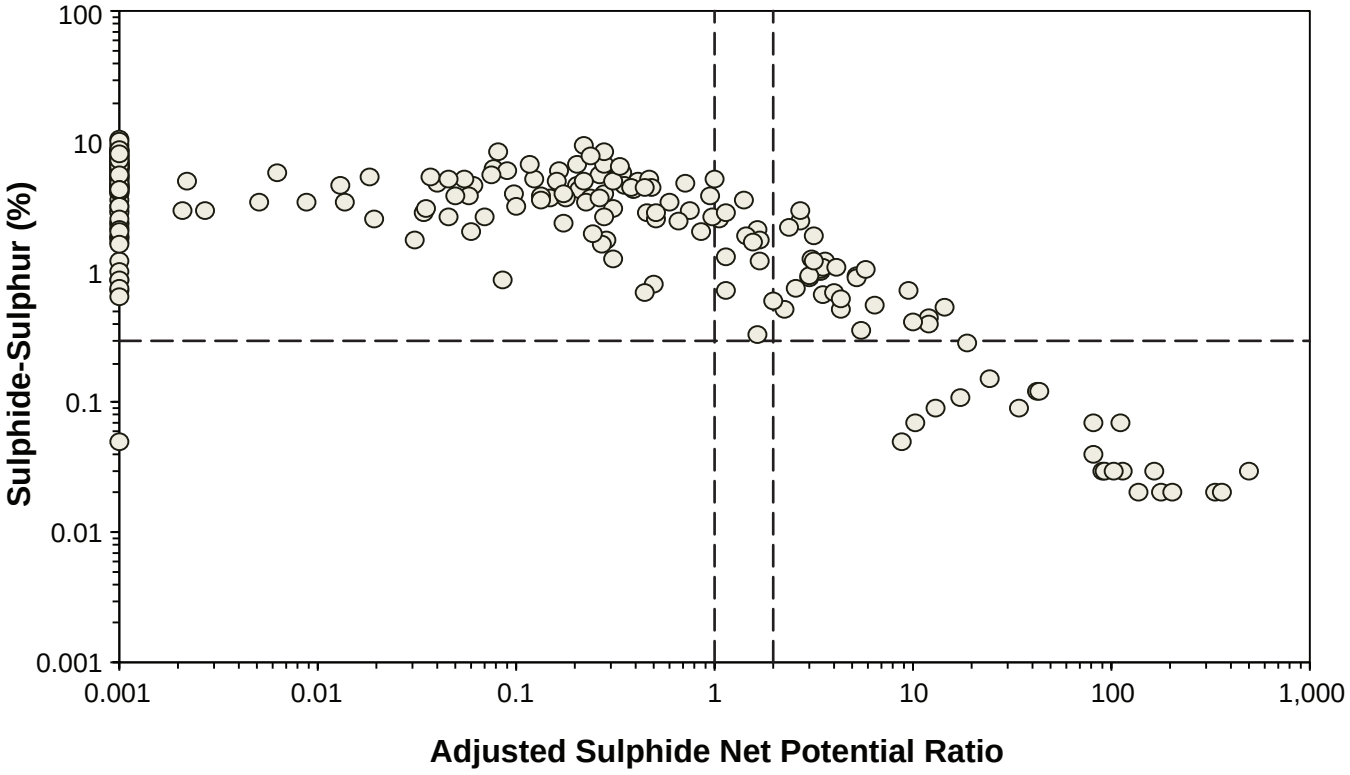


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Paste pH versus Adjusted Sulphide Net Potential Ratio in the Kerr Deposit

Figure 5.1-12

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Sulphide-Sulphur versus Adjusted Sulphide Net Potential Ratio in the Kerr Deposit

Figure 5.1-13

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Table 5.1-1. Statistical Summary of Results for the Elements Exceeding Three Times the Crustal Abundance for the Kerr Deposit

	Silver	Arsenic	Barium	Bismuth	Cadmium	Cesium	Copper	Mercury	Potassium
Number of Samples	227	305	305	305	305	166	305	88	305
Minimum	0.05	0.1	7	0.02	0.01	1.2	2.7	0.005	3000
10 Percentile	0.1	3.14	20	0.05	0.05	2.5	62.608	0.017	25540
25 Percentile	0.3	7.6	29	0.08	0.09	3.1	209	0.04	30700
Mean	1.04	121.76	417.39	0.42	0.68	3.62	1477.30	1.02	34797.38
Median	0.6	19.1	80	0.2	0.2	3.645	685	0.115	36100
75 Percentile	1.0	48.0	380.0	0.5	0.6	4.2	1924.6	0.6	39900.0
90 Percentile	2.34	139	1356	1.058	1.618	4.69	4000.00	2.378	43460
Maximum	14.3	9310	4560	6.33	18.65	5.83	10000	29	52400
3X Basalt Crustal Abundance	0.33	6	990	0.021	0.66	3.3	261	0.27	24900
Number of Samples >	164	240	48	296	69	111	217	30	276
% >	72%	79%	16%	97%	23%	67%	71%	34%	90%
3X Shale Crustal Abundance	0.21	39	1740	n.a	1	15	135	1	79800
Number of Samples >	180	89	21	0	58	0	246	16	0
% >	79%	29%	7%	0%	19%	0%	81%	18%	0%

	Molybdenum	Lead	Rubidium	Sulphur	Antimony	Selenium	Thalium	Tungsten	Zinc
Number of Samples	305	293	305	305	293	88	88	305	305
Minimum	0.1	1.76	10.1	400	0.2	1	0.49	0.3	7.2
10 Percentile	0.7	5.6	53.88	4160	1.106	2	1.459	0.9	25.76
25 Percentile	2.1	8.6	67.3	19700	2.57	9	1.8	1.6	56
Mean	15.69	34.95	81.56	45227.87	13.65	15.81	2.01	3.14	172.36
Median	6.46	14.9	81.1	47000	4.58	13.5	1.975	2.5	92.9
75 Percentile	17.4	34.0	97.1	68000.0	9.9	23.0	2.3	4.1	166.0
90 Percentile	33.76	67.12	110	83000	26.4	30	2.563	6.36	331.6
Maximum	296.04	686	146	100000	500.61	55	3.97	13.9	4560
3X Basalt Crustal Abundance	4.5	18	90	900	0.6	0.15	0.63	2.1	315
Number of Samples >	171	129	107	286	279	88	87	187	36
% >	56%	44%	35%	94%	95%	100%	99%	61%	12%
3X Shale Crustal Abundance	8	60	420	7200	5	2	4	5	285
Number of Samples >	140	35	0	263	149	83	0	42	41
% >	46%	12%	0%	86%	51%	94%	0%	14%	13%

Concentrations are in ppm

n.a - crustal abundance data are not available

Appendix 5.1-3 provides the petrographic analysis results for the KSM Project. A description of thin sections of four rock samples at the Kerr Deposit is provided. The most common primary minerals were quartz, quartz+feldspar, sericite, and chlorite. The most common sulphide mineral was pyrite, with fewer observations of chalcocite, chalcopyrite, and trace amounts of bornite and enargite (Cu_3AsS_4). Pyrite ranged from anhedral to subhedral grains, liberated and disseminated in lithic clasts.

5.1.2 Sulphurets Deposit

The ABA and solid-phase elemental analyses were conducted on a total of 433 samples from the Sulphurets Deposit (366 drill core samples and 67 pulp samples from drill core samples). Detailed results of the static tests and statistical summaries for the Sulphurets Deposit are presented in Appendix 5.1-1.

5.1.2.1 Paste pH

The results of the paste pH tests on samples from the Sulphurets Deposit by model code are shown in Figure 5.1-14. The paste pH of 433 samples range from a minimum of pH 6.2 (S UP Hazelton) to a maximum of pH 9.6 (S Monzonite), with median values ranging from pH 8.7 (S Au, Leach, Raewyn) to pH 8.8 (S Monzonite).

5.1.2.2 Sulphur Species

A statistical summary of the total-sulphur concentrations for the Sulphurets Deposit is shown in Figure 5.1-15. The total-sulphur concentrations of 433 sample results from the Sulphurets Deposit ranged from a minimum of 0.01% (S Up Hazelton) to a maximum of 7.50% (S Undefined), with median concentrations ranging from 0.36% (S Overburden) to 2.27% (S Lower Au).

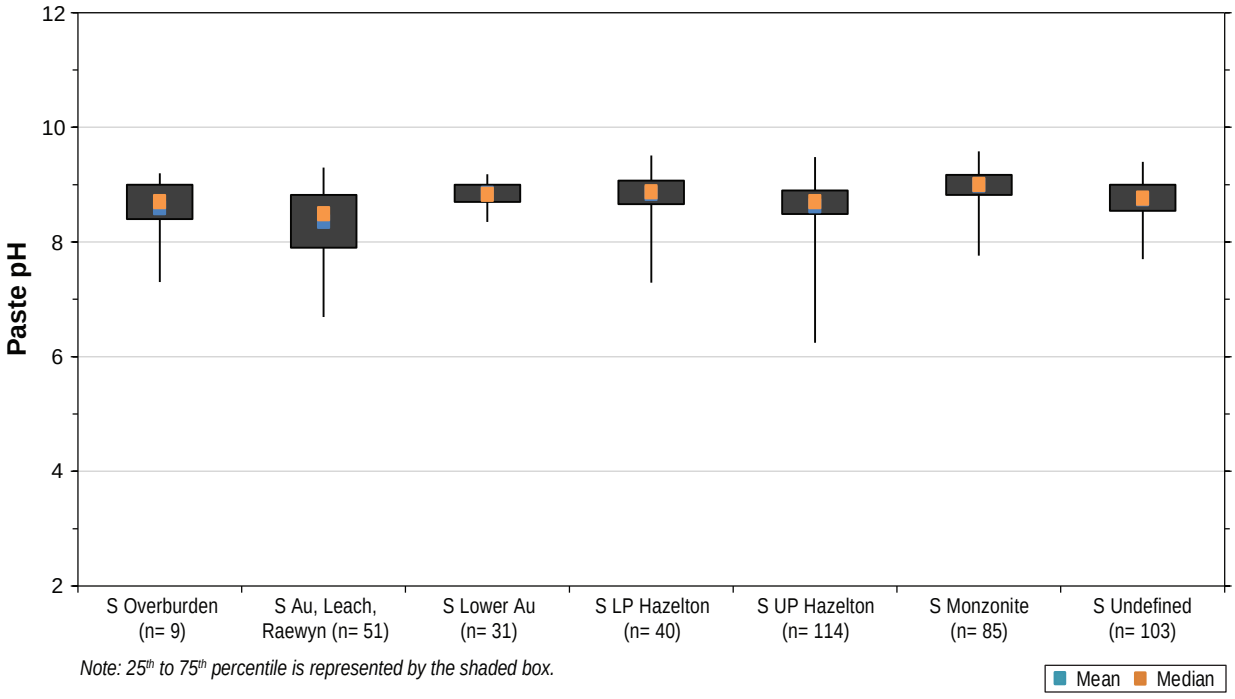
For the Sulphurets Deposit, the total-sulphur concentrations can be categorized into 3 general groups:

- Total-sulphur median concentrations < 1%: S Overburden and S Monzonite;
- Total-sulphur median concentrations between 1 and 2 %: S LP Hazelton, S UP Hazelton, and S Undefined; and
- Total-sulphur median concentrations > 2 %: S Au, Leach, Raewyn and S Lower Au.

A statistical summary of the sulphide-sulphur concentrations for the Sulphurets Deposit is shown in Figure 5.1-16. The sulphide-sulphur content of 369 sample results from the Sulphurets Deposit ranged from a minimum of 0.01% (S Monzonite) to a maximum of 5.82% (S Undefined), with median concentrations ranging from 0.28% (S Overburden) to 2.19% (S Lower Au).

The range of sulphide-sulphur concentrations is similar to the range of total-sulphur concentrations by model code. However sulphide-sulphur concentrations typically are lower than total-sulphur concentrations.

The relationship between sulphide-sulphur and total-sulphur concentrations by model code for the Sulphurets is shown in Figure 5.1-17. In general, there is a strong relationship between sulphide-sulphur and total-sulphur indicating the absence of sulphate-sulphur species such as anhydrite or gypsum. Figure 5.1-18 shows the relationship between acid-soluble sulphate-sulphur and total-sulphur concentrations indicating that there are very low concentrations of sulphate-sulphur in the Sulphurets Deposit samples.



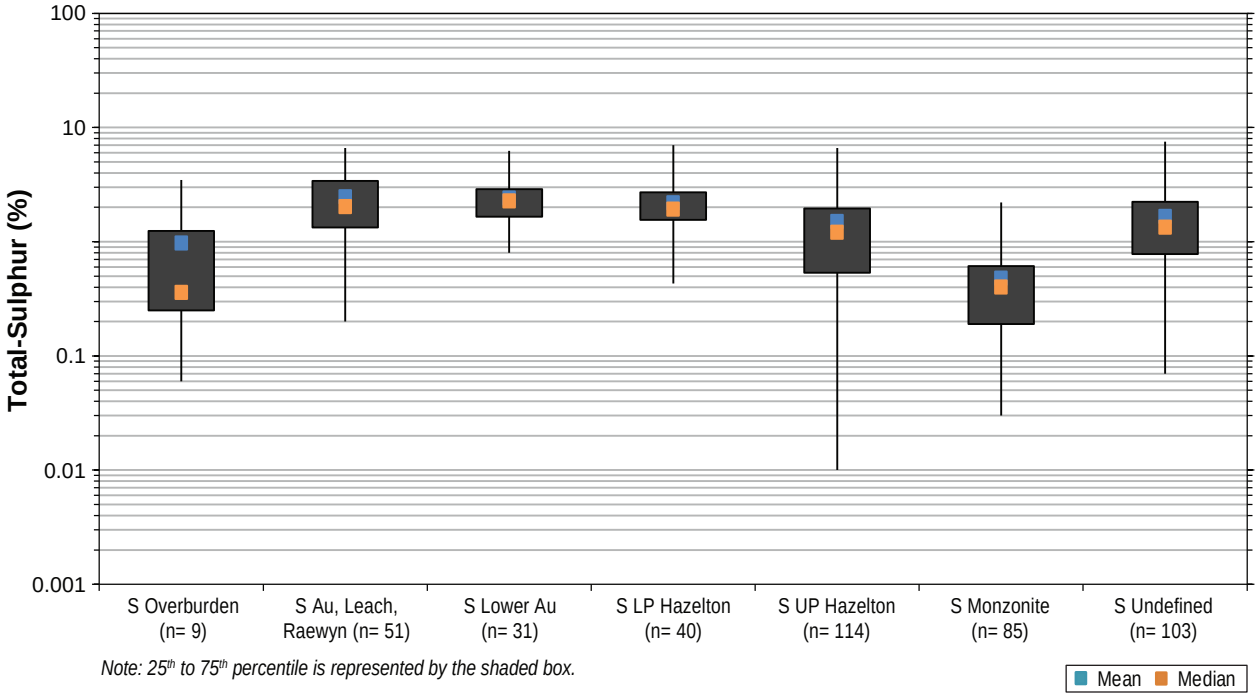
Note: 25th to 75th percentile is represented by the shaded box.

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Statistical Summary of Sulphurets Deposit Paste pH by Model Code

Figure 5.1-14

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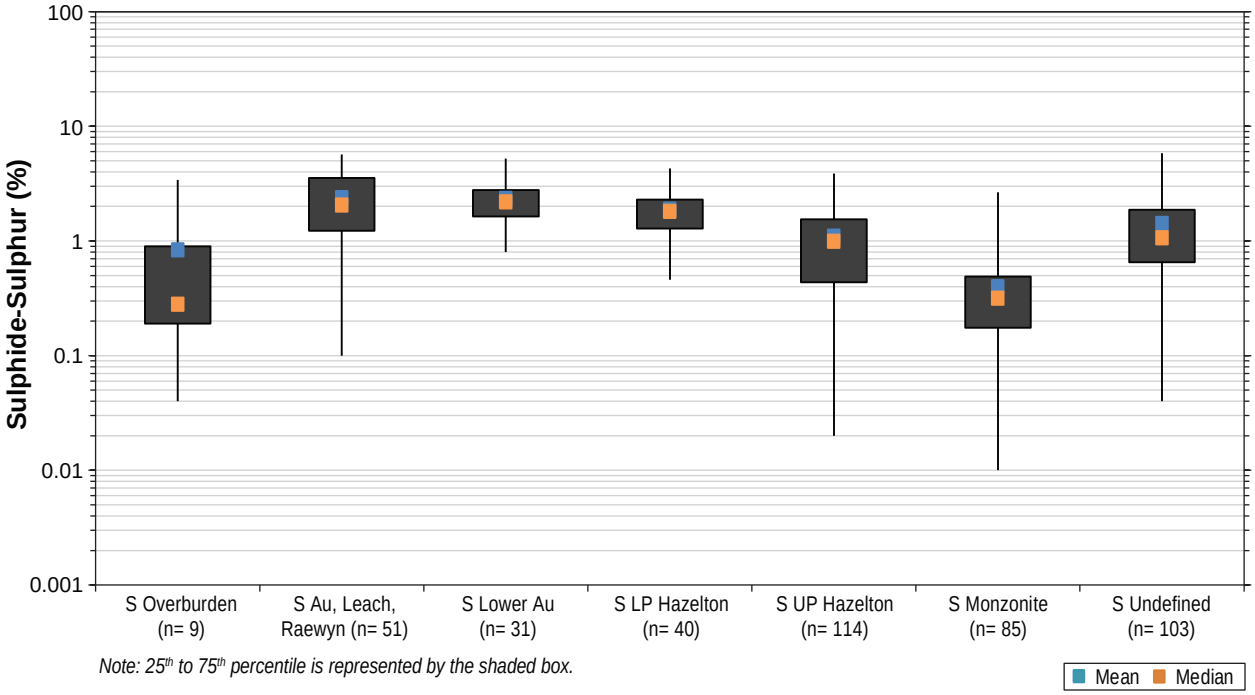
Note: 25th to 75th percentile is represented by the shaded box.

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Statistical Summary of Sulphurets Deposit Total-Sulphur Concentrations by Model Code

Figure 5.1-15

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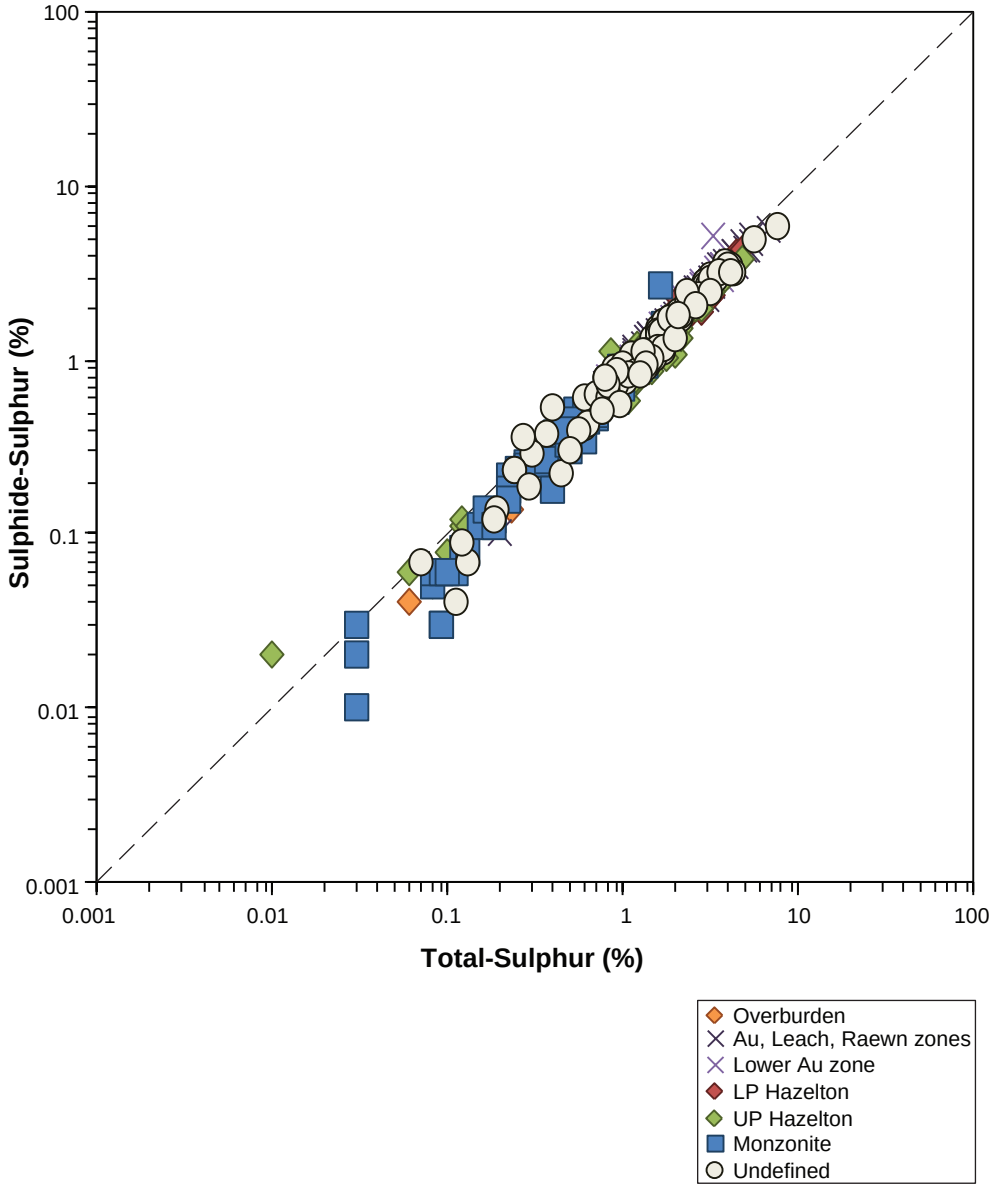
Note: 25th to 75th percentile is represented by the shaded box.

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Statistical Summary of Sulphurets Deposit Sulphide-Sulphur Concentrations by Model Code

Figure 5.1-16

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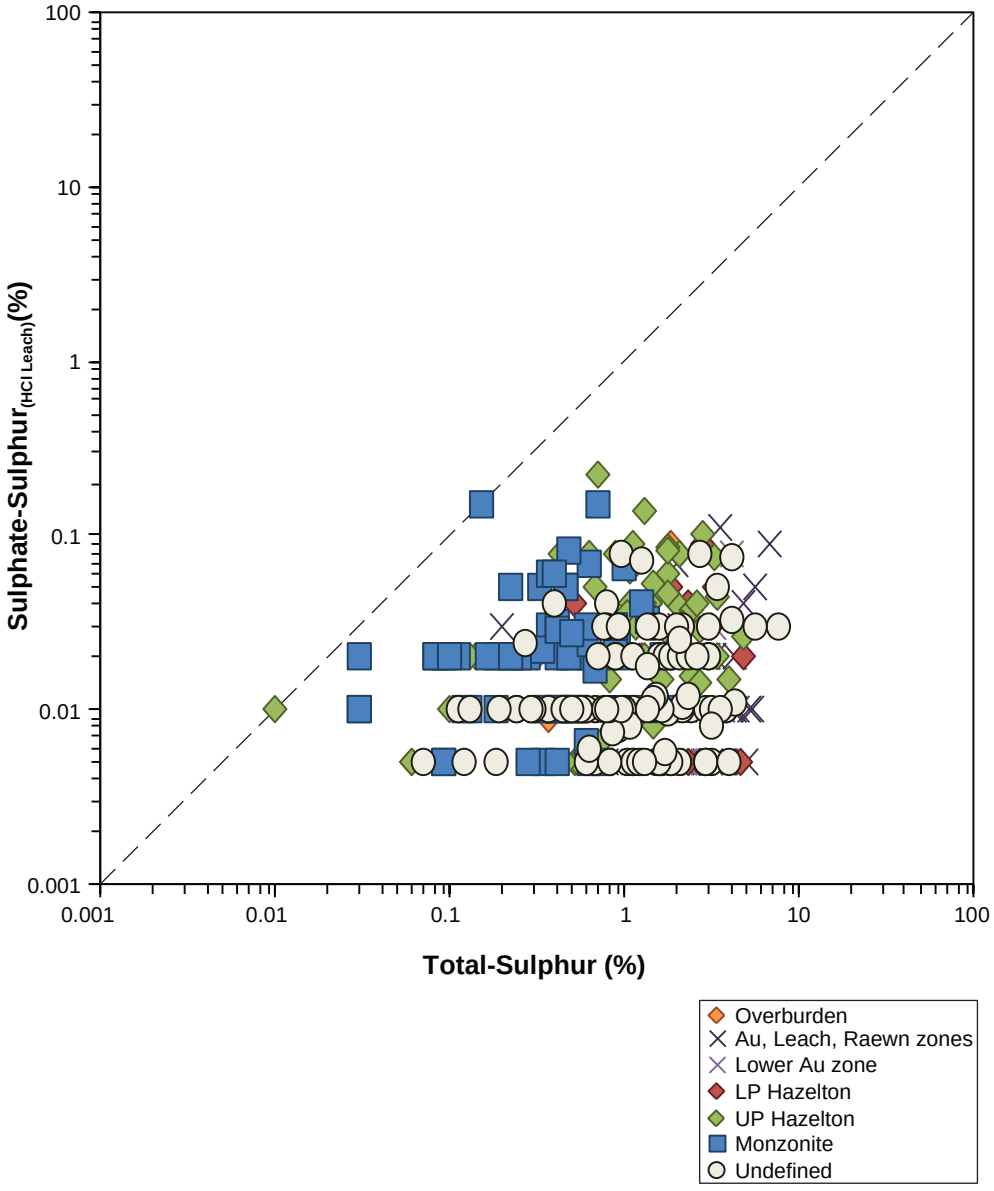


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Sulphide-Sulphur versus Total-Sulphur in the Sulphurets Deposit by Model Code

Figure 5.1-17

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Sulphate-Sulphur versus Total-Sulphur in the Sulphurets Deposit by Model Code

Figure 5.1-18

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5.1.2.3 Neutralization Potential

A statistical summary of the bulk neutralization potential values for the Sulphurets Deposit is shown in Figure 5.1-19. The Bulk Sobek NP values for 433 samples from the Sulphurets Deposit range from a minimum of 5 kg $CaCO_3$/t (S Au, Leach, Raewyn) to a maximum of 350 kg $CaCO_3$/t (S LP Hazelton), with median values ranging from 34 kg $CaCO_3$/t (S Au, Leach, Raewyn) to 139 kg $CaCO_3$/t (S UP Hazelton).

Bulk Sobek NP values for the Sulphurets Deposit can be grouped into three general categories:

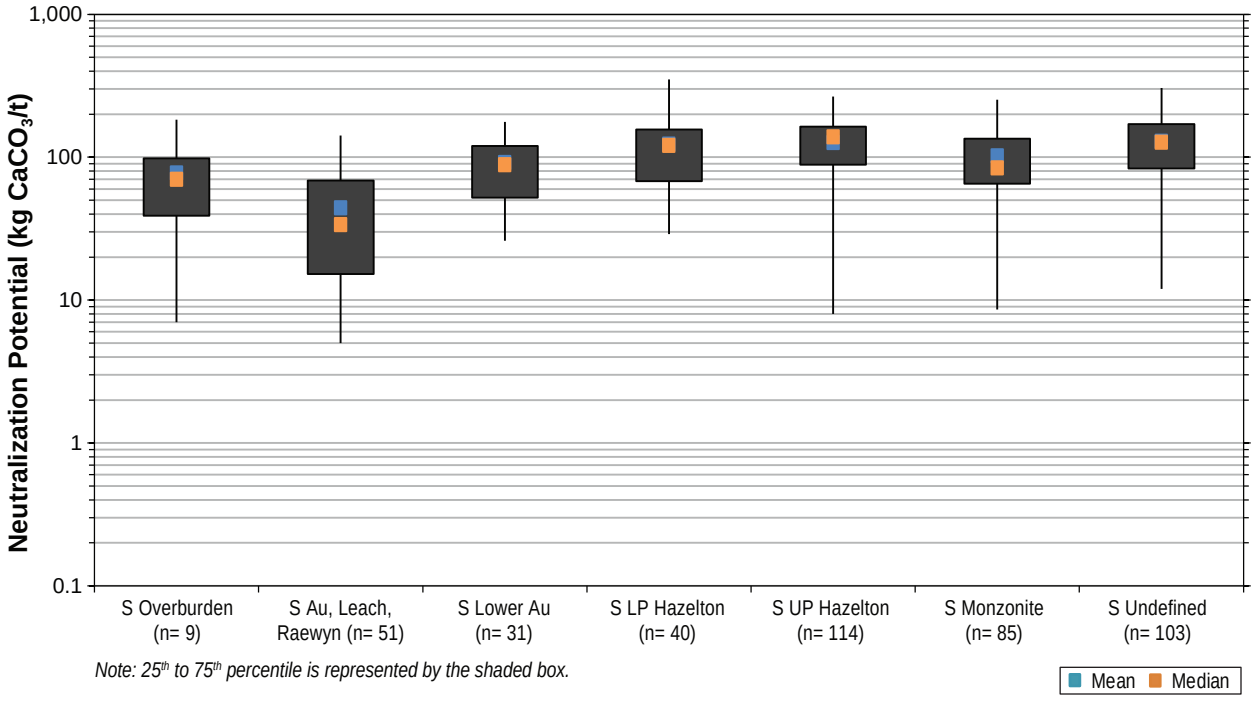
- Median Bulk Sobek NP between 15 kg $CaCO_3$/t and 100 kg $CaCO_3$/t and 25th percentile Bulk Sobek NP lower than 15 kg $CaCO_3$/t l: S Au, Leach, Raewyn;
- Median Bulk Sobek NP between 15 kg $CaCO_3$/t and 100 kg $CaCO_3$/t and 25th percentile Bulk Sobek NP between 15 kg $CaCO_3$/t and 100 kg $CaCO_3$/t: S Overburden, S Lower Au, S Monzonite; and
- Median Bulk Sobek NP greater than 100 kg $CaCO_3$/t: S UP Hazelton, S LP Hazelton and S Undefined.

The relationship between paste pH and Sobek NP values for Sulphurets Deposit samples by model code is presented in Figure 5.1-20. Based on this figure, up to 8 kg $CaCO_3$/t of measured NP could be associated with low paste pH. However, a project unavailable NP value of 15 kg $CaCO_3$/t was previously derived from the complete KSM deposit static test database and the RSFs will be composed of a mix rocks with different model codes from several deposits. Therefore the more conservative earlier estimate of unavailable NP is maintained unchanged. The neutralization potential was adjusted by this estimate of unavailable NP to calculate an adjusted neutralization potential (Adjusted NP).

The correlation between Bulk Sobek NP and Inorg NP is shown in Figure 5.1-21. Below the unavailable NP line, the Inorg NP shows a poor correlation to Sobek NP, suggesting unavailable Sobek NP is comprised of a mixture of carbonate and non-carbonate minerals. Above the unavailable NP line of 15 kg $CaCO_3$/t, the Inorg NP values shows good correlation to Bulk Sobek NP in most of the samples, suggesting that most of the Sobek NP in the Sulphurets Deposit occurs as carbonate minerals. Some samples from UP Hazelton and S Undefined show a poor correlation between Inorg NP and Bulk Sobek NP values. The Inorg NP can be estimated from inorganic carbon analyses as a reasonable surrogate to the Sobek NP for estimation of the available NP in the majority of the Sulphurets Deposit samples.

A plot of a Ca CaNP, assuming that the elemental calcium is present as calcite, versus Bulk Sobek NP is shown in Figure 5.1-22. The Ca CaNP values show a strong correlation with the majority of Sobek NP values, indicating that most of the available Sobek NP in the Sulphurets Deposit occurs as calcium carbonate minerals. Some samples from S Monzonite and UP Hazelton exhibit poor correlation, indicating the presence of a greater proportion of calcium from non-carbonate mineral phases in those samples. Ca CaNP values would be a preferable surrogate to Inorg NP for estimation of the available NP

A plot of a CaMg CaNP, assuming that the elemental calcium and magnesium is present as dolomite, versus Bulk Sobek NP is shown in Figure 5.1-23. The correlation between CaMg CaNP and Sobek NP was poorer than for Ca CaNP, indicating that magnesium occurs predominantly in non-carbonate magnesium-bearing mineral phases. Therefore the CaMg CaNP cannot be used reliably for estimating the available NP in the Sulphurets Deposit.



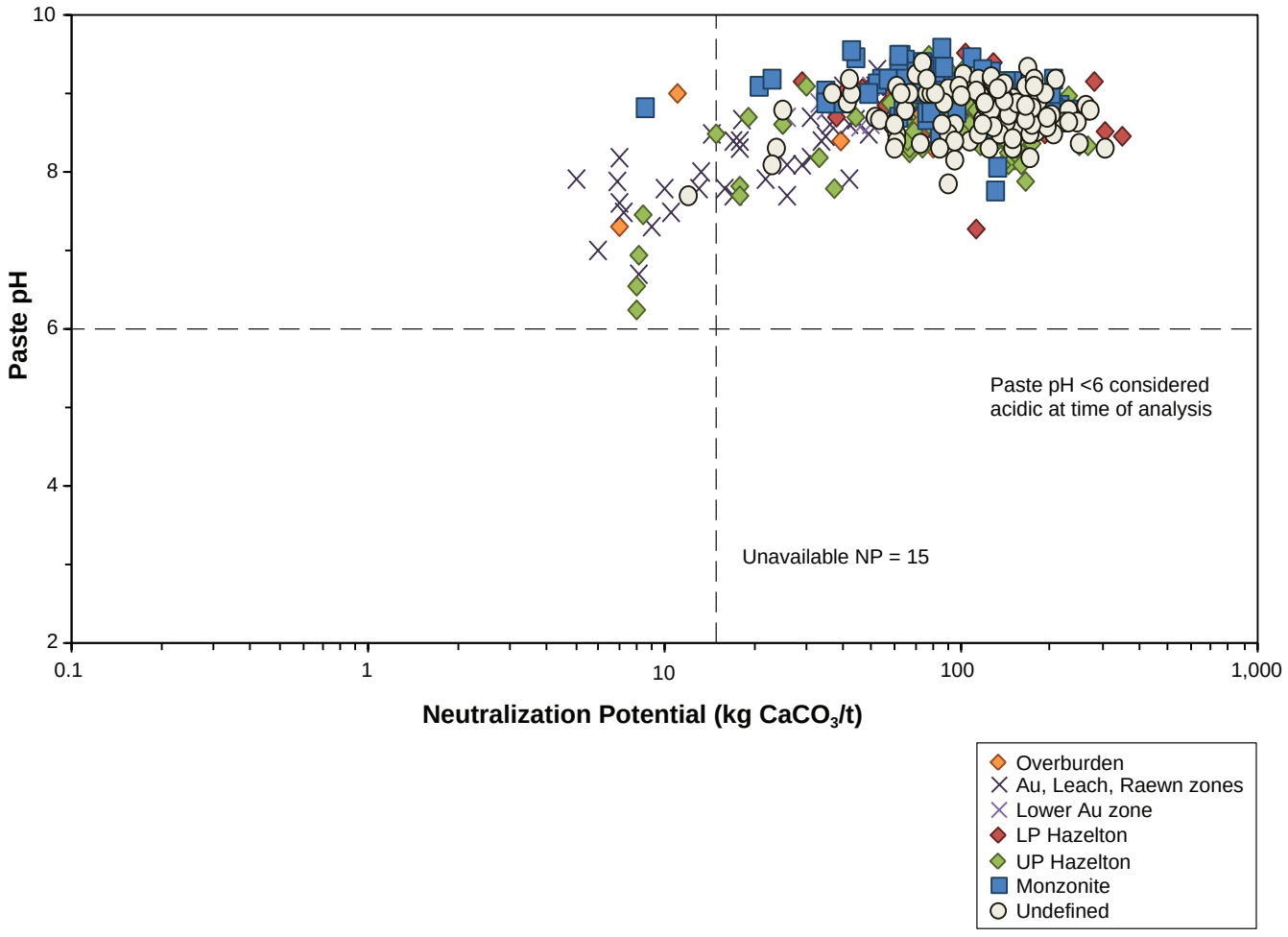
Note: 25th to 75th percentile is represented by the shaded box.

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Statistical Summary of Sulphurets Deposit Bulk Sobek Neutralization Potential Values by Model Code

Figure 5.1-19

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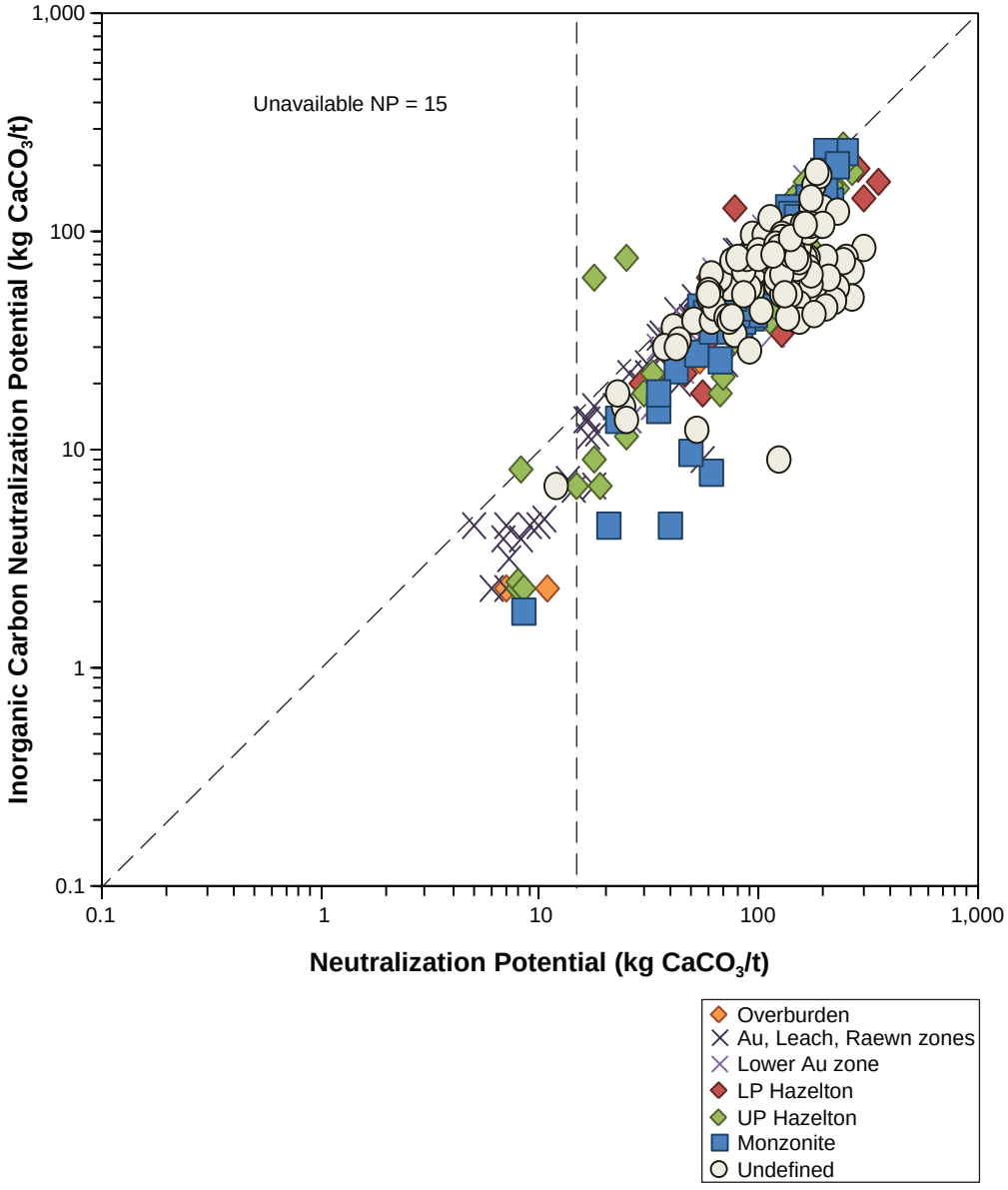


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Paste pH versus Bulk Sobek Neutralization Potential - Sulphurets Deposit by Model Code

Figure 5.1-20

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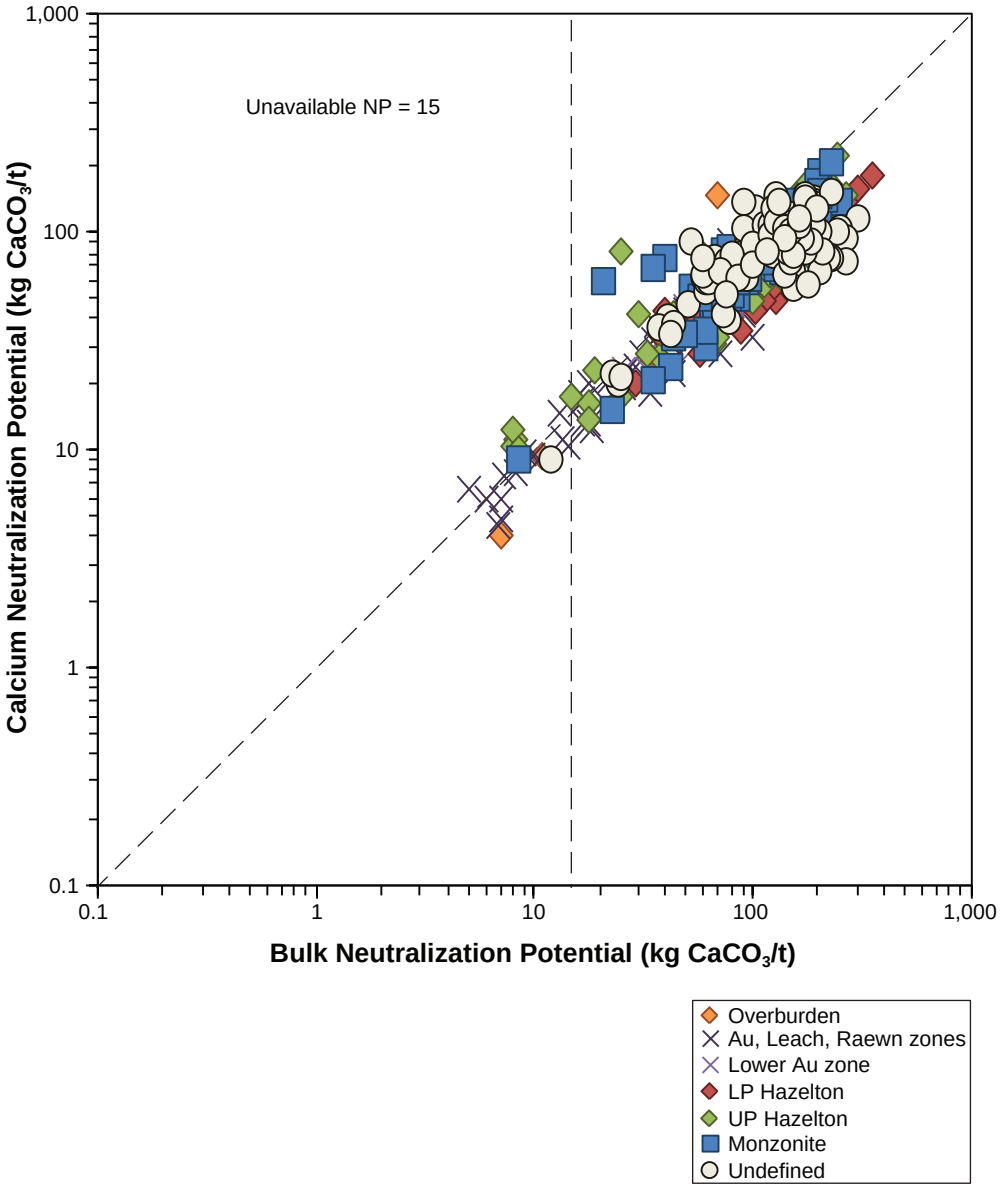


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Inorganic Carbon Neutralization Potential versus Bulk Sobek Neutralization Potential – Sulphurets Deposit by Model Code

Figure 5.1-21

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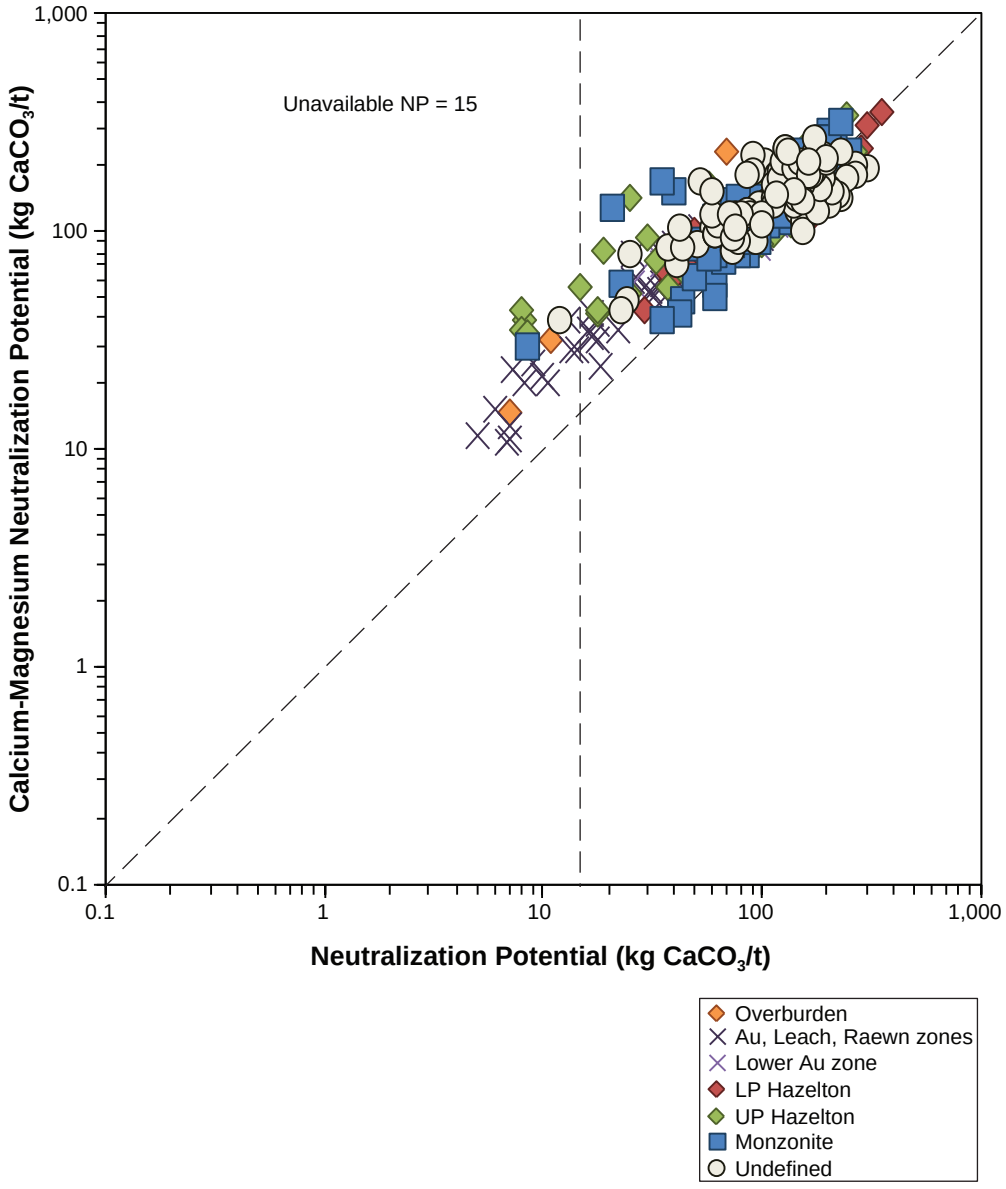


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Calcium Neutralization Potential versus Bulk Sobek Neutralization Potential - Sulphurets Deposit by Model Code

Figure 5.1-22

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Calcium-Magnesium Neutralization Potential versus Bulk Sobek Neutralization Potential - Sulphurets Deposit by Model Code

Figure 5.1-23

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5.1.2.4 Sulphide Net Potential Ratios

A statistical summary of the adjusted SNPR for the Sulphurets Deposit is shown in Figure 5.1-24. The adjusted SNPR for 433 samples from the Sulphurets Deposit range from a minimum of 0.01 to a maximum of 161, with median values ranging from 0.25 (S Au, Leach, Raewyn) to of 7.24 (S Monzonite). Twenty-five percent of the samples (S Au, Leach, Raewyn and S Lower Au) have median adjusted SNPR<1, indicating that they are potentially acid generating (PAG). Nineteen percent of the samples (S Overburden and S LP Hazelton) have median adjusted SNPR between 1.0 and 2.0, indicating they are possibly acid generating (U). Fifty-six percent of the samples (S UP Hazelton, S Monzonite, and S Undefined) have median adjusted SNPR>2, indicating that they are not potentially acid generating (not-PAG). It is important to note that the 25th percentile of the samples from S UP Hazelton have an SNPR of 1.48, and the 25th percentile of the samples from S Undefined have an SNPR of 1.07, indicating they are potentially acid generating, and possibly acid generating (U), respectively.

The relationship between paste pH and adjusted SNPR of Sulphurets Deposit samples is shown in Figure 5.1-25. Samples with adjusted SNPR of 0.01 were associated with neutral/alkaline pH, indicating that the majority of the samples are in the early stage of acid generation (no acidic samples).

The relationship between sulphide-sulphur and adjusted SNPR of Sulphurets Deposit samples is shown in Figure 5.1-26. It indicates that the samples with a combination of sulphide-sulphur greater than 0.1% and an adjusted SNPR<2 are the most likely to be net ARD generating.

5.1.2.5 Whole Rock and Solid-phase Elemental Analysis

The solid-phase multi-element concentrations in the ML/ARD samples from the Sulphurets Deposit were measured by ICP-MS analysis after strong four-acid digestion and by XRF whole-rock analysis. The results are found in Appendix 5.1-1.

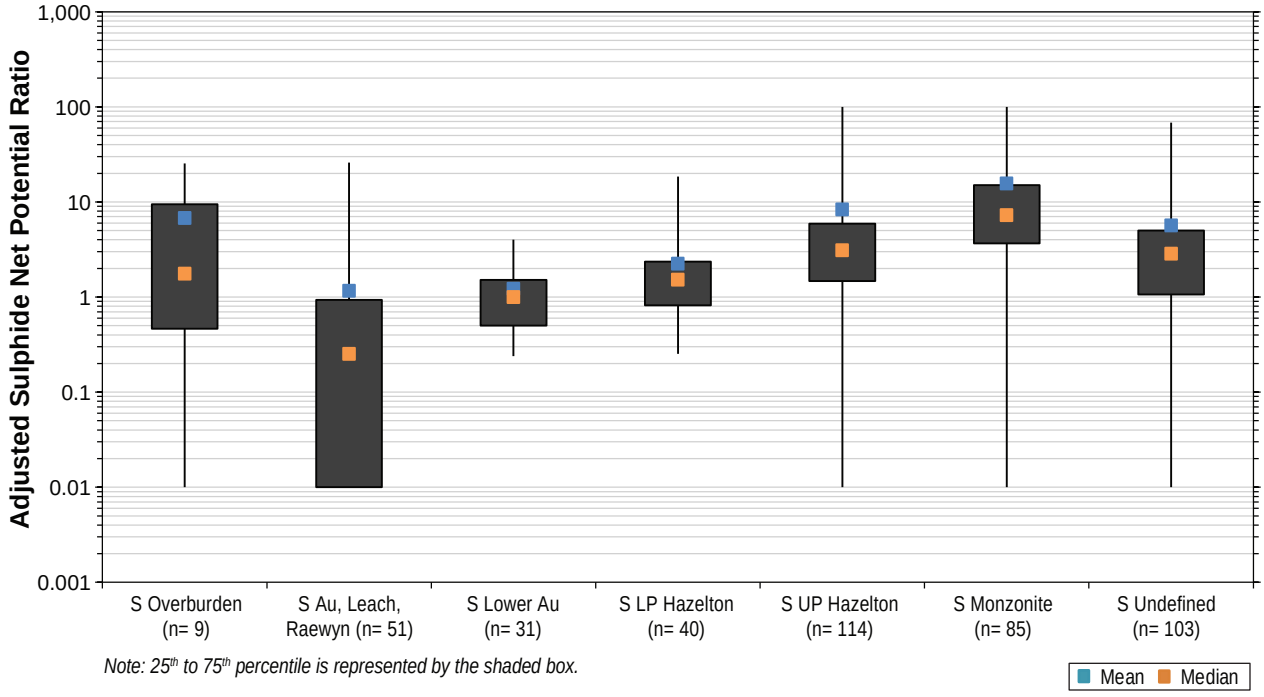
Most of the Sulphurets Deposit rock was comprised of oxide-equivalents of SiO_2 and Al_2O_3. Lesser but still significant amounts of Fe_2O_3, K_2O, CaO, MgO, and Na_2O were present.

The solid-phase concentrations of each element were compared with concentrations found in the earth's crust (crustal abundance) in order to determine which elements occur in anomalously high concentrations (Price 1997). Any elemental concentration higher than three times its crustal abundance was considered an anomalously high concentration.

Table 5.1-2 shows the statistical summary of the results for elements with median concentrations exceeding three times the crustal abundance for the Sulphurets Deposit rocks. The results showed that the elements frequently exceeding three times basalt crustal abundance were: silver, arsenic, barium, bismuth, cadmium, cesium, copper, mercury, potassium, molybdenum, lead, rubidium, sulphur, antimony, selenium, thallium, tungsten, and zinc. Elements frequently exceeding three times shale crustal abundance were: silver, arsenic, barium, cadmium, copper, molybdenum, lead, sulphur, antimony, selenium, tungsten and zinc.

5.1.2.6 Mineralogy

Mineralogical composition of waste rock samples at the Sulphurets Deposit was determined by Rietveld XRD and petrographic analysis (transmitted light microscopy).



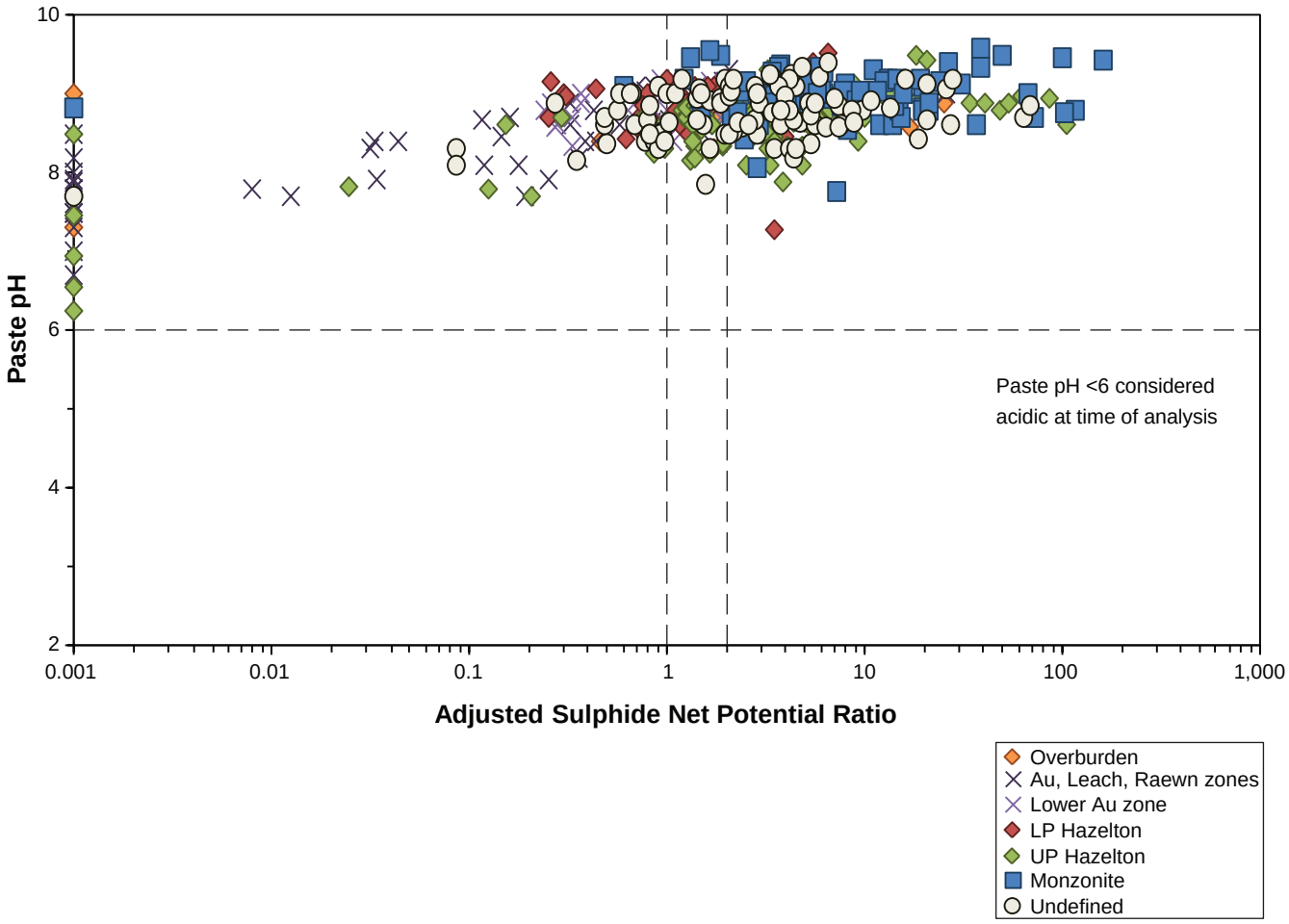
Note: 25th to 75th percentile is represented by the shaded box.

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Statistical Summary of Sulphurets Deposit Adjusted Net Potential Ratios by Model Code

Figure 5.1-24

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Paste pH versus Adjusted Sulphide Net Potential Ratio - Sulphurets Deposit by Model Code

Figure 5.1-25

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Table 5.1-2. Statistical Summary of Results for the Elements Exceeding Three Times the Crustal Abundance for the Sulphurets Deposit by Model Code

		Silver	Arsenic	Barium	Bismuth	Cadmium	Cesium	Copper	Mercury	Potassium	Molybdenum	Lead	Rubidium	Sulphur	Antimony	Selenium	Thalium	Tungsten	Zinc
SULPHURETS - Overburden	Number of Samples	7	9	9	9	9	8	9	6	9	9	7	9	8	7	6	6	9	9
	Minimum	0.24	3	150	0.05	0.03	1.37	72.5	0.01	22200	3.04	3.1	49	700	1.64	1	0.39	2.8	30
	10 Percentile	0.258	3.4	390	0.05	0.038	1.685	171.3	0.01	28600	3.168	5.8	64.44	1750	1.796	1.5	0.46	4.56	32.4
	25 Percentile	0.295	3.5	1327	0.06	0.04	2.33	243	0.0125	31900	3.89	7.8	76.1	2575	2.4	2.25	0.555	5.3	37
	Mean	0.40	41.60	1470.56	0.41	0.21	2.94	755.47	0.06	39044	8.81	12.83	92.99	11237.50	18.14	3.50	1.22	10.86	89.47
	Median	0.33	7	1530	0.16	0.07	3.17	1036.05	0.04	41900	4.3	8.2	97.6	7700	3.1	3	0.635	7	45.2
	75 Percentile	0.455	66.4	1760	0.38	0.11	3.5225	1245	0.0675	47400	8.23	13.5	109.1	13650	18.975	4.5	1.4125	16.5	85
	90 Percentile	0.622	92.26	2140.4	0.836	0.54	3.842	1259	0.14	48320	18.88	23.54	122.88	24060	49.74	6	2.555	19.42	147.4
	Maximum	0.7	174.5	2790	2.14	1.06	4.43	1295	0.21	49200	32.6	35.9	134	38900	79.5	7	3.44	29.5	373
	3X Basalt Crustal Abundance	0.33	6	990	0.021	0.66	3.3	261	0.27	24900	4.5	18	90	900	0.6	0.15	0.63	2.1	315
	Number of Samples >	3	5	7	9	1	3	6	0	8	3	1	5	7	7	6	3	9	1
	% >	43%	56%	78%	100%	11%	38%	67%	0%	89%	33%	14%	56%	88%	100%	100%	50%	100%	11%
	3X Shale Crustal Abundance	0.21	39	1740	n.a	0.9	15	135	1.2	79800	7.8	60	420	7200	4.5	1.8	4.2	5.4	285
	Number of Samples >	7	4	3	0	1	0	8	0	0	3	0	0	4	3	5	0	6	1
	% >	100%	44%	33%	0%	11%	0%	89%	0%	0%	33%	0%	0%	50%	43%	83%	0%	67%	11%
SULPHURETS - Au, Leach, Raewn zones	Number of Samples	34	51	51	51	51	51	51	34	51	51	40	51	51	40	34	34	51	51
	Minimum	0.08	3	38	0.07	0.04	1.42	19.21	0.01	26000	1.6	4	68.3	2100	2.91	2	0.82	2.4	21
	10 Percentile	0.169	6.5	100	0.12	0.08	2.99	102	0.033	31000	4.46	9.15	94.9	9800	5.918	3	1.188	3.7	34
	25 Percentile	0.38	13.25	263.5	0.165	0.15	3.445	388	0.0625	39900	8.03	13.775	107.15	14450	7.9275	5.25	1.7725	6.1	62
	Mean	0.76	40.79	861.06	0.31	2.34	6.14	3256.15	0.23	45931	123.75	55.29	131.47	25480.39	24.24	9.56	2.20	10.81	214.35
	Median	0.555	24.4	560	0.24	0.64	5.8	2243.84	0.14	47100	47.3	25.775	135.9	21000	9.115	8.5	2.22	9.5	122
	75 Percentile	0.91	47.4	1015	0.39	1.565	7.64	5055	0.27	50700	159.105	59.35	152.7	34700	16.3	11.75	2.7725	14.95	250.25
	90 Percentile	1.538	92.2	1770	0.54	4.8	10.2	8438.47	0.423	60400	292.78	111.142	167.5	48000	52.1	16.7	3.029	17.7	404
	Maximum	2.89	265	4640	1.41	26.4	16.7	10000	1.58	70000	995.1	361.71	184	63400	238	26	3.52	34	1820
	3X Basalt Crustal Abundance	0.33	6	990	0.021	0.66	3.3	261	0.27	24900	4.5	18	90	900	0.6	0.15	0.63	2.1	315
	Number of Samples >	26	46	13	51	25	40	40	7	51	45	27	47	51	40	34	34	51	7
	% >	76%	5%	1%	5%	3%	6%	4%	2%	5%	5%	3%	5%	6%	5%	8%	8%	5%	1%
	3X Shale Crustal Abundance	0.21	39	1740	n.a	0.9	15	135	1.2	79800	7.8	60	420	7200	4.5	1.8	4.2	5.4	285
	Number of Samples >	28	20	6	0	23	1	43	2	0	38	10	0	48	38	34	0	39	8
	% >	82%	39%	12%	0%	45%	2%	84%	6%	0%	75%	25%	0%	94%	95%	100%	0%	76%	16%
SULPHURETS - Lower Au zone	Number of Samples	16	31	31	31	31	30	31	15	31	31	26	31	30	26	15	15	31	31
	Minimum	0.21	5.2	44	0.09	0.03	2.3	210.95	0.02	25000	3.04	3.8	71.2	8900	3.19	5	0.92	4.2	27.7
	10 Percentile	0.23	9.4	63	0.11	0.06	3.241	357.04	0.02	29300	5.81	5.73	92.4	11590	5.765	5	1.192	4.7	32
	25 Percentile	0.2925	14.65	115	0.16	0.095	5.165	638.785	0.02	30800	13.08	7.15	99.65	17600	7.34	6	1.49	5.65	50.8
	Mean	0.96	29.46	557.29	0.30	2.25	7.66	1428.00	0.14	36661	40.54	73.98	124.32	25403.33	13.29	7.60	1.96	29.58	244.39
	Median	0.44	18.6	298	0.22	0.38	7.355	1170	0.03	32600	31.06	23.55	119.3	22750	10.79	8	1.61	10.8	91
	75 Percentile	1.125	32	835	0.315	3.625	10.9375	1671.605	0.155	42750	47.38	84.8025	141.6	29825	14.19	8.5	2.3	41	267.85
	90 Percentile	2.485	50.3	1250	0.44	6.18	12.28	3200	0.422	46700	73.24	159.87	167	38950	19.76	9	3.076	84.6	647.7
	Maximum	4.08	205	2200	1.3	17.71	16.2	4620	0.63	52700	237	669	208	71700	58.99	15	3.96	166.7	1267.4
	3X Basalt Crustal Abundance	0.33	6	990	0.021	0.66	3.3	261	0.27	24900	4.5	18	90	900	0.6	0.15	0.63	2.1	315
	Number of Samples>	9	30	6	31	13	26	29	2	31	29	15	28	30	26	15	15	31	6
	% >	56%	97%	19%	100%	42%	87%	94%	13%	100%	94%	58%	90%	100%	100%	100%	100%	100%	19%
	3X Shale Crustal Abundance	0.21	39	1740	n.a	0.9	15	135	1.2	79800	7.8	60	420	7200	4.5	1.8	4.2	5.4	285
	Number of Samples>	15	6	1	0	12	1	31	0	0	26	11	0	30	24	15	0	24	7
	% >	94%	19%	3%	0%	39%	3%	100%	0%	0%	84%	42%	0%	100%	92%	100%	0%	77%	23%
SULPHURETS - LP Hazelton	Number of Samples	27	40	40	40	40	24	40	11	40	40	34	40	40	34	11	11	39	40
	Minimum	0.2	2.5	42	0.07	0.05	1.5	85.8	0.04	9400	1.6	3.6	43.4	5000	3.5	5	0.51	3	33
	10 Percentile	0.34	6.77	69.5	0.149	0.099	3.36	365.147	0.05	16920	4.888	12.65	72.85	9160	5.682	5	0.98	4.48	67.8
	25 Percentile	0.575	11.675	93.5	0.2475	0.5925	4.895	589.25	0.09	31150	7.19	25.2	98.2	15225	8.0925	5.5	1.16	5.15	184.15
	Mean	3.68	32.81	398.45	1.28	3.15	6.04	1188.74	0.75	35020	25.35	364.16	124.83	22112.50	39.10	7.45	1.32	11.00	688.08
	Median	0.9	20.15	181.5	0.48	1.69	5.92	824.915	0.33	36800	15.15	78.64	126.5	19000	11.55	7	1.27	7	321.8
	75 Percentile	1.255	37.625	653	0.9025	3.97	7.475	1604.0325	0.65	43625	31.7775	129	151.9	27175	24.825	8	1.64	10.5	696.5
	90 Percentile	4.94	67.22	1066.6	2.42	7.587	9.058	2449.469	1.83	46700	58.11	525.678	170.14	31370	45.29	8	1.68	20.12	1327
	Maximum	54.4	161.5	1440	16.28	19.2	10.2	4613.38	3.9	49300	119.11	5310	202	73000	624	17	1.81	76.4	4160
	3X Basalt Crustal Abundance	0.33	6	990	0.021	0.66	3.3	261	0.27	24900	4.5	18	90	900	0.6	0.15	0.63	2.1	315
	Number of Samples>	25	36	6	40	29	21	37	6	33	36	26	33	40	34	11	10	39	21
	% >	93%	90%	15%	100%	73%	88%	93%	55%	83%	90%	76%	83%	100%	100%	100%	91%	100%	53%
	3X Shale Crustal Abundance	0.21	39	1740	n.a	0.9	15	135	1.2	79800	7.8	60	420	7200	4.5	1.8	4.2	5.4	285
	Number of Samples>	26	10	0	0	28	0	38	2	0	29	20	0	38	33	11	0	26	23
	% >	96%	25%	0%	0%	70%	0%	95%	18%	0%	73%	59%	0%	95%	97%	100%	0%	67%	58%

(continued)

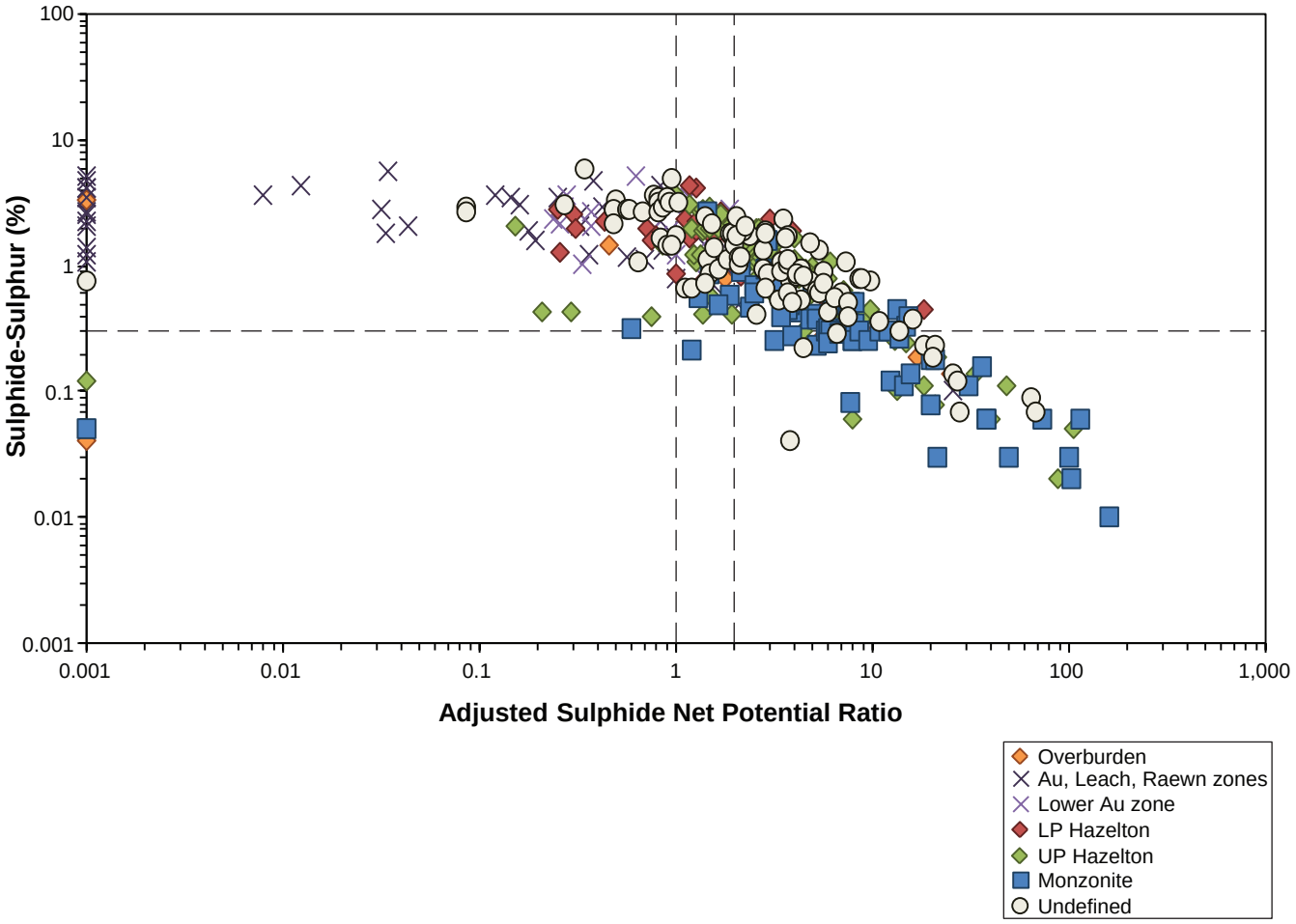
Table 5.1-2. Statistical Summary of Results for the Elements Exceeding Three Times the Crustal Abundance for the Sulphurets Deposit by Model Code (completed)

		Silver	Arsenic	Barium	Bismuth	Cadmium	Cesium	Copper	Mercury	Potassium	Molybdenum	Lead	Rubidium	Sulphur	Antimony	Selenium	Thalium	Tungsten	Zinc
SULPHURETS - UP Hazelton	Number of Samples	74	114	114	114	114	70	114	30	114	114	96	114	87	96	30	30	114	114
	Minimum	0.10	1.50	29.00	0.02	0.01	1.00	84.90	0.01	13300.00	1.23	3.10	40.00	500.00	1.61	2.00	0.21	1.90	16.00
	10 Percentile	0.39	3.52	96.90	0.06	0.05	1.98	334.03	0.01	24120.00	3.05	4.08	69.66	1460.00	2.58	2.00	0.37	5.23	27.86
	25 Percentile	0.59	6.10	149.00	0.12	0.05	2.71	747.25	0.02	28725.00	5.82	5.79	81.18	4250.00	3.03	3.00	0.47	7.15	34.00
	Mean	1.52	15.98	1053.68	0.60	0.35	4.02	1436.10	0.04	35650.00	30.90	26.47	98.81	13888.51	13.31	4.03	0.64	11.23	63.75
	Median	0.90	10.00	611.00	0.23	0.09	3.60	1249.65	0.03	35450.00	19.05	7.90	93.55	11000.00	4.33	3.50	0.67	9.85	42.85
	75 Percentile	1.38	17.80	1772.50	0.68	0.13	5.08	1935.75	0.05	42075.00	38.10	12.73	110.65	17900.00	7.53	5.00	0.77	14.15	52.00
	90 Percentile	1.95	27.70	2480.00	1.29	0.26	6.26	2658.77	0.08	47250.00	78.09	23.02	138.61	24420.00	10.50	6.10	0.90	20.02	68.40
	Maximum	34.90	223.20	7150.00	8.20	11.30	10.35	6360.00	0.10	65600.00	287.00	1030.00	177.50	69200.00	500.61	10.00	1.14	32.80	724.00
	3X Basalt Crustal Abundance	0.33	6	990	0.021	0.66	3.3	261	0.27	24900	4.5	18	90	900	0.6	0.15	0.63	2.1	315
	Number of Samples >	69	86	48	107	8	42	105	0	97	92	16	63	83	96	30	16	112	4
	% >	93%	75%	42%	94%	7%	60%	92%	0%	85%	81%	17%	55%	95%	100%	100%	53%	98%	4%
	3X Shale Crustal Abundance	0.21	39	1740	n.a	0.9	15	135	1.2	79800	7.8	60	420	7200	4.5	1.8	4.2	5.4	285
	Number of Samples >	71	6	29	0	7	0	112	0	0	77	2	0	54	46	30	0	101	4
	% >	96%	5%	25%	0%	6%	0%	98%	0%	0%	68%	2%	0%	62%	48%	100%	0%	89%	4%
SULPHURETS - Monzonite	Number of Samples	61	85	85	85	85	56	85	32	85	85	78	85	65	78	32	32	85	85
	Minimum	0.05	1.90	111.00	0.02	0.01	0.65	40.40	0.01	12700.00	0.73	2.50	26.90	300.00	1.47	2.00	0.17	2.30	8.00
	10 Percentile	0.17	3.04	413.80	0.04	0.03	1.55	131.10	0.01	23120.00	1.49	3.80	57.56	840.00	1.90	2.00	0.32	4.18	18.40
	25 Percentile	0.26	4.00	1150.00	0.05	0.04	2.58	221.20	0.02	30800.00	3.19	5.63	74.50	2000.00	2.49	2.00	0.46	5.90	24.00
	Mean	0.50	8.29	2394.11	0.24	0.06	3.40	654.23	0.03	37425.88	17.08	9.57	89.91	4461.54	3.56	3.03	0.60	8.09	30.89
	Median	0.40	6.00	2743.00	0.10	0.05	3.12	459.38	0.02	37300.00	7.20	6.70	88.90	3900.00	3.20	3.00	0.60	8.20	28.50
	75 Percentile	0.66	10.00	3330.00	0.26	0.07	4.24	846.00	0.04	46200.00	15.70	9.40	106.10	5200.00	4.33	3.00	0.77	10.20	36.00
	90 Percentile	1.00	15.00	4066.00	0.50	0.10	5.42	1344.00	0.06	49060.00	29.66	16.45	120.88	9280.00	5.41	4.90	0.85	12.22	47.40
	Maximum	1.30	58.40	5750.00	2.52	0.49	7.87	2820.00	0.08	59900.00	323.20	71.70	149.00	23700.00	8.33	6.00	0.94	18.40	70.00
	3X Basalt Crustal Abundance	0.33	6	990	0.021	0.66	3.3	261	0.27	24900	4.5	18	90	900	0.6	0.15	0.63	2.1	315
	Number of Samples >	36	40	66	81	0	25	59	0	74	57	7	42	57	78	32	14	85	0
	% >	59%	47%	78%	95%	0%	45%	69%	0%	87%	67%	9%	49%	88%	100%	100%	44%	100%	0%
	3X Shale Crustal Abundance	0.21	39	1740	n.a	0.9	15	135	1.2	79800	7.8	60	420	7200	4.5	1.8	4.2	5.4	285
	Number of Samples >	60	59	45	79	1	0	85	0	0	60	1	0	57	78	32	0	49	0
	% >	98%	69%	53%	93%	1%	0%	100%	0%	0%	71%	1%	0%	88%	100%	100%	0%	58%	0%
SULPHURETS - Undefined	Number of Samples	82	103	103	103	103	59	103	38	103	103	84	103	79	84	38	38	103	103
	Minimum	0.05	3.00	17.00	0.02	0.03	1.10	24.71	0.01	18500.00	0.40	3.40	36.50	600.00	1.64	1.00	0.50	1.40	26.00
	10 Percentile	0.32	10.02	95.60	0.10	0.05	1.72	58.01	0.01	24420.00	0.98	5.73	62.20	3000.00	2.64	2.00	0.68	4.10	35.54
	25 Percentile	0.40	17.00	295.00	0.26	0.06	1.98	97.15	0.02	26800.00	1.70	9.05	73.50	8050.00	3.78	3.00	0.98	7.25	45.50
	Mean	1.68	129.00	1181.07	1.39	2.03	3.65	419.99	0.29	34381.55	10.96	179.80	95.60	17200.00	13.37	4.63	1.33	12.40	356.65
	Median	0.70	29.00	859.00	0.56	0.16	3.10	225.88	0.04	34700.00	3.61	16.85	95.80	13700.00	5.79	4.00	1.25	9.90	76.00
	75 Percentile	1.51	75.50	1657.00	1.31	0.55	4.75	540.75	0.09	41750.00	11.85	36.05	112.50	22800.00	9.16	6.00	1.60	15.60	124.40
	90 Percentile	3.02	264.80	2777.40	2.16	2.50	6.43	1021.86	0.16	45700.00	30.46	165.60	130.26	33560.00	11.97	7.00	1.89	22.44	384.60
	Maximum	24.20	2850.00	4687.00	42.70	73.60	8.22	2540.00	6.75	51000.00	136.50	5520.00	170.00	77100.00	540.90	20.00	3.04	51.40	10000.00
	3X Basalt Crustal Abundance	0.33	6	990	0.021	0.66	3.3	261	0.27	24900	4.5	18	90	900	0.6	0.15	0.63	2.1	315
	Number of Samples>	73	98	47	102	23	26	43	2	88	46	41	59	78	84	38	36	100	13
	% >	89%	95%	46%	99%	22%	44%	42%	5%	85%	45%	49%	57%	99%	100%	100%	95%	97%	13%
	3X Shale Crustal Abundance	0.21	39	1740	n.a	0.9	15	135	1.2	79800	7.8	60	420	7200	4.5	1.8	4.2	5.4	285
	Number of Samples >	78	43	23	0	21	0	69	2	0	36	18	0	62	52	37	0	86	14
	% >	95%	42%	22%	0%	20%	0%	67%	5%	0%	35%	21%	0%	78%	62%	97%	0%	83%	14%

Concentrations are in ppm

n.a - crustal abundance data are not available

Crustal abundance data from Price (1997).



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Sulphide-Sulphur versus Adjusted Sulphide Net Potential Ratio - Sulphurets Deposit by Model Code

Figure 5.1-26

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Appendix 5.1-2 provides the XRD analysis for the Sulphurets Deposit samples. The more common primary minerals identified in five samples from Sulphurets Deposit were quartz, K-feldspar, muscovite, clinochlore, and plagioclase. The most common sulphide mineral was pyrite with lesser amounts of sphalerite, galena and molybdenite. Other identified sulphur-bearing minerals were gypsum and anhydrite. The most common carbonate minerals were calcite, dolomite, and lesser amount of siderite.

Appendix 5.1-3 provides the petrographic analyses of samples from the Kerr, Sulphurets and Mitchell Deposits. A description of thin sections of five rock samples from the Sulphurets Deposit is provided. The more common primary minerals were quartz+feldspar, sericite, and chlorite. The most common sulphide mineral was pyrite, with lesser observations of chalcopyrite, and trace amounts of molybdenite, bornite, sphalerite, tetrahedrite-tennatite and enargite (Cu_3AsS_4). Pyrite ranged from anhedral to subhedral grains, disseminated in lithic clasts.

5.1.3 Mitchell Deposit

ABA and solid-phase elemental analyses were conducted on a total of 936 samples from the Mitchell Deposit (809 drill core samples and 127 pulp samples from drill core samples). Details of the static tests and statistical summaries for the Mitchell Deposit are presented in Appendix 5.1-1.

5.1.3.1 Paste pH

The results of the paste pH tests on samples from the Mitchell Deposit by model code are shown in Figure 5.1-27. The paste pH of 936 samples range from a minimum of pH 2.0 (M LP Hazelton) to a maximum of pH 10.0 (M UP Hazelton), with median values ranging from pH 6.5 (M Leach breccia/bornite breccia) to pH 9.1 (M UP Hazelton and M Monzonite).

Static tests of the Mitchell Deposit drill core samples revealed that 5% of the samples had a paste pH less than 6.0, indicating sulphide oxidation and net acid generation had already occurred. Two model codes have minimum paste pH lower than 6.0: M LP Hazelton and M Leach breccia/bornite breccia.

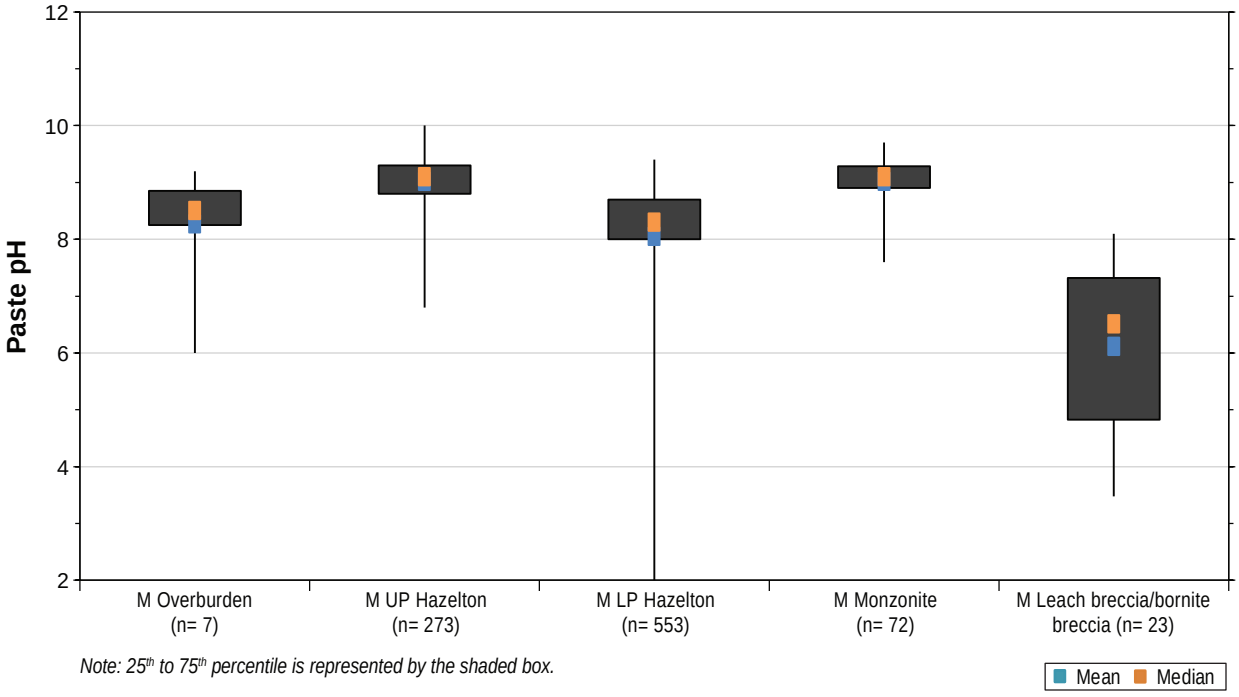
5.1.3.2 Sulphur Species

A statistical summary of the total-sulphur concentrations for the Mitchell Deposit is shown in Figure 5.1-28. The total-sulphur content of all 936 samples from the Mitchell Deposit ranged from a minimum of 0.02% (M UP Hazelton) to a maximum of 19.05% (M Leach breccia/bornite breccia), with median values ranging from 0.52% (M Monzonite) to 5.48% (M Leach breccia/bornite breccia).

For the Mitchell Deposit, the total-sulphur concentrations can be categorized into 3 general groups:

- Total-sulphur median concentrations < 1%: M Overburden and M Monzonite;
- Total-sulphur median concentrations between 1 and 3 %: M UP Hazelton; and
- Total-sulphur median concentrations > 3 %: M LP Hazelton and M Leach breccia/bornite breccia.

A statistical summary of the sulphide-sulphur concentrations for the Mitchell Deposit is shown in Figure 5.1-29. The sulphide-sulphur content of 875 samples from the Mitchell Deposit ranged from a minimum of 0.01% (M Monzonite) to a maximum of 16.35% (M Leach breccia/bornite breccia), with median values ranging from 0.43% (M Monzonite) to 4.04% (M Leach breccia/bornite breccia).



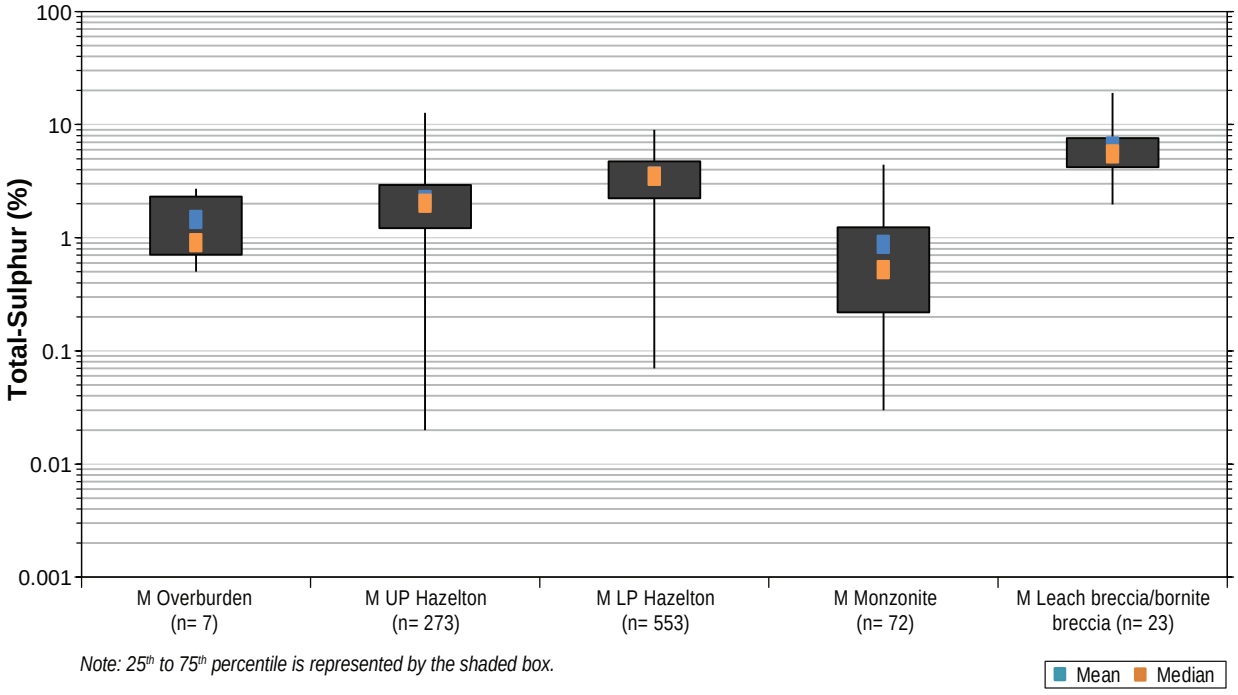
Note: 25th to 75th percentile is represented by the shaded box.

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Statistical Summary of Mitchell Deposit
Paste pH by Model Code

Figure 5.1-27

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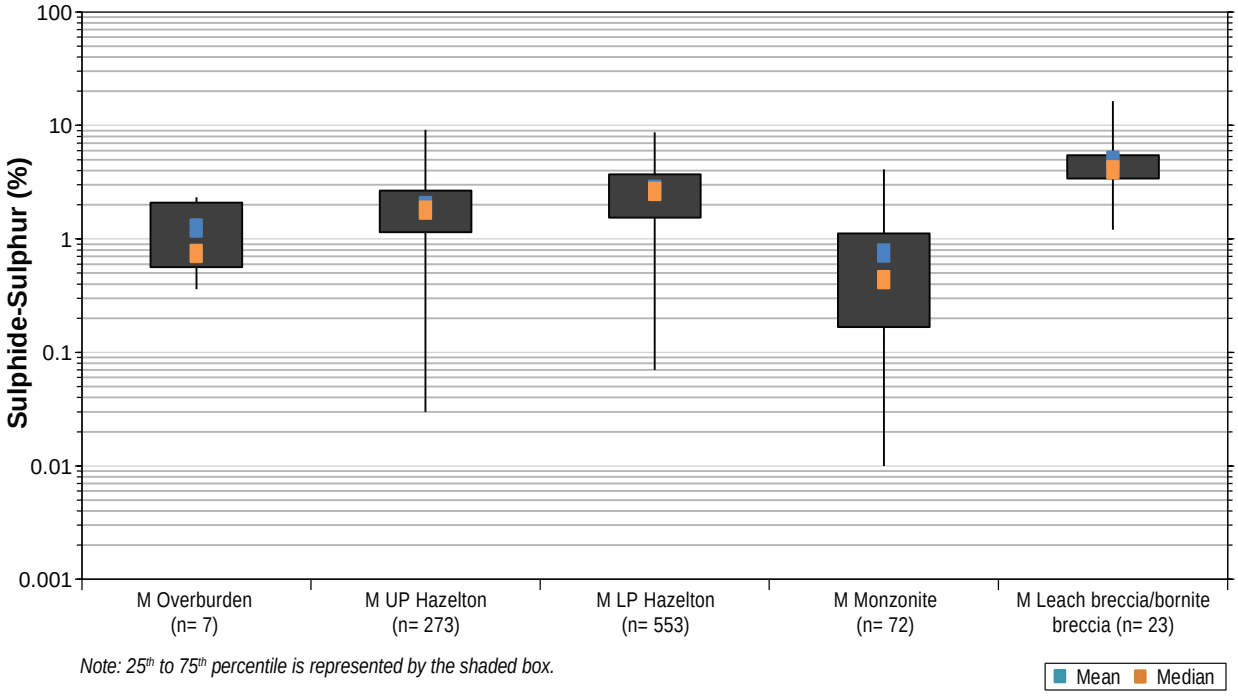
Note: 25th to 75th percentile is represented by the shaded box.

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Statistical Summary of Mitchell Deposit
Total-Sulphur Concentrations by Model Code

Figure 5.1-28

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Statistical Summary of Mitchell Deposit Sulphide-Sulphur Concentrations by Model Code

Figure 5.1-29

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The relationship between sulphide-sulphur and total-sulphur concentrations by model code for the Mitchell Deposit is shown in Figure 5.1-30. In general, there is a strong relationship between sulphide-sulphur and total-sulphur for total-sulphur concentrations greater than 0.3%. However, the results also clearly show that M LP Hazelton samples show the weakest correlation, with total-sulphur concentrations up to 6.1 times higher than sulphide-sulphur concentrations. Moderately soluble sulphate-sulphur species such as anhydrite and gypsum were detected by XRD analysis in a sample from M LP Hazelton in the Mitchell Deposit.

The relationship between acid-soluble sulphate-sulphur and total-sulphur concentrations by model code for the Mitchell Deposit are shown in Figure 5.1-31. This relationship shows that the acid-soluble sulphate-sulphur component of total-sulphur is variable with high concentrations of acid-soluble sulphate-sulphur in M LP Hazelton samples.

5.1.3.3 Neutralization Potential

A statistical summary of the bulk neutralization potential values for the Mitchell Deposit is shown in Figure 5.1-32. The Bulk Sobek NP values for 936 samples from the Mitchell Deposit range from a minimum of -4 kg $CaCO_3$/t (M Leach breccia/bornite breccia) to a maximum of 342 kg $CaCO_3$/t (M Monzonite), with median values ranging from 8 kg $CaCO_3$/t (M Leach breccia/bornite breccia) to 63 kg CaCO3/t (M Monzonite).

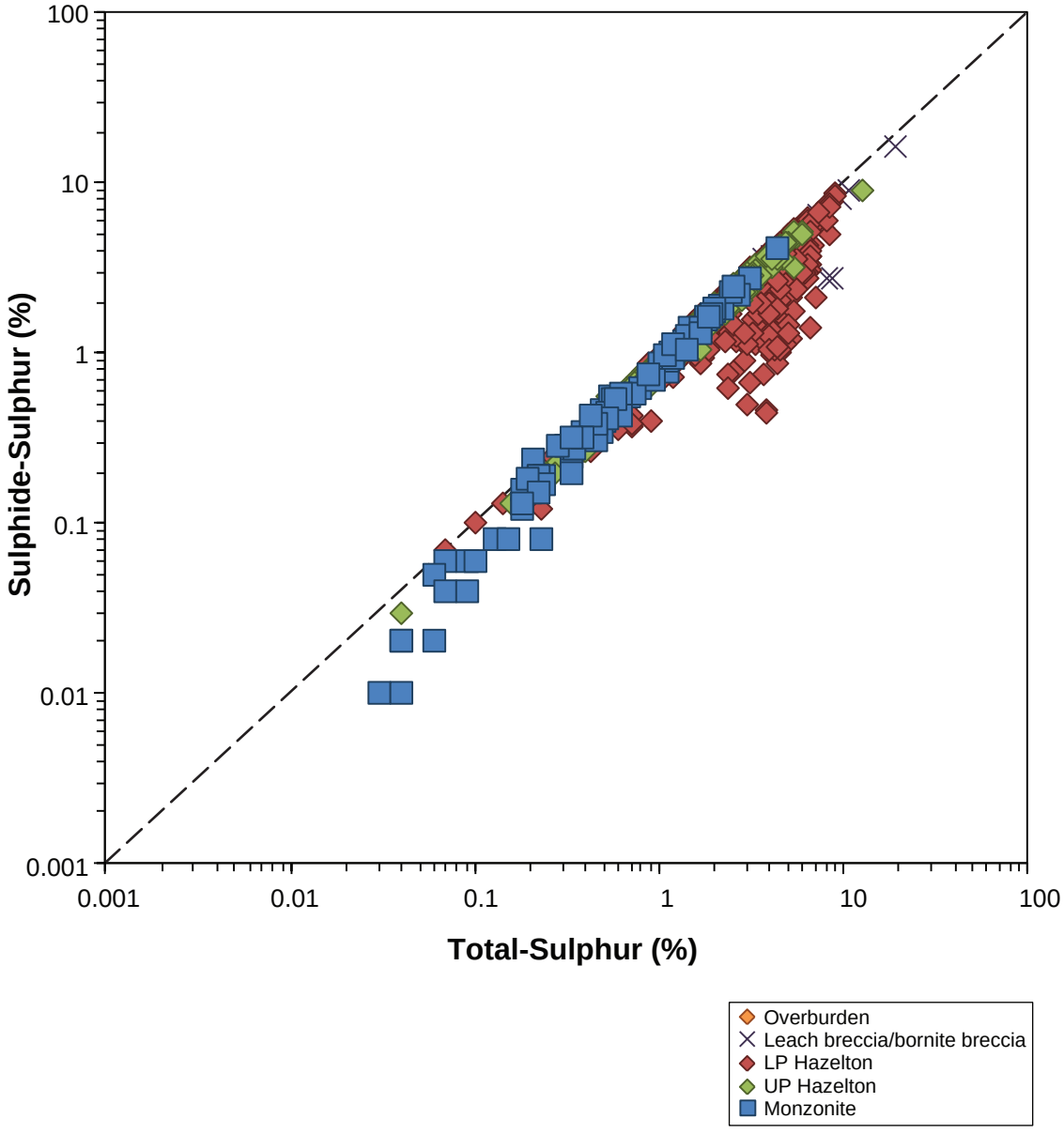
Bulk Sobek NP values for the Mitchell Deposit can be grouped into two general categories:

- Median Bulk Sobek NP lower than 15 kg $CaCO_3$/t: M Leach breccia/bornite breccia
- Median Bulk Sobek NP between 15 kg $CaCO_3$/t and 100 kg $CaCO_3$/t: M Overburden, M UP Hazelton, M LP Hazelton, and M Monzonite.

The relationship between paste pH and Bulk Sobek NP values for Mitchell Deposit samples by model codes are presented in Figure 5.1-33. Based on this figure, up to 15 kg $CaCO_3$/t of measured NP could be associated with acidic paste pH. The neutralization potential was adjusted by this estimate of 15 kg $CaCO_3$/t (unavailable NP) to calculate an adjusted neutralization potential (Adjusted NP).

The correlation between Bulk Sobek NP and Inorg NP is shown in Figure 5.1-34. Below the unavailable NP line, the Inorg NP shows a poor correlation to Sobek NP, predominantly in M LP Hazelton and M Leach breccia/bornite breccia, suggesting unavailable Sobek NP is comprised of a mixture of carbonate and non-carbonate minerals. Above the unavailable NP line of 15 kg $CaCO_3$/t, the Inorg NP shows a stronger correlation to Bulk Sobek NP, predominantly in M Monzonite, suggesting that most of the available Sobek NP in M Monzonite occurs as carbonate minerals. Some samples from M UP Hazelton and M LP Hazelton show a poor correlation between Inorg NP and Bulk Sobek NP, suggesting Sobek NP is comprised of a mixture of carbonate and non-carbonate minerals.

A plot of a Ca CaNP, assuming that the elemental calcium is present as calcite, versus Bulk Sobek NP is shown in Figure 5.1-35. The Ca CaNP values show a strong correlation with the majority of Sobek NP values, indicating that most of the available Sobek NP in the Mitchell Deposit occurs as calcium carbonate minerals. Some samples M LP Hazelton exhibit a poor correlation, indicating the presence of a greater proportion of calcium from non-carbonate mineral phases. Ca CaNP values would be a preferable surrogate to Inorg NP for estimation of the available NP.

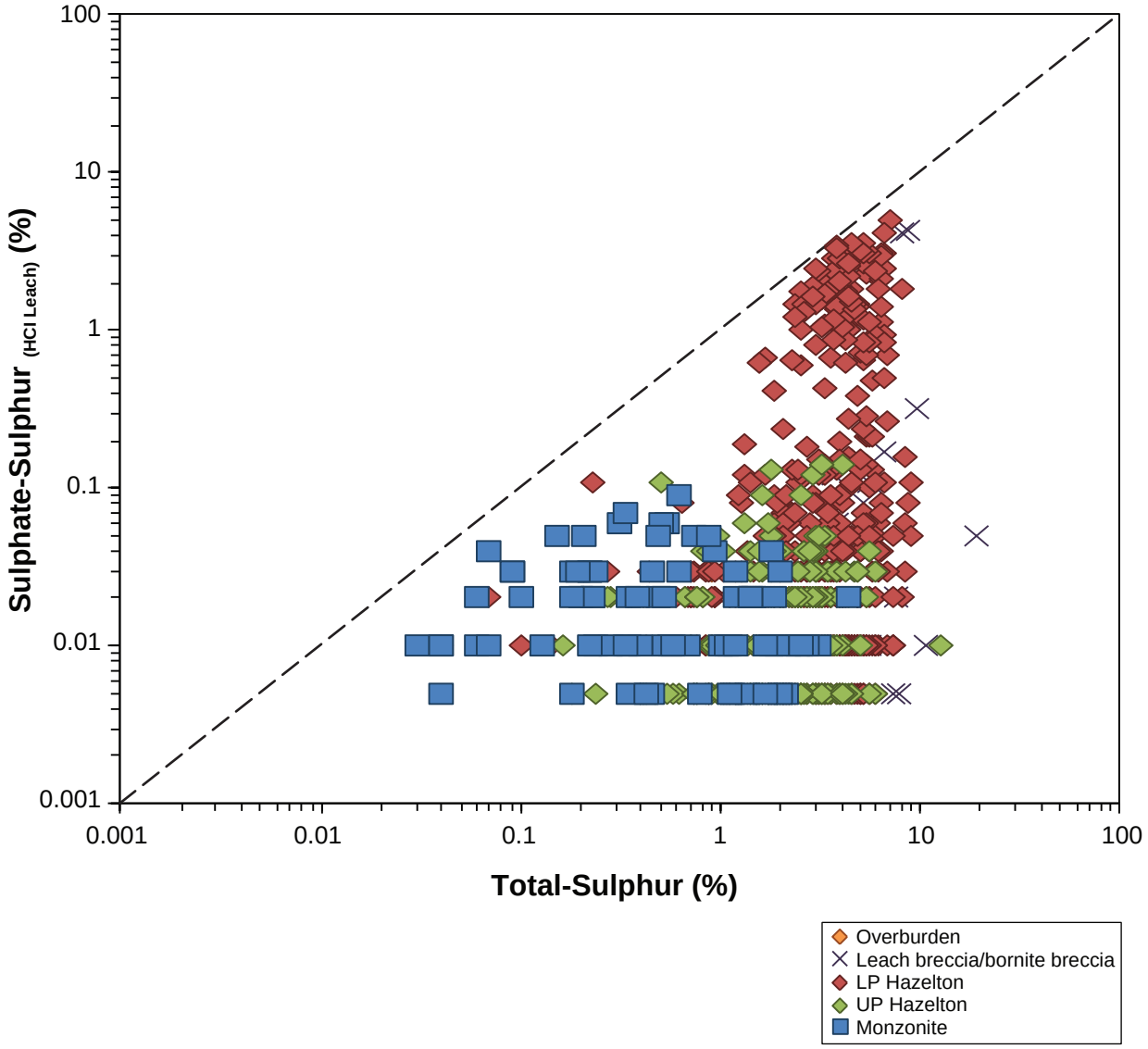


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Sulphide-Sulphur versus Total-Sulphur in the Mitchell Deposit by Model Code

Figure 5.1-30

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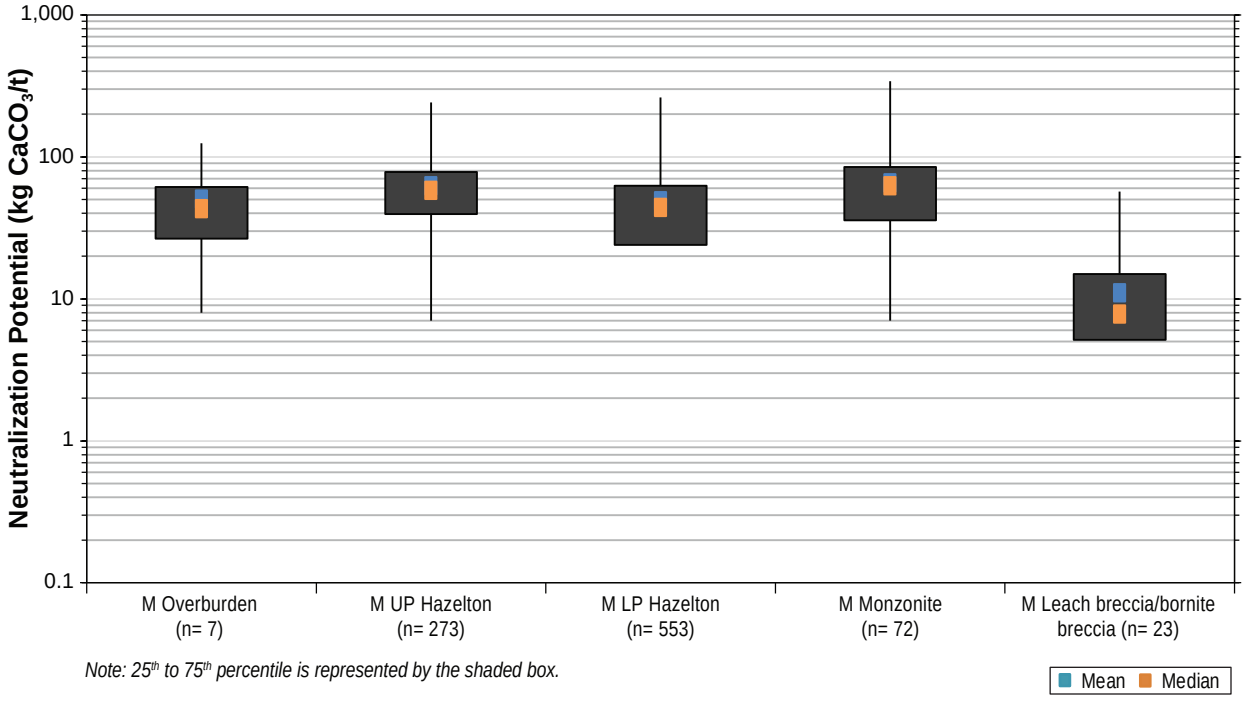


SEABRIDGE GOLD
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Sulphate-Sulphur versus Total-Sulphur in the Mitchell Deposit by Model Code

Figure 5.1-31

Rescan™ Engineers & Scientists



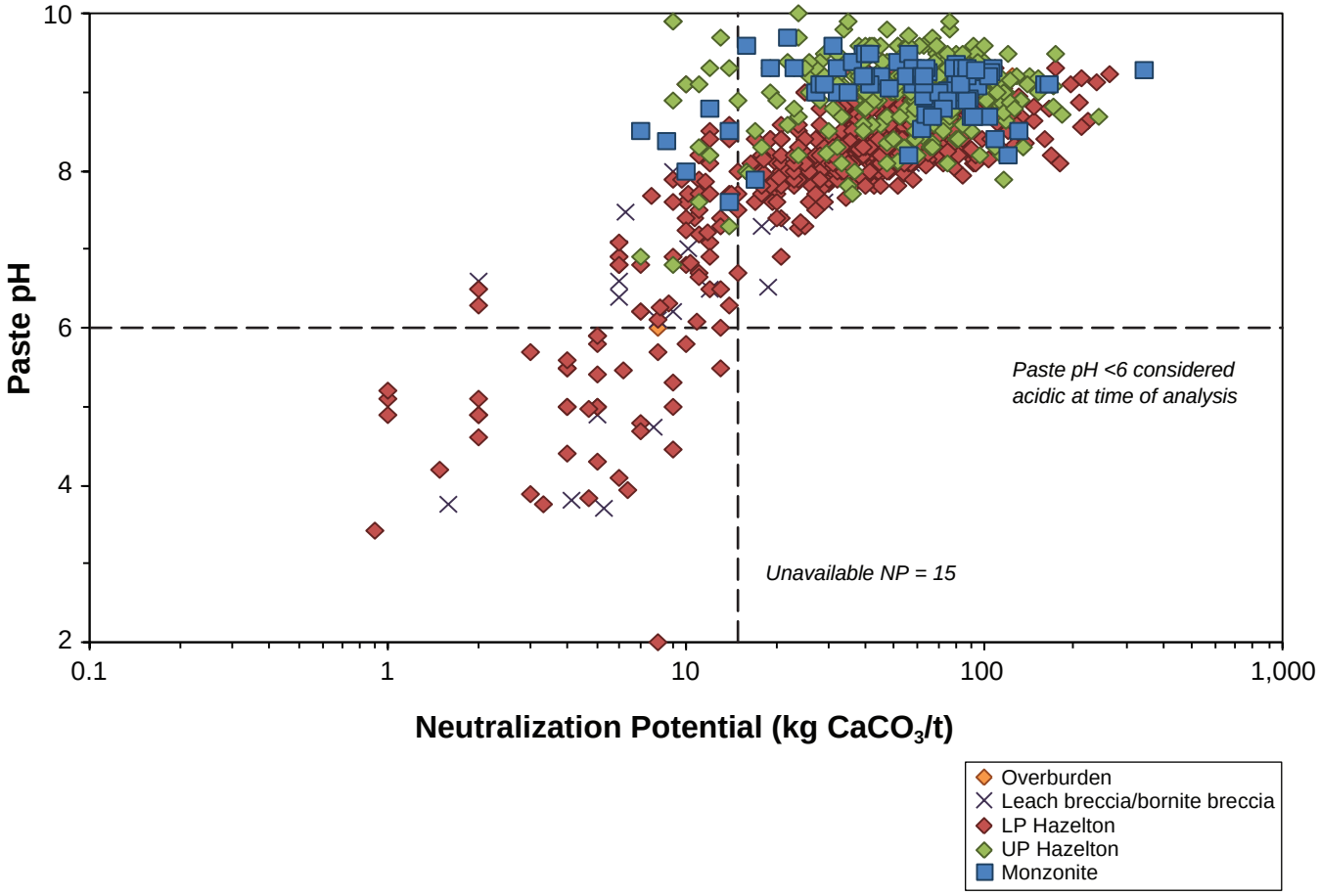
Note: 25th to 75th percentile is represented by the shaded box.

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Statistical Summary of Mitchell Deposit Bulk Sobek Neutralization Potential Values by Model Code

Figure 5.1-32

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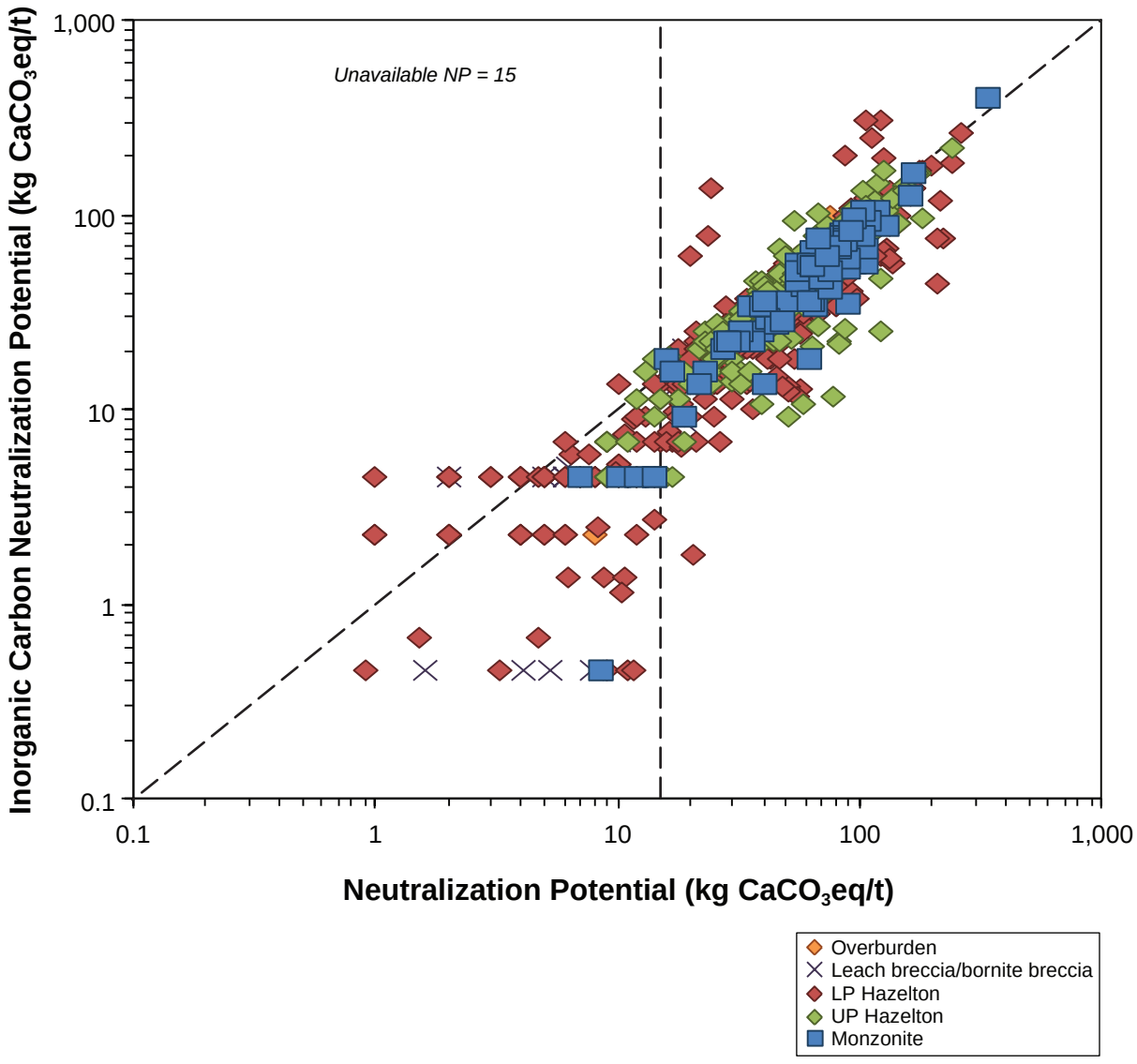


SEABRIDGE GOLD
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Paste pH versus Bulk Sobek Neutralization Potential in the Mitchell Deposit by Model Code

Figure 5.1-33

Rescan™ Engineers & Scientists

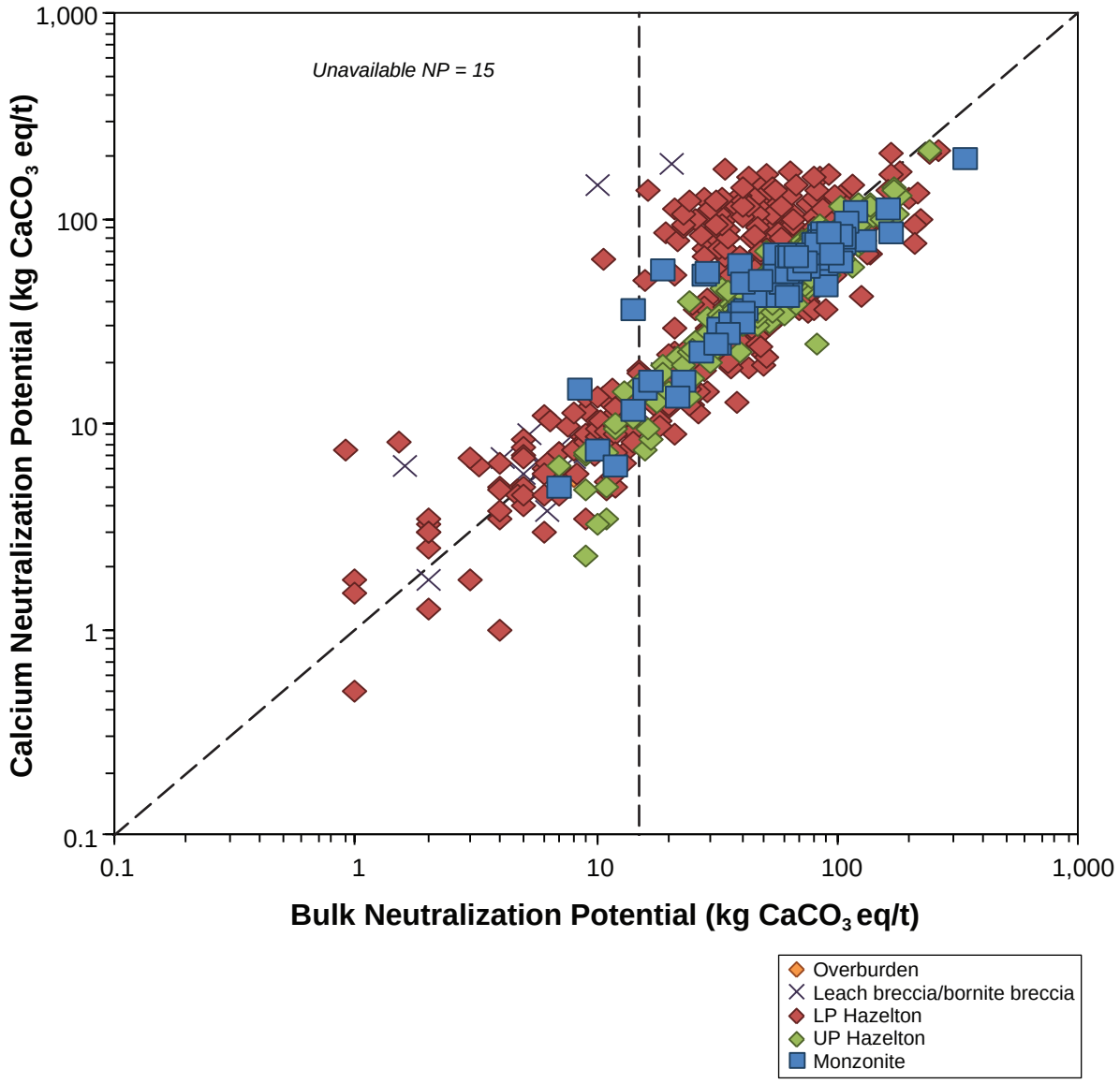


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Inorganic Carbon Neutralization Potential versus Bulk Sobek Neutralization Potential in the Mitchell Deposit by Model Code

Figure 5.1-34

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Calcium Neutralization Potential versus Bulk Sobek Neutralization Potential in the Mitchell Deposit by Model Code

Figure 5.1-35

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A plot of a CaMg CaNP, assuming that the elemental calcium and magnesium is present as dolomite, versus Bulk Sobek NP is shown in Figure 5.1-36. The correlation between CaMg CaNP and Sobek NP was poorer than for Ca CaNP, indicating that a measurable portion of CaMg CaNP is not providing neutralization or is unreactive. This poor correlation indicates that magnesium occurs predominantly in non-carbonate magnesium-bearing mineral phases. Therefore the CaMg CaNP cannot be used reliably for estimating the available NP in the Mitchell Deposit.

5.1.3.4 Sulphide Net Potential Ratios

A statistical summary of the adjusted SNPR for the Mitchell Deposit is shown in Figure 5.1-37. The adjusted SNPR for 936 samples from the Mitchell Deposit range from a minimum of 0.01 to a maximum of 246, with median values ranging from 0.01 (M Leach breccia/bornite breccia) to 3.4 (M Monzonite) . Seventy-four percent of the samples have adjusted SNPR<1, indicating that they are potentially acid generating (PAG). From those samples 138 (20%) were assigned a default SNPR of 0.01, indicating that the samples had NP values equal or lower than 15 kg$CaCO_3$/t, suggesting that the onset of acidic conditions would be rapid in these samples. Twelve percent of the samples have an adjusted SNPR between 1.0 and 2.0, indicating they are possibly acid generating (UPAG) and 14 % of the samples have adjusted SNPR>2, indicating that they are not potentially acid generating (not-PAG).

The relationship between paste pH and adjusted SNPR of Mitchell Deposit samples is shown in Figure 5.1-38. Samples with an adjusted SNPR of 0.01 were associated with both acidic and neutral/alkaline pH, indicating that samples from M LP Hazelton and M Leach breccia/bornite breccia are in in an advanced stage of acid generation (acidic samples) while samples from M Overburden, M UP Hazelton, and M Monzonite are in the early stage of acid generation (no acidic samples).

The relationship between sulphide-sulphur and adjusted SNPR of Mitchell Deposit samples located below MTF and above MTF is shown in Figure 5.1-39. The samples with a combination of sulphide-sulphur greater than 0.1% and adjusted SNPR<2 are the most likely to be net ARD generating in the long term.

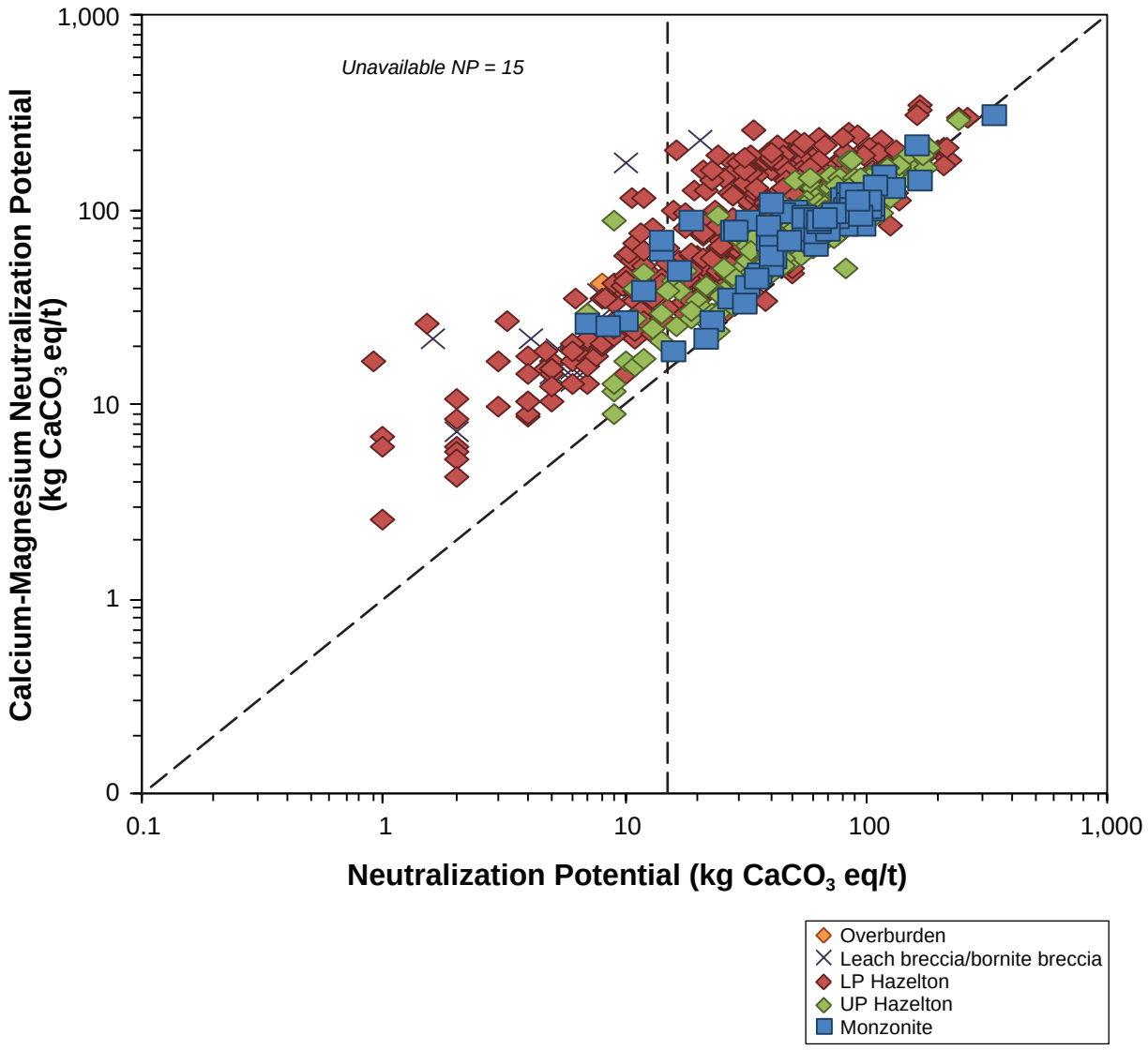
5.1.3.5 Whole Rock and Solid-phase Elemental Analysis

The multi-element concentrations in the ML/ARD samples from the Mitchell Deposit were measured by ICP-MS analysis after strong four-acid digestion and by XRF whole-rock analysis. The results are found in Appendix 5.1-1.

Most of the Mitchell Deposit rock was comprised of oxide-equivalents of SiO_2 and Al_2O_3. Lesser but still significant amounts of Fe_2O_3, K_2O, CaO, MgO, and Na_2O were detected.

The solid-phase concentrations of each element were compared with concentrations found in the earth's crust (crustal abundance) in order to determine which elements occur in anomalously high concentrations (Price 1997). Any elemental concentration higher than three times its crustal abundance was considered an anomalously high concentration.

Table 5.1-3 shows the statistical summary of the results for elements with median concentrations exceeding three times the crustal abundance for the Mitchell Deposit. The results showed that the elements frequently exceeding three times basalt crustal abundance were silver, arsenic, barium, bismuth, cadmium, cesium, copper, potassium, molybdenum, lead, rubidium, sulphur, antimony, selenium, thallium, vanadium and tungsten. Elements frequently exceeding three times shale crustal abundance were silver, arsenic, barium, cadmium, chromium, copper,, molybdenum, lead, sulphur, antimony, selenium, vanadium, and tungsten.

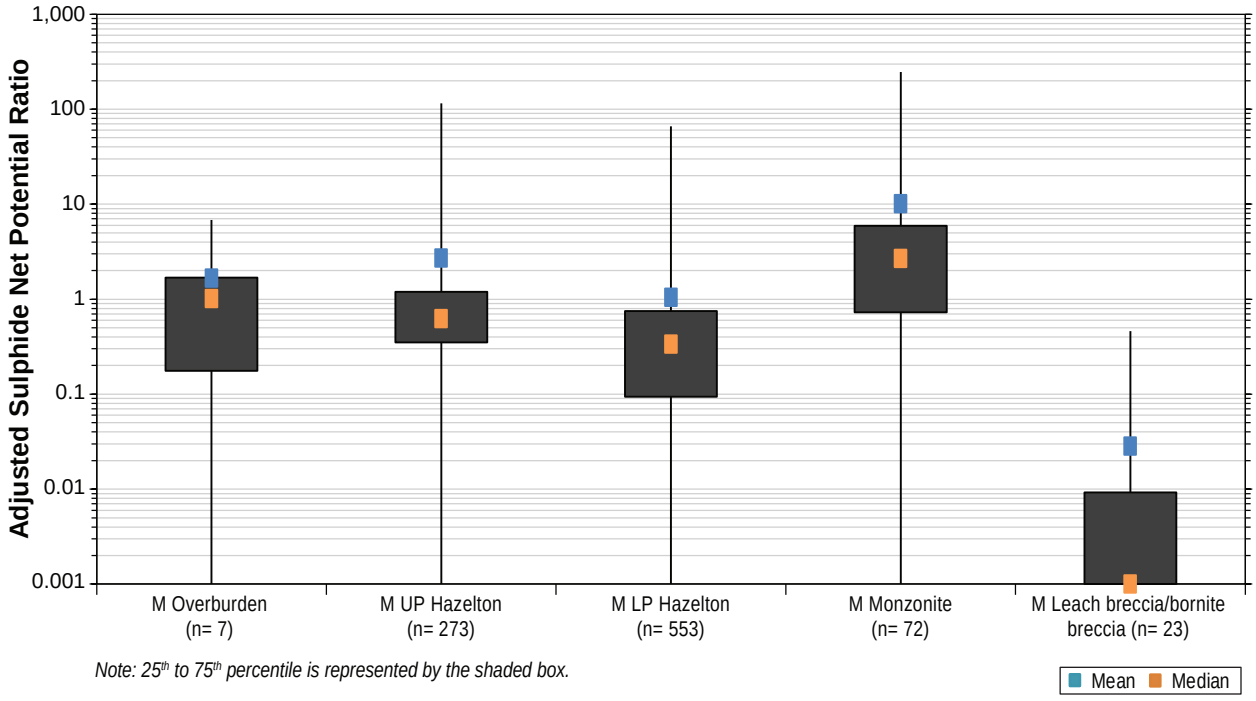


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Calcium-Magnesium Neutralization Potential versus Bulk Sobek Neutralization Potential in the Mitchell Deposit by Model Code

Figure 5.1-36

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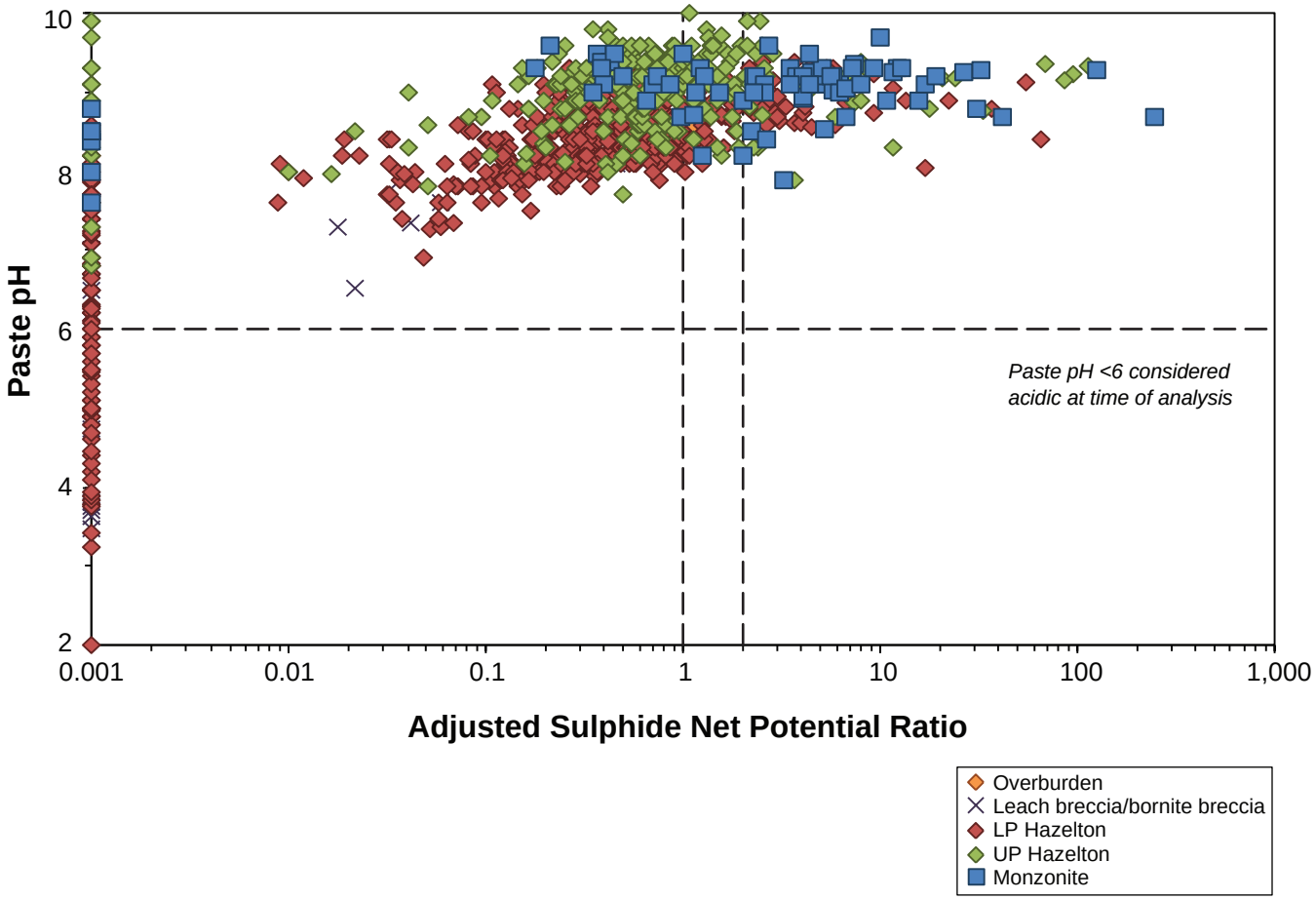
Note: 25th to 75th percentile is represented by the shaded box.

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Statistical Summary of Mitchell Deposit Adjusted Net Potential Ratios by Model Code

Figure 5.1-37

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Paste pH versus Adjusted Sulphide Net Potential Ratio in the Mitchell Deposit by Model Code

Figure 5.1-38

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Table 5.1-3. Statistical Summary of Results for the Elements Exceeding Three Times the Crustal Abundance for the Mitchell Deposit by Model Code

		Silver	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cesium	Copper	Potassium	Molybdenum	Lead	Rubidium	Sulphur	Antimony	Selenium	Thalium	Uranium	Vanadium	Tungsten
MITCHELL - Overburden	Number of Samples	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	Minimum	0.74	3.70	520.00	0.03	0.04	3.00	1.28	660.00	28300.00	4.99	7.60	103.50	4900	1.59	3.00	0.70	1.10	100	0.30
	10 Percentile	0.81	4.00	724.00	0.07	0.09	3.00	1.92	742.80	31480.00	5.09	8.14	105.00	5740	1.73	3.60	0.79	1.28	114	0.48
	25 Percentile	0.93	5.40	1055.00	0.18	0.15	3.00	3.00	858.00	35800.00	7.19	14.30	107.25	7800	2.18	4.00	0.87	1.55	147	1.70
	Mean	1.76	12.13	1987.14	0.95	0.35	20.86	4.11	1295.86	43100.00	26.14	22.60	120.14	15671	3.26	4.86	1.39	2.33	384	4.59
	Median	1.74	7.00	1490.00	0.36	0.28	5.00	4.90	1075.00	41400.00	10.90	23.50	122.50	9900	2.80	5.00	0.93	1.80	179	4.40
	75 Percentile	1.85	8.40	2565.00	1.21	0.36	7.50	5.36	1505.00	49050.00	38.65	31.65	128.00	24850	4.39	6.00	1.96	2.55	557	7.30
	90 Percentile	2.90	24.10	3772.00	2.63	0.68	52.80	5.80	2196.00	56240.00	54.22	34.96	136.70	28940	5.30	6.00	2.27	4.06	921	8.32
	Maximum	4.33	46.60	4660.00	3.53	1.11	117.00	5.86	2610.00	62300.00	75.40	35.20	144.50	29600	5.32	6.00	2.47	5.20	1000	9.40
	3X Basalt Crustal Abundance	0.33	6	990	0.021	0.66	510	3.3	261	24900	4.5	18	90	900	0.6	0.15	0.63	3	750	2.1
	Number of Samples >	7	5	5	7	1	0	5	7	7	7	5	7	7	7	7	7	2	2	5
	% >	100%	71%	71%	100%	14%	0%	71%	100%	100%	100%	71%	100%	100%	100%	100%	100%	29%	29%	71%
	3X Shale Crustal Abundance	0.21	39	1740	n.a	0.9	270	15	135	79800	7.8	60	420	7200	4.5	1.8	4.2	11.1	390	5.4
	Number of Samples>	7	1	3	0	1	0	0	7	0	5	0	0	5	2	7	0	0	2	3
	% >	100%	14%	43%	0%	14%	0%	0%	100%	0%	71%	0%	0%	71%	29%	100%	0%	0%	29%	43%
MITCHELL - UP Hazelton	Number of Samples	245	273	273	273	273	273	273	273	273	273	255	273	273	255	245	245	273	273	273
	Minimum	0.20	0.40	33.00	0.04	0.01	1.00	0.71	14.20	14400	0.66	2.50	46.50	400	0.75	2.00	0.40	0.50	38	1.20
	10 Percentile	0.47	3.80	200.00	0.26	0.04	3.00	1.56	104.60	33880	2.32	6.78	85.82	7160	1.54	4.00	0.62	1.10	133	3.40
	25 Percentile	0.75	5.60	390.00	0.47	0.07	6.00	2.14	396.00	40700	4.26	10.15	97.60	12700	2.01	5.00	0.79	1.70	191	5.30
	Mean	1.85	18.35	1060.70	2.07	0.82	25.64	3.85	946.02	45751	25.54	72.49	119.49	22236	6.80	8.60	1.25	5.57	357	10.19
	Median	1.37	10.80	860.00	1.06	0.16	14.00	3.44	779.00	45600	10.30	18.90	115.00	20900	2.79	8.00	1.16	2.80	336	8.70
	75 Percentile	2.03	21.70	1440.00	2.08	0.47	35.00	4.95	1310.00	51500	32.30	72.35	141.00	30400	4.33	11.00	1.64	5.70	462	13.10
	90 Percentile	3.12	40.62	2292.00	4.83	1.03	68.20	6.85	1799.00	56780	70.03	166.90	159.90	36860	6.39	13.00	2.05	11.98	598	17.98
	Maximum	30.00	196.50	4774.00	29.40	60.10	118.00	11.80	5620.00	78900	257.00	1535.00	231.00	100000	475.00	29.00	3.47	103.00	1252	67.30
	3X Basalt Crustal Abundance	0.33	6	990	0.021	0.66	510	3.3	261	24900	4.5	18	90	900	0.6	0.15	0.63	3	750	2.1
	Number of Samples >	241	200	118	273	46	0	146	222	266	198	135	233	268	255	245	216	127	13	262
	% >	98%	73%	43%	100%	17%	0%	53%	81%	97%	73%	53%	85%	98%	100%	100%	88%	47%	5%	96%
	3X Shale Crustal Abundance	0.21	39	1740	n.a	0.9	270	15	135	79800	7.8	60	420	7200	4.5	1.8	4.2	11.1	390	5.4
	Number of Samples>	244	32	47	0	32	0	0	238	0	156	69	0	245	59	245	0	30	105	202
	% >	100%	12%	17%	0%	12%	0%	0%	87%	0%	57%	27%	0%	90%	23%	100%	0%	11%	38%	74%
MITCHELL - LP Hazelton	Number of Samples	412	553	553	553	553	553	553	553	553	553	463	553	553	463	412	412	553	553	553
	Minimum	0.08	0.10	9.00	0.01	0.01	1.00	0.30	23.00	2300	0.64	4.48	8.30	800	0.12	2.00	0.27	0.10	32	0.10
	10 Percentile	0.62	3.60	41.20	0.07	0.16	3.00	1.91	152.20	19440	4.29	9.06	61.26	11700	0.96	4.00	0.96	0.70	92	0.40
	25 Percentile	0.99	5.40	90.00	0.15	0.28	4.00	2.77	474.00	25900	16.15	14.15	76.90	22300	1.47	6.00	1.32	1.10	124	0.80
	Mean	2.18	21.38	493.15	0.64	1.69	39.10	3.71	989.86	31900	70.30	58.69	93.90	34999	8.32	9.31	1.91	1.67	157	3.50
	Median	1.39	9.00	200.00	0.35	0.49	8.00	3.60	808.00	32600	47.77	25.60	94.50	35000	2.51	8.00	1.81	1.50	157	1.40
	75 Percentile	2.25	18.70	510.00	0.67	0.88	36.00	4.67	1340.00	38800	93.10	48.20	111.50	46700	4.71	11.00	2.49	1.80	175	3.30
	90 Percentile	3.80	44.56	1284.00	1.36	2.06	140.40	5.56	1974.00	42980	151.76	94.90	124.00	56660	12.12	16.00	2.96	2.20	225	9.60
	Maximum	46.10	1080.30	4730.00	18.35	65.10	311.00	13.10	5066.42	54600	836.00	2170.00	189.00	97700	790.00	43.00	4.87	29.50	424	45.20
	3X Basalt Crustal Abundance	0.33	6	990	0.021	0.66	510	3.3	261	24900	4.5	18	90	900	0.6	0.15	0.63	3	750	2.1
	Number of Samples >	401	382	77	544	190	0	323	475	433	494	300	316	552	452	412	402	24	0	184
	% >	97%	69%	14%	98%	34%	0%	58%	86%	78%	89%	65%	57%	100%	98%	100%	98%	4%	0%	33%
	3X Shale Crustal Abundance	0.21	39	1740	n.a	0.9	270	15	135	79800	7.8	60	420	7200	4.5	1.8	4.2	11.1	390	5.4
	Number of Samples >	409	67	38	0	135	2	0	503	0	480	84	0	524	124	412	2	3	3	98
	% >	99%	12%	7%	0%	24%	0%	0%	91%	0%	87%	18%	0%	95%	27%	100%	0%	1%	1%	18%
MITCHELL - Monzonite	Number of Samples	70	80	80	80	80	80	72	80	80	80	70	80	80	70	62	62	80	80	80
	Minimum	0.01	0.70	77.00	0.07	0.01	1.00	0.78	51.10	15400	0.64	3.20	62.00	300	0.84	2.00	0.33	0.70	120	1.10
	10 Percentile	0.15	1.59	661.20	0.13	0.04	2.00	1.00	110.05	37940	1.45	6.27	81.92	900	1.14	2.00	0.44	1.20	155	3.27
	25 Percentile	0.29	2.70	1122.50	0.23	0.06	2.00	1.20	210.24	42775	2.79	9.33	92.15	2375	1.48	2.00	0.50	1.90	174	4.78
	Mean	0.86	6.86	2689.13	0.61	0.15	21.68	2.62	658.32	46623	13.92	17.62	104.77	8486	2.60	4.74	0.72	3.18	322	9.07
	Median	0.64	3.90	2460.00	0.37	0.09	6.00	2.06	402.50	46800	6.73	12.90	99.70	5250	2.04	3.00	0.62	2.90	218	8.05
	75 Percentile	1.02	7.00	4147.50	0.68	0.17	33.75	3.24	959.87	50675	17.26	19.78	119.50	13100	2.99	7.00	0.76	4.23	363	11.20
	90 Percentile	1.37	12.54	4925.00	1.36	0.28	63.10	4.99	1343.31	53610	37.32	29.94	133.05	19430	4.76	8.90	1.26	5.01	599	14.56
	Maximum	5.45	87.70	6112.00	3.58	1.30	133.00	9.50	2760.00	77400	81.50	81.70	178.00	41500	10.25	14.00	1.83	14.30	1315	60.60
	3X Basalt Crustal Abundance	0.33	6	990	0.021	0.66	510	3.3	261	24900	4.5	18	90	900	0.6	0.15	0.63	3	750	2.1
	Number of Samples>	46	21	65	80	2	0	18	52	79	52	19	63	71	70	62	27	38	6	78
	% >	66%	26%	81%	100%	3%	0%	25%	65%	99%	65%	27%	79%	89%	100%	100%	44%	48%	8%	98%
	3X Shale Crustal Abundance	0.21	39	1740	n.a	0.9	270	15	135	79800	7.8	60	420	7200	4.5	1.8	4.2	11.1	390	5.4
	Number of Samples >	65	30	39	80	4	29	0	80	0	56	3	0	71	70	62	0	1	79	46
	% >	93%	38%	49%	100%	5%	36%	0%	100%	0%	70%	4%	0%	89%	100%	100%	0%	1%	99%	58%

(continued)

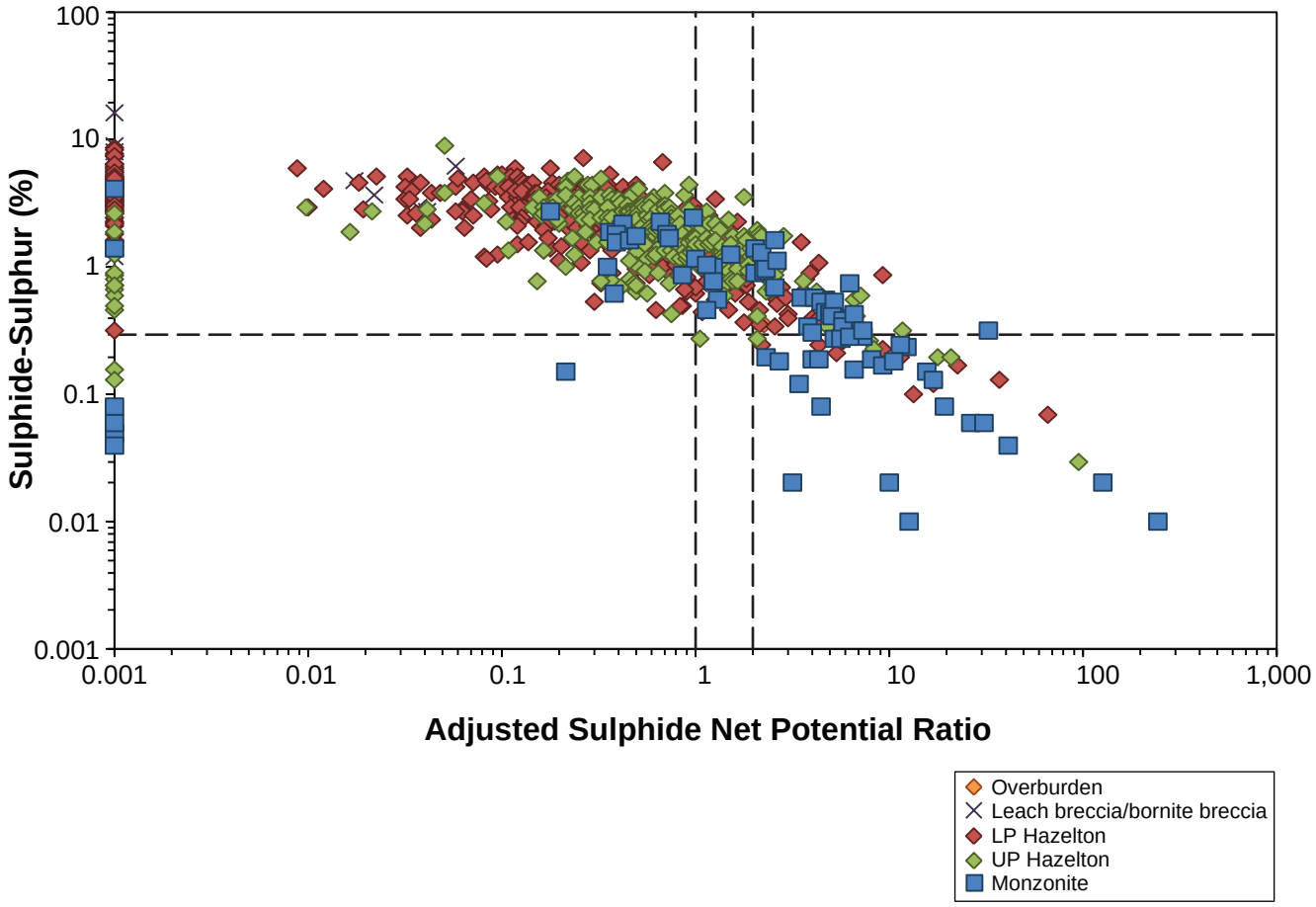
Table 5.1-3. Statistical Summary of Results for the Elements Exceeding Three Times the Crustal Abundance for the Mitchell Deposit by Model Code (completed)

		Silver	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cesium	Copper	Potassium	Molybdenum	Lead	Rubidium	Sulphur	Antimony	Selenium	Thalium	Uranium	Vanadium	Tungsten
MITCHELL - Leach breccia/ bornite breccia	Number of Samples	13	23	23	23	23	23	23	23	23	23	13	23	23	13	13	13	23	23	23
	Minimum	0.30	0.30	9.00	0.22	0.01	2.00	0.60	71.70	9400	10.40	5.30	27.10	20600	0.30	9.00	1.31	0.30	69	0.20
	10 Percentile	0.81	3.06	17.20	0.60	0.08	3.00	1.32	192.80	18060	23.41	7.32	61.30	39480	0.43	9.40	1.37	0.62	79	0.42
	25 Percentile	1.01	4.40	25.00	0.74	0.24	3.50	1.98	608.82	22750	32.79	13.80	69.75	44500	0.72	11.00	1.50	0.90	90	0.55
	Mean	2.13	27.20	104.74	1.49	1.04	69.78	2.46	1356.92	27026	51.04	28.18	86.38	60352	5.99	16.92	1.92	1.46	99	2.42
	Median	1.35	7.50	70.00	1.02	0.64	5.00	2.42	693.00	30800	46.90	22.90	91.60	57800	0.87	15.00	1.67	1.40	103	2.10
	75 Percentile	2.25	39.55	155.00	1.59	1.22	125.00	2.82	1112.74	32100	64.41	35.30	104.00	72150	6.81	17.00	2.41	1.95	109	3.35
	90 Percentile	4.21	80.88	230.00	3.14	2.13	219.60	4.02	1874.00	33300	82.02	57.68	110.00	92760	23.23	25.00	2.56	2.10	114	3.94
	Maximum	8.21	152.20	330.00	5.90	4.44	245.00	4.70	10000.00	34700	117.35	66.00	123.50	100000	28.00	44.00	2.57	3.60	116	14.60
	3X Basalt Crustal Abundance	0.33	6	990	0.021	0.66	510	3.3	261	24900	4.5	18	90	900	0.6	0.15	0.63	3	750	2.1
	Number of Samples>	12	12	0	23	11	0	4	19	16	23	8	13	23	10	13	13	1	0	11
	% >	92%	52%	0%	100%	48%	0%	17%	83%	70%	100%	62%	57%	100%	77%	100%	100%	4%	0%	48%
	3X Shale Crustal Abundance	0.21	39	1740	n.a	0.9	270	15	135	79800	7.8	60	420	7200	4.5	1.8	4.2	11.1	390	5.4
	Number of Samples>	13	6	0	0	9	0	0	21	0	23	2	0	23	4	13	0	0	0	1
	% >	100%	26%	0%	0%	39%	0%	0%	91%	0%	100%	15%	0%	100%	31%	100%	0%	0%	0%	4%

Concentrations are in ppm

n.a - crustal abundance data are not available

Crustal abundance data from Price (1997).



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Sulphide-Sulphur versus Adjusted Sulphide Net Potential Ratio in the Mitchell Deposit by Model Code

Figure 5.1-39

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5.1.3.6 Mineralogy

Appendix 5.1-2 provides the results of XRD analyses for samples at the Mitchell Deposit. The most common primary minerals identified in 17 samples from Mitchell Deposit were quartz, muscovite, plagioclase, K-feldspar, clinochlore, and biotite. The most common sulphide mineral was pyrite with lesser amounts of molybdenite. Anhydrite and gypsum were identified in one sample. The most common carbonate minerals were calcite, dolomite, and lesser amount of siderite.

Appendix 5.1-3 provides the petrographic analyses of rock samples from the Kerr, Sulphurets and Mitchell Deposit. A description of thin sections of 17 rock samples from the Mitchell Deposit is provided. The most common primary minerals were quartz, quartz+feldspar, quartz+plagioclase, sericite, chlorite, illite, and biotite. The most common sulphide mineral was pyrite, with lesser observations of chalcopyrite, and trace amounts of chalcocite, enargite (Cu_3AsS_4), molybdenite, tetrahedrite-tennantite, and sphalerite. Pyrite ranged from anhedral to subhedral grains, liberated and disseminated in lithic clasts.

5.1.4 Iron Cap Deposit

ABA and solid-phase elemental analysis were conducted on a total of 356 samples from the Iron Cap deposit (224 drill core samples and 132 pulp samples from drill core samples). Detailed results of the static tests and statistical summaries for the Iron Cap deposit are presented in Appendix 5.1-1.

5.1.4.1 Paste pH

The results of the paste pH tests of samples from the Iron Cap deposit are shown in Figure 5.1-40. The paste pH of 356 samples results ranged from a minimum of 3.0 to a maximum of 9.6, with a mean of 7.9 and a median of 8.3.

Static tests of the Iron Cap deposit drill core samples revealed that 8 percent of the samples had a paste pH less than 6.0 at the time of laboratory testing, indicating sulphide oxidation and net acid generation had already occurred.

5.1.4.2 Sulphur Species

The results of the total-sulphur analyses of the Iron Cap deposit samples are shown in Figure 5.1-41. The total-sulphur content of 356 samples ranged from a minimum of 0.11% to a maximum of 11.86%, with a mean of 3.17% and a median of 3.11%.

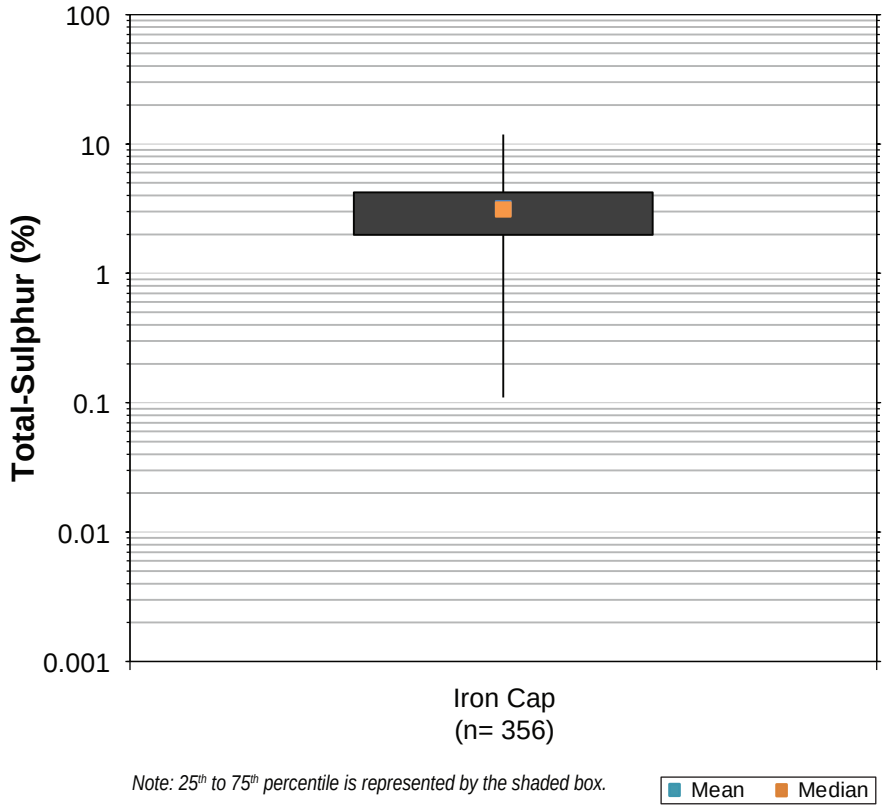
Sulphide-sulphur analyses for Iron Cap deposit samples are shown in Figure 5.1-42. Sulphide-sulphur concentrations ranged from a minimum of 0.12 % to a maximum of 8.60%, with a mean of 2.52% and a median of 2.45%.

The relationship between sulphide-sulphur and total-sulphur concentrations for the Iron Cap deposit samples is shown in Figure 5.1-43. In general, there is a strong relationship between sulphide-sulphur and total-sulphur indicating the sulphur species is mostly comprised of sulphide-sulphur.

The relationship between acid-soluble sulphate-sulphur and total-sulphur concentrations for the Iron Cap deposit samples is shown in Figure 5.1-44. This relationship shows that there is no correlation between acid-soluble sulphate-sulphur and total-sulphur, indicating there is minor sulphate sulphur present.

5.1.4.3 Neutralization Potential

Neutralization Potential of Iron Cap deposit samples is shown in Figure 5.1-45. Neutralization Potential values of 356 samples ranged from a minimum of -5 kg $CaCO_3$/t to a maximum of 258 kg $CaCO_3$/t with a mean value of 38 kg $CaCO_3$/t and a median value of 31 kg $CaCO_3$/t.

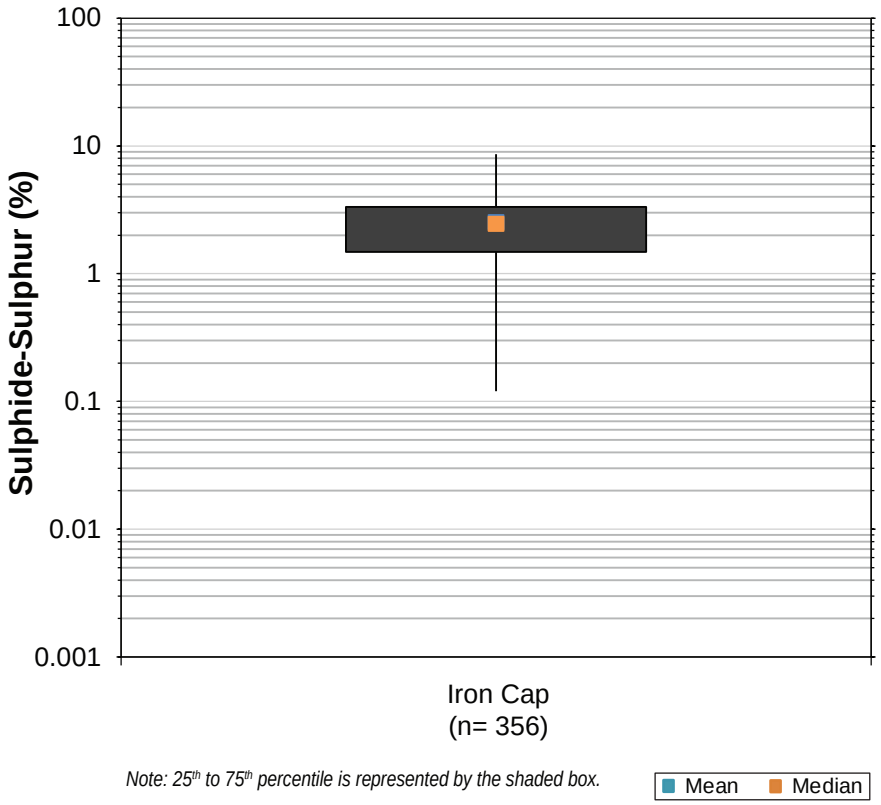


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Statistical Summary of Iron Cap Deposit Total-Sulphur Concentrations

Figure 5.1-41

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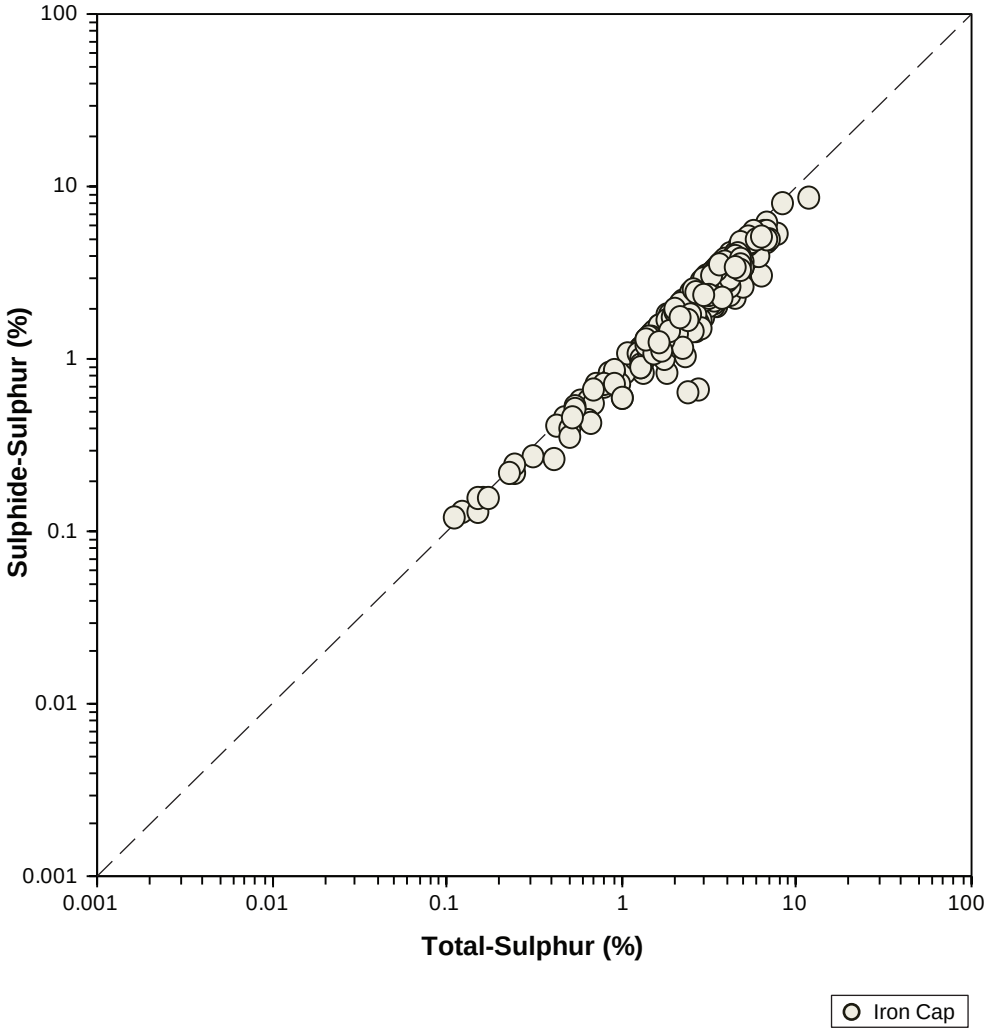
Note: 25th to 75th percentile is represented by the shaded box.

Statistical Summary of Iron Cap Deposit Sulphide-Sulphur Concentrations

Figure 5.1-42

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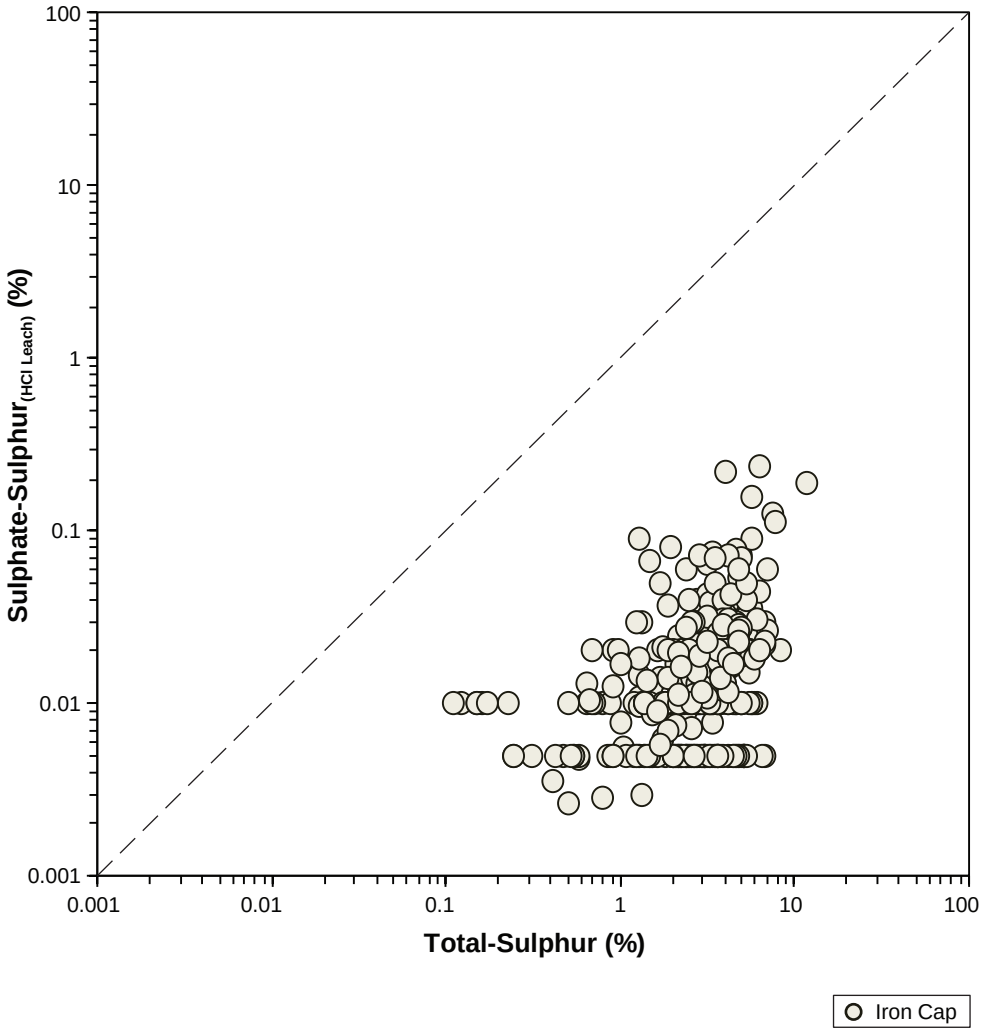


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Sulphide-Sulphur versus Total-Sulphur in the Iron Cap Deposit

Figure 5.1-43

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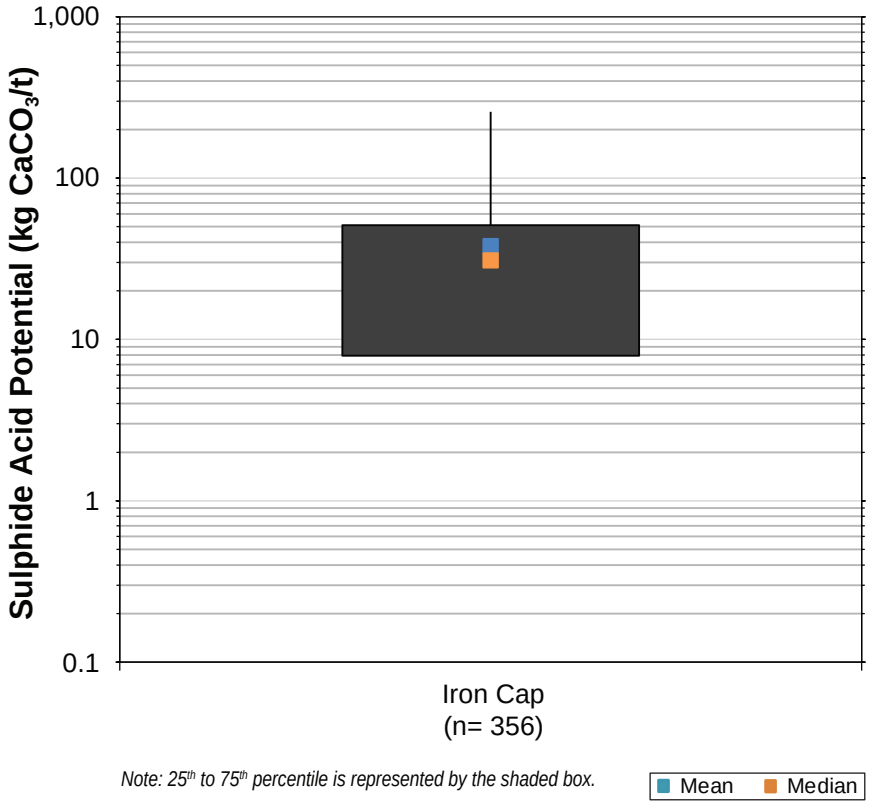


Sulphate-Sulphur versus Total-Sulphur in the Iron Cap Deposit

Figure 5.1-44

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Statistical Summary of Iron Cap Deposit Bulk Sobek Neutralization Potential Values

Figure 5.1-45

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The relationship between paste pH and Sobek NP values for Iron Cap Deposit samples is presented in Figure 5.1-46. Based on this figure, up to 15 kg $CaCO_3$/t of measured NP could be associated with with acidic paste pH values. The neutralization potential was adjusted by this estimate of 15 kg $CaCO_3$/t (unavailable NP) to calculate an adjusted neutralization potential (Adjusted NP).

The correlation between Bulk Sobek NP and Inorg NP is shown in Figure 5.1-47. Below the unavailable NP line, the Inorg NP shows a poor correlation to Sobek NP, suggesting unavailable Sobek NP is comprised of a mixture of carbonate and non-carbonate minerals. Above the unavailable NP line of 15 kg $CaCO_3$/t, the Inorg NP shows a stronger correlation to Bulk Sobek NP, suggesting that most of the Sobek NP in the Iron Cap deposit samples occurs as carbonate minerals. Therefore the Inorg NP can be estimated from inorganic carbon analyses as a reasonable surrogate to the Sobek NP for estimation of the available NP.

A plot of a Calcium CaNP (Ca CaNP), assuming that the elemental calcium is present as calcite, versus Bulk Sobek NP is shown in Figure 5.1-48. The Ca CaNP values show a strong correlation with the majority of Sobek NP values, indicating that most of the available Sobek NP in the Iron Cap deposit occurs as calcium carbonate minerals. Some samples with values below the unavailable NP exhibit poor correlation, indicating the presence of a greater proportion of calcium from non-carbonate mineral phases.

A plot of a Calcium-Magnesium CaNP (CaMg CaNP), assuming that the elemental calcium and magnesium is present as dolomite, versus Bulk Sobek NP is shown in Figure 5.1-49. Below the unavailable NP line, the CaMg CaNP shows a poor correlation to Sobek NP, indicating that magnesium occurs predominantly in non-carbonate magnesium-bearing mineral phases. Above the unavailable NP line, the CaMg CaNP shows a stronger correlation to Bulk Sobek NP, suggesting that there is occurrence of calcium and magnesium carbonate minerals.

5.1.4.4 Sulphide Net Potential Ratios

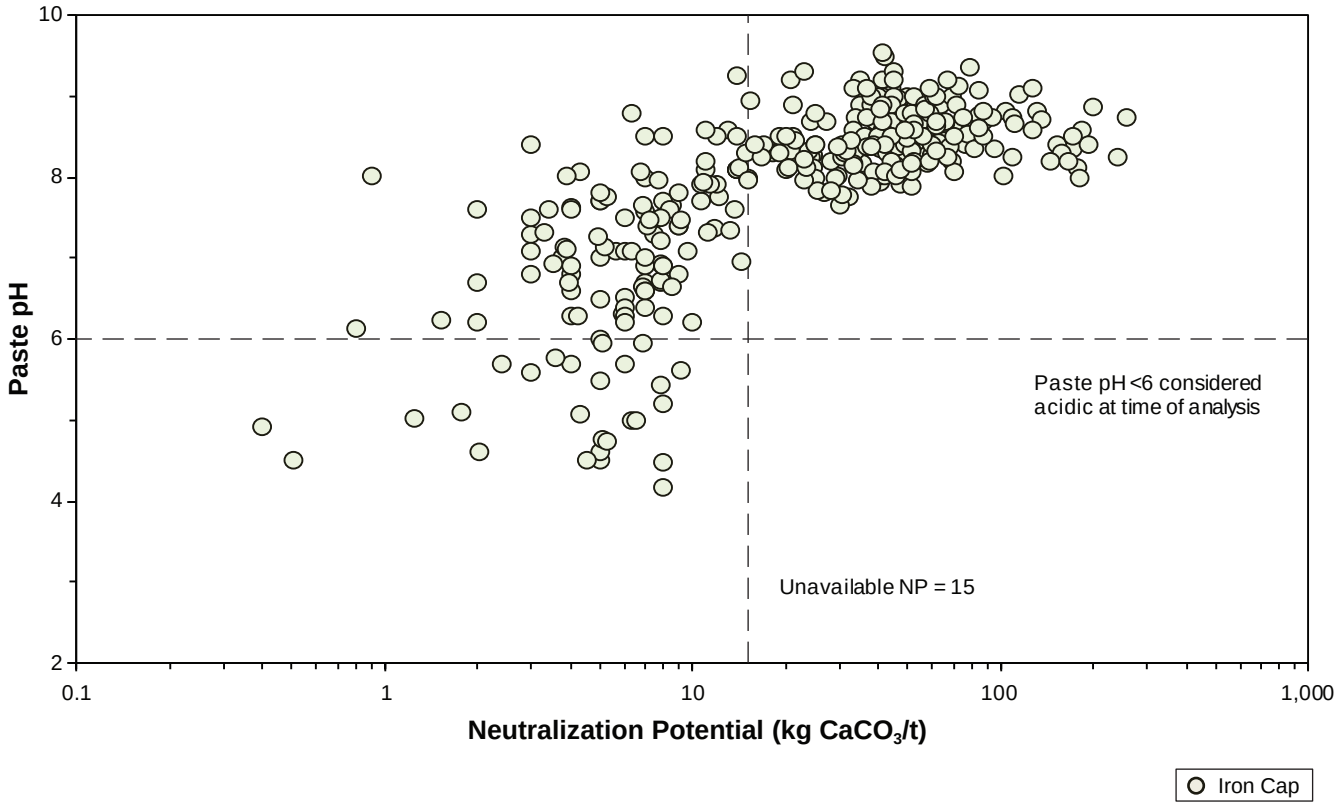
The adjusted SNPR for 356 Iron Cap deposit samples are shown in Figure 5.1-50. They range from a minimum of 0.01 to a maximum of 41.6, with a mean of 0.98 and a median of 0.14. Eighty-seven percent of the samples have adjusted SNPR<1, indicating that they are potentially acid generating (PAG). One hundred and thirty-seven samples (39%) were assigned an adjusted SNPR of 0.01, indicating that the samples had NP values equal or lower than 15 kg$CaCO_3$/t, meaning the onset of acidic conditions is expected to be rapid in these. Five percent of the samples have an adjusted SNPR between 1.0 and 2.0, indicating they are possibly acid generating (UPAG) and 8 % of the samples have adjusted SNPR>2, indicating that they are not potentially acid generating (not-PAG).

The relationship between paste pH and adjusted SNPR of Iron Cap deposit samples is shown in Figure 5.1-51. Samples with adjusted SNPR of 0.01 were associated with both acidic and neutral/alkaline pH, indicating that some samples are in an advanced stage of acid generation (acidic samples) and some samples are in the early stage of acid generation (no acidic samples).

The relationship between sulphide-sulphur and adjusted SNPR for Iron Cap deposit samples is shown in Figure 5.1-52. It indicates that the samples with a combination of sulphide-sulphur greater than 0.1% and an adjusted SNPR<2 are the most likely to be net ARD generating.

5.1.4.5 Solid-phase Elemental Analysis

The multi-element concentrations in the ML/ARD samples from the Iron Cap deposit were measured by ICP-MS analysis after strong four-acid digestion. The results can be found in Appendix 5.1-1.

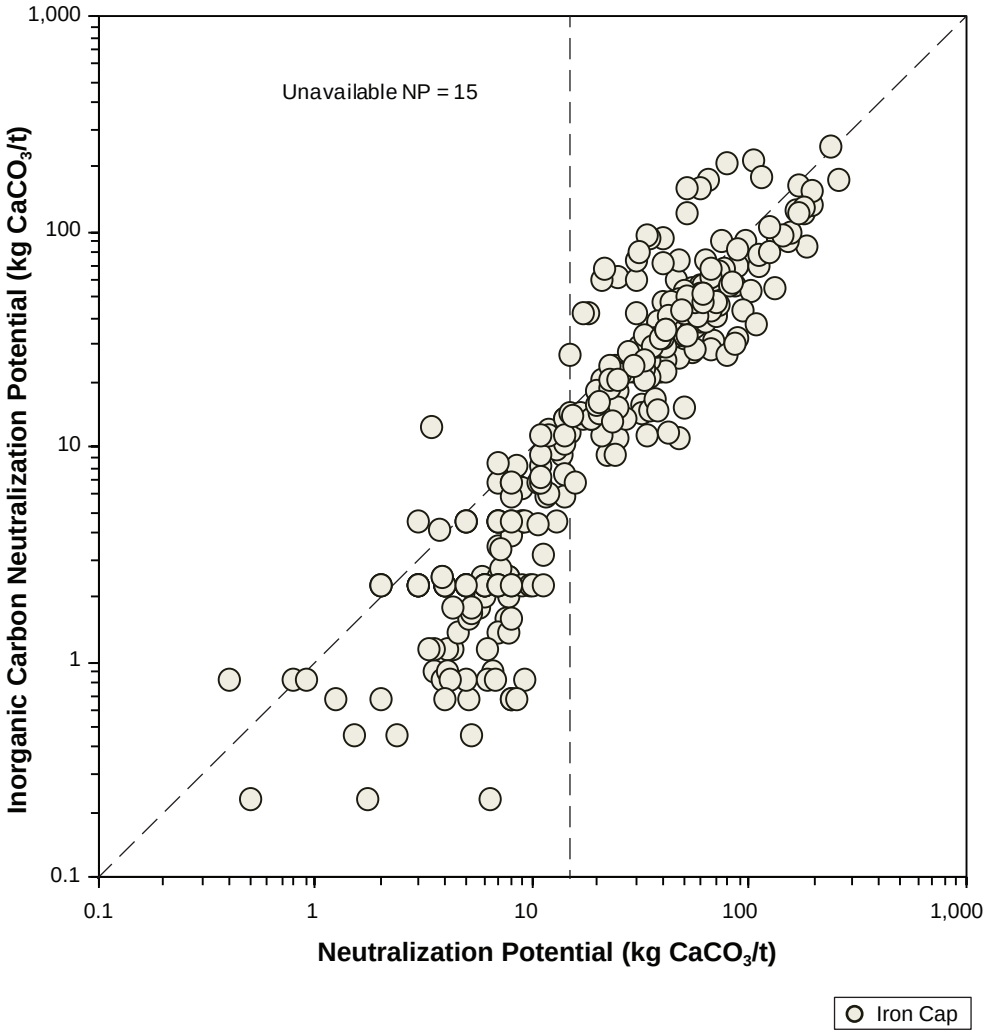


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Paste pH versus Bulk Sobek Neutralization Potential - Iron Cap Deposit

Figure 5.1-46

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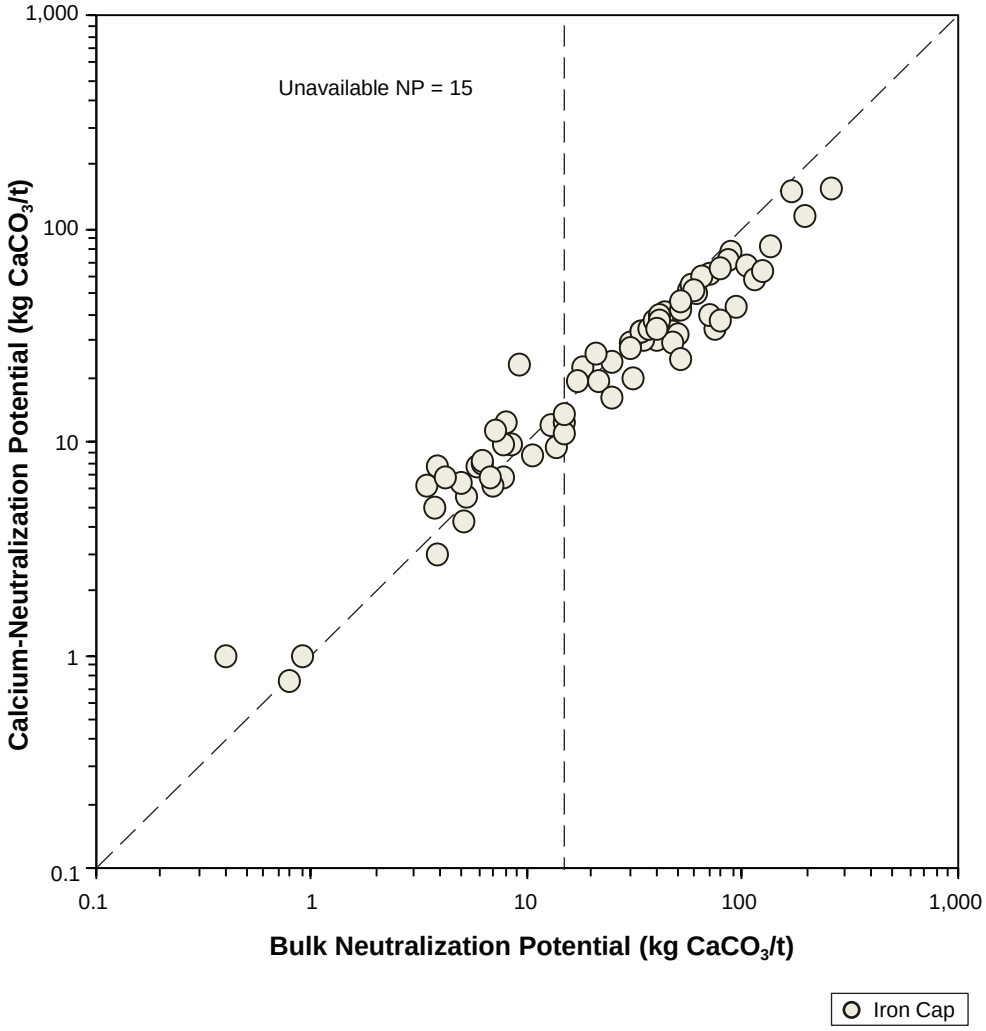


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Inorganic Carbon Neutralization Potential versus Bulk Sobek Neutralization Potential - Iron Cap Deposit

Figure 5.1-47

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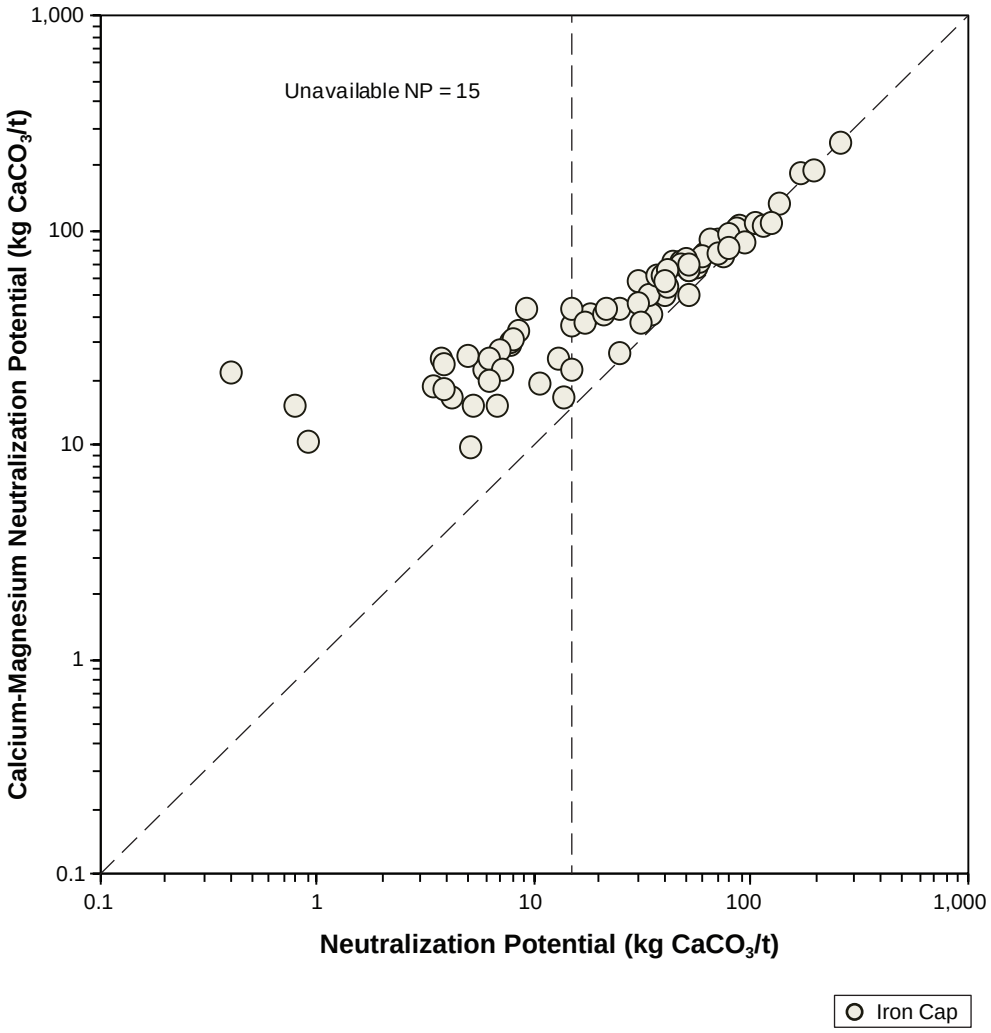


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Calcium Neutralization Potential versus Bulk Sobek Neutralization Potential - Iron Cap Deposit

Figure 5.1-48

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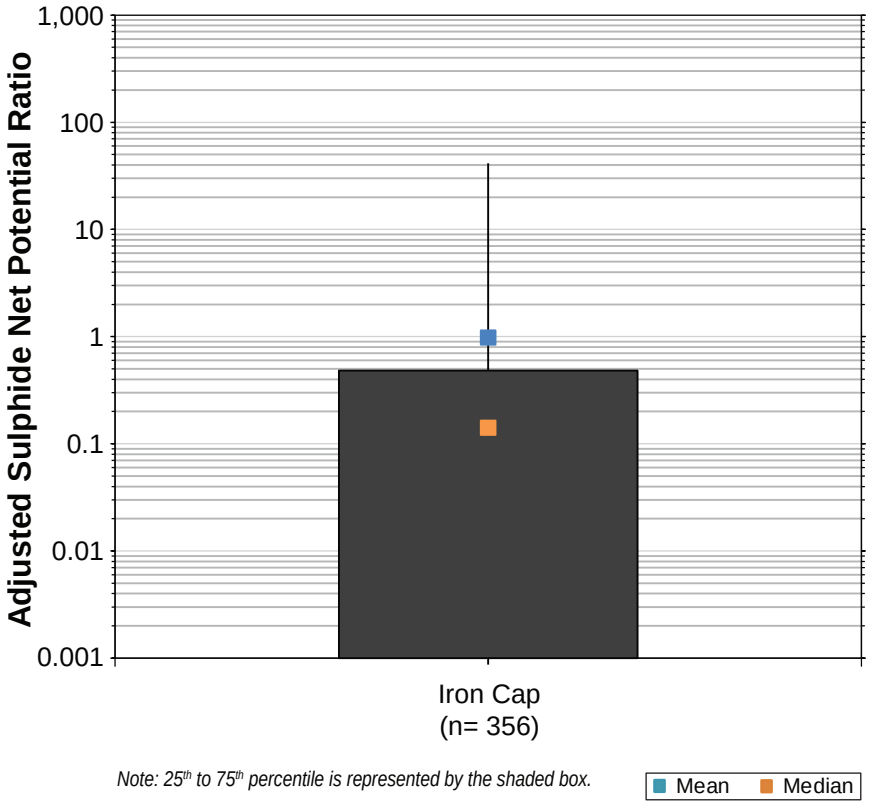


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Calcium-Magnesium Neutralization Potential versus Bulk Sobek Neutralization Potential - Iron Cap Deposit

Figure 5.1-49

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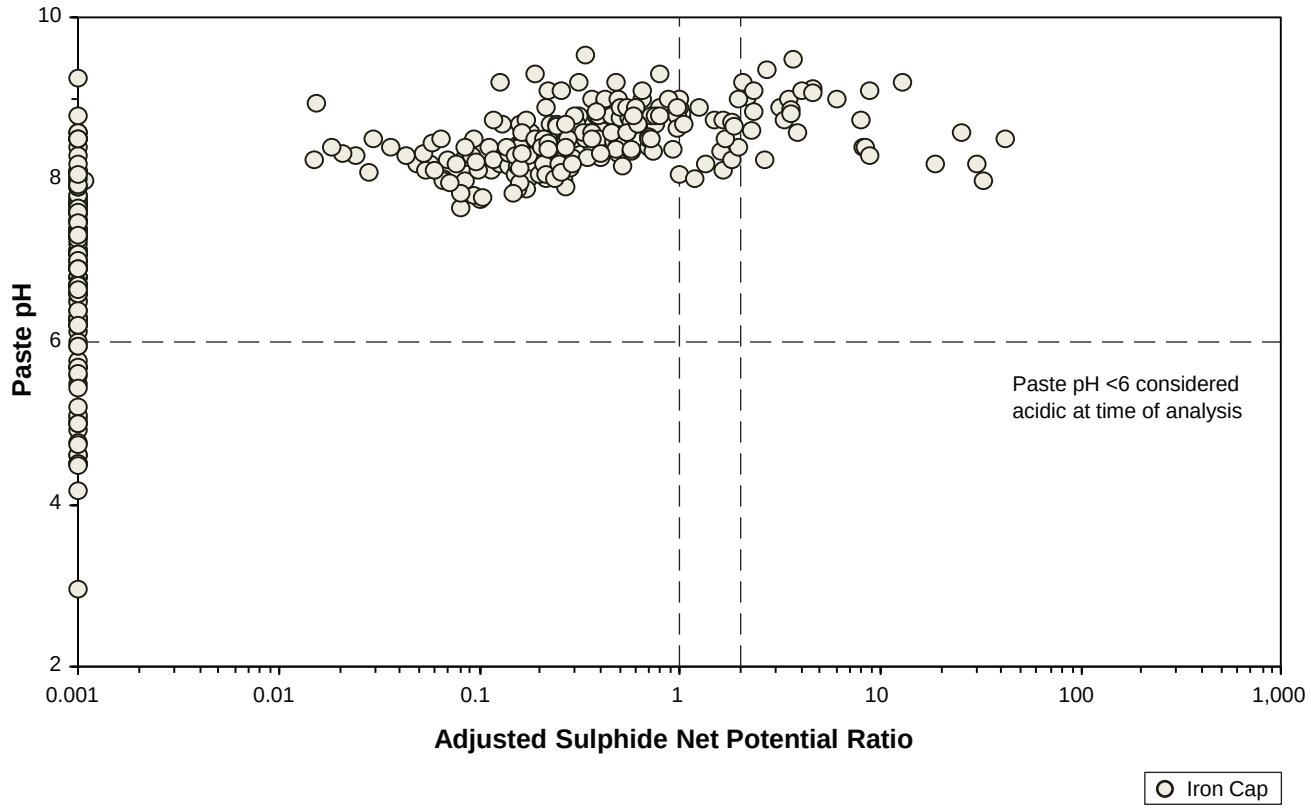


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Statistical Summary of Iron Cap Deposit Adjusted Sulphide Net Potential Ratios

Figure 5.1-50

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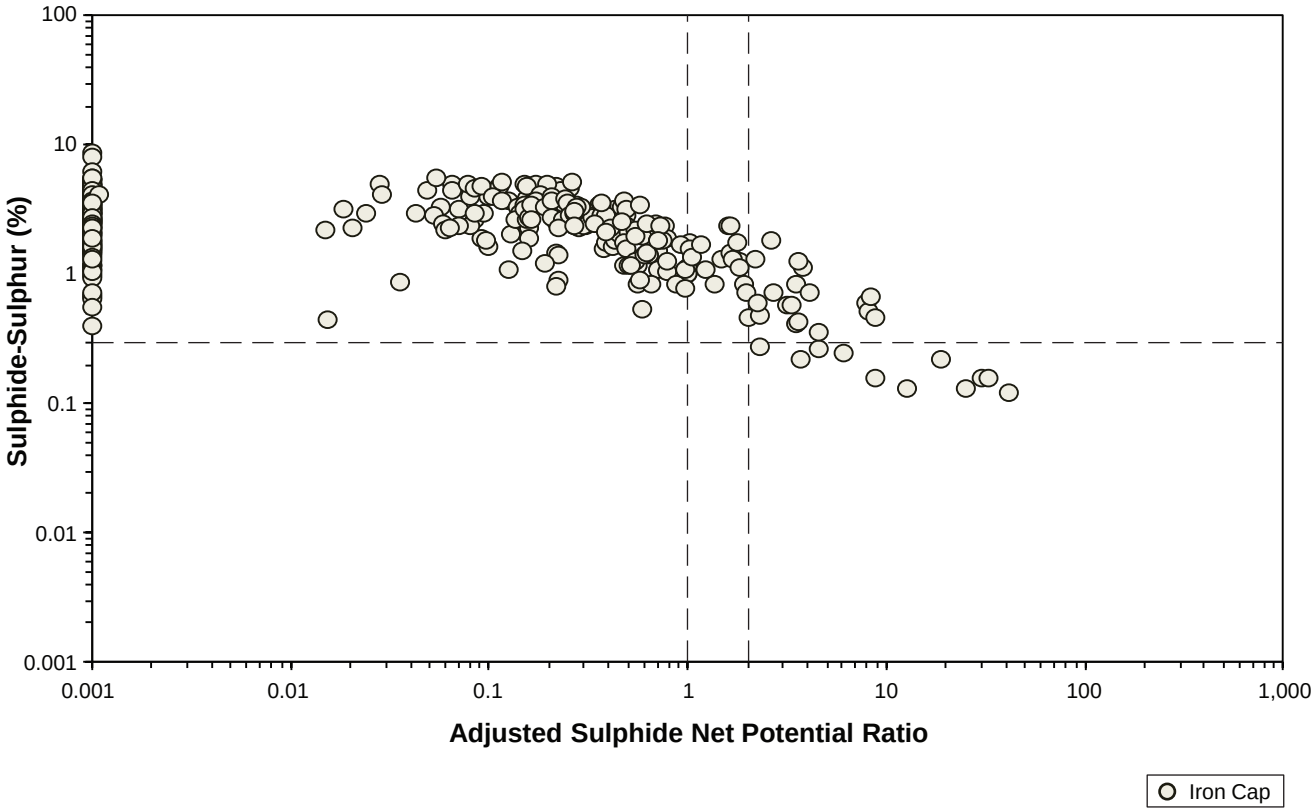


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Paste pH versus Adjusted Sulphide Net Potential Ratio - Iron Cap Deposit

Figure 5.1-51

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Sulphide-Sulphur versus Adjusted Sulphide Net Potential Ratio - Iron Cap Deposit

Figure 5.1-52

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Table 5.1-4 shows the statistical summary of the results for elements with median concentrations exceeding three times the crustal abundance for the Iron Cap deposit. The results showed that the elements frequently exceeding three times basalt crustal abundance were: silver, arsenic, bismuth, cadmium, cesium, copper, potassium, molybdenum, lead, antimony, rubidium, sulphur, selenium, tungsten, and zinc. Elements frequently exceeding three times shale crustal abundance were: silver, arsenic, cadmium, copper, molybdenum, lead, sulphur, antimony, selenium, tungsten, and zinc.

5.1.4.6 Mineralogy

Mineralogical composition of waste rock samples at Iron Cap Deposit was determined by Rietveld XRD and petrographic analysis (transmitted light microscopy).

Appendix 5.1-2 provides the XRD analysis results for samples from the Iron Cap deposit. The more common primary minerals identified in six samples from the Iron Cap deposit were quartz, K-feldspar, muscovite, and plagioclase. The most common sulphide mineral was pyrite. The most common carbonate minerals were calcite and lesser amounts of dolomite and siderite.

5.2 KINETIC TESTS

5.2.1 Humidity Cells

Forty laboratory humidity cells were initiated and operated to assess the ML/ARD properties of potential waste rock and pit wall rock from the Kerr, Mitchell, Sulphurets, and Iron Cap deposits. This section of the report incorporates results collected up till the end of July 2012.

For the purpose of this discussion, the humidity cells have been divided by deposit and the position relative to Mitchell Thrust Fault (MTF) for the Mitchell Deposit (e.g. upper and lower panels), and are further discussed with reference to the model code from the Seabridge ABA block model (M. Lechner, pers. comm.). Not all model codes are represented by humidity cells. S Au, Leach, Raewyn, S LP Hazelton, S Monzonite and M Overburden are not represented. The following percentage of waste rock is represented by humidity cells: Kerr 98.7% (SNPR<2) and 1.3% (SNPR >2); Sulphurets 21.6% (SNPR<2) and 14% (SNPR >2); Mitchell 75.2 % (SNPR<2) and 19.1% (SNPR >2); and Iron Cap 100% (Table 4.4-3).

5.2.1.1 Pre-test Static Test Results

Subsamples of humidity cell material were obtained to determine pre-humidity cell solid-phase static test properties and analyses included ABA, solid-phase elemental concentration analysis, and mineralogy.

The results of the pre-humidity cell solid-phase static tests for the Project are found in Appendix 5.2-1.

Detailed analytical mineralogy and petrographic studies for waste rock can be found in Appendices 5.1-2 and 5.1-3, respectively.

Paste pH

Figure 5.2-1 presents the paste pH of the humidity cells samples in relation to the statistical distribution of the paste pH determined for all waste rock samples by block model code. The results show that the majority of the humidity cells samples are within the pH interquartile range for their model code. Some humidity cell samples exhibited pH variability towards the lower range of all waste rock samples (Kerr, S Overburden, M UP Hazelton, M LP Hazelton, and Iron Cap).

Table 5.1-4. Statistical Summary of Results for the Elements Exceeding Three Times the Crustal Abundance for the Iron Cap Deposit

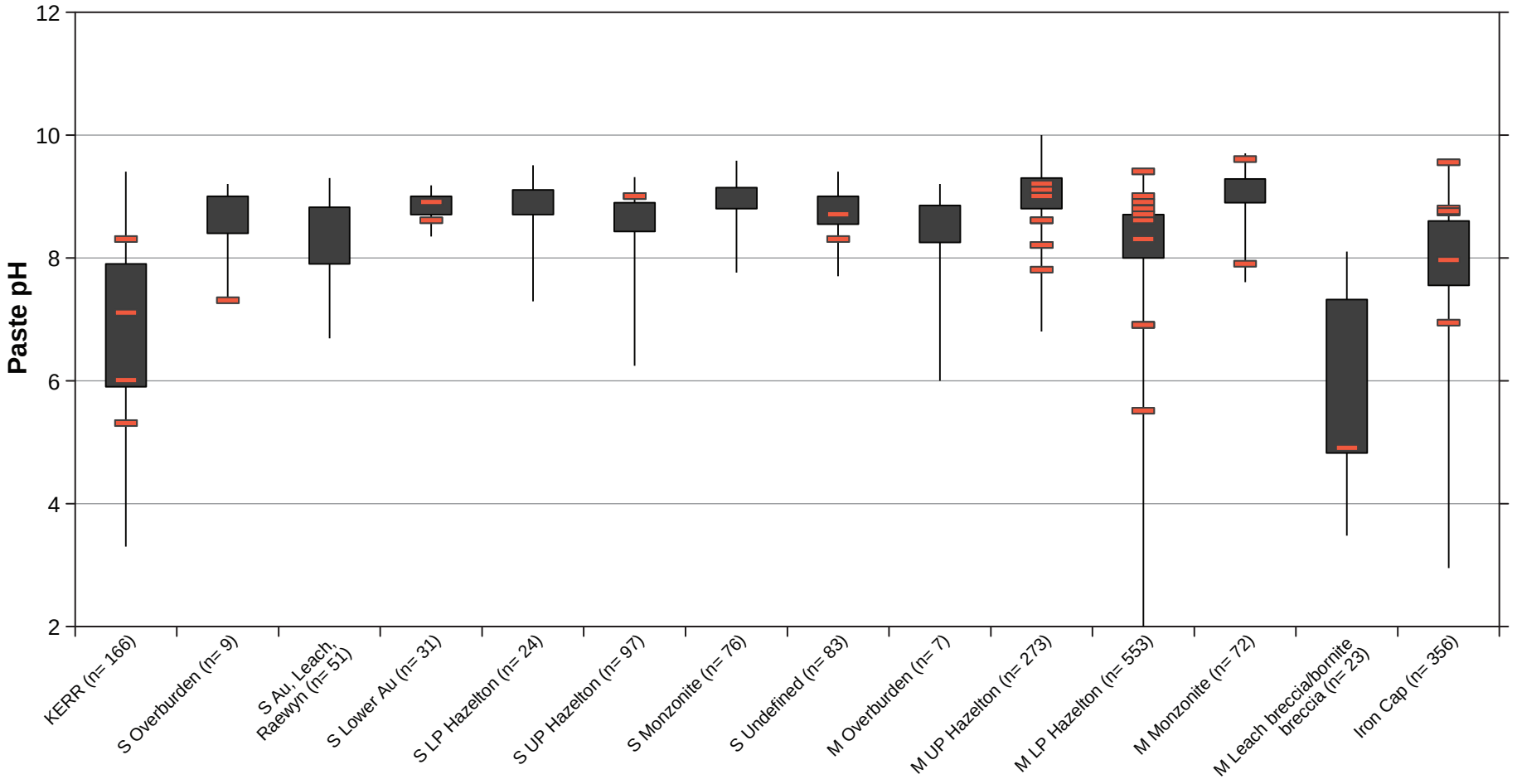
	Silver	Arsenic	Bismuth	Cadmium	Cesium	Copper	Potassium	Molybdenum
Number of Samples	75	75	75	75	50	75	14	75
Minimum	0.773	5.4	0.05	0.04	2.6	57.59	33900	1.97
10 Percentile	1.62	9.46	0.316	0.13	2.99	261.842	38600	5.084
25 Percentile	4.55	16.5	0.55	0.26	3.425	447.61	41400	10.42
Mean	932.18	48.80	1.73	1.76	4.83	1053	51329	48.16
Median	667	31.8	0.86	0.63	4.3	810.8	50300	20.59
75 Percentile	1159.5	61.65	1.61	1.89	5.675	1457.425	58425	41.475
90 Percentile	2175.8	104.6	3.9	4.82	7.41	2190.54	67540	126.844
Maximum	7714	280.6	13.5	14.60	10.4	4014.6	72000	357.1
3X Basalt Crustal Abundance	0.33	6	0.021	0.66	3.3	261	24900	4.5
Number of Samples >	75	72	75	37	39	67	14	68
% >	100%	96%	100%	49%	78%	89%	100%	91%
3X Shale Crustal Abundance	0.21	39	n.a	0.9	15	135	79800	7.8
Number of Samples >	75	33	0	31	0	73	0	61
% >	100%	44%	0%	41%	0%	97%	0%	81%

	Lead	Rubidium	Sulphur	Antimony	Selenium	Uranium	Tungsten	Zinc
Number of Samples	75	75	6	75	16	75	75	75
Minimum	4.8	69.4	6000	1.39	2	1.1	1.6	18.60
10 Percentile	17.19	109.84	15100	2.386	2.7	1.44	3.9	38.64
25 Percentile	31.35	123.4	27875	3.105	3	2	4.95	60.75
Mean	94.66	151.46	34250.00	17.55	6.41	6.48	7	181.37
Median	61.05	143.8	39550	5.64	7.5	3.1	6.2	88.60
75 Percentile	101.58	183.55	42600	16.37	8.45	5.55	9.35	214.15
90 Percentile	245.824	208	48100	61.282	9.5	9.52	12.1	449.00
Maximum	511.4	236.3	52800	131.78	15.6	94.7	15.9	1223
3X Basalt Crustal Abundance	18	90	900	0.6	0.15	3	2.1	315
Number of Samples >	67	72	6	75	16	39	73	11
% >	89%	96%	100%	100%	100%	52%	97%	15%
3X Shale Crustal Abundance	60	420	7200	4.5	1.8	11.1	5.4	285
Number of Samples >	39	0	5	44	16	6	48	14
% >	52%	0%	83%	59%	100%	8%	64%	19%

Concentrations are in ppm

n.a - crustal abundance data are not available

Crustal abundance data from Price (1997).



Note: 25th to 75th percentile is represented by the shaded box. The red bars indicate individual humidity cells.

Figure 5.2-1

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Statistical Summary - Paste pH by Model Code for Humidity Cells

Figure 5.2-1

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Sulphur Species

Figure 5.2-2 presents total-sulphur concentrations of the humidity cells samples in relation to the statistical distribution of total-sulphur concentrations determined for all waste rock samples by model code. The results show that the majority of the humidity cells samples are within the total-sulphur interquartile range for their model code. Some humidity cell samples exhibited total-sulphur concentrations variability towards the lower range of all waste rock samples (M UP Hazelton, M Monzonite, and Iron Cap) and some humidity cell samples exhibited total-sulphur concentrations variability towards the higher range of all waste rock samples (Kerr, S Overburden, M UP Hazelton and M Leach breccia/bornite breccia).

Figure 5.2-3 presents sulphide-sulphur concentrations of the humidity cells samples in relation to the statistical distribution of sulphide-sulphur concentrations determined for all waste rock samples by model code. The results show that the majority of the humidity cells samples are within the sulphide-sulphur interquartile range for their model code. Some humidity cell samples exhibited sulphide-sulphur concentrations variability towards the lower range of all waste rock samples (M UP Hazelton, M Monzonite and Iron Cap) and some humidity cell samples exhibited total-sulphur concentrations variability towards the higher range of all waste rock samples (Kerr, S Overburden, M UP Hazelton and M Leach breccia/bornite breccia).

Neutralization Potential

Figure 5.2.4 presents the NP values of the humidity cell samples in relation to the statistical distribution of NP values determined for all waste rock samples by model code. The results show that the majority of the humidity cells samples are within the NP interquartile range for their model code. Some humidity cell samples exhibited NP variability towards the lower range of all waste rock samples (S Overburden, M UP Hazelton, M LP Hazelton, and M Monzonite).

Adjusted Sulphide Net Potential Ratio

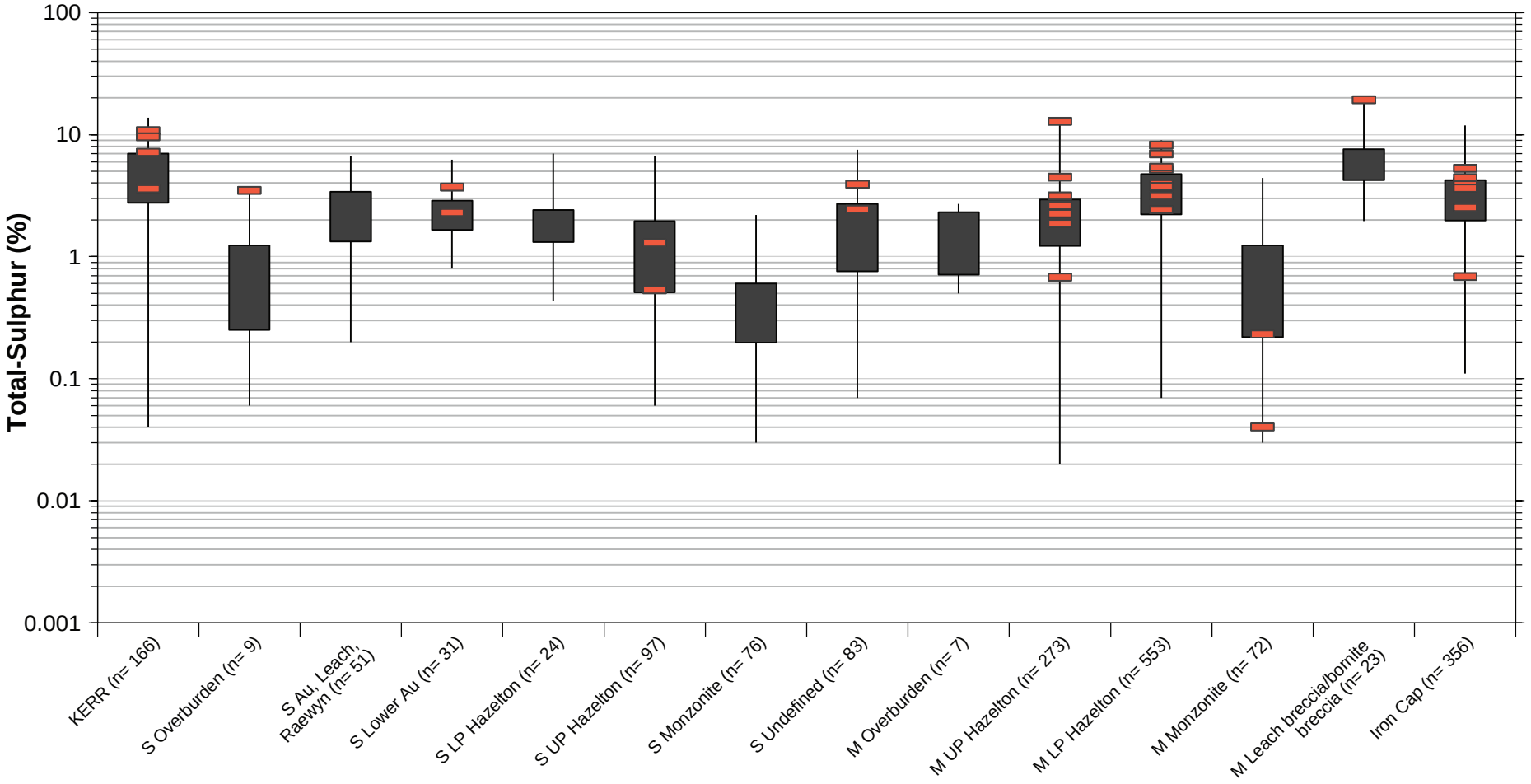
Figure 5.2.5 presents the adjusted SNPR of the humidity cell samples in relation to the statistical distribution of adjusted SNPR determined for all waste rock samples by model code. The results show that the majority of the humidity cells samples are within the adjusted SNPR interquartile range for their model code. Some humidity cell samples exhibited adjusted SNPR variability towards the lower range of all waste rock samples (S Overburden, S Undefined, M UP Hazelton, and M LP Hazelton).

Whole Rock and Solid-phase Elemental Analysis

The multi-element concentrations in humidity cell samples from the Kerr, Sulphurets and Mitchell Deposits were measured by ICP-MS analysis after strong four-acid digestion and by XRF whole-rock analysis. The results are found in Appendix 5.2-1.

Most of the humidity cell samples were comprised of oxide-equivalents of SiO_2 and Al_2O_3, which is consistent with the dominant presence of quartz, feldspar minerals, and other aluminosilicate minerals in KSM rocks. Also consistent with the general mineralogy, there were lesser but still significant amounts of Fe_2O_3, K_2O, CaO, MgO, and Na_2O.

The solid-phase concentrations of each element were compared with concentrations found in the earth's crust (crustal abundance) in order to determine which elements occur in anomalously high concentrations (Price 1997). Any elemental concentration higher than three times its crustal abundance was considered an anomalously high concentration.



Note: 25th to 75th percentile is represented by the shaded box. The red bars indicate individual humidity cells.

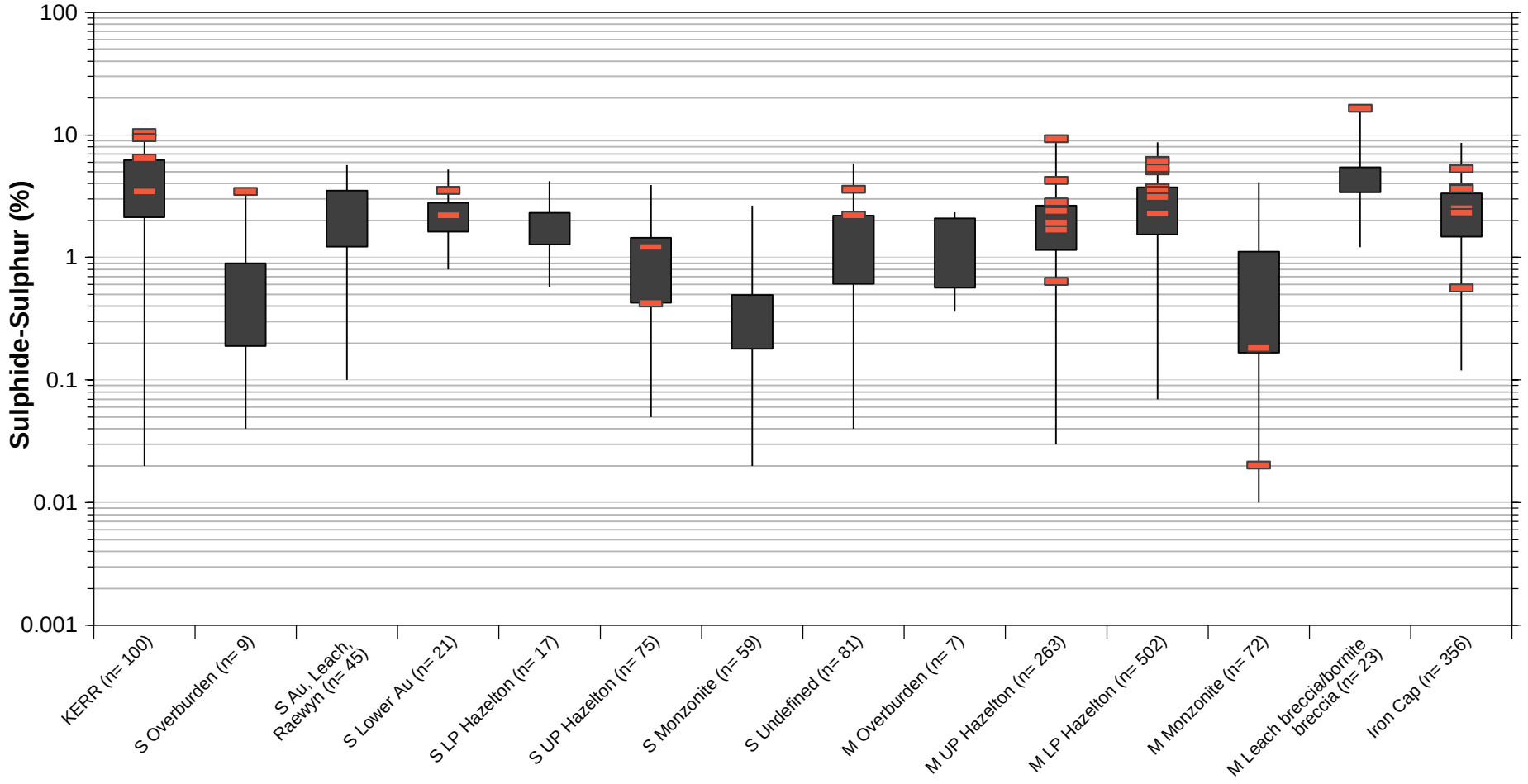
Figure 5.2-2

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Statistical Summary - Total-Sulphur Concentrations by Model Code for Humidity Cells

Figure 5.2-2

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Note: 25th to 75th percentile is represented by the shaded box. The red bars indicate individual humidity cells.

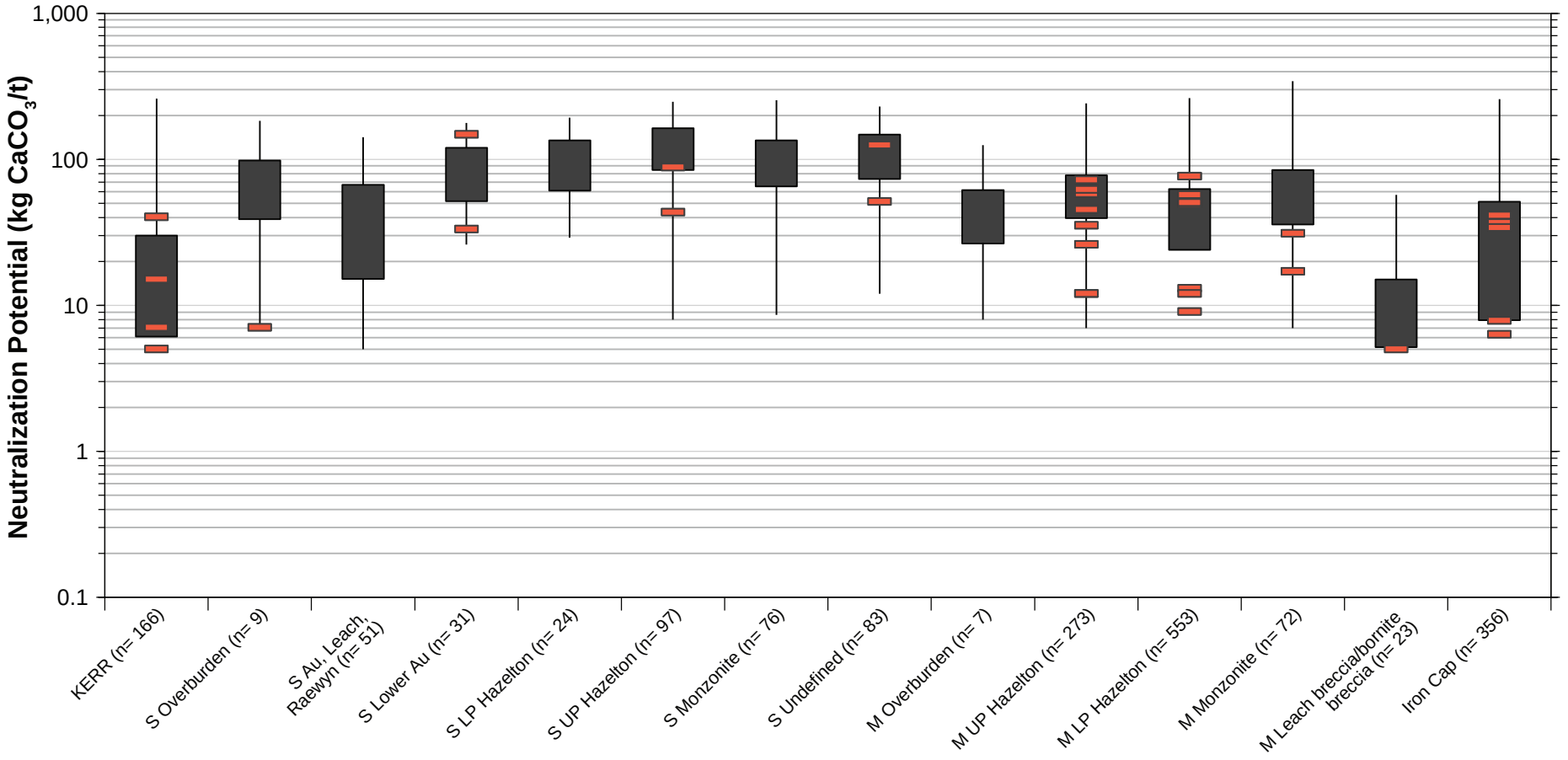
Figure 5.2-3

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Statistical Summary - Sulphide-Sulphur Concentrations by Model Code for Humidity Cells

Figure 5.2-3

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Note: 25th to 75th percentile is represented by the shaded box. The red bars indicate individual humidity cells.

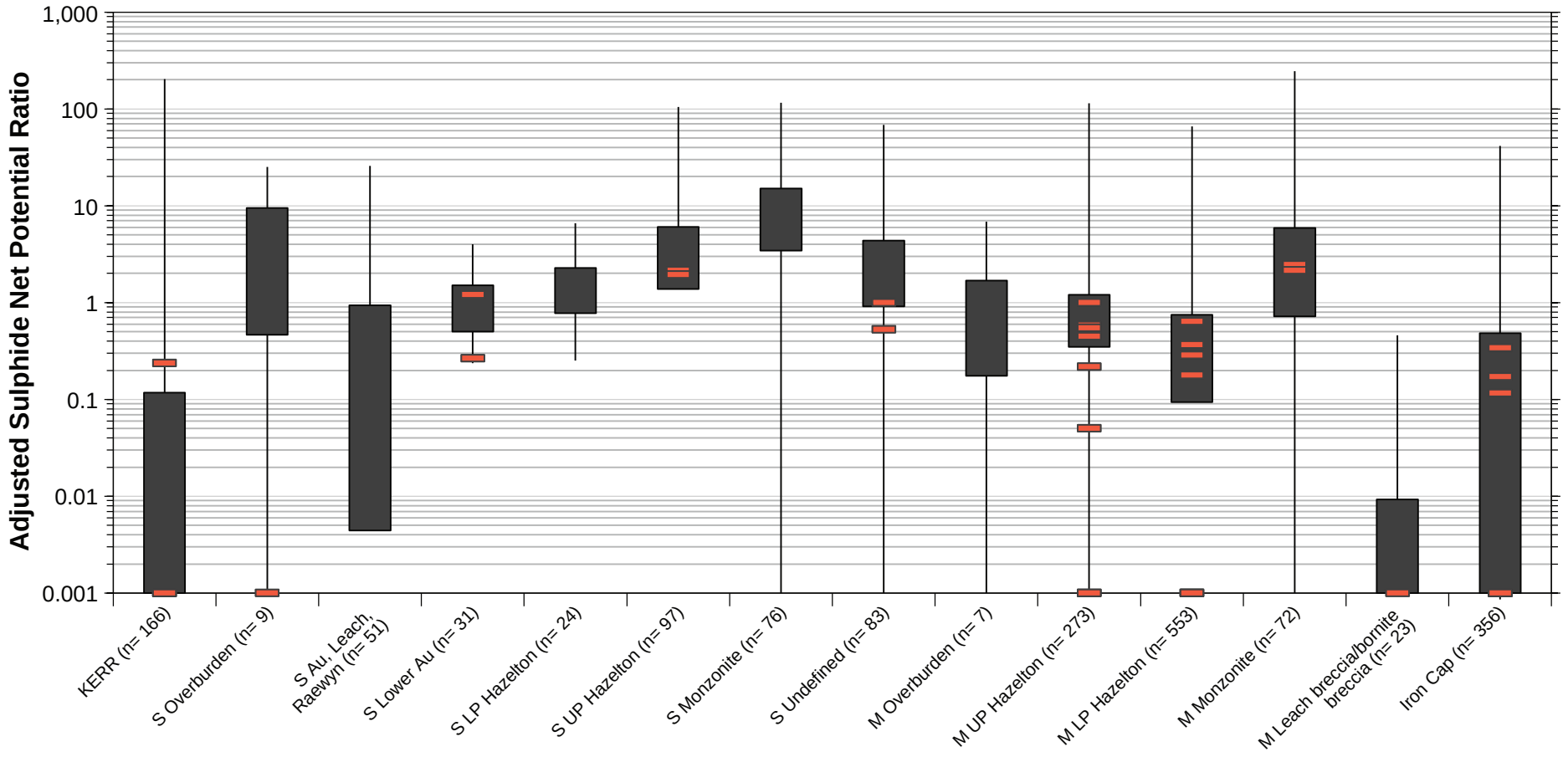
Figure 5.2-4

SEABRIDGE GOLD
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Statistical Summary - Neutralization Potential Concentrations by Model Code for Humidity Cells

Figure 5.2-4

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Note: 25th to 75th percentile is represented by the shaded box. The red bars indicate individual humidity cells.

Figure 5.2-5

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Statistical Summary - Adjusted Sulphide Net Potential Ratios by Model Code for Humidity Cells

Figure 5.2-5

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Table 5.2-1 shows the statistical summary of the results for elements concentrations exceeding three times the crustal abundance. The results showed that the elements frequently exceeding three times basalt crustal abundance were silver, arsenic, bismuth, cesium, copper, potassium, molybdenum, lead, rubidium, sulphur, antimony, selenium, thallium and tungsten. Elements frequently exceeding three times shale crustal abundance were silver, copper, molybdenum, sulphur, and selenium.

Mineralogy

Detailed analytical mineralogy and petrographic studies for waste rock can be found in Appendix 5.1-2 and 5.1-3, respectively, and are referred to elsewhere in report Section 5.1.

5.2.1.2 Kinetic Test Results

The following discussion presents the results of leachate analyses from the humidity cells for each deposit for:

- Indicators of acid generation (pH, sulphate, acidity, and alkalinity);
- Elements that contribute to acidity (aluminum, iron, and manganese);
- Barium which is most commonly associated with barite ($BaSO_4$), a highly insoluble mineral;
- Trace elements with elevated concentrations in the last 10 weekly cycles relative to water quality guidelines. Identification of these elements can be used to inform treatment design decisions, including treatment at the proposed Water Treatment Plant (WTP), and water quality modelling; and
- Calcium and magnesium which commonly occur in carbonate mineral phases and are associated with the neutralization potential.

Kerr Deposit

Four humidity cells of the model code KERR have operated for either 61 or 129 weeks at the time of this report. The complete dataset for humidity cell leachate concentrations for the Kerr Deposit are presented in Appendix 5.2-2. The leach rates for additional parameters are presented in Appendix 5.2-3.

pH, Sulphate, Acidity, and Alkalinity

Two Kerr humidity cells were near-neutral (HC20 and 22) and two Kerr humidity cells were acidic (HC21 and 23). The pH of the near-neutral humidity cells remained near-neutral after 129 weeks; however, HC22 became acidic with pH values of 5.5 to 6.5 between weeks 20 and 79, and with pH values of 6.5 to 5.9 between weeks 79 and 129. The pH of the two acidic humidity cells decreased for the first 16 weeks. The pH of HC 21 was stable between weeks 16 and 61, while the pH for HC23 was stable between weeks 16 and 51, but decreased between weeks 51 and 61 (Figure 5.2-6).

Initial decreases in sulphate production rates in the near-neutral humidity cells represented the flushing of surface sulphate precipitates. The stable sulphate production rates and stable pH values in the near-neutral humidity cells indicated that any acid produced by sulphide oxidation was effectively neutralized. Sulphate production rates in HC23 decreased to week 51 and subsequently rapidly increased for the last 9 weeks. Steady-state conditions were not reached, and increased sulphate production coincident with decreases in pH indicated increased sulphide oxidation rates (Figure 5.2-6).

Table 5.2-1. Statistical Summary of Results for the Elements Exceeding Three Times the Crustal Abundance for the KSM Humidity Cells Samples

		Silver	Arsenic	Barium	Bismuth	Cadmium	Cesium	Copper	Mercury	Potassium	Molybdenum	Lead	Rubidium	Sulphur	Antimony	Selenium	Thalium	Uranium	Vanadium	Tungsten	Zinc
Kerr Humidity Cells	Number of Samples	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Minimum	0.41	11.8	30	0.09	0.06	2.14	386	0.02	20700	4.82	5.6	52.7	37500	0.54	18	1.13	0.3	116	1	15
	10 Percentile	0.494	12.79	36	0.129	0.093	2.512	1092.2	0.053	23700	5.312	6.5	60.38	46860	1.095	20.1	1.349	0.33	134.3	1.39	18.9
	25 Percentile	0.62	14.275	45	0.1875	0.1425	3.07	2151.5	0.1025	28200	6.05	7.85	71.9	60900	1.9275	23.25	1.6775	0.375	161.75	1.975	24.75
	Mean	0.66	42.85	130.00	0.26	0.15	3.51	3101.50	0.35	31275	22.05	19.10	73.83	76400.00	4.66	26.75	1.86	0.43	197.50	2.53	42.25
	Median	0.725	15.8	55	0.235	0.17	3.425	2965	0.36	31050	13.78	11.75	78.9	84050	3.755	28.5	2.01	0.45	212.5	2.8	33
	75 Percentile	0.7625	44.375	140	0.3025	0.18	3.8625	3915	0.6025	34125	29.775	23	80.825	99550	6.49	32	2.19	0.5	248.25	3.35	50.5
	90 Percentile	0.767	94.55	284	0.397	0.198	4.569	5220	0.625	39030	45.39	37.58	83.21	99820	8.956	32	2.244	0.5	248.7	3.44	73
	Maximum	0.77	128	380	0.46	0.21	5.04	6090	0.64	42300	55.8	47.3	84.8	100000	10.6	32	2.28	0.5	249	3.5	88
	3X Basaltic Crustal Abundance	**0.33**	**6**	990	**0.021**	0.66	**3.3**	**261**	**0.27**	**24900**	**4.5**	18	**90**	**900**	**0.6**	**0.15**	**0.63**	3	750	**2.1**	315
	Number of Samples>	4	4	0	4	0	3	4	2	3	4	1	0	4	3	4	4	0	0	3	0
	% >	100	100	0	100	0	75	100	50	75	100	25	0	100	75	100	100	0	0	75	0
	3X Shales Crustal Abundance	**0.21**	39	1740	n.a	0.9	15	**135**	1.2	79800	**7.8**	60	420	**7200**	4.5	**1.8**	4.2	11.1	390	5.4	285
	Number of Samples >	4	1	0	0	0	0	4	0	0	2	0	0	4	2	4	0	0	0	0	0
	% >	100	25	0	0	0	0	100	0	0	50	0	0	100	50	100	0	0	0	0	0
Sulphurets Humidity Cells	Number of Samples	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	6
	Minimum	0.32	8	420	0.09	0.02	1.84	227	0.02	29300	1.72	6.5	76.1	6000	2.88	3	0.47	1.8	150	4.5	24
	10 Percentile	0.326	8.9	438	0.09	0.032	2.02	239	0.02	31460	2.176	6.86	82.64	10440	3.018	3.6	0.56	1.8	151.8	6.36	26
	25 Percentile	0.36	10.35	485	0.155	0.055	2.375	247.5	0.025	37800	5.83	7.85	87.05	17950	4.405	4.5	0.945	1.8	173	8.15	38.75
	Mean	1.72	42.70	1092.86	0.77	10.85	5.86	886.71	1.02	41729	58.84	803.37	115.70	25842.86	18.38	7.00	1.82	2.64	221.14	32.29	134.50
	Median	0.49	35.3	700	0.25	0.09	3.06	1170	0.04	43500	28.5	12.9	97.7	23300	9.43	6	1.61	1.9	200	24.8	72.5
	75 Percentile	0.87	54.95	1540	1.155	1.08	7.59	1282.5	0.145	46900	41.5	34.25	147.5	38400	14.025	8	2.675	2.55	263	40.45	196.25
	90 Percentile	4.032	93.02	2384	2.056	30.1	12.93	1492	2.826	48820	145.04	2229.54	163.4	38660	41.49	11.4	3.368	4	289.4	70.64	305
	Maximum	8.76	125	2480	2.44	73.6	16.2	1750	6.75	49900	287	5520	167	38900	79.5	15	3.44	6.1	326	99.5	373
	3X Basaltic Crustal Abundance	**0.33**	**6**	990	**0.021**	0.66	3.3	**261**	0.27	**24900**	**4.5**	18	**90**	**900**	**0.6**	**0.15**	**0.63**	3	750	**2.1**	315
	Number of Samples>	5	7	2	7	3	3	4	1	7	5	3	4	7	7	7	5	1	0	7	1
	% >	71	100	29	100	43	43	57	14	100	71	43	57	100	100	100	71	14	0	100	17
	3X Shales Crustal Abundance	**0.21**	39	1740	n.a	0.9	15	**135**	1.2	79800	**7.8**	60	420	**7200**	**4.5**	**1.8**	4.2	11.1	390	**5.4**	285
	Number of Samples>	7	2	2	0	3	1	7	1	0	5	1	0	6	5	7	0	0	0	6	1
	% >	100	29	29	0	43	14	100	14	0	71	14	0	86	71	100	0	0	0	86	17
M UP Hazelton Humidity Cells	Number of Samples	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	Minimum	0.31	5.5	130	0.39	0.05	0.84	85.9	0.02	39900	0.8	8.5	92.2	2600	1.74	2	0.52	1.7	145	3.3	26
	10 Percentile	0.862	7.26	330	0.694	0.098	1.408	359.58	0.02	39900	2.976	8.5	96.52	6040	2.452	3.6	0.536	1.78	179.4	4.02	43.6
	25 Percentile	1.17	7.7	390	0.77	0.11	2.15	1105	0.03	40000	3.57	10	99.8	19300	3.19	7	0.65	1.9	337	4.9	49
	Mean	6.28	35.38	880.00	3.55	2.17	3.91	1440.99	0.21	44533	13.17	114.86	136.96	30055.56	55.69	10.78	1.24	4.18	405.00	10.19	213.00
	Median	1.73	10.4	850	1.35	0.17	3.3	1580	0.05	44600	11.75	13.9	124.5	21200	3.24	9	1.09	2.6	345	8.3	52
	75 Percentile	5.9	32	1310	3.33	1.19	6.9	1790	0.05	48500	24.7	117.5	147.5	30300	4.04	13	1.52	5.1	433	12.3	114
	90 Percentile	16.72	67.3	1418	8.632	5.964	6.94	2088	0.598	50380	28.9	275.8	207	54800	98.248	17	2.088	6.82	626.8	15.58	513.6
	Maximum	30	196.5	1850	15.2	13.5	6.94	3280	1.19	52300	28.9	647	207	100000	475	29	2.24	12.1	934	28.7	1120
	3X Basaltic Crustal Abundance	**0.33**	**6**	990	**0.021**	0.66	3.3	**261**	0.27	**24900**	**4.5**	18	**90**	**900**	**0.6**	**0.15**	**0.63**	3	750	**2.1**	315
	Number of Samples>	7	7	4	8	2	3	7	1	8	5	3	8	8	8	8	6	4	1	8	1
	% >	78	78	44	89	22	33	78	11	89	56	33	89	89	89	89	67	44	11	89	11
	3X Shales Crustal Abundance	**0.21**	39	1740	n.a	0.9	15	**135**	1.2	79800	**7.8**	60	420	**7200**	4.5	**1.8**	4.2	11.1	390	**5.4**	285
	Number of Samples >	8	0	1	0	2	0	7	0	0	5	2	0	6	0	8	0	1	3	6	1
	% >	89	0	11	0	22	0	78	0	0	56	22	0	67	0	89	0	11	33	67	11
M LP Hazelton Humidity Cells	Number of Samples	14	14	14	14	14	14	14	10	14	14	14	14	14	14	14	14	14	14	14	14
	Minimum	0.12	8	40	0.13	0.05	1.7	70.1	0.01	19100	4.25	9.6	66.3	300	1.01	2	1.04	0.9	69	0.5	23
	10 Percentile	0.755	9.18	86	0.16	0.136	2.011	78.06	0.01	22770	7.26	13.78	71.67	21810	1.143	6.3	1.393	1.23	126.5	0.86	25.9
	25 Percentile	0.93	11.225	102.5	0.36	0.165	3.8725	131.75	0.0175	27625	28.425	20.35	93.775	25250	2.5025	7.5	1.57	1.45	150.5	1.3	41
	Mean	1.97	21.42	325.00	0.82	0.46	4.77	527.19	0.07	35221	101.29	41.83	112.01	47185.71	5.25	14.29	2.23	2.46	179.57	6.27	113.29
	Median	1.11	14.05	230	0.525	0.22	4.8	602	0.04	36250	95.05	33.05	116	45100	4.075	9	2.285	1.7	159	2.2	68.5
	75 Percentile	1.3375	26.75	347.5	1.055	0.31	5.6975	735.5	0.0675	43375	134.75	55.15	125	64125	7.3725	18.25	2.595	2.125	196.5	7.175	160.25
	90 Percentile	4.855	45	562	1.859	1.241	7.298	1015	0.134	45530	212.3	86.33	146.65	80980	9.757	26.5	3.158	4.55	222.1	16.89	180.9
	Maximum	8.82	58.7	1550	2.42	1.99	8.42	1175	0.26	52100	256	94.5	170	100000	16.25	44	3.67	8.6	424	26.6	472
	3X Basaltic Crustal Abundance	**0.33**	**6**	990	**0.021**	0.66	**3.3**	**261**	0.27	**24900**	**4.5**	**18**	**90**	**900**	**0.6**	**0.15**	**0.63**	3	750	**2.1**	315
	Number of Samples>	13	14	1	14	3	11	9	0	11	13	11	11	13	14	14	14	3	0	7	1
	% >	93	100	7	100	21	79	64	0	79	93	79	79	93	100	100	100	21	0	50	7
	3X Shales Crustal Abundance	**0.21**	39	1740	n.a	0.9	15	**135**	1.2	79800	**7.8**	60	420	**7200**	4.5	**1.8**	4.2	11.1	390	5.4	285
	Number of Samples>	13	2	0	0	2	0	10	0	0	12	3	0	13	6	14	0	0	1	5	1
	% >	93	14	0	0	14	0	71	0	0	86	21	0	93	43	100	0	0	7	36	7

(contained)

Table 5.2-1. Statistical Summary of Results for the Elements Exceeding Three Times the Crustal Abundance for the KSM Humidity Cells Samples (completed)

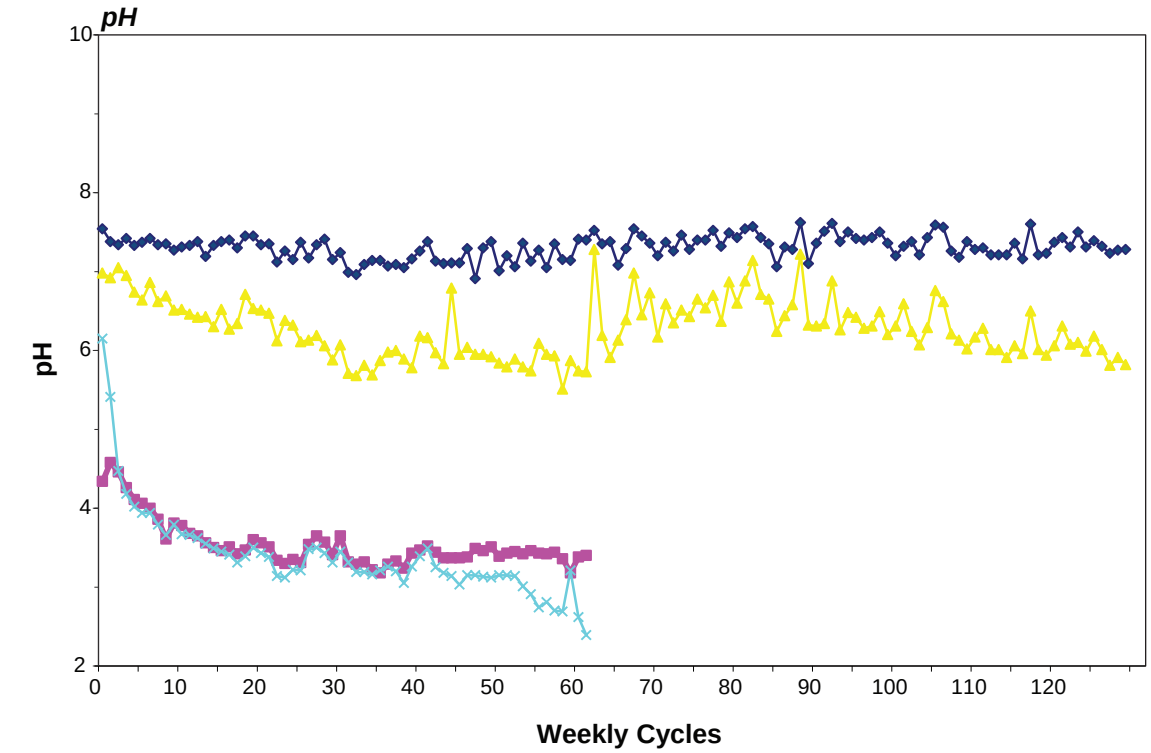
		Silver	Arsenic	Barium	Bismuth	Cadmium	Cesium	Copper	Mercury	Potassium	Molybdenum	Lead	Rubidium	Sulphur	Antimony	Selenium	Thalium	Uranium	Vanadium	Tungsten	Zinc
Iron Cap Humidity	Number of Samples	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Cells	Minimum	0.625	31.8	23	0.62	0.22	3.2	450	0	47100	5.54	27.96	183.5	6000	2.69	2	0	1.4	136	2.9	73
	10 Percentile	0.666	31.9	23.5	0.675	0.345	3.65	488	0	50200	12.56	31.38	190.55	15100	3.27	2.5	0	2.35	144	3.55	77.05
	25 Percentile	0.71825	39.325	24.25	0.7625	0.49	4.15	597	0	53850	20.2425	41.3625	200.65	27875	4.115	3	0	3.5	155	4.4	83.1
	Mean	1.17	91.18	78.50	1.09	1.77	5.20	844	0.00	60217	36.04	71.75	209.52	34250.00	26.63	5.67	0.00	4.60	175.83	6.62	188.23
	Median	0.886	62.35	28.5	0.87	0.59	5.05	854	0	60050	22.755	69.405	210.45	39550	19.645	5.5	0	4.45	170	5.55	101.5
	75 Percentile	1.143	100.225	48.5	1.24	1.9125	6.25	922	0	67750	37.275	95.985	216.875	42600	44.19	8	0	6.375	187.25	8.575	185.825
	90 Percentile	1.967	179.3	183.5	1.71	4.38	6.9	1189	0	70400	72.815	114.465	227.55	48100	56.97	9	0	7	213.5	10.75	386.15
	Maximum	2.75	246.1	313	2.06	6.42	7.4	1447	0	72000	103.69	126.87	236.3	52800	66.48	10	0	7.1	236	12.1	562.5
	3X Basaltic Crustal Abundance	**0.33**	**6**	990	**0.021**	0.66	**3.3**	**261**	0.27	**24900**	**4.5**	**18**	**90**	**900**	**0.6**	**0.15**	0.63	**3**	750	**2.1**	315
	Number of Samples>	6	6	0	6	2	5	6	0	6	6	6	6	6	6	6	0	5	0	6	1
	% >	100	100	0	100	33	83	100	0	100	100	100	100	100	100	100	0	83	0	100	17
	3X Shales Crustal Abundance	**0.21**	**39**	1740	n.a	0.9	15	**135**	1.2	79800	**7.8**	**60**	420	**7200**	**4.5**	**1.8**	4.2	11.1	390	**5.4**	285
	Number of Samples>	6	4	0	0	2	0	6	0	0	5	4	0	5	4	6	0	0	0	3	1
	% >	100	67	0	0	33	0	100	0	0	83	67	0	83	67	100	0	0	0	50	17

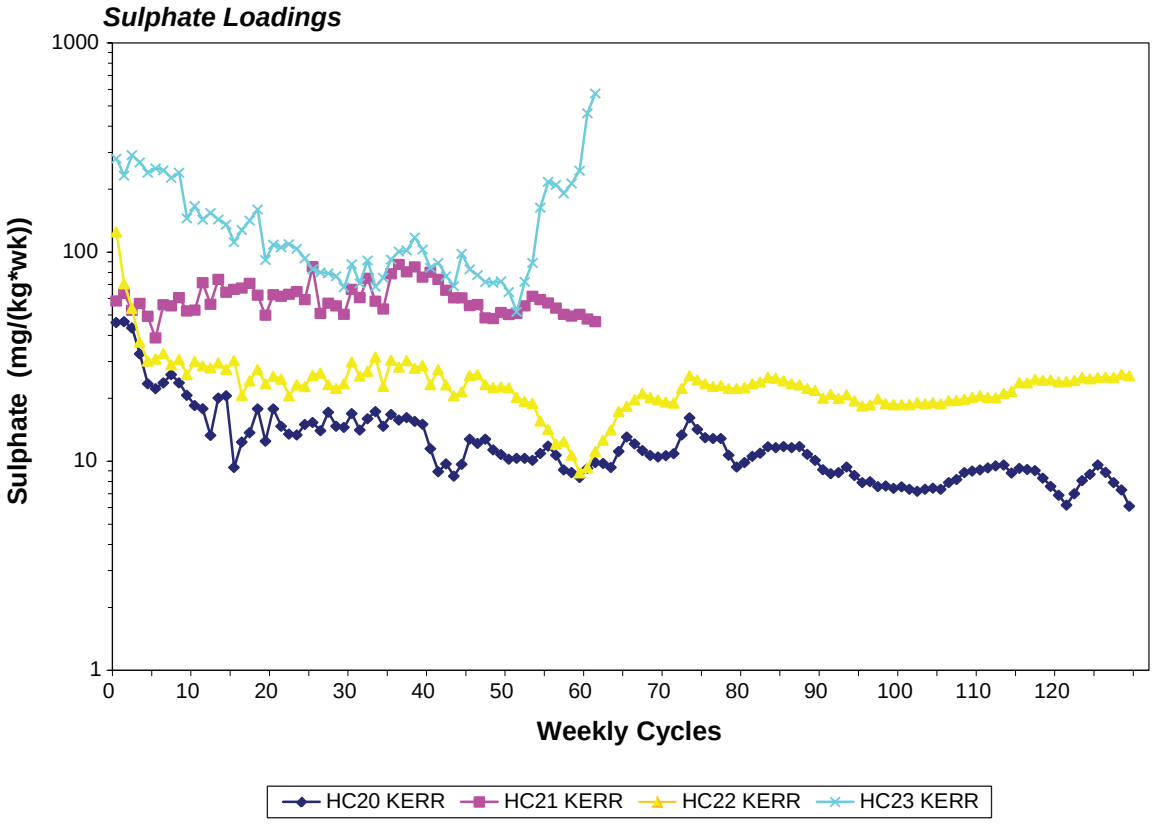
Concentrations are in ppm

Underlined and bold values that median value exceeds three times the crustal abundance

n.a - crustal abundance data are not available

Crustal abundance data from Price (1997).





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Weekly pH and Sulphate Production Rates, Kerr Deposit Waste Rock Humidity Cells

Figure 5.2-6

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Alkalinity was not detected in the acidic humidity cells. Acidity and alkalinity trends for the near-neutral humidity cells followed the pH trends closely and were generally stable for 129 weeks. Similarly, acidity closely matched the pH trends in the acidic humidity cells with increased acidity production in the first 16 weeks, followed by stable rates between weeks 16 and 51, and increased acidity production at week 51 in HC23 (Figure 5.2-7).

Elements that Contribute to Acidity

Aluminum and iron concentrations were controlled by leachate pH, with elevated concentrations in the acidic humidity cells. Aluminum leach rates in the near-neutral humidity cells decreased during the initial flush before stabilizing, and iron leach rates in the near-neutral humidity cells were highly variable. Aluminum leach rates in HC21 gradually decreased by week 61 to 0.4 mg/kg/wk. Iron leach rates in the acidic humidity cells increased for the first 16 weeks and then stabilized at 12 mg/kg/wk. Aluminum and iron leach rates sharply increased after week 51 in HC23, which was concomitant with the decrease in pH (Figure 5.2-8).

Manganese leach rates were generally stable in the near-neutral humidity cells and ranged from 0.02 to 0.03 mg/kg/wk. HC21 leach rates decreased for the first 12 weeks, increased sharply, and then stabilized at approximately 0.02 mg/kg/wk. HC23 leach rates increased at week 51, coincident with pH decreases (Figure 5.2-9).

Barium

Barium leach rates generally decreased over time for all humidity cells. A more rapid decrease in barium leach rates after cycle 51 for HC23 likely reflected increased barite precipitation due to increased sulphate production (Figure 5.2-9).

Trace Elements

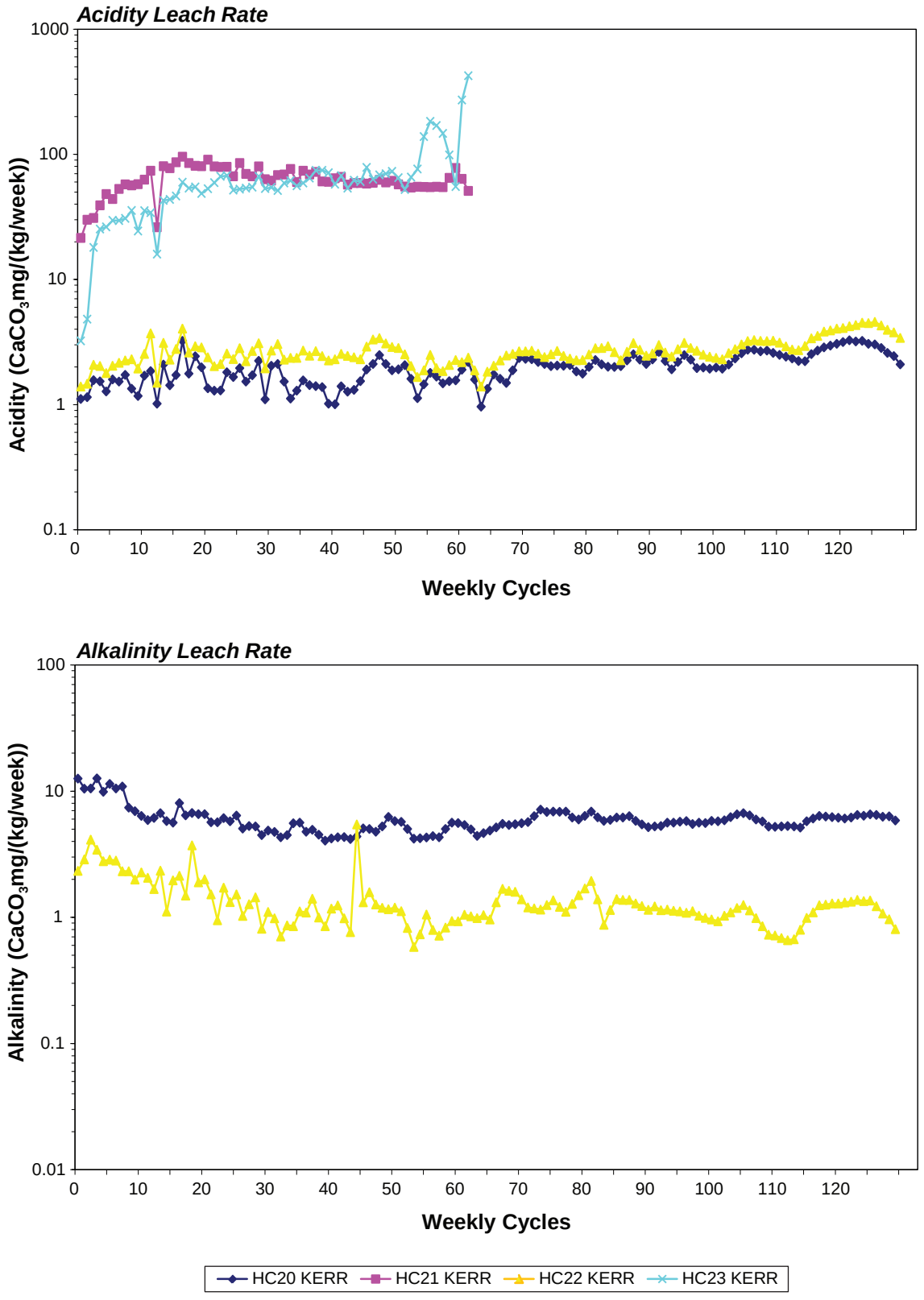
In the near-neutral humidity cells, arsenic leach rates decreased to week 20 due to the initial flush and subsequent concentrations were frequently below detection. Steady state arsenic leach rates in HC21 were 0.02 mg/kg/wk. Arsenic leach rates were highly variably for HC23 until week 23 when rates substantially increased due to increased sulphide oxidation (Figure 5.2-10).

Cadmium concentrations were elevated in the acidic humidity cells relative to the near-neutral humidity cells. Steady state cadmium leach rates for the near-neutral humidity cells ranged from 0.00003 to 0.00013 mg/kg/wk. Steady state leach rates for the acidic humidity cells ranged from 0.0003 to 0.002 mg/kg/wk (Figure 5.2-10).

Chromium concentrations in the near-neutral humidity cells were frequently below detection. Chromium leach rates in HC21 decreased after week 40 and chromium leach rates in HC23 substantially increased after week 51 (Figure 5.2-11).

Stable cobalt leach rates in the near-neutral humidity cells ranged from 0.00007 mg/kg/wk in HC20 to 0.01 mg/kg/wk in HC22. HC21 leach rates were stable at 0.007 mg/kg/wk after an initial decrease. Cobalt leach rates in HC23 increased at week 51 with the decreased pH (Figure 5.2-11).

Copper leach rates in the acidic humidity cells were relatively stable over time at approximately 10 mg/kg/wk (Figure 5.2-12). Copper leach rates in the near-neutral HC22 gradually increased over time, while in the near-neutral HC20 copper leach rates reached a steady state rate of approximately 0.003 mg/kg/wk.

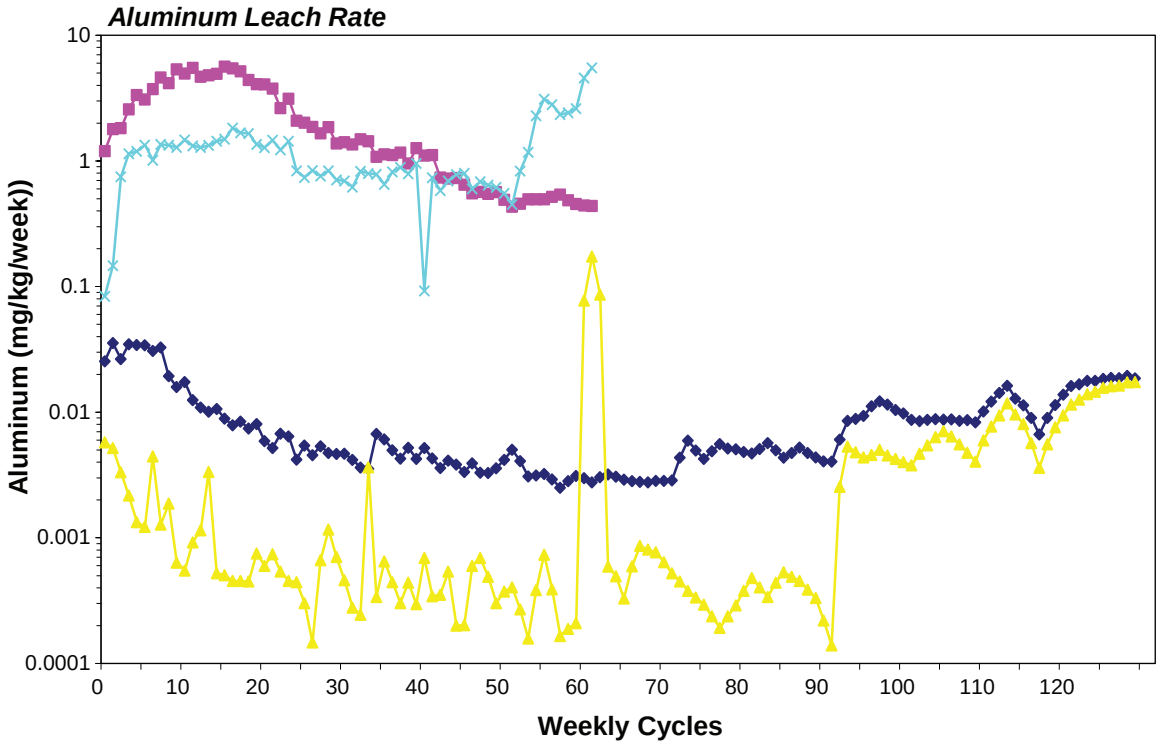


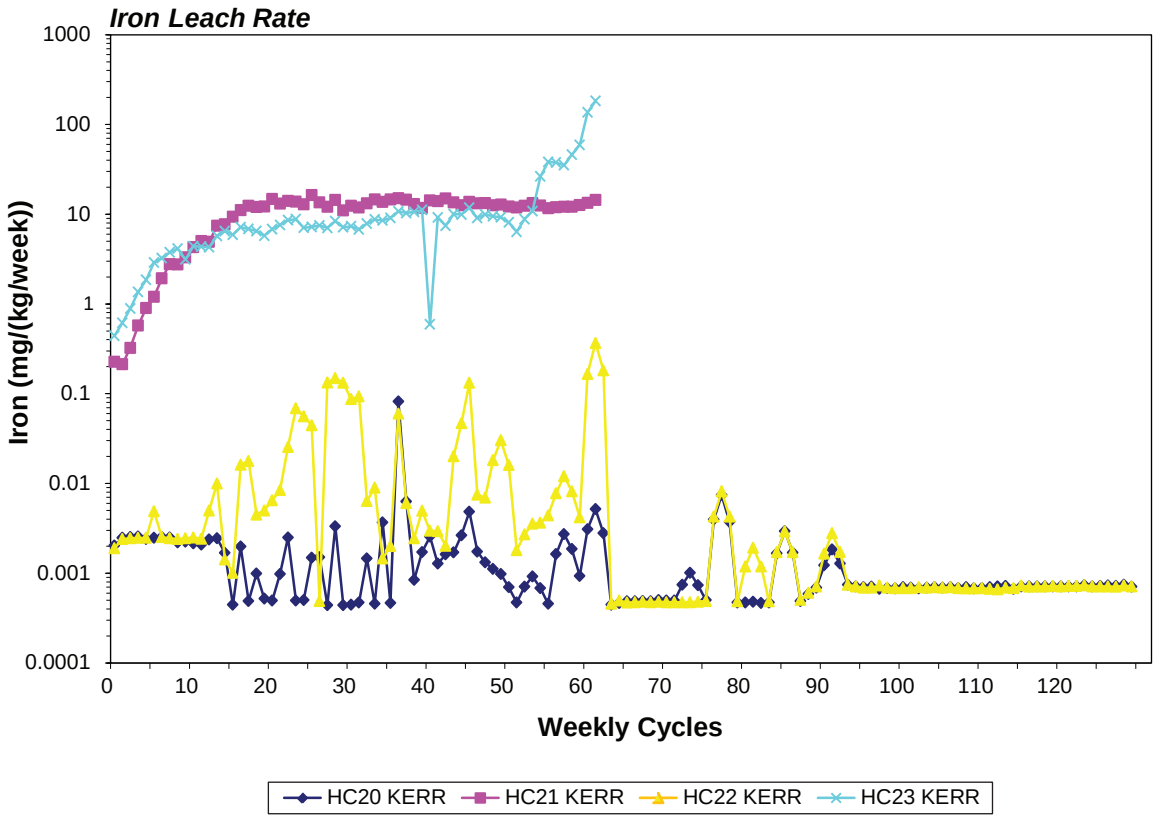
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Acidity and Alkalinity Production Rates, Kerr Deposit Waste Rock Humidity Cells

Figure 5.2-7

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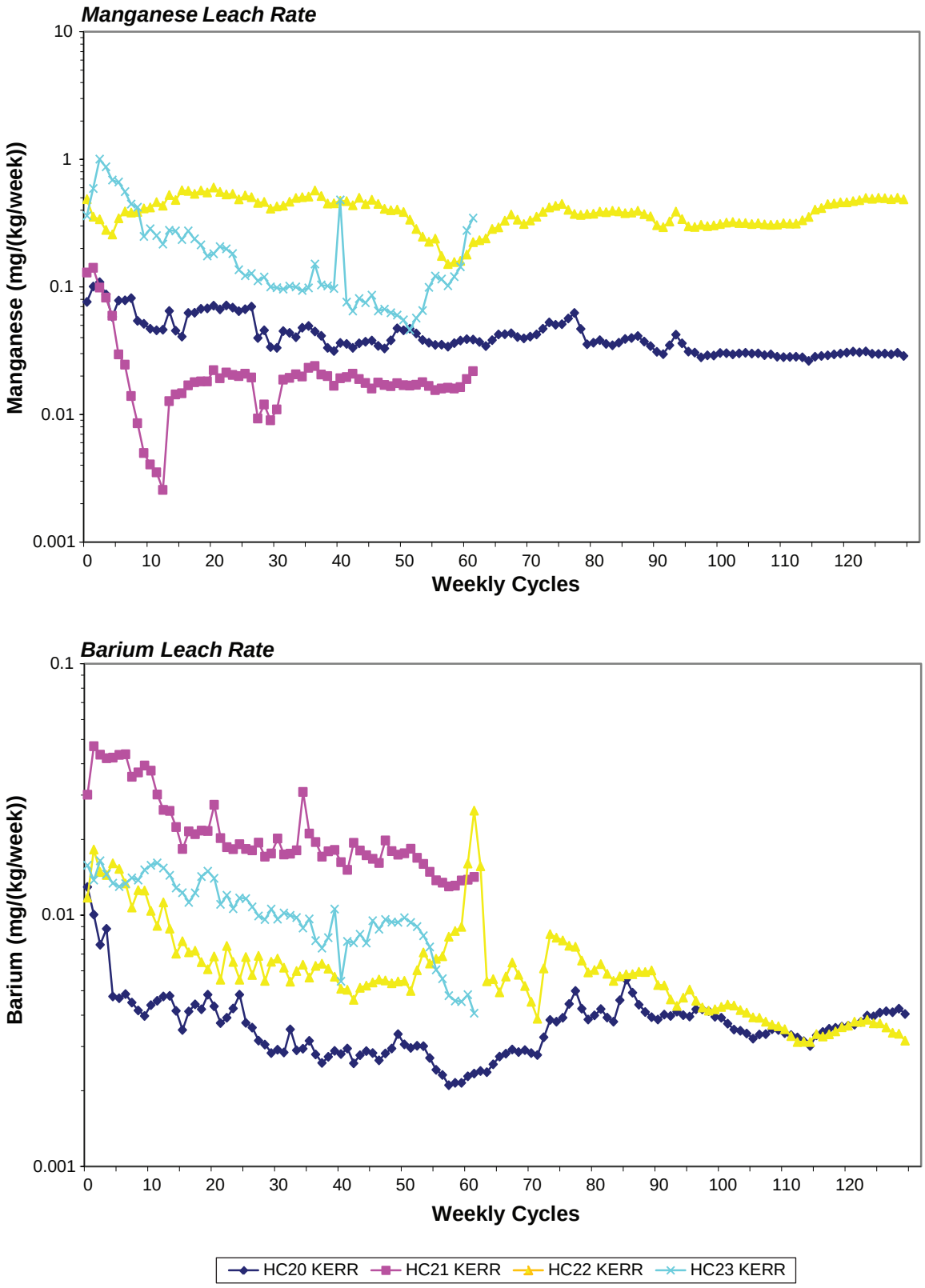


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**Aluminum and Iron Leach Rates,
Kerr Deposit Waste Rock Humidity Cells**

Figure 5.2-8

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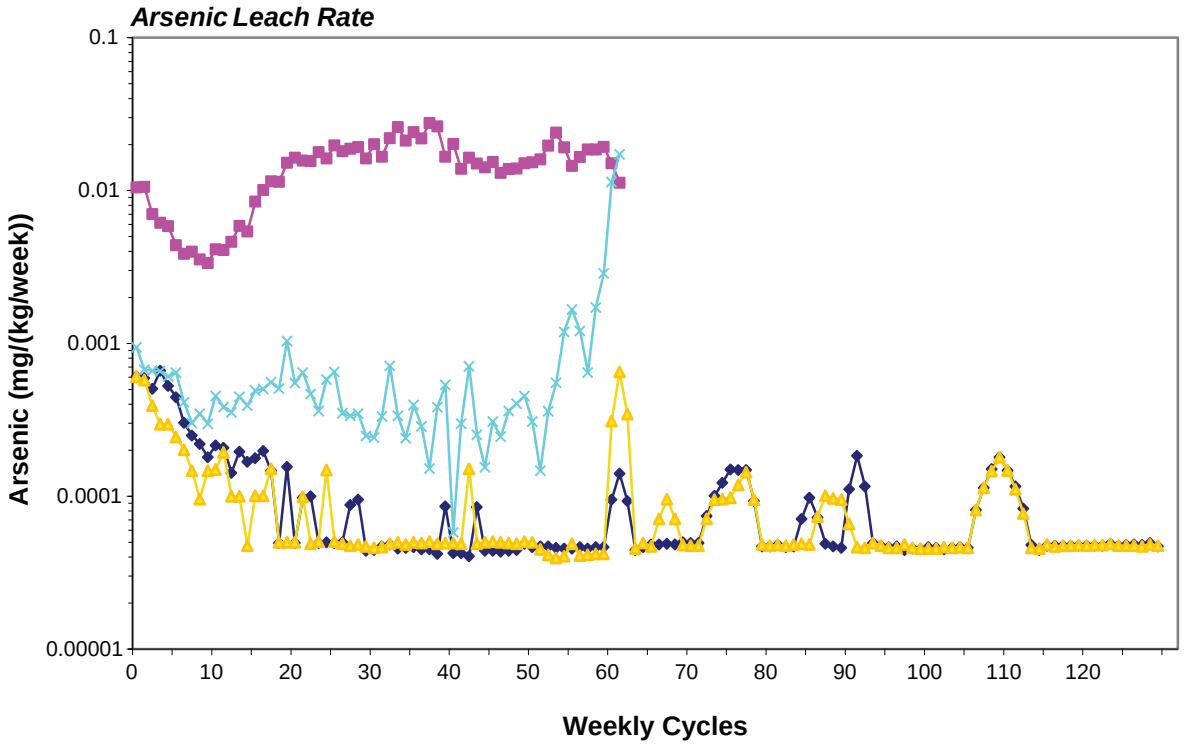


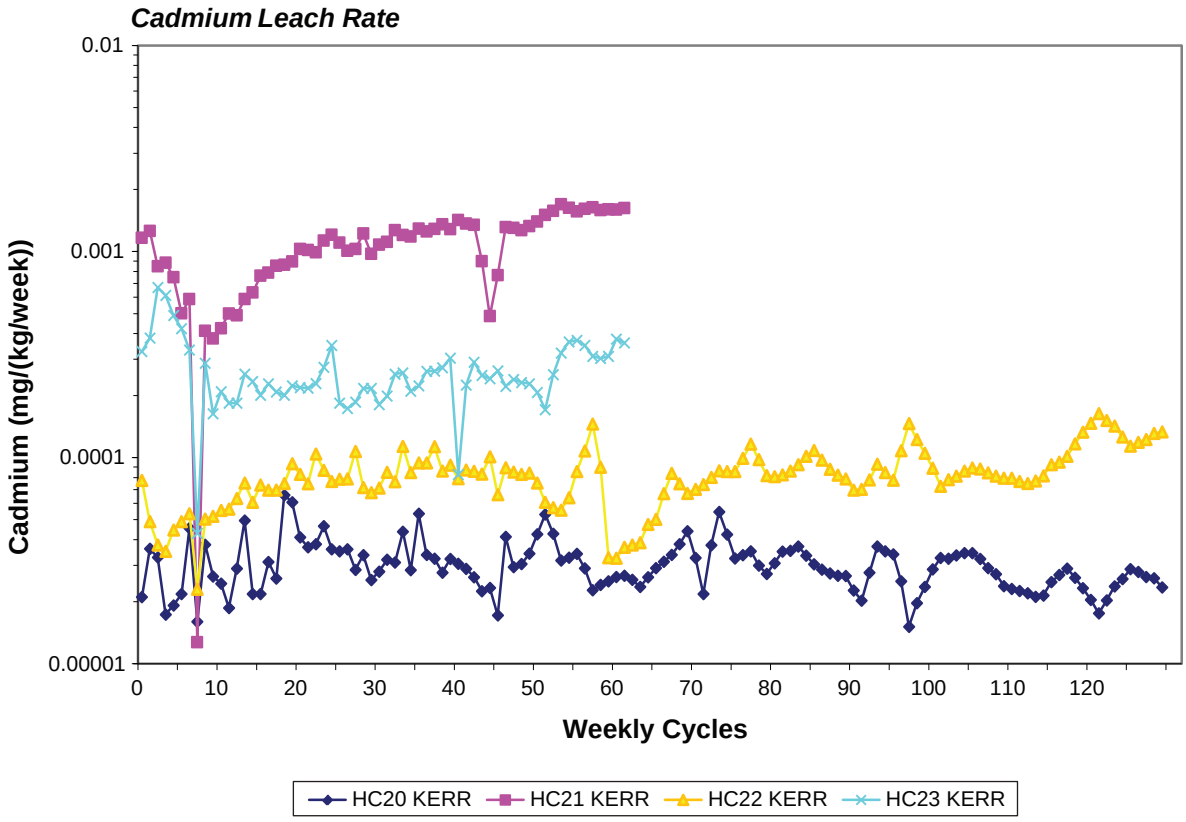
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Manganese and Barium Leach Rates, Kerr Deposit Waste Rock Humidity Cells

Figure 5.2-9

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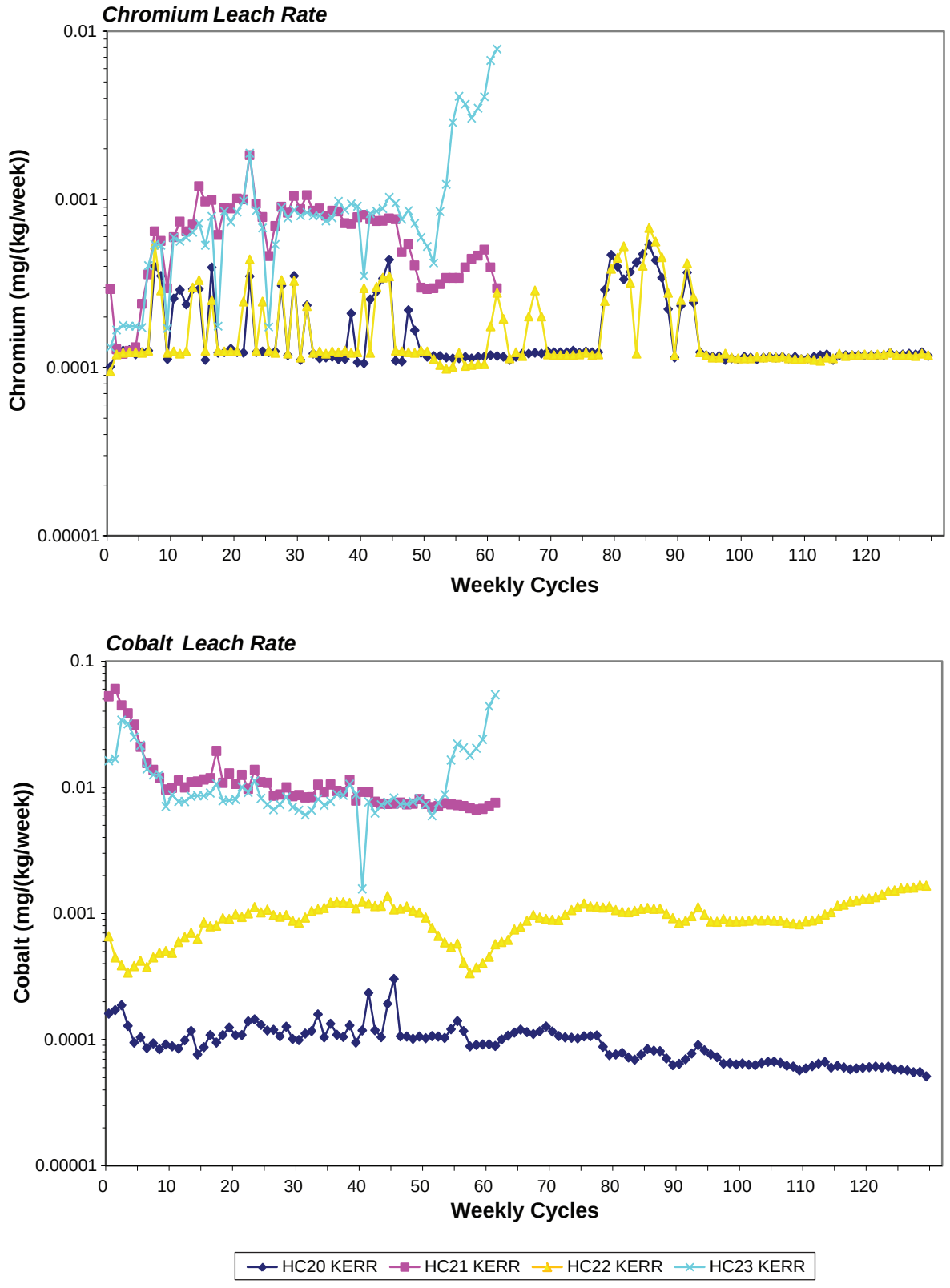


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Arsenic and Cadmium Leach Rates, Kerr Deposit Waste Rock Humidity Cells

Figure 5.2-10

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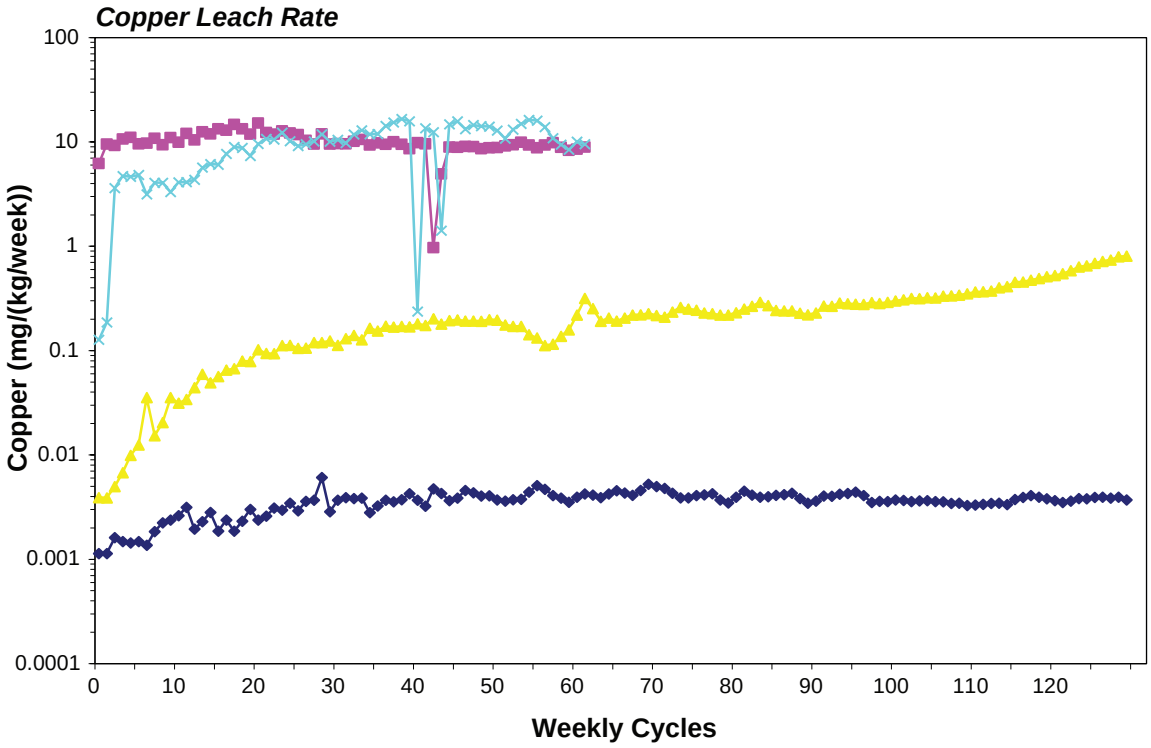


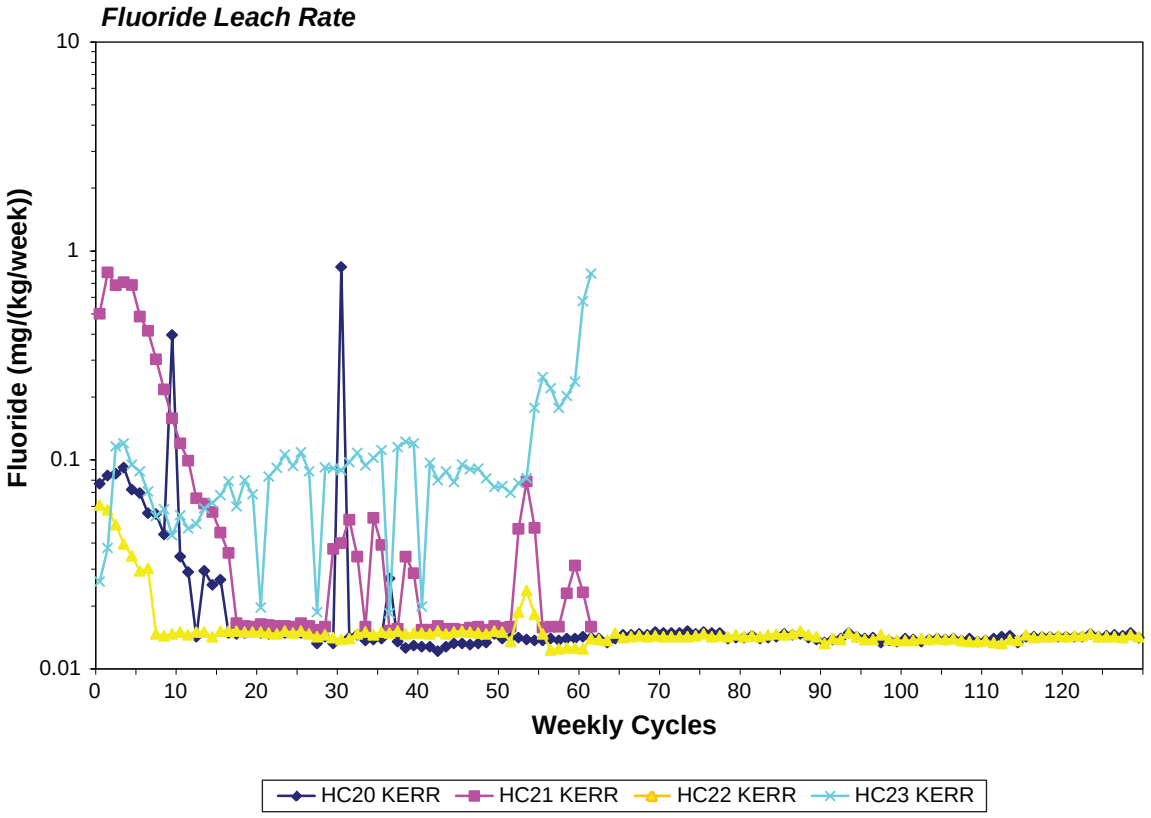
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**Chromium and Cobalt Leach Rates,
Kerr Deposit Waste Rock Humidity Cells**

Figure 5.2-11

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**Copper and Fluoride Leach Rates,
Kerr Deposit Waste Rock Humidity Cells**

Figure 5.2-12

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Fluoride concentrations in the near-neutral humidity cells and in the acidic HC21 were frequently below detection. Fluoride leach rates increased in HC23 after week 51 concomitant with the decrease in pH (Figure 5.2-12).

Lead concentrations in the acidic humidity cells were initially elevated relative to the near-neutral cells. Lead leach rates in all four humidity cells were highly variable over time (Figure 5.2-13).

Selenium concentrations were elevated in the acidic humidity cells relative to the near-neutral cells, and stabilized after approximately 20 weeks. Steady state selenium leach rates in the acidic humidity cells were approximately 0.007 mg/kg/wk and ranged from 0.0004 to 0.002 mg/kg/wk in the near-neutral humidity cells (Figure 5.2-13).

Silver concentrations in the near-neutral humidity cells were frequently below detection. Silver leach rates in the acidic humidity cells increased over time (Figure 5.2-14).

Zinc concentrations were elevated in the acidic humidity cells relative to the near-neutral cells. Leach rates in acidic HC21 gradually increased over time, while leach rates in HC 23 were more variable over time. Leach rates in the near-neutral humidity cells increased over time (Figure 5.2-14).

Table 5.2-2 summarizes the parameters with elevated concentrations by model code under acidic and neutral drainage conditions in order to inform treatment design.

Table 5.2-2. Kerr Deposit Acidic and Neutral Leachate from Humidity Cells

Model Code	Acidic Drainage	Neutral Drainage
KERR	Sulphate, Aluminum, Arsenic, Cadmium, Chromium, Cobalt, Copper, Fluoride, Iron, Lead, Selenium, Silver, Zinc	Aluminum, Cadmium, Copper, Selenium

Elements Associated with the Neutralization Potential

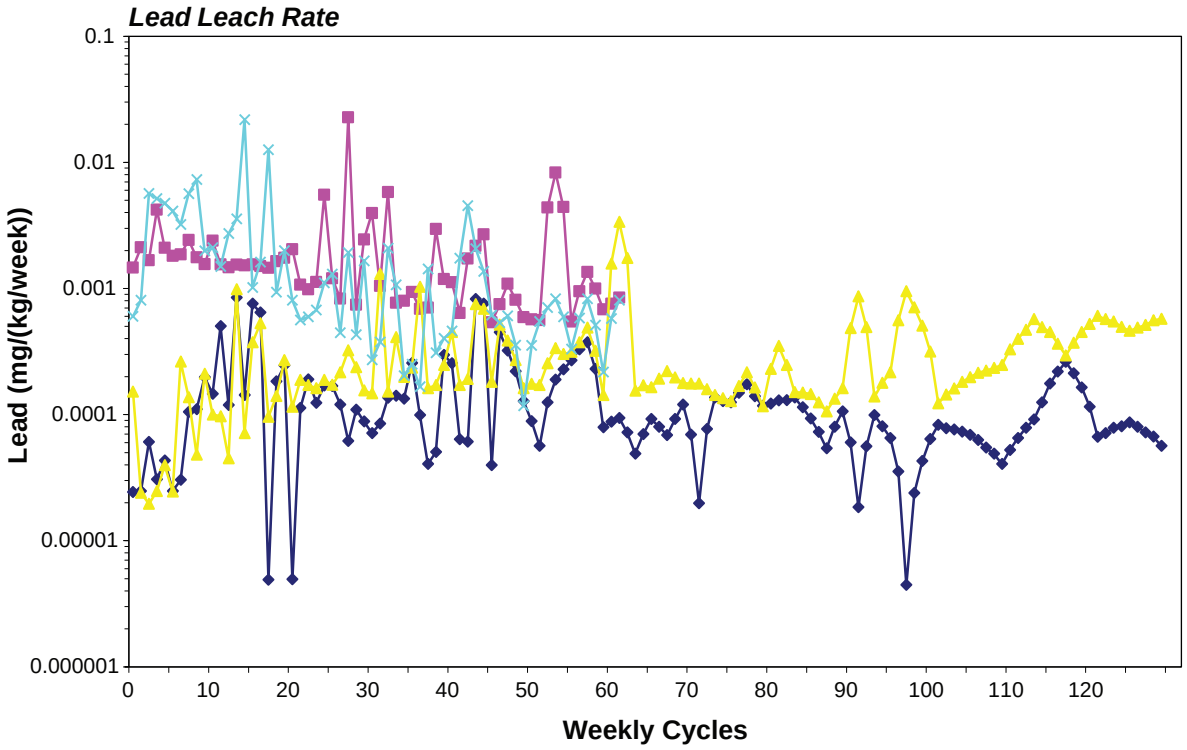
In the near-neutral humidity cells, leach rates of calcium and magnesium were stable after an initial decrease, similar to the pH dynamics of the near-neutral humidity cells. The calcium and magnesium leach rates in the acidic humidity cells decreased over time, although rates in HC21 were more variable. Increased calcium and magnesium leach rates were observed after cycle 51 in HC23, concomitant with decreased pH and increased sulphate production (Figure 5.2-15).

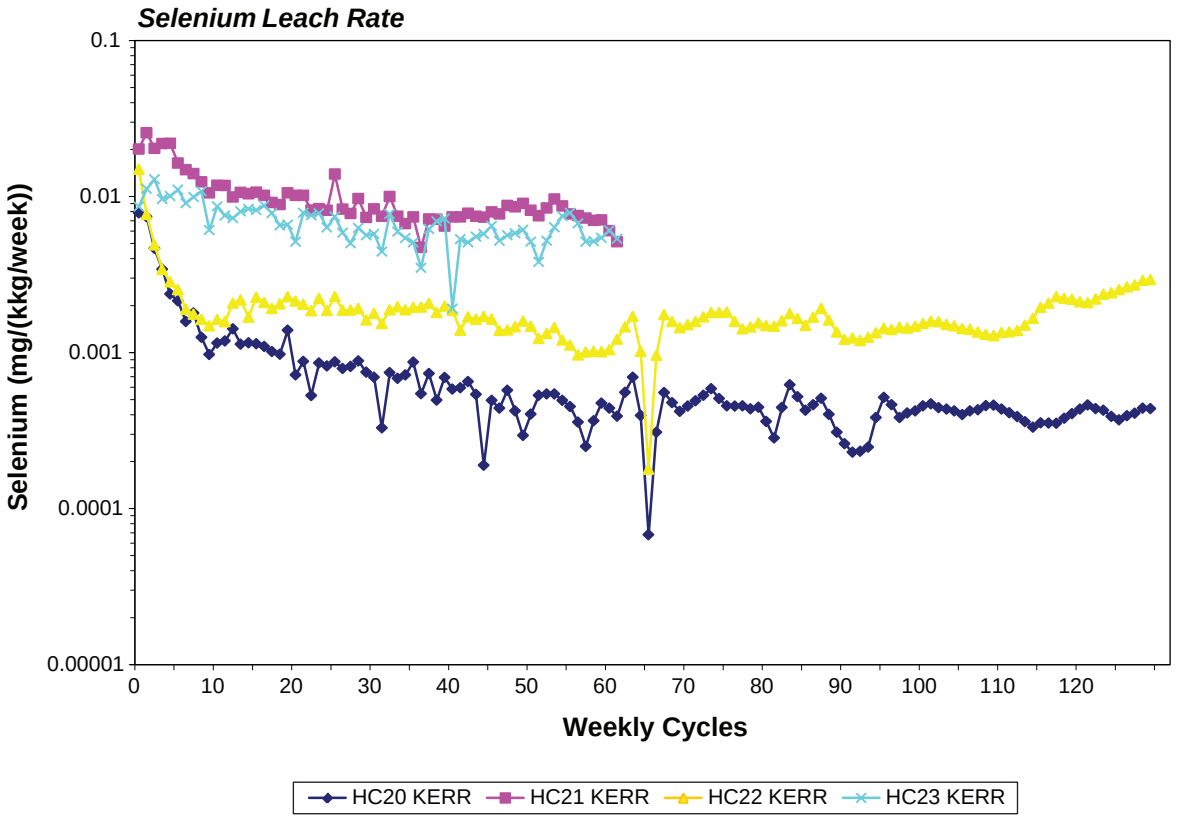
Sulphurets Deposit

Seven humidity cells were operated for the Sulphurets Deposit for five ABA block model codes (two humidity cells for Lower Au Zone, two for UP Hazelton, one for Overburden, and two for Undefined) for between 56 and 179 weeks. The complete dataset for humidity cell leachate concentrations for the Sulphurets Deposit is presented in Appendix 5.2-4. The leach rates for additional parameters are presented in Appendix 5.2-3.

pH, Sulphate, Acidity, and Alkalinity

Six of the seven humidity cells from the Sulphurets Deposit had initial near-neutral pH and remained near-neutral through 56 to 129 cycles. One Overburden humidity cell (S-06-05) was initially acidic and the pH decreased to a stable pH between 2.5 to 2.7 (Figure 5.2-16).



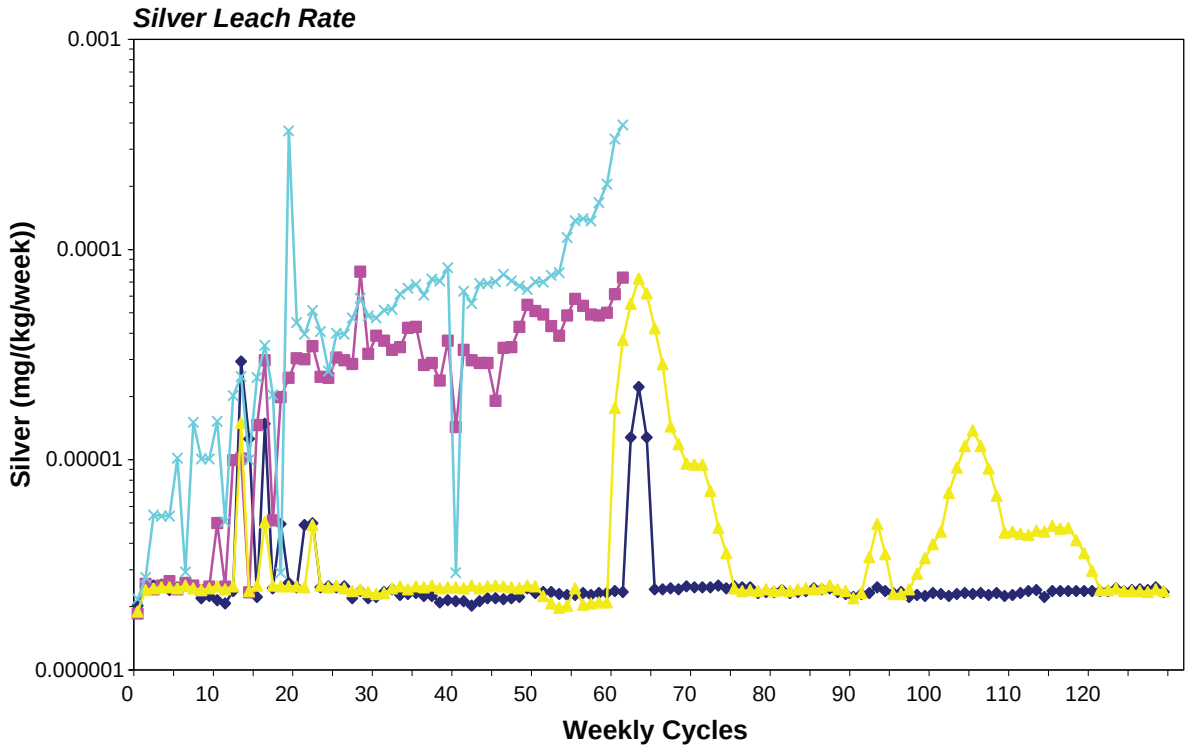


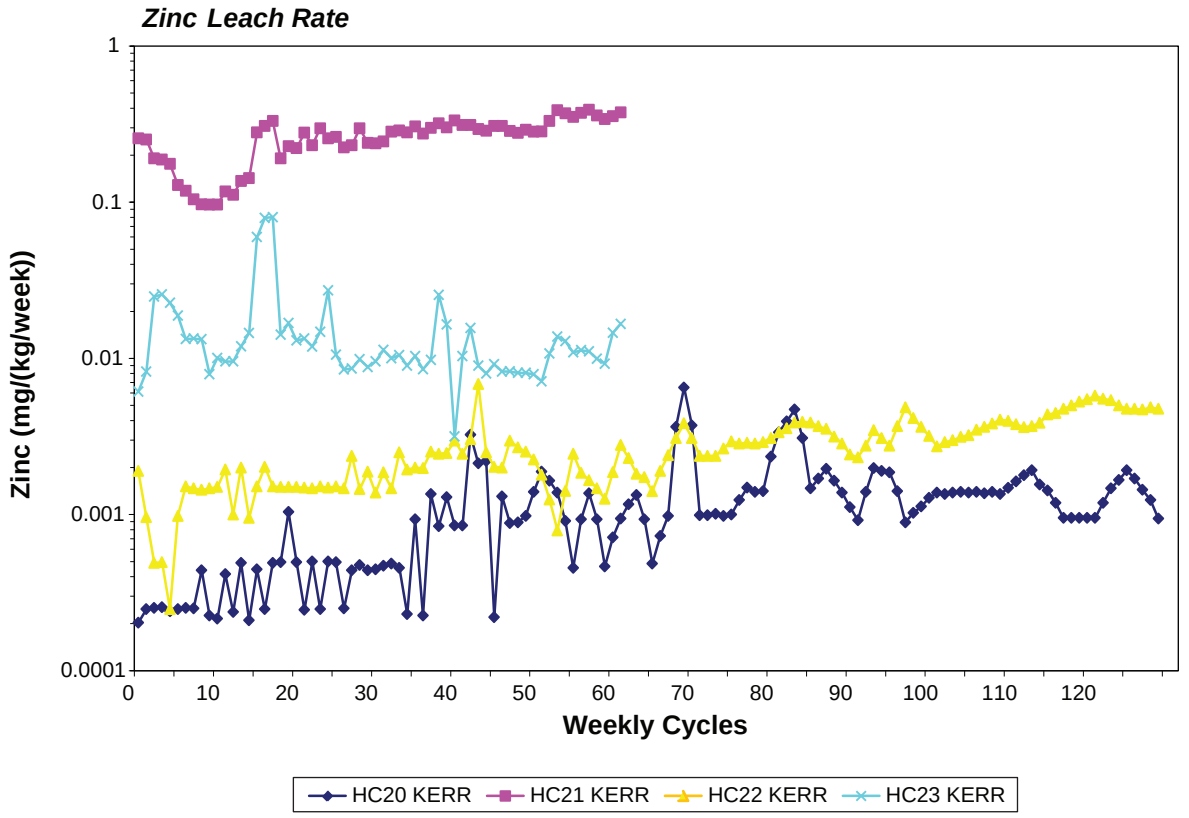
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Lead and Selenium Leach Rates,
Kerr Deposit Waste Rock Humidity Cells

Figure 5.2-13

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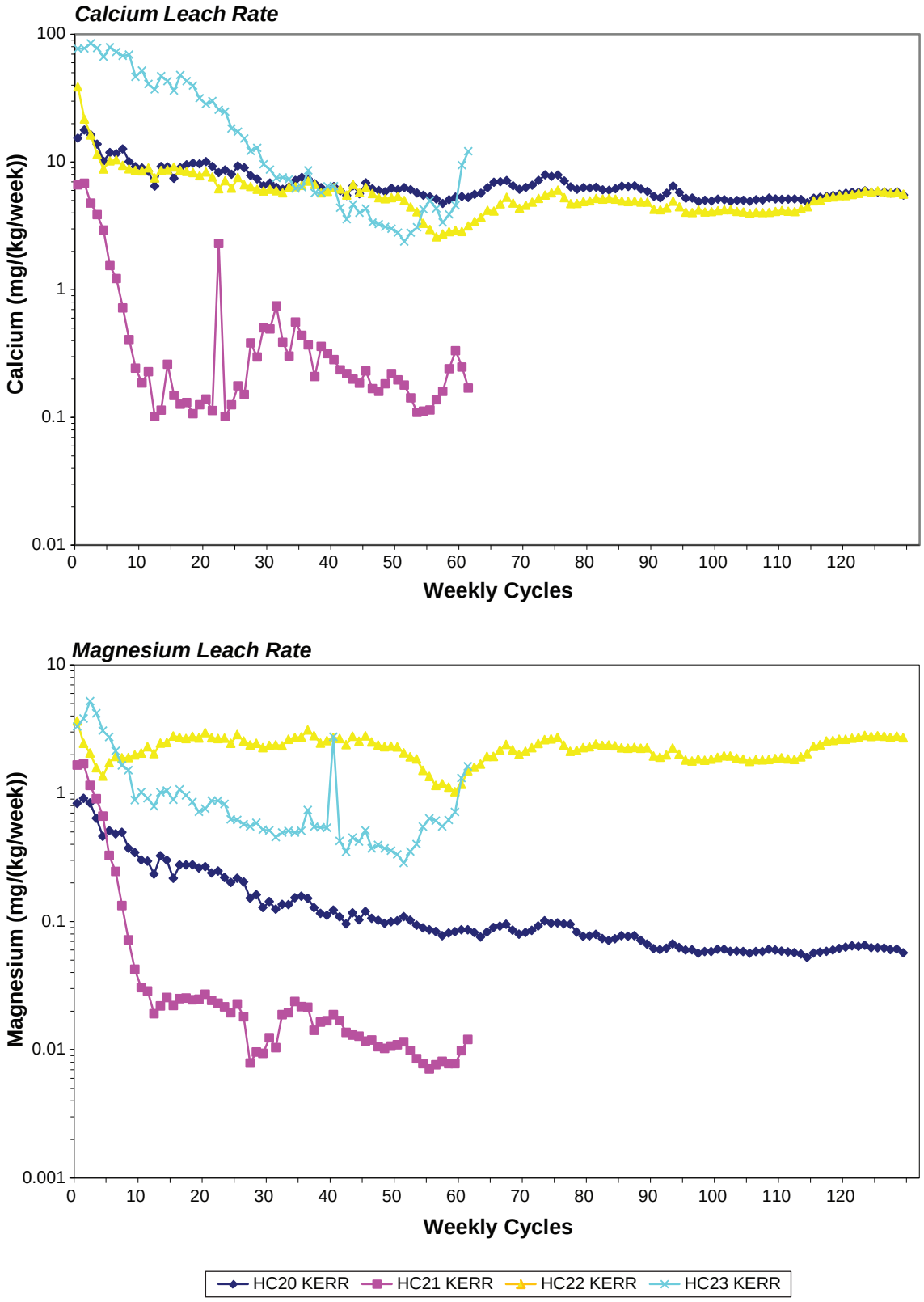


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Silver and Zinc Leach Rates,
Kerr Deposit Waste Rock Humidity Cells

Figure 5.2-14

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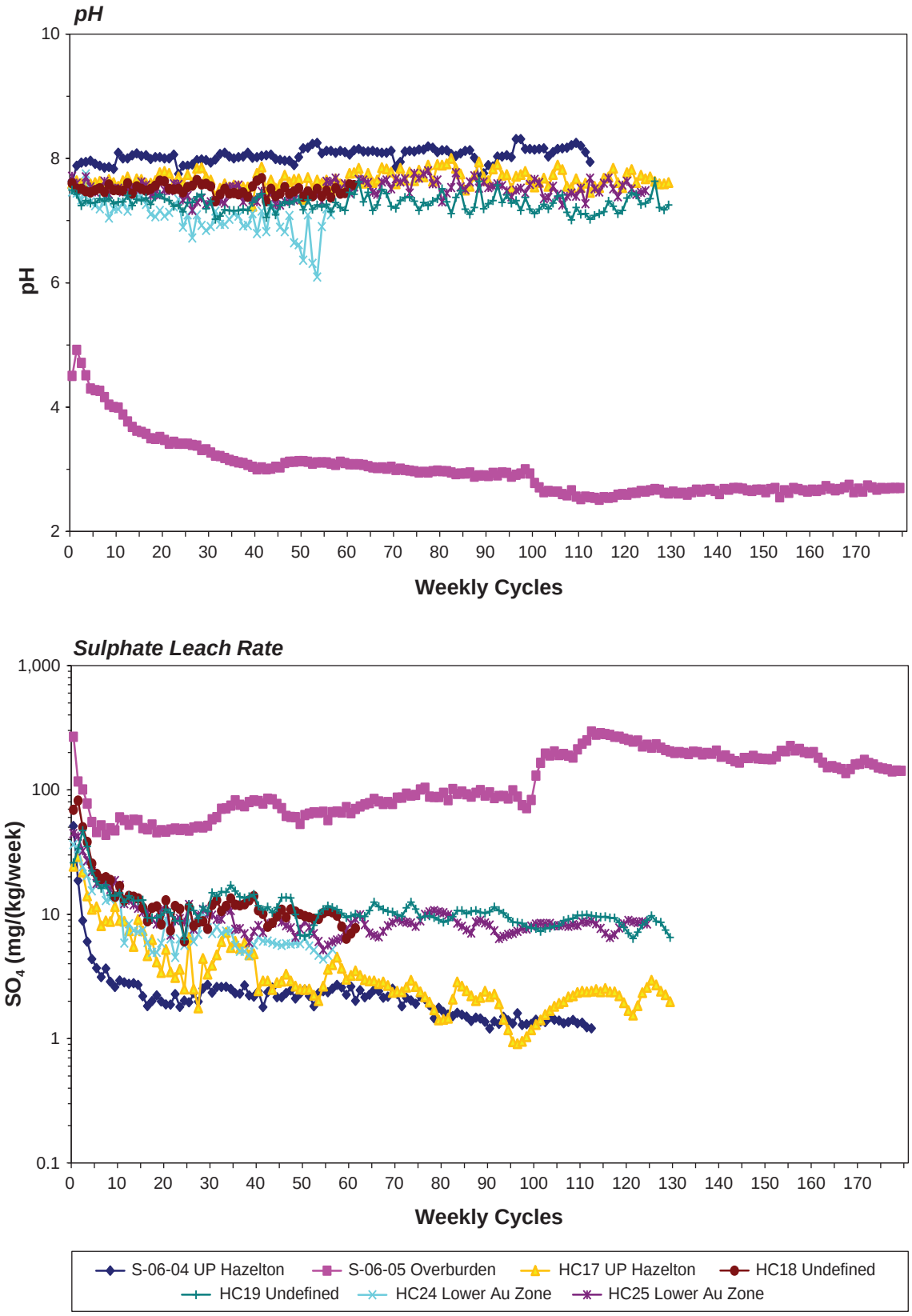


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Calcium and Magnesium Leach Rates, Kerr Deposit Waste Rock Humidity Cells

Figure 5.2-15

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Weekly pH and Sulphate Production Rates, Sulphurets Deposit Waste Rock Humidity Cells

Figure 5.2-16

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Sulphate production rates decreased for approximately 20 cycles in the near-neutral humidity cells, representing the flushing of surface precipitates, before stabilizing between 1.2 to 8.5 mg/kg/wk. The pH and sulphate results indicated that any acid produced through sulphide oxidation in those near-neutral humidity cells was effectively neutralized. The acidic Overburden humidity cell had decreased rates of sulphate production for eight weeks, and subsequently sulphate concentrations gradually and variably increased from 8 to 112 weeks, indicating increased sulphide oxidation. Sulphate production rates slightly decreased from 112 to 179 weeks to a stable production rate of 142 mg/kg/wk (Figure 5.2-16).

Acidity production was highly variable and frequently below detection in the near-neutral humidity cells. After an initial one week decrease, acidity production increased over time in the acidic Overburden humidity cell, closely following the pH trend. Alkalinity production rates were stable in all humidity cells, with alkalinity in the near-neutral humidity cells between 9 to 11 mg/kg/wk, approximately an order of magnitude greater than in the acidic humidity cell (Figure 5.2-17).

Elements that Contribute to Acidity

Aluminum and iron concentrations were controlled by leachate pH, with elevated concentrations in the acidic Overburden humidity cell. Aluminum and iron leach rates in the acidic Overburden humidity cell decreased during the initial flush before increasing variably. Near-neutral humidity cells' aluminum leach rates remained stable or decreased gradually over time (Figure 5.2-18). Iron leach rates in the near-neutral humidity cells were highly variable and frequently below detection (Figure 5.2-18).

Manganese leach rates decreased over time or were stable in all humidity cells (Figure 5.2-19).

Barium

Barium leach rates were stable over time for the near-neutral humidity cells between 0.007 to 0.08 mg/kg/wk. Barium leach rates were lower in the acidic Overburden humidity cell, likely due to increased barite precipitation due to increased sulphate production (Figure 5.2-19).

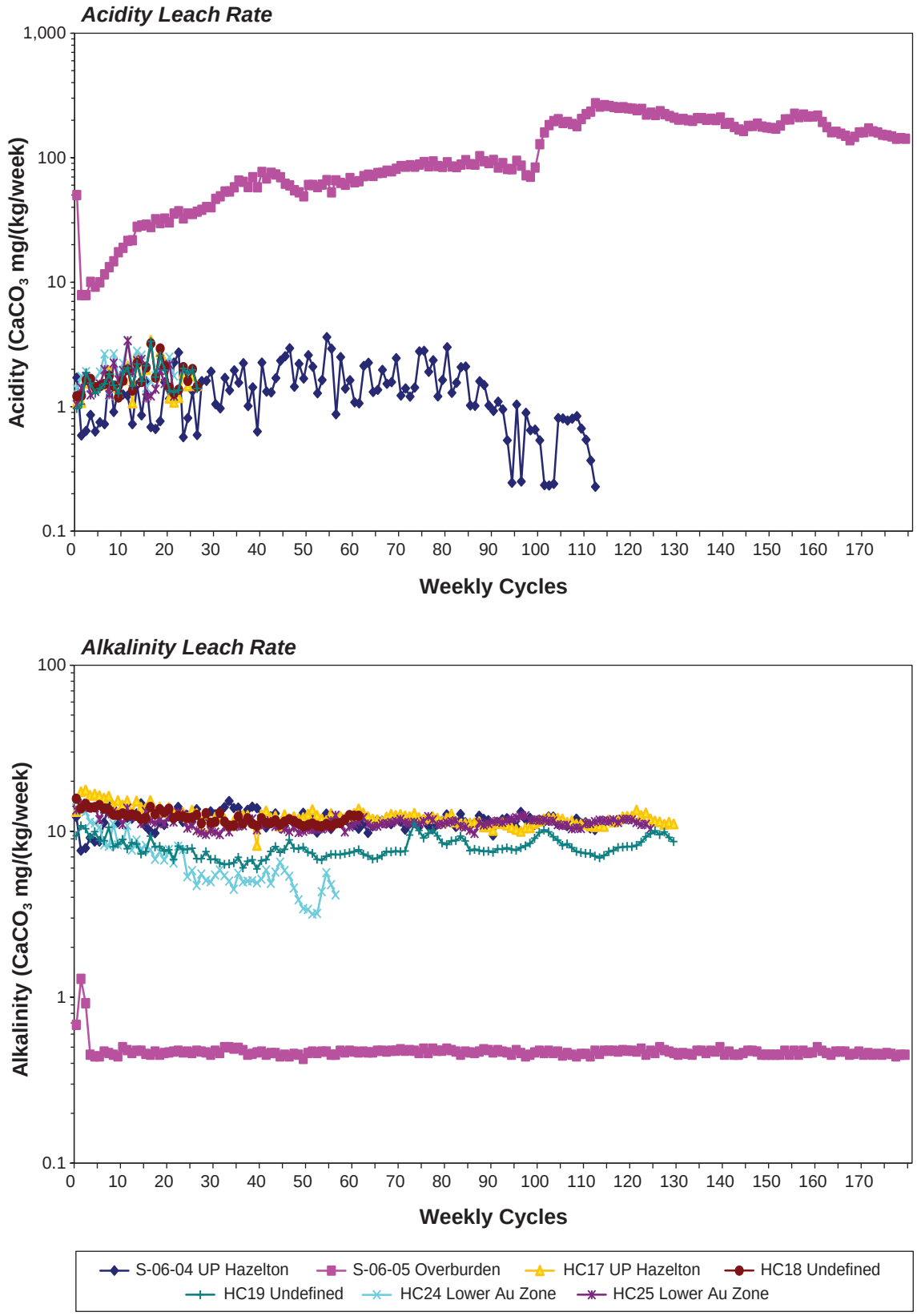
Trace Elements

Trace element concentrations were typically elevated in the acidic Overburden humidity cell relative to the near-neutral humidity cells, with the exception of lead. Notably, concentrations and leach rates of lead, cadmium, selenium, and zinc in HC19 Undefined were elevated relative to other near-neutral humidity cells and increasing.

Arsenic leach rates increased over time in the acidic Overburden humidity cell to approximately 0.03 mg/kg/wk in the last 10 weeks. A substantial increase in leach rates was observed at week 98 when the pH in the leachate decreased below 3.0. Arsenic leach rates in the near-neutral humidity cells were approximately an order of magnitude or more lower (Figure 5.2-20).

Cadmium leach rates were generally stable over time in the acidic Overburden humidity cell at 0.002 mg/kg/wk. In contrast, the near-neutral humidity cell cadmium leach rates were highly variable and concentrations were frequently below the detection limit. The exception to this trend was HC19 Undefined, in which cadmium leach rates increased over time to 0.004 mg/kg/wk (Figure 5.2-20).

Chromium leach rates in the acidic Overburden and the near-neutral UP Hazelton (S-06-04) humidity cells were similar and stable for 79 weeks, when the chromium concentrations in the MCMONZ leachate decreased to below the detection limit. The acidic Overburden chromium leach rates increased at week 98 in response to the decreased pH (pH < 3), and subsequently decreased for the remaining time. Chromium concentrations in the other near-neutral humidity cells were highly variable and frequently below the detection limit (Figure 5.2-21).

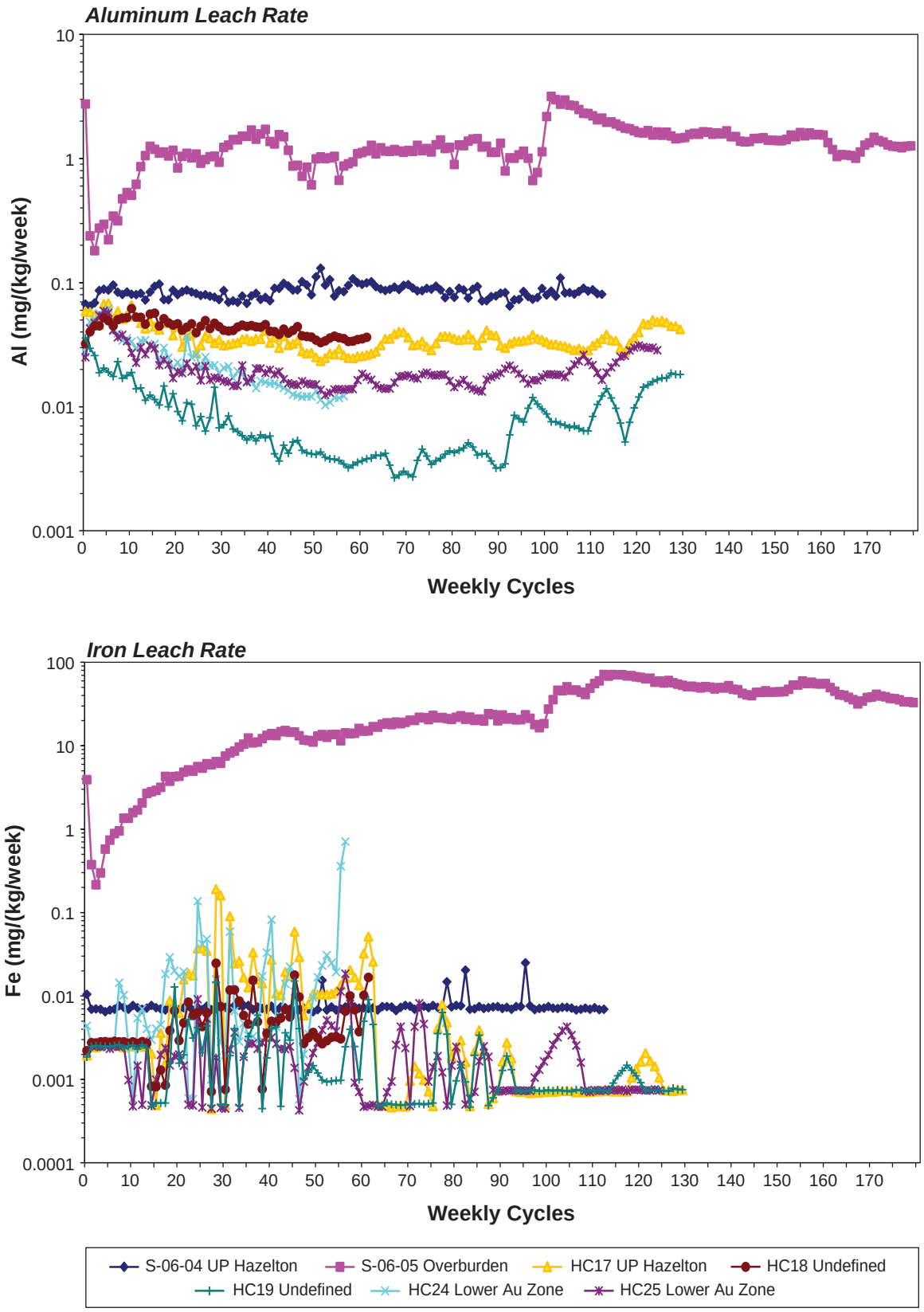


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Acidity and Alkalinity Production Rates, Sulphurets Deposit Waste Rock Humidity Cells

Figure 5.2-17

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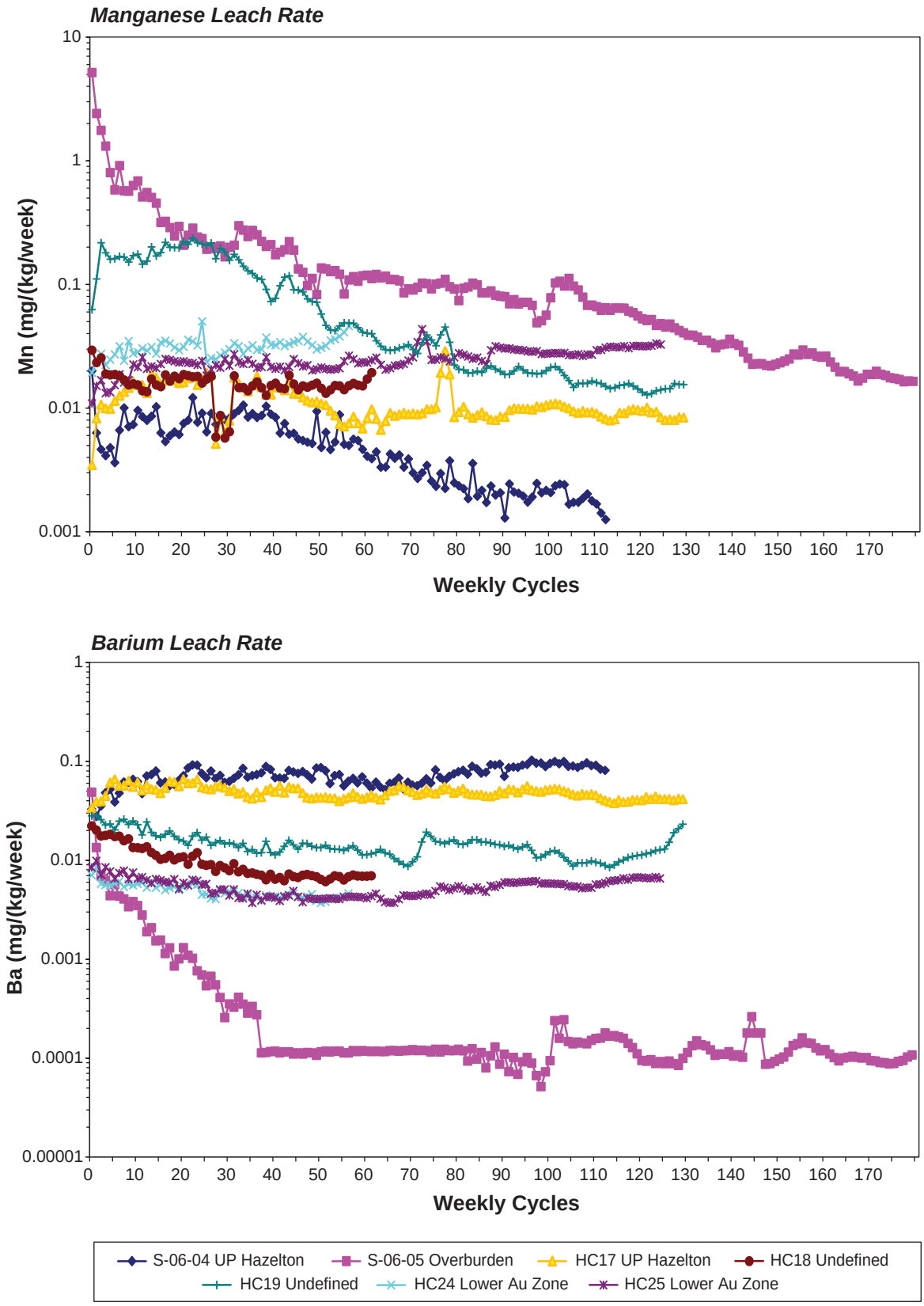


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Aluminum and Iron Leach Rates, Sulphurets Deposit Waste Rock Humidity Cells

Figure 5.2-18

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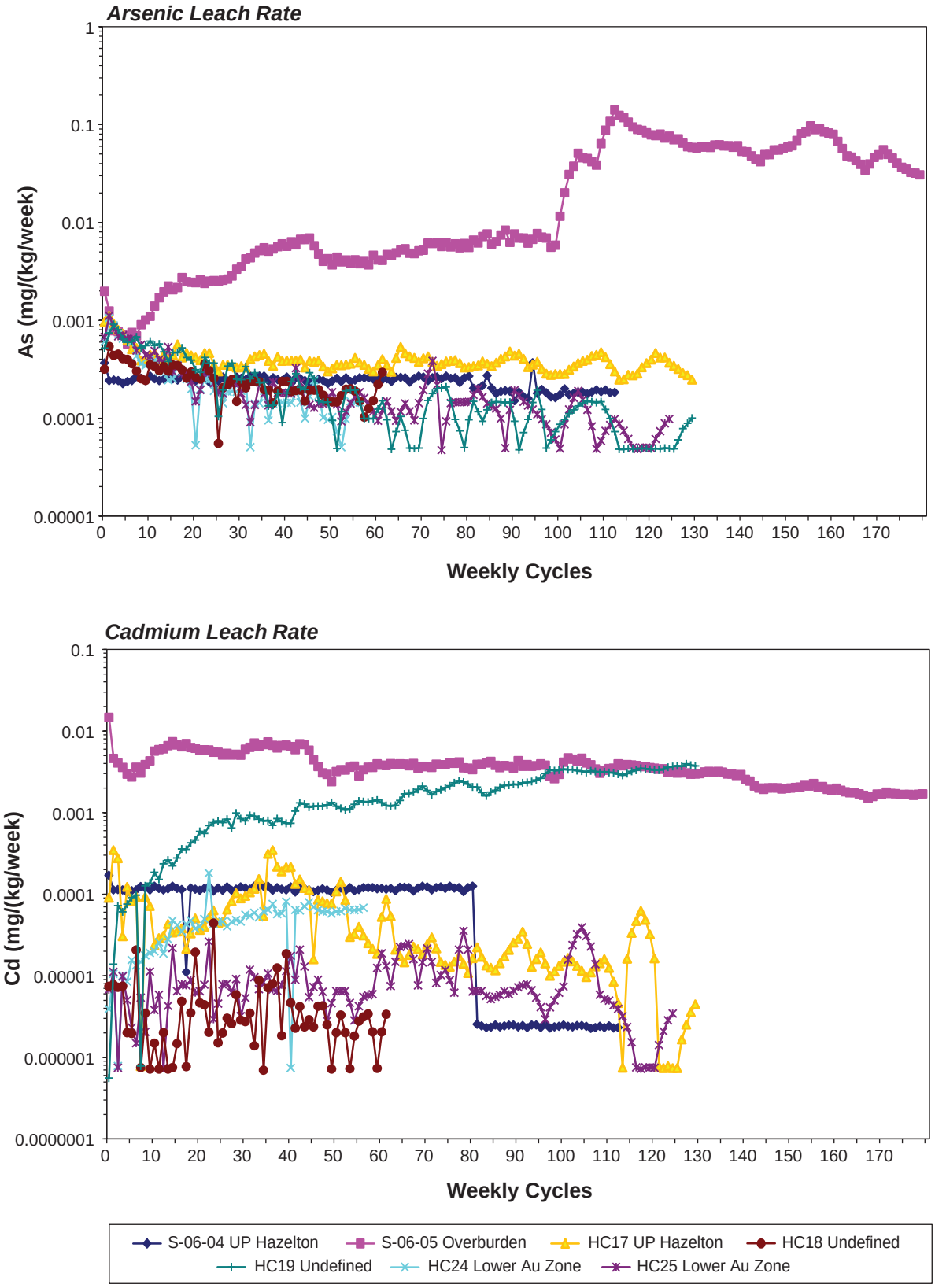


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Manganese and Barium Leach Rates, Sulphurets Deposit Waste Rock Humidity Cells

Figure 5.2-19

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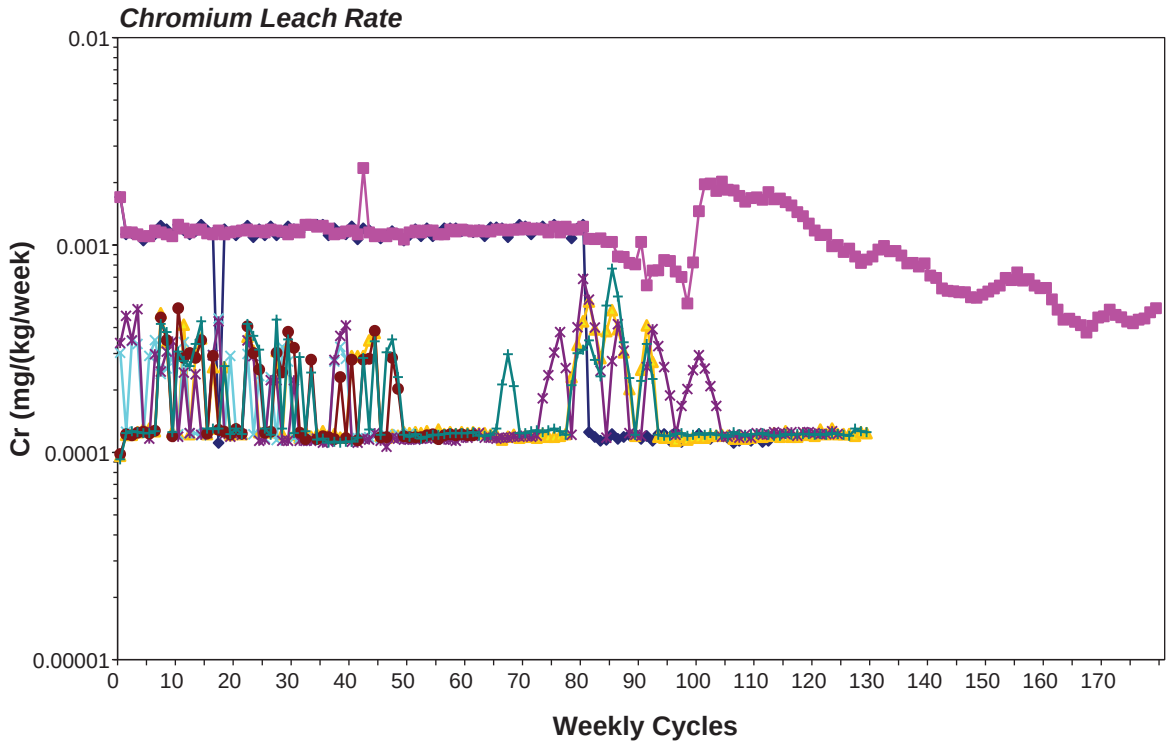


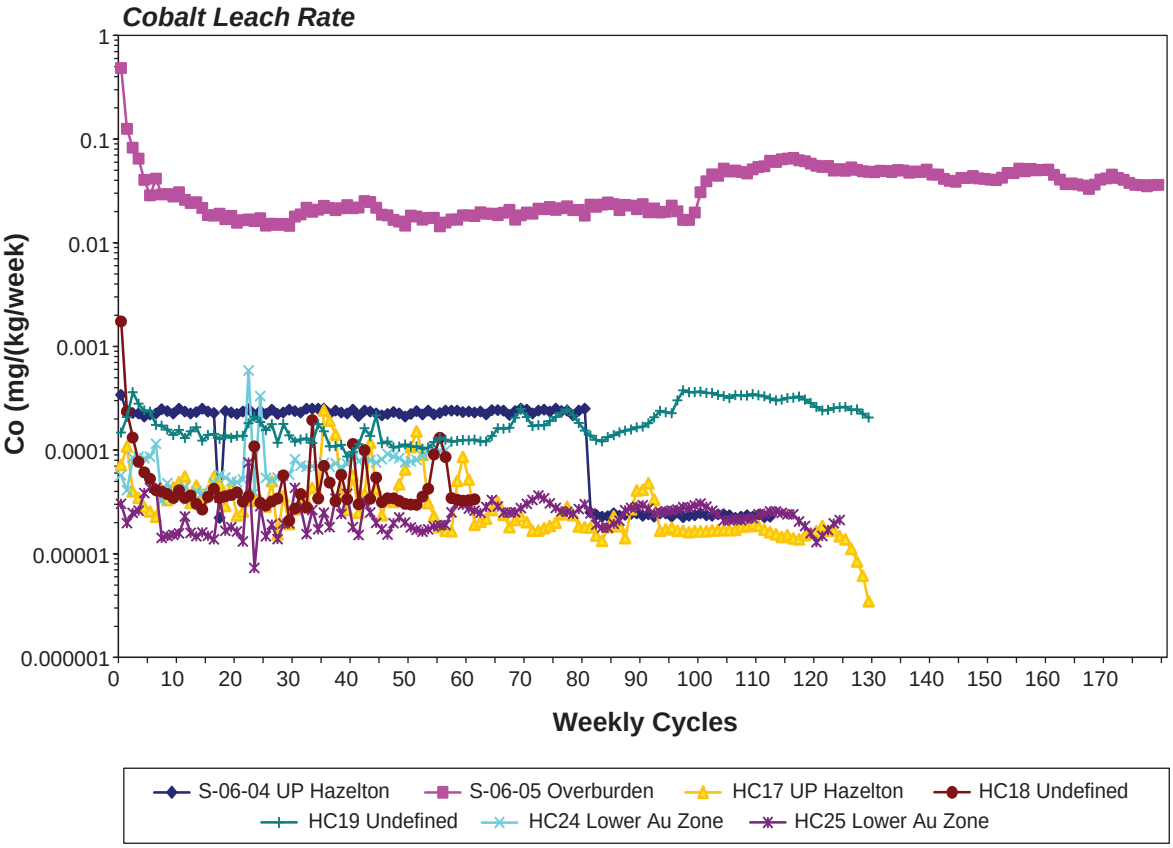
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Arsenic and Cadmium Leach Rates, Sulphurets Deposit Waste Rock Humidity Cells

Figure 5.2-20

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Chromium and Cobalt Leach Rates, Sulphurets Deposit Waste Rock Humidity Cells

Figure 5.2-21

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Cobalt and copper leach rates were generally stable over time in the acidic Overburden humidity cell following an initial brief decrease during the first flush. Leach rates increased slightly when the leachate pH decreased below 3.0. Cobalt and copper concentrations in the near-neutral humidity cells were highly variable and frequently below the detection limit (Figures 5.2-21, 5.2-22).

Fluoride concentrations decreased to below the detection limit in all near-neutral humidity cells except HC25 Lower Au zone. Fluoride leach rates decreased in the acidic Overburden humidity cell for the first six weeks, gradually increased until week 100, and were variable for the following 79 weeks. Increased leach rates after week 100 likely reflect decreased pH in the Overburden leachate. The highest fluoride leach rates (0.25 mg/kg/wk) were observed in HC25 Lower Au zone and were stable over time (Figure 5.2-22).

Lead leach rates were generally low and variable or below the detection limit in all humidity cells except HC19 Undefined which had stable leach rates over time at 0.01 mg/kg/wk(Figure 5.2-23).

Selenium leach rates decreased over time for all near-neutral humidity cells. Selenium leach rates for HC19 Undefined (0.0008 mg/kg/wk) and the acidic Overburden (0.002 mg/kg/wk) humidity cells were elevated relative to the other humidity cells (Figure 5.2-23).

Molybdenum leach rates were elevated in HC 17 UP Hazelton over all Sulphurets humidity cells at 0.09 mg/kg/wk. Molybdenum leach rates in the other humidity cells were orders of magnitude lower and frequently below detection (Figure 5.2-24).

Nickel leach rates were elevated in the acidic S-06-05 Overburden over all Sulphurets humidity cells at 0.02 mg/kg/wk. Nickel leach rates in the other humidity cells were orders of magnitude lower and frequently below detection (Figure 5.2-24).

Zinc leach rates gradually decreased over time in the acidic Overburden humidity cell to 0.5 mg/kg/wk. The leach rates in the near-neutral humidity cells were typically four orders of magnitude lower, and concentrations in HC25 Lower Au zone and HC17 UP Hazelton were frequently below detection. Zinc leach rates increased over time in HC19 Undefined to 0.09 mg/kg/wk (Figure 5.2-25).

Table 5.2-3 summarizes the parameters with elevated concentrations by model code under acidic and neutral drainage conditions in order to inform treatment design.

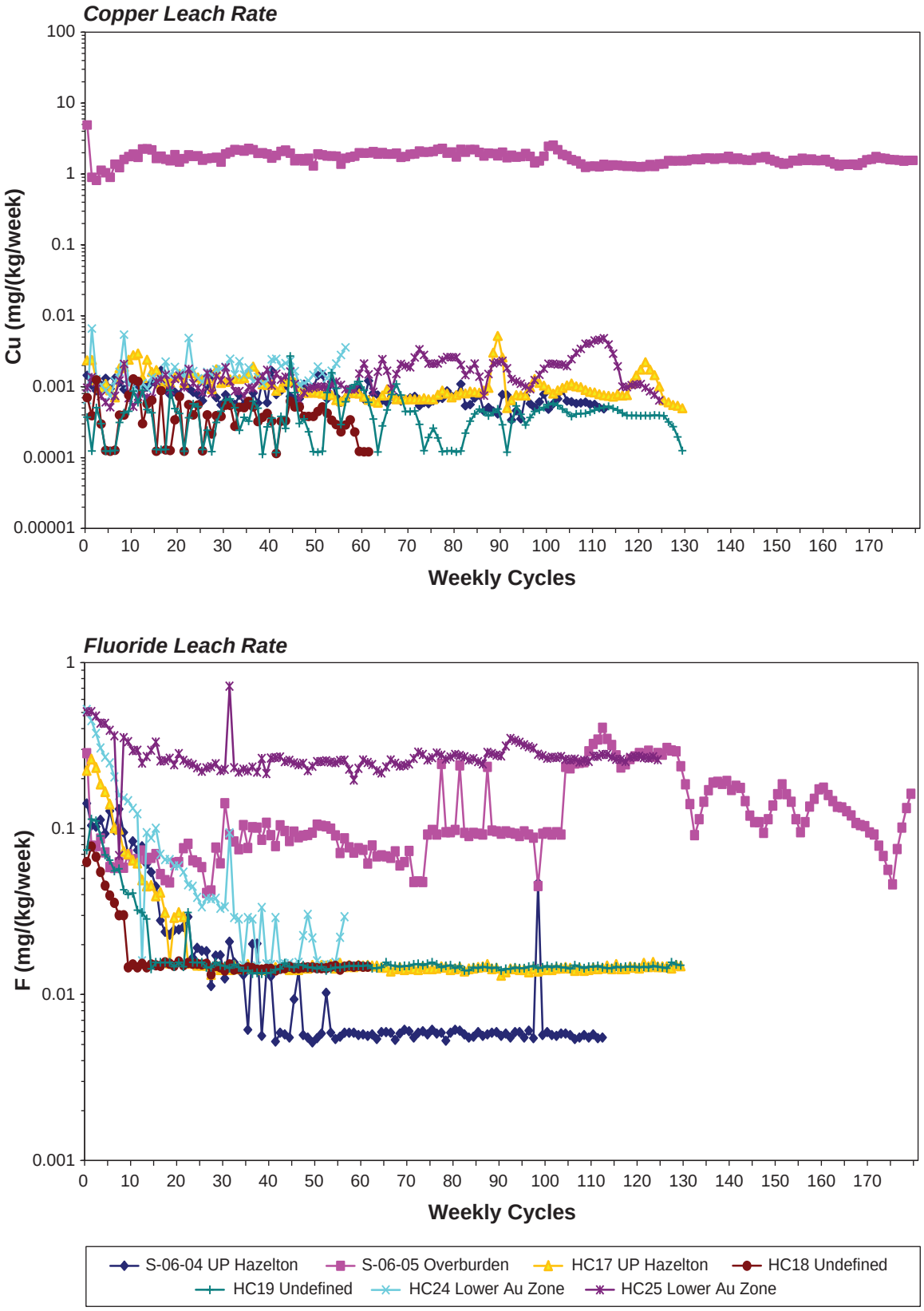
Table 5.2-3. Sulphurets Deposit Acidic and Neutral Leachate from Humidity Cells

Model Code	Acidic Drainage	Neutral Drainage
Overburden	Sulphate, Aluminum, Arsenic, Cadmium, Chromium, Cobalt, Copper, Fluoride, Iron, Nickel, Selenium, Zinc	n/a
UP Hazelton	n/a	Aluminum, Cadmium, Copper, Molybdenum
Lower Au Zone	n/a	Cadmium, Copper, Fluoride
Undefined	n/a	Aluminum, Cadmium, Lead, Selenium, Zinc

n/a indicates that no humidity cell was observed.

Elements Associated with the Neutralization Potential

Calcium and magnesium leach rates have been decreasing over time indicating that neutralization potential is likely being consumed. Increased calcium and magnesium leach rates at week 98 corresponded to the pH decrease below 3.0 in the acidic Overburden humidity cell (Figure 5.2-26).

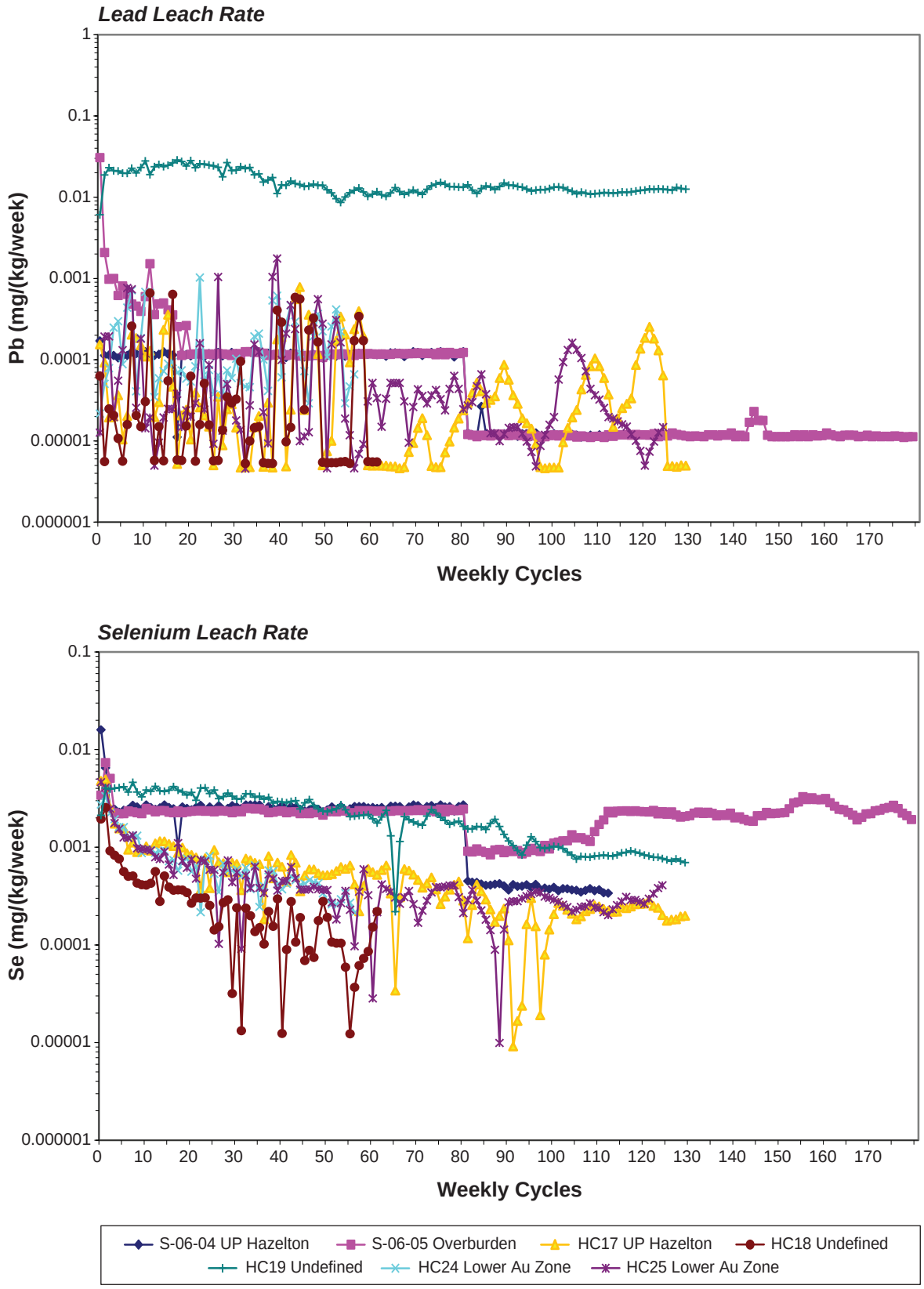


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Copper and Fluoride Leach Rates, Sulphurets Deposit Waste Rock Humidity Cells

Figure 5.2-22

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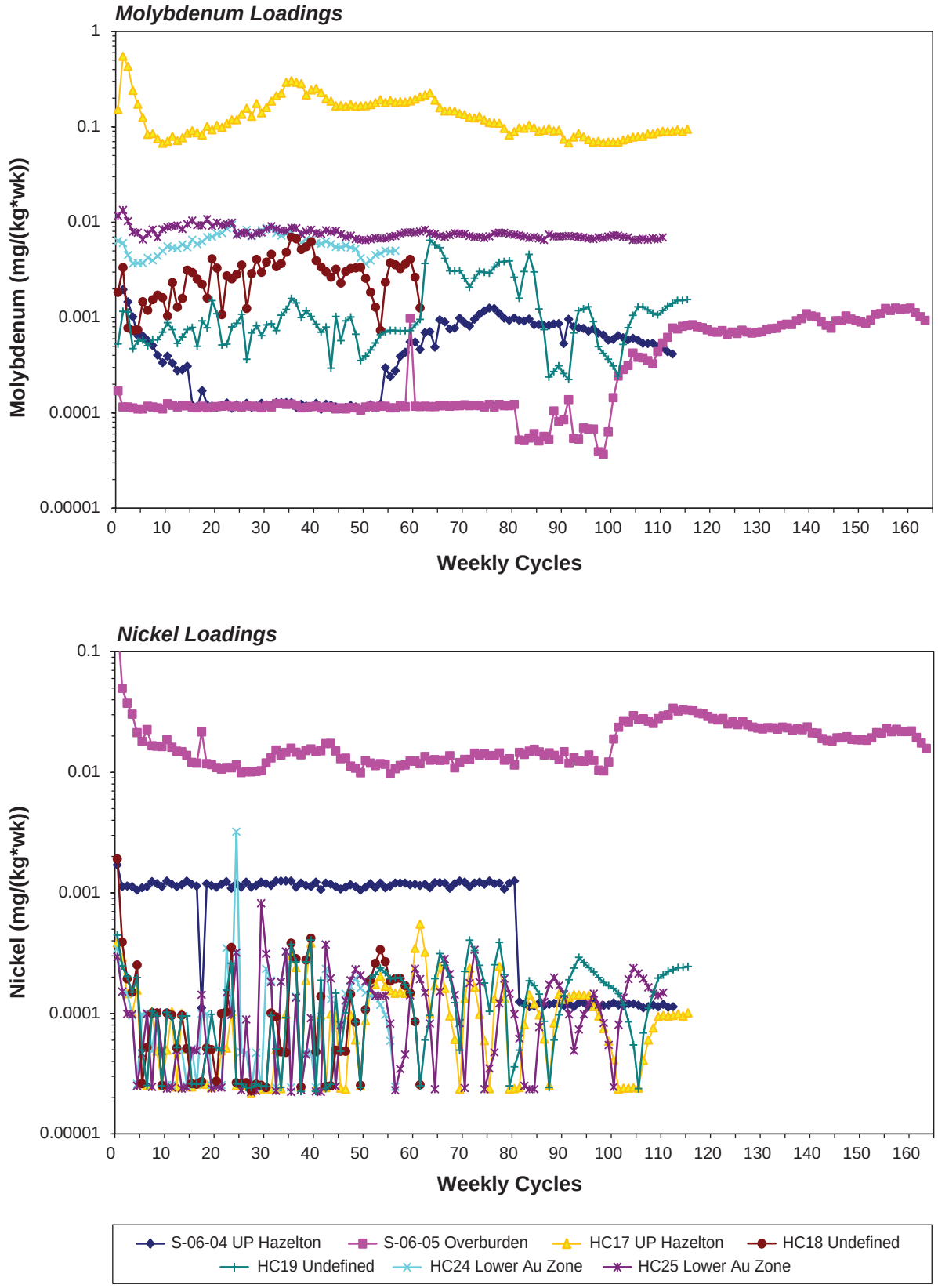


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Lead and Selenium Leach Rates, Sulphurets Deposit Waste Rock Humidity Cells

Figure 5.2-23

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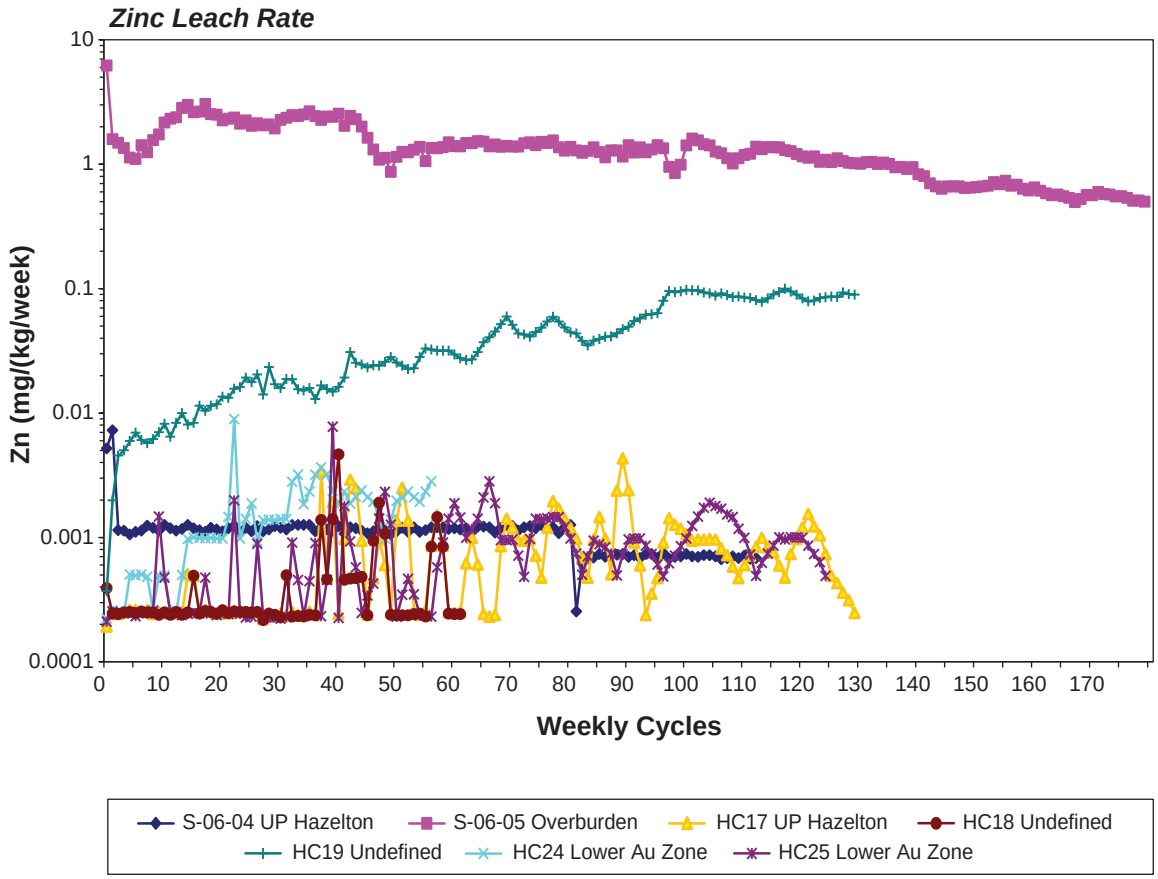


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Molydenum and Nickel Leach Rates,
Sulphurets Deposit Waste Rock Humidity Cells

Figure 5.2-24

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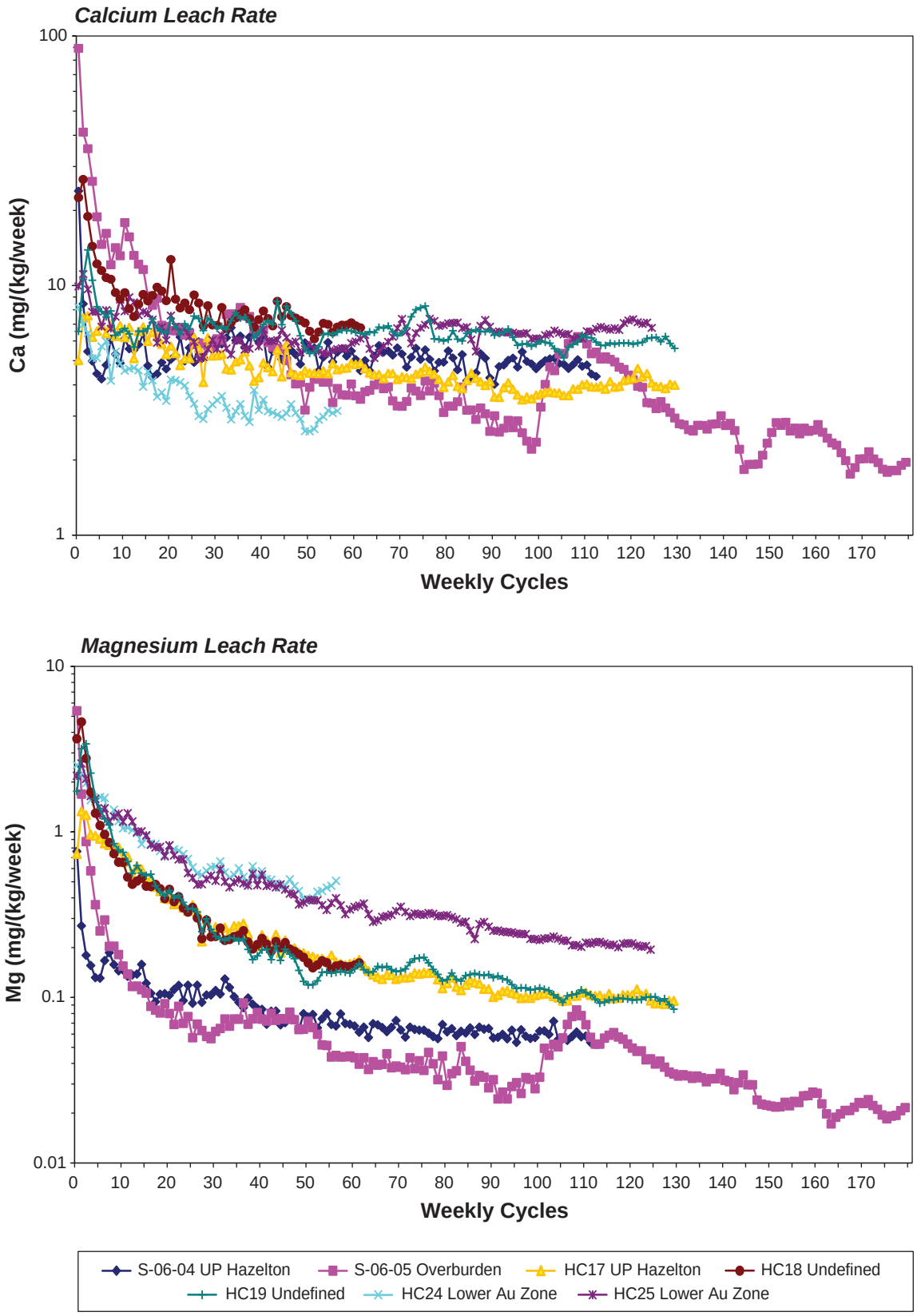


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Zinc Leach Rates, Sulphurets Deposit
Waste Rock Humidity Cells

Figure 5.2-25

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Calcium and Magnesium Leach Rates, Sulphurets Deposit Waste Rock Humidity Cells

Figure 5.2-26

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Mitchell Deposit

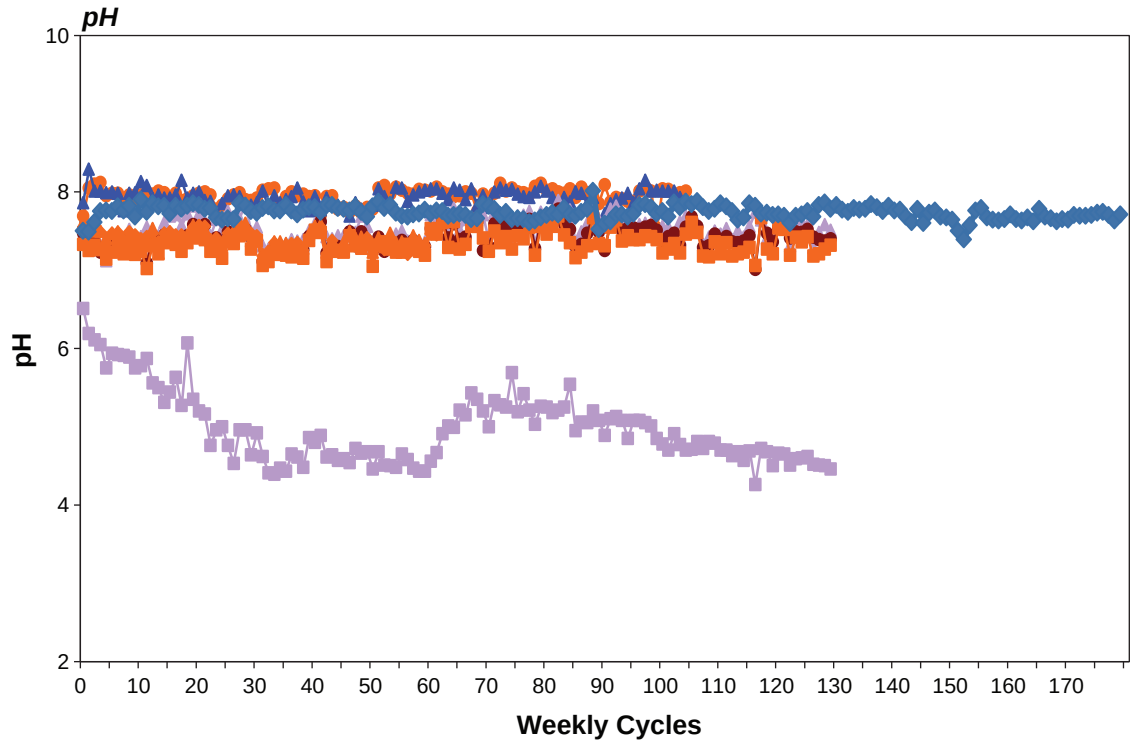
Twenty-three humidity cells were operated for the Mitchell Deposit from the upper panel (UP; above the MTF) and the lower panel (LP; below the MTF). Nine humidity cells were operated representing the upper panel and 16 humidity cells represent the lower panel. The Mitchell upper panel humidity cells were operated for between 61 and 179 weeks and represent two ABA block model codes with eight humidity cells representing UP Hazelton and one humidity cell representing Monzonite. The Mitchell lower panel humidity cells were operated for between 61 and 129 weeks and represent three model codes with 12 humidity cells representing LP Hazelton, and one humidity cell representing each of Monzonite and Leach breccia/bornite breccia. The leachate chemistry of the lower panel Mitchell Deposit humidity cells was observed to have higher element concentrations in general. The complete dataset for Mitchell Deposit humidity cell leachate concentrations is presented in Appendix 5.2-5. The leach rates for additional parameters are presented in Appendix 5.2-3.

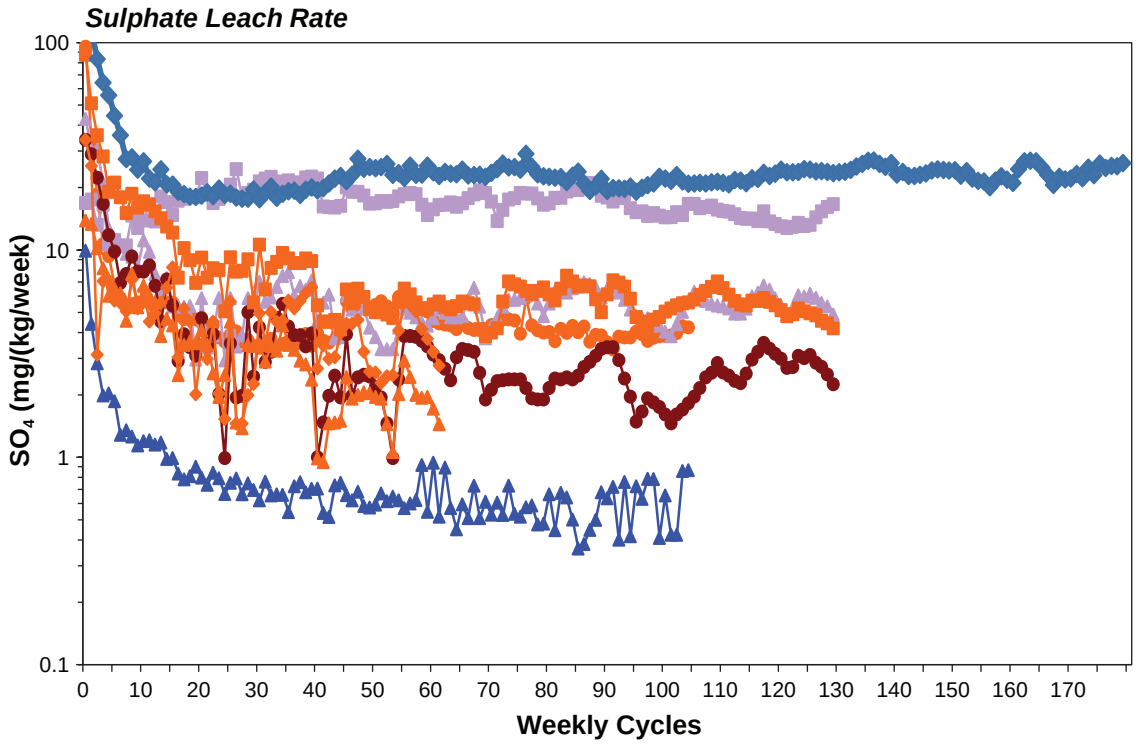
pH, Sulphate, Acidity, and Alkalinity

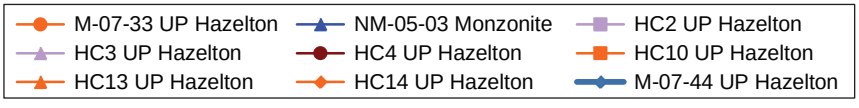
Seven of the nine upper panel humidity cells had initial near-neutral pH and remained near-neutral through 61 to 179 weekly cycles (Figure 5.2-27). HC2 UP Hazelton had an initial pH of 6.51 and decreased to pH 4.43 by week 59, and subsequently increased to maximum of pH 5.69 at week 74, and then decreased for the remaining weeks. Eleven of the 14 lower panel humidity cells had initial near-neutral pH and 10 remained near neutral through 61 to 129 weekly cycles (Figure 5.2-27). HC1 LP Hazelton had an initial pH of 6.57 and decreased to approximately pH 3 by week 15. Two other LP Hazelton humidity cells (M-06-14 and M-07-43) had initial acidic pH values and remained acidic throughout the operating weeks. HC15 Leach breccia/bornite breccia also had an acidic initial pH and had the lowest steady-state pH of less than pH 2.5.

Sulphate production rates decreased initially in all upper and lower panel humidity cells representing the flushing of surface precipitates. In the upper panel humidity cells, the acidic HC2 UP Hazelton and the near-neutral M-07-44 UP Hazelton had the highest steady-state production rates, ranging from 13-27 mg/kg/wk. The lowest sulphate production rates were two orders of magnitude lower in the NM-05-03 Monzonite humidity cell (Figure 5.2-27). In the lower panel humidity cells, sulphate production rates were ordered by model code from greatest to lowest as Leach breccia/bornite breccia > LP Hazelton > Monzonite (Figure 5.2-28). Sulphate production rates increased rapidly in HC15 Leach breccia/bornite breccia between weeks 15 and 25 by an order of magnitude. Sulphate production rates in the LP Hazelton humidity cells were stable after the initial decrease and ranged from 2.5 to 180 mg/kg/wk after 100 weeks.

Acidity and alkalinity production rates followed pH trends in upper panel humidity cells. Increased acidity production was observed in HC2 UP Hazelton as pH decreased. Stable acidity production rates were approximately an order of magnitude lower in the near-neutral upper panel humidity cells (Figure 5.2-29). Alkalinity production in HC2 UP Hazelton decreased to below the detection limit at week 29, but then increased when pH increased after week 60. Alkalinity production subsequently decreased in HC2 below detection after 100 weekly cycles. Acidity production rates in HC15 Leach breccia/bornite breccia and M-07-43 LP Hazelton humidity cells increased concomitant with pH decreases. Acidity production in acidic lower panel humidity cells was one to three orders of magnitude greater than in near-neutral humidity cells (Figure 5.2-30). Alkalinity production was approximately an order of magnitude greater in near-neutral lower panel humidity cells than in the acidic M-07-43 and M-06-14 LP Hazelton humidity cells. Alkalinity was below the detection limit in the other acidic lower panel humidity cells (HC 15 and HC1.





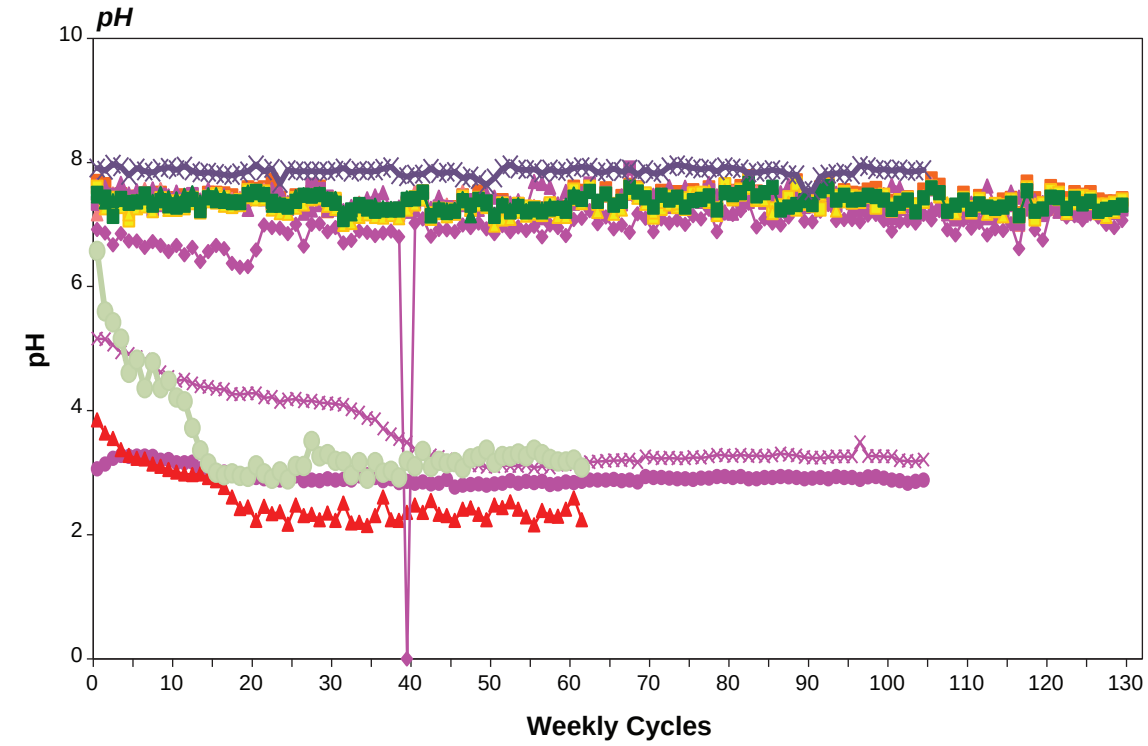


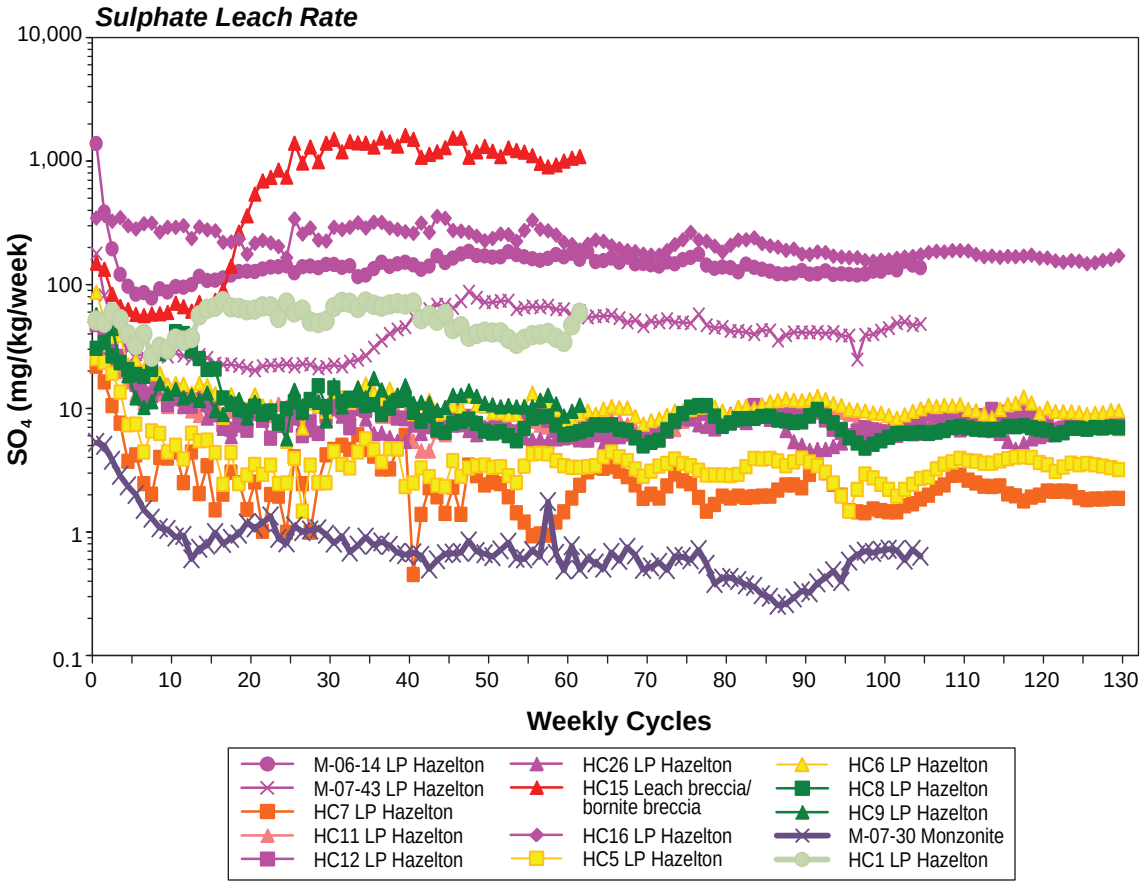
SEABRIDGE GOLD
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Weekly pH and Sulphate Production Rates, Mitchell Deposit Waste Rock Upper Panel Humidity Cells

Figure 5.2-27

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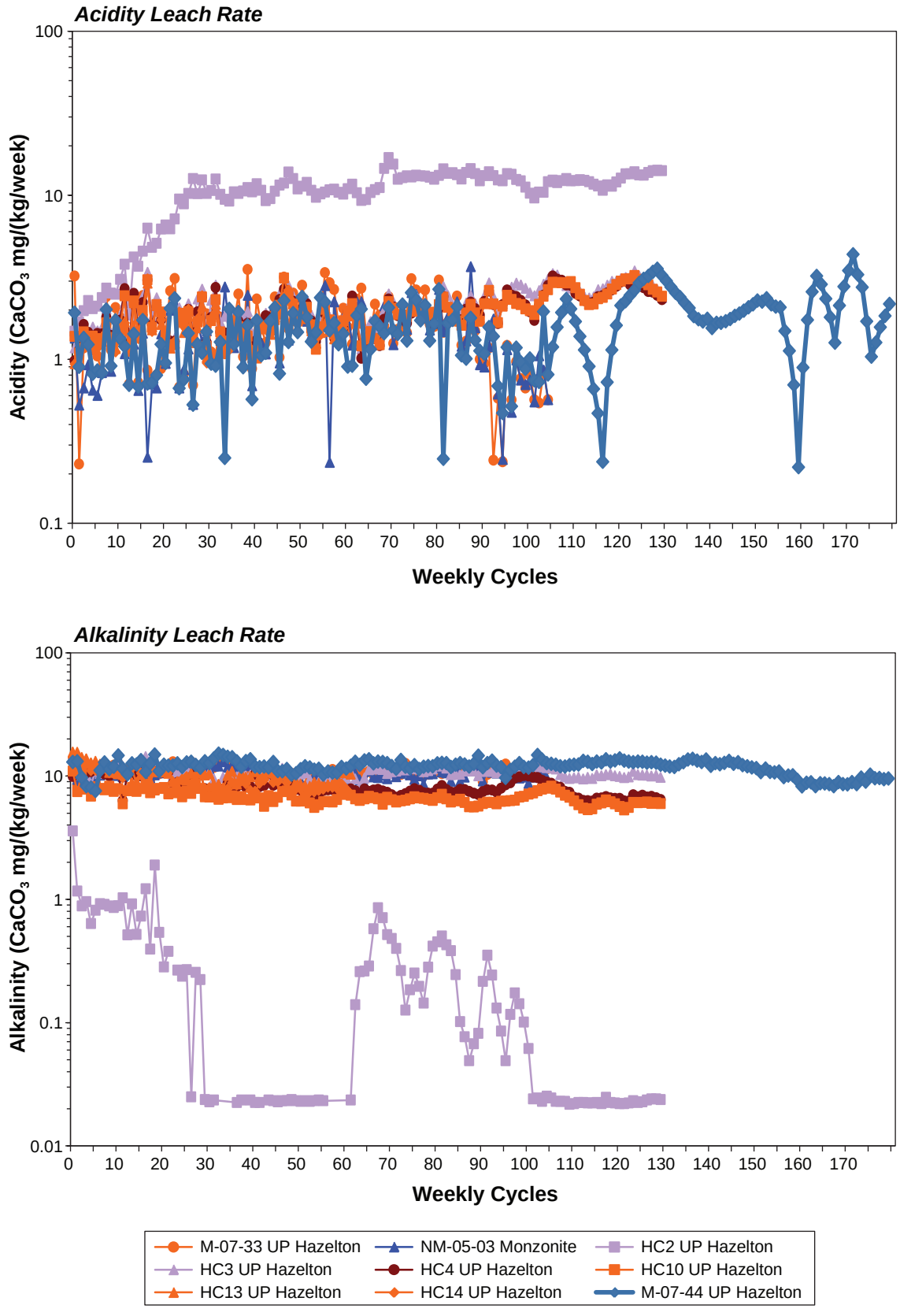


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Weekly pH and Sulphate Production Rates, Mitchell Deposit Waste Rock Lower Panel Humidity Cells

Figure 5.2-28

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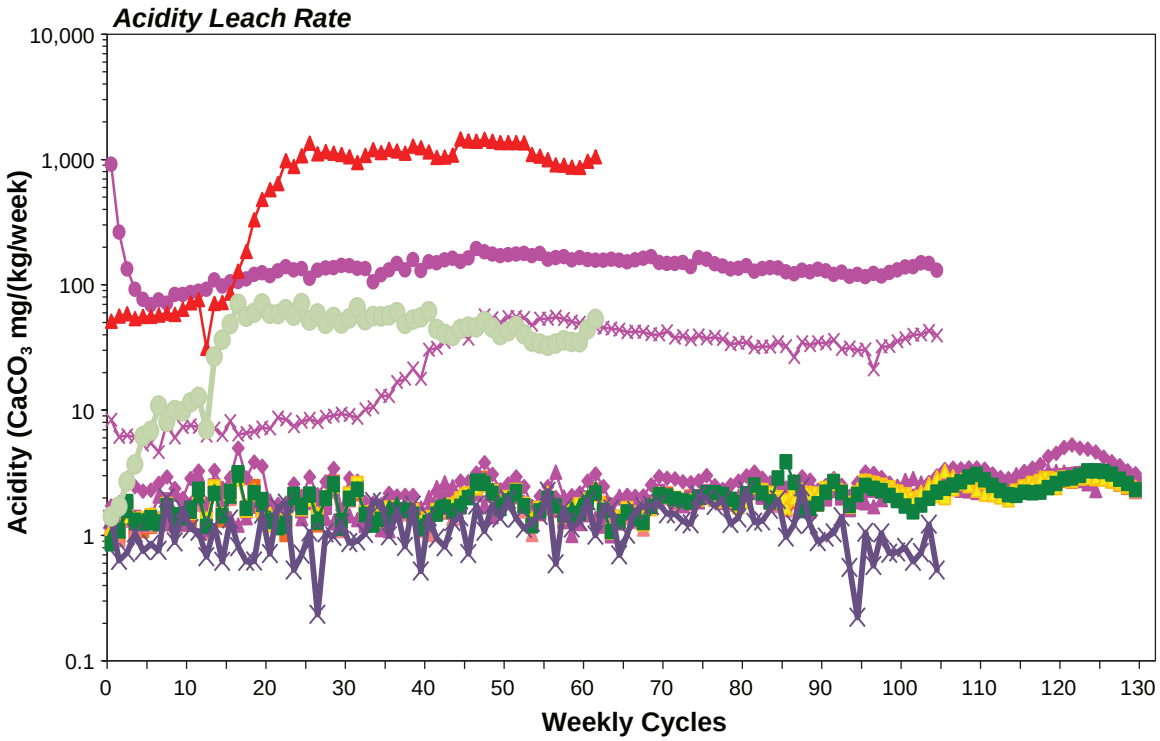


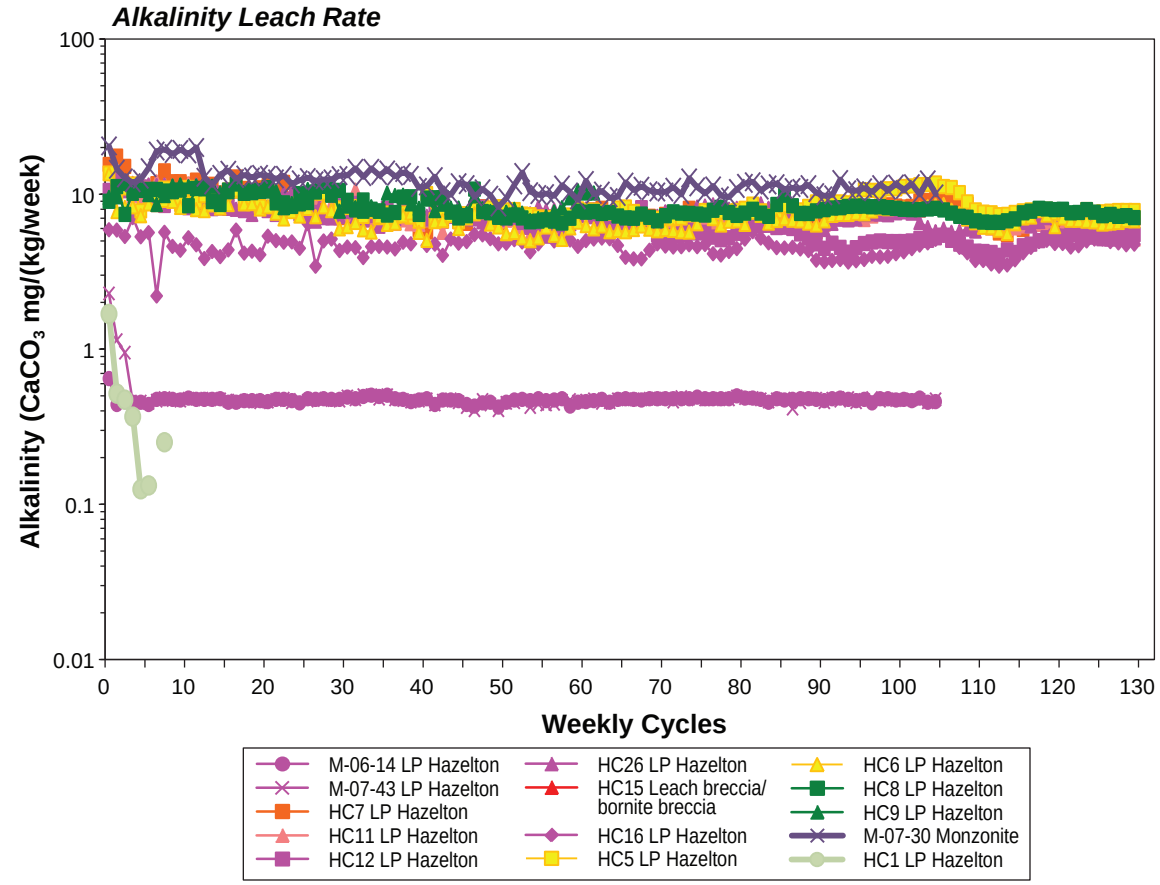
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Acidity and Alkalinity Production Rates, Mitchell Deposit Waste Rock Upper Panel Humidity Cells

Figure 5.2-29

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Acidity and Alkalinity Production Rates, Mitchell Deposit Waste Rock Lower Panel Humidity Cells

Figure 5.2-30

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Elements that Contribute to Acidity

Aluminum concentrations in upper panel humidity cells reflected leachate pH. The acidic UP Hazelton humidity cell had elevated leachate concentrations relative to other upper panel humidity cells. Near-neutral aluminum leach rates ranged from 0.008 to 0.1 mg/kg/wk. Aluminum leach rates in all lower panel humidity cells closely followed pH trends with the timing of increased rates coinciding with decreases in pH (Figures 5.2-31, 5.2-32).

Upper panel iron leach rates were highly variable and frequently below the detection limit. Iron leach rates were pH-dependent with increases in iron leach rates for HC 1 LP Hazelton, M-07-43 LP Hazelton, and HC 15 Leach breccia/bornite breccia occurring simultaneously with decreases in pH. Iron leach rates from the lower panel Monzonite humidity cell were greater than iron leach rates from other near-neutral LP Hazelton humidity cells. The near-neutral lower panel humidity cells typically had highly variable iron leach rates and concentrations occasionally below the detection limit (Figures 5.2-31, 5.2-32).

Manganese leach rates also typically reflected leachate pH, with greater concentrations in the acidic HC2 relative to other near-neutral upper panel humidity cells by one to two orders of magnitude (Figure 5.2-33). The near-neutral upper panel leach rates ranged from 0.0027 to 0.17 mg/kg/wk. HC15 Leach breccia/bornite breccia manganese leach rates were greater than LP Hazelton leach rates (Figure 5.2-34).

Barium

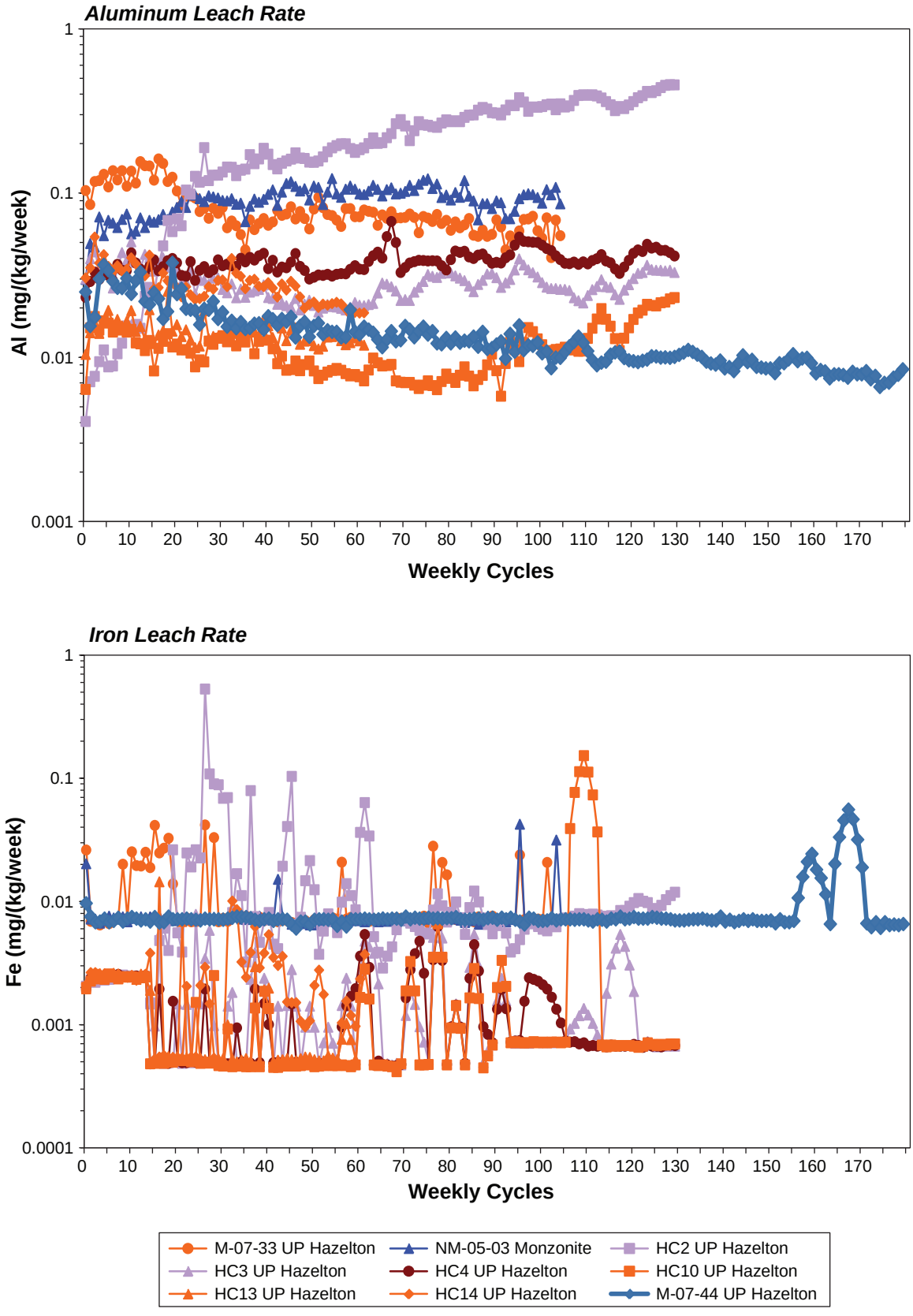
Barium leach rates were generally stable over time in all upper panel and near-neutral lower panel humidity cells. Decreasing barium leach rates in HC 14 UP Hazelton, HC15 Leach breccia/bornite breccia, and M-06-14 LP Hazelton humidity cells were observed (Figures 5.2-33, 5.2-34).

Trace Elements

Antimony leach rates in M-07-44 UP Hazelton were elevated relative to other upper panel humidity cells at approximately 0.10 mg/kg/wk and remained relatively constant throughout the 179 weekly cycles. Antimony leach rates for all other humidity cells were more than an order of magnitude less and were stable or decreasing (Figure 5.2-35), with the exception of HC2, HC4 and HC3 UP Hazelton which had variable release rates.

The arsenic leach rates in M-07-44 UP Hazelton were elevated relative to both acidic and near-neutral upper panel humidity cells, remaining stable over time at approximately 0.003 mg/kg/wk. The leach rates for HC15 Leach breccia/bornite breccia sharply increased with the decrease in pH below 3 at week 16. The steady state leach rate in HC15 Leach breccia/bornite breccia was approximately 0.06 mg/kg/wk. Leach rates in all other humidity cells were stable or decreasing and were one or more orders of magnitude lower (Figure 5.2-36).

The greatest upper panel cadmium leach rates were observed in UP Hazelton HC 2, HC 10, and M-07-44 and ranged from 0.00016 to 0.00073 mg/kg/wk. The cadmium release rates from UP Hazelton HC 3 and HC 4 sharply increased at week 104 to 0.0025 and 0.011 mg/kg/wk, respectively, at week 109, and the release rates decreased to below detection in subsequent weeks. Cadmium leach rates in the other upper panel humidity cells were highly variable and frequently below detection. The highest lower panel cadmium leach rates of 0.002 mg/kg/wk were observed in the LP Hazelton M-06-14 humidity cell. Leach rates in other acidic lower panel humidity cells were generally stable over time with increases in rates typically reflecting leachate pH falling below 3 (Figure 5.2-37).

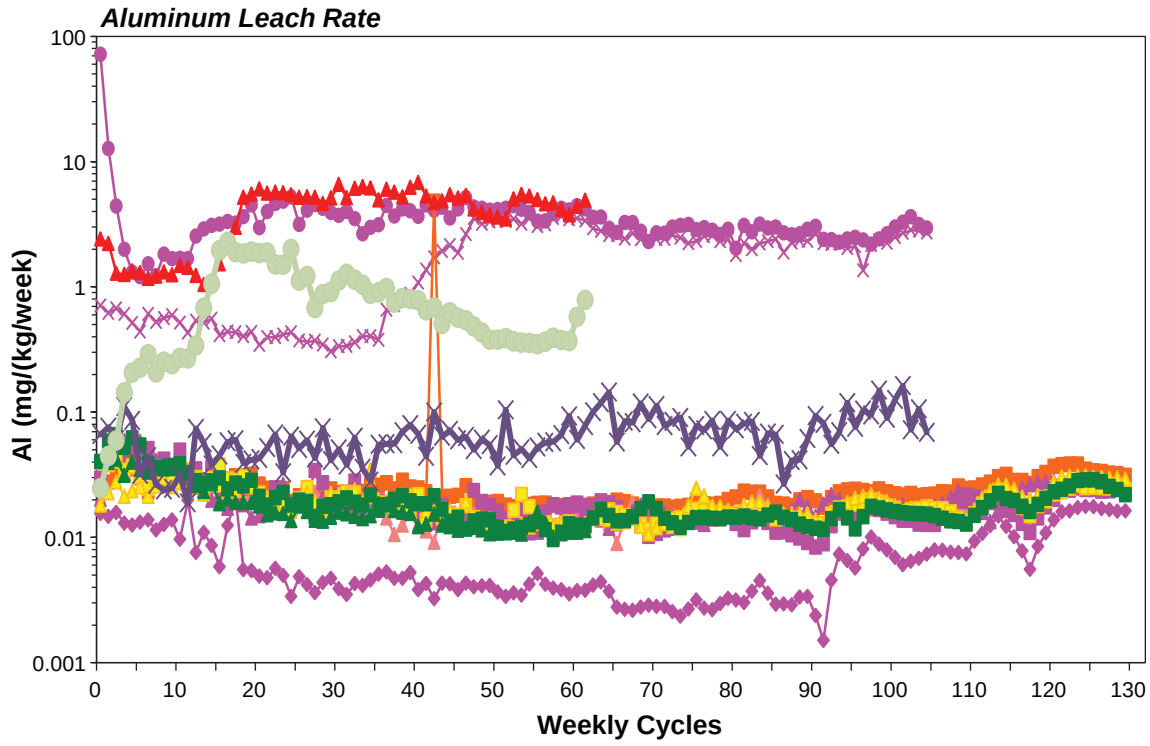


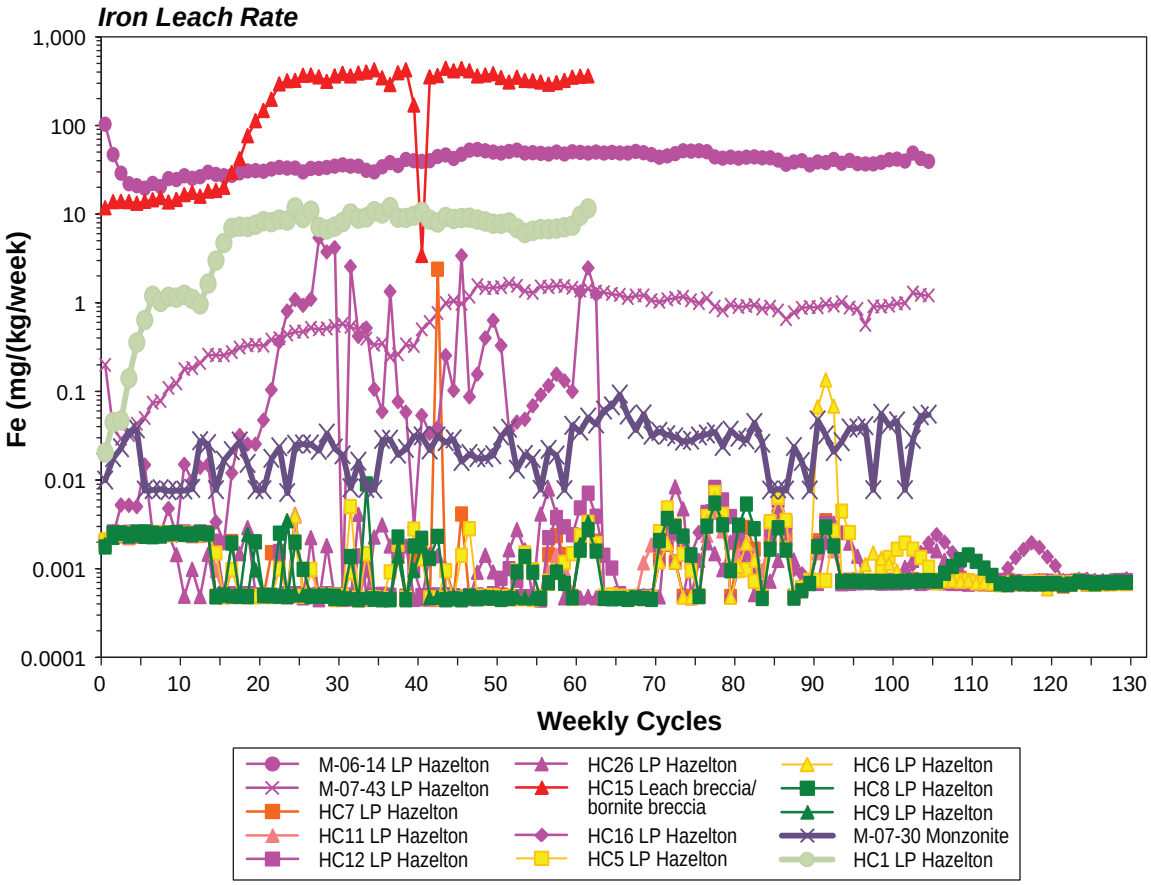
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Aluminum and Iron Leach Rates, Mitchell Deposit
Waste Rock Upper Panel Humidity Cells

Figure 5.2-31

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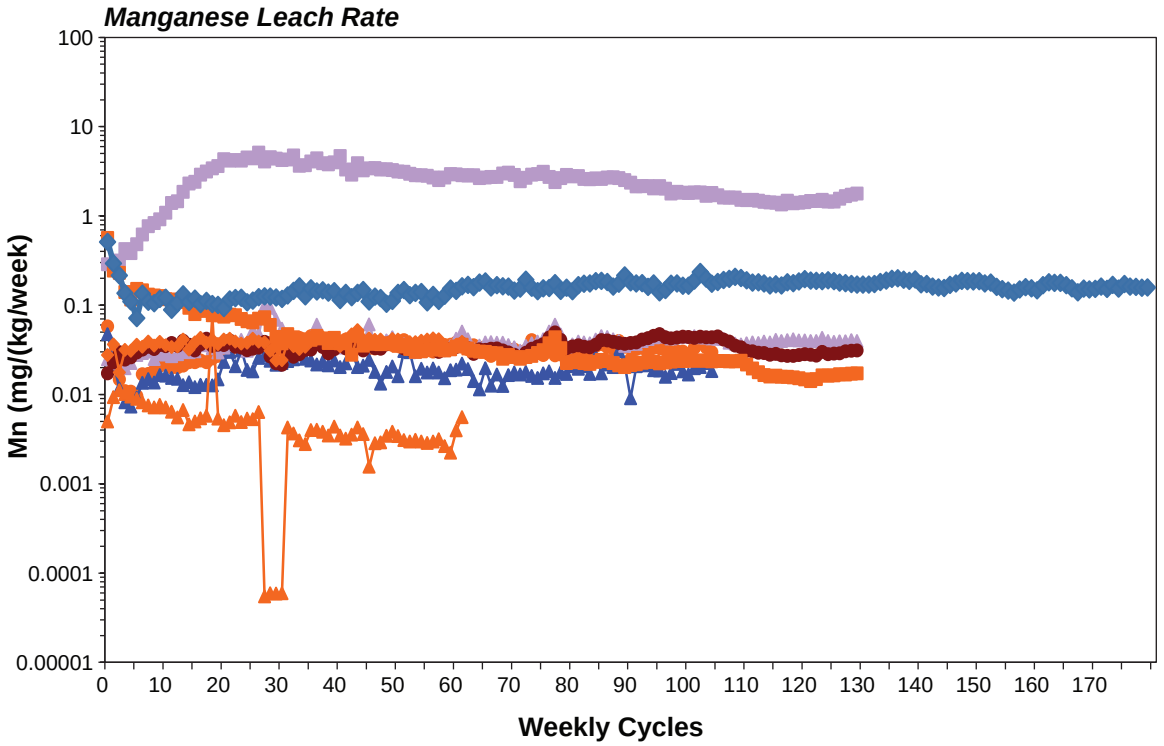


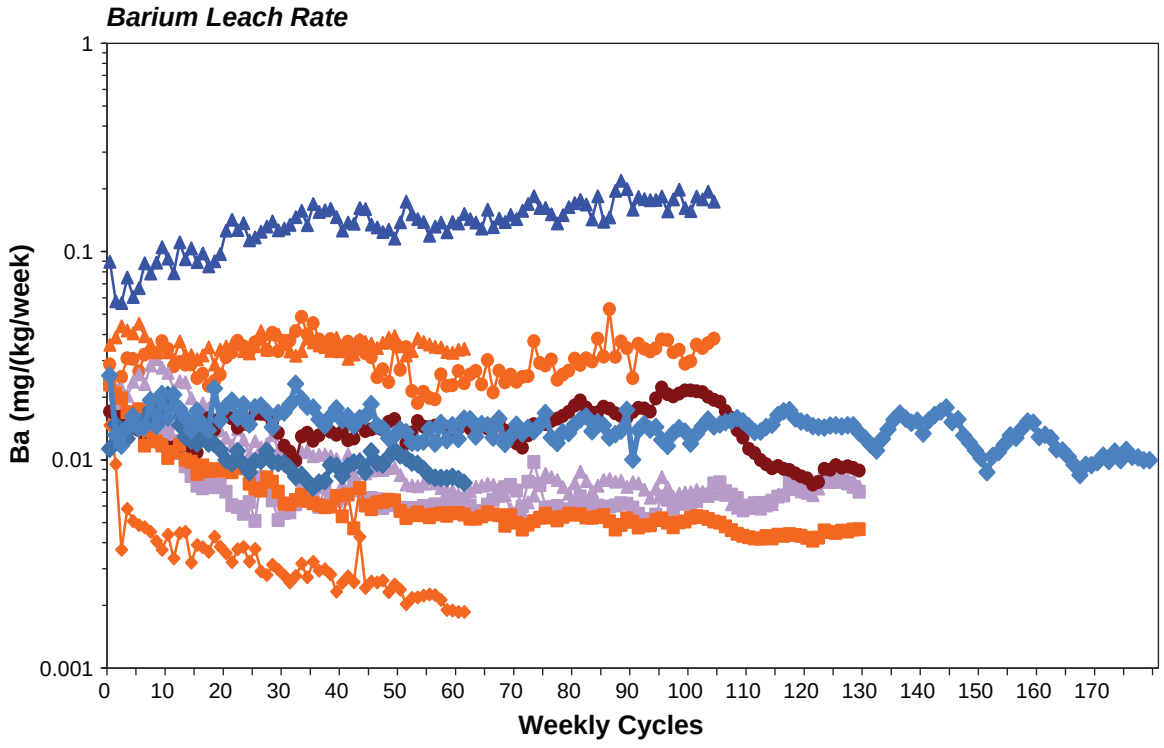
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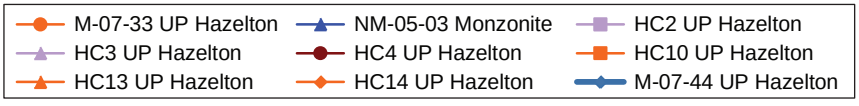
Aluminum and Iron Leach Rates, Mitchell Deposit Waste Rock Lower Panel Humidity Cells

Figure 5.2-32

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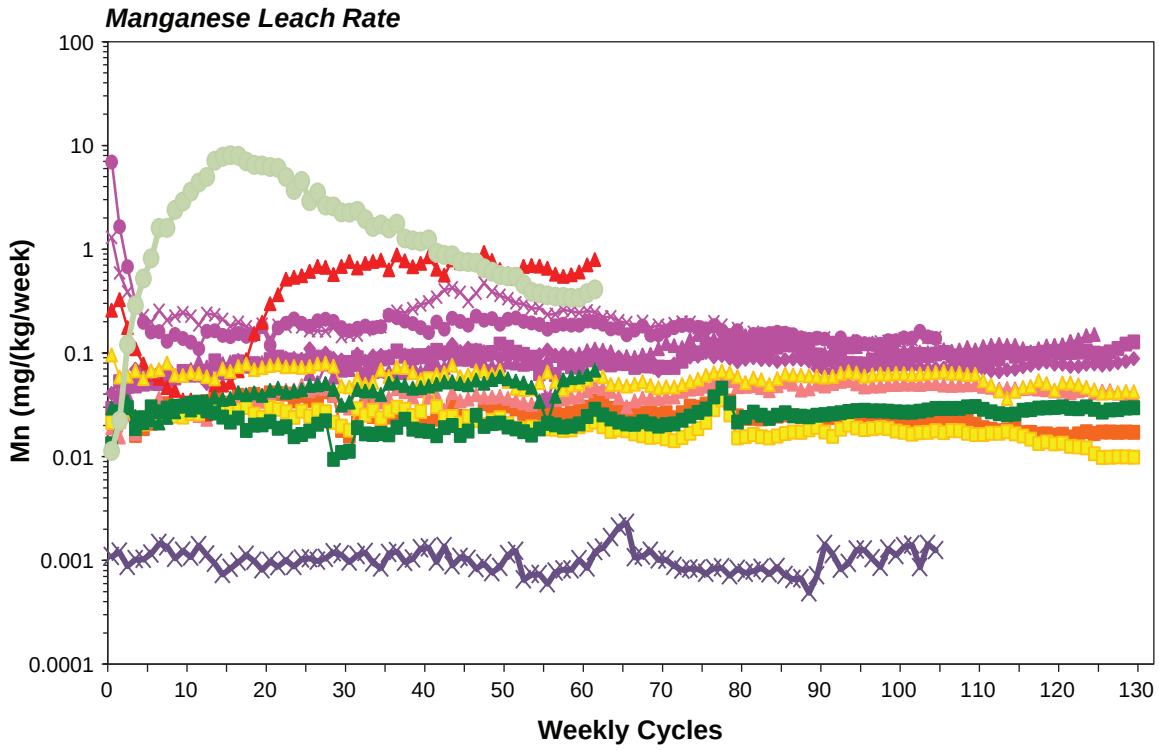


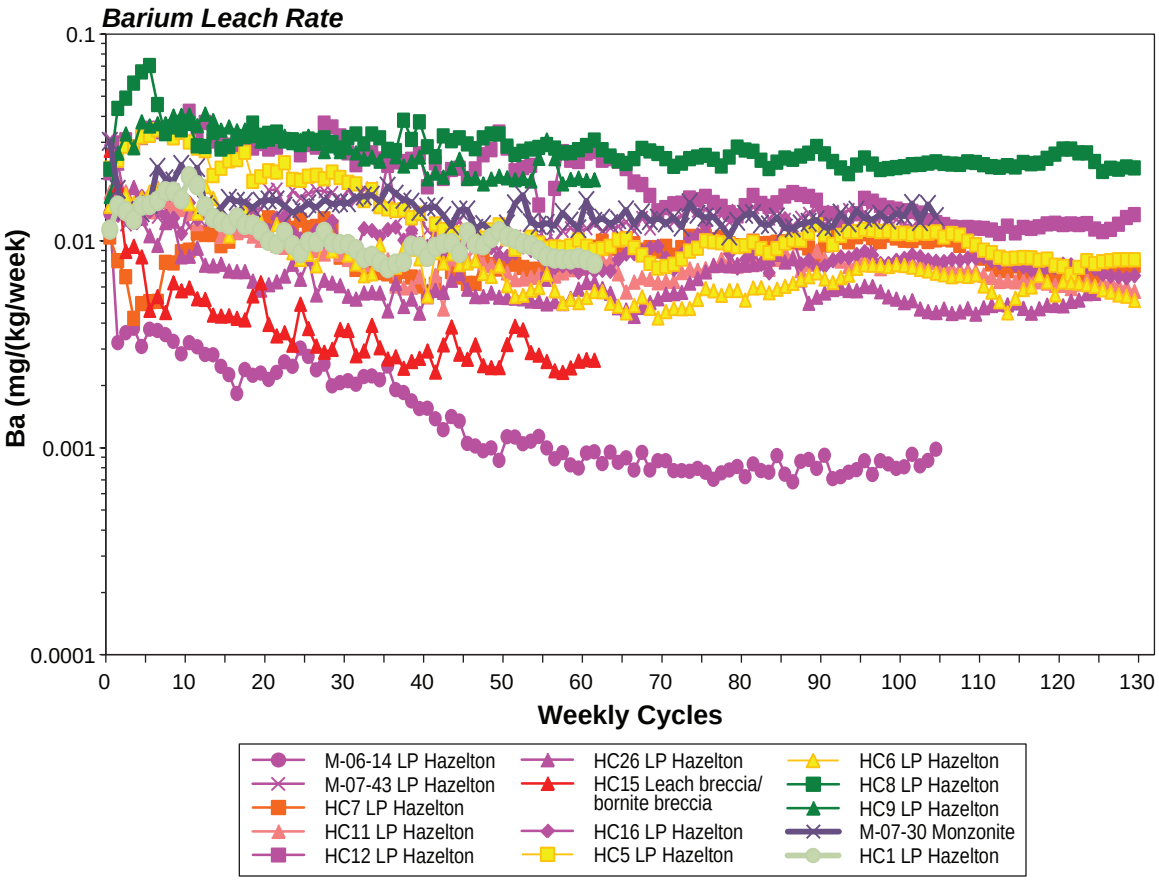
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Manganese and Barium Leach Rates, Mitchell Deposit Waste Rock Upper Panel Humidity Cells

Figure 5.2-33

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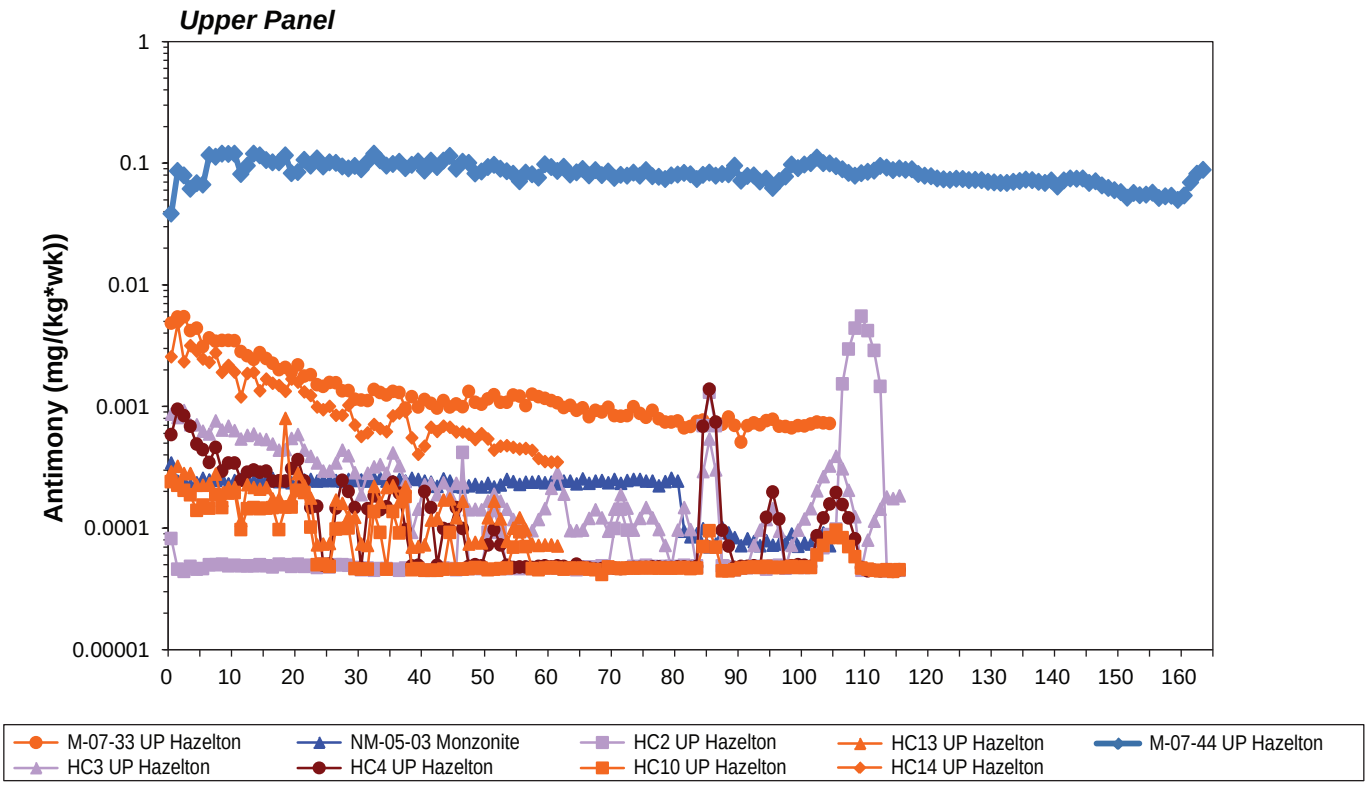


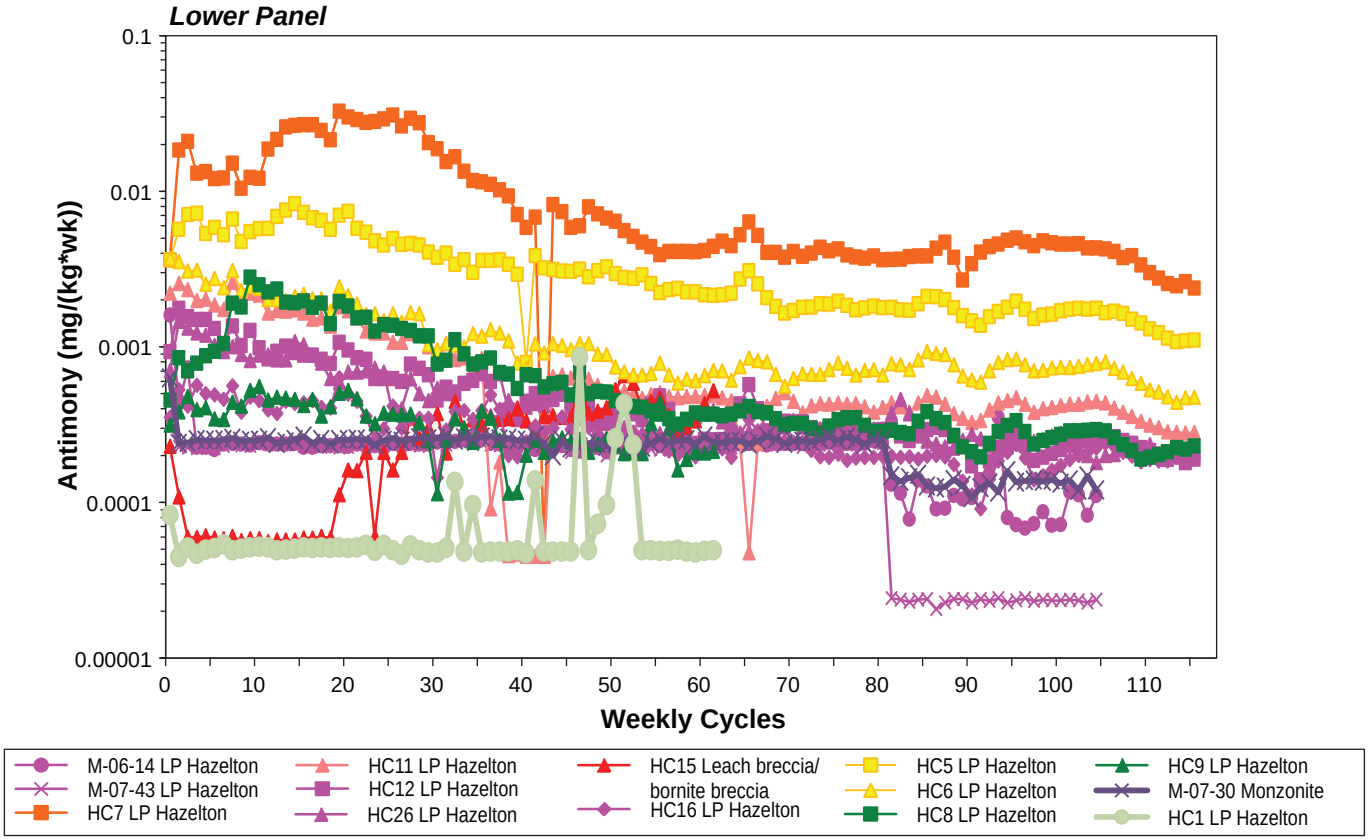
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Manganese and Barium Leach Rates, Mitchell Deposit Waste Rock Lower Panel Humidity Cells

Figure 5.2-34

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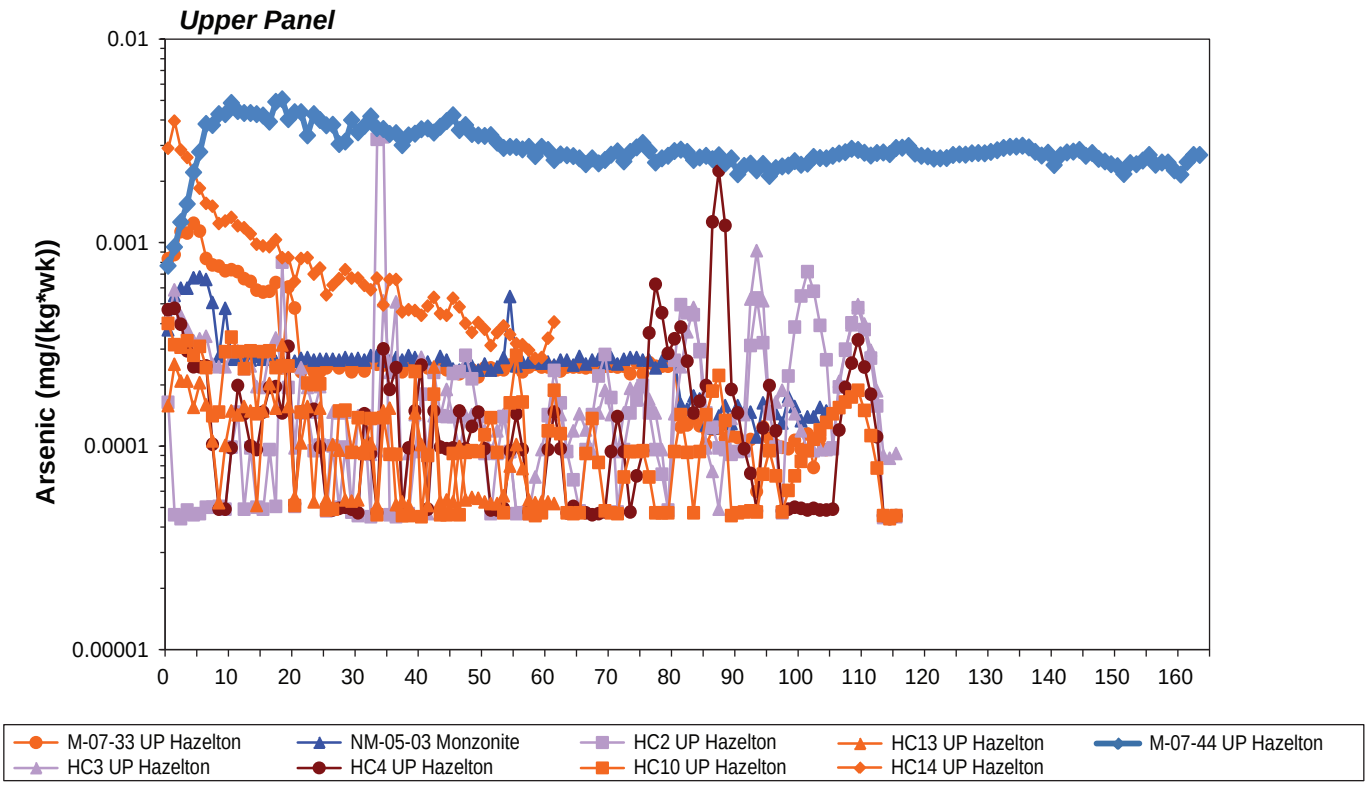


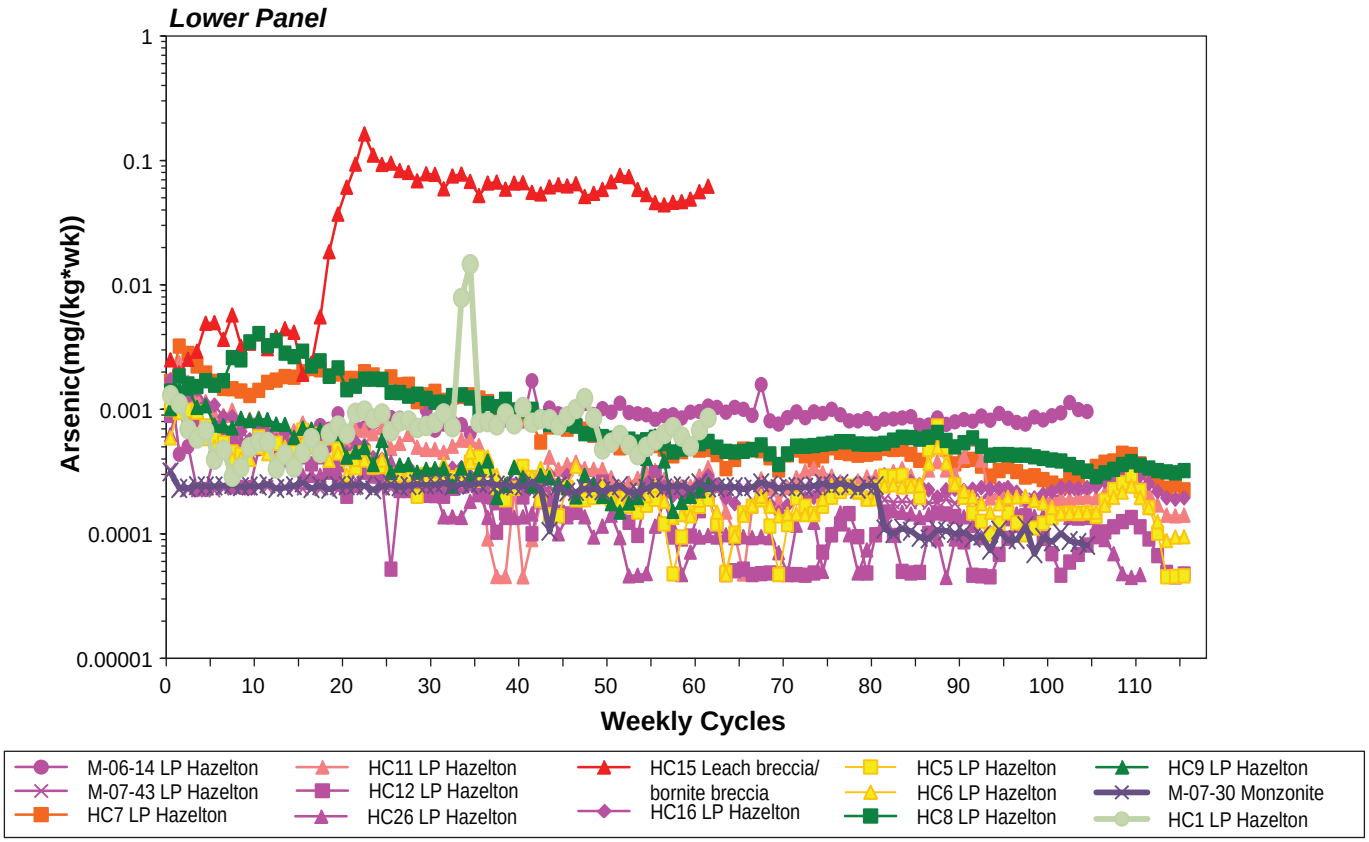
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Antimony Leach Rates, Mitchell Deposit
Waste Rock Humidity Cells

Figure 5.2-35

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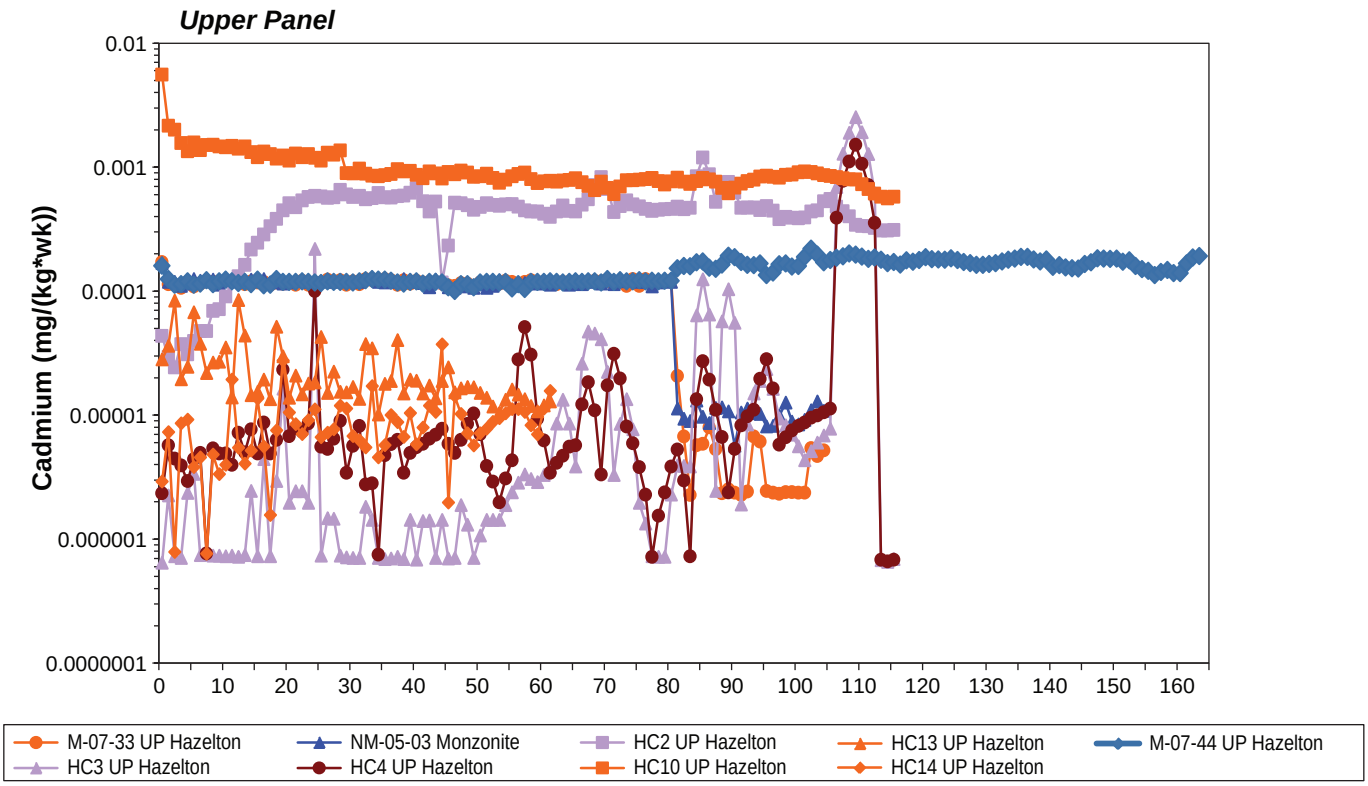


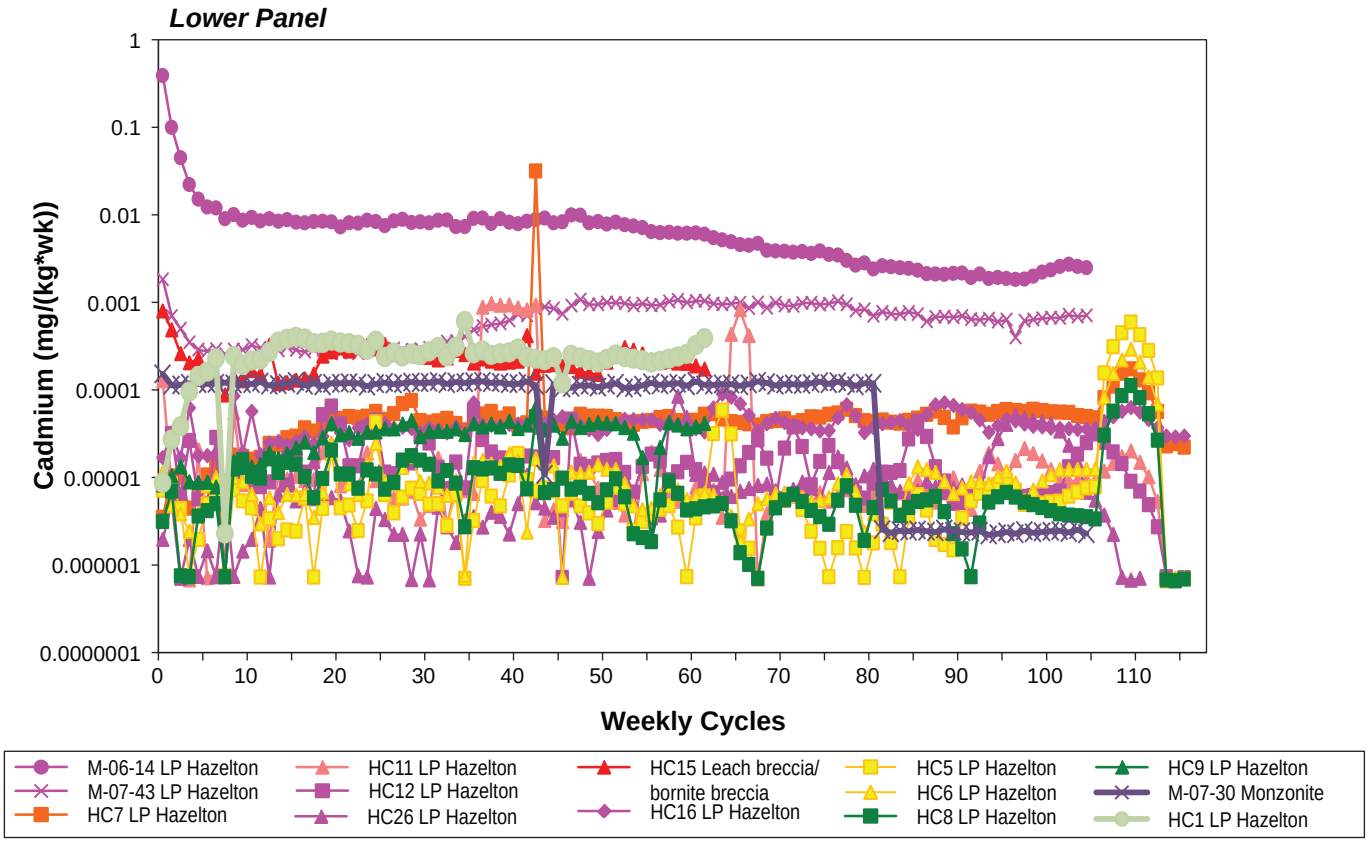
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Arsenic Leach Rates, Mitchell Deposit
Waste Rock Humidity Cells

Figure 5.2-36

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Cadmium Leach Rates, Mitchell Deposit
Waste Rock Humidity Cells

Figure 5.2-37

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Chromium concentrations in upper panel humidity cells were highly variable and frequently below detection. Chromium leach rates in HC15 Leach breccia/bornite breccia increased with the decrease in pH below 3 at week 16, but subsequently decreased for the remaining weeks. Leach rates HC 1 LP Hazelton fluctuated around 0.01 mg/kg/wk in the last 10 weeks of testing. Chromium concentrations in the other lower panel humidity cells were frequently below detection (Figure 5.2-38).

Cobalt leach rates in the acidic HC3 UP Hazelton and the near-neutral HC14 UP Hazelton were elevated with steady state rates of 0.023 and 0.006 mg/kg/wk, respectively. Cobalt leach rates increased in HC15 Leach breccia/bornite breccia increased when the pH dropped below 3 to a steady state rate of 0.05 mg/kg/wk. Other acidic lower panel humidity cells ranged from 0.0064 to 0.012 mg/kg/wk. Leach rates in the near-neutral humidity cells ranged from 0.00001 to 0.00034 mg/kg/wk (Figures 5.2-39).

Copper leach rates were elevated in the acidic HC2 UP Hazelton by greater than three orders of magnitude relative to the near-neutral upper panel humidity cells, with a steady state leach rate of 4.5 mg/kg/wk. The near- neutral upper panel humidity cells steady state leach rates ranged from 0.01 to 0.002 mg/kg/wk, although a high degree of variability was observed in HC3 UP Hazelton. Copper concentrations in M-07-33 UP Hazelton humidity cell were frequently below detection. Steady state leach rates in the three acidic LP Hazelton humidity cells ranged from 0.5 to 2 mg/kg/wk. Copper concentrations increased to week 16 in HC15 Leach breccia/bornite breccia and then decreased to a steady state leach rate of 0.09 mg/kg/wk. The near-neutral lower panel copper leach rates ranged from 0.0002 to 0.004 mg/kg/wk (Figures 5.2-40).

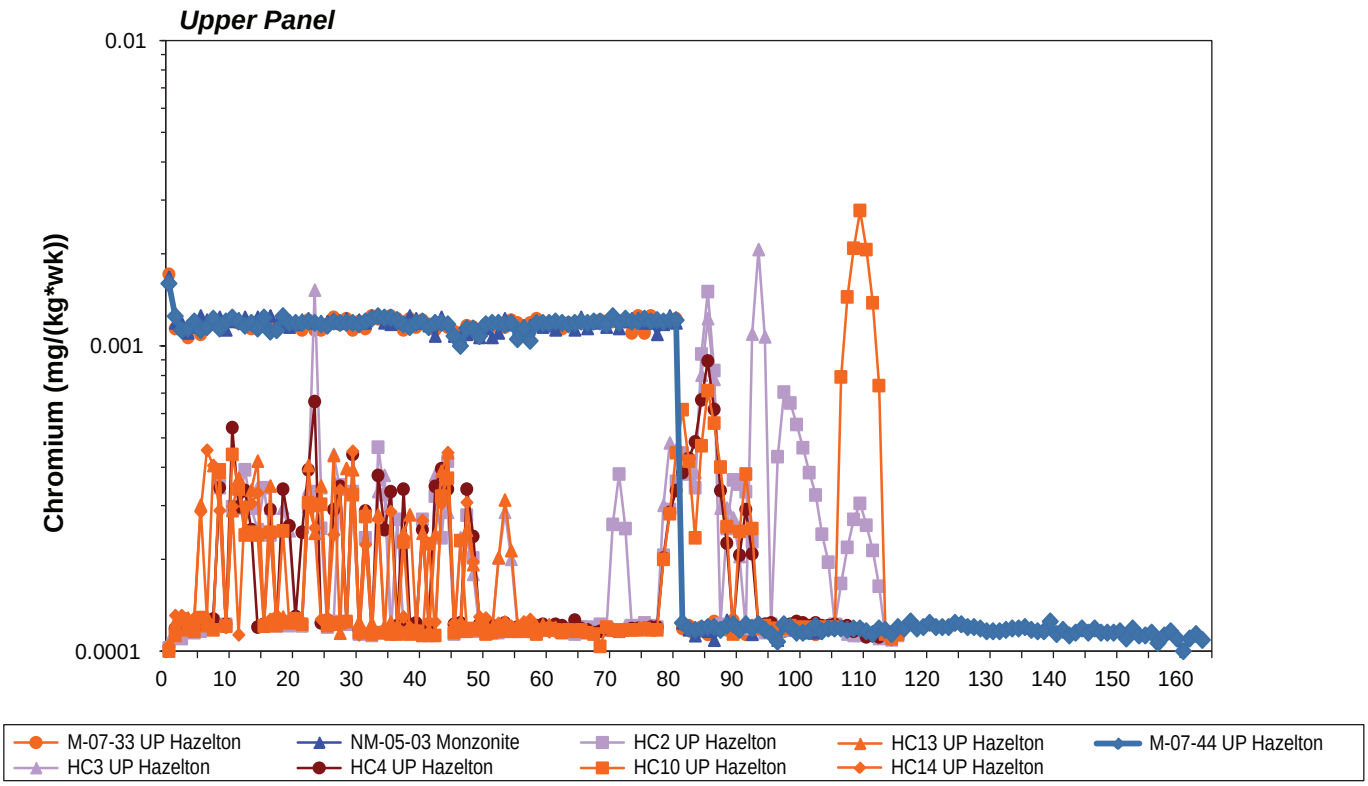
Fluoride leach rates were elevated in the acidic HC2 UP Hazelton and the near-neutral HC 4 and HC 10 UP Hazelton, and in the LP Hazelton (M-06-14, M-07-43, and HC 7) and HC 15 Leach breccia/bornite breccia humidity cells. Fluoride leach rates in the other near-neutral upper panel and lower panel humidity cells decreased over time until concentrations were below the detection limit. Acidic humidity cells from both the upper and lower panel had similar steady-state fluoride leach rates between 0.2 to 0.4 mg/kg/wk (Figures 5.2-41).

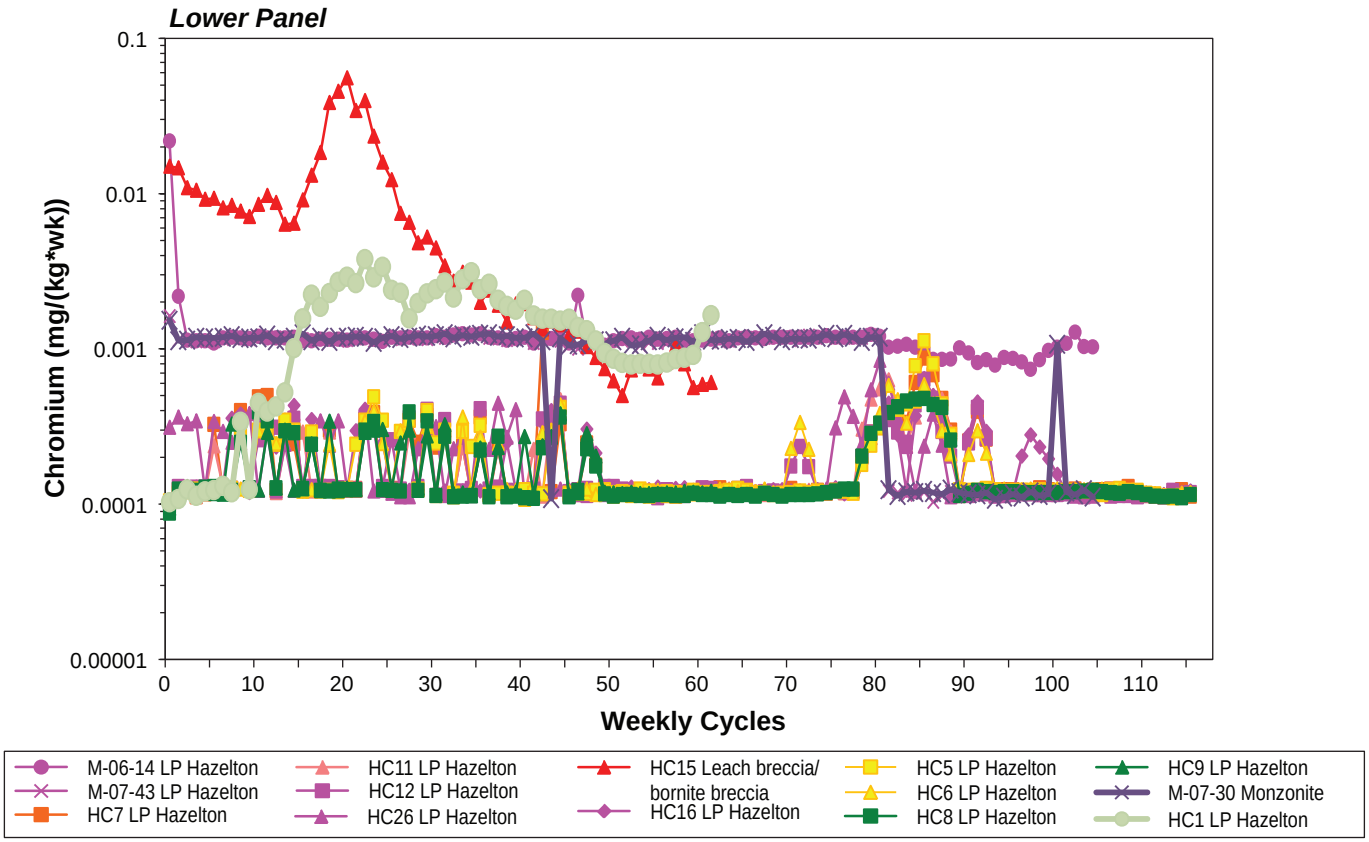
Lead leach rates were highly variable in the acidic HC2 UP Hazelton and were stable from week 4 in HC10 UP Hazelton at 0.01 mg/kg/wk. Highly variable leach rates with concentrations frequently below detection were observed in the other near-neutral upper panel humidity cells. Leach rates in the two acidic LP Hazelton humidity cells decreased for the last 30 to 50 weeks to between 0.01 to 0.07 mg/kg/wk. The steady state leach rate in HC15 Leach breccia/bornite breccia lower panel was 0.006 mg/kg/wk (Figures 5.2-42).

Selenium leach rates in the UP Hazelton humidity cells ranged from 0.00025 to 0.017 mg/kg/wk. Steady state selenium leach rates in the LP Hazelton humidity cells ranged from 0.00001 to 0.0023 mg/kg/wk. HC15 Leach breccia/bornite breccia leach rates increased at week 16 with the decrease in pH and stabilized at 0.08 mg/kg/wk (Figure 5.2-43).

Silver leach rates in the HC15 Leach breccia/bornite breccia increased over time to 0.0006 mg/kg/wk in the last 10 weeks. The leach rates in the other humidity cells were variable, orders of magnitude lower, and frequently below the detection limit (Figure 5.2-44).

Vanadium concentrations were frequently below detection in upper panel humidity cells. Vanadium concentrations were elevated in M-06-14 LP Hazelton and HC15 Leach breccia/bornite breccia with leach rates of 0.005 to 0.008 mg/kg/wk. All other lower panel humidity cells had decreasing leach rates or concentrations below detection (Figure 5.2-45).



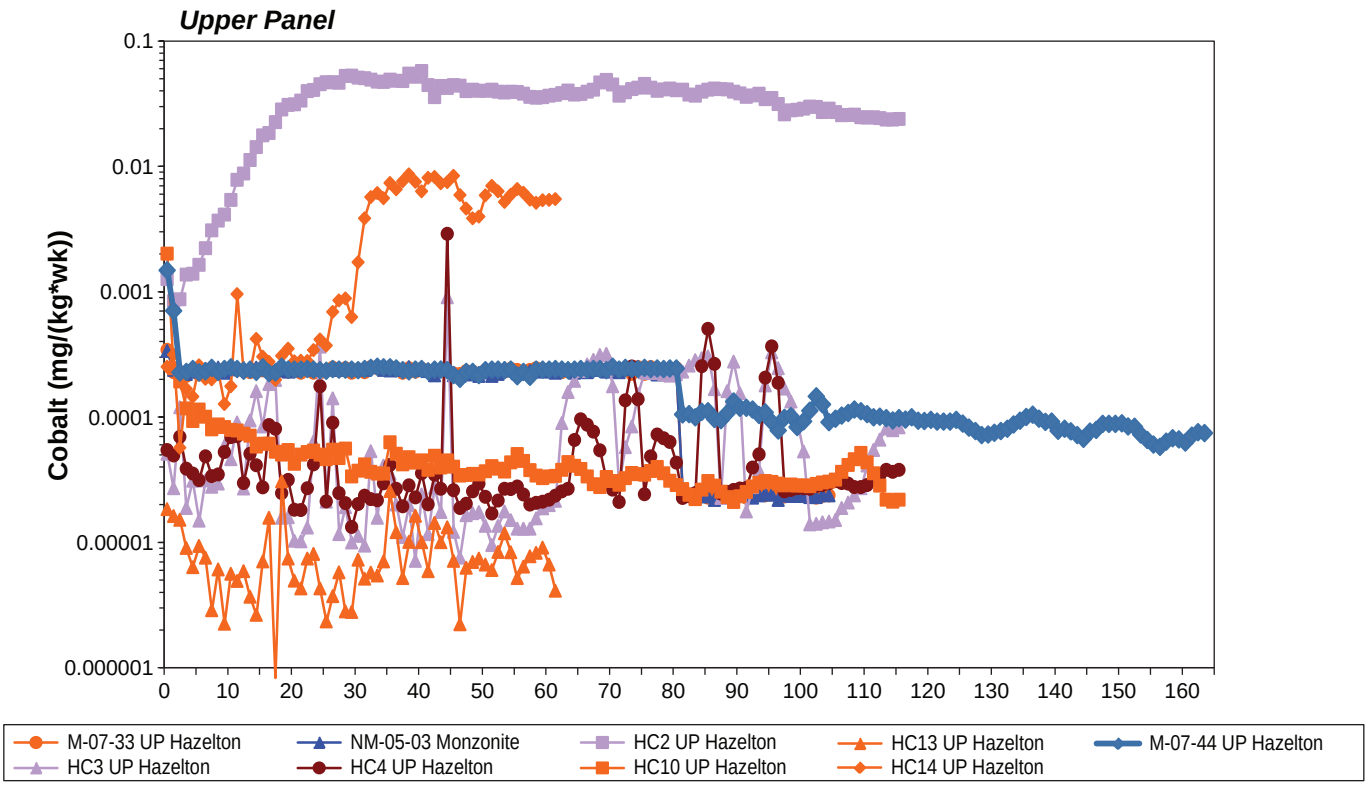


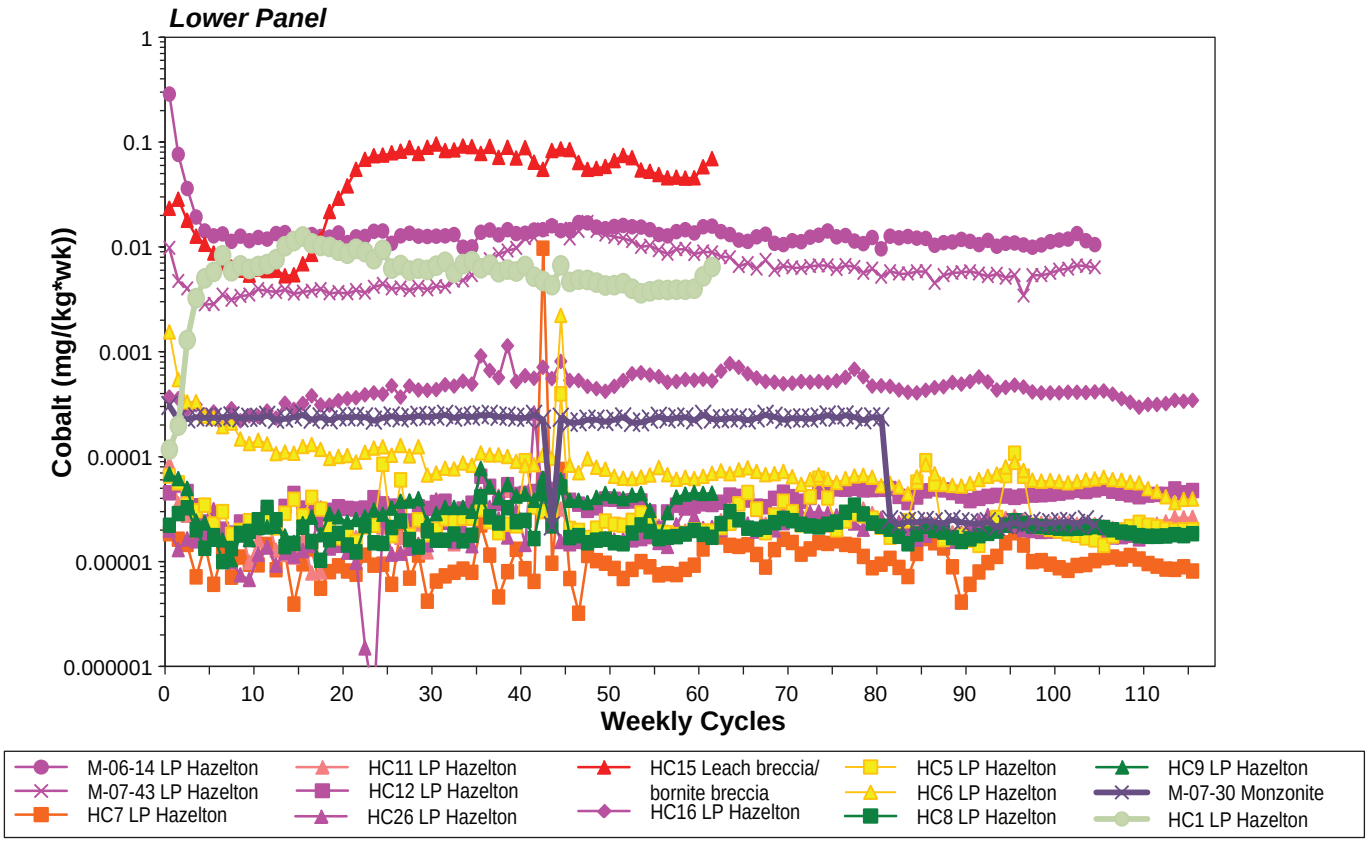
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Chromium Leach Rates, Mitchell Deposit
Waste Rock Humidity Cells

Figure 5.2-38

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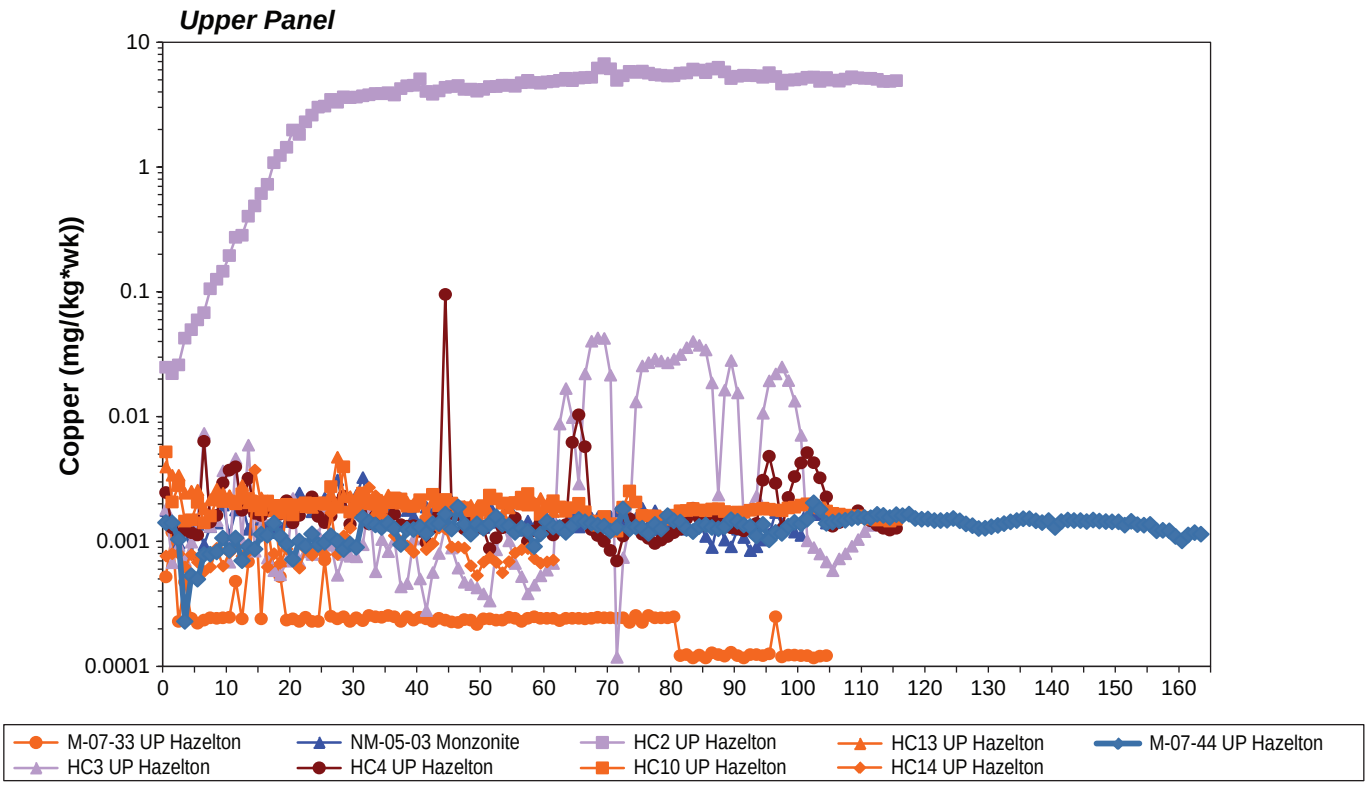


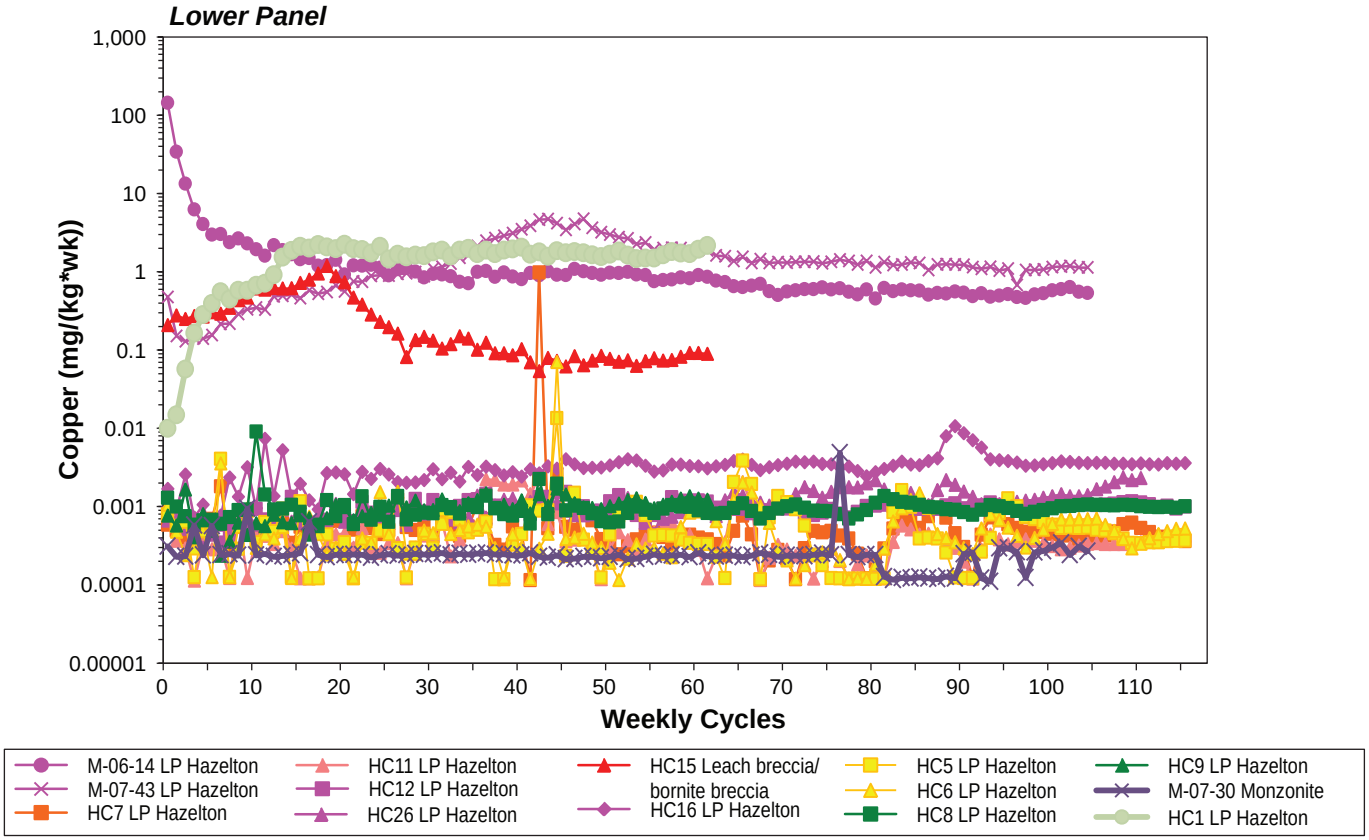
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Cobalt Leach Rates, Mitchell Deposit
Waste Rock Humidity Cells

Figure 5.2-39

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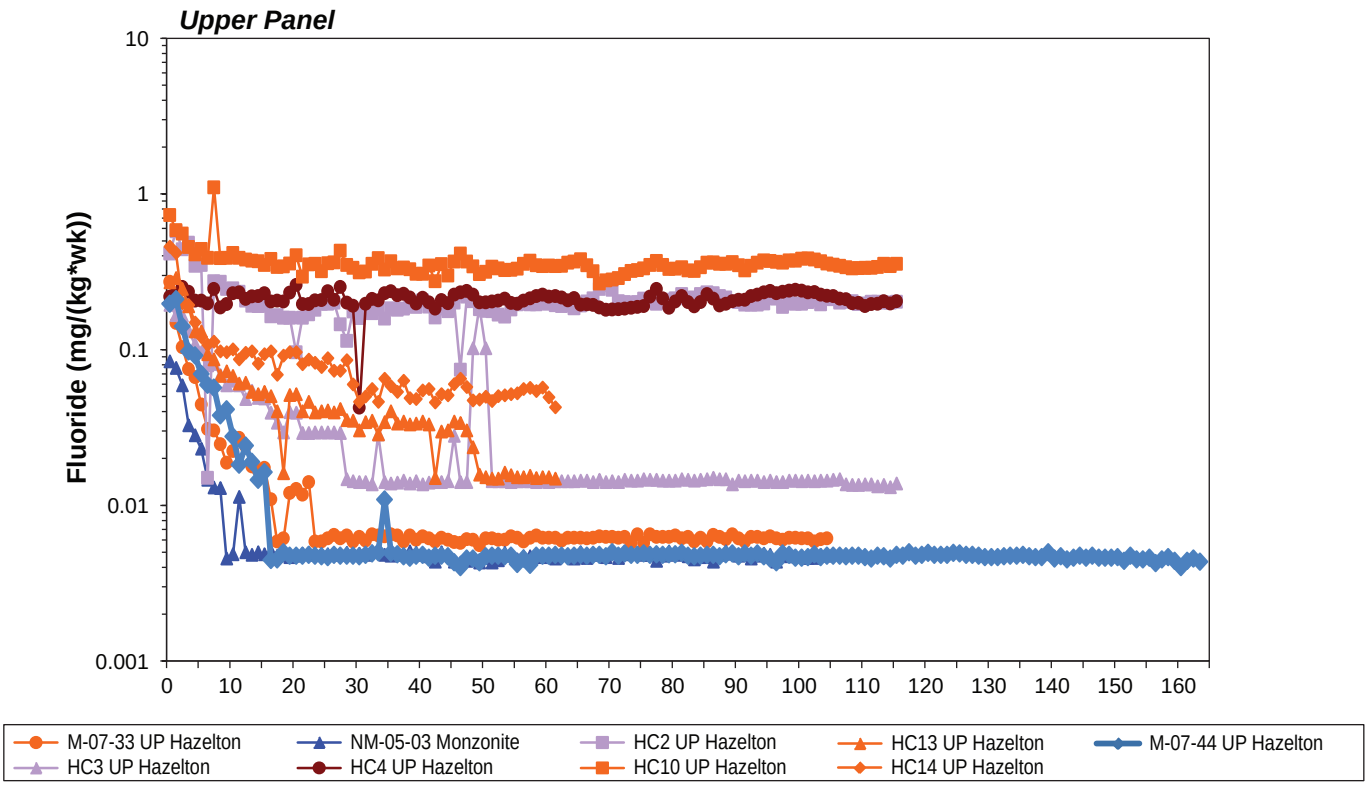


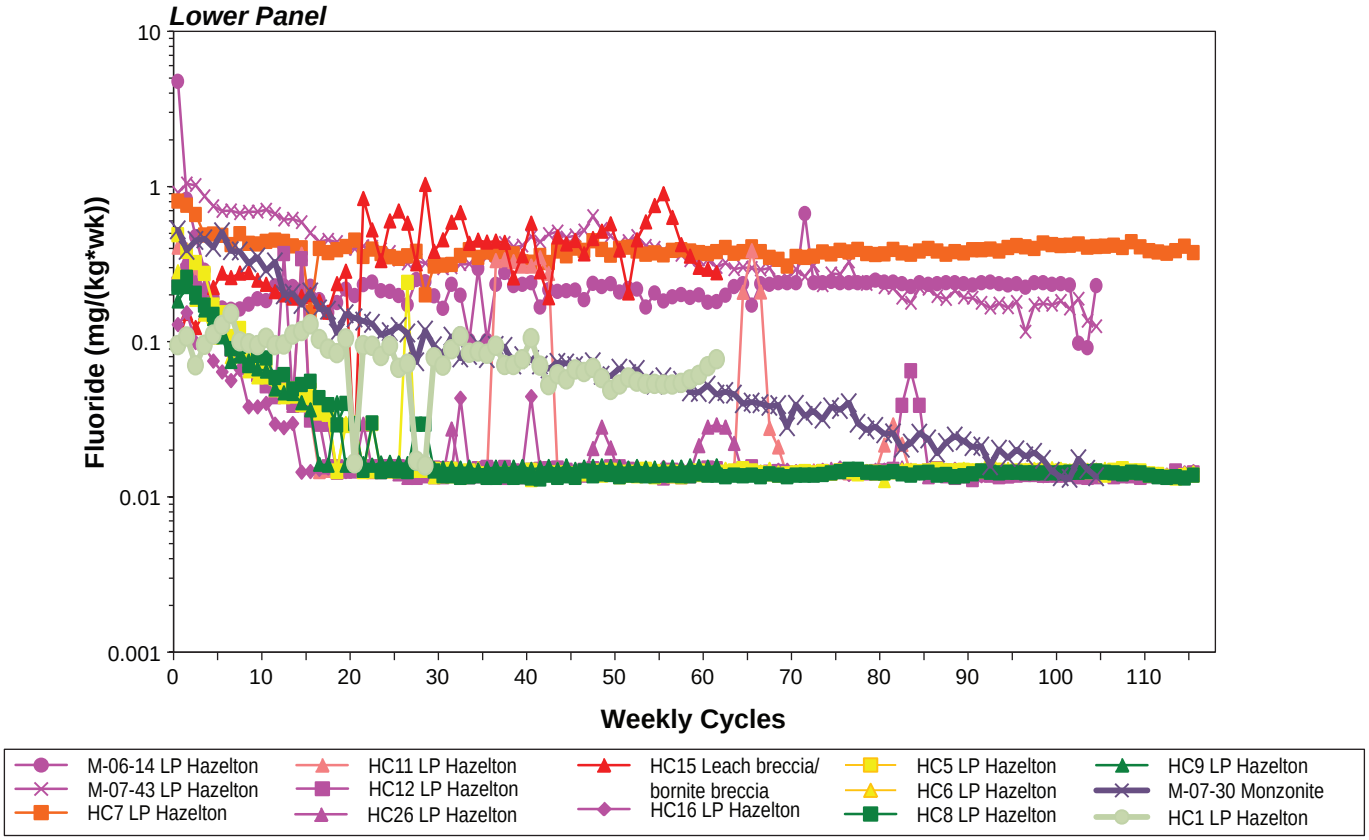
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Copper Leach Rates, Mitchell Deposit
Waste Rock Humidity Cells

Figure 5.2-40

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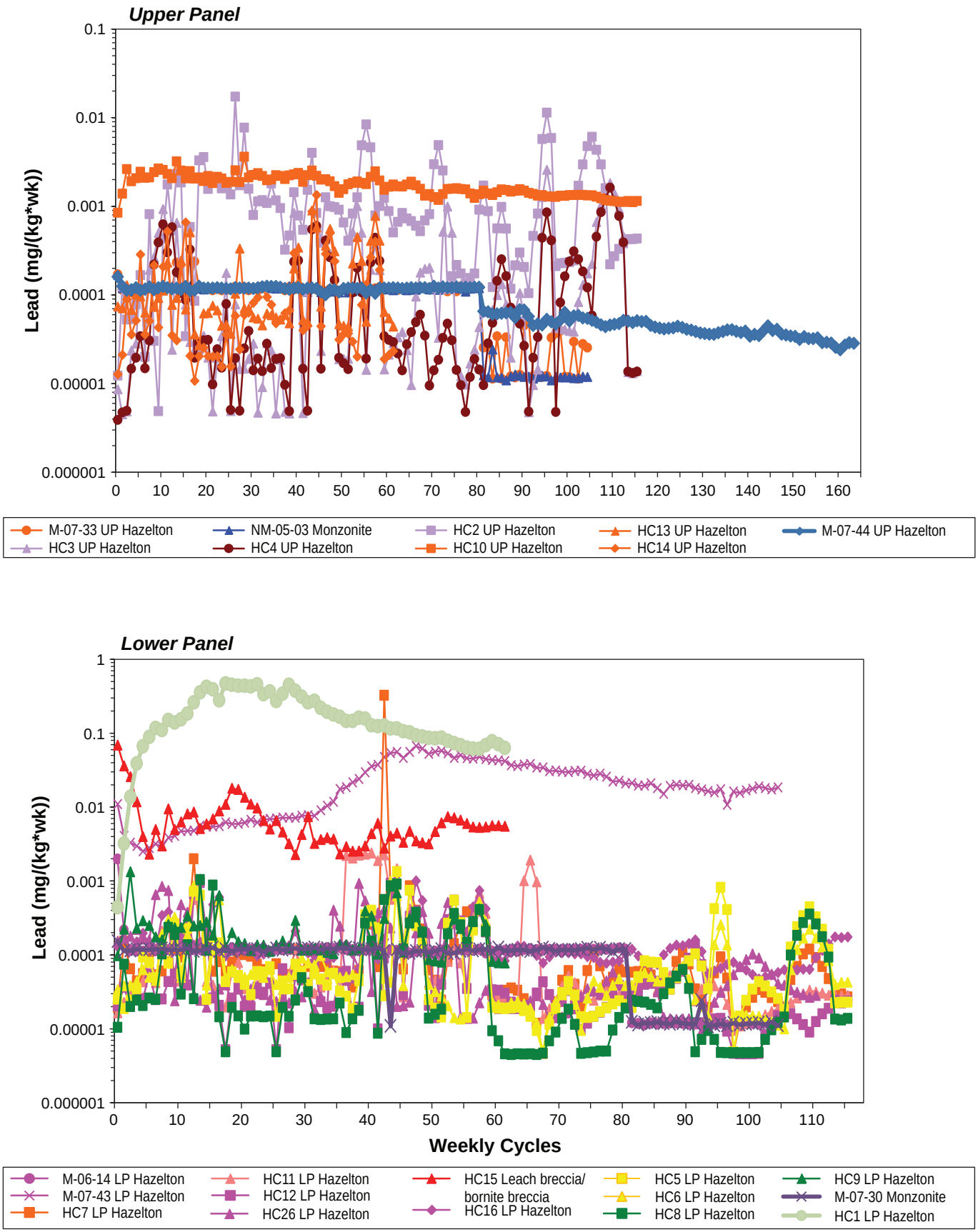


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Fluoride Leach Rates, Mitchell Deposit
Waste Rock Humidity Cells

Figure 5.2-41

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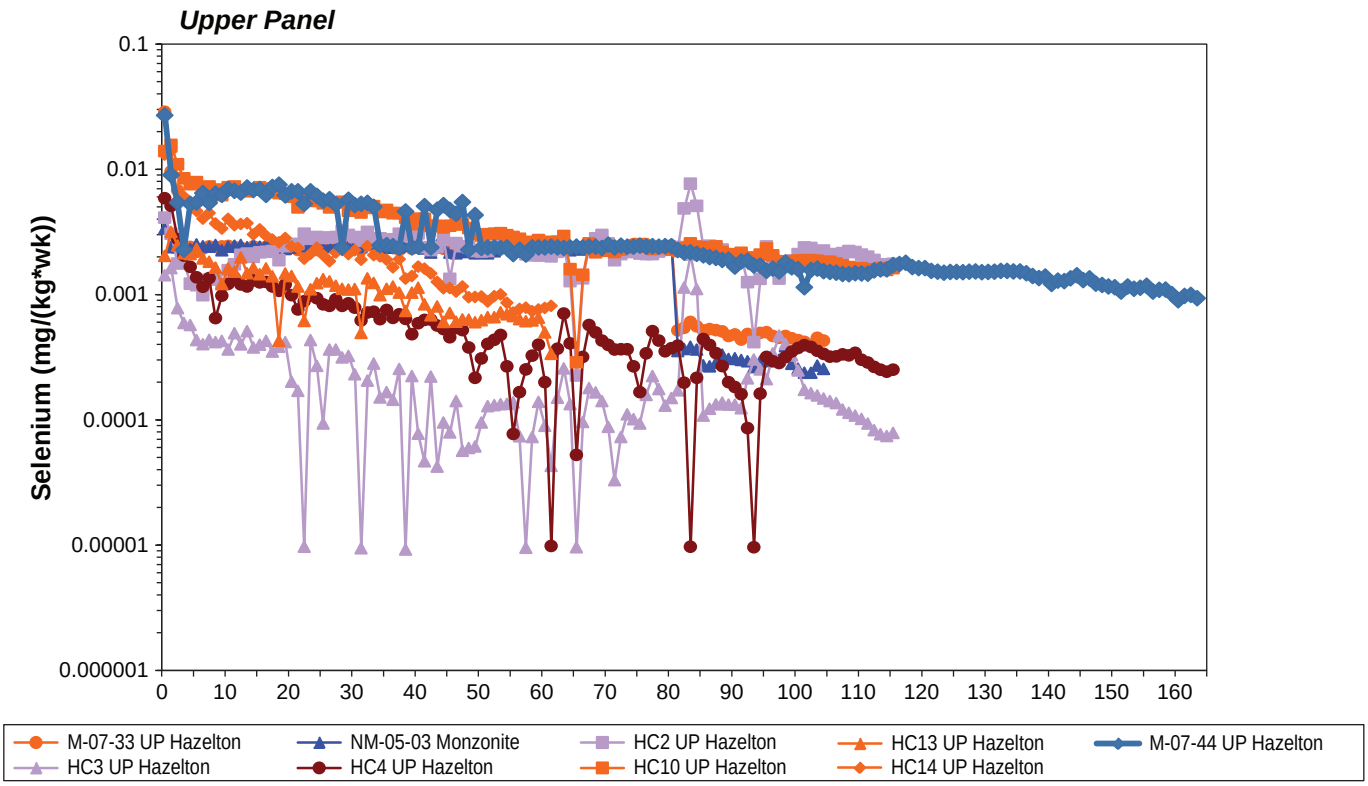


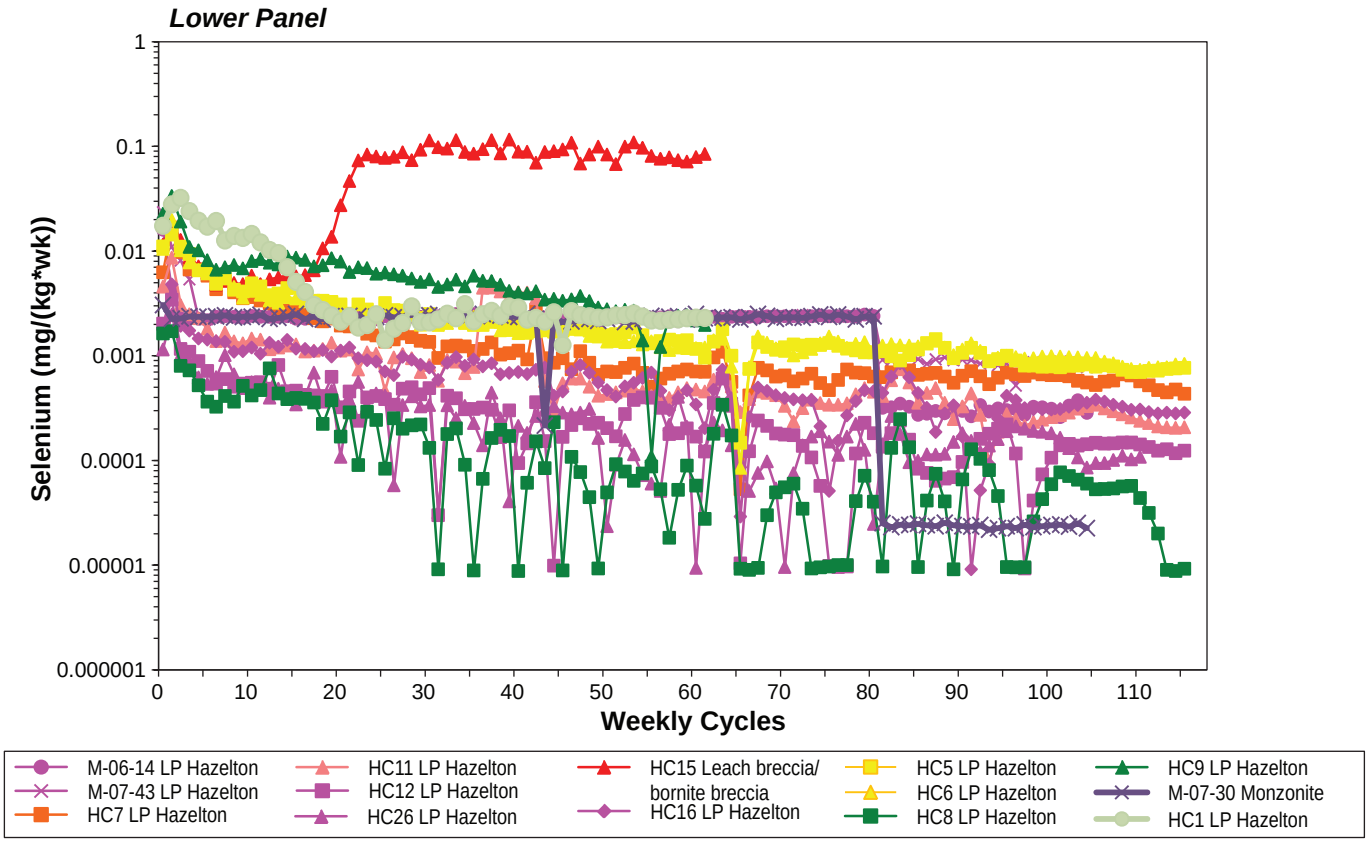
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Lead Leach Rates, Mitchell Deposit
Waste Rock Humidity Cells

Figure 5.2-42

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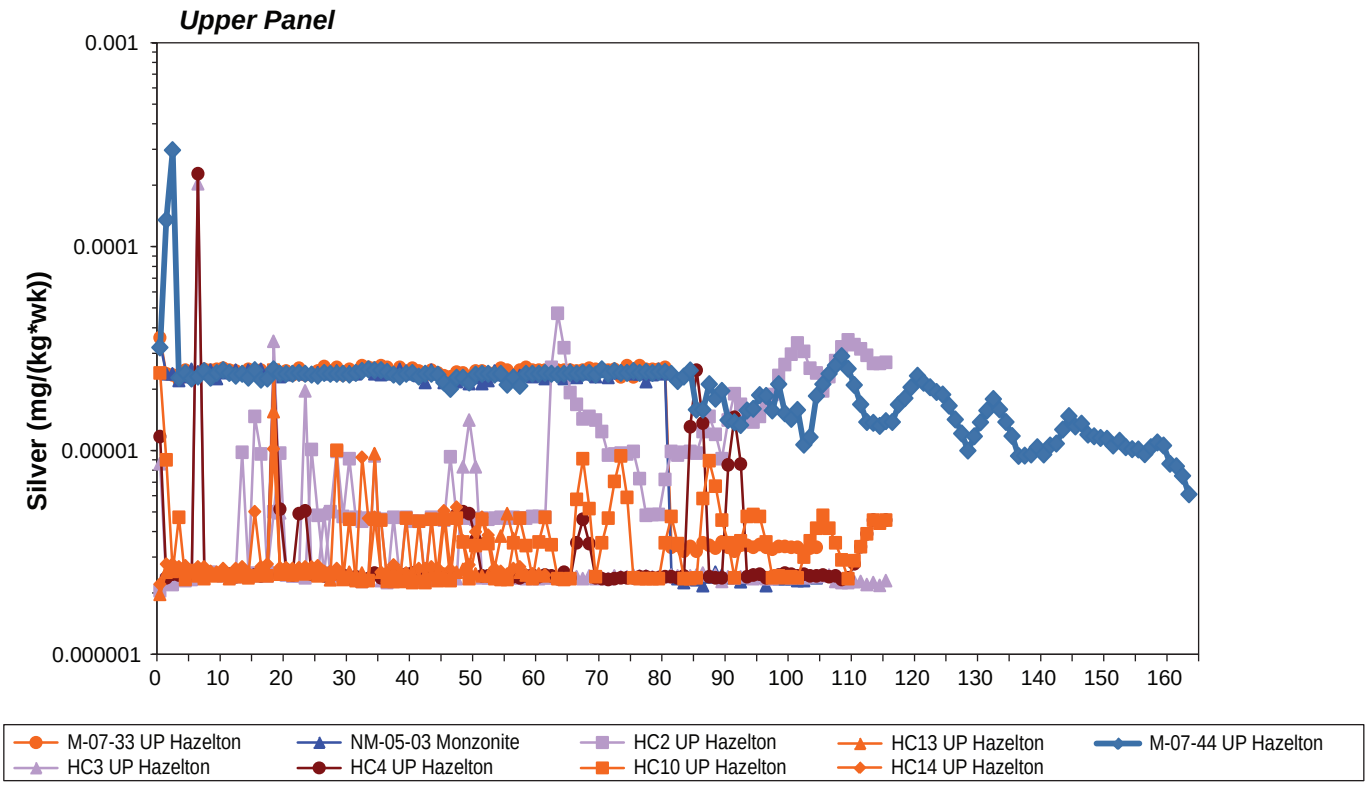


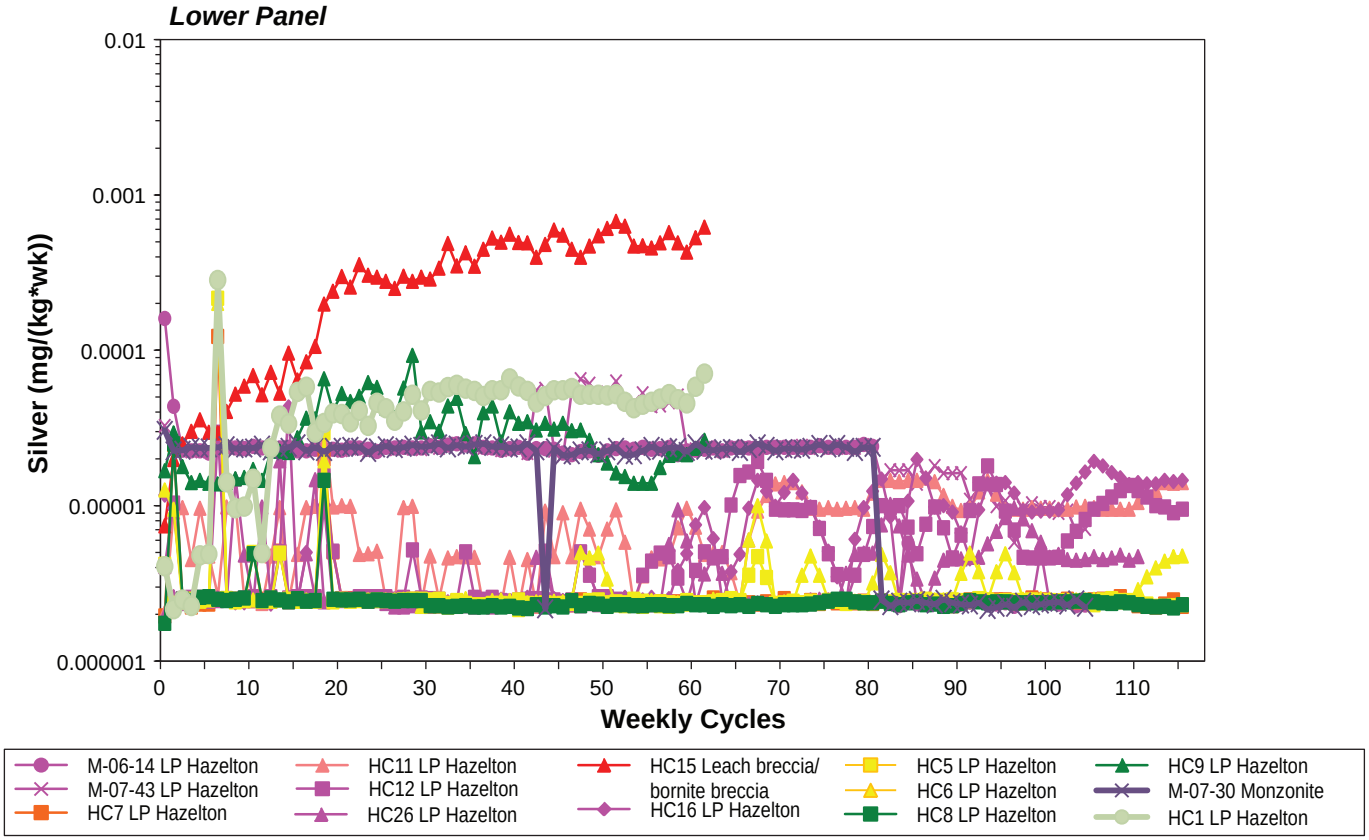
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Selenium Leach Rates, Mitchell Deposit
Waste Rock Humidity Cells

Figure 5.2-43

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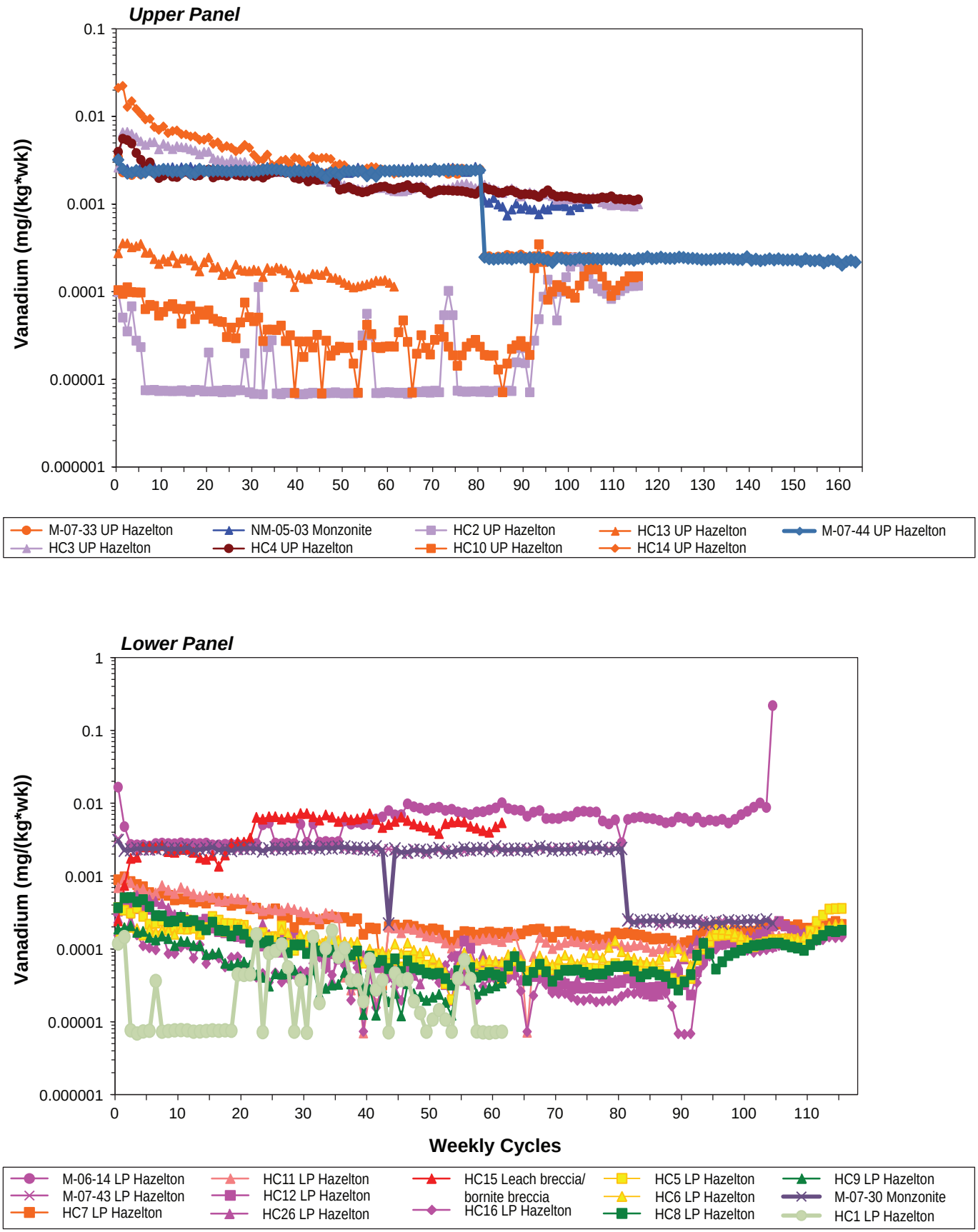


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Silver Leach Rates, Mitchell Deposit
Waste Rock Humidity Cells

Figure 5.2-44

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Vanadium Leach Rates, Mitchell Deposit
Waste Rock Humidity Cells

Figure 5.2-45

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Zinc leach rates were elevated in the acidic HC2 UP Hazelton, and the near-neutral HC10 UP Hazelton, and M-07-44 UP Hazelton with leach rates ranging from 0.0035 to 0.030 mg/kg/wk. Among the acidic lower panel humidity cells, steady state leach rates humidity cells ranged from 0.021 to 0.23 mg/kg/wk (Figure 5.2-46).

Table 5.2-4 summarizes the parameter with elevated concentrations by model code under acidic and neutral drainage conditions in order to inform treatment design.

Table 5.2-4. Mitchell Deposit Acidic and Neutral Leachate from Humidity Cells

Model Code	Acidic Drainage	Neutral Drainage
Upper panel		
UP Hazelton	Aluminum, Cadmium, Copper, Fluoride, Lead, Manganese, Selenium, Silver, Zinc	Aluminum, Antimony, Arsenic, Cadmium, Chromium, Cobalt, Copper, Fluoride, Lead, Selenium
Monzonite	n/a	Aluminum, Cadmium, Copper
Lower panel		
LP Hazelton	Sulphate, Aluminum, Cadmium, Chromium, Cobalt, Copper, Fluoride, Iron, Lead, Manganese, Selenium, Silver, Vanadium, Zinc	Aluminum, Cadmium, Copper, Fluoride, Selenium
Leach breccia/bornite breccia	Sulphate, Aluminum, Arsenic, Cadmium, Chromium, Cobalt, Copper, Fluoride, Iron, Lead, Selenium, Silver, Vanadium, Zinc	n/a
Monzonite	n/a	Cadmium

n/a indicates that no humidity cell was observed.

Elements associated with the Neutralization Potential

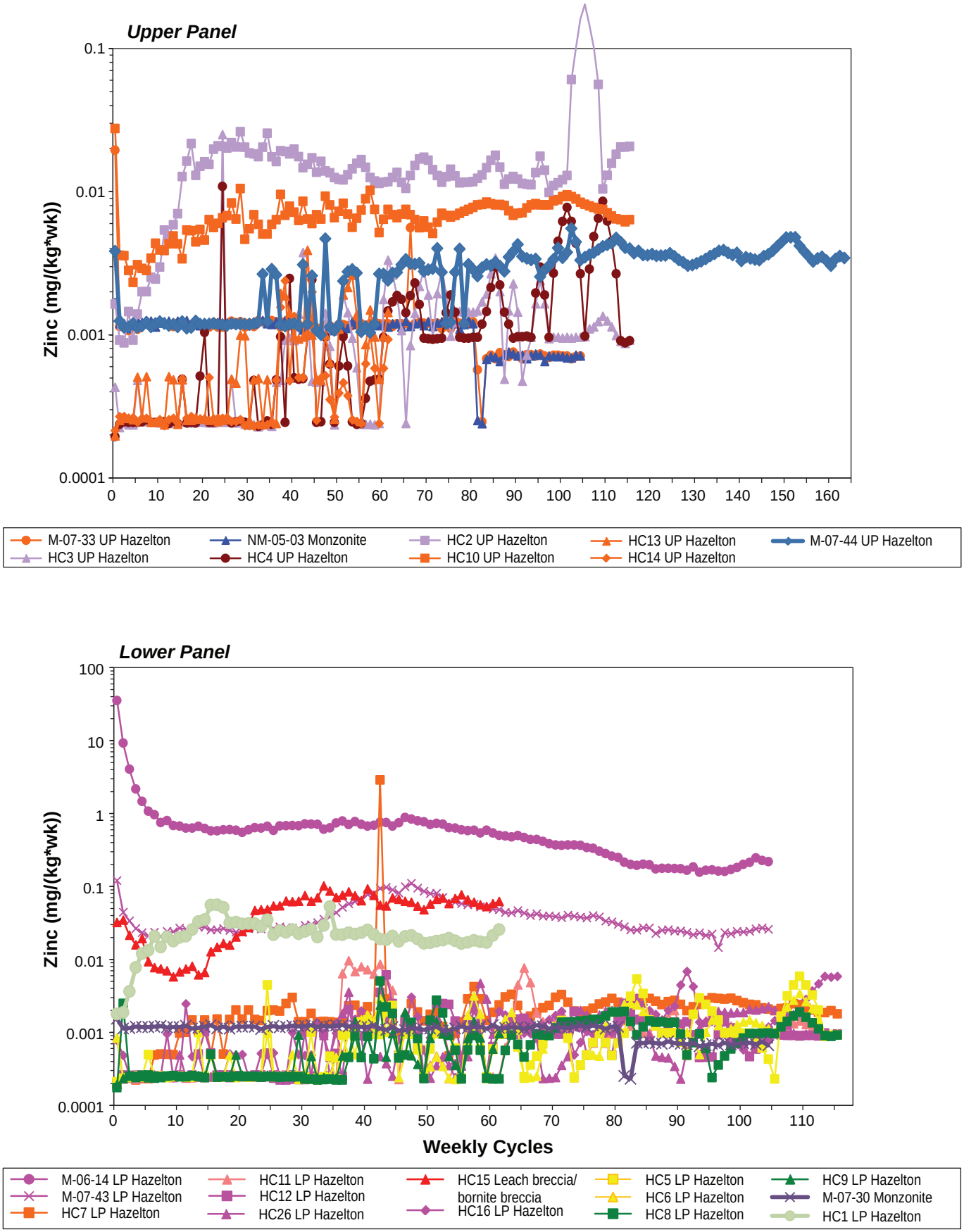
Calcium and magnesium leach rates in the acidic HC2 UP Hazelton steadily decreased through week 99 indicating consumption of neutralization potential. Calcium continued to decrease through week 129, while magnesium increased from week 99 to week 129, suggesting silicate mineral assemblages possibly contributed to acid neutralization. Calcium leach rates in the near-neutral upper panel humidity cells were stable over time, while magnesium leach rates decreased over time with the exception of M-07-33 UP Hazelton and M-07-44 UP Hazelton. Calcium and magnesium leach rates were typically stable or gradually decreased over time in lower panel humidity cells. Leach rates in HC15 Leach breccia/bornite breccia lower panel sharply increased at week 16 when pH decreased (Figures 5.2-47, 5.2-48).

Iron Cap Deposit

Six humidity cells of the ABA block model code Iron Cap were operated for 75 weeks to the cut-off date for data for this report. The complete dataset for humidity cell leachate concentrations for the Iron Cap deposit is presented in Appendix 5.2-6. The leach rates for additional parameters are presented in Appendix 5.2-3.

pH, Sulphate, Acidity, and Alkalinity

Three of the six Iron Cap humidity cells were acidic (HCT-3, 4, and 6) and three remained near-neutral (HCT-1, 2, and 5) throughout the 75 weekly cycles. Observed pH decreased steadily over the 75 weeks in HC-3 and HC-6 acidic cells to 2.80. The pH in HC-4 steady decreased over 55 weeks to around 4, and sharply decreased through week 70 to pH 2.80 (Figure 5.2-49).

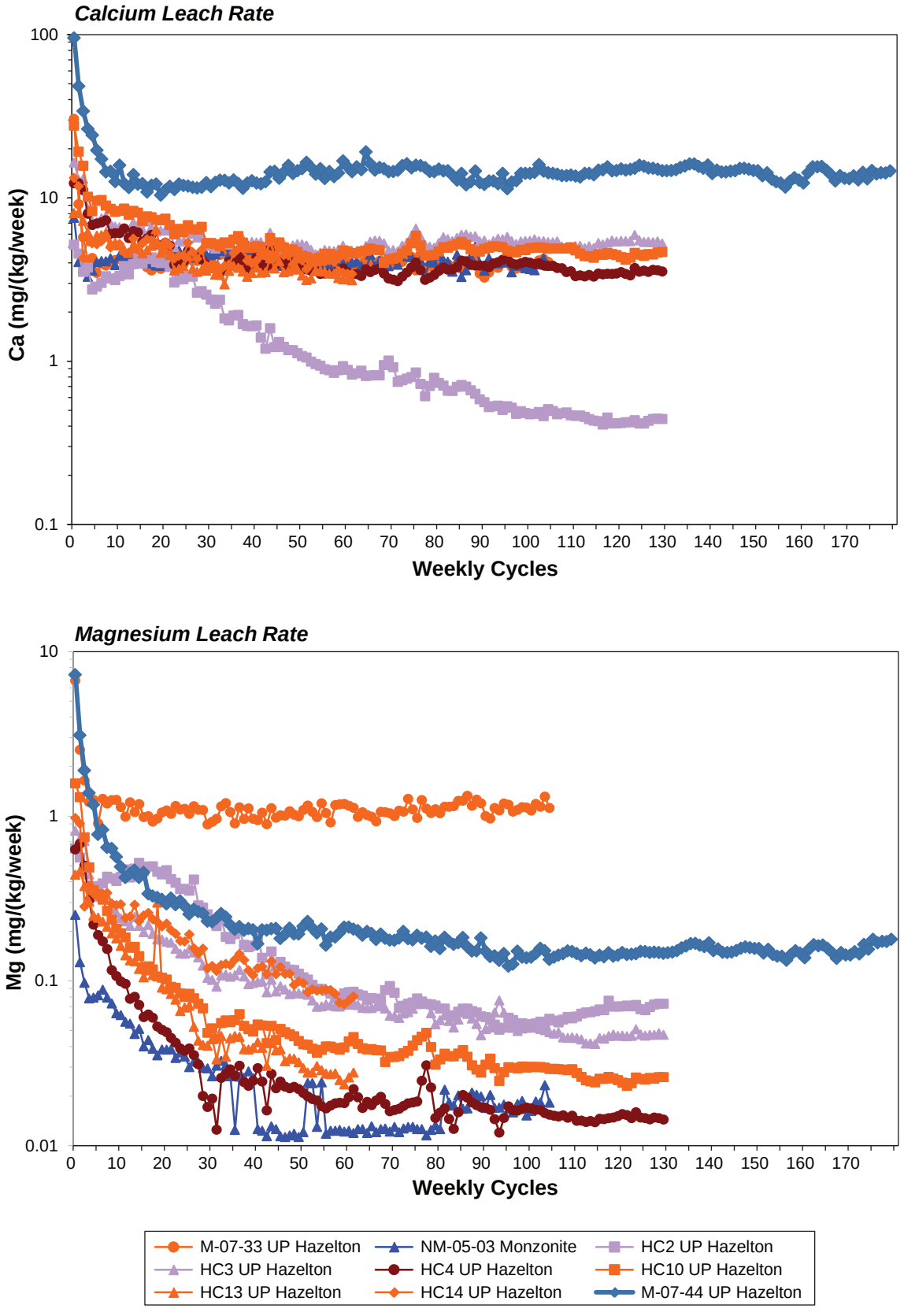


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Zinc Leach Rates, Mitchell Deposit
Waste Rock Humidity Cells

Figure 5.2-46

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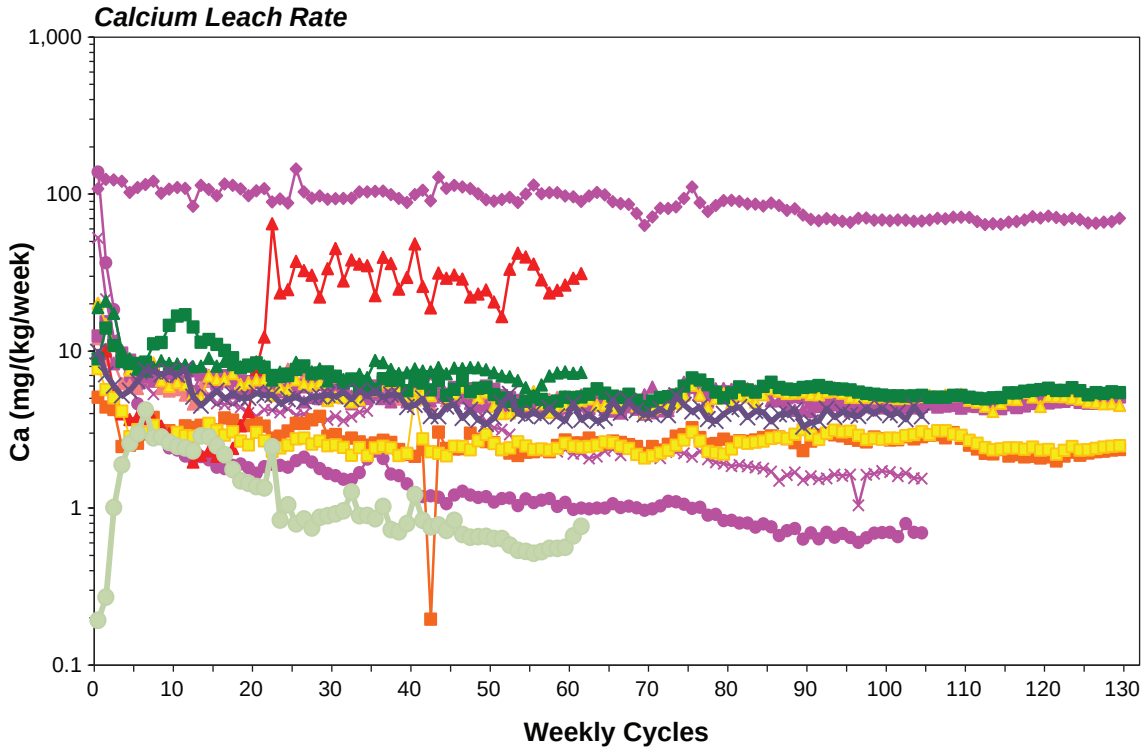


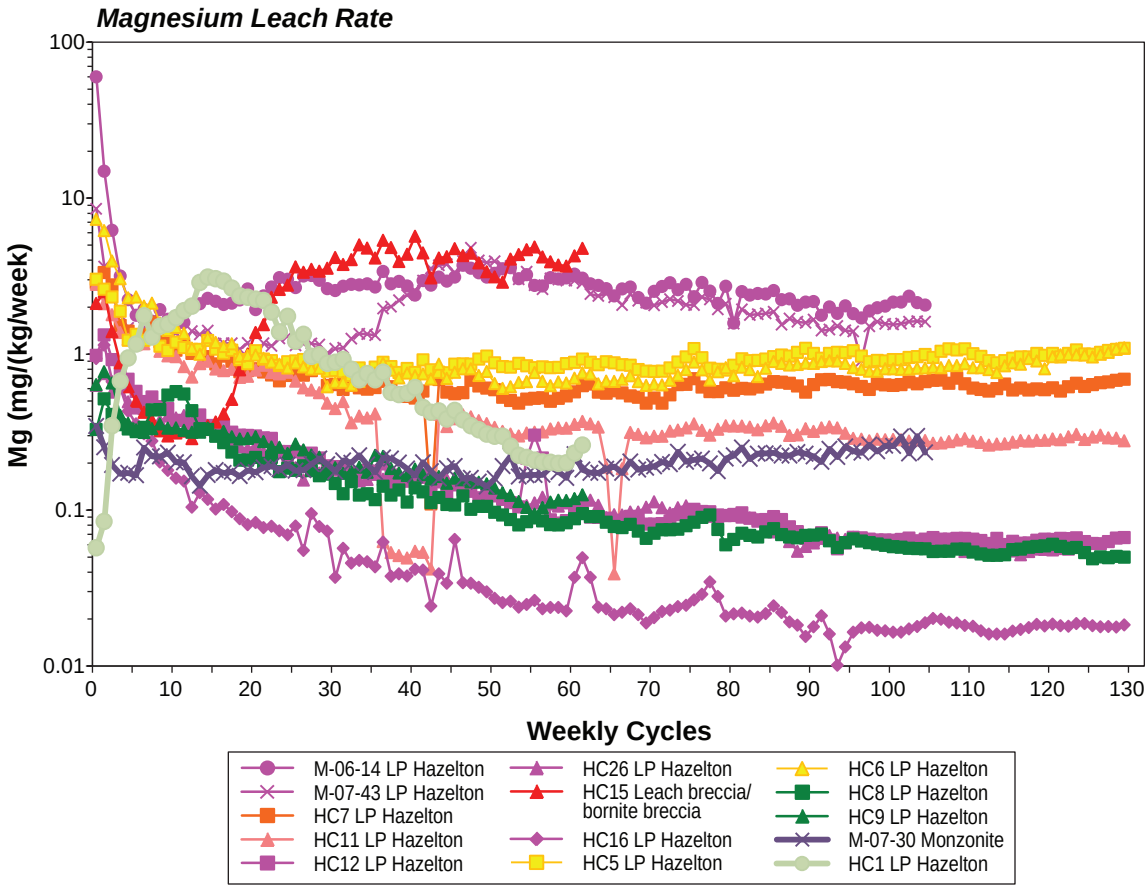
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Calcium and Magnesium Leach Rates, Mitchell Deposit Waste Rock Upper Panel Humidity Cells

Figure 5.2-47

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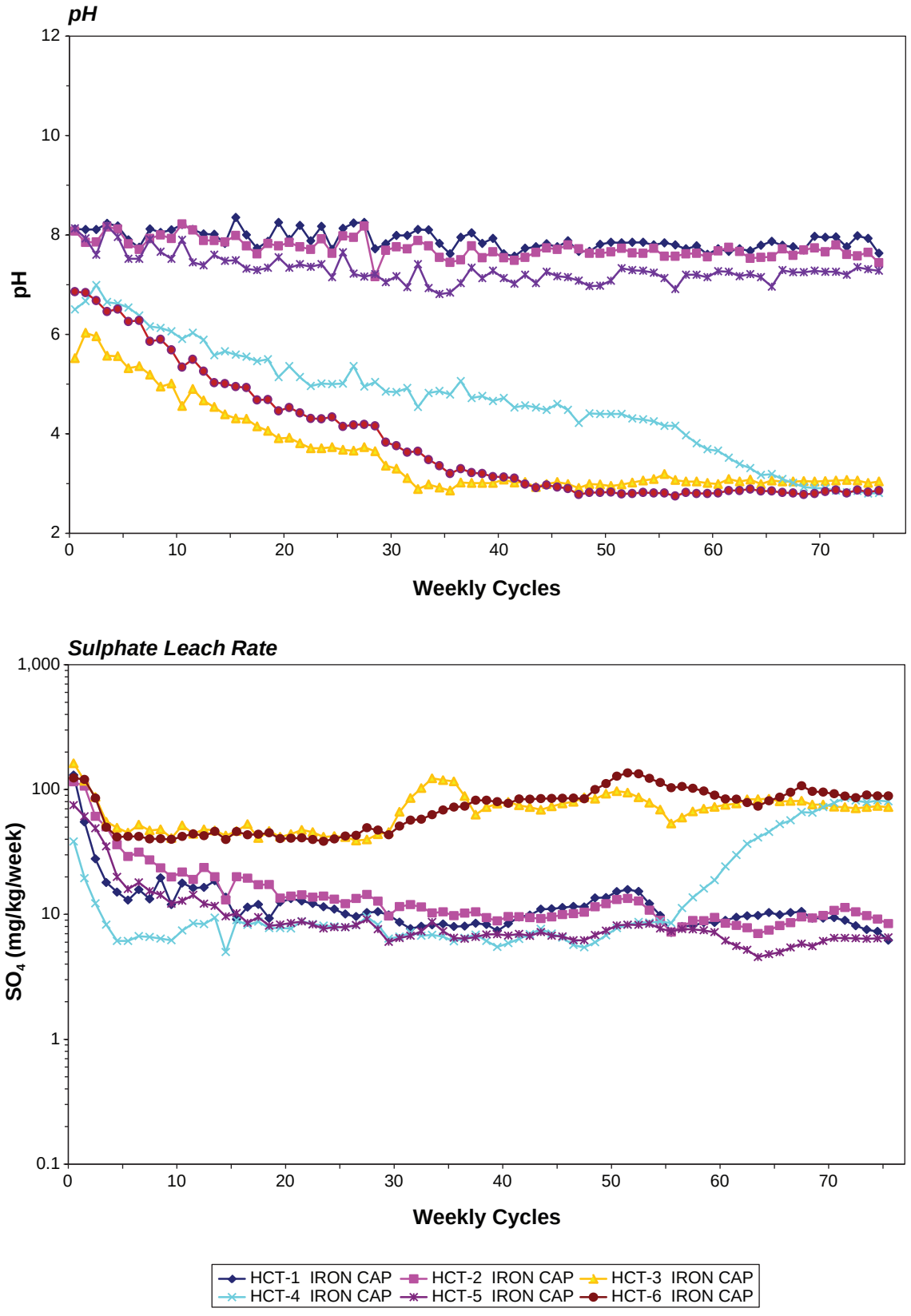


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Calcium and Magnesium Leach Rates, Mitchell Deposit Waste Rock Lower Panel Humidity Cells

Figure 5.2-48

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Weekly pH and Sulphate Production Rates, Iron Cap Deposit Waste Rock Humidity Cells

Figure 5.2-49

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Sulphate production rates in HCT-3 and HCT-6 increased after week 30 to between 70 to 100 mg/kg/wk. The sulphate production rate in HCT-4 increased with the decrease in pH after week 55 from approximately 8 mg/kg/wk to 90 mg/kg/wk by week 70. Sulphate production rates decreased over 37 weeks in the other 4 humidity cells and stabilized between 6.5 to 11 mg/kg/wk (Figure 5.2-49).

Acidity was frequently below detection in the near-neutral humidity cells. Acidity production rates increased sharply after week 25 in HCT-6. The acidity production rate in HC-4 steadily increased after week 50 to a similar production rate observed in other acidic humidity cells (100 mg $CaCO_3$/kg/wk). Alkalinity was frequently below detection after week 10 in the acidic humidity cells and alkalinity production was stable at 4.9 to 11 mg $CaCO_3$/kg/wk in the three near-neutral humidity cells (Figure 5.2-50).

Elements that Contribute to Acidity

Aluminum leach rates were relatively stable over time in the near-neutral humidity cells, ranging between 0.01 and 0.04 mg/kg/wk. Aluminum leach rates increased to steady state rates between 1.2 to 3.3 mg/kg/wk in the acidic humidity cells (Figure 5.2-51).

Iron leach rates increased over time in the three acidic humidity cells to 25 mg/kg/wk at week 75. Leach rates in the near-neutral humidity cells were variable over time (Figure 5.2-51).

Manganese leach rates were relatively stable over time in the near-neutral cells and decreased over time in the acidic cells. Leach rates ranged from 0.014 to 0.035 mg/kg/wk in the acidic humidity cells, and 0.03 to 0.1 mg/kg/wk in the near-neutral humidity cells (Figure 5.2-52).

Barium

Barium leach rates were variable over time ranging from 0.01 to 0.05 mg/kg/wk. Barium leach rates decreased after week 29 in HCT-3, but subsequently increased (Figure 5.2-52).

Trace Elements

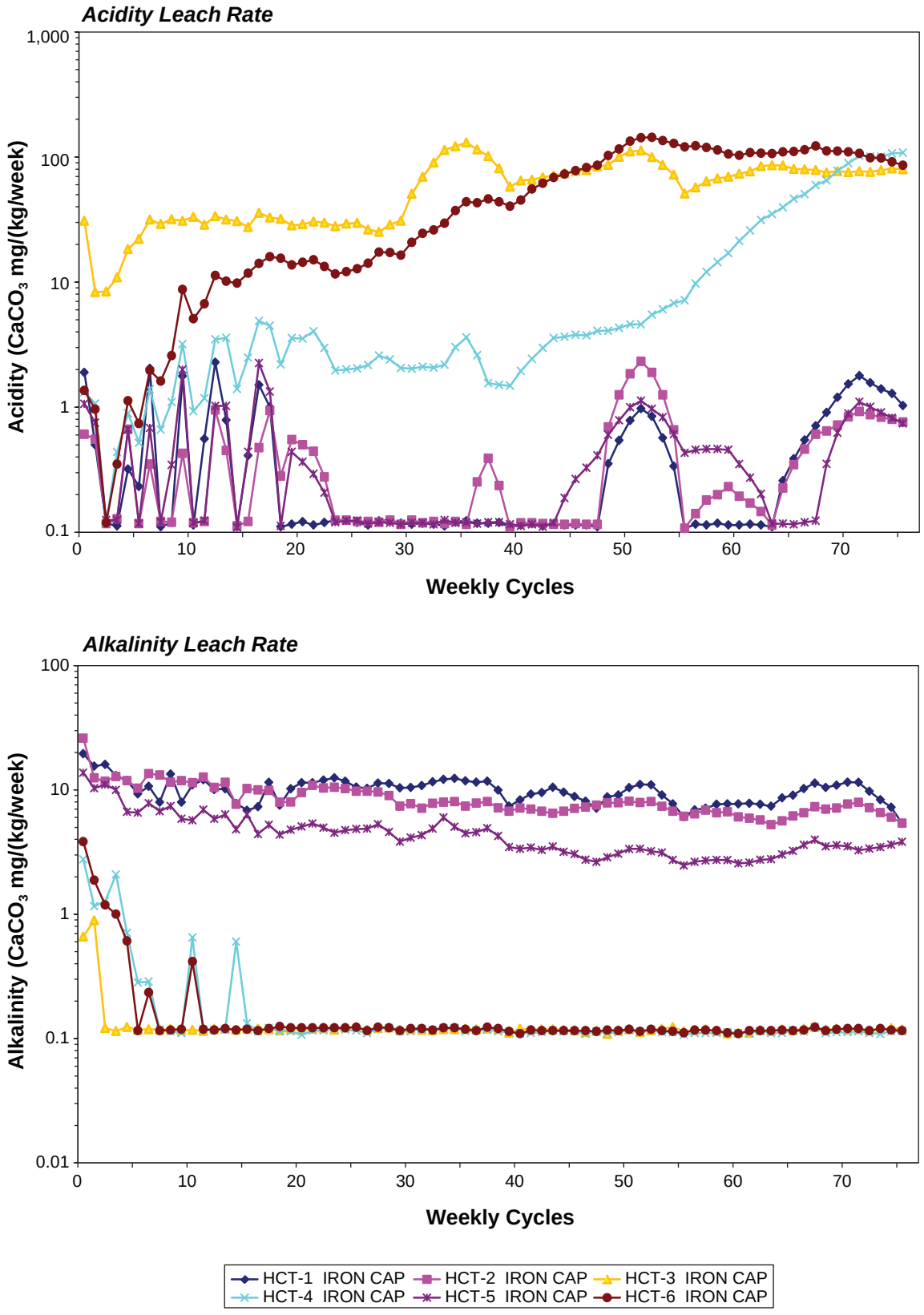
Arsenic leach rates in HCT-3 and HCT-6 increased to between 0.0005 to 0.009 mg/kg/wk. Leach rates in HCT-4 increased after week 51 to a maximum of 0.02 mg/kg/wk. Leach rates in all other Iron Cap humidity cells decreased over time (Figure 5.2-53).

Beryllium concentrations were elevated in acidic humidity cells. Beryllium leach rates increased to approximately week 20 and leach rates in the last 10 weeks ranged from 0.0002 to 0.0025 mg/kg/wk. Beryllium concentrations in near-neutral humidity cells were frequently below detection (Figure 5.2-53).

Cadmium leach rates increased over time in the acidic humidity cells to between 0.002 and 0.013 mg/kg/wk and were relatively stable in the near-neutral cells ranging from 0.00001 to 0.0002 mg/kg/wk (Figure 5.2-54).

Chromium concentrations were frequently below detection limits, but leach rates increased after weeks 29 in HCT-3 and 6, and week 55 in HCT-4 (Figure 5.2-54).

Cobalt concentrations were elevated in acidic humidity cells. Leach rates in the acidic humidity cells ranged from 0.005 to 0.07 mg/kg/wk in week 37 and were orders of magnitude lower in the near-neutral humidity cells (Figure 5.2-55).

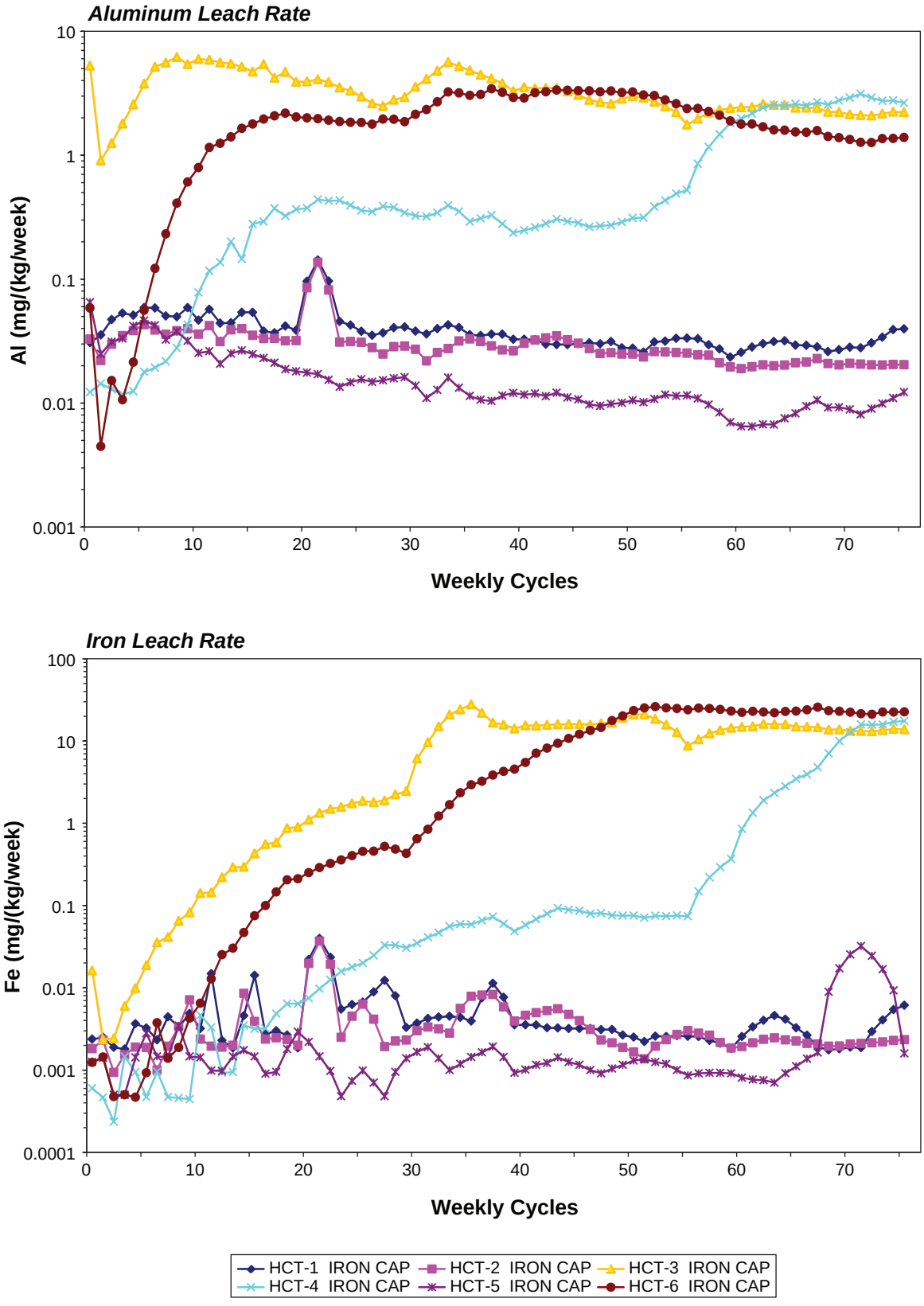


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Acidity and Alkalinity Production Rates, Iron Cap Deposit Waste Rock Humidity Cells

Figure 5.2-50

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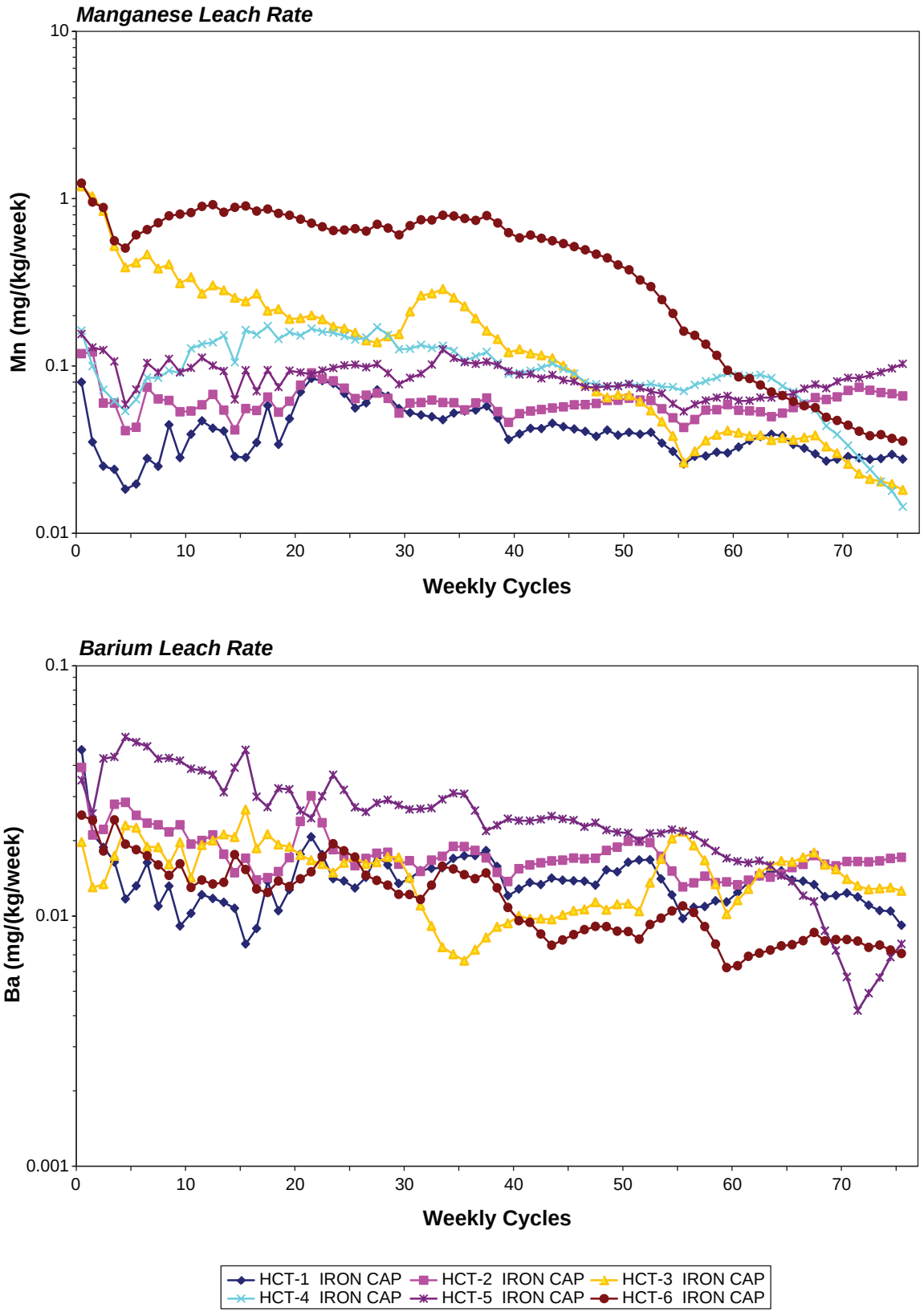


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Aluminum and Iron Leach Rates,
Iron Cap Deposit Waste Rock Humidity Cells

Figure 5.2-51

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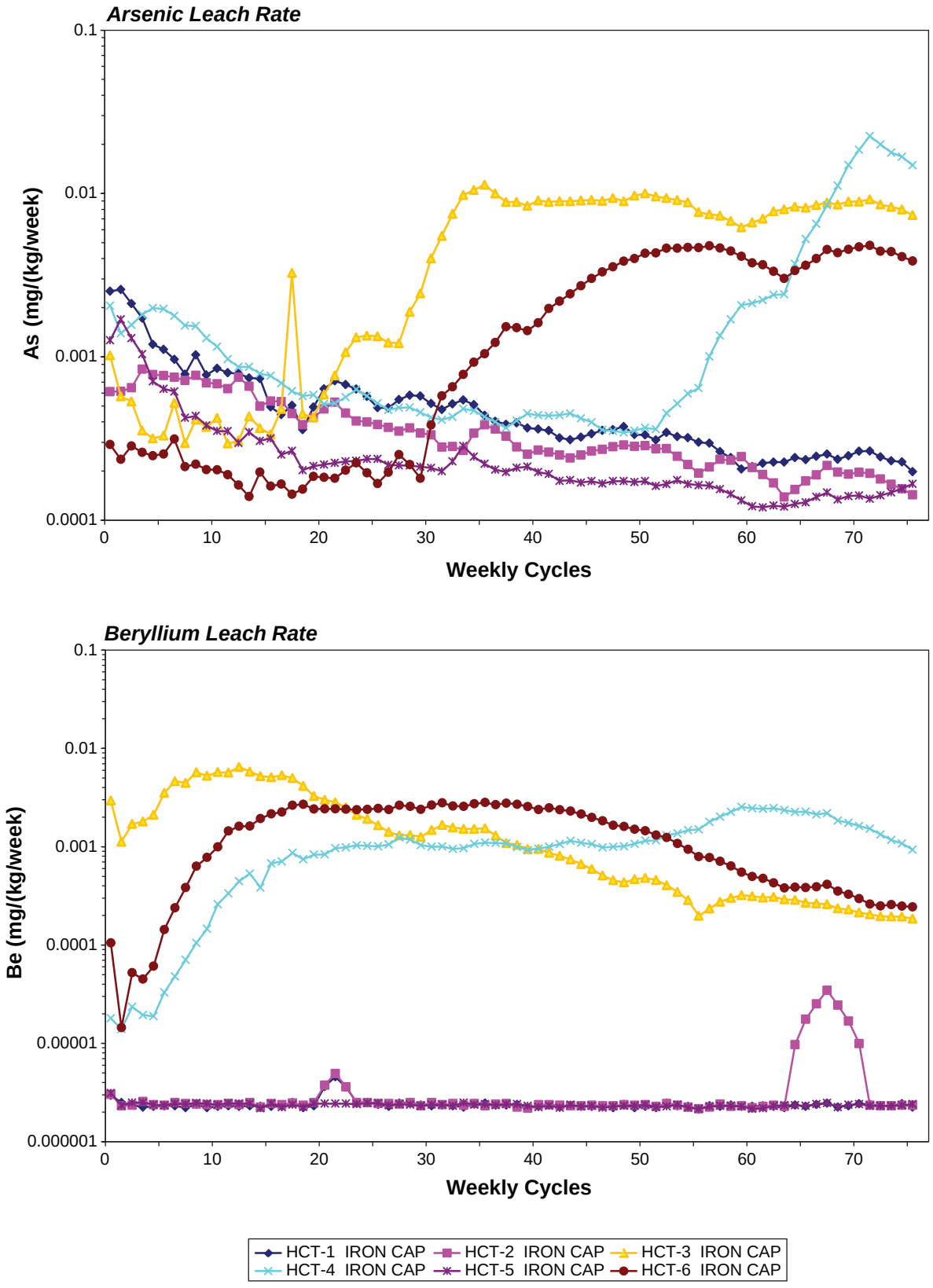


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Manganese and Barium Leach Rates, Iron Cap Deposit Waste Rock Humidity Cells

Figure 5.2-52

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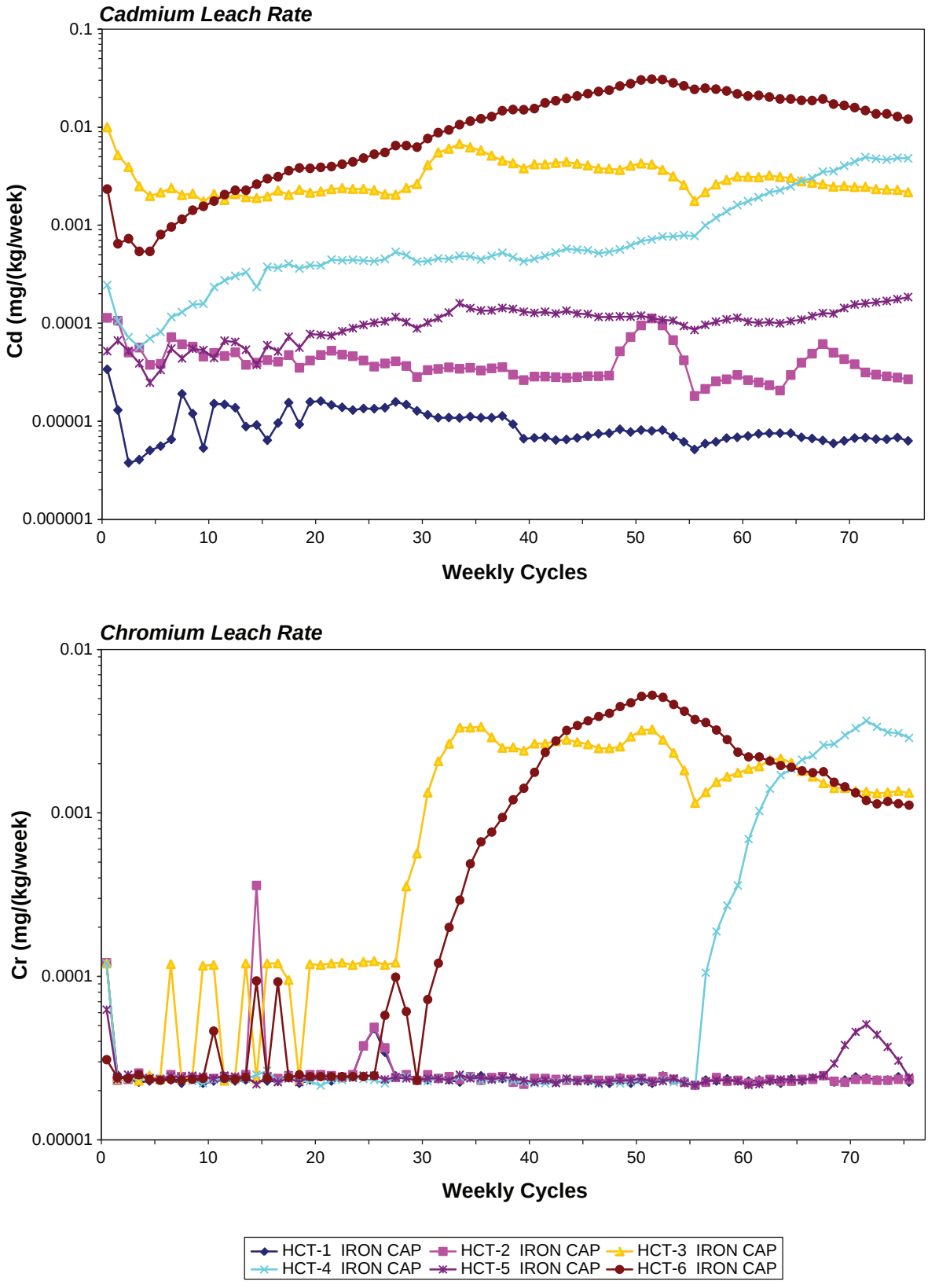


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**Arsenic and Beryllium Leach Rates,
Iron Cap Deposit Waste Rock Humidity Cells**

Figure 5.2-53

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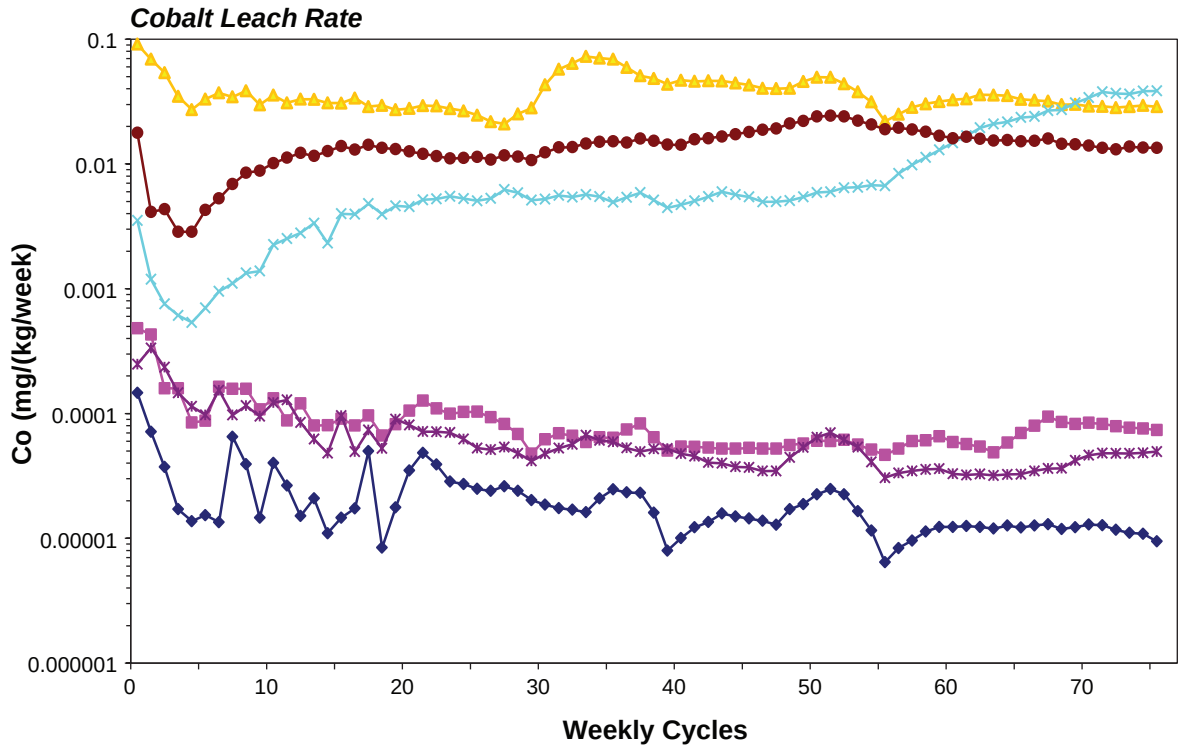


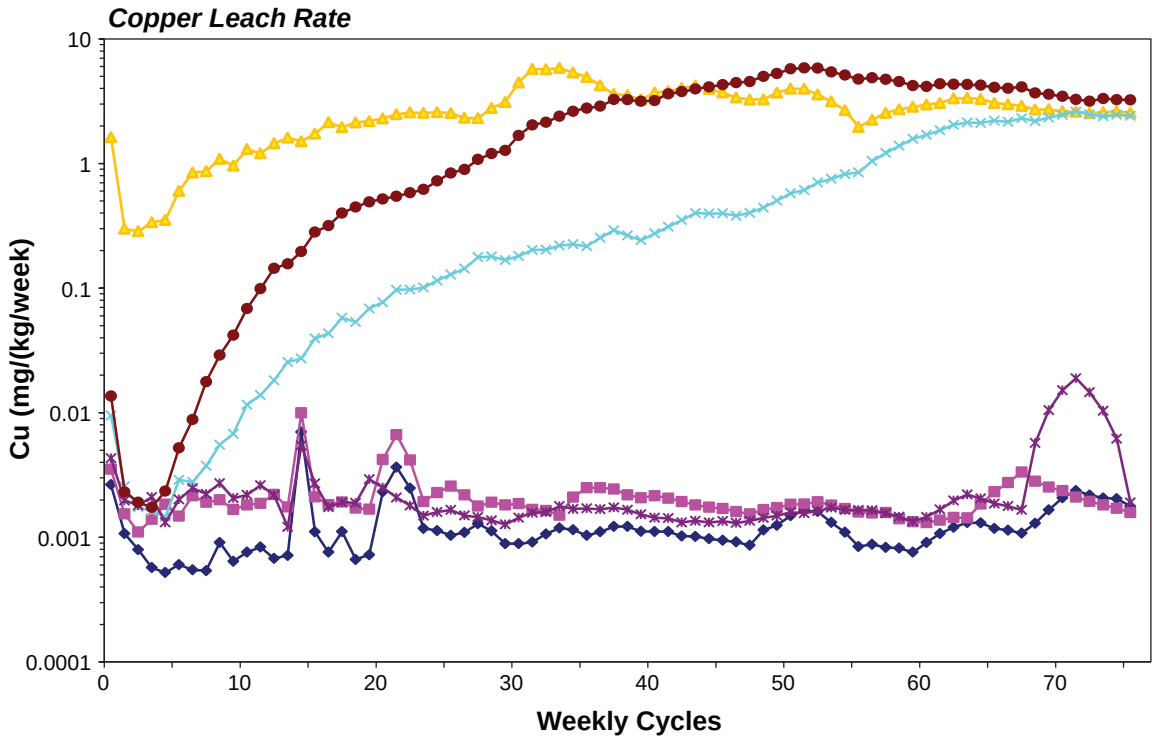
SEABRIDGE GOLD
KSM PROJECT

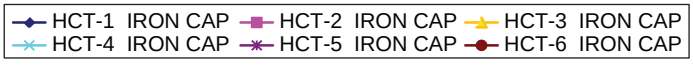
**Cadmium and Chromium Leach Rates,
Iron Cap Deposit Waste Rock Humidity Cells**

Figure 5.2-54

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Cobalt and Copper Leach Rates,
Iron Cap Deposit Waste Rock Humidity Cells

Figure 5.2-55

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Copper leach rates increased over time in the acidic humidity cells and ranged from 0.3 to 3 mg/kg/wk in week 37 and were stable at 2.5 to 3.2 mg/kg/wk at week 75. Leach rates in the near-neutral humidity cells were stable over time and steady-state rates ranged from 0.01 to 0.002 mg/kg/wk (Figure 5.2-55).

Steady state fluoride leach rates in the acidic cells ranged from 0.4 to 8 mg/kg/wk. Fluoride leach rates in the near-neutral humidity cells decreased over time (Figure 5.2-56).

Lead leach rates increased over time in HCT-3, 4 and 6, but decreased after week 16 in HCT-3, after week 40 in HCT-6 and after week 66 in HCT-4 (Figure 5.2-56).

Mercury leach rates were elevated in HCT-3 and HCT-6 between weeks 33 and 67 and ranged from 0.000002 to 0.000004 mg/kg/wk. Leach rates decreased in the last 5 weeks. Mercury leach rates in HCT-4 increased after week 63 up to 0.000008 mg/kg/wk. Mercury concentrations were frequently below detection in all humidity cells and leach rates were highly variable (Figure 5.2-57).

Selenium concentrations decreased over time for all humidity cells and leach rates ranged from 0.00009 to 0.0008 mg/kg/wk at week 75 (Figure 5.2-57).

Nickel leach rates increased over time in the acidic HCT-3, 4, and 6 with leach rates ranging from 0.002 to 0.005 mg/kg/wk by week 75. Leach rates in the near-neutral humidity cells were frequently below detection (Figure 5.2-58).

Silver leach rates increased over time in the acidic HCT-3, 4, and 6 with leach rates ranging from 0.00009 to 0.00014 mg/kg/wk by week 75. Leach rates in the near-neutral humidity cells were frequently below detection (Figure 5.2-58).

Thallium leach rates were stable over time in all humidity cells and were elevated in acidic cells over near-neutral cells. The highest concentrations were observed in HCT-3 and 4 and steady state thallium leach rates were 0.0003 mg/kg/wk in HCT-3 and decreased to 0.00003 mg/kg/wk in HCT-4 (Figure 5.2-59).

Zinc leach rates increased over time in the acidic cells to between 0.11 to a maximum of 2.8 mg/kg/wk at week 53, and were highly variable in the near-neutral cells (Figure 5.2-59).

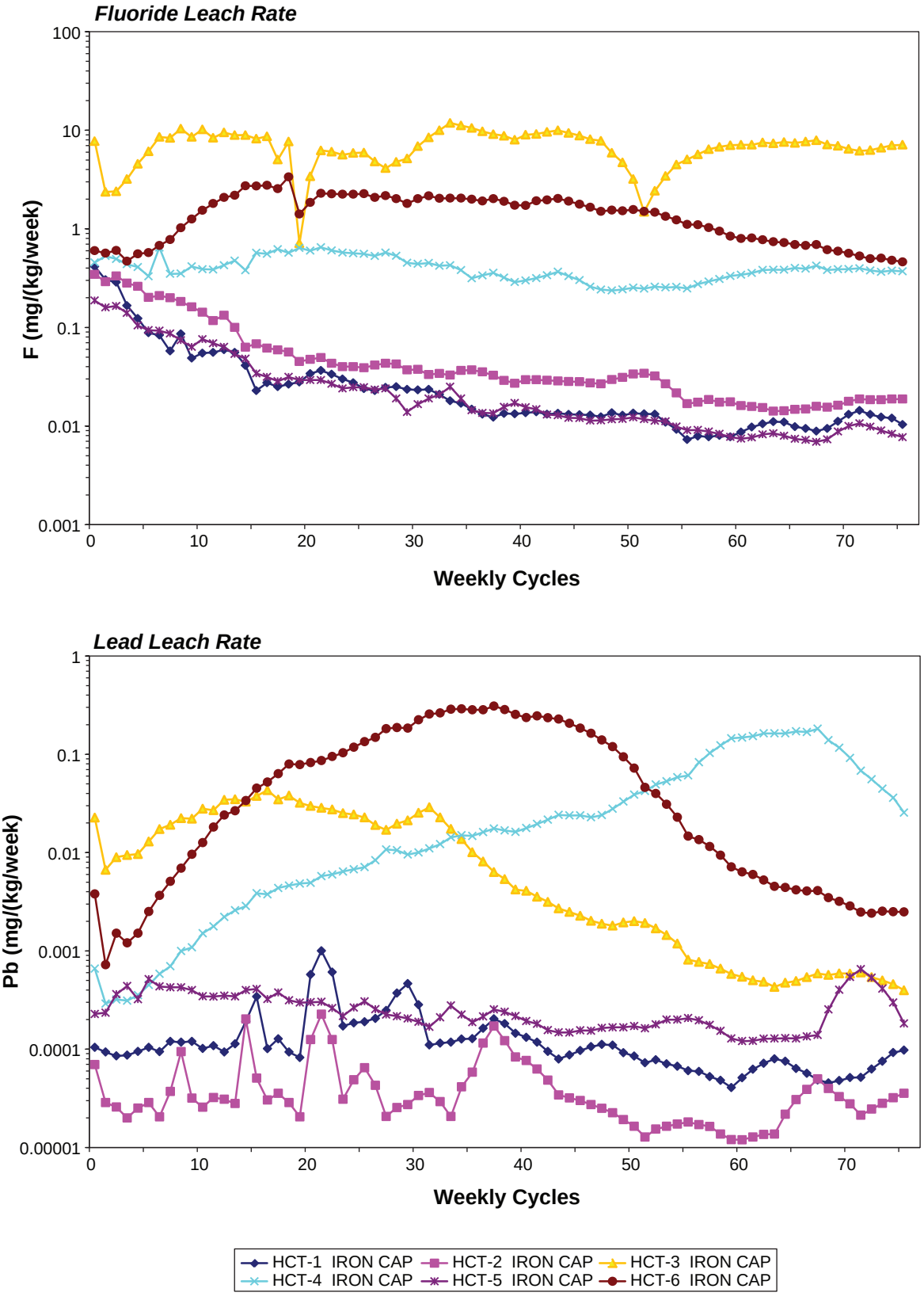
Table 5.2-5 summarizes the parameters with elevated concentrations by model code under acidic and neutral drainage conditions in order to inform treatment design.

Table 5.2-5. Iron Cap Deposit Acidic and Neutral Leachate from Humidity Cells

Model Code	Acidic Drainage	Neutral Drainage
Iron Cap	Sulphate, Aluminum, Arsenic, Cadmium, Chromium, Cobalt, Copper, Fluoride, Iron, Lead, Nickel, Selenium, Silver, Thallium, Zinc	Aluminum, Cadmium, Copper, Selenium, Thallium

Elements associated with the Neutralization Potential

After an initial decrease, calcium leach rates were relatively stable in all humidity cells and ranged from 1.8 to 13 mg/kg/wk, with the exception of HCT-6 in which the calcium leach rates decreased after week 53 to a mimunim of 2.7 mg/kg/wk. Magnesium leach rates decreased over time for all humidity cells, with the exception of HCT-1 which remained stable at around 0.3 mg/kg/wk (Figure 5.2-60).

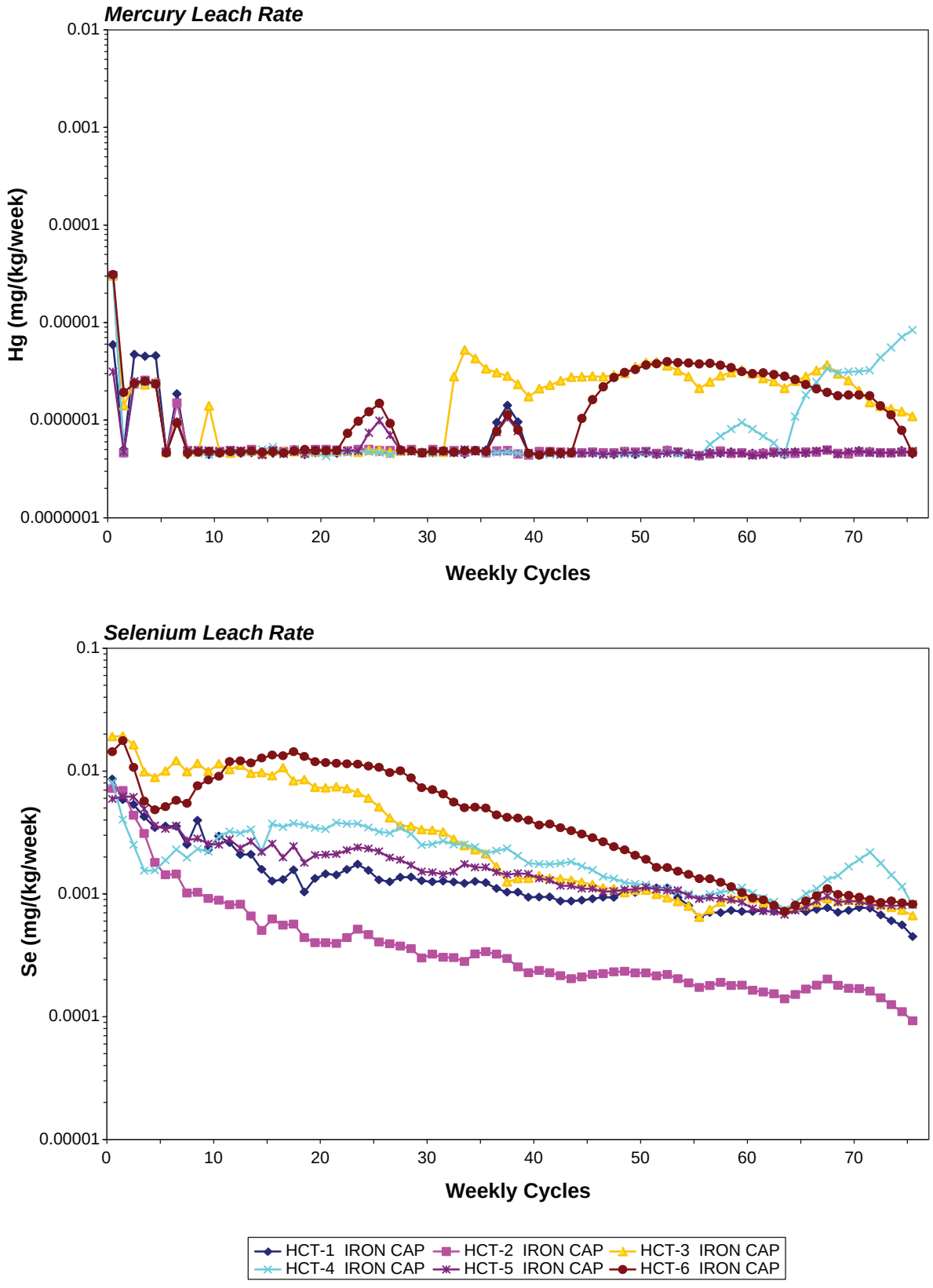


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Fluoride and Lead Leach Rates,
Iron Cap Deposit Waste Rock Humidity Cells

Figure 5.2-56

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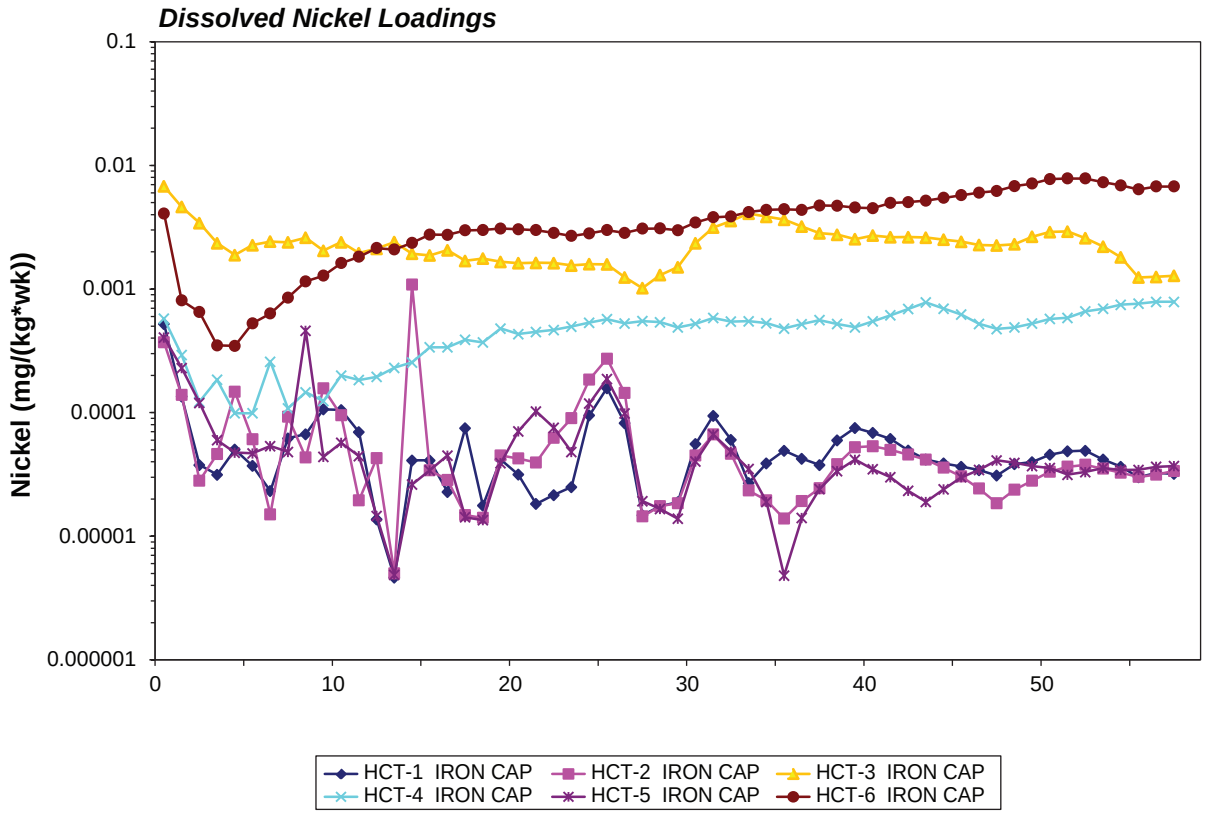


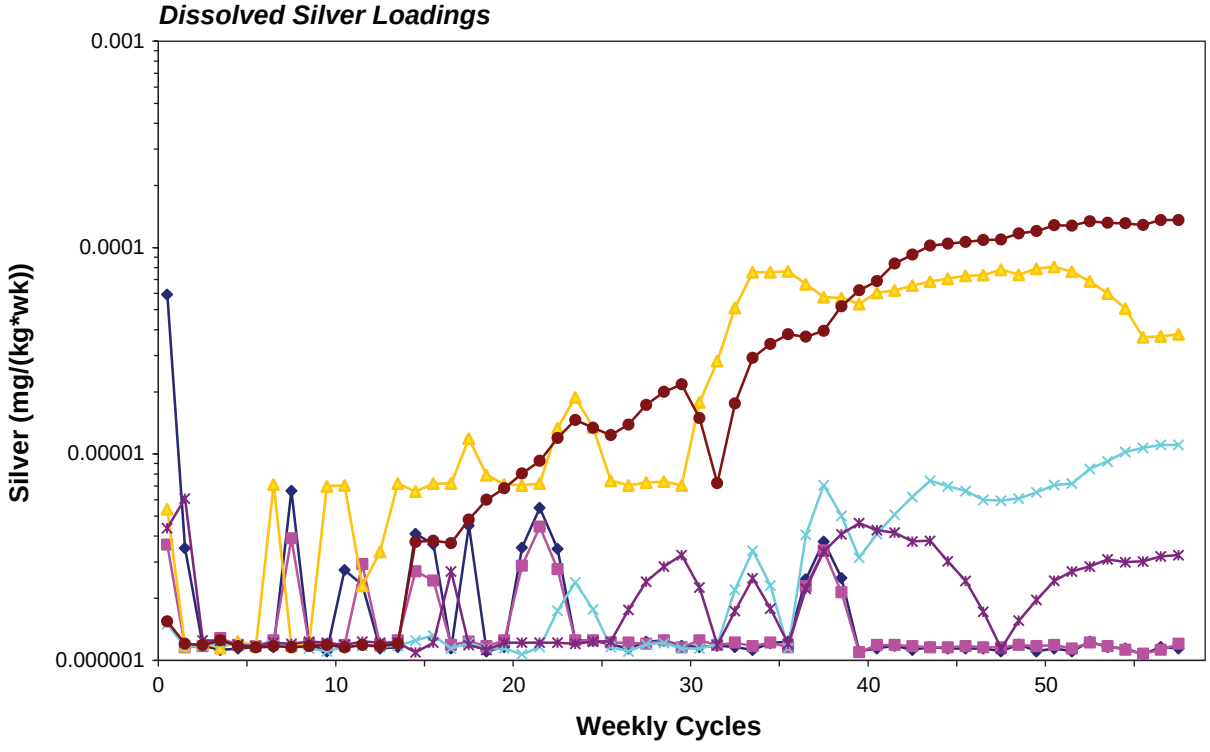
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**Mercury and Selenium Leach Rates,
Iron Cap Deposit Waste Rock Humidity Cells**

Figure 5.2-57

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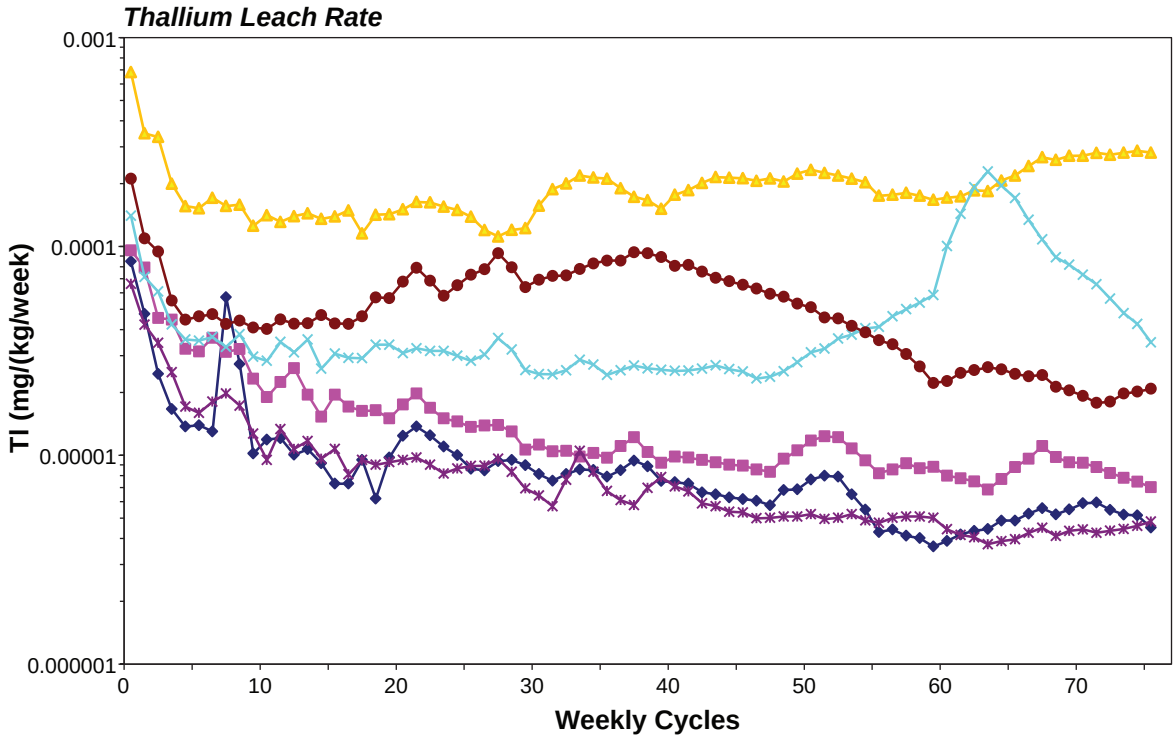


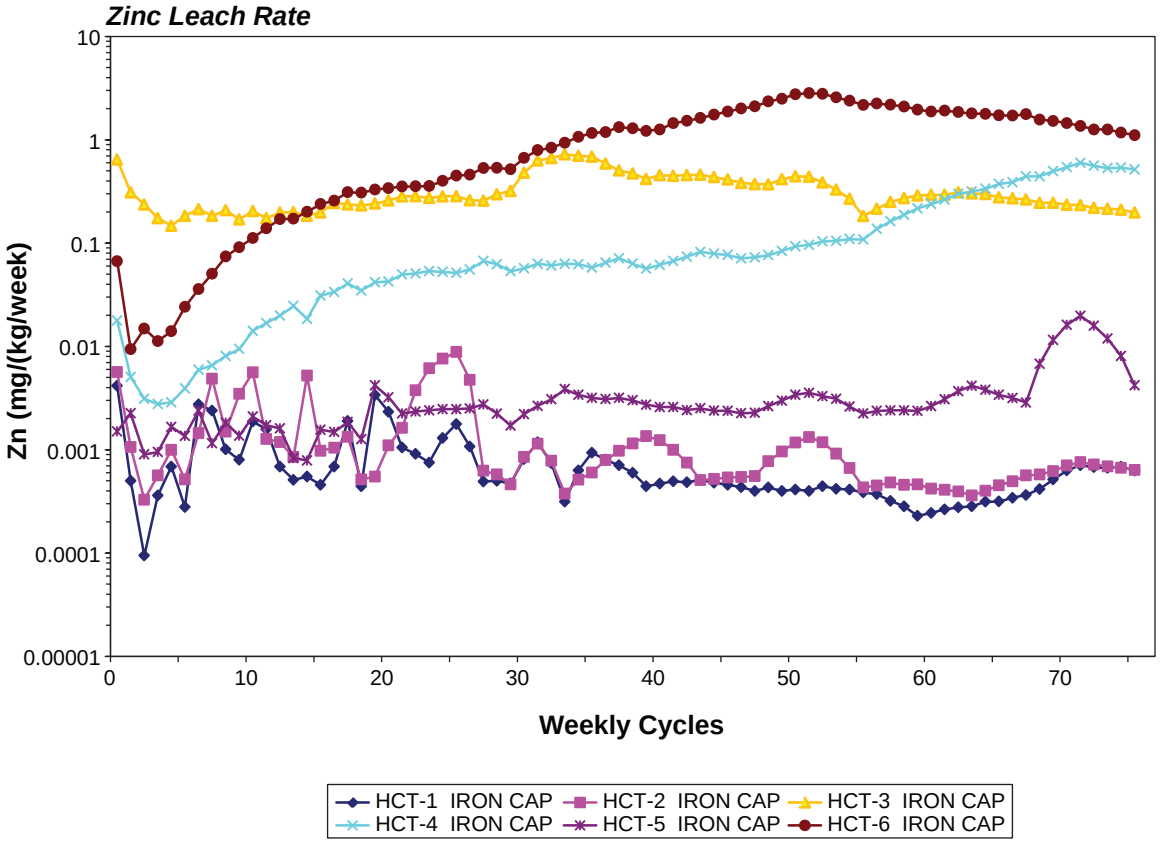
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Nickel and Silver Leach Rates, Iron Cap Deposit Waste Rock Humidity Cells

Figure 5.2-58

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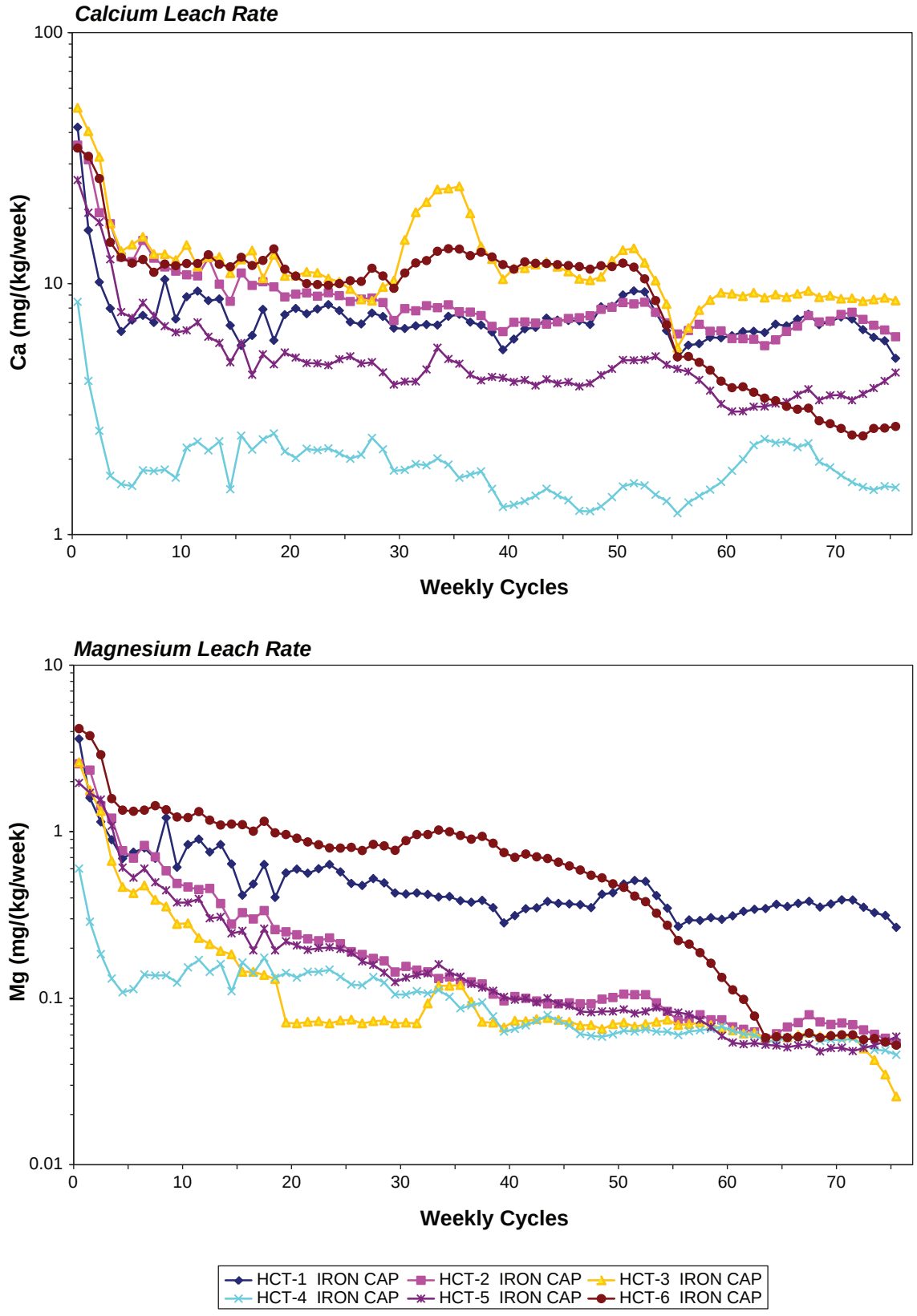


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**Thallium and Zinc Leach Rates,
Iron Cap Deposit Waste Rock Humidity Cells**

Figure 5.2-59

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**Calcium and Magnesium Leach Rates,
Iron Cap Deposit Waste Rock Humidity Cells**

Figure 5.2-60

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5.2.1.3 Post-test Static Test Results

As part of the humidity cells closedown procedure, ABA static tests have been performed on the samples solid phase. Appendix 5.2-7 presents the post-humidity cells solid-phase static tests results for the KSM Project.

5.2.1.4 Depletion Times and Onset of Acid Rock Drainage

The rates of depletion of sulphide, bulk Sobek NP, and carbonate NP were calculated and used to estimate the time to the onset of ARD. Table 5.2-6 presents a summary of these data by ABA block model code.

The onset to ARD for acidic humidity cells or humidity cells with no available NP is 0 years, indicating that ARD is predicted to be immediate or within weeks for waste rock represented by these humidity cells. ARD from waste rock from the Kerr Deposit is predicted to occur within a range of immediate to 92 years, with an end to sulphide depletion occurring three to 263 years following ARD onset. ARD from waste rock from the Sulphurets Deposit is predicted to occur within a range of immediate to 147 years (never if based on Bulk NP), with an end to sulphide depletion occurring eight to 296 years subsequently. ARD from waste rock from the Mitchell Deposit upper panel is predicted to occur within a range of two to 268 years, with an end to sulphide depletion occurring two to 629 years following ARD onset. ARD from waste rock from the Mitchell Deposit lower panel is predicted to occur within a range of immediate to 307 years (never if based on Bulk NP), with an end to sulphide depletion occurring nine to 469 years subsequently. ARD from waste rock from the Iron Cap deposit is predicted to occur within the range of immediate to 233 years, with an end to sulphide depletion occurring from 50 to 27, 257 years subsequently. It should be noted that ARD onset predictions are based on the assumption that stable leach rates will persist; however, little long-term data exists to assess this assumption (Price 2009). Stable rates can persist within a factor of two for at least five years, but these ARD onset predictions should be updated and assessed by ongoing kinetic testing and monitoring (Day 1994). A reduction in leach rates over the long-term is expected, and will increase the time to predicted ARD onset.

The results indicated considerable disagreement in predictions of ARD onset based on the source of NP (measured bulk Sobek NP or calculated carbonate NP). Notably, ARD was never predicted to occur for some cells of Sulphurets (UP Hazelton, Lowe Au zone) and Mitchell (Monzonite, LP Hazelton) based on depletion of bulk NP, but was predicted to occur within 43 to 183 years based on depletion of carbonate NP. This discrepancy in onset to ARD time also predicted that two humidity cells with adjusted SNPR > 2 (Sulphurets UP Hazelton and Mitchell upper panel Monzonite) would become acidic in approximately 40 years based on the depletion of carbonate NP. Section 4 has a detailed description of the methods used to calculated depletion times and ARD onset.

5.2.2 Sub-Aerial Drip Columns

This section presents the results of static tests and kinetics tests performed on four laboratory sub-aerial drip columns constructed using drill core samples of the same model codes as were used for KSM field leach barrels 1 to 4. The laboratory column material represents M UP Hazelton, M LP Hazelton, and M Monzonite model codes.

5.2.2.1 Pre-Test Static Test Results

The full static test dataset can be found in Appendix 5.2-8. Detailed analytical mineralogy and petrographic studies for waste rock can be found in Appendix 5.1-2 and 5.1-3, respectively, and are referred to elsewhere in this report (Section 5.1).

The statistical summary of the solid phase elemental analysis results is presented in Section 5.2.3.1.

Table 5.2-6. Depletion Rates, ARD Onset, and End of ARD by Model Code for Humidity Cells

Cell ID *Units*	Adj SNPR	pH last 10 weeks	Sulphate Production Rate (mmol S/kg/wk)	Sulphide Depletion (years)	Bulk NP Consumption Rate (mg $CaCO_3$/kg/wk)	Carbonate Depletion Rate (mmol/kg/wk)
Kerr						
HC20 KERR	0.23	7.3	0.09	224	9.4	0.13
HC21 KERR	0.00	3.4	0.55	113	0.0	0.00
HC22 KERR	0.00	6.1	0.21	263	0.0	0.18
HC23 KERR	0.00	2.8	2.54	16	0.0	0.16
Sulphurets						
S-06-04 UP Hazelton	2.13	8.1	0.01	195	1.4	0.12
HC17 UP Hazelton	1.93	7.6	0.02	296	2.4	0.10
S-06-05 Overburden	0.00	2.6	2.03	8	202.9	0.07
HC24 Lower Au zone	0.26	6.7	0.06	241	5.6	0.09
HC25 Lower Au zone	1.20	7.4	0.09	252	8.6	0.17
HC18 Undefined	0.99	7.5	0.09	250	9.2	0.18
HC19 Undefined	0.53	7.1	0.10	142	9.9	0.15
Mitchell						
M-07-33 UP Hazelton	0.58	8.0	0.04	376	4.1	0.14
M-07-44 UP Hazelton	0.05	7.8	0.24	318	23.8	0.34
HC 10 UP Hazelton	0.22	7.3	0.06	420	6.3	0.12
HC 13 UP Hazelton	0.54	7.4	0.02	195	2.0	0.08
HC 14 UP Hazelton	0.99	7.3	0.04	270	4.1	0.10
HC 2 UP Hazelton	0.00	4.7	0.16	81	15.9	0.01
HC 3 UP Hazelton	0.00	7.5	0.06	237	5.5	0.13
HC 4 UP Hazelton	0.44	7.4	0.03	737	2.5	0.09
HC 6 UP Hazelton	0.36	7.3	0.10	318	10.1	0.15
NM-05-03 Monzonite UP	2.44	8.0	0.01	181	0.7	0.10
M-06-14 LP Hazelton	0.00	2.9	1.38	27	137.7	0.10
M-07-43 LP Hazelton	0.00	3.3	0.44	30	44.0	0.10
HC 1 LP Hazelton	0.00	3.2	0.42	71	41.9	0.02
HC 11 LP Hazelton	0.18	7.3	0.08	377	8.3	0.14
HC 12 LP Hazelton	0.28	7.2	0.09	250	9.1	0.11
HC 16 LP Hazelton	0.18	7.0	1.85	18	185.4	1.70
HC 26 LP Hazelton	0.36	7.3	0.07	317	6.9	0.11
HC 5 LP Hazelton	0.63	7.3	0.04	488	3.8	0.11
HC 7 LP Hazelton	1.04	7.4	0.03	469	2.6	0.09
HC 8 LP Hazelton	0.70	7.3	0.07	195	7.0	0.13
HC 9 LP Hazelton	0.27	7.3	0.11	443	10.9	0.17
M-07-30 Monzonite LP	2.13	7.9	0.01	23	0.7	0.11
HC 15 Leach breccia/bornite breccia	0.00	2.4	11.12	9	1112.5	0.96
Iron Cap						
HCT-1 IRON CAP	0.34	7.8	0.06	236	6.3	0.13
HCT-2 IRON CAP	0.17	7.6	0.06	397	6.1	0.15
HCT-3 IRON CAP	0.00	3.0	0.00	17736	0.0	0.25
HCT-4 IRON CAP	0.00	4.3	0.04	94	0.0	0.03
HCT-5 IRON CAP	0.12	7.1	0.02	1274	2.5	0.10
HCT-6 IRON CAP	0.00	2.8	0.00	27267	0.0	0.19

(continued)

Table 5.2-6. Depletion Rates, ARD Onset, and End of ARD by Model Code for Humidity Cells (completed)

Cell ID *Units*	Bulk NP Depletion (years)	Carbonate NP Depletion (years)	ARD Onset (Bulk NP Depletion) (years)	ARD Onset (Carbonate Depletion) (years)	End of Sulphide Depletion (following Bulk NP Depletion) (years)	End of Sulphide Depletion (following Carbonate Depletion) (years)
Kerr						
HC20 KERR	48	48	48	48	176	176
HC21 KERR	0	92	0	92	113	22
HC22 KERR	0	2	0	2	263	261
HC23 KERR	0	13	0	13	16	3
Sulphurets						
S-06-04 UP Hazelton	379	55	never	55	195	140
HC17 UP Hazelton	576	135	never	135	296	161
S-06-05 Overburden	0	0	0	0	8	9
HC24 Lower Au zone	61	32	61	32	180	209
HC25 Lower Au zone	294	147	never	147	252	106
HC18 Undefined	228	8	228	8	22	242
HC19 Undefined	67	46	67	46	75	96
Mitchell						
M-07-33 UP Hazelton	217	88.6	217	89	159	287
M-07-44 UP Hazelton	13	14.6	13	15	305	304
HC 10 UP Hazelton	88	45.8	88	46	331	374
HC 13 UP Hazelton	105	39.8	105	40	90	155
HC 14 UP Hazelton	268	96.3	268	96	2	174
HC 2 UP Hazelton	0	57.1	0	57	84	24
HC 3 UP Hazelton	0	4.2	0	4	240	233
HC 4 UP Hazelton	326	108.3	326	108	412	629
HC 6 UP Hazelton	114	94.5	114	95	204	223
NM-05-03 Monzonite UP	446	43.3	never	43	181	138
M-06-14 LP Hazelton	0	4.4	0	4	30	23
M-07-43 LP Hazelton	0	4.9	0	5	32	25
HC 1 LP Hazelton	0	33.5	0	33	73	38
HC 11 LP Hazelton	67	51.5	67	52	310	326
HC 12 LP Hazelton	69	73.7	69	74	180	176
HC 16 LP Hazelton	1	2.4	1	2	17	15
HC 26 LP Hazelton	114	77.5	114	78	203	239
HC 5 LP Hazelton	307	146.0	307	146	181	342
HC 7 LP Hazelton	487	183.2	never	183	469	286
HC 8 LP Hazelton	136	74.9	136	75	59	120
HC 9 LP Hazelton	116	85.3	116	85	326	358
M-07-30 Monzonite LP	53	25.3	never	never	23	23
HC 15 Leach breccia/bornite breccia	0	0.1	0	0	10	9
Iron Cap						
HCT-1 IRON CAP	79	185.7	79	186	157	50
HCT-2 IRON CAP	66	145.7	66	146	331	251
HCT-3 IRON CAP	0	5	0	5	17736	17731
HCT-4 IRON CAP	0	30.6	0	31	94	63
HCT-5 IRON CAP	144	232.6	144	233	1130	1041
HCT-6 IRON CAP	0	9	0	9	27267	27257

Paste pH

Figure 5.2-61 presents the plots of the paste pH values of the sub-aerial drip column samples in relation to the statistical distribution of the paste pH values determined for all waste rock samples by model code. The results show that all the sub-aerial drip columns samples are within the pH interquartile range for their model code.

Sulphur Species

Figure 5.2-62 presents the plots of the total-sulphur values of the sub-aerial drip column samples in relation to the statistical distribution of the total-sulphur values determined for all waste rock samples by model code. The results show that all the sub-aerial drip column samples are within the total-sulphur interquartile range for their model code.

Figure 5.2-63 presents the plots of the sulphide-sulphur values of the sub-aerial drip column samples in relation to the statistical distribution of the sulphide-sulphur values determined for all waste rock samples by model code. The results show that all the sub-aerial drip column samples are within the sulphide-sulphur interquartile range for their model code.

Neutralization Potential

Figure 5.2-64 presents the plots of the NP values of the sub-aerial drip column samples in relation to the statistical distribution of the NP values determined for all waste rock samples by model code. The results show that all the sub-aerial drip columns samples are within the NP range for their model code.

Sulphide Net Potential Ratio

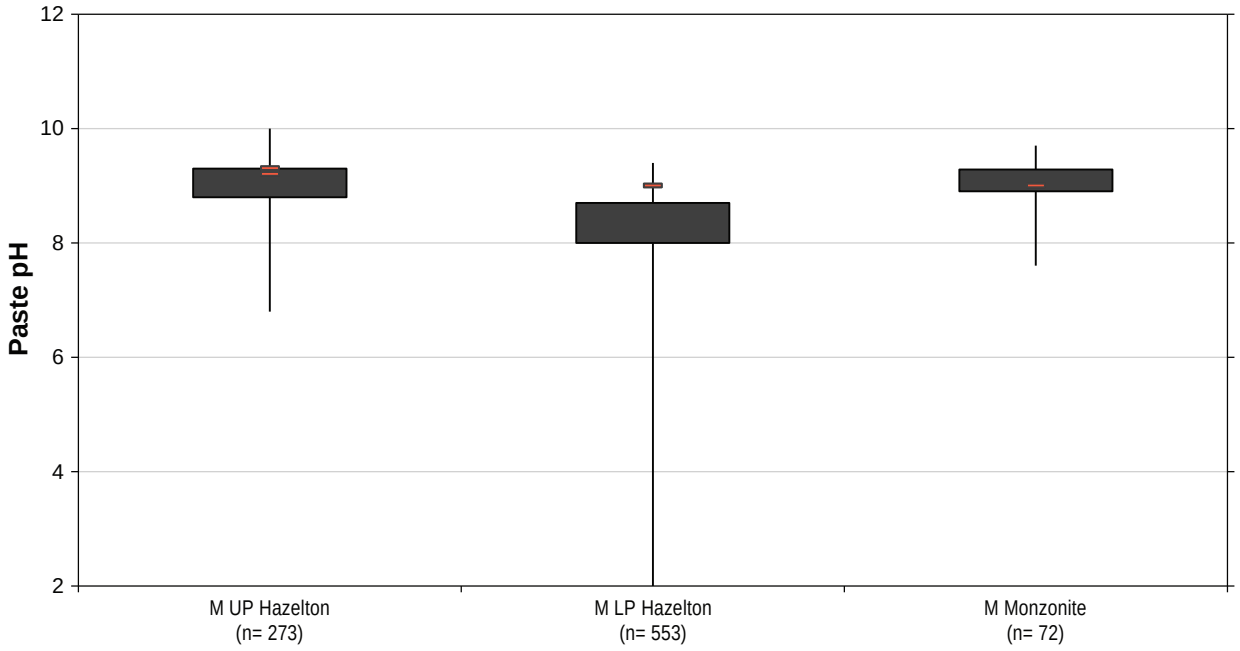
Figure 5.2-65 presents the plots of the adjusted SNPR values of the sub-aerial drip column samples in relation to the statistical distribution of the adjusted SNPR values determined for all waste rock samples by model code. The results show that all the sub-aerial drip column samples are within the adjusted SNPR interquartile range for their model code.

5.2.2.2 Kinetic Test Results

The following discussion presents the results for the leachate analyses from the sub-aerial laboratory drip columns for the Mitchell Deposit for:

- Indicators of acid generation (pH, sulphate, and alkalinity);
- Elements that contribute to acidity (aluminum, iron, and manganese);
- Trace elements with elevated concentrations in the last 10 weekly cycles relative to water quality guidelines. Identification of these elements can be used to inform treatment design decisions, including treatment at the proposed Water Treatment Plant (WTP), and water quality modelling; and
- Calcium and magnesium which commonly occur in carbonate mineral phases and are associated with the neutralization potential.

The sub-aerial drip column data are supplemental to the humidity cell data and primarily serve as a comparison. Mitchell Deposit waste rock is expected to dominate the waste rock chemistry at the Project, therefore, only Mitchell Deposit material was selected for these kinetic tests. The complete data set for the sub-aerial laboratory drip columns leachate concentrations is presented in Appendix 5.2-9. Leachate water was recirculated during the kinetic tests and therefore leach rates could not be accurately calculated or evaluated. The following ABA block model codes were represented: a composite of UP Hazelton and Monzonite (Columns 1, 2, and 3) and a composite of UP Hazelton and LP Hazelton (Column 4).



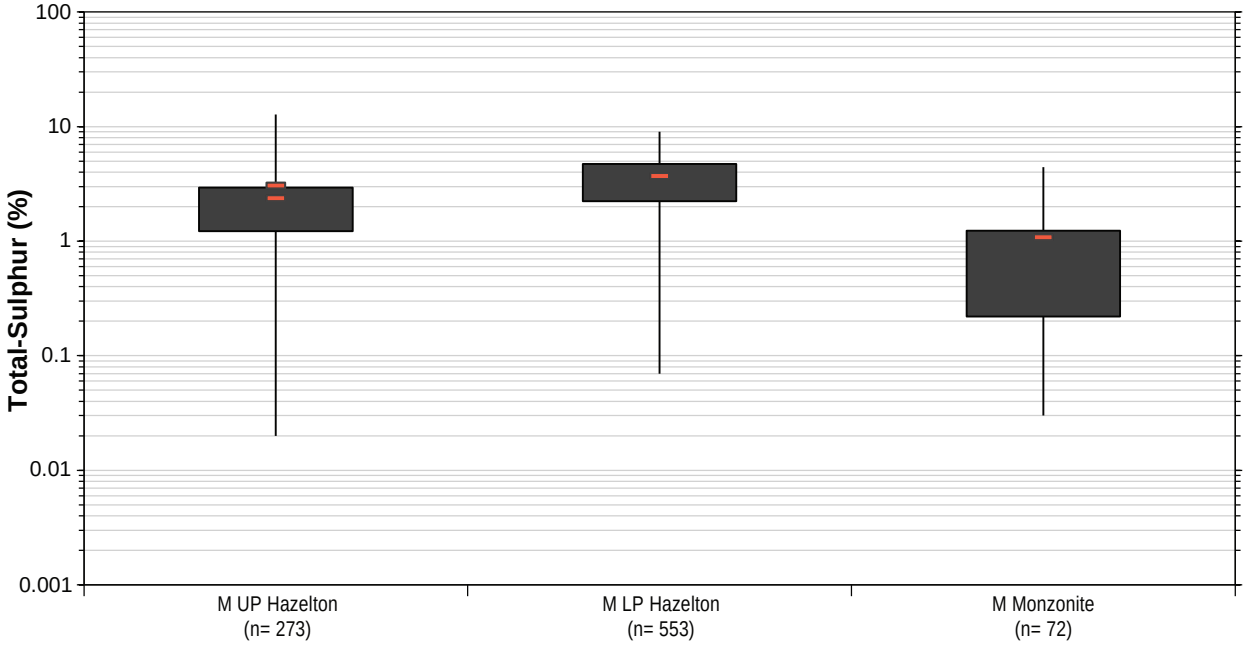
Note: 25th to 75th percentile is represented by the shaded box. The red bars indicate individual humidity cells.

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Statistical Summary - Paste pH by Model Code for Sub-Aerial Drip Columns

Figure 5.2-61

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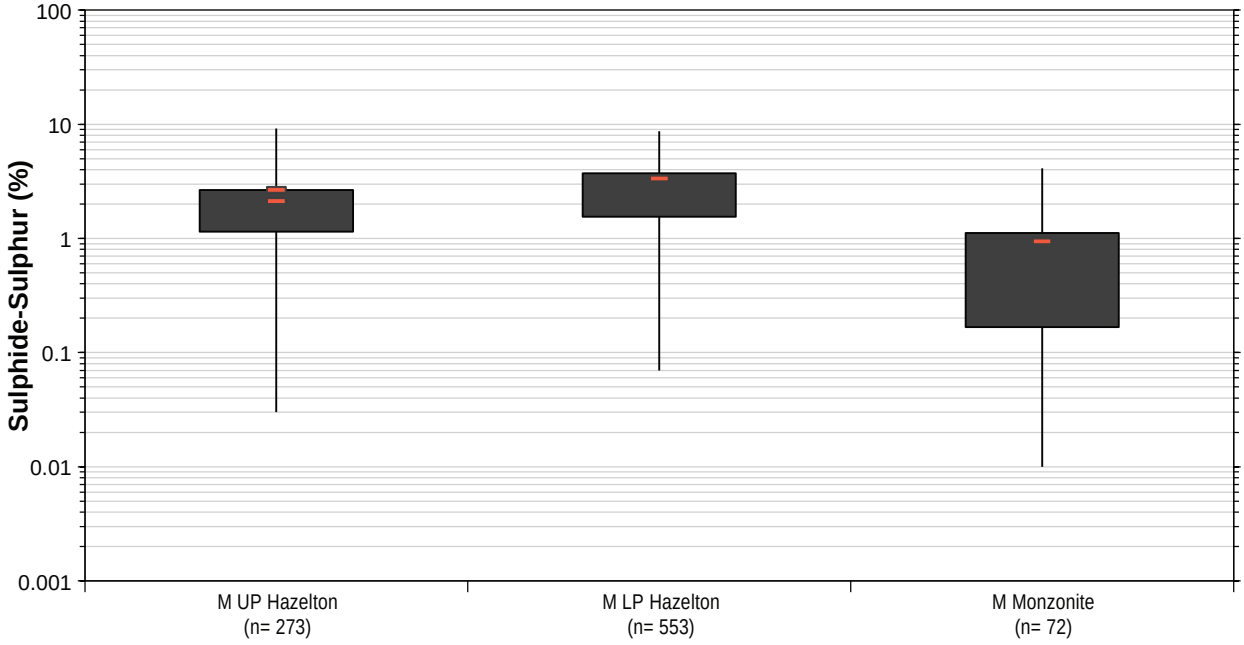
Note: 25th to 75th percentile is represented by the shaded box. The red bars indicate individual humidity cells.

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Statistical Summary - Total-Sulphur Concentrations by Model Code for Sub-Aerial Drip Columns

Figure 5.2-62

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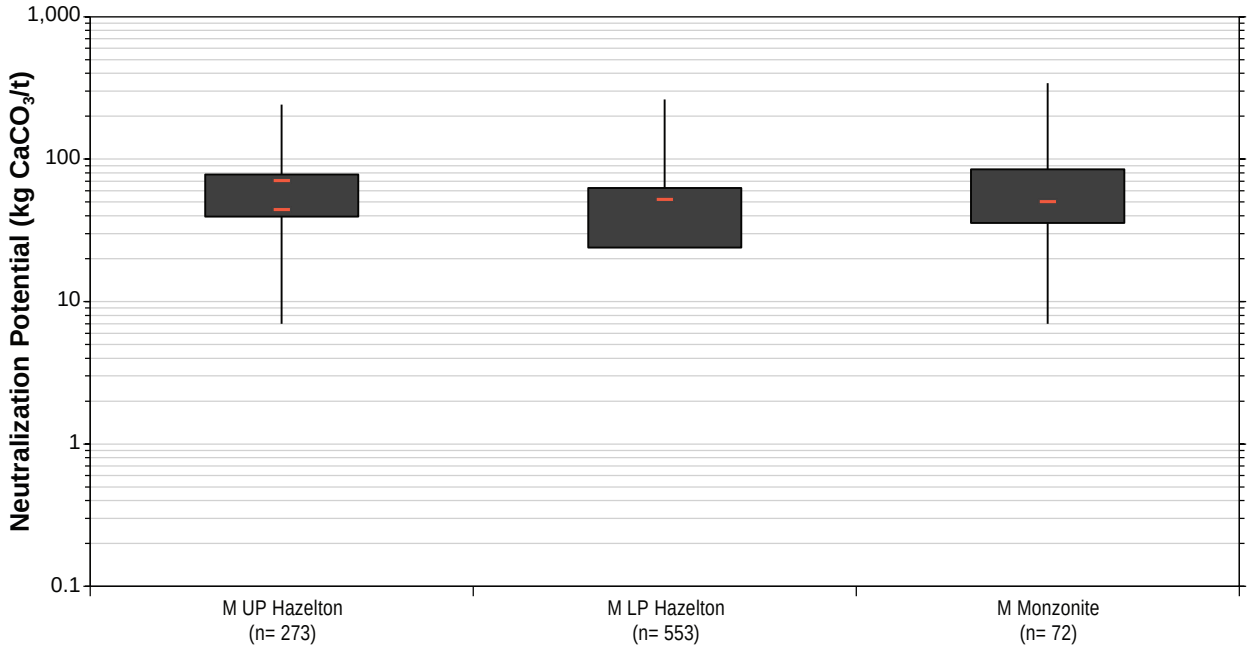
Note: 25th to 75th percentile is represented by the shaded box. The red bars indicate individual humidity cells.

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Statistical Summary - Sulphide-Sulphur Concentrations by Model Code for Sub-Aerial Drip Columns

Figure 5.2-63

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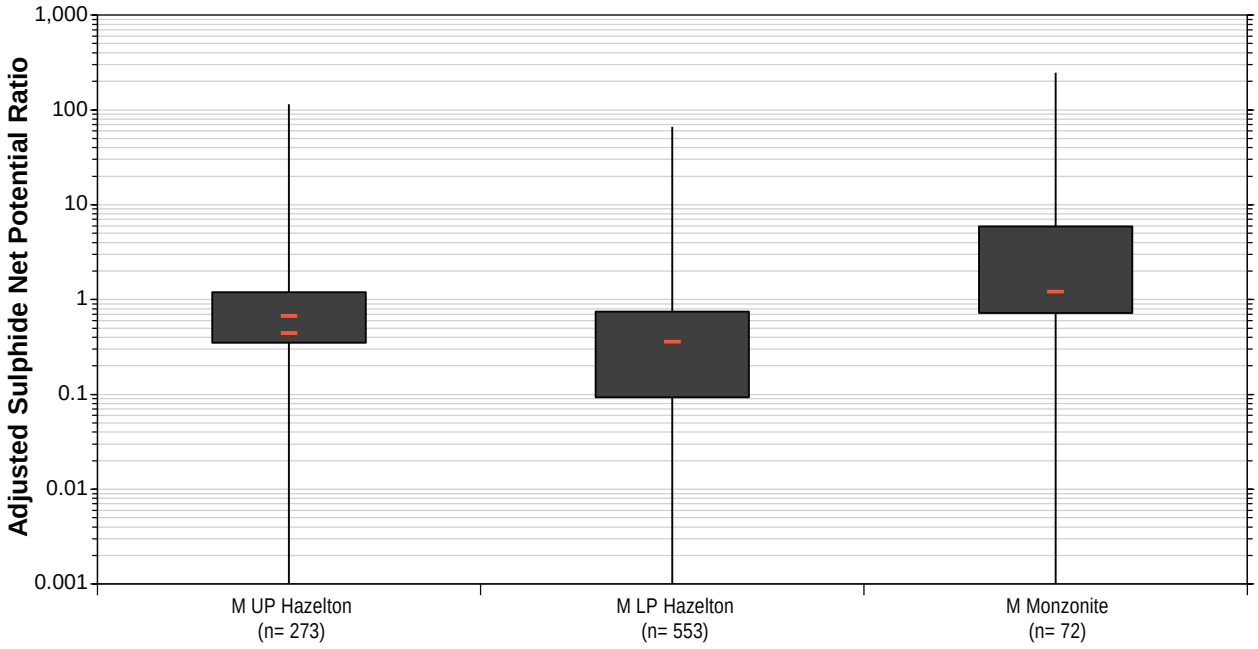
Note: 25th to 75th percentile is represented by the shaded box. The red bars indicate individual humidity cells.

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Statistical Summary - Neutralization Potential Values by Model Code for Sub-Aerial Drip Columns

Figure 5.2-64

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Note: 25th to 75th percentile is represented by the shaded box. The red bars indicate individual humidity cells.

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Statistical Summary - Adjusted Sulphide Net Potential Ratio by Model Code for Sub-Aerial Drip Columns

Figure 5.2-65

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These data represent four sub-aerial laboratory drip columns, constructed using waste rock from the Mitchell Deposit that was operated for 107 weeks. Data was collected for the first two weeks, and from week 30 to week 107.

pH, Sulphate, and Alkalinity

The pH remained near neutral at approximately pH 8 for 107 weeks in all four drip columns. Steady-state sulphate concentrations ranged from 30 mg/L in Column 1 to 80 mg/kg/wk in Column 4. The stable pH indicated that any acid produced during sulphide oxidation was effectively neutralized. Weekly alkalinity observations showed some variability in Column 1, but steady alkalinity was produced in Columns 2 to 4 at approximately 36 mg $CaCO_3$/L (Figure 5.2-66).

Elements that Contribute to Acidity

Aluminum concentrations were generally stable with concentrations approximately 0.03 mg/L in Columns 1 and 2 and 0.01 mg/L in Columns 3 and 4. Iron concentrations were below the detection limit in all columns for 107 weeks. Manganese concentrations ranged from 0.08 mg/L in Column 1 to 0.4 mg/L in Column 3 and were stable over time (Figure 5.2-67).

Trace Elements

Stable cadmium concentrations were 0.00008 mg/L, 0.0001 mg/L, and 0.0005 mg/L in Columns 2 to 4, respectively (Figure 5.2-68). Cadmium concentrations in Column 1 were always below the detection limit.

Fluoride concentrations were similar in Columns 1 and 2 and were approximately 0.9 mg/L. Concentrations in Columns 3 and 4 decreased over time to final values of 0.07 mg/L (Figure 5.2-68).

Selenium concentrations decreased over time in all four columns to final concentrations ranging from 0.003 mg/L in Column 1 to 0.01 mg/L in Column 3 (Figure 5.2-68).

Elements Associated with the Neutralization Potential

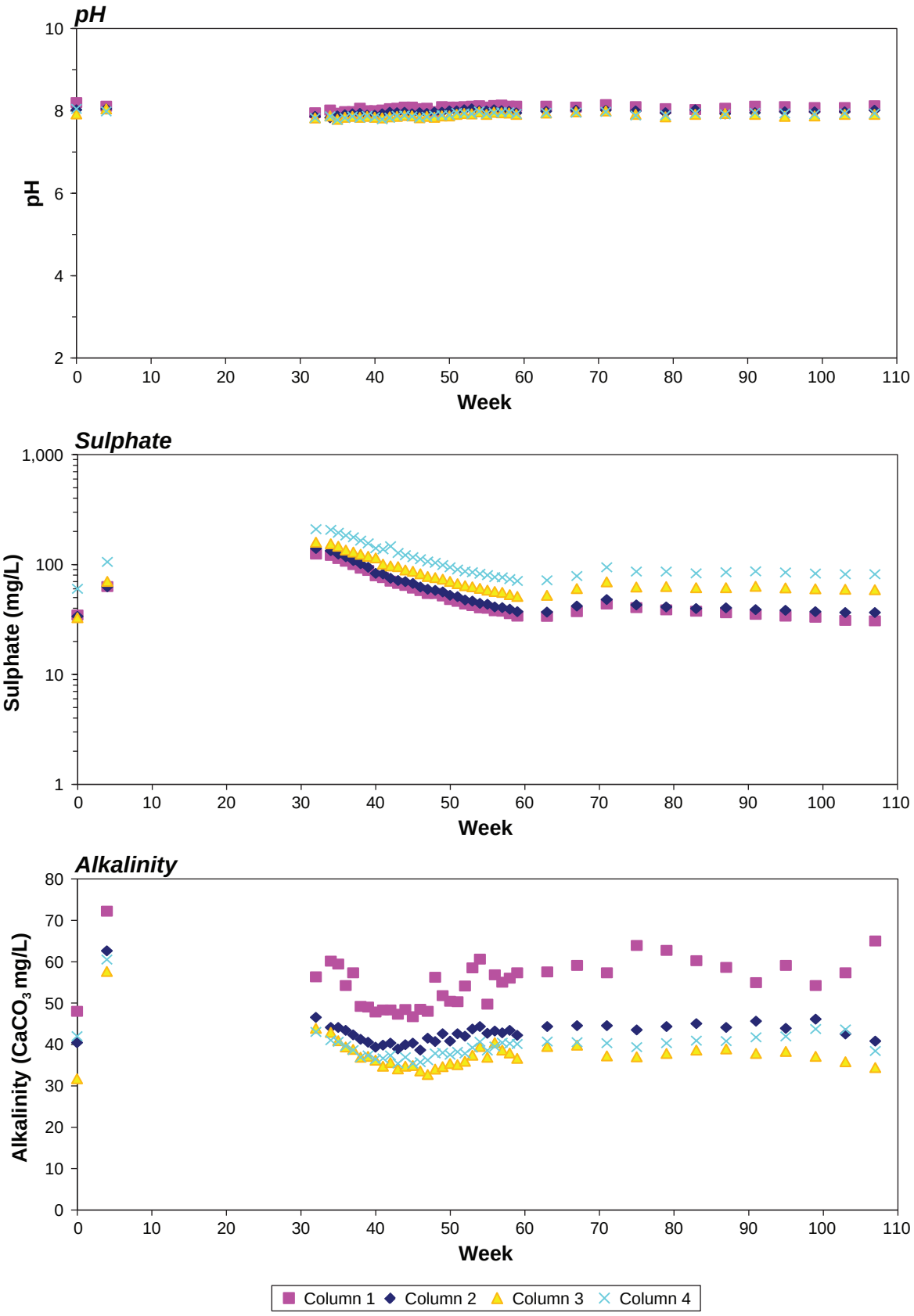
Steady state calcium concentrations ranged from 24 mg/L in Column 1 to 42 mg/L in Column 4. Steady state magnesium concentrations ranged from 2 mg/L in Column 2 to 5 mg/L in Column 1. Calcium and magnesium concentrations were stable from week 60 to week 107 (Figure 5.2-69).

5.2.3 Field Leach Barrels

This section presents the results of pre-kinetic static tests performed on 12 field leach barrels and the results of kinetic tests performed on 18 field leach barrels constructed at the KSM Project exploration camp near Sulphurets Creek to assess the ML/ARD properties of potential waste and pit wall rock material in the proposed KSM Project mine area. The Kerr Deposit is represented by Barrel 9, the Sulphurets Deposit is represented by barrels 10, 11, and 14, the Mitchell Deposit upper panel is represented by barrels 1 to 3, 8, 12, 15, and 16, and the Mitchell Deposit lower panel is represented by barrels 4 to 7, 13, and 17. The Iron Cap Deposit is not represented by any field leach barrels; however, the design change to block caving has greatly reduced the volume of waste rock proposed to be produced from the Iron Cap Deposit. Furthermore, the Mitchell Deposit waste rock field leach data are a reasonable approximation of the Iron Cap waste rock.

5.2.3.1 Pre-test Static Test Results

Static tests results are only available for 12 drill core samples. The full static test dataset can be found in Appendix 5.2-10. Detailed analytical mineralogy and petrographic studies for waste rock can be found in Appendix 5.1-2 and 5.1-3, respectively, and are referred to elsewhere in report (Section 5.1).

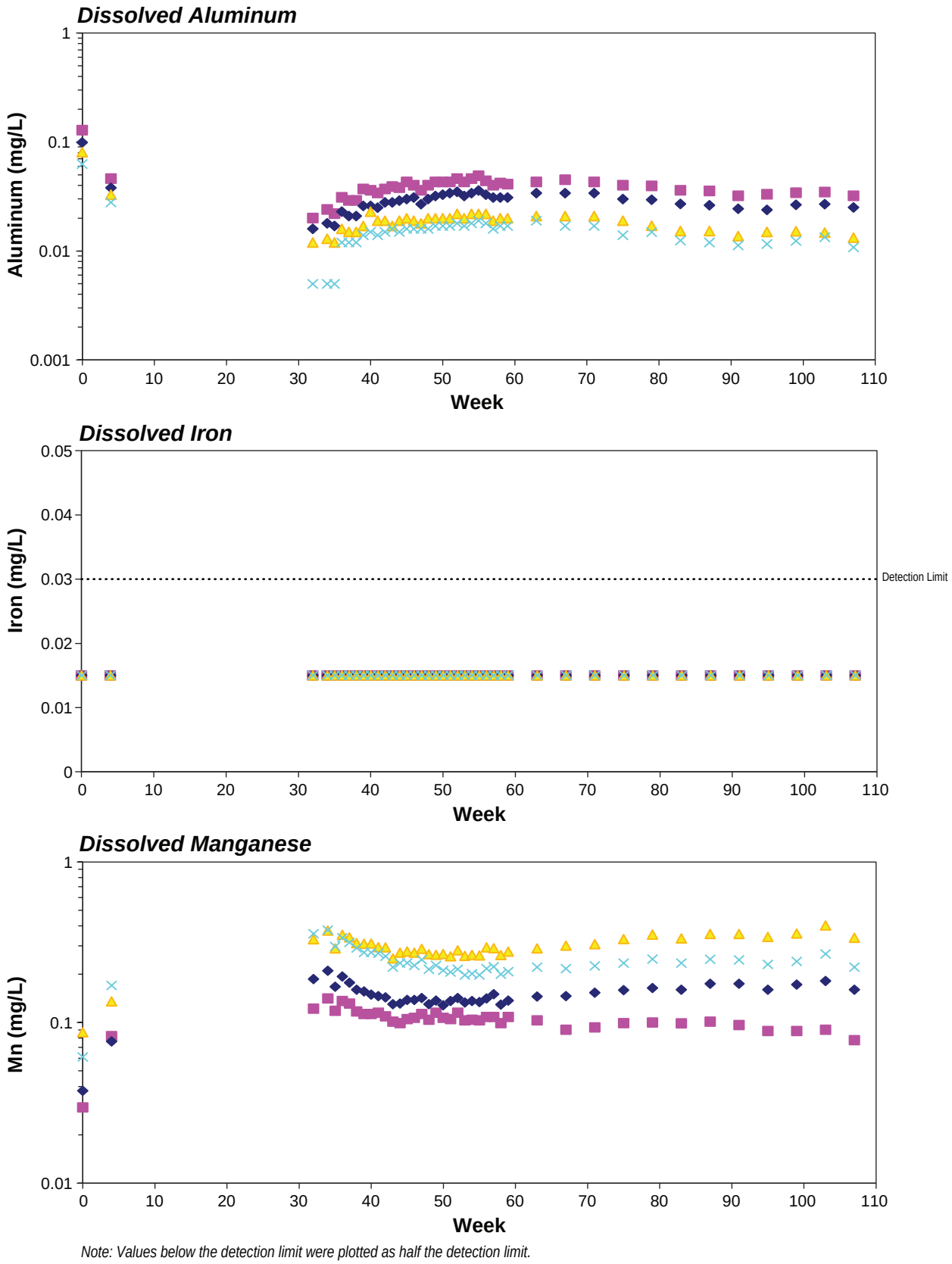


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**Weekly pH, Sulphate and Alkalinity,
Mitchell Deposit Waste Rock
Sub-Aerial Drip Columns**

Figure 5.2-66

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Note: Values below the detection limit were plotted as half the detection limit.

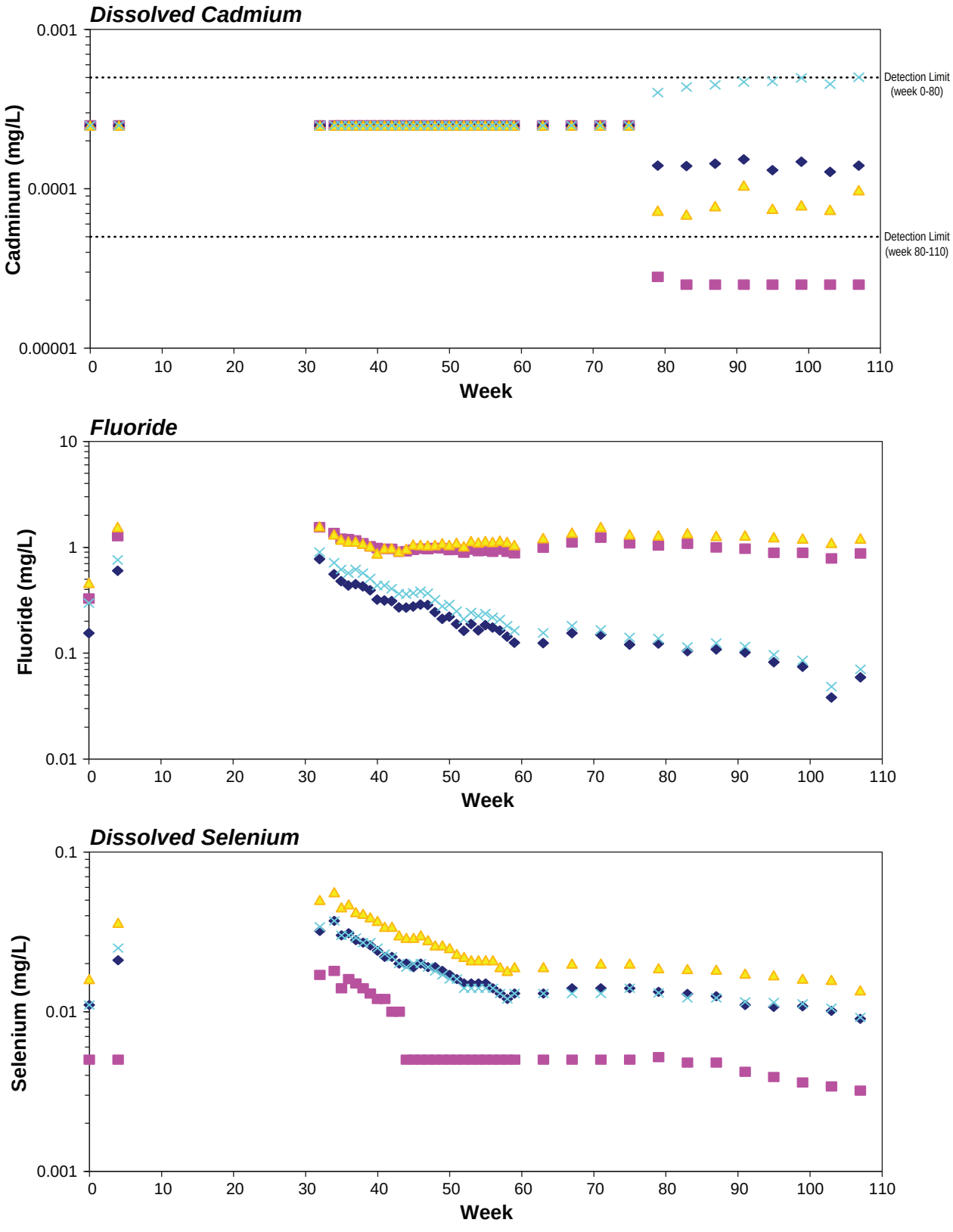
Column 1 ◆ Column 2 ▲ Column 3 × Column 4

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Aluminum, Iron, and Manganese Concentrations, Mitchell Deposit Waste Rock Sub-Aerial Drip Columns

Figure 5.2-67

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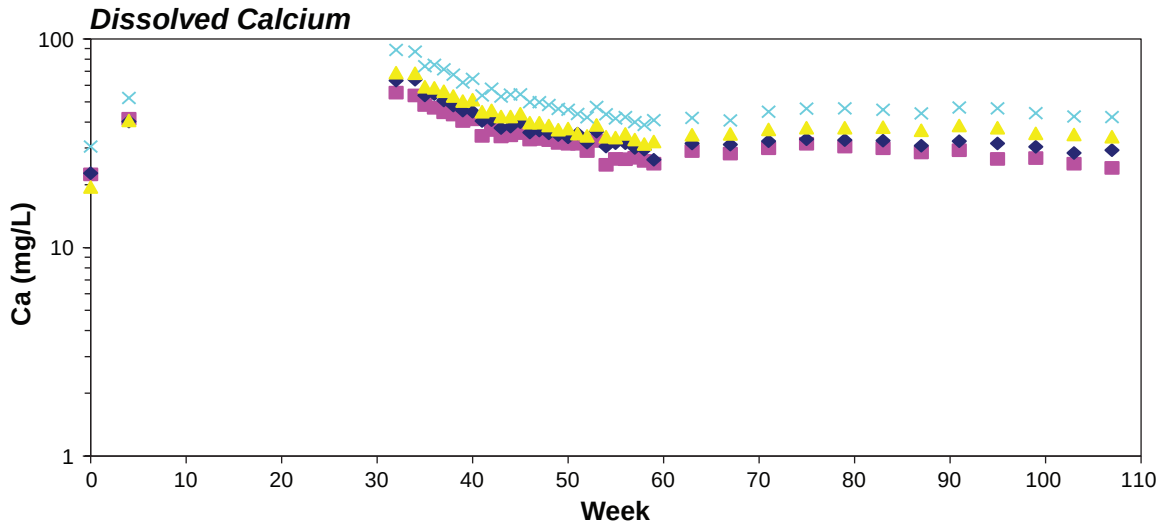


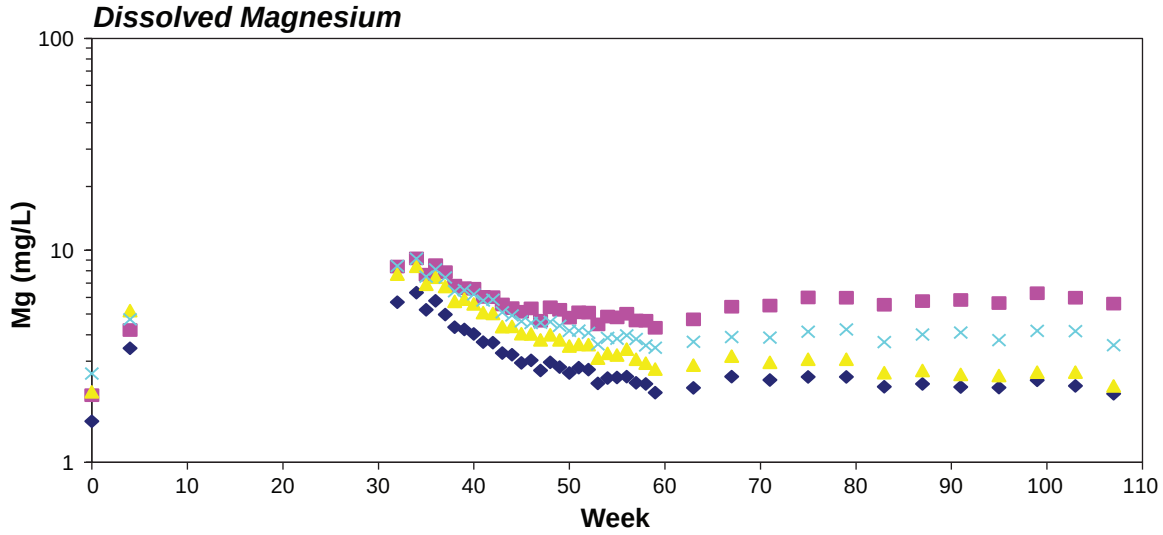
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Cadmium, Fluoride, and Selenium Concentrations, Mitchell Deposit Waste Rock Sub-Aerial Drip Columns

Figure 5.2-68

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Calcium and Magnesium Concentrations, Mitchell Deposit Waste Rock Sub-Aerial Drip Columns

Figure 5.2-69

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Paste pH

Figure 5.2-70 presents the paste pH of the field leach barrel samples in relation to the statistical distribution of the pH values determined for all waste rock samples by model code. The table shows that the majority of the field leach barrel samples are within the pH interquartile range for their model code.

Sulphur Species

Figure 5.2-71 presents the total-sulphur content of the field leach barrel samples in relation to the statistical distribution of the total-sulphur values determined for all waste rock samples by model code. The results show that the majority of the field leach barrel samples are within the total-sulphur interquartile range for their model code. All leach barrel samples exhibited total-sulphur values within the minimum and maximum range.

Figure 5.2-72 presents the sulphide-sulphur content of the field leach barrel samples in relation to the statistical distribution of the sulphide-sulphur values determined for all waste rock samples by model code. The results show that the majority of the field leach barrel samples are within the sulphide-sulphur interquartile range for their model code. All leach barrels samples exhibited sulphide-sulphur values within the minimum and maximum range.

Neutralization Potential

Figure 5.2-73 presents the NP values of the field leach barrel samples in relation to the statistical distribution of the NP values determined for all waste rock samples by model code. The results show that the majority of the field leach barrel samples are within the NP interquartile range for their model code.

Sulphide Net Potential Ratio

Figure 5.2-74 presents the adjusted SNPR values of the field leach barrel samples in relation to the statistical distribution of the adjusted SNPR values determined for all waste rock samples by model code. The results show that the majority of the field leach barrel samples are within the adjusted SNPR interquartile range for their model code.

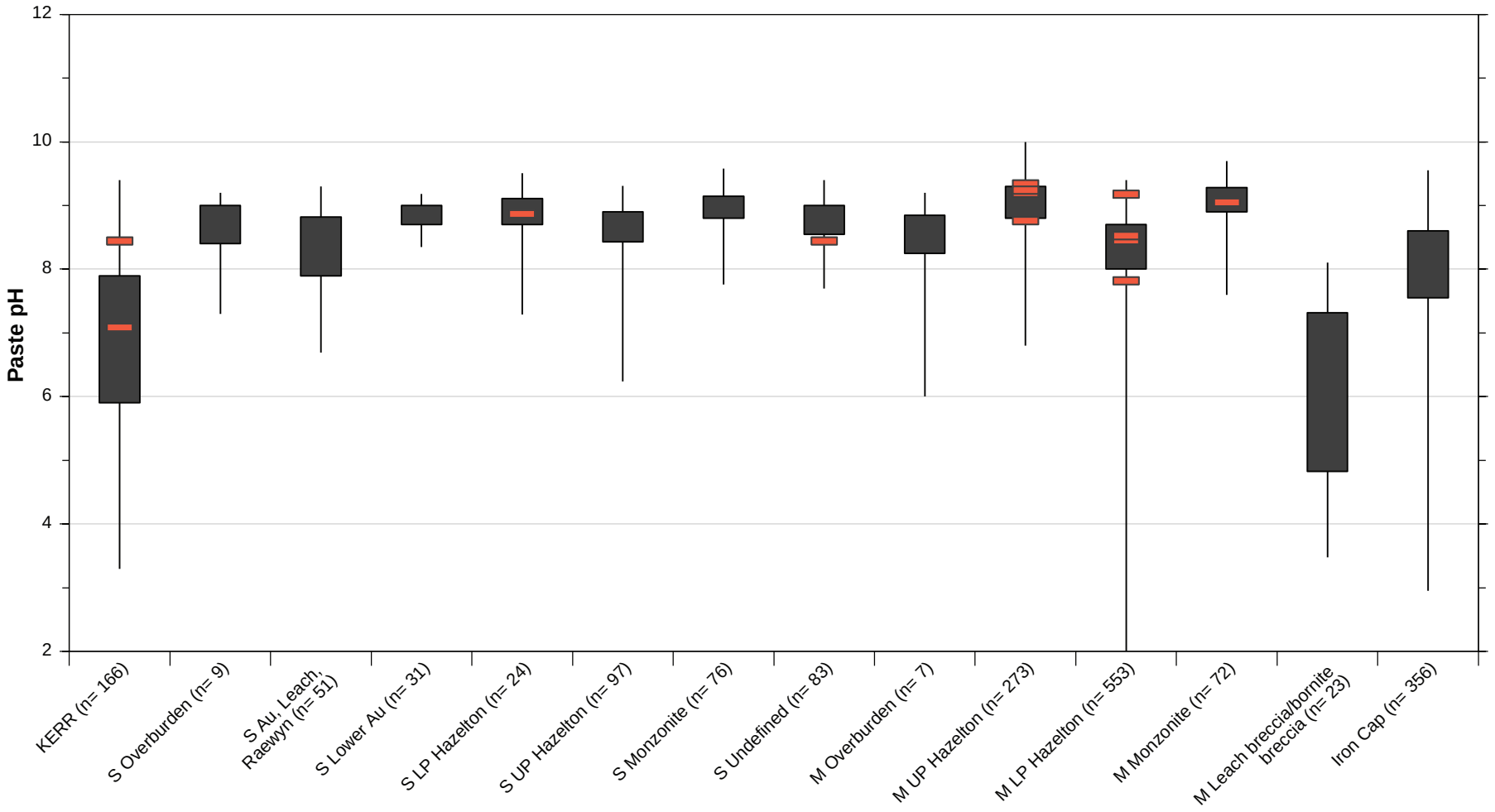
Whole Rock and Solid-phase Analysis

The multi-element concentrations in field leach barrel samples from the KSM Project were measured by ICP-MS analysis after strong four-acid digestion and by XRF whole-rock analysis. The results are found in Appendix 5.2-10.

Most of the field leach barrel samples were comprised of oxide-equivalents of SiO_2 and Al_2O_3, which is consistent with the dominant presence of quartz, feldspar minerals, and other aluminosilicate minerals in KSM rocks. Also consistent with general mineralogy, there were lesser but still significant amounts of K_2O, Fe_2O_3, CaO, MgO, and Na_2O.

In order to assess which solid-phase elements are elevated, they were compared to crustal abundances for the rock types basalt, and shales (Price 1997). This comparison was used as a preliminary screening tool to indicate which solid-phase elements may also be elevated in site mine drainage waters.

Table 5.2-7 presents the results for element median values exceeding three times the crustal abundance. It shows that the elements frequently exceeding three times basalt crustal abundance were silver, arsenic, bismuth, cesium, copper, potassium, molybdenum, lead, rubidium, sulphur, antimony, selenium, thallium and tungsten. Elements frequently exceeding three times the shale crustal abundance were silver, copper, molybdenum, sulphur, and selenium. Elements frequently exceeding three times high-calcium granite crustal abundance were silver, arsenic, copper, molybdenum, sulphur, antimony, selenium, and tungsten.



Note: 25th to 75th percentile is represented by the shaded box. The red bars indicate individual humidity cells.

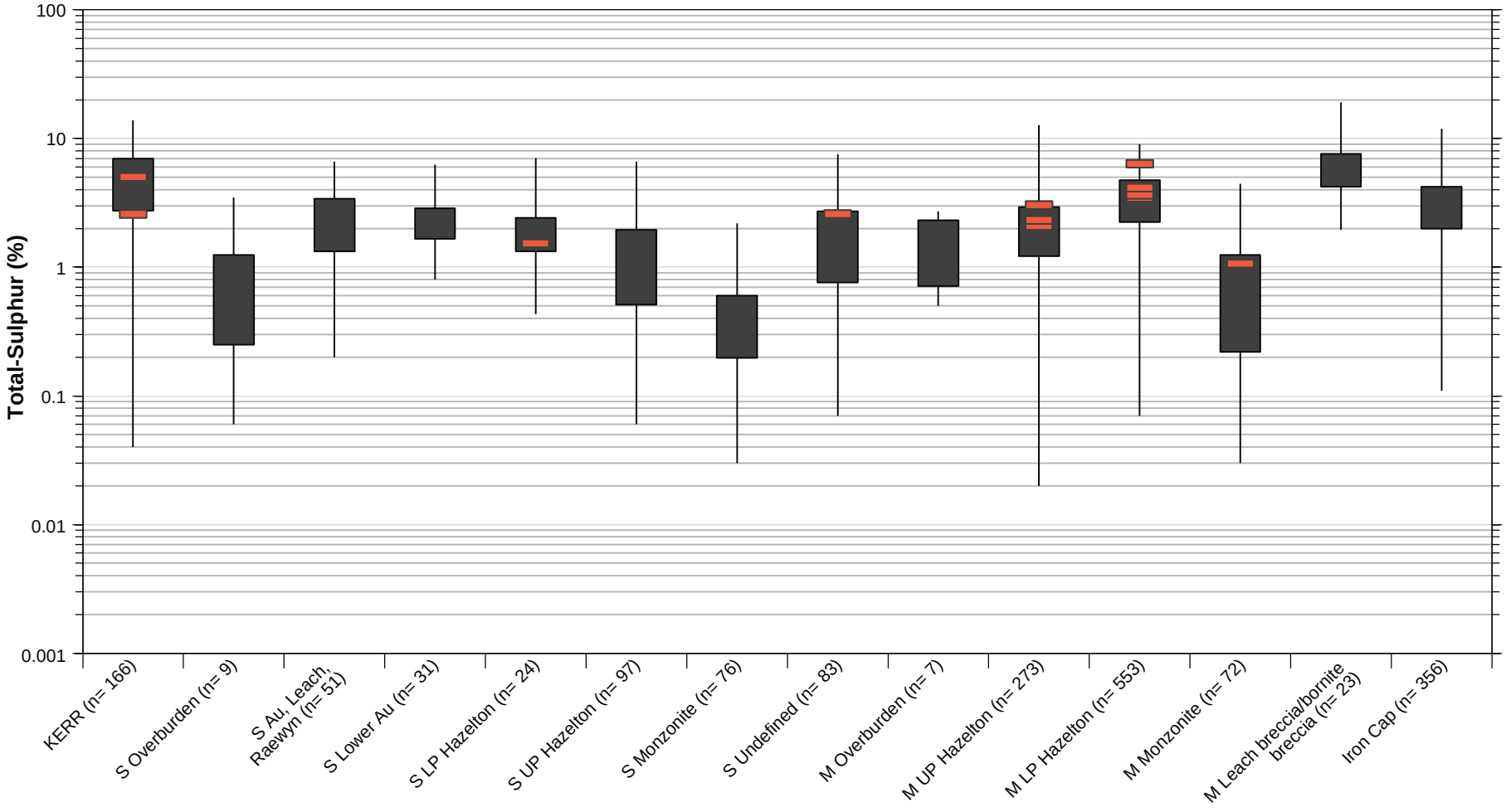
Figure 5.2-70

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Statistical Summary for Field Leach Barrels - Paste pH

Figure 5.2-70

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Note: 25th to 75th percentile is represented by the shaded box. The red bars indicate individual humidity cells.

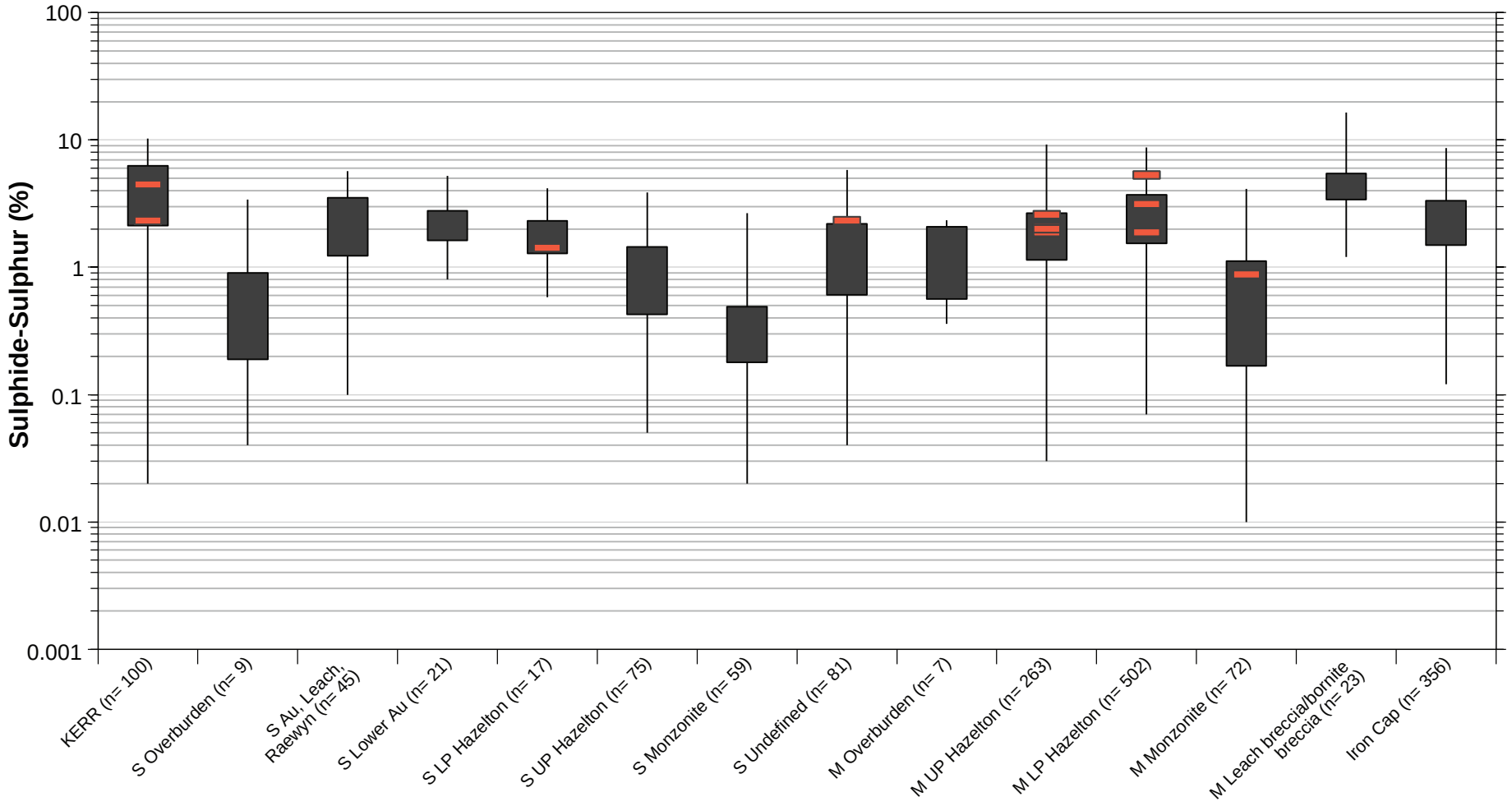
Figure 5.2-71

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Statistical Summary for Field Leach Barrels - Total-Sulphur Concentrations

Figure 5.2-71

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Note: 25th to 75th percentile is represented by the shaded box. The red bars indicate individual humidity cells.

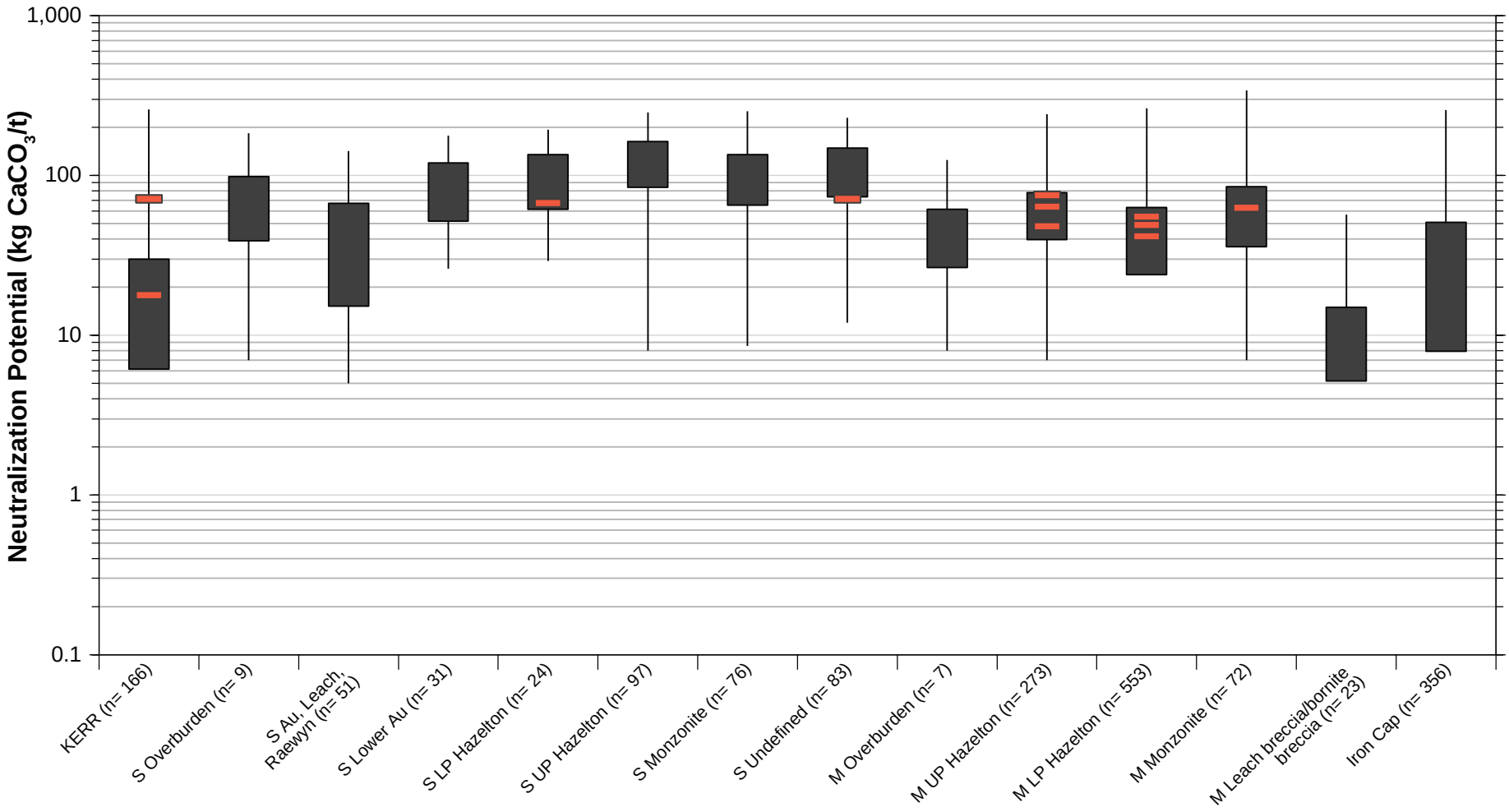
Figure 5.2-72

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Statistical Summary for Field Leach Barrels - Sulphide-Sulphur Concentrations

Figure 5.2-72

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Note: 25th to 75th percentile is represented by the shaded box. The red bars indicate individual humidity cells.

Figure 5.2-73

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Statistical Summary for Field Leach Barrels - Neutralization Potential Values

Figure 5.2-73

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Table 5.2-7. Summary of Results for the Elements Exceeding Three Times the Crustal Abundance for the Field Leach Barrel Samples

	Silver	Arsenic	Barium	Bismuth	Cadmium	Cesium	Copper	Potassium	Molybdenum	Lead	Rubidium	Sulphur	Antimony	Selenium	Thalium	Uranium	Vanadium	Tungsten
Barrel 1																		
Median	0.89	5.8	2830	0.48	0.08	2.04	671	48000	24.5	12.3	101	11500	2.16	4	0.64	4.4	217	12.5
3X Basalt	**0.33**	6	**990**	**0.021**	0.66	3.3	**261**	**24900**	**4.5**	18	**90**	**900**	**0.6**	**0.15**	**0.63**	**3**	750	**2.1**
3X Shale	**0.21**	39	**1740**	n.a	0.9	15	**135**	79800	**7.8**	60	420	**7200**	4.5	**1.8**	4.2	11.1	390	**5.4**
3X High Ca Granite	**0.153**	**5.7**	**1260**	n.a	0.39	6	**90**	75000	**3**	45	330	**900**	**0.6**	**0.15**	2.16	9	264	**3.9**
Barrel 2																		
Median	1	4.7	730	0.73	0.13	3.66	906	51800	23.1	14.2	135.5	23800	1.65	10	0.97	1.3	305	8.2
3X Basalt	**0.33**	6	990	**0.021**	0.66	**3.3**	**261**	**24900**	**4.5**	18	**90**	**900**	**0.6**	**0.15**	**0.63**	3	750	**2.1**
3X Shale	**0.21**	39	1740	n.a	0.9	15	**135**	79800	**7.8**	60	420	**7200**	4.5	**1.8**	4.2	11.1	390	**5.4**
3X High Ca Granite	**0.153**	5.7	1260	n.a	0.39	6	**90**	75000	**3**	45	330	**900**	**0.6**	**0.15**	2.16	9	**264**	**3.9**
Barrel 3																		
Median	1.25	53.8	490	1.58	0.16	4.9	316	38200	30.5	31	125	28500	5.17	13	1.36	1.7	135	17.5
3X Basalt	**0.33**	**6**	990	**0.021**	0.66	**3.3**	**261**	**24900**	**4.5**	**18**	**90**	**900**	**0.6**	**0.15**	**0.63**	3	750	**2.1**
3X Shale	**0.21**	**39**	1740	n.a	0.9	15	**135**	79800	**7.8**	60	420	**7200**	**4.5**	**1.8**	4.2	11.1	390	**5.4**
3X High Ca Granite	**0.153**	**5.7**	1260	n.a	0.39	6	**90**	75000	**3**	45	330	**900**	**0.6**	**0.15**	2.16	9	264	**3.9**
Barrel 4																		
Median	1.815	31.3	335	0.94	0.785	3.59	214.5	40750	6.875	26.55	117.25	39200	12.3	8	1.965	1.7	173	8.9
3X Basalt	**0.33**	**6**	990	**0.021**	**0.66**	**3.3**	261	**24900**	**4.5**	**18**	**90**	**900**	**0.6**	**0.15**	**0.63**	3	750	**2.1**
3X Shale	**0.21**	39	1740	n.a	0.9	15	**135**	79800	7.8	60	420	**7200**	**4.5**	**1.8**	4.2	11.1	390	**5.4**
3X High Ca Granite	**0.153**	**5.7**	1260	n.a	**0.39**	6	**90**	75000	**3**	45	330	**900**	**0.6**	**0.15**	2.16	9	264	**3.9**
Barrel 5																		
Median	1.42	8.9	130	0.64	0.32	4.7	882	34800	59.7	16.4	108	51900	3.13	10	1.62	1.6	137	1.3
3X Basalt	**0.33**	**6**	990	**0.021**	0.66	**3.3**	**261**	**24900**	**4.5**	18	**90**	**900**	**0.6**	**0.15**	**0.63**	3	750	2.1
3X Shale	**0.21**	39	1740	n.a	0.9	15	**135**	79800	**7.8**	60	420	**7200**	4.5	**1.8**	4.2	11.1	390	5.4
3X High Ca Granite	**0.153**	**5.7**	1260	n.a	0.39	6	**90**	75000	**3**	45	330	**900**	**0.6**	**0.15**	2.16	9	264	3.9
Barrel 6																		
Median	1.02	6.8	400	0.08	0.48	4.48	603	28100	74.2	23.4	99	34900	1.86	7	2.09	1.6	172	0.9
3X Basalt	**0.33**	**6**	990	**0.021**	0.66	**3.3**	**261**	**24900**	**4.5**	**18**	**90**	**900**	**0.6**	**0.15**	**0.63**	3	750	2.1
3X Shale	**0.21**	39	1740	n.a	0.9	15	**135**	79800	**7.8**	60	420	**7200**	4.5	**1.8**	4.2	11.1	390	5.4
3X High Ca Granite	**0.153**	**5.7**	1260	n.a	**0.39**	6	**90**	75000	**3**	45	330	**900**	**0.6**	**0.15**	2.16	9	264	3.9
Barrel 7																		
Median	1.24	8.4	150	0.3	0.34	4.84	650	35200	52.5	24.4	104	39600	2.31	11	2.2	1.6	160	1.8
3X Basalt	**0.33**	**6**	990	**0.021**	0.66	**3.3**	**261**	**24900**	**4.5**	**18**	**90**	**900**	**0.6**	**0.15**	**0.63**	3	750	2.1
3X Shale	**0.21**	39	1740	n.a	0.9	15	**135**	79800	**7.8**	60	420	**7200**	4.5	**1.8**	4.2	11.1	390	5.4
3X High Ca Granite	**0.153**	**5.7**	1260	n.a	0.39	6	**90**	75000	**3**	45	330	**900**	**0.6**	**0.15**	**2.16**	9	264	3.9
Barrel 8																		
Median	1.28	12.3	1060	1.13	0.2	3.63	570	40900	3.72	28.9	107	17000	2.94	6	1.14	3.5	251	5.2
3X Basalt	**0.33**	**6**	**990**	**0.021**	0.66	**3.3**	**261**	**24900**	4.5	**18**	**90**	**900**	**0.6**	**0.15**	**0.63**	**3**	750	**2.1**
3X Shale	**0.21**	39	1740	n.a	0.9	15	**135**	79800	7.8	60	420	**7200**	4.5	**1.8**	4.2	11.1	390	5.4
3X High Ca Granite	**0.153**	**5.7**	1260	n.a	0.39	6	**90**	75000	3	45	330	**900**	**0.6**	**0.15**	2.16	9	264	**3.9**
Barrel 9																		
Median	0.58	17.6	190	0.23	0.21	3.98	891	36600	12.5	16.9	88.7	51000	5.8	13	2.11	0.7	213	3.9
3X Basalt	**0.33**	**6**	990	**0.021**	0.66	**3.3**	**261**	**24900**	**4.5**	18	90	**900**	**0.6**	**0.15**	**0.63**	3	750	**2.1**
3X Shale	**0.21**	39	1740	n.a	0.9	15	**135**	79800	**7.8**	60	420	**7200**	**4.5**	**1.8**	4.2	11.1	390	5.4
3X High Ca Granite	**0.153**	**5.7**	1260	n.a	0.39	6	**90**	75000	**3**	45	330	**900**	**0.6**	**0.15**	2.16	9	264	3.9
Barrel 10																		
Median	0.495	17.75	1345	0.17	0.14	5.93	1150	45750	28.25	15.35	117.75	15150	8.4	5	1.38	2.4	156	9.05
3X Basalt	**0.33**	**6**	**990**	**0.021**	0.66	**3.3**	**261**	**24900**	**4.5**	18	**90**	**900**	**0.6**	**0.15**	**0.63**	3	750	**2.1**
3X Shale	**0.21**	39	1740	n.a	0.9	15	**135**	79800	**7.8**	60	420	**7200**	**4.5**	**1.8**	4.2	11.1	390	**5.4**
3X High Ca Granite	**0.153**	**5.7**	**1260**	n.a	0.39	6	**90**	75000	**3**	45	330	**900**	**0.6**	**0.15**	2.16	9	264	**3.9**

(continued)

Table 5.2-7. Summary of Results for the Elements Exceeding Three Times the Crustal Abundance for the Field Leach Barrels Samples (completed)

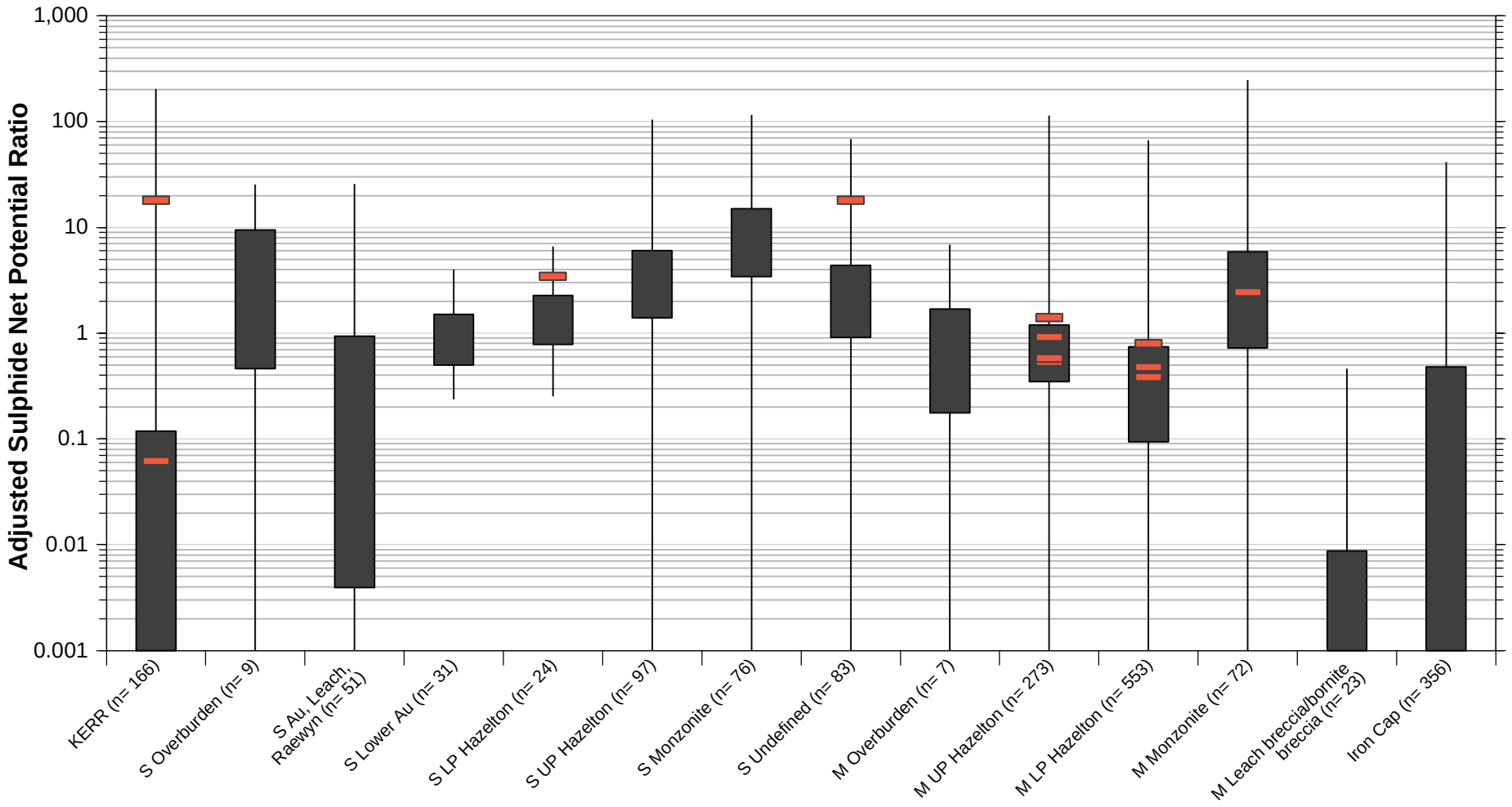
	Silver	Arsenic	Barium	Bismuth	Cadmium	Cesium	Copper	Potassium	Molybdenum	Lead	Rubidium	Sulphur	Antimony	Selenium	Thalium	Uranium	Vanadium	Tungsten
Barrel 11																		
Median	0.695	17.1	950	0.25	0.11	3.26	927.5	34600	4.955	8.7	86.65	14600	3.89	4	1.255	1.45	208	7
3X Basalt	**0.33**	**6**	990	**0.021**	0.66	3.3	**261**	**24900**	**4.5**	18	90	**900**	**0.6**	**0.15**	**0.63**	3	750	**2.1**
3X Shale	**0.21**	39	1740	n.a	0.9	15	**135**	79800	7.8	60	420	**7200**	4.5	**1.8**	4.2	11.1	390	**5.4**
3X High Ca Granite	**0.153**	**5.7**	1260	n.a	0.39	6	**90**	75000	**3**	45	330	**900**	**0.6**	**0.15**	2.16	9	264	**3.9**
Barrel 12																		
Median	0.96	8.6	860	0.77	0.1	4.23	814	46500	10.05	10.1	142.5	22500	2.39	9	0.84	1.9	365	9.8
3X Basalt	**0.33**	**6**	990	**0.021**	0.66	**3.3**	**261**	**24900**	**4.5**	18	**90**	**900**	**0.6**	**0.15**	**0.63**	3	750	**2.1**
3X Shale	**0.21**	39	1740	n.a	0.9	15	**135**	79800	**7.8**	60	420	**7200**	4.5	**1.8**	4.2	11.1	390	**5.4**
3X High Ca Granite	**0.153**	**5.7**	1260	n.a	0.39	6	**90**	75000	**3**	45	330	**900**	**0.6**	**0.15**	2.16	9	**264**	**3.9**

Concentrations are in ppm

Bold underlined values indicate median values exceed three time the crustal abudance.

n.a - crustal abundance data are not available

Crustal abundance data from Price (1997).



Note: 25th to 75th percentile is represented by the shaded box. The red bars indicate individual humidity cells.

Figure 5.2-74

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Statistical Summary for Field Leach Barrels - Adjusted Sulphide Net Potential Ratio Values

Figure 5.2-74

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5.2.3.2 Kinetic Test Results

The following discussion presents the results of the analyses of leachate from the field leach barrels for:

- Indicators of acid generation (pH, sulphate, acidity, and alkalinity);
- Elements that contribute to acidity (aluminum, iron, and manganese);
- Barium which is most commonly associated with barite ($BaSO_4$), a highly insoluble mineral;
- Trace elements with elevated concentrations in all samples relative to water quality guidelines. Identification of these elements can be used to inform treatment design decisions, including treatment at the proposed Water Treatment Plant (WTP), and water quality modelling; and
- Calcium and magnesium which commonly occur in carbonate mineral phases and are associated with the neutralization potential.

Total element concentrations for each sample date have been normalized to the height of rock in the barrel (in centimetres) and the volume of water in the collection pail (in litres) and this normalized data is presented graphically for selected elements with elevated concentrations. The complete data set for field barrel leachate concentrations is presented in Appendix 5.2-11. Normalized data for additional selected parameters are presented graphically in Appendix 5.2-12.

Kerr and Sulphurets Deposits

pH, Sulphate, Acidity, and Alkalinity

The pH of leachate from all Kerr and Sulphurets field barrels were acidic at one or more sampling times. Barrel 9 (Kerr) had highly variable pH between 5.8 and 8.3 for the first 20 months, but decreased steadily to pH 5.2 in the last 5 months. The pH of leachate from Barrels 10, 11, and 14 (Sulphurets) was variable in the first 2 years of sampling, but generally stabilized between pH 7 and 8 in 2011 (Figure 5.2-75).

Sulphate concentrations were generally stable in Barrels 9 (Kerr), 10, and 14 (Sulphurets). The normalized sulphate decreased from 100 mg/cm to 14 mg/cm in Barrel 11 over 2 years, indicating flushing of surface precipitates (Figure 5.2-75).

Acidity was highly variable in Barrel 10, but tended to increase over time in Barrels 9, 11, and 14 (Figure 5.2-76).

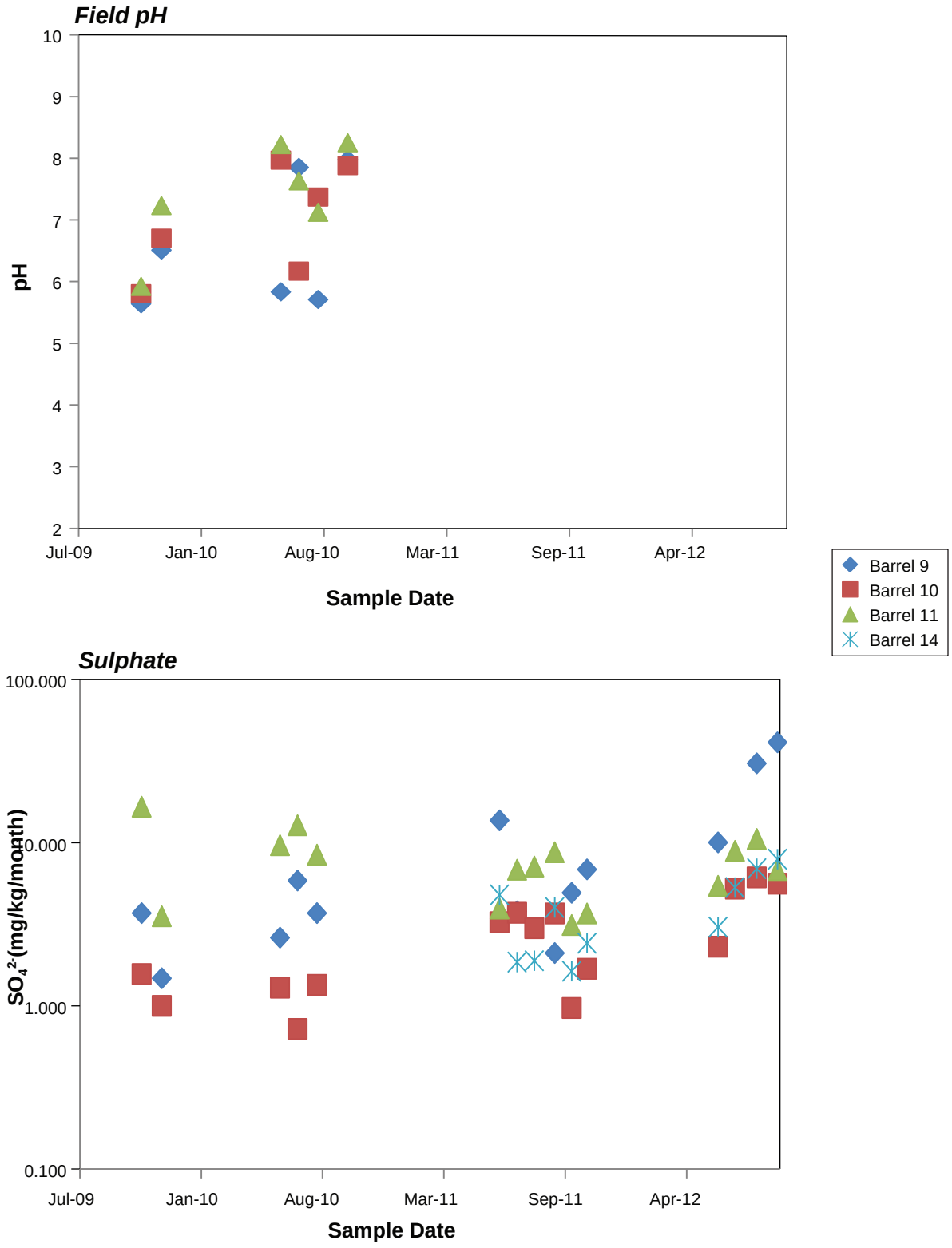
Alkalinity was typically lower and more variable in Barrel 9 compared to the other three barrels. Alkalinity in Barrel 11 decreased through the summer, and had a higher value at the beginning of the subsequent year. Alkalinity in Barrel 11 and 14 was less variable (Figure 5.2-76).

Nutrients and Total Organic Carbon

Total nitrogen and total phosphate (as P) concentrations were low and frequently below the detection limit. Total organic carbon decreased over time in all Kerr and Sulphurets field barrels (Figure 5.2-77).

Elements that Contribute to Acidity

Total aluminum in Barrel 9 leachate showed a seasonal trend, increasing throughout the summer, with a lower concentration at the beginning of the following year. Total aluminum in the three Sulphurets barrels leachates decreased over time. In general, dissolved aluminum concentrations followed the same trend as total aluminum (Figure 5.2-78).

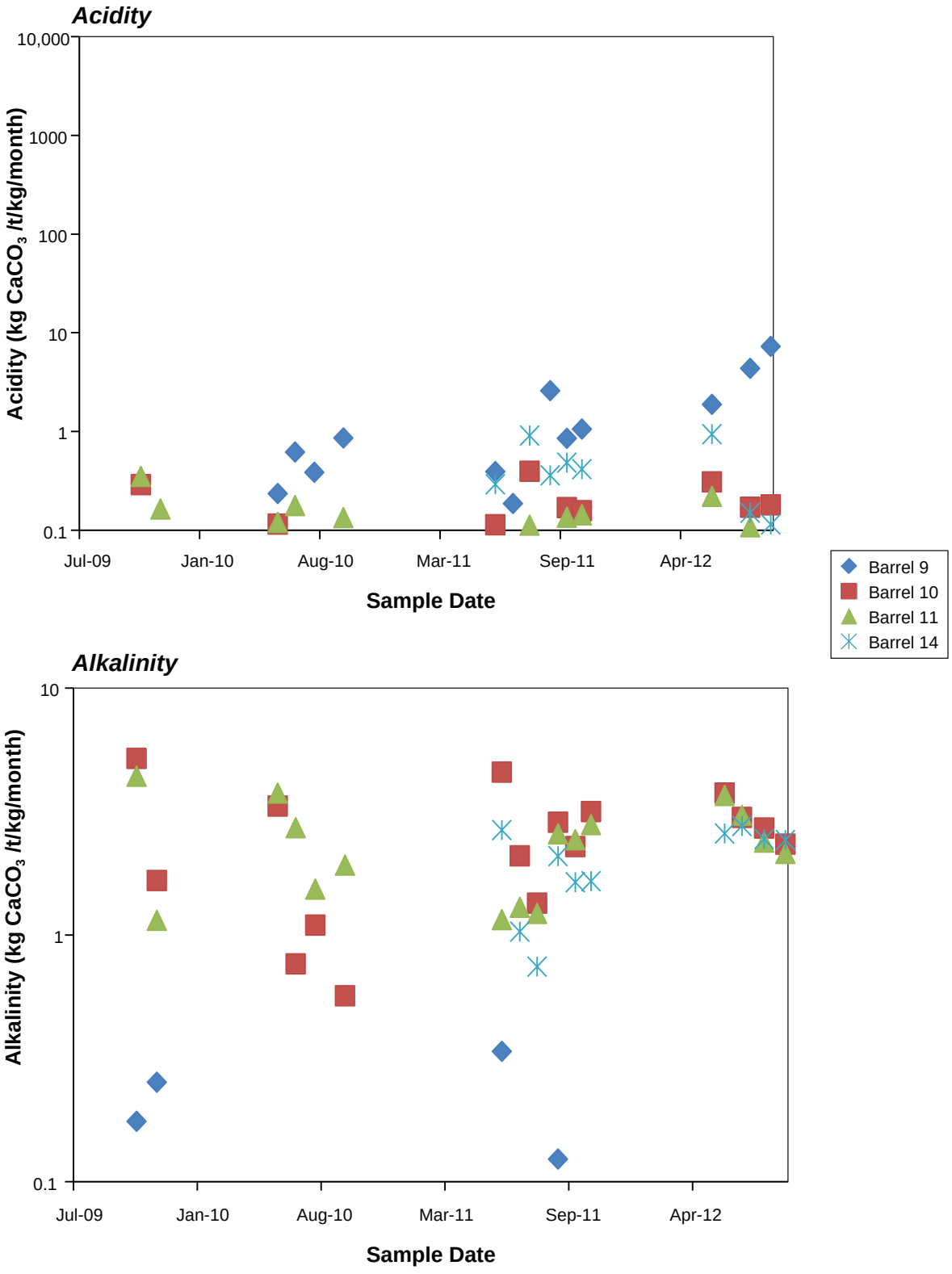


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pH and Sulphate, Kerr and Sulphurets Deposits Field Leach Barrels

Figure 5.2-75

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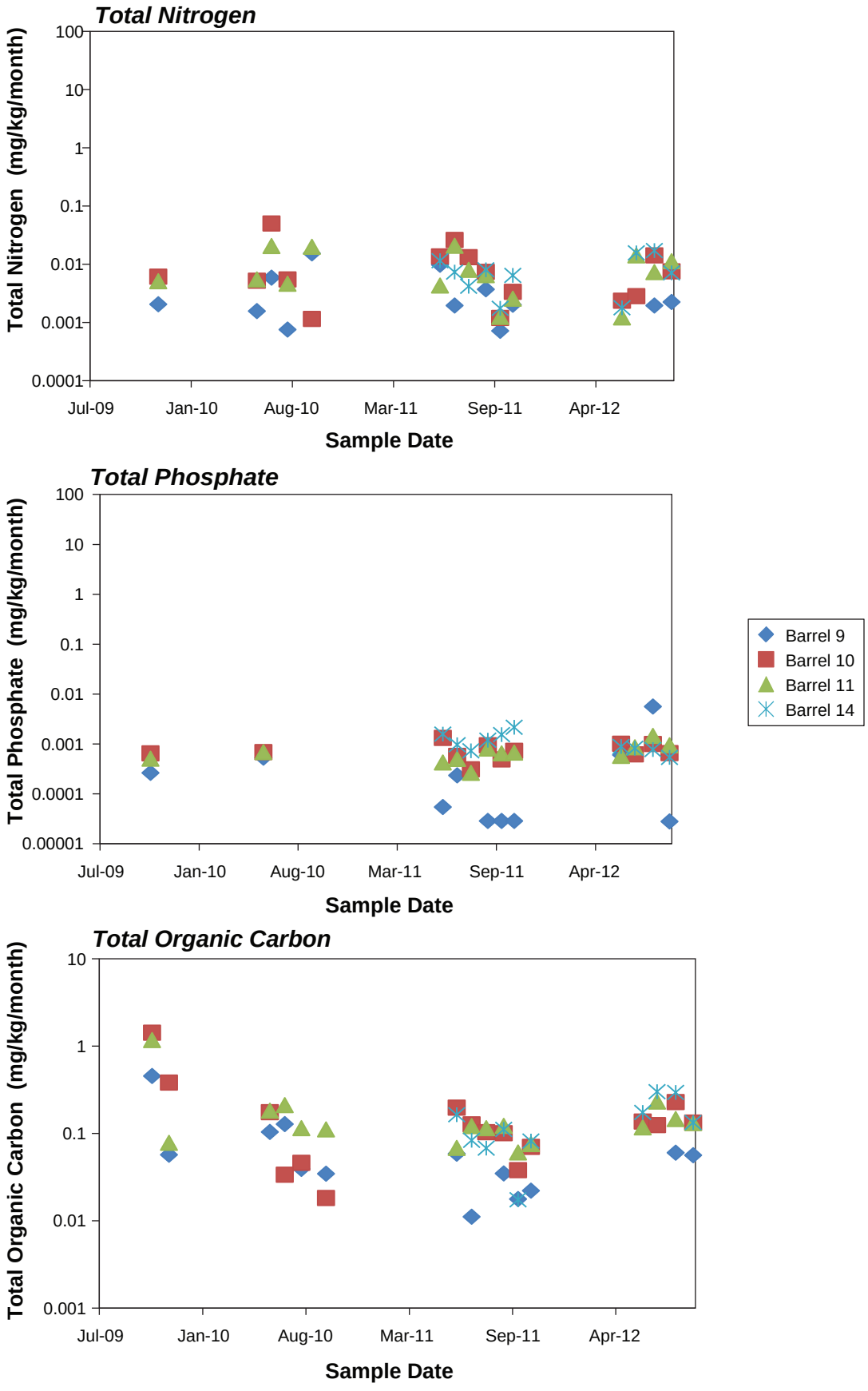


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Acidity and Alkalinity, Kerr and Sulphurets Deposits Field Leach Barrels

Figure 5.2-76

Rescan™ Engineers & Scientists

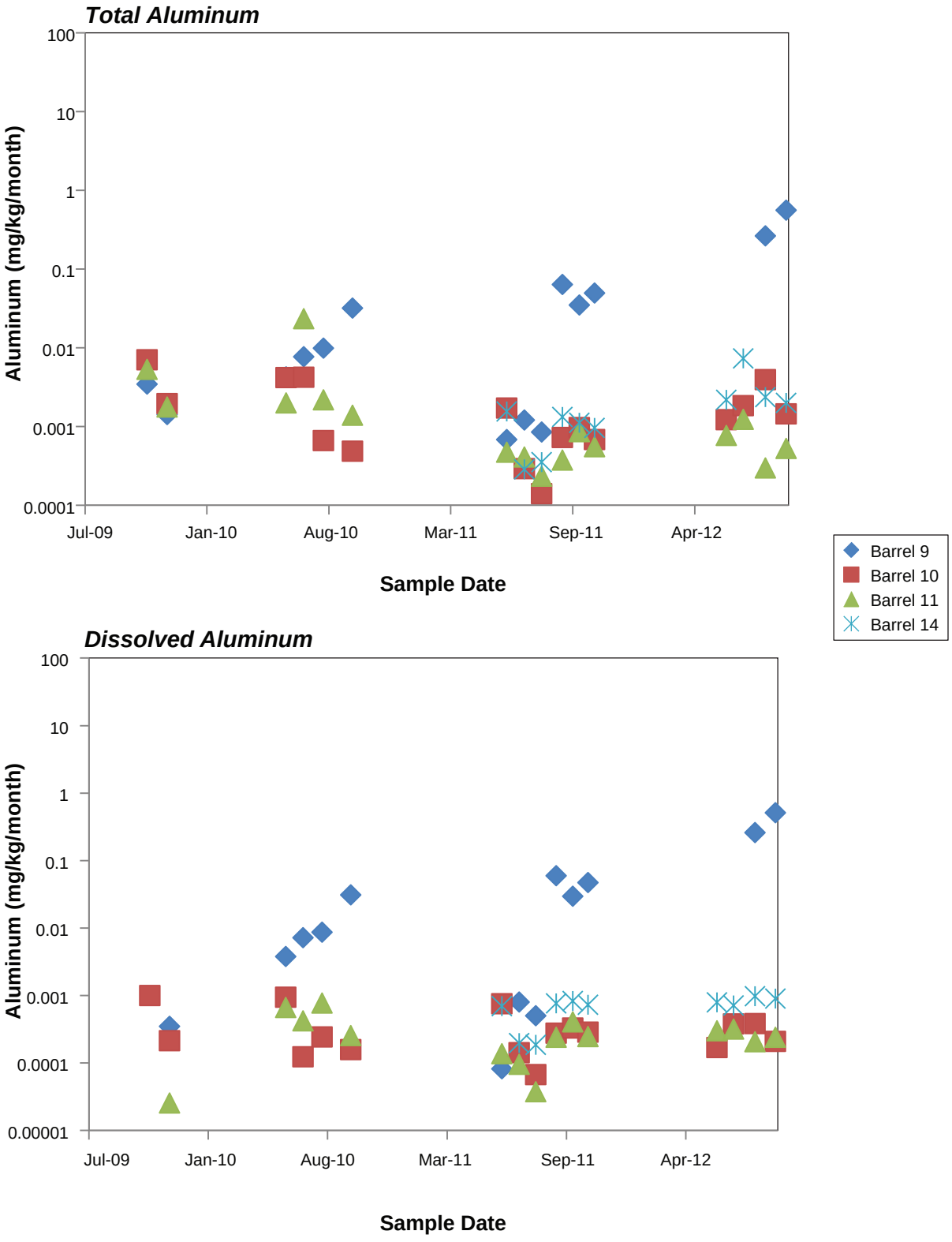


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Total Nitrogen, Total Phosphate, and Total Organic Carbon, Kerr and Sulphurets Deposits Field Leach Barrels

Figure 5.2-77

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Total and Dissolved Aluminum, Kerr and Sulphurets Deposits Field Leach Barrels

Figure 5.2-78

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Total and dissolved iron concentrations decreased over time and were frequently below detection in all Kerr and Sulphurets field barrel leachates (Figure 5.2-79).

Manganese concentrations were elevated in Barrel 9 (Kerr) leachate. Manganese concentrations increased over time in Barrel 9 leachate. Manganese in Barrel 10 leachate exhibited a strong seasonal trend with increases over the winter, and decreased concentrations due to flushing through the summer. Manganese in Barrels 11 and 14 leachates decreased over time (Figure 5.2-80).

Barium

Barium concentrations were generally stable in leachates from all Kerr and Sulphurets field barrels, with some variability in Barrel 9 (Figure 5.2-80).

Trace Elements

Cadmium concentrations in Barrel 9 leachate increased over time. Cadmium in leachate from Barrels 10, 11, and 14 was generally stable and frequently below the detection limit (Figure 5.2-81).

Cobalt concentrations were elevated in Barrel 9 leachate. Cobalt in Barrel 9 leachate increased over time. Cobalt in Barrel 10 leachate exhibited a seasonal trend, decreasing during the summer, but building up during the winter. Cobalt in Barrels 11 and 14 leachates decreased over time (Figure 5.2-81).

Copper in Barrel 9 leachate increased over time. Copper concentrations in Barrels 10, 11, and 14 decreased over time, and indicated a flushing of surface precipitates in the first sample of the year (Figure 5.2-82).

Molybdenum concentrations were elevated in near-neutral field barrels over the acidic Barrel 9. Molybdenum concentrations were generally stable over time in leachate from all barrels (Figure 5.2-82).

Selenium concentrations in Barrel 9 were variable. Selenium in barrels 10, 11, and 14 decreased over time (Figure 5.2-83).

Zinc concentrations were increased in 2011 over 2010 concentrations and were relatively stable in Barrels 9, 10, and 11 between 0.1 and 0.4 mg/cm. Zinc in Barrel 14 leachate was frequently below the detection limit (Figure 5.2-83).

Elements Associated with the Neutralization Potential

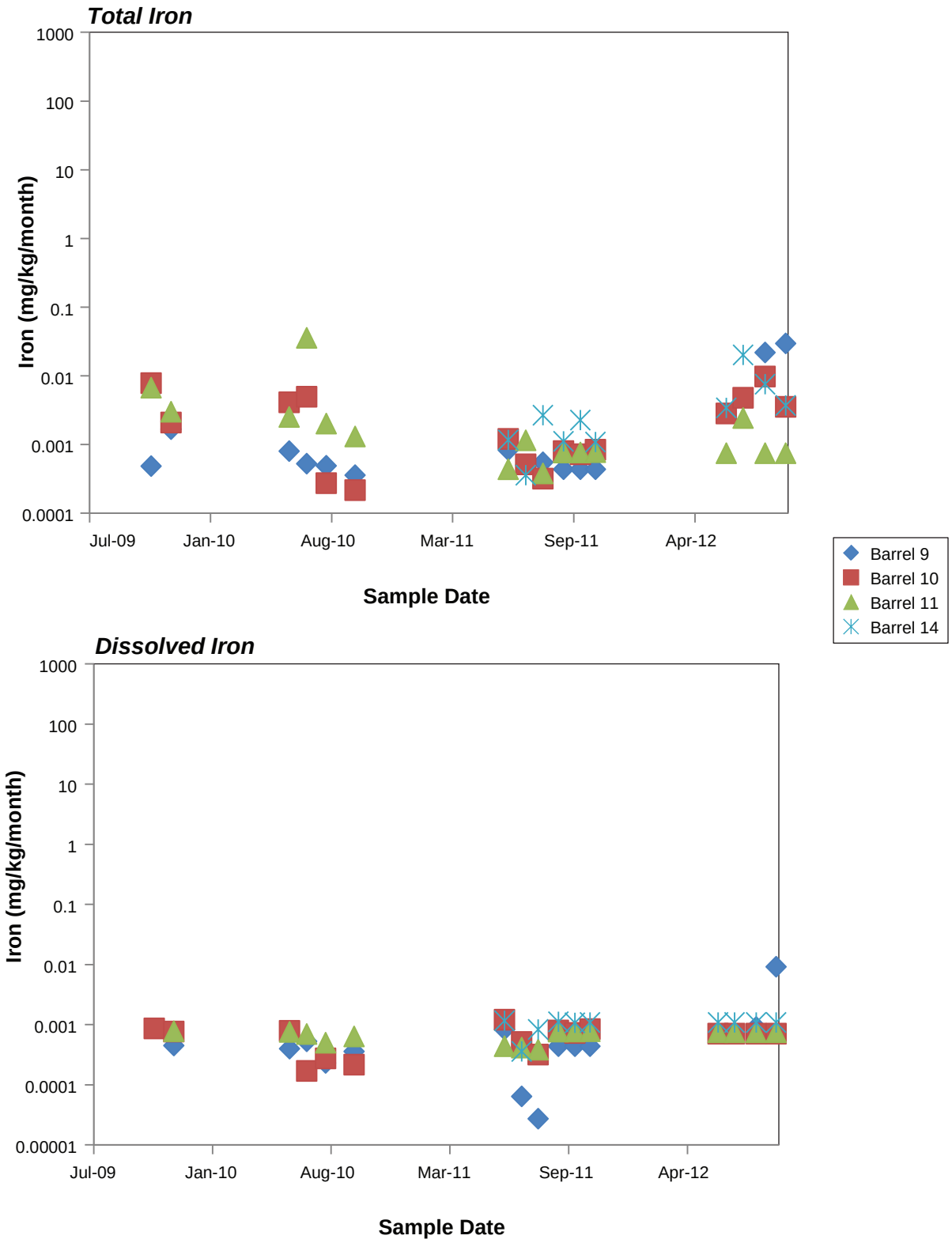
Calcium concentrations in leachate from Barrel 9 increased over time. Calcium in leachate from Barrel 10 decreased in 2011 but were increased and relatively stable in 2011. Calcium in Barrels 11 and 14 were generally stable over time (Figure 5.2-84).

Magnesium concentrations were generally stable over time in leachate from all Kerr and Sulphurets barrels, with some variability in Barrel 9 (Figure 5.2-84).

Mitchell Deposit

pH, Sulphate, Acidity, and Alkalinity

The pH of the leachate of upper panel Barrels 1, 2, 3, 12, 15 and all lower panel barrels were acidic at least once. The pH of the upper panel barrels was generally stable in the last year between pH 6 and 8. The pH of leachate from Barrels 4 to 7 was typically near-neutral in 2011. Barrels 13 and 17 containing weathered intensely altered outcrop had pH values less than 3 from the initial construction in June 2011 (Figures 5.2-85, 5.2-86).

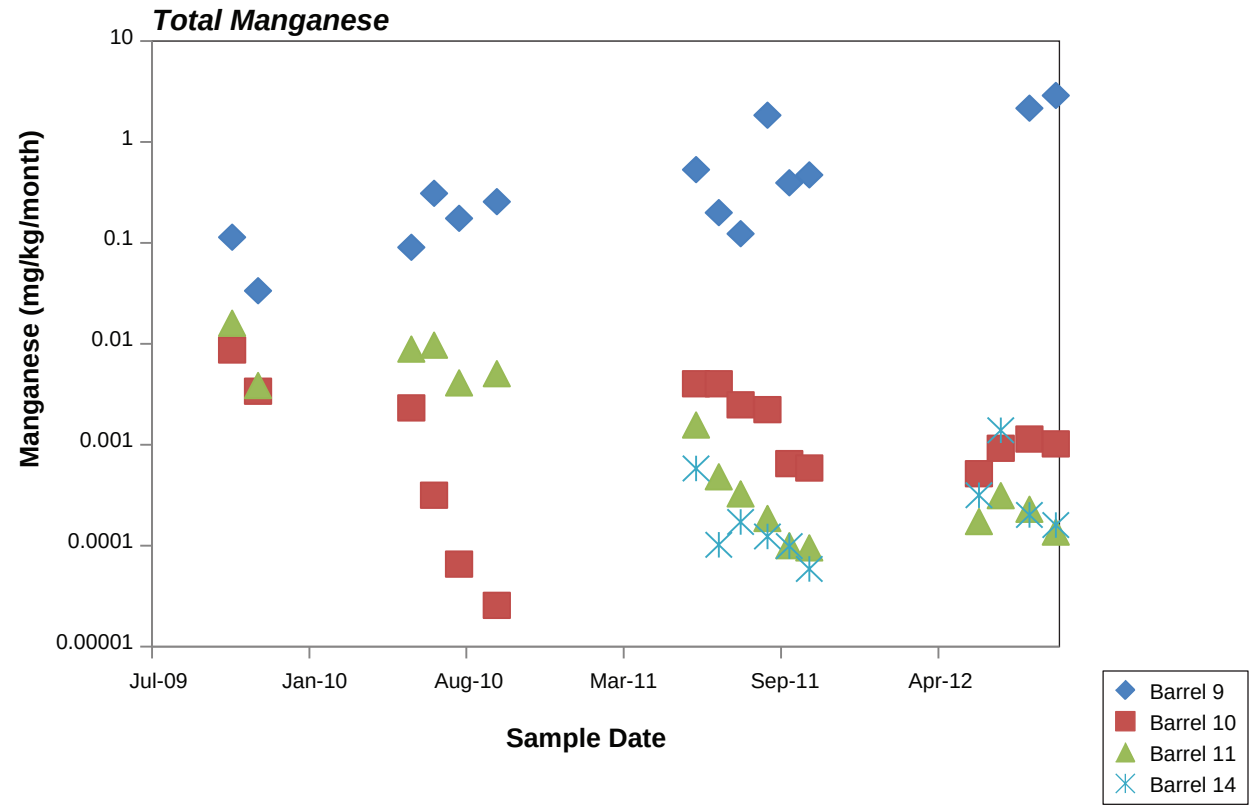


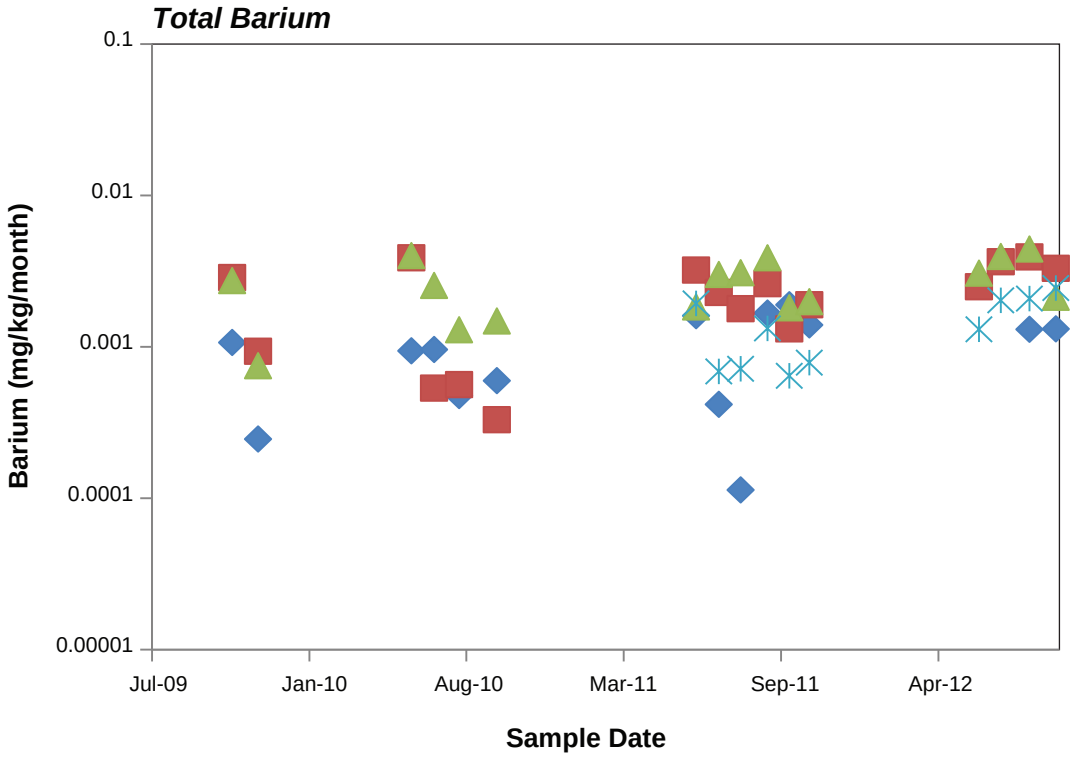
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Total and Dissolved Iron, Kerr and Sulphurets Deposits Field Leach Barrels

Figure 5.2-79

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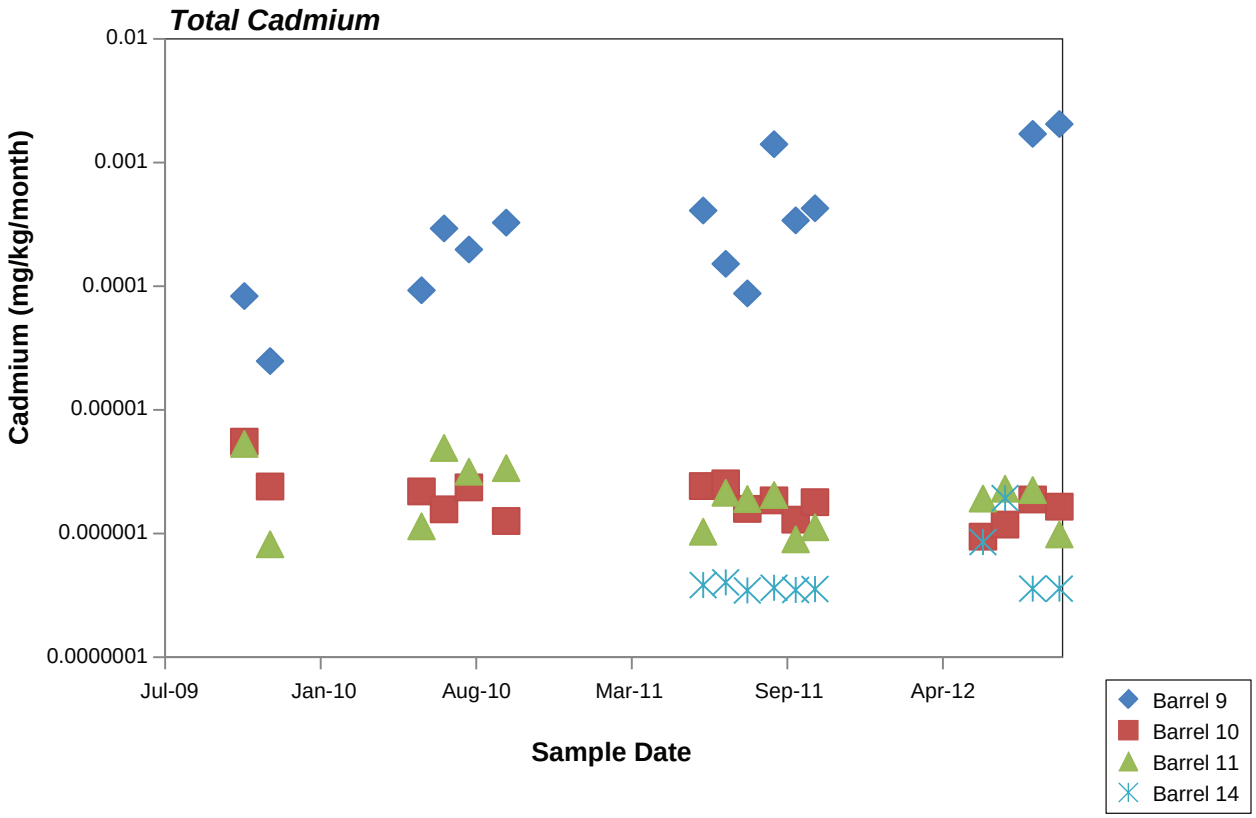


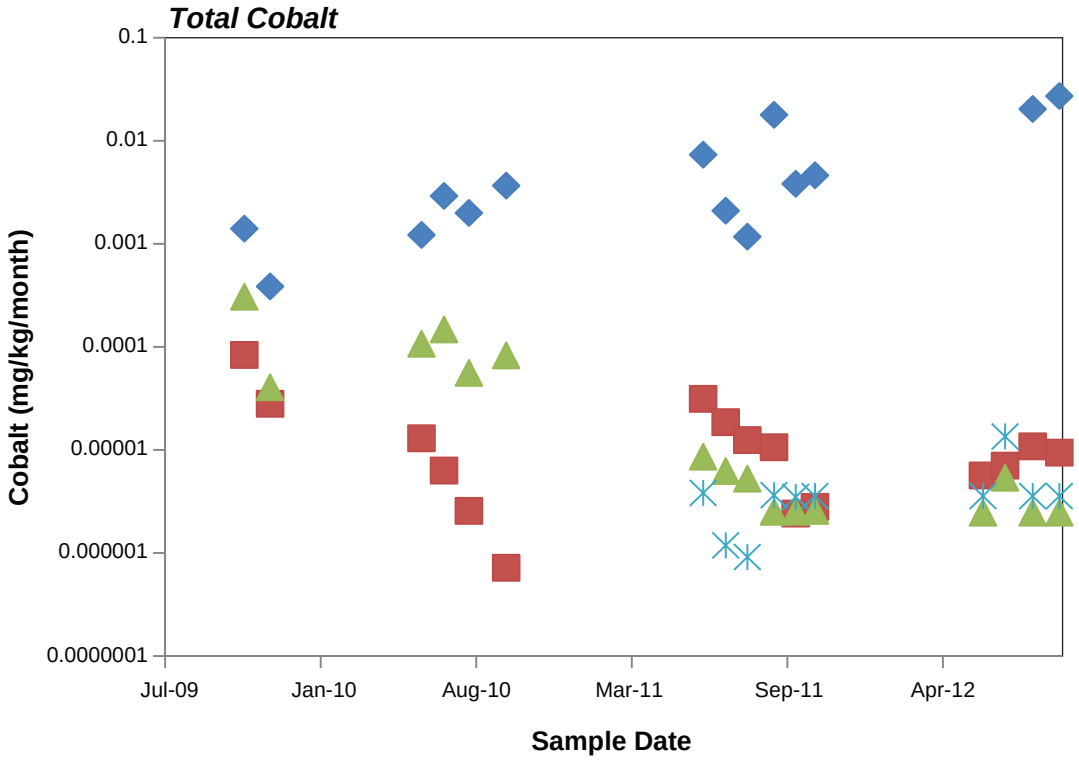
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Total Manganese and Total Barium, Kerr and Sulphurets Deposits Field Leach Barrels

Figure 5.2-80

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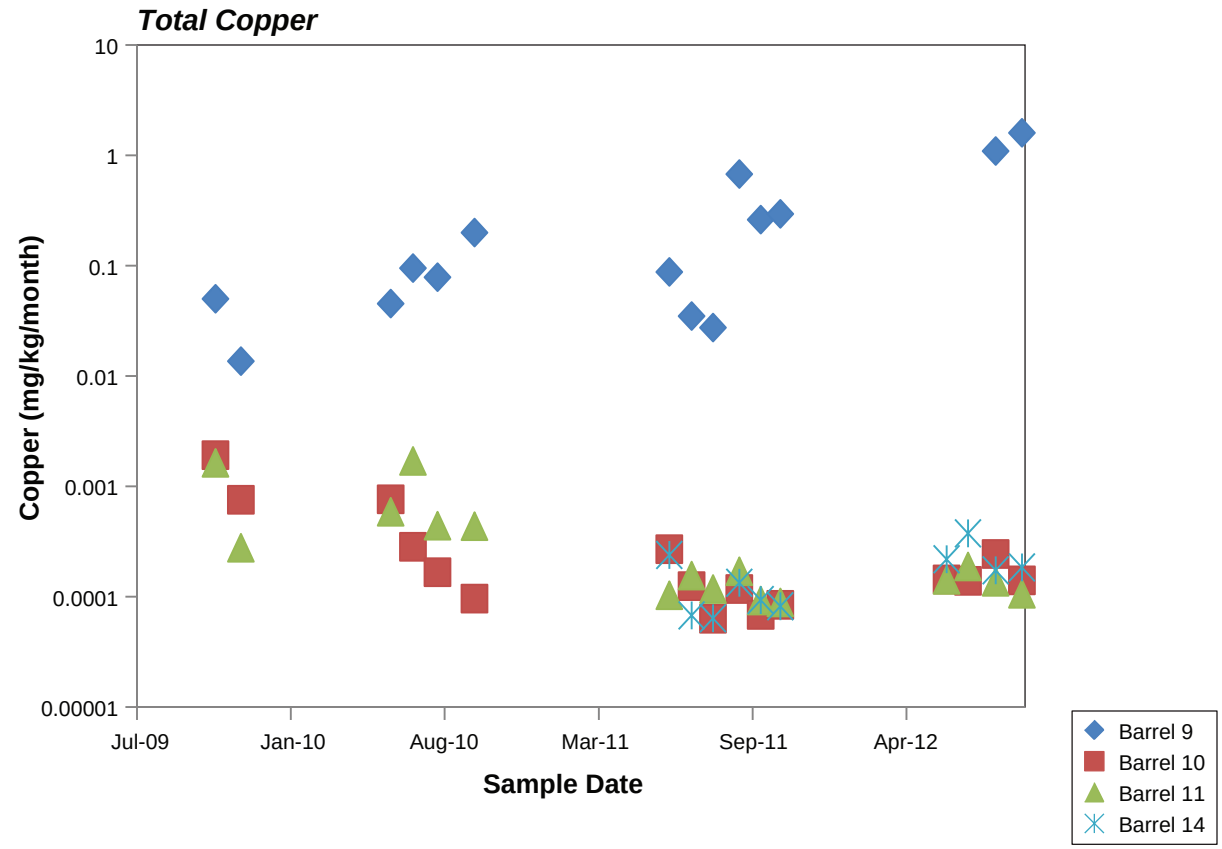


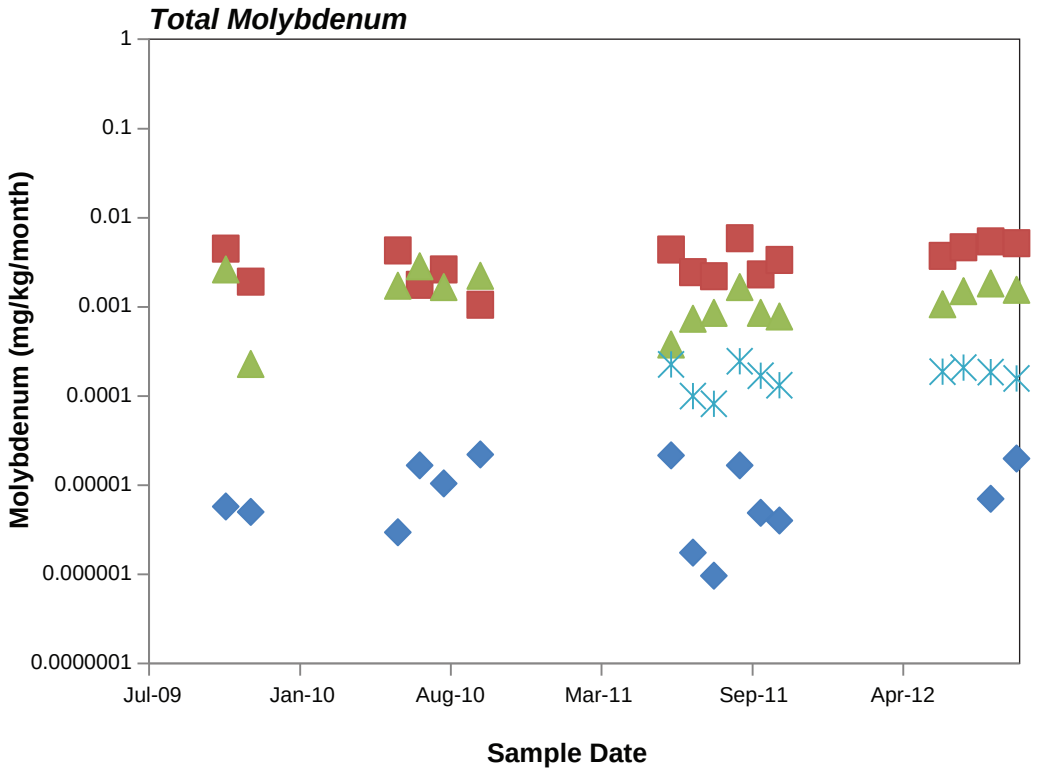
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Total Cadmium and Total Cobalt, Kerr and Sulphurets Deposits Field Leach Barrels

Figure 5.2-81

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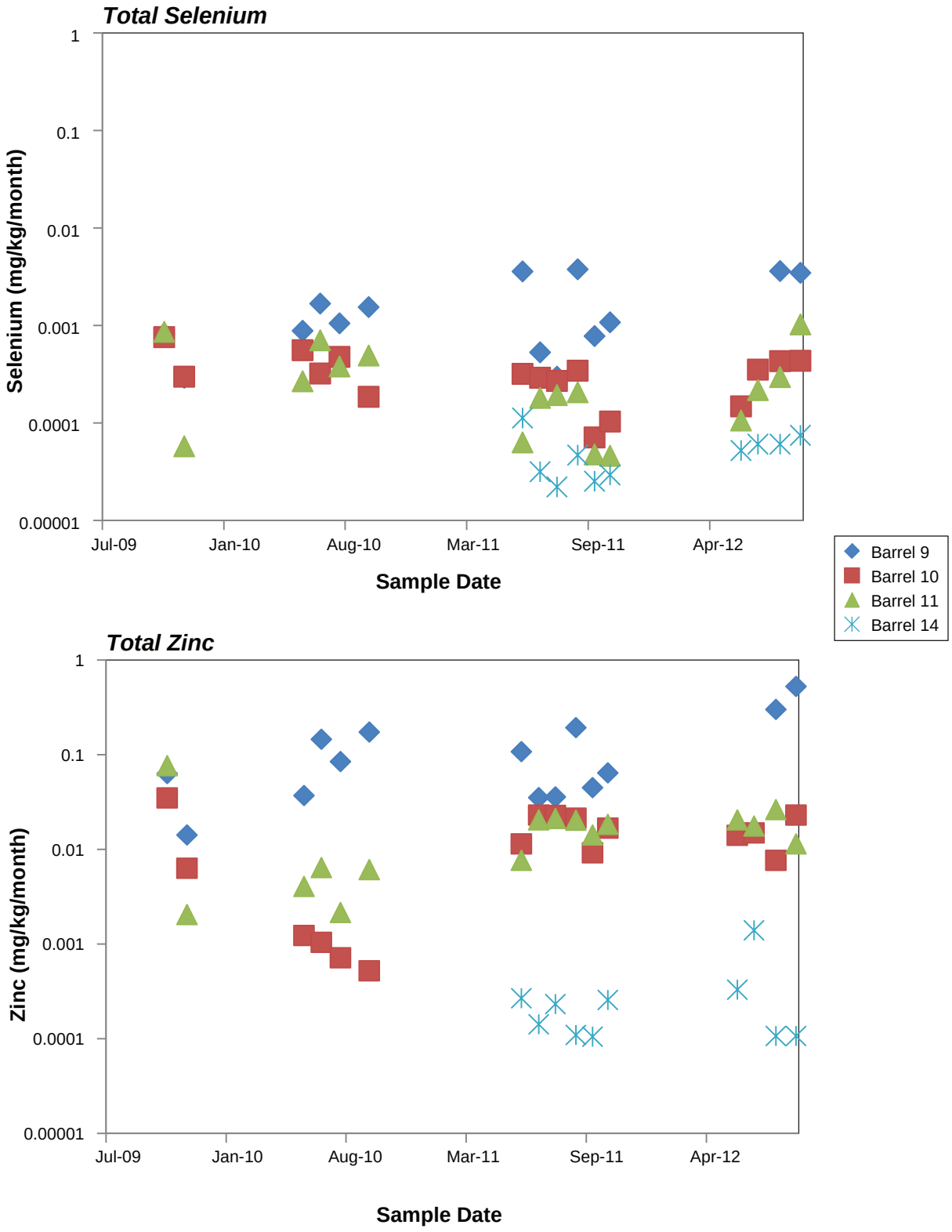


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Total Copper and Total Molybdenum, Kerr and Sulphurets Deposits Field Leach Barrels

Figure 5.2-82

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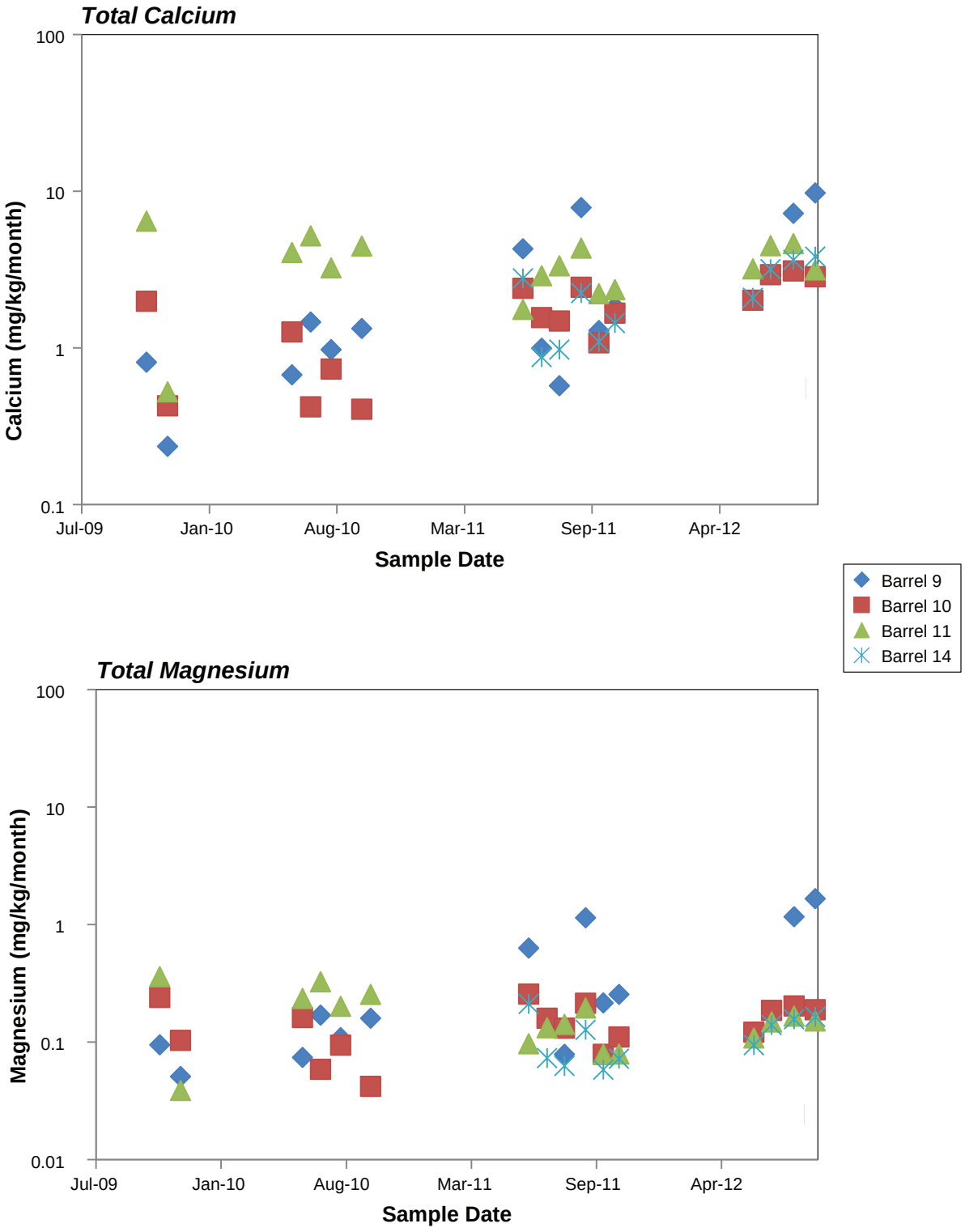


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Total Selenium and Total Zinc, Kerr and Sulphurets Deposits Field Leach Barrels

Figure 5.2-83

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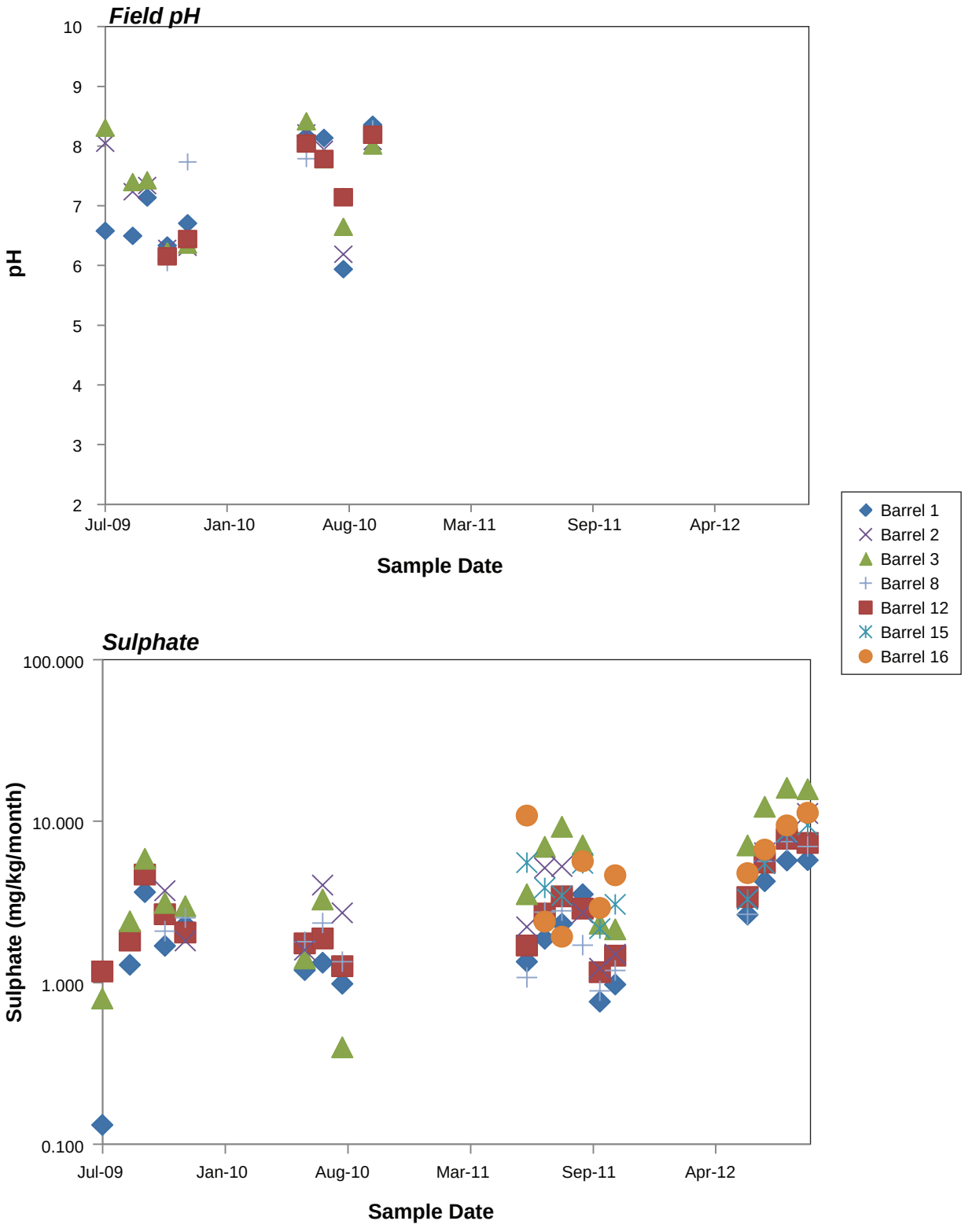


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Total Calcium and Total Magnesium, Kerr and Sulphurets Deposits Field Leach Barrels

Figure 5.2-84

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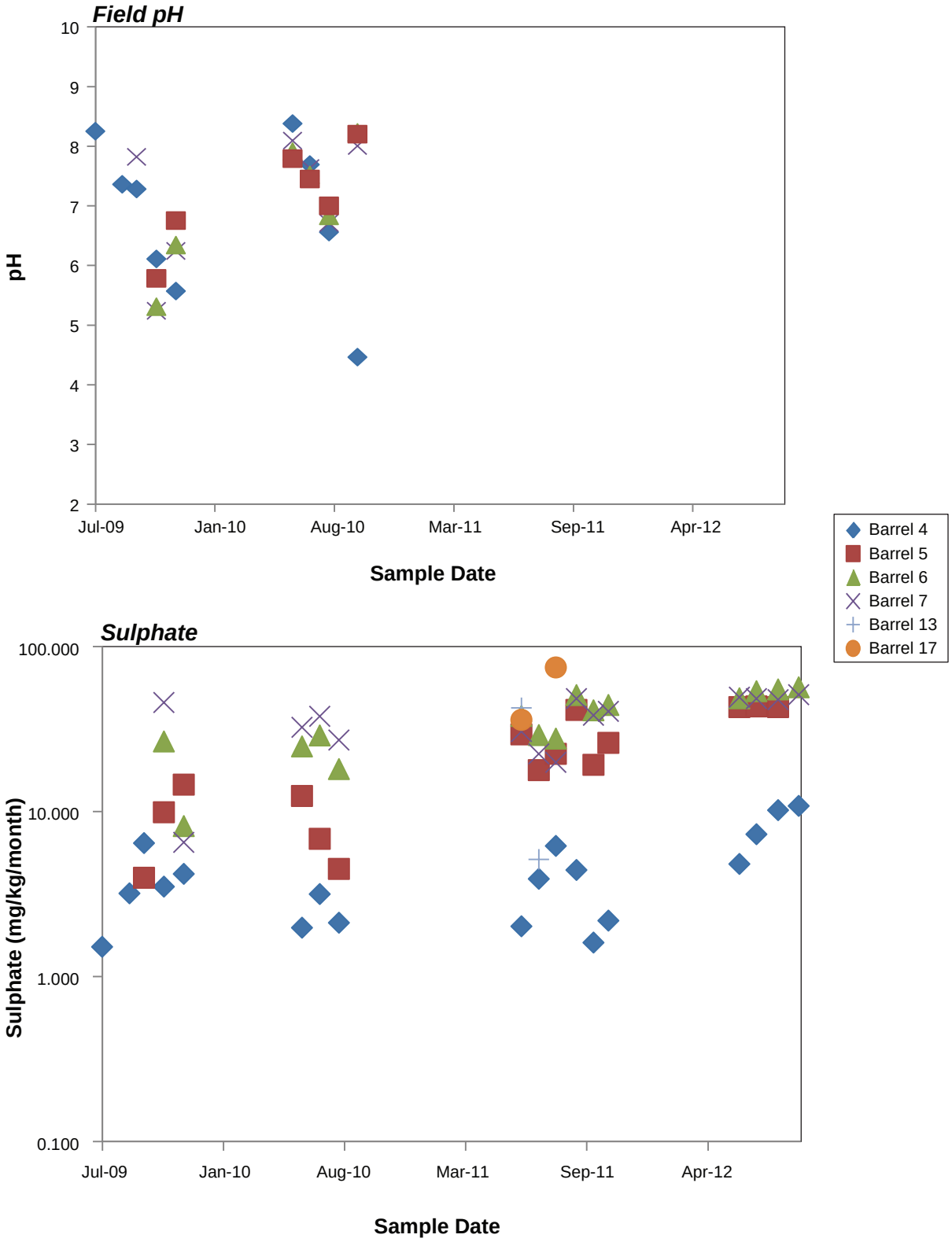


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pH and Sulphate, Mitchell Deposit
Upper Panel Field Leach Barrels

Figure 5.2-85

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pH and Sulphate, Mitchell Deposit
Lower Panel Field Leach Barrels

Figure 5.2-86

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Sulphate concentrations in leachate from upper panel barrels were generally stable over time ranging from 5 to 60 mg/cm in 2011. Sulphate concentrations in Barrel 4 (which contained upper and lower panel material) leachates were one to two orders of magnitude less than the other lower panel barrels. Sulphate in leachate from Barrels 5, 13, and 17 increased over time (Figures 5.2-85, 5.2-86).

Acidity and alkalinity were generally stable in leachate from all Mitchell Deposit barrels except lower panel Barrels 13 and 17 where acidity was two to three orders of magnitude higher and increased over time and alkalinity was below detection (Figures 5.2-87, 5.2-88).

Nutrients and Total Organic Carbon

Total nitrogen was comparable between upper and lower panel barrels. Total phosphate was comparable between upper and lower panel barrel leachates, with the exception of high total phosphate in acidic Barrels 13 and 17. Total organic carbon decreased over time in leachates from lower panel barrels and upper panel Barrel 12, but was generally stable in the remaining upper panel barrels (Figures 5.2-89, 5.2-90).

Elements that Contribute to Acidity

Total aluminum was generally stable in upper panel barrel leachates. Increased concentrations in the summer in lower panel Barrel 5 leachate in 2009 and 2010 were noted, but concentrations were low and stable in 2011. Total aluminum in the acidic Barrels 13 and 17 leachates were three to four orders of magnitude higher than in the other field barrels. Dissolved aluminum was frequently below the detection limit in all field barrel leachates, except the acidic Barrels 13 and 17 (Figures 5.2-91, 5.2-92).

Total and dissolved iron was frequently below the detection limit in all field barrel leachates except the acidic Barrels 13 and 17, where concentrations increased over time in 2011 and ranged from 12 to 770 mg/L (Figures 5.2-93, 5.2-94).

Manganese concentrations generally decreased over time in all upper panel and lower barrel leachates. A steady decrease in manganese concentrations in 2011 from June to October was evident. Manganese in the acidic Barrels 13 and 17 was two orders of magnitude greater than other lower panel barrels (Figures 5.2-95, 5.2-96).

Barium

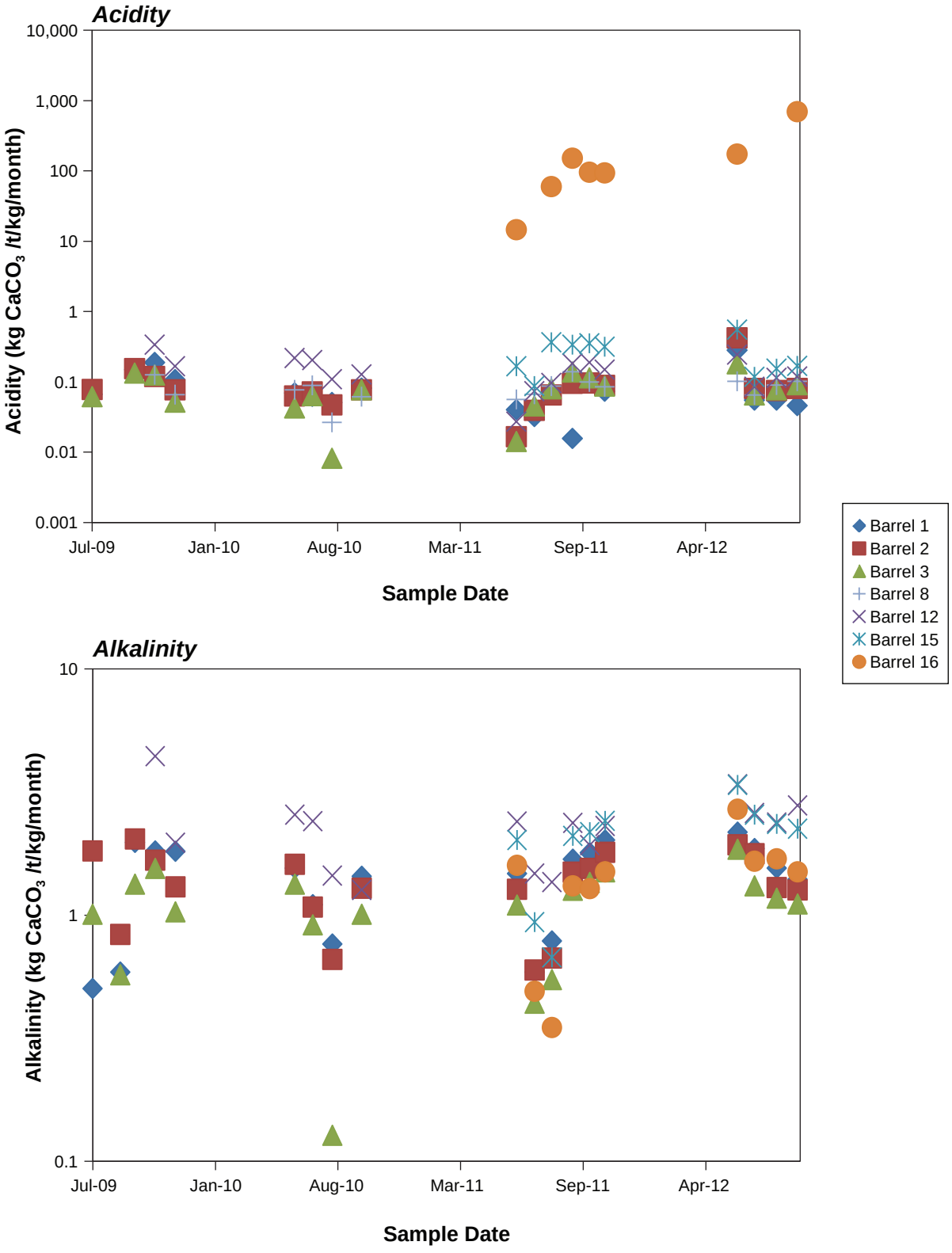
Barium was generally stable around 0.01 mg/cm in leachate from upper panel barrels, but showed a high degree of variability in lower panel barrels (Figures 5.2-95, 5.2-96).

Trace Elements

Chloride and fluoride were elevated in leachate from the acidic Barrels 13 and 17 only. Concentrations of chloride in leachate from these two barrels increased over time, while fluoride concentrations increased from June to the beginning of September in 2011 before decreasing to the end of October (Figures 5.2-97).

Antimony concentrations were generally stable and comparable across upper and lower panel barrel leachates (Figure 5.2-98).

Arsenic concentrations were elevated in leachates from upper panel Barrel 16 and lower panel Barrels 7, 13, and 17. Arsenic concentrations generally decreased over time, especially throughout 2011, with the exception the acidic Barrels 13 and 17 (Figures 5.2-98, 5.2-99).

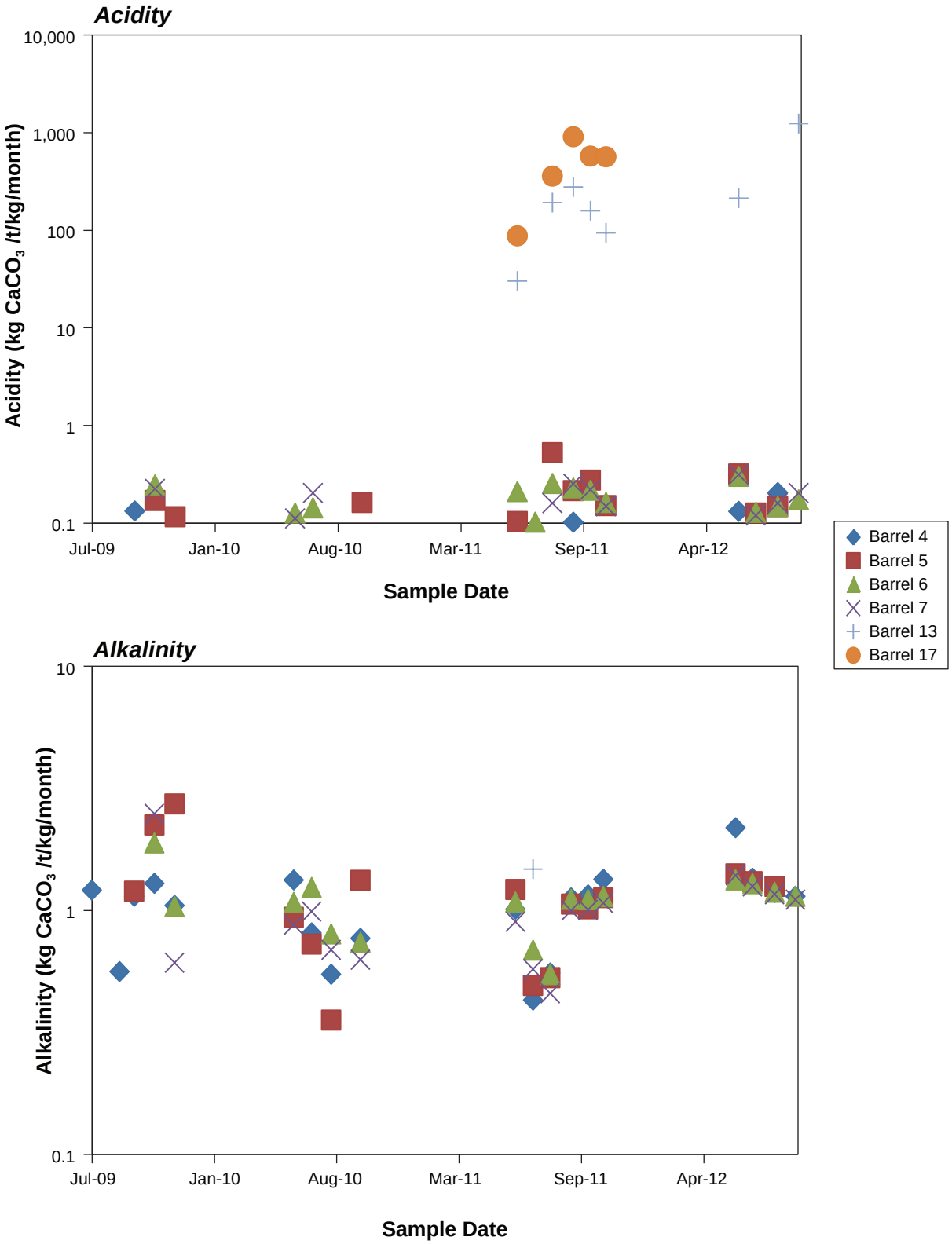


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Acidity and Alkalinity, Mitchell Deposit
Upper Panel Field Leach Barrels

Figure 5.2-87

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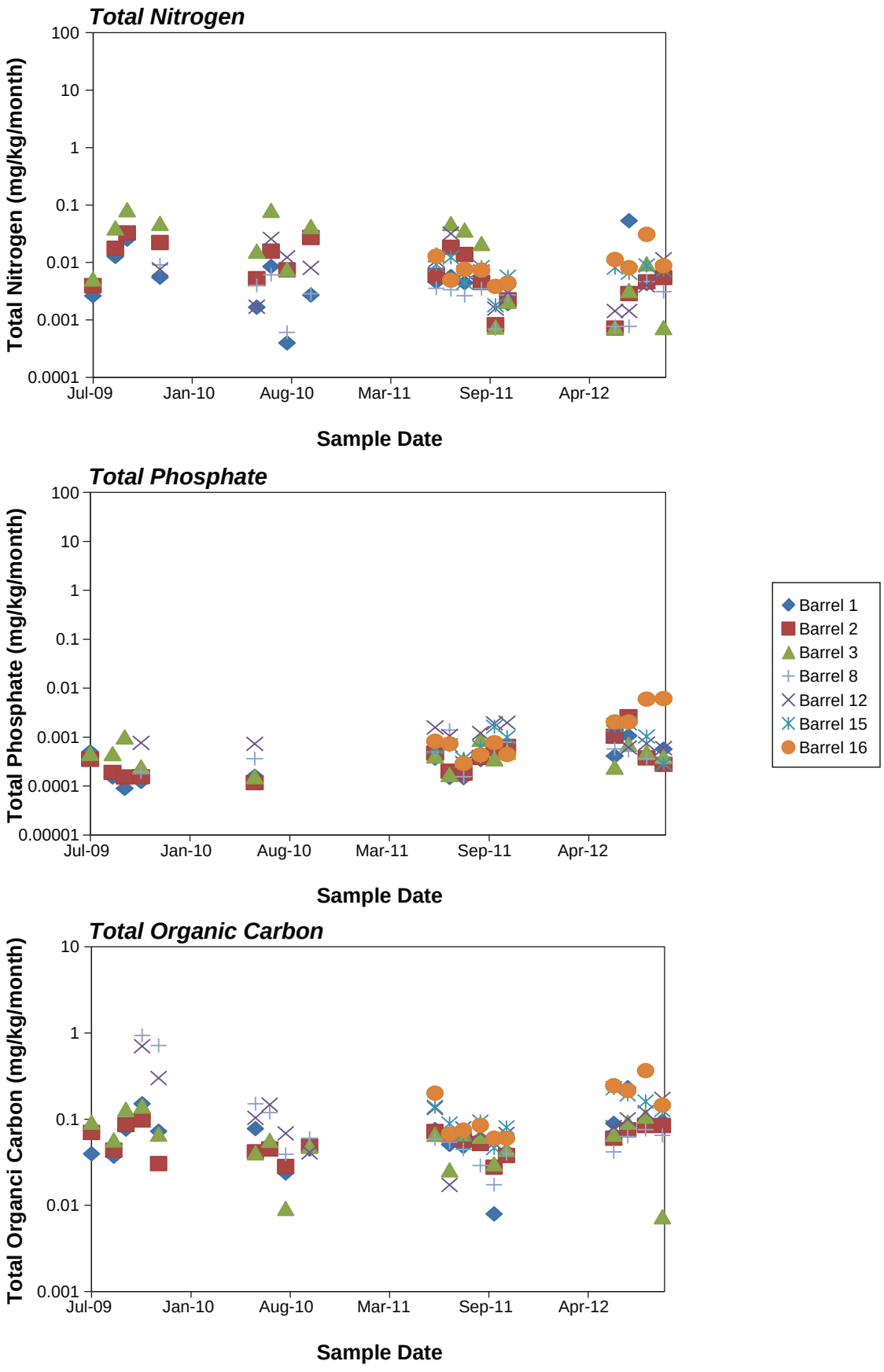


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Acidity and Alkalinity, Mitchell Deposit
Lower Panel Field Leach Barrels

Figure 5.2-88

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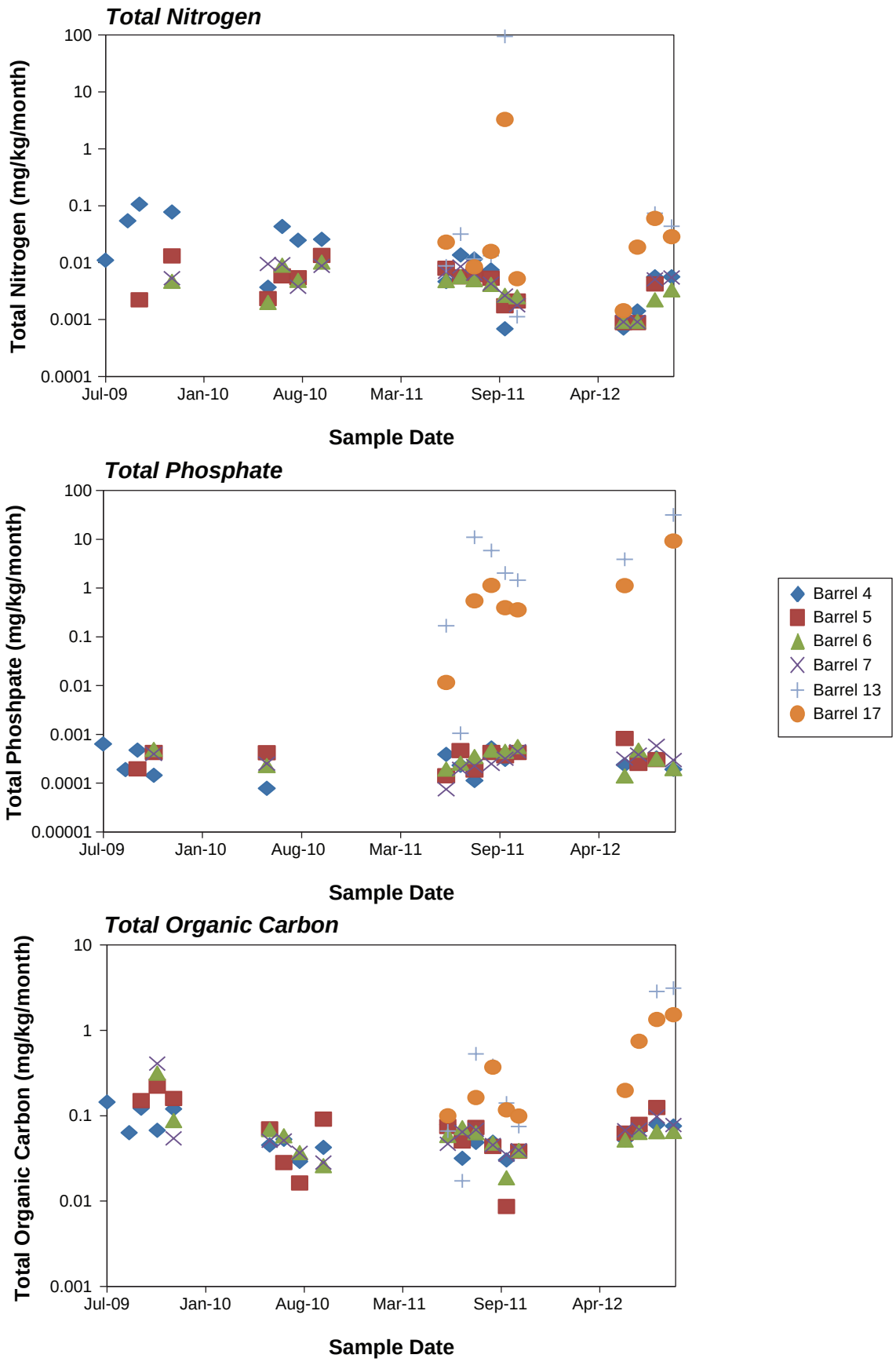


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Total Nitrogen, Total Phosphate, and Total Organic Carbon, Mitchell Deposit Upper Panel Field Leach Barrels

Figure 5.2-89

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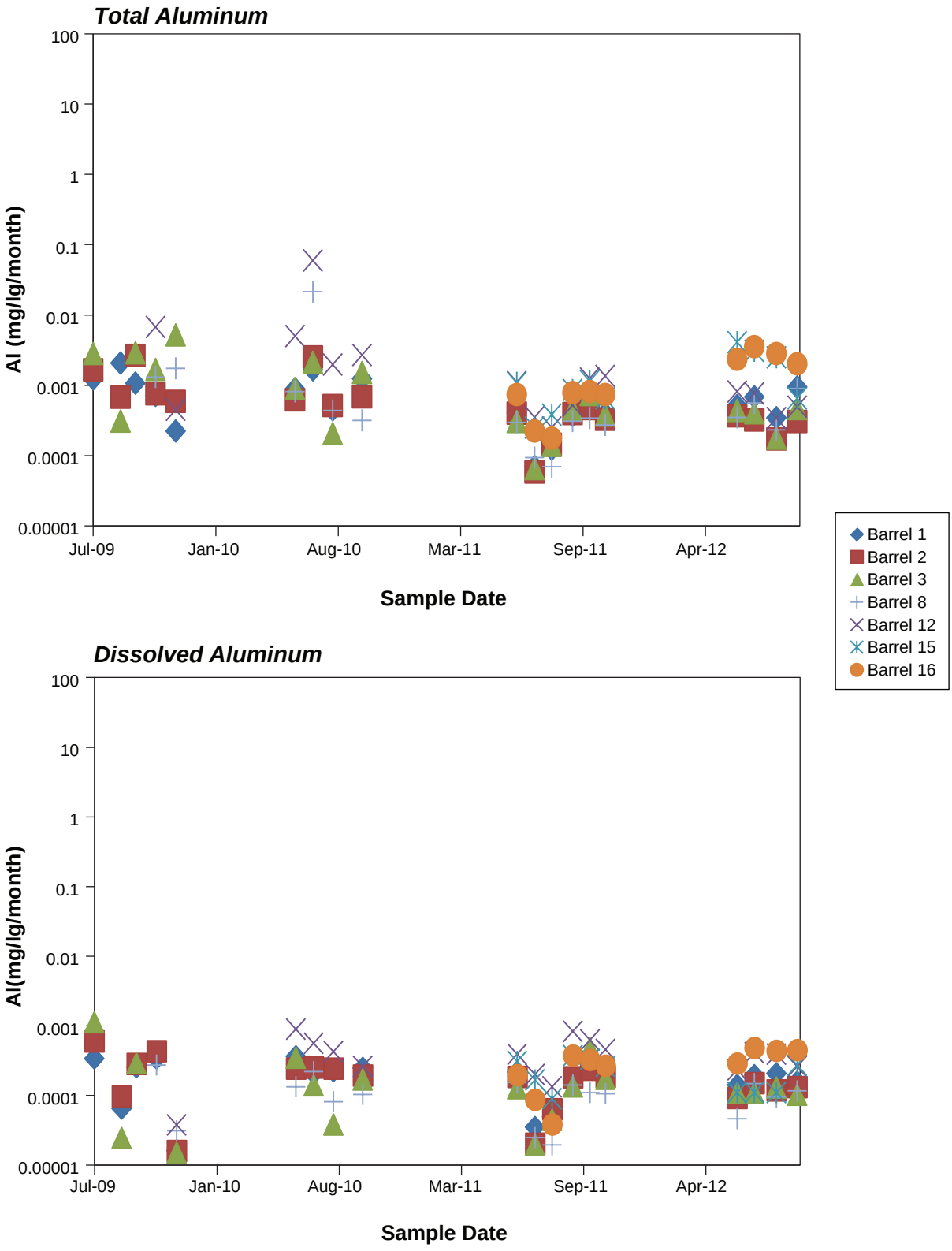


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Total Nitrogen, Total Phosphate, and Total Organic Carbon, Mitchell Deposit Lower Panel Field Leach Barrels

Figure 5.2-90

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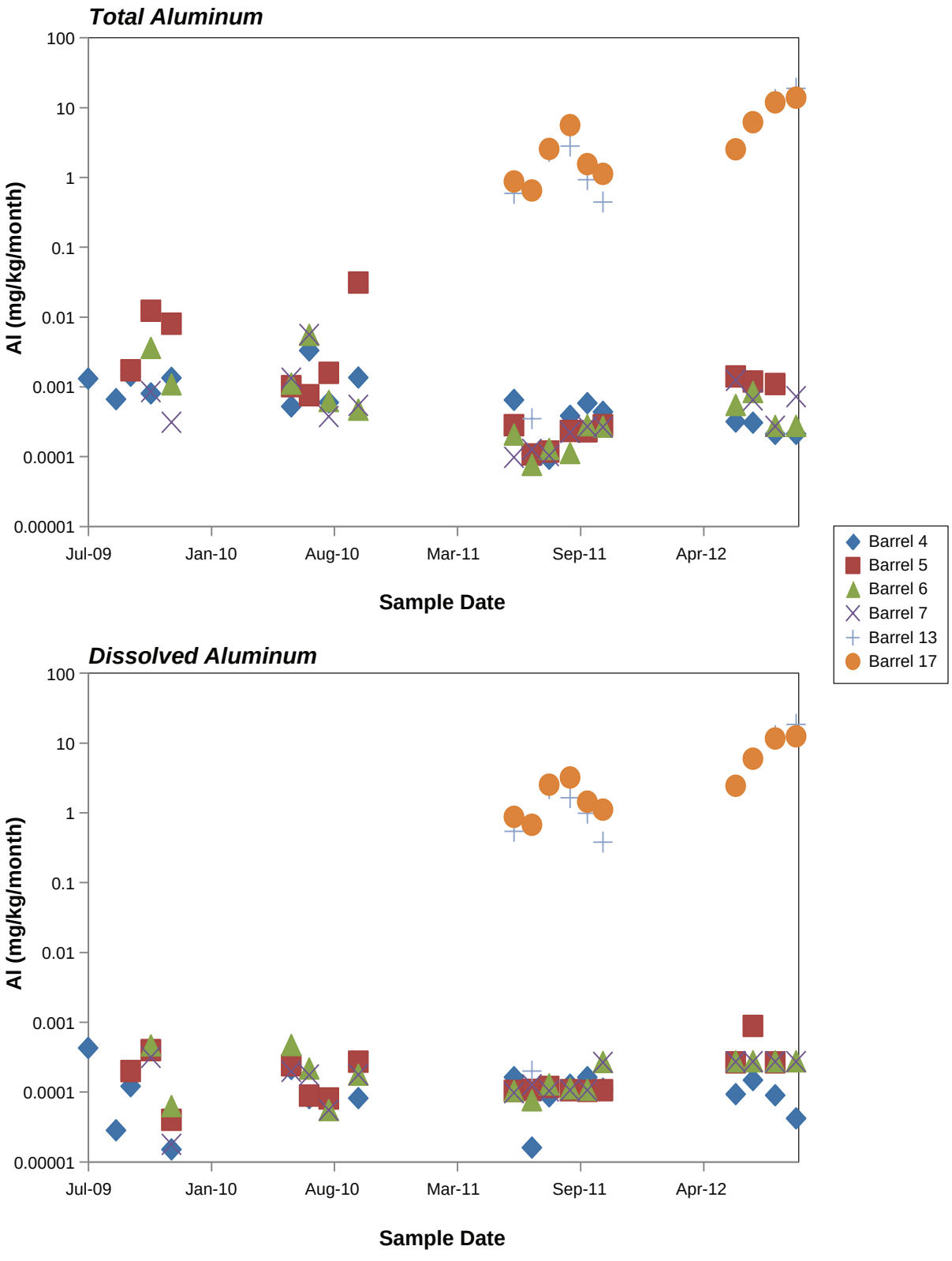


SEABRIDGE GOLD
KSM PROJECT

Total and Dissolved Aluminum, Mitchell Deposit Upper Panel Field Leach Barrels

Figure 5.2-91

Rescan™ Engineers & Scientists

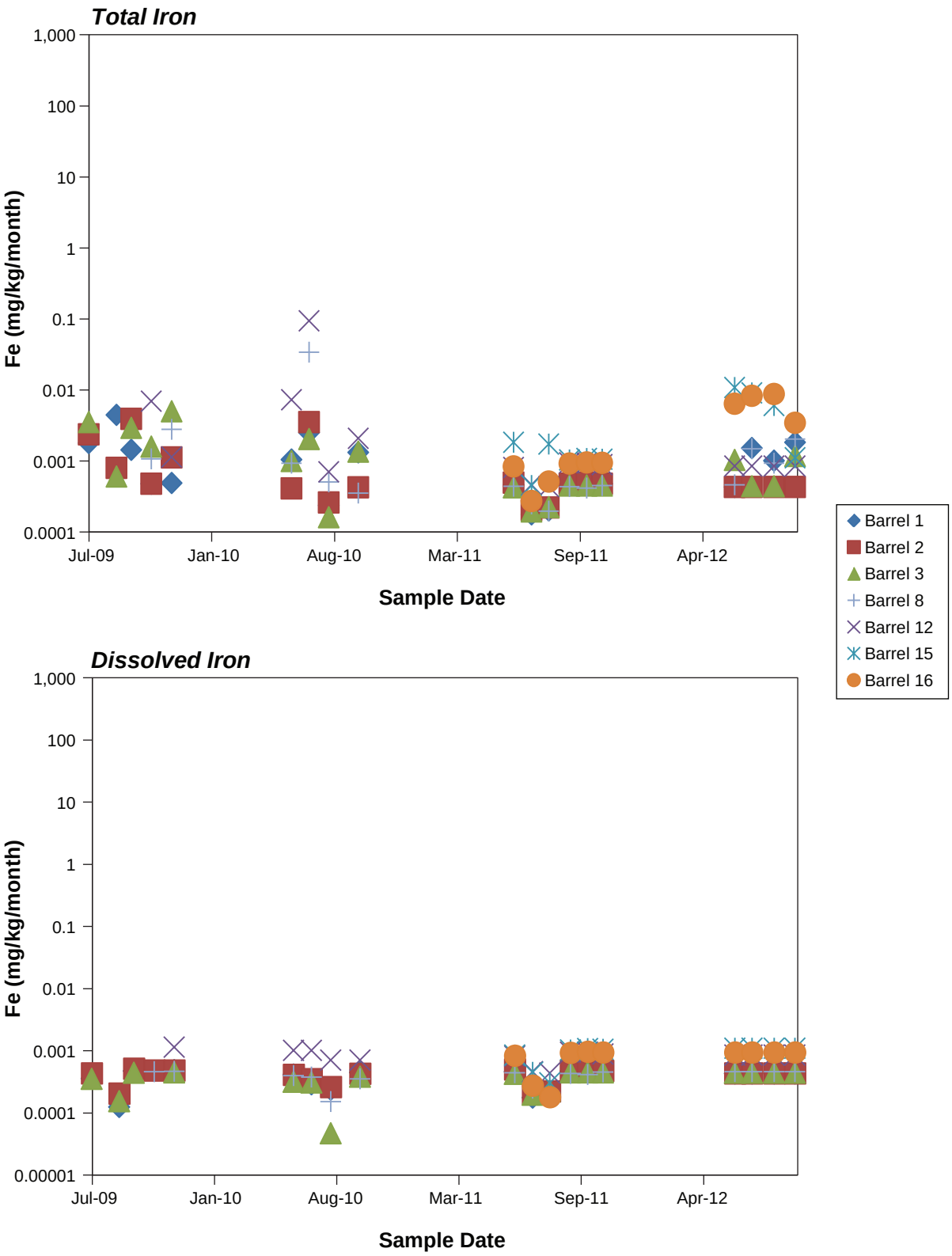


SEABRIDGE GOLD
KSM PROJECT

Total and Dissolved Aluminum, Mitchell Deposit Lower Panel Field Leach Barrels

Figure 5.2-92

Rescan™ Engineers & Scientists

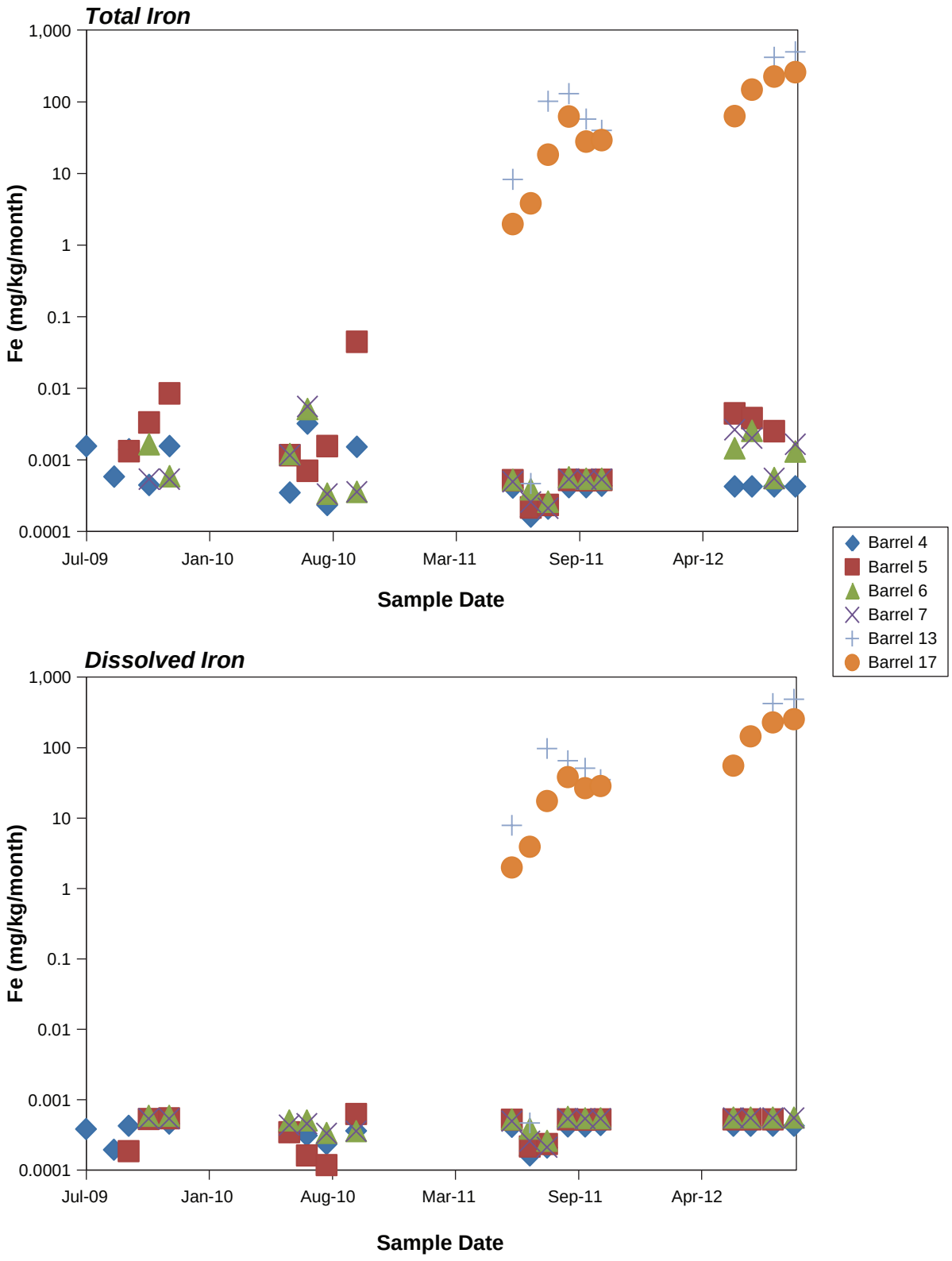


SEABRIDGE GOLD
KSM PROJECT

Total and Dissolved Iron, Mitchell Deposit Upper Panel Field Leach Barrels

Figure 5.2-93

Rescan™ Engineers & Scientists

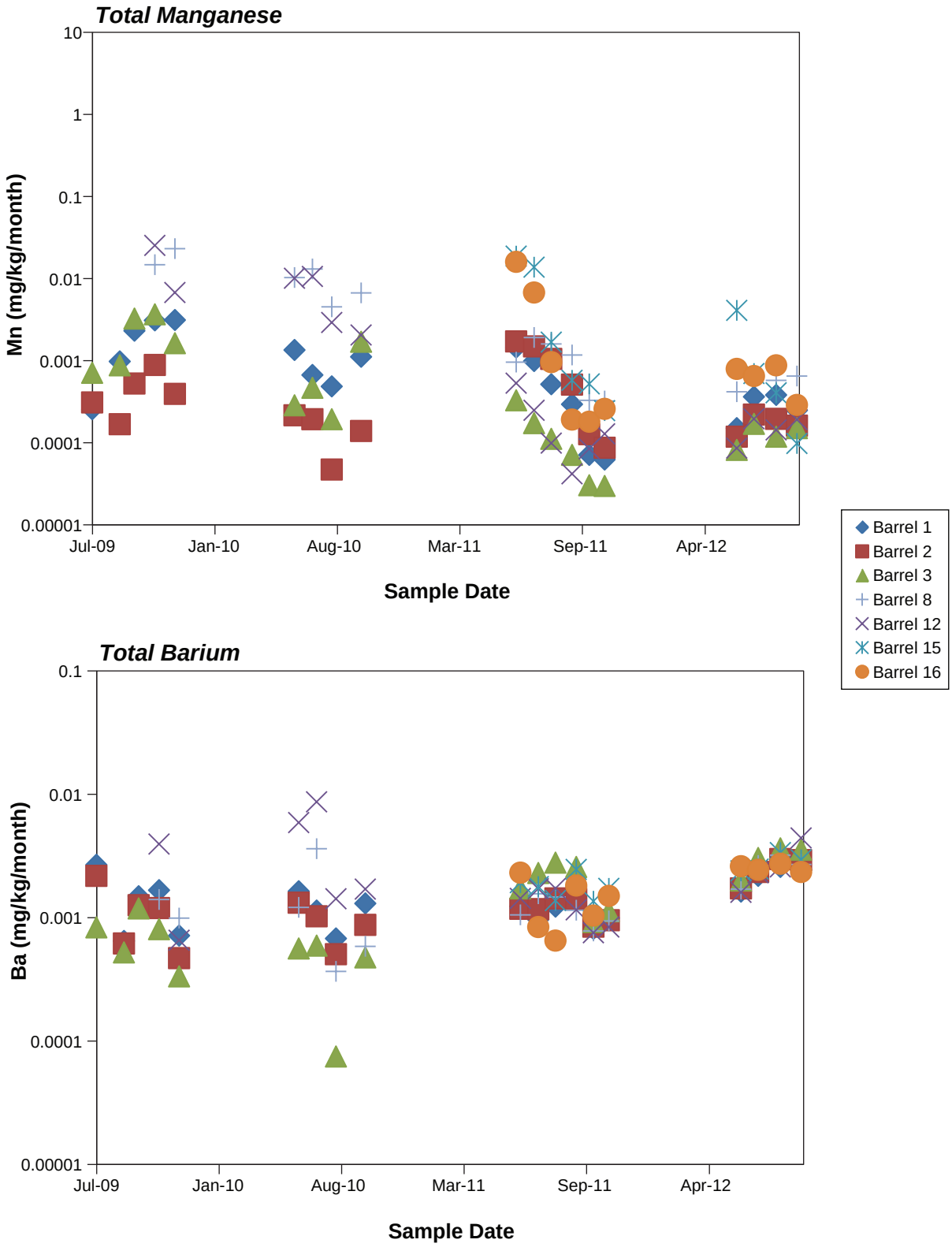


SEABRIDGE GOLD
KSM PROJECT

Total and Dissolved Iron, Mitchell Deposit Lower Panel Field Leach Barrels

Figure 5.2-94

Rescan™ Engineers & Scientists

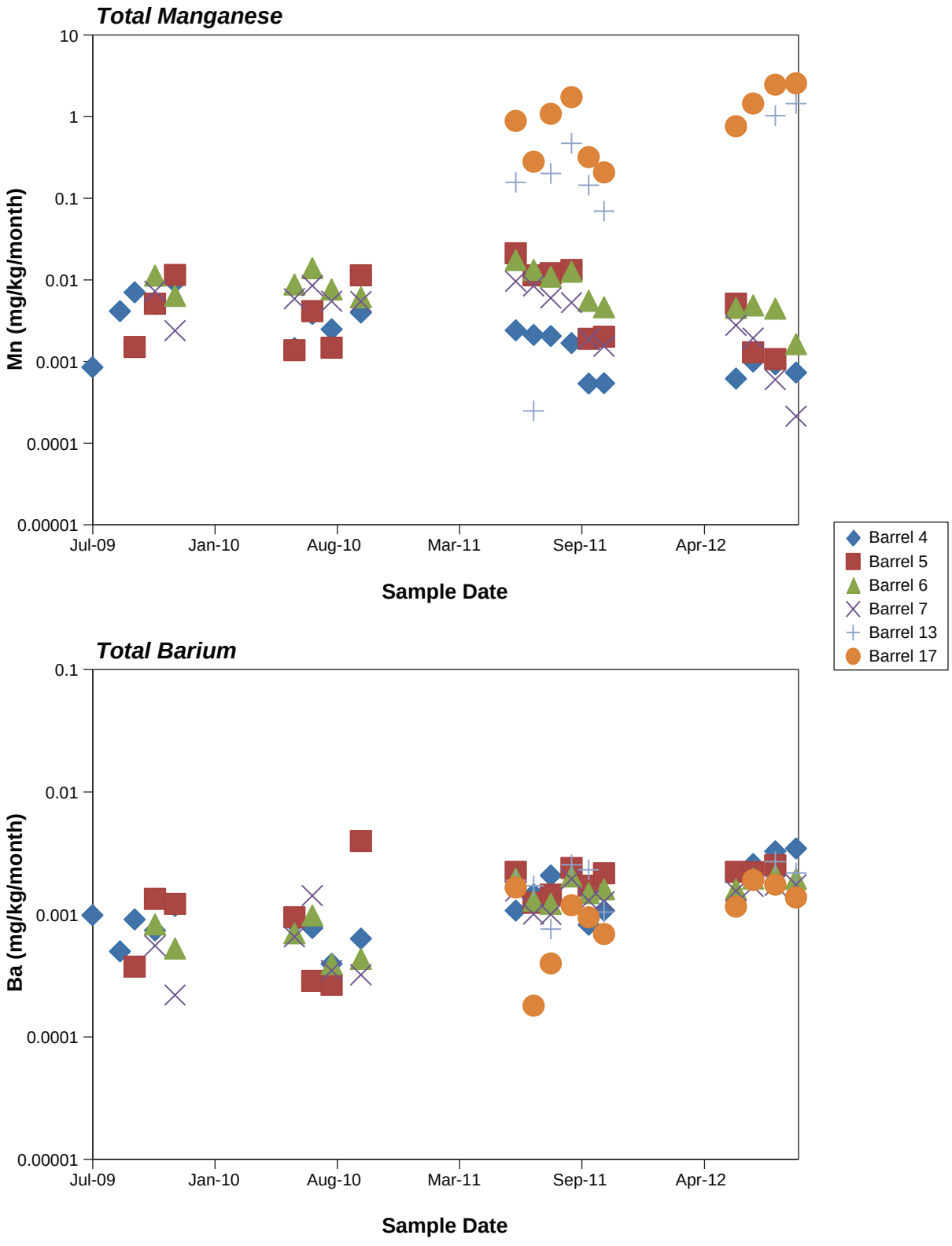


SEABRIDGE GOLD
KSM PROJECT

Total Manganese and Total Barium, Mitchell Deposit Upper Panel Field Leach Barrels

Figure 5.2-95

Rescan™ Engineers & Scientists

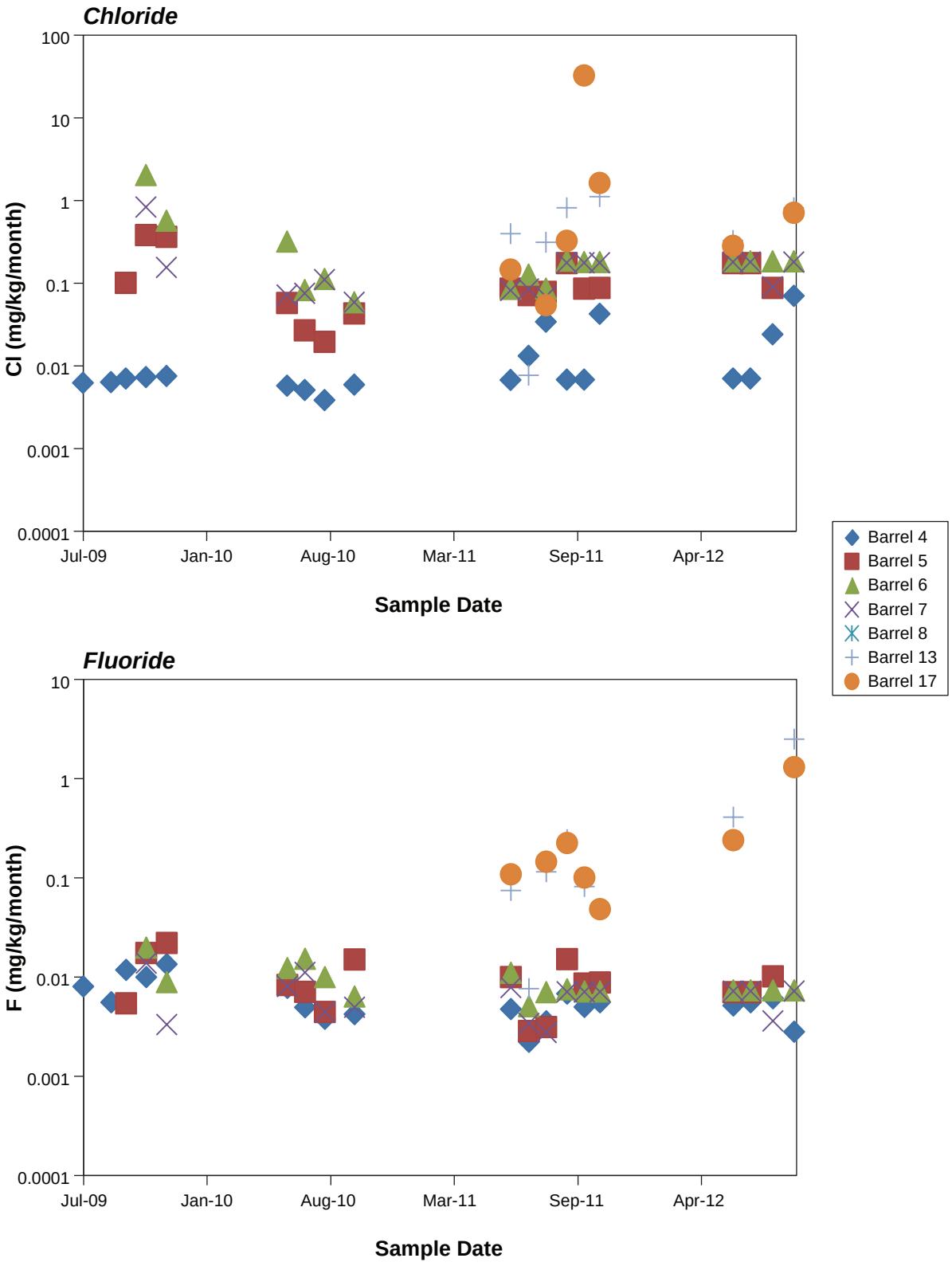


SEABRIDGE GOLD
KSM PROJECT

Total Manganese and Total Barium, Mitchell Deposit Lower Panel Field Leach Barrels

Figure 5.2-96

Rescan™ Engineers & Scientists

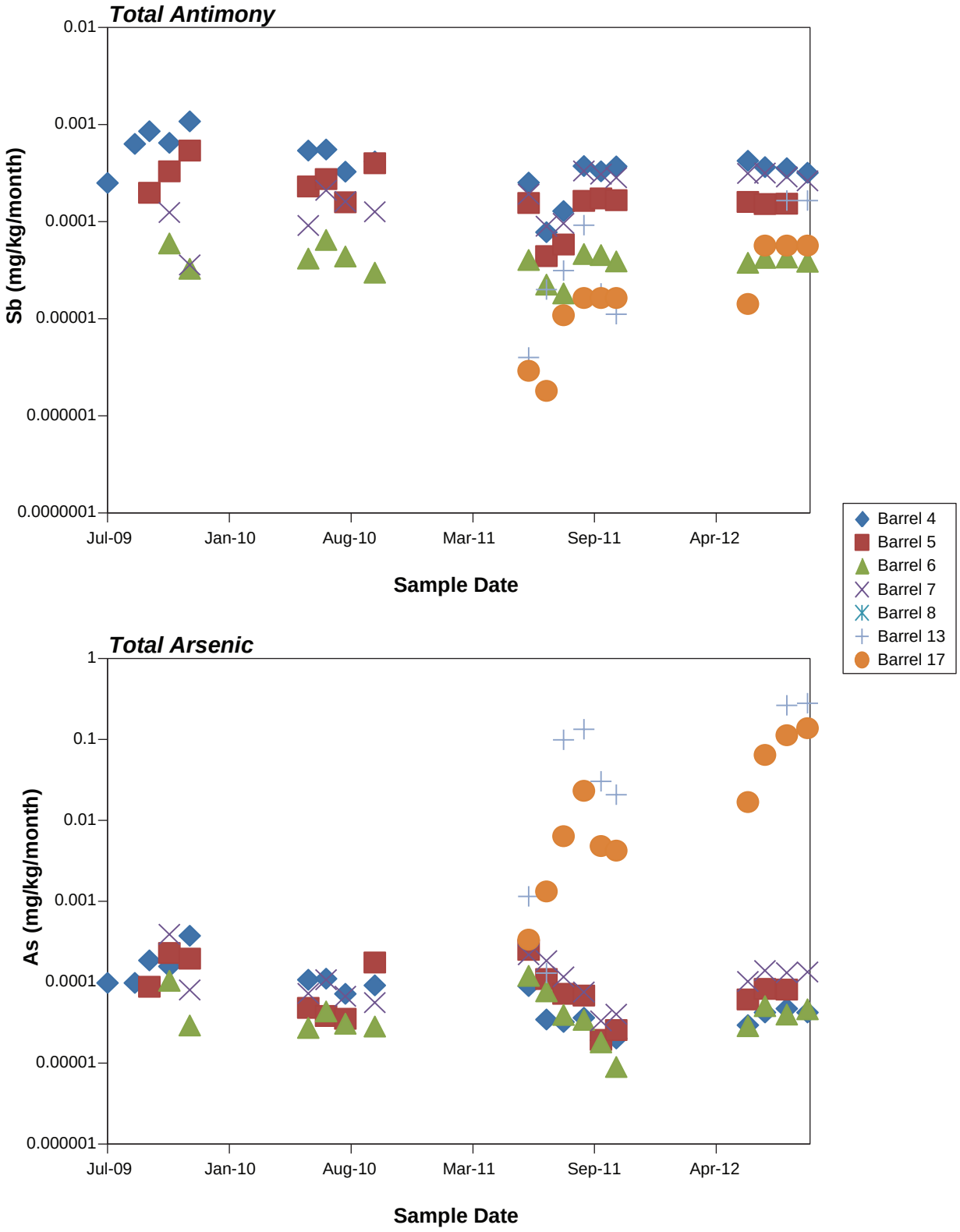


SEABRIDGE GOLD
KSM PROJECT

Chloride and Fluoride, Mitchell Deposit Lower Panel Field Leach Barrels

Figure 5.2-97

Rescan™ Engineers & Scientists

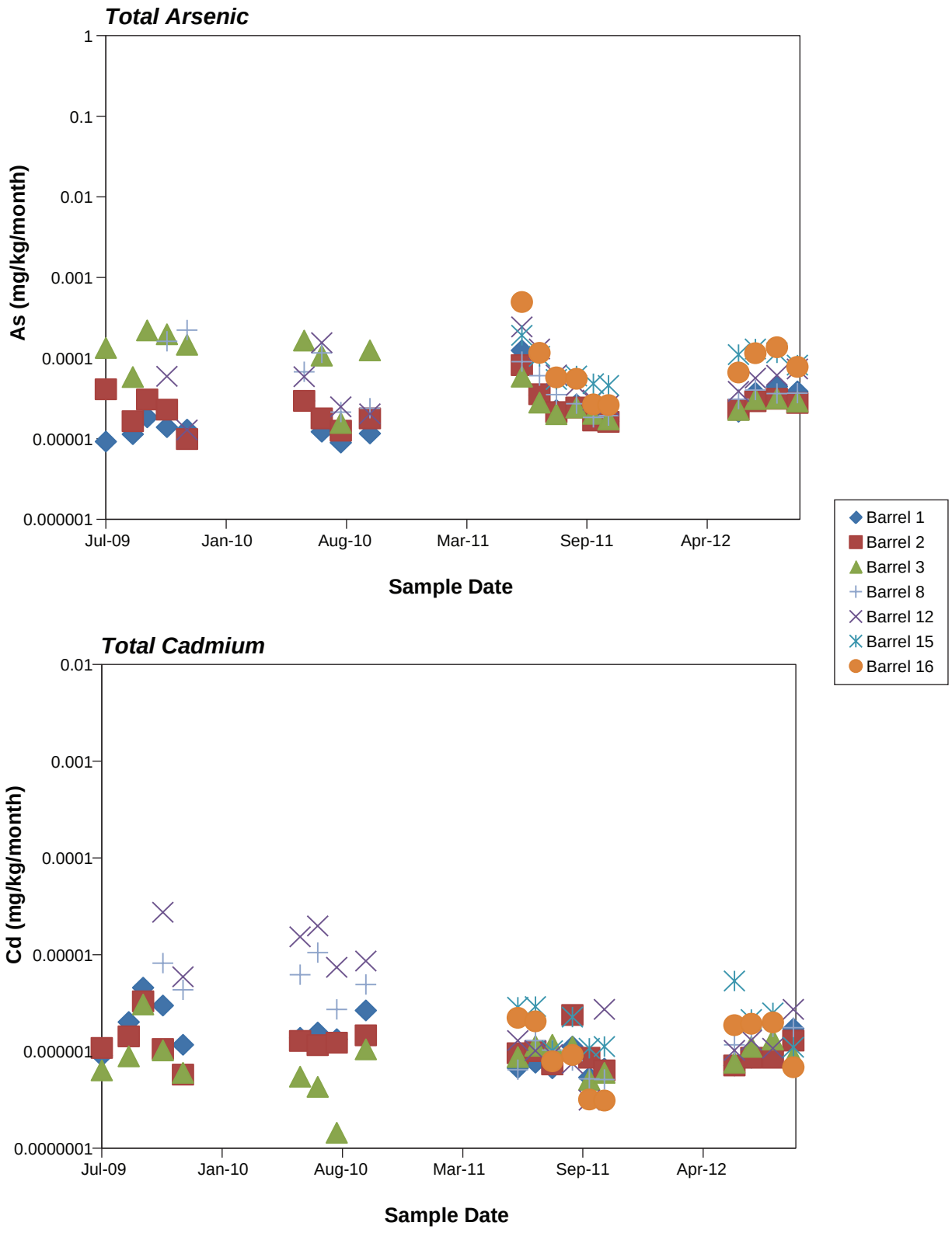


SEABRIDGE GOLD
KSM PROJECT

Total Antimony and Total Arsenic, Mitchell Deposit Lower Panel Field Leach Barrels

Figure 5.2-98

Rescan™ Engineers & Scientists



SEABRIDGE GOLD
KSM PROJECT

Total Arsenic and Total Cadmium, Mitchell Deposit Upper Panel Field Leach Barrels

Figure 5.2-99

Rescan™ Engineers & Scientists

Cadmium concentrations were generally stable in upper panel barrels ranging from 0.000002 to 0.000007 mg/cm in 2011. Cadmium decreased over time in lower panel barrel leachates. Cadmium concentrations in leachates from the acidic Barrels 13 and 17 were two to three orders of magnitude higher than the other lower panel barrels (Figures 5.2-99, 5.2-100).

Chromium concentrations were elevated in leachate from the acidic lower panel barrels 13 and 17, and increased over time. Chromium concentrations in the other barrels were frequently below the detection limit (Figure 5.2-100).

Cobalt concentrations in all barrels except the acidic Barrels 13 and 17 decreased over time (Figure 5.2-101). At the end of 2011, cobalt concentrations in Barrels 4 to 7 ranged from 0.000009 to 0.00005 mg/cm, compared to 0.066 mg/L in the acidic barrels.

Copper concentrations decreased over time for all barrels to less than 0.0002 mg/cm except the acidic Barrels 13 and 17 which had copper concentrations four to five orders of magnitude higher than the other barrels (Figures 5.2-101, 5.2-102).

Lead concentrations increased from 2009 to 2010, and then were decreased in 2011 in all barrels. Lead concentrations were elevated in Barrels 13 and 17 (Figure 5.2-103).

Total mercury concentrations were occasionally elevated in Barrels 5, 13, and 17, but were frequently below detection in all other barrels (Figure 5.2-103).

Molybdenum concentrations were elevated in lower panel Barrel 13. Molybdenum concentrations were generally stable over time for all barrels except for Barrels 13 and 17 which had increasing concentrations (Figure 5.2-102, 5.2-104).

Nickel concentrations were elevated in Barrel 13 and 17. Nickel concentrations generally decreased in other barrels over 2011 (Figure 5.2-104).

Selenium concentrations ranged from 0.0002 to 0.19 mg/cm decreased over time in most barrels with the exception of the acidic lower panel Barrels 13 and 17 (Figure 5.2-105, 5.-2-106).

Silver concentrations ranged from 0.0000005 to 0.0007 mg/cm in lower panel barrels. Silver concentrations decreased over time except in the acidic Barrel 17 (Figure 5.2-105).

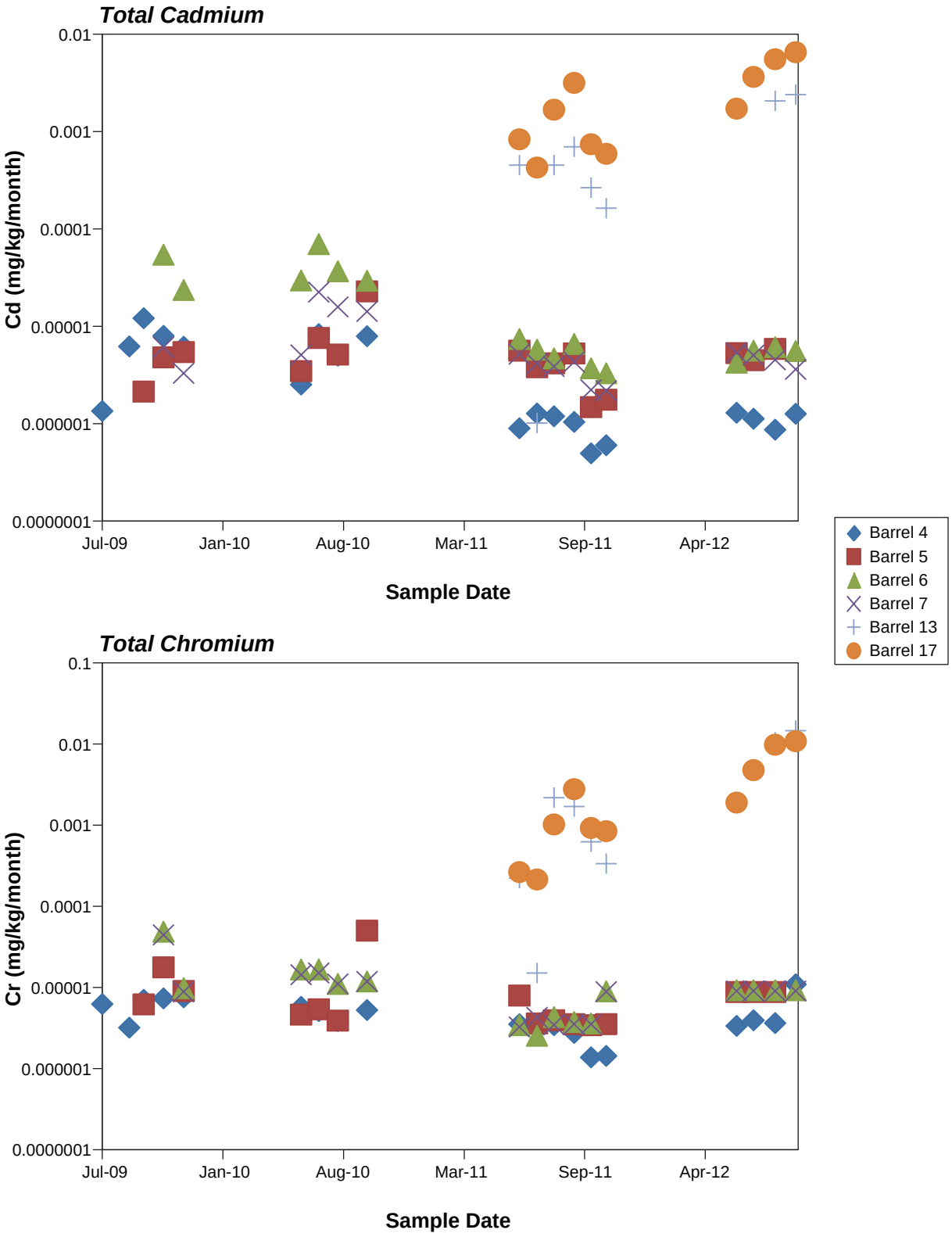
Thallium concentrations were elevated in Barrels 13 and 17 relative to the other barrels. Concentrations ranged from 0.000003 to 0.00011 mg/cm. Thallium concentrations in the other barrels were frequently below detection or decreased over time (Figure 5.2-107).

Vanadium concentrations were elevated in leachate from the acidic lower panel Barrel 13. Vanadium concentrations were generally stable in all other lower panel Barrels except the acidic Barrels 13 and 17 where concentrations increased over time (Figure 5.2-107).

Zinc concentrations in leachates from the upper panel barrels stabilized in 2011 around 0.1 mg/cm after variability in 2009 to 2010. Zinc concentrations typically increased over time in leachate from all lower panel barrels (Figures 5.2-106, 5.2-108).

Elements Associated with the Neutralization Potential

Calcium and magnesium concentrations in leachates were comparable and stable across all upper panel barrels ranging from 5.6 to 22 mg/cm. Calcium and magnesium concentrations increased over time in in leachates from most lower panel barrels, with increased variability in the acidic Barrels 13 and 17 (Figures 5.2-109, 5.2-110).

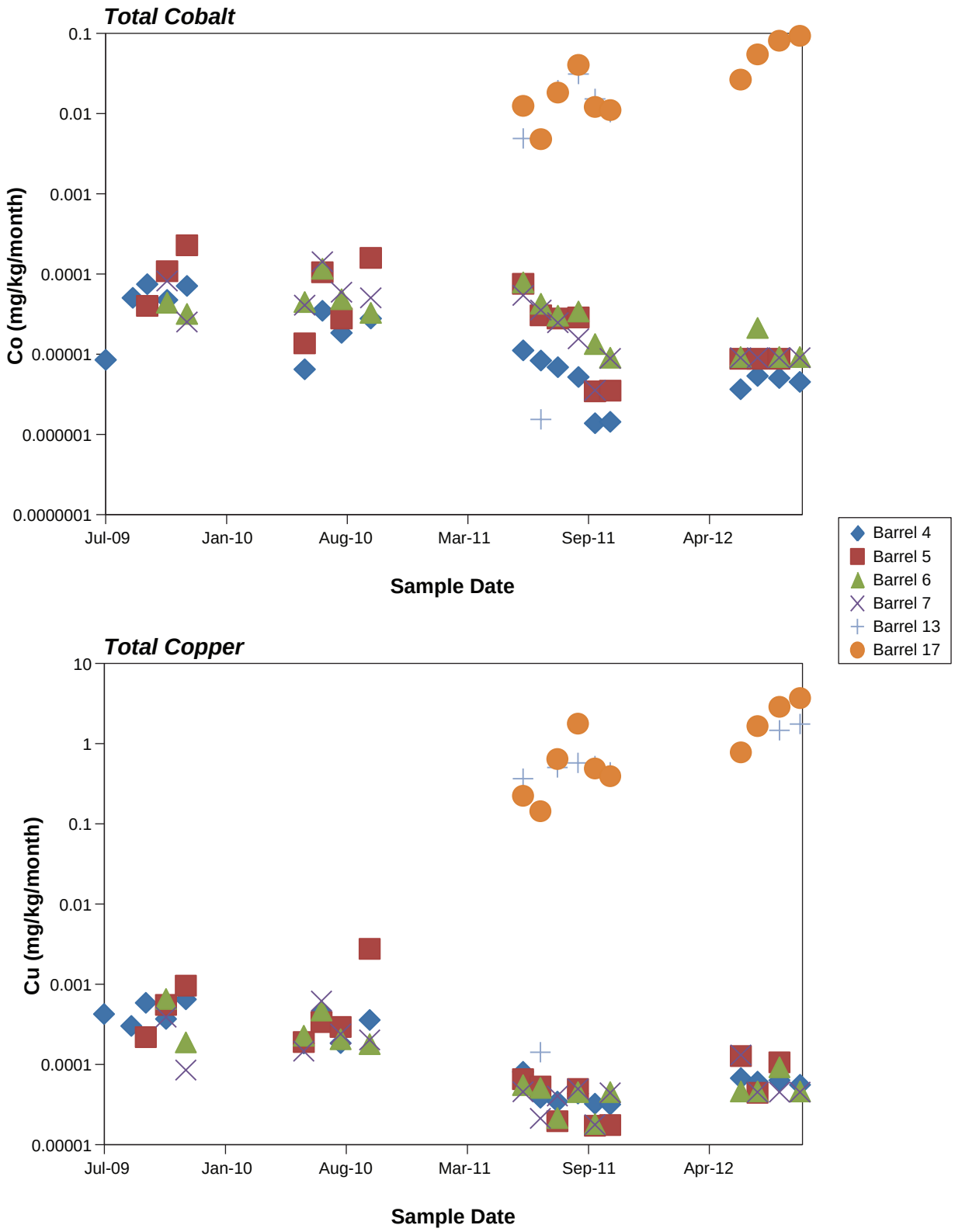


SEABRIDGE GOLD
KSM PROJECT

Total Cadmium and Total Chromium, Mitchell Deposit Lower Panel Field Leach Barrels

Figure 5.2-100

Rescan™ Engineers & Scientists

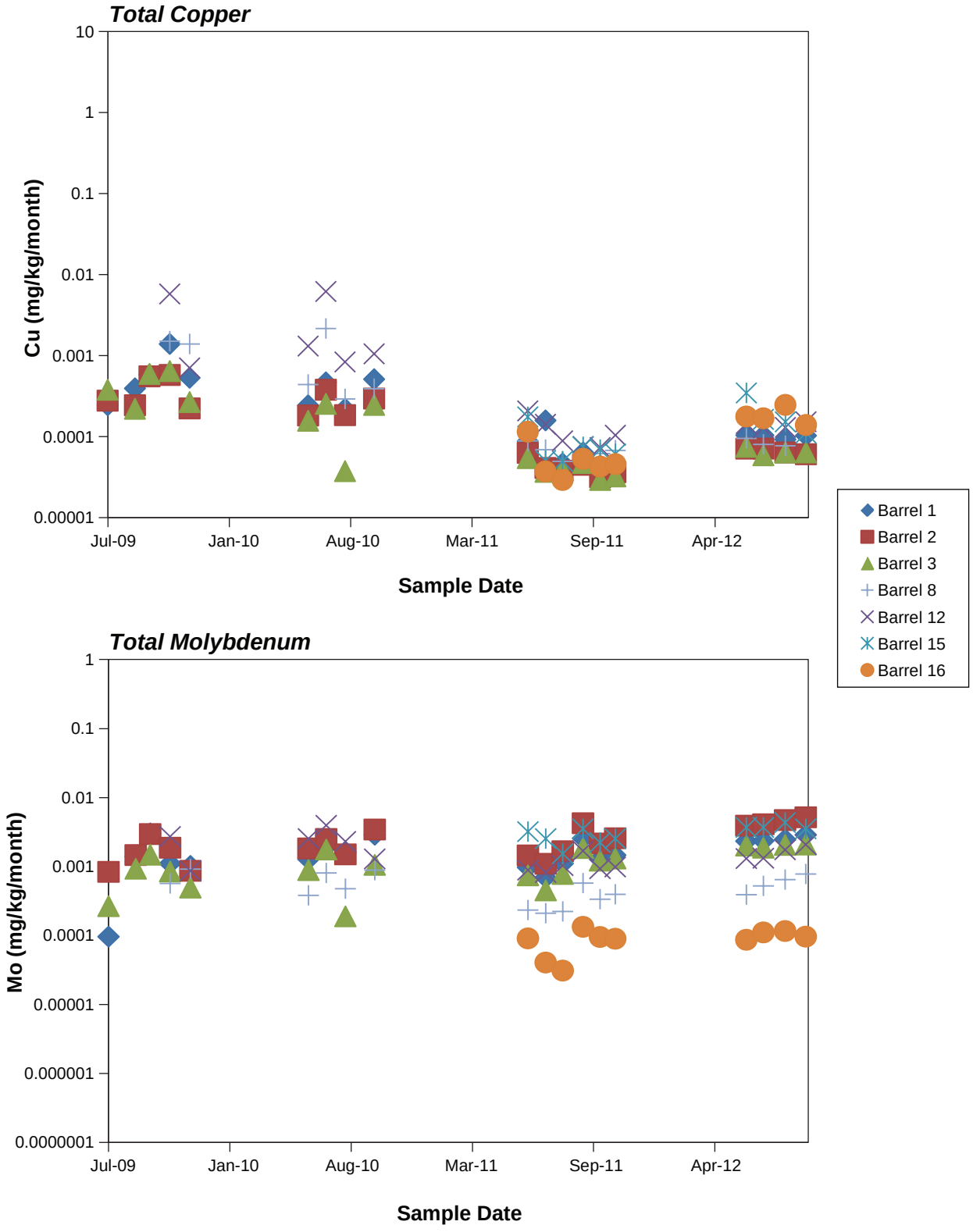


SEABRIDGE GOLD
KSM PROJECT

Total Cobalt and Total Copper, Mitchell Deposit Lower Panel Field Leach Barrels

Figure 5.2-101

Rescan™ Engineers & Scientists

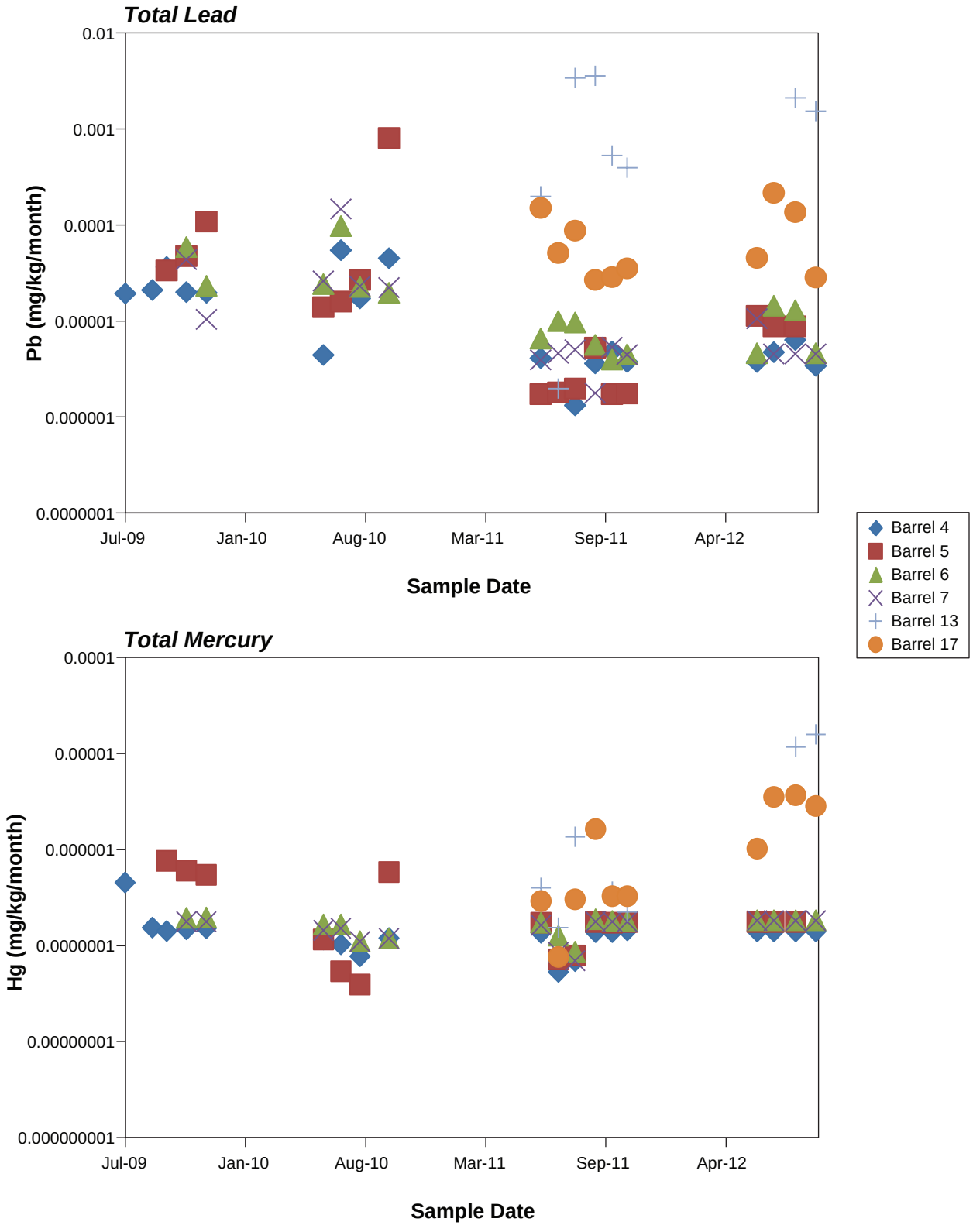


SEABRIDGE GOLD
KSM PROJECT

Total Copper and Total Molybdenum, Mitchell Deposit Upper Panel Field Leach Barrels

Figure 5.2-102

Rescan™
Engineers & Scientists

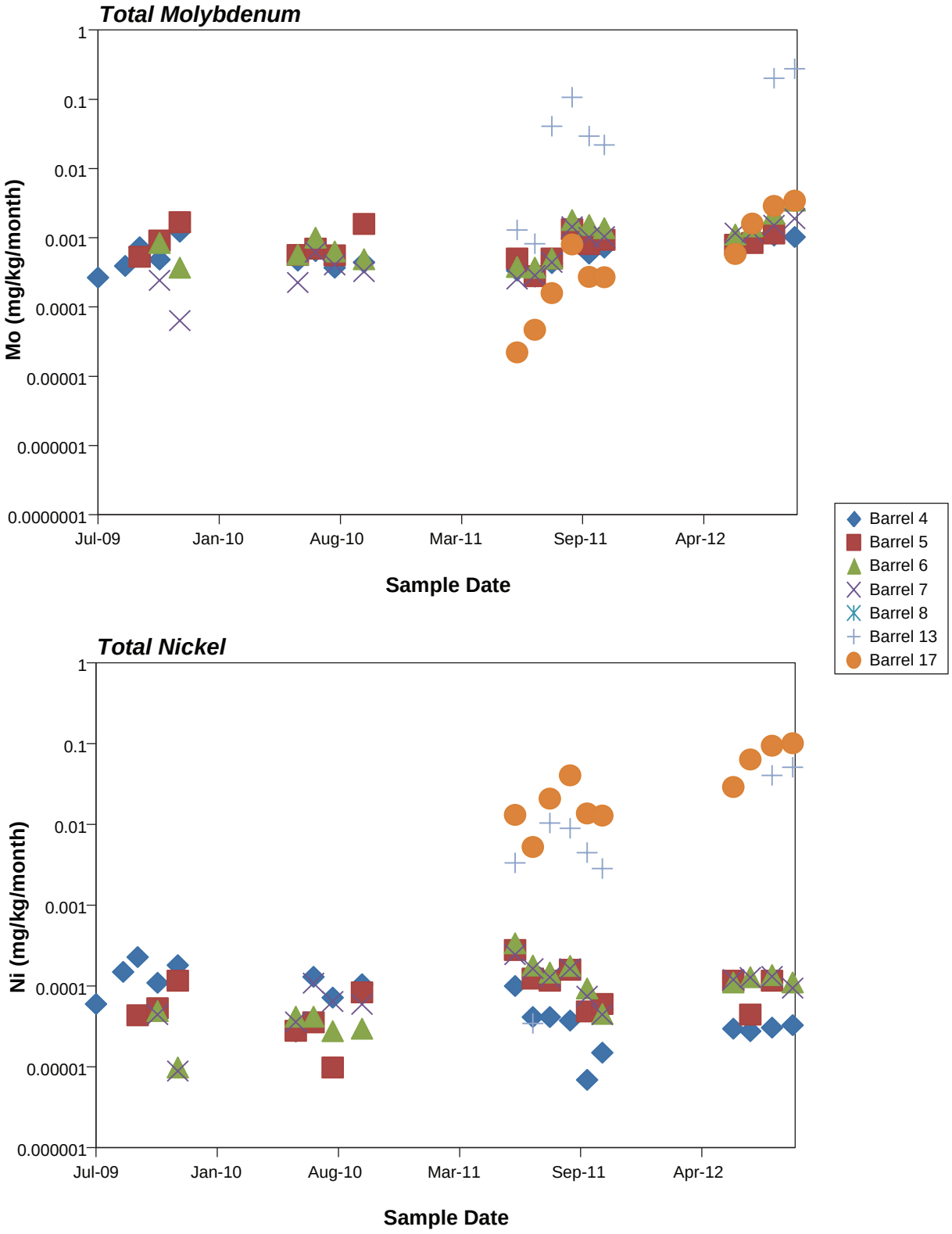


SEABRIDGE GOLD
KSM PROJECT

Total Lead and Total Mercury, Mitchell Deposit Lower Panel Field Leach Barrels

Figure 5.2-103

Rescan™ Engineers & Scientists

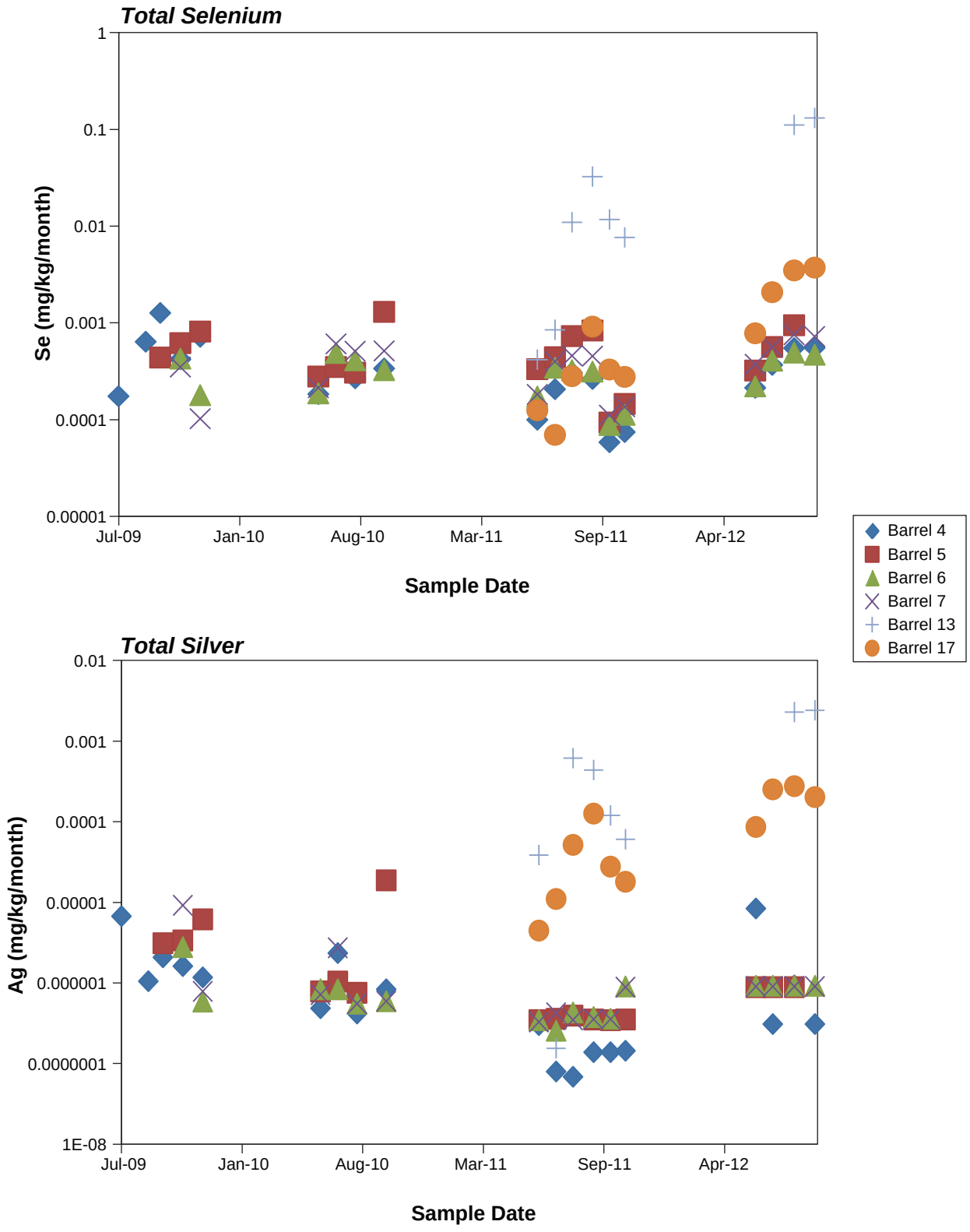


SEABRIDGE GOLD
KSM PROJECT

Total Molybdenum and Total Nickel, Mitchell Deposit Lower Panel Field Leach Barrels

Figure 5.2-104

Rescan™ Engineers & Scientists

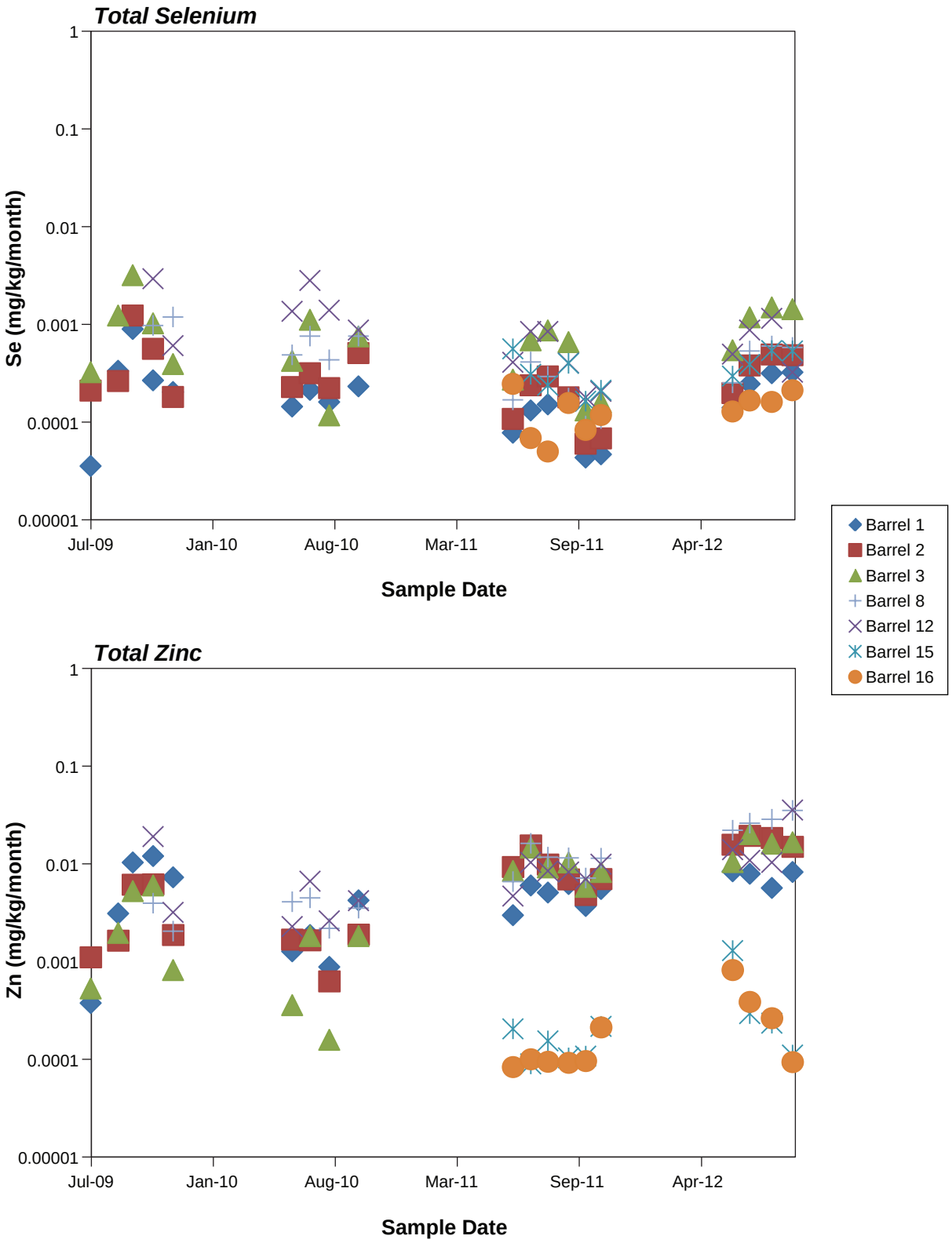


SEABRIDGE GOLD
KSM PROJECT

Total Selenium and Total Silver, Mitchell Deposit Lower Panel Field Leach Barrels

Figure 5.2-105

Rescan™ Engineers & Scientists

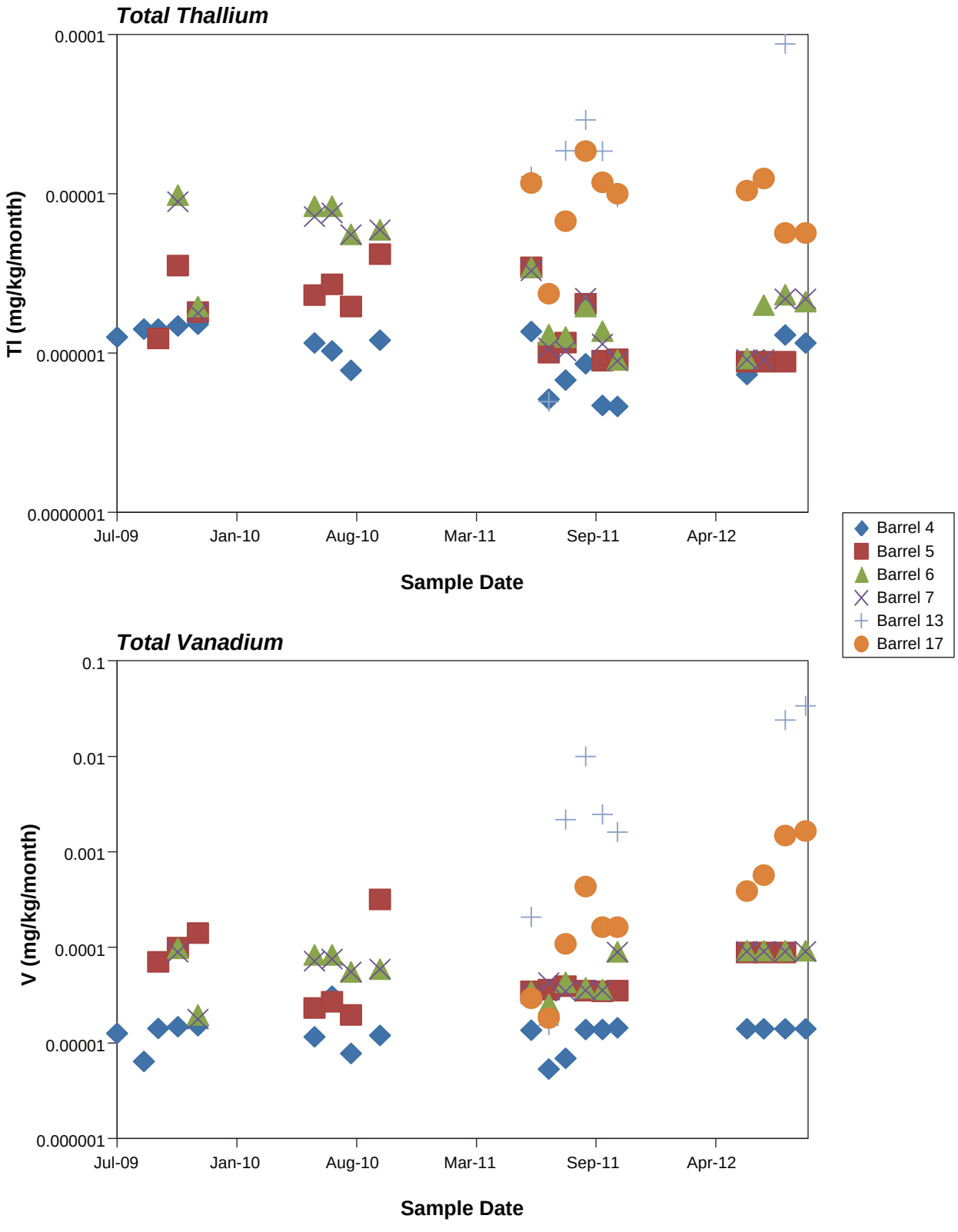


SEABRIDGE GOLD
KSM PROJECT

Total Selenium and Total Zinc, Mitchell Deposit Upper Panel Field Leach Barrels

Figure 5.2-106

Rescan™ Engineers & Scientists

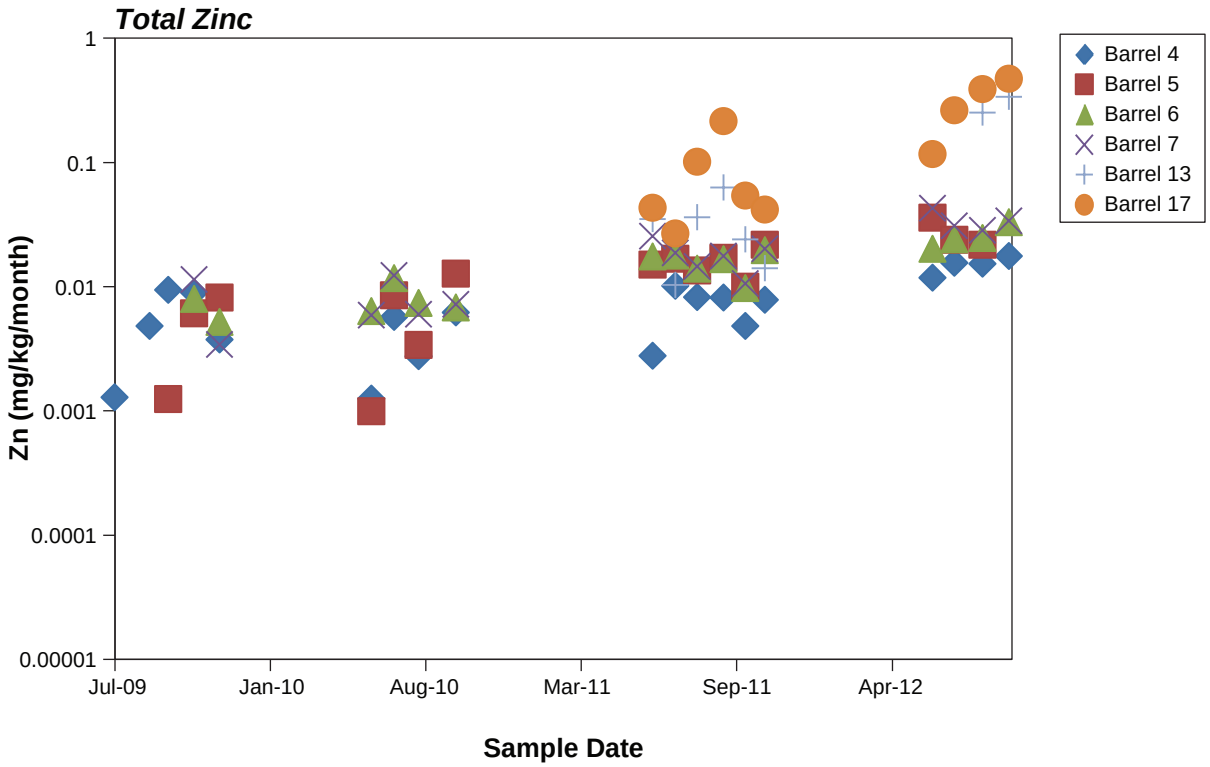


SEABRIDGE GOLD
KSM PROJECT

Total Thallium and Total Vanadium, Mitchell Deposit Lower Panel Field Leach Barrels

Figure 5.2-107

Rescan™ Engineers & Scientists

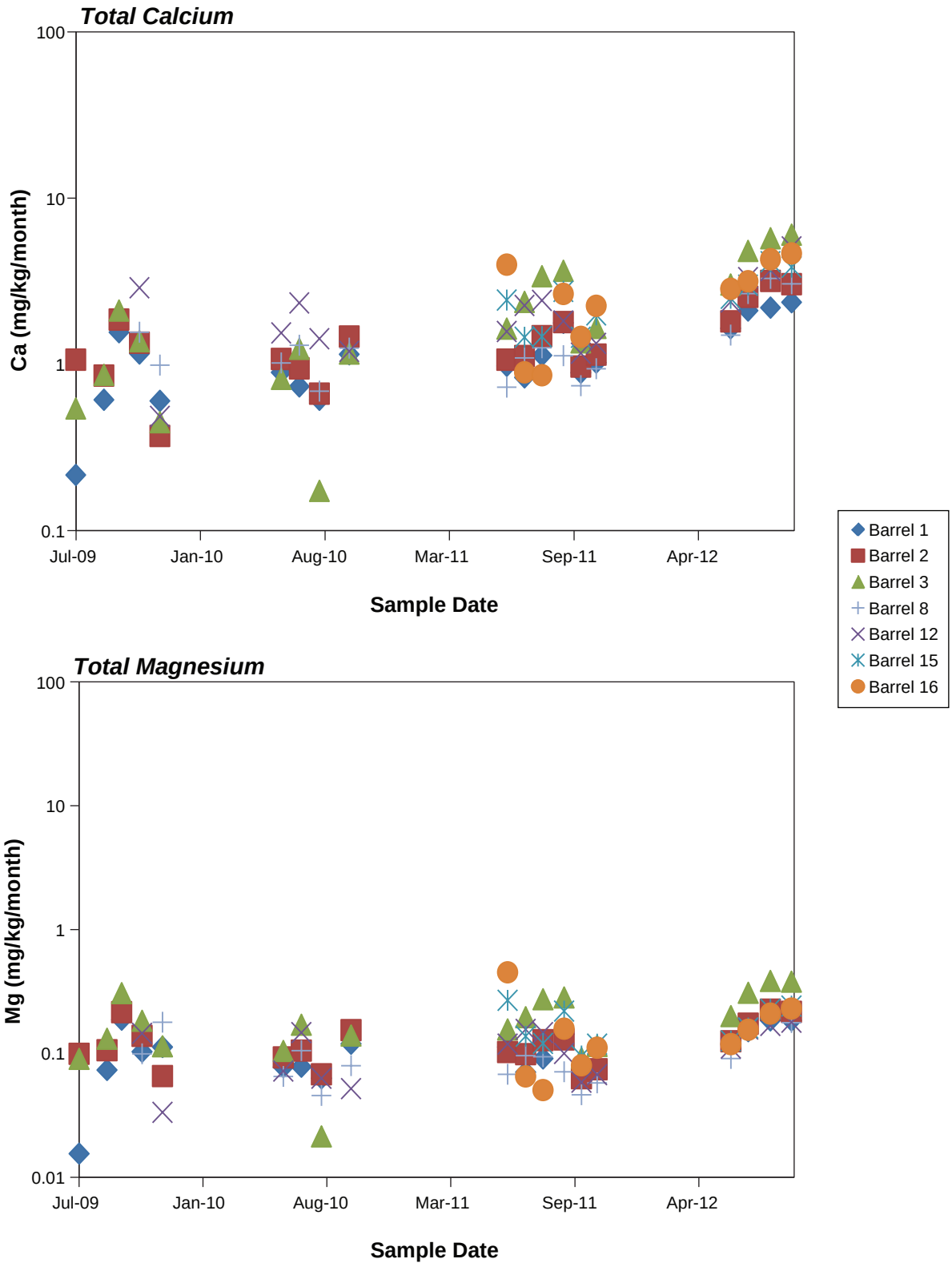


SEABRIDGE GOLD
KSM PROJECT

Total Zinc, Mitchell Deposit Lower Panel Field Leach Barrels

Figure 5.2-108

Rescan™ Engineers & Scientists

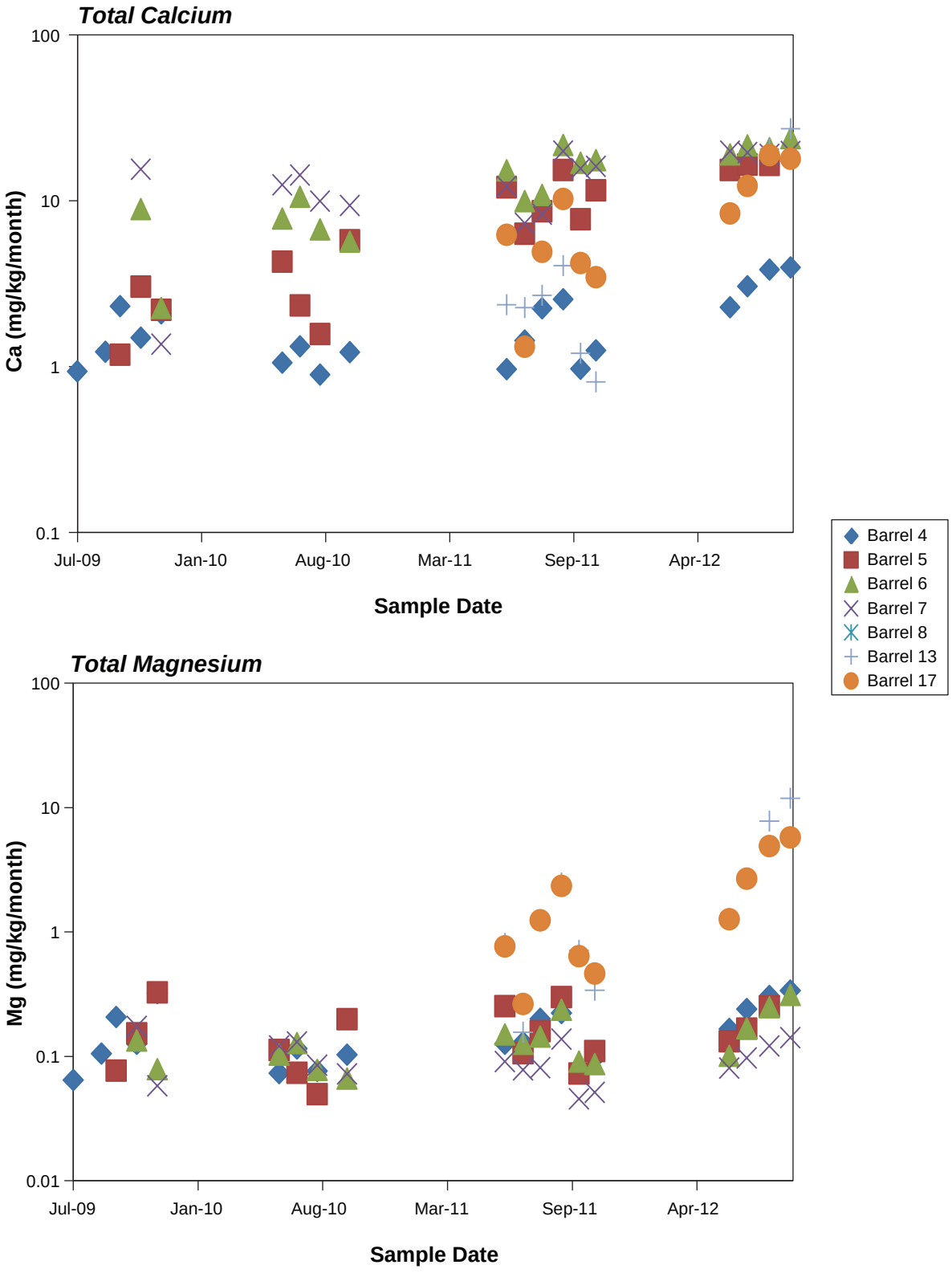


SEABRIDGE GOLD
KSM PROJECT

Total Calcium and Total Magnesium, Mitchell Deposit Upper Panel Field Leach Barrels

Figure 5.2-109

Rescan™ Engineers & Scientists



SEABRIDGE GOLD
KSM PROJECT

Total Calcium and Total Magnesium, Mitchell Deposit Lower Panel Field Leach Barrels

Figure 5.2-110

Rescan™ Engineers & Scientists

5.2.4 Comparison of Deposit Rock Kinetic Test Results

Table 5.2-8 summarizes the water quality parameters that had elevated concentrations in the three deposit rock kinetic tests: humidity cells, sub-aerial drip columns, and field leach barrels. Metal leaching typically reflected drainage pH and there was generally good agreement across tests. Aluminum, cadmium, copper, selenium, and zinc were elevated most frequently across various model codes and under both near-neutral and acidic pH drainage conditions.

5.3 LEACHATE TESTS

Net Acid Generation (NAG) tests were performed on 49 samples of deposit rock from the Kerr (six samples), Sulphurets (seven samples), and Mitchell Deposits (36 samples). A modified single addition NAG test was carried out using volumes of hydrogen peroxide determined by a preliminary two-cycle sequential NAG test. The results of the modified single addition NAG test were used to identify potentially acid-forming (PAF) and not acid-forming (NAF) material and the percentage of metals associated with sulphide-mineral phases.

5.3.1 Pre-Test Static Results

Pre-test static ABA results are presented in Appendix 5.3-1. Paste pH values ranged from 3.2 (Mitchell QSP lower panel) to 9.9 (Mitchell NM Hazelton Volcanics upper panel) with a median of 7.5, indicating that samples range from currently acid generating to alkaline. The net neutralization potential (NNP) of all 49 samples characterized all samples as PAG.

The results of the metal content analyses of the pre-test samples are presented in Appendix 5.3-2. Table 5.3-1 summarizes the median concentration of selected metals in the model codes from the Kerr, Sulphurets, and Mitchell Deposits.

5.3.2 Leachate Results

5.3.2.1 Acid Generation

Eighty-four deposit rock samples were analysed by a two-cycle sequential NAG test to determine the volume of hydrogen peroxide for a subsequent modified single addition NAG test on a sub-set of 49 samples. Appendix 5.3-3 presents the results from the two-cycle and modified single addition NAG tests and the results are summarized by model code in Table 5.3-2.

Samples designated as PAF had a pH < 4.5 either by the end of Cycle 2 of the two-cycle sequential NAG and/or after the modified single addition NAG tests. Samples designated as uncertain had a pH > 4.5 at the end of Cycle 2 of the two-cycle sequential NAG but were not tested in the modified single addition NAG test. These samples may be NAF if the reaction at the end of Cycle 2 was complete, but this information was not available. No samples were NAF with a pH > 4.5 after the modified single addition NAG test.

5.3.2.2 Metal Leaching

The rapid oxidation of sulphide minerals during the NAG tests liberated metals associated with the sulphide-phase. The metal extraction results indicate that cadmium and copper are substantially associated with sulphide minerals in all model codes. The majority of aluminum and iron in all model codes is not associated with sulphide minerals. The complete leachate dataset is presented in Appendix 5.3-4. The total metal content of the post-test residues is presented in Appendix 5.3-5.

Table 5.2-8. Comparison among Kinetic Tests of Parameters with Elevated Concentrations

		Humidity Cells		Sub-Aerial Drip Columns		Field Leach Barrels	
	Drainage pH	Model Code	Parameters	Model Code	Parameters	Model Code[1]	Parameters
Kerr	Acid	KERR	Sulphate, Aluminum, Arsenic, Cadmium, Chromium, Cobalt, Copper, Fluoride, Iron, Lead, Selenium, Silver, Zinc	n.a.	n.a.	KERR	Sulphate, Aluminum, Cadmium, Cobalt, Copper, Manganese, Selenium, Zinc
	Near-Neutral	KERR	Aluminum, Cadmium, Copper, Selenium	n.a.	n.a.	KERR	Sulphate, Copper, Selenium, Zinc
Sulphurets	Acid	Overburden	Sulphate, Aluminum, Arsenic, Cadmium, Chromium, Cobalt,	n.a.	n.a.	n.a	n.a
	Near-Neutral	UP Hazelton Lower Au Zone Undefined	Aluminum, Cadmium, Copper, Fluoride, Lead, Molybdenum, Selenium, Zinc	n.a.	n.a.	LP Hazelton	Sulphate, Cadmium, Copper, Molybdenum, Selenium, Zinc
Mitchell Upper Panel	Acid	UP Hazelton	Aluminum, Cadmium, Copper, Fluoride, Lead, Manganese, Selenium, Silver, Zinc	n.a.	n.a.	n.a.	
	Near-Neutral	UP Hazelton Monzonite	Aluminum, Antimony, Arsenic, Cadmium, Chromium, Copper, Fluoride, Lead, Selenium	UP Hazelton Monzonite	Fluoride, Cadmium, Selenium	UP Hazelton Monzonite	Sulphate, Aluminum, Arsenic, Cadmium, Copper, Selenium, Zinc
Mitchell Lower Panel	Acid	LP Hazelton Leach breccia/bornite breccia	Sulphate, Aluminum, Arsenic, Cadmium, Chromium, Cobalt, Copper, Fluoride, Iron, Lead, Manganese, Selenium, Silver, Vanadium, Zinc	n.a.	n.a.	LP Hazelton	Sulphate, Fluoride, Aluminum, Arsenic, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Selenium, Silver, Thallium, Vanadium, Zinc
	Near-Neutral	LP Hazelton Monzonite	Aluminum, Cadmium, Copper, Fluoride, Selenium	LP Hazelton	Fluoride, Cadmium, Selenium	LP Hazelton Leach breccia/bornite breccia	Sulphate, Aluminum, Antimony, Arsenic, Cadmium, Cobalt, Copper, Lead, Molybdenum, Selenium, Silver, Zinc
Iron Cap	Acid	IRON CAP	Sulphate, Aluminum, Arsenic, Cadmium, Chromium, Cobalt, Copper, Fluoride, Iron, Lead, Nickel, Selenium, Silver, Thallium, Zinc	n.a.	n.a.	n.a.	n.a.
	Near-Neutral	IRON CAP	Aluminum, Cadmium, Copper, Selenium, Thallium	n.a.	n.a.	n.a.	n.a.

Notes:

n.a. indicates not applicable, or not observed

1: Field Leach Barrels contain a composite of deposit rock material

Table 5.3-1. Summary of Metal Content of Pre-NAG Test Deposit Rock Samples

Model Code	Aluminum	Cadmium	Copper	Iron
Units	%	ppm	ppm	%
Kerr Deposit				
KERR	7.565	0.100	1884	5.48
Sulphurets Deposit				
LP Hazelton	8.95	0.0900	878	4.12
Au, Leach, Raewyn zones	6.73	0.990	2391.9	3.94
Mitchell Deposit				
UP Hazelton	7.90	0.050	382	4.02
LP Hazelton	6.30	0.570	1254	4.63
Leach breccia/bornite breccia	5.17	0.820	1005	4.76

Table 5.3-2. Summary of Acid Generation NAG Test Results

Model Code	Samples	PAF	NAF	Uncertain
Kerr Deposit				
KERR	6	86%	0%	14%
Sulphurets Deposit				
LP Hazelton	1	100%	0%	0%
Au, Leach, Raewyn zones	6	100%	0%	0%
Mitchell Deposit				
Overburden	1	100%	0%	0%
Monzonite	5	20%	0%	80%
LP Hazelton	36	72%	0%	28%
UP Hazelton	20	80%	0%	20%
Leach breccia/bornite breccia	6	100%	0%	0%
Lower Au zone	1	0%	0%	100%
Undefined	2	50%	0%	50%

5.4 SUMMARY: DEPOSIT ROCK ML/ARD

The ML/ARD predictions for the deposit rock are summarized in Table 5.4-1.

Table 5.4-1. Deposit Rock ML/ARD Summary

Deposit Code	Percent of Total Waste Rock (%)		Adjusted SNPR		Metal Leaching Predictions	
	PAG	not-PAG	Median	25th Percentile	Acidic Drainage	Neutral Drainage
Kerr						
KERR	98.7%	1.3%	0.00	0.00	Sulphate, Aluminum, Cadmium, Cobalt, Copper, Selenium,	Copper, Selenium
Sulphurets						
Overburden	0.1%	2.1%	1.8	0.46	Sulphate, Aluminum, Arsenic, Cadmium, Chromium, Cobalt, Copper, Fluoride, Iron, Nickel, Selenium, Zinc	Not observed
UP Hazelton	5.4%	14.0%	3.0	1.4	Not observed	Aluminum, Cadmium, Copper, Selenium, Zinc
LP Hazelton	5.2%	0.3%	1.32	0.780	Not observed	Sulphate, Cadmium, Copper, Molybdenum, Selenium, Zinc
Monzonite	1.5%	18.1%	7.43	3.45	Not observed	Not observed
Au, leach & Raewyn zones	4.6%	0.1%	0.3	0.0	Not observed	Not observed
Lower Au zone	9.5%	0.0%	1.00	0.50	Not observed	Aluminum, Cadmium, Copper, Fluoride, Lead, Molybdenum, Selenium, Zinc
Undefined	6.6%	32.4%	2.06	0.92	Not observed	Not observed
Mitchell						
Overburden	1.5%	0.0%	1.01	0.18	Not observed	Not observed
UP Hazelton	59.0%	1.2%	0.62	0.35	Aluminum, Cadmium, Copper, Fluoride, Lead, Manganese, Selenium, Silver, Zinc	Aluminum, Antimony, Cadmium, Aluminum, Antimony, Arsenic, Cadmium, Chromium, Cobalt, Copper, Fluoride, Lead, Selenium
LP Hazelton	15.8%	0.4%	0.3	0.09	Sulphate, Aluminum, Cadmium, Chromium, Cobalt, Copper, Fluoride, Iron, Lead, Manganese, Selenium, Silver, Vanadium, Zinc	Aluminum, Cadmium, Copper, Fluoride, Selenium
Monzonite	2.4%	19.1%	2.67	0.73	Not observed	Aluminum, Cadmium, Copper
Leach/bornite breccia	0.3%	0.0%	0.00	0.00	Sulphate, Aluminum, Arsenic, Cadmium, Chromium, Cobalt, Copper, Fluoride, Iron, Lead, Selenium, Silver, Vanadium, Zinc	Not observed
Iron Cap						
IRON CAP	100.0%	0.0%	0.14	0.00	Sulphate, Aluminum, Arsenic, Cadmium, Chromium, Cobalt, Copper, Fluoride, Iron, Lead, Nickel, Selenium, Silver, Thallium, Zinc	Aluminum, Cadmium, Copper, Selenium, Thallium

6. Tailing Results

A multi-year (2007 to 2010) comprehensive metallurgical program has been completed by Seabridge on the Kerr, Sulphurets, Mitchell, and Iron Cap deposits of the KSM Project. Historical metallurgical testing was also completed by a number of companies on the Kerr Deposit. The full details of this metallurgical program are discussed in the Preliminary Feasibility Study (Wardrop 2010).

6.1 STATIC TESTS

This section describes the geochemical characteristics of the KSM tailing and its potential for ML/ARD based in the geochemical static test results.

Static tests were performed on 35 tailing samples: Mitchell Rougher (1); Mitchell Rougher-coarse (1); Mitchell Rougher-fine (1); Mitchell Sulphide (pyrite) (1); Mitchell Rougher/Sulphide combined at a ratio equivalent (90:10) to the relative contributions of Rougher and cleaner tailing to the TMF (1); Mitchell/Sulphurets (4); Mitchell/Kerr (16) blended; and Iron Cap (10).

The ABA test results for the KSM tailing are presented Appendix 6.1-1.

6.1.1 Paste pH

The paste pH values of KSM tailing are shown in Figure 6.1-1. Paste pH values in Mitchell/Kerr, Mitchell/Sulphurets Rougher tailing ranged from pH 7.8 to pH 11.1 with median values of pH 9. The paste pH values for Iron Cap Rougher tailing ranged from pH 8.4 to pH 8.6 with median values of pH 8.8.

The paste pH of the Mitchell Sulphide tailing was acidic (5.8) while the Mitchell Rougher tailing range was basic (pH 7.9 to pH 8.2). The Mitchell Rougher/Sulphide tailing shows a paste pH slightly above 6.0.

6.1.2 Sulphur Species

The total-sulphur content of KSM tailing is shown in Figure 6.1-2. Total-sulphur content of Mitchell/Kerr Rougher tailing ranged from 0.19% to 0.48% with a median content of 0.35%, while total-sulphur contents of Mitchell/Sulphurets Rougher tailing ranged from 0.11% to 0.19% with a median content of 0.12%. Total-sulphur contents of Iron Cap Rougher tailing ranged from 0.05% to 0.08% with a median content of pH 0.07%.

Total-sulphur content of Mitchell Sulphide tailing was 22.40% and total-sulphur content of Mitchell Rougher/Sulphide tailing was 3.13%. The Mitchell Rougher tailing total-sulphur range was 0.21% to 0.38%.

The sulphide-sulphur content of the KSM tailing is shown in Figure 6.1-3. Sulphide-sulphur content of Mitchell/Kerr Rougher tailing ranged from 0.06 % to 0.16% with a median content of 0.13%, while sulphide-sulphur content of Mitchell/Sulphurets Rougher tailing ranged from 0.06 % to 0.11% with a median content of 0.08%. Sulphide-sulphur content of Iron Cap Rougher tailing ranged from 0.05% to 0.06% with a median content of 0.05.

Sulphide-sulphur content of Mitchell Sulphide tailing was 20.2% and sulphide-sulphur content of Mitchell Rougher/Sulphide tailing was 2.32%. The Mitchell Rougher tailing sulphide-sulphur range was 0.04% to 0.08%.

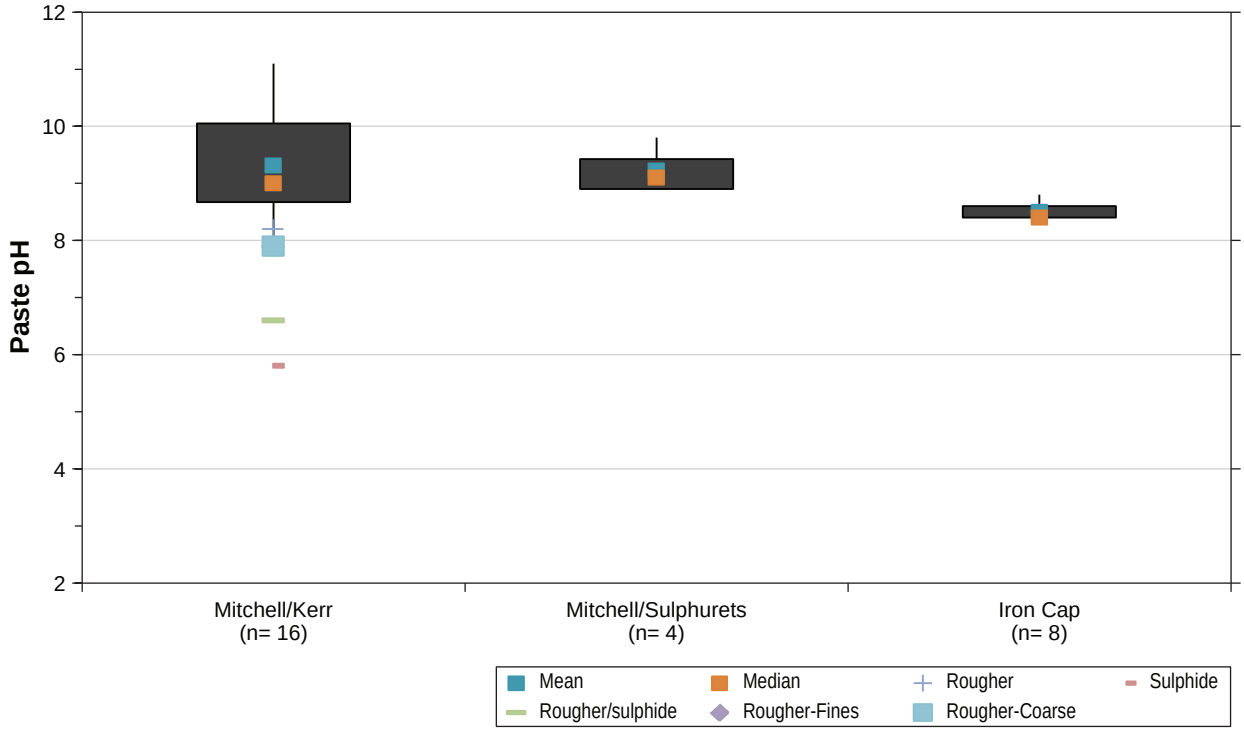
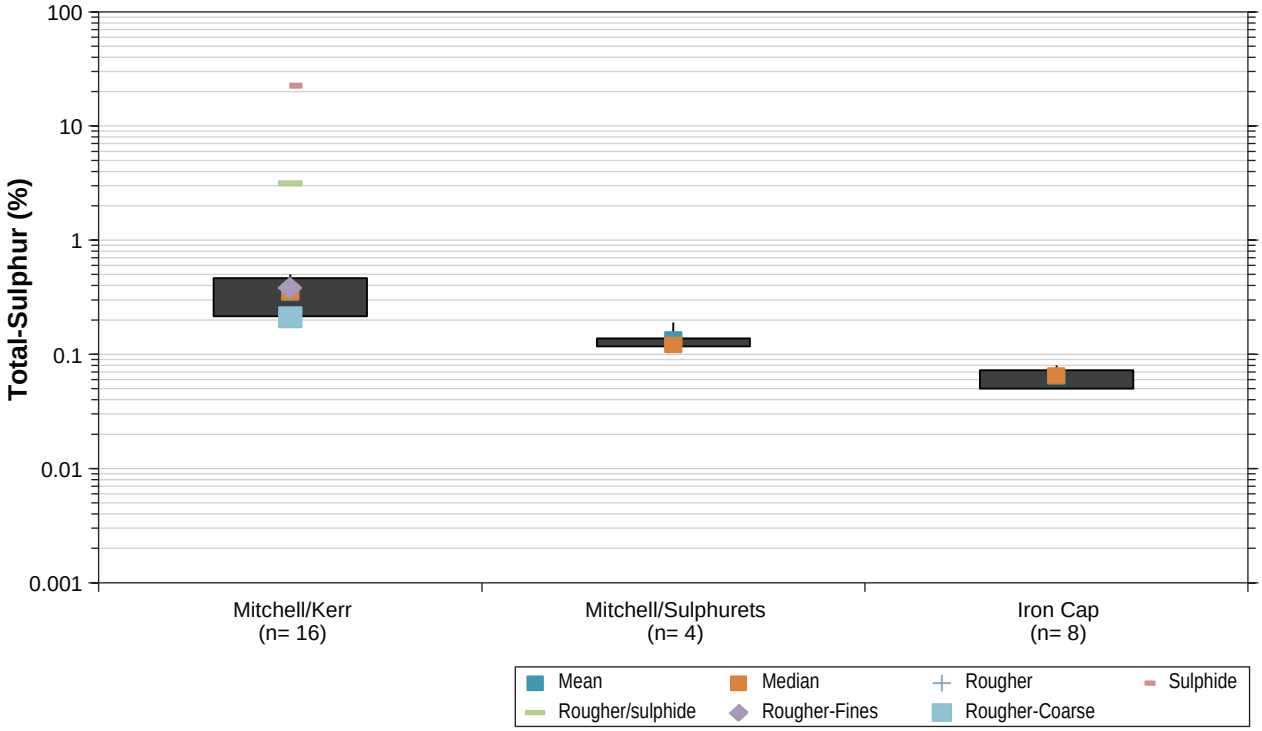


Figure 6.1-1

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Statistical Summary for Tailing - Paste pH

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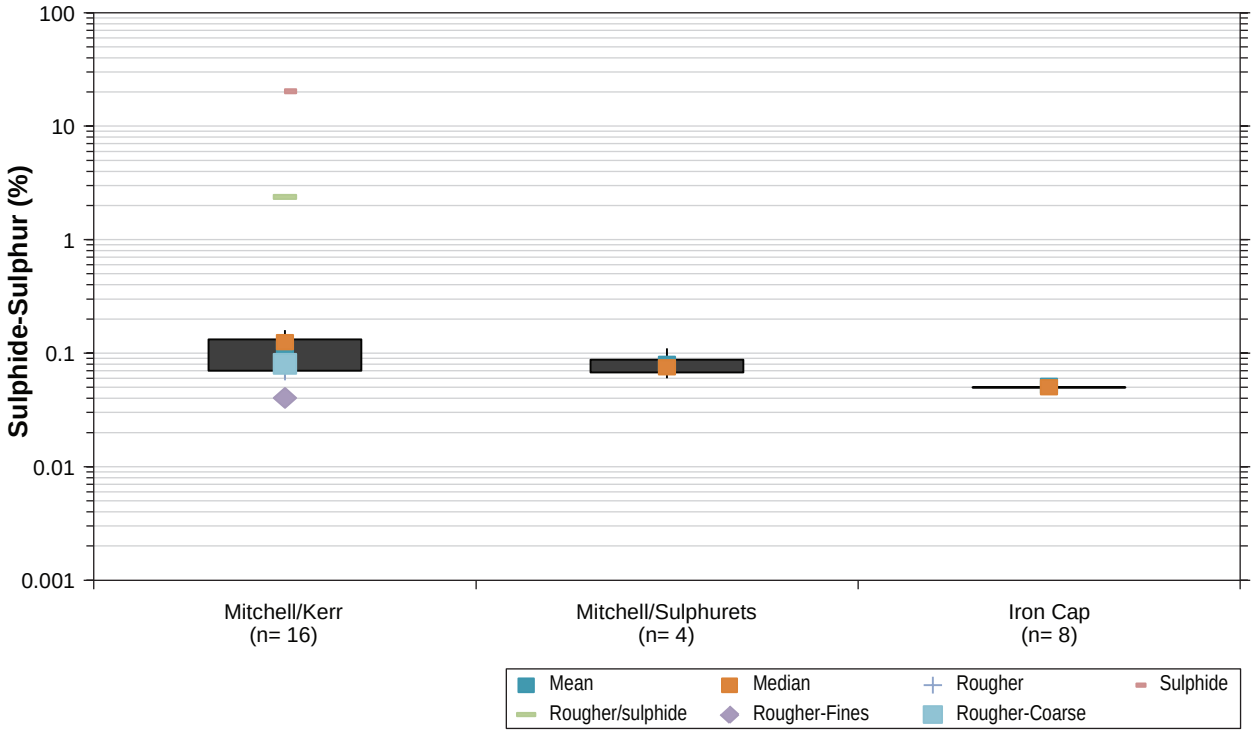


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Statistical Summary for Tailing - Total-Sulphur Concentrations

Figure 6.1-2

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Statistical Summary for
Tailing - Sulphide-Sulphur Concentrations

Figure 6.1-3

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The plot of sulphide-sulphur versus total-sulphur (Figure 6.1-4) shows the distribution of those two sulphur species within the various tailing types. The results indicate that Mitchell Sulphide, Mitchell Rougher/Sulphide have the highest total-sulphur and sulphide-sulphur concentrations and show the strongest correlation between sulphide-sulphur and total-sulphur. The weaker correlation between the total-sulphur and sulphide-sulphur content in Mitchell Rougher, Mitchell/Kerr, Mitchell/Sulphurets, and the Iron Cap Rougher tailing reflects metallurgical processing and the presence of non-sulphide-sulphur species. Figure 6.1-5 shows the relationship between acid-soluble sulphate-sulphur and total-sulphur concentrations, indicating that some of the samples have high concentrations of acid-soluble sulphate-sulphur.

6.1.3 Neutralization Potential

NP of the KSM tailing is shown in Figure 6.1-6. NP values of Mitchell/Kerr Rougher tailing ranged from 12 kg $CaCO_3$/t to 26 kg $CaCO_3$/t with a median value of 16 kg $CaCO_3$/t, while NP values of Mitchell/Sulphurets Rougher tailing ranged from 41 kg $CaCO_3$/t to 46 kg $CaCO_3$/t with a median value of 43 kg $CaCO_3$/t. NP values of Iron Cap Rougher tailing ranged from 24 kg $CaCO_3$/t to 28 kg $CaCO_3$/t with a median value of 27 kg $CaCO_3$/t.

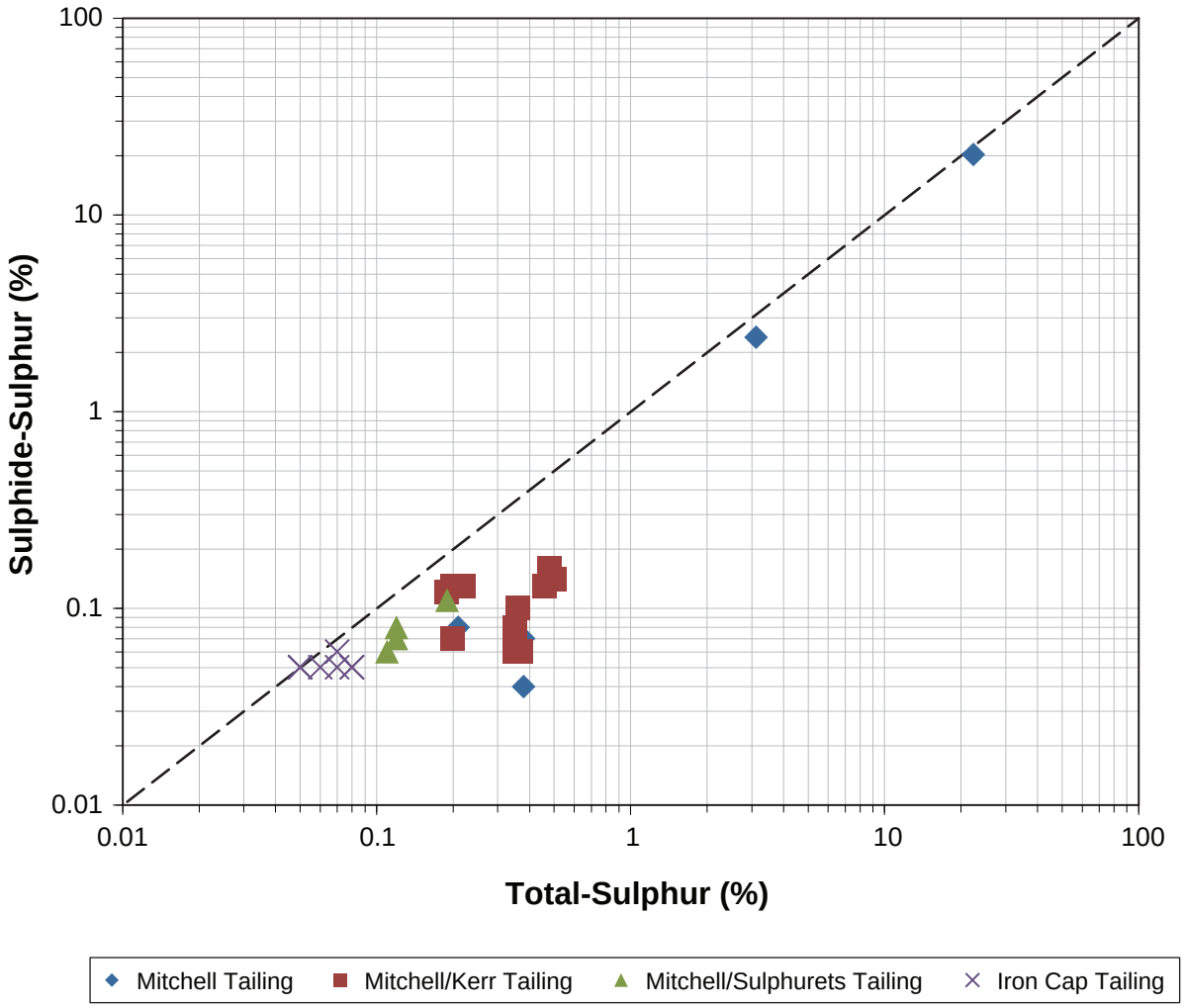
NP value of Mitchell Sulphide tailing was 6 kg $CaCO_3$/t and NP value of Mitchell Rougher/Sulphide tailing was 22 kg $CaCO_3$/t. The Mitchell Rougher tailing NP range was 28 kg $CaCO_3$/t to 31 kg $CaCO_3$/t.

The Mitchell Sulphide tailing exhibited 6 kg $CaCO_3$/t of unavailable NP at the time of the test (Figure 6.1-7). The NP was adjusted by this estimate of unavailable NP to calculate an adjusted NP. The adjusted NP of Mitchell Sulphide tailing was 0 kg $CaCO_3$/t, because it was acid generating at the time of the paste pH test.

The correlation between Bulk Sobek NP and Inorg NP is shown in Figure 6.1-8. The Inorg NP shows a good correlation to Bulk Sobek NP in Mitchell/Sulphurets Rougher tailing, some of Mitchell/Kerr Rougher, and Mitchell tailing (with the exception of Mitchell Rougher-coarse tailing and Mitchell Sulphide tailing), suggesting that most of the Sobek NP occurs as carbonate minerals. Therefore the Inorg NP can be estimated from inorganic carbon analyses as a reasonable surrogate to the Sobek NP for estimation of the available NP in these tailing. The Inorg NP shows a poor correlation to Sobek NP in the Iron Cap Rougher tailing, suggesting Sobek NP is comprised of a mixture of carbonate and non-carbonate minerals.

A plot of a Ca CaNP, assuming that the elemental calcium is present as calcite, versus Bulk Sobek NP is shown in Figure 6.1-9. The Ca CaNP values show a good correlation with the Sobek NP values in most of the samples with the exception of some samples from Mitchell/Kerr Rougher tailing and Mitchell Sulphide tailing, indicating that most of the available Sobek NP in the KSM tailing occurs as calcium carbonate minerals. Some samples from Mitchell/Kerr Rougher tailing exhibit poor correlation, indicating the presence of a greater proportion of calcium from non-carbonate mineral phases.

A plot of a CaMg CaNP, assuming that the elemental calcium and magnesium is present as dolomite, versus Bulk Sobek NP is shown in Figure 6.1-10. The correlation between CaMg CaNP and Sobek NP was poorer than for Ca CaNP, indicating that a measurable portion of CaMg CaNP is not providing neutralization or is unreactive. This poor correlation indicates that magnesium occurs predominantly in non-carbonate magnesium-bearing mineral phases. Therefore the CaMg CaNP cannot be used reliably for estimating the available NP in the KSM Deposits.

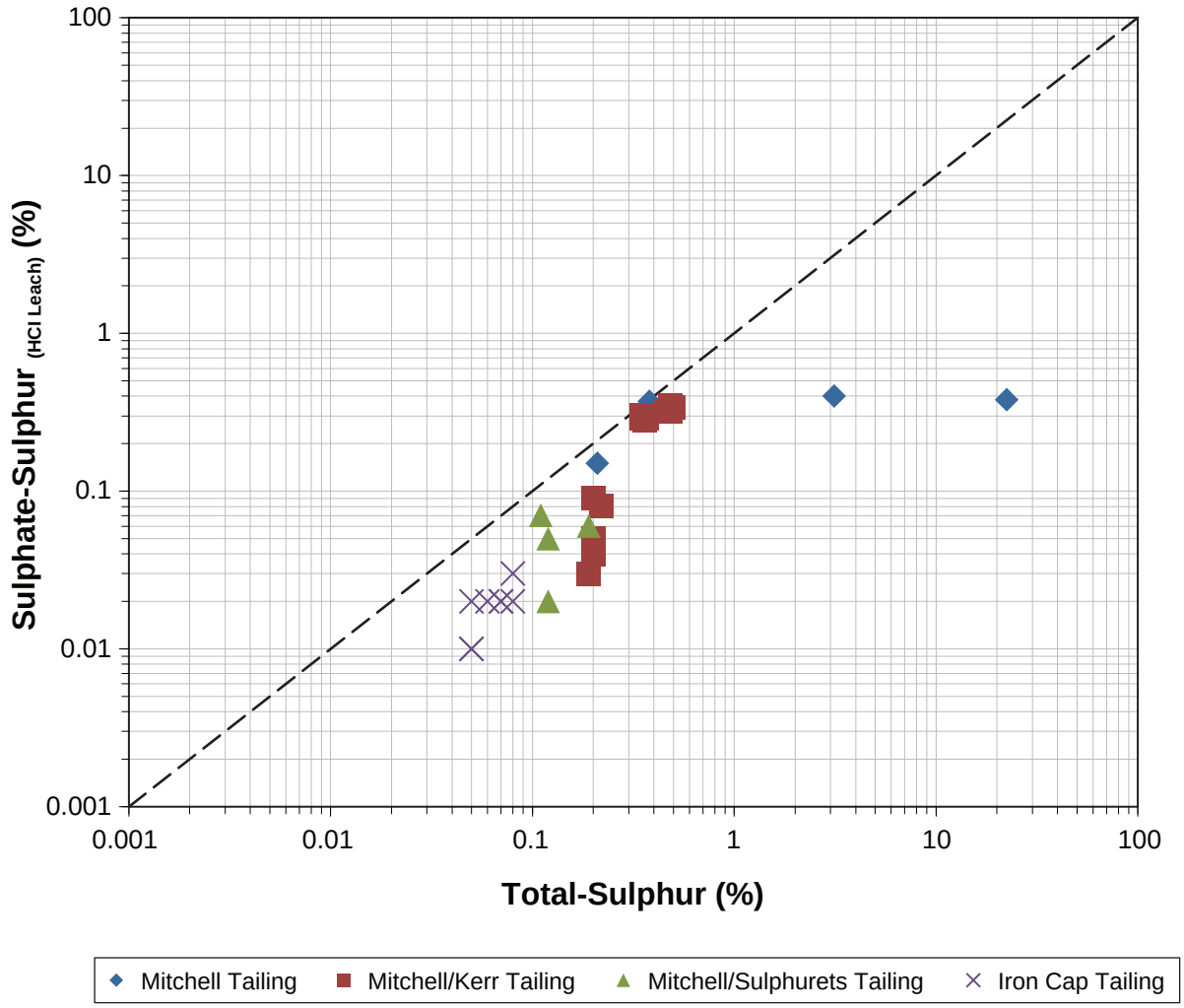


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Sulphide-Sulphur versus Total-Sulphur in Tailing

Figure 6.1-4

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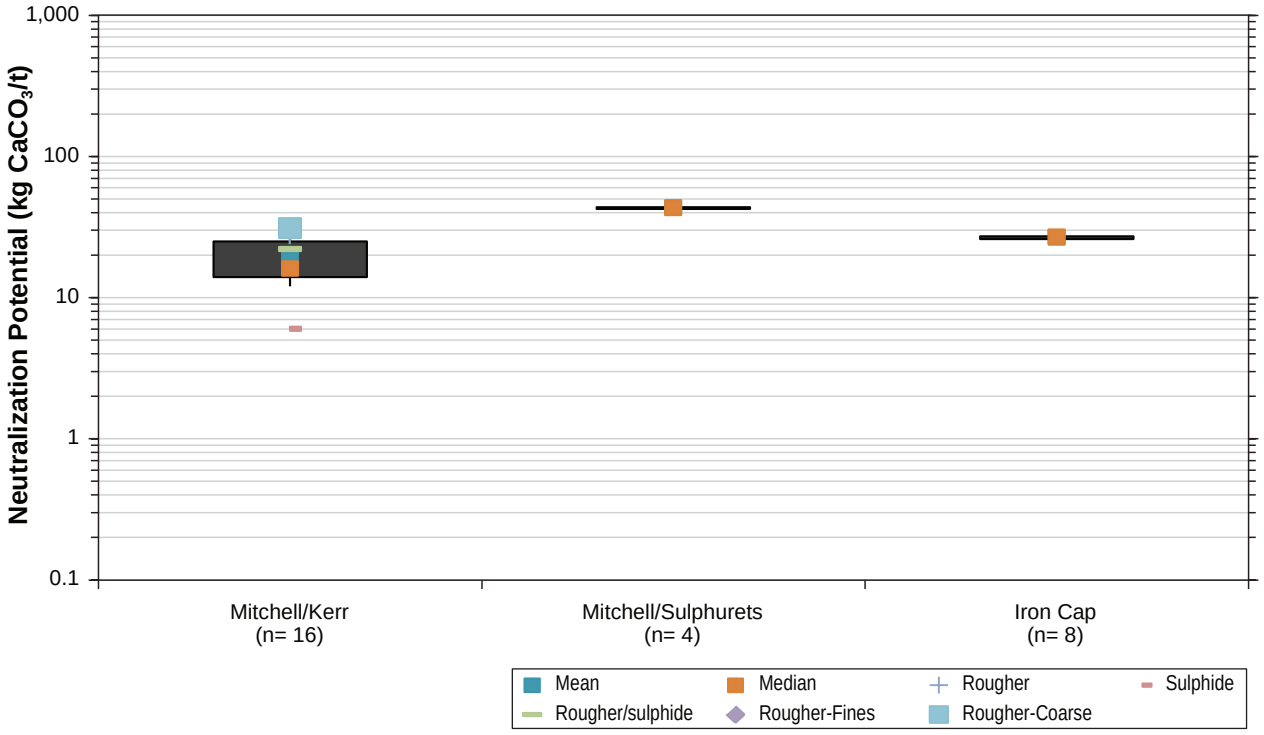


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Sulphate-Sulphur versus Total-Sulphur in Tailing

Figure 6.1-5

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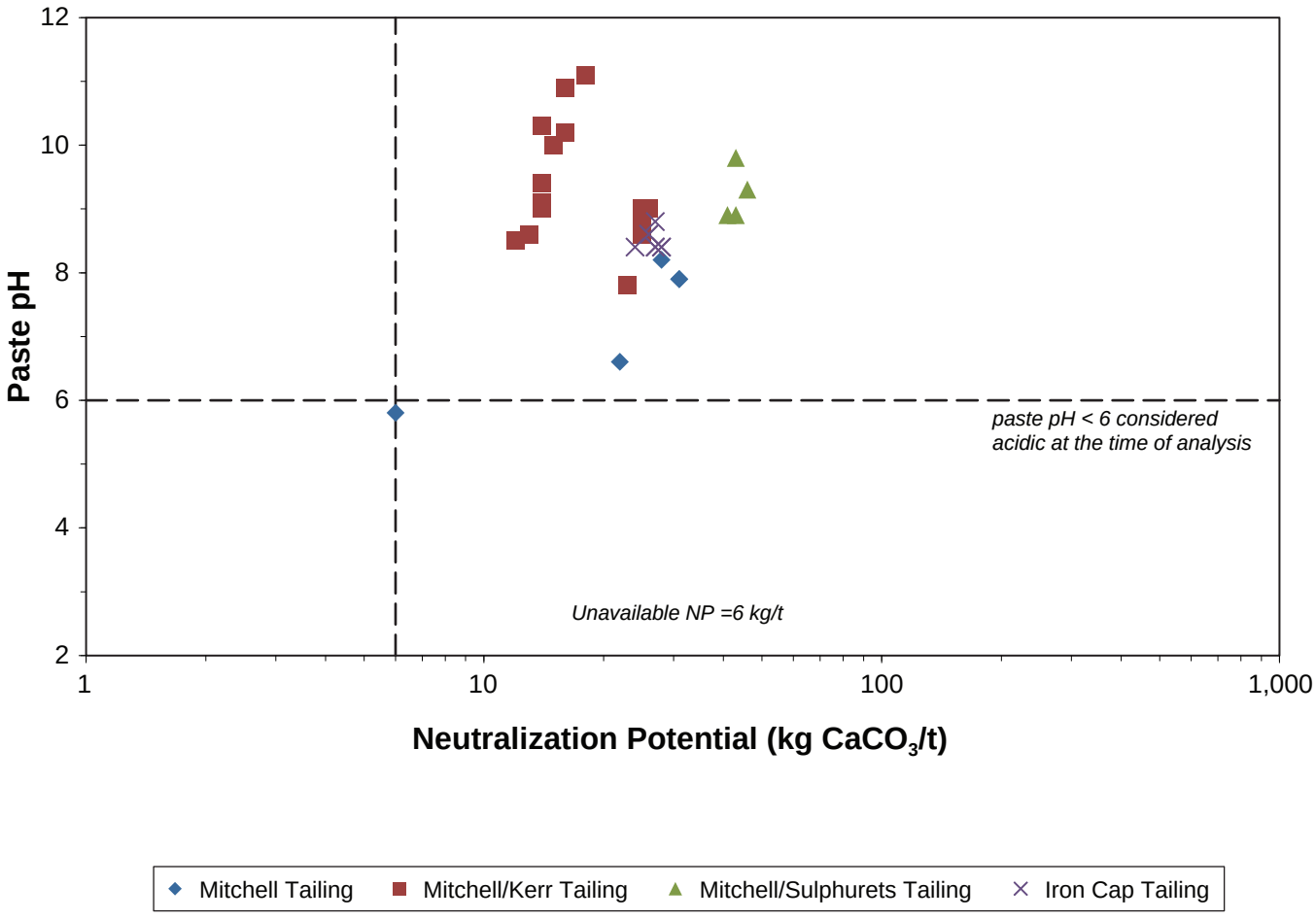


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Statistical Summary for Tailing - Neutralization Potential Values

Figure 6.1-6

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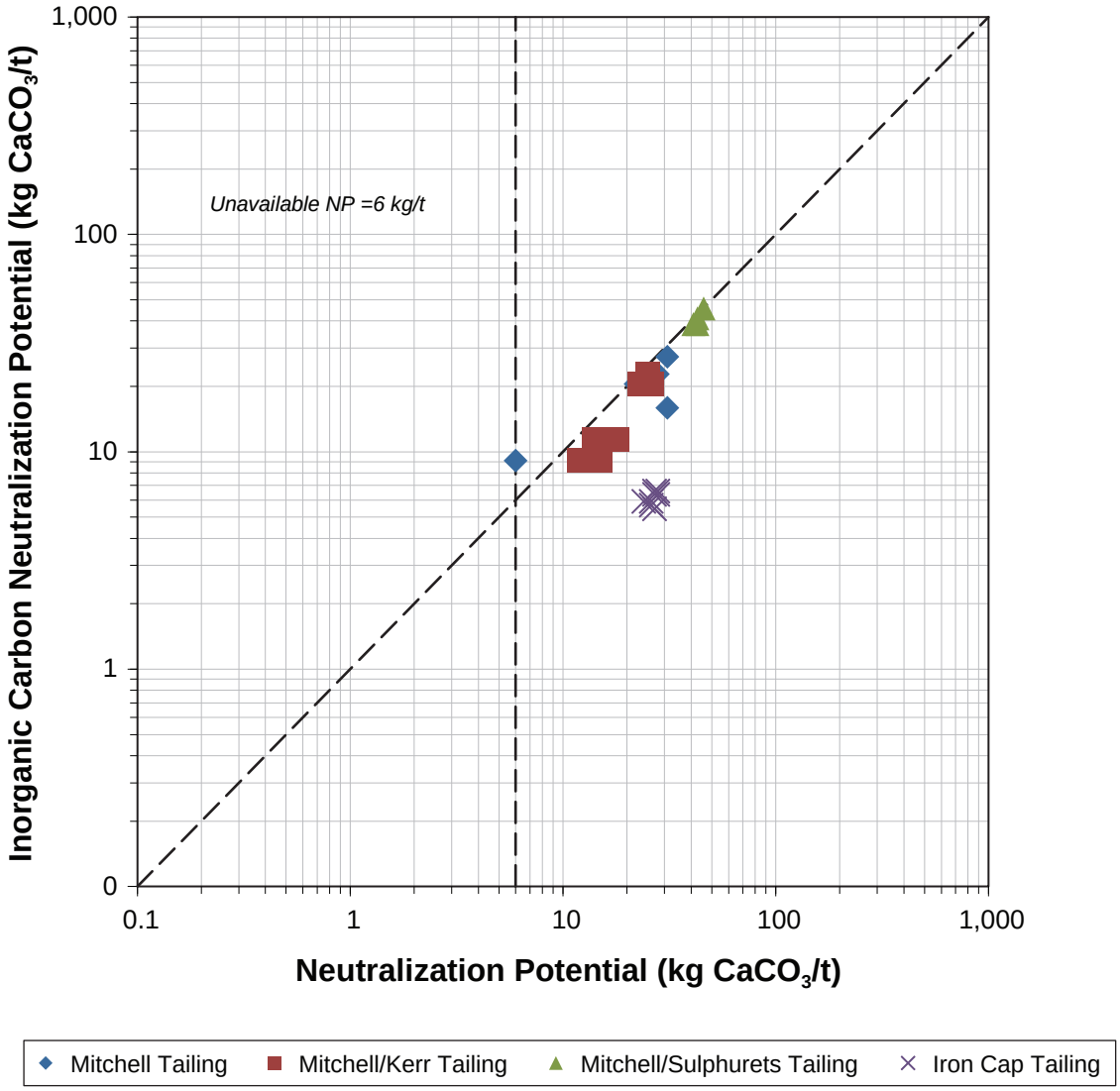


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Paste pH versus Bulk Sobek Neutralization Potential - Tailing

Figure 6.1-7

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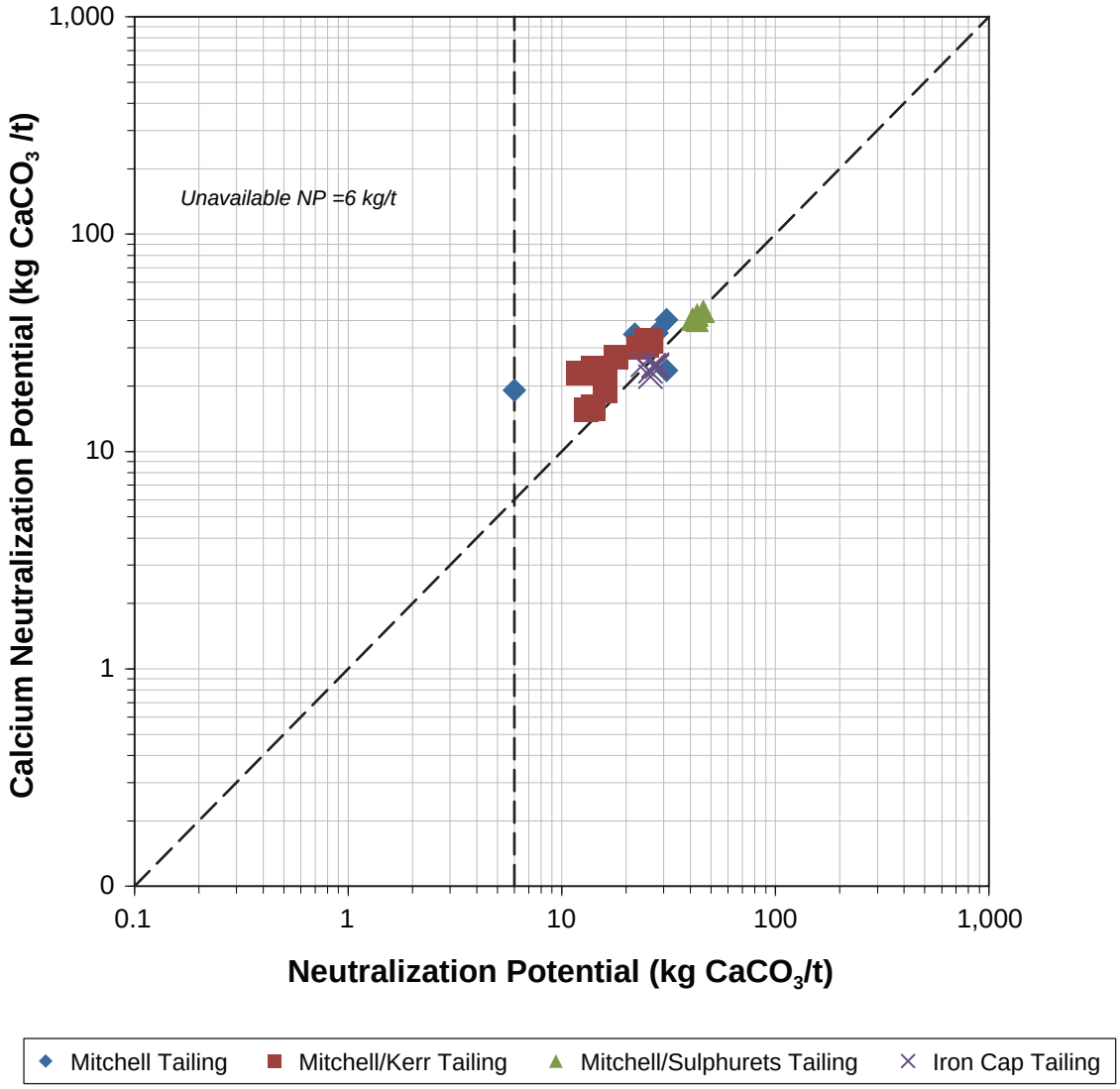


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Inorganic Carbon Neutralization Potential versus Bulk Sobek Neutralization Potential - Tailing

Figure 6.1-8

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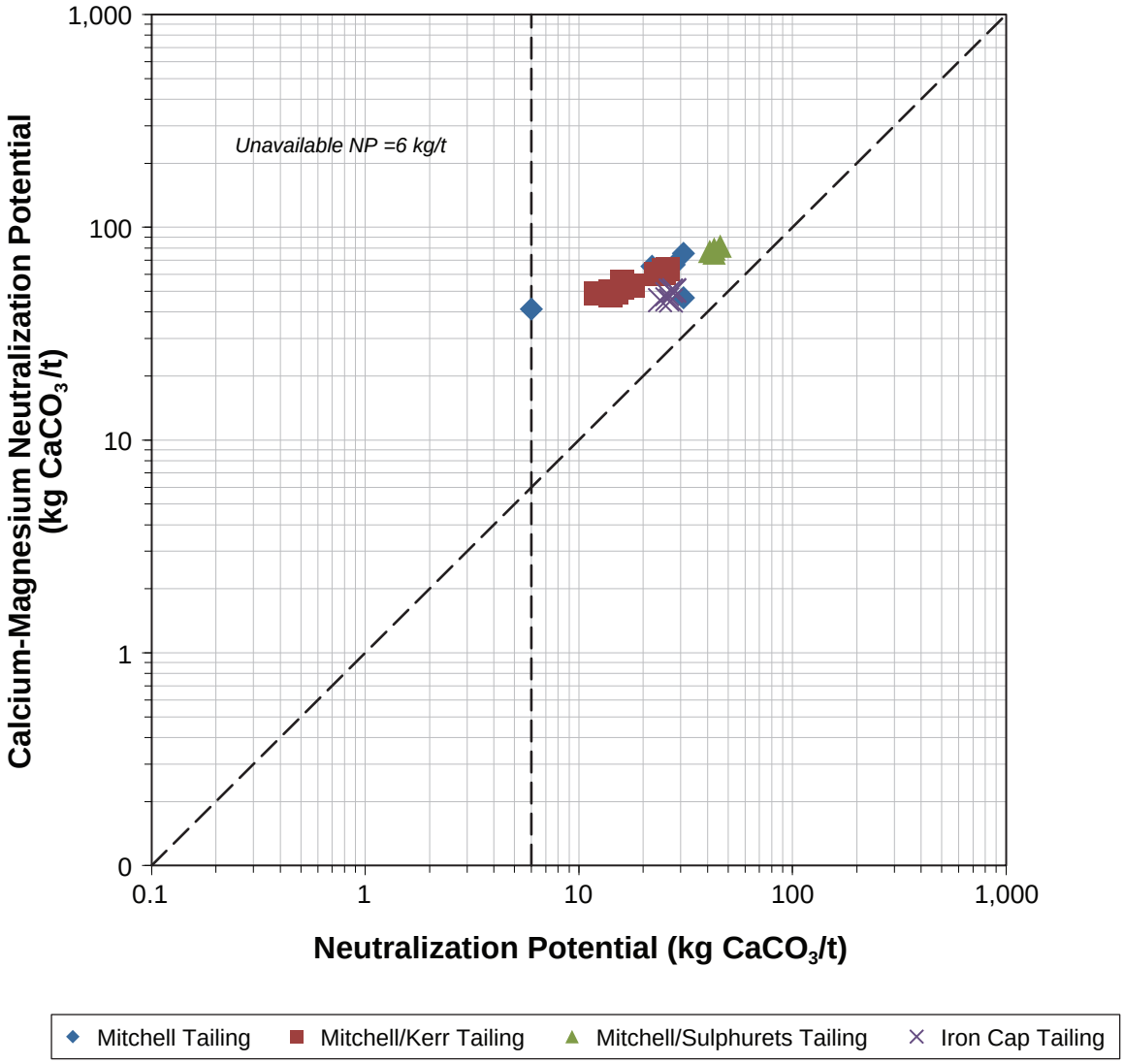


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Calcium Neutralization Potential versus Bulk Sobek Neutralization Potential - Tailing

Figure 6.1-9

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Calcium-Magnesium Neutralization Potential versus Bulk Sobek Neutralization Potential - Tailing

Figure 6.1-10

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6.1.4 Sulphide Net Potential Ratios

Adjusted SNPR values for the KSM tailing are shown in Figure 6.1-11. The adjusted SNPR values for Mitchell/Kerr Rougher tailing range from a minimum of 2.9 to a maximum of 13.3, with a mean of 6.5 and a median of 3.7. The adjusted SNPR values for Mitchell/Sulphurets Rougher tailing range from a minimum of 11.9 to a maximum of 24.5, with a mean of 18.3 and a median of 18.4. The adjusted SNPR values for Iron Cap Rougher tailing range from a minimum of 14.9 to a maximum of 17.9, with a mean of 16.7 and a median of 16.9. Mitchell Rougher tailing adjusted SNPR values range from 0.01 (Mitchell Sulphide) to 24.8 (Mitchell Rougher-fines).

The majority of the KSM tailing are not-PAG with the exception of Mitchell Sulphide tailing and Mitchell Rougher/Sulphide tailing. Mitchell Sulphide tailing sample exhibited a default adjusted SNPR of 0.01, indicating that the sample had NP equal to or lower than 6 $kgCaCO_3/t$, and that the onset of acidic conditions is likely to be rapid in this sample. Mitchell Rougher/Sulphide tailing sample has an adjusted SNPR of 0.3, indicating it is PAG.

The relationship between paste pH and adjusted SNPR of KSM tailing samples is shown in Figure 6-1-12. Samples with adjusted SNPR values of 0.01 were associated with acidic pH, indicating that the Mitchell Sulphide tailing sample is in an advanced stage of acid generation (acidic sample).

The relationship between sulphide-sulphur and adjusted SNPR of KSM tailing samples is shown in Figure 6.1-13. It indicates that the samples with a combination of sulphide-sulphur greater than 0.1% and an adjusted SNPR<2 are the most likely to be net ARD generating.

6.1.5 Whole Rock and Solid-phase Elemental Analysis

The multi-element concentrations of KSM tailing were measured by ICP-MS analysis after strong four-acid digestion and by XRF whole-rock analysis. The results of these analyses are found in Appendix 6.1-1.

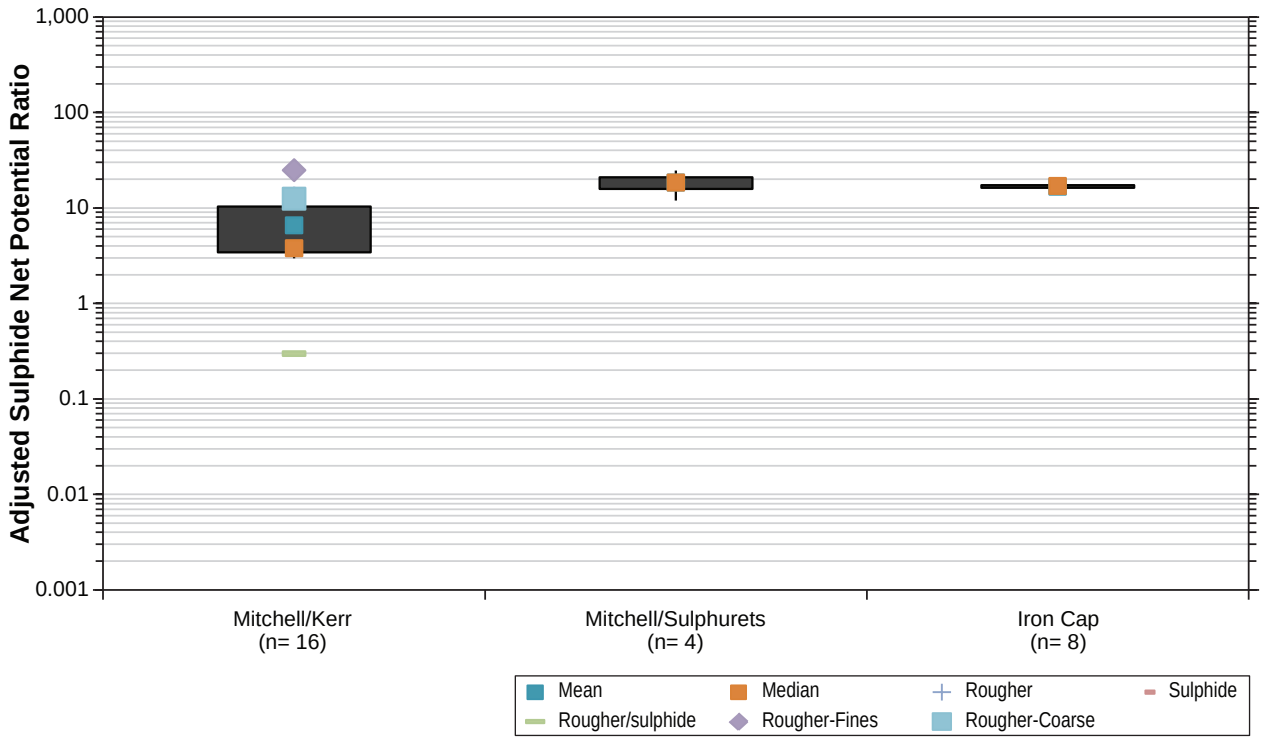
Trace elements analysis by ICP-MS provides a measure of concentrations of various elements within the sample. When compared to known concentrations within the Earth's crust, these analyses can be used to determine which elements are present in anomalous quantities which increases the likelihood of mobilization by leaching. In this report, elevated concentrations are defined as concentrations exceeding three times average crustal abundance. Tailing solid-phase analyses were compared to the crustal abundance for shale.

While the comparison of solid-phase elemental concentrations to three times the average crustal abundance can provide an indication of elevated elements, it does not determine susceptibility to weathering, weathering rates or aqueous concentrations under site-specific conditions. However, the identification of elevated solid-phase elemental concentrations relative to crustal abundances provides an early-stage screening tool for identification of important mineral phases and potential constituents of concern in leach extraction and/or kinetic testing.

Mitchell Sulphide tailing was comprised mostly of oxide-equivalents of SiO_2 and Fe_2O_3 with lesser but still significant amounts of Al_2O_3. Mitchell Rougher/Sulphide tailing was comprised of oxide-equivalents of SiO_2 and Al_2O_3, with lesser but still significant amounts of Fe_2O_3.

Mitchell Rougher tailing were comprised mostly of SiO_2 and Al_2O_3, with lesser but still significant amounts of Fe_2O_3 and K_2O.

Mitchell/Kerr Rougher tailing and Mitchell/Sulphurets Rougher tailing were comprised mostly of oxide-equivalents of Al_2O_3 and BaO with lesser but still significant amounts of K_2O and MgO.

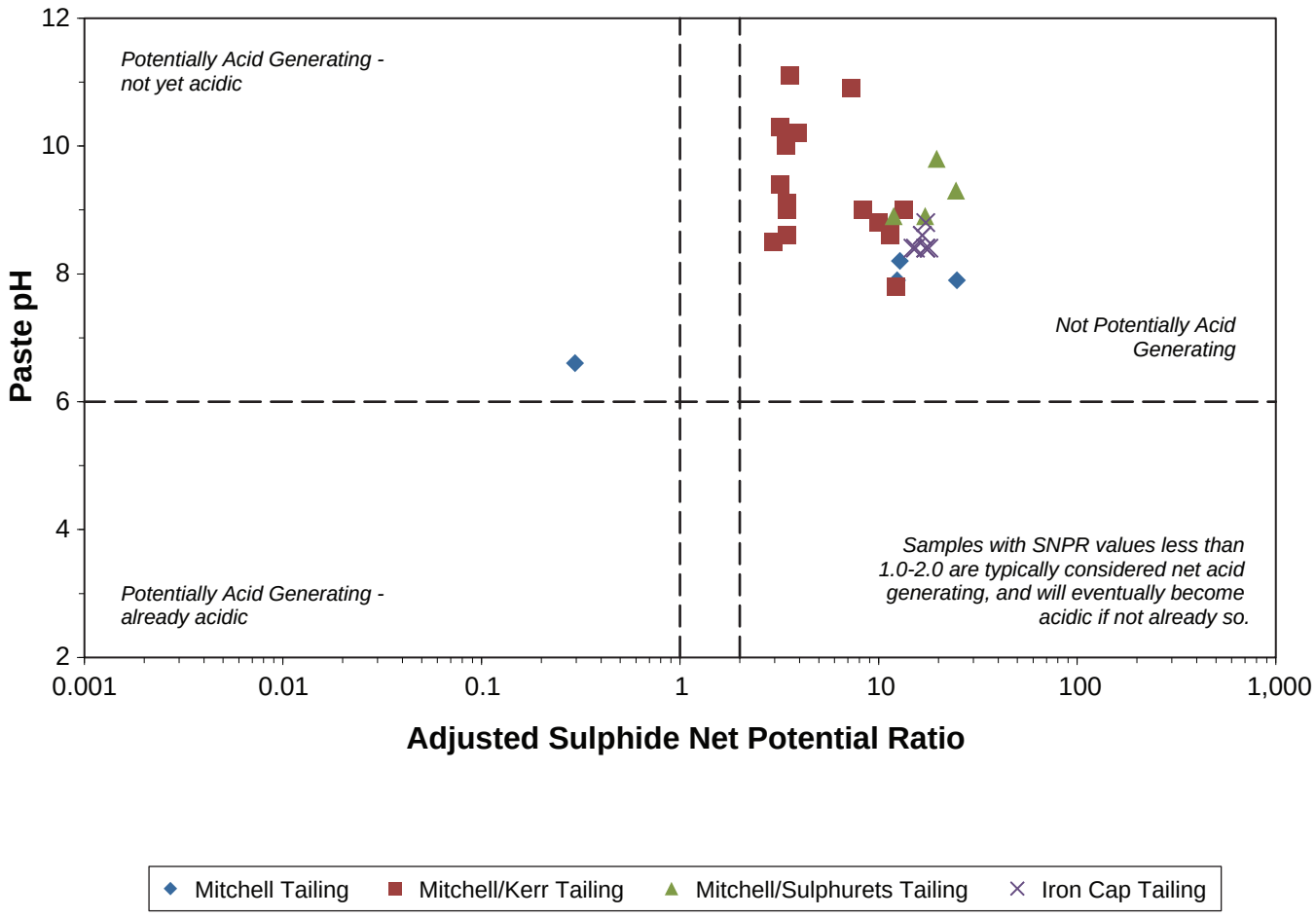


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Statistical Summary for Tailing - Adjusted Sulphide Net Potential Ratios Values

Figure 6.1-11

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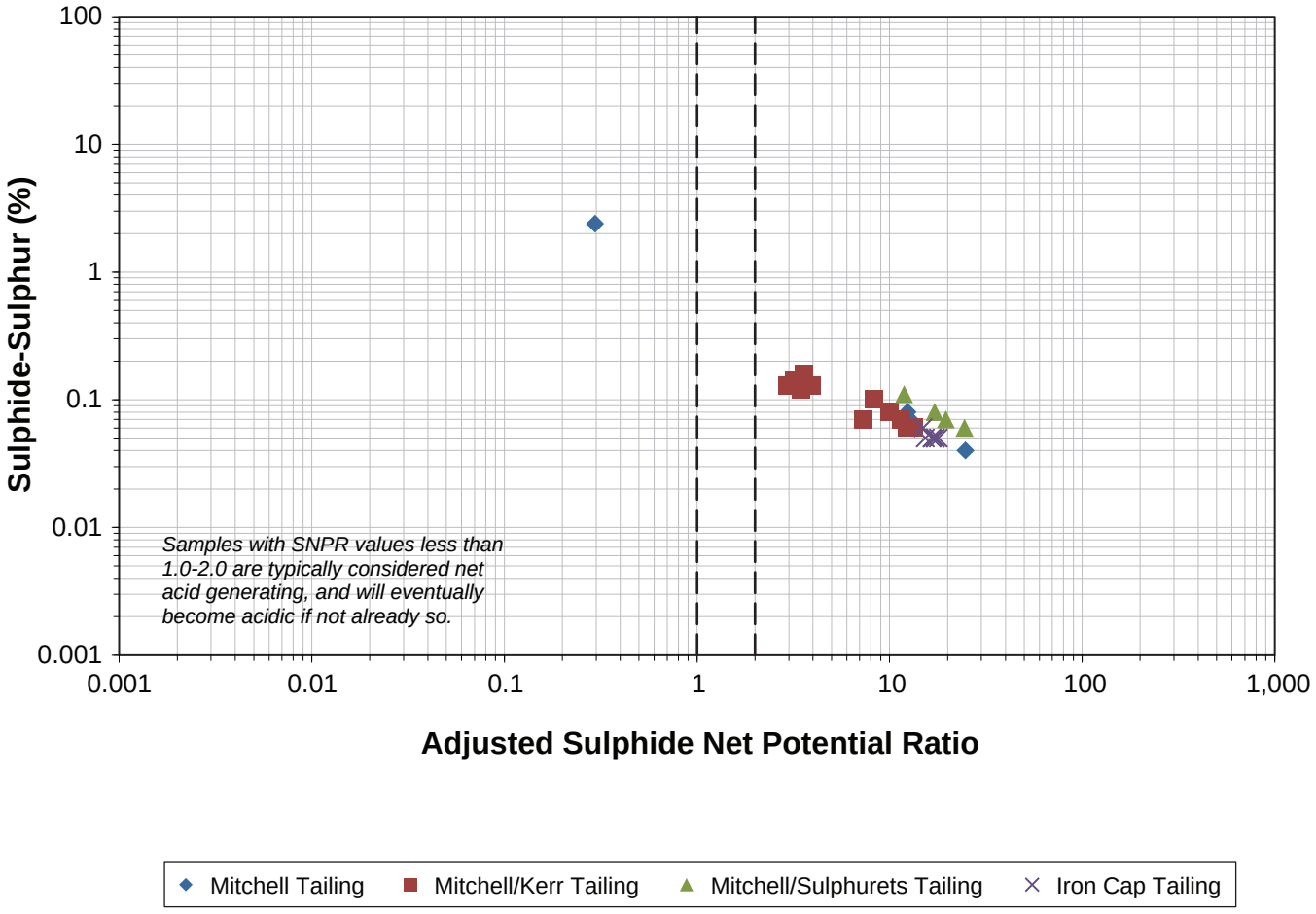


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Paste pH versus Adjusted Sulphide Net Potential Ratio - Tailing

Figure 6.1-12

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Sulphide-Sulphur versus Adjusted Sulphide Net Potential Ratio - Tailing

Figure 6.1-13

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Iron Cap Rougher tailing and Mitchell/Sulphurets Rougher tailing were comprised mostly of oxide-equivalents of Al_2O_3 and BaO with lesser but still significant amounts of MgO, CaO, and Fe_2O_3.

Table 6.1-1 shows the statistical summary of the elements with median values exceeding three times the average crustal abundance for the KSM tailing samples.

The elements frequently exceeding three times average shale crustal abundance in Mitchell Sulphide tailing are silver, arsenic, cadmium, copper, iron, molybdenum, sulphur, antimony, and selenium. Elements frequently exceeding three times shale crustal abundance in Mitchell Rougher/Sulphide tailing are silver, cadmium, copper, molybdenum, sulphur, and selenium. Elements frequently exceeding three times shale crustal abundance in Mitchell Rougher tailing are silver, copper, molybdenum, and selenium.

Elements frequently exceeding three times shale crustal abundance in Mitchell/Kerr Rougher tailing are silver, copper, and selenium.

Elements frequently exceeding three times shale crustal abundance in Mitchell/Sulphurets Rougher tailing are silver, copper and molybdenum.

Elements frequently exceeding three times shale crustal abundance in Iron Cap Rougher tailing are silver, copper and antimony.

6.1.6 Mineralogy

The mineralogy of the KSM tailing samples submitted for humidity cell tests was analyzed by Rietveld XRD analysis (Appendix 6.1-2), and QEMSCAN analysis (Appendix 6.1-3). A comparison between these two analyses is shown in Appendix 6.1-4.

Pyrite was the main sulphide-bearing mineral occurring in Mitchell Sulphide tailing (42.5 wt %) with lesser amounts of chalcopyrite (1.4 wt %) and molybdenite (0.2 wt %). The main gangue mineral identified in the Mitchell Sulphide tailing was quartz (25.5 wt %) followed by muscovite (17.0 wt %), the magnesium-bearing aluminosilicate clinochlore (3.7 wt %), K-feldspar (3.4 wt %), and calcium–bearing aluminosilicate plagioclase (3.2 wt %). Minor amounts of calcite (0.7 wt %), ankerite/dolomite (0.7 wt %) and gypsum (0.7 wt %) were also identified.

A small amount of pyrite (0.2 wt %) was identified in Mitchell Rougher tailing. The main gangue mineral identified in Mitchell Rougher tailing was quartz (56.0 wt %) followed by muscovite (23.0 wt %), plagioclase (7.0 wt %), clinochlore (4.6 wt %) and K-feldspar (3.6 wt %). Calcite, ankerite/dolomite and gypsum were identified in lesser amounts, but greater than the amounts identified in Mitchell Sulphide tailing. QEMSCAN analyses identified minor amounts of the zinc-bearing sulphide mineral sphalerite (0.1%) and the lead-bearing sulphide mineral galena (0.1%).

Pyrite (4.5 wt %) and minor chalcopyrite (0.2 wt %) were the sulphide-bearing minerals identified in the Mitchell Rougher/Sulphide tailing. The type and amounts of non-sulphide minerals were similar to the minerals identified in the Mitchell Rougher tailing.

Some differences in the mineralogy were identified for the Mitchell Rougher-fine and Mitchell Rougher-coarse tailing. There was a minor amount of pyrite (0.2 wt %) in the Mitchell Rougher-fine and the amount of quartz was greater in the Mitchell Rougher-coarse.

In general plagioclase and feldspar are the dominant silicate minerals contributing NP in the Mitchell tailing samples. Calcite and ankerite/magnesite are the only carbonate minerals identified in the Mitchell and Mitchell/Sulphurets Rougher tailing. The quantitative analyses show trace quantities of calcite (0.3 to 2.3%) in all the samples.

Table 6.1-1. Summary of Elements Exceeding Three Times the Average Crustal Abundance for the KSM Tailing Samples

		Silver	Arsenic	Cadmium	Copper	Iron	Molybdenum	Sulphur	Antimony	Selenium
Mitchell/Kerr Tailing	75th	0.445	7.05	0.20	527	21325	9.83	4925	1.81	2.00
	Max	0.610	9.80	0.25	578	22100	34.00	5100	2.01	2.00
	Min	0.120	4.10	0.04	215	11400	3.83	2100	0.80	1.00
	25th	0.140	4.98	0.05	224	11850	5.47	2350	1.14	2.00
	Mean	0.313	6.14	0.12	393	18162.5	8.98	3650	1.46	1.81
	Median	0.290	6.00	0.07	432	20700	6.31	3700	1.56	2.00
	3x Shale	**0.210**	39.00	0.90	**135**	141600	7.80	7200	4.50	**1.80**
Mitchell/Sulphurets Tailing	75th	0.305	6.48	0.30	196	24850	10.34	1575	4.03	1.00
	Max	0.350	7.30	0.30	198	26200	11.20	2100	4.05	1.00
	Min	0.280	6.10	0.26	171	24000	7.52	1300	3.86	1.00
	25th	0.288	6.10	0.27	186	24075	7.56	1375	3.98	1.00
	Mean	0.303	6.43	0.28	189	24675	9.09	1550	3.99	1.00
	Median	0.290	6.15	0.29	193	24250	8.81	1400	4.02	1.00
	3x Shale	**0.210**	39.00	0.90	**135**	141600	**7.80**	7200	4.50	1.80
Iron Cap Tailing	75th	0.700	5.50	0.61	247	15025	5.61	1200	5.21	1.00
	Max	0.810	10.50	0.67	337	15300	5.68	1200	6.32	2.00
	Min	0.610	3.50	0.47	155	9000	3.93	900	4.05	1.00
	25th	0.635	4.00	0.52	190	10400	4.86	1000	4.27	1.00
	Mean	0.680	4.36	0.57	227	12600	5.14	1088	4.86	1.13
	Median	0.665	4.20	0.57	213	13000	5.48	1100	4.61	1.00
	3x Shale	**0.210**	39.00	0.90	**135**	141600	7.80	7200	**4.50**	1.80
Mitchell Tailing	Rougher	0.530	4.10	0.69	147	24600	8.05	3900	2.08	2.00
	Rougher-Fines	0.390	3.60	0.31	148	25600	4.82	4400	2.24	2.00
	Rougher-Coarse	0.590	4.30	0.44	246	17200	7.45	2500	1.89	2.00
	3x Shale	**0.210**	39.00	0.90	**135**	141600	**7.80**	7200	4.50	**1.80**
	Sulphide	9.290	118.00	6.60	4030	216000	326.00	100000	17.10	41.00
	Rougher/sulphide	1.420	16.70	0.94	585	47500	56.40	31200	3.81	6.00
	3x Shale	**0.210**	**39.00**	**0.90**	**135**	**141600**	**7.80**	**7200**	**4.50**	**1.80**

Concentrations are in ppm

Bold and underlined values indicated median values exceed crustal abudnace

Crustal abundance data from Price (1997).

6.1.7 Particle Size Analysis

The particle size distribution of the tailing samples submitted for humidity cell tests was analyzed by the wet sieving method (Mitchell tailing) and by laser diffraction method (Mitchell/Kerr Rougher and Mitchell/Sulphurets Rougher tailing). Appendix 6.1-5 presents the particle size analyses results.

Mitchell tailing showed a broad range of particle size distributions. Analysis of the Mitchell Rougher-fine tailing showed that 50% by weight was finer than 5.0 microns, and 80% by weight was finer than 12.0 microns. The Mitchell Rougher tailing analysis showed that 50% by weight was finer than 44 microns, and 80% by weight was finer than 75 microns. The Mitchell Rougher-coarse tailing analysis showed that approximately 50% by weight was finer than 100 microns, and approximately 80% by weight was finer than 150 microns.

Mitchell/Kerr Rougher tailing analysis showed that 50% by volume was finer than 12 microns to 16 microns, and 80% by volume was finer than 63 microns to 84 microns. Analysis of the Mitchell/Sulphurets Rougher tailing showed that 50% by volume was finer than 20 microns, and 80% by volume was finer than 89 microns.

6.1.8 Coarse versus Fine Mitchell Rougher Tailing

The static test results of the Mitchell Rougher-coarse tailing and Mitchell Rougher-fine tailing were similar to the Mitchell total Rougher. The Mitchell Rougher-fine and Mitchell total Rougher static test results have a stronger correlation; both representing tailing material that will be deposited in the flotation tailing cells in the summer and winter respectively. The Mitchell Rougher-coarse tailing static test results were also very similar and represent cyclone tailing material proposed to be used for TMF dam construction during summer months.

The Mitchell Rougher-coarse and Mitchell Rougher-fine fraction ABA results show no variation in the paste pH. The total-sulphur concentration in the fine fraction (0.38%) was higher than the concentration in the coarse fraction (0.21%). The sulphide-sulphur concentration in the fine and coarse fractions tested were 0.04% and 0.08%, respectively. The fine fraction and coarse fraction tailing show sulphate-sulphur concentrations of 0.37% and 0.15%, respectively.

The Sobek NP of both the Rougher-coarse and Rougher-fine tailing was 31 kg $CaCO_3$/t. There was better agreement between the Inorg NP and Sobek NP values for the Rougher-fines tailing (difference of 4 kg $CaCO_3$/t) than the Rougher-coarse tailing (difference of 16 kg $CaCO_3$/t).

The SNPR values for the Rougher-coarse and Rougher-fine fractions were above 10.0. These SNPR values indicate that the Rougher-coarse and Rougher-fine tailing are not-PAG.

6.2 KINETIC TESTS

6.2.1 Humidity Cells

6.2.1.1 Pre-test Static Test Results

The results of the static tests of the tailing and tailing composites used in humidity cells are presented in Section 6.1.

6.2.1.2 Kinetic Test Results

This section of the report incorporates results collected up till the end of July 2012. The following discussion presents an assessment of the analyses of leachate from the tailing humidity cells for:

- Indicators of acid generation (pH, sulphate, acidity, and alkalinity);
- Elements that contribute to acidity (aluminum, iron, and manganese);
- Barium which is most commonly associated with barite ($BaSO_4$), a highly insoluble mineral;
- Trace elements with elevated concentrations in the last 10 weekly cycles relative to water quality guidelines. Identification of these elements can be used to inform treatment design decisions and water quality modelling; and
- Calcium and magnesium which commonly occur in carbonate mineral phases and are associated with the neutralization potential.

The detection limits for the metal analyses method are presented in Section 4 (Table 4.4-1). The detection limits have been lowered during the humidity cells operation period.

The leach rates over time for the above parameters for all humidity cells are graphically presented. The complete data set for humidity cell leachate concentrations is presented in Appendix 6.2-1. The leach rates representing concentrations below the detection limit are shown as a sequence of constant values. Leach rates for parameters additional parameters are presented in Appendix 6.2-2.

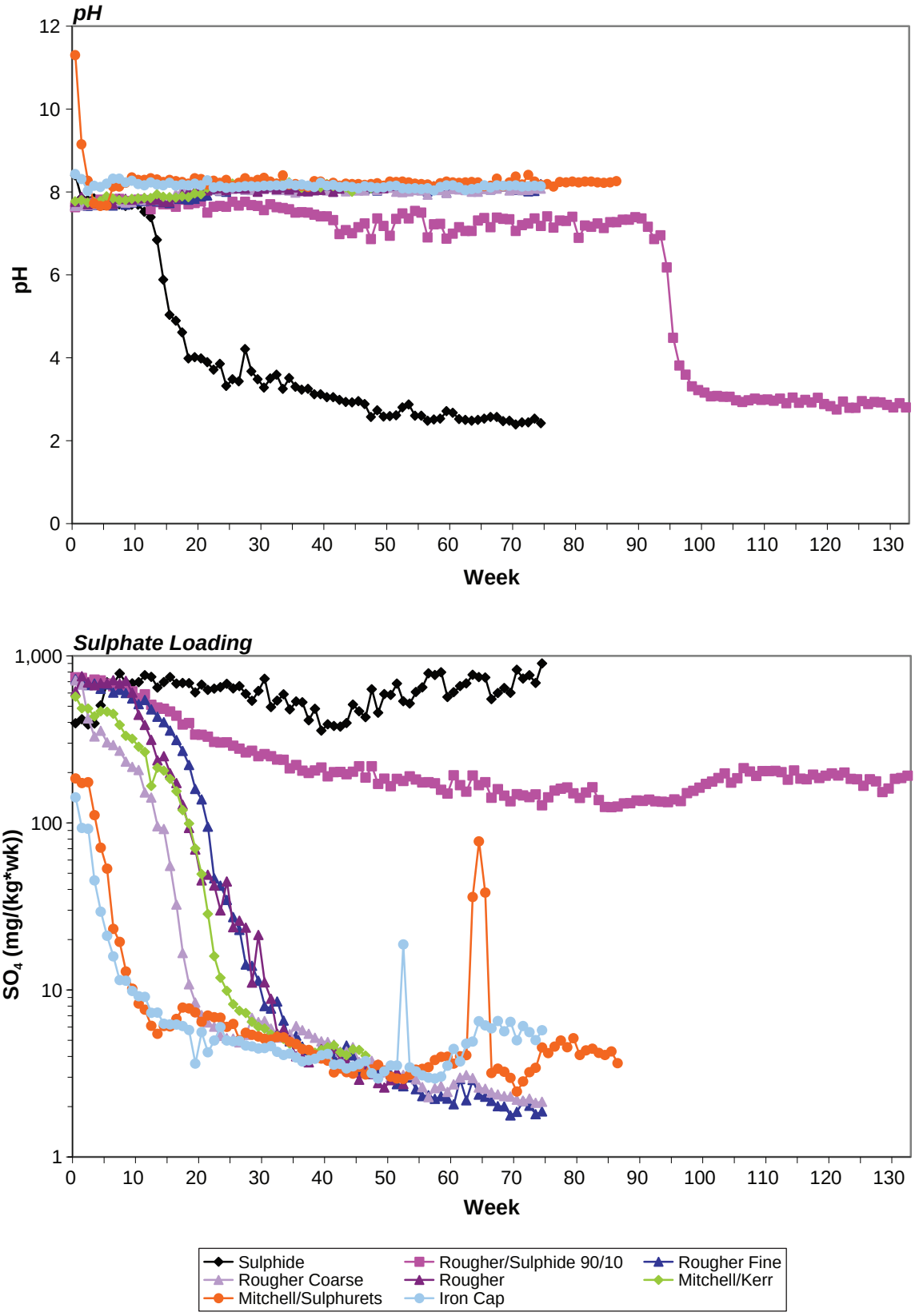
These data represent eight humidity cells that were operated for 52 to 148 weeks for the following tailing samples: Sulphide (Mitchell Sulphide), Rougher/Sulphide (Mitchell Rougher/Sulphide 90/10), Rougher-fine (Mitchell Rougher-fine), Rougher-coarse (Mitchell Rougher-coarse), Rougher (Mitchell Rougher), Mitchell/Kerr, Mitchell/Sulphurets, and Iron Cap. Mitchell tailing chemistry is expected to dominate the chemistry of the TMF.

pH, Sulphate, Acidity, and Alkalinity

Initial pH values of tailing humidity cells leachate were near-neutral with the exception of the initial alkaline pH 11.3 observed in the Mitchell/Sulphurets humidity cell. The initial flush reduced the high pH by week 3 and leachate from the Rougher-fine, Rougher-coarse, Rougher, Mitchell/Kerr, Mitchell/Sulphurets, and Iron Cap humidity cells remained around pH 8 for the remaining weekly cycles. The pH in the Sulphide humidity cell decreased rapidly at week 12 and stabilized at pH 2.5. The pH gradually decreased in the Rougher/Sulphide humidity cell between weeks 12 and 89 before sharply decreasing to a stable pH of 3 (Figure 6.2-1).

Sulphate production rates in the near-neutral humidity cells decreased by two orders of magnitude over 46 to 73 weeks. Iron Cap sulphate production rates increased at week 57. Sulphate production rates in the Sulphide humidity cell ranged from 700 to 1000 mg/kg/wk. Steady state sulphate production rates in the Rougher/Sulphide humidity cell were approximately 200 mg/kg/wk to week 133, increasing rapidly to 681 mg/kg/wk in the last 15 weeks. The higher sulphate production rates in the acidic humidity cells are consistent with sulphide oxidation driving the pH decrease (Figure 6.2-1).

Acidity production was highly variable and frequently below detection in the near-neutral humidity cells with the exception of Mitchell/Sulphurets (steady state acidity production 25 mg $CaCO_3$/kg/wk). Acidity production in the Sulphide humidity cell increased over time, while increased acidity production in the Rougher/Sulphide humidity cell was not observed until week 89 at the time of the pH decrease. Alkalinity production rates in the near-neutral humidity cells remained constant at approximately 25 mg $CaCO_3$/kg/wk. Alkalinity was below the detection limit after week 18 and week 96 in the Sulphide and Rougher/Sulphide humidity cells, respectively (Figure 6.2-2).

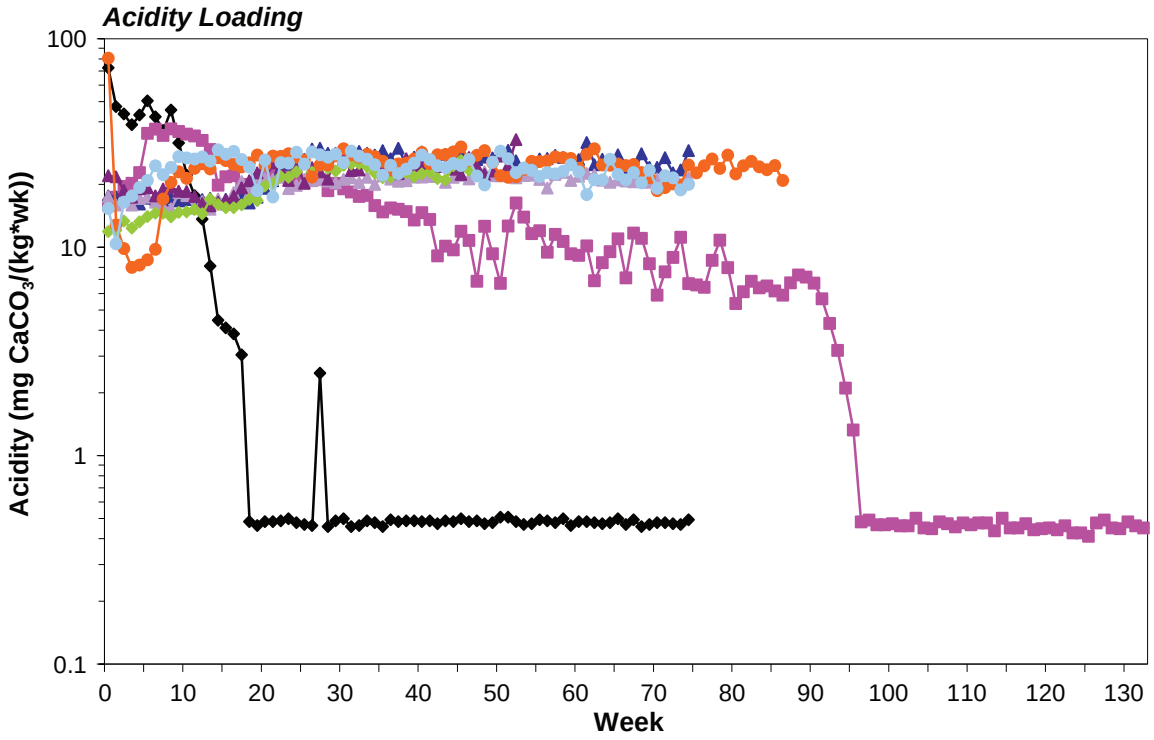


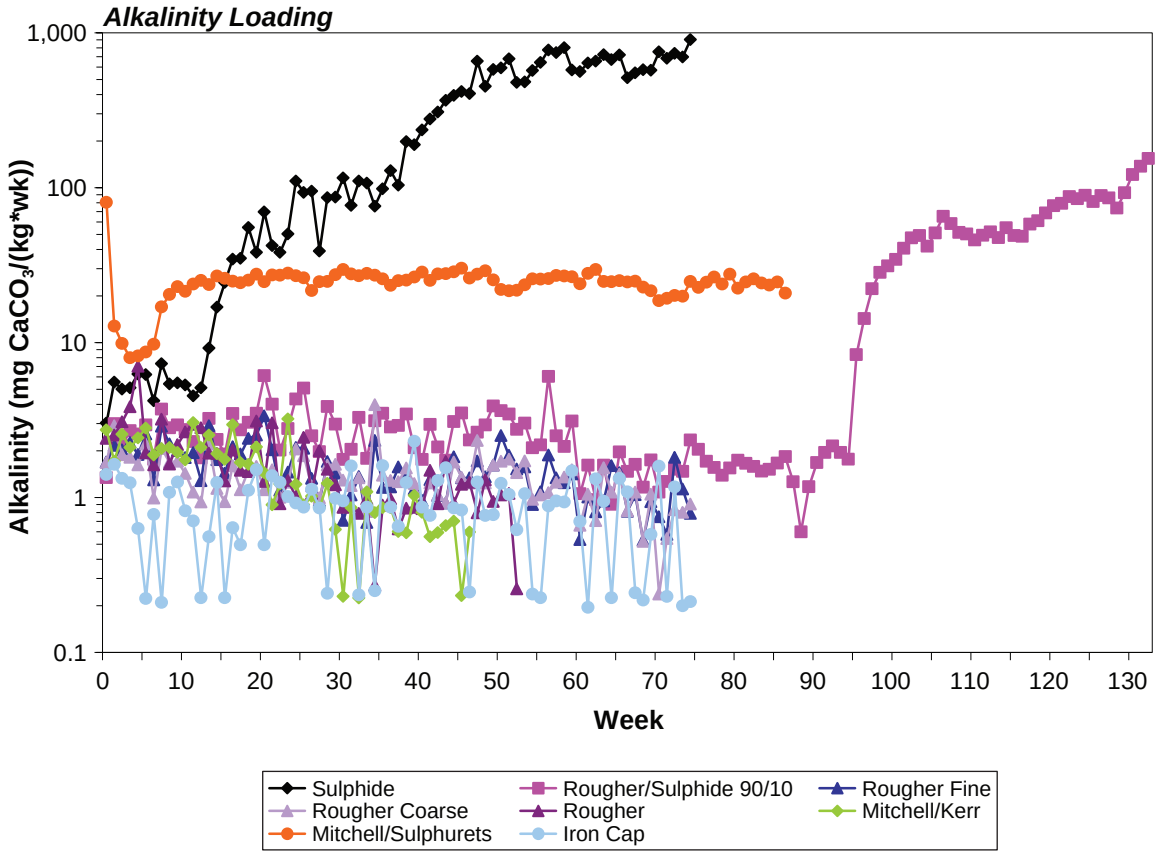
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Weekly pH and Sulphate Production, Tailing Humidity Cells

Figure 6.2-1

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Acidity and Alkalinity Production, Tailing Humidity Cells

Figure 6.2-2

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Elements that Contribute to Acidity

Aluminum leach rates increased over time in the Sulphide humidity cell to 12.3 mg/kg/wk. Aluminum leach rates increased at the time of the pH decrease in the Rougher/Sulphide humidity cell and stabilized at 1.26 mg/kg/wk around week 127. A rapid increase in Aluminum leach rates to 13.74 mg/kg/wk is observed after week 127. Aluminum leach rates in the near-neutral humidity cells ranged from 0.014 to 0.043 mg/kg/wk (Figure 6.2-3).

Iron concentrations in the leachate from the near-neutral humidity cells were frequently below detection. Iron leach rates increased over time in the Sulphide humidity cell to 272 mg/kg/wk. Iron leach rates increased gradually to 7 mg/kg/wk in the Rougher/Sulphide humidity cell to week 127 (Figure 6.2-3). A further rapid increase in iron leach rates to 186 mg/kg/wk was observed after week 127.

Manganese leach rates were variable over time and stabilized at approximately 0.9 mg/kg/wk. Leach rates in the Rougher/Sulphide humidity cell increased over time to week 125, and subsequently decreased (Figure 6.2-4).

Barium

Barium leach rates were stable over time in the acidic humidity cells and ranged from 0.005 to 0.007 mg/kg/wk. The low barium concentrations likely reflected barium precipitation as barite. Barium leach rates in the near-neutral humidity cells increased over time and ranged from 0.06 to 0.25 mg/kg/wk in the last 10 weeks. Decreased barium leaching occurred in Mitchell/Sulphurets and Iron Cap humidity cells after week 67 and 59, respectively (Figure 6.2-4).

Trace Elements

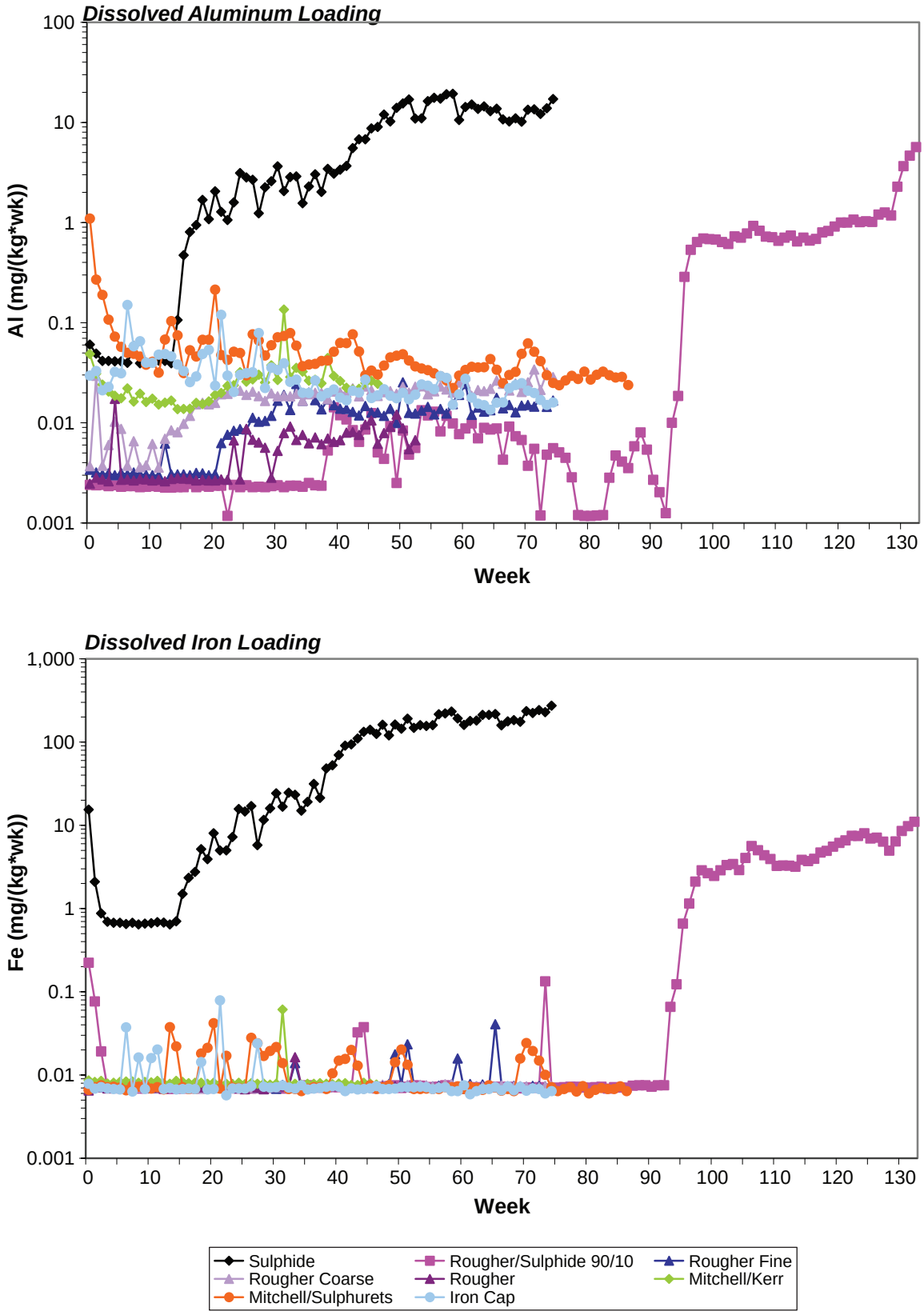
Arsenic concentrations in the Rougher-fine, Rougher-coarse, and Rougher humidity cells were frequently below detection. Arsenic leach rates in the Sulphide humidity cell increased after week 41 when the pH decreased below 3 and were highly variable. Leach rates in the Rougher/Sulphide humidity cell increased to 0.0003 mg/kg/wk between weeks 100 and 127, then increased again to 0.0018 mg/kg/wk at week 143 due to decreased pH (Figure 6.2-5).

Cadmium leach rates were variable in the Sulphide humidity cell but were relatively stable after week 48 at 0.05 mg/kg/wk. Leach rates in the Rougher/Sulphide humidity cell increased after week 89 to stabilize at 0.001 mg/kg/wk. Cadmium leach rates in the Rougher/Sulphide humidity cell increased to 0.037 mg/kg/wk from week 113 to week 129, and subsequently decreased. The near-neutral leach rates were two orders of magnitude less and were approximately 0.00001 mg/kg/wk (Figure 6.2-5).

Chromium concentrations were below detection in the near-neutral humidity cells. Chromium leach rates increased over time in the Sulphide humidity cell after week 25. Chromium leach rates increased after week 93 in the Rougher/Sulphide humidity cells to stable leach rates of 0.005 mg/kg/wk to week 127. A rapid increase in leach rates to 0.20 mg/kg/wk was observed at week 144 (Figure 6.2-6).

Cobalt concentrations were below detection in the near-neutral humidity cells. Steady state leach rates in the Sulphide humidity cell were 0.08 mg/kg/wk. Cobalt leach rates increased at week 91 in the Rougher/Sulphide to 0.09 mg/kg/wk (Figure 6.2-6).

Copper leach rates sharply increased at week 9 in the Sulphide humidity cell and stabilized at 32 mg/kg/wk. Steady-state leach rates in the Rougher/Sulphide humidity cell after the increase at week 90 were 0.5 mg/kg/wk. Copper leach rates in the Rougher/Sulphide humidity cell increased to 17.5 mg/kg/wk from week 113 to week 131, and subsequently decreased. Copper leach rates in the near-neutral humidity cells ranged from below detection in the Rougher humidity cell to 0.0007 mg/kg/wk in the Rougher-coarse humidity cell (Figure 6.2-7).

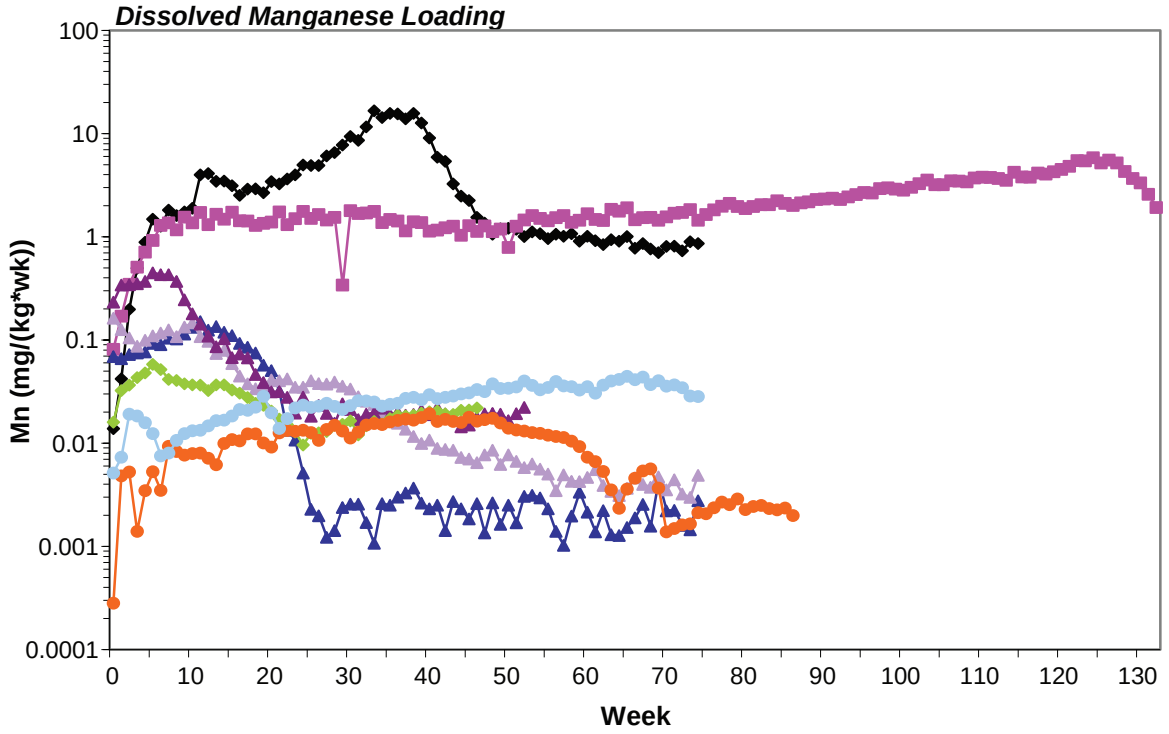


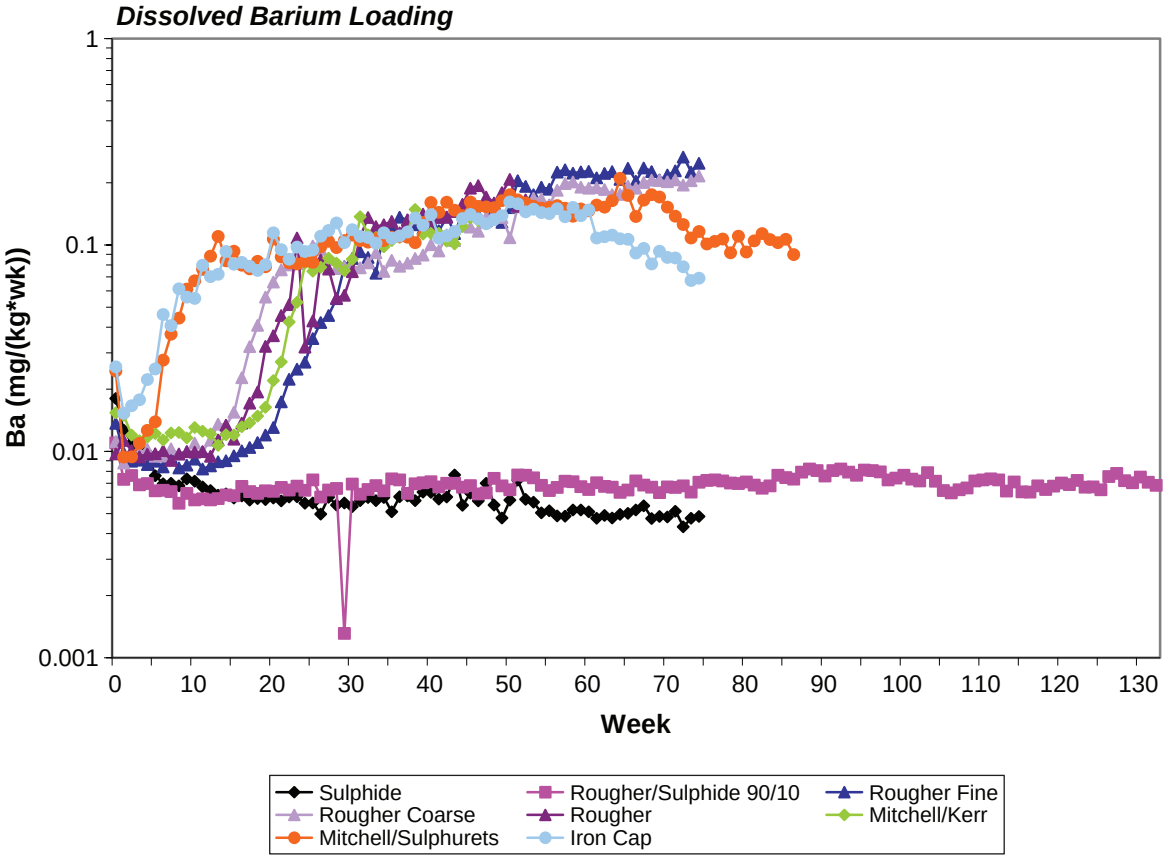
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Aluminum and Iron Leach Rates, Tailing Humidity Cells

Figure 6.2-3

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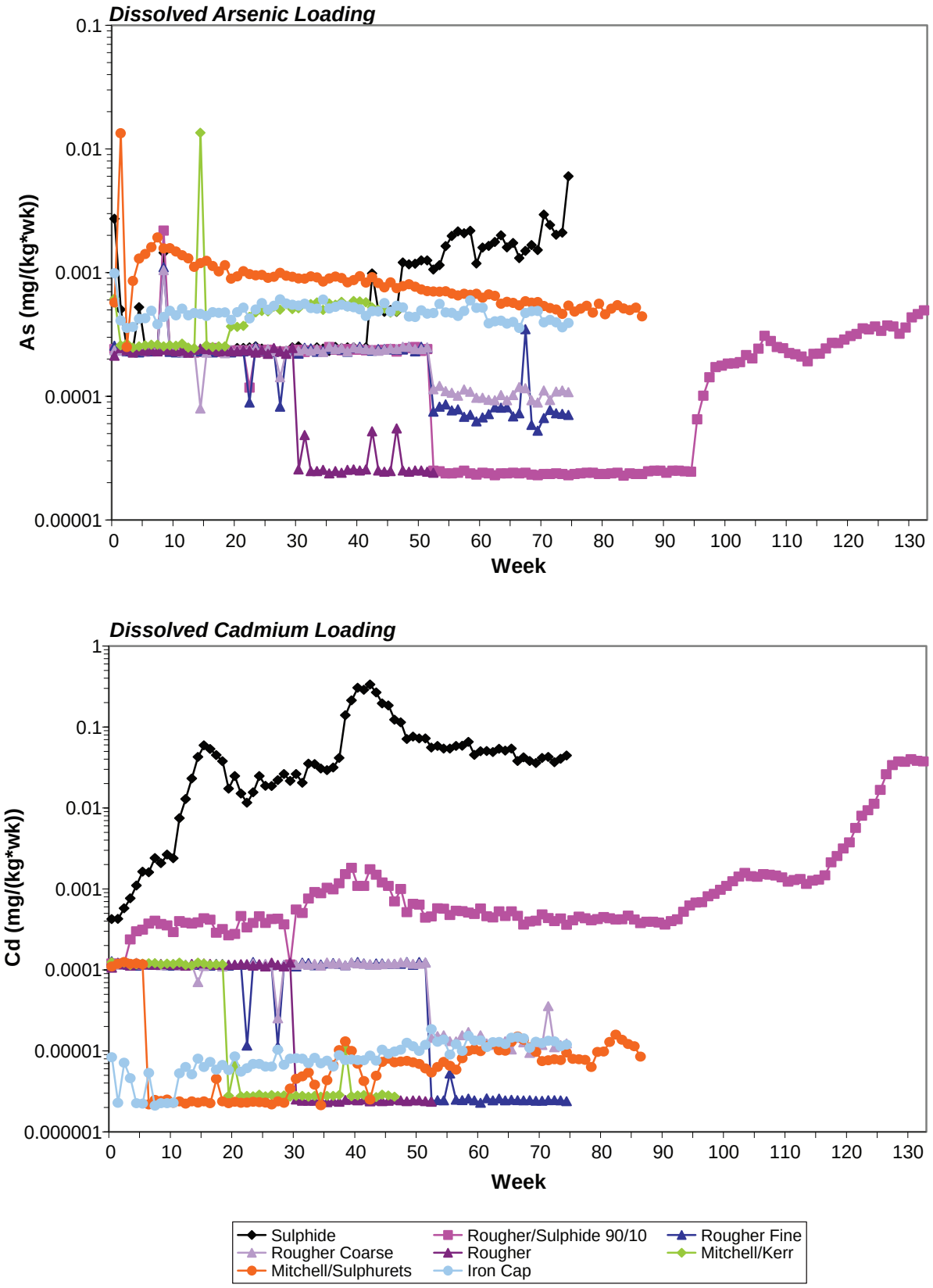


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Manganese and Barium Leach Rates, Tailing Humidity Cells

Figure 6.2-4

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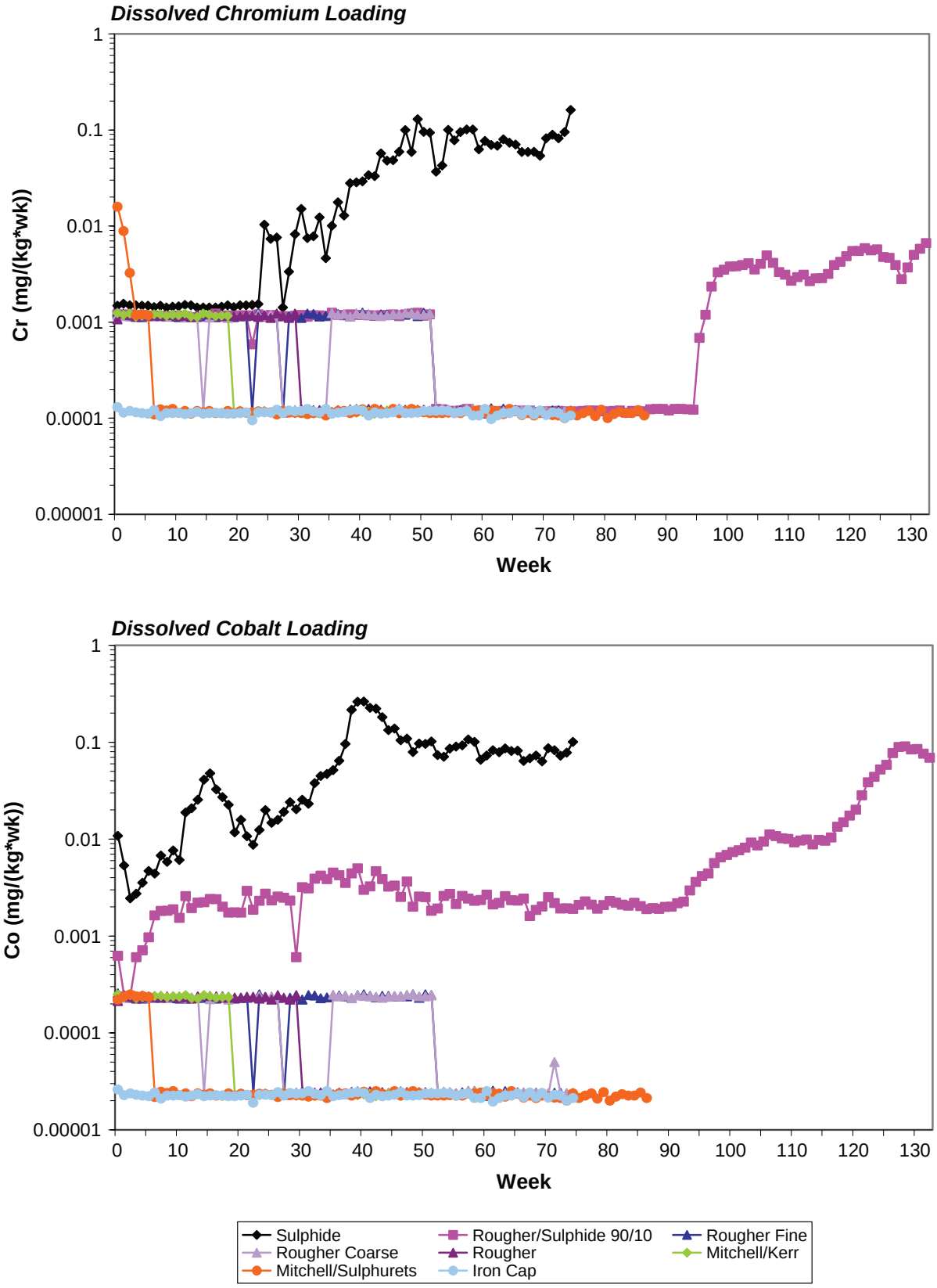


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Arsenic and Cadmium Leach Rates, Tailing Humidity Cells

Figure 6.2-5

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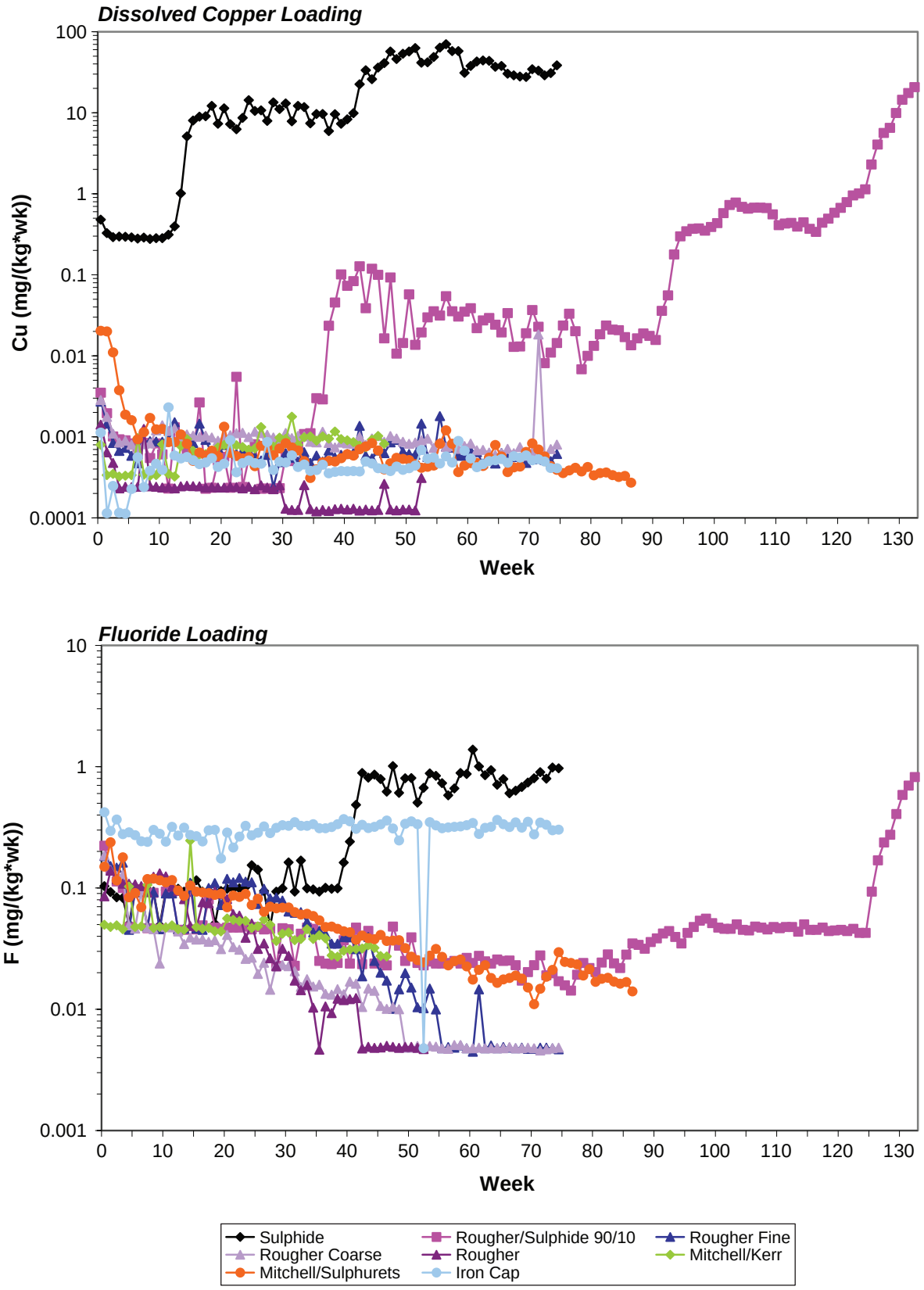


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Chromium and Cobalt Leach Rates, Tailing Humidity Cells

Figure 6.2-6

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Copper and Fluoride Leach Rates, Tailing Humidity Cells

Figure 6.2-7

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Fluoride leach rates in the Sulphide humidity cell increased at week 37 and stabilized at approximately 0.9 mg/kg/wk. Fluoride leach rates increased at week 123 in the Rougher/Sulphide humidity cell to a maximum of 1.00 mg/kg/wk at week 136, and subsequently decreased. Iron Cap fluoride leach rates were stable over time at 0.3 mg/kg/wk. Fluoride leach rates in the other humidity cells generally decreased over time (Figure 6.2-7).

Lead concentrations in the near-neutral humidity cell leachates were frequently below detection. Lead leach rates sharply increased after week 12 in the Sulphide humidity cell, but began decreasing after week 54. Lead leach rates increased from below detection to 0.09 mg/kg/wk in the Rougher/Sulphide humidity cell between weeks 142 and 154 (Figure 6.2-8).

Nickel concentrations in the near-neutral humidity cell leachates were below the detection limit. Nickel leach rates in the Sulphide humidity cell increased to week 39 and subsequently decreased to 0.09 mg/kg/wk. Leach rates in the Rougher/Sulphide humidity cell ranged from 0.004 to 0.01 mg/kg/wk until week 110, when leach rates increased to 0.26 mg/kg/wk, and subsequently decreased (Figure 6.2-8).

Selenium leach rates decreased over time for most humidity cells. Leach rates in the last 10 weeks ranged from 0.001 to 0.002 mg/kg/wk, 0.0004 to 0.0005 mg/kg/wk, and 0.0008 to 0.0009 mg/kg/wk in the Sulphide, Mitchell/Kerr, and Iron Cap humidity cells, respectively (Figure 6.2-9).

Silver concentrations in the near-neutral humidity cells were below the detection limit. Silver leach rates increased after week 51 and 90 in the Sulphide and Rougher/Sulphide humidity cells, respectively (Figure 6.2-10).

Thallium concentrations were below the detection limit in the near-neutral humidity cells. Thallium leach rates in the Sulphide humidity cell ranged from 0.0003 to 0.0004 mg/kg/wk in the last 10 weeks. Thallium leach rates in the Rougher/Sulphide humidity cell increased after week 90 (Figure 6.2-10).

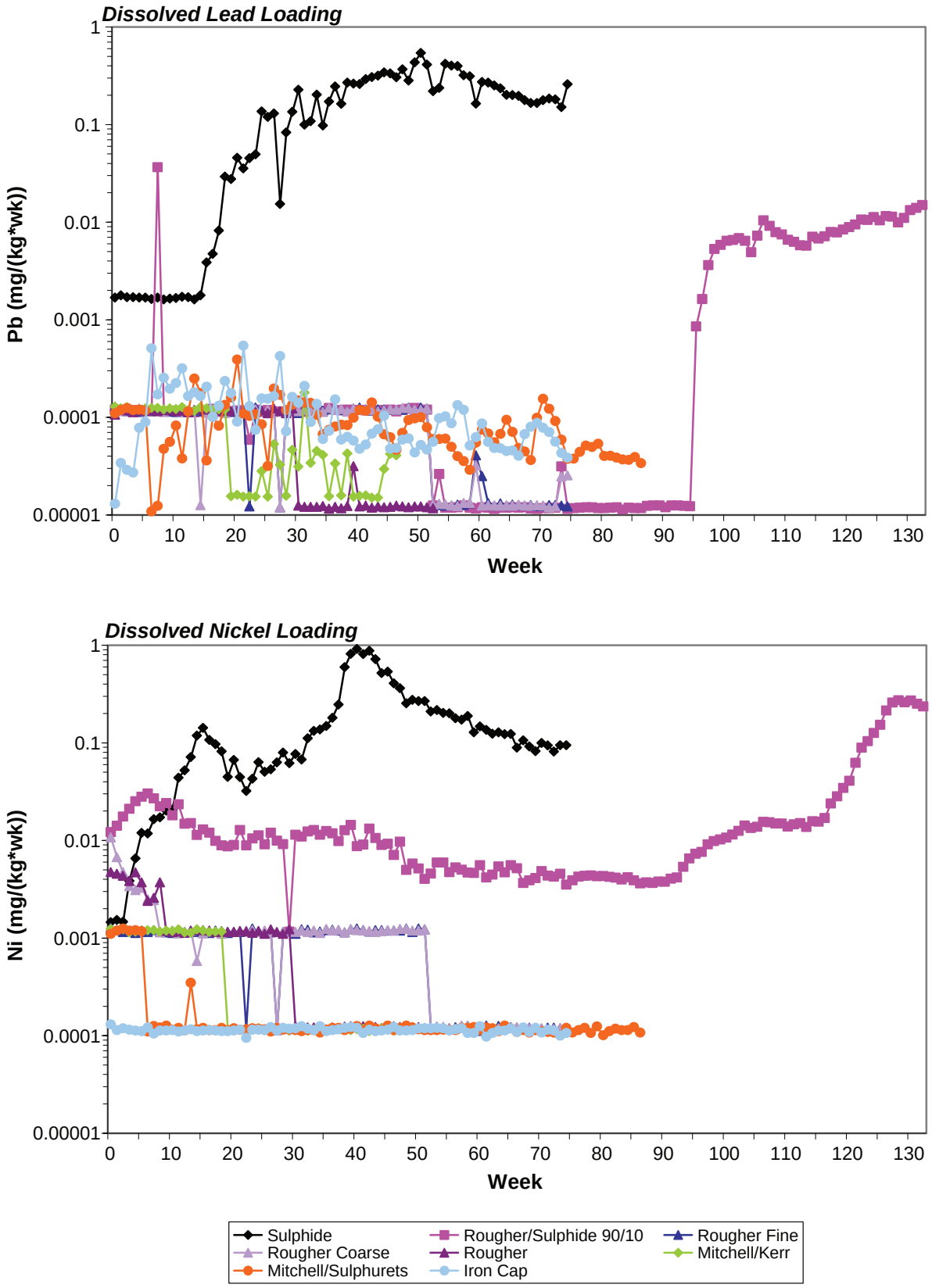
Vanadium concentrations were below the detection limit in the near-neutral humidity cells. Vanadium leach rates were highly variable, but increased over time in the Sulphide humidity cell to 0.012 mg/kg/wk. Vanadium leach rates increased in the Rougher/Sulphide cell after week 120 to 0.0022 mg/kg/wk (Figure 6.2-9).

Zinc concentrations were below the detection limit in the near-neutral humidity cells. Steady state zinc leach rates in the Sulphide humidity cell were 2.7 mg/kg/wk. Leach rates in the Rougher/Sulphide humidity cell were 0.03 mg/kg/wk after the increase at week 89, until a subsequent rate increase at week 110 to a maximum of 1.3 mg/kg/wk (Figure 6.2-11).

Table 6.2-1 summarizes the parameters with elevated concentrations from each tailing sample under acidic and neutral drainage conditions.

Elements Associated with the Neutralization Potential

Calcium leach rates decreased over time in all humidity cells. Steady state leach rates for the acidic Sulphide humidity cell and the near-neutral humidity cells ranged from 7 to 11 mg/kg/wk. Leach rates in the Rougher/Sulphide humidity cell decreased gradually to 35 mg/kg/wk to week 113, and subsequently decreased sharply to 5.25 mg/kg/wk. Magnesium leach rates increased over time in the acidic humidity cells. Steady state magnesium leach rates in the near-neutral humidity cells ranged from 0.5 to 1.5 mg/kg/wk (Figure 6.2-12).

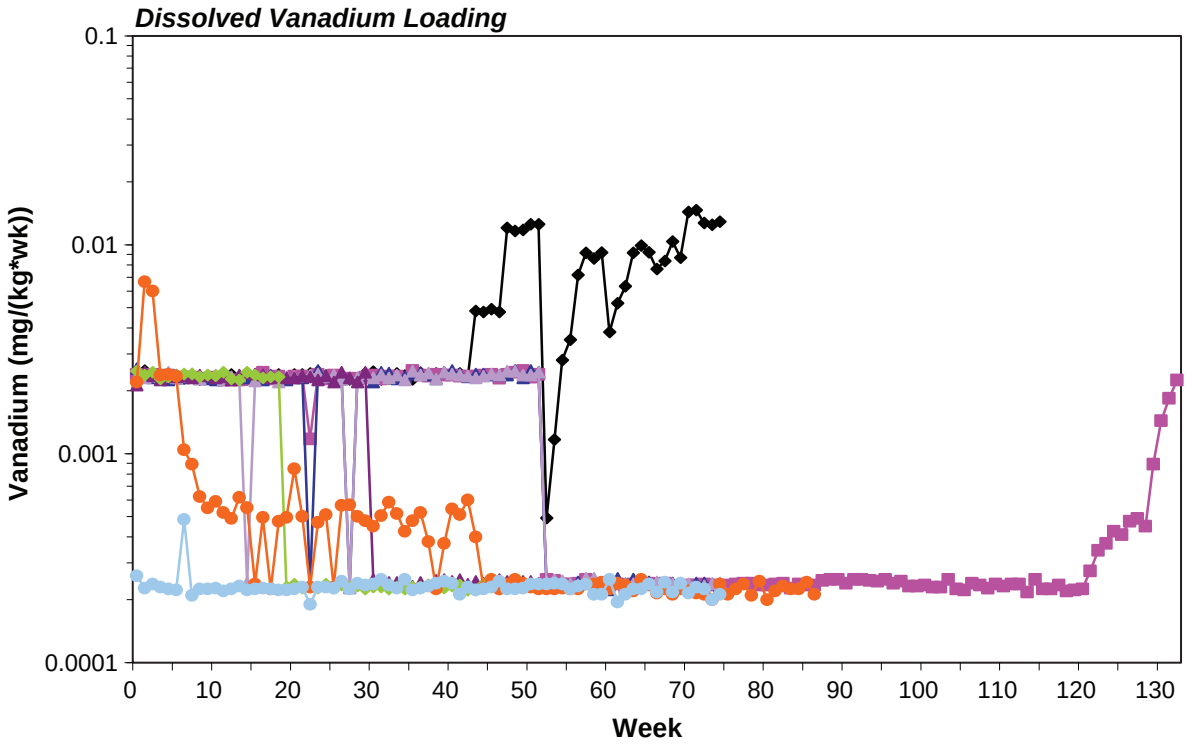


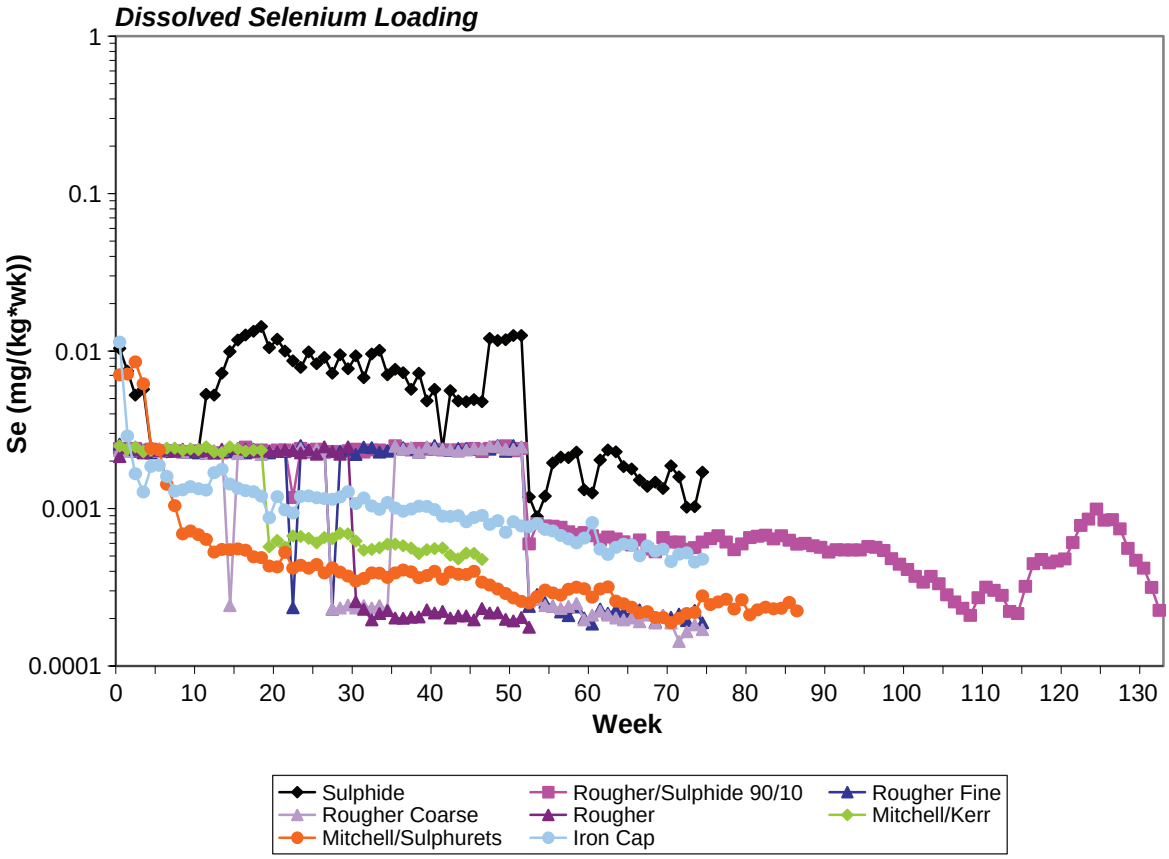
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Lead and Nickel
Leach Rates, Tailing Humidity Cells

Figure 6.2-8

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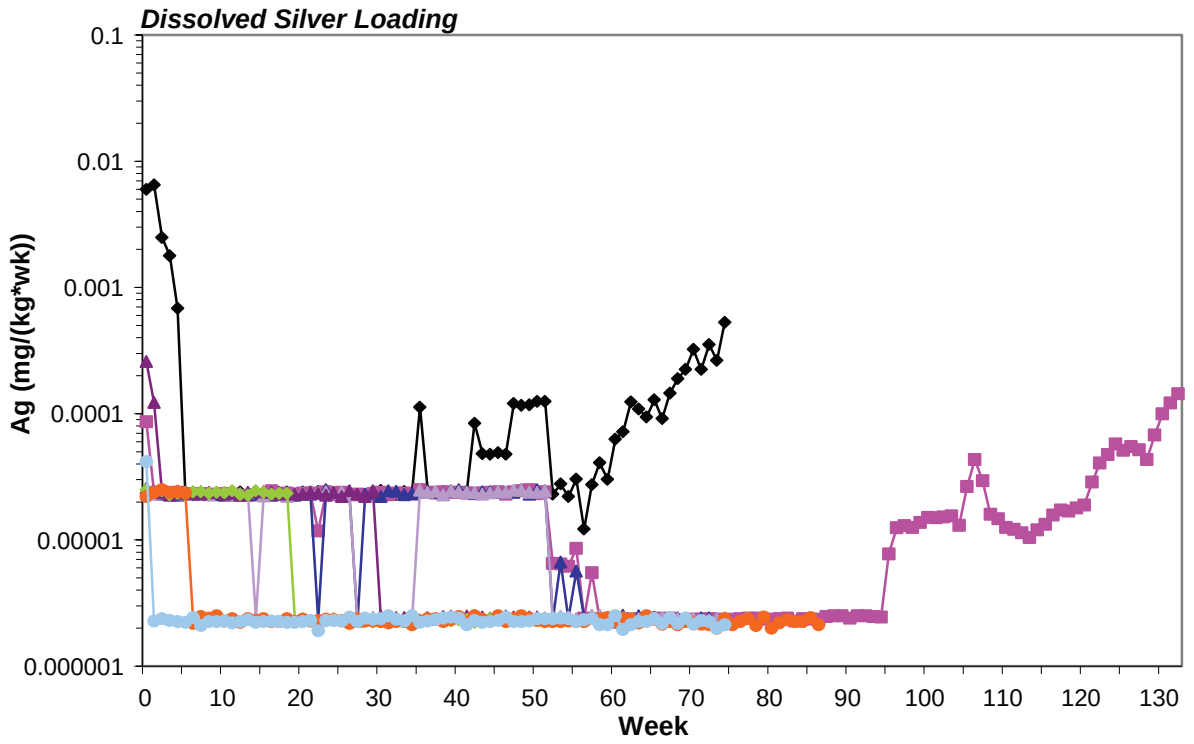


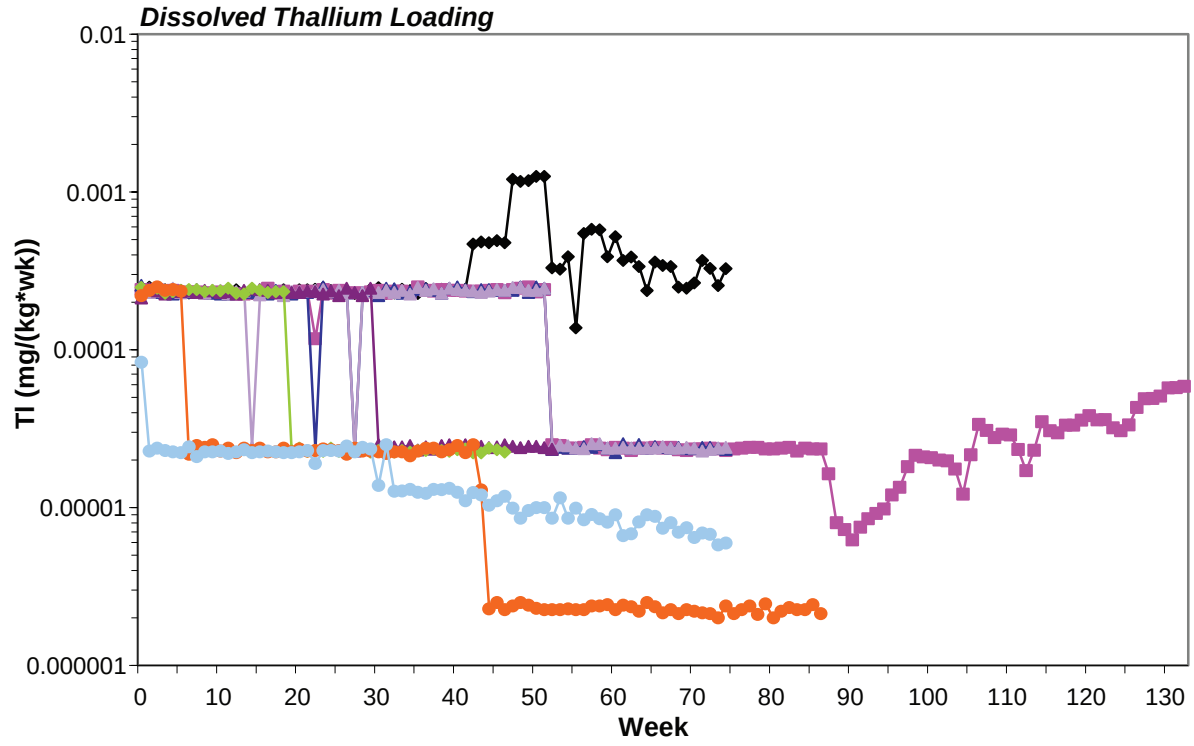
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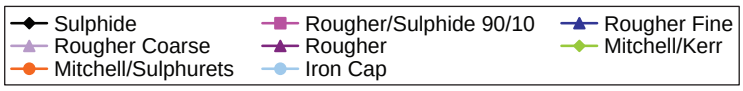
Vanadium and Selenium Leach Rates, Tailing Humidity Cells

Figure 6.2-9

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Silver and Thallium
Leach Rates, Tailing Humidity Cells

Figure 6.2-10

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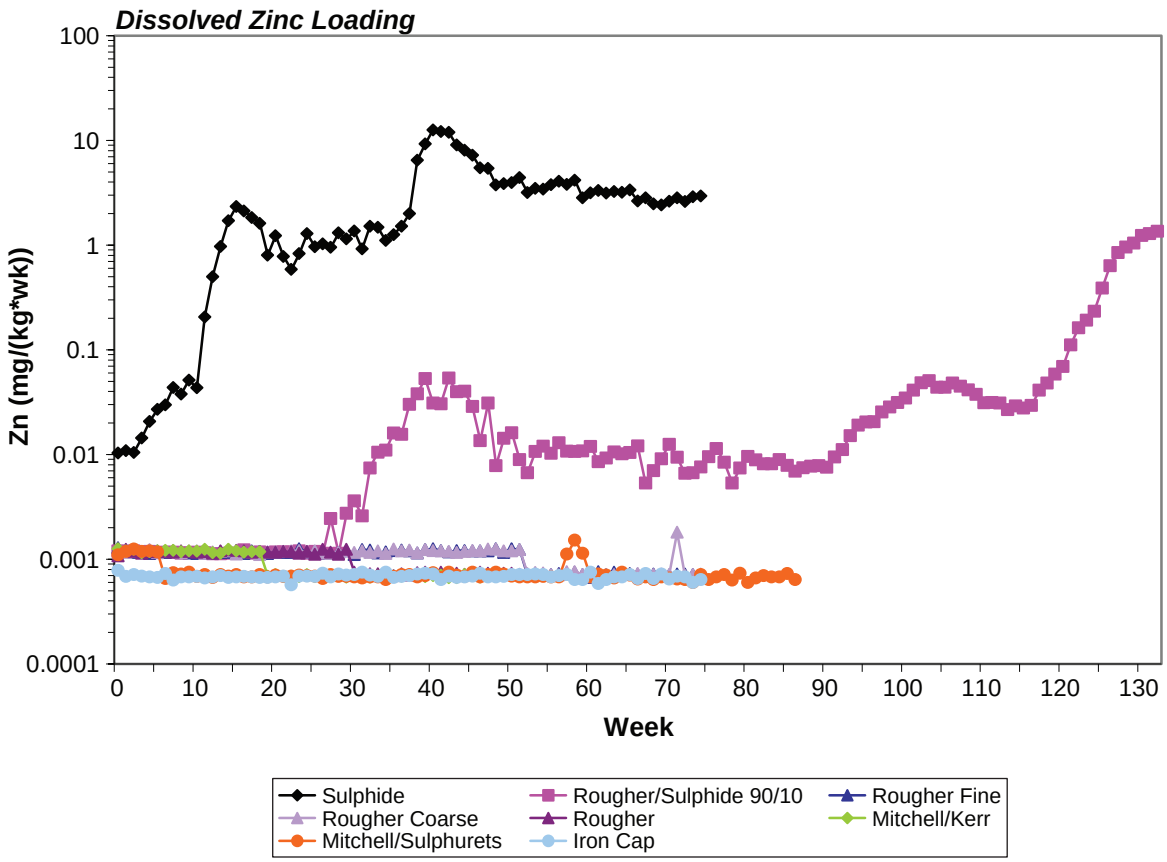
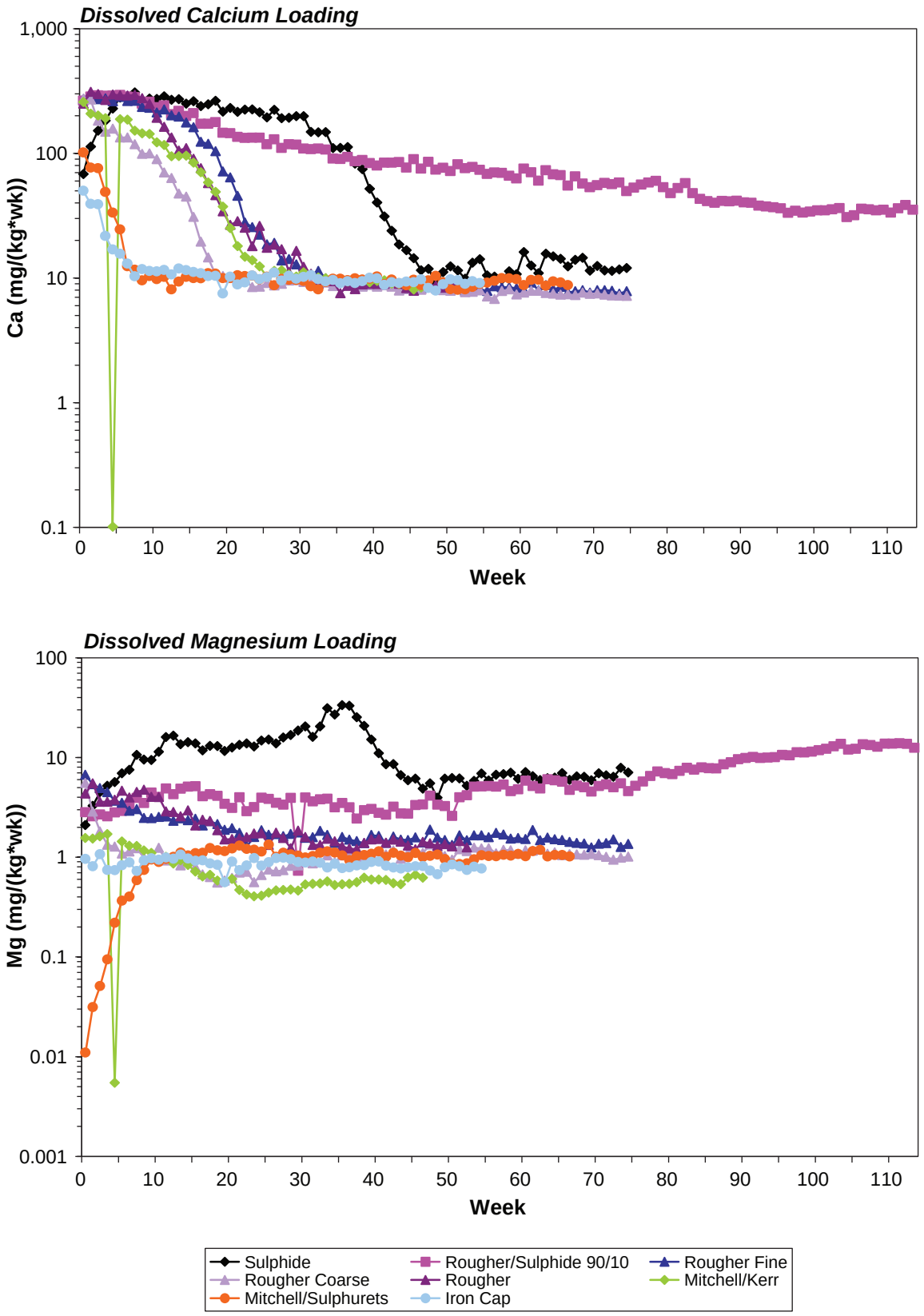


Figure 6.2-11

Zinc Leach Rates, Tailing Humidity Cells

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Calcium and Magnesium Leach Rates, Tailing Humidity Cells

Figure 6.2-12

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Table 6.2-1. Tailing Acidic and Neutral Leachate from Humidity Cells

Tailing	Acidic Drainage	Neutral Drainage
Sulphide	Sulphate, Aluminum, Arsenic, Cadmium, Chromium, Cobalt, Copper, Fluoride, Iron, Lead, Manganese, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc	n/a
Rougher/Sulphide	Sulphate, Aluminum, Beryllium, Cadmium, Chromium, Cobalt, Copper, Fluoride, Iron, Lead, Manganese, Nickel, Silver, Zinc	n/a
Rougher-fine	n/a	None
Rougher-coarse	n/a	Aluminum, Cadmium, Copper
Rougher	n/a	None
Mitchell/Kerr	n/a	Aluminum, Selenium
Mitchell/Sulphurets	n/a	Aluminum, Cadmium, Molybdenum
Iron Cap	n/a	Fluoride, Cadmium, Selenium

n/a indicates that no humidity cell was observed.

6.2.1.3 Depletion Times and Onset of Acid Rock Drainage

The rates of depletion of sulphide, bulk Sobek NP, and carbonate NP were calculated and used to estimate the time to the onset of ARD and the time to the end of ARD for sub-aerial deposition of tailing. Table 6.2-2 presents a summary of these data by tailing type.

There is reasonable agreement in predictions of ARD onset based on the source of NP (bulk Sobek NP or carbonate NP). ARD onset is predicted to be quite rapid for Mitchell Sulphide and Mitchell Rougher/Sulphide tailing, but is predicted to never occur in the Mitchell Rougher-fine, Mitchell Rougher-coarse, Mitchell Rougher, Mitchell/Kerr Rougher, Mitchell/Sulphurets Rougher, or Iron Cap Rougher tailing.

6.2.2 Subaqueous Columns

The following discussion presents an assessment of porewater and supernatant analyses from the tailing subaqueous columns for:

- Indicators of acid generation (pH, sulphate, acidity, and alkalinity);
- Trace elements with elevated concentrations in the last 10 weekly cycles relative to water quality guidelines. Identification of these elements can be used to inform treatment design decisions and water quality modelling; and
- Calcium and magnesium which commonly occur in carbonate mineral phases and are associated with the neutralization potential.

The supernatant water from the tailing subaqueous columns is considered representative of the TMF cover water at the tailing solid-water interface and the porewater from the tailing subaqueous column is considered representative of the TMF tailing porewater.

The complete data set for subaqueous columns supernatant and pore water concentrations is presented in Appendix 6.2-3, and the graphs for additional parameters are presented in Appendix 6.2-4. Supernatant water was diluted at each sampling event during the kinetic tests and therefore leach rates could not be accurately calculated or evaluated. Decreasing concentrations over time may also reflect this dilution effect. Furthermore, the replaced supernatant water was not deoxygenated.

Table 6.2-2. Depletion Rates, Estimated Time to ARD Onset, and Estimated Time to End of ARD by Tailing Type for Humidity Cells

Cell ID	Adj SNPR	pH Last 10 Weeks	Sulphate Production Rate	Sulphide Depletion	Bulk NP Consumption Rate	Carbonate Depletion Rate	Bulk NP Depletion	Carbonate NP Depletion	ARD Onset (Bulk NP Depletion)	ARD Onset (Carbonate Depletion)	End of ARD (Bulk NP Depletion)	End of ARD (Carbonate Depletion)
Units			(mmol S/wk)	(years)	(mg $CaCO_3$/kg/wk)	(mmol/wk)	(years)	(years)	(years)	(years)	(years)	(years)
Sulphide	0.00	2.4	7.33	15	0.06	0.59	0	3	0	3	15	12
Rougher/Sulphide 90/10	0.30	2.9	2.04	4	0.07	1.35	0	3	0	3	4	1
Rougher Fine	24.80	8.1	0.02	0	0.03	0.25	14956	21	never	never	n.a.	n.a.
Rougher Coarse	12.40	8.1	0.02	0	0.02	0.23	22608	14	never	never	n.a.	n.a.
Rougher	12.80	8.1	0.03	0	0.03	0.27	12771	16	never	never	n.a.	n.a.
Mitchell/Kerr	10.00	8.1	0.04	0	0.03	0.25	13616	16	never	never	n.a.	n.a.
Mitchell/Sulphurets	17.20	8.2	0.19	1	0.03	0.28	29987	27	never	never	n.a.	n.a.
Iron Cap	14.93	8.1	0.05	4	0.03	0.26	20740	5	never	never	n.a.	n.a.

Six subaqueous columns were operated for 48 to 129 weeks for the following tailing samples: Mitchell Sulphide, Mitchell Rougher/Sulphide, Mitchell Rougher, Mitchell/Kerr Rougher, Mitchell/Sulphurets Rougher, and Iron Cap Rougher. Both supernatant (TOP) and porewater (BOTTOM) data were collected.

6.2.2.1 pH, Sulphate, Acidity, and Alkalinity

The pH was higher in the porewater than in the supernatant for all subaqueous columns. The pH was typically near-neutral with the exception of alkaline pH (~11) in the porewater of the Mitchell/Sulphurets Rougher column, and acidic pH (<6.5) after week 40 in supernatant of the Mitchell Sulphide column and after week 64 in the supernatant of the Mitchell Rougher/Sulphide column. The pH stabilized in the supernatant of the Mitchell Sulphide column at approximately pH 3.75 at week 68, but the pH in the supernatant of the Mitchell Rougher/Sulphide decreased to pH 4.8 at 129 weeks (Figure 6.2-13).

Sulphate concentrations were typically orders of magnitude higher in the porewater than in the supernatant for an individual column. Sulphate concentrations initially decreased in both the supernatant and the porewater over a period of 6 to 30 weeks. Steady state sulphate concentrations in Iron Cap Rougher, Mitchell/Sulphurets Rougher, Mitchell/Kerr Rougher, and Mitchell Rougher supernatant ranged from 1 to 2 mg/L. Steady state sulphate concentrations in Mitchell Sulphide and Mitchell Rougher/Sulphide supernatant ranged from 28 to 80 mg/L (Figure 6.2-13).

Acidity was highly variable and frequently below detection in all subaqueous column samples. Acidity in the supernatant in Mitchell Sulphide tailing increased after week 56. Alkalinity was typically stable and comparable among supernatant and porewater samples of all columns, ranging from 20 to 50 mg $CaCO_3$/L. The exceptions were alkalinity values below detection in the acidic supernatants of the Mitchell Sulphide and Mitchell Rougher/Sulphide columns after weeks 42 and 69, respectively (Figure 6.2-14).

6.2.2.2 Trace Elements

Aluminum concentrations increased when supernatant waters became acidic in the Mitchell Sulphide and Mitchell Rougher/Sulphide columns. Aluminum concentrations also increased over time in the alkaline porewater of the Mitchell/Sulphurets Rougher column (Figure 6.2-15).

Antimony concentrations in Mitchell/Sulphurets Rougher, Mitchell Sulphide, and Iron Cap Rougher tailing porewater were comparable ranging from 0.01 to 0.02 mg/L. Antimony concentrations increased over time in the alkaline Mitchell/Sulphurets Rougher porewater. Concentrations below the detection limit were frequently observed in the Mitchell Rougher/Sulphide supernatant and porewater, the Rougher supernatant and porewater, and the Mitchell/Kerr Rougher supernatant (Figure 6.2-15).

Arsenic concentrations were elevated in the Iron Cap Rougher and Mitchell/Sulphurets Rougher porewater at 0.004 mg/L relative to the other columns. Arsenic concentrations decreased over time and were frequently below the detection limit in the other supernatant and porewater samples (Figure 6.2-16).

Cadmium concentrations were frequently below the detection limit in most columns. Cadmium concentrations were typically similar in the supernatant and porewater of an individual column, with the exception of the acidic supernatant of the Mitchell Sulphide column in which steady state cadmium concentrations were approximately 0.005 mg/L (Figure 6.2-16).

The Mitchell Sulphide column had steady state cobalt concentrations of 0.009 mg/L. The Mitchell Rougher/Sulphide column had steady state cobalt concentrations of 0.001 mg/L. Cobalt concentrations in the Mitchell/Kerr Rougher, Mitchell/Sulphurets Rougher, and Iron Cap Rougher supernatants and pore waters were frequently below detection (Figure 6.2-17).

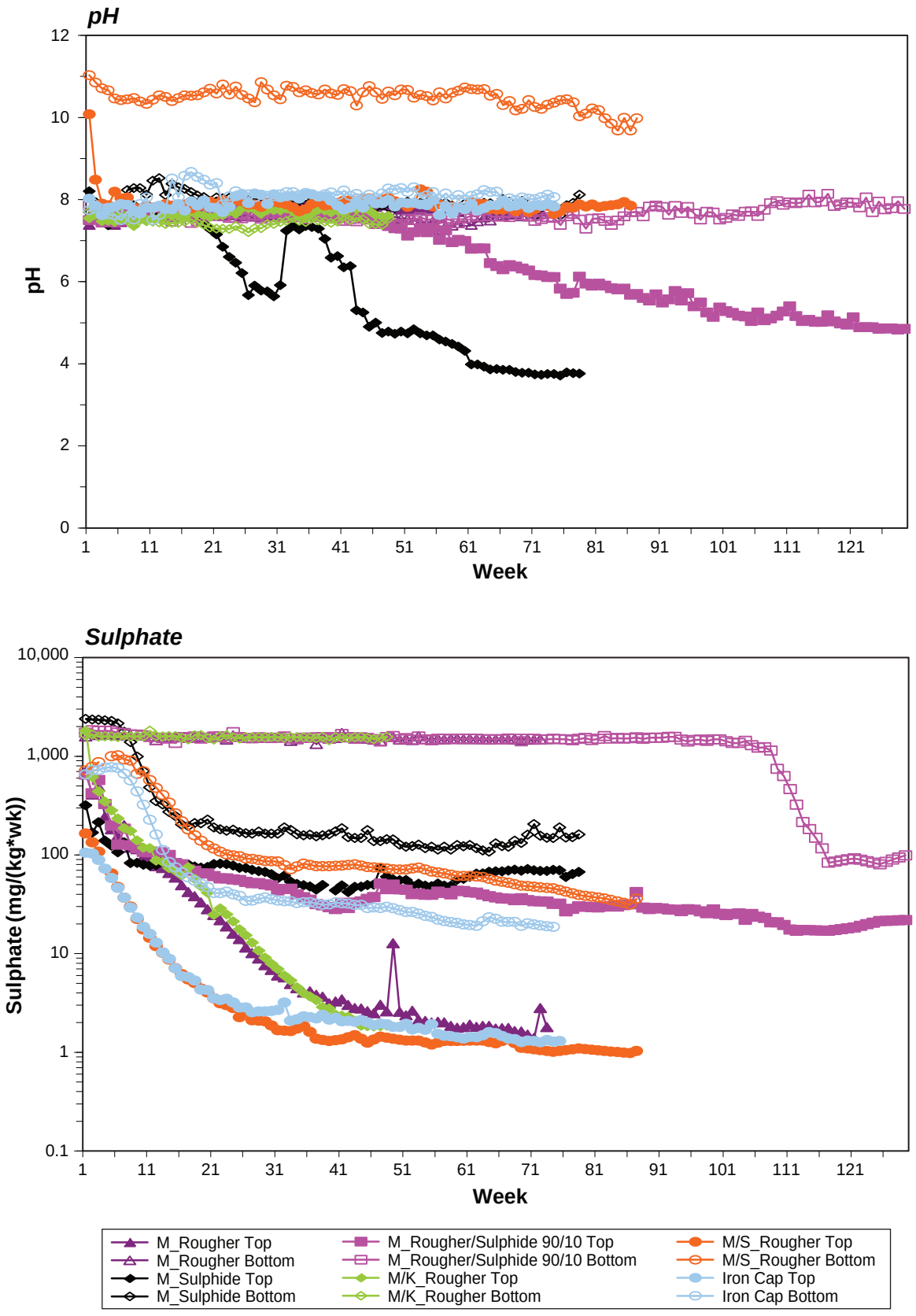


Figure 6.2-13

Weekly pH and Sulphate, Tailing Subaqueous Columns

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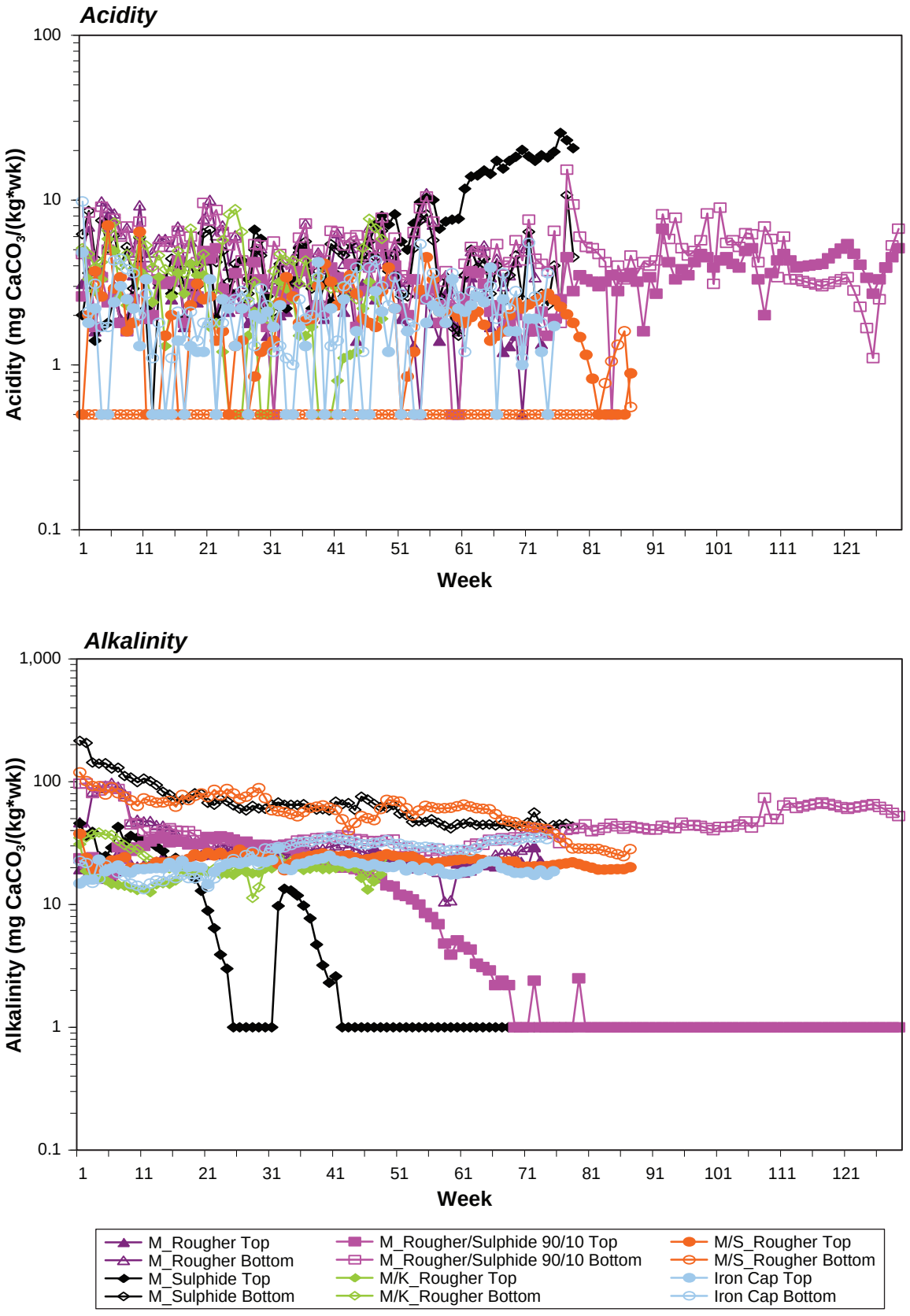
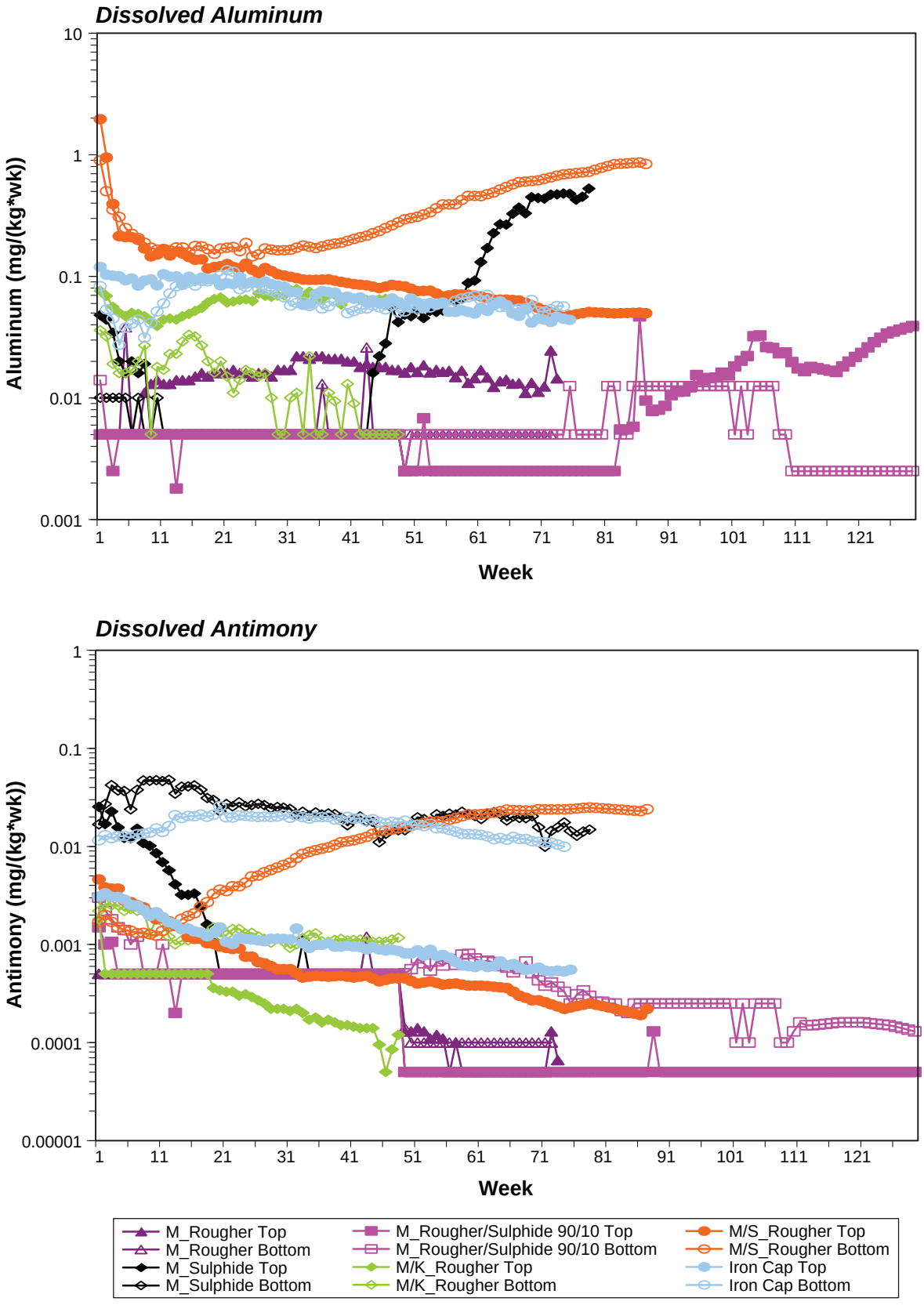


Figure 6.2-14

Acidity and Alkalinity, Tailing Subaqueous Columns

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Aluminum and Antimony,
Tailing Subaqueous Columns

Figure 6.2-15

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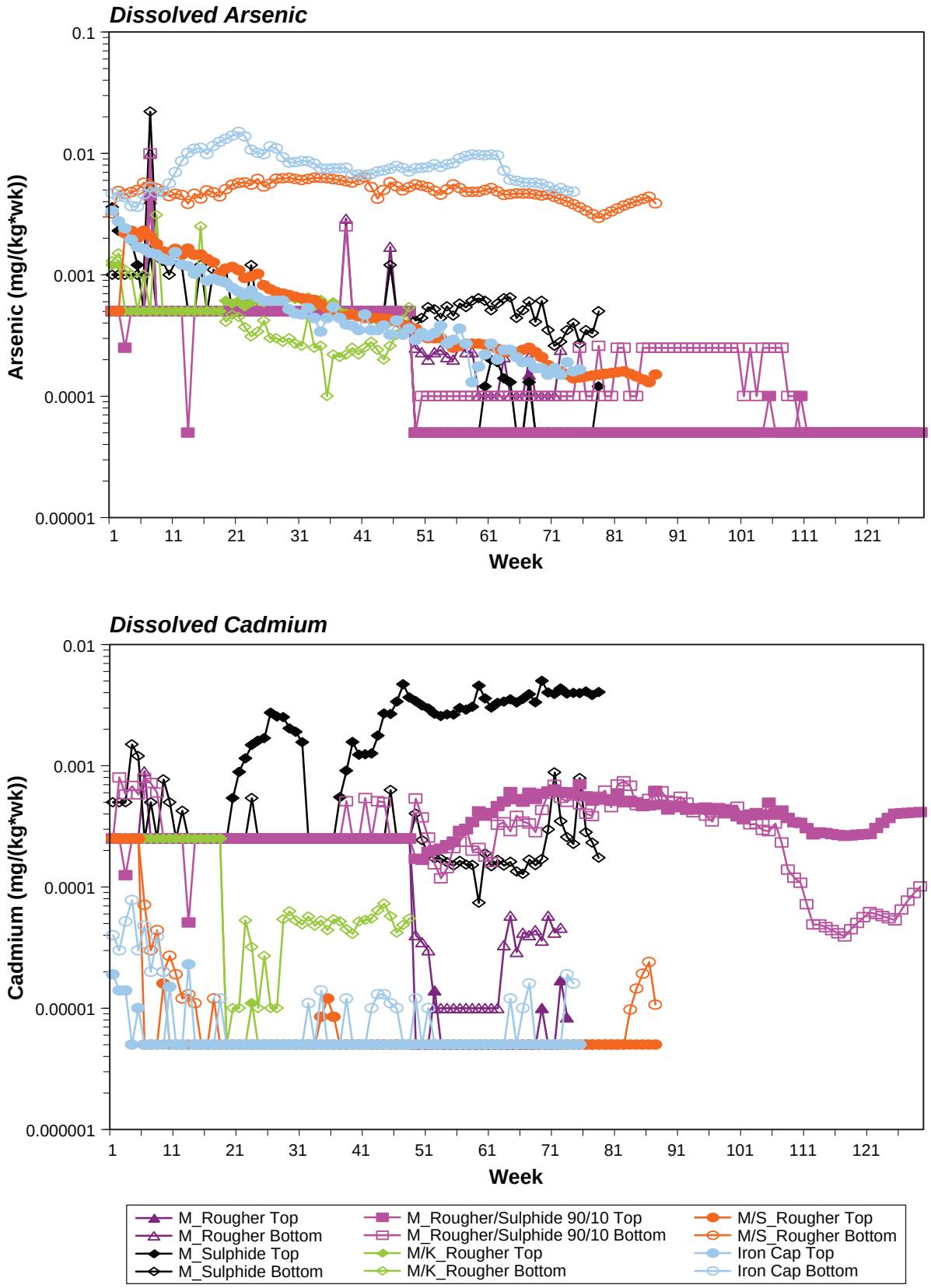
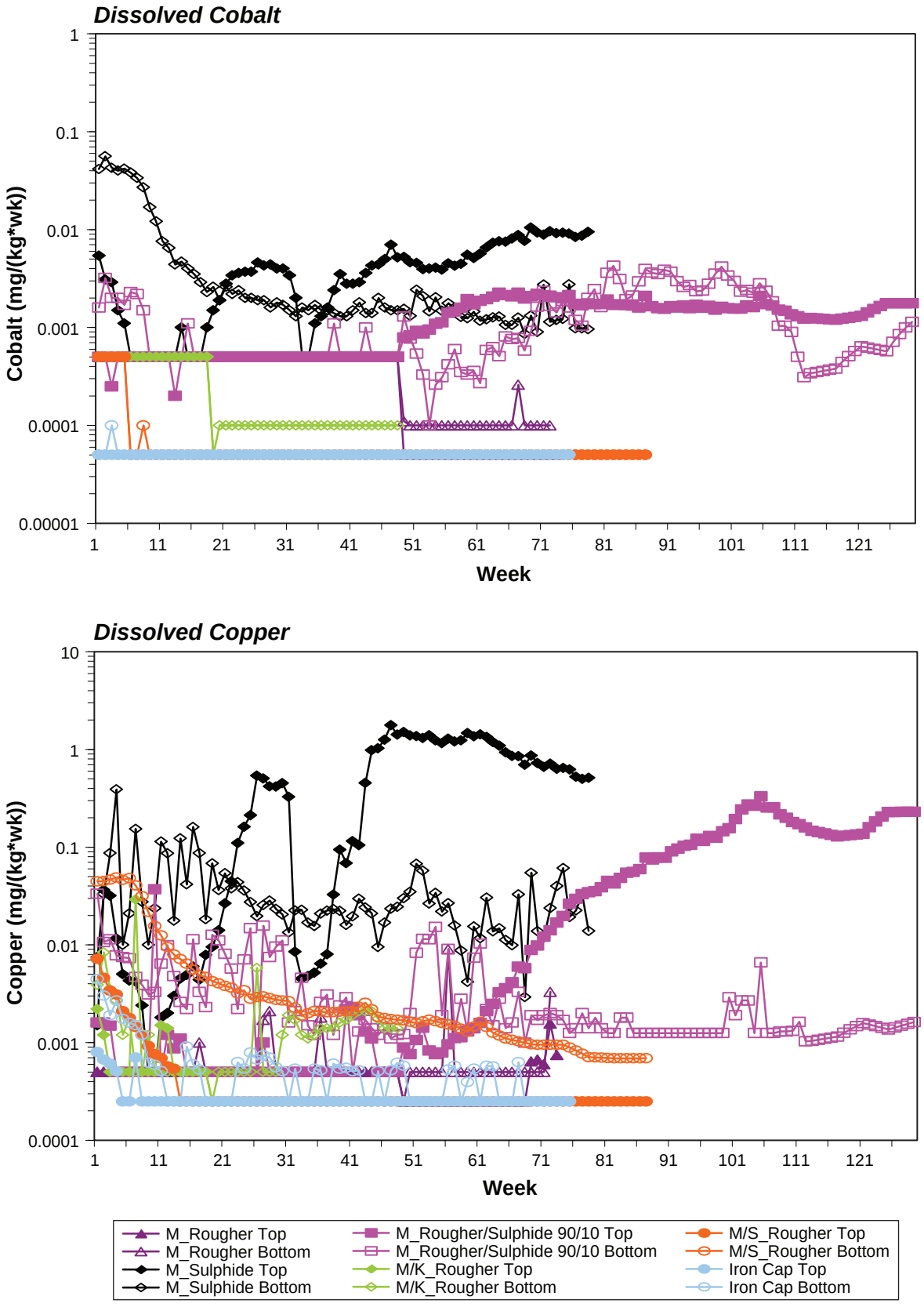


Figure 6.2-16

Arsenic and Cadmium, Tailing Subaqueous Columns

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Cobalt and Copper,
Tailing Subaqueous Columns

Figure 6.2-17

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Copper concentrations decreased after week 42 in the Mitchell Sulphide column to 0.5 mg/L at week 76. Copper concentrations increased after week 53 in the Mitchell Rougher/Sulphide column when the pH became acidic to 0.24 mg/L at week 103. Copper concentrations were highly variable and/or frequently below detection in the other columns (Figure 6.2-17).

Fluoride concentrations were elevated in the porewater of the Mitchell Rougher/Sulphide and Iron Cap Rougher columns. Fluoride concentrations were frequently below detection in the other columns (Figure 6.2-18).

Lead concentrations increased over time in the supernatant of the Mitchell Sulphide column. Lead concentrations were below detection in all other columns and in the Mitchell Sulphide porewater (Figure 6.2-18).

Selenium concentrations were elevated at 0.015 mg/L in the Mitchell/Sulphurets Rougher porewater relative to the other columns. Selenium concentrations decreased over time in the Iron Cap Rougher supernatant and porewater, Mitchell/Sulphurets Rougher supernatant, Mitchell/Kerr Rougher supernatant and porewater, and Mitchell Sulphide supernatant and porewater (Figure 6.2-19).

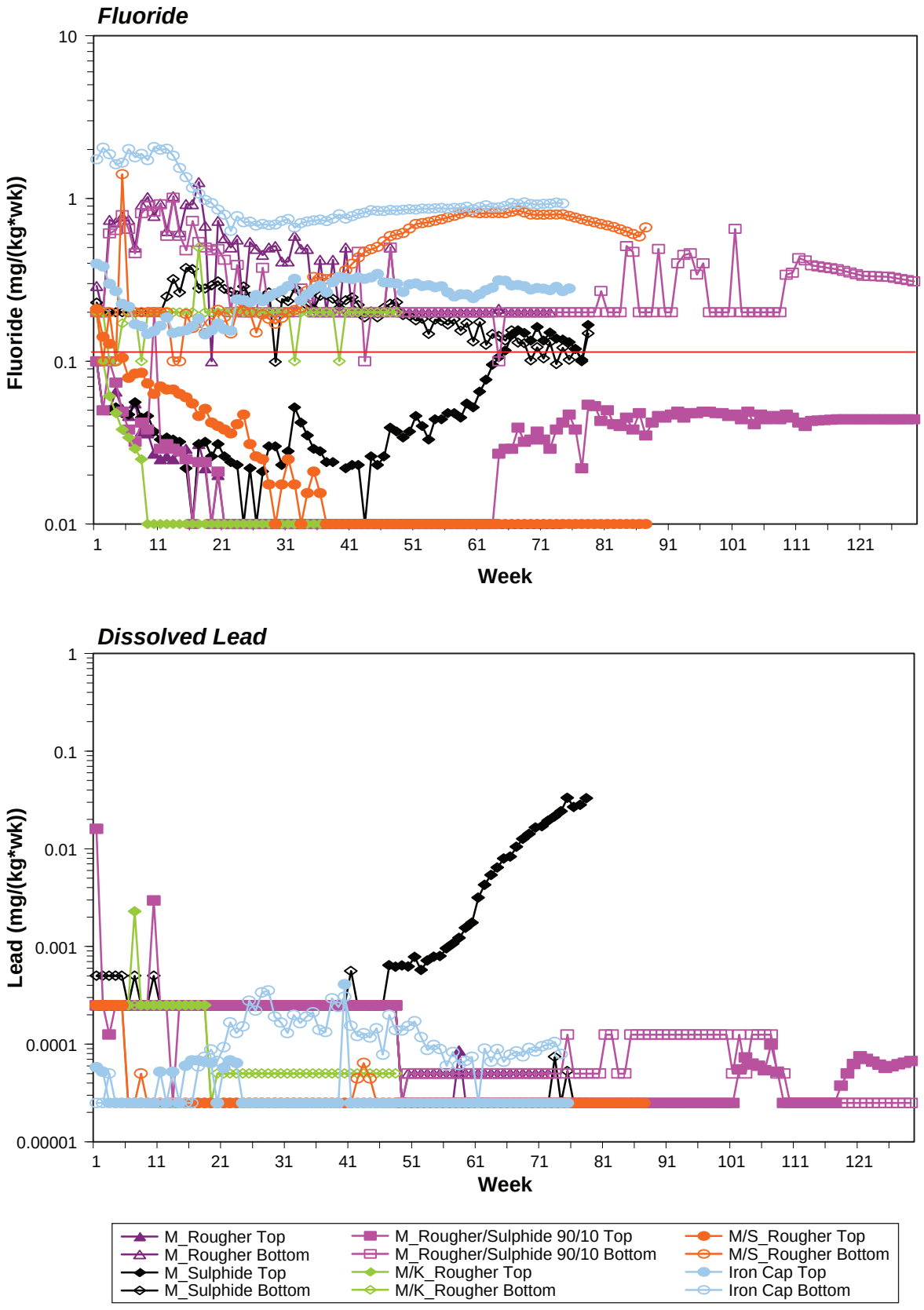
Zinc concentrations in the Mitchell Sulphide and Mitchell Rougher/Sulphide columns were stable at 0.2 and 0.02 mg/L, respectively. Concentrations of the supernatant and porewater of the Micthell Rougher, Mitchell/Kerr Rougher, Mitchell/Sulphurets Rougher, and Iron Cap Rougher columns were frequently below the detection limit (Figure 6.2-19).

Table 6.2-3 summarizes the parameters with elevated concentrations in each tailing subaqueous column.

Table 6.2-3. Elevated Parameters in Tailing Subaqueous Columns

Tailing	Acidic pH	Neutral pH	Alkaline pH
Sulphide supernatant	Aluminum, Cadmium, Cobalt, Copper, Lead, Zinc	n/a	n/a
Sulphide porewater	n/a	Sulphate, Cadmium, Copper	n/a
Rougher/Sulphide supernatant	Aluminum, Cadmium, Copper	n/a	n/a
Rougher/Sulphide porewater	n/a	Sulphate, Fluoride, Cadmium	n/a
Rougher supernatant	n/a	Cadmium	n/a
Rougher porewater	n/a	Sulphate	n/a
Mitchell/Kerr supernatant	n/a	Aluminum	n/a
Mitchell/Kerr porewater	n/a	No exceedances	n/a
Mitchell/Sulphurets supernatant	n/a	Aluminum	n/a
Mitchell/Sulphurets porewater	n/a	n/a	Aluminum, Antimony, Selenium
Iron Cap supernatant	n/a	Aluminum	n/a
Iron Cap Porewater	n/a	Aluminum, Arsenic, Fluoride, Selenium	n/a

n/a indicates that pH condition was not observed.



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Fluoride and Lead,
Tailing Subaqueous Columns

Figure 6.2-18

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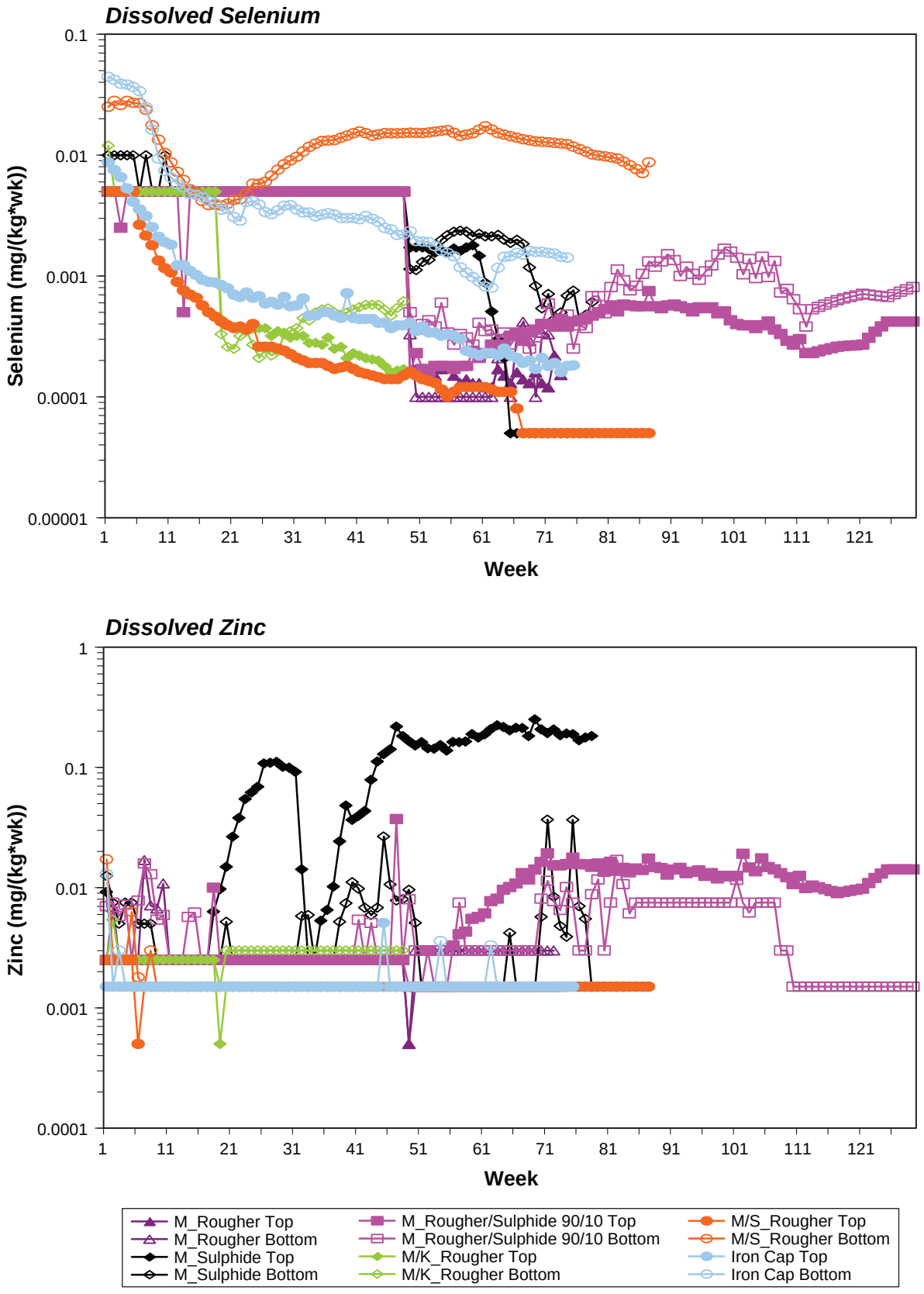


Figure 6.2-19

Selenium and Zinc,
Tailing Subaqueous Columns

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6.2.2.3 Elements Associated with the Neutralization Potential

Calcium concentrations were typically one to two orders of magnitude higher in the porewater than the supernatant of an individual column. Calcium concentrations generally decreased over time but were greatest in Mitchell Sulphide and Mitchell Rougher/Sulphide and lowest in Mitchell/Sulphurets Rougher, Mitchell/Kerr Rougher, Mitchell Rougher, and Iron Cap Rougher. Magnesium concentrations were between 0.5 and 4 mg/L in all columns with the exception of the porewater of the alkaline Mitchell/Sulphurets Rougher column which had very low magnesium concentrations (Figure 6.2-20).

6.2.3 Aging Tests

The following discussion presents an assessment of the supernatant analyses from the tailing aging tests for:

- Indicators of acid generation (pH, sulphate, acidity, and alkalinity);
- Cyanide and nutrients;
- Trace elements with elevated concentrations in the last 10 weekly cycles relative to water quality guidelines. Identification of these elements can be used to inform treatment design decisions and water quality modelling; and
- Calcium and magnesium which commonly occur in carbonate mineral phases and are associated with the neutralization potential.

The supernatant water from the aging columns is considered representative of the TMF cover water without considering additional water inputs.

The complete data set for aging tests supernatant concentrations is presented in Appendix 6.2-5 and the graphs for additional parameters are presented in Appendix 6.2-6. Supernatant water was removed and not replaced at each sampling event during the kinetic tests and therefore leach rates could not be accurately calculated or evaluated. Increasing concentrations over time may reflect a small load or flux from the tailing material into a decreasing volume of water.

The following discussion relates to three aging test that were operated for 30 to 120 days for the following Mitchell tailing samples: Sulphide, Rougher/Sulphide, and Rougher. Given the size and proposed life of the Mitchell deposit, Mitchell tailing chemistry is expected to dominate the chemistry of the TMF.

6.2.3.1 pH, Sulphate, Acidity, and Alkalinity

The pH in all three aging tests was near-neutral to weakly alkaline throughout the test. Between days 60 and 120, the pH in the Rougher/Sulphide aging test decreased from 8.1 to 6.9, while the pH in the Rougher and Sulphide aging tests remained stable (Figure 6.2-21).

Sulphate concentrations steadily increased over 30 to 120 days, indicating sulphide oxidation was occurring. The sulphate concentration in the Sulphide aging test doubled over 120 days (Figure 6.2-21).

Acidity generally increased over 120 days in the Rougher/Sulphide and Sulphide aging tests. Acidity decreased over 30 days in the Rougher aging test. Alkalinity increased from day 0 to day 14 in the Rougher/Sulphide aging test and subsequently decreased. Alkalinity increased for 30 days in the Rougher aging test, and was relatively stable over 120 days in the Sulphide aging test (Figure 6.2-22).

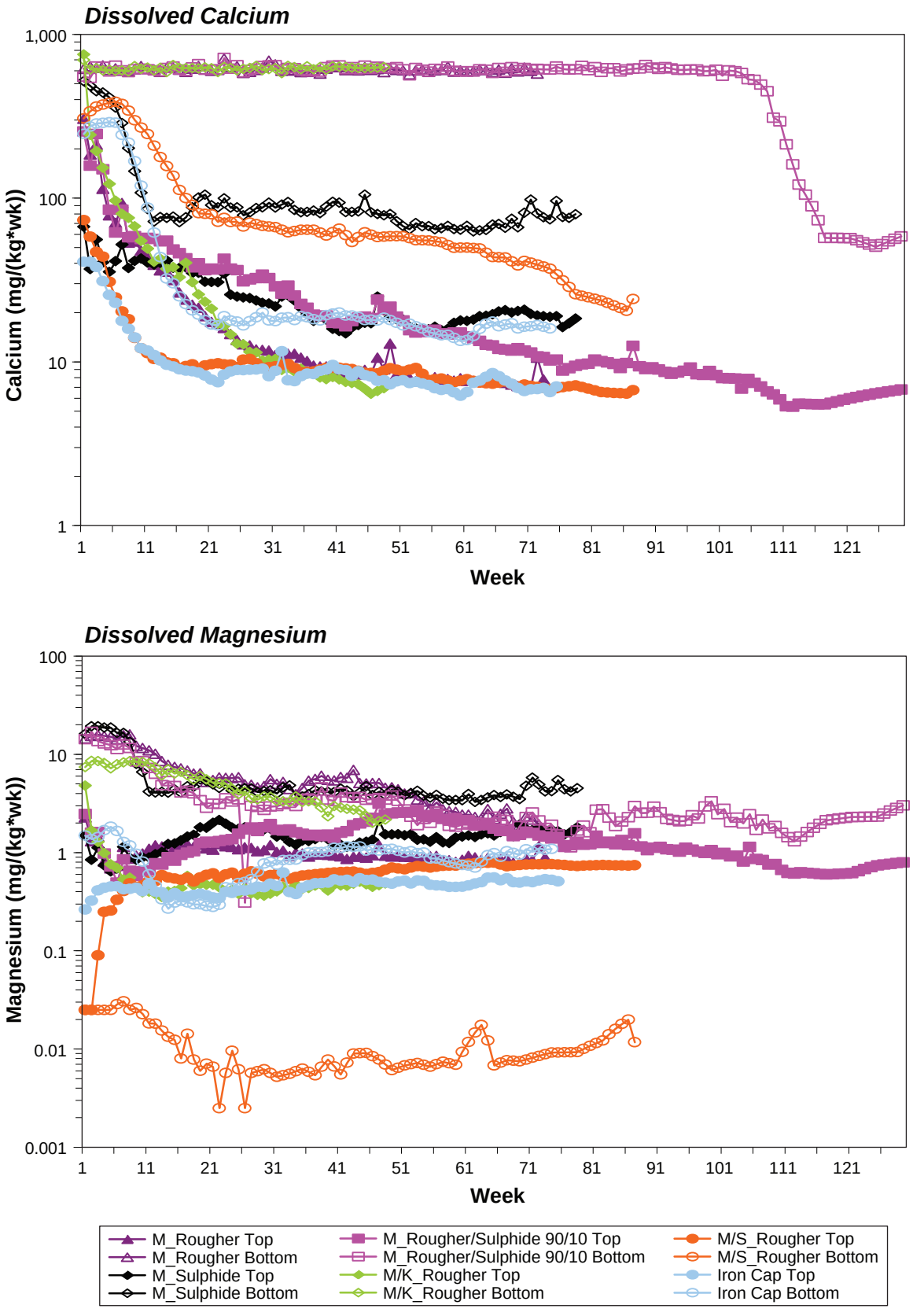
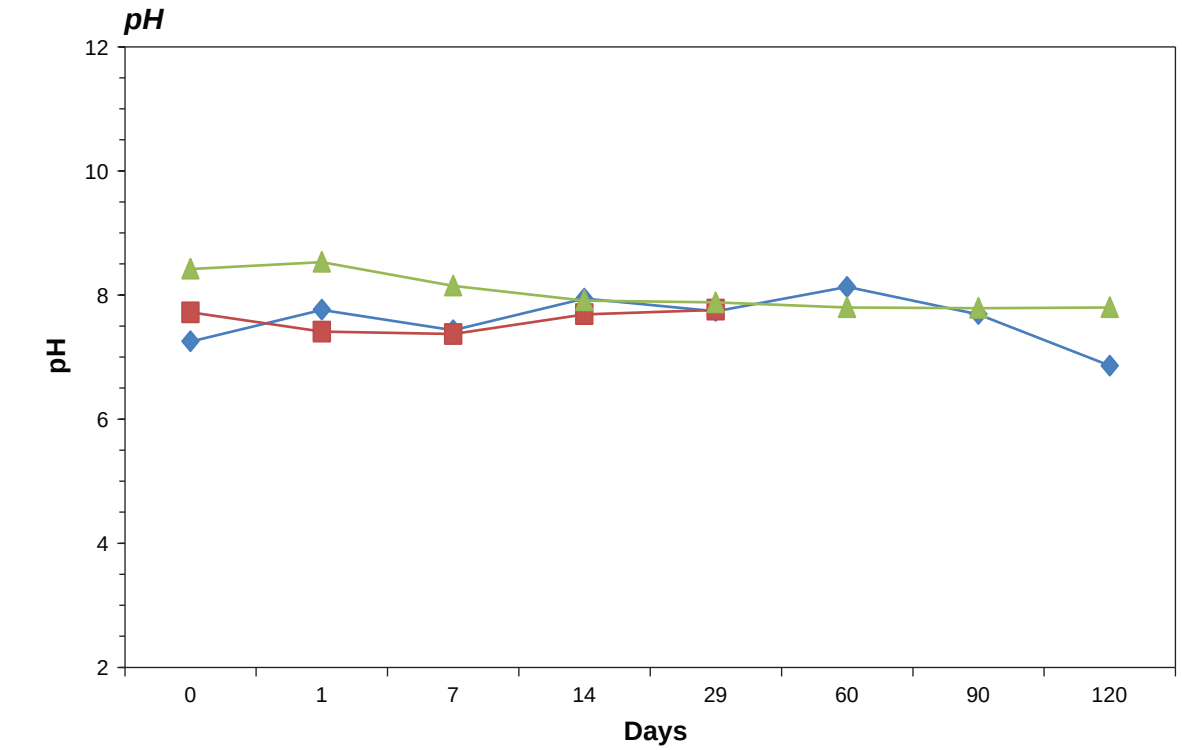


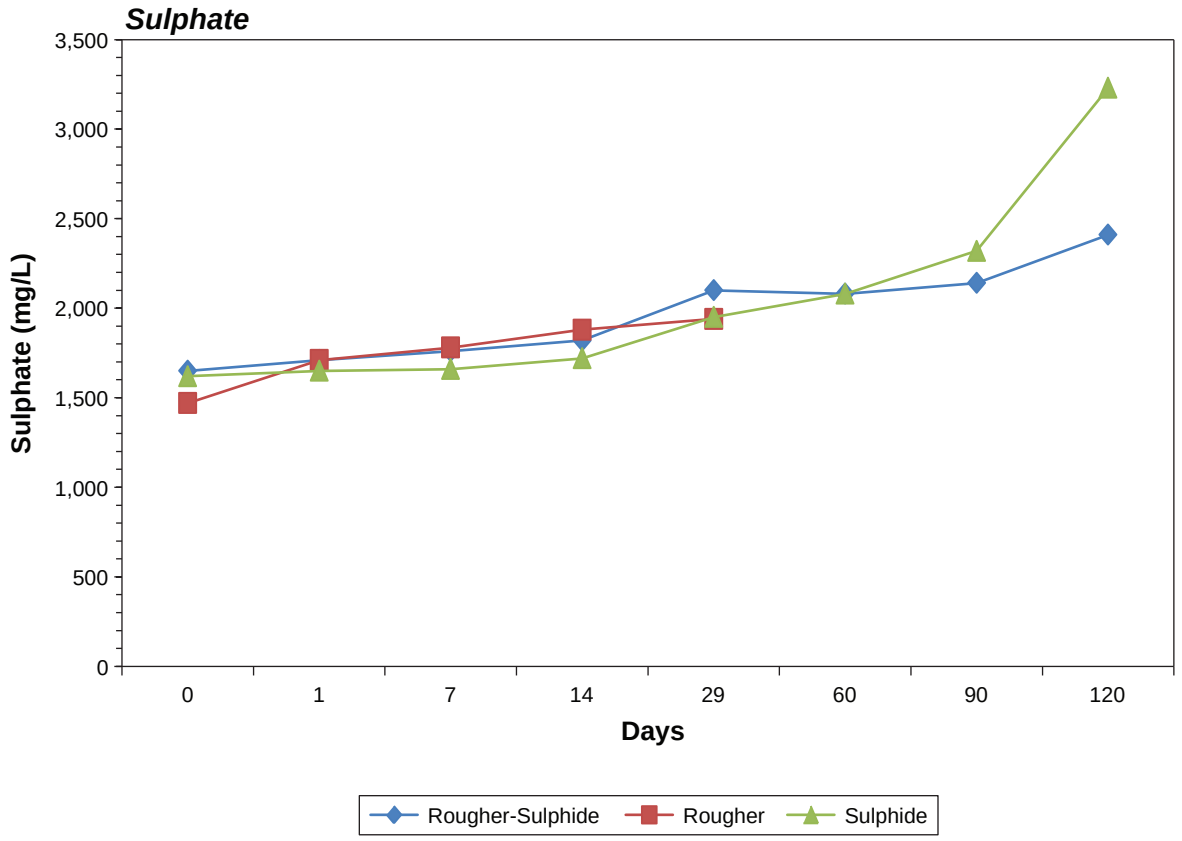
Figure 6.2-20

Calcium and Magnesium, Tailing Subaqueous Columns

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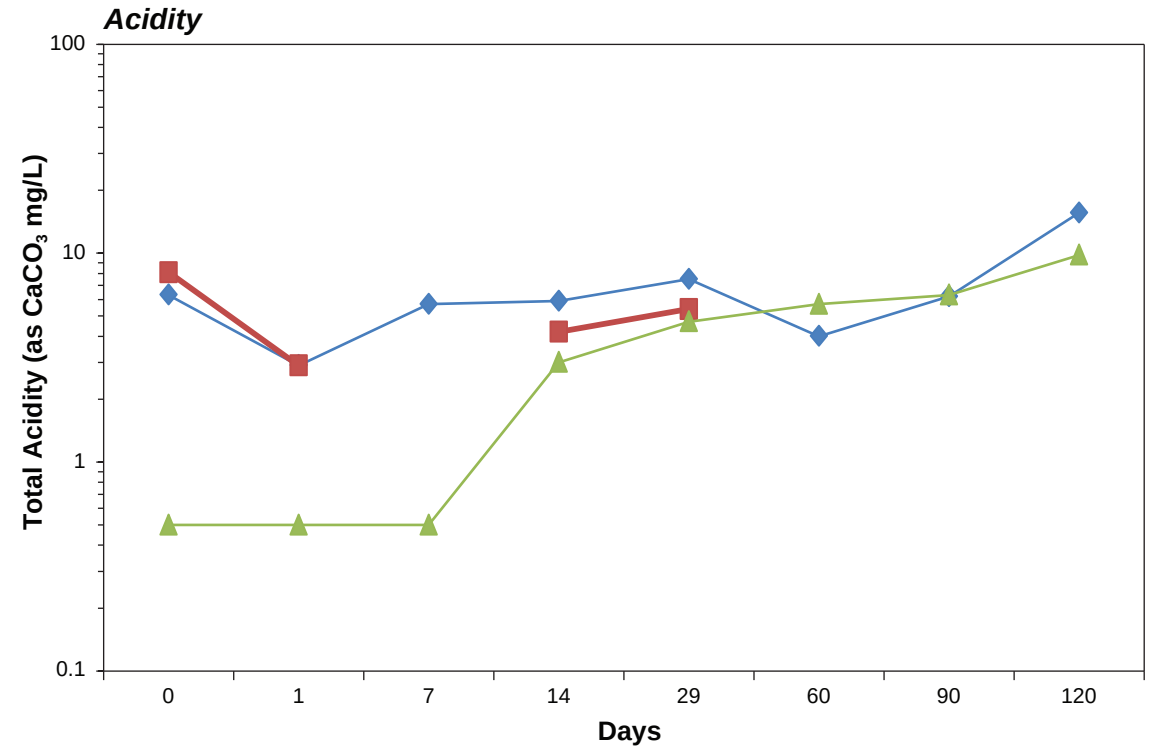


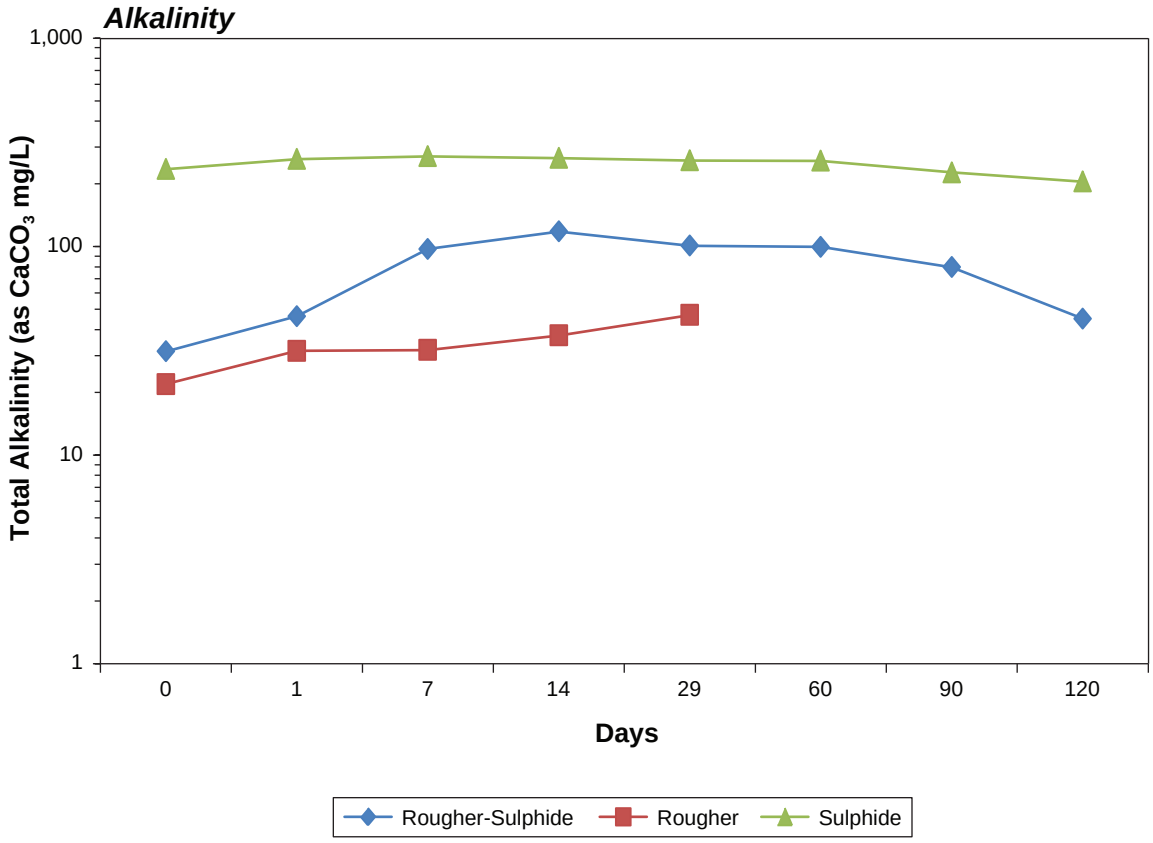
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**pH and Sulphate,
Tailing Aging Tests**

Figure 6.2-21

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Acidity and Alkalinity, Tailing Aging Tests

Figure 6.2-22

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6.2.3.2 Elements that Contribute to Acidity

Aluminum concentrations were highly variable over time and were occasionally below detection in the Rougher/Sulphide and Rougher supernatants. Dissolved aluminum was frequently below detection in the Rougher/Sulphide and Rougher aging tests, and decreased in concentration over time in the Sulphide aging test (Figure 6.2-23).

Iron concentrations in the Rougher/Sulphide and Rougher supernatants were highly variable. The total iron concentration in the Sulphide supernatant gradually decreased over 120 days. Dissolved iron concentrations in the Sulphide aging test represented close to 100% of the total iron concentration. Dissolved iron concentrations in the Rougher/Sulphide supernatant decreased to below the detection limit at 90 days, and concentrations in the Rougher supernatant were always below detection (Figure 6.2-24).

Manganese concentrations increased over time in all three tests, but were variable in the Sulphide supernatant (Figure 6.2-25).

6.2.3.3 Cyanide and Nutrients

Weak acid dissociable (WAD) cyanide was not measured in the Rougher aging test because cyanide is not used as a reagent in the flotation process that produces the Rougher tailing. WAD cyanide concentrations decreased 120 days in both the Rougher/Sulphide and Sulphide aging test (Figure 6.2-25).

Ammonia concentrations decreased over time in the Rougher and Sulphide supernatants, with final concentrations of below detection and 50 mg/L respectively. Ammonia concentrations increased over time in the Rougher/Sulphide aging test to 23 mg/L (Figure 6.2-26).

Total phosphate concentrations decreased over 30 days in the Sulphide aging tests. In the Rougher aging test, concentrations were highly variable over 30 days. Concentrations were relatively constant at approximately 0.25 mg/L in the Rougher/Sulphide aging test (Figure 6.2-26).

6.2.3.4 Trace Elements

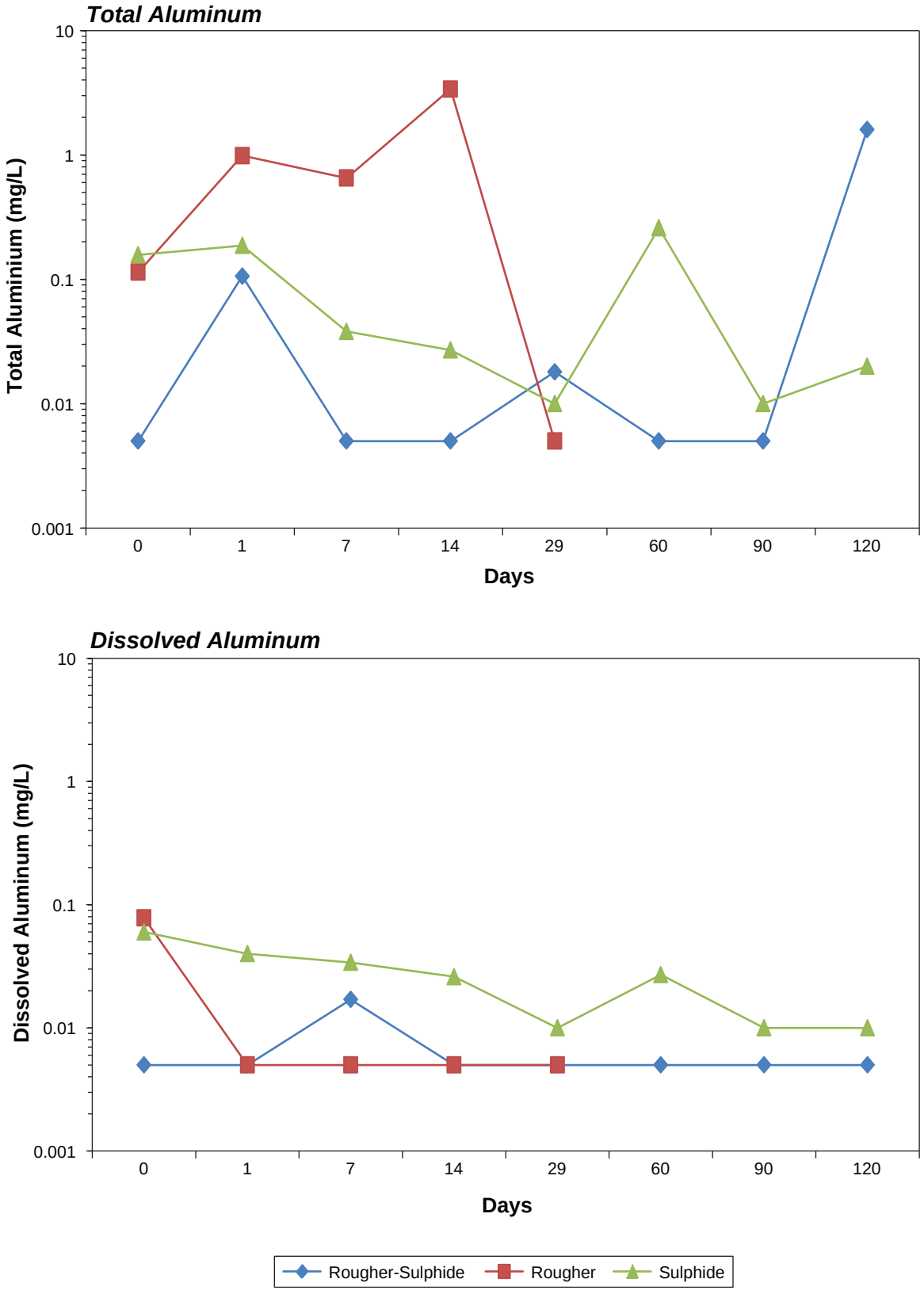
Trace element concentrations were generally greatest in the Sulphide supernatant and lowest in the Rougher supernatant.

Antimony concentrations generally decreased over time in the Sulphide and Rougher/Sulphide aging tests. Concentrations in the Rougher supernatant were always below the detection limit (Figure 6.2-27).

Total arsenic concentrations were elevated in the Sulphide aging test for the first 14 days and subsequently were below the detection limit. Arsenic concentrations in the Rougher/Sulphide aging test were frequently below detection but increased at day 120 to 0.0058 mg/L. Rougher supernatant arsenic concentrations were frequently below the detection limit (Figure 6.2-27). Note that detection limits for arsenic varied among tailing aging tests.

Cadmium concentrations increased over time in the Rougher/Sulphide supernatant. Cadmium concentrations were variable in the Sulphide and Rougher supernatant, ranging from 0.00017 to 0.0016 mg/L and below detection to 0.0002 mg/L respectively (Figure 6.2-28).

Cobalt concentrations increased slightly over time in the Sulphide and Rougher/Sulphide aging tests, while concentrations in the Rougher supernatant were always below detection (Figure 6.2-28).



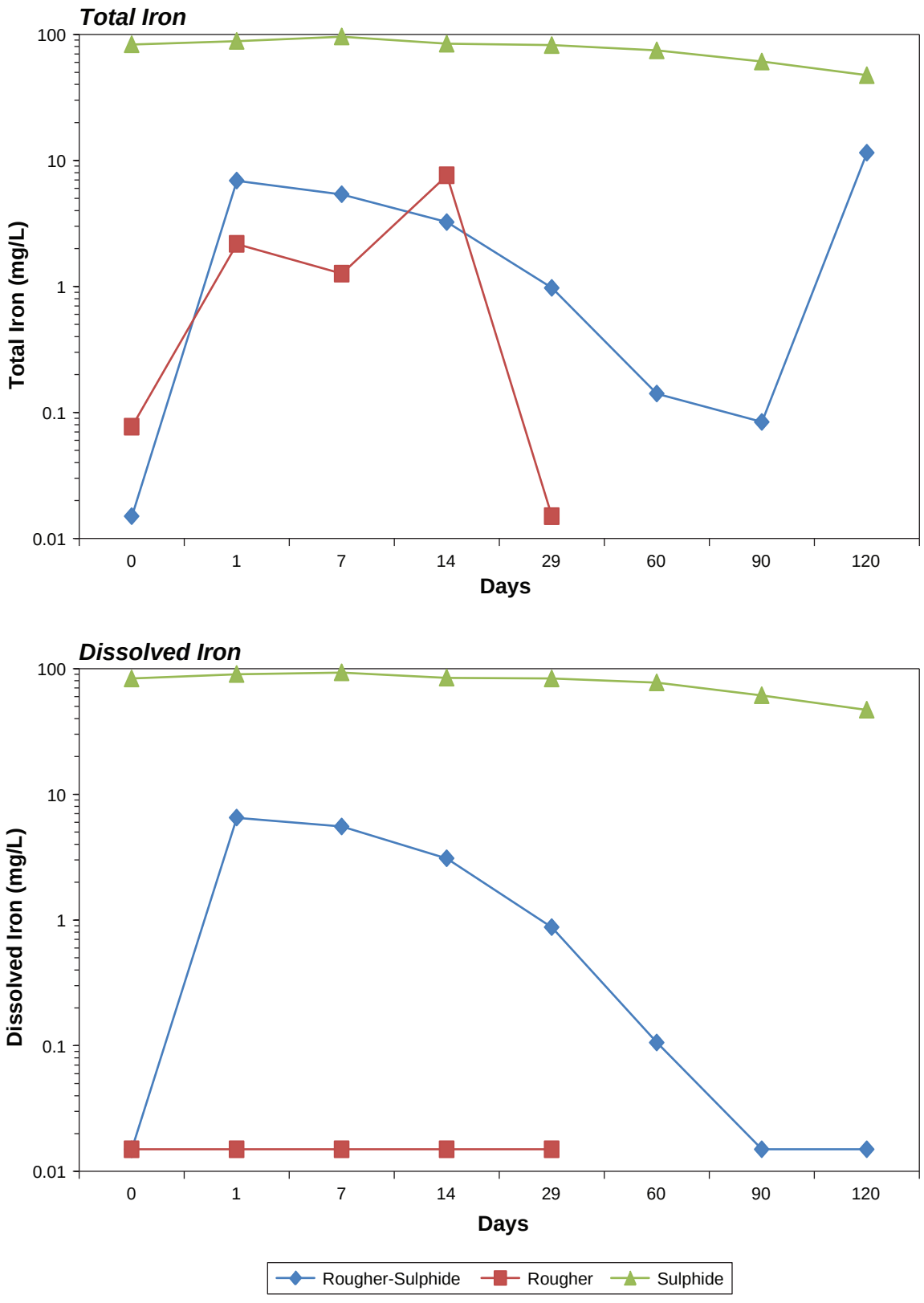
Note: Values below the detection limit are plotted as half the detection limit.

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Total and Dissolved Aluminum, Tailing Aging Tests

Figure 6.2-23

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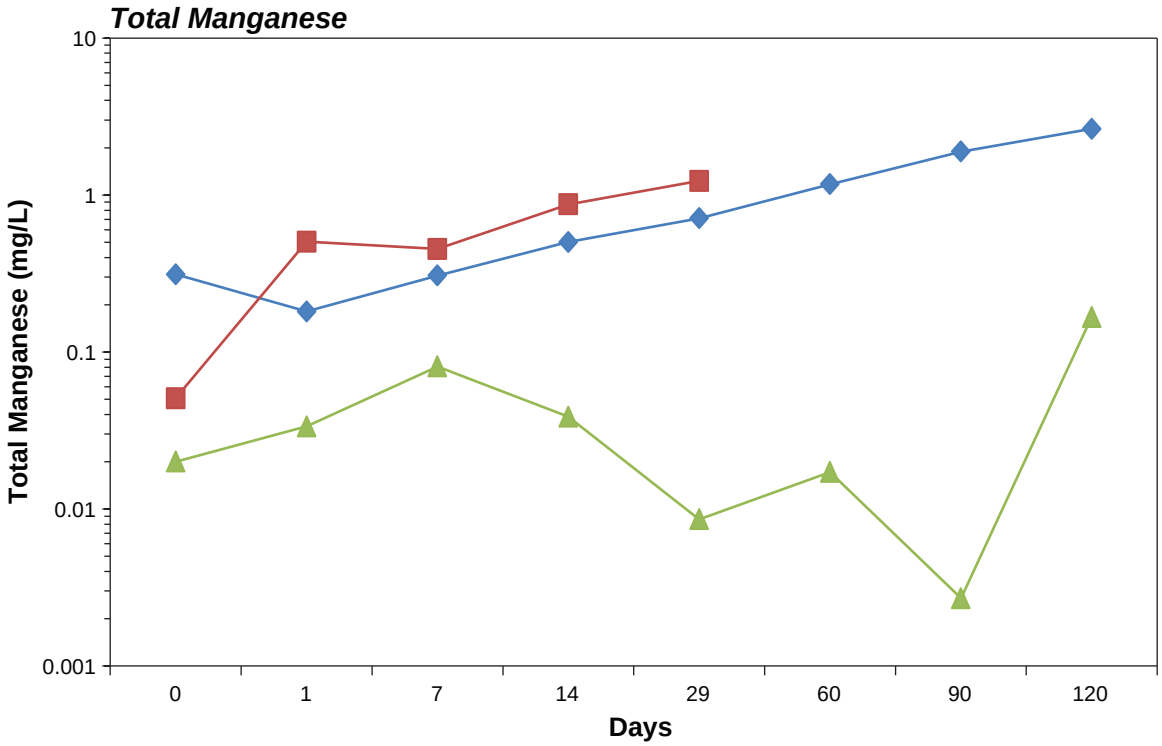
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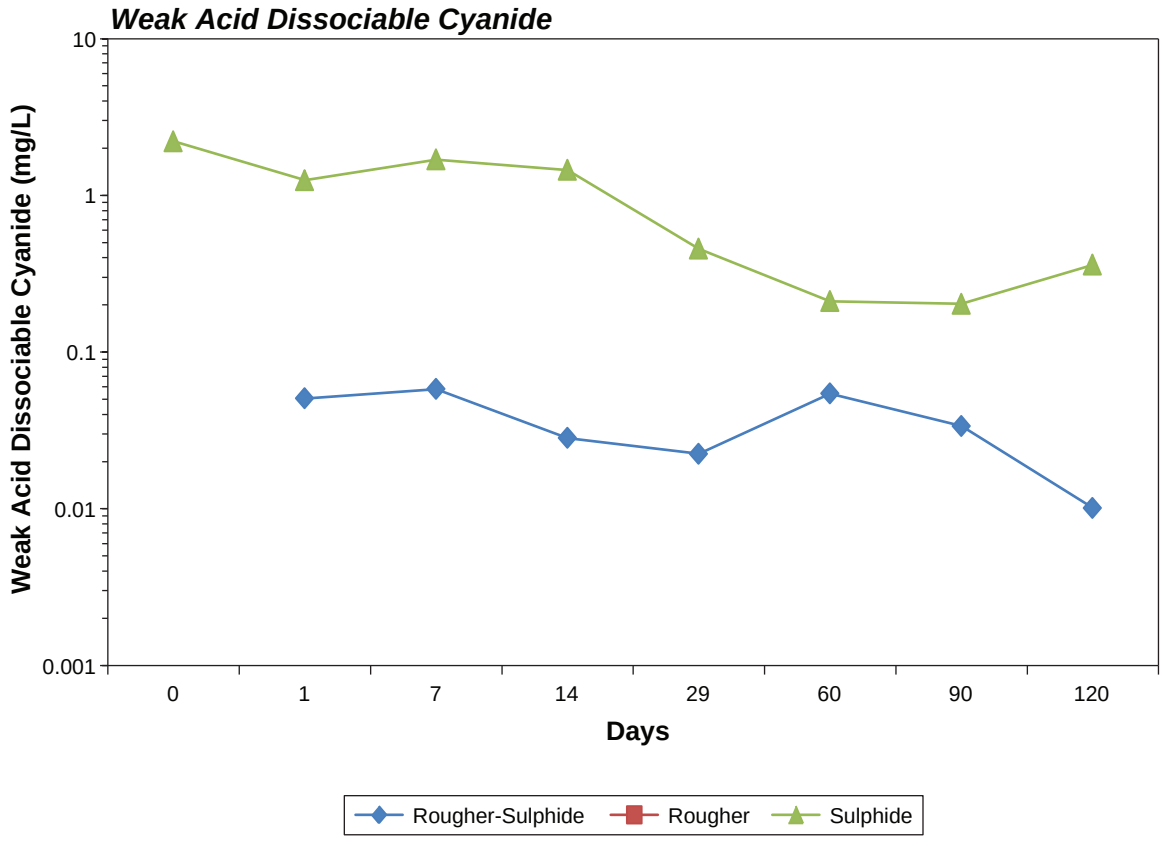
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Total and Dissolved Iron, Tailing Aging Tests

Figure 6.2-24

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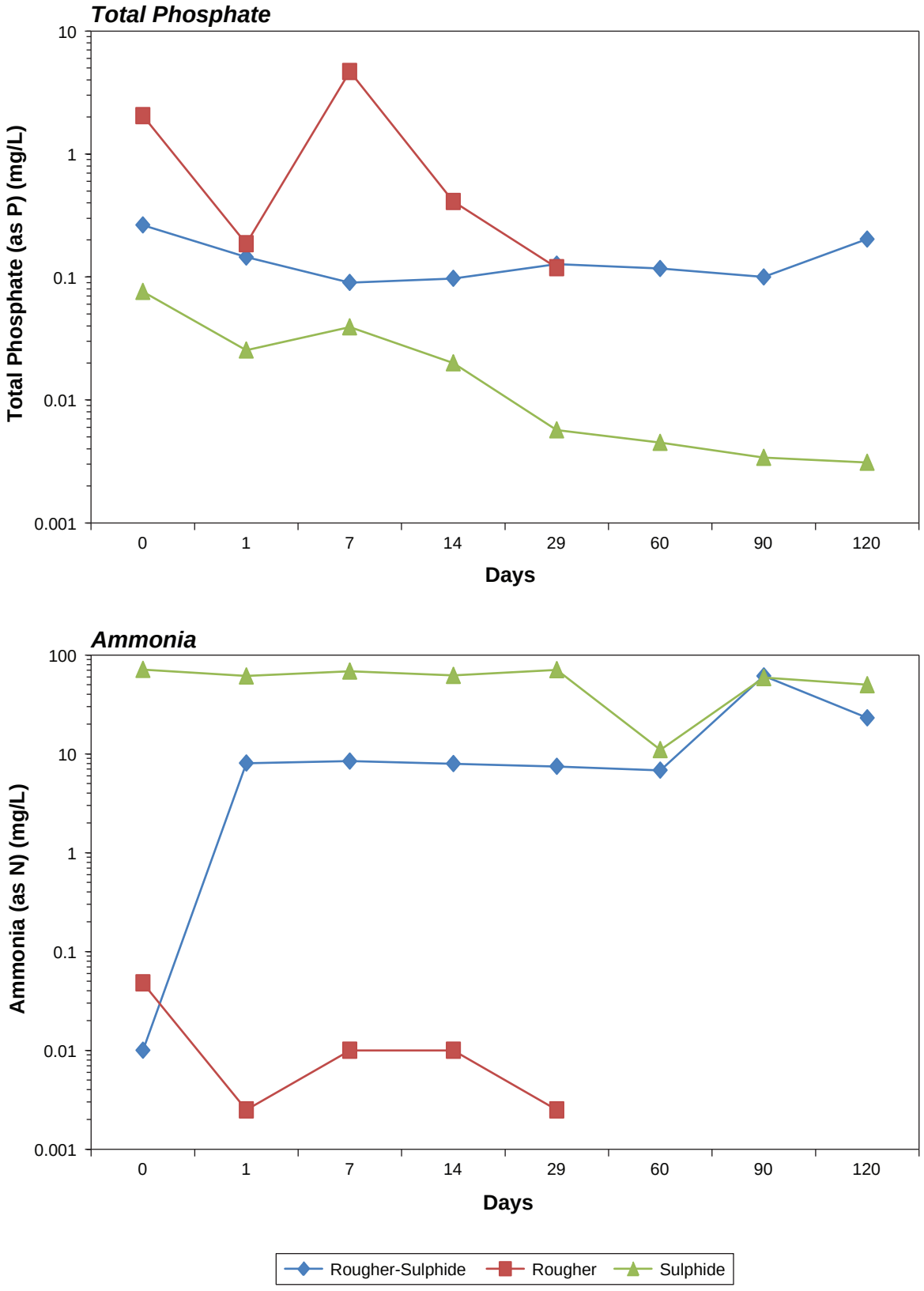


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Total Manganese and Weak Acid Dissociable Cyanide, Tailing Aging Tests

Figure 6.2-25

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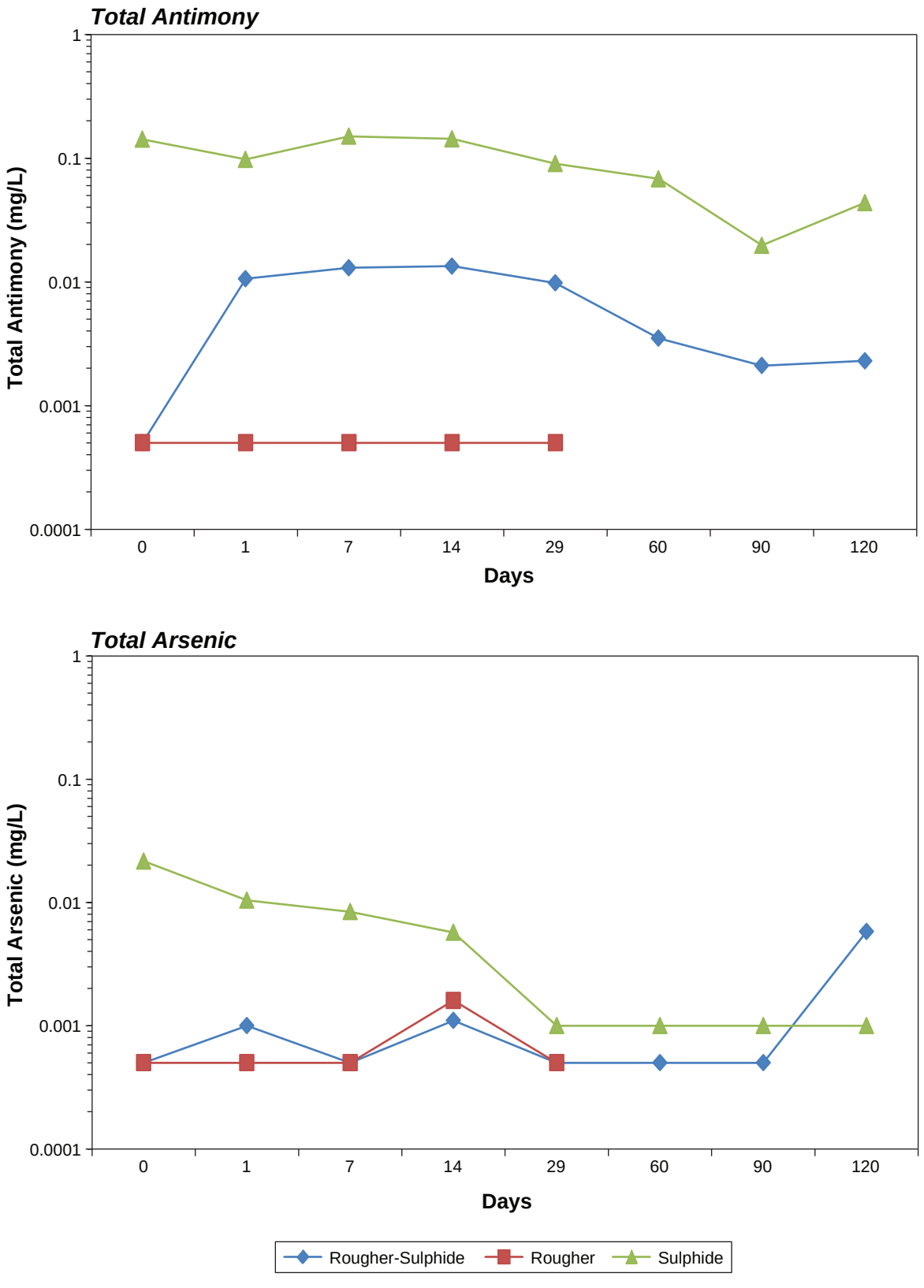


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Total Phosphate and Ammonia, Tailing Aging Tests

Figure 6.2-26

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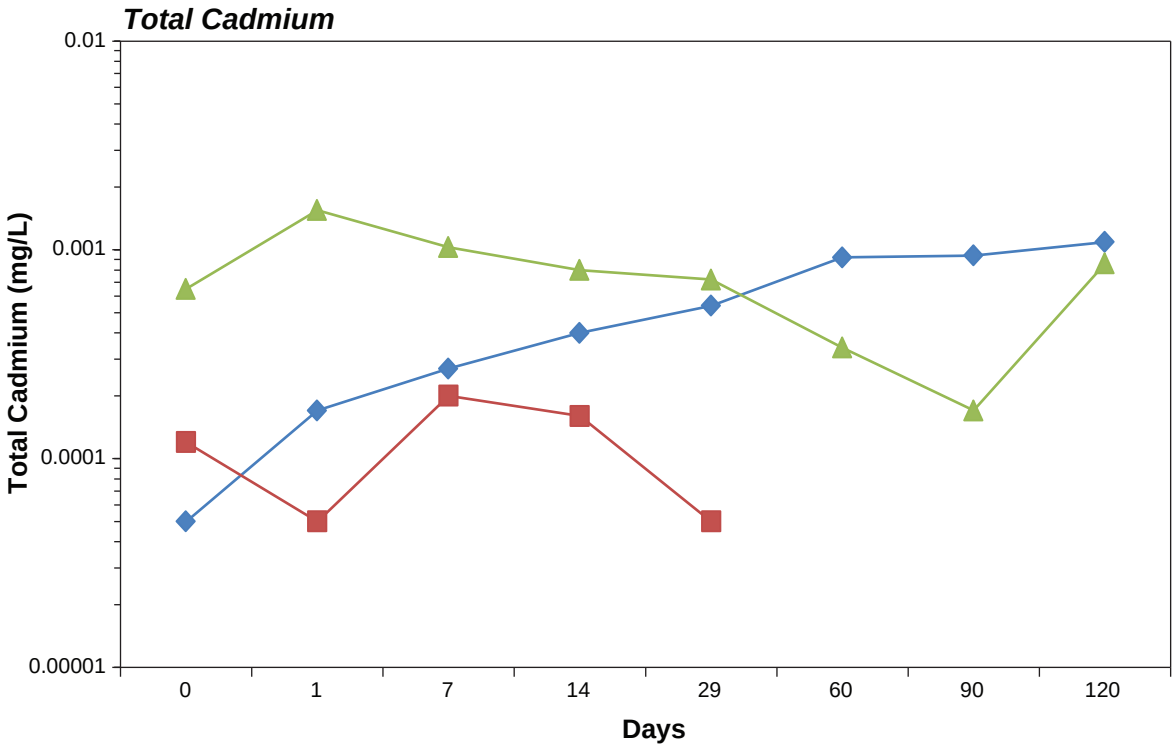
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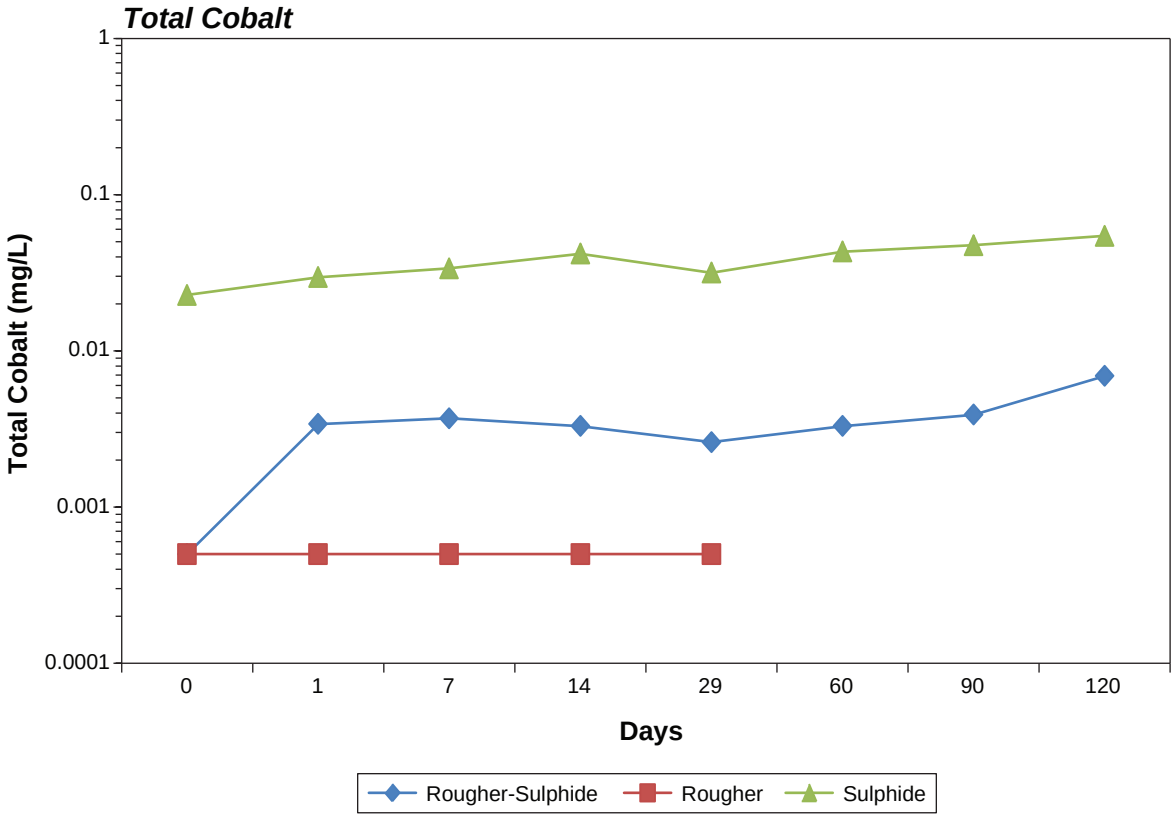
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Total Antimony and Total Arsenic, Tailing Aging Tests

Figure 6.2-27

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Note: Values below the detection limit are plotted as half the detection limit.

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Total Cadmium and Total Cobalt, Tailing Aging Tests

Figure 6.2-28

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Copper concentrations increased over time in the Rougher/Sulphide supernatant and decreased over time in the Sulphide supernatant with the exception of an increase in the last 30 days. Concentrations in the Rougher supernatant were variable over time at 30 days were one to two orders of magnitude lower than the other two aging tests (Figure 6.2-29).

Fluoride concentrations increased over time all three aging tests to between 0.4 to 1.0 mg/L (Figure 6.2-29).

Mercury concentrations were always below the detection limit in the Rougher supernatant. Concentrations in the Rougher/Sulphide and the Sulphide supernatants followed a similar pattern of variability with concentrations at 120 days ranging from 0.000018 to 0.00015 mg/L (Figure 6.2-30).

Molybdenum concentrations were generally stable over time at approximately 0.2 mg/L in the Sulphide supernatant with the exception of an outlier low concentration at day 90. Molybdenum concentrations in the Rougher/Sulphide and the Rougher supernatants were approximately an order of magnitude lower (Figure 6.2-30).

Selenium concentrations decreased over time in the Rougher/Sulphide and the Sulphide supernatants to final concentrations of 0.004 and 0.02 mg/L respectively. Selenium concentrations in the Rougher supernatant decreased to day 7 and then increased to day 30 to 0.003 mg/L (Figure 6.2-31).

Silver concentrations increased over time to 0.0009 mg/L in the Rougher/Sulphide supernatant. Concentrations were relatively stable in the Sulphide supernatant at 0.006 mg/L and were frequently below detection in the Rougher supernatant (Figure 6.2-31).

6.2.3.5 Elements Associated with the Neutralization Potential

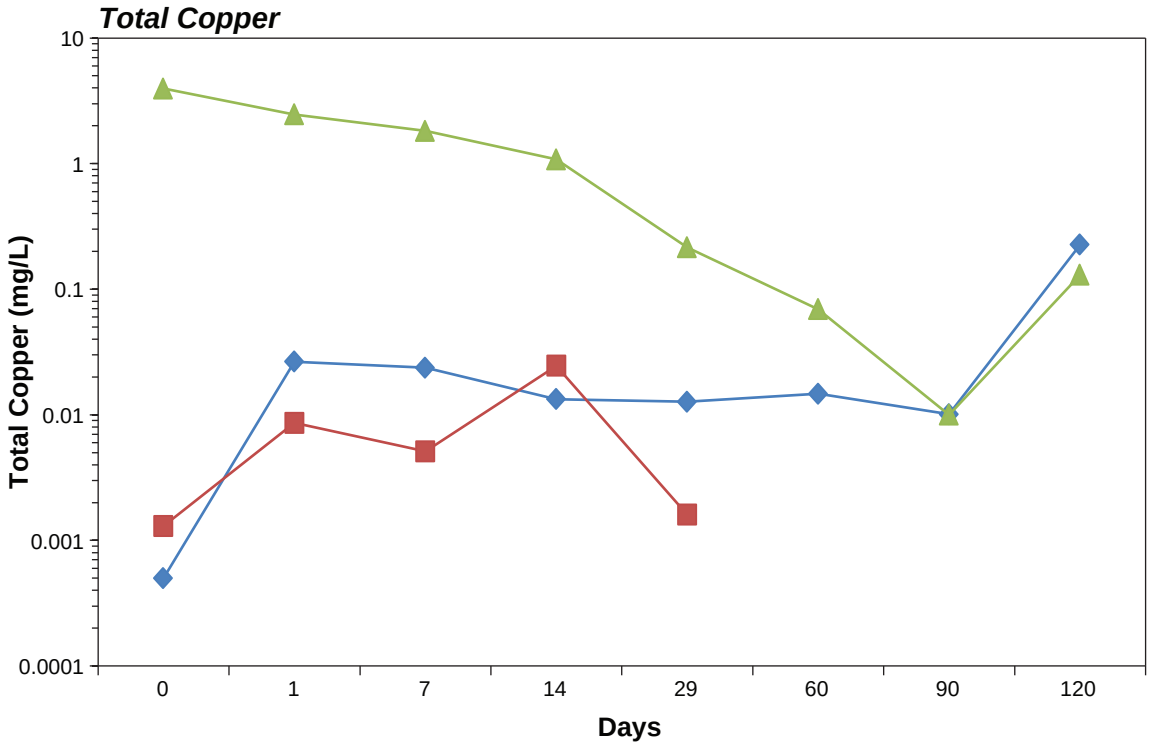
Calcium concentrations were generally stable in the Rougher and Rougher/Sulphide aging tests at approximately 650 mg/L. Calcium concentrations increased over time to 350 mg/L in the Sulphide supernatant.

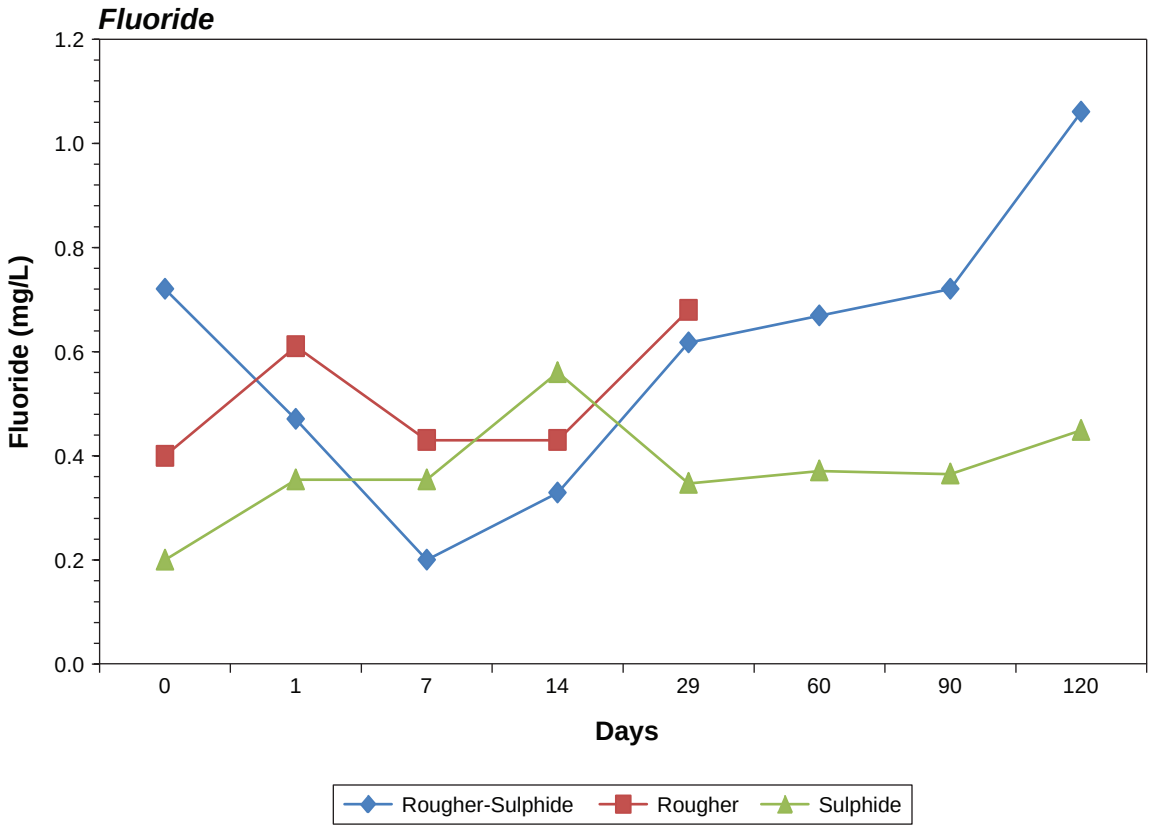
Magnesium concentrations increased over time in all three aging tests with final concentrations ranging from 14 to 24 mg/L.

6.2.4 Comparison between Subaqueous Columns and Aging Tests: Mitchell Deposit

The supernatant concentrations of both the subaqueous columns and the aging tests are expected to represent the concentrations in the cover water in the TMF. The same Mitchell tailing samples (Rougher/Sulphide; Rougher; Sulphide) were evaluated in both kinetic tests permitting a comparison.

In general, this comparison indicates that the concentrations of trace elements in the supernatant were dependent on the pH. In the subaqueous column and aging test for the Rougher tailing sample the supernatant pH was comparable and most parameters were similar in concentration. In contrast, for the Rougher/Sulphide and Sulphide tailing samples, the pH of the supernatant was acidic in the subaqueous columns and near-neutral to weakly alkaline in the aging tests. For those tailing samples, the trace element behaviour followed predictable pH patterns. In the acidic subaqueous column supernatants, higher concentrations of aluminum, cadmium, copper, lead, and zinc were observed which is consistent with acidic metal leaching for those elements. It is important to note that oxygenated water was replaced each week in the subaqueous columns and therefore oxygen concentrations in the supernatant were likely significantly higher in the subaqueous columns than in the aging tests. In the near-neutral aging test supernatants, higher concentrations of antimony, fluoride, molybdenum, and selenium likely reflected neutral metal leaching which is expected with those elements.



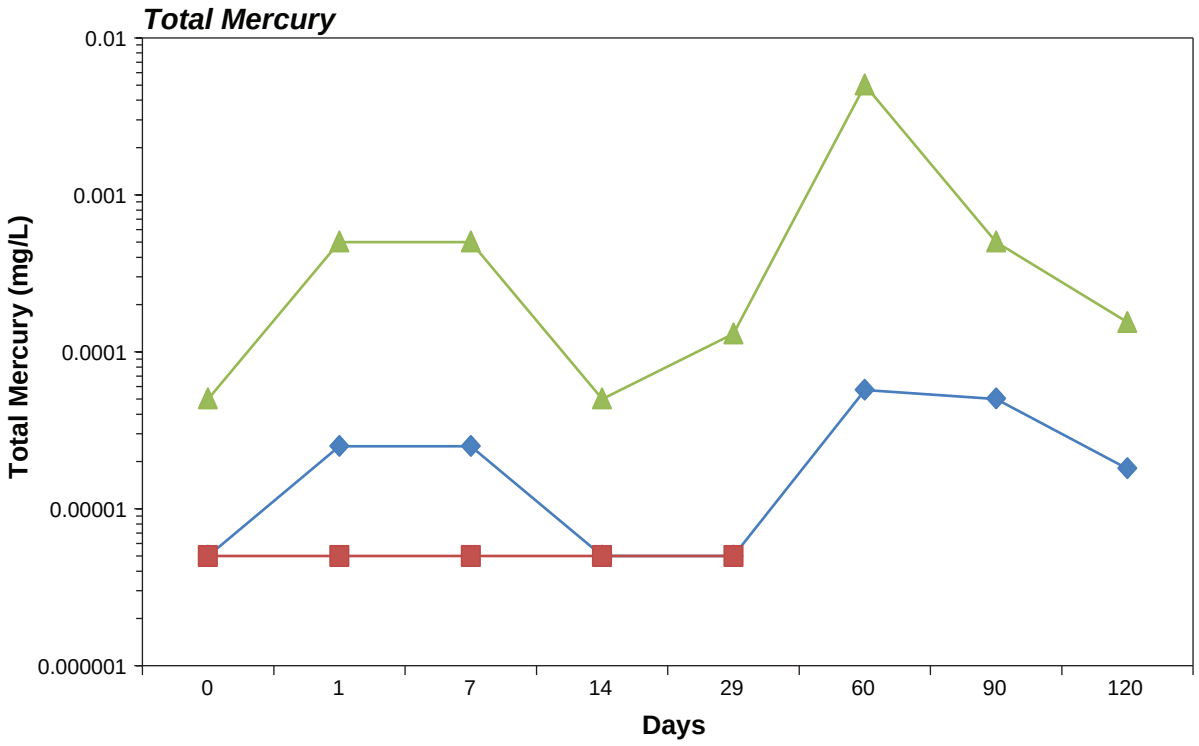


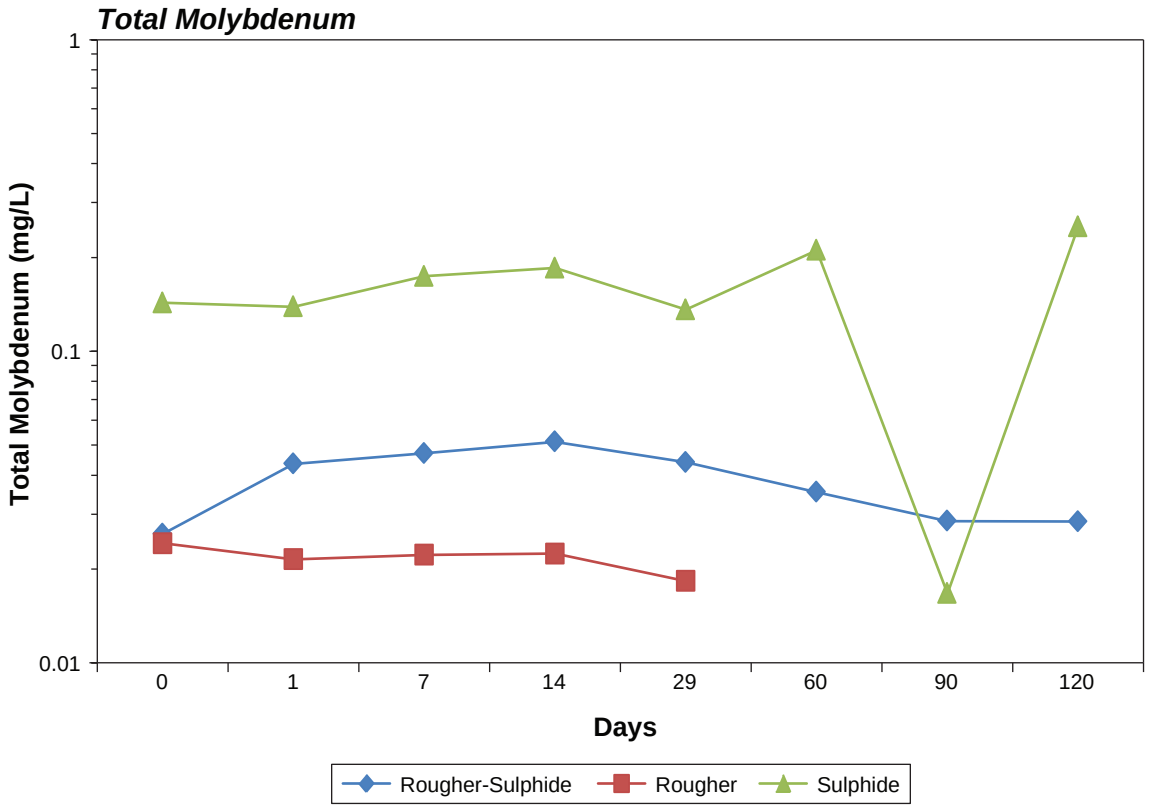
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Total Copper and Fluoride, Tailing Aging Tests

Figure 6.2-29

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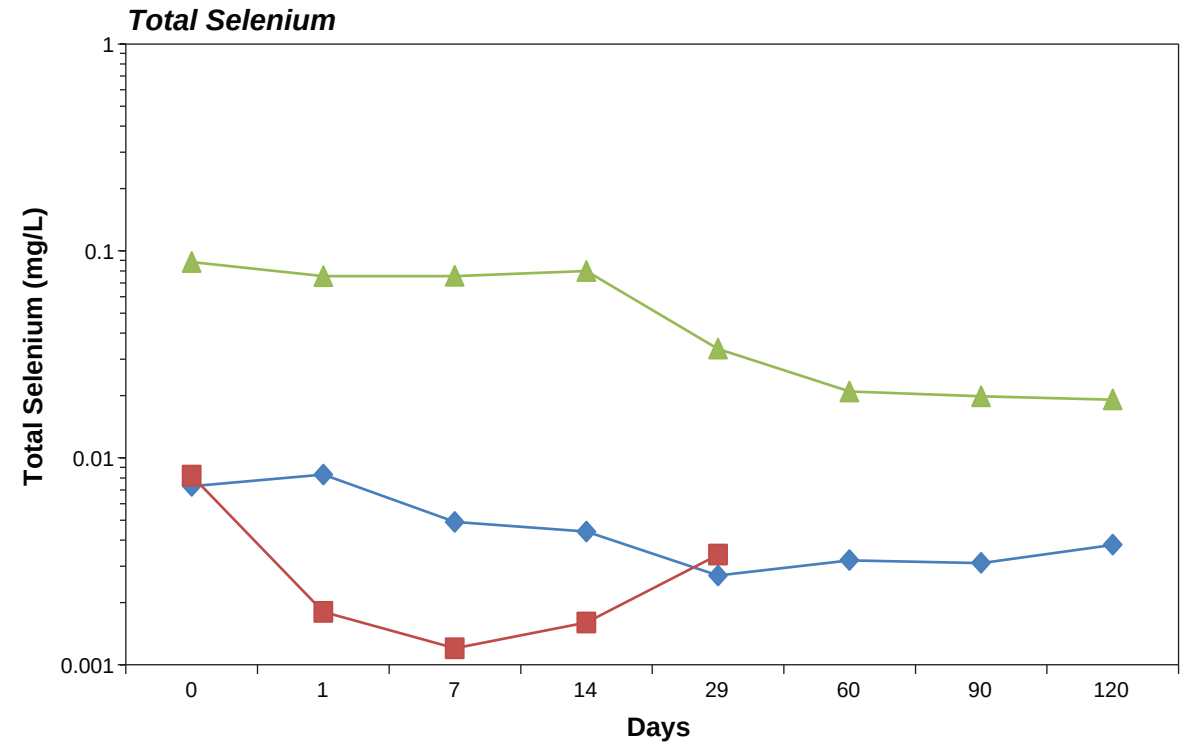
Note: Values below the detection limit are plotted as half the detection limit.

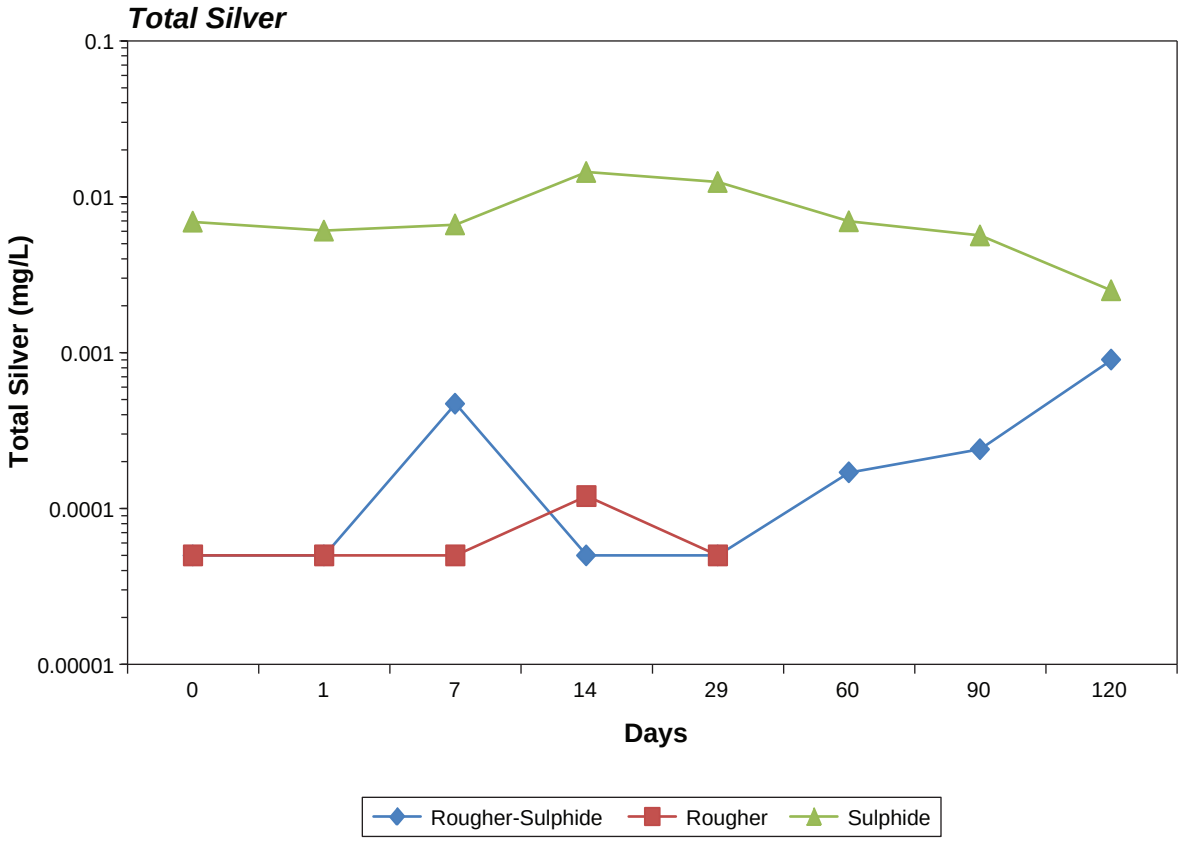
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Total Mercury and Total Molybdenum, Tailing Aging Tests

Figure 6.2-30

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Total Selenium and Total Silver, Tailing Aging Tests

Figure 6.2-31

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6.3 SUMMARY: TAILING

Table 6.3-1 summarizes the water quality parameters with elevated concentrations in the three tailing kinetic tests: humidity cells, subaqueous columns, and aging tests. Metal leaching typically reflected the pH of the water and there was generally good agreement across tests. Aluminum, arsenic, fluoride, cadmium, copper, selenium, sulphate, and zinc were most frequently elevated across various tailing types and across a range of pH conditions.

Table 6.3-1. Tailing Metal Leaching Summary

	Acidic		Neutral		Alkaline	
Tailing	**HC**	**SAC**	**HC**	**SAC**	**Aging**	**SAC**
Sulphide	Sulphate, Fluoride, Aluminum, Arsenic, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Nickel, Selenium, Silver, Thallium, Vanadium Zinc	Aluminum, Cadmium, Cobalt, Copper, Lead, Zinc	n/a	Sulphate, Cadmium, Copper	Sulphate, Antimony, Arsenic, Cobalt, Copper, Fluoride, Iron, Mercury, Molybdenum, Selenium, Silver	n/a
Rougher/Sulphide 90/10	Sulphate, Aluminum, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Vanadium, Zinc	Aluminum, Cadmium, Copper	n/a	Sulphate, Fluoride, Cadmium	Sulphate, Aluminum, Arsenic, Cadmium, Cobalt, Fluoride, Iron, Manganese, Molybdenum, Selenium, Silver	n/a
Rougher-fine	n/a	n/a	Aluminum	n/a	n/a	n/a
Rougher-coarse	n/a	n/a	Aluminum, Cadmium, Copper	n/a	n/a	n/a
Rougher	n/a	n/a	No exceedances	Sulphate, Cadmium	Sulphate, Aluminum, Fluoride, Manganese, Molybdenum, Selenium	n/a
Mitchell/Kerr	n/a	n/a	Aluminum, Selenium	Aluminum	n/a	n/a
Mitchell/Sulphurets	n/a	n/a	Cadmium	Aluminum	n/a	Aluminum, Antimony, Selenium
Iron Cap	n/a	n/a	Fluoride, Cadmium, Selenium	Aluminum, Arsenic, Fluoride, Selenium	n/a	n/a

n/a indicates that no humidity cell was observed.

Subaqueous column exceedences for either supernatent or porewater

7. Non-Deposit Rock Results

This section describes the geochemical characteristics of the KSM non-deposit material and its potential for ML/ARD based on the geochemical static test results. This section of the report incorporates results collected up till the end of July 2012.

Non-deposit material assessed for this characterization includes overburden samples collected from drill holes and grab samples from hand-dug test pits and rock samples collected from drill holes and grab samples hammered from outcrops. Table 4.1-2 summarises the sampling program, dividing the samples collected by location and type. Results of the static testing for non-deposit samples can be found in Appendix 7-1 and 7-2.

7.1 OVERBURDEN STATIC TESTS

Non-deposit overburden material is likely to be used for reclamation and as fill material for construction of buildings and roads. As such it will likely be moved during the life of the operation and remain exposed to physical and chemical weathering and erosion conditions similar to those to which the material is currently being exposed. Overburden material had significant variability based on the sampling site; from organic silts to well graded, fine to coarse gravels.

Particle size distribution curves for each of the overburden grab samples are provided in Appendix 7.1-1. The particle size distributions indicate that the majority (~75%) of these overburden samples were comprised of a mixture of fine to coarse gravels and fine to coarse sands with lesser (<20%) amounts of silt and clay particles typical of glacial tills. A minor proportion of the tested samples (~5%) were dominantly fines (clay or silt) including samples WP09-37 and WP09-53B from MRSF overburden, and samples WP09-56, WP09-56A, and WP09-57 from WSF overburden .

7.1.1 Paste pH

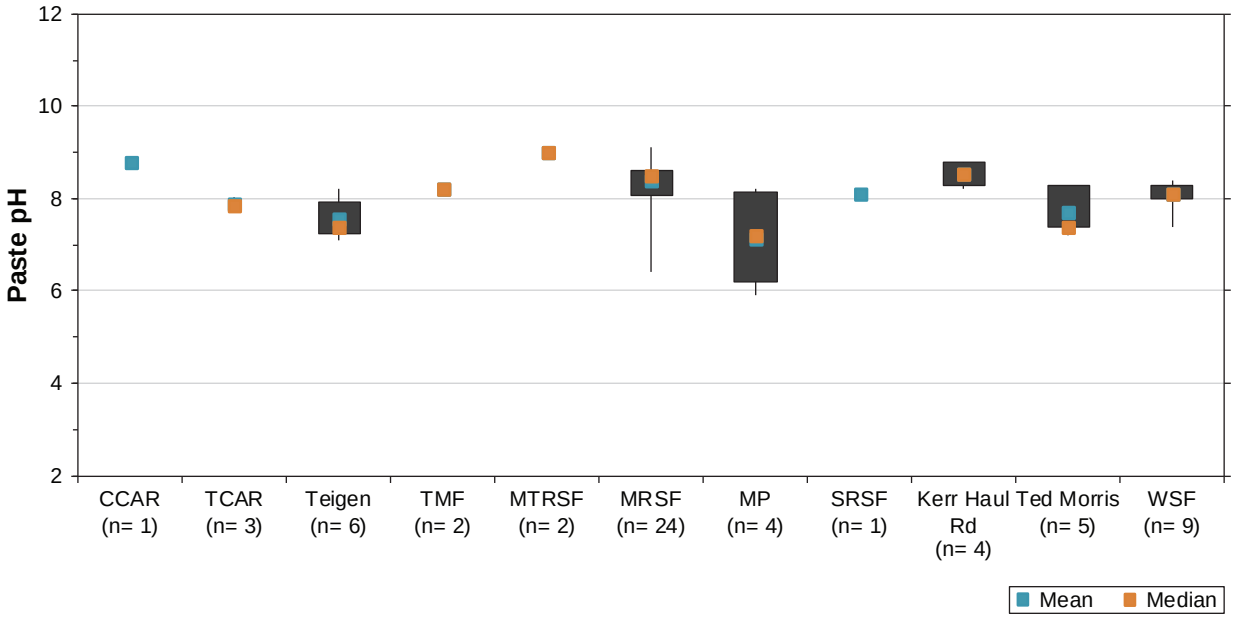
The paste pH values for non-deposit overburden material vary between 5.9 and 9.1, with the largest interquartile range ascribed to Mitchell Pit samples (Figure 7.1-1). Mean and median values of all 63 samples were above 6.0 indicating that the majority samples were not acid generating at the time of sample collection. The only sample with an acidic paste pH was morainal silty clay from within the outline of the proposed Mitchell Pit.

7.1.2 Sulphur Species

The total-sulphur in the non-deposit overburden samples varied over two orders of magnitude (Figure 7.1-2) with the lowest value (0.005%) at the MRSF and the highest (6.78%) from the Mitchell Pit. Median values varied between 0.04 and 1.22%.

The sulphide-sulphur in the non-deposit overburden samples has a similar range to the total-sulphur (Figure 7.1-2 and 7.1-3) and is the dominant sulphur species.

The highest sulphate-sulphur concentration was 0.31% from a sample of clayey sand in the Mitchell Pit (Figure 7.1-2 and 7.1-3); sulphate-sulphur concentrations were frequently below method detection limits (0.01%).

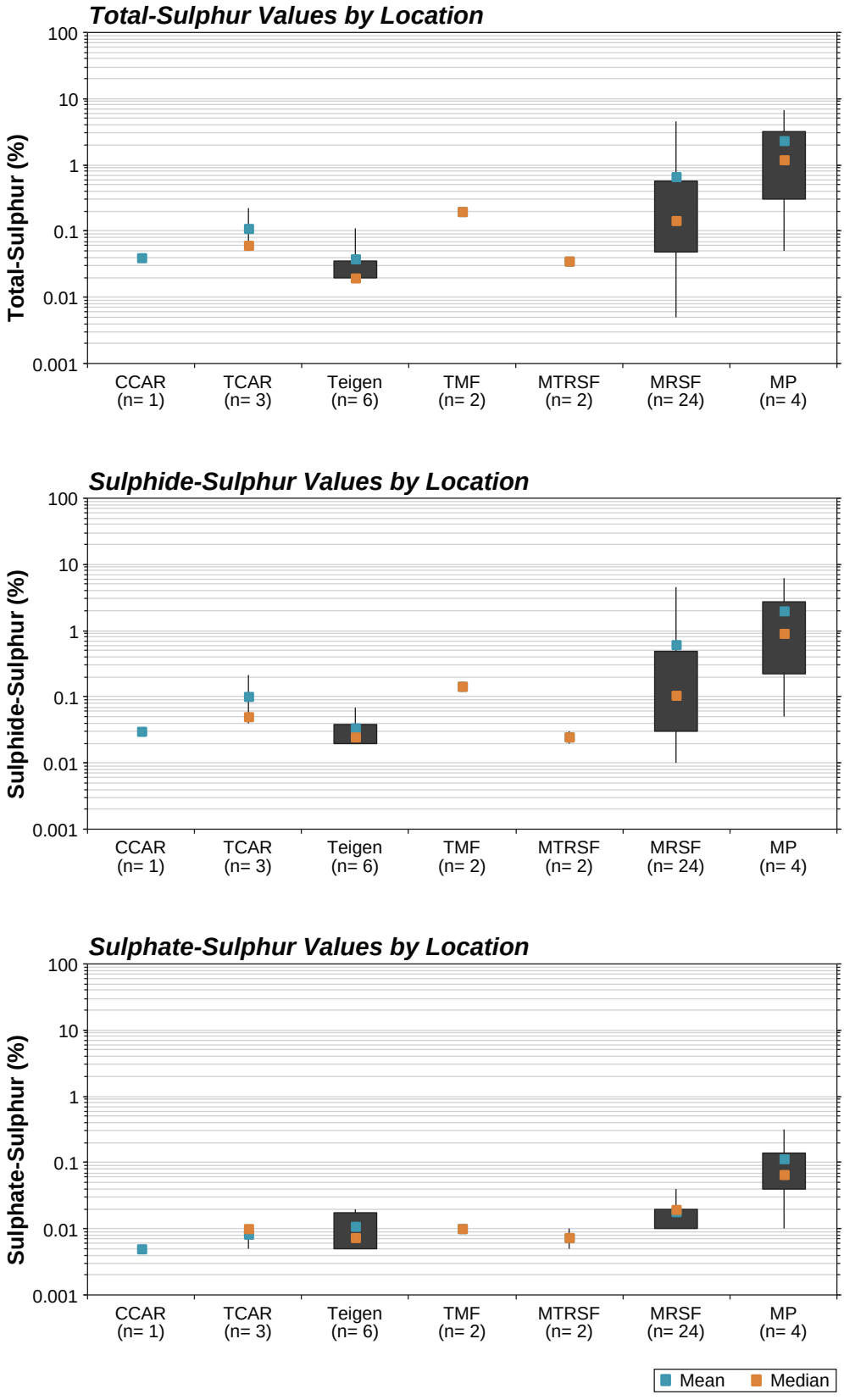


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Non-Deposit Overburden Statistical Summary of Paste pH Values by Location

Figure 7.1-1

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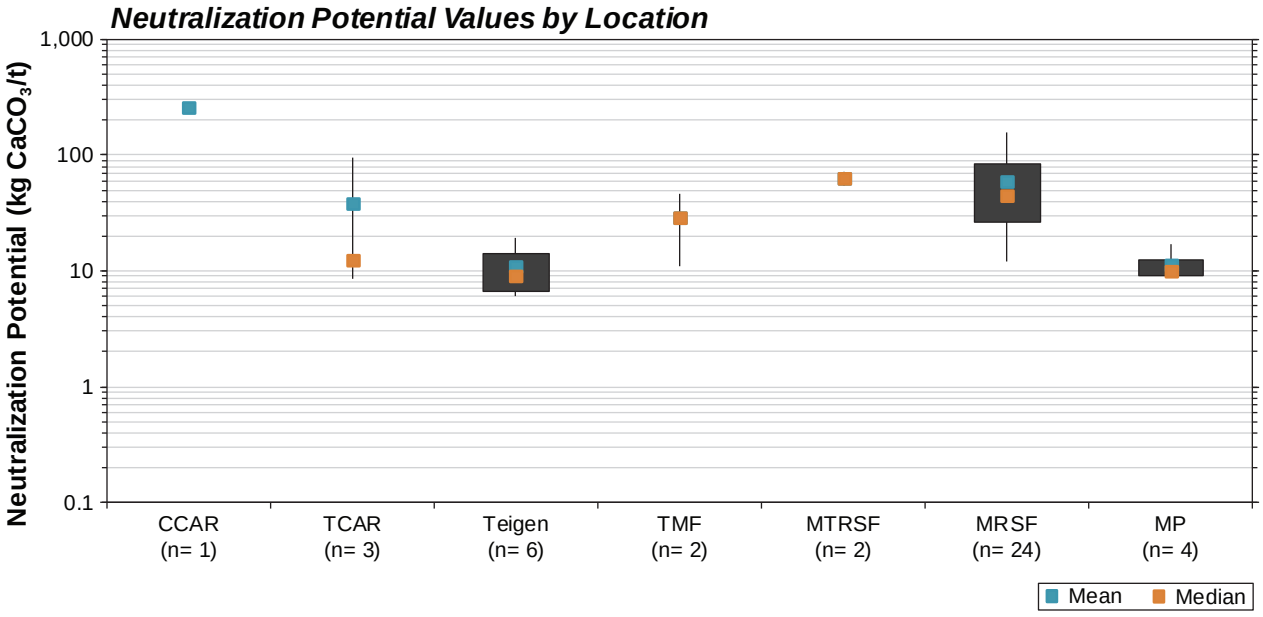


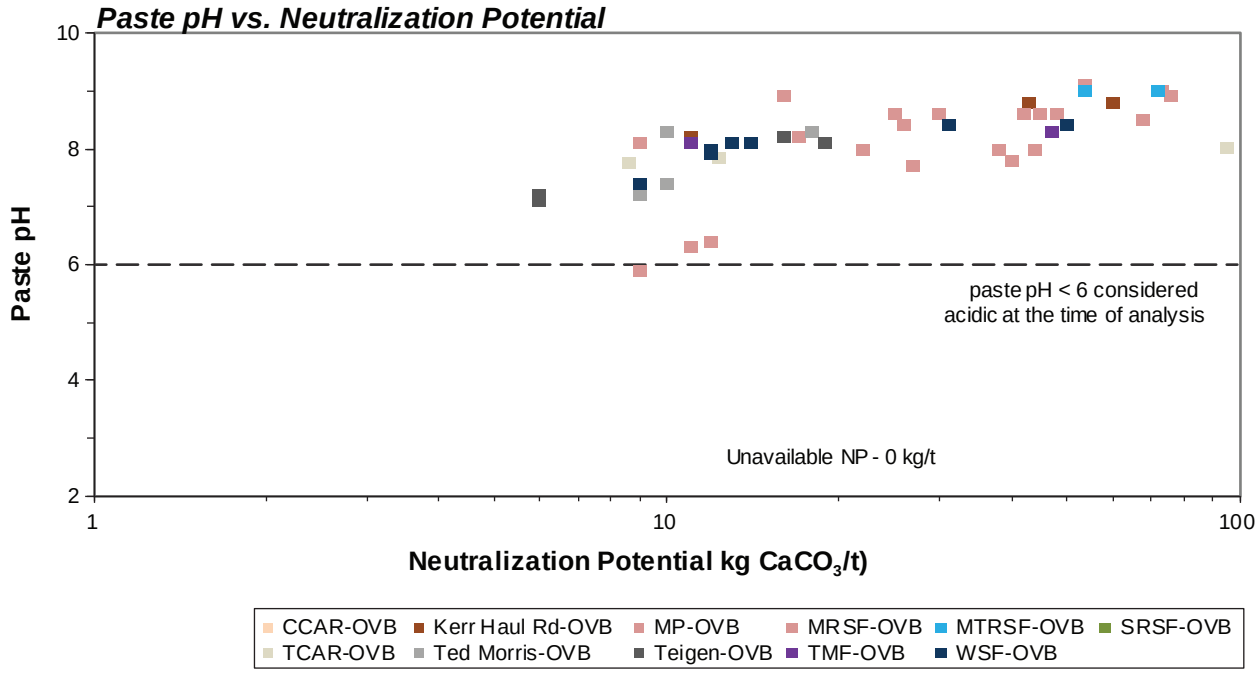
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Non-Deposit Overburden Statistical Summary of Total-Sulphur, Sulphide-Sulphur, and Sulphate-Sulphur Values by Location

Figure 7.1-2

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Non-Deposit Overburden Statistical Summary of Bulk Neutralization Potential Values and Paste pH versus Bulk Neutralization Potential Values by Location

Figure 7.1-3

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7.1.3 Neutralization Potential

The bulk NP values for non-deposit overburden are summarized in Figure 7.1-4. Bulk NP values are generated by the bulk Sobek method and represent easily accessible and some unavailable NP. Bulk Sobek NP values for non-deposit overburden vary between 6 and 304 kg $CaCO_3$/t. Teigen Access Road (not currently part of the mine plan), Mitchell Pit, and SRSF samples have slightly lower bulk Sobek NP values than the other locations. The only sample with a paste pH below 6.0 had a bulk Sobek NP value of 9 kg $CaCO_3$/t. This bulk Sobek NP value could be applied as a site-specific unavailable NP as the sample is already acid generating. However, the sample is silty moraine from within the outline of the proposed Mitchell Pit. It is likely that this glacial moraine material includes from ground up rock from the Mitchell, Snowfields, or Iron Cap deposits. All these deposits have a large amount of PAG material and therefore any moraine generated from those sources will have a high probability of being PAG. As a result a site-wide unavailable NP value will not be used for the overburden material. Caution should be used when generating SNPR values for morainal material as the bulk NP may not be completely available.

The Inorg NP, derived from inorganic carbon values, typically underestimates the NP of samples when compared to the bulk Sobek NP (Figure 7.1-5). Conversely, the Ca CaNP, derived from calcium concentrations, typically overestimates the NP of the samples when compared to the bulk Sobek NP. The CaMg CaNP does not correlate well with bulk Sobek NP indicating that the magnesium occurs in non-carbonate magnesium-bearing mineral phases.

7.1.4 Sulphide Net Potential Ratios

The SNPR values discussed below are unadjusted SNPR values based on the unadjusted NP for non-deposit overburden as there was no unavailable NP. The only location that had a large proportion of samples with a SNPR value less than 2.0 was the Mitchell Pit (Figure 7.1-6). Mean and median SNPR values were consistently above 4.0 for the other non-deposit overburden sampling locations indicating very low potential for acid generation.

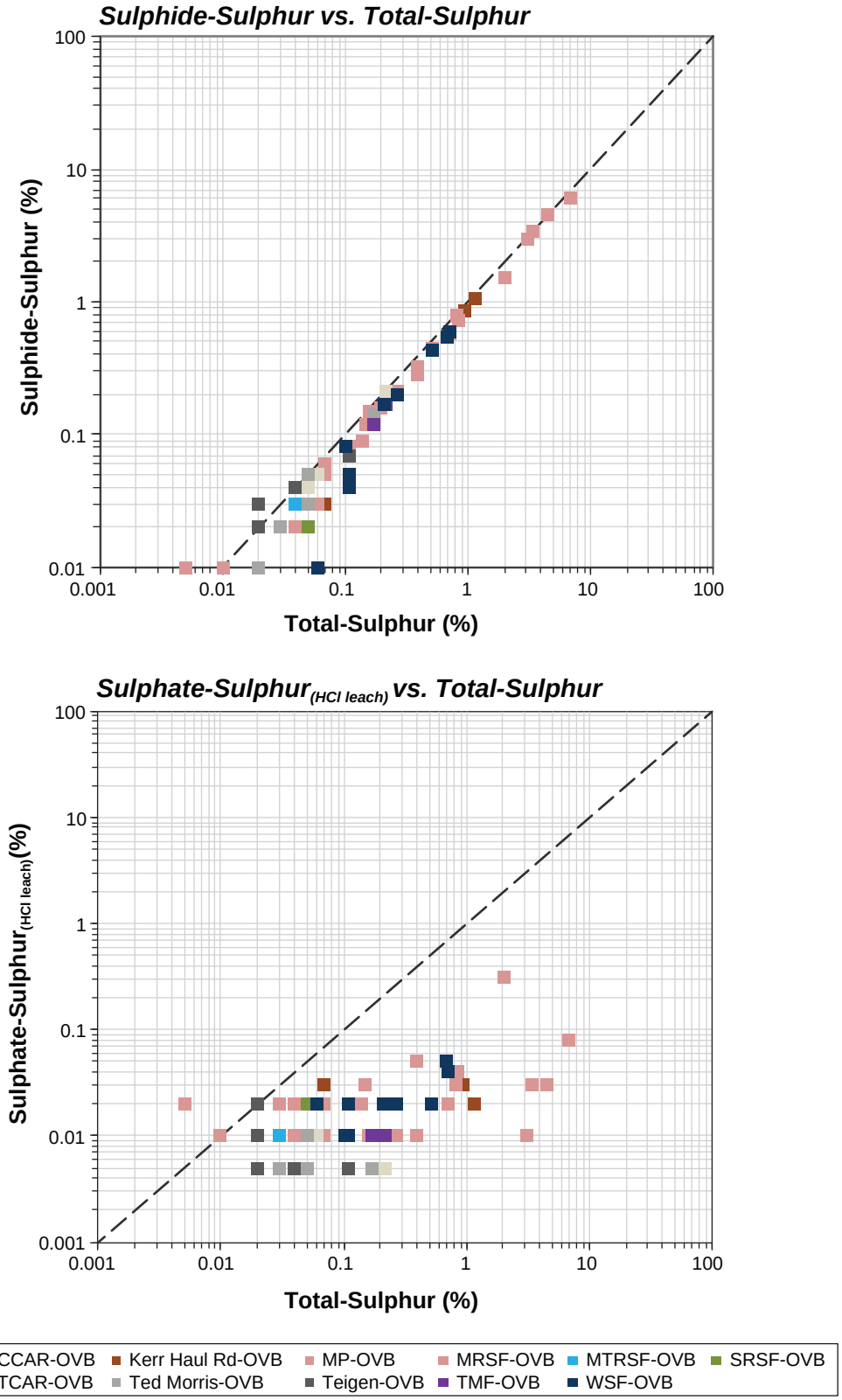
The Teigen Creek Valley overburden samples plotted in a slightly different trend compared to the other sample locations (Figure 7.1-7). These samples plot on a fairly straight line in both graphs, in contrast to the other sample datasets. This may be due to low sulphide-sulphur and low bulk NP values in these samples.

7.1.5 Whole Rock and Solid-phase Elemental Analysis

Results of the whole rock XRF and four acid digestion followed by ICP-MS and the summary statistics can be found in Appendix 7-1.

7.2 ROCK STATIC TESTS

Non-deposit rock material is likely to be exposed during road construction or in locations where bedrock will be blasted to make level surfaces, e.g. building or dam foundations, or used as fill material during construction of buildings and potentially in roads. As such it will likely be moved during the life of the operations and remain exposed to physical and chemical weathering and erosion conditions different to that to which the material is currently being exposed. The 192 rock samples vary between sedimentary and volcanic rock types and come from the Stuhini, Hazelton, Bowser Lake Groups, and one sample from the Zippa Mountain Plutonic Complex.

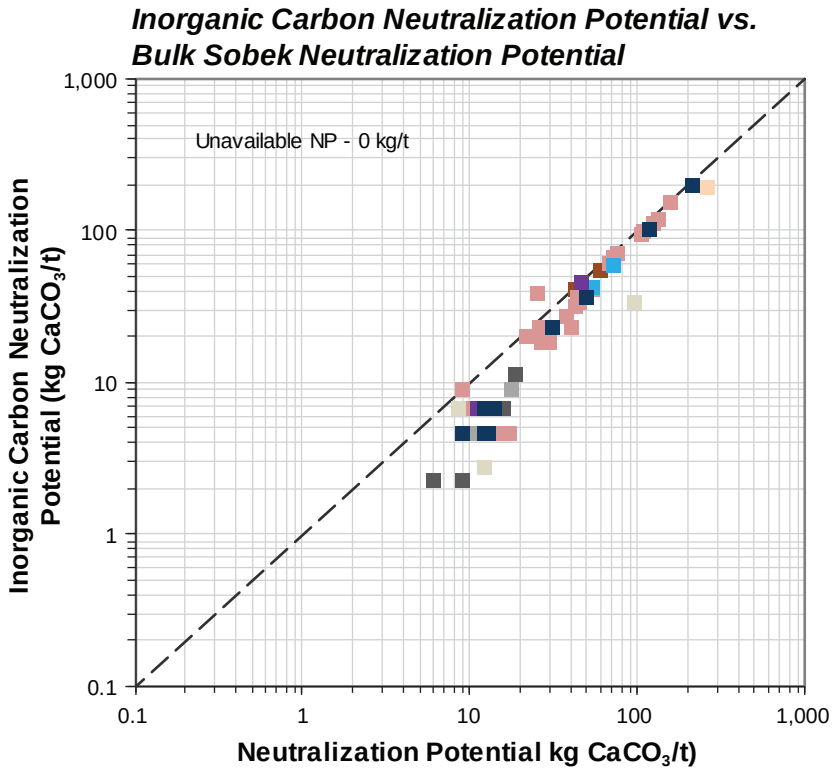


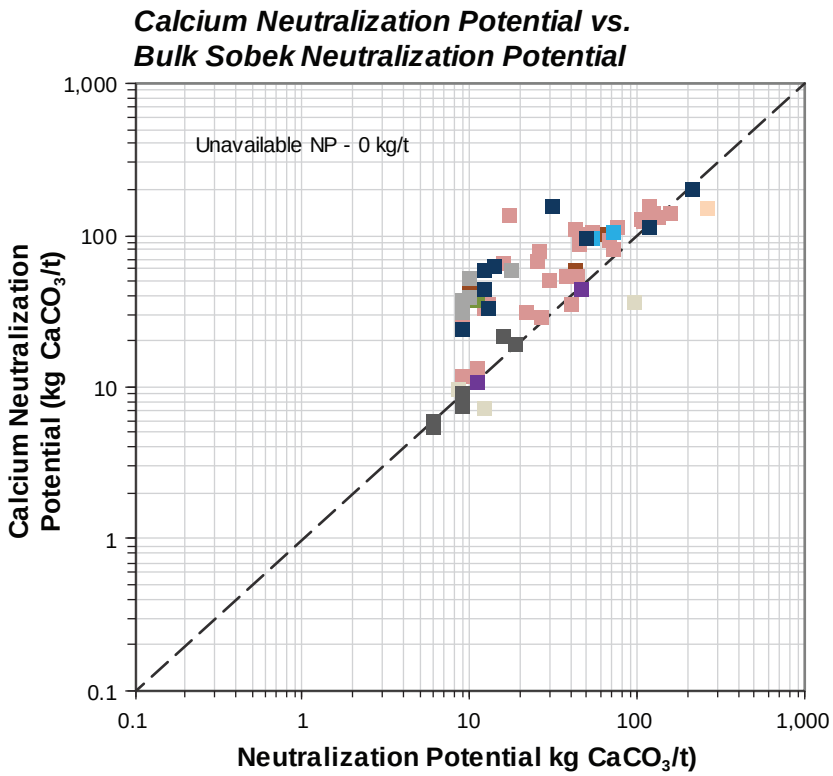
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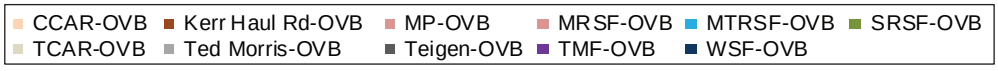
Sulphide-Sulphur and Sulphate-Sulphur versus Total-Sulphur for Non-Deposit Overburden Samples by Location

Figure 7.1-4

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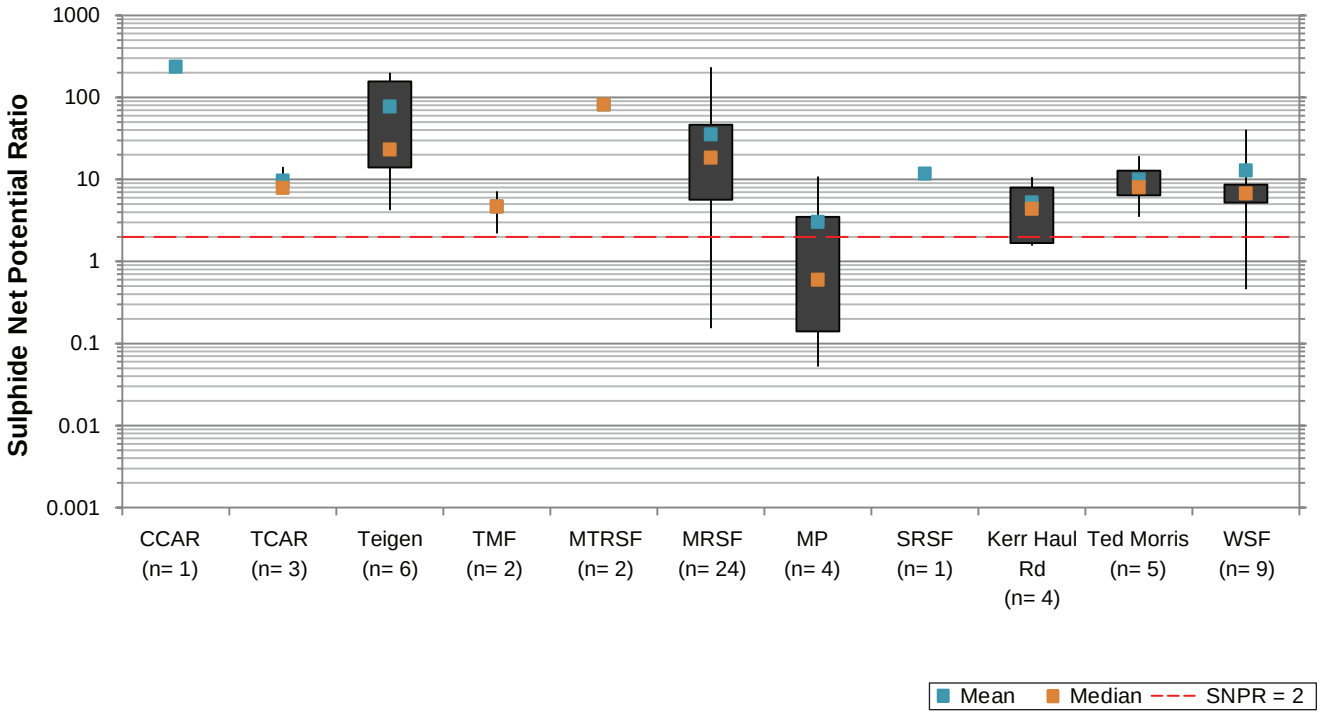


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Non-Deposit Overburden Inorganic Neutralization Potential and Calcium Neutralization Potential versus Bulk Sobek Neutralization Potential by Location

Figure 7.1-5

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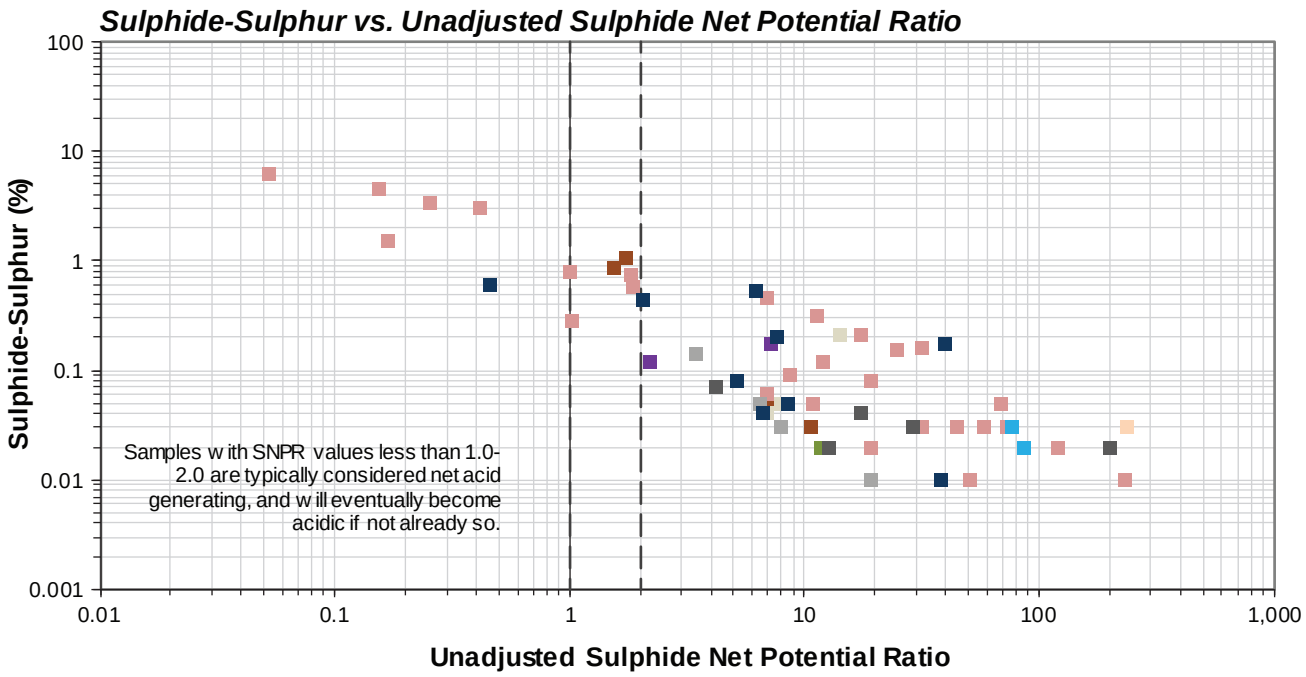


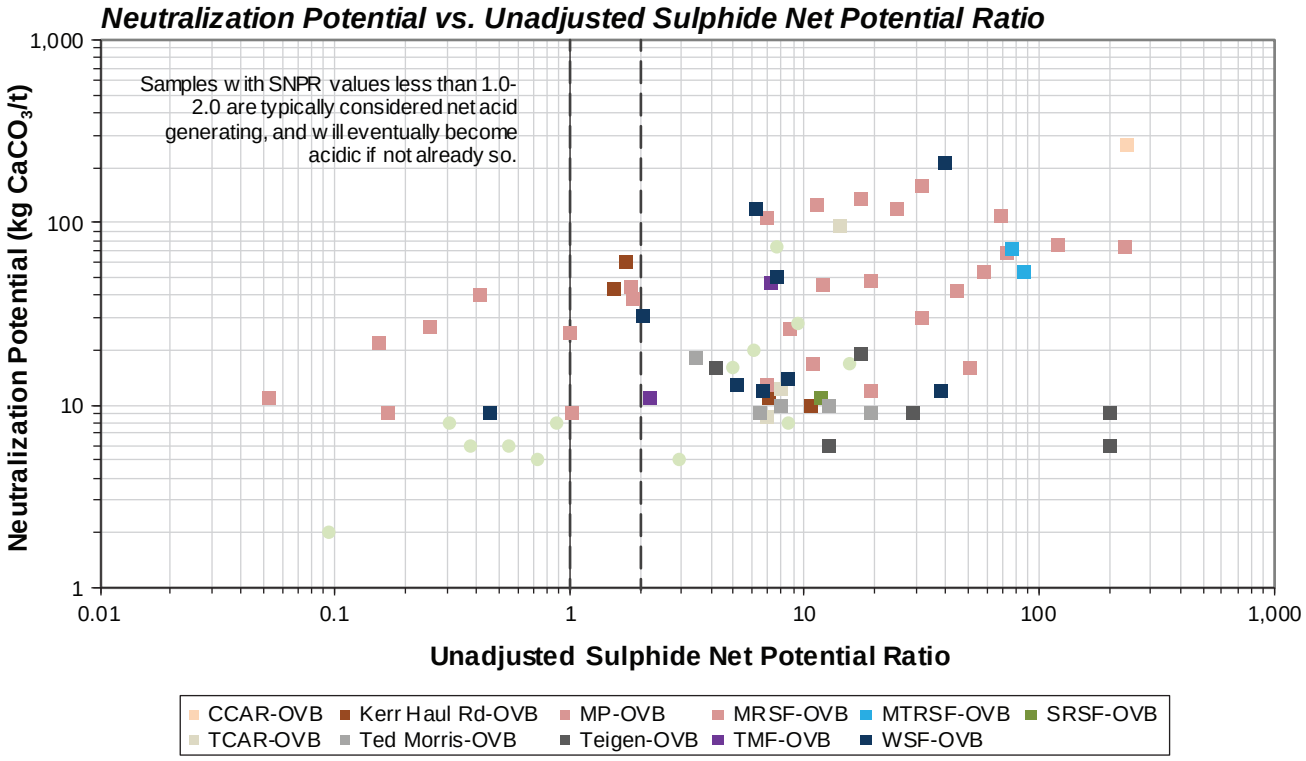
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Non-Deposit Overburden Statistical Summary of Unadjusted Sulphide Net Potential Ratios by Location

Figure 7.1-6

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Non-Deposit Overburden Sulphide-Sulphur and Sobek Bulk Neutralization Potential versus Unadjusted Sulphide Net Potential Ratio by Location

Figure 7.1-7

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7.2.1 Paste pH

The paste pH interquartile range for most sample locations is around 4.5 to 9.4 (Figure 7.2-1). Median pH values ranged from 7.3 to 8.9. One location have 25th percentile values below 6.0: Mitchell Pit (5.9). The mean and median values at each location are greater than 7.0 indicating that the majority of materials in these locations have enough NP to not be immediately acid generating.

7.2.2 Sulphur Species

Locations with mean and median total-sulphur values greater than or equal to 0.3% are: MDT, Mitchell Pit, Sulphurets Pit, and Sulphurets Laydown Area (Figure 7.2-2). Samples collected from the vicinity of the four access roads that have been proposed at various times between 2008 and 2012 and the TMF have low total-sulphur values, with median and mean values less than 0.3%. The six MTDT samples were tightly clustered between 0.05% and 0.13 total-sulphur, while the MTT had a skewed dataset with a median at 0.07% and a mean at 0.30% total-sulphur.

Sulphide-sulphur values are very similar to total-sulphur values (Figure 7.2-2 and 7.2-3) and are the dominant sulphur species in the non-deposit rock samples. Sulphate-sulphur is the minor sulphur species (Figure 7.2-2 and 7.2-3).

7.2.3 Neutralization Potential

The bulk Sobek NP value for non-deposit rock material can vary significantly by location and within a location (Figure 7.2-4). The TAR dataset was the only location to have a median bulk Sobek NP less than 10 kg $CaCO_3$/t. The spread in the values at CCAR, Mitchell Pit, and Sulphurets Pit is quite large: from less than 1 kg $CaCO_3$/t to more than 100 kg $CaCO_3$/t. Typically other locations had bulk Sobek NP values between 5 and 70 kg $CaCO_3$/t. The three Sulphurets Laydown Area samples were tightly clustered between 84 and 125 kg $CaCO_3$/t.

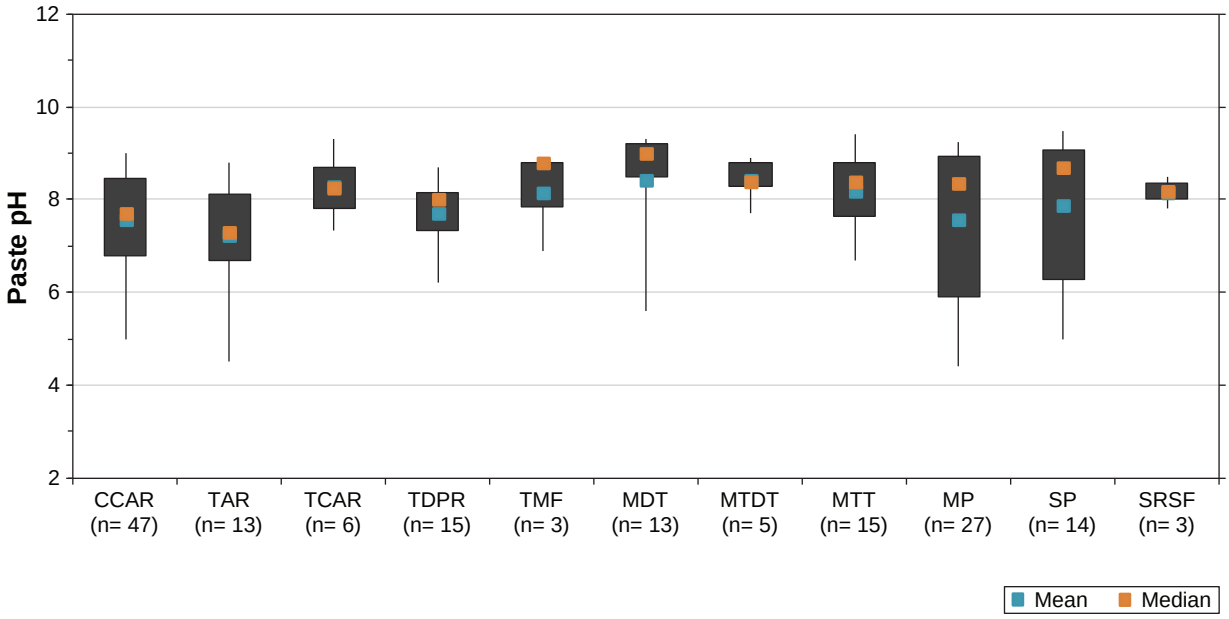
Compared to the bulk Sobek NP the Inorg NP and Ca CaNP values are similar with some scatter around the 1:1 correlation line (Figure 7.2-5). This trend indicates that inorganic calcium carbonate is the main source of NP in the samples.

The CaMg CaNP does not correlate well with bulk Sobek NP indicating that the magnesium occurs in non-carbonate magnesium-bearing mineral phases.

Samples from the CCAR, MDT, Mitchell Pit, and Sulphurets Pit had paste pH values less than 6.0. This indicates that the bulk Sobek NP was insufficient to neutralize the acid produced and this NP is unavailable. The highest NP with a paste pH less than 6.0 was 9 kg $CaCO_3$/t from a MDT sample. The access road samples are discussed in detail in (Rescan 2012b) and the effect of unavailable NP is taken into consideration.

7.2.4 Sulphide Net Potential Ratios

The SNPR can be calculated with either unadjusted bulk Sobek NP, or as an adjusted SNPR which is calculated from the adjusted bulk Sobek NP. The unavailable NP ascribed to the adjusted SNPR values is outlined in Table 7.2-1. Access road values are taken from the KSM Project: Access Roads Metal Leaching and Acid Rock Drainage Potential Assessment (Rescan 2012b) values of 15 are used for material collected within the mine area and close to mine waste rock, and the PTMA is assigned a value of 8 kg $CaCO_3$/t due to the TDPR dataset.

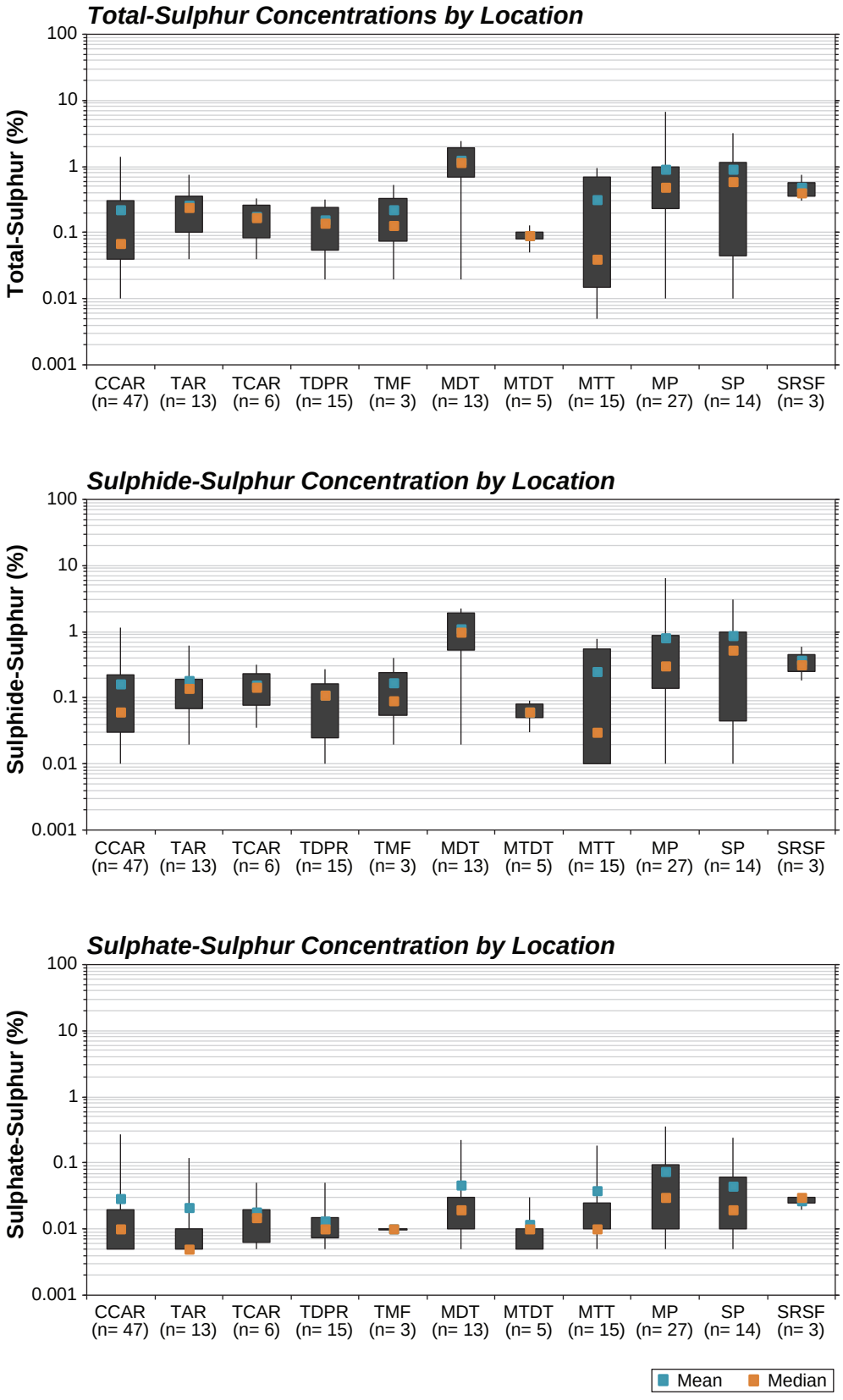


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Non-Deposit Rock Statistical Summary of Paste pH Values by Location

Figure 7.2-1

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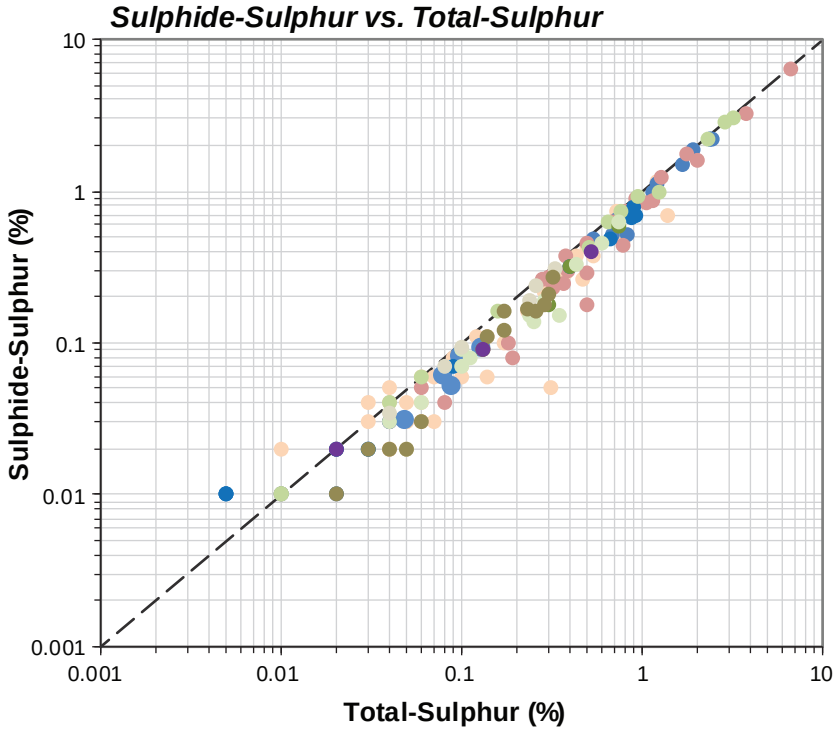


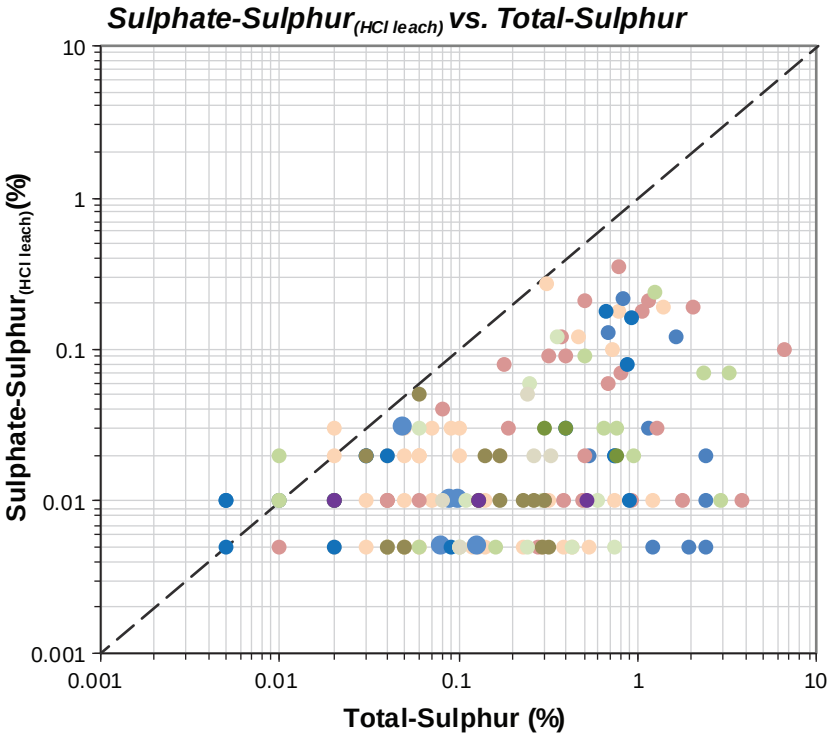
Non-Deposit Rock Statistical Summary of Total-Sulphur, Sulphide-Sulphur, and Sulphate-Sulphur Values by Location

Figure 7.2-2

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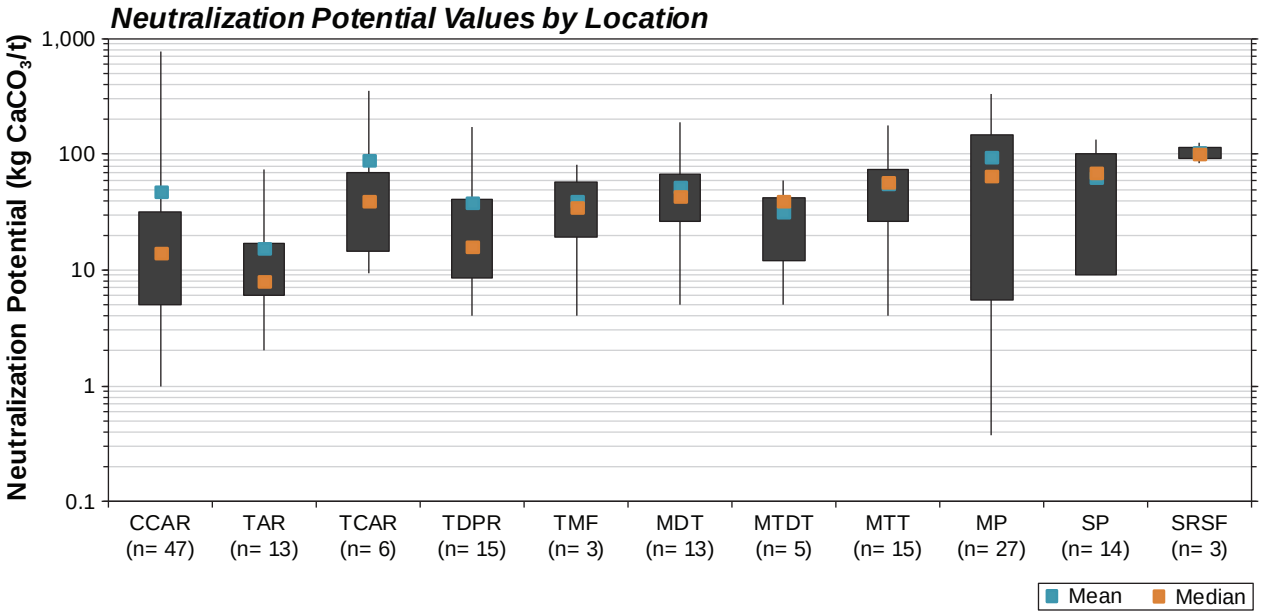


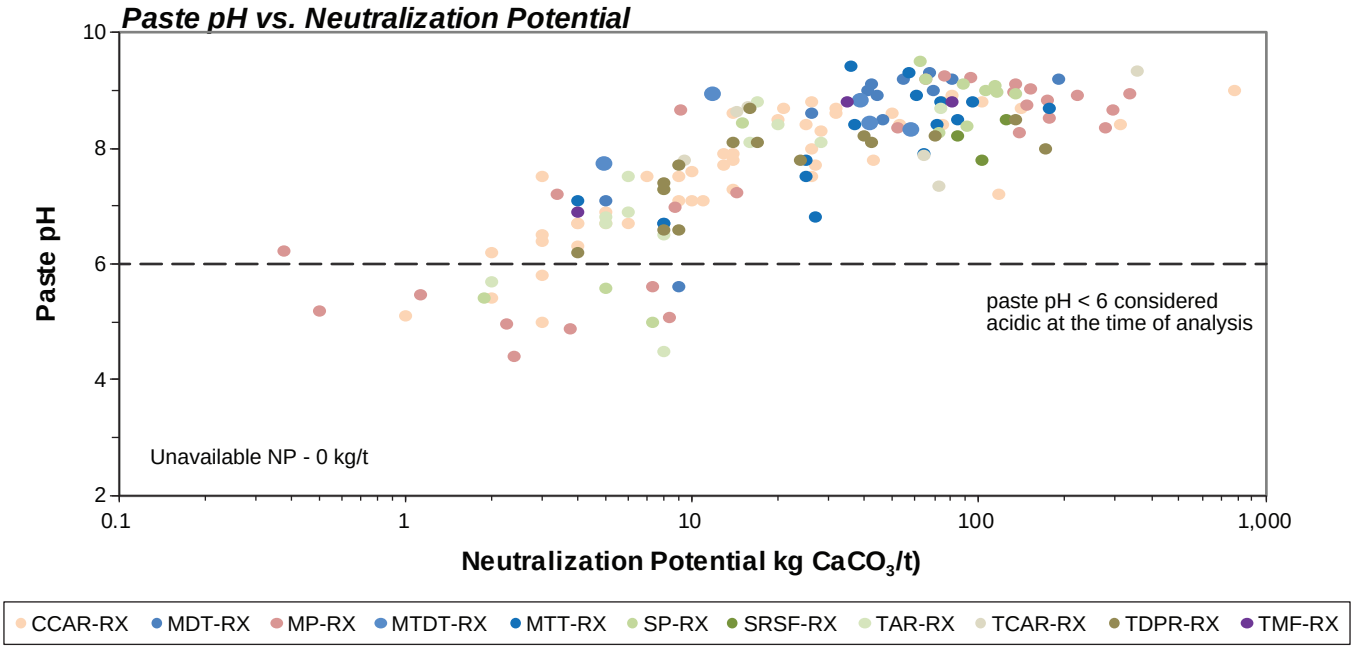
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Sulphide-Sulphur and Sulphate-Sulphur versus Total-Sulphur for Non-Deposit Rock Samples by Location

Figure 7.2-3

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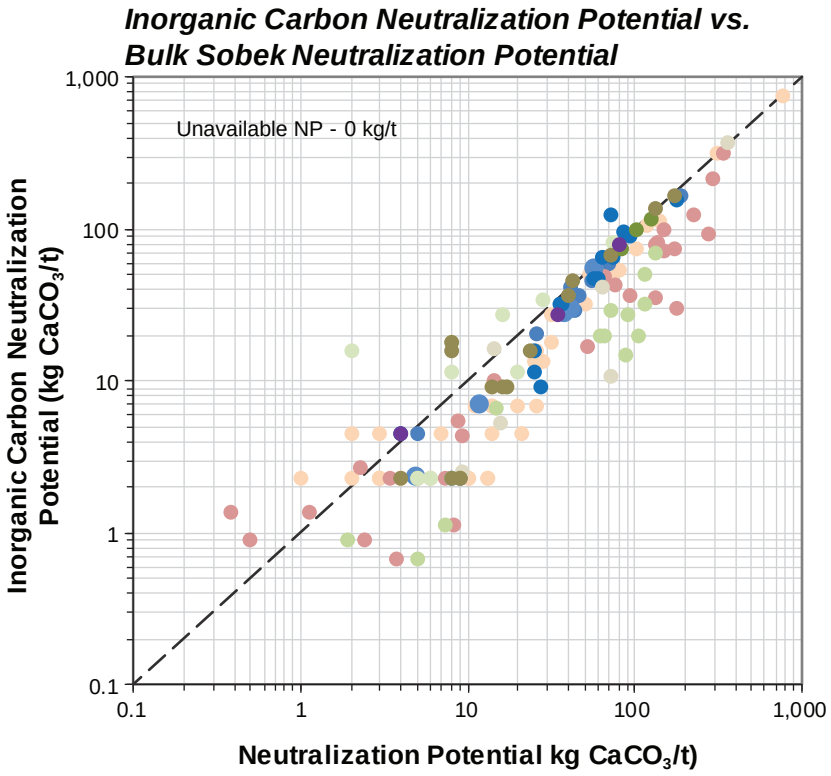


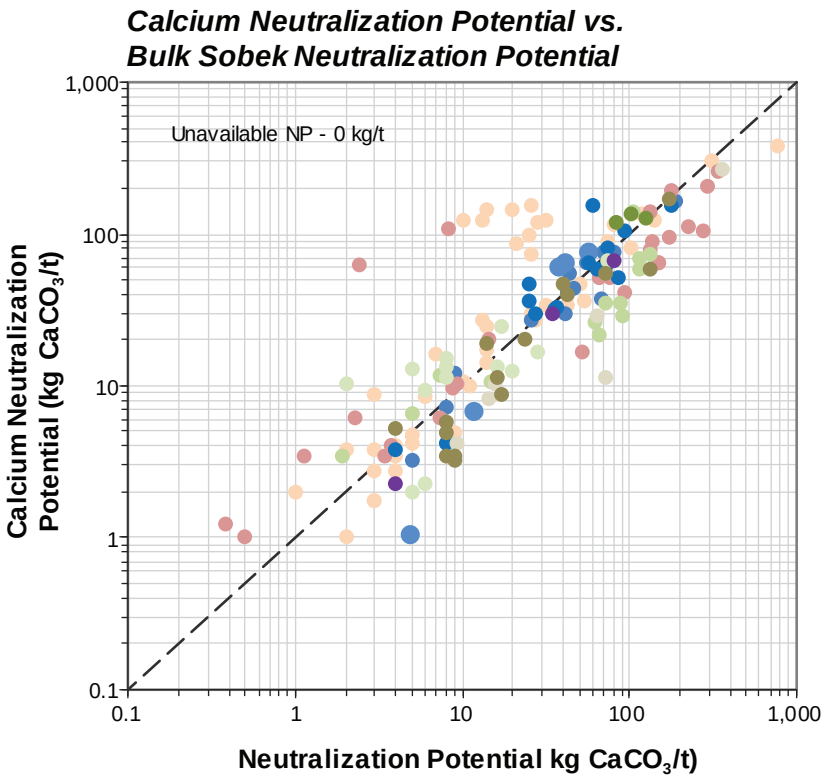
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Non-Deposit Rock Statistical Summary of Bulk Neutralization Potential Values and Paste pH versus Bulk Neutralization Potential Values by Location

Figure 7.2-4

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CCAR-RX MDT-RX MP-RX MTDT-RX MTT-RX SP-RX SRSF-RX TAR-RX TCAR-RX TDPR-RX TMF-RX

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Non-Deposit Rock Inorganic Neutralization Potential and Calcium Neutralization Potential versus Bulk Sobek Neutralization Potential by Location

Figure 7.2-5

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Table 7.2-1. Unavailable Sobek Bulk Neutralization Potential Used In Adjusted Sulphide Net Potential Ratios

Location	Unavailable NP (kg $CaCO_3$/t)	Location	Unavailable NP (kg $CaCO_3$/t)
CCAR	9	Sulphurets Pit	15
MDT	15	Sulphurets Laydown Area	0
Mitchell Pit	15	TAR	8
MRSF	0	TCAR	0
MTDT	0	TDPR	8
MTRSF	0	PTMA	8
MTT	0		

The TAR, MDT, Mitchell Pit, and Sulphurets Pit have at least 25% of samples with a SNPR less than 2.0 (Figure 7.2-6), indicating that this material will become acid generating at some point. After taking into account the unavailable NP the CCAR, TDPR, and PTMA datasets have more than 25% of samples with an adjusted SNPR less than 2.0 (Figure 7.2-6). The only locations that have a low potential for acid generation are: TCAR, MTDT, and Sulphurets Laydown Area. However, these locations also have the lowest number of samples collected.

7.2.5 Whole Rock and Solid-phase Elemental Analysis

Results of the whole rock XRF and four acid digestion followed by ICP-MS and the summary statistics can be found in Appendix 7.1.

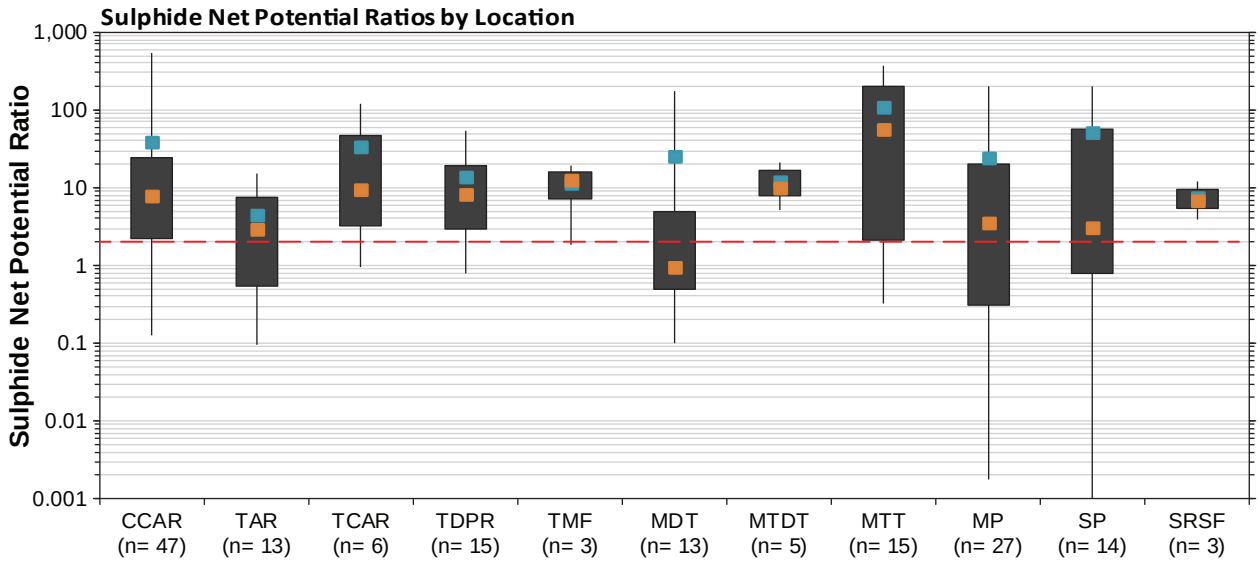
7.3 LEACHATE TESTS

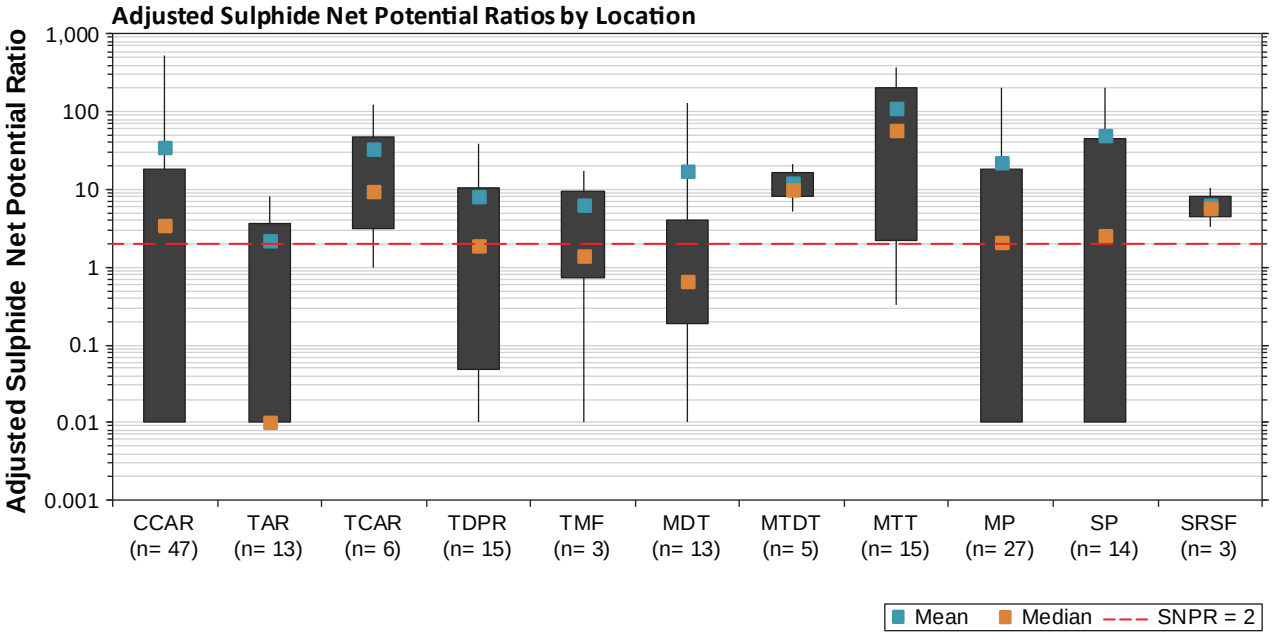
7.3.1 Overburden Shake Flask Extraction

Four overburden samples were subjected to a 24 hour shake flask extraction: two from the Mitchell Pit and two from MRSF. The full table of analyses is presented in Appendix 7.3-1.

7.3.2 Rock Meteoric Water Mobility Protocol

Three composites were created to test the mobility of elements from Mitchell highwall material. The full results and additional figures can be found in Appendix 7.3-2 and appendix 7.3-3, respectively. As the MWMP progressed the loadings increased fairly consistently, although Cycle 3 was sometimes lower than Cycle 2 and 4.





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Non-Deposit Rocks Statistical Summary of Unadjusted and Adjusted Sulphide Net Potential Ratio by Location

Figure 7.2-6

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8. Groundwater Seep Results

Naturally-occurring groundwater seeps were sampled for water quality parameters at the Kerr, Sulphurets, and Mitchell Deposits, and in the McTagg and Ted Morris Creek Valleys in 2009, 2010, and 2012. The complete water quality data for the deposit seeps are presented in Appendix 8.1-1 and the dataset for the McTagg and Ted Morris Creek Valleys is presented in Appendix 8.1-2.

8.1 SEEP GEOCHEMISTRY

The following discussion presents an assessment of the water quality analyses from the groundwater seeps for:

- Indicators of acid generation (pH, sulphate, acidity, and alkalinity);
- Elements that contribute to acidity (aluminum, iron, and manganese);
- Barium which is most commonly associated with barite ($BaSO_4$), a highly insoluble mineral;
- Trace elements with elevated concentrations relative to water quality guidelines. Identification of these elements can be used to inform upper limits on water quality modelling; and
- Calcium and magnesium which commonly occur in carbonate mineral phases and are associated with the neutralization potential.

The deposit seeps were characterized by deposit and/or degree of alteration at the discharge location and the seep classification is summarized in Table 8.1-1. Less intensely altered seeps occur in rocks of the Hazelton group and chlorite-propylitic alterations, and intensely altered seeps occur in quartz-sericite-pyrite alterations and intermediate argillic alterations.

Table 8.1-1. Groundwater Seep Classification

Deposit	Seep	Alteration	Deposit	Seep	Characteristics
Kerr	K-1	-	Mitchell *(cont'd)*	MS-G	Intensely altered
	K-2	-		MS-C1	Intensely altered
	K-3	-		MS-C2	Intensely altered
	K-4	-		MS-C3	Intensely altered
	K-5	-		MS-C4	Intensely altered
Sulphurets	S-1	undetermined		MS-D	Intensely altered
Mitchell	MN-A	Less intensely altered		MS-H	Less intensely altered
	MN-B	Less intensely altered		MS-I	Less intensely altered
	MN-C	Less intensely altered		MS-J	Less intensely altered
	MN-D	Less intensely altered		MS-M	Less intensely altered
	MS-A	Intensely altered		MS-S	Less intensely altered
	MS-B	Intensely altered		MS-T	Less intensely altered
	MS-E	Intensely altered		MS-U	Intensely altered

8.1.1.1 pH, Sulphate, Acidity, and Alkalinity

The pH of all Kerr and Sulphurets Deposit seeps was acidic. The pH at the five Kerr Deposit seeps ranged from 1.25 at K-5 to 7.29 at K-3. The pH at K-4 became more acidic from June to August in 2010 and 2012

(from 3.2 to 2.4 and 3.7 to 2.8, respectively). The pH at the Sulphurets seep was 6.5. The pH at all Mitchell Deposit seeps was acidic. Less acidic pH values typically greater than 4 were observed in less intensely altered seeps. Seasonal trends were not observed for those seeps with multiple samples within one year (Figure 8.1-1). Ted Morris and McTagg seeps were near neutral from 2009 through 2012.

The sulphate concentrations were elevated at the Kerr seeps, ranging from 60 to 950 mg/L. Sulphate concentrations increased from June to August in 2010 and 2012 at K-4, coincident with decreases in pH. Sulphate concentrations ranged from 110 to 7400 mg/L in Mitchell South seeps. Sulphate concentrations were more moderate in Mitchell North seeps ranging and from 23 to 275 mg/L. Ted Morris and McTagg seeps had sulphate concentrations between 60 and 1500 mg/L (Figure 8.1-2).

Acidity and alkalinity at the Kerr seeps typically mirrored the pH with greater acidity and alkalinity below the detection limit measured at K-4 and K-5 with pH values less than 3. Acidity was greatest at intensely altered seeps reflecting low pH values, and lowest at less intensely altered seeps. Alkalinity was frequently below detection at intensely altered seeps, and ranged from below detection to 50 mg/L $CaCO_3$ at less intensely altered seeps (Figures 8.1-3, 8.1-4).

8.1.1.2 Elements that Contribute to Acidity

Total aluminum concentrations were elevated at all Kerr seeps except K-2, and ranged from 0.005 to 8.8 mg/L. Dissolved aluminum represented the majority of the aluminum in the seeps. Aluminum concentrations closely reflected the seep pH and greater concentrations were observed at lower pH values, especially below pH 4 (Figures 8.1-5, 8.1-6).

Total aluminum concentrations exceeded CCME water quality guidelines at all Mitchell Deposit seeps. Seasonal trends across seeps were not observed. The highest aluminum concentrations were observed at Mitchell South seeps, and concentrations were two to three orders of magnitude higher than at Mitchell North, Kerr and Sulphurets seeps. Dissolved aluminum represented the majority of the aluminum in the Mitchell seeps (Figures 8.1-5, 8.1-6).

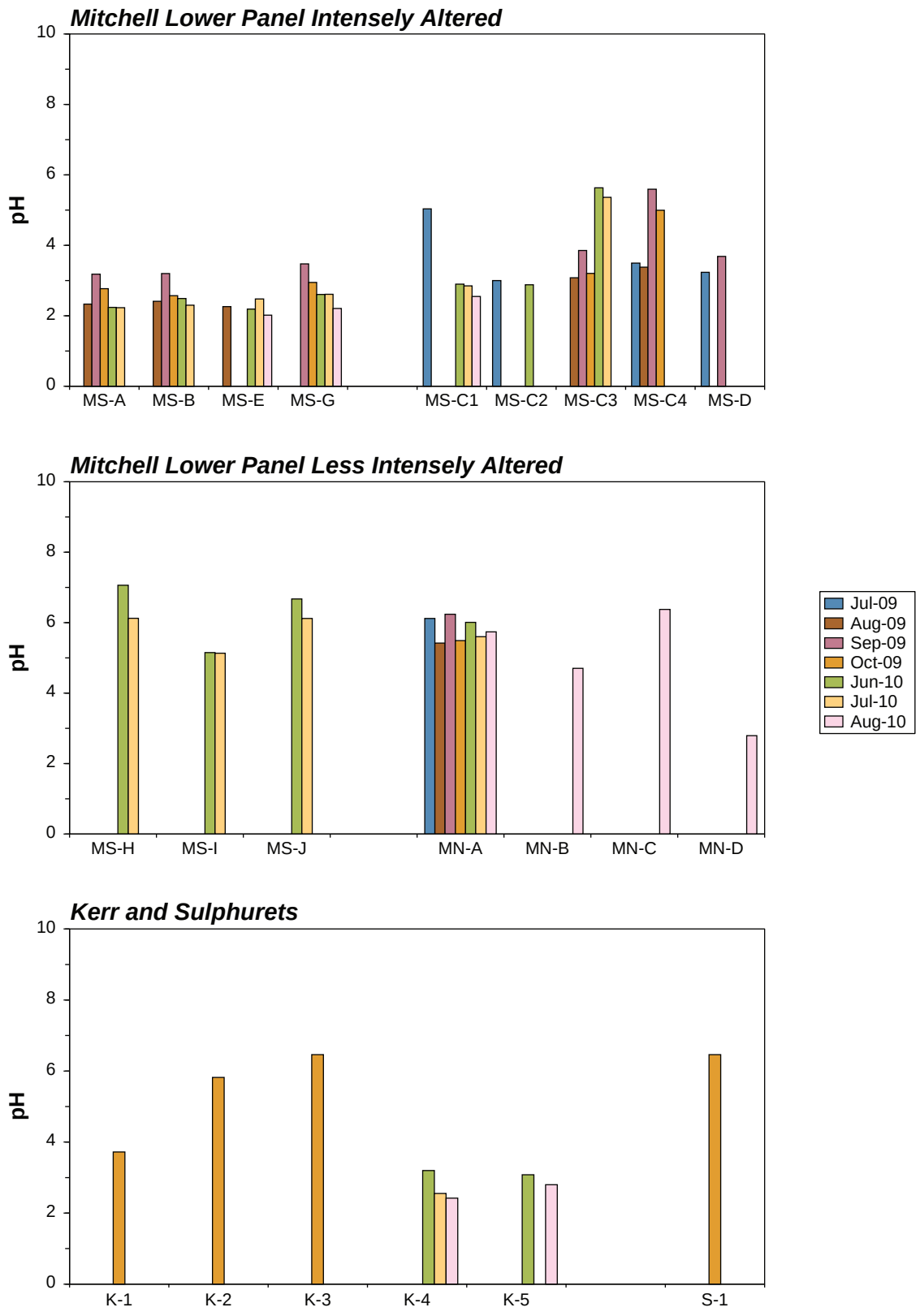
Total iron concentrations were more comparable across the range of pH observed at the Kerr seeps, and ranged from 7 to 78 mg/L. Total and dissolved iron were below the detection limit at the Sulphurets seep (Figures 8.1-7, 8.1-8).

Total iron concentrations in the intensely altered seeps ranged from 5 to 2,400 mg/L, whereas total iron in the less intensely altered seeps ranged from below detection to 24 mg/L. Dissolved iron represented the majority of the iron in the Mitchell seeps (Figures 8.1-7, 8.1-8).

Total manganese concentrations at the Kerr seeps closely reflected the trend in iron concentrations, and ranged from 0.3 to 4 mg/L. Total manganese was below detection at the Sulphurets seep. The total manganese ranged from below detection to 11mg/L at Ted Morris and McTagg seeps. Total manganese concentrations were low in Mitchell North seeps, ranging from below detection to 0.89 mg/L. Manganese in Mitchell Southseeps ranged from 0.01 to 33 mg/L (Figure 8.1-9).

8.1.1.3 Barium

Barium concentrations were similar across Kerr and Sulphurets seeps, ranging from 0.005 to 0.04 mg/L. Barium concentrations were similar across all Mitchell seeps, ranging from 0.004 mg/L to 0.06 mg/L. The lowest barium concentrations were observed for Mitchell South seeps which had the lowest pH and highest sulphate concentrations (Figure 8.1-10).

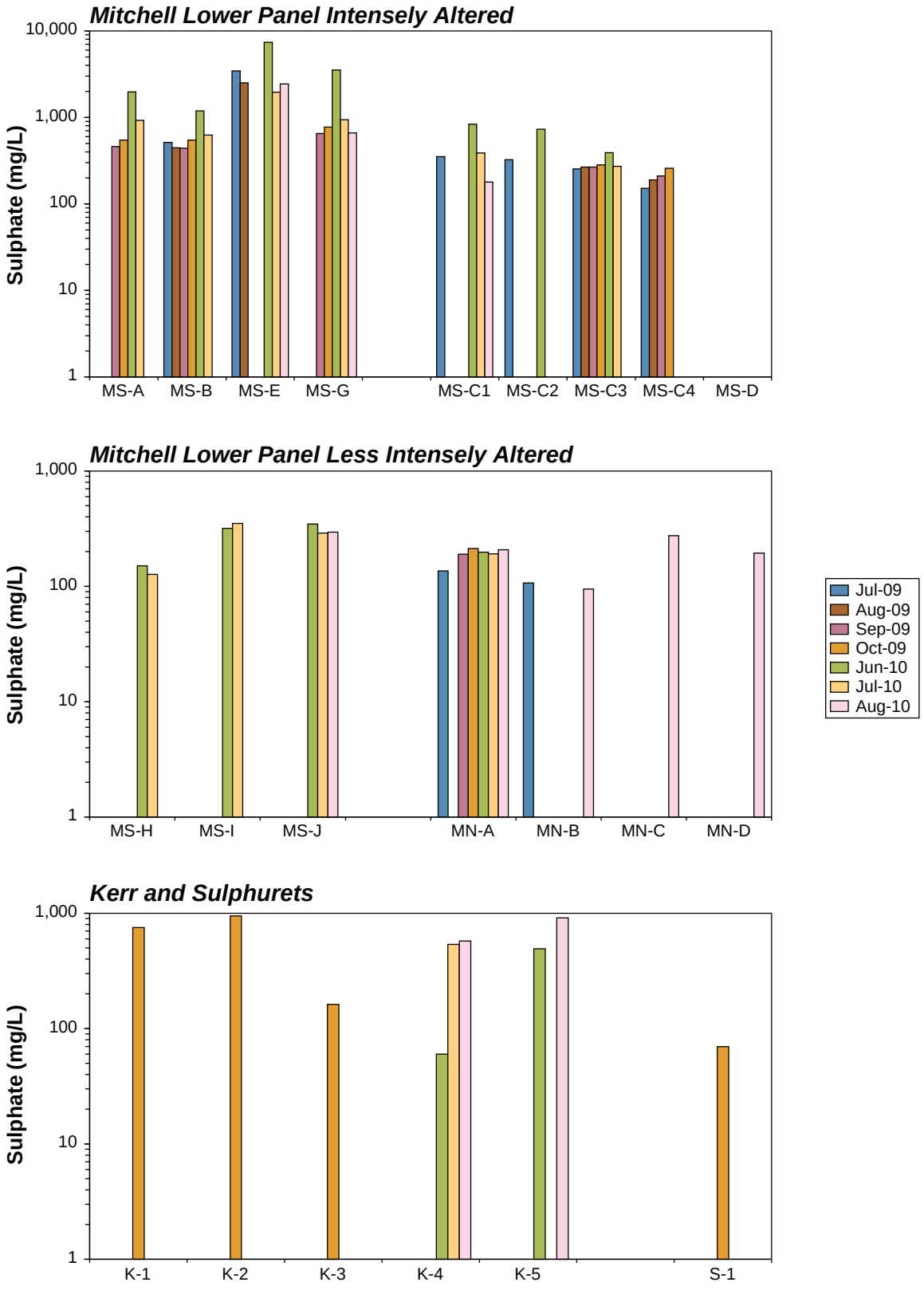


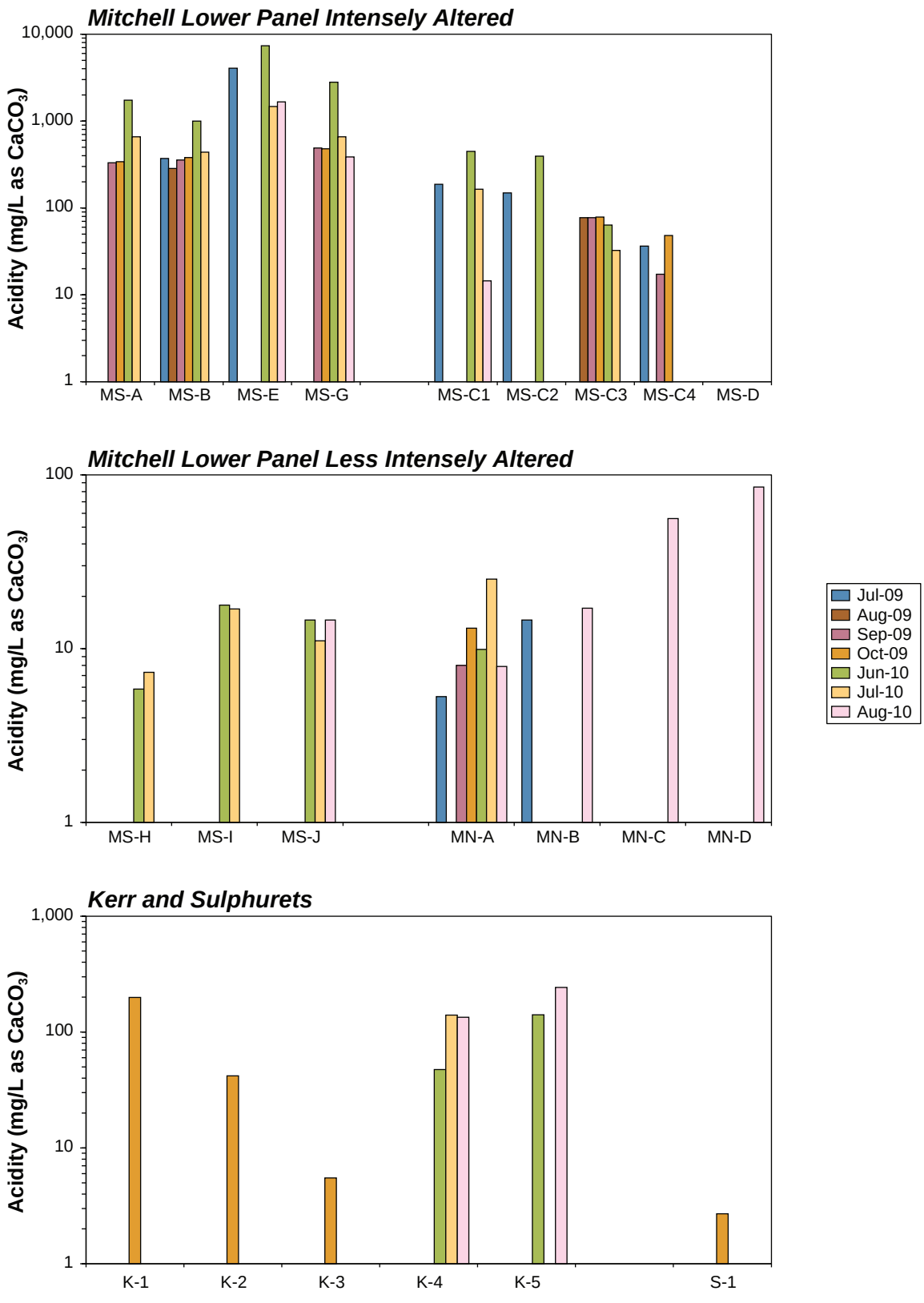
SEABRIDGE GOLD
KSM PROJECT

**pH,
Groundwater Seeps**

Figure 8.1-1

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Mitchell Lower Panel Intensely Altered
Sulphate (mg/L)
10,000
1,000
100
10
1
MS-A
MS-B
MS-E
MS-G
MS-C1
MS-C2
MS-C3
MS-C4
MS-D
Mitchell Lower Panel Less Intensely Altered
Sulphate (mg/L)
1,000
100
10
1
MS-H
MS-I
MS-J
MN-A
MN-B
MN-C
MN-D
Jul-09
Aug-09
Sep-09
Oct-09
Jun-10
Jul-10
Aug-10
Kerr and Sulphurets
Sulphate (mg/L)
1,000
100
10
1
K-1
K-2
K-3
K-4
K-5
S-1

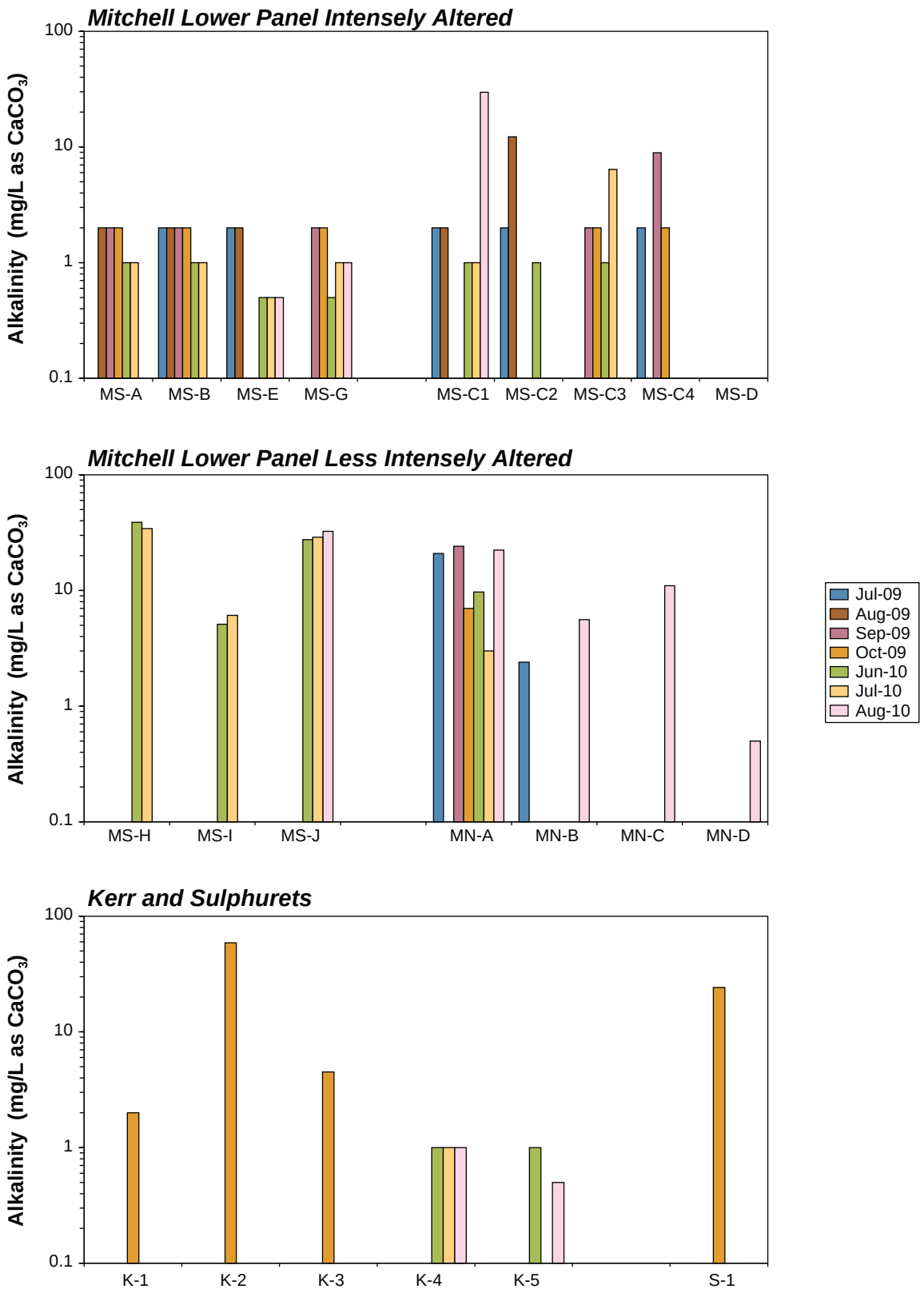


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**Acidity,
Groundwater Seeps**

Figure 8.1-3

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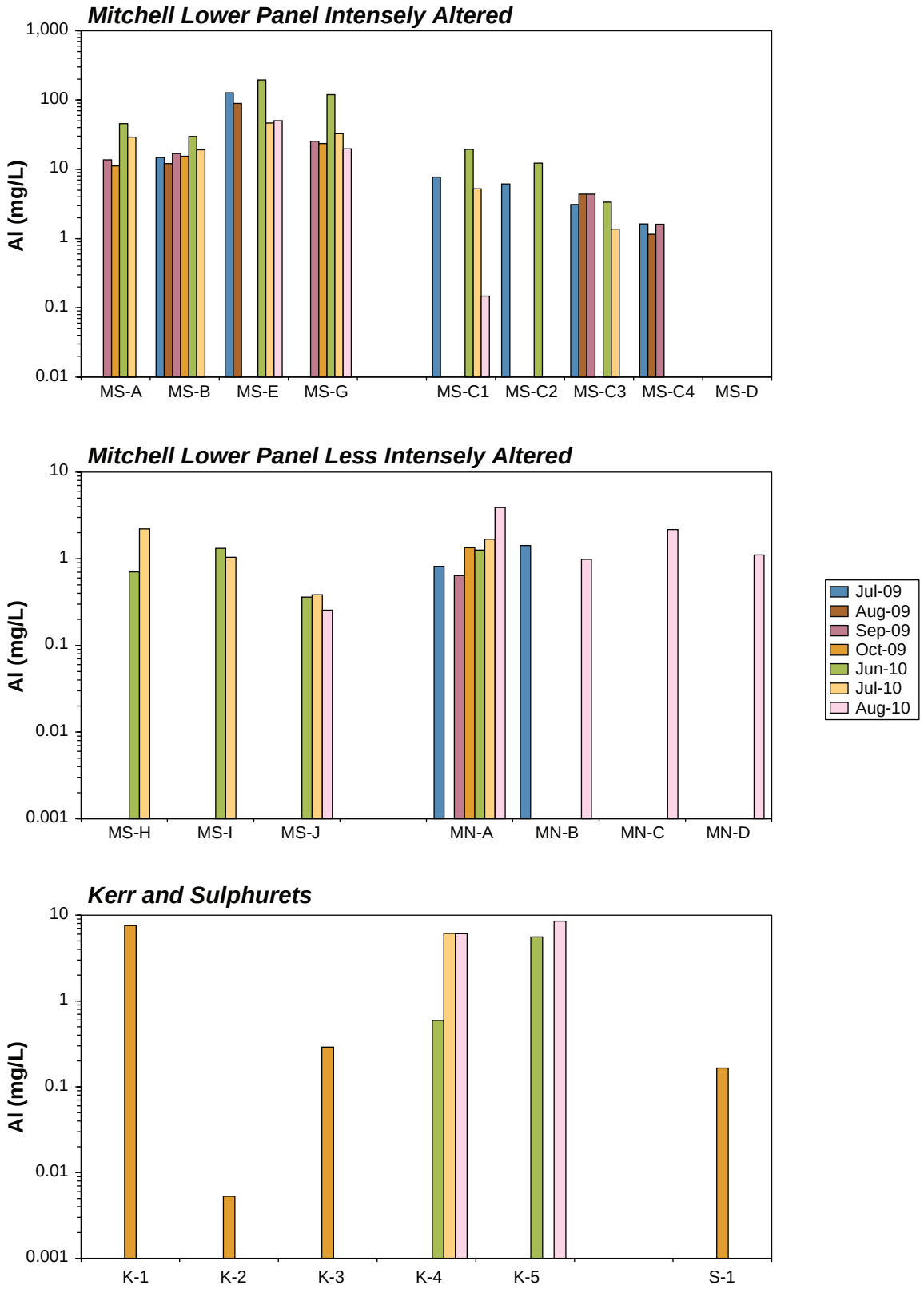


SEABRIDGE GOLD
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Alkalinity, Groundwater Seeps

Figure 8.1-4

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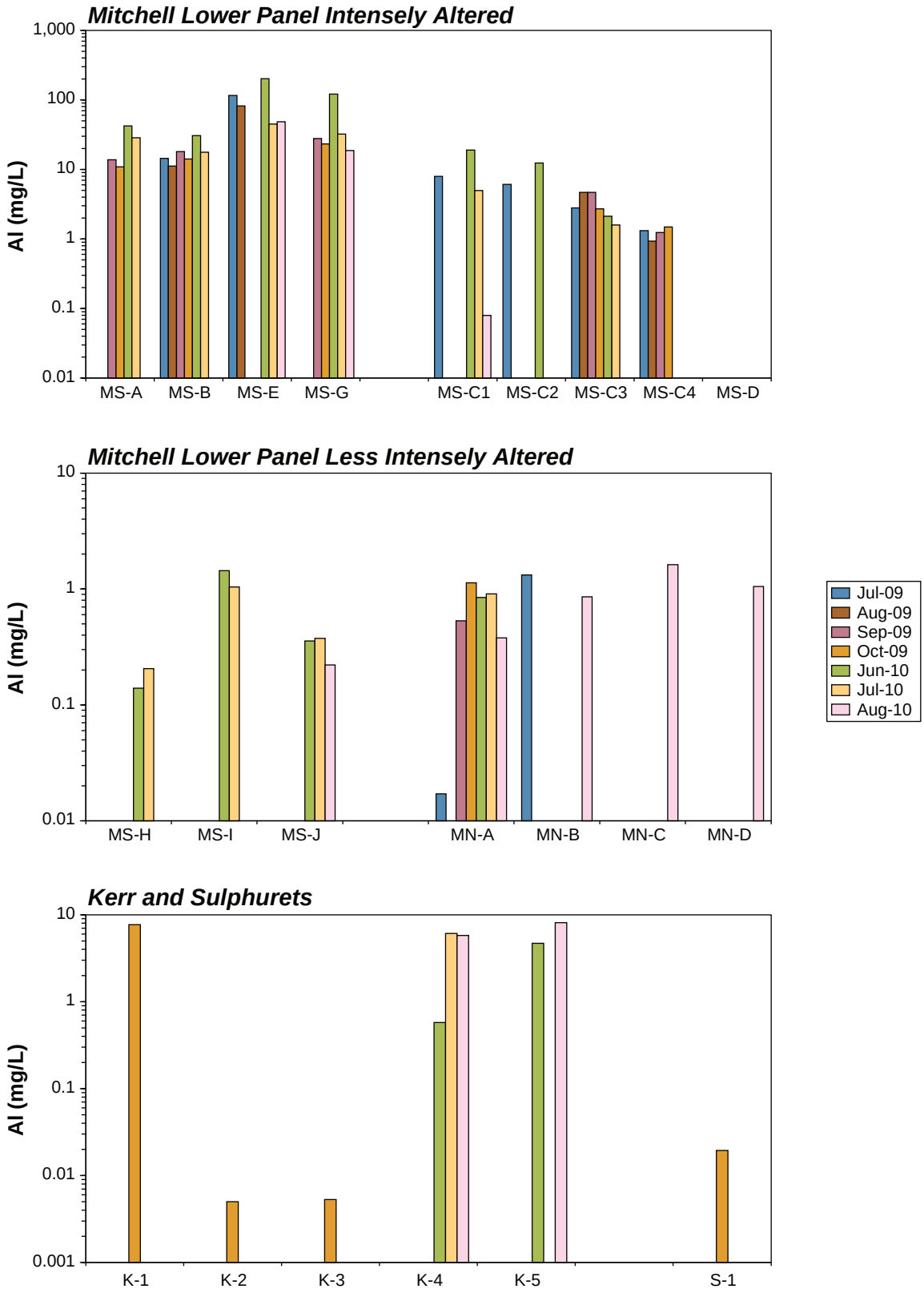


SEABRIDGE GOLD
KSM PROJECT

Total Aluminum, Groundwater Seeps

Figure 8.1-5

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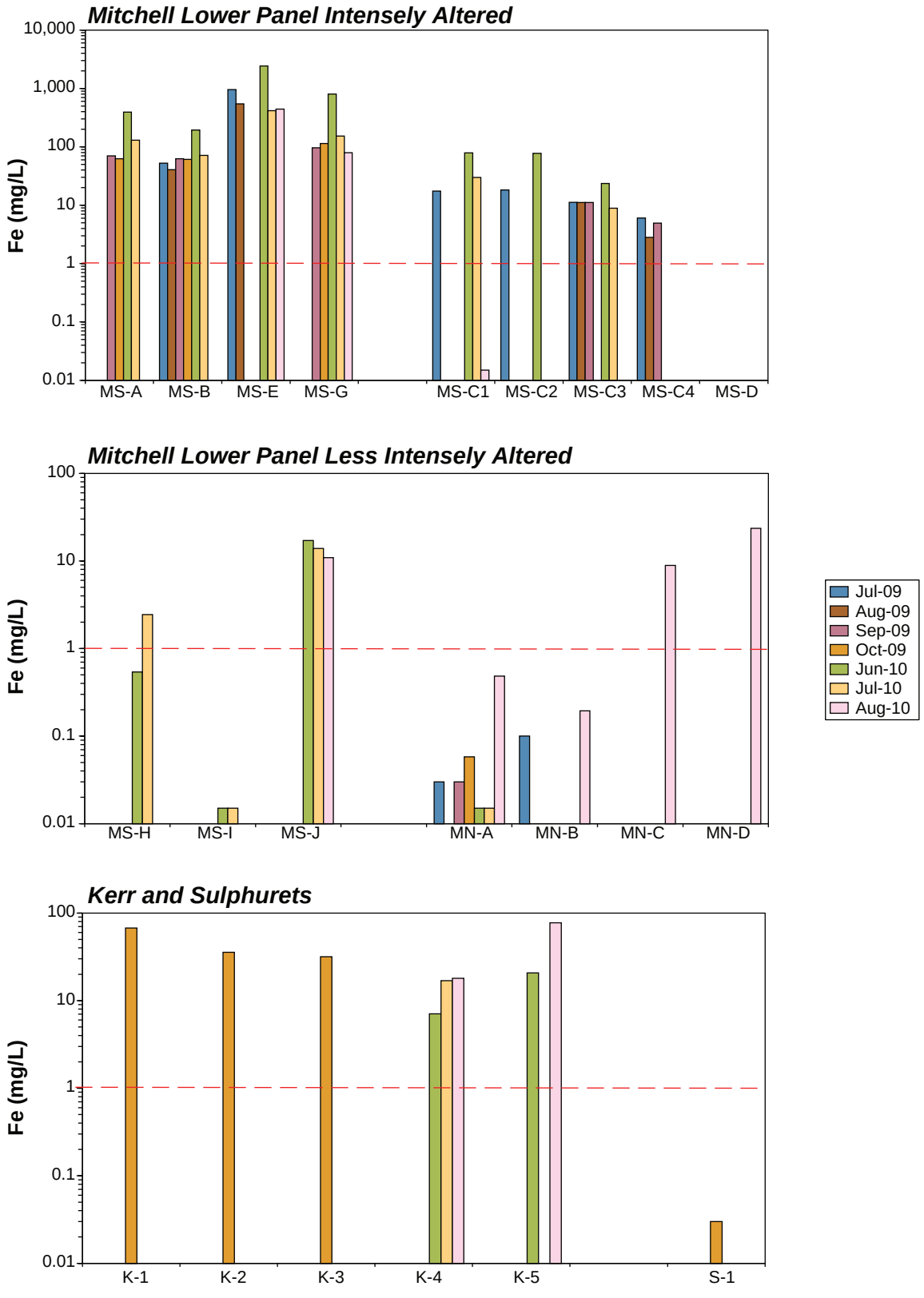
Note: BC MOE guideline for dissolved aluminum is pH-dependent.

SEABRIDGE GOLD
KSM PROJECT

Dissolved Aluminum, Groundwater Seeps

Figure 8.1-6

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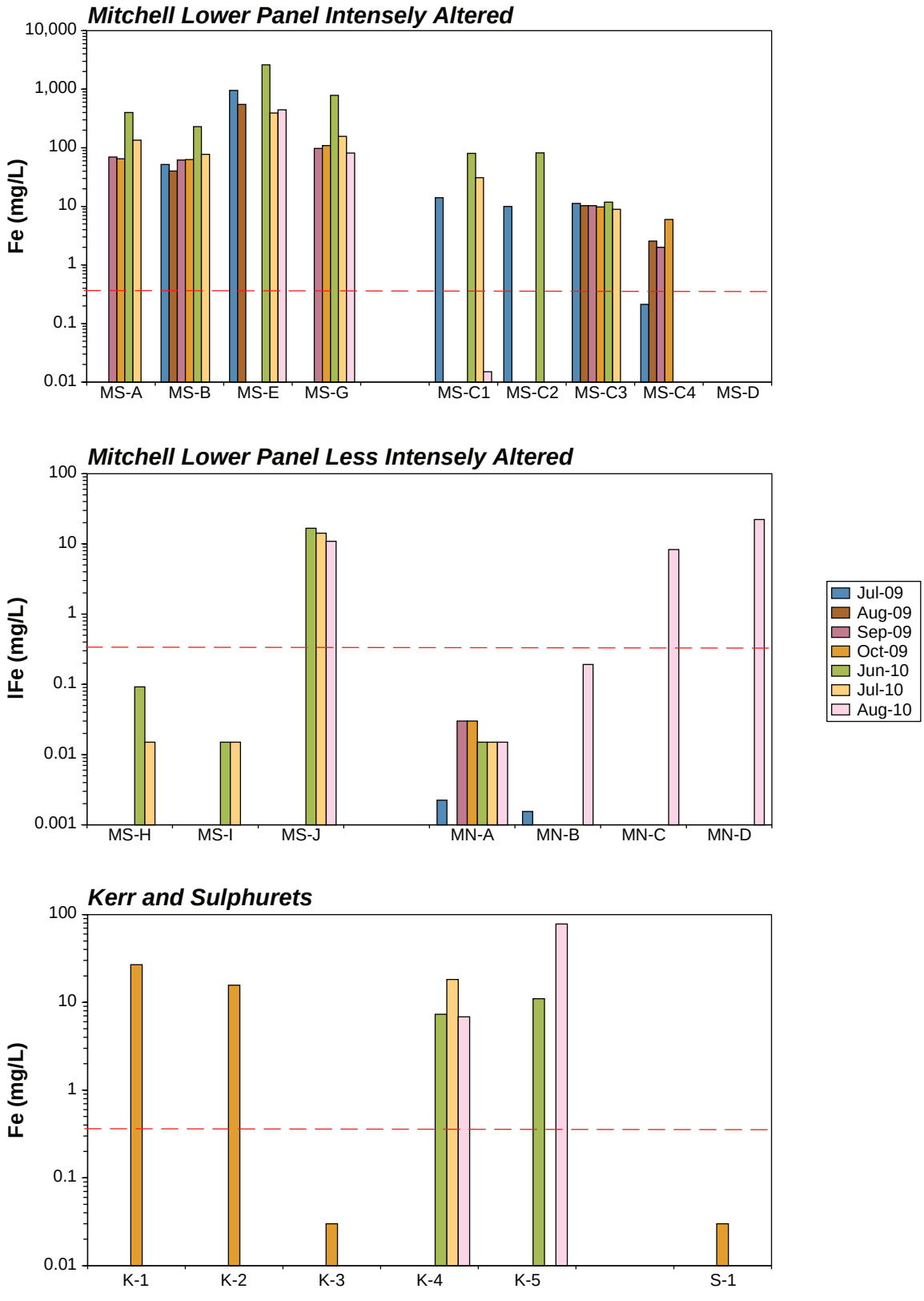
Note: Dashed lines indicate BC MOE WQG

SEABRIDGE GOLD
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**Total Iron,
Groundwater Seeps**

Figure 8.1-7

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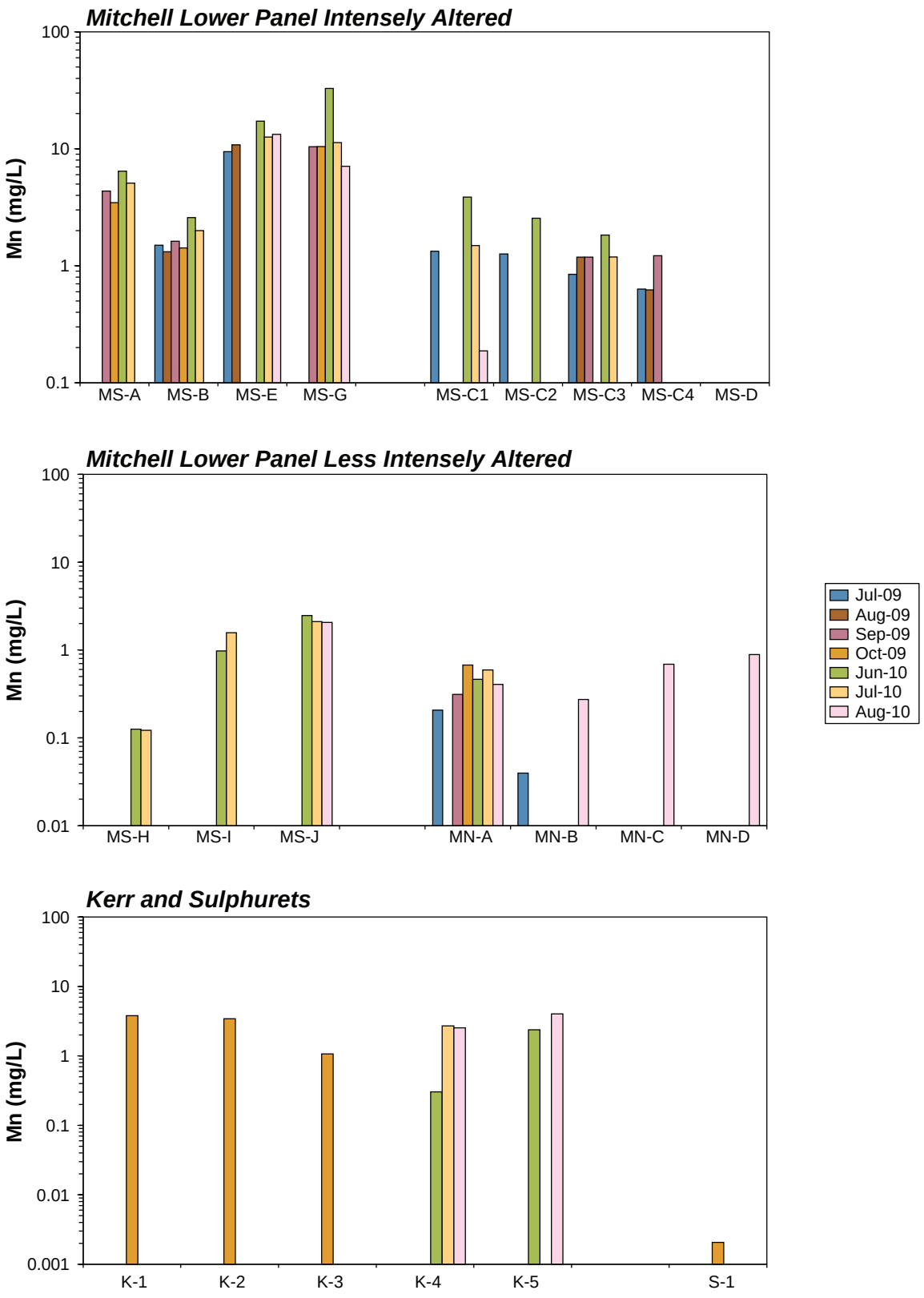
Note: Dashed lines indicate BC MOE WQG.

SEABRIDGE GOLD
KSM PROJECT

Dissolved Iron, Groundwater Seeps

Figure 8.1-8

Rescan™ Engineers & Scientists

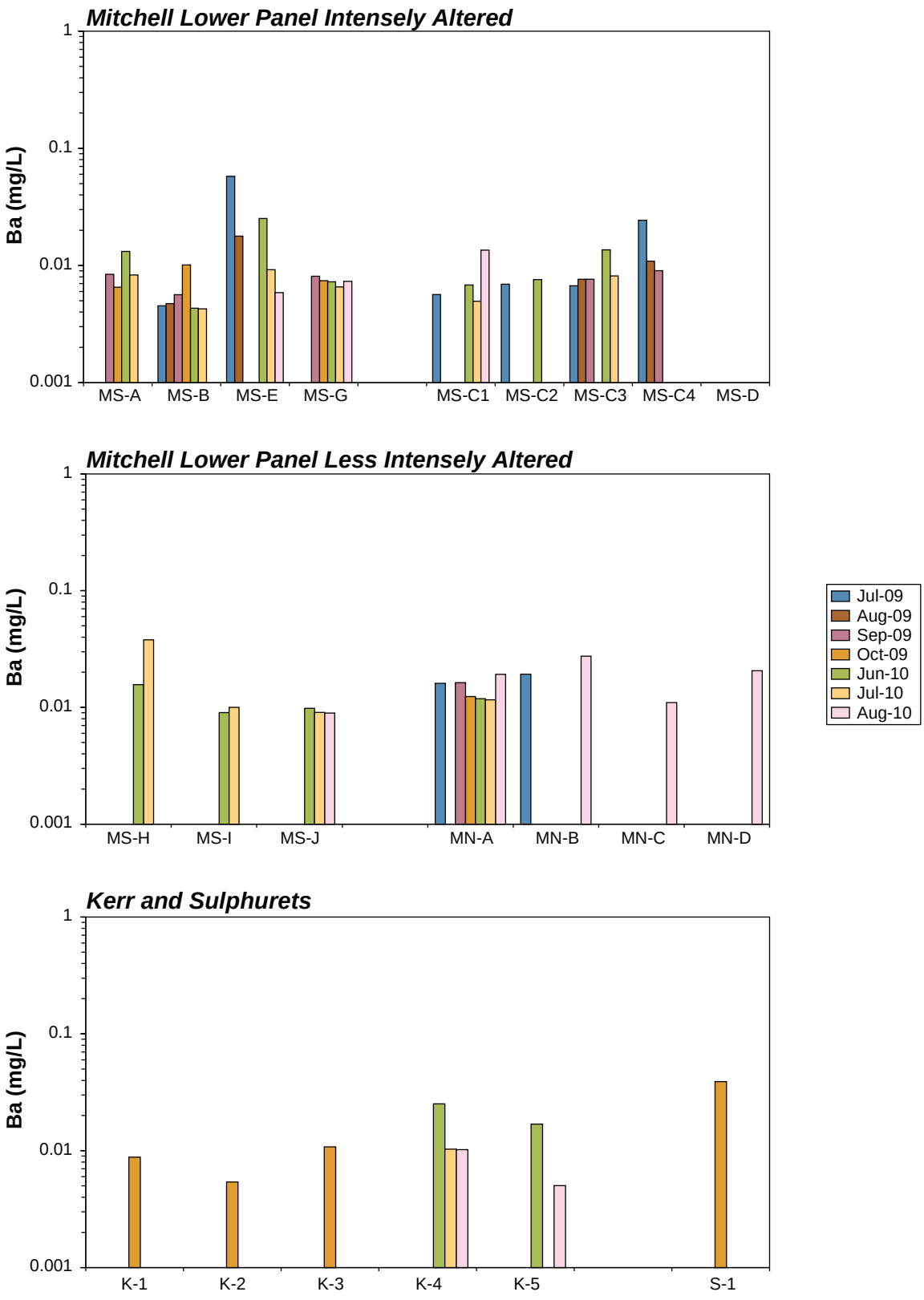


SEABRIDGE GOLD
KSM PROJECT

Total Manganese, Groundwater Seeps

Figure 8.1-9

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**Total Barium,
Groundwater Seeps**

Figure 8.1-10

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8.1.1.4 Trace Elements

A statistical summary of the elements with elevated concentrations at the deposit seeps is presented in Table 8.1-2. The Sulphurets seep was not included as only one measurement was made. The concentrations of total trace elements are graphically presented in Figures 8.1-11 to 8.1-24.

In general, the trace element concentrations of the seeps are very high. These concentrations may represent site-specific equilibrium maximums. General seasonal trends were observed in the Kerr and Mitchell seeps. Concentrations increased throughout the summer of 2010 at the K-4 and K-5 seeps, reflecting decreases in pH. Concentrations typically decreased throughout the summer at the Mitchell seeps, which may reflect the flushing of oxidation products accumulated over the winter low flow period.

8.1.1.5 Elements Associated with the Neutralization Potential

Calcium and magnesium concentrations were similar across Kerr and Sulphurets seeps with concentrations that ranged from 36 to 340 mg/L, and 2 to 19 mg/L for calcium and magnesium respectively. Calcium and magnesium concentrations increased throughout the summer at the K-4 and K-5 seeps (Figures 8.1-23, 8.1-24).

Calcium concentrations were comparable across IARG and QSP seeps, ranging from 60 to 200 mg/L. Magnesium concentrations were more variable within each individual seep, and concentrations ranged from 4 to 80 mg/L. Calcium and magnesium concentrations were lower at the CL-PR and Hazelton Volcanics seeps. Calcium and magnesium concentrations tended to decrease throughout the summer at the Mitchell seeps (Figures 8.1-23, 8.1-24).

8.2 SEEP FLOW RATES

Seep flow measurements were conducted for selected seeps in September and October 2009 and for all seeps where geochemical samples were obtained in July 2010. The flow rates measured and calculated for seeps are presented in Table 8.2-1. A comparison of the flow rates for each of the seeps highlights the variability in the seep discharge that is a result of variable precipitation, infiltration rates, and flow paths. There is no clear relationship between the flow rates and temporal variability, as some seeps have higher flow rates in the fall while others have higher flow rates in the summer.

For Kerr Deposit seeps, the measured flow rates ranged from 0.03 L/s for seep K-3 to 6.4 L/s for seep K-1. Many of the higher elevation seeps in the Kerr Deposit are ephemeral.

For Mitchell Deposit seeps, the flow rates range from 0.01 L/s for seep MS-E in July 2010 to 127.20 for Seep MS-A in September 2009.

Seep flow rates in the Ted Morris Creek Valley were consistently lower in October 2009 than in July 2010. The flows in October 2009 ranged from 0.83 L/s (TM-E) to 7.34 L/s (TM-B) and in July 2010 ranged from 1.02 L/s (TM-E) to 8.13 L/s (TM-B).

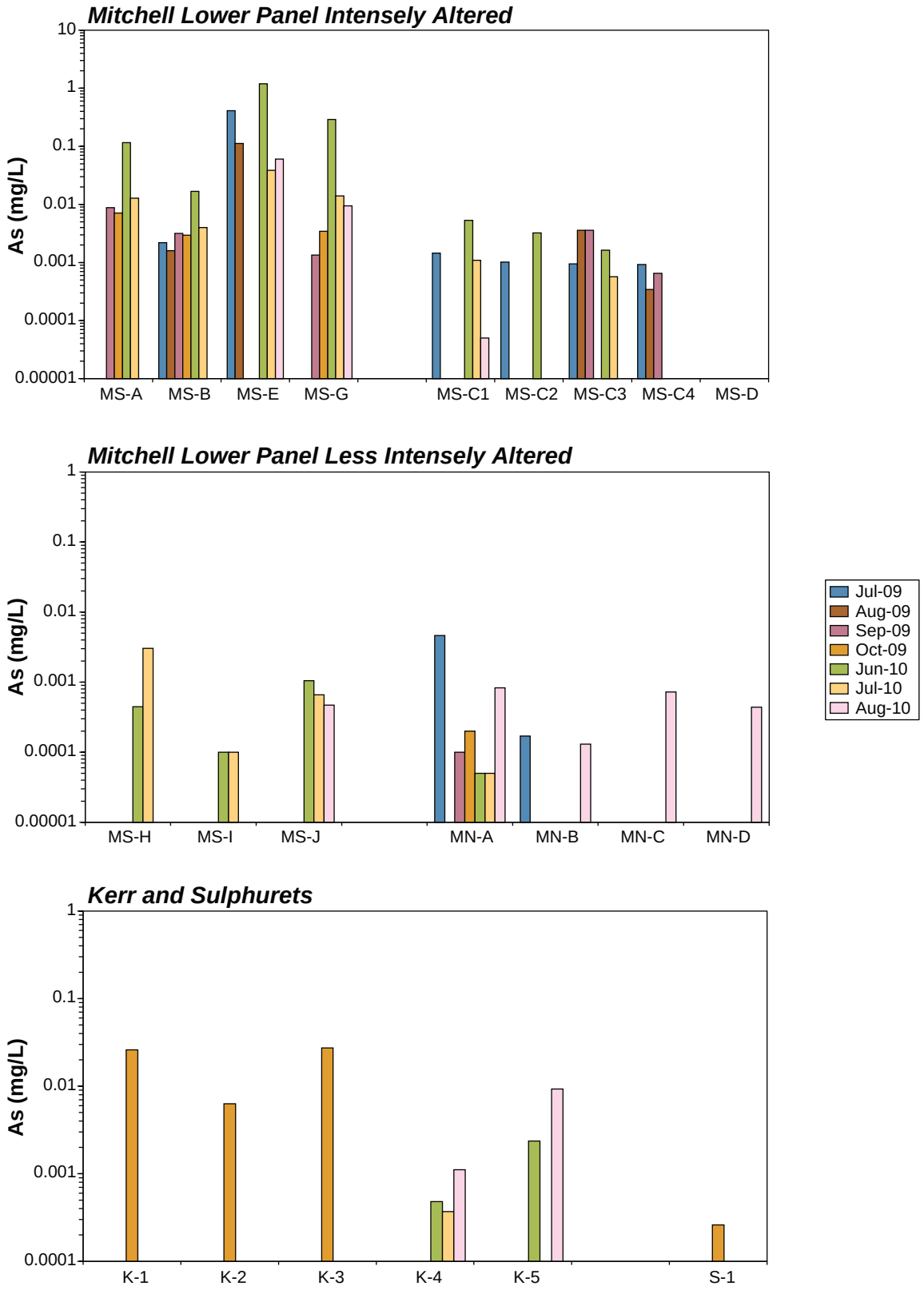
Table 8.1-2. Statistical Summary of Trace Elements in Groundwater Seeps

Parameter	KERR			MITCHELL-IARG			MITCHELL-QSP		
Units: mg/L	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX
pH	2.42	3.14	6.46	2.02	2.49	3.47	2.55	3.38	5.63
Aluminum	0.00530	5.83	8.52	11.20	25.50	195.00	0.15	3.36	19.40
Arsenic	0.00037	0.00433	0.0273	0.00134	0.0117	1.19	*0.0000500*	0.00102	0.00530
Cadmium	*0.0000500*	0.00197	0.00324	0.0144	0.0514	0.234	0.000808	0.0150	0.0650
Chromium	0.000810	0.00136	0.00420	0.00100	0.00200	0.0404	0.000200	0.000500	0.00250
Cobalt	0.00536	0.0241	0.0391	0.0229	0.0778	0.562	0.00157	0.0136	0.0806
Copper	0.00392	1.82	4.23	5.07	7.57	76.0	0.0305	4.99	28.8
Fluoride	0.0500	0.520	1.00	1.34	2.60	18.1	0.299	1.58	5.32
Iron	7.06	26.2	77.5	40.7	114	2430	0.0150	11.2	79.0
Lead	0.000146	0.000625	0.00480	0.00449	0.0609	0.579	0.000207	0.00984	0.0404
Manganese	0.303	2.63	4.03	1.32	6.44	32.85	0.187	1.22	3.87
Mercury	*0.00000500*	*0.00000500*	0.0000590	*0.00000500*	*0.0000100*	0.0000150	*0.00000500*	*0.0000100*	*0.0000100*
Selenium	0.000320	0.000575	0.00108	0.00252	0.00664	0.238	0.000200	0.00100	0.00530
Silver	*0.0000100*	0.0000290	0.0000500	0.0000715	0.000643	0.00240	*0.00000500*	0.0000640	0.000230
Vanadium	*0.000500*	0.00150	0.0138	0.00200	0.0104	0.289	*0.000500*	0.00100	0.00550
Zinc	0.03040	0.304	0.475	1.14	3.19	15.00	0.04	1.02	4.60

Parameter	MITCHELL-CL-PR			MITCHELL-HAZELTON VOLCANICS		
Units: mg/L	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX
pH	5.13	6.12	7.06	2.79	5.67	6.38
Aluminum	0.26	0.71	2.22	0.64	1.30	3.91
Arsenic	*0.000100*	0.000470	0.00304	*0.0000500*	0.000185	0.00462
Cadmium	0.00151	0.00316	0.0139	0.000773	0.00387	0.00727
Chromium	0.000155	0.000250	0.000500	0.000100	0.000238	0.000500
Cobalt	0.00188	0.0125	0.0198	0.00059	0.00388	0.0117
Copper	0.112	1.09	1.56	0.0492	1.19	2.15
Fluoride	0.375	0.598	1.46	0.350	0.915	2.05
Iron	0.0150	2.44	17.1	0.0150	0.0790	23.6
Lead	0.000700	0.00399	0.0115	0.000160	0.00179	0.00688
Manganese	0.122	1.57	2.47	0.04	0.436	0.889
Mercury	*0.00000500*	*0.00000500*	*0.00000500*	*0.00000500*	*0.00000500*	*0.00001000*
Selenium	0.000100	0.000750	0.00373	0.000490	0.00321	0.00429
Silver	*0.0000100*	0.0000360	0.000138	0.0000140	0.0000295	0.000111
Vanadium	*0.000500*	0.00100	0.00210	*0.000100*	0.00088	0.00155
Zinc	0.07	0.132	0.544	0.05	0.240	0.474

Notes:

Italicized values are below the detection limit

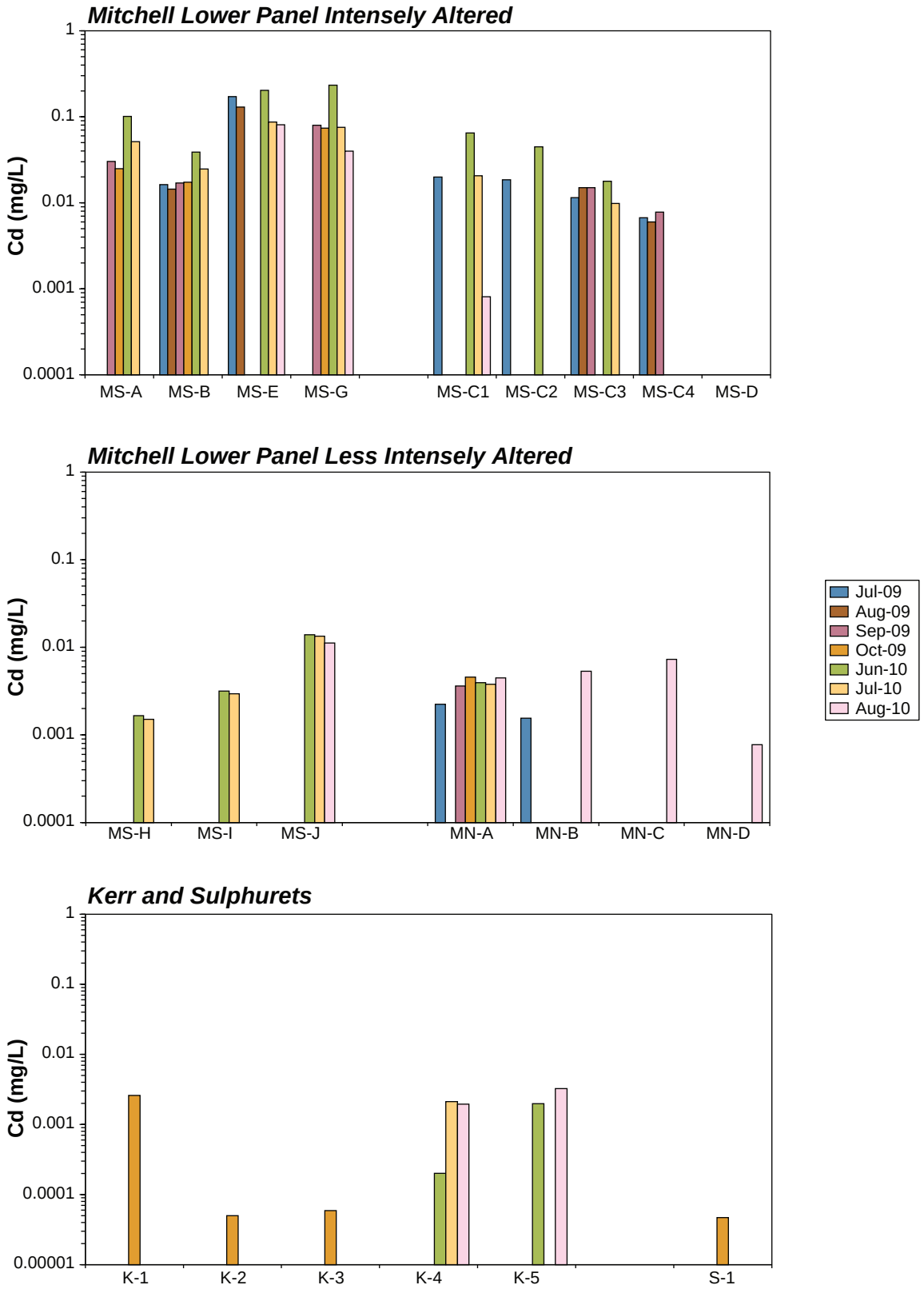


SEABRIDGE GOLD
KSM PROJECT

Total Arsenic, Groundwater Seeps

Figure 8.1-11

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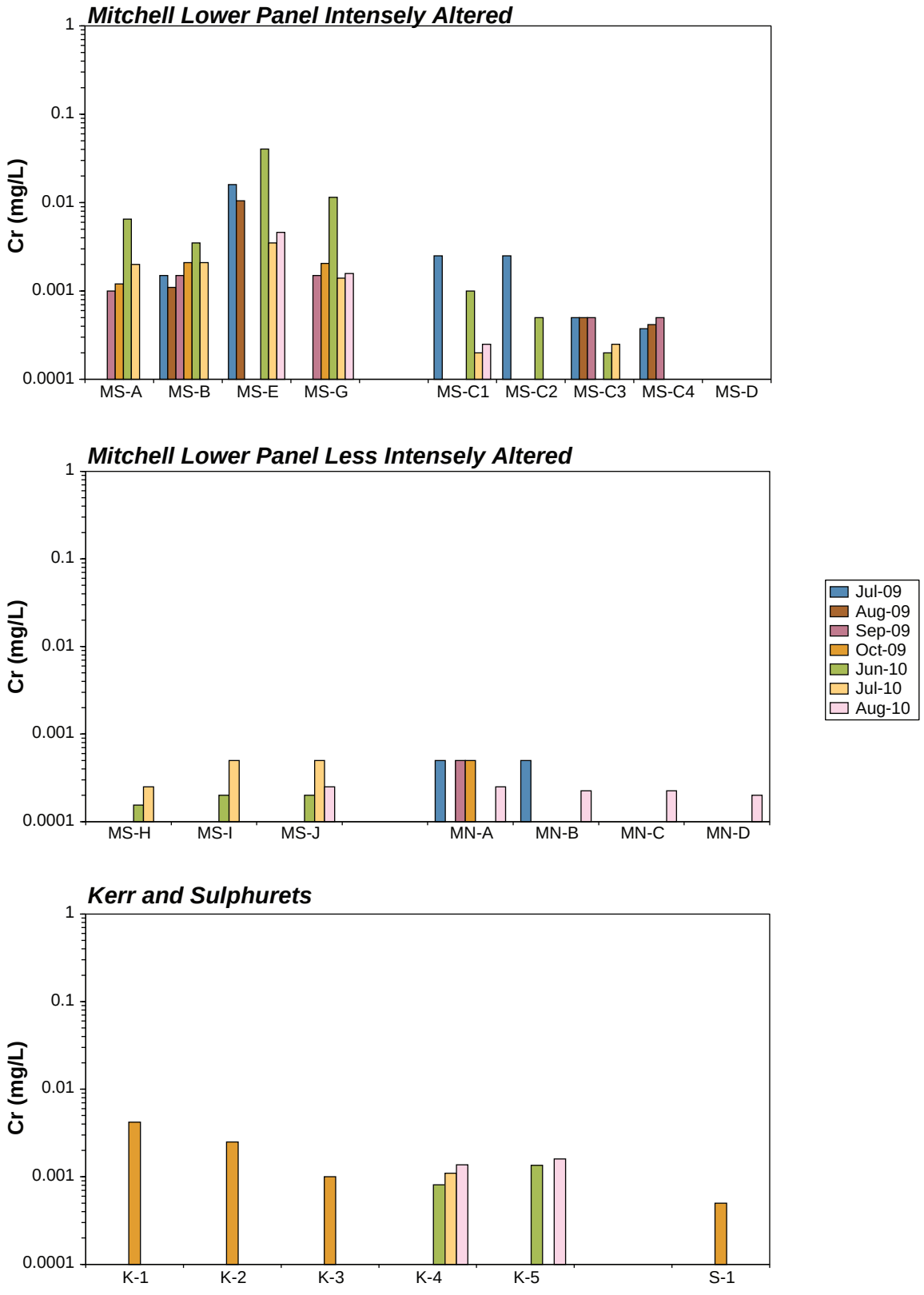


SEABRIDGE GOLD
KSM PROJECT

Total Cadmium, Groundwater Seeps

Figure 8.1-12

Rescan™ Engineers & Scientists

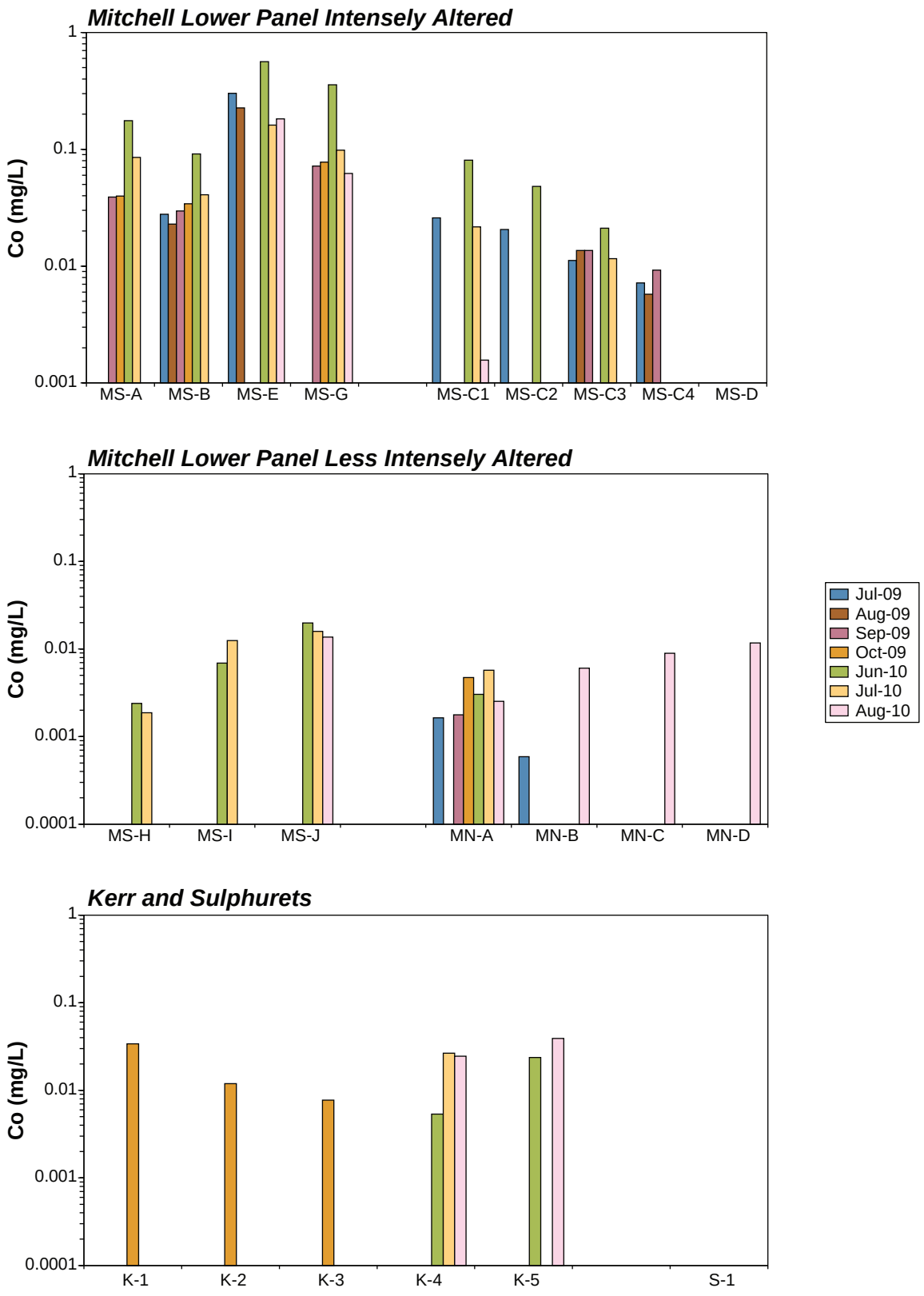


SEABRIDGE GOLD
KSM PROJECT

Total Chromium, Groundwater Seeps

Figure 8.1-13

Rescan™ Engineers & Scientists

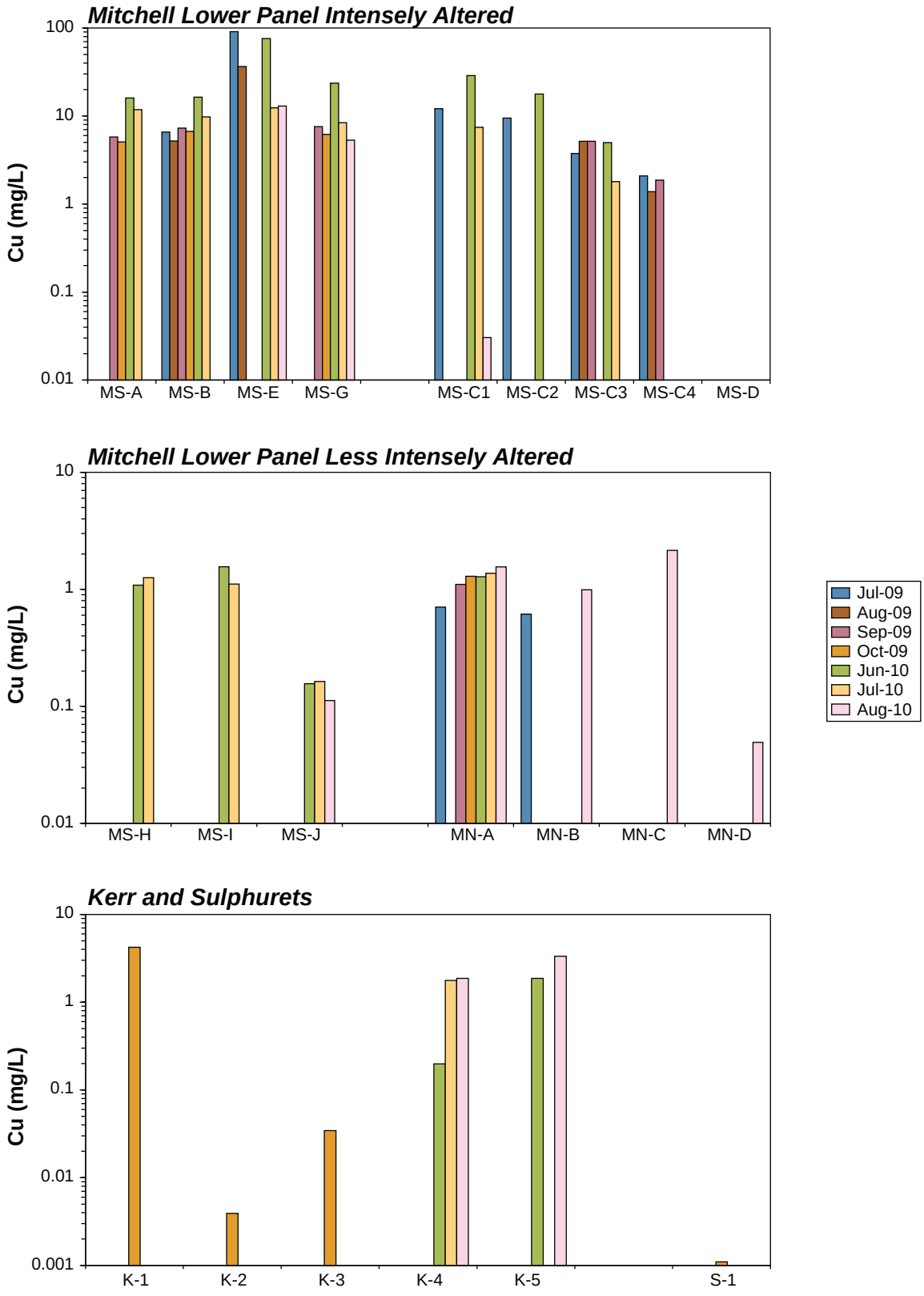


SEABRIDGE GOLD
KSM PROJECT

Total Cobalt, Groundwater Seeps

Figure 8.1-14

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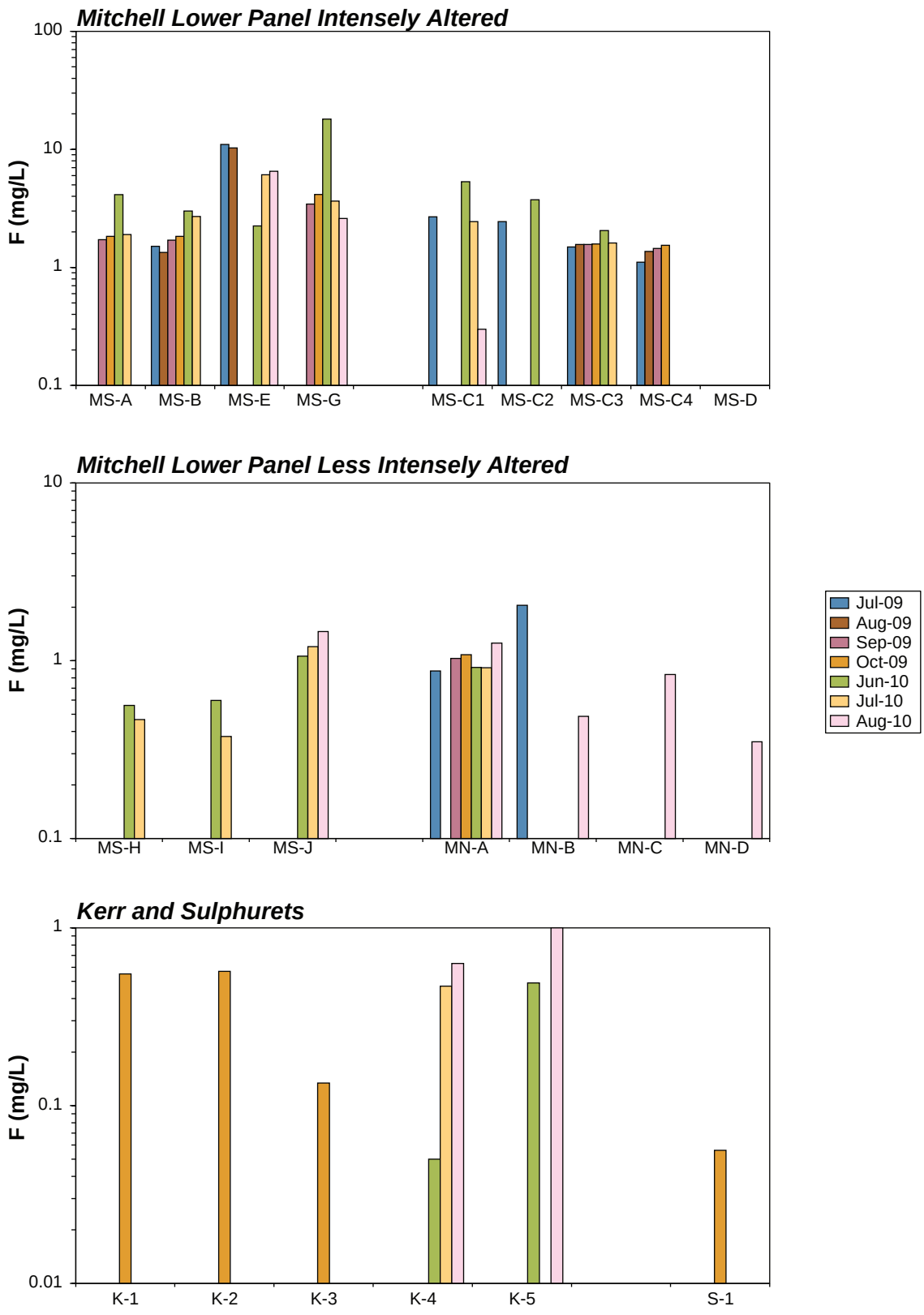


SEABRIDGE GOLD
KSM PROJECT

**Total Copper,
Groundwater Seeps**

Figure 8.1-15

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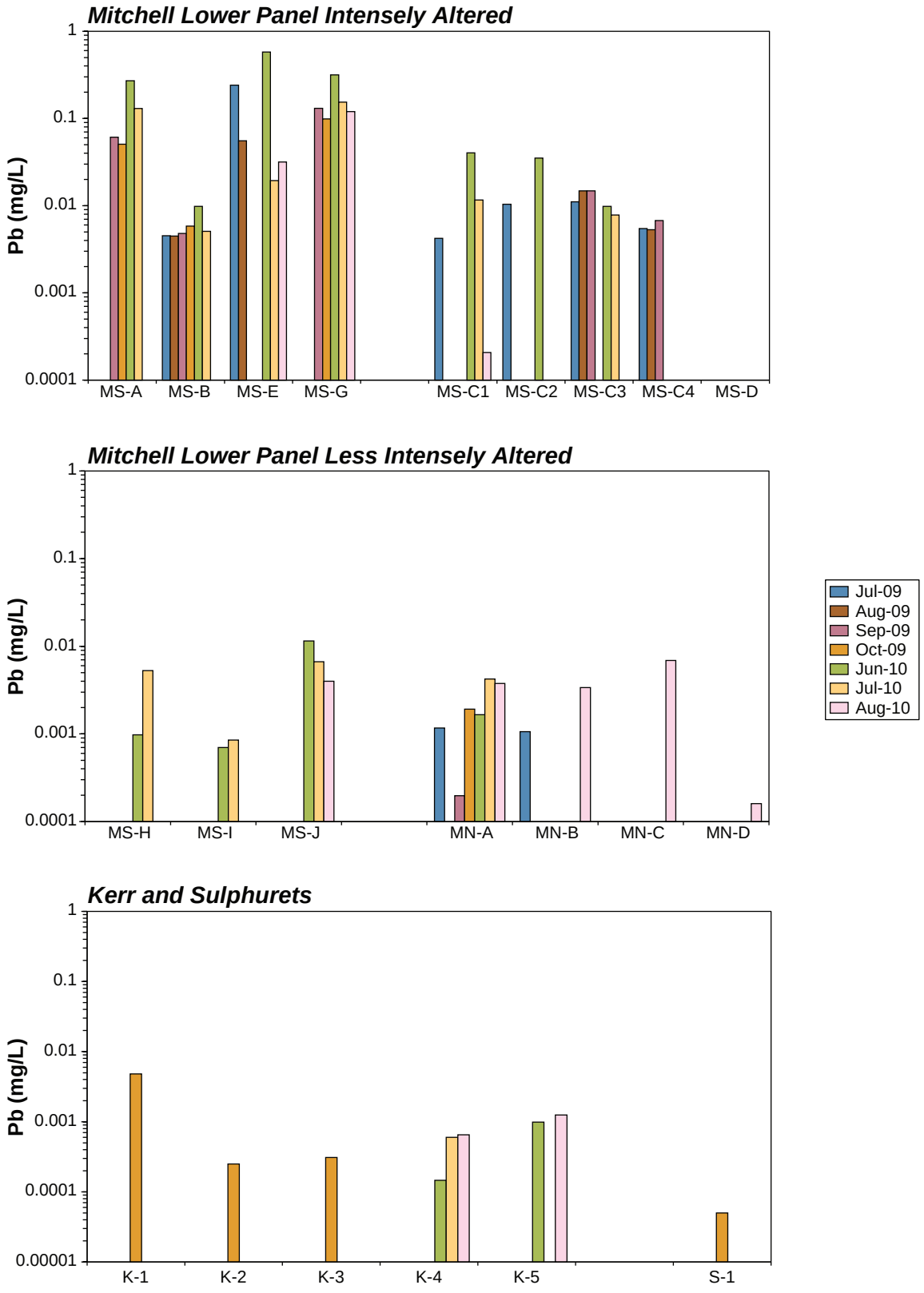


SEABRIDGE GOLD
KSM PROJECT

Total Fluoride, Groundwater Seeps

Figure 8.1-16

Rescan™ Engineers & Scientists

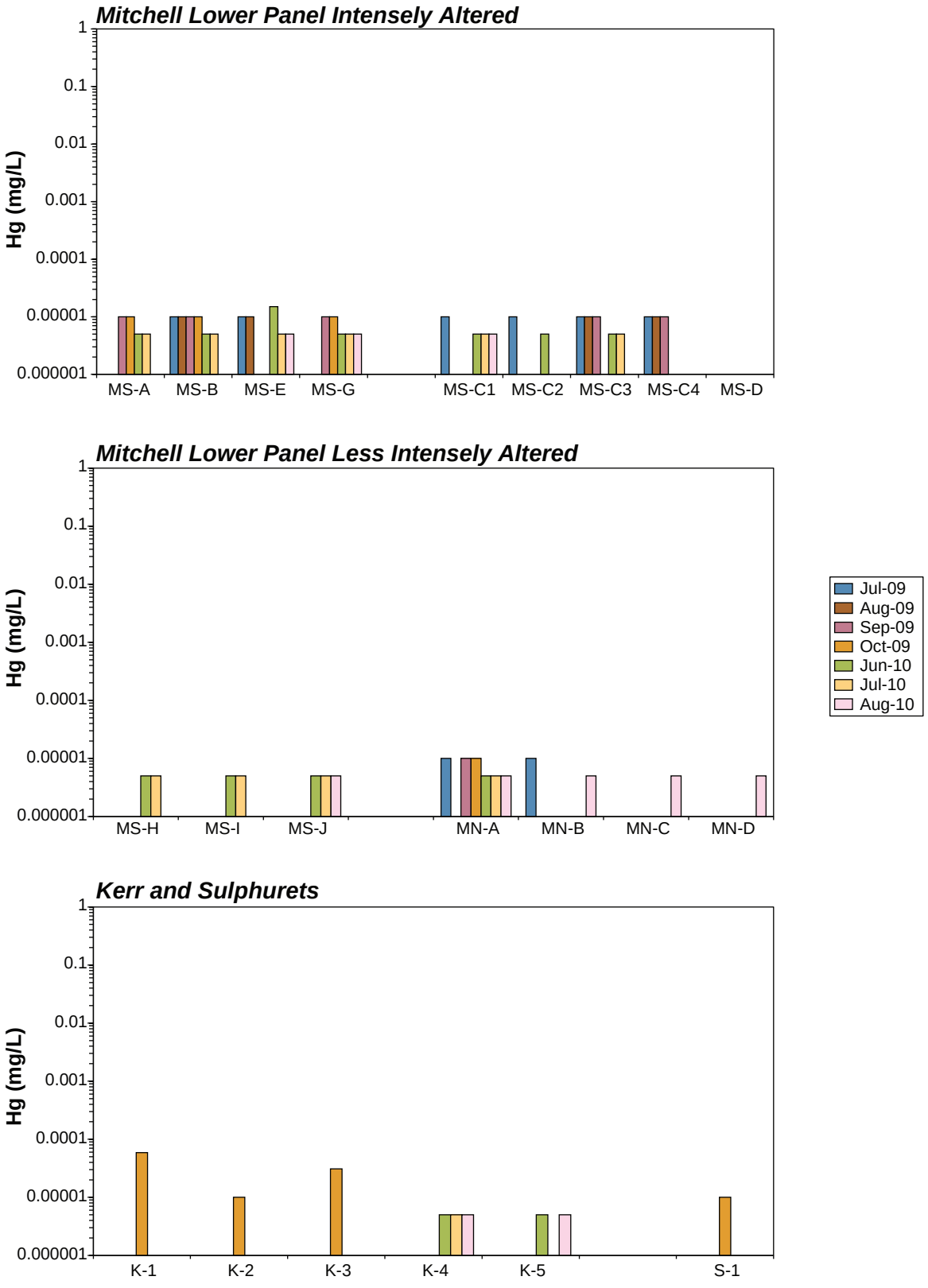


SEABRIDGE GOLD
KSM PROJECT

**Total Lead,
Groundwater Seeps**

Figure 8.1-17

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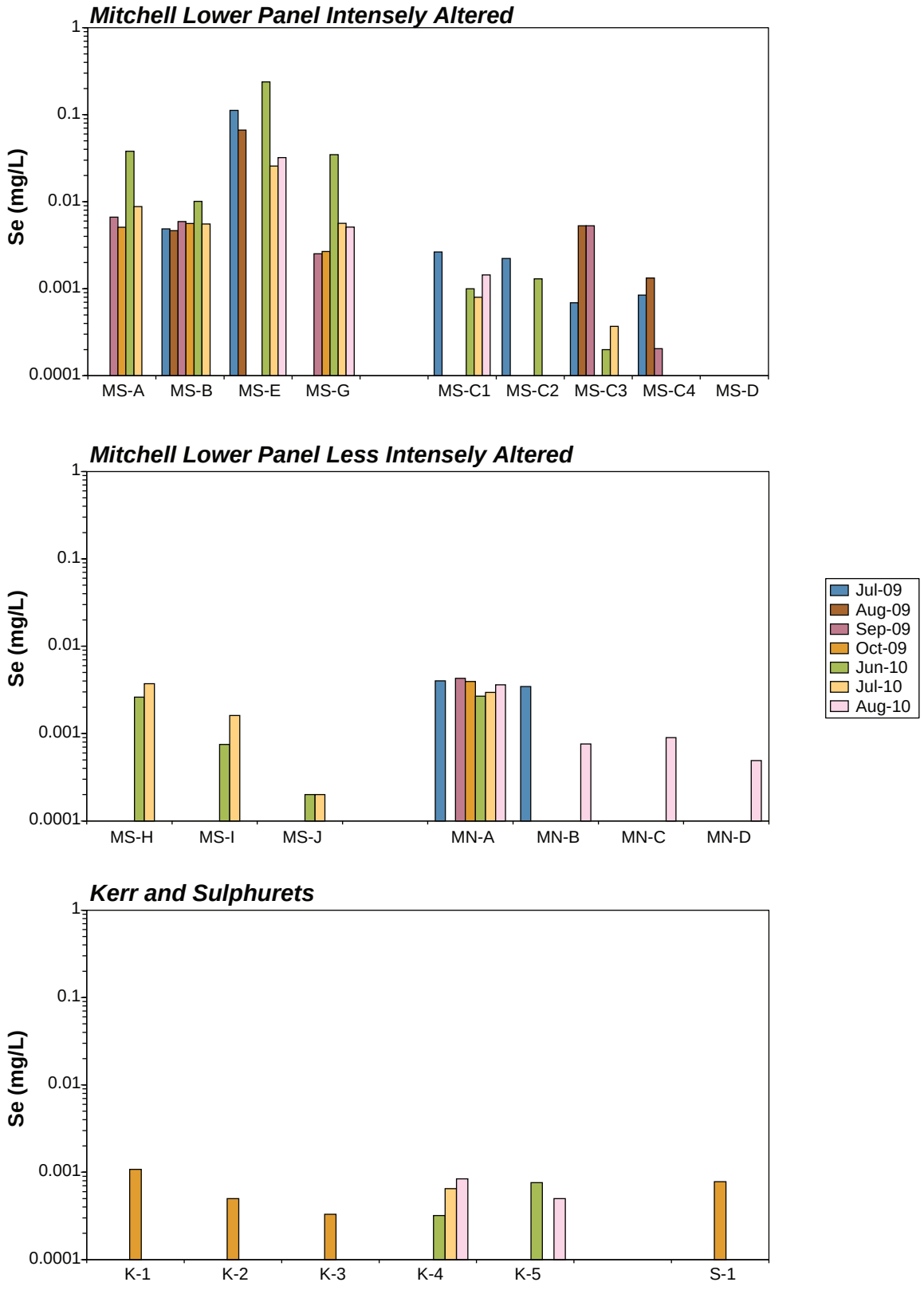


SEABRIDGE GOLD
KSM PROJECT

Total Mercury, Groundwater Seeps

Figure 8.1-18

Rescan™ Engineers & Scientists

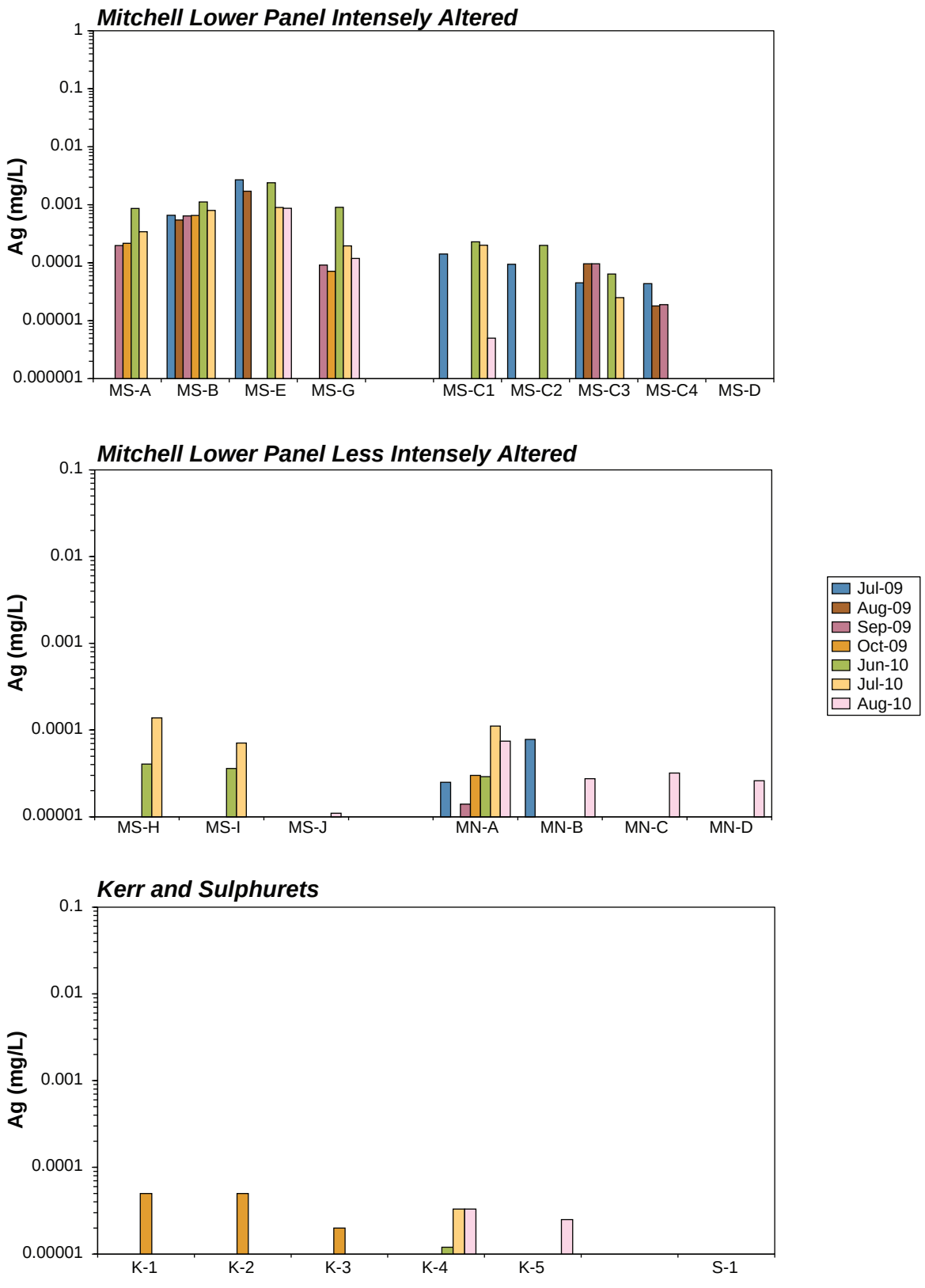


SEABRIDGE GOLD
KSM PROJECT

Total Selenium, Groundwater Seeps

Figure 8.1-19

Rescan™ Engineers & Scientists

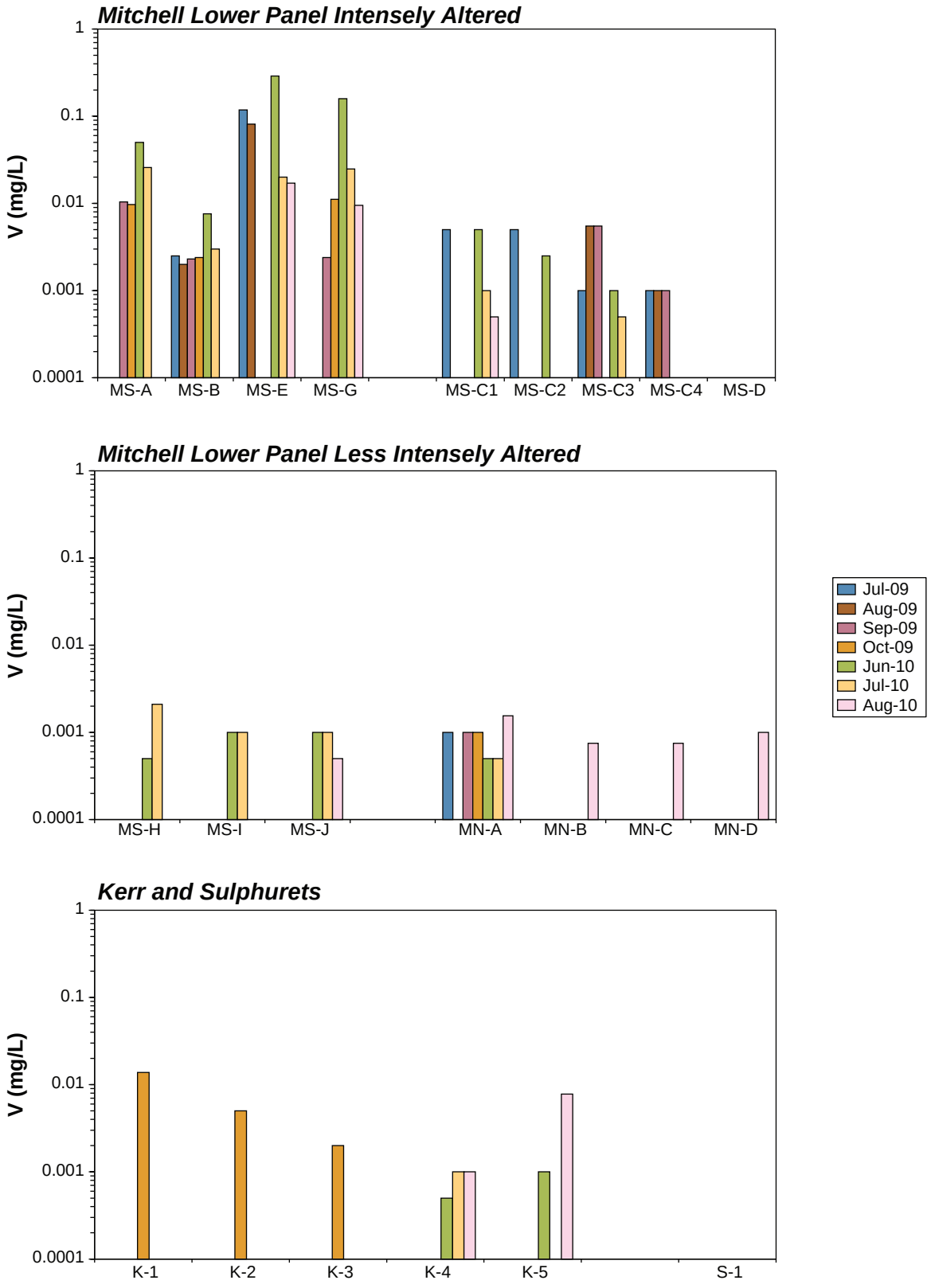


SEABRIDGE GOLD
KSM PROJECT

**Total Silver,
Groundwater Seeps**

Figure 8.1-20

Rescan™
Engineers & Scientists

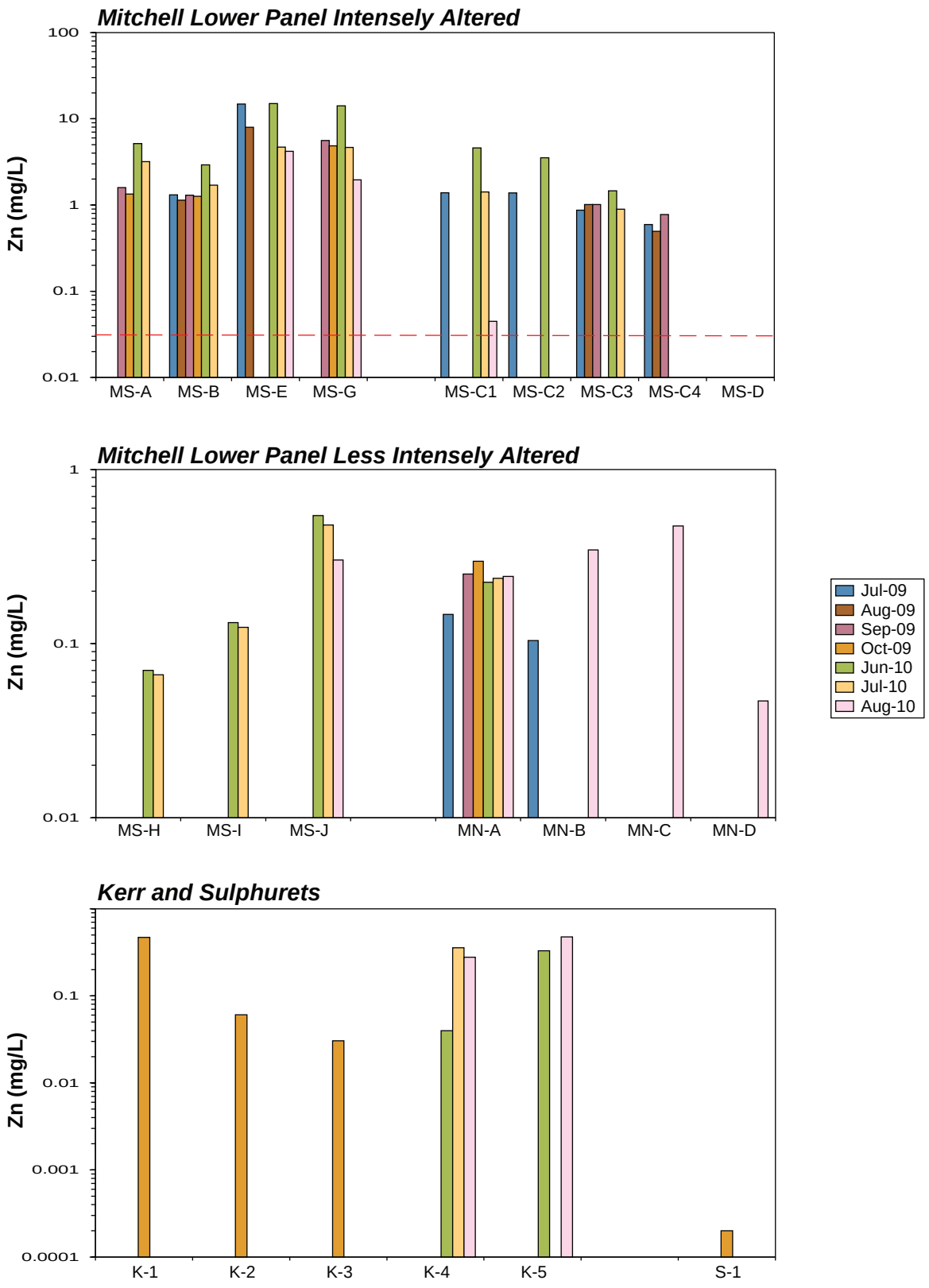


SEABRIDGE GOLD
KSM PROJECT

Total Vanadium, Groundwater Seeps

Figure 8.1-21

Rescan™ Engineers & Scientists

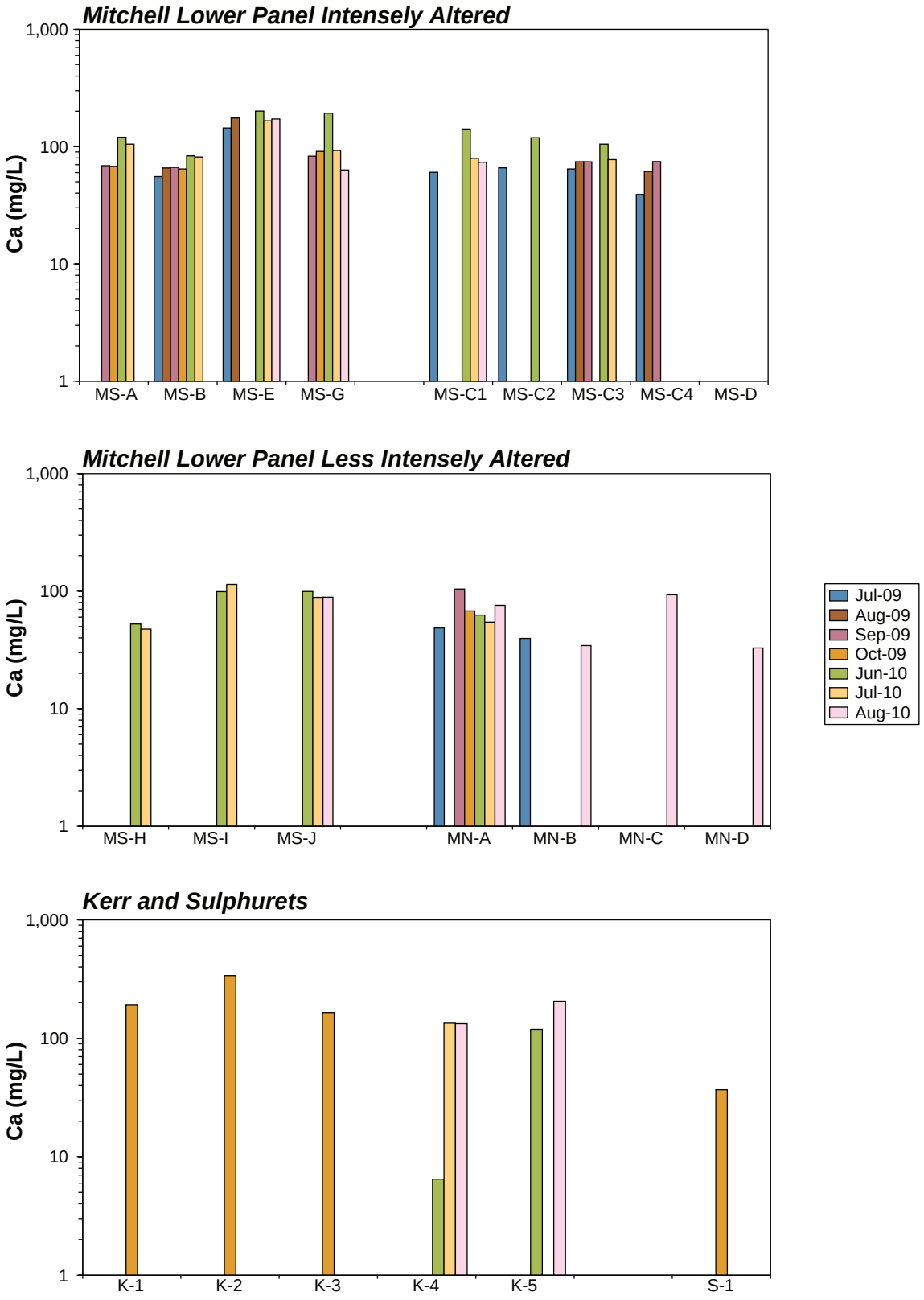


SEABRIDGE GOLD
KSM PROJECT

**Total Zinc,
Groundwater Seeps**

Figure 8.1-22

Rescan™
Engineers & Scientists

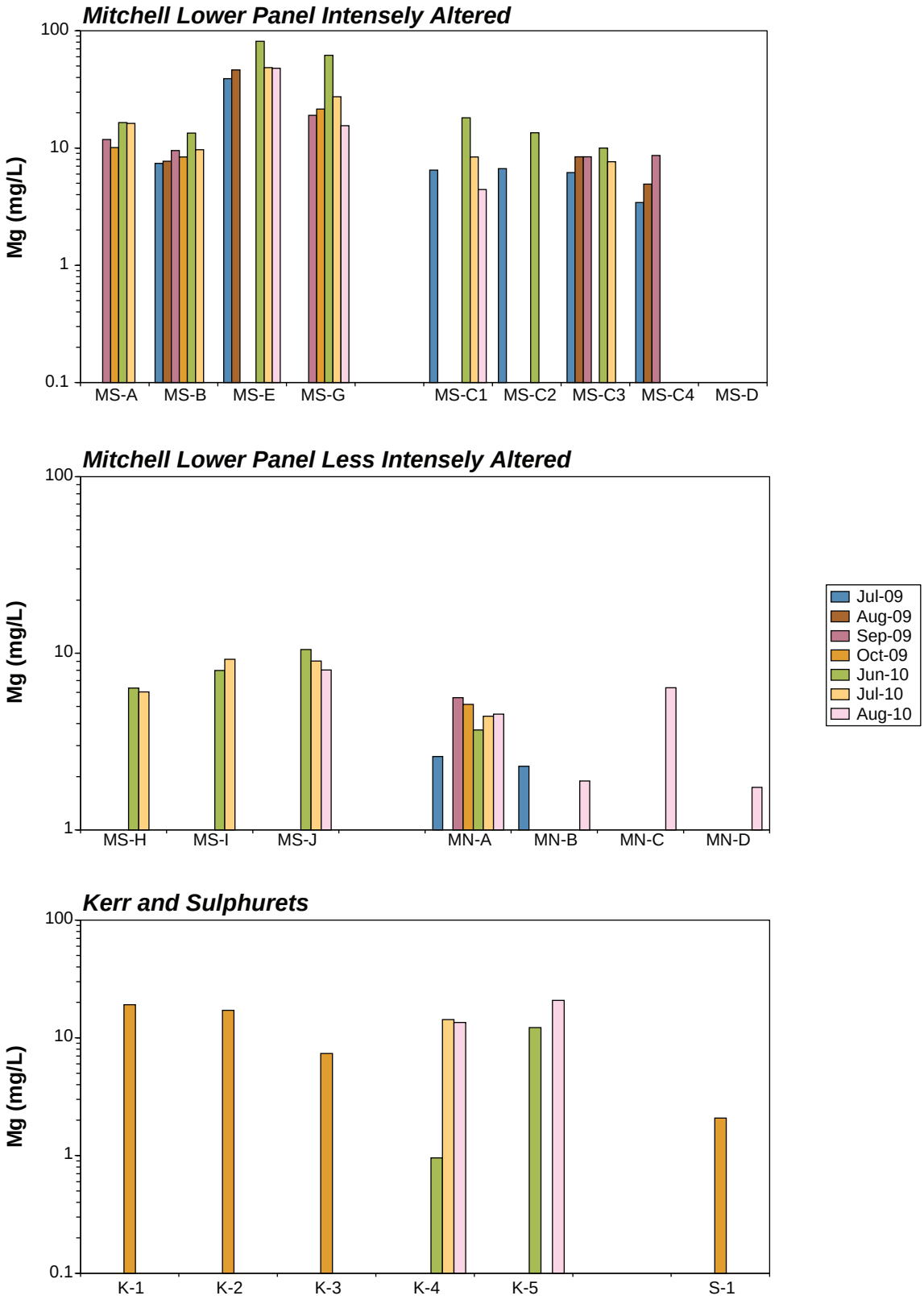


SEABRIDGE GOLD
KSM PROJECT

Total Calcium, Groundwater Seeps

Figure 8.1-23

Rescan™ Engineers & Scientists



SEABRIDGE GOLD
KSM PROJECT

Total Magnesium, Groundwater Seeps

Figure 8.1-24

Rescan™ Engineers & Scientists

Table 8.2-1. Seep Flow Rates

Seep	Sep-09	Oct-09	Jul-10
Units: L/s			
Kerr			
K-1		6.39	1.6
K-2		0.07	
K-3		0.03	
K-4			4.3
Mitchell			
MS-A	127.2		26.3
MS-B		0.22	3.6
MS-E			0.01
MS-G	69.96	55.24	77.01
MS-C3	3.36		6.22
MS-C1			2.22
MN-A	0.37	1.21	0.62
MS-H1			3.34
MS-H2			3.89
MS-I			1.28
MS-J			1.04
Ted Morris			
TM-B		7.34	8.13
TM-C		2.20	2.91
TM-D		4.33	9.57
TM-E		0.83	1.02
McTagg			
McTagg-A			2.49
McTagg-1		0.45	0.02
McTagg-B			0.09

9. Conclusions

The KSM Project has two geographically separated areas: (1) the Mine Site and (2) the Process Plant and TMF Area. These locations will be accessed by new access roads built from the Eskay Creek Mine Road and Highway 37. Samples of waste rock, tailing, non-deposit material, and groundwater seeps were collected for analysis between 2008 and 2012.

There were 2,030 samples of waste rock and potential pit wall material collected from diamond drill holes. These samples underwent static ABA, leachate, and kinetic tests. The ABA test results have been collected from all model codes used in the mine waste schedule. Adjusted SNPR values less than 2.0 were reported for 82% of Kerr samples, 43% of Sulphurets samples, 75% of Mitchell upper panel samples, 92% of Mitchell lower panel samples, and 92% of Iron Cap samples. The only model codes with median adjusted SNPR values greater than 2.0 were Sulphurets UP Hazelton, Sulphurets Monzonite, Sulphurets Undefined, and Mitchell Monzonite. The 40 humidity cell kinetic tests represent 99% of Kerr waste rock, 36% of Sulphurets waste rock, 94% of Mitchell waste rock, and 100% of Iron Cap waste rock. Aluminum, cadmium, copper, selenium, and zinc were the elements in kinetic test leachate that were most frequently elevated across various model codes and under both near-neutral and acidic pH drainage conditions. NAG leachate testing indicated that the sulphide minerals were the primary source of the cadmium and copper, but not the aluminum, selenium, or zinc.

Static ABA testing indicated that the Mitchell Sulphide and Rougher/Sulphide tailing are likely PAG due to the presence of sulphide minerals (pyrite) as these materials represent tailing that has not gone through the sulphide destruction circuit. Seventeen kinetic tests were initiated on tailing material. Leachate from the testing indicated that aluminum, arsenic, cadmium, copper, fluoride, selenium, sulphate, and zinc were elevated most frequently across various tailing types and under both near-neutral and acidic pH conditions.

Sixty-one overburden and 161 rock samples were collected from non-deposit Project regions. Overburden material located outside the proposed Mitchell Pit has a mean and median SNPR value greater than 4.0 and is classified as not-PAG. Based on adjusted SNPR values, only non-deposit rock material from TCAR, MTDT, and Sulphurets Laydown Area has a low potential for acid generation. SFE and MWMP leachate tests produced leachate with elevated concentrations of nitrite, sulphate, aluminum, arsenic, boron, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, phosphorus, selenium, vanadium, and zinc.

Groundwater seeps from Kerr, Sulphurets and Mitchell Deposits, McTagg Creek Valley, and Ted Morris Creek Valley were sampled in 2009, 2010, and 2012. The seeps were acidic and had high metal concentrations representing site-specific maximums.

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Personal Communications

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Appendix 4.1-1

Summary of ML/ARD Prediction Tests and Samples

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Appendix 4.1-1. Summary of ML/ARD Prediction Tests and Samples

	Test	Static			Kinetic							Leachate Extraction		Aging
Deposit	Description	Total Samples	Ore	Waste	Laboratory	Humidity Cell	Drip Column	Subaqueous Column	Comment	Field Barrel	Shake Flask Extraction	Sequential Extraction	Net Acid Generation	
Kerr	Waste Rock/Pit Wall	***305***	127	178		4				1				
	Tailing	***2***				1		1	Mitchell/ Kerr Composite					
Sulphurets	Waste Rock/Pit Wall	***433***	162	270		7				3				
	Tailing	***2***				1		1	Mitchell/ Sulphurets Composite					
Mitchell	Waste Rock/Pit Wall	***936***	463	473		23	4			13		3 composite	84	
	Tailing	***8***				5		3						3
Iron Cap	Waste Rock/Pit Wall	***356***	159	196		6								
	Tailing	***1***				1		1						
Non-deposit														
	Road Alignments	***81***												
	Tunnel Alignments	***33***												
	Other Rock	***48***												
	Borrow Materials	***61***									4			
TOTAL		**2266**	**911**	**1117**		**48**	**4**	**6**		**17**	**4**	**3**	**84**	**3**

Notes:

Tailing static tests were performed on kinetic test prior to initiation of the kinetic test

Borrow materials are all overburden samples

Appendix 4.1-2
Historical Data

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Appendix 4.1-2. Historical Data

Year	Drill Hole	From	To	Zone	Interval	Rock Code	Lithology	Simplified Alteration 1	Alt_1_ Intensity	Alt_1_ Intensity_ Old	Alt_2_ Code	Alt_2_ Intensity_ Old	Position	In/Below PEA Pit	Waste/ Ore	Sample No.	PFS Sample#	PFS ABA Model Code	PFS Waste/ Ore	PFS Pit In/Out	PFS Litho	Sample Matrix	Sample Type
Historical	KS-106	40.7	51	Kerr	10.3	KERR	DDAP	CL		50/70						KS-106_5	KS-106_5	KERR				Rock	Drillcore
Historical	KS-064	291.2	297	Kerr	5.8	KERR	DDAP	CL		60/60	/CL	/20				KS-064_15	KS-064_15	KERR				Rock	Drillcore
Historical	KS-103	92	100.1	Kerr	8.1	KERR	DDHB	CL		70/60/60						KS-103_12	KS-103_12	KERR				Rock	Drillcore
Historical	KS-062	42.67	53	Kerr	10.3	KERR	DDPL	CL		30	QS	30				KS-062_5	KS-062_5	KERR				Rock	Drillcore
Historical	KS-062	31.3	42.67	Kerr	11.4	KERR	DDPL	CL		30	QS	30				KS-062_4	KS-062_4	KERR				Rock	Drillcore
Historical	KS-062	6.1	14.4	Kerr	8.3	KERR	DDPL	CL		30	QS	30				KS-062_1	KS-062_1	KERR				Rock	Drillcore
Historical	KS-062	86.25	95.4	Kerr	9.2	KERR	DDPL	CL		50						KS-062_10	KS-062_10	KERR				Rock	Drillcore
Historical	KS-062	68.8	78.8	Kerr	10.0	KERR	DDPL	CL		40	QS	40				KS-062_8	KS-062_8	KERR				Rock	Drillcore
Historical	KS-062	61.5	68.8	Kerr	7.3	KERR	DDPL	CL		40	QS	40				KS-062_7	KS-062_7	KERR				Rock	Drillcore
Historical	KS-065	71.5	80.5	Kerr	9.0	KERR	DDPL	CL		50	SE	30				KS-065_8	KS-065_8	KERR				Rock	Drillcore
Historical	KS-106	3.05	12	Kerr	9.0	KERR	DDPL	CL		50	QS	30				KS-106_1	KS-106_1	KERR				Rock	Drillcore
Historical	KS-062	53	61.5	Kerr	8.5	KERR	DDPL	CL		30/40	QS/QS	30/40				KS-062_6	KS-062_6	KERR				Rock	Drillcore
Historical	K87-004	24.6	29	Kerr	4.4	KERR	DDPL	CL		30/40	QP/	20/				K87-004_2	K87-004_2	KERR				Rock	Drillcore
Historical	KS-062	95.4	103.8	Kerr	8.4	KERR	DDPL	CL		50/70	/SI/SI	60/60				KS-062_11	KS-062_11	KERR				Rock	Drillcore
Historical	KS-093	75.7	81.35	Kerr	5.6	KERR	DDPL	CL		60	/QS	0/40				KS-093_3	KS-093_3	KERR				Rock	Drillcore
Historical	K89-007	138.1	146	Kerr	7.9	KERR	DDRK	CL								K89-007_4	K89-007_4	KERR				Rock	Drillcore
Historical	KS-093	62.6	69.2	Kerr	6.6	KERR	DMON	CL		0/60/60						KS-093_2	KS-093_2	KERR				Rock	Drillcore
Historical	KS-062	141.85	150.85	Kerr	9.0	KERR	INPP	CL		70	QS	30				KS-062_17	KS-062_17	KERR				Rock	Drillcore
Historical	KS-062	134.11	141.85	Kerr	7.7	KERR	INPP	CL		70	QS	30				KS-062_16	KS-062_16	KERR				Rock	Drillcore
Historical	KS-062	150.85	159.85	Kerr	9.0	KERR	INPP	CL		70/60	QS/QS	30/40				KS-062_18	KS-062_18	KERR				Rock	Drillcore
Historical	KS-062	103.8	109.73	Kerr	5.9	KERR	SSED	CL		70	SI	60				KS-062_12	KS-062_12	KERR				Rock	Drillcore
Historical	KS-065	98.5	106.7	Kerr	8.2	KERR	VHLP	CL		50	SE	20				KS-065_11	KS-065_11	KERR				Rock	Drillcore
Historical	KS-065	89.5	98.5	Kerr	9.0	KERR	VHLP	CL		50	SE	20				KS-065_10	KS-065_10	KERR				Rock	Drillcore
Historical	KS-065	80.5	89.5	Kerr	9.0	KERR	VHLP	CL		50	SE	20				KS-065_9	KS-065_9	KERR				Rock	Drillcore
Historical	KS-065	53.5	62.5	Kerr	9.0	KERR	VHLP	CL		50	SE	30				KS-065_6	KS-065_6	KERR				Rock	Drillcore
Historical	KS-065	44.5	53.5	Kerr	9.0	KERR	VHLP	CL		50	SE	40				KS-065_5	KS-065_5	KERR				Rock	Drillcore
Historical	KS-103	12	21	Kerr	9.0	KERR	VHLP	CL		40	SE	30				KS-103_4	KS-103_4	KERR				Rock	Drillcore
Historical	KS-106	21	31.45	Kerr	10.5	KERR	VHLP	CL		40	QS	40				KS-106_3	KS-106_3	KERR				Rock	Drillcore
Historical	KS-106	12	21	Kerr	9.0	KERR	VHLP	CL		40	QS	40				KS-106_2	KS-106_2	KERR				Rock	Drillcore
Historical	KS-067	75	84	Kerr	9.0	KERR	VHLP	CL		70/50	KF/CL	30/20				KS-067_1	KS-067_1	KERR				Rock	Drillcore
Historical	KS-103	3.05	12	Kerr	9.0	KERR	VHLP	CL		70/40	/SE	/30				KS-103_3	KS-103_3	KERR				Rock	Drillcore
Historical	KS-103	39	48	Kerr	9.0	KERR	VHLP	CL		30/50/50	CL/QS/CL	30/30/30				KS-103_6	KS-103_6	KERR				Rock	Drillcore
Historical	KS-065	62.5	71.5	Kerr	9.0	KERR	VHLP	CL		50/50	SE	30				KS-065_7	KS-065_7	KERR				Rock	Drillcore
Historical	KS-065	16.3	25.3	Kerr	9.0	KERR	VTUF	CL		50	SE	40				KS-065_2	KS-065_2	KERR				Rock	Drillcore
Historical	KS-065	7.62	16.3	Kerr	8.7	KERR	VTUF	CL		50	SE	50				KS-065_1	KS-065_1	KERR				Rock	Drillcore
Historical	KS-065	35.5	44.5	Kerr	9.0	KERR	VTUF	CL		50/50	SE/SE	40/40				KS-065_4	KS-065_4	KERR				Rock	Drillcore
Historical	KS-106	197	205	Kerr	8.0	KERR	VTUF	CL		70/60	QP	60				KS-106_10	KS-106_10	KERR				Rock	Drillcore
Historical	K89-007	146	153	Kerr	7.0	KERR	VTXL	CL		50						K89-007_5	K89-007_5	KERR				Rock	Drillcore
Historical	KS-062	125.6	134.11	Kerr	8.5	KERR	VUTF	CL		70						KS-062_15	KS-062_15	KERR				Rock	Drillcore
Historical	KS-065	25.3	35.5	Kerr	10.2	KERR	VUTF	CL		50	SE/SE	40/40				KS-065_3	KS-065_3	KERR				Rock	Drillcore
Historical	KS-132	137.3	146.3	Kerr	9.0	KERR	FELS	MY		70	SE	30				KS-132_7	KS-132_7	KERR				Rock	Drillcore
Historical	KS-132	88.4	97.35	Kerr	8.9	KERR	SCNG	MY		70	SE	60				KS-132_2	KS-132_2	KERR				Rock	Drillcore
Historical	KS-132	114.3	123.3	Kerr	9.0	KERR	SMUD	MY		60	SE	50				KS-132_5	KS-132_5	KERR				Rock	Drillcore
Historical	KS-132	123.3	129.4	Kerr	6.1	KERR	SMUD	MY		60/70	SE	50/				KS-132_6	KS-132_6	KERR				Rock	Drillcore
Historical	KS-093	117.3	121.9	Kerr	4.6	KERR	SSED	MY		60	QS	40				KS-093_8	KS-093_8	KERR				Rock	Drillcore
Historical	KS-093	108.3	117.3	Kerr	9.0	KERR	SSED	MY		60	QS	40				KS-093_7	KS-093_7	KERR				Rock	Drillcore
Historical	KS-093	99	108.3	Kerr	9.3	KERR	SSED	MY		60	QS	40				KS-093_6	KS-093_6	KERR				Rock	Drillcore
Historical	KS-093	90	99	Kerr	9.0	KERR	SSED	MY		60	QS	40				KS-093_5	KS-093_5	KERR				Rock	Drillcore
Historical	KS-093	81.35	90	Kerr	8.7	KERR	SSED	MY		60	QS	40				KS-093_4	KS-093_4	KERR				Rock	Drillcore
Historical	KS-132	146.3	154.23	Kerr	7.9	KERR	SSED	MY		50	SE	30				KS-132_8	KS-132_8	KERR				Rock	Drillcore
Historical	K89-007	153	162	Kerr	9.0	KERR	SSED	MY		50/70	QS/MY	50/30				K89-007_6	K89-007_6	KERR				Rock	Drillcore
Historical	KS-062	16.3	24	Kerr	7.7	KERR	DDPL	QP		70/40	/SI	0/30				KS-062_2	KS-062_2	KERR				Rock	Drillcore
Historical	KS-093	29	33.9	Kerr	4.9	KERR	DDHB	QS		50/60	CL/QP	30/30				KS-093_1	KS-093_1	KERR				Rock	Drillcore
Historical	KS-062	78.8	86.25	Kerr	7.5	KERR	DDPL	QS		30	CL	30				KS-062_9	KS-062_9	KERR				Rock	Drillcore
Historical	K87-004	47.9	52.4	Kerr	4.5	KERR	DDPL	QS		60/40						K87-004_7	K87-004_7	KERR				Rock	Drillcore
Historical	KS-106	172.7	179.1	Kerr	6.4	KERR	INPP	QS		50	CL	50				KS-106_9	KS-106_9	KERR				Rock	Drillcore
Historical	KS-106	134	142	Kerr	8.0	KERR	INPP	QS		50/60/60	CL	30				KS-106_7	KS-106_7	KERR				Rock	Drillcore
Historical	KS-079	84.6	94	Kerr	9.4	KERR	INPP	QS		60/70	QP	10				KS-079_2	KS-079_2	KERR				Rock	Drillcore

Appendix 4.1-2. Historical Data

Year	Drill Hole	From	To	udf_LabID	Lab_ Certificate_ Number	Geo_Tech_ Lab_ID	Client ID	Collect Date/ Time	Paste pH (unit less)
Historical	KS-106	40.7	51	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58586-58588	58586-58588	1-May-93	4.73
Historical	KS-064	291.2	297	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57605-57607	57605-57607	1-May-93	8.03
Historical	KS-103	92	100.1	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49809-49811	49809-49811	1-May-93	7.79
Historical	KS-062	42.67	53	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58091-58093	58091-58093	1-May-93	7.7
Historical	KS-062	31.3	42.67	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58088-58090	58088-58090	1-May-93	7.82
Historical	KS-062	6.1	14.4	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58076-58078	58076-58078	1-May-93	8.05
Historical	KS-062	86.25	95.4	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58106-58108	58106-58108	1-May-93	8.88
Historical	KS-062	68.8	78.8	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58100-58102	58100-58102	1-May-93	8.69
Historical	KS-062	61.5	68.8	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58097-58099	58097-58099	1-May-93	7.77
Historical	KS-065	71.5	80.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57022-57024	57022-57024	1-May-93	7.75
Historical	KS-106	3.05	12	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58574-58576	58574-58576	1-May-93	7.12
Historical	KS-062	53	61.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58094-58096	58094-58096	1-May-93	8.23
Historical	K87-004	24.6	29	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	17234-17236	17234-17236	1-May-93	8.23
Historical	KS-062	95.4	103.8	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58109-58111	58109-58111	1-May-93	8.69
Historical	KS-093	75.7	81.35	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56876-56878	56876-56878	1-May-93	8.09
Historical	K89-007	138.1	146	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	14127-14129	14127-14129	1-May-93	8.7
Historical	KS-093	62.6	69.2	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56870-56872	56870-56872	1-May-93	8.21
Historical	KS-062	141.85	150.85	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58127-58129	58127-58129	1-May-93	8.32
Historical	KS-062	134.11	141.85	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58124-58126	58124-58126	1-May-93	8.36
Historical	KS-062	150.85	159.85	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58130-58132	58130-58132	1-May-93	8.33
Historical	KS-062	103.8	109.73	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58112-58114	58112-58114	1-May-93	8.46
Historical	KS-065	98.5	106.7	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57031-57033	57031-57033	1-May-93	8.17
Historical	KS-065	89.5	98.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57028-57030	57028-57030	1-May-93	8.13
Historical	KS-065	80.5	89.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57025-57027	57025-57027	1-May-93	7.71
Historical	KS-065	53.5	62.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57016-57018	57016-57018	1-May-93	7.77
Historical	KS-065	44.5	53.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57013-57015	57013-57015	1-May-93	7.32
Historical	KS-103	12	21	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49307-49309	49307-49309	1-May-93	4.56
Historical	KS-106	21	31.45	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58580-58582	58580-58582	1-May-93	5.46
Historical	KS-106	12	21	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58577-58579	58577-58579	1-May-93	6.93
Historical	KS-067	75	84	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57057-57059	57057-57059	1-May-93	6.33
Historical	KS-103	3.05	12	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49304-49306	49304-49306	1-May-93	4.81
Historical	KS-103	39	48	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49316-49318	49316-49318	1-May-93	4.79
Historical	KS-065	62.5	71.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57019-57021	57019-57021	1-May-93	7.75
Historical	KS-065	16.3	25.3	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57004-57006	57004-57006	1-May-93	6.12
Historical	KS-065	7.62	16.3	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57001-57003	57001-57003	1-May-93	5.22
Historical	KS-065	35.5	44.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57010-57012	57010-57012	1-May-93	7.07
Historical	KS-106	197	205	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58641-58644	58641-58644	1-May-93	7.78
Historical	K89-007	146	153	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	14130-14132	14130-14132	1-May-93	7.94
Historical	KS-062	125.6	134.11	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58121-58123	58121-58123	1-May-93	8.73
Historical	KS-065	25.3	35.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57007-57009	57007-57009	1-May-93	7.04
Historical	KS-132	137.3	146.3	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39572-39574	39572-39574	1-May-93	5.36
Historical	KS-132	88.4	97.35	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39554-39556	39554-39556	1-May-93	7.62
Historical	KS-132	114.3	123.3	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39563-39565	39563-39565	1-May-93	4.71
Historical	KS-132	123.3	129.4	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39566-39568	39566-39568	1-May-93	4.51
Historical	KS-093	117.3	121.9	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56891-56892	56891-56892	1-May-93	7.9
Historical	KS-093	108.3	117.3	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56888-56890	56888-56890	1-May-93	7.76
Historical	KS-093	99	108.3	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56885-56887	56885-56887	1-May-93	7.61
Historical	KS-093	90	99	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56882-56884	56882-56884	1-May-93	6.68
Historical	KS-093	81.35	90	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56879-56881	56879-56881	1-May-93	6.71
Historical	KS-132	146.3	154.23	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39575-39577	39575-39577	1-May-93	4.38
Historical	K89-007	153	162	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	14133-14135	14133-14135	1-May-93	7.83
Historical	KS-062	16.3	24	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58082-58084	58082-58084	1-May-93	7.35
Historical	KS-093	29	33.9	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56857-56859	56857-56859	1-May-93	4.01
Historical	KS-062	78.8	86.25	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58103-58105	58103-58105	1-May-93	8.93
Historical	K87-004	47.9	52.4	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	17252-17254	17252-17254	1-May-93	8
Historical	KS-106	172.7	179.1	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58632-58634	58632-58634	1-May-93	7.22
Historical	KS-106	134	142	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58618-58620	58618-58620	1-May-93	6.57
Historical	KS-079	84.6	94	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56699-56701	56699-56701	1-May-93	7.59

Appendix 4.1-2. Historical Data

Year	Drill Hole	From	To	S_ Total (%)	TAP (kg $CaCO_3$/t)	NP (kg $CaCO_3$/t)	Total C (%)	CANP_TTL (%)	TNNP (kg $CaCO_3$/t)	TNNP_ ADJ (kg $CaCO_3$/t)	TNPR (unit less)	Fizz Rating (unit less)
Historical	KS-106	40.7	51	7.34	229.375	5	0.01	0.833388843	-224.375	-229.375	0.021798365	1
Historical	KS-064	291.2	297	2.58	80.625	31	0.38	31.66877602	-49.625	-64.625	0.384496124	2
Historical	KS-103	92	100.1	2.9	90.625	55	0.64	53.33688593	-35.625	-50.625	0.606896552	2
Historical	KS-062	42.67	53	0.96	30	30	0.27	22.50149875	0	-15	1	2
Historical	KS-062	31.3	42.67	0.32	10	14	0.09	7.500499584	4	-10	1.4	1
Historical	KS-062	6.1	14.4	1.74	54.375	36	0.35	29.16860949	-18.375	-33.375	0.662068966	2
Historical	KS-062	86.25	95.4	0.63	19.6875	89	1.07	89.17260616	69.3125	54.3125	4.520634921	2
Historical	KS-062	68.8	78.8	0.51	15.9375	72	0.8	66.67110741	56.0625	41.0625	4.517647059	2
Historical	KS-062	61.5	68.8	1.38	43.125	52	0.55	45.83638634	8.875	-6.125	1.205797101	2
Historical	KS-065	71.5	80.5	2.12	66.25	14	0.03	2.500166528	-52.25	-66.25	0.211320755	2
Historical	KS-106	3.05	12	2.33	72.8125	44	0.48	40.00266445	-28.8125	-43.8125	0.604291845	2
Historical	KS-062	53	61.5	1.09	34.0625	37	0.34	28.33522065	2.9375	-12.0625	1.086238532	2
Historical	K87-004	24.6	29	3.67	114.6875	52	0.56	46.66977519	-62.6875	-77.6875	0.453405995	2
Historical	KS-062	95.4	103.8	0.62	19.375	74	0.84	70.00466278	54.625	39.625	3.819354839	2
Historical	KS-093	75.7	81.35	2.23	69.6875	74	0.86	71.67144047	4.3125	-10.6875	1.061883408	2
Historical	K89-007	138.1	146	0.04	1.25	75	0.9	75.00499584	73.75	58.75	60	2
Historical	KS-093	62.6	69.2	0.5	15.625	83	1	83.33888426	67.375	52.375	5.312	
Historical	KS-062	141.85	150.85	2.72	85	46	0.41	34.16894255	-39	-54	0.541176471	2
Historical	KS-062	134.11	141.85	2.21	69.0625	54	0.42	35.00233139	-15.0625	-30.0625	0.781900452	2
Historical	KS-062	150.85	159.85	4.15	129.6875	50	0.5	41.66944213	-79.6875	-94.6875	0.385542169	2
Historical	KS-062	103.8	109.73	2.69	84.0625	84	1.01	84.17227311	-0.0625	-15.0625	0.999256506	2
Historical	KS-065	98.5	106.7	2.19	68.4375	29	0.22	18.33455454	-39.4375	-54.4375	0.423744292	2
Historical	KS-065	89.5	98.5	2.11	65.9375	41	0.35	29.16860949	-24.9375	-39.9375	0.621800948	2
Historical	KS-065	80.5	89.5	2.85	89.0625	22	0.13	10.83405495	-67.0625	-82.0625	0.247017544	2
Historical	KS-065	53.5	62.5	3.55	110.9375	35	0.28	23.33488759	-75.9375	-90.9375	0.315492958	2
Historical	KS-065	44.5	53.5	2.26	70.625	21	0.1	8.333888426	-49.625	-64.625	0.297345133	2
Historical	KS-103	12	21	2.64	82.5	4	0.02	1.666777685	-78.5	-82.5	0.048484848	1
Historical	KS-106	21	31.45	5.05	157.8125	9	0.04	3.333555371	-148.8125	-157.8125	0.057029703	1
Historical	KS-106	12	21	3.74	116.875	22	0.23	19.16794338	-94.875	-109.875	0.188235294	1
Historical	KS-067	75	84	5.11	159.6875	12	0.08	6.667110741	-147.6875	-159.6875	0.075146771	1
Historical	KS-103	3.05	12	0.85	26.5625	0	0.02	1.666777685	-26.5625	-26.5625		1
Historical	KS-103	39	48	4.32	135	4	0.04	3.333555371	-131	-135	0.02962963	1
Historical	KS-065	62.5	71.5	3.92	122.5	43	0.43	35.83572023	-79.5	-94.5	0.351020408	1
Historical	KS-065	16.3	25.3	2.36	73.75	8	0.05	4.166944213	-65.75	-73.75	0.108474576	1
Historical	KS-065	7.62	16.3	1.98	61.875	2	0.03	2.500166528	-59.875	-61.875	0.032323232	1
Historical	KS-065	35.5	44.5	2.43	75.9375	19	0.11	9.167277269	-56.9375	-71.9375	0.250205761	2
Historical	KS-106	197	205	5.87	183.4375	40	0.46	38.33588676	-143.4375	-158.4375	0.218057922	2
Historical	K89-007	146	153	2.91	90.9375	48	0.49	40.83605329	-42.9375	-57.9375	0.527835052	2
Historical	KS-062	125.6	134.11	0.8	25	42	0.36	30.00199833	17	2	1.68	2
Historical	KS-065	25.3	35.5	2.75	85.9375	26	0.22	18.33455454	-59.9375	-74.9375	0.302545455	2
Historical	KS-132	137.3	146.3	8.33	260.3125	8	0.03	2.500166528	-252.3125	-260.3125	0.030732293	1
Historical	KS-132	88.4	97.35	7.3	228.125	88	1.48	123.3415487	-140.125	-155.125	0.385753425	2
Historical	KS-132	114.3	123.3	6.74	210.625	5	0.01	0.833388843	-205.625	-210.625	0.023738872	1
Historical	KS-132	123.3	129.4	6.05	189.0625	5	0.01	0.833388843	-184.0625	-189.0625	0.026446281	1
Historical	KS-093	117.3	121.9	9.37	292.8125	78	0.89	74.17160699	-214.8125	-229.8125	0.26638207	2
Historical	KS-093	108.3	117.3	8.41	262.8125	69	0.79	65.83771857	-193.8125	-208.8125	0.26254459	2
Historical	KS-093	99	108.3	8.54	266.875	56	0.59	49.16994172	-210.875	-225.875	0.209836066	2
Historical	KS-093	90	99	11.5	359.375	13	0.1	8.333888426	-346.375	-359.375	0.036173913	1
Historical	KS-093	81.35	90	8.53	266.5625	9	0.06	5.000333056	-257.5625	-266.5625	0.033763189	1
Historical	KS-132	146.3	154.23	7.95	248.4375	6	0.01	0.833388843	-242.4375	-248.4375	0.024150943	1
Historical	K89-007	153	162	7.35	229.6875	77	0.92	76.67177352	-152.6875	-167.6875	0.335238095	2
Historical	KS-062	16.3	24	0.93	29.0625	33	0.29	24.16827644	3.9375	-11.0625	1.135483871	2
Historical	KS-093	29	33.9	5.91	184.6875	3	0.02	1.666777685	-181.6875	-184.6875	0.016243655	1
Historical	KS-062	78.8	86.25	0.61	19.0625	77	0.92	76.67177352	57.9375	42.9375	4.039344262	2
Historical	K87-004	47.9	52.4	2.7	84.375	55	0.58	48.33655287	-29.375	-44.375	0.651851852	2
Historical	KS-106	172.7	179.1	5.09	159.0625	22	0.24	20.00133222	-137.0625	-152.0625	0.138310413	1
Historical	KS-106	134	142	4.6	143.75	19	0.19	15.83438801	-124.75	-139.75	0.132173913	1
Historical	KS-079	84.6	94	4.4	137.5	30	0.31	25.83505412	-107.5	-122.5	0.218181818	2

Appendix 4.1-2. Historical Data

Year	Drill Hole	From	To	Zone	Interval	Rock Code	Lithology	Simplified Alteration 1	Alt_1_ Intensity	Alt_1_ Intensity_ Old	Alt_2_ Code	Alt_2_ Intensity_ Old	Position	In/Below PEA Pit	Waste/ Ore	Sample No.	PFS Sample#	PFS ABA Model Code	PFS Waste/ Ore	PFS Pit In/Out	PFS Litho	Sample Matrix	Sample Type
Historical	KS-062	24	31.3	Kerr	7.3	KERR	SMUD	QS		40	SI	30				KS-062_3	KS-062_3	KERR				Rock	Drillcore
Historical	K87-004	20.9	24.6	Kerr	3.7	KERR	SSED	QS		50/30	MY/QP	10/20				K87-004_1	K87-004_1	KERR				Rock	Drillcore
Historical	KS-106	31.45	40.7	Kerr	9.3	KERR	SSED	QS		60/50	ML/QS	30				KS-106_4	KS-106_4	KERR				Rock	Drillcore
Historical	KS-067	93	102	Kerr	9.0	KERR	VHLP	QS		50	CL	20				KS-067_3	KS-067_3	KERR				Rock	Drillcore
Historical	KS-067	84	93	Kerr	9.0	KERR	VHLP	QS		50	CL	20				KS-067_2	KS-067_2	KERR				Rock	Drillcore
Historical	KS-079	94	100.5	Kerr	6.5	KERR	VHLP	QS		70	QP	10				KS-079_3	KS-079_3	KERR				Rock	Drillcore
Historical	KS-094	185	194	Kerr	9.0	KERR	VHLP	QS		70	BI	30				KS-094_12	KS-094_12	KERR				Rock	Drillcore
Historical	KS-094	176	185	Kerr	9.0	KERR	VHLP	QS		70	BI	30				KS-094_11	KS-094_11	KERR				Rock	Drillcore
Historical	KS-094	167	176	Kerr	9.0	KERR	VHLP	QS		70	BI	30				KS-094_10	KS-094_10	KERR				Rock	Drillcore
Historical	KS-094	159.7	167	Kerr	7.3	KERR	VHLP	QS		70	BI	30				KS-094_9	KS-094_9	KERR				Rock	Drillcore
Historical	KS-094	151.5	159.7	Kerr	8.2	KERR	VHLP	QS		70						KS-094_8	KS-094_8	KERR				Rock	Drillcore
Historical	KS-094	144.5	151.5	Kerr	7.0	KERR	VHLP	QS		70						KS-094_7	KS-094_7	KERR				Rock	Drillcore
Historical	KS-094	134.5	144.5	Kerr	10.0	KERR	VHLP	QS		70						KS-094_6	KS-094_6	KERR				Rock	Drillcore
Historical	KS-094	125.5	134.5	Kerr	9.0	KERR	VHLP	QS		70						KS-094_5	KS-094_5	KERR				Rock	Drillcore
Historical	KS-094	100	109	Kerr	9.0	KERR	VHLP	QS		40	MY	40				KS-094_4	KS-094_4	KERR				Rock	Drillcore
Historical	KS-103	66	75	Kerr	9.0	KERR	VHLP	QS		50	CL	30				KS-103_9	KS-103_9	KERR				Rock	Drillcore
Historical	KS-103	57	66	Kerr	9.0	KERR	VHLP	QS		50	CL	30				KS-103_8	KS-103_8	KERR				Rock	Drillcore
Historical	KS-103	48	57	Kerr	9.0	KERR	VHLP	QS		50	CL	30				KS-103_7	KS-103_7	KERR				Rock	Drillcore
Historical	KS-106	214	223.11	Kerr	9.1	KERR	VHLP	QS		60	MY	20				KS-106_12	KS-106_12	KERR				Rock	Drillcore
Historical	KS-106	205	214	Kerr	9.0	KERR	VHLP	QS		60						KS-106_11	KS-106_11	KERR				Rock	Drillcore
Historical	KS-106	142	150.4	Kerr	8.4	KERR	VHLP	QS		60	BI	50				KS-106_8	KS-106_8	KERR				Rock	Drillcore
Historical	KS-067	102	111	Kerr	9.0	KERR	VHLP	QS		70/70	CL/BI	20/10				KS-067_4	KS-067_4	KERR				Rock	Drillcore
Historical	KS-103	75	84.9	Kerr	9.9	KERR	VHLP	QS		50/40	CL/CL	30/30				KS-103_10	KS-103_10	KERR				Rock	Drillcore
Historical	KS-094	194	202	Kerr	8.0	KERR	VHLP	QS		70/30/30	BI/Bl/Bl	30/30/30				KS-094_13	KS-094_13	KERR				Rock	Drillcore
Historical	KS-094	83	92.6	Kerr	9.6	KERR	VHLP	QS		50//50	CL//CL	30//				KS-094_3	KS-094_3	KERR				Rock	Drillcore
Historical	KS-094	75.8	83	Kerr	7.2	KERR	VHLP	QS		50/40/40	CL//CL	50/40/50				KS-094_2	KS-094_2	KERR				Rock	Drillcore
Historical	KS-106	125.1	134	Kerr	8.9	KERR	VHLP	QS		50	BI/CL	30/50				KS-106_6	KS-106_6	KERR				Rock	Drillcore
Historical	K89-007	180	184	Kerr	4.0	KERR	VTLP	QS		70	MY					K89-007_9	K89-007_9	KERR				Rock	Drillcore
Historical	K89-007	171	180	Kerr	9.0	KERR	VTLP	QS		70	MY					K89-007_8	K89-007_8	KERR				Rock	Drillcore
Historical	K89-007	162	171	Kerr	9.0	KERR	VTLP	QS		70	MY					K89-007_7	K89-007_7	KERR				Rock	Drillcore
Historical	KS-064	146.3	154.7	Kerr	8.4	KERR	DDLP	SE		50/70	CL/	40/				KS-064_12	KS-064_12	KERR				Rock	Drillcore
Historical	KS-064	9.5	18.5	Kerr	9.0	KERR	DDPL	SE		20						KS-064_1	KS-064_1	KERR				Rock	Drillcore
Historical	KS-063	50	59.3	Kerr	9.3	KERR	DDPL	SE		70/	CL/CL/	60/60/				KS-063_6	KS-063_6	KERR				Rock	Drillcore
Historical	KS-109	19.96	30	Kerr	10.0	KERR	DDPL	SE		20/40						KS-109_3	KS-109_3	KERR				Rock	Drillcore
Historical	KS-120	225	234	Kerr	9.0	KERR	DDPL	SE		60/40	MY	/40				KS-120_15	KS-120_15	KERR				Rock	Drillcore
Historical	KS-067	231	240	Kerr	9.0	KERR	DDPL	SE		80/40	CL/MY	40/60				KS-067_8	KS-067_8	KERR				Rock	Drillcore
Historical	KS-064	191.1	200.2	Kerr	9.1	KERR	DDRK	SE		30	CL	30				KS-064_14	KS-064_14	KERR				Rock	Drillcore
Historical	KS-120	172.82	183	Kerr	10.2	KERR	DDRK	SE		40/50	CL/MY	30/				KS-120_9	KS-120_9	KERR				Rock	Drillcore
Historical	KS-120	144.85	154	Kerr	9.2	KERR	DDRK	SE		40/70	CL/MY	30/60				KS-120_7	KS-120_7	KERR				Rock	Drillcore
Historical	KS-103	201.3	208.75	Kerr	7.4	KERR	DMON	SE		50	CL	/40				KS-103_24	KS-103_24	KERR				Rock	Drillcore
Historical	KS-063	64.34	70	Kerr	5.7	KERR	FALT	SE		0/70	CL	0/70				KS-063_8	KS-063_8	KERR				Rock	Drillcore
Historical	KS-079	6.1	15.2	Kerr	9.1	KERR	FELS	SE		80	CL	10				KS-079_1	KS-079_1	KERR				Rock	Drillcore
Historical	KS-109	57	66	Kerr	9.0	KERR	FELS	SE		20	MY	50				KS-109_7	KS-109_7	KERR				Rock	Drillcore
Historical	KS-109	10.96	19.96	Kerr	9.0	KERR	FELS	SE		20						KS-109_2	KS-109_2	KERR				Rock	Drillcore
Historical	KS-109	1.96	10.96	Kerr	9.0	KERR	FELS	SE		20						KS-109_1	KS-109_1	KERR				Rock	Drillcore
Historical	KS-109	30	39	Kerr	9.0	KERR	FELS	SE		40						KS-109_4	KS-109_4	KERR				Rock	Drillcore
Historical	KS-063	79	86.6	Kerr	7.6	KERR	INPP	SE		70	CL	70				KS-063_10	KS-063_10	KERR				Rock	Drillcore
Historical	KS-063	70	79	Kerr	9.0	KERR	INPP	SE		70	CL	70				KS-063_9	KS-063_9	KERR				Rock	Drillcore
Historical	KS-109	48	57	Kerr	9.0	KERR	INPP	SE		50/0/20	CL//SE	80/0/50				KS-109_6	KS-109_6	KERR				Rock	Drillcore
Historical	KS-126	95.6	104.6	Kerr	9.0	KERR	SCNG	SE		40	MY	30				KS-126_9	KS-126_9	KERR				Rock	Drillcore
Historical	KS-126	86.6	95.6	Kerr	9.0	KERR	SCNG	SE		40	MY	30				KS-126_8	KS-126_8	KERR				Rock	Drillcore
Historical	KS-126	77.6	86.6	Kerr	9.0	KERR	SCNG	SE		40	MY	30				KS-126_7	KS-126_7	KERR				Rock	Drillcore
Historical	KS-126	68.6	77.6	Kerr	9.0	KERR	SCNG	SE		40	MY	30				KS-126_6	KS-126_6	KERR				Rock	Drillcore
Historical	KS-126	59.6	68.6	Kerr	9.0	KERR	SCNG	SE		40	MY	30				KS-126_5	KS-126_5	KERR				Rock	Drillcore
Historical	KS-126	50.6	59.6	Kerr	9.0	KERR	SCNG	SE		40	MY	30				KS-126_4	KS-126_4	KERR				Rock	Drillcore
Historical	KS-126	41.6	50.6	Kerr	9.0	KERR	SCNG	SE		40	MY	30				KS-126_3	KS-126_3	KERR				Rock	Drillcore
Historical	KS-126	34.4	41.6	Kerr	7.2	KERR	SCNG	SE		40	MY	30				KS-126_2	KS-126_2	KERR				Rock	Drillcore
Historical	KS-126	27.95	34.4	Kerr	6.5	KERR	SCNG	SE		40	MY	/30				KS-126_1	KS-126_1	KERR				Rock	Drillcore

Appendix 4.1-2. Historical Data

Year	Drill Hole	From	To	udf_LabID	Lab_ Certificate_ Number	Geo_Tech_ Lab_ID	Client ID	Collect Date/ Time	Paste pH (unit less)
Historical	KS-062	24	31.3	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58085-58087	58085-58087	1-May-93	7.18
Historical	K87-004	20.9	24.6	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	17231-17233	17231-17233	1-May-93	8.23
Historical	KS-106	31.45	40.7	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58583-58585	58583-58585	1-May-93	7.92
Historical	KS-067	93	102	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57063-57065	57063-57065	1-May-93	4.61
Historical	KS-067	84	93	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57060-57062	57060-57062	1-May-93	6.78
Historical	KS-079	94	100.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56702-56703	56702-56703	1-May-93	7.1
Historical	KS-094	185	194	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56212-56214	56212-56214	1-May-93	8.08
Historical	KS-094	176	185	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56209-56211	56209-56211	1-May-93	7.67
Historical	KS-094	167	176	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56206-56208	56206-56208	1-May-93	7.53
Historical	KS-094	159.7	167	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56203-56205	56203-56205	1-May-93	7.1
Historical	KS-094	151.5	159.7	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56200-56202	56200-56202	1-May-93	7.57
Historical	KS-094	144.5	151.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56197-56199	56197-56199	1-May-93	7.25
Historical	KS-094	134.5	144.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56194-56196	56194-56196	1-May-93	7.96
Historical	KS-094	125.5	134.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56191-56193	56191-56193	1-May-93	7.6
Historical	KS-094	100	109	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56181-56183	56181-56183	1-May-93	6.67
Historical	KS-103	66	75	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49325,49801-49802	49325,49801-49802	1-May-93	6.83
Historical	KS-103	57	66	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49322-49324	49322-49324	1-May-93	6.77
Historical	KS-103	48	57	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49319-49321	49319-49321	1-May-93	6.89
Historical	KS-106	214	223.11	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58648-58650	58648-58650	1-May-93	7.67
Historical	KS-106	205	214	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58645-58647	58645-58647	1-May-93	7.56
Historical	KS-106	142	150.4	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58621-58623	58621-58623	1-May-93	5.63
Historical	KS-067	102	111	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57066-57068	57066-57068	1-May-93	7.05
Historical	KS-103	75	84.9	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49803-49805	49803-49805	1-May-93	7.12
Historical	KS-094	194	202	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56215-56217	56215-56217	1-May-93	8.04
Historical	KS-094	83	92.6	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56175-57177	56175-57177	1-May-93	6.73
Historical	KS-094	75.8	83	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56172-56174	56172-56174	1-May-93	6.58
Historical	KS-106	125.1	134	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58615-58617	58615-58617	1-May-93	6.32
Historical	K89-007	180	184	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	14142-14144	14142-14144	1-May-93	7.98
Historical	K89-007	171	180	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	14139-14141	14139-14141	1-May-93	7.86
Historical	K89-007	162	171	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	14136-14138	14136-14138	1-May-93	7.76
Historical	KS-064	146.3	154.7	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57556-57558	57556-57558	1-May-93	7.86
Historical	KS-064	9.5	18.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57505-57507	57505-57507	1-May-93	6.92
Historical	KS-063	50	59.3	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56519-56521	56519-56521	1-May-93	7.77
Historical	KS-109	19.96	30	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49832-49834	49832-49834	1-May-93	7.96
Historical	KS-120	225	234	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58903-58905	58903-58905	1-May-93	8.16
Historical	KS-067	231	240	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57107-57109	57107-57109	1-May-93	7.21
Historical	KS-064	191.1	200.2	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57572-57574	57572-57574	1-May-93	8.22
Historical	KS-120	172.82	183	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58885-58887	58885-58887	1-May-93	8.11
Historical	KS-120	144.85	154	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58876-58878	58876-58878	1-May-93	7.97
Historical	KS-103	201.3	208.75	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49873-49875	49873-49875	1-May-93	8.25
Historical	KS-063	64.34	70	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56525-56527	56525-56527	1-May-93	8.18
Historical	KS-079	6.1	15.2	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56671-56673	56671-56673	1-May-93	4.53
Historical	KS-109	57	66	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49844-49846	49844-49846	1-May-93	7.76
Historical	KS-109	10.96	19.96	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49829-49831	49829-49831	1-May-93	6.83
Historical	KS-109	1.96	10.96	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49826-49828	49826-49828	1-May-93	7
Historical	KS-109	30	39	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49835-49837	49835-49837	1-May-93	5.23
Historical	KS-063	79	86.6	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56531-56533	56531-56533	1-May-93	8.17
Historical	KS-063	70	79	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56528-56530	56528-56530	1-May-93	8.69
Historical	KS-109	48	57	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49841-49843	49841-49843	1-May-93	8.02
Historical	KS-126	95.6	104.6	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39117-39119	39117-39119	1-May-93	5.14
Historical	KS-126	86.6	95.6	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39114-39116	39114-39116	1-May-93	5.32
Historical	KS-126	77.6	86.6	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39111-39113	39111-39113	1-May-93	4.53
Historical	KS-126	68.6	77.6	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39108-39110	39108-39110	1-May-93	4.48
Historical	KS-126	59.6	68.6	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39105-39107	39105-39107	1-May-93	4.67
Historical	KS-126	50.6	59.6	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39102-39104	39102-39104	1-May-93	4.7
Historical	KS-126	41.6	50.6	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39099-39101	39099-39101	1-May-93	4.67
Historical	KS-126	34.4	41.6	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39096-39098	39096-39098	1-May-93	6.27
Historical	KS-126	27.95	34.4	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39093-39095	39093-39095	1-May-93	4.27

Appendix 4.1-2. Historical Data

Year	Drill Hole	From	To	S_ Total (%)	TAP (kg $CaCO_3$/t)	NP (kg $CaCO_3$/t)	Total C (%)	CANP_TTL (%)	TNNP (kg $CaCO_3$/t)	TNNP_ ADJ (kg $CaCO_3$/t)	TNPR (unit less)	Fizz Rating (unit less)
Historical	KS-062	24	31.3	0.65	20.3125	23	0.18	15.00099917	2.6875	-12.3125	1.132307692	2
Historical	K87-004	20.9	24.6	2.51	78.4375	38	1.22	101.6734388	-40.4375	-55.4375	0.484462151	2
Historical	KS-106	31.45	40.7	3.23	100.9375	76	1.17	97.50649459	-24.9375	-39.9375	0.752941176	2
Historical	KS-067	93	102	5.63	175.9375	7	0.03	2.500166528	-168.9375	-175.9375	0.039786856	1
Historical	KS-067	84	93	6.03	188.4375	17	0.16	13.33422148	-171.4375	-186.4375	0.090215589	2
Historical	KS-079	94	100.5	6.09	190.3125	19	0.2	16.66777685	-171.3125	-186.3125	0.099835796	1
Historical	KS-094	185	194	4.65	145.3125	33	0.88	73.33821815	-112.3125	-127.3125	0.227096774	2
Historical	KS-094	176	185	5.35	167.1875	33	0.34	28.33522065	-134.1875	-149.1875	0.197383178	2
Historical	KS-094	167	176	6.01	187.8125	42	0.36	30.00199833	-145.8125	-160.8125	0.223627288	1
Historical	KS-094	159.7	167	5.24	163.75	22	0.24	20.00133222	-141.75	-156.75	0.134351145	2
Historical	KS-094	151.5	159.7	5.56	173.75	22	0.17	14.16761032	-151.75	-166.75	0.126618705	1
Historical	KS-094	144.5	151.5	6.26	195.625	18	0.15	12.50083264	-177.625	-192.625	0.09201278	2
Historical	KS-094	134.5	144.5	5.88	183.75	39	0.45	37.50249792	-144.75	-159.75	0.212244898	2
Historical	KS-094	125.5	134.5	6.1	190.625	24	0.2	16.66777685	-166.625	-181.625	0.125901639	1
Historical	KS-094	100	109	6.6	206.25	10	0.08	6.667110741	-196.25	-206.25	0.048484848	1
Historical	KS-103	66	75	4.57	142.8125	12	0.07	5.833721898	-130.8125	-142.8125	0.084026258	1
Historical	KS-103	57	66	5.66	176.875	13	0.11	9.167277269	-163.875	-176.875	0.073498233	1
Historical	KS-103	48	57	5.58	174.375	11	0.14	11.6674438	-163.375	-174.375	0.063082437	1
Historical	KS-106	214	223.11	6.41	200.3125	39	0.51	42.50283097	-161.3125	-176.3125	0.194695788	1
Historical	KS-106	205	214	7.39	230.9375	30	0.33	27.50183181	-200.9375	-215.9375	0.129905277	2
Historical	KS-106	142	150.4	6.3	196.875	15	0.22	18.33455454	-181.875	-196.875	0.076190476	1
Historical	KS-067	102	111	5.13	160.3125	40	0.48	40.00266445	-120.3125	-135.3125	0.249512671	2
Historical	KS-103	75	84.9	2.93	91.5625	36	0.41	34.16894255	-55.5625	-70.5625	0.393174061	2
Historical	KS-094	194	202	3.62	113.125	70	0.88	73.33821815	-43.125	-58.125	0.61878453	2
Historical	KS-094	83	92.6	5.12	160	20	0.25	20.83472107	-140	-155	0.125	1
Historical	KS-094	75.8	83	4.98	155.625	17	0.26	21.66810991	-138.625	-153.625	0.109236948	1
Historical	KS-106	125.1	134	6.1	190.625	22	0.21	17.5011657	-168.625	-183.625	0.115409836	1
Historical	K89-007	180	184	4.28	133.75	77	0.97	80.83871774	-56.75	-71.75	0.575700935	2
Historical	K89-007	171	180	6.9	215.625	63	0.7	58.33721898	-152.625	-167.625	0.292173913	2
Historical	K89-007	162	171	6.43	200.9375	50	0.55	45.83638634	-150.9375	-165.9375	0.248833593	2
Historical	KS-064	146.3	154.7	3.23	100.9375	64	0.87	72.50482931	-36.9375	-51.9375	0.634055728	
Historical	KS-064	9.5	18.5	2.2	68.75	28	0.18	15.00099917	-40.75	-55.75	0.407272727	
Historical	KS-063	50	59.3	1.33	41.5625	16	0.11	9.167277269	-25.5625	-40.5625	0.384962406	
Historical	KS-109	19.96	30	3.07	95.9375	67	0.78	65.00432973	-28.9375	-43.9375	0.698371336	
Historical	KS-120	225	234	5.85	182.8125	98	0.99	82.50549542	-84.8125	-99.8125	0.536068376	
Historical	KS-067	231	240	6.97	217.8125	30	0.44	36.66910908	-187.8125	-202.8125	0.137733142	
Historical	KS-064	191.1	200.2	0.09	2.8125	14	0.24	20.00133222	11.1875	-2.8125	4.977777778	
Historical	KS-120	172.82	183	5.73	179.0625	80	0.69	57.50383014	-99.0625	-114.0625	0.446771379	
Historical	KS-120	144.85	154	3.84	120	82	0.73	60.83738551	-38	-53	0.683333333	
Historical	KS-103	201.3	208.75	4.12	128.75	60	0.59	49.16994172	-68.75	-83.75	0.466019417	
Historical	KS-063	64.34	70	2.42	75.625	54	0.59	49.16994172	-21.625	-36.625	0.714049587	
Historical	KS-079	6.1	15.2	0.84	26.25	0	0.02	1.666777685	-26.25	-26.25		
Historical	KS-109	57	66	5.95	185.9375	66	0.86	71.67144047	-119.9375	-134.9375	0.354957983	
Historical	KS-109	10.96	19.96	2.38	74.375	45	0.43	35.83572023	-29.375	-44.375	0.605042017	
Historical	KS-109	1.96	10.96	4.77	149.0625	21	0.15	12.50083264	-128.0625	-143.0625	0.140880503	
Historical	KS-109	30	39	7.99	249.6875	8	0.02	1.666777685	-241.6875	-249.6875	0.03204005	
Historical	KS-063	79	86.6	2.28	71.25	33	0.31	25.83505412	-38.25	-53.25	0.463157895	
Historical	KS-063	70	79	1.49	46.5625	61	0.67	55.83705246	14.4375	-0.5625	1.310067114	
Historical	KS-109	48	57	1.96	61.25	78	1.01	84.17227311	16.75	1.75	1.273469388	
Historical	KS-126	95.6	104.6	8.13	254.0625	9	0.03	2.500166528	-245.0625	-254.0625	0.035424354	
Historical	KS-126	86.6	95.6	10.1	315.625	9	0.03	2.500166528	-306.625	-315.625	0.028514851	
Historical	KS-126	77.6	86.6	9.37	292.8125	7	0.01	0.833388843	-285.8125	-292.8125	0.023906083	
Historical	KS-126	68.6	77.6	9.25	289.0625	7	0.01	0.833388843	-282.0625	-289.0625	0.024216216	
Historical	KS-126	59.6	68.6	7.05	220.3125	7	0.01	0.833388843	-213.3125	-220.3125	0.03177305	
Historical	KS-126	50.6	59.6	7.11	222.1875	7	0.04	3.333555371	-215.1875	-222.1875	0.031504923	
Historical	KS-126	41.6	50.6	8.82	275.625	7	0.01	0.833388843	-268.625	-275.625	0.025396825	
Historical	KS-126	34.4	41.6	5.67	177.1875	19	0.21	17.5011657	-158.1875	-173.1875	0.107231041	
Historical	KS-126	27.95	34.4	11.5	359.375	0	0.01	0.833388843	-359.375	-359.375		

Appendix 4.1-2. Historical Data

Year	Drill Hole	From	To	Zone	Interval	Rock Code	Lithology	Simplified Alteration 1	Alt_1_ Intensity	Alt_1_ Intensity_ Old	Alt_2_ Code	Alt_2_ Intensity_ Old	Position	In/Below PEA Pit	Waste/ Ore	Sample No.	PFS Sample#	PFS ABA Model Code	PFS Waste/ Ore	PFS Pit In/Out	PFS Litho	Sample Matrix	Sample Type
Historical	KS-132	97.35	105.6	Kerr	8.3	KERR	SCNG	SE		70	MY	50				KS-132_3	KS-132_3	KERR				Rock	Drillcore
Historical	KS-132	81.05	88.4	Kerr	7.4	KERR	SCNG	SE		80	MY	70				KS-132_1	KS-132_1	KERR				Rock	Drillcore
Historical	KS-120	234	243	Kerr	9.0	KERR	SCNG	SE		30	CL	30				KS-120_16	KS-120_16	KERR				Rock	Drillcore
Historical	KS-132	105.6	114.3	Kerr	8.7	KERR	SCNG	SE		70/60	MY/SE	50				KS-132_4	KS-132_4	KERR				Rock	Drillcore
Historical	KS-120	209	217	Kerr	8.0	KERR	SSED	SE		50						KS-120_13	KS-120_13	KERR				Rock	Drillcore
Historical	KS-120	202	209	Kerr	7.0	KERR	SSED	SE		50						KS-120_12	KS-120_12	KERR				Rock	Drillcore
Historical	KS-120	192	202	Kerr	10.0	KERR	SSED	SE		50						KS-120_11	KS-120_11	KERR				Rock	Drillcore
Historical	KS-120	183	192	Kerr	9.0	KERR	SSED	SE		50						KS-120_10	KS-120_10	KERR				Rock	Drillcore
Historical	KS-120	154	163	Kerr	9.0	KERR	SSED	SE		70	MY	60				KS-120_8	KS-120_8	KERR				Rock	Drillcore
Historical	KS-120	138	144.85	Kerr	6.8	KERR	SSED	SE		80	MY	50				KS-120_6	KS-120_6	KERR				Rock	Drillcore
Historical	KS-120	129	138	Kerr	9.0	KERR	SSED	SE		80	MY	50				KS-120_5	KS-120_5	KERR				Rock	Drillcore
Historical	T89-014	197	206	Kerr	9.0	KERR	SSED	SE		80	MY	40				T89-014_7	T89-014_7	KERR				Rock	Drillcore
Historical	T89-014	140	149	Kerr	9.0	KERR	SSED	SE		80	MY	60				T89-014_6	T89-014_6	KERR				Rock	Drillcore
Historical	T89-014	131	140	Kerr	9.0	KERR	SSED	SE		80	MY	60				T89-014_5	T89-014_5	KERR				Rock	Drillcore
Historical	T89-014	122	131	Kerr	9.0	KERR	SSED	SE		80	MY	60				T89-014_4	T89-014_4	KERR				Rock	Drillcore
Historical	T89-014	113	122	Kerr	9.0	KERR	SSED	SE		80	MY	60				T89-014_3	T89-014_3	KERR				Rock	Drillcore
Historical	T89-014	104	113	Kerr	9.0	KERR	SSED	SE		80	MY	60				T89-014_2	T89-014_2	KERR				Rock	Drillcore
Historical	T89-014	95.14	104	Kerr	8.9	KERR	SSED	SE		80	MY	60				T89-014_1	T89-014_1	KERR				Rock	Drillcore
Historical	KS-120	90	99.8	Kerr	9.8	KERR	SSED	SE		60/20	SI//	40//				KS-120_4	KS-120_4	KERR				Rock	Drillcore
Historical	KS-120	217	225	Kerr	8.0	KERR	SSED	SE		50/40/60	/MY/	40				KS-120_14	KS-120_14	KERR				Rock	Drillcore
Historical	KS-062	109.73	117.1	Kerr	7.4	KERR	SSST	SE		30	MY	20				KS-062_13	KS-062_13	KERR				Rock	Drillcore
Historical	KS-109	39	48	Kerr	9.0	KERR	SSST	SE		40/50/50						KS-109_5	KS-109_5	KERR				Rock	Drillcore
Historical	KS-062	117.1	125.6	Kerr	8.5	KERR	SSST	SE		30/70/70	MY//	20//				KS-062_14	KS-062_14	KERR				Rock	Drillcore
Historical	KS-063	96	105	Kerr	9.0	KERR	VHLP	SE		30/50	CL/CL	30/30				KS-063_11	KS-063_11	KERR				Rock	Drillcore
Historical	KS-064	306.6	315.6	Kerr	9.0	KERR	VHLP	SE		60	CL	20				KS-064_17	KS-064_17	KERR				Rock	Drillcore
Historical	KS-064	297	306.6	Kerr	9.6	KERR	VHLP	SE		60	CL	20				KS-064_16	KS-064_16	KERR				Rock	Drillcore
Historical	KS-064	154.7	162.85	Kerr	8.2	KERR	VHLP	SE		70						KS-064_13	KS-064_13	KERR				Rock	Drillcore
Historical	KS-064	137.7	146.3	Kerr	8.6	KERR	VHLP	SE		70						KS-064_11	KS-064_11	KERR				Rock	Drillcore
Historical	KS-064	128.7	137.7	Kerr	9.0	KERR	VHLP	SE		70						KS-064_10	KS-064_10	KERR				Rock	Drillcore
Historical	KS-064	121	128.7	Kerr	7.7	KERR	VHLP	SE		70						KS-064_9	KS-064_9	KERR				Rock	Drillcore
Historical	KS-064	105	114	Kerr	9.0	KERR	VHLP	SE		50						KS-064_7	KS-064_7	KERR				Rock	Drillcore
Historical	KS-064	96	105	Kerr	9.0	KERR	VHLP	SE		50						KS-064_6	KS-064_6	KERR				Rock	Drillcore
Historical	KS-064	87	96	Kerr	9.0	KERR	VHLP	SE		50						KS-064_5	KS-064_5	KERR				Rock	Drillcore
Historical	KS-064	78	87	Kerr	9.0	KERR	VHLP	SE		50						KS-064_4	KS-064_4	KERR				Rock	Drillcore
Historical	KS-064	61.75	68.65	Kerr	6.9	KERR	VHLP	SE		50						KS-064_3	KS-064_3	KERR				Rock	Drillcore
Historical	KS-064	35.5	44.5	Kerr	9.0	KERR	VHLP	SE		50						KS-064_2	KS-064_2	KERR				Rock	Drillcore
Historical	KS-067	120	129	Kerr	9.0	KERR	VHLP	SE		70	BI	10				KS-067_6	KS-067_6	KERR				Rock	Drillcore
Historical	KS-067	111	120	Kerr	9.0	KERR	VHLP	SE		70	BI	10				KS-067_5	KS-067_5	KERR				Rock	Drillcore
Historical	KS-103	208.75	217.75	Kerr	9.0	KERR	VHLP	SE		50	CL	40				KS-103_25	KS-103_25	KERR				Rock	Drillcore
Historical	KS-103	192.5	201.3	Kerr	8.8	KERR	VHLP	SE		50	CL	40				KS-103_23	KS-103_23	KERR				Rock	Drillcore
Historical	KS-103	183.5	192.5	Kerr	9.0	KERR	VHLP	SE		40/50	CL	40				KS-103_22	KS-103_22	KERR				Rock	Drillcore
Historical	KS-103	174.5	183.5	Kerr	9.0	KERR	VHLP	SE		40						KS-103_21	KS-103_21	KERR				Rock	Drillcore
Historical	KS-103	165.4	174.5	Kerr	9.1	KERR	VHLP	SE		40						KS-103_20	KS-103_20	KERR				Rock	Drillcore
Historical	KS-103	151.3	159.4	Kerr	8.1	KERR	VHLP	SE		50						KS-103_18	KS-103_18	KERR				Rock	Drillcore
Historical	KS-103	134.05	142.3	Kerr	8.3	KERR	VHLP	SE		50						KS-103_17	KS-103_17	KERR				Rock	Drillcore
Historical	KS-103	127	134.05	Kerr	7.1	KERR	VHLP	SE		50						KS-103_16	KS-103_16	KERR				Rock	Drillcore
Historical	KS-103	118	127	Kerr	9.0	KERR	VHLP	SE		50						KS-103_15	KS-103_15	KERR				Rock	Drillcore
Historical	KS-103	109	118	Kerr	9.0	KERR	VHLP	SE		60/50						KS-103_14	KS-103_14	KERR				Rock	Drillcore
Historical	KS-103	100.1	109	Kerr	8.9	KERR	VHLP	SE		60						KS-103_13	KS-103_13	KERR				Rock	Drillcore
Historical	KS-103	84.9	92	Kerr	7.1	KERR	VHLP	SE		70	CL					KS-103_11	KS-103_11	KERR				Rock	Drillcore
Historical	KS-103	21	30	Kerr	9.0	KERR	VHLP	SE		70	CL	30				KS-103_5	KS-103_5	KERR				Rock	Drillcore
Historical	KS-109	203	212	Kerr	9.0	KERR	VHLP	SE		50	MY	20				KS-109_10	KS-109_10	KERR				Rock	Drillcore
Historical	KS-109	194	203	Kerr	9.0	KERR	VHLP	SE		50	MY	20				KS-109_9	KS-109_9	KERR				Rock	Drillcore
Historical	KS-103	217.75	225.7	Kerr	7.9	KERR	VHLP	SE		50	CL/	40				KS-103_26	KS-103_26	KERR				Rock	Drillcore
Historical	KS-064	114	121	Kerr	7.0	KERR	VHLP	SE		50/70						KS-064_8	KS-064_8	KERR				Rock	Drillcore
Historical	KS-103	159.4	165.4	Kerr	6.0	KERR	VHLP	SE		50/30						KS-103_19	KS-103_19	KERR				Rock	Drillcore
Historical	KS-067	129	138	Kerr	9.0	KERR	VHLP	SE		70/50	BI/QP	10/50				KS-067_7	KS-067_7	KERR				Rock	Drillcore
Historical	K89-007	30	39	Kerr	9.0	KERR	VTLP	SE		80	CL					K89-007_2	K89-007_2	KERR				Rock	Drillcore

Appendix 4.1-2. Historical Data

Year	Drill Hole	From	To	udf_LabID	Lab_ Certificate_ Number	Geo_Tech_ Lab_ID	Client ID	Collect Date/ Time	Paste pH (unit less)
Historical	KS-132	97.35	105.6	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39557-39559	39557-39559	1-May-93	7.43
Historical	KS-132	81.05	88.4	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39551-39553	39551-39553	1-May-93	6.43
Historical	KS-120	234	243	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58906-58908	58906-58908	1-May-93	8.57
Historical	KS-132	105.6	114.3	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39560-39562	39560-39562	1-May-93	4.6
Historical	KS-120	209	217	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58897-58899	58897-58899	1-May-93	7.83
Historical	KS-120	202	209	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58894-58896	58894-58896	1-May-93	7.92
Historical	KS-120	192	202	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58891-58893	58891-58893	1-May-93	7.51
Historical	KS-120	183	192	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58888-58890	58888-58890	1-May-93	7.88
Historical	KS-120	154	163	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58879-58881	58879-58881	1-May-93	7.88
Historical	KS-120	138	144.85	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58873-58875	58873-58875	1-May-93	4.13
Historical	KS-120	129	138	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58870-58872	58870-58872	1-May-93	4.61
Historical	T89-014	197	206	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	18185-18187	18185-18187	1-May-93	4.21
Historical	T89-014	140	149	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	18166-18168	18166-18168	1-May-93	7.3
Historical	T89-014	131	140	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	18163-18165	18163-18165	1-May-93	7.31
Historical	T89-014	122	131	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	18160-18162	18160-18162	1-May-93	6.42
Historical	T89-014	113	122	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	18157-18159	18157-18159	1-May-93	4.99
Historical	T89-014	104	113	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	18154-18156	18154-18156	1-May-93	7.21
Historical	T89-014	95.14	104	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	18151-18153	18151-18153	1-May-93	7.37
Historical	KS-120	90	99.8	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58857-58859	58857-58859	1-May-93	7.67
Historical	KS-120	217	225	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58900-58902	58900-58902	1-May-93	8.19
Historical	KS-062	109.73	117.1	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58115-58117	58115-58117	1-May-93	8.63
Historical	KS-109	39	48	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49838-49840	49838-49840	1-May-93	6.91
Historical	KS-062	117.1	125.6	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58118-58120	58118-58120	1-May-93	8.31
Historical	KS-063	96	105	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56537-56539	56537-56539	1-May-93	8.27
Historical	KS-064	306.6	315.6	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57611-57613	57611-57613	1-May-93	6.97
Historical	KS-064	297	306.6	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57608-57610	57608-57610	1-May-93	5.89
Historical	KS-064	154.7	162.85	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57560-57562	57560-57562	1-May-93	6.53
Historical	KS-064	137.7	146.3	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57552-57554	57552-57554	1-May-93	6.75
Historical	KS-064	128.7	137.7	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57549-57551	57549-57551	1-May-93	6.82
Historical	KS-064	121	128.7	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57546-57548	57546-57548	1-May-93	6.61
Historical	KS-064	105	114	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57540-57542	57540-57542	1-May-93	6.98
Historical	KS-064	96	105	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57537-57539	57537-57539	1-May-93	6.5
Historical	KS-064	87	96	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57534-57536	57534-57536	1-May-93	5.57
Historical	KS-064	78	87	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57531-57533	57531-57533	1-May-93	4.94
Historical	KS-064	61.75	68.65	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57525-57527	57525-57527	1-May-93	7.56
Historical	KS-064	35.5	44.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57514-57516	57514-57516	1-May-93	4.22
Historical	KS-067	120	129	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57072-57074	57072-57074	1-May-93	7.37
Historical	KS-067	111	120	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57069-57071	57069-57071	1-May-93	7.53
Historical	KS-103	208.75	217.75	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49876-49878	49876-49878	1-May-93	7.81
Historical	KS-103	192.5	201.3	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49870-49872	49870-49872	1-May-93	8.02
Historical	KS-103	183.5	192.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49867-49869	49867-49869	1-May-93	7.91
Historical	KS-103	174.5	183.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49864-49866	49864-49866	1-May-93	8.02
Historical	KS-103	165.4	174.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49861-49863	49861-49863	1-May-93	8.01
Historical	KS-103	151.3	159.4	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49855-49857	49855-49857	1-May-93	7.8
Historical	KS-103	134.05	142.3	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49824-49825,49851	49824-49825,49851	1-May-93	8.23
Historical	KS-103	127	134.05	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49821-49823	49821-49823	1-May-93	7.88
Historical	KS-103	118	127	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49818-49820	49818-49820	1-May-93	7.76
Historical	KS-103	109	118	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49815-49817	49815-49817	1-May-93	7.52
Historical	KS-103	100.1	109	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49812-49814	49812-49814	1-May-93	6.6
Historical	KS-103	84.9	92	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49806-49808	49806-49808	1-May-93	7.03
Historical	KS-103	21	30	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49310-49312	49310-49312	1-May-93	4.59
Historical	KS-109	203	212	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	59093-59095	59093-59095	1-May-93	6.3
Historical	KS-109	194	203	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	59090-59092	59090-59092	1-May-93	6.67
Historical	KS-103	217.75	225.7	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49879-49881	49879-49881	1-May-93	8.2
Historical	KS-064	114	121	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57543-57545	57543-57545	1-May-93	7.1
Historical	KS-103	159.4	165.4	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	49858-49860	49858-49860	1-May-93	7.94
Historical	KS-067	129	138	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	57075-57077	57075-57077	1-May-93	6.31
Historical	K89-007	30	39	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	14081-14083	14081-14083	1-May-93	6.59

Appendix 4.1-2. Historical Data

Year	Drill Hole	From	To	S_ Total (%)	TAP (kg $CaCO_3$/t)	NP (kg $CaCO_3$/t)	Total C (%)	CANP_TTL (%)	TNNP (kg $CaCO_3$/t)	TNNP_ ADJ (kg $CaCO_3$/t)	TNPR (unit less)	Fizz Rating (unit less)
Historical	KS-132	97.35	105.6	6.81	212.8125	52	0.74	61.67077435	-160.8125	-175.8125	0.244346549	
Historical	KS-132	81.05	88.4	7.98	249.375	35	0.41	34.16894255	-214.375	-229.375	0.140350877	
Historical	KS-120	234	243	2.75	85.9375	120	1.18	98.33988343	34.0625	19.0625	1.396363636	
Historical	KS-132	105.6	114.3	5.73	179.0625	5	0.01	0.833388843	-174.0625	-179.0625	0.027923211	
Historical	KS-120	209	217	7.5	234.375	64	0.68	56.6704413	-170.375	-185.375	0.273066667	
Historical	KS-120	202	209	8.06	251.875	83	0.91	75.83838468	-168.875	-183.875	0.329528536	
Historical	KS-120	192	202	9.94	310.625	50	0.5	41.66944213	-260.625	-275.625	0.160965795	
Historical	KS-120	183	192	9.61	300.3125	83	0.91	75.83838468	-217.3125	-232.3125	0.276378772	
Historical	KS-120	154	163	9.03	282.1875	98	0.91	75.83838468	-184.1875	-199.1875	0.347286822	
Historical	KS-120	138	144.85	11.2	350	9	0.01	0.833388843	-341	-350	0.025714286	
Historical	KS-120	129	138	11.1	346.875	10	0.04	3.333555371	-336.875	-346.875	0.028828829	
Historical	T89-014	197	206	7.51	234.6875	5	0.02	1.666777685	-229.6875	-234.6875	0.021304927	
Historical	T89-014	140	149	7.54	235.625	38	0.34	28.33522065	-197.625	-212.625	0.16127321	
Historical	T89-014	131	140	6.97	217.8125	65	0.7	58.33721898	-152.8125	-167.8125	0.298421808	
Historical	T89-014	122	131	6.76	211.25	66	0.1	8.333888426	-145.25	-160.25	0.312426036	
Historical	T89-014	113	122	7.86	245.625	7	0.02	1.666777685	-238.625	-245.625	0.028498728	
Historical	T89-014	104	113	6.78	211.875	9	0.04	3.333555371	-202.875	-211.875	0.042477876	
Historical	T89-014	95.14	104	5.81	181.5625	10	0.05	4.166944213	-171.5625	-181.5625	0.055077453	
Historical	KS-120	90	99.8	2.44	76.25	78	0.25	20.83472107	1.75	-13.25	1.02295082	
Historical	KS-120	217	225	6.26	195.625	106	1.14	95.00632806	-89.625	-104.625	0.541853035	
Historical	KS-062	109.73	117.1	1.3	40.625	62	0.66	55.00366361	21.375	6.375	1.526153846	
Historical	KS-109	39	48	5.49	171.5625	44	0.46	38.33588676	-127.5625	-142.5625	0.256466302	
Historical	KS-062	117.1	125.6	1.88	58.75	30	0.24	20.00133222	-28.75	-43.75	0.510638298	
Historical	KS-063	96	105	2.86	89.375	42	0.41	34.16894255	-47.375	-62.375	0.46993007	
Historical	KS-064	306.6	315.6	9.64	301.25	23	0.24	20.00133222	-278.25	-293.25	0.076348548	
Historical	KS-064	297	306.6	10.7	334.375	12	0.06	5.000333056	-322.375	-334.375	0.03588785	
Historical	KS-064	154.7	162.85	6.09	190.3125	20	0.19	15.83438801	-170.3125	-185.3125	0.105090312	
Historical	KS-064	137.7	146.3	6.27	195.9375	20	0.22	18.33455454	-175.9375	-190.9375	0.102073365	
Historical	KS-064	128.7	137.7	6.47	202.1875	22	0.23	19.16794338	-180.1875	-195.1875	0.108809892	
Historical	KS-064	121	128.7	5.42	169.375	14	0.11	9.167277269	-155.375	-169.375	0.082656827	
Historical	KS-064	105	114	6.02	188.125	17	0.15	12.50083264	-171.125	-186.125	0.090365449	
Historical	KS-064	96	105	6.61	206.5625	16	0.11	9.167277269	-190.5625	-205.5625	0.077458396	
Historical	KS-064	87	96	5.86	183.125	10	0.03	2.500166528	-173.125	-183.125	0.054607509	
Historical	KS-064	78	87	4.99	155.9375	13	0.04	3.333555371	-142.9375	-155.9375	0.083366733	
Historical	KS-064	61.75	68.65	5.03	157.1875	36	0.34	28.33522065	-121.1875	-136.1875	0.229025845	
Historical	KS-064	35.5	44.5	6.51	203.4375	4	0.02	1.666777685	-199.4375	-203.4375	0.019662058	
Historical	KS-067	120	129	5.28	165	38	0.45	37.50249792	-127	-142	0.23030303	
Historical	KS-067	111	120	4.86	151.875	45	0.56	46.66977519	-106.875	-121.875	0.296296296	
Historical	KS-103	208.75	217.75	6.3	196.875	33	0.26	21.66810991	-163.875	-178.875	0.167619048	
Historical	KS-103	192.5	201.3	4.39	137.1875	47	0.48	40.00266445	-90.1875	-105.1875	0.342596811	
Historical	KS-103	183.5	192.5	4.75	148.4375	51	0.55	45.83638634	-97.4375	-112.4375	0.343578947	
Historical	KS-103	174.5	183.5	5.48	171.25	49	0.53	44.16960866	-122.25	-137.25	0.286131387	
Historical	KS-103	165.4	174.5	5.72	178.75	47	0.52	43.33621982	-131.75	-146.75	0.262937063	
Historical	KS-103	151.3	159.4	5.67	177.1875	55	0.63	52.50349709	-122.1875	-137.1875	0.310405644	
Historical	KS-103	134.05	142.3	4.77	149.0625	52	0.57	47.50316403	-97.0625	-112.0625	0.34884696	
Historical	KS-103	127	134.05	5.75	179.6875	41	0.43	35.83572023	-138.6875	-153.6875	0.228173913	
Historical	KS-103	118	127	6.47	202.1875	38	0.37	30.83538718	-164.1875	-179.1875	0.187944359	
Historical	KS-103	109	118	5.05	157.8125	23	0.21	17.5011657	-134.8125	-149.8125	0.145742574	
Historical	KS-103	100.1	109	5.24	163.75	9	0.05	4.166944213	-154.75	-163.75	0.054961832	
Historical	KS-103	84.9	92	3.11	97.1875	25	0.28	23.33488759	-72.1875	-87.1875	0.257234727	
Historical	KS-103	21	30	0.74	23.125	0	0.02	1.666777685	-23.125	-23.125		
Historical	KS-109	203	212	5.8	181.25	19	0.21	17.5011657	-162.25	-177.25	0.104827586	
Historical	KS-109	194	203	5.05	157.8125	16	0.2	16.66777685	-141.8125	-156.8125	0.101386139	
Historical	KS-103	217.75	225.7	5.14	160.625	51	0.53	44.16960866	-109.625	-124.625	0.317509728	
Historical	KS-064	114	121	5.09	159.0625	17	0.16	13.33422148	-142.0625	-157.0625	0.106876228	
Historical	KS-103	159.4	165.4	5.41	169.0625	32	0.39	32.50216486	-137.0625	-152.0625	0.189279113	
Historical	KS-067	129	138	5.35	167.1875	16	0.16	13.33422148	-151.1875	-166.1875	0.095700935	
Historical	K89-007	30	39	5.33	166.5625	14	0.08	6.667110741	-152.5625	-166.5625	0.084052533	

Appendix 4.1-2. Historical Data

Year	Drill Hole	From	To	Zone	Interval	Rock Code	Lithology	Simplified Alteration 1	Alt_1_ Intensity	Alt_1_ Intensity_ Old	Alt_2_ Code	Alt_2_ Intensity_ Old	Position	In/Below PEA Pit	Waste/ Ore	Sample No.	PFS Sample#	PFS ABA Model Code	PFS Waste/ Ore	PFS Pit In/Out	PFS Litho	Sample Matrix	Sample Type
Historical	K89-007	12	21	Kerr	9.0	KERR	VTLP	SE		80	CL					K89-007_1	K89-007_1	KERR				Rock	Drillcore
Historical	KS-126	260.85	269.2	Kerr	8.3	KERR	VTLP	SE		50		30				KS-126_24	KS-126_24	KERR				Rock	Drillcore
Historical	KS-126	147.8	156.8	Kerr	9.0	KERR	VTLP	SE		50		30				KS-126_11	KS-126_11	KERR				Rock	Drillcore
Historical	KS-126	139.5	147.8	Kerr	8.3	KERR	VTLP	SE		50		30				KS-126_10	KS-126_10	KERR				Rock	Drillcore
Historical	KS-126	251.85	260.85	Kerr	9.0	KERR	VTLP	SE		50		30				KS-126_23	KS-126_23	KERR				Rock	Drillcore
Historical	KS-126	242.85	251.85	Kerr	9.0	KERR	VTLP	SE		50		30				KS-126_22	KS-126_22	KERR				Rock	Drillcore
Historical	KS-126	234.5	242.85	Kerr	8.3	KERR	VTLP	SE		50		30				KS-126_21	KS-126_21	KERR				Rock	Drillcore
Historical	KS-126	226.1	234.5	Kerr	8.4	KERR	VTLP	SE		50		30				KS-126_20	KS-126_20	KERR				Rock	Drillcore
Historical	KS-126	217.1	226.1	Kerr	9.0	KERR	VTLP	SE		50		30				KS-126_19	KS-126_19	KERR				Rock	Drillcore
Historical	KS-126	208.1	217.1	Kerr	9.0	KERR	VTLP	SE		50		30				KS-126_18	KS-126_18	KERR				Rock	Drillcore
Historical	KS-126	199.1	208.1	Kerr	9.0	KERR	VTLP	SE		50		30				KS-126_17	KS-126_17	KERR				Rock	Drillcore
Historical	KS-126	191.5	199.1	Kerr	7.6	KERR	VTLP	SE		50		30				KS-126_16	KS-126_16	KERR				Rock	Drillcore
Historical	KS-126	183.8	191.5	Kerr	7.7	KERR	VTLP	SE		50		30				KS-126_15	KS-126_15	KERR				Rock	Drillcore
Historical	KS-126	174.8	183.8	Kerr	9.0	KERR	VTLP	SE		50		30				KS-126_14	KS-126_14	KERR				Rock	Drillcore
Historical	KS-126	165.8	174.8	Kerr	9.0	KERR	VTLP	SE		50		30				KS-126_13	KS-126_13	KERR				Rock	Drillcore
Historical	KS-126	156.8	165.8	Kerr	9.0	KERR	VTLP	SE		50		30				KS-126_12	KS-126_12	KERR				Rock	Drillcore
Historical	KS-109	176	185	Kerr	9.0	KERR	VTLP	SE		60/80/80/50	MY//MY	20//20				KS-109_8	KS-109_8	KERR				Rock	Drillcore
Historical	T89-014	260	267	Kerr	7.0	KERR	VTUF	SE		70	CL	50				T89-014_14	T89-014_14	KERR				Rock	Drillcore
Historical	T89-014	251	260	Kerr	9.0	KERR	VTUF	SE		70	CL	50				T89-014_13	T89-014_13	KERR				Rock	Drillcore
Historical	T89-014	242	251	Kerr	9.0	KERR	VTUF	SE		70	CL	50				T89-014_12	T89-014_12	KERR				Rock	Drillcore
Historical	T89-014	233	242	Kerr	9.0	KERR	VTUF	SE		70	CL	50				T89-014_11	T89-014_11	KERR				Rock	Drillcore
Historical	T89-014	224	233	Kerr	9.0	KERR	VTUF	SE		70	CL	50				T89-014_10	T89-014_10	KERR				Rock	Drillcore
Historical	T89-014	215	224	Kerr	9.0	KERR	VTUF	SE		70	CL	50				T89-014_9	T89-014_9	KERR				Rock	Drillcore
Historical	T89-014	206	215	Kerr	9.0	KERR	VTUF	SE		70	CL	50				T89-014_8	T89-014_8	KERR				Rock	Drillcore
Historical	KS-120	34.5	41	Kerr	6.5	KERR	VTXL	SE		90	CL	20				KS-120_3	KS-120_3	KERR				Rock	Drillcore
Historical	KS-120	26.51	34.5	Kerr	8.0	KERR	VTXL	SE		90	CL	20				KS-120_2	KS-120_2	KERR				Rock	Drillcore
Historical	KS-120	18.7	26.51	Kerr	7.8	KERR	VTXL	SE		90	CL	20				KS-120_1	KS-120_1	KERR				Rock	Drillcore
Historical	K87-004	38.9	43.4	Kerr	4.5	KERR	SCNG	SI		40						K87-004_5	K87-004_5	KERR				Rock	Drillcore
Historical	K87-004	31.8	35.4	Kerr	3.6	KERR	SCNG	SI		40						K87-004_4	K87-004_4	KERR				Rock	Drillcore
Historical	K87-004	29	31.8	Kerr	2.8	KERR	SCNG	SI		40						K87-004_3	K87-004_3	KERR				Rock	Drillcore
Historical	KS-063	33.87	42.5	Kerr	8.6	KERR	SCNG	SI		20						KS-063_4	KS-063_4	KERR				Rock	Drillcore
Historical	KS-063	25.31	33.87	Kerr	8.6	KERR	SCNG	SI		20						KS-063_3	KS-063_3	KERR				Rock	Drillcore
Historical	K87-004	43.4	47.9	Kerr	4.5	KERR	SCNG	SI		40/60						K87-004_6	K87-004_6	KERR				Rock	Drillcore
Historical	K87-004	76.6	81.8	Kerr	5.2	KERR	SCNG	SI		30/30						K87-004_12	K87-004_12	KERR				Rock	Drillcore
Historical	KS-063	42.5	50	Kerr	7.5	KERR	SCNG	SI		20/70/70	CL	0/60/60				KS-063_5	KS-063_5	KERR				Rock	Drillcore
Historical	K87-004	93.3	97.54	Kerr	4.2	KERR	SSED	SI		30						K87-004_15	K87-004_15	KERR				Rock	Drillcore
Historical	K87-004	87.8	93.3	Kerr	5.5	KERR	SSED	SI		30						K87-004_14	K87-004_14	KERR				Rock	Drillcore
Historical	K87-004	81.8	87.8	Kerr	6.0	KERR	SSED	SI		30						K87-004_13	K87-004_13	KERR				Rock	Drillcore
Historical	K87-004	67.4	71.9	Kerr	4.5	KERR	SSST	SI		30						K87-004_10	K87-004_10	KERR				Rock	Drillcore
Historical	K87-004	61.9	67.4	Kerr	5.5	KERR	SSST	SI		40						K87-004_9	K87-004_9	KERR				Rock	Drillcore
Historical	K87-004	52.4	56.9	Kerr	4.5	KERR	SSST	SI		40						K87-004_8	K87-004_8	KERR				Rock	Drillcore
Historical	KS-063	13	17.45	Kerr	4.5	KERR	SSST	SI		20						KS-063_2	KS-063_2	KERR				Rock	Drillcore
Historical	KS-063	6.1	13	Kerr	6.9	KERR	SSST	SI		20						KS-063_1	KS-063_1	KERR				Rock	Drillcore
Historical	K87-004	71.9	76.6	Kerr	4.7	KERR	SSST	SI		30/30						K87-004_11	K87-004_11	KERR				Rock	Drillcore
Historical	KS-094	10.15	19	Kerr	8.9	KERR	DDPL									KS-094_1	KS-094_1	KERR				Rock	Drillcore
Historical	KS-063	59.3	64.3	Kerr	5.0	KERR	FALT									KS-063_7	KS-063_7	KERR				Rock	Drillcore
Historical	K89-007	63.81	70.3	Kerr	6.5	KERR	FELS									K89-007_3	K89-007_3	KERR				Rock	Drillcore
Historical	SG92-02	112.8	115	Sulphurets	2.2	sw volc	BVAT	TUFF	QA	30	QB	20	2 upper panel	in	ore	SG92-02_6	C8891	RAEWN_CU	ORE	IN	VUAT	Rock	Drillcore
Historical	SG92-02	115	116.4	Sulphurets	1.4	sw volc	PQMZ	INTRUSIVES	QP	30	QA	10	2 upper panel	in	ore	SG92-02_7	C8892	RAEWN_CU	ORE	IN	VUAT	Rock	Drillcore
Historical	SG92-02	116.4	119	Sulphurets	2.6	sw volc	PQMZ	INTRUSIVES	QP	30	QA	10	2 upper panel	in	ore	SG92-02_8	C8893	RAEWN_CU	ORE	IN	PMON	Rock	Drillcore
Historical	SG92-02	119	121.5	Sulphurets	2.5	sw volc	PQMZ	INTRUSIVES	QP	30	QA	10	2 upper panel	in	ore	SG92-02_9	C8894	RAEWN_CU	ORE	IN	PMON	Rock	Drillcore
Historical	SG92-02	121.5	124	Sulphurets	2.5	sw volc	VULT	TUFF	QB	50	QP	10	2 upper panel	in	ore	SG92-02_10	C8896	RAEWN_CU	ORE	IN	VULT	Rock	Drillcore
Historical	SG92-02	126	128	Sulphurets	2.0	sw volc	VULT	TUFF	QB	50	QP	10	2 upper panel	in	ore	SG92-02_11	C8898	RAEWN_CU	ORE	IN	VULT	Rock	Drillcore
Historical	SG92-02	128	130	Sulphurets	2.0	sw volc	VULT	TUFF	QB	50	QP	10	2 upper panel	in	ore	SG92-02_12	C8899	RAEWN_CU	ORE	IN	VULT	Rock	Drillcore
Historical	SG92-02	130	132	Sulphurets	2.0	sw volc	VULT	TUFF	QB	50	QP	10	2 upper panel	in	ore	SG92-02_13	C8900	RAEWN_CU	ORE	IN	VULT	Rock	Drillcore
Historical	SG92-02	135	137	Sulphurets	2.0	sw volc	PQMZ	INTRUSIVES	QB	30	QP	30	2 upper panel	in	ore	SG92-02_14	C8902	RAEWN_CU	ORE	IN	PMON	Rock	Drillcore
Historical	SG92-02	137	139	Sulphurets	2.0	sw volc	PQMZ	INTRUSIVES	QB	30	QP	30	2 upper panel	in	ore	SG92-02_15	C8903	RAEWN_CU	ORE	IN	PMON	Rock	Drillcore
Historical	SG92-02	141	143	Sulphurets	2.0	sw volc	PQMZ	INTRUSIVES	QB	30	QP	30	2 upper panel	in	ore	SG92-02_16	C8907	RAEWN_CU	ORE	IN	PMON	Rock	Drillcore

Appendix 4.1-2. Historical Data

Year	Drill Hole	From	To	udf_LabID	Lab_ Certificate_ Number	Geo_Tech_ Lab_ID	Client ID	Collect Date/ Time	Paste pH (unit less)
Historical	K89-007	12	21	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	14075-14077	14075-14077	1-May-93	6.2
Historical	KS-126	260.85	269.2	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39176-39178	39176-39178	1-May-93	6.51
Historical	KS-126	147.8	156.8	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39137-39139	39137-39139	1-May-93	7.41
Historical	KS-126	139.5	147.8	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39134-39136	39134-39136	1-May-93	6.93
Historical	KS-126	251.85	260.85	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39173-39175	39173-39175	1-May-93	7.71
Historical	KS-126	242.85	251.85	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39170-39172	39170-39172	1-May-93	7.26
Historical	KS-126	234.5	242.85	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39167-39169	39167-39169	1-May-93	7.35
Historical	KS-126	226.1	234.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39164-39166	39164-39166	1-May-93	6.79
Historical	KS-126	217.1	226.1	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39161-39163	39161-39163	1-May-93	5.14
Historical	KS-126	208.1	217.1	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39158-39160	39158-39160	1-May-93	4.76
Historical	KS-126	199.1	208.1	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39155-39157	39155-39157	1-May-93	6.77
Historical	KS-126	191.5	199.1	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39152-39154	39152-39154	1-May-93	7.27
Historical	KS-126	183.8	191.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39149-39151	39149-39151	1-May-93	7.11
Historical	KS-126	174.8	183.8	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39146-39148	39146-39148	1-May-93	7.15
Historical	KS-126	165.8	174.8	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39143-39145	39143-39145	1-May-93	7.36
Historical	KS-126	156.8	165.8	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	39140-39142	39140-39142	1-May-93	7.2
Historical	KS-109	176	185	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	59084-59086	59084-59086	1-May-93	8.03
Historical	T89-014	260	267	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	18206-18207	18206-18207	1-May-93	6.87
Historical	T89-014	251	260	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	18203-18205	18203-18205	1-May-93	6.95
Historical	T89-014	242	251	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	18200-18202	18200-18202	1-May-93	6.64
Historical	T89-014	233	242	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	18197-18199	18197-18199	1-May-93	6.72
Historical	T89-014	224	233	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	18194-18196	18194-18196	1-May-93	6.86
Historical	T89-014	215	224	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	18191-18193	18191-18193	1-May-93	6.53
Historical	T89-014	206	215	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	18188-18190	18188-18190	1-May-93	5.91
Historical	KS-120	34.5	41	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58838-58840	58838-58840	1-May-93	5.35
Historical	KS-120	26.51	34.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58835-58837	58835-58837	1-May-93	4.3
Historical	KS-120	18.7	26.51	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	58832-58834	58832-58834	1-May-93	4.48
Historical	K87-004	38.9	43.4	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	17246-17248	17246-17248	1-May-93	8
Historical	K87-004	31.8	35.4	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	17240-17242	17240-17242	1-May-93	8.09
Historical	K87-004	29	31.8	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	17237-17239	17237-17239	1-May-93	8.36
Historical	KS-063	33.87	42.5	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56513-56515	56513-56515	1-May-93	8
Historical	KS-063	25.31	33.87	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56510-56512	56510-56512	1-May-93	8.07
Historical	K87-004	43.4	47.9	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	17249-17251	17249-17251	1-May-93	7.95
Historical	K87-004	76.6	81.8	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	17270-17272	17270-17272	1-May-93	8.33
Historical	KS-063	42.5	50	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56516-56518	56516-56518	1-May-93	8.43
Historical	K87-004	93.3	97.54	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	17407-17409	17407-17409	1-May-93	7.69
Historical	K87-004	87.8	93.3	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	17404-17406	17404-17406	1-May-93	8.59
Historical	K87-004	81.8	87.8	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	17273-17275	17273-17275	1-May-93	8.4
Historical	K87-004	67.4	71.9	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	17264-17266	17264-17266	1-May-93	6.55
Historical	K87-004	61.9	67.4	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	17261-17263	17261-17263	1-May-93	6.83
Historical	K87-004	52.4	56.9	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	17255-17257	17255-17257	1-May-93	8.16
Historical	KS-063	13	17.45	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56504-56506	56504-56506	1-May-93	8.17
Historical	KS-063	6.1	13	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56501-56503	56501-56503	1-May-93	7.52
Historical	K87-004	71.9	76.6	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	17267-17269	17267-17269	1-May-93	7.53
Historical	KS-094	10.15	19	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56100-56102	56100-56102	1-May-93	6.69
Historical	KS-063	59.3	64.3	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	56522-56524	56522-56524	1-May-93	7.47
Historical	K89-007	63.81	70.3	Stantec Consulting Ltd., "Environmental Evaluation of the Kerr-Sulphurets Property, Northwestern, B.C.", for Noranda Inc., November 2003	Placer Dome Research Centre	14096-14098	14096-14098	1-May-93	4.43
Historical	SG92-02	112.8	115		Placer Dome Research Centre	SG92-02_C8891	SG92-02_C8891	1-May-93	8.01
Historical	SG92-02	115	116.4		Placer Dome Research Centre	SG92-02_C8892	SG92-02_C8892	1-May-93	7.97
Historical	SG92-02	116.4	119		Placer Dome Research Centre	SG92-02_C8893	SG92-02_C8893	1-May-93	7.97
Historical	SG92-02	119	121.5		Placer Dome Research Centre	SG92-02_C8894	SG92-02_C8894	1-May-93	8.28
Historical	SG92-02	121.5	124		Placer Dome Research Centre	SG92-02_C8896	SG92-02_C8896	1-May-93	8.23
Historical	SG92-02	126	128		Placer Dome Research Centre	SG92-02_C8898	SG92-02_C8898	1-May-93	8.06
Historical	SG92-02	128	130		Placer Dome Research Centre	SG92-02_C8899	SG92-02_C8899	1-May-93	7.91
Historical	SG92-02	130	132		Placer Dome Research Centre	SG92-02_C8900	SG92-02_C8900	1-May-93	8.14
Historical	SG92-02	135	137		Placer Dome Research Centre	SG92-02_C8902	SG92-02_C8902	1-May-93	8.01
Historical	SG92-02	137	139		Placer Dome Research Centre	SG92-02_C8903	SG92-02_C8903	1-May-93	8.07
Historical	SG92-02	141	143		Placer Dome Research Centre	SG92-02_C8907	SG92-02_C8907	1-May-93	8.07

Appendix 4.1-2. Historical Data

Year	Drill Hole	From	To	S_ Total (%)	TAP (kg $CaCO_3$/t)	NP (kg $CaCO_3$/t)	Total C (%)	CANP_TTL (%)	TNNP (kg $CaCO_3$/t)	TNNP_ ADJ (kg $CaCO_3$/t)	TNPR (unit less)	Fizz Rating (unit less)
Historical	K89-007	12	21	4.55	142.1875	30	0.31	25.83505412	-112.1875	-127.1875	0.210989011	
Historical	KS-126	260.85	269.2	7.01	219.0625	9	0.05	4.166944213	-210.0625	-219.0625	0.041084165	
Historical	KS-126	147.8	156.8	4.86	151.875	39	0.44	36.66910908	-112.875	-127.875	0.256790123	
Historical	KS-126	139.5	147.8	6.14	191.875	25	0.22	18.33455454	-166.875	-181.875	0.13029316	
Historical	KS-126	251.85	260.85	5.92	185	29	0.3	25.00166528	-156	-171	0.156756757	
Historical	KS-126	242.85	251.85	5.65	176.5625	16	0.09	7.500499584	-160.5625	-175.5625	0.090619469	
Historical	KS-126	234.5	242.85	5.89	184.0625	19	0.18	15.00099917	-165.0625	-180.0625	0.103225806	
Historical	KS-126	226.1	234.5	7.11	222.1875	15	0.13	10.83405495	-207.1875	-222.1875	0.067510549	
Historical	KS-126	217.1	226.1	6.79	212.1875	7	0.02	1.666777685	-205.1875	-212.1875	0.032989691	
Historical	KS-126	208.1	217.1	6.8	212.5	7	0.01	0.833388843	-205.5	-212.5	0.032941176	
Historical	KS-126	199.1	208.1	5.59	174.6875	13	0.08	6.667110741	-161.6875	-174.6875	0.074418605	
Historical	KS-126	191.5	199.1	5.2	162.5	21	0.17	14.16761032	-141.5	-156.5	0.129230769	
Historical	KS-126	183.8	191.5	5.46	170.625	22	0.2	16.66777685	-148.625	-163.625	0.128937729	
Historical	KS-126	174.8	183.8	4.92	153.75	18	0.13	10.83405495	-135.75	-150.75	0.117073171	
Historical	KS-126	165.8	174.8	5.41	169.0625	30	0.29	24.16827644	-139.0625	-154.0625	0.177449168	
Historical	KS-126	156.8	165.8	5.35	167.1875	26	0.25	20.83472107	-141.1875	-156.1875	0.155514019	
Historical	KS-109	176	185	5.4	168.75	66	0.85	70.83805162	-102.75	-117.75	0.391111111	
Historical	T89-014	260	267	5.59	174.6875	15	0.09	7.500499584	-159.6875	-174.6875	0.085867621	
Historical	T89-014	251	260	7.34	229.375	19	0.18	15.00099917	-210.375	-225.375	0.082833787	
Historical	T89-014	242	251	6.45	201.5625	13	0.09	7.500499584	-188.5625	-201.5625	0.064496124	
Historical	T89-014	233	242	7.02	219.375	13	0.09	7.500499584	-206.375	-219.375	0.059259259	
Historical	T89-014	224	233	6.12	191.25	14	0.09	7.500499584	-177.25	-191.25	0.073202614	
Historical	T89-014	215	224	7.64	238.75	9	0.04	3.333555371	-229.75	-238.75	0.037696335	
Historical	T89-014	206	215	6.68	208.75	4	0.01	0.833388843	-204.75	-208.75	0.019161677	
Historical	KS-120	34.5	41	6.71	209.6875	13	0.05	4.166944213	-196.6875	-209.6875	0.061997019	
Historical	KS-120	26.51	34.5	6.5	203.125	7	0.02	1.666777685	-196.125	-203.125	0.034461538	
Historical	KS-120	18.7	26.51	2.54	79.375	2	0.03	2.500166528	-77.375	-79.375	0.02519685	
Historical	K87-004	38.9	43.4	1.7	53.125	71	0.77	64.17094088	17.875	2.875	1.336470588	
Historical	K87-004	31.8	35.4	1.62	50.625	83	1.01	84.17227311	32.375	17.375	1.639506173	
Historical	K87-004	29	31.8	1.54	48.125	74	0.81	67.50449625	25.875	10.875	1.537662338	
Historical	KS-063	33.87	42.5	2.2	68.75	46	0.48	40.00266445	-22.75	-37.75	0.669090909	
Historical	KS-063	25.31	33.87	1.29	40.3125	53	0.57	47.50316403	12.6875	-2.3125	1.314728682	
Historical	K87-004	43.4	47.9	1.93	60.3125	49	0.39	32.50216486	-11.3125	-26.3125	0.812435233	
Historical	K87-004	76.6	81.8	2.17	67.8125	134	1.47	122.5081599	66.1875	51.1875	1.976036866	
Historical	KS-063	42.5	50	1.52	47.5	45	0.47	39.1692756	-2.5	-17.5	0.947368421	
Historical	K87-004	93.3	97.54	2.26	70.625	15	0.03	2.500166528	-55.625	-70.625	0.212389381	
Historical	K87-004	87.8	93.3	1.01	31.5625	76	0.1	8.333888426	44.4375	29.4375	2.407920792	
Historical	K87-004	81.8	87.8	2.44	76.25	112	1.09	90.83938385	35.75	20.75	1.468852459	
Historical	K87-004	67.4	71.9	1.5	46.875	39	0.37	30.83538718	-7.875	-22.875	0.832	
Historical	K87-004	61.9	67.4	1.08	33.75	76	0.86	71.67144047	42.25	27.25	2.251851852	
Historical	K87-004	52.4	56.9	2.52	78.75	39	0.28	23.33488759	-39.75	-54.75	0.495238095	
Historical	KS-063	13	17.45	0.71	22.1875	16	0.11	9.167277269	-6.1875	-21.1875	0.721126761	
Historical	KS-063	6.1	13	1.6	50	11	0.07	5.833721898	-39	-50	0.22	
Historical	K87-004	71.9	76.6	1.8	56.25	74	0.83	69.17127394	17.75	2.75	1.315555556	
Historical	KS-094	10.15	19	1.06	33.125	12	0.1	8.333888426	-21.125	-33.125	0.362264151	
Historical	KS-063	59.3	64.3	1.75	54.6875	13	0.08	6.667110741	-41.6875	-54.6875	0.237714286	
Historical	K89-007	63.81	70.3	0.29	9.0625	0	0.03	2.500166528	-9.0625	-9.0625		
Historical	SG92-02	112.8	115	0.89	27.8125	24	0.18	15.00099917	-3.8125	-18.8125	0.862921348	
Historical	SG92-02	115	116.4	0.89	27.8125	63	0.81	67.50449625	35.1875	20.1875	2.265168539	
Historical	SG92-02	116.4	119	2.33	72.8125	19	0.23	19.16794338	-53.8125	-68.8125	0.260944206	
Historical	SG92-02	119	121.5	1.5	46.875	20	0.24	20.00133222	-26.875	-41.875	0.426666667	
Historical	SG92-02	121.5	124	1.3	40.625	49	0.56	46.66977519	8.375	-6.625	1.206153846	
Historical	SG92-02	126	128	2.84	88.75	34	0.29	24.16827644	-54.75	-69.75	0.383098592	
Historical	SG92-02	128	130	3.07	95.9375	24	0.17	14.16761032	-71.9375	-86.9375	0.250162866	
Historical	SG92-02	130	132	1.71	53.4375	55	0.63	52.50349709	1.5625	-13.4375	1.029239766	
Historical	SG92-02	135	137	3.07	95.9375	20	0.19	15.83438801	-75.9375	-90.9375	0.208469055	
Historical	SG92-02	137	139	1.36	42.5	30	0.25	20.83472107	-12.5	-27.5	0.705882353	
Historical	SG92-02	141	143	1.58	49.375	18	0.16	13.33422148	-31.375	-46.375	0.364556962	

Appendix 4.1-2. Historical Data

Year	Drill Hole	From	To	Zone	Interval	Rock Code	Lithology	Simplified Alteration 1	Alt_1_ Intensity	Alt_1_ Intensity_ Old	Alt_2_ Code	Alt_2_ Intensity_ Old	Position	In/Below PEA Pit	Waste/ Ore	Sample No.	PFS Sample#	PFS ABA Model Code	PFS Waste/ Ore	PFS Pit In/Out	PFS Litho	Sample Matrix	Sample Type
Historical	SG92-02	143	146.2	Sulphurets	3.2	sw volc	PQMZ	INTRUSIVES	QB	30	QP	30	2 upper panel	in	ore	SG92-02_17	C8908	RAEWN_CU	ORE	IN	PMON	Rock	Drillcore
Historical	SG92-02	146.2	148	Sulphurets	1.8	sw volc	VUAT	TUFF	QB	50	QP	20	2 upper panel	in	ore	SG92-02_18	C8909	RAEWN_CU	ORE	IN	VUAT	Rock	Drillcore
Historical	SG92-02	148	150	Sulphurets	2.0	sw volc	VUAT	TUFF	QB	50	QP	20	2 upper panel	in	ore	SG92-02_19	C8910	RAEWN_CU	ORE	IN	VUAT	Rock	Drillcore
Historical	SG92-02	150	152	Sulphurets	2.0	sw volc	VUAT	TUFF	QB	50	QP	20	2 upper panel	in	ore	SG92-02_20	C8911	RAEWN_CU	ORE	IN	VUAT	Rock	Drillcore
Historical	SG92-02	152	154	Sulphurets	2.0	sw volc	VUAT	TUFF	QB	50	QP	20	2 upper panel	in	ore	SG92-02_21	C8912	RAEWN_CU	ORE	IN	VUAT	Rock	Drillcore
Historical	SG92-02	154	156	Sulphurets	2.0	sw volc	VUAT	TUFF	QB	50	QP	20	2 upper panel	in	ore	SG92-02_22	C8913	RAEWN_CU	ORE	IN	VUAT	Rock	Drillcore
Historical	SG92-02	156	158	Sulphurets	2.0	sw volc	VUAT	TUFF	QB	50	QP	20	2 upper panel	in	ore	SG92-02_23	C8914	RAEWN_CU	ORE	IN	VUAT	Rock	Drillcore
Historical	SG92-02	158	160	Sulphurets	2.0	sw volc	VUAT	TUFF	QB	50	QP	20	2 upper panel	in	ore	SG92-02_24	C8916	RAEWN_CU	ORE	IN	VUAT	Rock	Drillcore
Historical	SG92-02	160	162.8	Sulphurets	2.8	sw volc	VUAT	TUFF	QB	50	QP	20	2 upper panel	in	ore	SG92-02_25	C8917	RAEWN_CU	ORE	IN	VUAT	Rock	Drillcore
Historical	SG92-15	190.6	192.6	Sulphurets	2.0	sw volc	PSBX	BX	SI	20	QA	70	2 upper panel	in	ore	SG92-15_3	C12976	SULPH_AU	ORE	IN	PSBX	Rock	Drillcore
Historical	SG92-15	192.6	194.6	Sulphurets	2.0	sw volc	PSBX	BX	SI	20	QA	70	2 upper panel	in	ore	SG92-15_4	C12977	SULPH_AU	ORE	IN	PSBX	Rock	Drillcore
Historical	SG92-15	194.6	196.6	Sulphurets	2.0	sw volc	PSBX	BX	SI	20	QA	70	2 upper panel	in	ore	SG92-15_5	C12978	SULPH_AU	ORE	IN	PSBX	Rock	Drillcore
Historical	SG92-15	196.6	198.6	Sulphurets	2.0	sw volc	PSBX	BX	SI	20	QA	70	2 upper panel	in	ore	SG92-15_6	C12979	SULPH_AU	ORE	IN	PSBX	Rock	Drillcore
Historical	SG92-15	198.6	200.6	Sulphurets	2.0	sw volc	PSBX	BX	SI	20	QA	70	2 upper panel	in	ore	SG92-15_7	C12980	SULPH_AU	ORE	IN	PSBX	Rock	Drillcore
Historical	SG92-15	200.6	202.6	Sulphurets	2.0	sw volc	PSBX	BX	SI	20	QA	70	2 upper panel	in	ore	SG92-15_8	C12981	SULPH_AU	ORE	IN	PSBX	Rock	Drillcore
Historical	SG92-15	202.6	204.6	Sulphurets	2.0	sw volc	PSBX	BX	SI	20			2 upper panel	in	ore	SG92-15_9	C12982	SULPH_AU	ORE	IN	PSBX	Rock	Drillcore
Historical	SG92-15	204.6	206.6	Sulphurets	2.0	sw volc	PSBX	BX	SI	20			2 upper panel	in	ore	SG92-15_10	C12983	SULPH_AU	ORE	IN	PSBX	Rock	Drillcore
Historical	SG92-15	206.6	208.5	Sulphurets	1.9	sw volc	PSBX	BX	SI	20			2 upper panel	in	ore	SG92-15_11	C12986	SULPH_AU	ORE	IN	PSBX	Rock	Drillcore
Historical	SG92-15	208.5	210.5	Sulphurets	2.0	sw volc	PSBX	BX	SI	20			2 upper panel	in	ore	SG92-15_12	C12987	SULPH_AU	ORE	IN	PSBX	Rock	Drillcore
Historical	SG92-15	210.5	212.5	Sulphurets	2.0	sw volc	PSBX	BX	SI	20			2 upper panel	in	ore	SG92-15_13	C12988	SULPH_AU	ORE	IN	PSBX	Rock	Drillcore
Historical	SG92-15	212.5	214.5	Sulphurets	2.0	sw volc	PSBX	BX	SI	20			2 upper panel	in	ore	SG92-15_14	C12989	SULPH_AU	ORE	IN	PSBX	Rock	Drillcore
Historical	SG92-15	214.5	215.67	Sulphurets	1.2	sw volc	PSBX	BX	SI	20			2 upper panel	in	ore	SG92-15_15	C12990	SULPH_AU	ORE	IN	PSBX	Rock	Drillcore
Historical	SG92-15	215.67	217.67	Sulphurets	2.0	sw volc	PSBX	BX	SI	20			2 upper panel	in	ore	SG92-15_16	C12991	SULPH_AU	ORE	IN	PSBX	Rock	Drillcore
Historical	SG92-15	217.67	219.67	Sulphurets	2.0	sw volc	PSBX	BX	SI	20			2 upper panel	in	ore	SG92-15_17	C12992	SULPH_AU	ORE	IN	PSBX	Rock	Drillcore
Historical	SG92-15	219.67	221.25	Sulphurets	1.6	sw volc	PSBX	BX	SI	20			2 upper panel	in	ore	SG92-15_18	C12993	SULPH_AU	ORE	IN	PSBX	Rock	Drillcore
Historical	SG92-17	64.6	66.4	Sulphurets	1.8	sw volc	DDRT	INTRUSIVES	PR	10			2 upper panel	in	ore	SG92-17_6	C11076	HAZLVOLC_FW	WASTE	IN	DDRT	Rock	Drillcore
Historical	SG92-17	66.6	69	Sulphurets	2.4	sw volc	VAAT	ANDS	PR	10			2 upper panel	in	ore	SG92-17_7	C11077	HAZLVOLC_FW	WASTE	IN	VAAT	Rock	Drillcore
Historical	SG92-17	69	71	Sulphurets	2.0	sw volc	VAAT	ANDS	PR	10			2 upper panel	in	ore	SG92-17_8	C11078	HAZLVOLC_FW	WASTE	IN	VAAT	Rock	Drillcore
Historical	SG92-17	71	73	Sulphurets	2.0	sw volc	VAAT	ANDS	PR	10			2 upper panel	in	ore	SG92-17_9	C11079	HAZLVOLC_FW	WASTE	IN	VAAT	Rock	Drillcore
Historical	SG92-17	74.75	77	Sulphurets	2.3	sw volc	SSLT	SEDS	QP	10	PR	10	2 upper panel	in	ore	SG92-17_10	C11081	HAZLVOLC_FW	WASTE	IN	SSLT	Rock	Drillcore
Historical	SG92-17	77	79	Sulphurets	2.0	sw volc	SSLT	SEDS	QP	10	PR	10	2 upper panel	in	ore	SG92-17_11	C11082	HAZLVOLC_FW	WASTE	IN	SSLT	Rock	Drillcore
Historical	SG92-17	79	80.77	Sulphurets	1.8	sw volc	SSLT	SEDS	QP	10	PR	10	2 upper panel	in	ore	SG92-17_12	C11083	HAZLVOLC_FW	WASTE	IN	SSLT	Rock	Drillcore
Historical	SG92-17	80.77	82	Sulphurets	1.2	sw volc	SARG	SEDS					2 upper panel	in	ore	SG92-17_13	C11086	HAZLVOLC_FW	WASTE	IN	SARG	Rock	Drillcore
Historical	SG92-17	84.08	86	Sulphurets	1.9	sw volc	VAAT	ANDS	PR	10			2 upper panel	in	ore	SG92-17_14	C11088	HAZLVOLC_FW	WASTE	IN	VAAT	Rock	Drillcore
Historical	SG92-17	86	88	Sulphurets	2.0	sw volc	VAAT	ANDS	PR	10			2 upper panel	in	ore	SG92-17_15	C11089	HAZLVOLC_FW	WASTE	IN	VAAT	Rock	Drillcore
Historical	SG92-17	88	90	Sulphurets	2.0	sw volc	VAAT	ANDS	PR				2 upper panel	in	ore	SG92-17_16	C11090	HAZLVOLC_FW	WASTE	IN	VAAT	Rock	Drillcore

Appendix 4.1-2. Historical Data

Year	Drill Hole	From	To	udf_LabID	Lab_ Certificate_ Number	Geo_Tech_ Lab_ID	Client ID	Collect Date/ Time	Paste pH (unit less)
Historical	SG92-02	143	146.2		Placer Dome Research Centre	SG92-02_C8908	SG92-02_C8908	1-May-93	8.15
Historical	SG92-02	146.2	148		Placer Dome Research Centre	SG92-02_C8909	SG92-02_C8909	1-May-93	8.23
Historical	SG92-02	148	150		Placer Dome Research Centre	SG92-02_C8910	SG92-02_C8910	1-May-93	8.17
Historical	SG92-02	150	152		Placer Dome Research Centre	SG92-02_C8911	SG92-02_C8911	1-May-93	8.2
Historical	SG92-02	152	154		Placer Dome Research Centre	SG92-02_C8912	SG92-02_C8912	1-May-93	8.12
Historical	SG92-02	154	156		Placer Dome Research Centre	SG92-02_C8913	SG92-02_C8913	1-May-93	8.28
Historical	SG92-02	156	158		Placer Dome Research Centre	SG92-02_C8914	SG92-02_C8914	1-May-93	8.34
Historical	SG92-02	158	160		Placer Dome Research Centre	SG92-02_C8916	SG92-02_C8916	1-May-93	8.21
Historical	SG92-02	160	162.8		Placer Dome Research Centre	SG92-02_C8917	SG92-02_C8917	1-May-93	8.19
Historical	SG92-15	190.6	192.6		Placer Dome Research Centre	SG92-15_C12976	SG92-15_C12976	1-May-93	7.99
Historical	SG92-15	192.6	194.6		Placer Dome Research Centre	SG92-15_C12977	SG92-15_C12977	1-May-93	5.1
Historical	SG92-15	194.6	196.6		Placer Dome Research Centre	SG92-15_C12978	SG92-15_C12978	1-May-93	5.81
Historical	SG92-15	196.6	198.6		Placer Dome Research Centre	SG92-15_C12979	SG92-15_C12979	1-May-93	5.71
Historical	SG92-15	198.6	200.6		Placer Dome Research Centre	SG92-15_C12980	SG92-15_C12980	1-May-93	6.12
Historical	SG92-15	200.6	202.6		Placer Dome Research Centre	SG92-15_C12981	SG92-15_C12981	1-May-93	6.55
Historical	SG92-15	202.6	204.6		Placer Dome Research Centre	SG92-15_C12982	SG92-15_C12982	1-May-93	6.7
Historical	SG92-15	204.6	206.6		Placer Dome Research Centre	SG92-15_C12983	SG92-15_C12983	1-May-93	6.29
Historical	SG92-15	206.6	208.5		Placer Dome Research Centre	SG92-15_C12986	SG92-15_C12986	1-May-93	5.57
Historical	SG92-15	208.5	210.5		Placer Dome Research Centre	SG92-15_C12987	SG92-15_C12987	1-May-93	6.66
Historical	SG92-15	210.5	212.5		Placer Dome Research Centre	SG92-15_C12988	SG92-15_C12988	1-May-93	6.68
Historical	SG92-15	212.5	214.5		Placer Dome Research Centre	SG92-15_C12989	SG92-15_C12989	1-May-93	6.23
Historical	SG92-15	214.5	215.67		Placer Dome Research Centre	SG92-15_C12990	SG92-15_C12990	1-May-93	6.63
Historical	SG92-15	215.67	217.67		Placer Dome Research Centre	SG92-15_C12991	SG92-15_C12991	1-May-93	7.54
Historical	SG92-15	217.67	219.67		Placer Dome Research Centre	SG92-15_C12992	SG92-15_C12992	1-May-93	6.05
Historical	SG92-15	219.67	221.25		Placer Dome Research Centre	SG92-15_C12993	SG92-15_C12993	1-May-93	6.76
Historical	SG92-17	64.6	66.4		Placer Dome Research Centre	SG92-17_C11076	SG92-17_C11076	1-May-93	8.42
Historical	SG92-17	66.6	69		Placer Dome Research Centre	SG92-17_C11077	SG92-17_C11077	1-May-93	8.69
Historical	SG92-17	69	71		Placer Dome Research Centre	SG92-17_C11078	SG92-17_C11078	1-May-93	8.85
Historical	SG92-17	71	73		Placer Dome Research Centre	SG92-17_C11079	SG92-17_C11079	1-May-93	8.75
Historical	SG92-17	74.75	77		Placer Dome Research Centre	SG92-17_C11081	SG92-17_C11081	1-May-93	8.41
Historical	SG92-17	77	79		Placer Dome Research Centre	SG92-17_C11082	SG92-17_C11082	1-May-93	8.33
Historical	SG92-17	79	80.77		Placer Dome Research Centre	SG92-17_C11083	SG92-17_C11083	1-May-93	8.23
Historical	SG92-17	80.77	82		Placer Dome Research Centre	SG92-17_C11086	SG92-17_C11086	1-May-93	8.28
Historical	SG92-17	84.08	86		Placer Dome Research Centre	SG92-17_C11088	SG92-17_C11088	1-May-93	8.53
Historical	SG92-17	86	88		Placer Dome Research Centre	SG92-17_C11089	SG92-17_C11089	1-May-93	8.21
Historical	SG92-17	88	90		Placer Dome Research Centre	SG92-17_C11090	SG92-17_C11090	1-May-93	8.51

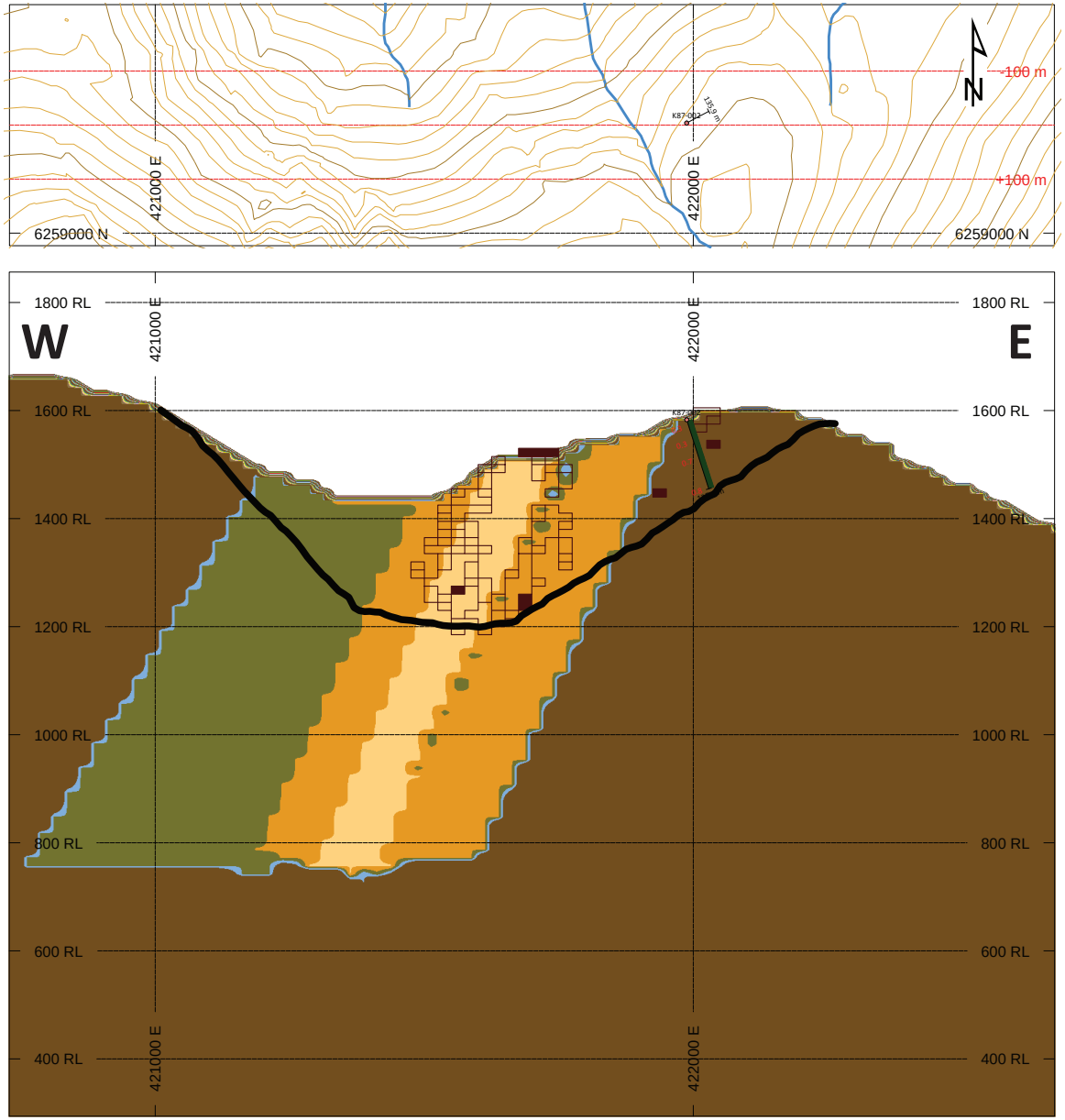
Appendix 4.1-2. Historical Data

Year	Drill Hole	From	To	S_ Total (%)	TAP (kg $CaCO_3$/t)	NP (kg $CaCO_3$/t)	Total C (%)	CANP_TTL (%)	TNNP (kg $CaCO_3$/t)	TNNP_ ADJ (kg $CaCO_3$/t)	TNPR (unit less)	Fizz Rating (unit less)
Historical	SG92-02	143	146.2	1.54	48.125	20	0.18	15.00099917	-28.125	-43.125	0.415584416	
Historical	SG92-02	146.2	148	1.52	47.5	30	0.24	20.00133222	-17.5	-32.5	0.631578947	
Historical	SG92-02	148	150	1.44	45	29	0.3	25.00166528	-16	-31	0.644444444	
Historical	SG92-02	150	152	1.56	48.75	27	0.24	20.00133222	-21.75	-36.75	0.553846154	
Historical	SG92-02	152	154	2.19	68.4375	26	0.24	20.00133222	-42.4375	-57.4375	0.379908676	
Historical	SG92-02	154	156	1.31	40.9375	27	0.26	21.66810991	-13.9375	-28.9375	0.659541985	
Historical	SG92-02	156	158	0.91	28.4375	32	0.31	25.83505412	3.5625	-11.4375	1.125274725	
Historical	SG92-02	158	160	1.55	48.4375	24	0.23	19.16794338	-24.4375	-39.4375	0.495483871	
Historical	SG92-02	160	162.8	2.04	63.75	47	0.54	45.0029975	-16.75	-31.75	0.737254902	
Historical	SG92-15	190.6	192.6	9.8	306.25	1	0.01	0.833388843	-305.25	-306.25	0.003265306	
Historical	SG92-15	192.6	194.6	16	500	2	0.01	0.833388843	-498	-500	0.004	
Historical	SG92-15	194.6	196.6	10	312.5	5	0.02	1.666777685	-307.5	-312.5	0.016	
Historical	SG92-15	196.6	198.6	8.54	266.875	4	0.01	0.833388843	-262.875	-266.875	0.01498829	
Historical	SG92-15	198.6	200.6	11.2	350	6	0.02	1.666777685	-344	-350	0.017142857	
Historical	SG92-15	200.6	202.6	8.27	258.4375	7	0.03	2.500166528	-251.4375	-258.4375	0.027085852	
Historical	SG92-15	202.6	204.6	7.44	232.5	7	0.04	3.333555371	-225.5	-232.5	0.030107527	
Historical	SG92-15	204.6	206.6	9.6	300	5	0.02	1.666777685	-295	-300	0.016666667	
Historical	SG92-15	206.6	208.5	11.1	346.875	4	0.02	1.666777685	-342.875	-346.875	0.011531532	
Historical	SG92-15	208.5	210.5	10.2	318.75	8	0.07	5.833721898	-310.75	-318.75	0.025098039	
Historical	SG92-15	210.5	212.5	7.4	231.25	9	0.06	5.000333056	-222.25	-231.25	0.038918919	
Historical	SG92-15	212.5	214.5	9.59	299.6875	5	0.02	1.666777685	-294.6875	-299.6875	0.016684046	
Historical	SG92-15	214.5	215.67	8.71	272.1875	6	0.04	3.333555371	-266.1875	-272.1875	0.022043628	
Historical	SG92-15	215.67	217.67	6.31	197.1875	20	0.18	15.00099917	-177.1875	-192.1875	0.101426307	
Historical	SG92-15	217.67	219.67	7.81	244.0625	4	0.02	1.666777685	-240.0625	-244.0625	0.016389245	
Historical	SG92-15	219.67	221.25	6.2	193.75	6	0.05	4.166944213	-187.75	-193.75	0.030967742	
Historical	SG92-17	64.6	66.4	0.39	12.1875	77	0.88	73.33821815	64.8125	49.8125	6.317948718	
Historical	SG92-17	66.6	69	0.31	9.6875	71	0.79	65.83771857	61.3125	46.3125	7.329032258	
Historical	SG92-17	69	71	0.16	5	86	0.98	81.67210658	81	66	17.2	
Historical	SG92-17	71	73	0.19	5.9375	89	1.07	89.17260616	83.0625	68.0625	14.98947368	
Historical	SG92-17	74.75	77	1.37	42.8125	117	1.26	105.0069942	74.1875	59.1875	2.732846715	
Historical	SG92-17	77	79	1.64	51.25	80	0.95	79.17194005	28.75	13.75	1.56097561	
Historical	SG92-17	79	80.77	2.78	86.875	74	0.84	70.00466278	-12.875	-27.875	0.851798561	
Historical	SG92-17	80.77	82	1.73	54.0625	62	0.69	57.50383014	7.9375	-7.0625	1.146820809	
Historical	SG92-17	84.08	86	0.76	23.75	61	0.67	55.83705246	37.25	22.25	2.568421053	
Historical	SG92-17	86	88	2.19	68.4375	141	1.53	127.5084929	72.5625	57.5625	2.060273973	
Historical	SG92-17	88	90	0.56	17.5	66	0.71	59.17060783	48.5	33.5	3.771428571	

Appendix 4.2-1

Cross Sections Showing Locations of Samples for Waste Rock ABA, Humidity, and Field Leach Barrels

Rescan™
Engineers and Scientists



HOLES PLOTTED
TOTAL 1
K87-002

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography
Kerr Pit

DDH Model Codes
Kerr

Adj SNPR Labels on Left
> 2.0
≤ 2.0

Posted Values on Right
Barrel No. Black Text
HC No. Maroon Text

Kerr N9200

SCALE
(m)
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NAD83 / UTM zone 9N

AZIMUTH = 90°
N
W E
S

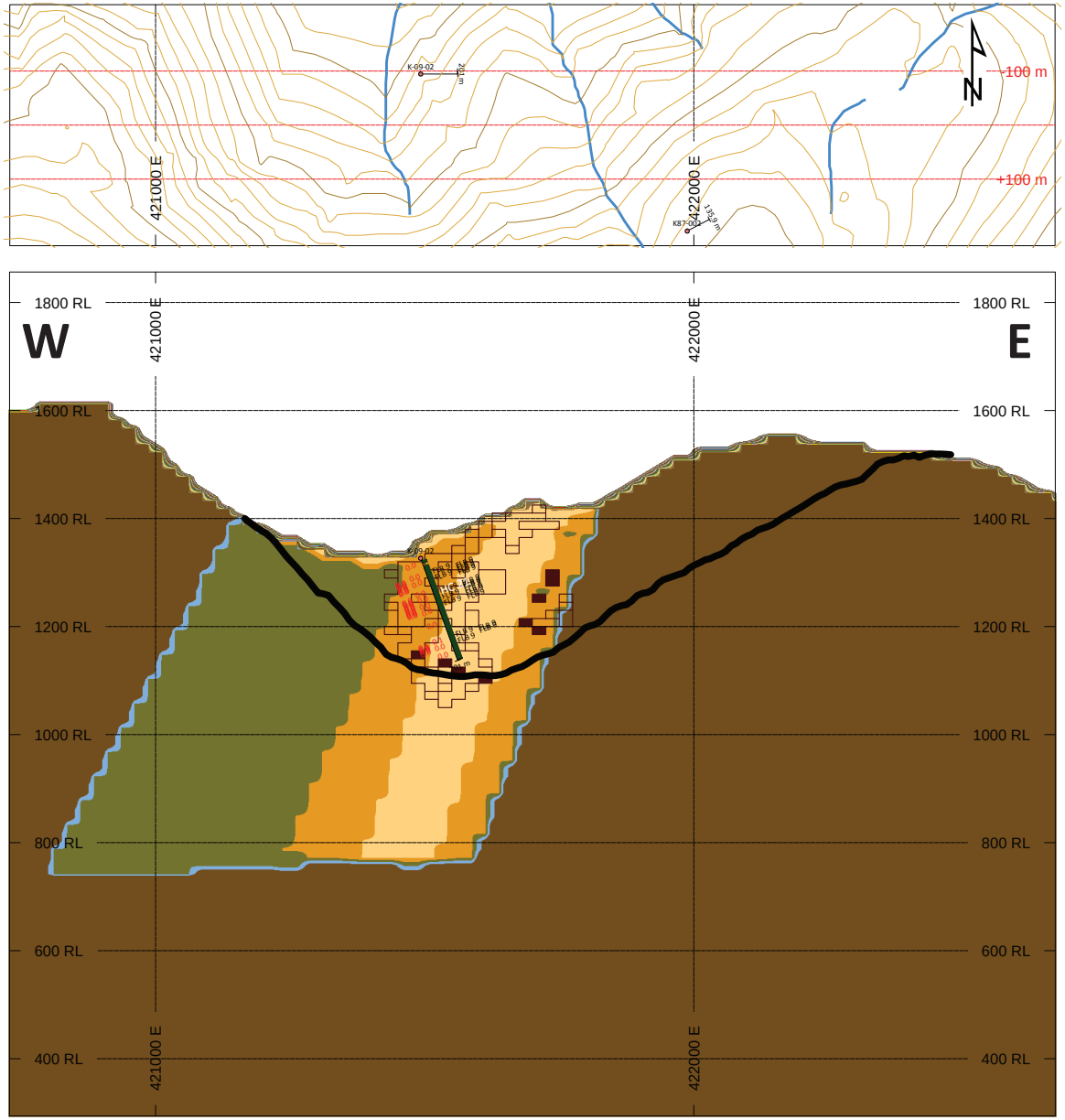
Figure 1

SEABRIDGE GOLD
KSM PROJECT

Kerr Cross-Section Looking North

Rescan™
Engineers & Scientists

Figure 1



HOLES PLOTTED

TOTAL 1

K-09-02

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Kerr Pit

DDH Model Codes

- Kerr

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text

HC No. Maroon Text

Kerr N9400

SCALE

(m)

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NAD83 / UTM zone 9N

AZIMUTH = 90°

N W E S

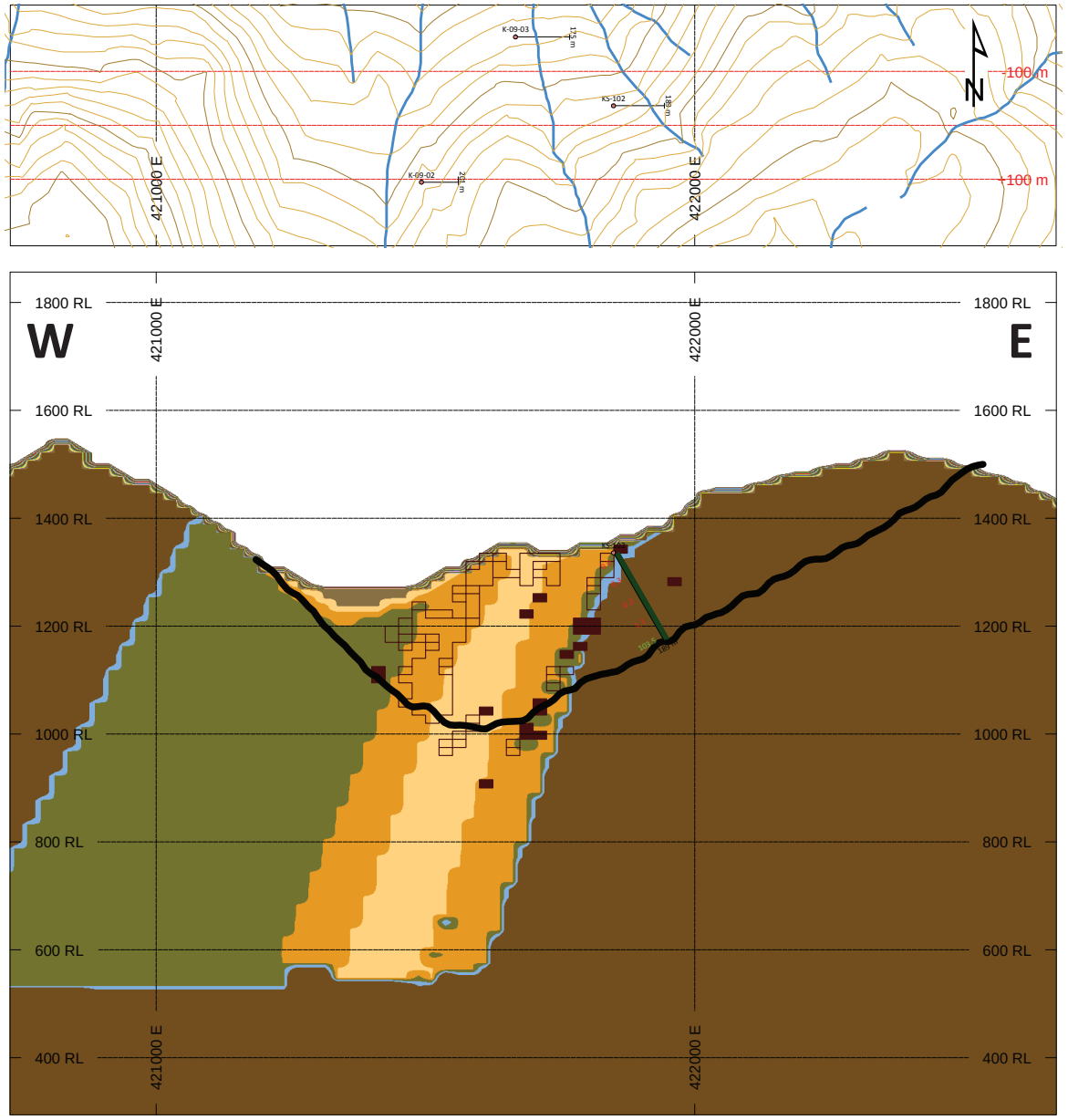
Figure 2

SEABRIDGE GOLD

KSM PROJECT

Kerr Cross-Section Looking North

Rescan™ Engineers & Scientists



HOLES PLOTTED

TOTAL 1

KS-102

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Kerr Pit

DDH Model Codes

- Kerr

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text

HC No. Maroon Text

Kerr N9600

SCALE

(m)

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NAD83 / UTM zone 9N

AZIMUTH = 90°

N W E S

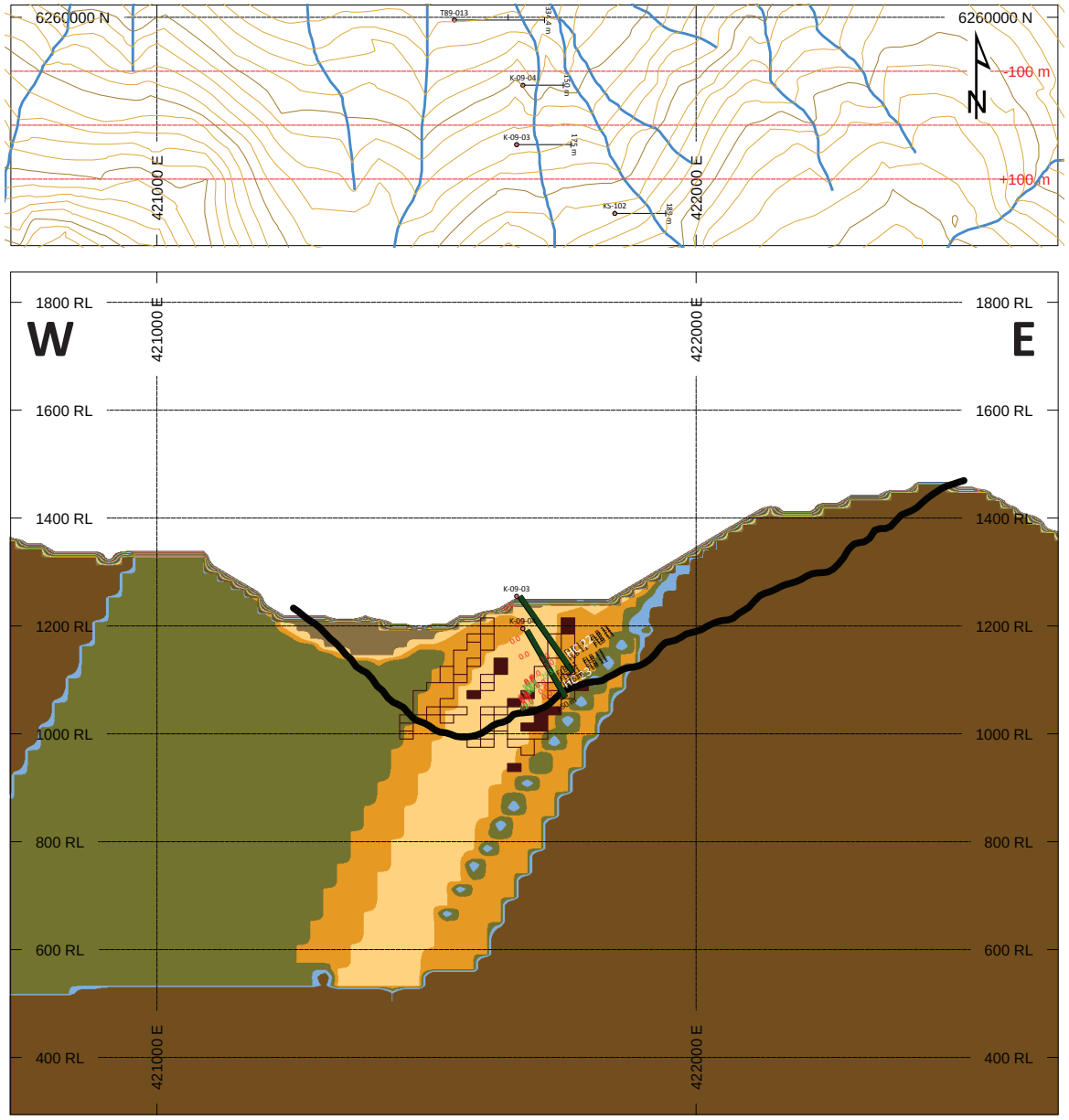
Figure 3

SEABRIDGE GOLD

KSM PROJECT

Kerr Cross-Section Looking North

Rescan™ Engineers & Scientists



HOLES PLOTTED

TOTAL 2

K-09-03 K-09-04

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Kerr Pit

DDH Model Codes

- Kerr

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text

HC No. Maroon Text

Kerr N9800

SCALE

(m)

-50 0 50 100 150 200 250 300

NAD83 / UTM zone 9N

AZIMUTH = 90°

N W E S

Figure 4

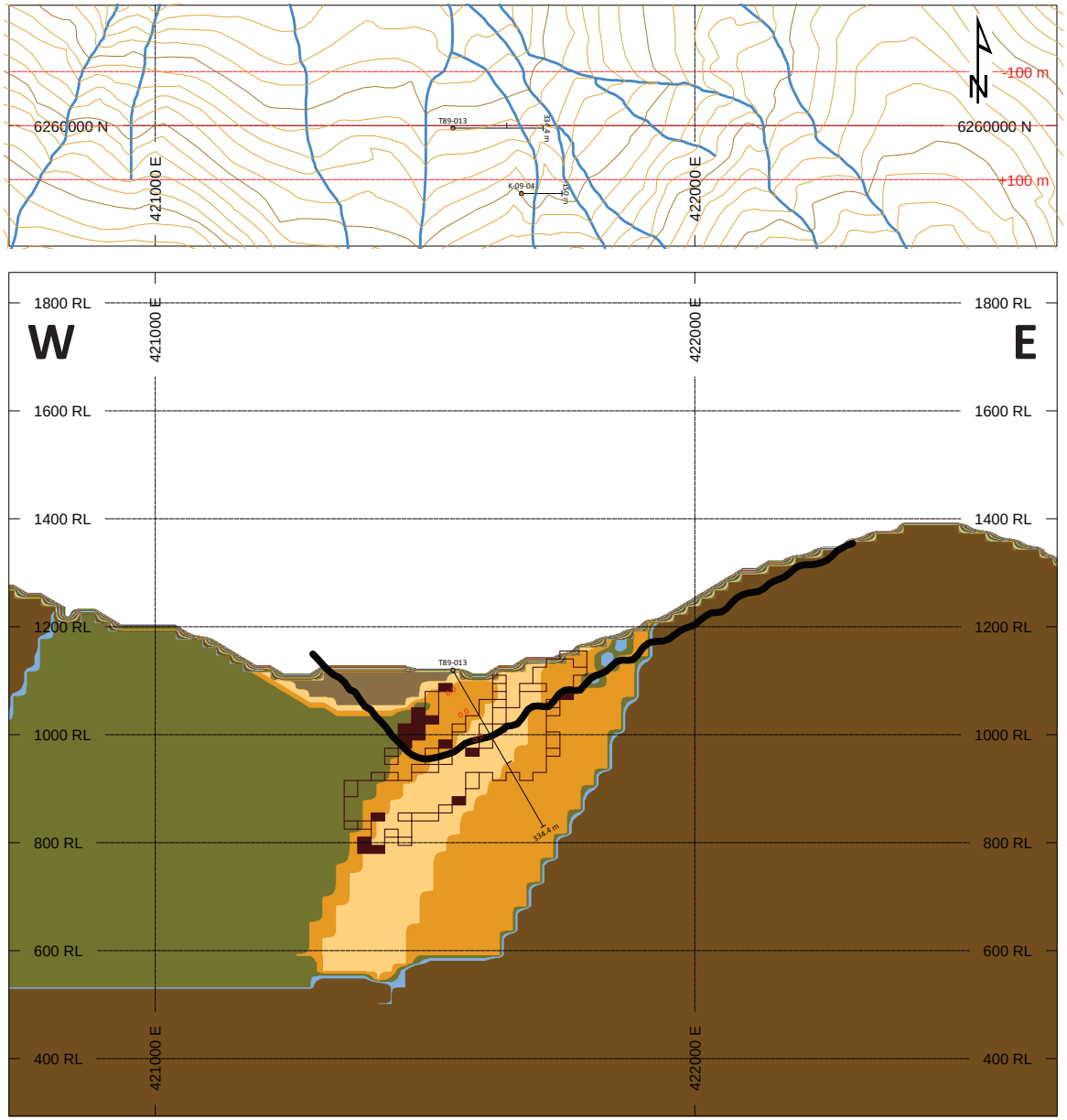
SEABRIDGE GOLD

KSM PROJECT

Kerr Cross-Section Looking North

Rescan™ Engineers & Scientists

Figure 4



HOLES PLOTTED
TOTAL 1
T89-013

Legend
- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography
- Kerr Pit

DDH Model Codes
- Kerr

Adj SNPR Labels on Left
- > 2.0
- ≤ 2.0

Posted Values on Right
Barrel No. Black Text
HC No. Maroon Text

Kerr N10000

SCALE
(m)
-50 0 50 100 150 200 250 300
NAD83 / UTM zone 9N

AZIMUTH = 90°
N
W E
S

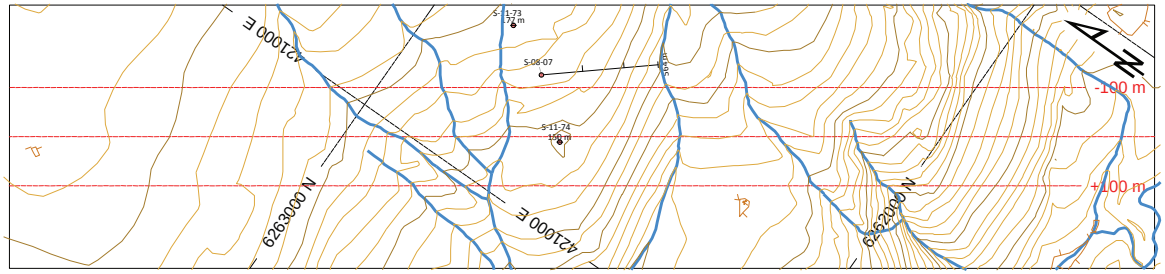
Figure 5

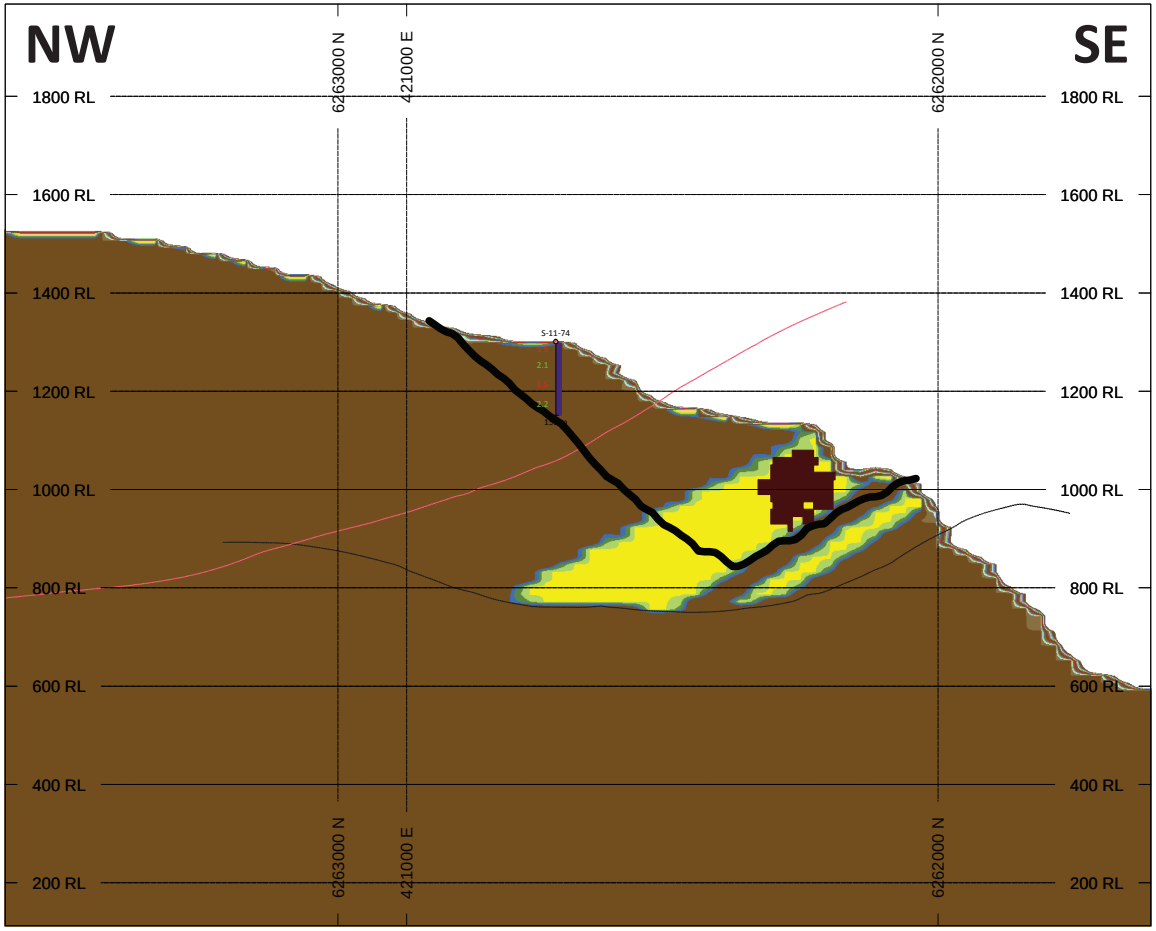
Kerr Cross-Section Looking North

SEABRIDGE GOLD
KSM PROJECT

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Figure 5





HOLES PLOTTED
TOTAL 1
S-11-74

Legend
- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography
- Sulphurets Pit
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes
- Au, leach & Raewyn
- LP Hazelton
- Lower Au
- Monzonite
- Overburden
- Up Hazelton
- Undefined

Adj SNPR Labels on Left
- > 2.0
- ≤ 2.0

Posted Values on Right
Barrel No. Black Text
HC No. Maroon Text

Sulph EW 1200

SCALE
(m)
-100 0 100 200 300
NAD83 / UTM zone 9N

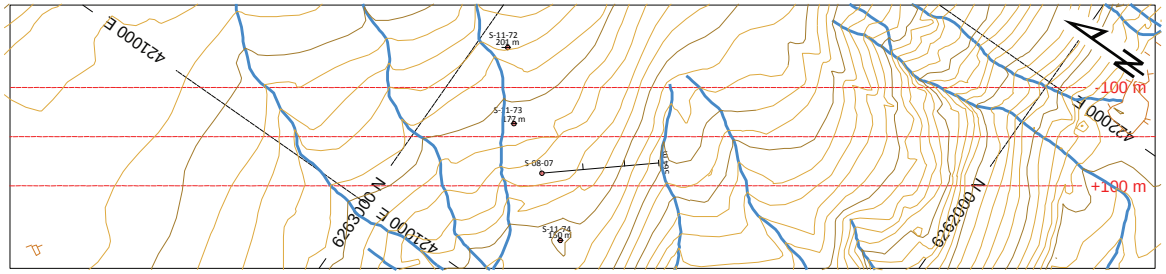
AZIMUTH = 145°
N E S W

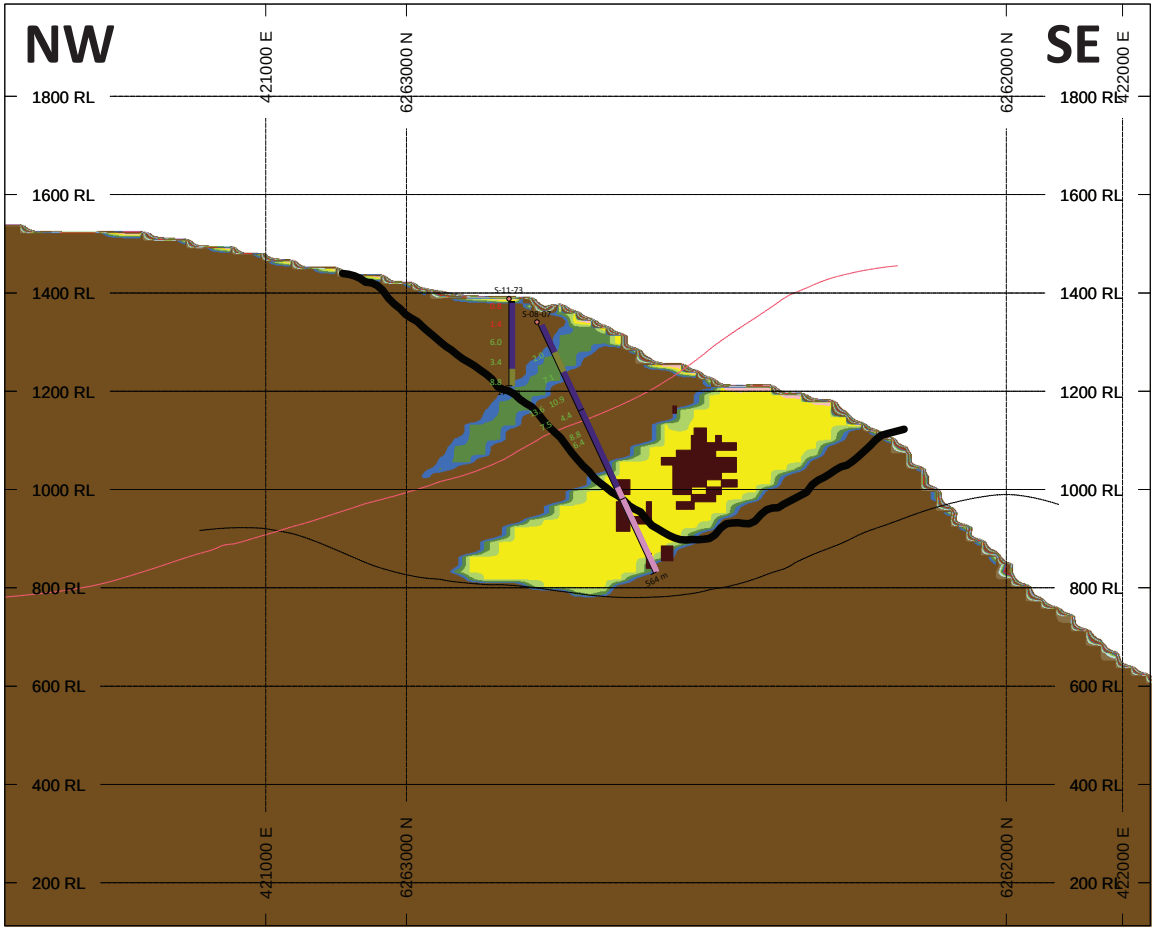
Figure 6

Sulphurets Cross-Section Looking Northeast

SEABRIDGE GOLD
KSM PROJECT

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HOLES PLOTTED

TOTAL 2

S-08-07 S-11-73

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Sulphurets Pit
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- LP Hazelton
- Lower Au
- Monzonite
- Overburden
- Up Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text

HC No. Maroon Text

Sulph EW 1364

SCALE

(m)

-100 0 100 200 300

NAD83 / UTM zone 9N

AZIMUTH = 145°

N W E S

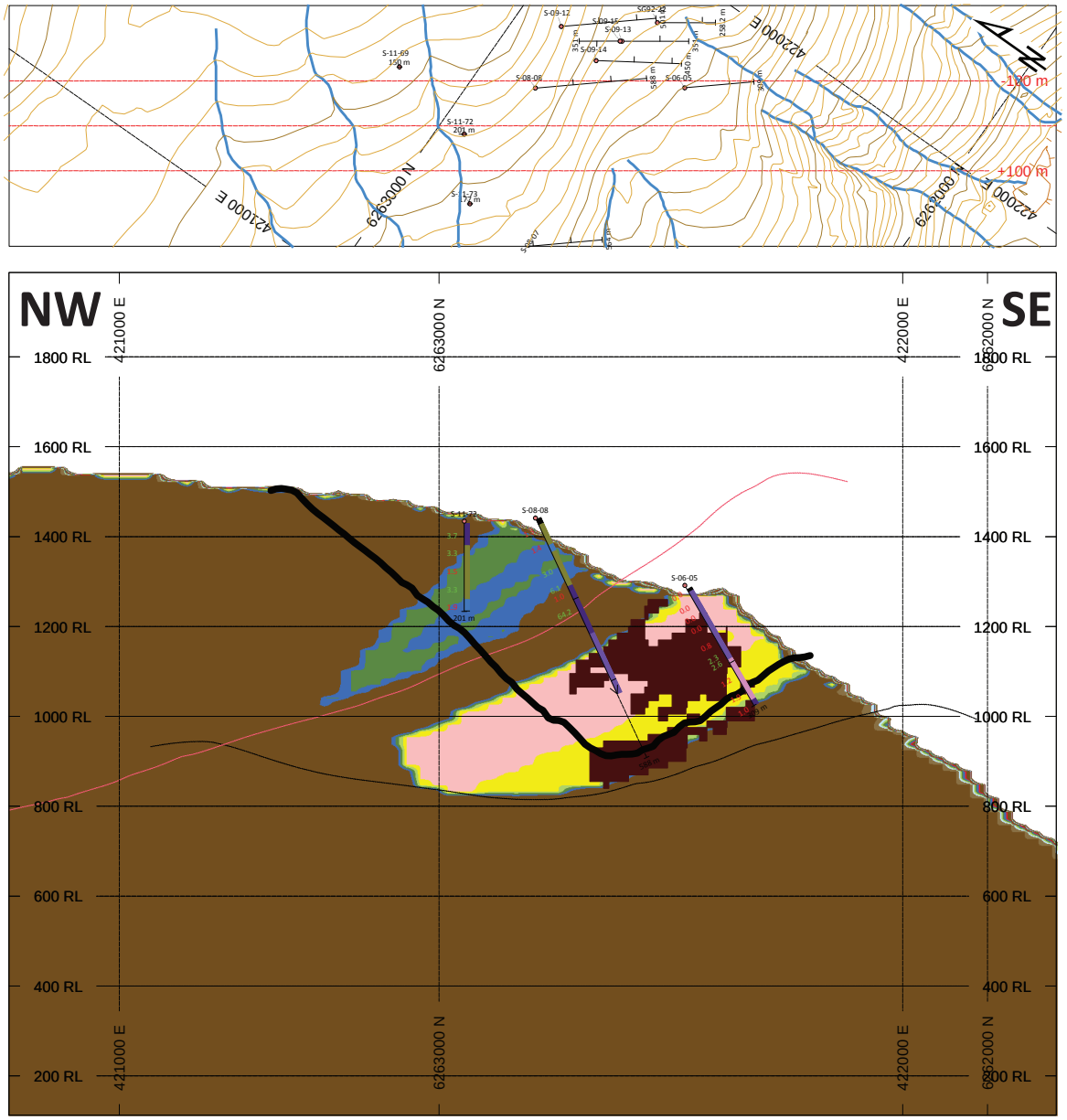
Figure 7

SEABRIDGE GOLD

KSM PROJECT

Sulphurets Cross-Section Looking Northeast

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HOLES PLOTTED

TOTAL 3

S-06-05 S-08-08 S-11-72

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Sulphurets Pit
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- LP Hazelton
- Lower Au
- Monzonite
- Overburden
- Up Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text

HC No. Maroon Text

Sulph EW 1528

SCALE

(m)

-100 0 100 200 300

NAD83 / UTM zone 9N

AZIMUTH = 145°

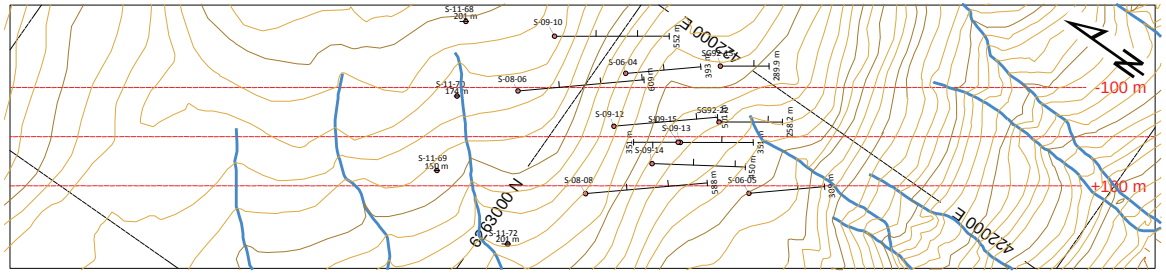
N W E S

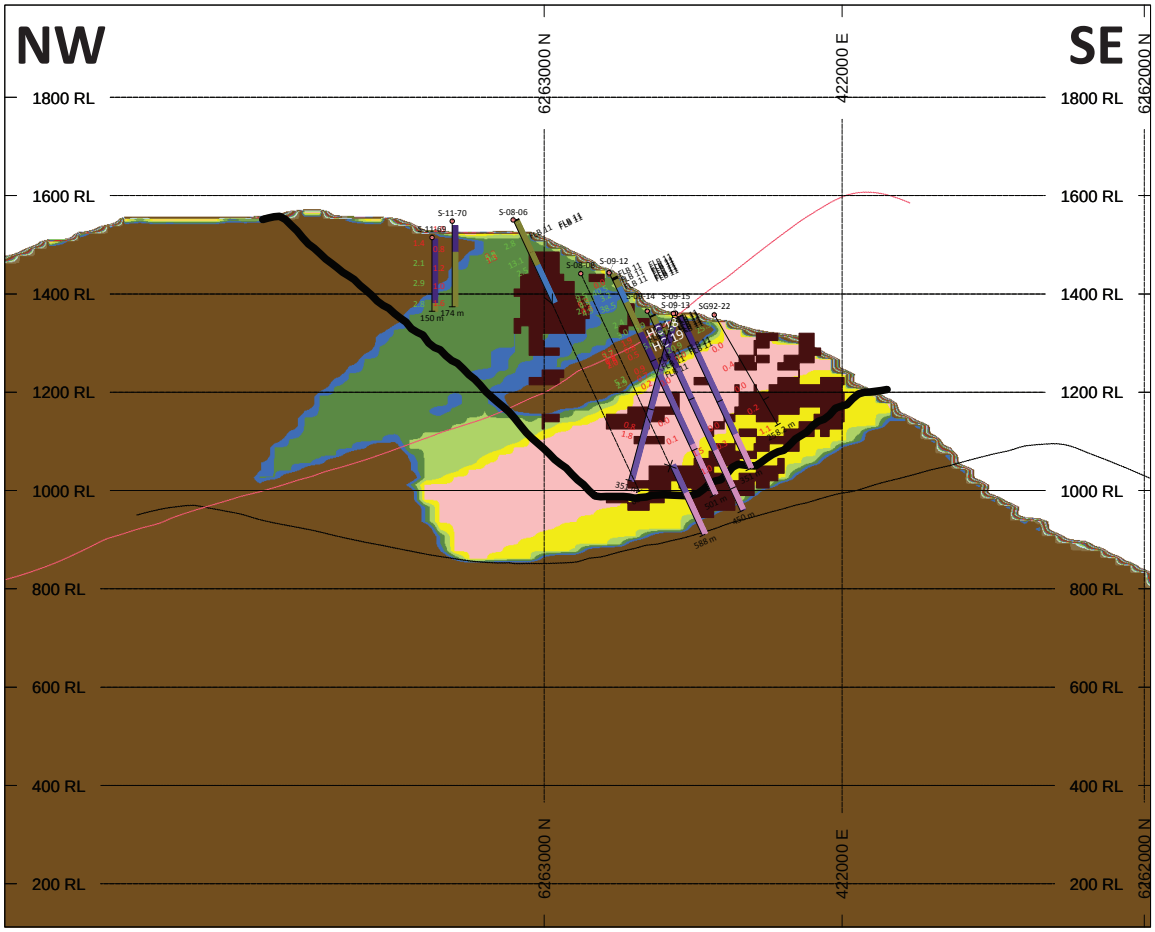
Figure 8

SEABRIDGE GOLD
KSM PROJECT

Sulphurets Cross-Section Looking Northeast

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HOLES PLOTTED

TOTAL 9

S-08-06 S-08-08 S-09-12 S-09-13
S-09-14 S-09-15 S-11-69 S-11-70
SG92-22

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Sulphurets Pit
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- LP Hazelton
- Lower Au
- Monzonite
- Overburden
- Up Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text
HC No. Maroon Text

Sulph EW 1691

SCALE

(m)

-100 0 100 200 300

NAD83 / UTM zone 9N

AZIMUTH = 145°

N W E S

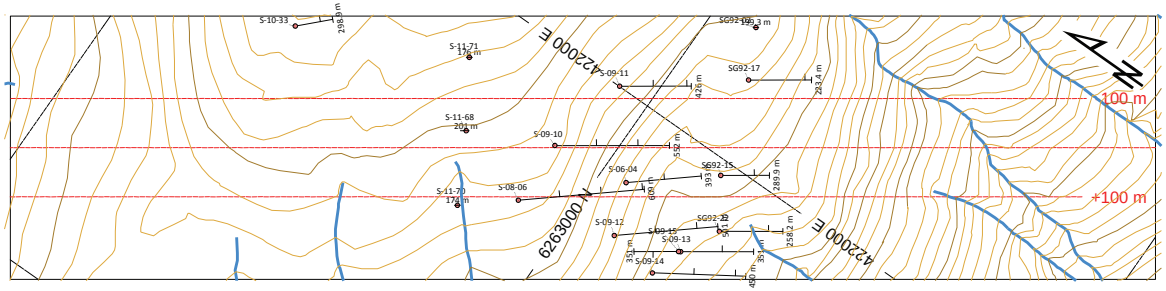
Figure 9

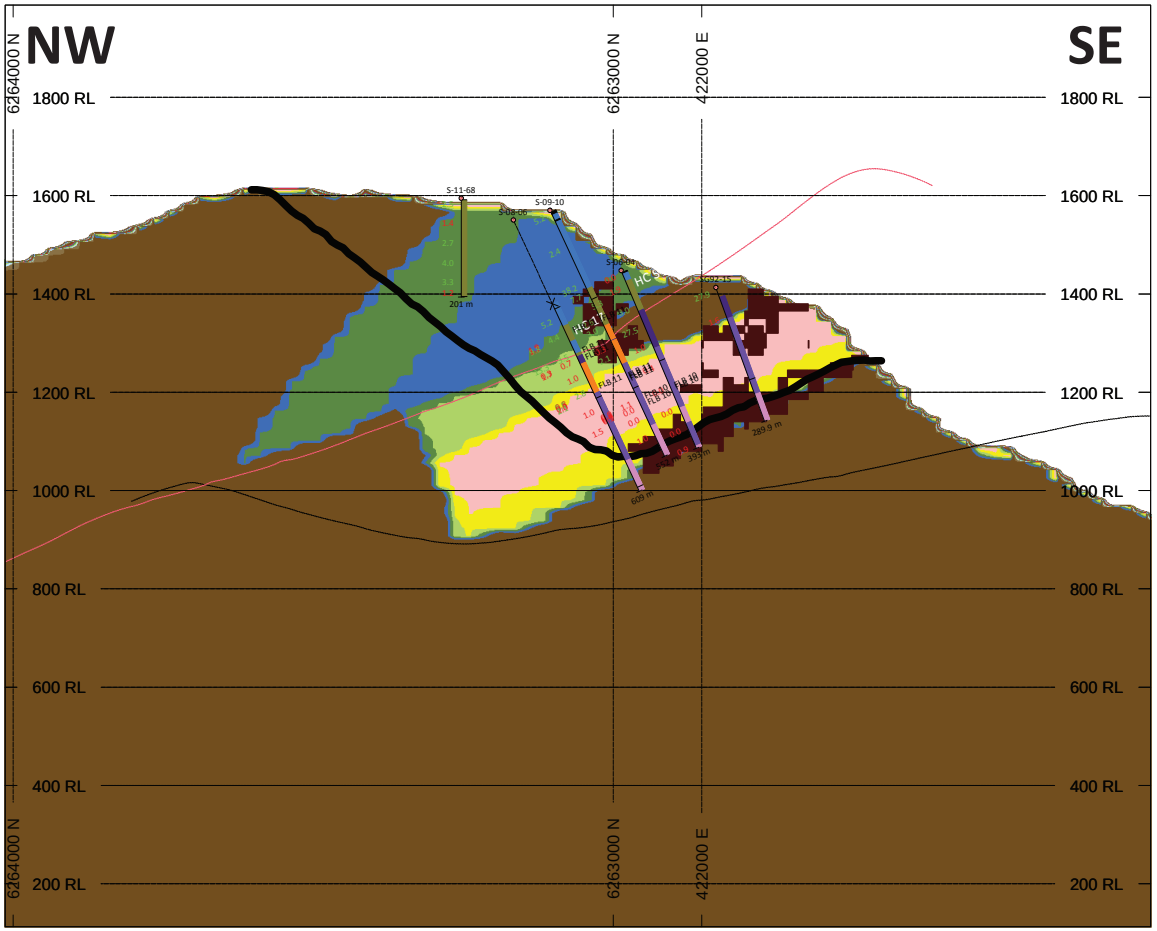
SEABRIDGE GOLD
KSM PROJECT

Sulphurets Cross-Section Looking Northeast

Rescan™ Engineers & Scientists

Figure 9





HOLES PLOTTED

TOTAL 5

S-06-04 S-08-06 S-09-10 S-11-68 SG92-15

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Sulphurets Pit
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- LP Hazelton
- Lower Au
- Monzonite
- Overburden
- Up Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text

HC No. Maroon Text

Sulph EW 1855

SCALE

(m)

-100 0 100 200 300

NAD83 / UTM zone 9N

AZIMUTH = 145°

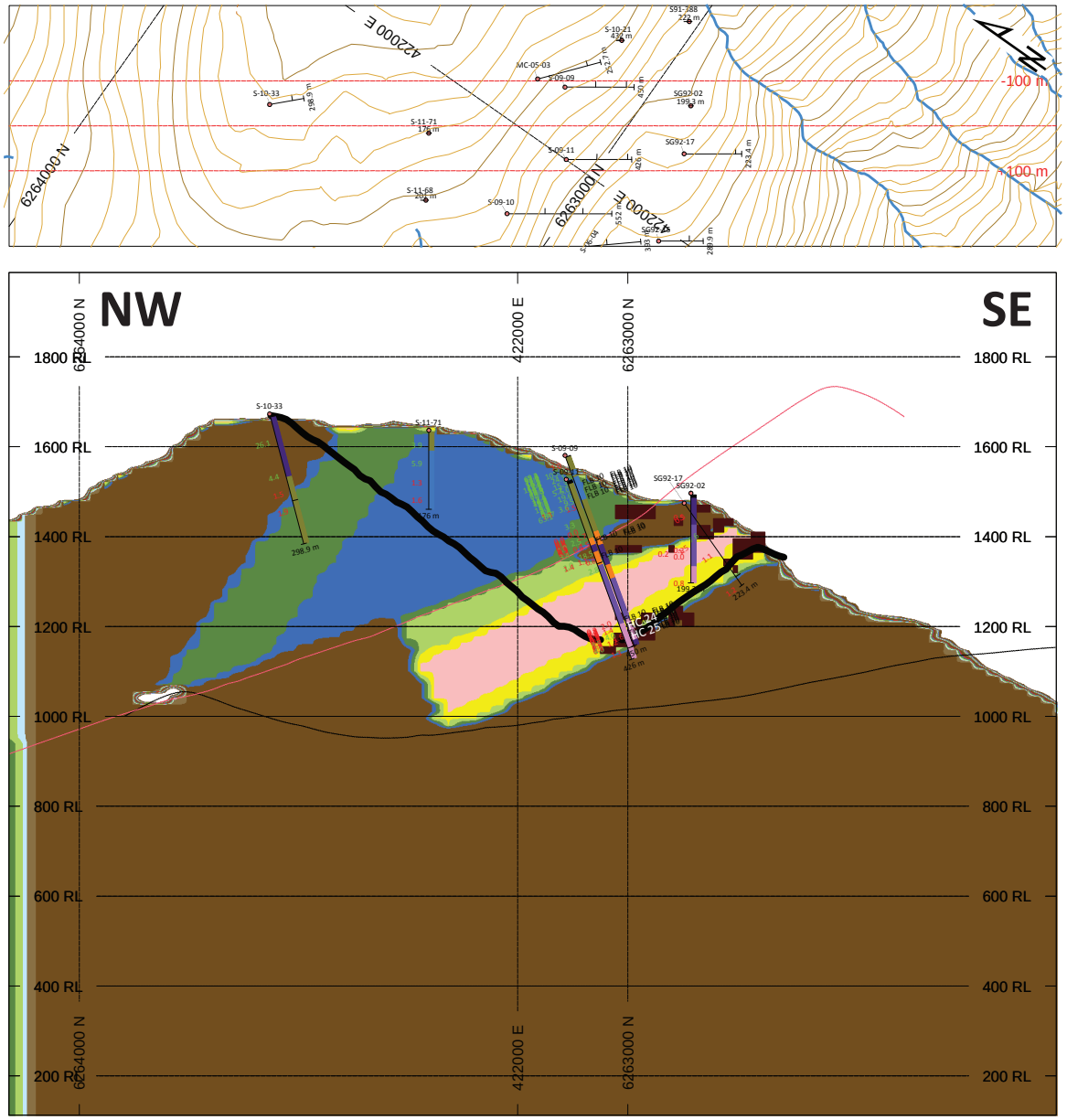
N W E S

Figure 10

SEABRIDGE GOLD KSM PROJECT

Sulphurets Cross-Section Looking Northeast

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HOLES PLOTTED

TOTAL 6

S-09-09 S-09-11 S-10-33 S-11-71
SG92-02 SG92-17

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Sulphurets Pit
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- LP Hazelton
- Lower Au
- Monzonite
- Overburden
- Up Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text
HC No. Maroon Text

Sulph EW 2019

SCALE

(m)

-100 0 100 200 300

NAD83 / UTM zone 9N

AZIMUTH = 145°

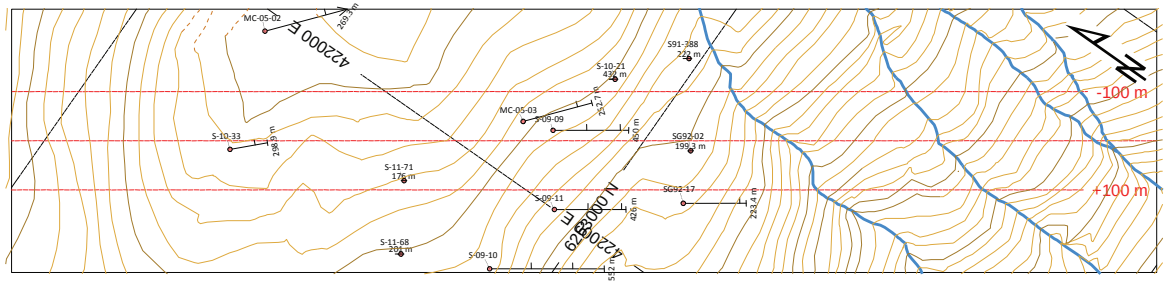
N W E S

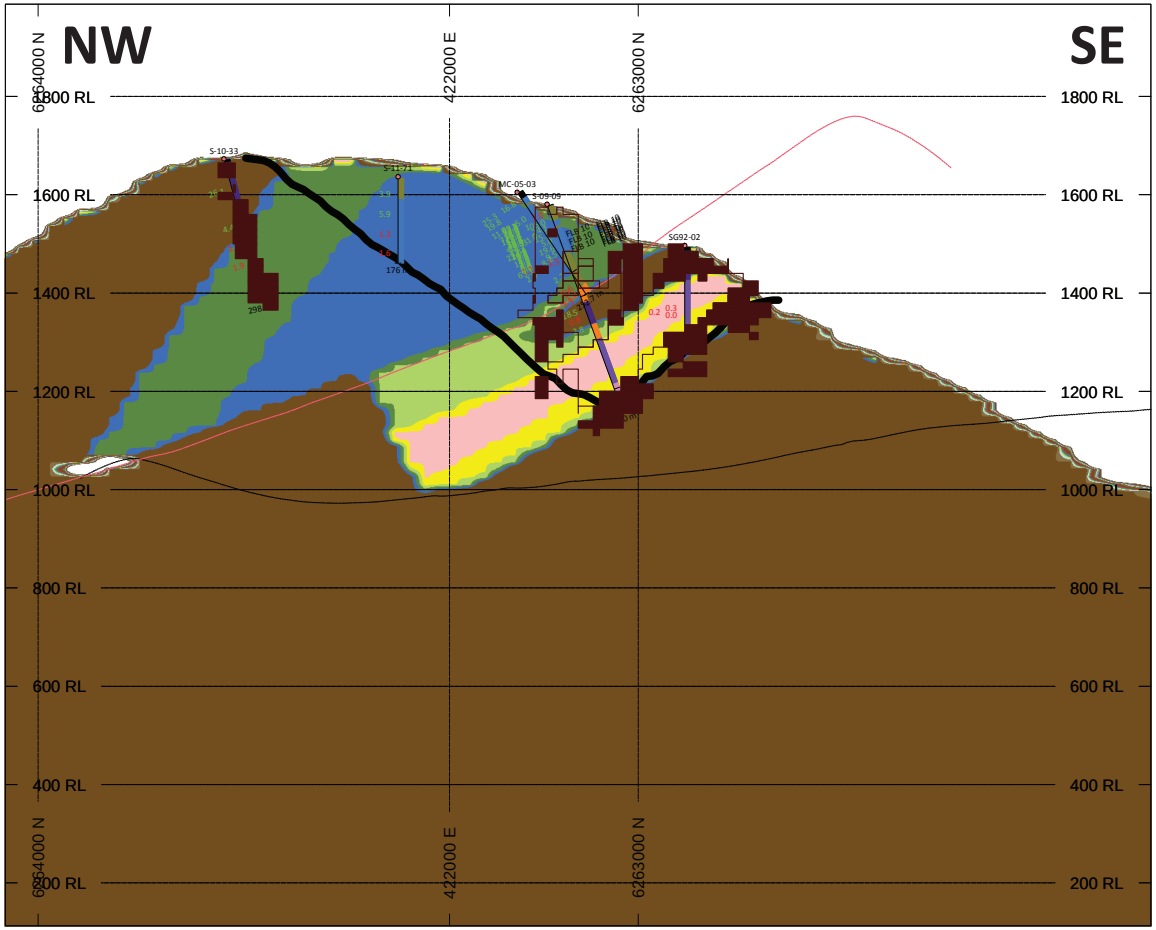
Figure 11

SEABRIDGE GOLD
KSM PROJECT

Sulphurets Cross-Section Looking Northeast

Rescan™ Engineers & Scientists





HOLES PLOTTED

TOTAL 5

MC-05-03 S-09-09 S-10-33 S-11-71 SG92-02

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Sulphurets Pit
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- LP Hazelton
- Lower Au
- Monzonite
- Overburden
- Up Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text

HC No. Maroon Text

Sulph EW 2150

SCALE

(m)

-100 0 100 200 300

NAD83 / UTM zone 9N

AZIMUTH = 145°

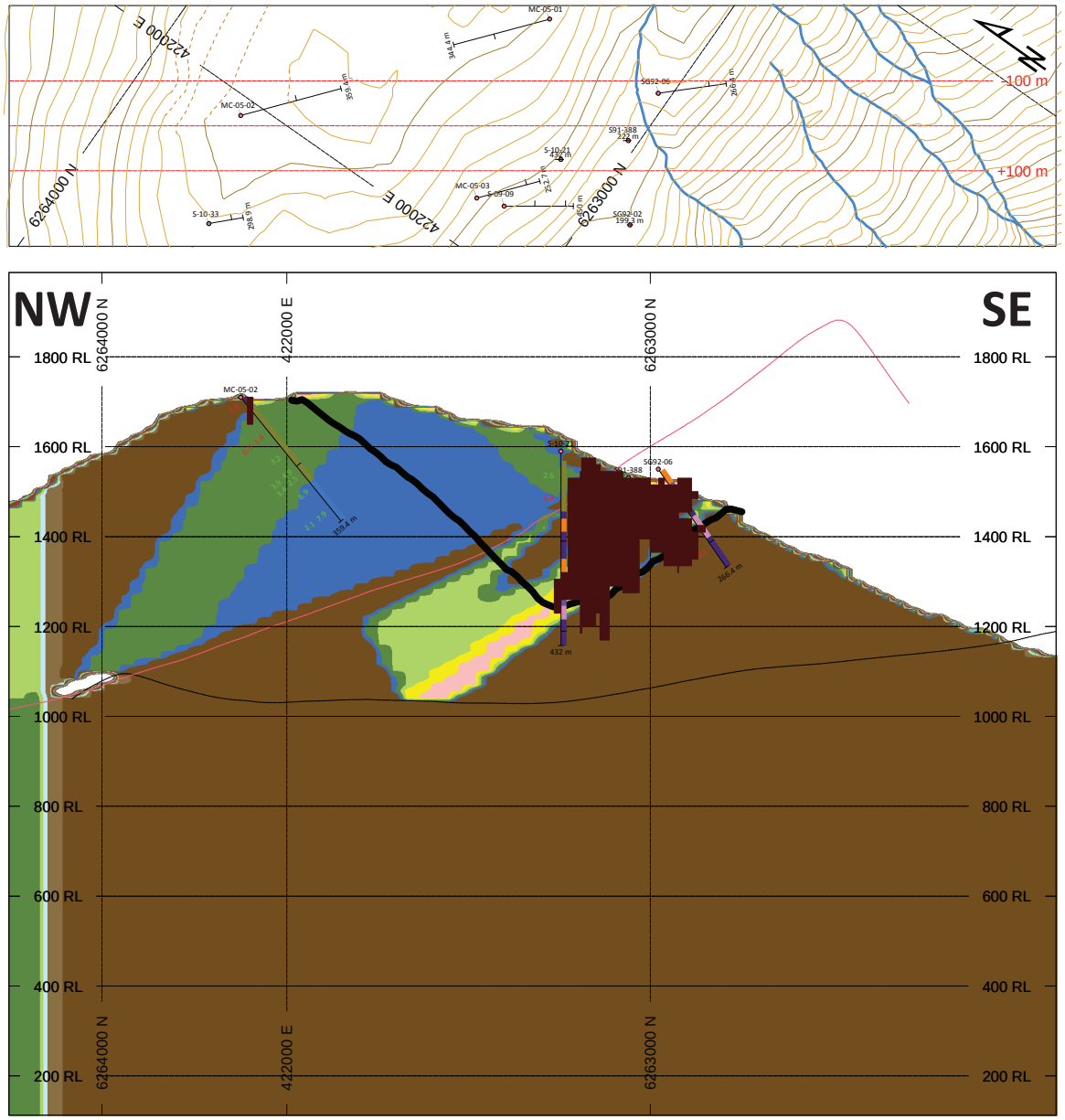
N W E S

Figure 12

Sulphurets Cross-Section Looking Northeast

SEABRIDGE GOLD
KSM PROJECT

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HOLES PLOTTED

TOTAL 4

MC-05-02 S-10-21 S91-388 SG92-06

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Sulphurets Pit
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- LP Hazelton
- Lower Au
- Monzonite
- Overburden
- Up Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text

HC No. Maroon Text

Sulph EW 2314

SCALE

(m)

-100 0 100 200 300

NAD83 / UTM zone 9N

AZIMUTH = 145°

N W E S

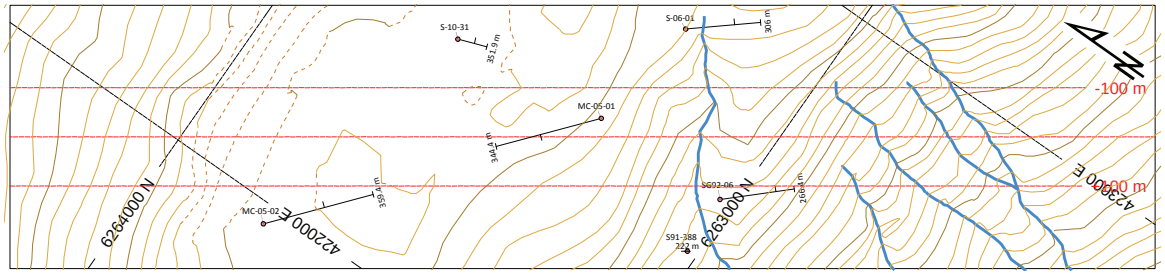
Figure 13

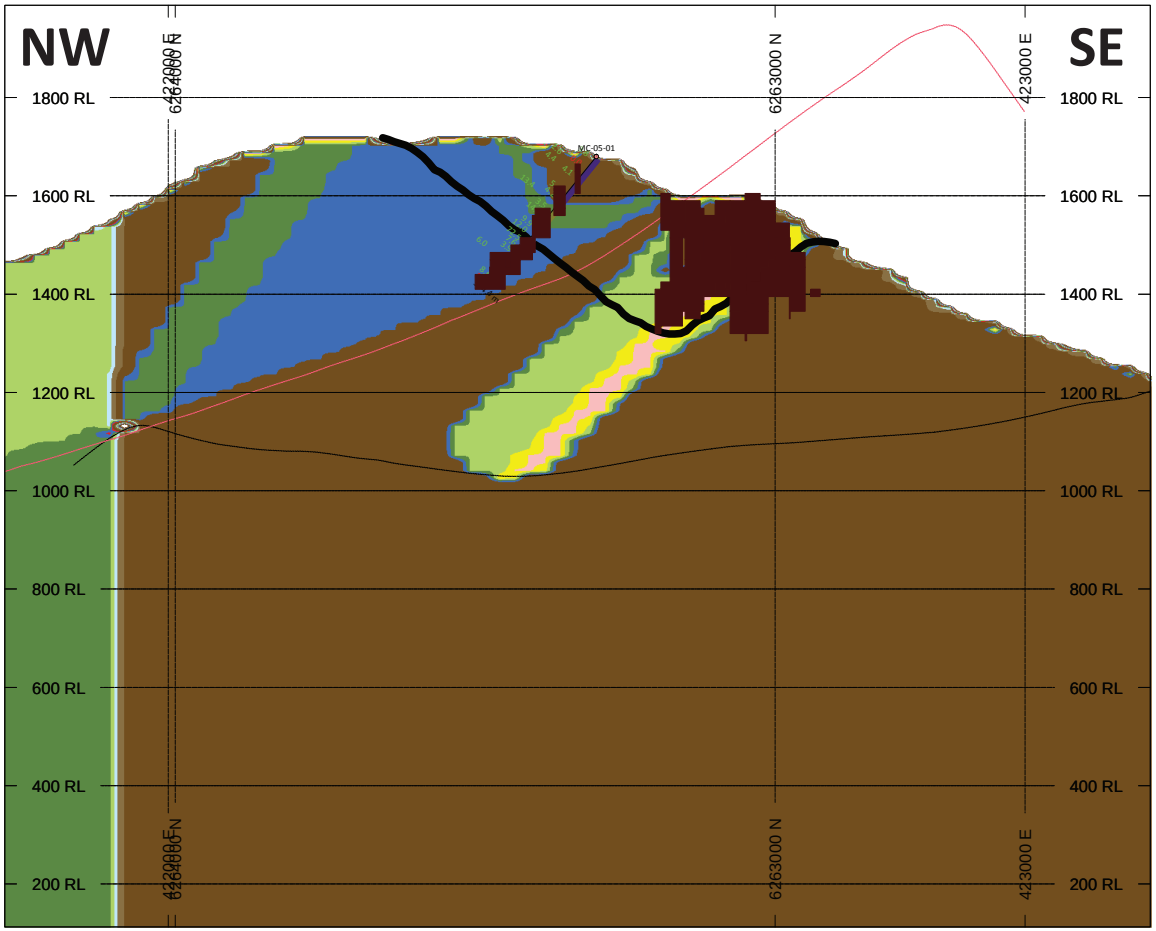
Sulphurets Cross-Section Looking Northeast

SEABRIDGE GOLD
KSM PROJECT

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Figure 13





HOLES PLOTTED
TOTAL 1
MC-05-01

Legend
- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography
- Sulphurets Pit
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes
- Au, leach & Raewyn
- LP Hazelton
- Lower Au
- Monzonite
- Overburden
- Up Hazelton
- Undefined

Adj SNPR Labels on Left
- > 2.0
- ≤ 2.0

Posted Values on Right
Barrel No. Black Text
HC No. Maroon Text

Sulph EW 2478

SCALE
(m)
-100 0 100 200 300
NAD83 / UTM zone 9N

AZIMUTH = 145°
N W E S

Figure 14

Sulphurets Cross-Section Looking Northeast

SEABRIDGE GOLD
KSM PROJECT

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Figure 14

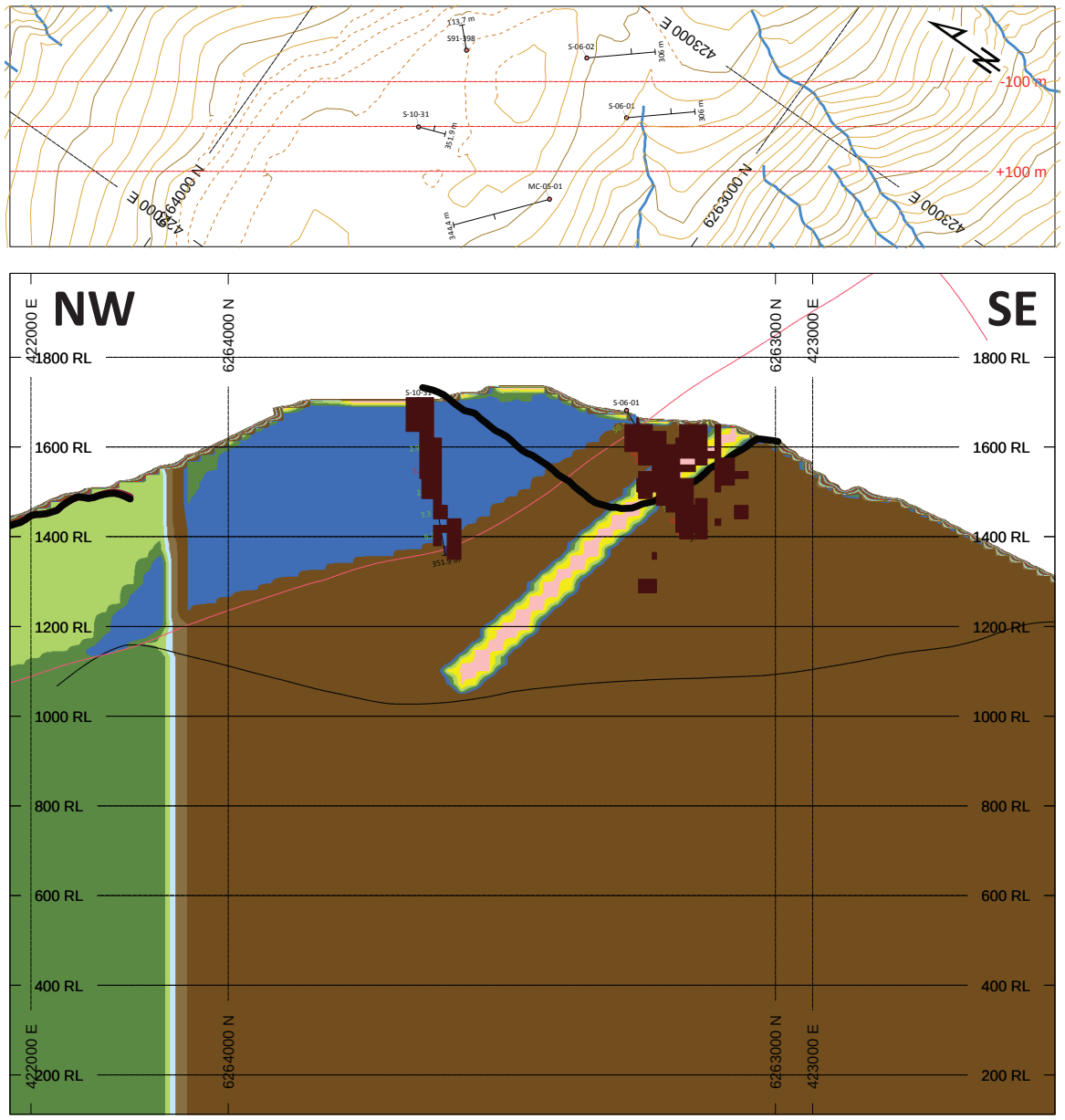


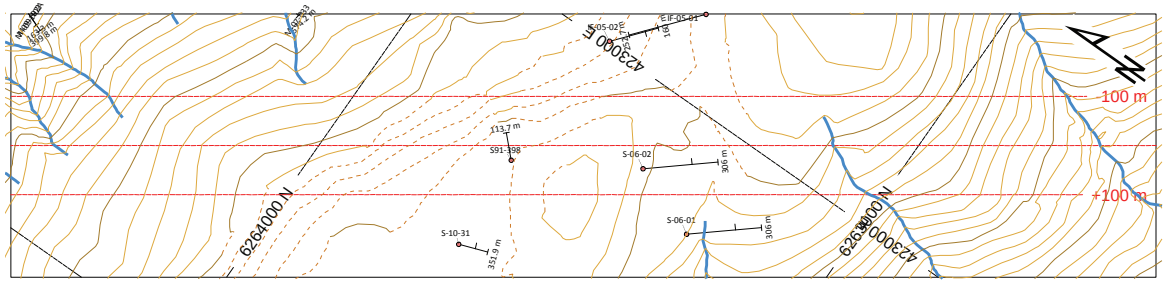
Figure 15

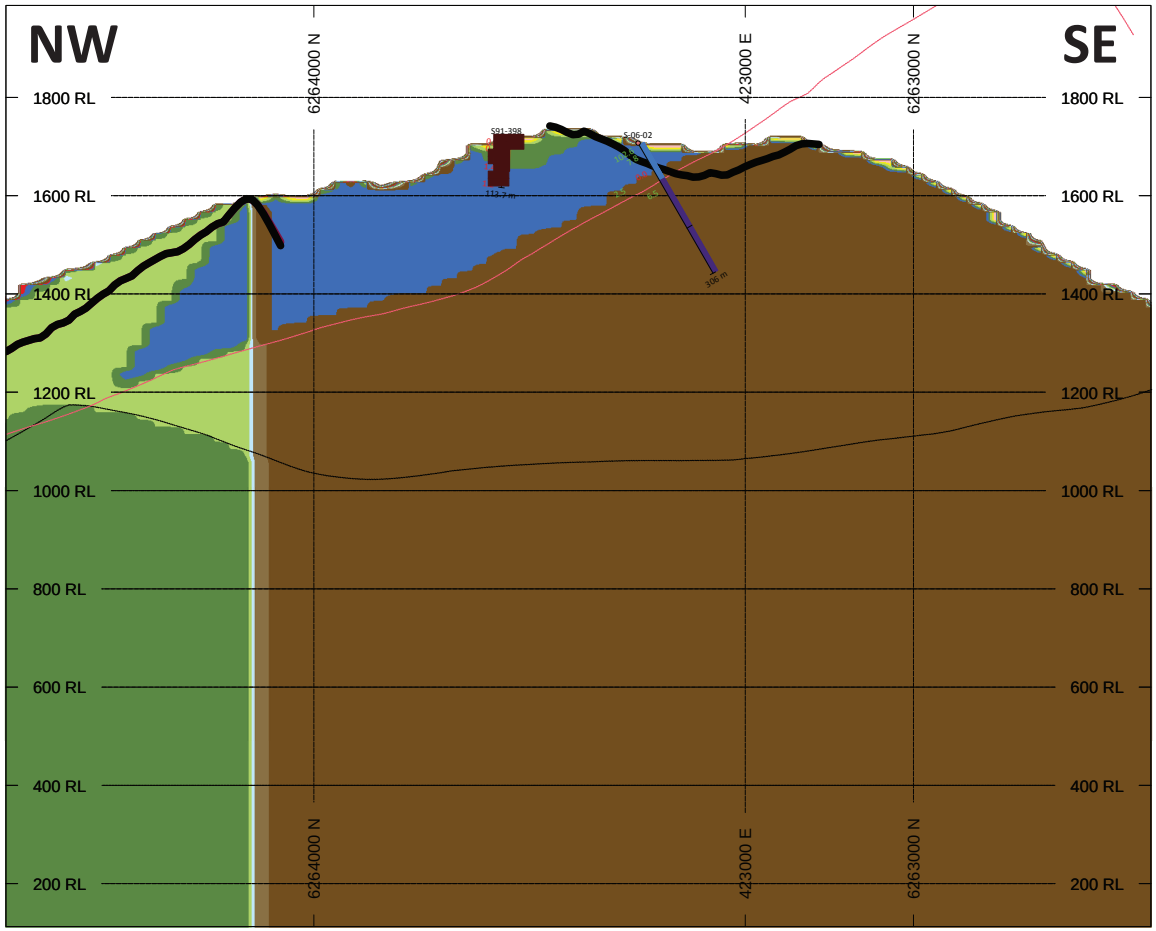
SEABRIDGE GOLD
KSM PROJECT

Sulphurets Cross-Section Looking Northeast

Figure 15

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HOLES PLOTTED

TOTAL 2

S-06-02 S91-398

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Sulphurets Pit
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- LP Hazelton
- Lower Au
- Monzonite
- Overburden
- Up Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text

HC No. Maroon Text

Sulph EW 2805

SCALE

(m)

-100 0 100 200 300

NAD83 / UTM zone 9N

AZIMUTH = 145°

N W E S

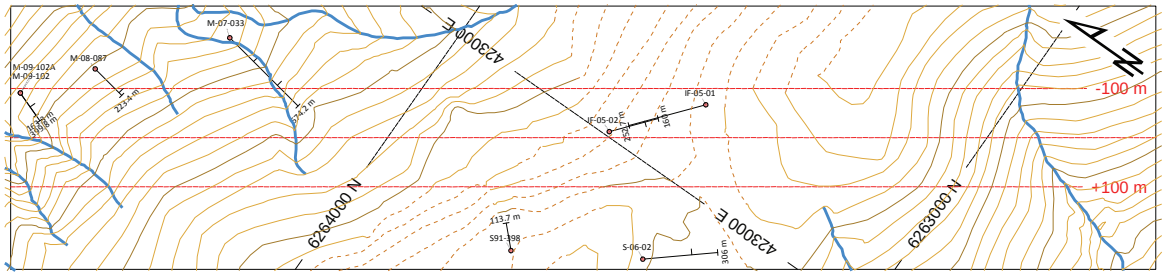
Figure 16

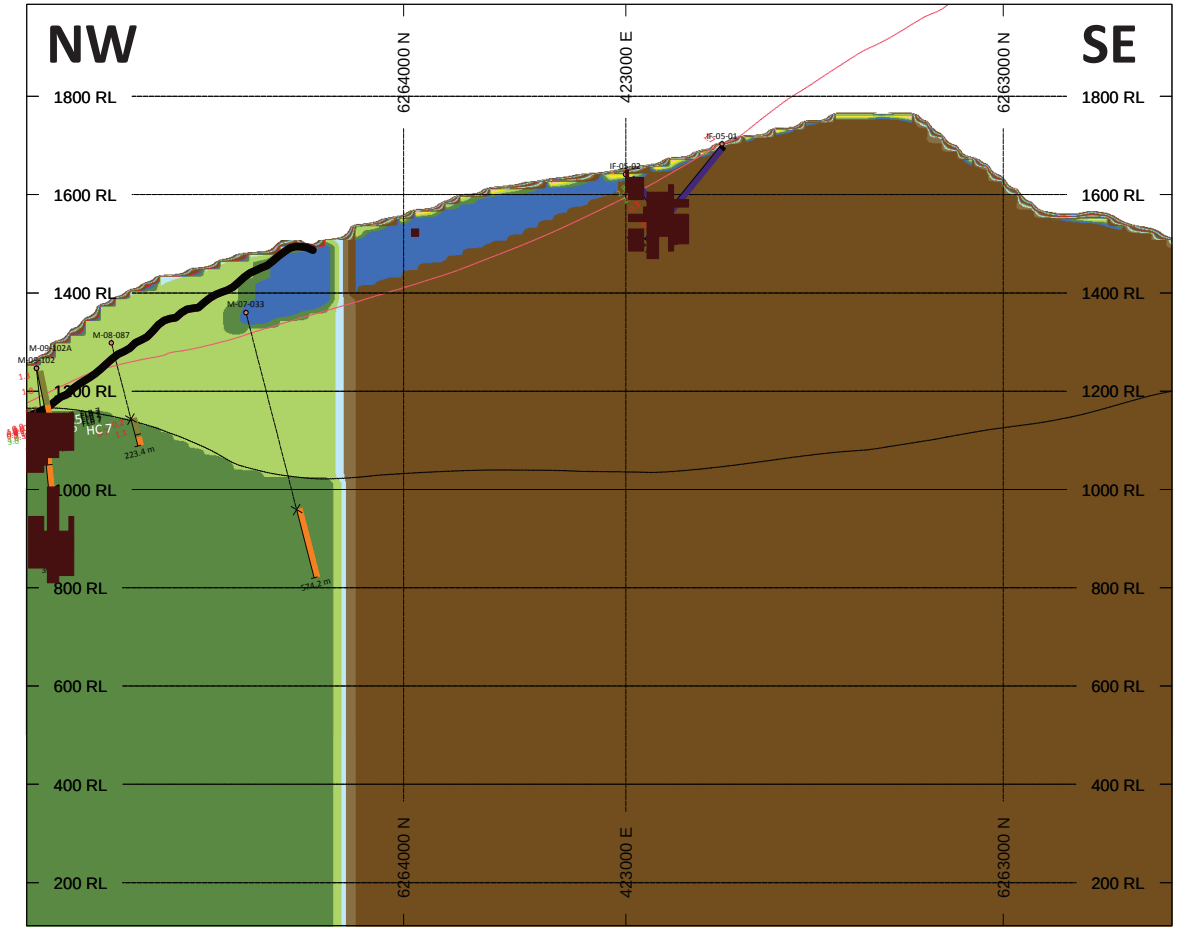
SEABRIDGE GOLD
KSM PROJECT

Sulphurets Cross-Section Looking Northeast

Rescan™ Engineers & Scientists

Figure 16





HOLES PLOTTED

TOTAL 6

IF-05-01 IF-05-02 M-07-033 M-08-087
M-09-102 M-09-102A

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Sulphurets Pit
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- LP Hazelton
- Lower Au
- Monzonite
- Overburden
- Up Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text
HC No. Maroon Text

Sulph EW 2969

SCALE

(m)

-100 0 100 200 300

NAD83 / UTM zone 9N

AZIMUTH = 145°

N W E S

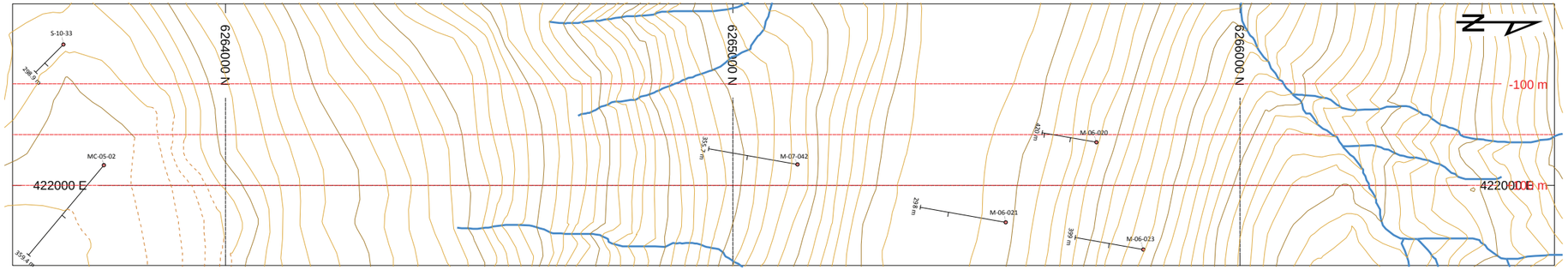
Figure 17

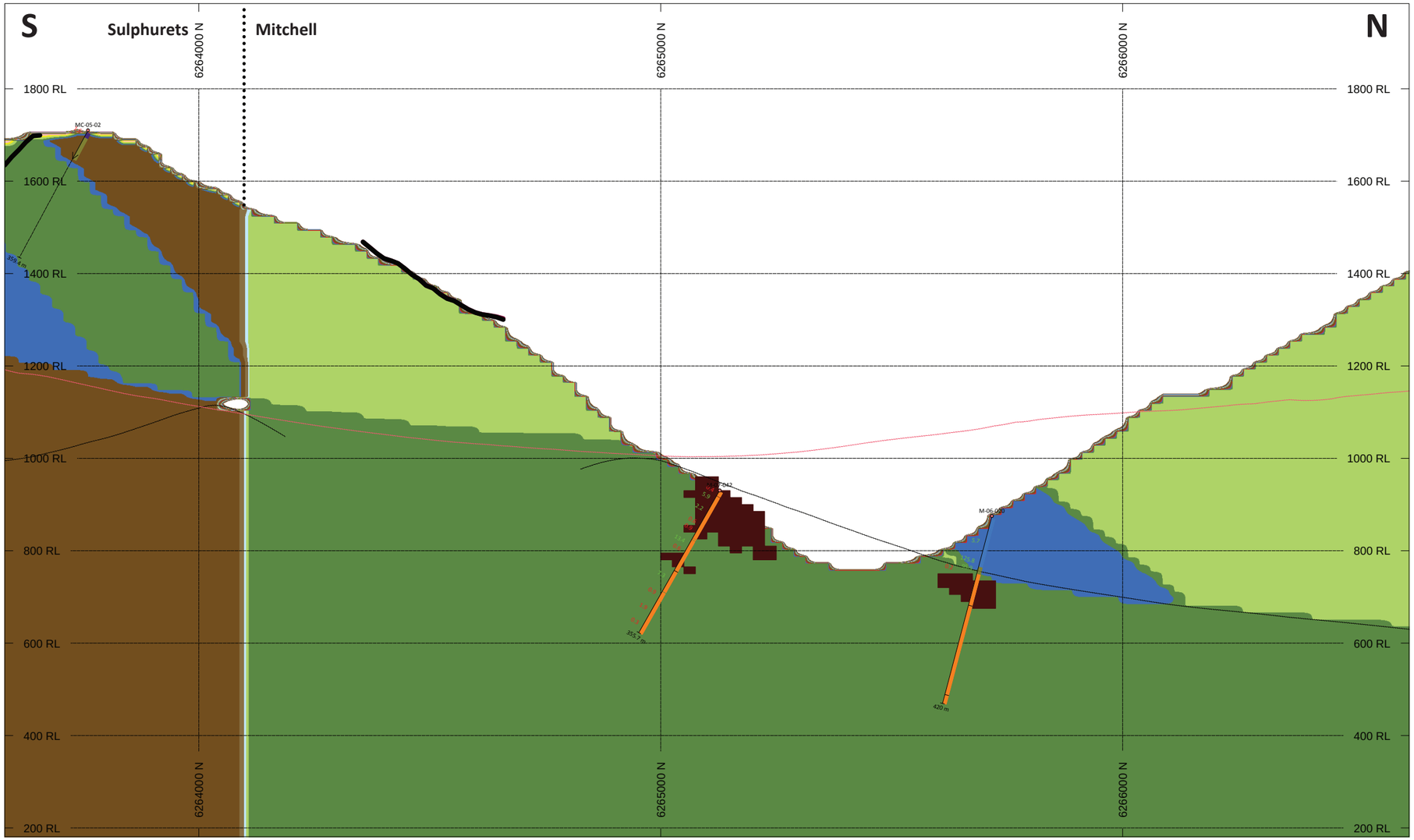
SEABRIDGE GOLD
KSM PROJECT

Sulphurets Cross-Section Looking Northeast

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Figure 17





Holes Plotted

TOTAL 3

M-06-020 M-07-042 MC-05-02

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Block Caves
- Open Pit Outline
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- Bornite/leach breccia
- LP Hazelton
- Monzonite
- Overburden
- UP Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text
HC No. Maroon Text

MN 1900

SCALE
(m)
-50 0 50 100 150 200 250
NAD83 / UTM zone 9N

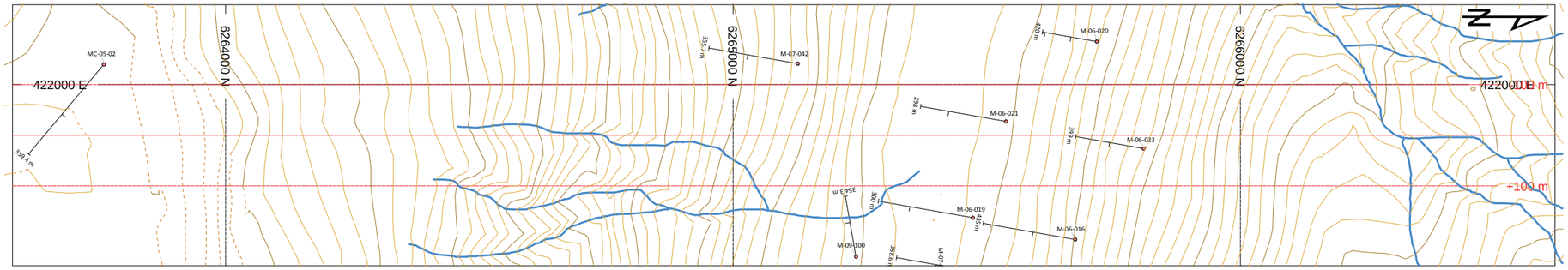
AZIMUTH = 0°
N W E S

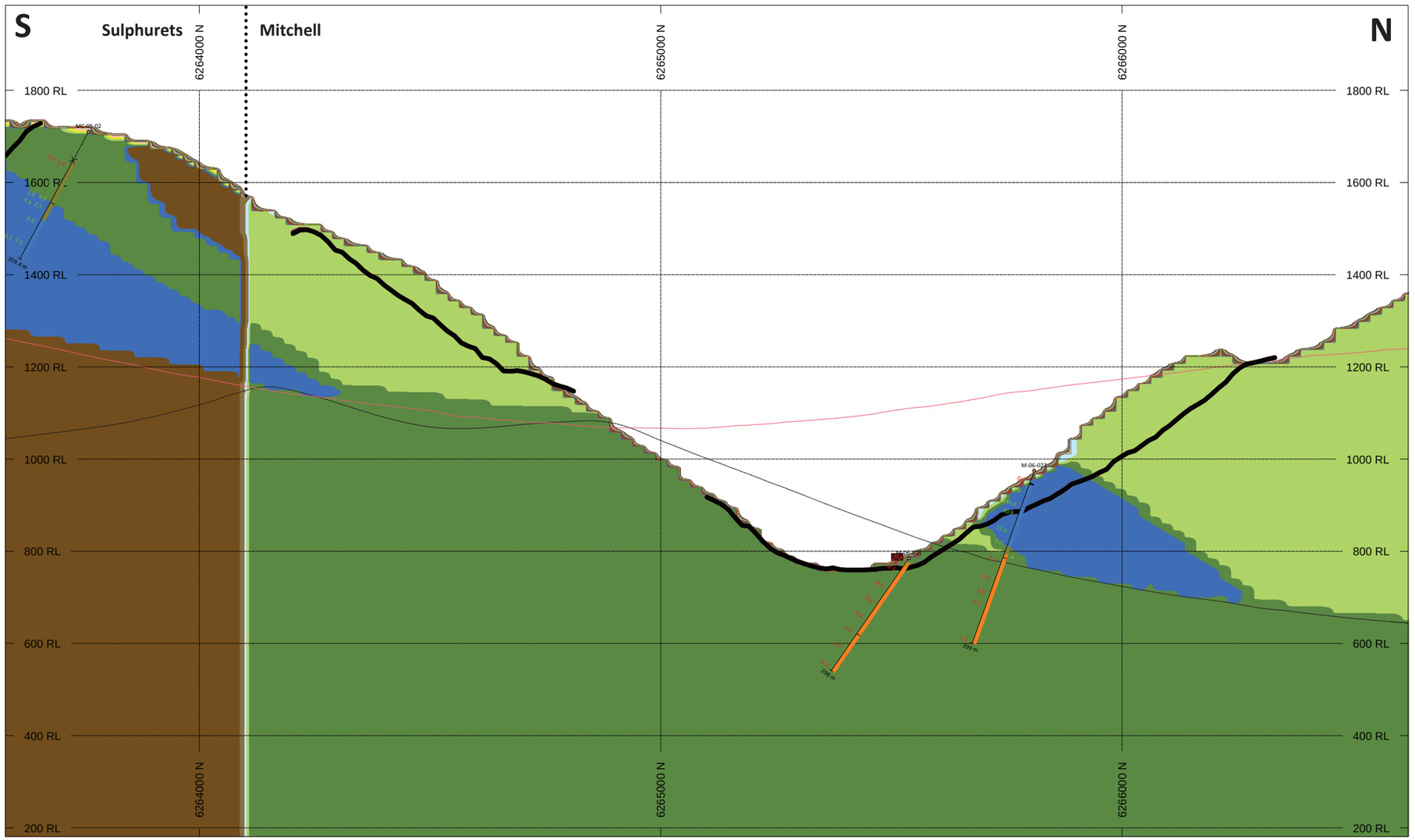
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Figure 18

Mitchell Cross-Section Looking West





Holes Plotted

TOTAL 3

M-06-021 M-06-023 MC-05-02

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Block Caves
- Open Pit Outline
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- Bornite/leach breccia
- LP Hazelton
- Monzonite
- Overburden
- UP Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text
HC No. Maroon Text

MN 2100

SCALE
(m)
-50 0 50 100 150 200 250
NAD83 / UTM zone 9N

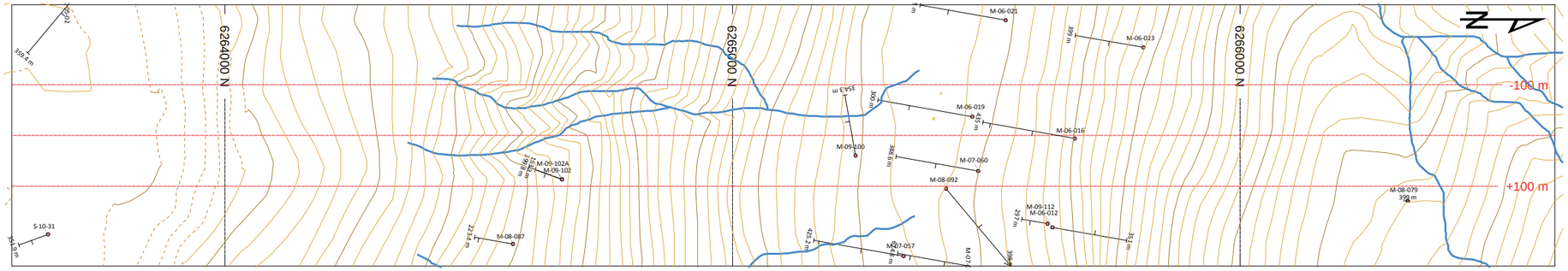
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N W E S

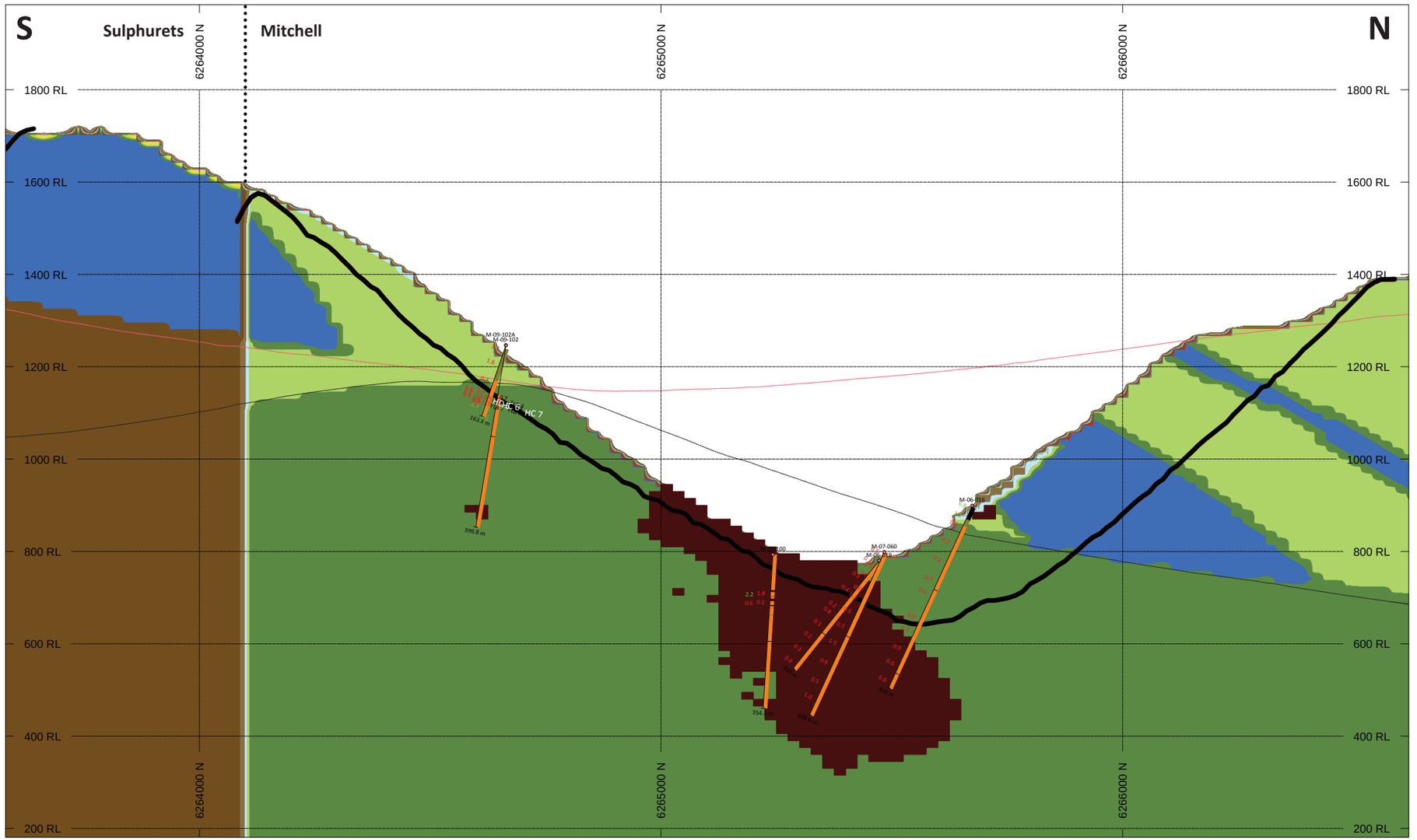
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Figure 19

Mitchell Cross-Section Looking West





Holes Plotted

TOTAL 6

M-06-016	M-06-019	M-07-060
M-09-102	M-09-102A	M-09-100

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Block Caves
- Open Pit Outline
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- Bornite/leach breccia
- LP Hazelton
- Monzonite
- Overburden
- UP Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text
HC No. Maroon Text

MN 2300

SCALE
(m)
-50 0 50 100 150 200 250
NAD83 / UTM zone 9N

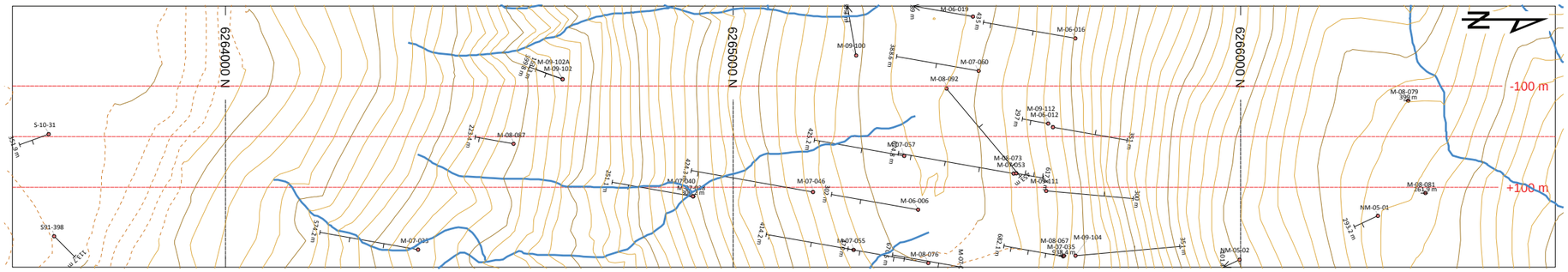
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N W E S

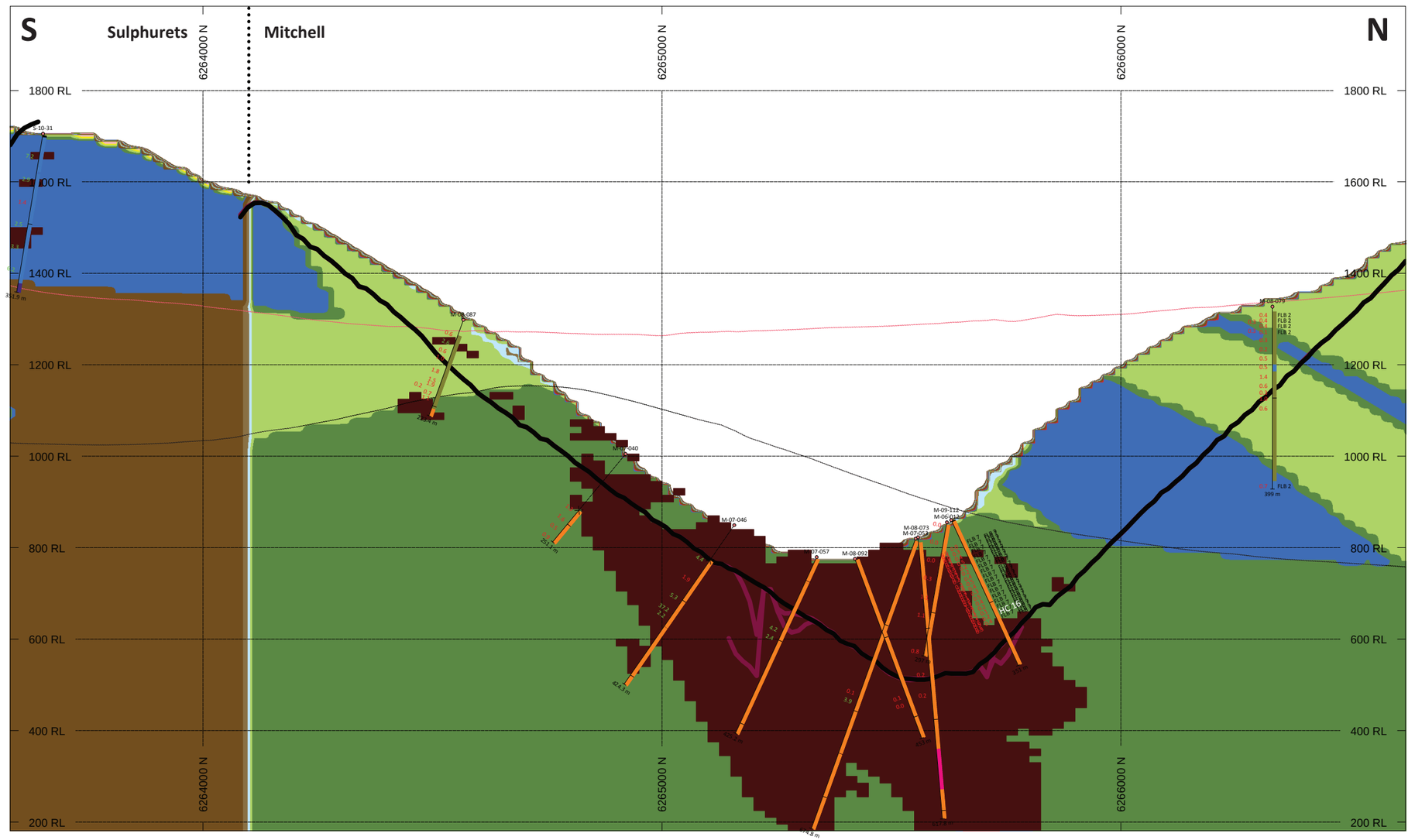
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Figure 20

Mitchell Cross-Section Looking West





Holes Plotted

TOTAL 11

M-06-012	M-07-040	M-07-046	M-07-053
M-07-057	M-08-073	M-08-079	M-08-087
M-08-092	M-09-112	S-10-31	

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Block Caves
- Open Pit Outline
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- Bornite/leach breccia
- LP Hazelton
- Monzonite
- Overburden
- UP Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text
HC No. Maroon Text

MN 2500

SCALE
(m)
-50 0 50 100 150 200 250
NAD83 / UTM zone 9N

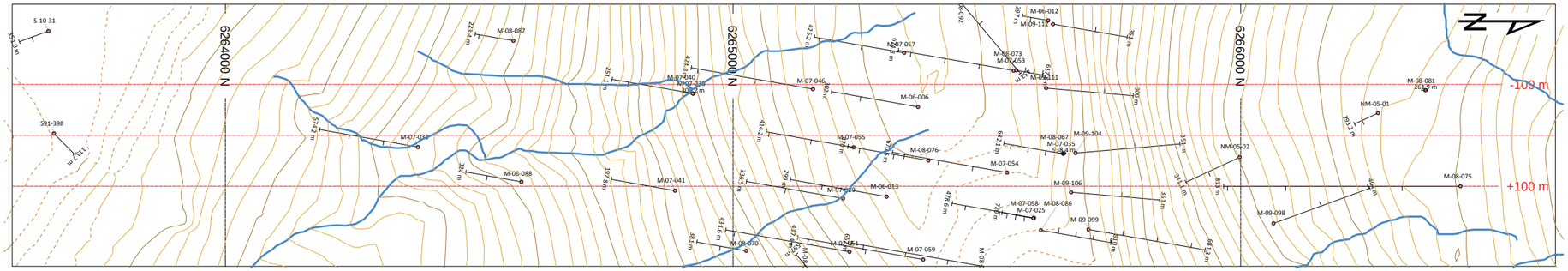
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N W E S

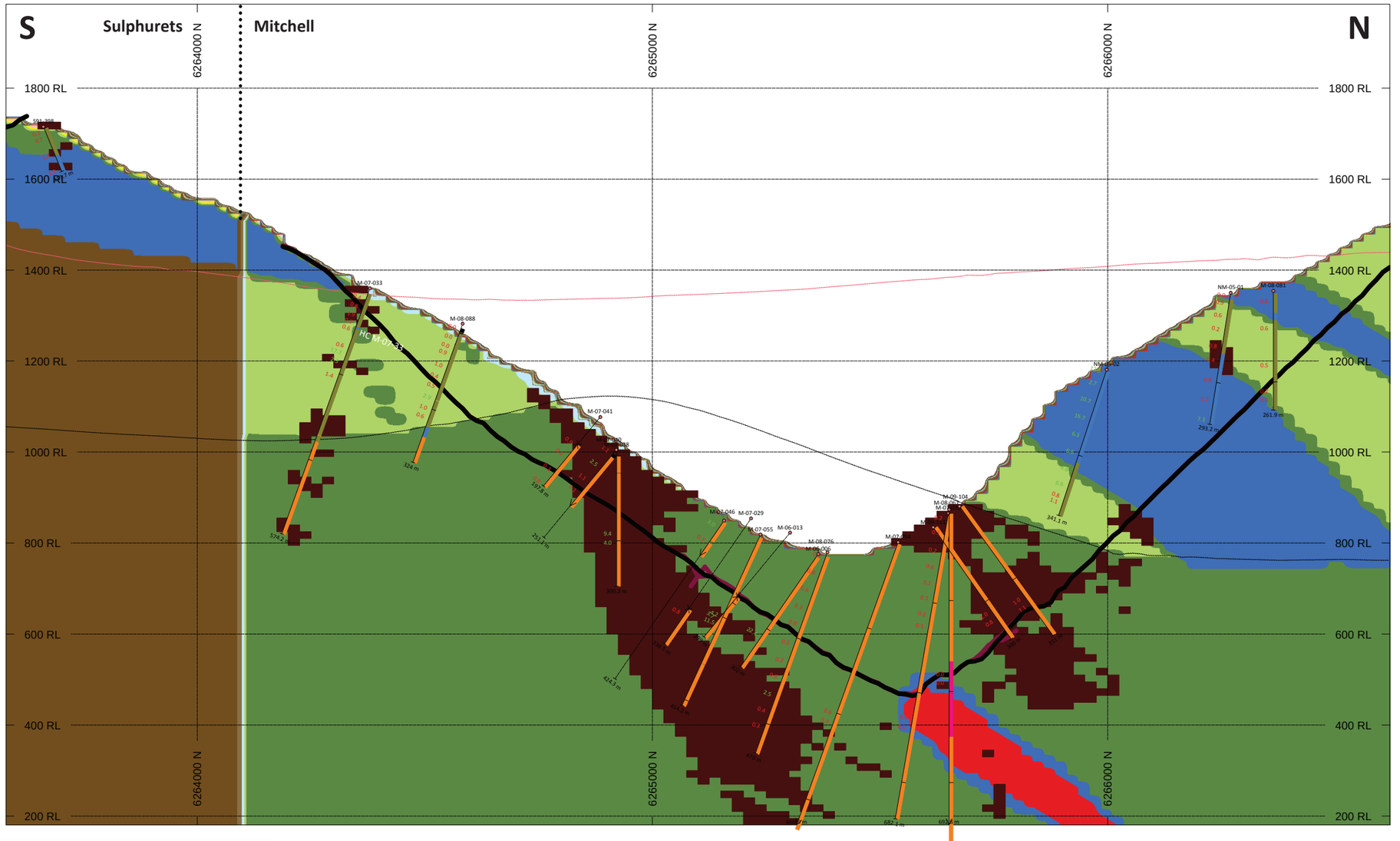
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Figure 21

Mitchell Cross-Section Looking West





Holes Plotted

TOTAL 20

M-06-006	M-06-013	M-07-029	M-07-033
M-07-035	M-07-038	M-07-040	M-07-041
M-07-046	M-07-054	M-07-055	M-08-067
M-08-076	M-08-081	M-08-088	M-09-104
M-09-111	NM-05-01	NM-05-02	S91-398

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Block Caves
- Open Pit Outline
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- Bornite/leach breccia
- LP Hazelton
- Monzonite
- Overburden
- UP Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text
HC No. Maroon Text

MN 2700

SCALE
(m)
-50 0 50 100 150 200 250
NAD83 / UTM zone 9N

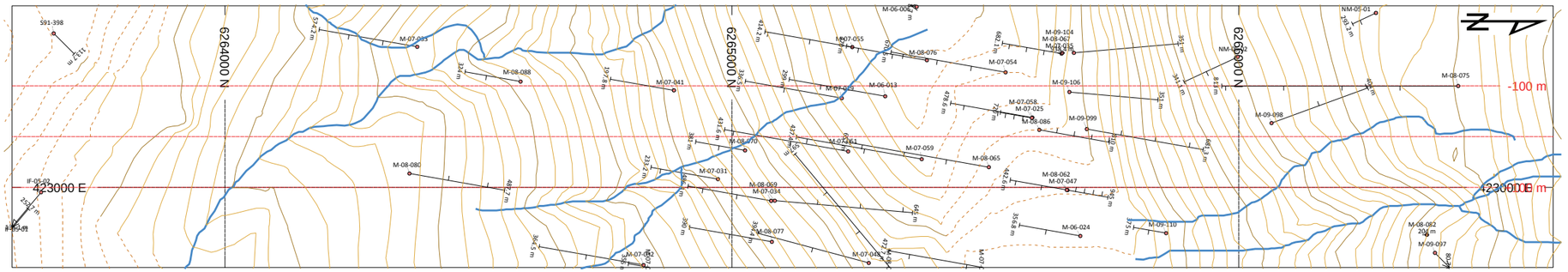
AZIMUTH = 0°
N W E S

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Figure 22

Mitchell Cross-Section Looking West



Holes Plotted

TOTAL 19

M-06-013	M-07-025	M-07-029	M-07-031
M-07-034	M-07-041	M-07-047	M-07-051
M-07-058	M-07-059	M-08-065	M-08-070
M-08-075	M-08-080	M-08-086	M-08-090
M-09-098	M-09-099	M-09-106	

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Block Caves
- Open Pit Outline
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- Bornite/leach breccia
- LP Hazelton
- Monzonite
- Overburden
- UP Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text
HC No. Maroon Text

MN 2900

SCALE
(m)
-50 0 50 100 150 200 250
NAD83 / UTM zone 9N

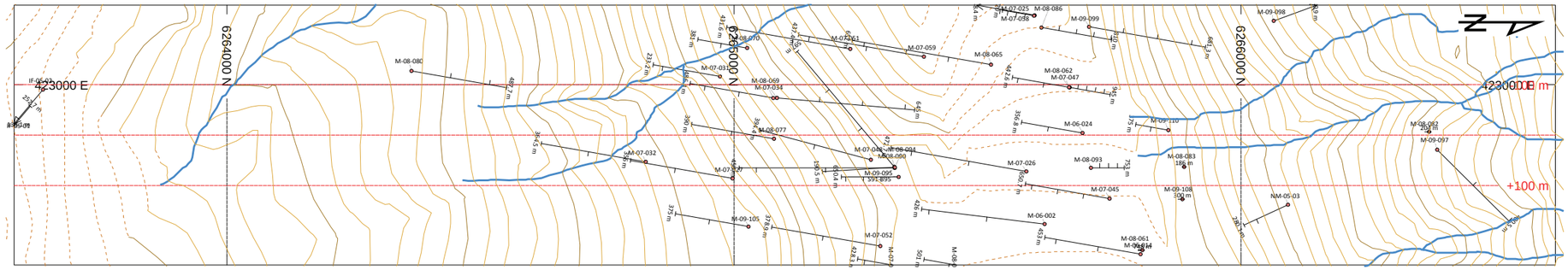
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N W E S

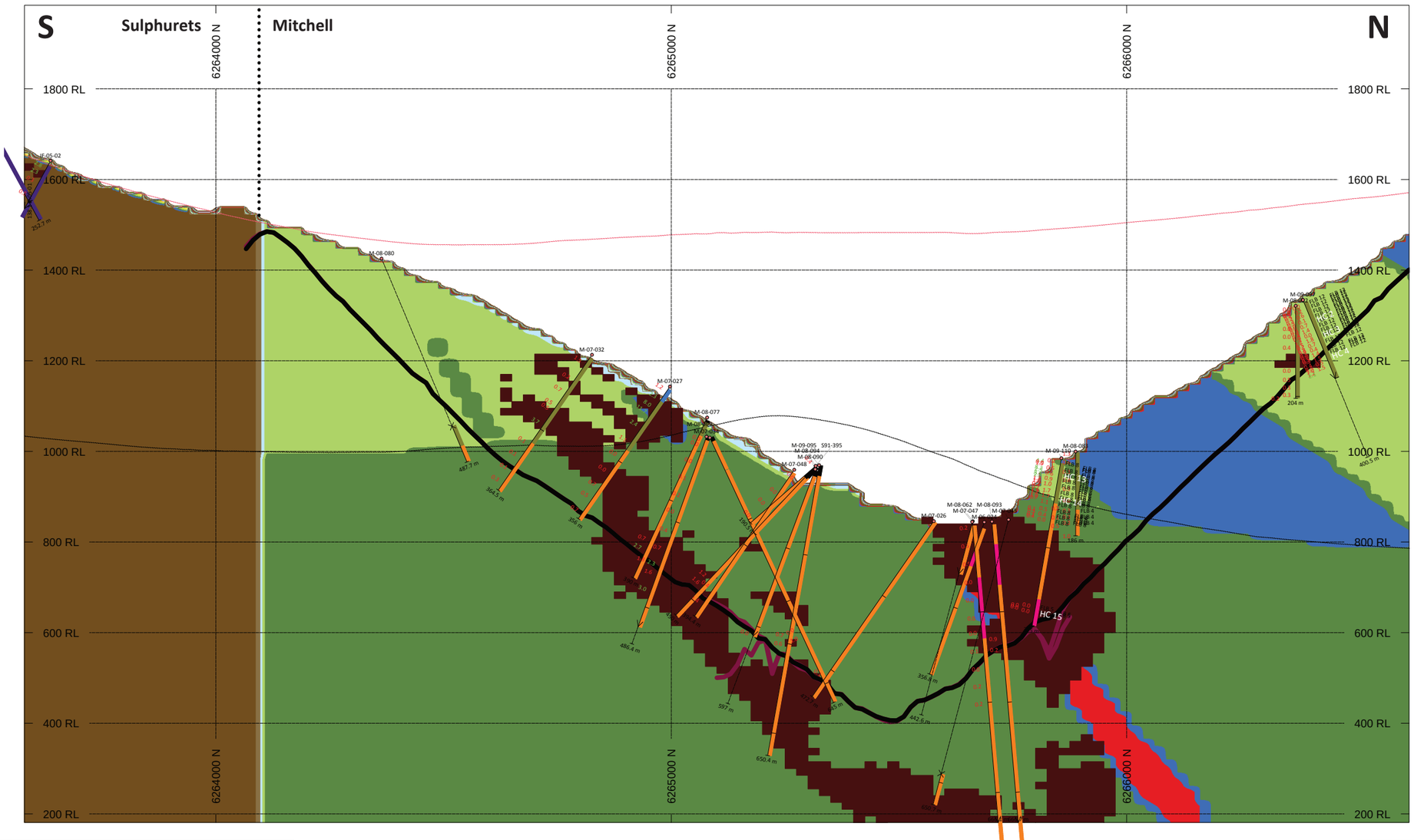
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Figure 23

Mitchell Cross-Section Looking West





Holes Plotted

TOTAL 23

IF-05-01	IF-05-02	M-06-024	M-07-026
M-07-027	M-07-032	M-07-034	M-07-045
M-07-047	M-07-048	M-08-062	M-08-069
M-08-077	M-08-080	M-08-082	M-08-083
M-08-090	M-08-093	M-08-094	M-09-095
M-09-097	M-09-110	S91-395	

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Block Caves
- Open Pit Outline
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- Bornite/leach breccia
- LP Hazelton
- Monzonite
- Overburden
- UP Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text
HC No. Maroon Text

MN 3100

SCALE
(m)
-50 0 50 100 150 200 250
NAD83 / UTM zone 9N

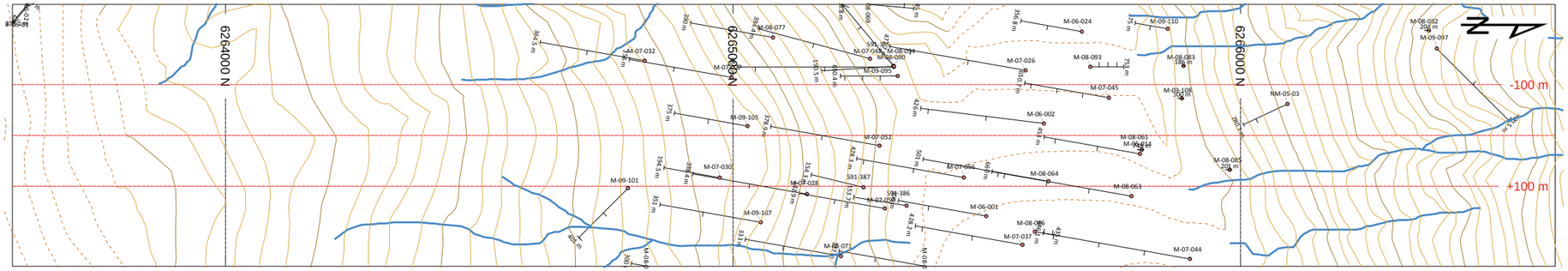
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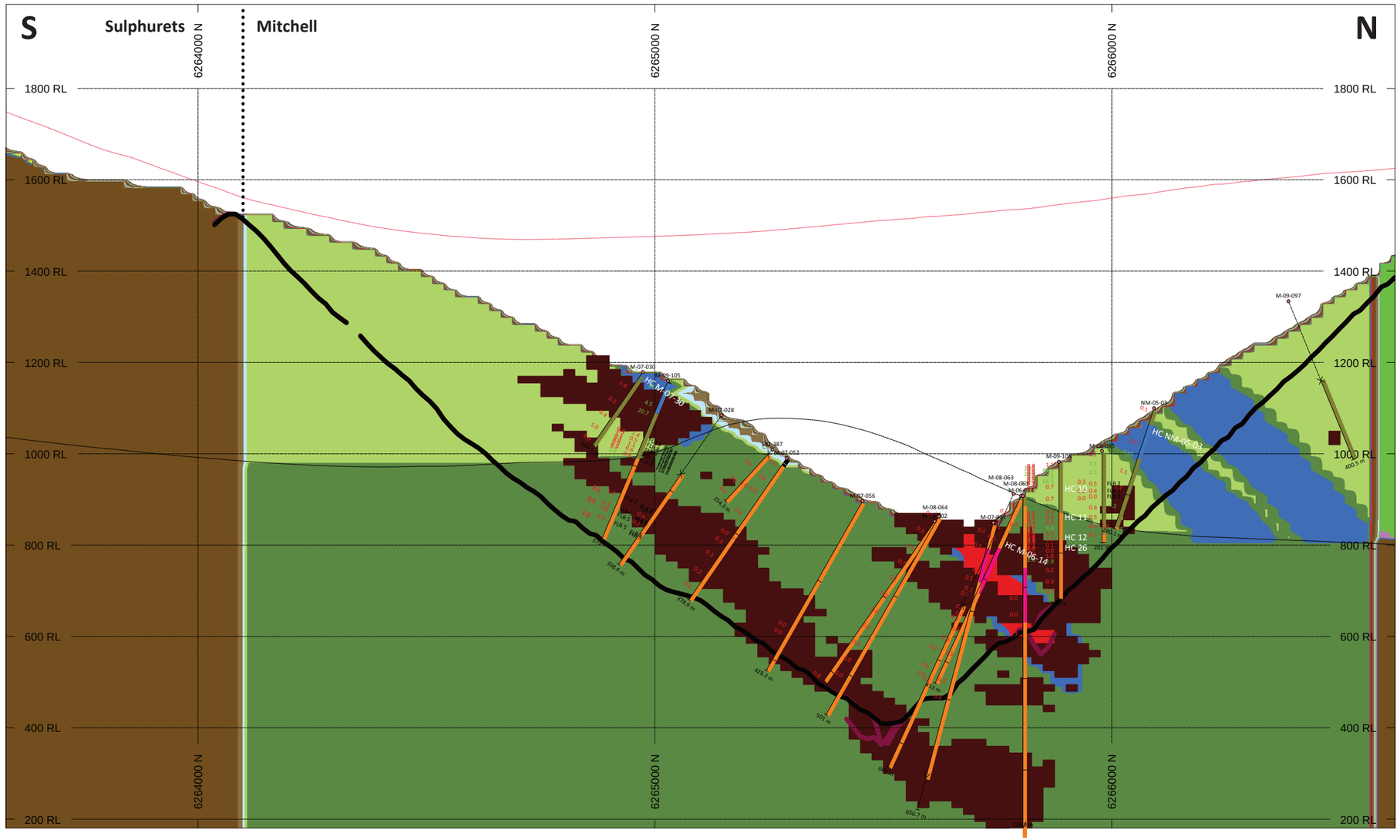
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Figure 24

Mitchell Cross-Section Looking West





Holes Plotted

TOTAL 16

M-06-002	M-06-014	M-07-028	M-07-030
M-07-045	M-07-052	M-07-056	M-08-061
M-08-063	M-08-064	M-08-085	M-09-097
M-09-105	M-09-108	NM-05-03	S91-387

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Block Caves
- Open Pit Outline
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- Bornite/leach breccia
- LP Hazelton
- Monzonite
- Overburden
- UP Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text
HC No. Maroon Text

MN 3300

SCALE
(m)
-50 0 50 100 150 200 250
NAD83 / UTM zone 9N

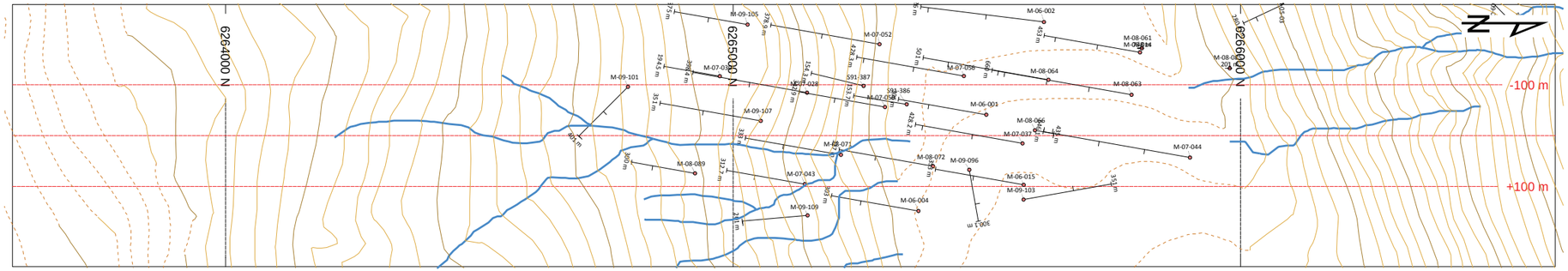
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W E
S

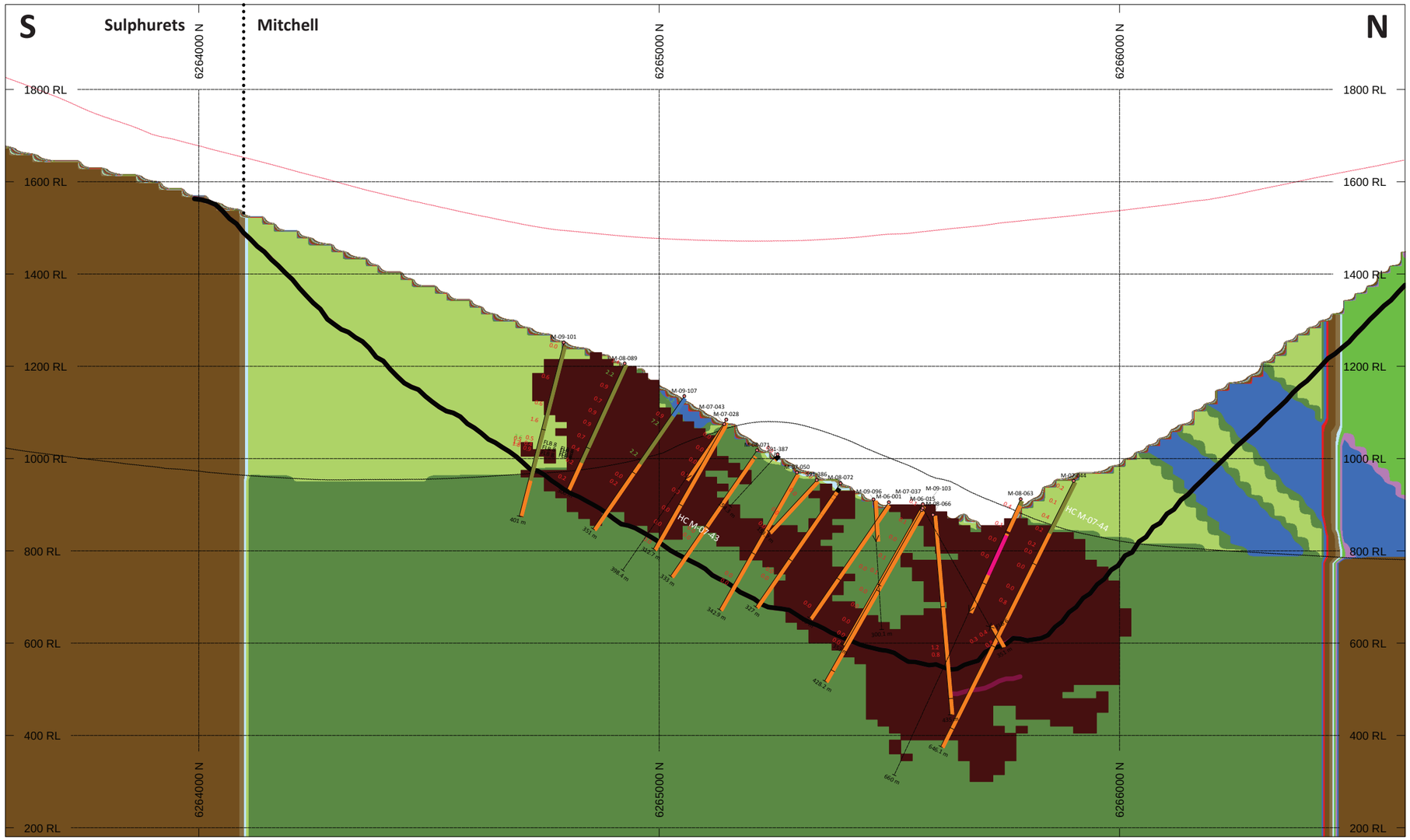
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Figure 25

Mitchell Cross-Section
Looking West





Holes Plotted

TOTAL 18

M-06-001	M-06-015	M-07-028	M-07-037
M-07-043	M-07-044	M-07-050	M-08-063
M-08-066	M-08-071	M-08-072	M-08-089
M-09-096	M-09-101	M-09-103	M-09-107
S91-386	S91-387		

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Block Caves
- Open Pit Outline
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- Bornite/leach breccia
- LP Hazelton
- Monzonite
- Overburden
- UP Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text
HC No. Maroon Text

MN 3500

SCALE
(m)
-50 0 50 100 150 200 250
NAD83 / UTM zone 9N

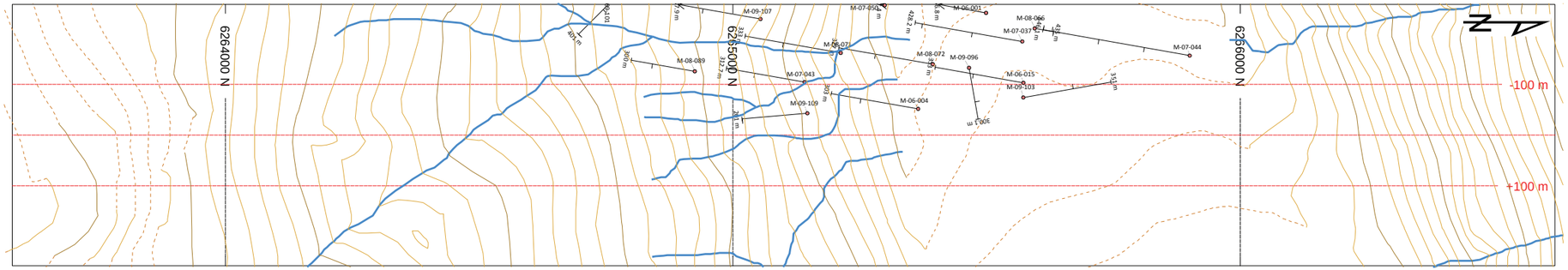
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N
W E
S

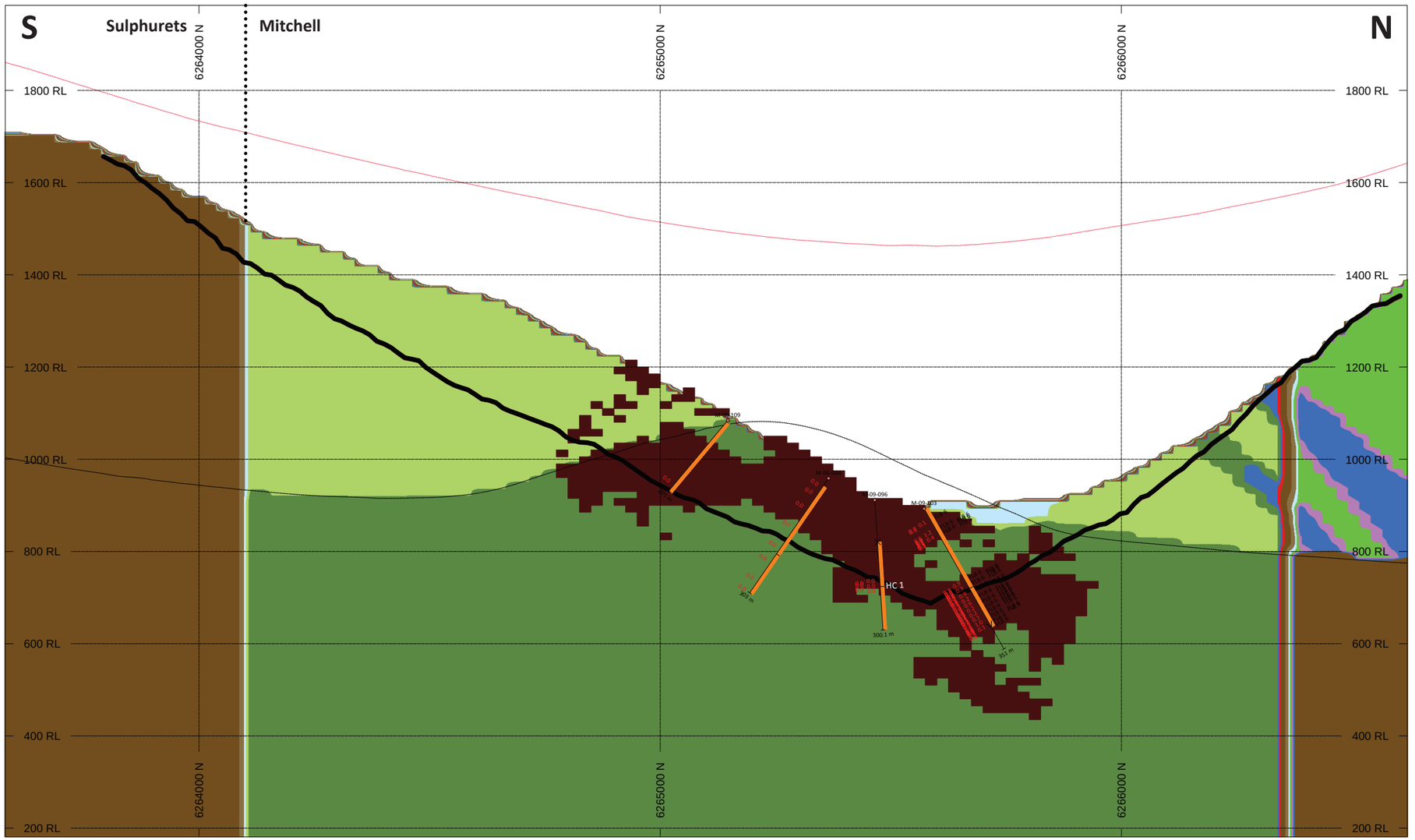
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Figure 26

Mitchell Cross-Section Looking West





Holes Plotted

TOTAL 4

M-06-004 M-09-096 M-09-103 M-09-109

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Block Caves
- Open Pit Outline
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes

- Au, leach & Raewyn
- Bornite/leach breccia
- LP Hazelton
- Monzonite
- Overburden
- UP Hazelton
- Undefined

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text
HC No. Maroon Text

MN 3700

SCALE
(m)
-50 0 50 100 150 200 250
NAD83 / UTM zone 9N

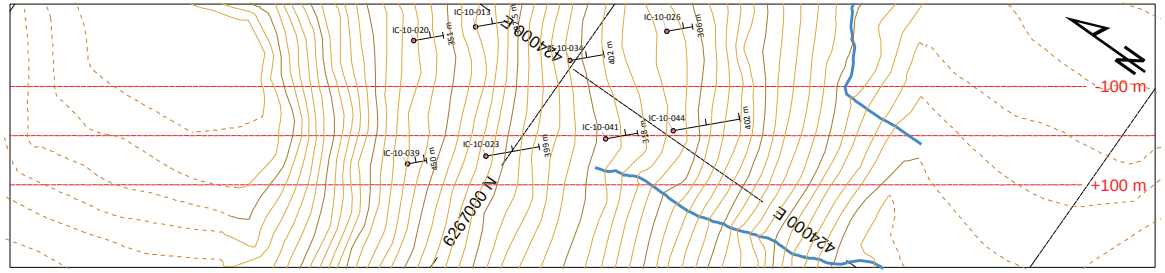
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N
W E
S

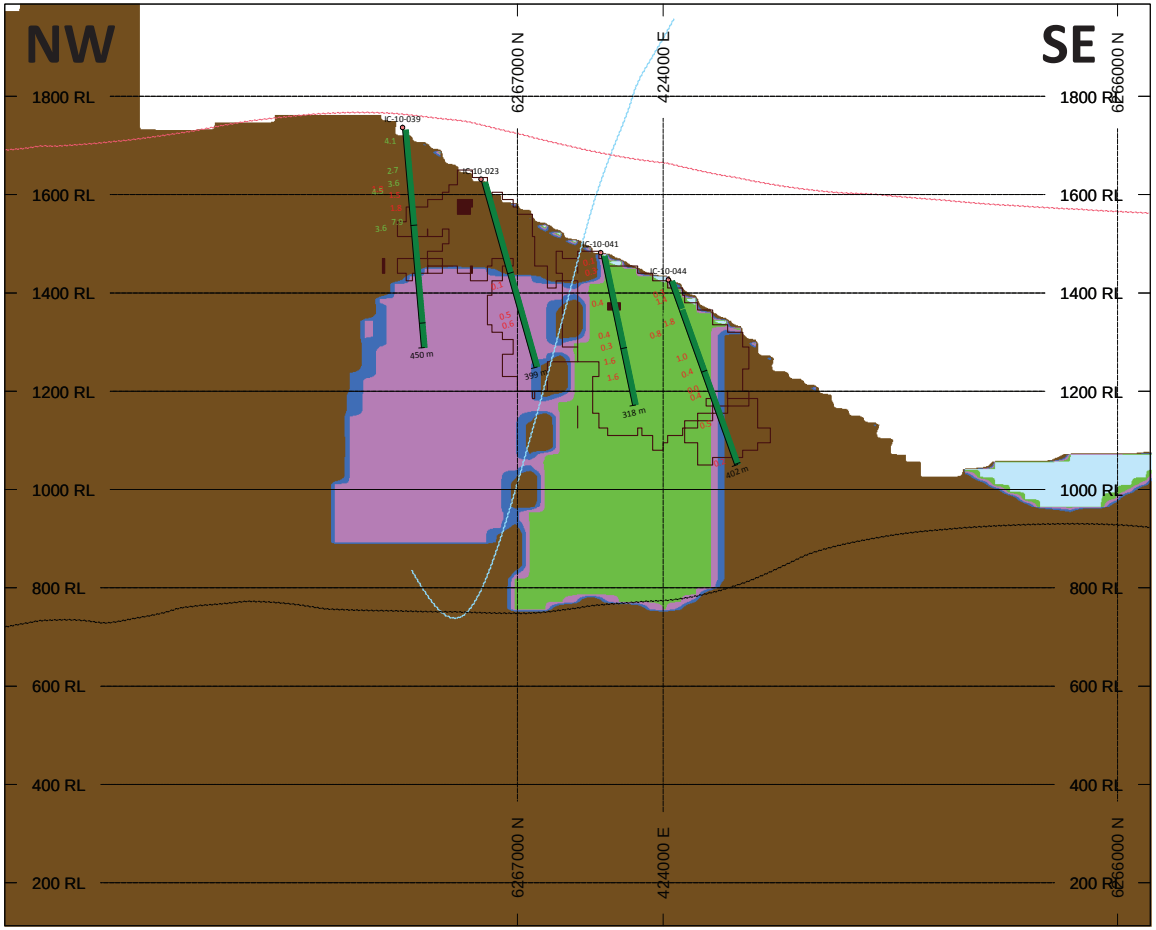
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Figure 27

Mitchell Cross-Section Looking West





HOLES PLOTTED

TOTAL 4

IC-10-023 IC-10-039 IC-10-041 IC-10-044

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Block Caves
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault
- Projected Iron Cap Thrust Fault

DDH Model Codes

- Iron Cap

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text

HC No. Maroon Text

IC EW 3900

SCALE

(m)

-100 0 100 200 300

NAD83 / UTM zone 9N

AZIMUTH = 145°

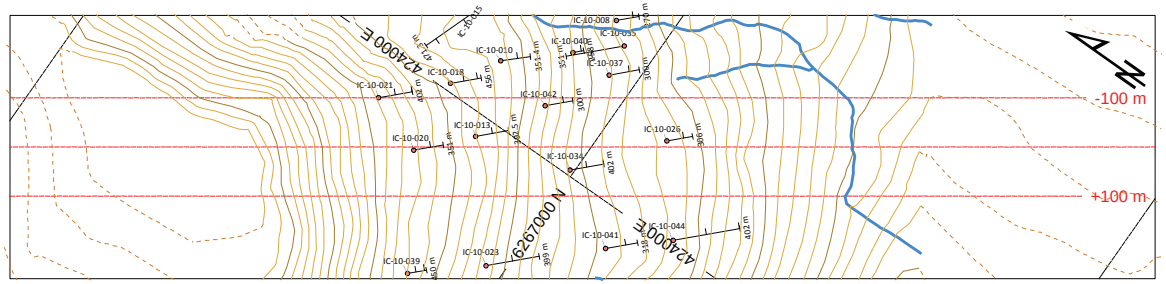
N W E S

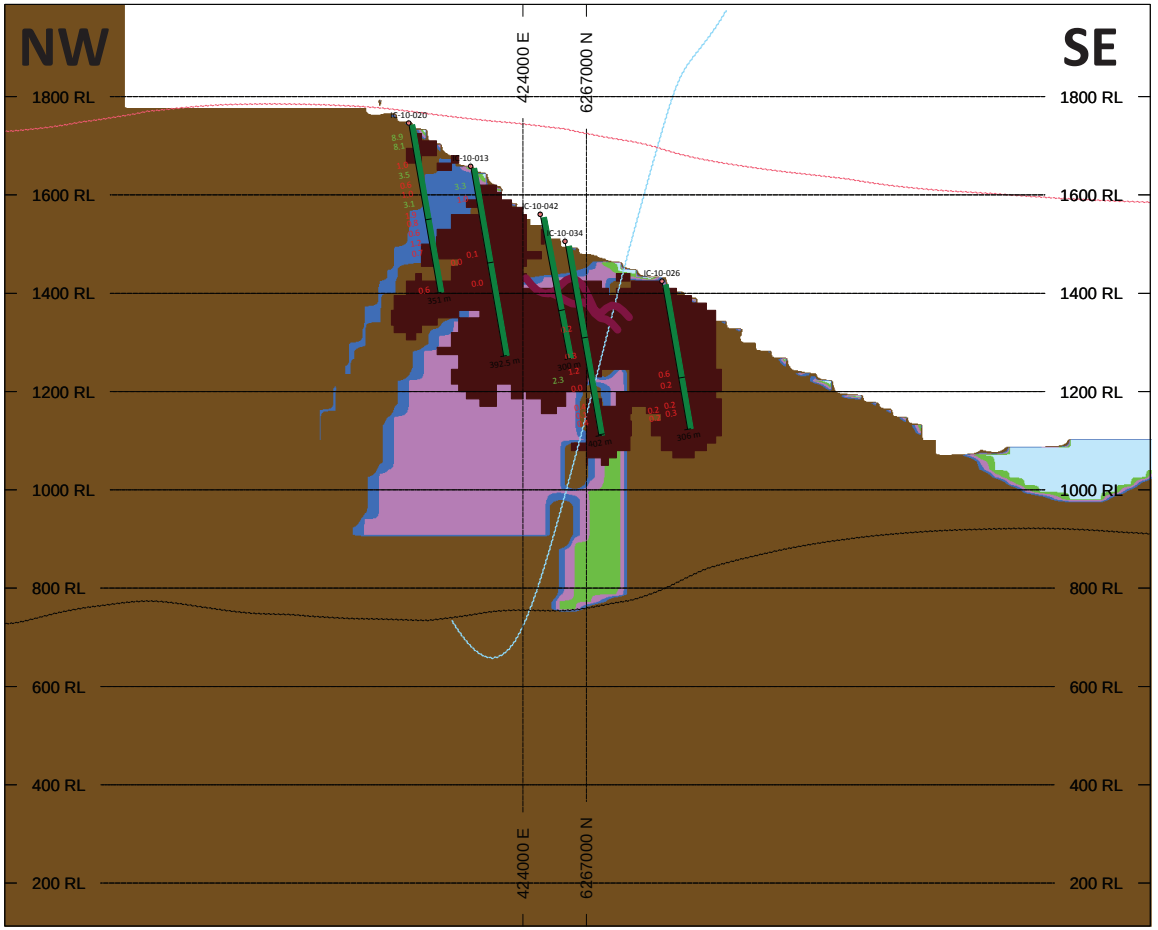
Figure 28

SEABRIDGE GOLD
KSM PROJECT

Iron Cap Cross-Section Looking Northeast

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HOLES PLOTTED

TOTAL 6

IC-10-013 IC-10-020 IC-10-021 IC-10-026
IC-10-034 IC-10-042

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Block Caves
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault
- Projected Iron Cap Thrust Fault

DDH Model Codes

- Iron Cap

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text
HC No. Maroon Text

IC EW 4064

SCALE
(m)
-100 0 100 200 300
NAD83 / UTM zone 9N

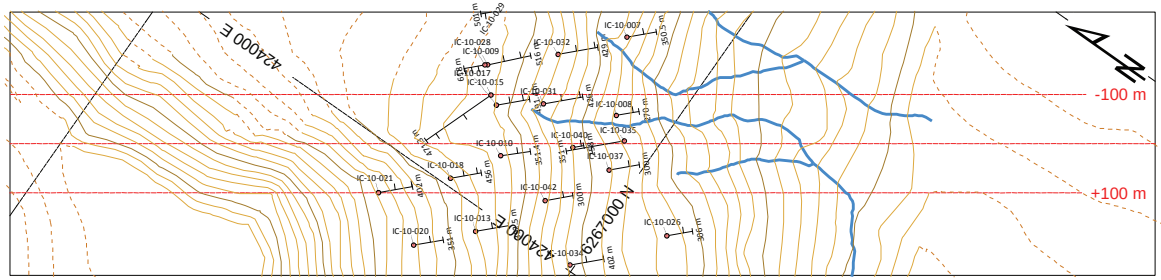
AZIMUTH = 145°
N E S W

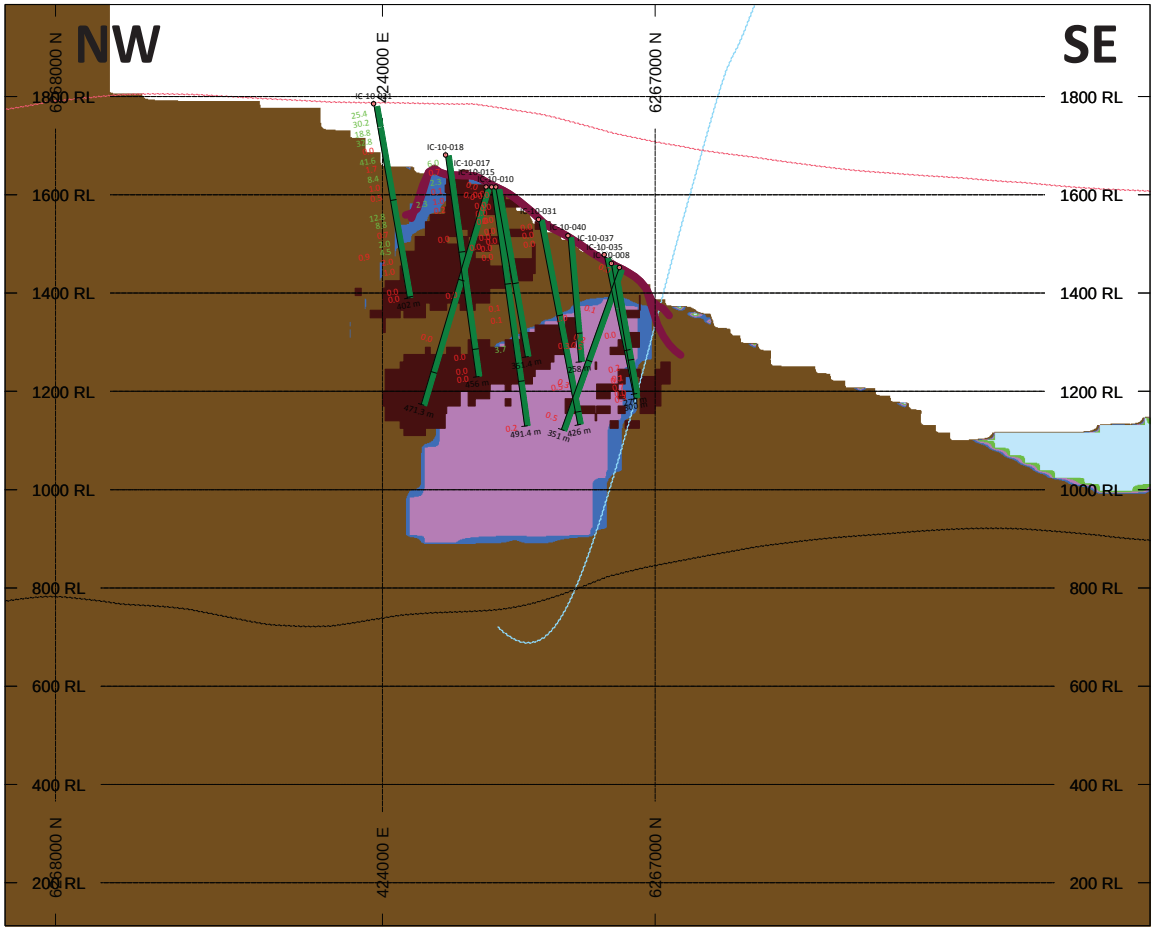
Figure 29

SEABRIDGE GOLD
KSM PROJECT

Iron Cap Cross-Section Looking Northeast

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HOLES PLOTTED

TOTAL 9

IC-10-008	IC-10-010	IC-10-015	IC-10-017
IC-10-018	IC-10-031	IC-10-035	IC-10-037
IC-10-040			

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Block Caves
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault
- Projected Iron Cap Thrust Fault

DDH Model Codes

- Iron Cap

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text

HC No. Maroon Text

IC EW 4228

SCALE

(m)

-100 0 100 200 300

NAD83 / UTM zone 9N

AZIMUTH = 145°

N W E S

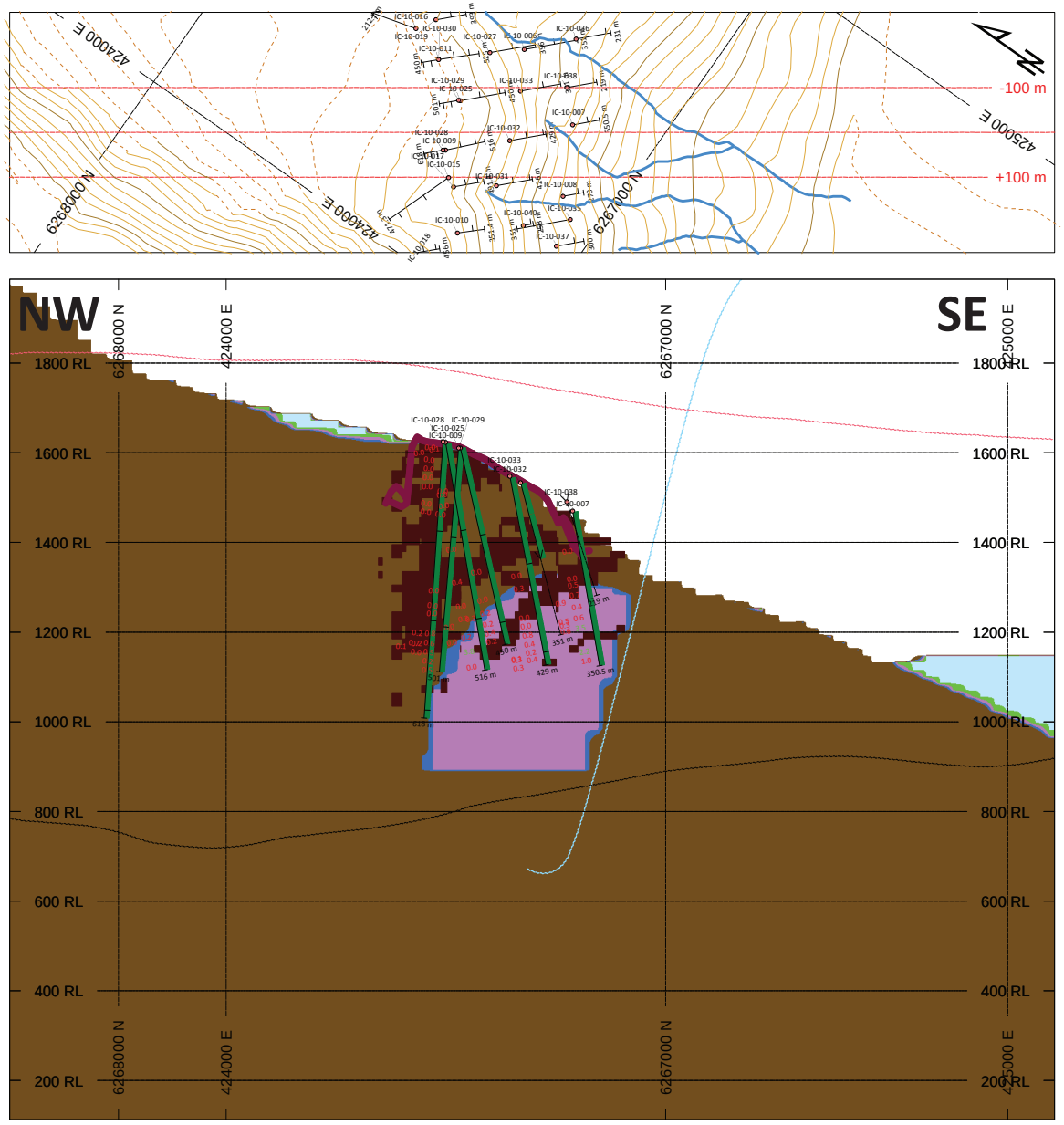
Figure 30

SEABRIDGE GOLD
KSM PROJECT

Iron Cap Cross-Section Looking Northeast

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Figure 30



HOLES PLOTTED

TOTAL 8

IC-10-007	IC-10-009	IC-10-025	IC-10-028
IC-10-029	IC-10-032	IC-10-033	IC-10-038

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Block Caves
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault
- Projected Iron Cap Thrust Fault

DDH Model Codes

- Iron Cap

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text

HC No. Maroon Text

IC EW 4391

SCALE

(m)

-100 0 100 200 300

NAD83 / UTM zone 9N

AZIMUTH = 145°

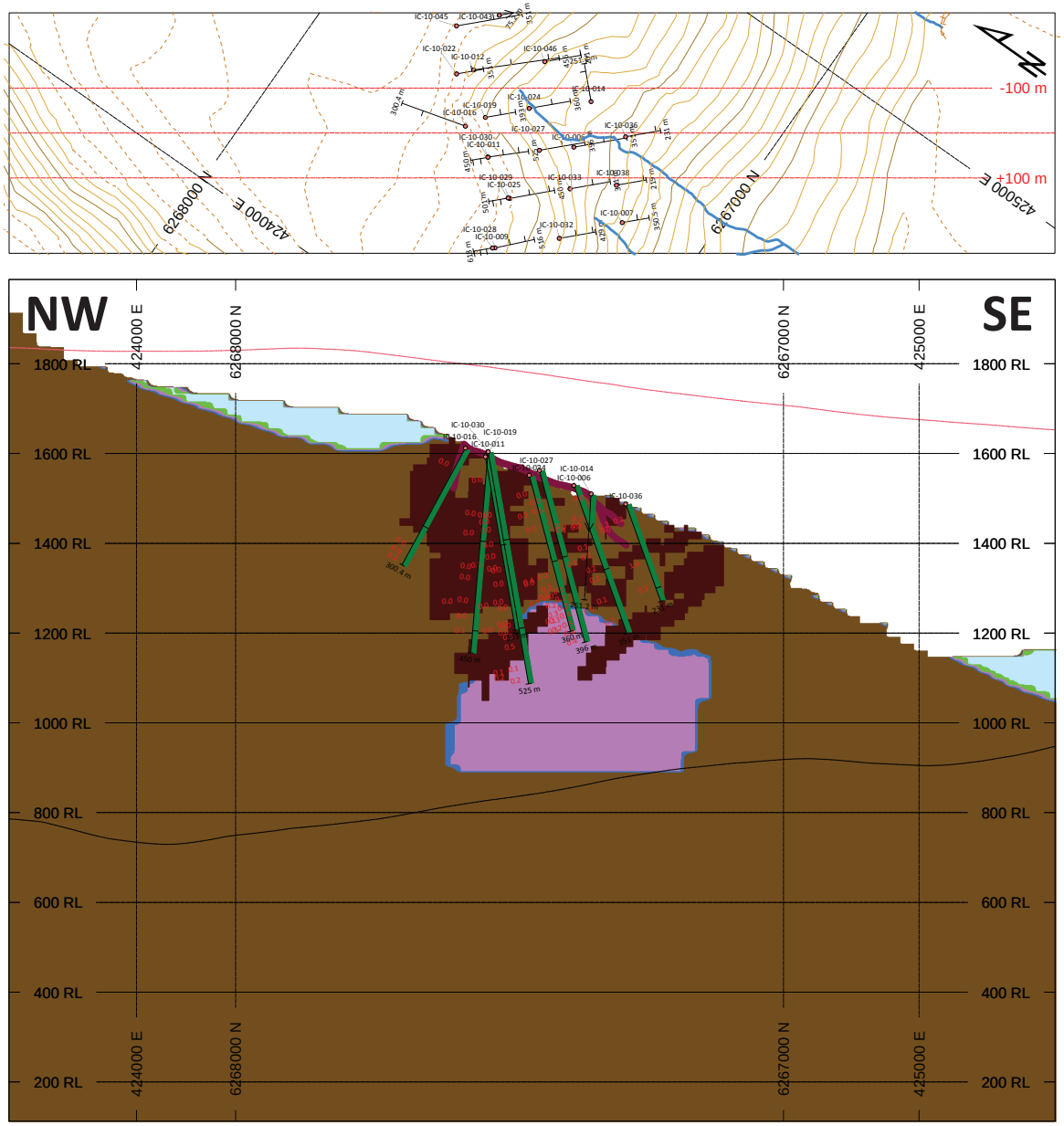
N W E S

Figure 31

SEABRIDGE GOLD
KSM PROJECT

Iron Cap Cross-Section Looking Northeast

Rescan™ Engineers & Scientists



HOLES PLOTTED

TOTAL 9

IC-10-006 IC-10-011 IC-10-014 IC-10-016
IC-10-019 IC-10-024 IC-10-027 IC-10-030
IC-10-036

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography
- Block Caves
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault

DDH Model Codes
- Iron Cap

Adj SNPR Labels on Left
- > 2.0
- ≤ 2.0

Posted Values on Right
Barrel No. Black Text
HC No. Maroon Text

IC EW 4555

SCALE
(m)
-100 0 100 200 300
NAD83 / UTM zone 9N

AZIMUTH = 145°
N E S W

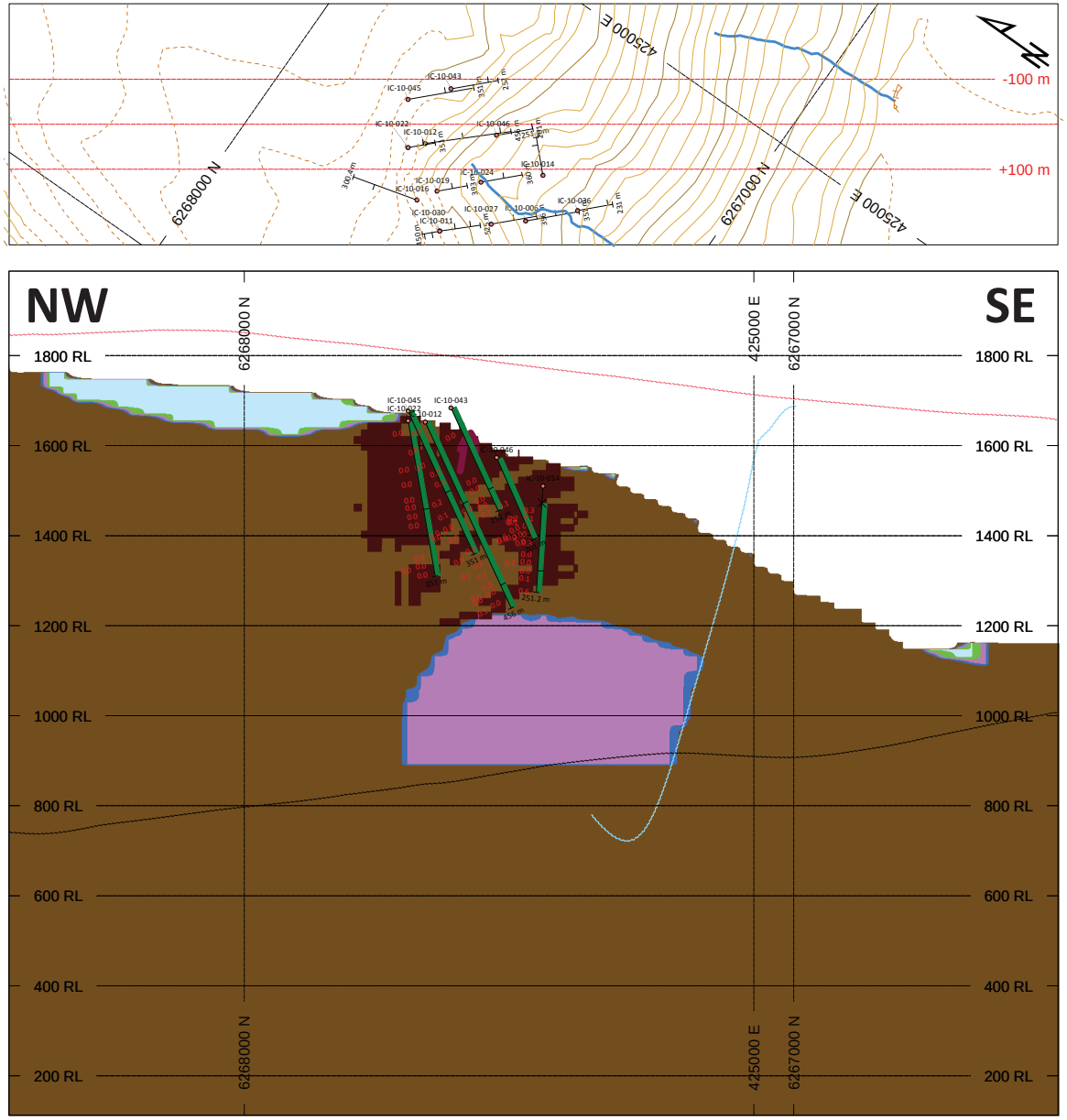
Figure 32

SEABRIDGE GOLD
KSM PROJECT

Iron Cap Cross-Section Looking Northeast

Rescan™ Engineers & Scientists

Figure 32



HOLES PLOTTED

TOTAL 6

IC-10-012 IC-10-014 IC-10-022 IC-10-043
IC-10-045 IC-10-046

Legend

- Overburden
- CL-PR
- QSP
- Weak CLQSP
- Dikes
- Au, Leach & Raewyn
- Lower Au
- UP Hazelton
- LP Hazelton
- Monzonite
- Glacial Ice
- Bornite/Leach Breccia
- Hazelton
- Diorite
- Undefined

Topography

- Block Caves
- Projected Sulphurets Thrust Fault
- Projected Mitchell Thrust Fault
- Projected Iron Cap Thrust Fault

DDH Model Codes

- Iron Cap

Adj SNPR Labels on Left

- > 2.0
- ≤ 2.0

Posted Values on Right

Barrel No. Black Text
HC No. Maroon Text

IC EW 4719

SCALE
(m)
-100 0 100 200 300
NAD83 / UTM zone 9N

AZIMUTH = 145°
N
W E
S

Figure 33

SEABRIDGE GOLD
KSM PROJECT

Iron Cap Cross-Section Looking Northeast

Rescan™ Engineers & Scientists

Appendix 5.1-1

Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Rescan™
Engineers and Scientists

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Kerr	2010	K-09-02	4.5	7.5	3.0	KERR	VU		IARG	3		QSP	1		ABOVE MTF			H42801	H42801	11
Kerr	2010	K-09-01	21.5	23	1.5	KERR	VU		QSP	3								K-09-01_40	H42619	11
Kerr	2010	K-09-03	3.3	7	3.7	KERR	VU		IARG	5					ABOVE MTF			H46054/55	H46054	11
Kerr	2009	K-09-04	106	108	2.0	KERR	VU		QSP	3		IARG	2					K-09-04_2	H46211	12
Kerr	2008	T89-013	129	132	3.0	KERR	SSED		SE		60							T89-013_3	14541	12
Kerr	2010	K-09-04	6.8	11	4.2	KERR	VU		SI	3/4		ARG/SI	2/2		ABOVE MTF			H46155/56	H46155	12
Kerr	2009	K-09-04	126.25	128	1.8	KERR	VU		QSP	3		IARG	3					K-09-04_7	H46222	12
Kerr	2010	K-09-04	104	106	2.0	KERR	VU		QSP	3		IARG	2					K-09-04_8	H46210	12
Kerr	2009	K-09-04	110	112	2.0	KERR	VU		QSP	3		IARG	2					K-09-04_3	H46213	12
Kerr	2010	K-09-04	82	86	4.0	KERR	VU		QSP	3					ABOVE MTF			H46198/99	H46198	12
Kerr	2009	K-09-04	102	104	2.0	KERR	VU		QSP	3		IARG	2					K-09-04_1	H46209	12
Kerr	2010	K-09-03	135	137	2.0	KERR	VU		IARG	4		CL	2					K-09-03_7	H46131	12
Kerr	2010	K-09-04	40	44	4.0	KERR	VU		QSP	3					ABOVE MTF			H46175/76	H46175	12
Kerr	2009	K-09-03	137	139	2.0	KERR	VU		QSP	5		None						K-09-03_1	H46132	12
Kerr	2010	K-09-02	162	164	2.0	KERR	VU		IARG	2		CL	2					K-09-02_36	H42885	12
Kerr	2010	K-09-03	120	121.85	1.8	KERR	VU		QSP	4		CL	3		ABOVE MTF			H46123	H46123	12
Kerr	2010	K-09-04	108	110	2.0	KERR	VU		QSP	3		IARG	2					K-09-04_9	H46212	12
Kerr	2009	K-09-04	114	116	2.0	KERR	VU		QSP	3		IARG	2					K-09-04_4	H46216	12
Kerr	2009	K-09-04	120	122.2	2.2	KERR	VU		QSP	3		IARG	2					K-09-04_5	H46219	12
Kerr	2009	K-09-02	160	162	2.0	KERR	VU		IARG	2		CL	2					K-09-02_18	H42884	12
Kerr	2010	K-09-02	158	160	2.0	KERR	VU		IARG	2		CL	2					K-09-02_35	H42882	12
Kerr	2010	K-09-02	120	124	4.0	KERR	VU		IARG	3		CL	1		ABOVE MTF			H42862/63	H42862	12
Kerr	2009	K-09-02	156	158	2.0	KERR	VU		IARG	2		CL	2					K-09-02_17	H42881	12
Kerr	2010	K-09-02	166	168	2.0	KERR	VU		IARG	2		CL	2					K-09-02_37	H42887	12
Kerr	2009	K-09-03	141	143	2.0	KERR	VU		QSP	5		None						K-09-03_2	H46135	12
Kerr	2010	K-09-03	139	141	2.0	KERR	VU		QSP	5								K-09-03_8	H46134	12
Kerr	2010	K-09-01	300	302	2.0	KERR	VU		CL	2		PR	1		ABOVE MTF			H42772	H42772	12
Kerr	2010	K-09-03	39	45	6.0	KERR	VU		IARG	4		CL	3		ABOVE MTF			H46076	H46076	12
Kerr	2009	K-09-02	164	166	2.0	KERR	VU		IARG	2		CL	2					K-09-02_19	H42886	12
Kerr	2010	K-09-04	112	114	2.0	KERR	VU		QSP	3		IARG	2					K-09-04_10	H46215	12
Kerr	2010	K-09-02	154	156	2.0	KERR	VU		IARG	2		CL	2					K-09-02_34	H42880	12
Kerr	2010	K-09-02	180	184	4.0	KERR	VU		IARG	2		CL	2		ABOVE MTF			H42895/96	H42895	12
Kerr	2009	K-09-02	152	153	1.0	KERR	VU		IARG	2		CL	2					K-09-02_16	H42879	12
Kerr	2010	K-09-01	220	222	2.0	KERR	VU		CL	2		PR	1		ABOVE MTF			H42731	H42731	12
Kerr	2010	K-09-01	259.95	262	2.1	KERR	VU		CL	2		PR	1		ABOVE MTF			H42752	H42752	12
Kerr	2010	K-09-04	122.2	124	1.8	KERR	DDRT		CL	1								K-09-04_11	H46220	12
Kerr	2010	K-09-04	124	126	2.0	KERR	DDRT		CL	1								K-09-04_12	H46221	12
Kerr	2009	K-09-04	124	126	2.0	KERR	DDRT		CL	1		None						K-09-04_6	H46221	12
Kerr	2009	K-09-01	160	162	2.0	KERR	VU		IARG	3		PR	2					K-09-01_33	H42695	13
Kerr	2009	K-09-01	138	140	2.0	KERR	VU		IARG	3		CL	1					K-09-01_28	H42683	13
Kerr	2008	KS-102	10	13	3.0	KERR	SSST		MY		80							KS-102_1	58437	13
Kerr	2010	K-09-02	65	67	2.0	KERR	VU		IARG	4		QSP	1					K-09-02_26	H42831	13
Kerr	2008	T89-013	75	78	3.0	KERR	NQKR		SE									T89-013_2	14523	13
Kerr	2010	K-09-02	39	41	2.0	KERR	VU		IARG	3		QSP	1					K-09-02_23	H42816	13
Kerr	2010	K-09-02	59.5	61.14	1.6	KERR	VU		QSP	4/1		IARG/QSP	1/1					K-09-02_25	H42828	13
Kerr	2010	K-09-02	89	91	2.0	KERR	VU		IARG	4		QSP	1					K-09-02_32	H42845	13
Kerr	2009	K-09-02	67	69	2.0	KERR	VU		IARG	4		QSP	1					K-09-02_8_B	H42832	13
Kerr	2010	K-09-02	69	71	2.0	KERR	VU		IARG	4		QSP	1					K-09-02_27	H42834	13
Kerr	2010	K-09-02	81	83	2.0	KERR	VU		IARG	4		QSP	1					K-09-02_30	H42841	13
Kerr	2010	K-09-02	93	95	2.0	KERR	VU		IARG	4		QSP	1					K-09-02_33	H42847	13

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Kerr	2009	K-09-02	43	45	2.0	KERR	VU		IARG	3		QSP	1					K-09-02_5	H42818	13
Kerr	2010	K-09-02	35	37	2.0	KERR	VU		IARG	3		QSP	1					K-09-02_22	H42814	13
Kerr	2009	K-09-02	37	39	2.0	KERR	VU		IARG	3		QSP	1					K-09-02_3	H42815	13
Kerr	2010	K-09-02	27	29	2.0	KERR	VU		IARG	3		QSP	1					K-09-02_20	H42809	13
Kerr	2009	K-09-02	75	77	2.0	KERR	VU		IARG	4		QSP	1					K-09-02_10	H42837	13
Kerr	2009	K-09-02	29	31	2.0	KERR	VU		IARG	3		QSP	1					K-09-02_1	H42810	13
Kerr	2010	K-09-01	162	164	2.0	KERR	VU		IARG	3		PR	2					K-09-01_62	H42696	13
Kerr	2010	K-09-02	45	47	2.0	KERR	VU		IARG	3		QSP	1					K-09-02_24	H42819	13
Kerr	2010	K-09-02	85	87	2.0	KERR	VU		IARG	4		QSP	1					K-09-02_31	H42843	13
Kerr	2010	K-09-02	71	73	2.0	KERR	VU		IARG	4		QSP	1					K-09-02_28	H42835	13
Kerr	2010	K-09-02	77	79	2.0	KERR	VU		IARG	4		QSP	1					K-09-02_29	H42838	13
Kerr	2009	K-09-02	87	89	2.0	KERR	VU		IARG	4		QSP	1					K-09-02_13	H42844	13
Kerr	2009	K-09-02	41	43	2.0	KERR	VU		IARG	3		QSP	1					K-09-02_4	H42817	13
Kerr	2009	K-09-02	47	49	2.0	KERR	VU		IARG	3		QSP	1					K-09-02_6	H42821	13
Kerr	2009	K-09-02	95	97	2.0	KERR	VU		IARG	4		QSP	1					K-09-02_15	H42848	13
Kerr	2008	T89-013	28	31	3.0	KERR	SCNG		SE		40	MY						T89-013_1	14507	13
Kerr	2009	K-09-02	91	93	2.0	KERR	VU		IARG	4		QSP	1					K-09-02_14	H42846	13
Kerr	2009	K-09-02	33	35	2.0	KERR	VU		IARG	3		QSP	1					K-09-02_2	H42813	13
Kerr	2010	K-09-01	136	138	2.0	KERR	VU		IARG	3		CL	1					K-09-01_85	H42682	13
Kerr	2009	K-09-02	83	85	2.0	KERR	VU		IARG	4		QSP	1					K-09-02_12	H42842	13
Kerr	2010	K-09-02	31	33	2.0	KERR	VU		IARG	3		QSP	1					K-09-02_21	H42812	13
Kerr	2009	K-09-02	71	73	2.0	KERR	VU		IARG	4		QSP	1					K-09-02_9	H42835	13
Kerr	2010	K-09-01	124	126	2.0	KERR	VU		IARG	3		CL	1					K-09-01_82	H42675	13
Kerr	2010	K-09-01	120	122	2.0	KERR	VU		IARG	3		CL	1					K-09-01_81	H42673	13
Kerr	2010	K-09-01	144	146	2.0	KERR	VU		IARG	3		CL	1					K-09-01_68	H42686	13
Kerr	2010	K-09-01	116	118	2.0	KERR	VU		IARG	3		CL	1					K-09-01_80	H42671	13
Kerr	2009	K-09-02	79	81	2.0	KERR	VU		IARG	4		QSP	1					K-09-02_11	H42839	13
Kerr	2009	K-09-01	110	112	2.0	KERR	VU		IARG	3		CL	1					K-09-01_21	H42668	13
Kerr	2008	K88-015	21	24	3.0	KERR	INPP		SE		80	CL		50				88-015_1	3008	13
Kerr	2008	KS-103	30	39	9.0	KERR	VHLP		SE		70	CL		30				KS-103_1	49313	13
Kerr	2009	K-09-01	126	128	2.0	KERR	VU		IARG	3		CL	1					K-09-01_25	H42676	13
Kerr	2009	K-09-01	106	108	2.0	KERR	VU		IARG	3		CL	1					K-09-01_20	H42666	13
Kerr	2010	K-09-03	143	144.4	1.4	KERR	VU		QSP	5								K-09-03_9	H46136	13
Kerr	2009	K-09-01	118	120	2.0	KERR	VU		IARG	3		CL	1					K-09-01_23	H42672	13
Kerr	2010	K-09-01	150	152	2.0	KERR	VU		IARG	3		CL	1					K-09-01_59	H42689	13
Kerr	2010	K-09-01	100	102	2.0	KERR	VU		IARG	3		CL	1					K-09-01_54	H42663	13
Kerr	2008	K88-015	139	142	3.0	KERR	INPP		SE		70/80	CL/CL		50				88-015_3	3048	13
Kerr	2010	K-09-01	110	112	2.0	KERR	VU		IARG	3		CL	1					K-09-01_56	H42668	13
Kerr	2009	K-09-01	142	144	2.0	KERR	VU		IARG	3		CL	1					K-09-01_29	H42685	13
Kerr	2010	K-09-01	148	150	2.0	KERR	VU		IARG	3		CL	1					K-09-01_58	H42688	13
Kerr	2009	K-09-01	146	148	2.0	KERR	VU		IARG	3		CL	1					K-09-01_30	H42687	13
Kerr	2010	K-09-01	112	114	2.0	KERR	VU		IARG	3		CL	1					K-09-01_57	H42669	13
Kerr	2010	K-09-01	170	172	2.0	KERR	VU		IARG	3								K-09-01_64	H42701	13
Kerr	2009	K-09-01	168	170	2.0	KERR	VU		IARG	3		PR	2					K-09-01_35	H42699	13
Kerr	2010	K-09-01	140	142	2.0	KERR	VU		IARG	3		CL	1					K-09-01_86	H42684	13
Kerr	2009	K-09-01	181	183	2.0	KERR	SSLT		IARG	2		None						K-09-01_38	H42707	13
Kerr	2010	K-09-01	173.75	175.77	2.0	KERR	VU		CARB	1								K-09-01_65	H42703	13
Kerr	2009	K-09-01	134	136	2.0	KERR	VU		IARG	3		CL	1					K-09-01_27	H42681	13
Kerr	2009	K-09-01	156	158	2.0	KERR	VU		IARG	3		CL	1					K-09-01_32	H42693	13
Kerr	2010	K-09-01	158	160	2.0	KERR	VU		IARG	3		CL	1					K-09-01_61	H42694	13

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Kerr	2010	K-09-01	132	134	2.0	KERR	VU		IARG	3		CL	1					K-09-01_84	H42680	13
Kerr	2009	K-09-01	164	166	2.0	KERR	VU		IARG	3		PR	2					K-09-01_34	H42697	13
Kerr	2009	K-09-01	175.77	177	1.2	KERR	SSLT		IARG	2		None						K-09-01_37	H42704	13
Kerr	2010	K-09-01	187	189	2.0	KERR	SSLT		IARG	2								K-09-01_67	H42710	13
Kerr	2010	K-09-01	179	181	2.0	KERR	SSLT		IARG	2								K-09-01_69	H42706	13
Kerr	2009	K-09-01	102	104	2.0	KERR	VU		IARG	3		CL	1					K-09-01_19	H42664	13
Kerr	2009	K-09-01	172	174	2.0	KERR	VU		IARG	3		None						K-09-01_36	H42702	13
Kerr	2010	K-09-01	183	185	2.0	KERR	SSLT		IARG	2								K-09-01_66	H42708	13
Kerr	2009	K-09-01	122	124	2.0	KERR	VU		IARG	3		CL	1					K-09-01_24	H42674	13
Kerr	2009	K-09-01	185	187	2.0	KERR	SSLT		IARG	2		None						K-09-01_39	H42709	13
Kerr	2008	KS-103	142.34	151.3	9.0	KERR	VHLP		SE		50							KS-103_2	49852	13
Kerr	2009	K-09-01	130	132	2.0	KERR	VU		IARG	3		CL	1					K-09-01_26	H42678	13
Kerr	2009	K-09-01	114	116	2.0	KERR	VU		IARG	3		CL	1					K-09-01_22	H42670	13
Kerr	2010	K-09-01	166	168	2.0	KERR	VU		IARG	3		PR	2					K-09-01_63	H42698	13
Kerr	2009	K-09-01	152	154	2.0	KERR	VU		IARG	3		CL	1					K-09-01_31	H42690	13
Kerr	2010	K-09-01	154	156	2.0	KERR	VU		IARG	3		CL	1					K-09-01_60	H42691	13
Kerr	2010	K-09-01	128	130	2.0	KERR	VU		IARG	3		CL	1					K-09-01_83	H42677	13
Kerr	2010	K-09-01	104	106	2.0	KERR	VU		IARG	3		CL	1					K-09-01_55	H42665	13
Kerr	2008	K88-015	80.5	83.5	3.0	KERR	DMON		CL									88-015_2	3027	13
Kerr	2010	K-09-03	146	148	2.0	KERR	ANDS		CL	2								K-09-03_10	H46138	13
Kerr	2009	K-09-03	144.4	146	1.6	KERR	ANDS		CL	2		None						K-09-03_3	H46137	13
Kerr	2009	K-09-03	152	154	2.0	KERR	ANDS		CL	2		None						K-09-03_5	H46142	13
Kerr	2009	K-09-03	156	157.5	1.5	KERR	ANDS		CL	2		None						K-09-03_6	H46144	13
Kerr	2009	K-09-03	148	150	2.0	KERR	ANDS		CL	2		None						K-09-03_4	H46139	13
Kerr	2010	K-09-03	154	156	2.0	KERR	ANDS		CL	2								K-09-03_12	H46143	13
Kerr	2010	K-09-03	150	152	2.0	KERR	ANDS		CL	2								K-09-03_11	H46141	13
Kerr	2012	K-10-05	1.85	3.15	1.3	KERR	VU		FEOX										X66086	19
Kerr	2012	K-10-05	3.15	5	1.9	KERR	VU		CL2										X66087	19
Kerr	2012	K-10-05	56.88	57.85	1.0	KERR	VULT		CL2										X66116	19
Kerr	2012	K-10-05	57.85	59	1.2	KERR	VU		CL										X66117	19
Kerr	2012	K-10-05	241	243	2.0	KERR	VU		CL										X66217	19
Kerr	2012	K-10-06	18	20	2.0	KERR	VU		QSP										X63932	12
Kerr	2012	K-10-06	58	60	2.0	KERR	VU		IARG										X63953	13
Kerr	2012	K-10-06	101	103.8	2.8	KERR	DDRT		UDEF										X63972	13
Kerr	2012	K-10-06	123.9	126.3	2.4	KERR	VU		IARG										X63980	15
Kerr	2012	K-10-06	215	217	2.0	KERR	VU		QSP										X67079	19
Kerr	2012	K-10-07	14	16	2.0	KERR	VU		CL										X66229	19
Kerr	2012	K-10-07	51	52.44	1.4	KERR	VU		CL										X66249	19
Kerr	2012	K-10-07	52.44	54	1.6	KERR	SEDS		SIL										X66250	19
Kerr	2012	K-10-07	117.5	118.9	1.4	KERR	VU		CL										X66286	19
Kerr	2012	K-10-07	118.9	121	2.1	KERR	PAND		SIL										X66287	19
Kerr	2012	K-10-07	149	150.65	1.7	KERR	PAND		SIL										X66304	19
Kerr	2012	K-10-07	150.65	153	2.3	KERR	VU		CL										X66305	19
Kerr	2012	K-10-07	203.25	204.85	1.6	KERR	SARG		UDEF										X66332	19
Kerr	2012	K-10-07	212	214.05	2.1	KERR	SARG		UDEF										X66338	19
Kerr	2012	K-10-07	214.05	216	1.9	KERR	PAND		CL										X66340	19
Kerr	2012	K-10-07	225.6	226.95	1.3	KERR	DDRT		UDEF										X66346	19
Kerr	2012	K-10-07	226.95	229	2.1	KERR	PAND		CL										X66347	19
Kerr	2012	K-10-07	274	276	2.0	KERR	PAND		CL										X66373	19
Kerr	2012	K-10-08	6.9	8.8	1.9	KERR	VULT		SIL										X67132	14

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Kerr	2012	K-10-08	8.8	11	2.2	KERR	DDRT		CL										X67133	14
Kerr	2012	K-10-08	27.5	29.5	2.0	KERR	VUTF		SIL										X67143	14
Kerr	2012	K-10-08	29.5	31.4	1.9	KERR	VUTF		CL										X67144	14
Kerr	2012	K-10-08	85	86.88	1.9	KERR	ANDS		CL										X67174	14
Kerr	2012	K-10-08	86.88	89	2.1	KERR	SEDS		QSP										X67175	14
Kerr	2012	K-10-08	260.9	263	2.1	KERR	VU		SIL										X67268	13
Kerr	2012	K-10-08	304	306	2.0	KERR	PAND		SIL										X67292	13
Kerr	2012	K-10-08	312.92	314.7	1.8	KERR	DDRT		UDEF										X67297	13
Kerr	2012	K-10-08	356.4	358.4	2.0	KERR	VU		QSP										X67322	13
Kerr	2012	K-10-08	402	404	2.0	KERR	PPFP		CARB										X67347	13
Kerr	2012	K-10-08	415.2	417.4	2.2	KERR	DDRT		CL										X67354	13
Kerr	2012	K-10-08	451	453	2.0	KERR	VU		QSP										X67374	13
Kerr	2012	K-10-08	492	494.2	2.2	KERR	VU		IARG										X67396	13
Kerr	2012	K-10-08	560	562	2.0	KERR	VU		QSP										X67432	12
Kerr	2012	K-10-08	572	574	2.0	KERR	PSYN		CARB										X67438	13
Kerr	2012	K-11-09	9	11	2.0	KERR	SCHT		QSP										S156638	11
Kerr	2012	K-11-09	19	21	2.0	KERR	SCHT		QSP										S156644	13
Kerr	2012	K-11-09	36	37.5	1.5	KERR	FLTZ		ARG										S156654	13
Kerr	2012	K-11-09	92	94	2.0	KERR	VULT		IARG										S156683	13
Kerr	2012	K-11-09	104	106	2.0	KERR	VU		QSP										S156689	15
Kerr	2012	K-11-09	114	116	2.0	KERR	VU		QSP										S156694	13
Kerr	2012	K-11-09	122	124	2.0	KERR	DDRT		CARB										S156698	13
Kerr	2012	K-11-09	141	142.5	1.5	KERR	VU		QSP										S156709	19
Kerr	2012	K-11-09	142.5	144.25	1.8	KERR	DDRT		CARB										S156710	19
Kerr	2012	K-11-10	9	11	2.0	KERR	SCHT		QSP										S156717	11
Kerr	2012	K-11-10	19	21	2.0	KERR	SCHT		QSP										S156723	14
Kerr	2012	K-11-10	41	43	2.0	KERR	SCHT		QSP										S156734	13
Kerr	2012	K-11-10	56	58	2.0	KERR	IBX		CL										S156743	13
Kerr	2012	K-11-10	72	74	2.0	KERR	IU		ARG										S156752	13
Kerr	2012	K-11-10	86	88	2.0	KERR	DDRT		CL										S156759	13
Kerr	2012	K-11-10	107	109	2.0	KERR	VU		QSP										S156769	13
Kerr	2012	K-11-10	126.2	128.4	2.2	KERR	DDRT		CL										S156780	13
Kerr	2012	K-11-10	133	135	2.0	KERR	IBX		QSP										S156784	13
Kerr	2012	K-11-10	143	145	2.0	KERR	FDYK		QSP										S156790	13
Kerr	2012	K-11-10	162	164	2.0	KERR	IVOL		CL										S156800	13
Kerr	2012	K-11-10	179	181	2.0	KERR	DDRT		CL										S156810	12
Kerr	2012	K-11-10	205	207	2.0	KERR	PAND		IARG										S156824	12
Kerr	2012	K-11-10	215.45	217.9	2.4	KERR	PPFP		QSP										S156829	12
Kerr	2012	K-11-10	228	230.19	2.2	KERR	IU		AH										S156835	12
Kerr	2012	K-11-10	244	246	2.0	KERR	IBX		CL										S156847	12
Kerr	2012	K-11-11	3.15	5.4	2.3	KERR	PMON		CL										S154641	19
Kerr	2012	K-11-11	8.5	10	1.5	KERR	SEDS		SIH										S154644	11
Kerr	2012	K-11-11	14	16.2	2.2	KERR	SEDS		SIH										S154647	19
Kerr	2012	K-11-11	28	30.25	2.3	KERR	SEDS		SIH										S154955	19
Kerr	2012	K-11-11	30.25	32	1.8	KERR	PPFP		CL										S154956	19
Kerr	2012	K-11-11	37.5	38.75	1.3	KERR	PPFP		CL										S154961	19
Kerr	2012	K-11-11	38.75	41	2.3	KERR	PMFP		CL										S154962	19
Kerr	2012	K-11-11	57	58.8	1.8	KERR	PAND		CL										S154973	19
Kerr	2012	K-11-11	58.8	61	2.2	KERR	PPFP		CL										S154974	19
Kerr	2012	K-11-11	113	114.5	1.5	KERR	IVOL		UDEF										S154653	19

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Kerr	2012	K-11-11	135	136.8	1.8	KERR	DDRT		CL										S154666	19
Kerr	2012	K-11-11	187	189.2	2.2	KERR	IVOL		CL										S154696	19
Kerr	2012	K-11-11	189.2	191.4	2.2	KERR	IVOL		SIL										S154697	19
Kerr	2012	K-11-11	269	271	2.0	KERR	VU		QSP										S154739	14
Kerr	2012	K-11-11	282	284	2.0	KERR	IVOL		CL										S154746	14
Kerr	2012	K-11-11	319	321	2.0	KERR	DDRT		PR										S154766	14
Kerr	2012	K-11-11	358	360	2.0	KERR	VUAT		QSP										S154788	13
Kerr	2012	K-11-11	376	378	2.0	KERR	DDRT		PR										S154798	13
Kerr	2012	K-11-11	390	392	2.0	KERR	VUAT		QSP										S154805	13
Kerr	2012	K-11-11	455	457	2.0	KERR	VUTF		CL										S154841	13
Kerr	2012	K-11-11	484.8	486.6	1.8	KERR	VU		SIL										S154857	15
Kerr	2012	K-11-11	486.6	488	1.4	KERR	DDRT		PR										S154858	15
Kerr	2012	K-11-11	509.5	511	1.5	KERR	DDRT		UDEF										S154871	12
Kerr	2012	K-11-11	511	513	2.0	KERR	PSBX		PSBX										S154872	12
Kerr	2012	K-11-11	532	534	2.0	KERR	IVOL		SIL										S154884	12
Kerr	2012	K-11-12	6	8	2.0	KERR	SARG		QSP										S156852	11
Kerr	2012	K-11-12	22	24	2.0	KERR	SARG		QSP										S156860	13
Kerr	2012	K-11-12	52	54	2.0	KERR	SCHT		QSP										S156877	13
Kerr	2012	K-11-12	74	76	2.0	KERR	VU		QSP										S156889	15
Kerr	2012	K-11-12	96	98	2.0	KERR	VU		QSP										S156900	13
Kerr	2012	K-11-12	120	122	2.0	KERR	VUTF		QSP										S156913	13
Kerr	2012	K-11-13	32	34	2.0	KERR	SARG		QSP										S156922	14
Kerr	2012	K-11-13	68	70	2.0	KERR	SCHT		QSP										S156942	14
Kerr	2012	K-11-13	120	122	2.0	KERR	VU		QSP										S156970	13
Kerr	2012	K-11-13	142	144	2.0	KERR	VU		SI										S156983	13
Kerr	2012	K-11-13	170	172	2.0	KERR	IU		CL										S156999	13
Kerr	2012	K-11-13	228	230	2.0	KERR	IBX		QSP										S157030	13
Kerr	2012	K-11-14	15	17	2.0	KERR	VU		QSP										S157047	13
Kerr	2012	K-11-14	29	31	2.0	KERR	DDRT		UDEF										S157055	13
Kerr	2012	K-11-14	46	48	2.0	KERR	SARG		QSP										S157066	13
Kerr	2012	K-11-14	69	71.25	2.3	KERR	SARG		CL										S157078	13
Kerr	2012	K-11-14	78	80	2.0	KERR	VALT		CL										S157082	13
Kerr	2012	K-11-14	127	129	2.0	KERR	VALT		CL										S157109	13
Kerr	2012	K-11-14	151	153	2.0	KERR	VALT		CL										S157122	12
Kerr	2012	K-11-14	169	171	2.0	KERR	SARG		CL										S157132	12
Kerr	2012	K-11-15	13	15	2.0	KERR	VU		QSP										S157181	13
Kerr	2012	K-11-15	68	70	2.0	KERR	SARG		CL										S157212	13
Kerr	2012	K-11-15	120	122	2.0	KERR	IVOL		CL										S157239	13
Kerr	2012	K-11-15	173.5	175.5	2.0	KERR	DDRT		UDEF										S157266	12
Kerr	2012	K-11-15	210	212	2.0	KERR	SARG		CL										S157287	12
Kerr	2012	K-11-15	235	237	2.0	KERR	VU		QSP										S157300	12
Kerr	2012	K-11-16	19	20.7	1.7	KERR	VU		CL										S154899	19
Kerr	2012	K-11-16	20.7	23	2.3	KERR	VUTF		CL										S154900	19
Kerr	2012	K-11-16	65	66.7	1.7	KERR	PAND		CL										S154925	14
Kerr	2012	K-11-16	66.7	69	2.3	KERR	VU		CL										S154926	14
Kerr	2012	K-11-16	99	101.3	2.3	KERR	IVOL		CL										S154942	14
Kerr	2012	K-11-16	101.3	103.6	2.3	KERR	DDRT		UDEF										S154943	14
Kerr	2012	K-11-16	125	127.6	2.6	KERR	VUAT		SIH										S155508	14
Kerr	2012	K-11-16	127.6	129	1.4	KERR	DDRT		SIL										S155509	14
Kerr	2012	K-11-16	233	235	2.0	KERR	PAND		CL										S155017	13

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Kerr	2012	K-11-16	288	290	2.0	KERR	VU		IARG										S155048	13
Kerr	2012	K-11-16	320	322	2.0	KERR	VUAT		SIL										S155067	13
Kerr	2012	K-11-16	335	337	2.0	KERR	SARG		SIL										S155075	13
Kerr	2012	K-11-16	376	378	2.0	KERR	SARG		SIL										S155098	12
Kerr	2012	K-11-16	400	402	2.0	KERR	VU		QSP										S155112	12
Kerr	2012	K-11-16	413.5	415.7	2.2	KERR	PPFP		CL										S155119	12
Kerr	2012	K-11-16	426	428	2.0	KERR	VU		QSP										S155125	12
Kerr	2012	K-11-16	466	468	2.0	KERR	VU		QSP										S155147	12
Kerr	2012	K-11-17	19	21	2.0	KERR	VU		QSP										S157321	13
Kerr	2012	K-11-17	63	65	2.0	KERR	DDRT		CL										S157345	13
Kerr	2012	K-11-17	89	91	2.0	KERR	IVOL		CL										S157360	13
Kerr	2012	K-11-17	143	145	2.0	KERR	FLTZ		CL										S157388	13
Kerr	2012	K-11-17	213	215	2.0	KERR	VU		AH										S157426	12
Kerr	2012	K-11-17	277	279	2.0	KERR	VU		AH										S157460	12
Kerr	2012	K-11-17	322.7	325	2.3	KERR	VU		AH										S157484	12
Kerr	2010	K-09-01	50	52	2.0	KERR	VU		QSP	3		IARG	2					K-09-01_44	H42636	14
Kerr	2009	K-09-01	36.5	37.5	1.0	KERR	VU		QSP	3		IARG	2					K-09-01_99	H42628	14
Kerr	2009	K-09-01	40.5	41.5	1.0	KERR	VU		QSP	3		IARG	2					K-09-01_4	H42630	14
Kerr	2009	K-09-01	28.5	29.5	1.0	KERR	VU		QSP	3		IARG	2					K-09-01_2	H42623	14
Kerr	2010	K-09-01	42.5	44.5	2.0	KERR	VU		QSP	3		IARG	2					K-09-01_43	H42631	14
Kerr	2010	K-09-01	30.5	32.5	2.0	KERR	VU		QSP	3		IARG	2					K-09-01_41	H42624	14
Kerr	2010	K-09-01	94	96	2.0	KERR	VU		IARG	3		CL	1					K-09-01_53	H42659	14
Kerr	2009	K-09-01	80	82	2.0	KERR	VU		IARG	3		CL	1					K-09-01_14	H42652	14
Kerr	2009	K-09-01	64	66	2.0	KERR	VU		IARG	3		CL	1					K-09-01_10	H42643	14
Kerr	2009	K-09-01	60	62	2.0	KERR	VU		IARG	3		CL	1					K-09-01_9	H42641	14
Kerr	2010	K-09-01	90	92	2.0	KERR	VU		IARG	3		CL	1					K-09-01_52	H42657	14
Kerr	2009	K-09-01	51.97	54	2.0	KERR	VU		IARG	3		CL	1					K-09-01_7	H42637	14
Kerr	2009	K-09-01	56	58	2.0	KERR	VU		IARG	3		CL	1					K-09-01_8	H42639	14
Kerr	2009	K-09-01	32.5	33.5	1.0	KERR	VU		QSP	3		IARG	2					K-09-01_3	H42625	14
Kerr	2009	K-09-01	72	74	2.0	KERR	VU		IARG	3		CL	1					K-09-01_12	H42648	14
Kerr	2009	K-09-01	44.5	45.5	1.0	KERR	VU		QSP	3		IARG	2					K-09-01_5	H42632	14
Kerr	2010	K-09-01	82	84	2.0	KERR	VU		IARG	3		CL	1					K-09-01_51	H42653	14
Kerr	2010	K-09-01	34.5	36.5	2.0	KERR	VU		QSP	3		IARG	2					K-09-01_42	H42627	14
Kerr	2010	K-09-01	62	64	2.0	KERR	VU		IARG	3		CL	1					K-09-01_47	H42642	14
Kerr	2009	K-09-01	68	70	2.0	KERR	VU		IARG	3		CL	1					K-09-01_11	H42645	14
Kerr	2009	K-09-01	92	94	2.0	KERR	VU		IARG	3		CL	1					K-09-01_17	H42658	14
Kerr	2010	K-09-01	66	68	2.0	KERR	VU		IARG	3		CL	1					K-09-01_48	H42644	14
Kerr	2009	K-09-01	88	90	2.0	KERR	VU		IARG	3		CL	1					K-09-01_16	H42656	14
Kerr	2009	K-09-01	24.39	26.5	2.1	KERR	VU		QSP	3		IARG	2					K-09-01_1	H42621	14
Kerr	2010	K-09-01	58	60	2.0	KERR	VU		IARG	3		CL	1					K-09-01_46	H42640	14
Kerr	2010	K-09-01	74	76	2.0	KERR	VU		IARG	3		CL	1					K-09-01_49	H42649	14
Kerr	2010	K-09-01	54	56	2.0	KERR	VU		IARG	3		CL	1					K-09-01_45	H42638	14
Kerr	2009	K-09-01	46.5	47.5	1.0	KERR	VU		QSP	3		IARG	2					K-09-01_6	H42633	14
Kerr	2009	K-09-01	84	86	2.0	KERR	VU		IARG	3		CL	1					K-09-01_15	H42654	14
Kerr	2009	K-09-01	96	98	2.0	KERR	VU		IARG	3		CL	1					K-09-01_18	H42661	14
Kerr	2010	K-09-01	78	80	2.0	KERR	VU		IARG	3		CL	1					K-09-01_50	H42651	14
Kerr	2009	K-09-01	76	78	2.0	KERR	VU		IARG	3		CL	1					K-09-01_13	H42650	14
Kerr	2008	KS-102	47	50	3.0	KERR	SSED		MY		70	FU		10				KS-102_2	58450	15
Kerr	2008	KS-102	91	94	3.0	KERR	SSED		MY		50	FU		30				KS-102_3	58464	19
Kerr	2008	K87-002	39	42	3.0	KERR	SSED		QS		60	MY						K87-002_2	17086	19

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Kerr	2008	K87-002	8.5	11.5	3.0	KERR	QS		MY		60							K87-002_1	17062	19
Kerr	2008	K87-002	73	76	3.0	KERR	SCNG		QS		60	FU						K87-002_3	17109	19
Kerr	2008	K87-002	131	134	3.0	KERR	SMUD											K87-002_4	17148	19
Kerr	2008	KS-102	135	138	3.0	KERR	DDPL		SE		30	CL		30				KS-102_4	58479	19
Kerr	2008	KS-102	175	178	3.0	KERR	DDRK		CL									KS-102_5	58493	19
Sulphurets	2008	S-06-05	10.4	12	1.6	sw volc	VU	VU	SIL	4					2 upper panel	in	ore	S-06-05_1	G24857	21
Sulphurets	2008	SG92-17	20	22	2.0	sw volc	SSLT	SEDS	PR		20				2 upper panel	in	waste	SG92-17_1	SG92-17_C11049	21
Sulphurets	2010	IF-05-01	2.7	6.7	4.0	SULPH	VU	VU	SIH	2		PR	2		2 upper panel	in	waste	9593/95	9593	21
Sulphurets	2008	S91-388	9.7	12.7	3.0	sw volc	CCSD	SEDS	PR		10				2 upper panel	in	ore	S91-388_1	S91-388_5219	21
Sulphurets	2010	S-09-10	3.6	7	3.4	MC MONZ	PMON	PMON	SIL	2					1 mc panel	in	waste	H44700/01	H44700	21
Sulphurets	2008	S-06-04	3.9	6	2.1	sw volc	PPFP	INTRUSIVES	PR			SIL	3		1 mc panel	in	waste	S-06-04_1	G24650	21
Sulphurets	2009	S-09-12	18.5	19.5	1.0	mc volc	VU	VU	CL	4		PR	1		1 mc panel	in	waste	S-09-12_2	H42333	21
Sulphurets	2012	MC-05-03	6	20	14.0													COMP 37	MC-05-03 6.0-20	21
Sulphurets	2008	MC-05-03	12	14	2.0	mc volc	PHBX	BX	SIL	2					1 mc panel	in	waste	MC-05-03_1	10335	21
Sulphurets	2010	S-09-13	239	240.85	1.8	SULPH	PSBX	BX	PSBX	4		SI	2		2 upper panel	in	ore	H45368	H45368	22
Sulphurets	2010	S-09-14	141	145	4.0	SULPH	PSBX	BX	PSBX	5					2 upper panel	in	ore	H45504/05	H45505	22
Sulphurets	2008	S-06-05	70	72	2.0	sw volc	PHBX	BX	SIL	2					2 upper panel	in	ore	S-06-05_3	G24888	22
Sulphurets	2008	S91-388	157.9	160.9	3.0	sw volc	PQMZ	INTRUSIVES	SI		10				2 upper panel	in	ore	S91-388_5	S91-388_5274	22
Sulphurets	2010	S-09-13	79	81	2.0	SULPH	VU	VU	SIL	3		SIH	2		2 upper panel	in	ore	H45279	H45279	22
Sulphurets	2008	S-06-04	300	302	2.0	sw volc	VU	VU	SI	2					2 upper panel	in	ore	S-06-04_9	G24806	22
Sulphurets	2008	S-06-04	344	346	2.0	sw volc	PHBX	BX	SIL	3					2 upper panel	below	pit wall	S-06-04_10	G24829	22
Sulphurets	2008	S-06-05	96	98	2.0	sw volc	FLTZ	FLTZ	SIL	2					2 upper panel	in	ore	S-06-05_4	G24902	22
Sulphurets	2008	S-06-05	44	46	2.0	sw volc	VU	VU	SIL	4					2 upper panel	in	ore	S-06-05_2	G24874	22
Sulphurets	2008	SG92-22	151	153	2.0	sw volc	PSBX	BX	QP		40				2 upper panel	in	ore	SG92-22_4	SG92-22_C9763	22
Sulphurets	2008	SG92-22	58	60.4	2.4	sw volc	VUAT	TUFF	QP		50	QB		30	2 upper panel	in	ore	SG92-22_2	SG92-22_C9711	22
Sulphurets	2008	S-06-04	254	256	2.0	sw volc	VU	VU	SI	2					2 upper panel	in	ore	S-06-04_8	G24782	22
Sulphurets	2010	S-09-10	460	462	2.0	SULPH	VU	VU	SIL	3					2 upper panel	in	ore	H44956	H44956	22
Sulphurets	2010	S-09-12	319	323	4.0	SULPH	VAAT	ANDS	SI	3		SIH	1		2 upper panel	in	ore	H42509/10	H42509	22
Sulphurets	2008	S91-388	122.3	125.3	3.0	sw volc	PQMZ	INTRUSIVES	SI		10				2 upper panel	in	ore	S91-388_4	S91-388_5261	22
Sulphurets	2009	S-09-10	432.5	433.5	1.0	sw volc	VU	VU	SIH	4		None			2 upper panel	in	ore	S-09-10_3	H44939	22
Sulphurets	2010	S-09-10	424	426	2.0	sw volc	VU	VU	SIH	4					2 upper panel	in	ore	S-09-10_5	H44935	22
Sulphurets	2008	S-06-01	166	168	2.0	sw volc	VUAT	TUFF	IARG	4					2 upper panel	outside	pit wall	S-06-01_6	G21680	22
Sulphurets	2010	S-09-12	360	362	2.0	SW VOLC	VAAT	ANDS	SI	3		SIH	1		2 upper panel	below	pit wall	H42532	H42532	22
Sulphurets	2009	S-09-10	436.5	437.5	1.0	sw volc	VU	VU	SIL	3		None			2 upper panel	in	ore	S-09-10_4	H44942	22
Sulphurets	2008	SG92-02	139	141	2.0	sw volc	PQMZ	INTRUSIVES	QB		30	QP		30	2 upper panel	in	ore	SG92-02_4	SG92-02_C8906	22
Sulphurets	2009	S-09-12	236.5	237.5	1.0	sw volc	VAAT	ANDS	CL	3		SIH	1		2 upper panel	in	ore	S-09-12_26	H42460	22
Sulphurets	2008	SG92-02	124	126	2.0	sw volc	VULT	TUFF	QB		50	QP		10	2 upper panel	in	ore	SG92-02_2	SG92-02_C8897	22
Sulphurets	2008	SG92-02	132	135	3.0	sw volc	VULT	TUFF	QB		50	QP		10	2 upper panel	in	ore	SG92-02_3	SG92-02_C8901	22
Sulphurets	2008	SG92-06	53.9	55.9	2.0	sw volc	VUXT	TUFF	QA		10				2 upper panel	in	ore	SG92-06_2	SG92-06_C12601	22
Sulphurets	2008	SG92-22	101.4	104	2.6	sw volc	VUAT	TUFF	QP		60				2 upper panel	in	ore	SG92-22_3	SG92-22_C9736	22
Sulphurets	2009	S-09-10	426.5	427.5	1.0	sw volc	VU	VU	SIH	4		None			2 upper panel	in	ore	S-09-10_2	H44936	22
Sulphurets	2009	S-09-11	334.5	335.5	1.0	sw volc	VU	VU	SIH	4		CL	2		2 upper panel	in	ore	S-09-11_6	H45187	22
Sulphurets	2009	S-09-11	342.5	343.5	1.0	sw volc	VU	VU	SIH	4		CL	2		2 upper panel	in	ore	S-09-11_8	H45191	22
Sulphurets	2010	S-09-10	434	436	2.0	sw volc	VU	VU	SIL	3					2 upper panel	in	ore	S-09-10_7	H44940	22
Sulphurets	2008	S-06-04	204	206	2.0	sw volc	VU	VU	PSBX	3					2 upper panel	in	ore	S-06-04_7	G24756	22
Sulphurets	2010	S-09-10	428	430	2.0	sw volc	VU	VU	SIH	4					2 upper panel	in	ore	S-09-10_6	H44937	22
Sulphurets	2008	S-06-05	140	142	2.0	sw volc	IVOL	IVOL	SIL	2					2 upper panel	in	ore	S-06-05_5	G24926	22
Sulphurets	2008	S91-388	86.4	89.4	3.0	sw volc	PQMZ	INTRUSIVES	SI		20				2 upper panel	in	ore	S91-388_3	S91-388_5249	22
Sulphurets	2010	S-09-15	239.7	241.7	2.0	SULPH	DDRT	INTRUSIVES	CL	1					2 upper panel	in	ore	H45803	H45803	22
Sulphurets	2010	S-09-11	336	338	2.0	sw volc	VU	VU	SIH	4	CL	2			2 upper panel	in	ore	S-09-11_23	H45188	22

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Sulphurets	2009	S-09-11	338.5	339.5	1.0	sw volc	VU	VU	SIH	4		CL	2		2 upper panel	in	ore	S-09-11_7	H45189	22
Sulphurets	2008	S-06-04	384	386	2.0	sw volc	IVOL	IVOL	PR	1					2 upper panel	outside	pit wall	S-06-04_11	G24852	22
Sulphurets	2009	S-09-10	422.5	423.5	1.0	sw volc	VU	VU	SIH	4		None			2 upper panel	in	ore	S-09-10_1	H44933	22
Sulphurets	2010	S-08-06	419	422.5	3.5	SULPH	VULT	TUFF	CL	4					2 upper panel	in	ore	X15955/56	X15955	22
Sulphurets	2010	S-09-14	300	302	2.0	SW VOLC	IVOL	IVOL	CL	3		SIH	2		2 upper panel	in	ore	H45591	H45591	22
Sulphurets	2010	S-08-06	459	467.85	8.9	SW VOLC	VU	VU	CL	3		SIL	1		2 upper panel	below	pit wall	X15979/80	X15979	22
Sulphurets	2008	S-06-01	144	146	2.0	sw volc	VATF	ANDS	IARG	3					2 upper panel	below	waste	S-06-01_5	G21668	22
Sulphurets	2010	S-09-11	340	342	2.0	sw volc	VU	VU	SIH	4	CL	2			2 upper panel	in	ore	S-09-11_24	H45190	22
Sulphurets	2010	S-09-15	259	261	2.0	SW VOLC	IVOL	IVOL	CL	3		SIH	1		2 upper panel	in	ore	H45814	H45814	22
Sulphurets	2010	S-09-11	332	334	2.0	sw volc	VU	VU	SIH	4	CL	2			2 upper panel	in	ore	S-09-11_22	H45186	22
Sulphurets	2008	S-06-05	172	174	2.0	sw volc	IVOL	IVOL	PR	2					2 upper panel	in	ore	S-06-05_6	G24942	22
Sulphurets	2009	S-08-06	390.5	391.5	1.0	sw volc	SARG	SEDS	CL	3		SIH	2		2 upper panel	in	ore	S-08-06_12	X15939	22
Sulphurets	2008	S-06-05	188	190	2.0	sw volc	PQMZ	INTRUSIVES	PR	1					2 upper panel	in	ore	S-06-05_7	G24952	22
Sulphurets	2008	S-06-01	206	208	2.0	sw volc	ANDS	ANDS	PR						2 upper panel	outside	waste	S-06-01_7	G21701	22
Sulphurets	2008	SG92-22	8	10	2.0	sw volc	SSLT	SEDS	PR		40				2 upper panel	in	waste	SG92-22_1	SG92-22_C9681	22
Sulphurets	2008	SG92-06	158	160	2.0	sw volc	VUXT	TUFF	QP		50	PR		30	2 upper panel	outside	pit wall	SG92-06_4	SG92-06_C12669	23
Sulphurets	2010	S-09-13	279	281	2.0	SW VOLC	VU	VU	SIH	3		SI	1		2 upper panel	below	pit wall	H45390	H45390	23
Sulphurets	2010	S-09-11	356	358	2.0	sw volc	VU	VU	SIH	4	CL	2			2 upper panel	in	ore	S-09-11_28	H45199	23
Sulphurets	2008	SG92-22	202.7	205	2.3	sw volc	SSLT	SEDS	QP		70				2 upper panel	in	ore	SG92-22_5	SG92-22_C9794	23
Sulphurets	2009	S-09-11	350.5	351.5	1.0	sw volc	VU	VU	SIH	4		CL	2		2 upper panel	in	ore	S-09-11_10	H45195	23
Sulphurets	2009	S-09-11	354.5	355.5	1.0	sw volc	VU	VU	SIH	4		CL	2		2 upper panel	in	ore	S-09-11_11	H45198	23
Sulphurets	2009	S-09-11	358.5	359.5	1.0	sw volc	VU	VU	SIH	4		CL	2		2 upper panel	in	ore	S-09-11_12	H45200	23
Sulphurets	2012	S-10-29	115.5	129.5	14.0													COMP 03	S-10-29 115.5-129.5	23
Sulphurets	2009	S-09-11	362.5	363.5	1.0	sw volc	VU	VU	SIH	4		CL	2		2 upper panel	in	ore	S-09-11_13	H45202	23
Sulphurets	2008	SG92-02	197	199.34	2.3	sw volc	BVXT	TUFF	PR		60				2 upper panel	in	ore	SG92-02_5	SG92-02_C8937	23
Sulphurets	2009	S-09-11	370.5	371.5	1.0	sw volc	VU	VU	SIH	4		CL	2		2 upper panel	below	pit wall	S-09-11_15	H45206	23
Sulphurets	2010	S-09-14	341	343	2.0	SW VOLC	SEDS	SEDS	SIH	4		CL	2		2 upper panel	outside	pit wall	H45614	H45614	23
Sulphurets	2010	S-09-11	344	346	2.0	sw volc	VU	VU	SIH	4	CL	2			2 upper panel	in	ore	S-09-11_25	H45192	23
Sulphurets	2009	S-09-11	378.5	379.5	1.0	sw volc	VU	VU	SIH	3		CL	3		2 upper panel	below	pit wall	S-09-11_17	H45211	23
Sulphurets	2008	SG92-22	251	253	2.0	sw volc	VUAT	TUFF	QP		40	PR		20	2 upper panel	in	ore	SG92-22_6	SG92-22_C9822	23
Sulphurets	2010	S-09-11	352	354	2.0	sw volc	VU	VU	SIH	4	CL	2			2 upper panel	in	ore	S-09-11_27	H45197	23
Sulphurets	2009	S-09-11	374.5	375.5	1.0	sw volc	VU	VU	SIH	4/3		CL	2/3		2 upper panel	below	pit wall	S-09-11_16	H45208	23
Sulphurets	2010	S-09-11	372	374	2.0	sw volc	VU	VU	SIH	4	CL	2			2 upper panel	below	pit wall	S-09-11_32	H45207	23
Sulphurets	2010	S-09-10	500	502	2.0	SW VOLC	VUTF	TUFF	SIL	2		CL	3		2 upper panel	outside	pit wall	H44977	H44977	23
Sulphurets	2010	S-09-11	376	378	2.0	sw volc	VU	VU	SIH	3	CL	3			2 upper panel	below	pit wall	S-09-11_33	H45210	23
Sulphurets	2008	S-06-05	230	232	2.0	sw volc	IVOL	IVOL	PR	1/2		SIL	2		2 upper panel	outside	pit wall	S-06-05_8	G24977	23
Sulphurets	2010	S-09-11	400	402	2.0	SW VOLC	VUTF	TUFF	CL	3		CL	1		2 upper panel	outside	pit wall	H45224	H45224	23
Sulphurets	2010	S-09-09	419	421	2.0	SW VOLC	VU	VU	SIH	3		CL	2		2 upper panel	below	pit wall	H44683	H44683	23
Sulphurets	2009	S-09-11	346.5	347.5	1.0	sw volc	VU	VU	SIH	4		CL	2		2 upper panel	in	ore	S-09-11_9	H45193	23
Sulphurets	2008	S-06-05	272	274	2.0	sw volc	IVOL	IVOL	PR	3					2 upper panel	outside	pit wall	S-06-05_9	G24999	23
Sulphurets	2010	S-09-11	348	350	2.0	sw volc	VU	VU	SIH	4	CL	2			2 upper panel	in	ore	S-09-11_26	H45194	23
Sulphurets	2009	S-09-11	366.5	367.5	1.0	sw volc	VU	VU	SIH	4		CL	2		2 upper panel	below	pit wall	S-09-11_14	H45204	23
Sulphurets	2010	S-09-11	368	370	2.0	sw volc	VU	VU	SIH	4	CL	2			2 upper panel	in	ore	S-09-11_31	H45205	23
Sulphurets	2010	S-09-11	364	366	2.0	sw volc	VU	VU	SIH	4	CL	2			2 upper panel	in	ore	S-09-11_30	H45203	23
Sulphurets	2010	S-09-11	360	362	2.0	sw volc	VU	VU	SIH	4	CL	2			2 upper panel	in	ore	S-09-11_29	H45201	23
Sulphurets	2010	S-09-11	380	382	2.0	sw volc	VU	VU	SIH	3	CL	3			2 upper panel	outside	pit wall	S-09-11_34	H45212	23
Sulphurets	2009	S-08-06	386.5	387.5	1.0	sw volc	SARG	SEDS	CL	3		SIH	2		2 upper panel	in	ore	S-08-06_11	X15937	24
Sulphurets	2009	S-09-11	150.5	151.5	1.0	sw volc	VU	VU	SIH	3		None			2 upper panel	in	waste	S-09-11_3	H45086	24
Sulphurets	2010	S-09-10	300	302	2.0	SULPH	VU	VU	SIH	3		CL	2		2 upper panel	in	waste	H44866	H44866	24
Sulphurets	2010	S-09-11	152	154	2.0	sw volc	VU	VU	SIH	3					2 upper panel	in	waste	S-09-11_19	H45087	24

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Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Sulphurets	2010	S-09-11	148	150	2.0	sw volc	VU	VU	SIH	3					2 upper panel	in	waste	S-09-11_18	H45085	24
Sulphurets	2009	S-09-11	146.5	147.5	1.0	sw volc	VU	VU	SIH	3		None			2 upper panel	in	waste	S-09-11_2	H45083	24
Sulphurets	2009	S-08-06	382.5	383.5	1.0	sw volc	SARG	SEDS	CL	3		SIH	2		2 upper panel	in	ore	S-08-06_10	X15934	24
Sulphurets	2010	S-09-11	180	185	5.0	SULPH	VUTF	TUFF	CL	2		CL	2		2 upper panel	in	ore	H45102/03	H45102	24
Sulphurets	2010	S-08-06	340	346	6.0	SULPH	VU	VU	CL	3		SIH	2		2 upper panel	in	ore	X15912/13/14	X15912	24
Sulphurets	2009	S-09-11	144	146	2.0	sw volc	VU	VU	SIH	3		None			2 upper panel	in	waste	S-09-11_1	H45082	24
Sulphurets	2008	MC-05-03	237	239	2.0	sw volc	CCSD	SEDS	QSP	2					2 upper panel	in	ore	MC-05-03_10	20856	24
Sulphurets	2009	S-09-11	154.5	155.5	1.0	sw volc	VU	VU	SIH	3		None			2 upper panel	in	waste	S-09-11_4	H45088	24
Sulphurets	2010	S-09-09	199	203	4.0	SULPH	VU	VU	SIL	4		CL	3		2 upper panel	in	ore	H44554/55	H44554	24
Sulphurets	2008	SG92-06	16	18	2.0	sw volc	CCSD	SEDS	PR		50				2 upper panel	in	ore	SG92-06_1	SG92-06_C12577	24
Sulphurets	2012	S-09-11	141.9	143.7	1.8														H45081	24
Sulphurets	2012	S-09-11	143.7	146	2.3														H45082	24
Sulphurets	2012	S-09-11	146	148	2.0														H45083	24
Sulphurets	2012	S-09-11	148	150	2.0														H45085	24
Sulphurets	2012	S-09-11	150	152	2.0														H45086	24
Sulphurets	2012	S-09-11	180	181.5	1.5														H45102	24
Sulphurets	2012	S-09-11	181.5	183	1.5														H45103	24
Sulphurets	2012	S-09-11	183	185	2.0														H45104	24
Sulphurets	2012	S-10-22	64.1	66	1.9														X64717	24
Sulphurets	2012	S-10-22	66	68	2.0														X64718	24
Sulphurets	2012	S-10-22	68	70	2.0														X64719	24
Sulphurets	2012	S-10-22	78	80.3	2.3														X64724	24
Sulphurets	2012	S-10-22	113.4	115.1	1.7														X64743	24
Sulphurets	2012	S-10-22	119	121	2.0														X64746	24
Sulphurets	2012	S-10-21	174	176	2.0														X62696	24
Sulphurets	2012	S-10-22	121	123	2.0														X64747	24
Sulphurets	2009	S-09-11	184.5	185.5	1.0	sw volc	VU	VU	SIH	2		CL	2		2 upper panel	in	ore	S-09-11_5	H45104	24
Sulphurets	2010	S-08-06	388	390	2.0	sw volc	SARG	SEDS	CL	3		SIH	2		2 upper panel	in	ore	S-08-06_24	X15938	24
Sulphurets	2010	S-09-11	181.5	183	1.5	sw volc	VU	VU	SIH	2	CL	2			2 upper panel	in	waste	S-09-11_21	H45103	24
Sulphurets	2010	S-09-10	320	322	2.0	SULPH	VU	VU	SIH	3		CL	2		2 upper panel	in	ore	H44876	H44876	24
Sulphurets	2009	S-08-06	378.5	379.5	1.0	sw volc	SARG	SEDS	CL	3		SIH	2		2 upper panel	in	ore	S-08-06_9	X15932	24
Sulphurets	2010	S-09-10	259.85	262	2.1	SULPH	VU	VU	CL	3					2 upper panel	in	waste	H44843	H44843	24
Sulphurets	2010	S-09-11	156	158	2.0	sw volc	VU	VU	SIH	3					2 upper panel	in	waste	S-09-11_20	H45089	24
Sulphurets	2010	S-08-06	384	386	2.0	sw volc	SARG	SEDS	CL	3		SIH	2		2 upper panel	in	ore	S-08-06_23	X15936	24
Sulphurets	2008	S91-388	49	52	3.0	sw volc	CCSD	SEDS	PR		10				2 upper panel	in	ore	S91-388_2	S91-388_5235	24
Sulphurets	2010	S-08-06	380	382	2.0	sw volc	SARG	SEDS	CL	3		SIH	2		2 upper panel	in	ore	S-08-06_22	X15933	24
Sulphurets	2010	S-09-11	136	138	2.0													S-09-01_6	H45078	25
Sulphurets	2010	S-09-11	124	126	2.0													S-09-01_3	H45071	25
Sulphurets	2010	S-09-11	120	122	2.0													S-09-01_2	H45068	25
Sulphurets	2010	S-09-11	116	118	2.0													S-09-01_1	H45065	25
Sulphurets	2010	S-09-11	139.9	141.9	2.0	MC VOLC	FLTZ	FLTZ	IARG	2					1 mc panel	in	waste	S-09-01_7	H45080	25
Sulphurets	2010	S-09-11	132	134	2.0													S-09-01_5	H45075	25
Sulphurets	2009	S-08-06	42.5	43.5	1.0	mc volc	VULT	TUFF	CL	3		SI	1		1 mc panel	in	waste	S-08-06_1	X15748	25
Sulphurets	2010	S-09-11	128	130	2.0													S-09-01_4	H45073	25
Sulphurets	2012	S-11-70	122.4	136.9	14.5													COMP 54	S-11-70 122.4-136.9	25
Sulphurets	2010	MC-05-02	98	102	4.0	MC VOLC	ANDS	ANDS	PR	2					1 mc panel	outside	pit wall	9976/77	9976	25
Sulphurets	2008	S91-398	6.1	9.1	3.0	mc monz	BVTF								mc panel	below	pit wall	S91-398_1	S91-398_5495	25
Sulphurets	2010	S-09-09	14	16	2.0	mc monz	VU	VU	SIH	2	CL2	2			1 mc panel	in	waste	S-09-09_24	H44453	25
Sulphurets	2012	S-11-70	85.4	103.4	18.0													COMP 53	S-11-70 85.4-103.4	25
Sulphurets	2009	S-09-12	30.5	31.5	1.0	mc volc	PMON	PMON	CL	3		PR	2		1 mc panel	in	waste	S-09-12_6	H42341	25

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Sulphurets	2009	S-08-06	256.5	257.5	1.0	sw volc	VUTF	TUFF	CL	3		None			1 mc panel	in	ore	S-08-06_5	X15862	25
Sulphurets	2012	S-10-21	94	110	16.0													COMP 18	S-10-21 94-110	25
Sulphurets	2010	S-08-08	19	23	4.0	MC VOLC	ANDS	ANDS	PR	3		SIH	3		1 mc panel	in	waste	E192812/13	E192812	25
Sulphurets	2012	S-11-68	183.46	199.46	16.0													COMP 46	S-11-68 183.46-199.46	25
Sulphurets	2012	S-11-68	41.46	57.46	16.0													COMP 42	S-11-68 41.46-57.46	25
Sulphurets	2012	MC-05-02	90	106	16.0													COMP 31	MC-05-02 90-106	25
Sulphurets	2010	S-08-08	59	63.4	4.4	MC VOLC	PMON	PMON	PR	1/2		CARB/--	1/--		1 mc panel	in	waste	E192834/35	E192834	25
Sulphurets	2012	S-08-08	117	119	2.0														E192868	25
Sulphurets	2012	S-08-08	119	121	2.0														E192869	25
Sulphurets	2012	S-08-08	121	123	2.0														E192870	25
Sulphurets	2012	S-09-09	8	10	2.0														H44450	25
Sulphurets	2012	S-09-09	10	12	2.0														H44451	25
Sulphurets	2012	S-09-09	12	13.8	1.8														H44452	25
Sulphurets	2012	S-09-09	13.8	15	1.2														H44453	25
Sulphurets	2012	S-09-09	15	17	2.0														H44454	25
Sulphurets	2012	S-09-11	136	138	2.0														H45078	25
Sulphurets	2012	S-09-11	138	139.9	1.9														H45079	25
Sulphurets	2012	S-09-11	139.9	141.9	2.0														H45080	25
Sulphurets	2012	S-11-70	160	162	2.0														S157569	25
Sulphurets	2012	S-11-70	162	164	2.0														S157570	25
Sulphurets	2012	S-10-21	79.2	80.5	1.3														X62639	25
Sulphurets	2012	S-10-21	80.5	81.4	0.9														X62640	25
Sulphurets	2012	S-10-33	244	246	2.0														X63892	25
Sulphurets	2012	S-10-33	246	248	2.0														X63893	25
Sulphurets	2012	S-10-33	170	186	16.0													COMP 13	S-10-33 170-186	25
Sulphurets	2010	S-09-09	110	112	2.0	mc volc	PMON	PMON	SIL	3					1 mc panel	in	waste	S-09-09_47	H44504	25
Sulphurets	2012	S-11-72	101.95	118.3	16.4													COMP 62	S-11-72 101.95-118.3	25
Sulphurets	2012	S-11-70	156.4	172.4	16.0													COMP 55	S-11-70 156.4-172.4	25
Sulphurets	2009	S-08-06	50.5	51.5	1.0	mc volc	VULT	TUFF	CL	3		SI	1		1 mc panel	in	waste	S-08-06_3	X15753	25
Sulphurets	2010	MC-05-03	219	225	6.0	SULPH	PQMZ	INTRUSIVES	SIL	2		PR	2		2 upper panel	in	waste	20847/48/49	20847	25
Sulphurets	2008	S91-398	22.2	25.2	3.0	mc volc	BVTF								mc panel	below	pit wall	S91-398_2	S91-398_5851	25
Sulphurets	2010	S-09-09	180	182	2.0	MC VOLC	VU	VU	SIL	2					1 mc panel	in	waste	H44544	H44544	25
Sulphurets	2010	S-08-06	254	256	2.0	mc volc	VUTF	TUFF	CL	3					1 mc panel	in	waste	S-08-06_17	X15861	25
Sulphurets	2012	S-10-33	210	226	16.0													COMP 22	S-10-33 210-226	25
Sulphurets	2009	S-09-09	112.5	113.5	1.0	mc volc	PMON	PMON	SIL	3		None			1 mc panel	in	waste	S-09-09_23	H44505	25
Sulphurets	2009	S-08-06	252.5	253.5	1.0	sw volc	VUTF	TUFF	CL	3		None			1 mc panel	in	waste	S-08-06_4	X15860	25
Sulphurets	2008	S91-398	64.7	67.7	3.0	mc monz	PQMZ								mc panel	below	pit wall	S91-398_3	S91-398_5865	25
Sulphurets	2008	MC-05-03	191	193	2.0	mc volc	PQMZ	INTRUSIVES	SIL	2		PR	2		1 mc panel	in	waste	MC-05-03_9	20831	25
Sulphurets	2010	S-09-12	100	102	2.0	MC VOLC	VU	VU	IARG	3		CL	1		1 mc panel	in	waste	H42381	H42381	25
Sulphurets	2012	S-09-11	130	146	16.0													COMP 20	S-09-11 130-146	25
Sulphurets	2012	S-11-68	1.31	17.46	16.2													COMP 41	S-11-68 1.31-17.46	25
Sulphurets	2012	MC-05-02	210	226.6	16.6													COMP 29	MC-05-02 210-226.6	25
Sulphurets	2010	S-09-10	240	242	2.0	MC VOLC	VU	VU	CL2	3		KP	2		1 mc panel	in	waste	H44831	H44831	25
Sulphurets	2012	S-10-21	44.9	61	16.1													COMP 23	S-10-21 44.9-61	25
Sulphurets	2008	S-06-04	30	32	2.0	sw monz	PPFP	INTRUSIVES	PR			SIL	1		1 mc panel	in	waste	S-06-04_2	G24663	25
Sulphurets	2012	S-11-68	81.46	96.56	15.1													COMP 43	S-11-68 81.46-96.56	25
Sulphurets	2010	S-08-06	99.35	103	3.7	MC MONZ	PPFP	INTRUSIVES	PR	1		SI	1		1 mc panel	in	waste	X15779/80	X15779	25
Sulphurets	2010	S-09-12	121	123	2.0	SULPH	VU	VU	IARG	3		CL	1		2 upper panel	in	waste	H42394	H42394	25
Sulphurets	2010	S-08-06	40	42	2.0	mc volc	VULT	TUFF	CL	3		SI	1		1 mc panel	in	waste	S-08-06_13	X15747	25
Sulphurets	2008	S-06-04	76	78	2.0	mc volc	IVOL	IVOL	SI	3		Ser	1		1 mc panel	in	waste	S-06-04_4	G24688	25

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Sulphurets	2010	S-08-08	119	123	4.0	MC VOLC	ANDS	ANDS	PR	2		MTH	1		1 mc panel	in	waste	E192869/70	E192869	25
Sulphurets	2012	S-11-72	62.3	77.5	15.2													COMP 61	S-11-72 62.3-77.5	25
Sulphurets	2012	S-11-72	142.3	158.3	16.0													COMP 63	S-11-72 142.3-158.3	25
Sulphurets	2012	S-09-11	90.7	104.7	14.0													COMP 15	S-09-11 90.7-104.7	25
Sulphurets	2012	MC-05-02	150	166	16.0													COMP 36	MC-05-02 150-166	25
Sulphurets	2010	MC-05-02	220	224	4.0	MC VOLC	ANDS	ANDS	PR	2					1 mc panel	outside	pit wall	10043/44	10043	25
Sulphurets	2012	S-09-11	49	65	16.0													COMP 10	S-09-11 49-65	25
Sulphurets	2008	MC-05-01	143	145	2.0	mc volc	ANDS	ANDS	PR	2					1 mc panel	in	waste	MC-05-01_7	9817	25
Sulphurets	2012	S-11-68	163.46	175.46	12.0													COMP 45	S-11-68 163.46-175.46	25
Sulphurets	2009	S-09-12	8.5	9.5	1.0	mc volc	VU	VU	CL	3/3		PR/CL	1/1		1 mc panel	in	waste	S-09-12_1	H42328	25
Sulphurets	2010	S-08-06	48	50	2.0	mc volc	VULT	TUFF	CL	3		SI	1		1 mc panel	in	waste	S-08-06_15	X15752	25
Sulphurets	2010	S-09-11	59	61	2.0	MC VOLC	VU	VU	CL	3		KP	1		1 mc panel	in	waste	H45036	H45036	25
Sulphurets	2010	MC-05-02	200	204	4.0	MC VOLC	ANDS	ANDS	PR	2					1 mc panel	outside	pit wall	100321/33	10032	25
Sulphurets	2010	S-09-11	139.9	141.9	2.0	MC VOLC	FLTZ	FLTZ	IARG	2					1 mc panel	in	waste	H45080	H45080	25
Sulphurets	2012	S-11-68	121.46	137.46	16.0													COMP 44	S-11-68 121.46-137.46	25
Sulphurets	2012	S-11-71	24.7	40.2	15.5													COMP 56	S-11-71 24.7-40.2	25
Sulphurets	2010	S-08-06	250	252	2.0	mc volc	VUTF	TUFF	CL	3					1 mc panel	in	waste	S-08-06_16	X15859	25
Sulphurets	2009	S-09-09	108.5	109.5	1.0	mc volc	PMON	PMON	SIL	3		None			1 mc panel	in	waste	S-09-09_22	H44503	25
Sulphurets	2012	MC-05-02	190	206	16.0													COMP 26	MC-05-02 190-206	25
Sulphurets	2012	S-09-11	9	25	16.0													COMP 14	S-09-11 9.0-25	25
Sulphurets	2008	S-06-04	42	44	2.0	sw monz	FLTZ	FLTZ	PR						1 mc panel	in	waste	S-06-04_3	G24670	25
Sulphurets	2009	S-09-12	34.5	35.5	1.0	mc volc	VU	VU	CL	3		PR	1		1 mc panel	in	waste	S-09-12_7	H42343	25
Sulphurets	2009	S-08-06	46.5	47.5	1.0	mc volc	VULT	TUFF	CL	3		SI	1		1 mc panel	in	waste	S-08-06_2	X15751	25
Sulphurets	2010	S-08-08	160	163.2	3.2	MC VOLC	FLTZ	FLTZ	CARB	4/--/4/2		IARG	2/--/2/2		1 mc panel	in	waste	E192892/93	E192892	25
Sulphurets	2010	S-09-14	20	22	2.0	MC VOLC	ANDS	ANDS	CL	2					1 mc panel	in	waste	H45436	H45436	25
Sulphurets	2010	S-08-06	44	46	2.0	mc volc	VULT	TUFF	CL	3		SI	1		1 mc panel	in	waste	S-08-06_14	X15749	25
Sulphurets	2009	S-09-09	32.5	33.5	1.0	mc volc	VU	VU	SIL	2		CL2	2		1 mc panel	in	waste	S-09-09_5	H44462	25
Sulphurets	2012	S-08-07	105.6	120.05	14.5													COMP 09	S-08-07 105.6-120.05	25
Sulphurets	2009	S-09-09	24.5	25.5	1.0	mc volc	VU	VU	SIL	2		CL2	2		1 mc panel	in	waste	S-09-09_3_Dupe1	H44458	25
Sulphurets	2010	S-09-10	182	184	2.0	MC VOLC	VU	VU	SIL	3		KP	1		1 mc panel	in	waste	H44799	H44800	25
Sulphurets	2012	S-11-73	160.2	176.2	16.0													COMP 69	S-11-73 160.2-176.2	25
Sulphurets	2009	S-09-09	16.5	17.5	1.0	mc volc	VU	VU	SIL	2		CL2	2		1 mc panel	in	waste	S-09-09_1	H44454	25
Sulphurets	2008	MC-05-01	189	191	2.0	mc volc	ANDS	ANDS	PR	2					1 mc panel	below	waste	MC-05-01_9	9841	25
Sulphurets	2010	S-08-06	258	260	2.0	mc volc	VUTF	TUFF	CL	3					1 mc panel	in	waste	S-08-06_18	X15864	25
Sulphurets	2010	S-09-09	26	28	2.0	mc volc	VU	VU	SIH	2	CL2	2			1 mc panel	in	waste	S-09-09_27	H44459	25
Sulphurets	2010	S-08-06	78	80	2.0	MC VOLC	VULT	TUFF	PR	3		SI	1		1 mc panel	in	waste	X15767	X15767	25
Sulphurets	2009	S-09-12	26.5	27.5	1.0	mc volc	VU	VU	CL	4		PR	1		1 mc panel	in	waste	S-09-12_4	H42338	25
Sulphurets	2008	MC-05-01	161	163	2.0	mc volc	ANDS	ANDS	PR	2					1 mc panel	in	waste	MC-05-01_8	9826	25
Sulphurets	2010	S-09-09	50	52	2.0	mc volc	VU	VU	SIH	2	CL2	2			1 mc panel	in	waste	S-09-09_33	H44471	25
Sulphurets	2008	MC-05-01	125	127	2.0	mc volc	PPFP	INTRUSIVES	KP	2					1 mc panel	in	waste	MC-05-01_6	9807	25
Sulphurets	2009	S-09-09	36.5	37.5	1.0	mc volc	VU	VU	SIL	2		CL2	2		1 mc panel	in	waste	S-09-09_6	H44464	25
Sulphurets	2010	S-09-09	30	32	2.0	mc volc	VU	VU	SIH	2	CL2	2			1 mc panel	in	waste	S-09-09_28	H44461	25
Sulphurets	2010	S-09-09	34	36	2.0	mc volc	VU	VU	SIH	2	CL2	2			1 mc panel	in	waste	S-09-09_29	H44463	25
Sulphurets	2009	S-09-09	20.5	21.5	1.0	mc volc	VU	VU	SIL	2		CL2	2		1 mc panel	in	waste	S-09-09_2	H44456	25
Sulphurets	2009	S-09-12	22.5	23.5	1.0	mc volc	VU	VU	CL	4		PR	1		1 mc panel	in	waste	S-09-12_3	H42335	25
Sulphurets	2009	S-09-09	52.5	53.5	1.0	mc volc	VU	VU	SIL	2		CL2	2		1 mc panel	in	waste	S-09-09_10	H44472	25
Sulphurets	2010	S-09-09	114	116	2.0	mc volc	PMON	PMON	SIL	3					1 mc panel	in	waste	S-09-09_48	H44506	25
Sulphurets	2010	S-09-09	18	20	2.0	mc volc	VU	VU	SIH	2	CL2	2			1 mc panel	in	waste	S-09-09_25	H44455	25
Sulphurets	2010	S-09-09	22	24	2.0	mc volc	VU	VU	SIH	2	CL2	2			1 mc panel	in	waste	S-09-09_26	H44457	25
Sulphurets	2009	S-09-09	28.5	29.5	1.0	mc volc	VU	VU	SIL	2		CL2	2		1 mc panel	in	waste	S-09-09_4	H44460	25

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Sulphurets	2012	S-10-31	145	161	16.0													COMP 05	S-10-31 145-161	26
Sulphurets	2008	MC-05-01	341	343	2.0	mc volc	PPFP	INTRUSIVES	PR	2					1 mc panel	outside	waste	MC-05-01_13	9924	26
Sulphurets	2012	S-11-71	106.9	122.2	15.3													COMP 58	S-11-71 106.9-122.2	26
Sulphurets	2009	S-09-12	46.5	47.5	1.0	mc volc	VU	VU	CL	3		PR	1		1 mc panel	in	waste	S-09-12_10	H42350	26
Sulphurets	2012	S-11-72	181.96	197.3	15.3													COMP 64	S-11-72 181.96-197.3	26
Sulphurets	2012	S-11-71	146.2	162.2	16.0													COMP 59	S-11-71 146.2-162.2	26
Sulphurets	2010	MC-05-02	320	324	4.0	MC MONZ	PMQZ	INTRUSIVES	SIL	2					1 mc panel	outside	pit wall	10098/99	10098	26
Sulphurets	2010	S-09-09	82	84	2.0	mc monz	PMON	PMON	SIL	3					1 mc panel	in	waste	S-09-09_40	H44488	26
Sulphurets	2012	S-06-02	60	76	16.0													COMP 12	S-06-02 60-76	26
Sulphurets	2010	S-09-10	79	81	2.0	MC MONZ	PMON	PMON	SIL	2					1 mc panel	in	waste	H44742	H44742	26
Sulphurets	2012	S-10-31	194	210	16.0													COMP 16	S-10-31 194-210	26
Sulphurets	2008	MC-05-03	158	160	2.0	mc volc	FLTZ	FLTZ							1 mc panel	in	waste	MC-05-03_8	20815	26
Sulphurets	2012	S-10-31	95	111	16.0													COMP 24	S-10-31 95-111	26
Sulphurets	2008	S91-398	104.3	107.3	3.0	mc monz	PQMZ								mc panel	below	pit wall	S91-398_4	S91-398_5880	26
Sulphurets	2012	S-10-31	245	260	15.0													COMP 04	S-10-31 245-260	26
Sulphurets	2010	S-08-06	296	298	2.0	mc volc	PSBX	BX	CL	3		SIL	2		1 mc panel	in	waste	S-08-06_19	X15886	26
Sulphurets	2010	S-09-09	94	96	2.0	mc monz	PMON	PMON	SIL	3					1 mc panel	in	waste	S-09-09_43	H44495	26
Sulphurets	2009	S-09-09	68.5	69.5	1.0	mc monz	PMON	PMON	SIL	3		None			1 mc panel	in	waste	S-09-09_12	H44481	26
Sulphurets	2010	S-09-09	106	108	2.0	mc volc	PMON	PMON	SIL	3					1 mc panel	in	waste	S-09-09_46	H44502	26
Sulphurets	2009	S-09-09	96.5	97.5	1.0	mc monz	PMON	PMON	SIL	3		None			1 mc panel	in	waste	S-09-09_19	H44497	26
Sulphurets	2009	S-09-12	38.5	39.5	1.0	mc volc	VU	VU	CL	3		PR	1		1 mc panel	in	waste	S-09-12_8	H42345	26
Sulphurets	2009	S-09-09	88.5	89.5	1.0	mc monz	PMON	PMON	SIL	3		None			1 mc panel	in	waste	S-09-09_17	H44491	26
Sulphurets	2008	MC-05-01	257	259	2.0	mc volc	PPFP	INTRUSIVES	PR	2					1 mc panel	outside	waste	MC-05-01_11	9878	26
Sulphurets	2012	S-09-09	65	67	2.0														H44480	26
Sulphurets	2012	S-09-09	67	69	2.0														H44481	26
Sulphurets	2012	S-09-09	85	87	2.0														H44490	26
Sulphurets	2012	S-09-09	87	89	2.0														H44491	26
Sulphurets	2012	S-09-09	91	93	2.0														H44494	26
Sulphurets	2012	S-09-09	93	95	2.0														H44495	26
Sulphurets	2012	S-09-09	95	97	2.0														H44497	26
Sulphurets	2012	S-09-09	103	105	2.0														H44501	26
Sulphurets	2012	S-09-09	105	107	2.0														H44502	26
Sulphurets	2010	S-06-02	58	60	2.0	MC MONZ	PPFP	INTRUSIVES	??	2					1 mc panel	in	waste	G21779	G21779	26
Sulphurets	2009	S-09-12	50.5	51.5	1.0	mc volc	VU	VU	CL	3		PR	1		1 mc panel	in	waste	S-09-12_11	H42352	26
Sulphurets	2009	S-09-09	100.5	101.5	1.0	mc volc	PMON	PMON	SIL	3		None			1 mc panel	in	waste	S-09-09_20	H44499	26
Sulphurets	2008	MC-05-03	88	90	2.0	mc volc	PQMZ	INTRUSIVES	PR	2					1 mc panel	in	waste	MC-05-03_5	10377	26
Sulphurets	2010	S-09-09	70	72	2.0	mc monz	PMON	PMON	SIL	3					1 mc panel	in	waste	S-09-09_37	H44482	26
Sulphurets	2012	S-10-31	294	310	16.0													COMP 17	S-10-31 294-310	26
Sulphurets	2010	S-08-06	217	219	2.0	MC MONZ	PPFP	INTRUSIVES	PR	2-Jan		SI	1		1 mc panel	in	waste	X15842	X15842	26
Sulphurets	2009	S-09-09	80.5	81.5	1.0	mc monz	PMON	PMON	SIL	3		None			1 mc panel	in	waste	S-09-09_15	H44487	26
Sulphurets	2008	MC-05-01	281	283	2.0	mc volc	PPFP	INTRUSIVES	PR	2					1 mc panel	outside	waste	MC-05-01_12	9891	26
Sulphurets	2009	S-09-09	92.5	93.5	1.0	mc monz	PMON	PMON	SIL	3		None			1 mc panel	in	waste	S-09-09_18	H44494	26
Sulphurets	2012	S-11-71	65.7	81.2	15.5													COMP 57	S-11-71 65.7-81.2	26
Sulphurets	2012	S-10-31	44	60	16.0													COMP 25	S-10-31 44-60	26
Sulphurets	2012	MC-05-02	250	266	16.0													COMP 28	MC-05-02 250-266	26
Sulphurets	2012	MC-05-01	230	255	25.0													COMP 34	MC-05-01 230-255	26
Sulphurets	2010	S-09-09	102	104	2.0	mc volc	PMON	PMON	SIL	3					1 mc panel	in	waste	S-09-09_45	H44500	26
Sulphurets	2008	MC-05-03	62	64	2.0	mc volc	PHBX	BX	SIL	2		PKBX	2		1 mc panel	in	waste	MC-05-03_4	10362	26
Sulphurets	2008	MC-05-03	148	150	2.0	mc volc	PHBX	BX	SIL	2		PKBX	2		1 mc panel	in	waste	MC-05-03_7	20809	26
Sulphurets	2012	MC-05-01	279	295	16.0													COMP 40	MC-05-01 279-295	26

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Sulphurets	2012	MC-05-02	314	330	16.0													COMP 35	MC-05-02 314-330	26
Sulphurets	2012	MC-05-01	319	335	16.0													COMP 27	MC-05-01 319-335	26
Sulphurets	2009	S-09-09	104.5	105.5	1.0	mc volc	PMON	PMON	SIL	3		None			1 mc panel	in	waste	S-09-09_21	H44501	26
Sulphurets	2008	MC-05-03	46	48	2.0	mc monz	PQMZ	INTRUSIVES	PR	2					1 mc panel	in	waste	MC-05-03_3	10353	26
Sulphurets	2012	MC-05-01	199	215	16.0													COMP 33	MC-05-01 199-215	26
Sulphurets	2012	S-06-02	20	26	6.0													COMP 06	S-06-02 20-26	26
Sulphurets	2009	S-08-06	298.5	299.5	1.0	sw volc	PSBX	BX	CL	3		SIL	2		1 mc panel	in	waste	S-08-06_6	X15887	26
Sulphurets	2010	S-09-09	86	88	2.0	mc monz	PMON	PMON	SIL	3					1 mc panel	in	waste	S-09-09_41	H44490	26
Sulphurets	2010	S-09-09	38	40	2.0	mc volc	VU	VU	SIH	2	CL2	2			1 mc panel	in	waste	S-09-09_30	H44465	26
Sulphurets	2010	S-09-09	78	80	2.0	mc monz	PMON	PMON	SIL	3					1 mc panel	in	waste	S-09-09_39	H44486	26
Sulphurets	2009	S-09-09	44.5	45.5	1.0	mc volc	VU	VU	SIL	2		CL2	2		1 mc panel	in	waste	S-09-09_8	H44468	26
Sulphurets	2012	MC-05-03	44	60	16.0													COMP 32	MC-05-03 44-60	26
Sulphurets	2009	S-09-09	56.5	57.5	1.0	mc volc	VU	VU	SIL	2		CL2	2		1 mc panel	in	waste	S-09-09_11	H44474	26
Sulphurets	2010	S-09-09	54	56	2.0	mc volc	VU	VU	SIH	2	CL2	2			1 mc panel	in	waste	S-09-09_34	H44473	26
Sulphurets	2009	S-09-09	72.5	73.5	1.0	mc monz	PMON	PMON	SIL	3		None			1 mc panel	in	waste	S-09-09_13	H44483	26
Sulphurets	2009	S-09-09	76.5	77.5	1.0	mc monz	PMON	PMON	SIL	3		None			1 mc panel	in	waste	S-09-09_14	H44485	26
Sulphurets	2010	S-09-09	98	100	2.0	mc monz	PMON	PMON	SIL	3					1 mc panel	in	waste	S-09-09_44	H44498	26
Sulphurets	2008	MC-05-03	26	28	2.0	mc monz	PQMZ	INTRUSIVES	PR	2					1 mc panel	in	waste	MC-05-03_2	10343	26
Sulphurets	2008	MC-05-03	100	102	2.0	mc monz	PHBX	BX	SIL	2		PKBX	2		1 mc panel	in	waste	MC-05-03_6	10383	26
Sulphurets	2010	S-09-09	90	92	2.0	mc monz	PMON	PMON	SIL	3					1 mc panel	in	waste	S-09-09_42	H44492	26
Sulphurets	2010	S-09-09	46	48	2.0	mc volc	VU	VU	SIH	2	CL2	2			1 mc panel	in	waste	S-09-09_32	H44469	26
Sulphurets	2009	S-09-09	84.5	85.5	1.0	mc monz	PMON	PMON	SIL	3		None			1 mc panel	in	waste	S-09-09_16	H44489	26
Sulphurets	2012	MC-05-03	84	100	16.0													COMP 30	MC-05-03 84-100	26
Sulphurets	2009	S-09-12	42.5	43.5	1.0	mc volc	VU	VU	CL	3		PR	1		1 mc panel	in	waste	S-09-12_9	H42347	26
Sulphurets	2009	S-09-09	48.5	49.5	1.0	mc volc	VU	VU	SIL	2		CL2	2		1 mc panel	in	waste	S-09-09_9	H44470	26
Sulphurets	2010	S-09-10	159	165	6.0	MC MONZ	PMON	PMON	SIL	2		KP	1		1 mc panel	in	waste	H44789	H44787	26
Sulphurets	2010	S-09-12	60	62	2.0	MC MONZ	PMON	PMON	KP	3		CL	2		1 mc panel	in	waste	H42358	H42358	26
Sulphurets	2010	S-09-09	42	44	2.0	mc volc	VU	VU	SIH	2	CL2	2			1 mc panel	in	waste	S-09-09_31	H44467	26
Sulphurets	2008	S-06-01	22	24	2.0	mc monz	PQMZ	INTRUSIVES	HEM	3					1 mc panel	in	waste	S-06-01_1	G21604	26
Sulphurets	2008	MC-05-01	227	229	2.0	mc volc	PPFP	INTRUSIVES	PR	2					1 mc panel	outside	waste	MC-05-01_10	9861	26
Sulphurets	2010	S-09-09	58	60	2.0	mc volc	VU	VU	SIH	2	CL2	2			1 mc panel	in	waste	S-09-09_35	H44475	26
Sulphurets	2009	S-09-09	40.5	41.5	1.0	mc volc	VU	VU	SIL	2		CL2	2		1 mc panel	in	waste	S-09-09_7	H44466	26
Sulphurets	2010	S-06-02	4	6	2.0	MC MONZ	OVBD	OVBD	FEOX	2		PR	1		1 mc panel	in	waste	G21756	G21756	26
Sulphurets	2010	S-09-09	66	68	2.0	mc monz	PMON	PMON	SIL	3					1 mc panel	in	waste	S-09-09_36	H44480	26
Sulphurets	2010	S-09-09	74	76	2.0	mc monz	PMON	PMON	SIL	3					1 mc panel	in	waste	S-09-09_38	H44484	26
Sulphurets	2008	SG92-06	102	104	2.0	sw volc	VUXT	TUFF	QP		40	PR		20	2 upper panel	in	ore	SG92-06_3	SG92-06_C12632	29
Sulphurets	2008	SG92-06	207.7	209.4	1.7	sw volc	VUXT	TUFF	QSP		40	/PR		0/40	2 upper panel	outside	pit wall	SG92-06_5	SG92-06_C12700	29
Sulphurets	2010	IF-05-02	60	64	4.0	SW VOLC	ANDS	ANDS	PR	2					2 upper panel	in	waste	10276/77	10276	29
Sulphurets	2009	S-08-06	312.5	313.5	1.0	sw volc	VU	VU	CL	4		None			2 upper panel	in	waste	S-08-06_7	X15896	29
Sulphurets	2008	MC-05-01	28.8	30.75	2.0	mc monz	FLTZ	FLTZ							1 mc panel	in	waste	MC-05-01_2	9756	29
Sulphurets	2010	IF-05-02	100	104	4.0	SW VOLC	VALT	ANDS	KP	2					2 upper panel	outside	pit wall	H10298/99	10298	29
Sulphurets	2008	SG92-02	51	53	2.0	sw volc	VAAT	ANDS	PR		50	QS		20	2 upper panel	in	ore	SG92-02_1	SG92-02_C8856	29
Sulphurets	2009	S-09-12	172.5	173.5	1.0	sw volc	VAAT	ANDS	CL	2		KP	1		2 upper panel	in	waste	S-09-12_20	H42421	29
Sulphurets	2008	S-06-01	294	296	2.0	sw volc	VUAT	TUFF	SI	1					2 upper panel	outside	pit wall	S-06-01_10	G21749	29
Sulphurets	2008	S-06-01	262	264	2.0	sw volc	ANDS	ANDS	PR	3					2 upper panel	outside	pit wall	S-06-01_9	G21731	29
Sulphurets	2010	S-08-06	310	312	2.0	sw volc	VU	VU	CL	4					2 upper panel	in	waste	S-08-06_26	X15894	29
Sulphurets	2009	S-09-12	218.5	219.5	1.0	sw volc	VAAT	ANDS	CL	3		QB	1		2 upper panel	in	ore	S-09-12_25	H42450	29
Sulphurets	2010	S-09-09	239	241	2.0	SULPH	VU	VU	CL	2		SIH	1		2 upper panel	in	waste	H44580	H44580	29
Sulphurets	2012	S-11-70	47.4	63.4	16.0													COMP 52	S-11-70 47.4-63.4	29
Sulphurets	2012	S-11-73	4.65	20.2	15.6													COMP 65	S-11-73 4.65-20.2	29

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Sulphurets	2009	S-09-12	160.5	161.5	1.0	sw volc	PMON	PMON	CL	3-Jan		IARG	1		2 upper panel	in	waste	S-09-12_17	H42415	29
Sulphurets	2009	S-09-12	156.5	157.5	1.0	sw volc	PMON	PMON	CL	3		IARG	1		2 upper panel	in	waste	S-09-12_16	H42412	29
Sulphurets	2012	S-09-12	143	145	2.0														H42406	29
Sulphurets	2012	S-09-12	145	147	2.0														H42407	29
Sulphurets	2012	S-09-12	147	149	2.0														H42408	29
Sulphurets	2012	S-09-12	149	151	2.0														H42409	29
Sulphurets	2012	S-09-12	151	153	2.0														H42410	29
Sulphurets	2012	S-09-12	163	165	2.0														H42417	29
Sulphurets	2012	S-09-12	165	167	2.0														H42418	29
Sulphurets	2012	S-09-12	169	171	2.0														H42420	29
Sulphurets	2012	S-09-12	171	173	2.0														H42421	29
Sulphurets	2012	S-09-12	210	211.5	1.5														H42445	29
Sulphurets	2012	S-09-12	211.5	213.17	1.7														H42446	29
Sulphurets	2012	S-09-12	213.17	215	1.8														H42447	29
Sulphurets	2012	S-09-12	215	217	2.0														H42449	29
Sulphurets	2012	S-09-12	217	219	2.0														H42450	29
Sulphurets	2012	S-11-61	101	103	2.0														S154096	29
Sulphurets	2012	S-11-61	103	105	2.0														S154097	29
Sulphurets	2012	S-11-74	83	85	2.0														S155917	29
Sulphurets	2012	S-11-74	85	87	2.0														S155918	29
Sulphurets	2012	S-11-64	35	37	2.0														S156364	29
Sulphurets	2012	S-11-64	37	39	2.0														S156365	29
Sulphurets	2009	S-09-12	144.5	145.5	1.0	sw volc	PMON	PMON	CL	3		IARG	1		2 upper panel	in	waste	S-09-12_13	H42406	29
Sulphurets	2010	S-08-08	179.8	181.3	1.5	SULPH	VU	VU	IARG	3		QA	3		2 upper panel	in	waste	E192902	E192902	29
Sulphurets	2009	S-09-12	202.5	203.5	1.0	sw volc	VAAT	ANDS	QB	4/3		PSBX/QB	1/1		2 upper panel	in	waste	S-09-12_21	H42440	29
Sulphurets	2008	S91-388	191.1	194.1	3.0	sw volc	VAAT	ANDS	PR		60				2 upper panel	below	pit wall	S91-388_6	S91-388_5285	29
Sulphurets	2008	S-06-01	106	108	2.0	sw volc	VATF	ANDS	PR						2 upper panel	in	waste	S-06-01_4	G21649	29
Sulphurets	2012	S-11-70	7.25	23.4	16.2													COMP 51	S-11-70 7.25-23.4	29
Sulphurets	2008	S-06-01	90	92	2.0	sw volc	VATF	ANDS	PR						2 upper panel	in	waste	S-06-01_3	G21640	29
Sulphurets	2008	S-06-05	306	308	2.0	sw volc	IVOL	IVOL	PR	1		SIL	1		2 upper panel	outside	pit wall	S-06-05_10	G23418	29
Sulphurets	2008	S-06-04	158	160	2.0	sw volc	BVTF	TUFF	PR	1					2 upper panel	in	waste	S-06-04_6	G24731	29
Sulphurets	2012	S-11-73	42.45	57.35	14.9													COMP 66	S-11-73 42.45-57.35	29
Sulphurets	2008	SG92-17	126	128	2.0	sw volc	VUXT	TUFF	QP		20				2 upper panel	in	ore	SG92-17_4	SG92-17_C11112	29
Sulphurets	2009	S-09-12	164.5	165.5	1.0	sw volc	PMON	PMON	CL	3		IARG	1		2 upper panel	in	waste	S-09-12_18	H42417	29
Sulphurets	2012	S-11-74	75.9	91.9	16.0													COMP 72	S-11-74 75.9-91.9	29
Sulphurets	2010	S-08-06	314	316	2.0	sw volc	VU	VU	CL	4-Jan		SIH	1-Jan		2 upper panel	in	waste	S-08-06_21	X15897	29
Sulphurets	2008	SG92-17	219	221	2.0	sw volc	VAAT	ANDS	PR						2 upper panel	in	ore	SG92-17_5	SG92-17_C11169	29
Sulphurets	2010	MC-05-02	6	10	4.0	MC VOLC	PQMZ	INTRUSIVES	PR	2					1 mc panel	outside	pit wall	9926/27	9926	29
Sulphurets	2008	SG92-17	82	84.08	2.1	sw volc	SARG	SEDS							2 upper panel	in	ore	SG92-17_3	SG92-17_C11087	29
Sulphurets	2012	S-11-69	1.76	16.9	15.1													COMP 47	S-11-69 1.76-16.9	29
Sulphurets	2008	SG92-15	60.45	62.45	2.0	sw volc	SARG	SEDS							2 upper panel	in	waste	SG92-15_2	SG92-15_C12893	29
Sulphurets	2012	S-11-74	5.9	21.9	16.0													COMP 70	S-11-74 5.9-21.9	29
Sulphurets	2009	S-09-12	140.5	141.5	1.0	sw volc	PMON	PMON	CL	3		IARG	1		2 upper panel	in	waste	S-09-12_12	H42404	29
Sulphurets	2009	S-09-12	152.5	153.5	1.0	sw volc	PMON	PMON	CL	3		IARG	1		2 upper panel	in	waste	S-09-12_15	H42410	29
Sulphurets	2012	S-08-07	55	70	15.0													COMP 11	S-08-07 55-70	29
Sulphurets	2009	S-09-12	168.5	169.5	1.0	sw volc	VAAT	ANDS	CL	2		KP	1		2 upper panel	in	waste	S-09-12_19	H42419	29
Sulphurets	2008	S-06-01	230	232	2.0	sw volc	VUAT	TUFF	PR	1					2 upper panel	outside	pit wall	S-06-01_8	G21714	29
Sulphurets	2012	S-11-69	42.1	56.9	14.8													COMP 48	S-11-69 42.1-56.9	29
Sulphurets	2012	S-11-74	37.9	53.9	16.0													COMP 71	S-11-74 37.9-53.9	29
Sulphurets	2012	S-11-74	117.9	133.9	16.0													COMP 73	S-11-74 117.9-133.9	29

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Sulphurets	2010	IF-05-02	38	42	4.0	SW VOLC	VALT	ANDS	SIL	2		PR	2		2 upper panel	in	waste	10263/64	10264	29
Sulphurets	2010	IF-05-02	18	22	4.0	MC VOLC	VALT	ANDS	SIL	2		PR	2		1 mc panel	in	waste	10250/51	10253	29
Sulphurets	2012	S-11-69	125.1	140.9	15.8													COMP 50	S-11-69 125.1-140.9	29
Sulphurets	2010	S-09-09	260	261	1.0	SULPH	VUTF	TUFF	PR	4		SIH	1		2 upper panel	in	waste	H44593	H44593	29
Sulphurets	2012	S-11-69	82.9	98.9	16.0													COMP 49	S-11-69 82.9-98.9	29
Sulphurets	2008	MC-05-01	35	37	2.0	mc monz	PQMZ	INTRUSIVES	PR	2					1 mc panel	in	waste	MC-05-01_3	9759	29
Sulphurets	2009	S-09-12	214.5	215.5	1.0	sw volc	VAAT	ANDS	CL	3		QB	1		2 upper panel	in	ore	S-09-12_24	H42447	29
Sulphurets	2012	S-11-73	118.2	134.2	16.0													COMP 68	S-11-73 118.2-134.2	29
Sulphurets	2012	S-11-72	23.3	38.3	15.0													COMP 60	S-11-72 23.3-38.3	29
Sulphurets	2008	S-06-01	52	54	2.0	sw volc	VUTF	TUFF	PR	4					2 upper panel	in	waste	S-06-01_2	G21620	29
Sulphurets	2012	S-10-29	65.5	79.5	14.0													COMP 02	S-10-29 65.5-79.5	29
Sulphurets	2009	S-09-12	148.5	149.5	1.0	sw volc	PMON	PMON	CL	3		IARG	1		2 upper panel	in	waste	S-09-12_14	H42408	29
Sulphurets	2012	MC-05-01	49	65	16.0													COMP 38	MC-05-01 49-65	29
Sulphurets	2012	S-10-29	14.4	29.5	15.1													COMP 01	S-10-29 14.4-29.5	29
Sulphurets	2012	S-10-33	129	146	17.0													COMP 08	S-10-33 129-146	29
Sulphurets	2008	MC-05-01	113	115	2.0	mc volc	ANDS	ANDS	PR	2					1 mc panel	in	waste	MC-05-01_5	9801	29
Sulphurets	2012	S-08-07	190	204.5	14.5													COMP 19	S-08-07 190-204.5	29
Sulphurets	2009	S-09-12	206.5	207.5	1.0	sw volc	VAAT	ANDS	CL	3		QB	1		2 upper panel	in	waste	S-09-12_22	H42443	29
Sulphurets	2008	MC-05-01	55	57	2.0	mc volc	ANDS	ANDS	PR	2					1 mc panel	in	waste	MC-05-01_4	9770	29
Sulphurets	2012	MC-05-01	89	105	16.0													COMP 39	MC-05-01 89-105	29
Sulphurets	2010	S-09-14	60	62	2.0	SULPH	DDRT	INTRUSIVES	CL	2					2 upper panel	in	waste	H45459	H45459	29
Sulphurets	2012	S-11-73	79.2	94.2	15.0													COMP 67	S-11-73 79.2-94.2	29
Sulphurets	2010	S-08-07	257	260.5	3.5	SW VOLC	FDYK	INTRUSIVES	IARG	3		CARB	2		2 upper panel	outside	pit wall	X18487/88	X18487	29
Sulphurets	2010	S-06-02	104	106	2.0	SW VOLC	VU	VU	PR	2		CARB	2		2 upper panel	outside	pit wall	G216203	E216203	29
Sulphurets	2008	SG92-17	73	74.75	1.8	sw volc	VAAT	ANDS	PR		10				2 upper panel	in	ore	SG92-17_2	SG92-17_C11080	29
Sulphurets	2010	S-08-07	197	199	2.0	MC VOLC2	IVOL	IVOL	PR	2					1 mc panel	outside	pit wall	X18455	X18455	29
Sulphurets	2010	S-08-07	238.1	243	4.9	SW VOLC	FDYK	INTRUSIVES	IARG	3		CARB	2		2 upper panel	outside	pit wall	X18477/79	X18478	29
Sulphurets	2008	MC-05-01	5	7	2.0	mc monz	PQMZ	INTRUSIVES	PR	2					1 mc panel	in	waste	MC-05-01_1	9742	29
Sulphurets	2012	S-08-07	155.1	170.5	15.4													COMP 21	S-08-07 155.1-170.5	29
Sulphurets	2010	S-08-07	162	164	2.0	MC VOLC2	SEDS	SEDS	PR	2					1 mc panel	outside	pit wall	X18433	X18433	29
Sulphurets	2010	S-09-09	221.33	225	3.7	SULPH	DDRT	INTRUSIVES	PR	1					2 upper panel	in	ore	H44569/70	H44569	29
Sulphurets	2010	S-09-13	60	61.3	1.3	SULPH	VUTF	TUFF	CL	4		SIL	2		2 upper panel	in	waste	H45267	H45267	29
Sulphurets	2010	S-09-13	20	24	4.0	SULPH	VUTF	TUFF	CL	3		SIL	2		2 upper panel	in	waste	H45245/46	H45245	29
Sulphurets	2012	S-10-33	52	69	17.0													COMP 07	S-10-33 52-69	29
Sulphurets	2008	S-06-04	120	122	2.0	sw volc	VU	VU	PR	3					2 upper panel	in	waste	S-06-04_5	G24711	29
Sulphurets	2008	SG92-15	3.6	5.6	2.0	sw volc	DDRT	INTRUSIVES							2 upper panel	in	waste	SG92-15_1	#N/A	29
Sulphurets	2010	S-08-08	219	221	2.0	SULPH	DDRT	INTRUSIVES	CARB	3			3		2 upper panel	in	waste	E192924	E192923	29
Sulphurets	2010	S-09-14	119	121	2.0	SULPH	DDRT	INTRUSIVES	CARB	1					2 upper panel	in	waste	H45491	H45491	29
Mitchell	2008	S91-387	0	3	3.0		SEDS		QC						lower panel	in	ore	S91-387_1	S91-387_5160	31
Mitchell	2009	M-08-088	10.8	13	2.2	sw volc	VU		SIL	2		CL	1		upper panel	in	waste	M-08-88_1	X18179	31
Mitchell	2008	S91-395	0	3	3.0	Drill Core S91-395	SEDS		CL						lower panel	in	ore	S91-395_1	S91-395_5370	31
Mitchell	2008	M-07-041	6.75	8	1.3	sw volc	FLTZ		QSP	4		CL	1		upper panel	in	waste	M-07-41_1	G37543	31
Mitchell	2008	M-07-040	10.9	13	2.1		VATF		CL2	3					lower panel	in	waste	M-07-40_1	E192557	31
Mitchell	2008	M-06-016	28	30	2.0	nm volc	FLTZ		PR	2		Sil	1		upper panel	in	waste	M-06-16_2	G33225	31
Mitchell	2008	M-06-016	4	6	2.0	nm volc	ANDS		PR	2		Sil	1		upper panel	in	waste	M-06-16_1	G33213	31
Mitchell	2008	M-07-044	57	59	2.0		VATF		IARG	5					lower panel	in	waste	M-07-44_2	G37849	33
Mitchell	2009	M-08-082	5	7	2.0	nm volc	PMON		IARG	2					upper panel	in	waste	M-08-82_1	X17096	33
Mitchell	2009	M-09-097	16.5	17.5	1.0	NM VOLC	PMON		KP	1/		/KP			upper panel	in	waste	M-09-97_3	H43066	33
Mitchell	2009	M-09-097	24.5	25.5	1.0	NM VOLC	PMON		HEM	1		KP	1		upper panel	in	waste	M-09-97_5	H43070	33
Mitchell	2009	M-09-108	8.5	9.5	1.0	NM VOLC	VU		SIH	3		PSBX	2		upper panel	in	waste	M-09-108_2	H41606	33

Note: values in blue are calculated

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highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2009	M-09-097	52.5	53.5	1.0	NM VOLC	PMON		KP	2					upper panel	in	waste	M-09-97_12	H43086	33
Mitchell	2009	M-09-097	12.5	13.5	1.0	NM VOLC	PMON		KP	1					upper panel	in	waste	M-09-97_2	H43064	33
Mitchell	2009	M-08-082	140	142	2.0	nm volc	VU		SIH	5					upper panel	in	waste	M-08-82_7	X17168	33
Mitchell	2010	M-09-101	8.9	13	4.1	SW VOLC	SAR		SIH	3					upper panel	in	waste	H40759/60	H40759	33
Mitchell	2009	M-08-082	48	50	2.0	nm volc	VATF		SIH	2-Jan					upper panel	in	waste	M-08-82_3	X17119	33
Mitchell	2008	NM-05-03	5.2	7.2	2.0	nm volc	ANDS		SIL	2					upper panel	in	waste	NM-05-03_2	9265	33
Mitchell	2009	M-09-097	76.5	77.5	1.0	NM VOLC	PMON		KP	2					upper panel	in	waste	M-09-97_18	H43100	33
Mitchell	2009	M-09-097	48.5	49.5	1.0	NM VOLC	IVOL		KP	1					upper panel	in	waste	M-09-97_11	H43084	33
Mitchell	2009	M-09-097	8.5	9.5	1.0	NM VOLC	PMON		KP	1					upper panel	in	waste	M-09-97_1	H43060	33
Mitchell	2009	M-08-082	66	68	2.0	nm volc	PMON		IARG	2					upper panel	in	waste	M-08-82_4	X17129	33
Mitchell	2009	M-08-082	21	22.5	1.5	nm volc	VATF		SIH	4					upper panel	in	waste	M-08-82_2	X17105	33
Mitchell	2010	M-08-061	17	21	4.0	QSP	VUTF		QSP	2					lower panel	in	waste	X06508	X06508	33
Mitchell	2009	M-08-079	47	61	14.0	nm volc	ANDS		SIH	3					upper panel	in	waste	M-08-79_16	X16763	33
Mitchell	2008	M-07-044	124.5	126	1.5		VALT		IARG	2					lower panel	in	ore	M-07-44_4	G37888	33
Mitchell	2009	M-08-080	380.3	400	19.7	sw volc	SEDS/VU		SIH	4/3					upper panel	outside	pit wall	M-08-80_22	X14984	33
Mitchell	2009	M-08-085	100	102	2.0	nm volc	PMON		HEM	3		IARG	2		upper panel	in	waste	M-08-85_6	X17360	33
Mitchell	2009	M-09-097	100.5	101.5	1.0	NM VOLC	PMON		KP	2					upper panel	in	waste	M-09-97_24	H43113	33
Mitchell	2008	M-07-032	68	70	2.0	sw volc	VUTF		SIH	4					upper panel	in	waste	M-07-32_2	G36677	33
Mitchell	2010	M-06-020	128	130	2.0	uncat	SARG		SIH	4					lower panel	outside	pit wall	G33512	G33512	33
Mitchell	2009	M-09-108	56.5	57.5	1.0	NM VOLC	VU		SIH	2		PSBX	1		upper panel	in	waste	M-09-108_14	H41633	33
Mitchell	2009	M-08-083	123.5	125	1.5	nm volc	VU		QSP	3		IARG	1		upper panel	in	waste	M-08-83_7	X17271	33
Mitchell	2009	M-09-097	28.5	29.5	1.0	NM VOLC	PMON		KP	1					upper panel	in	waste	M-09-97_6	H43074	33
Mitchell	2009	M-08-082	202	204	2.0	nm volc	PSBX		MTH	5					upper panel	below	waste	M-08-82_11	X17202	33
Mitchell	2009	M-08-085	85	87	2.0	nm volc	ANDS		SIH	3					upper panel	in	waste	M-08-85_5	X17350	33
Mitchell	2010	M-08-081	217	221	4.0	NM VOLC	VALT		IARG	4					upper panel	in	waste	X17069/70/71	X17069	33
Mitchell	2009	M-08-083	122	135	13.0	nm volc	FLTZ/VU		/QSP	/3		/IARG	/1		upper panel	in	waste	M-08-83_11	X17270	33
Mitchell	2009	M-09-097	20.5	21.5	1.0	NM VOLC	PMON		HEM	1		KP	1		upper panel	in	waste	M-09-97_4	H43068	33
Mitchell	2009	M-08-087	164	166	2.0		VU		SIL	4					upper panel	outside	pit wall	M-08-87_8	X18147	33
Mitchell	2009	M-08-079	91	93	2.0	nm volc	ANDS		SIH	3					upper panel	in	waste	M-08-79_5	X16787	33
Mitchell	2008	NM-05-01	80.7	82.7	2.0	nm volc	GRAN		AR	2					upper panel	in	waste	NM-05-01_4	67950	33
Mitchell	2009	M-09-108	106.5	107.5	1.0	HORN/PROP	VU		SIL	3		PSBX	2		lower panel	in	waste	M-09-108_17	H41661	33
Mitchell	2008	M-07-044	22.3	24	1.7		VUTF		SIL	3					upper panel	in	waste	M-07-44_1	G37829	33
Mitchell	2009	M-08-085	92.6	103.5	10.9	nm volc	PMON		HEM	3		IARG	2		upper panel	in	waste	M-08-85_13	X17354	33
Mitchell	2009	M-08-085	180	182	2.0		VU		SIH	3		CARB	2		lower panel	below	pit wall	M-08-85_10	X17404	33
Mitchell	2009	M-09-097	136.5	137.5	1.0	NM VOLC	PMON		KP	2		PR	1		upper panel	in	waste	M-09-97_33	H43134	33
Mitchell	2009	M-08-080	249.8	267	17.2	sw volc	SEDS		SIH	4					upper panel	in	waste	M-08-80_19	X14912	33
Mitchell	2009	M-09-097	36.5	37.5	1.0	NM VOLC	IVOL		KP	1					upper panel	in	waste	M-09-97_8	H43078	33
Mitchell	2009	M-09-097	44.5	45.5	1.0	NM VOLC	PMON		KP	1					upper panel	in	waste	M-09-97_10	H43082	33
Mitchell	2009	M-09-108	24.5	25.5	1.0	NM VOLC	VU		SIH	3		PSBX	2		upper panel	in	waste	M-09-108_6	H41615	33
Mitchell	2009	M-08-080	267	283	16.0	sw volc	SEDS/ANDS		SIH	4/1					upper panel	in	waste	M-08-80_20	X14921	33
Mitchell	2009	M-08-079	185	187	2.0	horn/prop	ANDS		SIH	1					upper panel	in	waste	M-08-79_10	X16837	33
Mitchell	2009	M-08-079	51	53	2.0	nm volc	ANDS		SIH	3					upper panel	in	waste	M-08-79_3	X16765	33
Mitchell	2009	M-08-083	41.7	44	2.3	nm volc	IVOL		MTH	3					upper panel	in	waste	M-08-83_3	X17225	33
Mitchell	2009	M-08-082	178	179.4	1.4	nm volc	VATF		MTH	4					upper panel	in	waste	M-08-82_9	X17188	33
Mitchell	2009	M-09-097	60.5	61.5	1.0	NM VOLC	PMON		KP	2					upper panel	in	waste	M-09-97_14	H43091	33
Mitchell	2008	M-08-075	186	204	18.0	nm monz	PMON		HEM	3/1		SIL/CL	1/1		upper panel	in	waste	M-08-75_10	X16185	33
Mitchell	2009	M-08-079	71	73	2.0	nm volc	ANDS		SIH	3					upper panel	in	waste	M-08-79_4	X16775	33
Mitchell	2009	M-09-097	64.5	65.5	1.0	NM VOLC	PMON		KP	2					upper panel	in	waste	M-09-97_15	H43093	33
Mitchell	2009	M-08-080	350	352	2.0	sw volc	ANDS		SIL	3					upper panel	outside	pit wall	M-08-80_13	X14969	33
Mitchell	2009	M-08-088	54	56	2.0	sw volc	PMON		SIL	2		HEM	1		upper panel	in	waste	M-08-88_3	X18198	33

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2009	M-08-085	162	164	2.0	nm volc	ANDS		MTH	3		CARB	1		upper panel	in	waste	M-08-85_9	X17394	33
Mitchell	2009	M-08-080	366	380.3	14.3	sw volc	ANDS		SIL	3					upper panel	outside	pit wall	M-08-80_21	X14977	33
Mitchell	2009	M-09-101	235.5	236.5	1.0	sw volc	VAAT		SIH	3		IARG	1		upper panel	in	waste	M-09-101_4	H40884	33
Mitchell	2009	M-08-079	31	33	2.0	nm volc	ANDS		SIH	3					upper panel	in	waste	M-08-79_2	X16754	33
Mitchell	2009	M-08-080	236.1	249.8	13.7	sw volc	PMON		SIL	4					upper panel	in	waste	M-08-80_18	X14904	33
Mitchell	2009	M-08-079	35	47	12.0	nm volc	ANDS		SIH	3					upper panel	in	waste	M-08-79_15	X16756	33
Mitchell	2009	M-08-085	65	67	2.0	nm volc	ANDS		SIH	3					upper panel	in	waste	M-08-85_4	X17340	33
Mitchell	2009	M-08-079	23	35	12.0	nm volc	ANDS		SIH	3					upper panel	in	waste	M-08-79_14	X16750	33
Mitchell	2008	M-07-044	93	95	2.0		VALT		IARG	2					lower panel	in	waste	M-07-44_3	G37869	33
Mitchell	2009	M-08-082	90	92	2.0	nm volc	VATF		SIH	3					upper panel	in	waste	M-08-82_5	X17142	33
Mitchell	2009	M-08-082	194	196	2.0	nm volc	PSBX		MTH	5					upper panel	in	pit wall	M-08-82_10	X17198	33
Mitchell	2009	M-08-080	328	330	2.0	sw volc	ANDS		SIL	3					upper panel	outside	pit wall	M-08-80_12	X14956	33
Mitchell	2009	M-09-097	116.5	117.5	1.0	NM VOLC	PMON		KP	2		PR	1		upper panel	in	waste	M-09-97_28	H43123	33
Mitchell	2009	M-08-080	310	312	2.0	sw volc	PMON		SIH	3					upper panel	below	pit wall	M-08-80_11	X14946	33
Mitchell	2009	M-08-083	106	108	2.0	nm volc	PMON		IARG	3		HEM	1		upper panel	in	waste	M-08-83_6	X17261	33
Mitchell	2008	M-07-032	136	138	2.0	sw volc	VUTF		SIH	2					upper panel	in	waste	M-07-32_4	G36716	33
Mitchell	2009	M-08-075	258	260	2.0	cl-pr	VU		CL2	3		SIL	2		upper panel	in	waste	M-08-75_30	X16227	33
Mitchell	2009	M-08-079	11	23	12.0	nm volc	ANDS		SIH	3					upper panel	in	waste	M-08-79_13	X16743	33
Mitchell	2009	M-08-088	125	127	2.0	sw volc	SEDS		SIH	4					upper panel	in	waste	M-08-88_6	X18236	33
Mitchell	2008	M-07-033	24	26	2.0	sw monz	VU		SIH	4					upper panel	in	waste	M-07-33_1	G34684	33
Mitchell	2009	M-09-097	147.5	148.5	1.0	NM VOLC	PMON		PR	3		MTH	1		upper panel	below	pit wall	M-09-97_35	H43140	33
Mitchell	2009	M-08-080	261	263	2.0	sw volc	SEDS		SIH	4					upper panel	in	waste	M-08-80_9	X14918	33
Mitchell	2009	M-09-097	132.5	133.5	1.0	NM VOLC	PMON		KP	2		PR	1		upper panel	in	waste	M-09-97_32	H43131	33
Mitchell	2009	M-08-085	77	92.6	15.6	nm volc	ANDS		SIH	3					upper panel	in	waste	M-08-85_12	X17346	33
Mitchell	2009	M-08-075	170	172	2.0	nm monz	PMON		SIL	2		CL	1		upper panel	in	waste	M-08-75_27	X16176	33
Mitchell	2009	M-09-101	231.5	232.5	1.0	sw volc	VAAT		SIH	3		IARG	1		upper panel	in	waste	M-09-101_3	H40882	33
Mitchell	2009	M-09-097	112.5	113.5	1.0	NM VOLC	PMON		KP	2		PR	1		upper panel	in	waste	M-09-97_27	H43120	33
Mitchell	2009	M-08-089	209	211	2.0	sw volc	SEDS		SIH	2					upper panel	below	waste	M-08-89_8	X17974	33
Mitchell	2009	M-09-108	12.5	13.5	1.0	NM VOLC	VU		SIH	3		PSBX	2		upper panel	in	waste	M-09-108_3	H41608	33
Mitchell	2009	M-08-080	149	151	2.0	sw volc	PMON		SIL	2					upper panel	in	waste	M-08-80_5	X14856	33
Mitchell	2009	M-09-097	80.5	81.5	1.0	NM VOLC	PMON		KP	2					upper panel	in	waste	M-09-97_19	H43102	33
Mitchell	2009	M-09-108	32.5	33.5	1.0	NM VOLC	VU		SIH	3		PSBX	2		upper panel	in	waste	M-09-108_8	H41619	33
Mitchell	2009	M-09-097	151.5	152.5	1.0	NM VOLC	PMON		PR	3		MTH	1		upper panel	below	pit wall	M-09-97_36	H43143	33
Mitchell	2009	M-08-080	232	234	2.0	sw volc	SEDS		SIH	3					upper panel	in	waste	M-08-80_8	X14902	33
Mitchell	2008	M-07-030	86	88	2.0	sw volc	VULT		SIH	4					upper panel	in	waste	M-07-30_3	G36584	33
Mitchell	2008	NM-05-01	22.1	23.4	1.3	nm volc	GRAN		SIL	2					upper panel	in	waste	NM-05-01_2	67916	33
Mitchell	2009	M-09-105	152.5	153.5	1.0	HIGHQTZ	PMON		SIL	3					upper panel	in	waste	M-09-105_6	H44025	33
Mitchell	2009	M-09-108	36.5	37.5	1.0	NM VOLC	VU		SIH	3		PSBX	2		upper panel	in	waste	M-09-108_9	H41621	33
Mitchell	2009	M-08-079	111	113	2.0	nm volc	ANDS		SIH	3					upper panel	in	waste	M-08-79_6	X16798	33
Mitchell	2009	M-08-082	160	162	2.0	nm volc	VATF		MTH	4					upper panel	in	waste	M-08-82_8	X17179	33
Mitchell	2009	M-09-101	223.5	224.5	1.0	sw volc	VAXT		CL	1		SIH	2		upper panel	in	waste	M-09-101_1	H40878	33
Mitchell	2009	M-08-075	108	110	2.0	nm monz	PMON		SI	2		CL	1		upper panel	in	waste	M-08-75_25	X16141	33
Mitchell	2008	M-07-030	122	124	2.0	sw volc	VUTF		SIH	5					upper panel	in	waste	M-07-30_4	G36604	33
Mitchell	2009	M-08-080	224.2	236.1	11.9	sw volc	SEDS		SIH	3					upper panel	in	waste	M-08-80_17	X14897	33
Mitchell	2009	M-09-108	28.5	29.5	1.0	NM VOLC	VU		SIH	3		PSBX	2		upper panel	in	waste	M-09-108_7	H41617	33
Mitchell	2008	M-07-033	136	138	2.0	sw volc	SEDS		QSP	5					upper panel	outside	pit wall	M-07-33_6	G34743	33
Mitchell	2010	M-08-081	159	165	6.0	NM VOLC	VALT		SIH	4					upper panel	in	waste	X17040/41/42	X17040	33
Mitchell	2010	M-09-101	80	84	4.0	SW VOLC	VU		SIH	3		IARG	2		upper panel	in	waste	H40799/80	H40799	33
Mitchell	2009	M-09-097	96.5	97.5	1.0	NM VOLC	PMON		KP	2					upper panel	in	waste	M-09-97_23	H43111	33
Mitchell	2009	M-09-108	40.5	41.5	1.0	NM VOLC	PMON		SIL	2		HEM	1		upper panel	in	waste	M-09-108_10	H41624	33

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2009	M-08-079	171	173	2.0	horn/prop	ANDS		SIH	1					upper panel	in	waste	M-08-79_9	X16829	33
Mitchell	2009	M-08-085	62	77	15.0	nm volc	SEDS/ANDS		SIH	2/3		CARB	2		upper panel	in	waste	M-08-85_11	X17338	33
Mitchell	2009	M-09-097	124.5	125.5	1.0	NM VOLC	PMON		KP	2		PR	1		upper panel	in	waste	M-09-97_30	H43127	33
Mitchell	2009	M-09-097	32.5	33.5	1.0	NM VOLC	PMON		KP	1					upper panel	in	waste	M-09-97_7	H43076	33
Mitchell	2009	M-08-085	142	144	2.0	nm volc	ANDS		MTH	3		CARB	1		upper panel	in	waste	M-08-85_8	X17383	33
Mitchell	2009	M-08-087	36	38	2.0		VUTF		SIL	2		CL	1		upper panel	in	waste	M-08-87_1	X18074	33
Mitchell	2009	M-08-088	148	150	2.0	sw volc	SEDS		SIH	3		IARG	1		upper panel	in	waste	M-08-88_7	X18250	33
Mitchell	2009	M-09-097	120.5	121.5	1.0	NM VOLC	PMON		KP	2		PR	1		upper panel	in	waste	M-09-97_29	H43135	33
Mitchell	2008	M-07-033	96	98	2.0	sw volc	SEDS		SIH	5		QSP	1		upper panel	below	pit wall	M-07-33_5	G34723	33
Mitchell	2009	M-08-087	76	78	2.0		VUTF		SIL	2		CL	1		upper panel	in	waste	M-08-87_3	X18095	33
Mitchell	2009	M-08-088	218	220	2.0	sw volc	SEDS		SIH	3		IARG	1		upper panel	outside	pit wall	M-08-88_10	X18289	33
Mitchell	2009	M-08-085	121	123	2.0	nm volc	ANDS		SIH	4					upper panel	in	waste	M-08-85_7	X17371	33
Mitchell	2010	M-08-081	77	83	6.0	NM VOLC	VALT		SIH	4					upper panel	in	waste	X16995/96/98	X16995	33
Mitchell	2008	M-08-075	220	230	10.0	nm monz	PMON		HEM	2		CL	2		upper panel	in	waste	M-08-75_8	X16205	33
Mitchell	2010	M-08-081	235	241	6.0	NM VOLC	VALT		SIH	2					upper panel	below	waste	X17080/81/82	X17080	33
Mitchell	2009	M-08-075	228	230	2.0	nm monz	PMON		HEM	2		CL	2		upper panel	in	waste	M-08-75_29	X16209	33
Mitchell	2009	M-09-108	16.5	17.5	1.0	NM VOLC	VU		SIH	3		PSBX	2		upper panel	in	waste	M-09-108_4	H41610	33
Mitchell	2009	M-09-108	110.5	111.5	1.0	HORN/PROP	VU		SIL	3		PSBX	2		lower panel	in	waste	M-09-108_18	H41664	33
Mitchell	2010	M-09-101	141	145	4.0	SW VOLC	PSYN		IARG	1		SIL	1		upper panel	in	waste	H40834/35	H40834	33
Mitchell	2009	M-08-079	220.6	222.6	2.0	horn/prop	ANDS		SIH	1					upper panel	in	waste	M-08-79_12	X16857	33
Mitchell	2009	M-09-105	164.5	165.5	1.0	HIGHQTZ	PMON		SIL	3		IARG	3		upper panel	in	waste	M-09-105_9	H44032	33
Mitchell	2009	M-08-089	180	182	2.0	sw volc	PSBX		PSBX	3		CARB	1		upper panel	in	waste	M-08-89_7	X17957	33
Mitchell	2008	M-07-032	150	152	2.0	sw volc	PPFP		SIH	3					upper panel	in	waste	M-07-32_5	G36725	33
Mitchell	2009	M-09-110	62.5	63.5	1.0	NM VOLC	PMON		SIH	4		HEM	1		upper panel	in	waste	M-09-110_15	H41797	33
Mitchell	2009	M-09-105	172.5	173.5	1.0	HIGHQTZ	PMON		SIL	3		IARG	3		upper panel	in	waste	M-09-105_11	H44036	33
Mitchell	2009	M-08-075	645	659	14.0	nm volc	ANDS/PSBX		CL	2/4		HEM/CL	1/2		upper panel	below	pit wall	M-08-75_12	X16439	33
Mitchell	2009	M-09-097	104.5	105.5	1.0	NM VOLC	PMON		KP	2		PR	1		upper panel	in	waste	M-09-97_25	H43116	33
Mitchell	2009	M-09-108	52.5	53.5	1.0	NM VOLC	VU		SIH	2		PSBX	1		upper panel	in	waste	M-09-108_13	H41631	33
Mitchell	2008	M-08-075	170	186	16.0	nm volc	PMON		SIL	2/3		CL/SIL	1/1		upper panel	in	waste	M-08-75_11	X16176	33
Mitchell	2009	M-09-110	92.5	93.5	1.0	NM VOLC	PMON		SIH	5					upper panel	in	waste	M-09-110_22	H41814	33
Mitchell	2009	M-09-097	72.5	73.5	1.0	NM VOLC	PMON		KP	2					upper panel	in	waste	M-09-97_17	H43098	33
Mitchell	2009	M-08-089	93	95	2.0	sw volc	SEDS		SIH	2		CARB	2		upper panel	in	waste	M-08-89_4	X17910	33
Mitchell	2009	M-09-108	20.5	21.5	1.0	NM VOLC	VU		SIH	3		PSBX	2		upper panel	in	waste	M-09-108_5	H41613	33
Mitchell	2009	M-09-105	140.5	141.5	1.0	HIGHQTZ	PMON		SIL	3					upper panel	in	waste	M-09-105_3	H44018	33
Mitchell	2009	M-08-087	174	176	2.0		VU		SIL	4					upper panel	outside	pit wall	M-08-87_9	X18152	33
Mitchell	2009	M-09-110	68.5	68.9	0.4	NM VOLC	PMON		SIH	4/5		HEM/	1/		upper panel	in	waste	M-09-110_16	H41800	33
Mitchell	2009	M-08-075	659	671	12.0	nm volc	ANDS		SIL	2/1		CL/HEM	1/1		upper panel	below	pit wall	M-08-75_13	X16447	33
Mitchell	2009	M-08-075	261	276	15.0	nm volc	GRAN		CL2	2/3		HEM/SIL	1/2		upper panel	in	waste	M-08-75_16	X16229	33
Mitchell	2008	M-07-032	101	103	2.0	sw volc	VUTF		SIH	3					upper panel	in	waste	M-07-32_3	G36696	33
Mitchell	2009	M-08-083	21	23	2.0	nm volc	IVOL		MTH	3					upper panel	in	waste	M-08-83_2	X17213	33
Mitchell	2009	M-08-083	60	62	2.0	nm volc	IVOL		MTH	3-Jan					upper panel	in	waste	M-08-83_4	X17234	33
Mitchell	2009	M-09-097	155.5	156.5	1.0	NM VOLC	PMON		PR	3		MTH	1		upper panel	below	pit wall	M-09-97_37	H43145	33
Mitchell	2010	M-08-081	19	21	2.0	NM VOLC	VALT		SIH	3					upper panel	in	waste	X16962	X16962	33
Mitchell	2009	M-09-097	56.5	57.5	1.0	NM VOLC	PMON		KP	2					upper panel	in	waste	M-09-97_13	H43088	33
Mitchell	2008	NM-05-01	50.4	52.4	2.0	nm volc	ANDS		PR	2					upper panel	in	waste	NM-05-01_3	67933	33
Mitchell	2009	M-09-110	22.5	23.5	1.0	NM VOLC	PMON		SIH	3		HEM	3		upper panel	in	ore	M-09-110_5	H41776	33
Mitchell	2009	M-08-083	80	82.1	2.1	nm volc	IVOL		MTH	3					upper panel	in	waste	M-08-83_5	X17245	33
Mitchell	2009	M-08-075	250.6	261	10.4	nm volc	VU		CL2	3		SIL	2		upper panel	in	waste	M-08-75_15	X16222	33
Mitchell	2009	M-08-089	121	123	2.0	sw volc	SEDS		SIH	2		CARB	2		upper panel	in	waste	M-08-89_5	X17925	33
Mitchell	2009	M-09-105	180.5	181.5	1.0	HIGHQTZ	PMON		SIL	3		IARG	3		upper panel	in	waste	M-09-105_13	H44040	33

Note: values in blue are calculated

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highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2009	M-08-075	138	140	2.0	nm monz	FLTZ		CL	2		SIL	1		upper panel	in	waste	M-08-75_26	X16158	33
Mitchell	2008	M-07-033	80	82	2.0	sw volc	PQMZ		SIL	5					upper panel	in	waste	M-07-33_4	G34713	33
Mitchell	2010	M-09-107	60	64	4.0	HIGHQTZ	PMON		SIH	4					upper panel	in	waste	H44174/75	H44174	33
Mitchell	2009	M-09-097	40.5	41.5	1.0	NM VOLC	PMON		KP	1					upper panel	in	waste	M-09-97_9	H43080	33
Mitchell	2009	M-09-105	160.5	161.5	1.0	HIGHQTZ	VUTF		SIL	4					upper panel	in	waste	M-09-105_8	H44030	33
Mitchell	2008	NM-05-02	296.4	297.9	1.5	nm volc	PHBX		SIL	2					upper panel	in	waste	NM-05-02_9	9042	33
Mitchell	2009	M-09-105	136.5	137.5	1.0	HIGHQTZ	PMON		SIL	3					upper panel	in	waste	M-09-105_2	H44016	33
Mitchell	2009	M-09-105	144.5	145.5	1.0	HIGHQTZ	PMON		SIL	3					upper panel	in	waste	M-09-105_4	H44020	33
Mitchell	2009	M-09-101	247.5	248.5	1.0	sw volc	VAAT		SIH	3		IARG	1		upper panel	below	waste	M-09-101_7	H40891	33
Mitchell	2009	M-09-105	168.5	169.5	1.0	HIGHQTZ	PMON		SIL	3		IARG	3		upper panel	in	waste	M-09-105_10	H44034	33
Mitchell	2008	NM-05-01	119.3	121.3	2.0	nm volc	ANDS		SIL	2					upper panel	in	waste	NM-05-01_5	67974	33
Mitchell	2008	M-07-033	44	46	2.0	sw monz	VU		SIH	5					upper panel	in	waste	M-07-33_2	G34694	33
Mitchell	2009	M-09-097	108.5	109.5	1.0	NM VOLC	PMON		KP	2		PR	1		upper panel	in	waste	M-09-97_26	H43118	33
Mitchell	2009	M-08-089	149	151	2.0	sw volc	SEDS		SIH	2		CARB	2		upper panel	in	waste	M-08-89_6	X17940	33
Mitchell	2009	M-09-108	60.5	61.5	1.0	NM VOLC	PMON		SIL	1		HEM	1		upper panel	in	waste	M-09-108_15	H41635	33
Mitchell	2009	M-09-110	54.5	55.5	1.0	NM VOLC	PMON		SIH	4		HEM	1		upper panel	in	waste	M-09-110_13	H41793	33
Mitchell	2009	M-08-080	203	205	2.0	sw volc	SEDS		SIH	3					upper panel	in	waste	M-08-80_7	X14886	33
Mitchell	2009	M-08-087	93	95	2.0		SEDS		SIH	3					upper panel	in	waste	M-08-87_4	X18104	33
Mitchell	2009	M-09-110	58.5	59.5	1.0	NM VOLC	PMON		SIH	4		HEM	1		upper panel	in	waste	M-09-110_14	H41795	33
Mitchell	2009	M-08-088	70	72	2.0	sw volc	IVOL		CL	2		HEM	1		upper panel	in	waste	M-08-88_4	X18206	33
Mitchell	2009	M-09-110	46.5	47.5	1.0	NM VOLC	PMON		SIH	4		HEM	1		upper panel	in	waste	M-09-110_11	H41789	33
Mitchell	2009	M-09-097	159.5	160.5	1.0	NM VOLC	PMON		PR	3		MTH	1		upper panel	below	pit wall	M-09-97_38	H43147	33
Mitchell	2009	M-08-079	198.6	200.75	2.2	horn/prop	ANDS		SIH	1					upper panel	in	waste	M-08-79_11	X16844	33
Mitchell	2009	M-08-088	198	200	2.0	sw volc	SEDS		SIH	1		IARG	1		upper panel	outside	pit wall	M-08-88_9	X18278	33
Mitchell	2009	M-08-089	60	62	2.0	sw volc	SEDS		SIH	2		CL	1		upper panel	in	waste	M-08-89_3	X17892	33
Mitchell	2009	M-09-110	88.5	89.5	1.0	NM VOLC	PMON		SIH	5					upper panel	in	waste	M-09-110_21	H41812	33
Mitchell	2008	M-07-030	155	157	2.0	sw volc	PPFP		SIH	3					upper panel	in	waste	M-07-30_5	G36622	33
Mitchell	2009	M-08-088	99	101	2.0	sw volc	SARG		SIH	3		CL	1		upper panel	in	waste	M-08-88_5	X18223	33
Mitchell	2009	M-08-087	186	188	2.0		VU		SIL	4					upper panel	outside	pit wall	M-08-87_10	X18158	33
Mitchell	2009	M-09-110	98.5	99.5	1.0	HORN/PROP	FLTZ/VU		SI	2/2		IARG/QSP	1/2		lower panel	in	waste	M-09-110_23	H41818	33
Mitchell	2009	M-09-108	48.5	49.5	1.0	NM VOLC	VU		SIH	2		PSBX	1		upper panel	in	waste	M-09-108_12	H41629	33
Mitchell	2009	M-09-108	4.5	5.5	1.0	NM VOLC	VU		SIH	3		PSBX	2		upper panel	in	waste	M-09-108_1	H41604	33
Mitchell	2009	M-09-110	34.5	35.5	1.0	NM VOLC	PMON		SIH	3		HEM	3		upper panel	in	ore	M-09-110_8	H41782	33
Mitchell	2009	M-08-075	276	291.05	15.1	nm volc	VU		CL2	3		SIL	2		upper panel	in	waste	M-08-75_17	X16237	33
Mitchell	2009	M-08-080	206.2	224.2	18.0	sw volc	ANDS		CL	2/2					upper panel	in	waste	M-08-80_16	X14888	33
Mitchell	2009	M-09-108	44.5	45.5	1.0	NM VOLC	PMON		SIL	2		HEM	1		upper panel	in	waste	M-09-108_11	H41626	33
Mitchell	2008	M-07-027	151	153	2.0	highqtz	VU		SIH	3		SIH	3		upper panel	in	waste	M-07-27_6	G36209	33
Mitchell	2009	M-09-105	148.5	149.5	1.0	HIGHQTZ	PMON		SIL	3					upper panel	in	waste	M-09-105_5	H44022	33
Mitchell	2009	M-09-105	156.5	157.5	1.0	HIGHQTZ	VUTF		SIL	4					upper panel	in	waste	M-09-105_7	H44028	33
Mitchell	2009	M-08-088	33	36	3.0	sw volc	VU		CL	1					upper panel	in	waste	M-08-88_2	X18188	33
Mitchell	2009	M-09-097	167.5	168.5	1.0	NM VOLC	PMON		PR	3		MTH	1		upper panel	below	pit wall	M-09-97_40	H43151	33
Mitchell	2008	NM-05-03	188.8	190.6	1.8	nm volc	ANDS		SIH	2					upper panel	in	waste	NM-05-03_7	9374	33
Mitchell	2010	M-09-108	6	8	2.0	nm volc	VU		SIH	3		PSBX	2		upper panel	in	waste	M-09-108_39	H41605	33
Mitchell	2010	M-09-102	7.8	11.8	4.0	SW VOLC	VAXT		SIH	3		CL	1		upper panel	in	waste	H40976/77	H40976	33
Mitchell	2008	NM-05-02	310.6	312.1	1.5	nm monz	GRAN		PR	2					upper panel	in	waste	NM-05-02_10	9051	33
Mitchell	2009	M-09-110	80.5	81.5	1.0	NM VOLC	PMON		SIH	5					upper panel	in	waste	M-09-110_19	H41807	33
Mitchell	2008	NM-05-03	151.4	153.1	1.7	nm volc	ANDS		PR	2					upper panel	in	waste	NM-05-03_6	9352	33
Mitchell	2009	M-08-080	195	206.2	11.2	sw volc	SEDS		SIH	3					upper panel	in	waste	M-08-80_15	X14882	33
Mitchell	2009	M-09-101	239.5	240.5	1.0	sw volc	VAAT		SIH	3		IARG	1		upper panel	in	waste	M-09-101_5	H40886	33
Mitchell	2009	M-09-097	88.5	89.5	1.0	NM VOLC	PMON		KP	2					upper panel	in	waste	M-09-97_21	H43106	33

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highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2009	M-09-110	50.5	51.5	1.0	NM VOLC	PMON		SIH	4		HEM	1		upper panel	in	waste	M-09-110_12	H41791	33
Mitchell	2009	M-09-097	128.5	129.5	1.0	NM VOLC	PMON		KP	2		PR	1		upper panel	in	waste	M-09-97_31	H43129	33
Mitchell	2009	M-08-083	2.6	5	2.4	nm volc	IVOL		MTH	3					upper panel	in	waste	M-08-83_1	X17203	33
Mitchell	2009	M-09-097	140.5	141.5	1.0	NM VOLC	PMON		KP	2		PR	1		upper panel	in	waste	M-09-97_34	H43136	33
Mitchell	2009	M-08-079	151	153	2.0	horn/prop	ANDS		SIH	1					upper panel	in	waste	M-08-79_8	X16819	33
Mitchell	2008	M-08-075	204	220	16.0	nm volc	PMON		SIL	1/2		CL/CL	1/2		upper panel	in	waste	M-08-75_9	X16195	33
Mitchell	2009	M-08-089	1.35	3	1.7	sw volc	SEDS		SIH	2		CL	1		upper panel	in	waste	M-08-89_1	X17863	33
Mitchell	2009	M-08-075	671	683	12.0	nm volc	ANDS		CL	1		HEM	1		upper panel	below	pit wall	M-08-75_14	X16454	33
Mitchell	2008	M-07-030	44	46	2.0	sw volc	VULT		SIH	4					upper panel	in	waste	M-07-30_2	G36562	33
Mitchell	2009	M-09-097	163.5	164.5	1.0	NM VOLC	PMON		PR	3		MTH	1		upper panel	below	waste	M-09-97_39	H43149	33
Mitchell	2009	M-08-087	144	146	2.0		VU		CL	3		SIL	1		upper panel	below	pit wall	M-08-87_6	X18135	33
Mitchell	2009	M-09-108	78.5	79.5	1.0	NM VOLC	PMON		SIL	1		CL	1		upper panel	in	waste	M-09-108_16	H41644	33
Mitchell	2009	M-09-097	92.5	93.5	1.0	NM VOLC	PMON		KP	2					upper panel	in	waste	M-09-97_22	H43109	33
Mitchell	2009	M-08-080	289	291	2.0	sw volc	SEDS		SIH	4					upper panel	below	pit wall	M-08-80_10	X14933	33
Mitchell	2008	M-07-032	23	25	2.0	sw volc	VUTF		SIH	3					upper panel	in	waste	M-07-32_1	G36652	33
Mitchell	2008	M-07-033	206	208	2.0	sw volc	VU		SIH	4		CL	3		upper panel	outside	pit wall	M-07-33_9	G34782	33
Mitchell	2009	M-09-110	72.5	73.5	1.0	NM VOLC	PMON		SIH	5					upper panel	in	waste	M-09-110_17	H41803	33
Mitchell	2009	M-09-097	68.5	69.5	1.0	NM VOLC	PMON		KP	2					upper panel	in	waste	M-09-97_16	H43096	33
Mitchell	2010	M-09-102	40	44	4.0	SW VOLC	VAXT		CL	1		SIH	1		upper panel	in	waste	H40994/95	H40994	33
Mitchell	2009	M-09-110	84.5	85.5	1.0	NM VOLC	PMON		SIH	5					upper panel	in	waste	M-09-110_20	H41810	33
Mitchell	2009	M-09-097	84.5	85.5	1.0	NM VOLC	PMON		KP	2					upper panel	in	waste	M-09-97_20	H43104	33
Mitchell	2009	M-09-110	16.5	17.5	1.0	NM VOLC	PMON		SIH	3		HEM	3		upper panel	in	ore	M-09-110_4	H41772	33
Mitchell	2009	M-09-101	243.5	244.5	1.0	sw volc	VAAT		SIH	3		IARG	1		upper panel	below	waste	M-09-101_6	H40888	33
Mitchell	2009	M-08-087	123	125	2.0		SEDS		SIH	3					upper panel	in	waste	M-08-87_5	X18120	33
Mitchell	2009	M-09-105	132.5	133.5	1.0	HIGHQTZ	PMON		SIL	3					upper panel	in	waste	M-09-105_1	H44014	33
Mitchell	2010	M-09-101	180	182	2.0	SW VOLC	SEDS		SIL	2					upper panel	in	waste	H40855	H40855	33
Mitchell	2008	M-07-030	185	187	2.0	sw volc	VUTF		SIH	3					upper panel	in	waste	M-07-30_6	G36639	33
Mitchell	2009	M-09-105	176.5	177.5	1.0	HIGHQTZ	PMON		SIL	3		IARG	3		upper panel	in	waste	M-09-105_12	H44038	33
Mitchell	2009	M-08-087	154.7	156	1.3		VU		SIL	3					upper panel	outside	pit wall	M-08-87_7	X18142	33
Mitchell	2009	M-09-097	171.5	172.5	1.0	NM VOLC	PMON		PR	3		MTH	1		upper panel	below	waste	M-09-97_41	H43153	33
Mitchell	2009	M-09-110	76.5	77.5	1.0	NM VOLC	PMON		SIH	5					upper panel	in	waste	M-09-110_18	H41805	33
Mitchell	2008	M-07-033	64	66	2.0	sw monz	PQMZ		SIL	5					upper panel	in	waste	M-07-33_3	G34704	33
Mitchell	2010	M-09-107	160	164	4.0	HIGHQTZ	PMON		SIH	4					upper panel	in	ore	H44230/31	H44230	33
Mitchell	2009	M-08-089	30	32	2.0	sw volc	SEDS		SIH	2		CL	1		upper panel	in	waste	M-08-89_2	X17877	33
Mitchell	2008	M-07-027	109	111	2.0	highqtz	VU		SIH	3		SIH	3		upper panel	in	waste	M-07-27_5	G36186	33
Mitchell	2010	M-09-108	20	22	2.0	nm volc	VU		SIH	3		PSBX	2		upper panel	in	waste	M-09-108_42	H41613	33
Mitchell	2009	M-09-110	14.5	15.5	1.0	NM VOLC	PMON		SIH	3		HEM	3		upper panel	in	ore	M-09-110_3	H41771	33
Mitchell	2009	M-08-085	4	6	2.0	nm volc	IVOL								upper panel	in	waste	M-08-85_1	X17306	33
Mitchell	2008	NM-05-03	230.3	232.2	1.9	nm volc	ANDS		SIH	2					upper panel	in	waste	NM-05-03_8	9399	33
Mitchell	2008	M-07-033	172	174	2.0	sw volc	VU		CL	4		KP	3		upper panel	outside	pit wall	M-07-33_8	G34763	33
Mitchell	2009	M-09-101	227.5	228.5	1.0	sw volc	VAAT		SIH	3		IARG	1		upper panel	in	waste	M-09-101_2	H40880	33
Mitchell	2009	M-08-085	44	46	2.0	nm volc	SEDS		MTH	4		HEM	1		upper panel	in	waste	M-08-85_3	X17327	33
Mitchell	2009	M-08-087	56	58	2.0		VUTF		SIL	2		CL	1		upper panel	in	waste	M-08-87_2	X18084	33
Mitchell	2009	M-08-088	174	177	3.0	sw volc	FLTZ								upper panel	below	pit wall	M-08-88_8	X18265	33
Mitchell	2009	M-09-110	30.5	31.5	1.0	NM VOLC	PMON		SIH	3		HEM	3		upper panel	in	ore	M-09-110_7	H41780	33
Mitchell	2009	M-09-110	42.5	43.5	1.0	NM VOLC	PMON		SIH	3		HEM	3		upper panel	in	ore	M-09-110_10	H41787	33
Mitchell	2009	M-08-085	24	26	2.0	nm volc	SEDS		MTH	4					upper panel	in	waste	M-08-85_2	X17317	33
Mitchell	2008	M-07-032	188	190	2.0	sw volc	VUTF		SIH	4			2		upper panel	in	waste	M-07-32_6	G36745	33
Mitchell	2009	M-08-075	200	202	2.0	nm monz	PMON		SIL	1		CL	1		upper panel	in	waste	M-08-75_28	X16193	33
Mitchell	2010	M-09-108	36	38	2.0	nm volc	VU		SIH	3		PSBX	2		upper panel	in	waste	M-09-108_46	H41621	33

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2008	NM-05-02	235.6	237.6	2.0	nm monz	GRAN		SIL	2					upper panel	in	waste	NM-05-02_7	9008	33
Mitchell	2008	M-07-031	11	13	2.0	sw volc	ANDS		SIH	3					upper panel	in	waste	M-07-31_1	G34556	33
Mitchell	2008	NM-05-02	270.6	272.4	1.8	nm monz	GRAN		SIL	2					upper panel	in	waste	NM-05-02_8	9027	33
Mitchell	2010	M-09-107	80	82	2.0	HIGHQTZ	PMON		SIH	4					upper panel	in	waste	H44187	H44187	33
Mitchell	2010	M-09-108	32	34	2.0	nm volc	VU		SIH	3		PSBX	2		upper panel	in	waste	M-09-108_45	H41619	33
Mitchell	2008	M-07-027	56	58	2.0	highqtz	IVOL		SIH	4		SIH	4		upper panel	in	waste	M-07-27_3	G36155	33
Mitchell	2009	M-09-110	38.5	39.5	1.0	NM VOLC	PMON		SIH	3		HEM	3		upper panel	in	ore	M-09-110_9	H41785	33
Mitchell	2009	M-09-110	26.5	27.5	1.0	NM VOLC	PMON		SIH	3		HEM	3		upper panel	in	ore	M-09-110_6	H41778	33
Mitchell	2008	M-07-027	74	76	2.0	sw volc	VULT		SIH	2					upper panel	in	waste	M-07-27_4	G36165	33
Mitchell	2010	M-09-108	28	30	2.0	nm volc	VU		SIH	3		PSBX	2		upper panel	in	waste	M-09-108_44	H41617	33
Mitchell	2008	M-07-033	151.8	154.6	2.8	sw volc	PQMZ		SIL	3					upper panel	outside	pit wall	M-07-33_7	G34753	33
Mitchell	2010	M-09-105	80	84	4.0	HIGHQTZ	FLTZ		SIH	2		CARB	1		upper panel	in	waste	H43984/85	H43984	33
Mitchell	2010	M-09-108	24	26	2.0	nm volc	VU		SIH	3		PSBX	2		upper panel	in	waste	M-09-108_43	H41615	33
Mitchell	2010	M-06-020	118	120.7	2.7	NM VOLC	PPFP		HEM	4					upper panel	outside	pit wall	G33506/07	G33506	33
Mitchell	2010	M-09-108	12	14	2.0	nm volc	VU		SIH	3		PSBX	2		upper panel	in	waste	M-09-108_40	H41608	33
Mitchell	2010	M-09-108	16	18	2.0	nm volc	VU		SIH	3		PSBX	2		upper panel	in	waste	M-09-108_41	H41610	33
Mitchell	2010	M-09-108	40.1	42	1.9	nm volc	PMON		SIL	2		HEM	1		upper panel	in	waste	M-09-108_47	H41622	33
Mitchell	2010	M-09-108	44	45.5	1.5	nm volc	PMON		SIL	2-Jan		HEM	1		upper panel	in	waste	M-09-108_48	H41626	33
Mitchell	2010	M-07-058	417	421	4.0	QSP	VUTF		QSP	4					lower panel	below	pit wall	X10676/77	X10676	34
Mitchell	2010	M-08-072	258	262	4.0	QSP	VUTF		QSP	2					lower panel	below	pit wall	X13711/12/13	X13711	34
Mitchell	2010	M-08-072	238	246	8.0	QSP	VUTF		QSP	2					lower panel	in	ore	X13701/03/04	X13701	34
Mitchell	2008	M-06-015	300	302	2.0		VU		QSPSTW	3					lower panel	outside	pit wall	M-06-15_9	G33182	34
Mitchell	2008	S91-395	179.5	182.5	3.0		SEDS		QC						lower panel	in	ore	S91-395_5	S91-395_5431	34
Mitchell	2008	M-07-043	38	40	2.0		QTVN		QTVN	5					lower panel	in	ore	M-07-43_1	G37665	34
Mitchell	2008	S91-387	135.9	138.9	3.0		SEDS		QS						lower panel	in	ore	S91-387_4	S91-387_5210	34
Mitchell	2008	M-06-004	184	186	2.0		VU		QSPSTW	6					lower panel	below	pit wall	M-06-04_5	G21564	34
Mitchell	2010	M-07-037	339	339	0.0	IARG	VATF		IARG	3					lower panel	below	waste	G37341/42	G37342	34
Mitchell	2008	S91-395	137.5	140.5	3.0		SEDS		QC						lower panel	in	ore	S91-395_4	S91-395_5417	34
Mitchell	2008	M-07-034	7.5	9	1.5		VU		CL	5		QSP	4		lower panel	in	ore	M-07-34_1	G36847	34
Mitchell	2008	S91-387	102.9	105.9	3.0		SEDS		QC						lower panel	in	ore	S91-387_3	S91-387_5199	34
Mitchell	2010	M-08-071	236.75	242	5.3	IARG	VUTF		IARG	4					lower panel	below	pit wall	X13520/22	X13520	34
Mitchell	2008	S91-387	53.7	56.7	3.0		SEDS		QS						lower panel	in	ore	S91-387_2	S91-387_5179	34
Mitchell	2008	M-07-044	214	216	2.0		VUTF		QSP	2					lower panel	in	ore	M-07-44_7	G37937	34
Mitchell	2008	S91-386	0	3	3.0		SEDS		QC						lower panel	in	ore	S91-386_1	S91-386_5101	34
Mitchell	2008	S91-386	149.8	152.8	3.0		SEDS		QC						lower panel	in	ore	S91-386_4	S91-386_5158	34
Mitchell	2010	M-07-037	317	321	4.0	IARG	VATF		IARG	3					lower panel	in	ore	G37330/31	G37330	34
Mitchell	2008	M-06-004	270	272	2.0		VU		QSPSTW	6					lower panel	outside	pit wall	M-06-04_7	G22009	34
Mitchell	2008	M-06-016	344	346	2.0	iarg	VAXT		IARG	3					lower panel	below	pit wall	M-06-16_10	G33396	34
Mitchell	2008	S91-386	108.4	111.4	3.0		SEDS		QC						lower panel	in	ore	S91-386_3	S91-386_5141	34
Mitchell	2008	M-07-034	20	22	2.0		VU		CL	5		QSP	4		lower panel	in	ore	M-07-34_2	G36855	34
Mitchell	2008	M-07-052	98.3	100	1.7		VU		QTVN	6		QSPSTWK	4		lower panel	in	ore	M-07-52_4	X05423	34
Mitchell	2008	M-06-004	220	222	2.0		VU		QSPSTW	6					lower panel	outside	pit wall	M-06-04_6	G21583	34
Mitchell	2008	S91-386	51.4	54.4	3.0		SEDS		QC						lower panel	in	ore	S91-386_2	S91-386_5122	34
Mitchell	2008	M-07-043	70	72	2.0		VU		QSPSTW	6					lower panel	in	ore	M-07-43_2	G37684	34
Mitchell	2008	S91-395	102.5	105.5	3.0		SEDS		QC						lower panel	in	ore	S91-395_3	S91-395_5405	34
Mitchell	2008	M-06-004	130	132	2.0		VU		QSPSTW	6					lower panel	in	waste	M-06-04_4	G21535	34
Mitchell	2008	M-07-052	154	156	2.0		VU		QSPSTW	6					lower panel	in	ore	M-07-52_5	X05453	34
Mitchell	2008	M-07-043	256	258	2.0		VALT		QSP	4		IARG	2		lower panel	outside	pit wall	M-07-43_7	G37785	34
Mitchell	2010	M-09-107	219	223	4.0	HIGHQTZ	VU/VU		QSPSTW	5					lower panel	in	ore	H44363/64	H44263	34
Mitchell	2009	M-08-064	285	287	2.0	iarg	VU		QSP	6					lower panel	in	ore	M-08-64_8	X11530	34

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2010	M-06-001	280	284	4.0	IARG	VU		QSP	5					lower panel	in	ore	G21048	G21048	34
Mitchell	2008	M-06-004	80	82	2.0		VU								lower panel	in	waste	M-06-04_3	G21508	34
Mitchell	2010	M-07-050	280	284	4.0	IARG	SARG		HFLS	4		QSP	1		lower panel	below	pit wall	X05339/41	X05339	34
Mitchell	2008	M-06-015	262	264	2.0		VU		QSP	5					lower panel	in	ore	M-06-15_8	G33162	34
Mitchell	2009	M-09-096	203.5	204.5	1.0	IARG	IVOL		QSP	3					lower panel	in	ore	M-09-96_5	H43405	34
Mitchell	2010	M-09-103	242	244	2.0		VU		CL	3		IARG	3		lower panel	in	ore	M-09-103_57	H43880	34
Mitchell	2008	M-07-043	100	102	2.0		VU		QSPSTW	6					lower panel	in	ore	M-07-43_3	G37699	34
Mitchell	2008	M-07-052	62	65	3.0		VU		QSPSTW	6					lower panel	in	ore	M-07-52_2	X05402	34
Mitchell	2009	M-08-064	329	331	2.0		VU		QSP	6					lower panel	in	ore	M-08-64_9	X11553	34
Mitchell	2008	M-07-043	300	302	2.0		VALT		QSP	4		IARG	2		lower panel	outside	pit wall	M-07-43_8	G37809	34
Mitchell	2010	M-08-092	360	366	6.0	HIGHQTZ	VU		CLSTW	5			0		lower panel	below	pit wall	X19143/44/45	X19143	34
Mitchell	2008	M-06-015	224	226	2.0		VU		QSPSTW	3					lower panel	in	ore	M-06-15_7	G33142	34
Mitchell	2008	M-06-004	44	46	2.0		VATF		QSP	2					lower panel	in	ore	M-06-04_2	G21490	34
Mitchell	2009	M-08-065	250	252	2.0		VULT		CL	3		QSP	3		lower panel	in	ore	M-08-65_7	X06441	34
Mitchell	2008	M-07-043	136	138	2.0		FLTZ		QSPSTW	6					lower panel	in	ore	M-07-43_4	G37719	34
Mitchell	2010	M-09-109	180	182	2.0	IARG	VU		IARG	4		CL	2		lower panel	in	ore	H44434	H44434	34
Mitchell	2010	M-07-024E	498.8	500.8	2.0	QSP	IVOL		IARG	4		CL	1		lower panel	in	ore	G36074	G36074	34
Mitchell	2008	M-06-004	22	24	2.0		VATF		QTVN	6					lower panel	in	ore	M-06-04_1	G21477	34
Mitchell	2008	M-07-060	58	60	2.0	iarg	VU		IARG	3		QSP	2		lower panel	in	ore	M-07-60_3	X14258	34
Mitchell	2009	M-09-096	187.5	188.5	1.0	IARG	IVOL		QSP	3					lower panel	in	ore	M-09-96_2	H43397	34
Mitchell	2009	M-09-096	195.5	196.5	1.0	IARG	IVOL		QSP	3					lower panel	in	ore	M-09-96_4	H43401	34
Mitchell	2009	M-09-096	183.5	184.5	1.0	IARG	IVOL		QSP	3					lower panel	in	ore	M-09-96_1	H43395	34
Mitchell	2009	M-09-096	199.5	200.5	1.0	IARG	IVOL		QSP	3					lower panel	in	ore	M-09-96_7	H43403	34
Mitchell	2008	M-07-060	92	94	2.0		VU		QSP	3		SIL	3		lower panel	in	waste	M-07-60_4	X14278	34
Mitchell	2008	M-06-014	107	109	2.0	iarg	VATF		IARG	3					lower panel	in	ore	M-06-14_3	E217257	34
Mitchell	2008	M-06-004	300	302	2.0		VU		QSPSTW	6					lower panel	outside	pit wall	M-06-04_8	G22025	34
Mitchell	2008	S91-395	52.7	55.8	3.1		SEDS		QC						lower panel	in	ore	S91-395_2	S91-395_5388	34
Mitchell	2009	M-09-108	192.5	193.5	1.0	IARG	VU		IARG	4		CL	1		lower panel	in	waste	M-09-108_38	H41708	34
Mitchell	2010	M-07-035	476	482	6.0	HIGHQTZ	VU		QSPSTW	6					lower panel	below	pit wall	G35241/42/43	G35241	34
Mitchell	2009	M-08-064	205	207	2.0		VU		QSP	6					lower panel	in	ore	M-08-64_6	X11486	34
Mitchell	2009	M-09-106	18.5	19.5	1.0	IARG	VU		CL	4		QSP	3		lower panel	in	ore	M-09-106_4	H41422	34
Mitchell	2008	M-07-044	178	180	2.0	iarg	VATF		IARG	3					lower panel	in	ore	M-07-44_6	G37917	34
Mitchell	2009	M-09-096	191.5	192.5	1.0	IARG	IVOL		QSP	3					lower panel	in	ore	M-09-96_3	H43399	34
Mitchell	2008	M-07-052	208	210	2.0		VU		QSP	4		IARG	2		lower panel	in	ore	M-07-52_6	X05483	34
Mitchell	2008	M-06-012	45	47	2.0	iarg	VATF		IARG	1					lower panel	in	waste	M-06-12_2	G24020	34
Mitchell	2010	M-07-056	337.2	341.25	4.1	IARG	VU		IARG	3		QSP	3		lower panel	below	pit wall	X14180/81	X14180	34
Mitchell	2009	M-09-096	207.5	208.5	1.0	IARG	IVOL		QSP	3					lower panel	below	pit wall	M-09-96_6	H43407	34
Mitchell	2009	M-09-112	56.5	57.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_1	H42161	34
Mitchell	2009	M-08-064	2.7	5	2.3		VU		IARG	4		CL	2		lower panel	in	ore	M-08-64_1	X11377	34
Mitchell	2010	M-07-058	400	402	2.0	CL-PR	VATF		CL	2		QSP	2		lower panel	in	ore	X10664/65	X10664	34
Mitchell	2008	M-07-043	176	178	2.0		VU		IARG	5		QSP	1		lower panel	in	ore	M-07-43_5	G37739	34
Mitchell	2009	M-09-108	188.5	189.5	1.0	IARG	VU/FLTZ		IARG	4/3		CL/CL	1/2		lower panel	in	waste	M-09-108_37	H41706	34
Mitchell	2008	M-07-034	178	180	2.0		VALT		CL	4		IARG	3		lower panel	in	ore	M-07-34_6	G36943	34
Mitchell	2010	M-07-035	455	460.25	5.3	HIGHQTZ	VALT		QSP	3		KP	2		lower panel	in	ore	G35228/29/30	G35228	34
Mitchell	2010	M-07-025	437	441	4.0	CL-PR	VALT		CL	3					lower panel	in	ore	G32981/82	G32981	34
Mitchell	2010	M-08-069	458	464	6.0	CL-PR	PSBX		CL	3		QSP	3		lower panel	in	ore	X15427/28/29	X15427	34
Mitchell	2009	M-09-112	60.5	61.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_2	H42163	34
Mitchell	2008	M-07-044	265	267	2.0		VUTF		QSP	4					lower panel	in	ore	M-07-44_8	G37966	34
Mitchell	2010	M-06-002	420	424	4.0	QSP	VALT		IARG	3					lower panel	in	ore	G21286/87	G21287	34
Mitchell	2008	M-07-034	60	62	2.0		VU		CL	5		QSP	1		lower panel	in	ore	M-07-34_3	G36878	34

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2009	M-08-076	168	170	2.0		VU		QSP	2		CL2	1		lower panel	in	ore	M-08-76_5	X14630	34
Mitchell	2010	M-09-103	230	232	2.0		VU		CL	3		IARG	3		lower panel	in	ore	M-09-103_58	H43874	34
Mitchell	2008	M-06-015	182	184	2.0		PPFP		QSPSTW	3					lower panel	in	ore	M-06-15_6	G33119	34
Mitchell	2008	M-06-016	270	272	2.0	iarg	VATF		IARG	1					lower panel	in	waste	M-06-16_8	G33357	34
Mitchell	2010	M-07-056	319	323	4.0	IARG	VU		IARG	3		QSP	3		lower panel	in	ore	X14171/72	X14171	34
Mitchell	2009	M-09-112	72.5	73.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_5	H42169	34
Mitchell	2010	M-08-071	220	222	2.0	IARG	VUTF		IARG	2					lower panel	in	waste	X13511	X13511	34
Mitchell	2009	M-09-110	138.5	139.5	1.0	IARG	VU		SI	2		QSP	2		lower panel	in	waste	M-09-110_31	H41839	34
Mitchell	2009	M-08-065	208	210	2.0		VULT		QSP	4		CL2	2		lower panel	in	ore	M-08-65_6	X06419	34
Mitchell	2008	M-06-012	85	87	2.0	cl-pr	VAXT		PR	2					lower panel	in	waste	M-06-12_3	G24041	34
Mitchell	2008	M-06-012	5.4	7	1.6	iarg	VATF		IARG	1					lower panel	in	waste	M-06-12_1	G23998	34
Mitchell	2009	M-08-065	369	371	2.0		VULT		CL2	3		KP	2		lower panel	in	ore	M-08-65_10	X15009	34
Mitchell	2008	M-06-014	275	277	2.0	iarg	VALT		PR	2					lower panel	in	ore	M-06-14_7	G32047	34
Mitchell	2008	M-07-045	54.65	56	1.4		VALT		QSP	5		IARG	1		lower panel	in	ore	M-07-45_2	G35583	34
Mitchell	2009	M-08-065	287	289	2.0		VULT		CL	3		KP	2		lower panel	in	ore	M-08-65_8	X06463	34
Mitchell	2008	M-06-023	250	252	2.0	cl-pr	SARG		QSP	3					lower panel	outside	pit wall	M-06-23_8	G33796	34
Mitchell	2009	M-08-062	283	285	2.0		VUTF		QSPSTW	6					lower panel	in	ore	M-08-62_8	X11008	34
Mitchell	2010	M-09-103	211	213	2.0		VU		IARG	3					lower panel	in	ore	M-09-103_41	H43862	34
Mitchell	2009	M-08-064	369	371	2.0	iarg	VU		CL	4		IARG	1		lower panel	in	ore	M-08-64_10	X11578	34
Mitchell	2010	M-09-103	28	30	2.0		VU		IARG	3					lower panel	in	ore	M-09-103_69	H43766	34
Mitchell	2008	M-06-015	140	142	2.0	iarg	ANDS		QSP	5					lower panel	in	ore	M-06-15_4	G33097	34
Mitchell	2008	M-06-016	380	382	2.0	qsp	VUAT		QSPSTW	6					lower panel	outside	pit wall	M-06-16_11	G33415	34
Mitchell	2010	M-09-099	259	261	2.0	CL-PR	VU		QSP	3		CL	2		lower panel	in	ore	H43518	H43518	34
Mitchell	2009	M-08-062	323	325	2.0		VUTF		QSPSTW	6					lower panel	outside	pit wall	M-08-62_9	X11031	34
Mitchell	2010	M-08-063	375	380.1	5.1	CL-PR	VULT		CL2	3		KP	2		lower panel	in	ore	X06150/51	X06146	34
Mitchell	2009	M-08-064	407	409	2.0		VU		CL	4		IARG	1		lower panel	below	pit wall	M-08-64_11	X11599	34
Mitchell	2009	M-09-112	148.5	149.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_24	H42210	34
Mitchell	2008	M-07-043	220	222	2.0		VALT		IARG	4		QSP	1		lower panel	outside	pit wall	M-07-43_6	G37765	34
Mitchell	2008	M-06-016	420	422	2.0	qsp	IVOL		QSP	3					lower panel	outside	pit wall	M-06-16_12	G33436	34
Mitchell	2010	M-08-092	342	344	2.0	HIGHQTZ	PMON		CL2	3		KP	1		lower panel	in	ore	X19131	X19131	34
Mitchell	2010	M-08-090	459	461	2.0	CL-PR	VULT		IARG	3		CL	1		lower panel	below	pit wall	X12874	X12874	34
Mitchell	2008	M-06-015	94	96	2.0		ANDS		IARG	5					lower panel	in	ore	M-06-15_3	G33072	34
Mitchell	2009	M-09-108	126.5	127.5	1.0	QSP	VU		SIL	3		PSBX	2		lower panel	in	waste	M-09-108_22	H41673	34
Mitchell	2009	M-08-065	167	169	2.0		VULT		CL2	3		IARG	1		lower panel	in	ore	M-08-65_5	X06396	34
Mitchell	2010	M-09-103	286.1	287.5	1.4		VU		IARG	3					lower panel	in	ore	M-09-103_67	H43905	34
Mitchell	2009	M-09-110	130.5	131.5	1.0	IARG	VU		SI	2		QSP	2		lower panel	in	waste	M-09-110_29	H41835	34
Mitchell	2010	M-09-103	24	26	2.0		VU		IARG	3		CL	2		lower panel	in	ore	M-09-103_64	H43762	34
Mitchell	2010	M-07-050	262	266	4.0	IARG	SARG		HFLS	4		QSP	1		lower panel	in	waste	X05329/30	X05329	34
Mitchell	2008	M-07-027	190	192	2.0		VU		QSPSTW	3-Jan					lower panel	in	ore	M-07-27_7	G36231	34
Mitchell	2008	M-07-045	20	22	2.0		VALT		IARG	4					lower panel	in	ore	M-07-45_1	G35563	34
Mitchell	2009	M-09-110	117.5	118.5	1.0	QSP	VU		SI	2		QSP	2		lower panel	in	waste	M-09-110_26	H41829	34
Mitchell	2009	M-09-106	276.5	277.5	1.0	CL-PR	VU		CL	3		IARG	2		lower panel	below	pit wall	M-09-106_19	H41561	34
Mitchell	2010	M-09-103	254	256	2.0		VU		CL	3					lower panel	in	ore	M-09-103_62	H43887	34
Mitchell	2008	M-07-041	114.3	116	1.7		SEDS		QSP	4					lower panel	in	waste	M-07-41_6	G37602	34
Mitchell	2008	M-07-032	311	313	2.0		VATF		QSP	2					lower panel	outside	pit wall	M-07-32_9	G36814	34
Mitchell	2008	M-06-015	176	178	2.0		VU		QSPSTW	3					lower panel	in	ore	M-06-15_5	G33116	34
Mitchell	2009	M-08-064	247	249	2.0		VU		QSP	3		CL	2		lower panel	in	ore	M-08-64_7	X11508	34
Mitchell	2009	M-09-112	212.5	213.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_40	H42245	34
Mitchell	2008	M-07-032	275	277	2.0		VATF		QSP	2					lower panel	below	pit wall	M-07-32_8	G36794	34
Mitchell	2008	M-07-035	156	158	2.0		VALT		CL	4		IARG	1		lower panel	in	ore	M-07-35_5	G35060	34

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2008	M-06-014	79	81	2.0	iarg	VAXT		IARG	2		PR		1	lower panel	in	ore	M-06-14_2	E217242	34
Mitchell	2010	M-09-103	69	71	2.0		VU		CL	4					lower panel	in	ore	M-09-103_53	H43780	34
Mitchell	2008	M-06-021	22	24	2.0		PQMZ		SI	4					lower panel	outside	pit wall	M-06-21_9	G32420	34
Mitchell	2009	M-09-112	220.5	221.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	ore	M-09-112_42	H42249	34
Mitchell	2009	M-09-108	150.5	151.5	1.0	IARG	VU		IARG	3		SIL	1		lower panel	in	waste	M-09-108_28	H41685	34
Mitchell	2008	NM-05-02	336.9	339	2.1	nm volc	GRAN		SIL	2		QSP	2		upper panel	in	waste	NM-05-03_1	9069	34
Mitchell	2009	M-09-103	26.5	27.5	1.0	IARG	VU		CL2	3					lower panel	in	ore	M-09-103_1	H43765	34
Mitchell	2010	M-08-090	420	424	4.0	CL-PR	VULT		CL	2		QSP			lower panel	in	ore	X12852/53	X12852	34
Mitchell	2009	M-09-103	282.5	283.5	1.0	IARG	VU		CL	3					lower panel	outside	pit wall	M-09-103_31	H43903	34
Mitchell	2008	M-07-035	190	192	2.0		VALT		CL	4		IARG	1		lower panel	in	ore	M-07-35_6	G35079	34
Mitchell	2008	M-06-014	45	47	2.0	iarg	VAXT		IARG	1					lower panel	in	waste	M-06-14_1	E217224	34
Mitchell	2008	M-07-027	231	233	2.0		VU		QSP	5		QSP	4		lower panel	in	waste	M-07-27_8	G36254	34
Mitchell	2009	M-09-106	54.5	55.5	1.0	IARG	VU		CL	4		QSP	3		lower panel	in	ore	M-09-106_13	H41441	34
Mitchell	2009	M-09-106	280.5	281.5	1.0	CL-PR	VU		CL	3		IARG	2		lower panel	below	pit wall	M-09-106_20	H41563	34
Mitchell	2008	M-06-015	50	52	2.0		ANDS		IARG	3					lower panel	in	ore	M-06-15_2	G33049	34
Mitchell	2009	M-09-112	120.5	121.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_17	H42195	34
Mitchell	2008	M-06-014	449	451	2.0	cl-pr	VAXT		QSP	1					lower panel	in	ore	M-06-14_10	G32137	34
Mitchell	2009	M-09-106	26.5	27.5	1.0	IARG	VU		CL	4		QSP	3		lower panel	in	ore	M-09-106_6	H41427	34
Mitchell	2008	M-07-059	102	104	2.0		VATF		CL	3		CL	2		lower panel	in	ore	M-07-59_3	X12417	34
Mitchell	2008	M-06-023	208	210	2.0	cl-pr	SARG		SIL	4					lower panel	below	pit wall	M-06-23_7	G33773	34
Mitchell	2010	M-08-073	297.8	300	2.2	CL-PR	VULT		CL2	2		QSP	2		lower panel	in	ore	X13902	X13902	34
Mitchell	2008	M-07-052	22	24	2.0		VU		IARG	3		QSP	1		lower panel	in	ore	M-07-52_1	X05383	34
Mitchell	2009	M-09-106	272.5	273.5	1.0	CL-PR	VU		CL	3		IARG	2		lower panel	below	pit wall	M-09-106_18	H41559	34
Mitchell	2009	M-08-083	143	145	2.0	iarg	VU		QSP	3		IARG	1		lower panel	in	waste	M-08-83_8	X17281	34
Mitchell	2009	M-09-112	204.5	205.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_38	H42240	34
Mitchell	2008	M-07-059	132	134	2.0		VATF		QSP	3		CL	2		lower panel	in	ore	M-07-59_4	X12432	34
Mitchell	2009	M-09-108	174.5	175.5	1.0	IARG	VU		IARG	4		CL	1		lower panel	in	waste	M-09-108_34	H41699	34
Mitchell	2008	M-07-035	252	254	2.0		VALT		QSP	5		KP	2		lower panel	in	ore	M-07-35_8	G35113	34
Mitchell	2008	M-07-060	112	114	2.0		VU		QSP	3		SIL	3		lower panel	in	waste	M-07-60_5	X14288	34
Mitchell	2009	M-09-112	224.5	225.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	ore	M-09-112_43	H42251	34
Mitchell	2009	M-09-106	30.5	31.5	1.0	IARG	VU		CL	4		QSP	3		lower panel	in	ore	M-09-106_7	H41429	34
Mitchell	2008	M-07-031	134	136	2.0		QTVN		CL	3					lower panel	in	ore	M-07-31_5	G34623	34
Mitchell	2008	M-06-019	12	14	2.0	iarg	VATF		IARG	1					lower panel	in	waste	M-06-19_1	G32259	34
Mitchell	2010	M-09-103	215	217	2.0		VU		CL	3		IARG	1		lower panel	in	ore	M-09-103_61	H43864	34
Mitchell	2010	M-08-063	59	75	16.0	IARG	VUTF		CL	3		IARG	2		lower panel	in	ore	X06946	X06946	34
Mitchell	2008	M-06-016	90	92	2.0	iarg	VATF		IARG	2					lower panel	in	waste	M-06-16_4	G33259	34
Mitchell	2009	M-09-112	168.5	169.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_29	H42221	34
Mitchell	2010	M-09-103	238	240	2.0		VU		CL	3		IARG	3		lower panel	in	ore	M-09-103_63	H43878	34
Mitchell	2009	M-09-108	118.5	119.5	1.0	HORN/PROP	VU		SIL	3		PSBX	2		lower panel	in	waste	M-09-108_20	H41669	34
Mitchell	2008	M-07-032	240	242	2.0		VUTF		IARG	2					lower panel	in	waste	M-07-32_7	G36775	34
Mitchell	2009	M-09-108	180.5	181.5	1.0	IARG	VU		IARG	4		CL	1		lower panel	in	waste	M-09-108_35	H41702	34
Mitchell	2010	M-09-103	250	252	2.0		VU		CL	3					lower panel	in	ore	M-09-103_44	H43885	34
Mitchell	2010	M-07-047	417	423	6.0	CL-PR	VATF		CL	3		QSP	2		lower panel	in	ore	X05177/79	X05177	34
Mitchell	2009	M-09-100	108.5	109.5	1.0	CL-PR	IVOL		PR	2		CL	1		lower panel	in	ore	M-09-100_3	H40630	34
Mitchell	2010	M-09-103	246	248	2.0		VU		CL	3					lower panel	in	ore	M-09-103_66	H43882	34
Mitchell	2010	M-08-073	343	345	2.0	HIGHQTZ	VU		CL	2		QSP	1		lower panel	below	pit wall	X13930	X13930	34
Mitchell	2008	M-06-021	160	162	2.0	cl-pr	VAXT		PR	1					lower panel	outside	pit wall	M-06-21_5	G32496	34
Mitchell	2009	M-09-112	116.5	117.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_16	H42193	34
Mitchell	2010	M-09-103	220	222	2.0		VU		CL	3		IARG	1		lower panel	in	ore	M-09-103_71	H43868	34
Mitchell	2010	M-09-103	258	260	2.0		VU		CL	3					lower panel	in	ore	M-09-103_59	H43890	34

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2009	M-08-083	149	163	14.0	iarg	VU		QSP	3		IARG	1		lower panel	in	waste	M-08-83_13	X17284	34
Mitchell	2009	M-09-112	208.5	209.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_39	H42242	34
Mitchell	2009	M-08-064	165	167	2.0		VU		CL	3		IARG	2		lower panel	in	ore	M-08-64_5	X11464	34
Mitchell	2009	M-09-103	260.5	261.5	1.0	IARG	VU		CL	3					lower panel	below	pit wall	M-09-103_26	H43891	34
Mitchell	2009	M-08-065	328	330	2.0		VULT		CL2	4		IARG	2		lower panel	in	ore	M-08-65_9	X06485	34
Mitchell	2009	M-08-089	279	281	2.0		VU		CL	3		IARG	1		lower panel	outside	pit wall	M-08-89_10	X12614	34
Mitchell	2009	M-09-112	216.5	217.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_41	H42247	34
Mitchell	2010	M-07-026	419	423	4.0	CL-PR	VALT		QSP	3		CL	2		lower panel	below	pit wall	G34338/39	G34338	34
Mitchell	2009	M-09-106	58.5	59.5	1.0	IARG	VU		CL	4		QSP	3		lower panel	in	ore	M-09-106_14	H41443	34
Mitchell	2008	M-07-059	60	62	2.0		VATF		QSP	3		CL	2		lower panel	in	ore	M-07-59_2	X12393	34
Mitchell	2009	M-09-112	104.5	105.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_13	H42186	34
Mitchell	2009	M-09-108	138.5	139.5	1.0	QSP	VU		IARG	3		SIL	1		lower panel	in	waste	M-09-108_25	H41679	34
Mitchell	2009	M-09-108	142.5	143.5	1.0	QSP	VU		IARG	3		SIL	1		lower panel	in	waste	M-09-108_26	H41681	34
Mitchell	2008	M-06-019	134	136	2.0	iarg	VATF		IARG	4					lower panel	in	ore	M-06-19_4	G32325	34
Mitchell	2010	M-07-025	457	463	6.0	CL-PR	VALT		CL	5					lower panel	below	pit wall	G32992	G32992	34
Mitchell	2008	M-07-035	84	86	2.0	iarg	VALT		IARG	4		QSP	2		lower panel	in	ore	M-07-35_3	G35021	34
Mitchell	2009	M-09-099	273.5	274.5	1.0	QSP	VU		QSP	3		CL	2		lower panel	in	ore	M-09-99_1	H43525	34
Mitchell	2008	M-07-044	160	162	2.0	iarg	VUTF		IARG	4		CL	2		lower panel	in	ore	M-07-44_5	G37907	34
Mitchell	2009	M-08-075	766	782	16.0	qsp	VU		QSP	4/3		/QSP	1		lower panel	below	pit wall	M-08-75_19	X16510	34
Mitchell	2008	M-07-052	312	314	2.0		SARG		HFLS	3		QSP	1		lower panel	in	ore	M-07-52_9	X05538	34
Mitchell	2010	M-07-045	359	363	4.0	CL-PR	VALT		CL2	4		QSP	2		lower panel	in	ore	G35749/50	G35749	34
Mitchell	2008	M-06-021	120	122	2.0		VAXT		PR	3					lower panel	outside	pit wall	M-06-21_4	G32474	34
Mitchell	2009	M-09-112	200.5	201.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_37	H42238	34
Mitchell	2008	M-06-021	290	292	2.0		VAXT		PR	4					lower panel	outside	pit wall	M-06-21_8	G32563	34
Mitchell	2009	M-09-112	124.5	125.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_18	H42197	34
Mitchell	2008	M-06-021	240	242	2.0		VAXT		PR	2					lower panel	outside	pit wall	M-06-21_7	G32537	34
Mitchell	2009	M-09-112	124.5	125.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_18	H42197	34
Mitchell	2008	M-06-021	240	242	2.0		VAXT		PR	2					lower panel	outside	pit wall	M-06-21_7	G32537	34
Mitchell	2008	M-07-052	350	352	2.0		SARG		HFLS	3		IARG	2		lower panel	below	pit wall	M-07-52_10	X05559	34
Mitchell	2009	M-09-108	146.5	147.5	1.0	QSP	VU		IARG	3		SIL	1		lower panel	in	waste	M-09-108_27	H41683	34
Mitchell	2010	M-09-108	259	261	2.0	IARG	VU		CL	3		IARG	2		lower panel	in	ore	H41745	H41745	34
Mitchell	2009	M-08-062	8.9	11	2.1		VUTF		CL	2		QSP	1		lower panel	in	ore	M-08-62_1	X10851	34
Mitchell	2010	M-09-103	234	236	2.0		VU		CL	3		IARG	3		lower panel	in	ore	M-09-103_60	H43876	34
Mitchell	2009	M-08-062	361	363	2.0		VUTF		CL	2		QSP	1		lower panel	outside	pit wall	M-08-62_10	X11052	34
Mitchell	2008	M-07-034	139	141	2.0		VALT		CL	4		IARG	3		lower panel	in	ore	M-07-34_5	G36921	34
Mitchell	2008	M-06-021	8.7	10	1.3		SARG		SIH	4					lower panel	outside	pit wall	M-06-21_1	G32413	34
Mitchell	2010	M-09-108	234	236	2.0		VU		CL	3		IARG	2		lower panel	in	waste	M-09-108_67	H41731	34
Mitchell	2009	M-08-083	135	149	14.0	iarg	VU		QSP	3		IARG	1		lower panel	in	waste	M-08-83_12	X17277	34
Mitchell	2009	M-09-108	154.5	155.5	1.0	IARG	FLTZ		IARG	3					lower panel	in	waste	M-09-108_29	H41687	34
Mitchell	2008	M-07-035	12	14	2.0	iarg	VALT		IARG	4		QSP	1		lower panel	in	ore	M-07-35_1	G34982	34
Mitchell	2010	M-09-108	279	281	2.0	IARG	VU		CL	3		QSP	2		lower panel	below	pit wall	H41756	H41756	34
Mitchell	2008	M-07-052	266	268	2.0		SARG		HFLS	3		QSP	1		lower panel	in	waste	M-07-52_8	X05514	34
Mitchell	2009	M-09-112	96.5	97.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_11	H42182	34
Mitchell	2009	M-08-075	798	813	15.0	iarg	VU		IARG	3		QSP	1		lower panel	below	pit wall	M-08-75_21	X16527	34
Mitchell	2008	M-06-016	134	136	2.0	cl-pr	VATF		PR	1					lower panel	in	waste	M-06-16_5	G33283	34
Mitchell	2010	M-09-107	239	241	2.0	QSP	VU		IARG	4					upper panel	below	pit wall	H44275	H44275	34
Mitchell	2008	M-07-045	243	245	2.0		VALT		CL2	3		IARG	2		lower panel	in	ore	M-07-45_7	G35686	34
Mitchell	2009	M-09-112	84.5	85.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_8	H42176	34
Mitchell	2009	M-09-112	136.5	137.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_21	H42203	34
Mitchell	2010	M-09-103	193	195	2.0		VU		CL	3					lower panel	in	ore	M-09-103_72	H43851	34
Mitchell	2009	M-09-112	64.5	65.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_3	H42165	34
Mitchell	2009	M-09-108	130.5	131.5	1.0	QSP	VU		IARG	2		SIL	2		lower panel	in	waste	M-09-108_23	H41675	34

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2009	M-09-112	156.5	157.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_26	H42215	34
Mitchell	2009	M-09-112	68.5	69.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_4	H42167	34
Mitchell	2009	M-09-108	162.5	163.5	1.0	IARG	VU		IARG	4		CL	1		lower panel	in	waste	M-09-108_31	H41691	34
Mitchell	2008	M-06-021	36	38	2.0		VAXT		PR	2					lower panel	outside	pit wall	M-06-21_2	G32428	34
Mitchell	2010	M-09-103	189	191	2.0		VU		CL	3					lower panel	in	ore	M-09-103_50	H43849	34
Mitchell	2009	M-08-089	240	242	2.0		VU		CL	3		QSP	2		lower panel	outside	pit wall	M-08-89_9	X17992	34
Mitchell	2008	M-07-045	209	211	2.0		VALT		CL2	3		IARG	2		lower panel	in	ore	M-07-45_6	G35667	34
Mitchell	2009	M-09-103	252.5	253.5	1.0	IARG	VU		CL	3					lower panel	below	pit wall	M-09-103_24	H43886	34
Mitchell	2010	M-08-093	279	283	4.0	CL-PR	VU		IARG	3		QSP	2		lower panel	outside	pit wall	X19627/28	X19627	34
Mitchell	2009	M-08-062	400	402	2.0		VULT		CL	2					lower panel	outside	pit wall	M-08-62_11	X11073	34
Mitchell	2010	M-09-103	300	302	2.0		VU		CL	3					lower panel	in	ore	M-09-103_51	H43913	34
Mitchell	2008	M-06-019	186	188	2.0	cl-pr	ANDS		PR	3					lower panel	outside	pit wall	M-06-19_6	G32353	34
Mitchell	2009	M-09-103	264.5	265.5	1.0	IARG	VU		CL	3					lower panel	below	pit wall	M-09-103_27	H43893	34
Mitchell	2009	M-08-076	408	410	2.0		VULT		CL2	3					lower panel	outside	pit wall	M-08-76_11	X14768	34
Mitchell	2009	M-09-112	112.5	113.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_15	H42190	34
Mitchell	2010	M-07-054	420	424	4.0	CL-PR	VUTF		CL2	3		QSP	2		lower panel	below	pit wall	X10310/11	X10310	34
Mitchell	2008	M-07-032	344	346	2.0		VATF		IARG	1		QSP	1		lower panel	outside	pit wall	M-07-32_10	G36831	34
Mitchell	2010	M-09-103	179	181	2.0		VU		CL	3					lower panel	in	ore	M-09-103_46	H43844	34
Mitchell	2008	M-06-019	52	54	2.0		VATF								lower panel	in	waste	M-06-19_2	G32282	34
Mitchell	2009	M-09-106	14.5	15.5	1.0	IARG	VU		CL	4		QSP	3		lower panel	in	ore	M-09-106_3	H41420	34
Mitchell	2008	M-07-034	99	101	2.0		VALT		CL	3		IARG	2		lower panel	in	ore	M-07-34_4	G36899	34
Mitchell	2009	M-09-102A	125.5	126.5	1.0	HORN/PROP	PSBX		SI	2					lower panel	in	waste	M-09-102A_3	H41075	34
Mitchell	2008	M-07-060	38	40	2.0	iarg	VU		IARG	4		QSP	2		lower panel	in	ore	M-07-60_2	X14248	34
Mitchell	2008	M-07-052	230	232	2.0		VU		HFLS	3		IARG	2		lower panel	in	waste	M-07-52_7	X05493	34
Mitchell	2009	M-08-065	85.15	87	1.8		VULT		QSP	4		CL2	3		lower panel	in	ore	M-08-65_3	X06348	34
Mitchell	2009	M-09-099	285.5	286.5	1.0	QSP	VU		QSP	3		CL	2		lower panel	in	ore	M-09-99_4	H43532	34
Mitchell	2008	M-06-014	351	353	2.0	cl-pr	VATF		PR	1					lower panel	in	ore	M-06-14_9	G32087	34
Mitchell	2009	M-09-110	134.5	135.5	1.0	IARG	VU		SI	2		QSP	2		lower panel	in	waste	M-09-110_30	H41837	34
Mitchell	2009	M-09-112	164.5	165.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_28	H42219	34
Mitchell	2009	M-09-108	122.5	123.5	1.0	HORN/PROP	VU		SIL	3		PSBX	2		lower panel	in	waste	M-09-108_21	H41671	34
Mitchell	2009	M-08-076	11	13	2.0		VU		CL2	2		IARG	1		lower panel	in	ore	M-08-76_1	X14539	34
Mitchell	2008	M-07-031	120	122	2.0		VALT		IARG	4					lower panel	in	ore	M-07-31_4	G34616	34
Mitchell	2010	M-07-053	362	364	2.0	CL-PR	VATF		CL2	5		CL	1		lower panel	in	ore	X12194	X12194	34
Mitchell	2009	M-09-112	192.5	193.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_35	H42234	34
Mitchell	2009	M-09-112	196.5	197.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_36	H42236	34
Mitchell	2009	M-09-112	172.5	173.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_30	H42223	34
Mitchell	2010	M-09-103	224	226	2.0		VU		CL	3		IARG	1		lower panel	in	ore	M-09-103_65	H43870	34
Mitchell	2009	M-09-108	134.5	135.5	1.0	QSP	VU		IARG	2		SIL	2		lower panel	in	waste	M-09-108_24	H41677	34
Mitchell	2009	M-09-112	128.5	129.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_19	H42199	34
Mitchell	2008	M-07-035	226	228	2.0		VALT		KP	3		CL	2		lower panel	in	ore	M-07-35_7	G35099	34
Mitchell	2009	M-09-112	88.5	89.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_9	H42178	34
Mitchell	2010	M-09-103	185	187	2.0		VU		CL	3-Jan					lower panel	in	ore	M-09-103_42	H43847	34
Mitchell	2009	M-09-108	170.5	171.5	1.0	IARG	VU		IARG	4		CL	1		lower panel	in	waste	M-09-108_33	H41697	34
Mitchell	2009	M-09-108	184.5	185.5	1.0	IARG	VU		IARG	4		CL	1		lower panel	in	waste	M-09-108_36	H41704	34
Mitchell	2009	M-09-112	80.5	81.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_7	H42174	34
Mitchell	2008	M-06-015	4	6	2.0		ANDS		PR	3					lower panel	in	ore	M-06-15_1	G33025	34
Mitchell	2009	M-09-103	302.5	303.5	1.0	IARG	VU		CL	3					lower panel	outside	pit wall	M-09-103_36	H43914	34
Mitchell	2010	M-09-103	65	67	2.0		VU		CL	4					lower panel	in	ore	M-09-103_68	H43779	34
Mitchell	2009	M-08-076	255	257.12	2.1		VULT		CL2	3					lower panel	in	ore	M-08-76_7	X14681	34
Mitchell	2008	M-07-042	4	6	2.0		VATF		PR	2					lower panel	outside	ore	M-07-42_1	G35302	34

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2008	M-07-042	335	337	2.0		SARG		PR	4		SIH	3		lower panel	outside	pit wall	M-07-42_11	G35490	34
Mitchell	2010	M-09-103	199	201	2.0		VU		CL	3					lower panel	in	ore	M-09-103_39	H43854	34
Mitchell	2009	M-09-106	10.5	11.5	1.0	IARG	VU		CL	4		QSP	1		lower panel	in	ore	M-09-106_2	H41418	34
Mitchell	2008	M-07-059	229.65	232	2.3		VATF		CL	3		QSP	1		lower panel	in	ore	M-07-59_6	X12487	34
Mitchell	2009	M-09-112	236.5	237.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	below	ore	M-09-112_46	H42258	34
Mitchell	2008	M-06-019	90	92	2.0	iarg	VATF		IARG	3					lower panel	in	waste	M-06-19_3	G32302	34
Mitchell	2009	M-08-076	130.98	133	2.0		VULT		CL2	1		IARG	2		lower panel	in	ore	M-08-76_4	X14608	34
Mitchell	2010	M-08-063	20	24	4.0	QSP	VUTF		IARG	2-Jan		CL	1		lower panel	in	ore	X06923/24	X06923	34
Mitchell	2010	M-09-099	300	304	4.0	QSP	VU		QSP	2		CL	1		lower panel	below	pit wall	H43540/41	H43540	34
Mitchell	2009	M-09-110	126.5	127.5	1.0	QSP	VU		SI	2		QSP	2		lower panel	in	waste	M-09-110_28	H41833	34
Mitchell	2009	M-08-064	43	45	2.0		VU		CL	2		IARG	2		lower panel	in	ore	M-08-64_2	X11398	34
Mitchell	2008	M-07-041	158	160.1	2.1		SEDS		PR	2		QSP	1		lower panel	in	waste	M-07-41_7	G37625	34
Mitchell	2009	M-08-075	782	798	16.0	iarg	VU		IARG	3		QSP	1		lower panel	below	pit wall	M-08-75_20	X16518	34
Mitchell	2009	M-09-108	166.5	167.5	1.0	IARG	VU		IARG	4		CL	1		lower panel	in	waste	M-09-108_32	H41694	34
Mitchell	2008	M-07-035	44	46	2.0	iarg	VALT		IARG	4		QSP	1		lower panel	in	ore	M-07-35_2	G35001	34
Mitchell	2008	M-06-016	48	50	2.0	nm volc	IVOL		SIL	2					upper panel	in	waste	M-06-16_3	G33237	34
Mitchell	2009	M-09-112	108.5	109.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_14	H42188	34
Mitchell	2010	M-08-061	58	62	4.0	QSP	VUTF		IARG	2					lower panel	in	waste	X06531	X06531	34
Mitchell	2008	M-07-045	164	166	2.0		VALT		CL	3		IARG	3		lower panel	in	ore	M-07-45_5	G35642	34
Mitchell	2008	M-06-019	220	222.2	2.2	cl-pr	ANDS		PR	3					lower panel	outside	pit wall	M-06-19_7	G32371	34
Mitchell	2009	M-09-112	188.5	189.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_34	H42232	34
Mitchell	2009	M-09-103	248.5	249.5	1.0	IARG	VU		CL	3					lower panel	below	pit wall	M-09-103_23	H43884	34
Mitchell	2008	M-07-059	242.2	244	1.8		QTVN								lower panel	in	ore	M-07-59_7	X12493	34
Mitchell	2009	M-09-106	62.5	63.5	1.0	IARG	VU		CL	4		QSP	1		lower panel	in	ore	M-09-106_15	H41446	34
Mitchell	2009	M-09-112	152.5	153.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_25	H42213	34
Mitchell	2009	M-08-065	46.1	48.25	2.2		VULT		CL2	3		IARG	1		lower panel	in	ore	M-08-65_2	X06326	34
Mitchell	2009	M-09-103	209.5	210.5	1.0	IARG	VU		CL	3					lower panel	in	ore	M-09-103_15	H43861	34
Mitchell	2009	M-09-112	100.5	101.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_12	H42184	34
Mitchell	2009	M-09-110	114.5	115.5	1.0	QSP	VU		SI	2		QSP	2		lower panel	in	waste	M-09-110_25	H41827	34
Mitchell	2009	M-09-103	256.5	257.5	1.0	IARG	VU		CL	3					lower panel	below	pit wall	M-09-103_25	H43888	34
Mitchell	2009	M-08-083	161	163	2.0	iarg	VU		QSP	3		IARG	1		lower panel	in	waste	M-08-83_9	X17292	34
Mitchell	2009	M-09-103	286.1	287.5	1.4	IARG	VU		IARG	3					lower panel	outside	pit wall	M-09-103_33	H43906	34
Mitchell	2008	M-07-060	1.22	4	2.8	iarg	VU		IARG	4		QSP	3		lower panel	in	waste	M-07-60_1	X14228	34
Mitchell	2009	M-09-105	330.5	331.5	1.0	IARG	VUTF		CL	3					lower panel	below	pit wall	M-09-105_30	H44123	34
Mitchell	2009	M-09-112	76.5	77.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_6	H42172	34
Mitchell	2009	M-08-076	372	374	2.0		VULT		CL2	3		IARG	1		lower panel	outside	pit wall	M-08-76_10	X14747	34
Mitchell	2009	M-08-065	4	6	2.0		VULT		CL2	3		IARG	1		lower panel	in	ore	M-08-65_1	X06302	34
Mitchell	2009	M-09-110	122.5	123.5	1.0	QSP	VU		SI	2		QSP	2		lower panel	in	waste	M-09-110_27	H41831	34
Mitchell	2008	M-06-021	80	82	2.0		VAXT		PR	2					lower panel	outside	pit wall	M-06-21_3	G32453	34
Mitchell	2009	M-08-075	750	766	16.0	iarg	VU		IARG	4/4		SIL/	2		lower panel	below	pit wall	M-08-75_18	X16501	34
Mitchell	2009	M-09-112	92.5	93.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_10	H42180	34
Mitchell	2009	M-09-105	278.5	279.5	1.0	IARG	VU		IARG	4		CL	2		lower panel	in	ore	M-09-105_17	H44093	34
Mitchell	2008	M-06-012	125	127	2.0	iarg	VATF		IARG	2					lower panel	in	waste	M-06-12_4	E217112	34
Mitchell	2009	M-09-112	180.5	181.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_32	H42227	34
Mitchell	2010	M-07-045	397	401	4.0	CL-PR	VALT		CL2	3		QSP	2		lower panel	below	pit wall	G35770/71	G35770	34
Mitchell	2009	M-09-108	114.5	115.5	1.0	HORN/PROP	VU		SIL	3		PSBX	2		lower panel	in	waste	M-09-108_19	H41666	34
Mitchell	2010	M-09-103	207	209	2.0		VU		CL	3					lower panel	in	ore	M-09-103_38	H43858	34
Mitchell	2009	M-09-099	277.5	278.5	1.0	QSP	VU		QSP	3		CL	2		lower panel	in	ore	M-09-99_2	H43527	34
Mitchell	2009	M-09-105	298.5	299.5	1.0	IARG	VUTF		CL	4					lower panel	in	ore	M-09-105_22	H44104	34
Mitchell	2009	M-09-112	232.5	233.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	below	ore	M-09-112_45	H42255	34

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2009	M-09-102	132.5	133.5	1.0	HORN/PROP	PSBX		SI	5		QSP	1		lower panel	below	waste	M-09-102_7	H41048	34
Mitchell	2009	M-09-099	281.5	282.5	1.0	QSP	VU		QSP	3		CL	2		lower panel	in	ore	M-09-99_3	H43529	34
Mitchell	2010	M-09-103	278	280	2.0		VU		IARG	3					lower panel	outside	pit wall	M-09-103_70	H43900	34
Mitchell	2009	M-09-102	124.5	125.5	1.0	HORN/PROP	PSBX		SI	5		QSP	1		lower panel	below	waste	M-09-102_5	H41043	34
Mitchell	2009	M-09-105	306.5	307.5	1.0	IARG	VUTF		CL	4					lower panel	in	ore	M-09-105_24	H44109	34
Mitchell	2009	M-09-112	240.5	241.5	1.0	IARG	VUTF		IARG	2		QSP	1		lower panel	below	ore	M-09-112_47	H42260	34
Mitchell	2009	M-09-112	244.5	245.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	below	ore	M-09-112_48	H42262	34
Mitchell	2009	M-09-103	67.5	68.5	1.0	IARG	VU		CL	4					lower panel	in	ore	M-09-103_6	H43780	34
Mitchell	2009	M-09-103	51.5	52.5	1.0	IARG	VU		CL	4					lower panel	in	ore	M-09-103_2	H43776	34
Mitchell	2009	M-09-112	140.5	141.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_22	H42206	34
Mitchell	2009	M-09-105	274.5	275.5	1.0	IARG	VU		IARG	4		CL	2		lower panel	in	ore	M-09-105_16	H44091	34
Mitchell	2008	M-06-016	300	302	2.0	iarg	VATF		IARG	1					lower panel	in	waste	M-06-16_9	G33372	34
Mitchell	2010	M-07-048	317	321	4.0	CL-PR	VATF		CL	4					lower panel	in	ore	X09587/88	X09587	34
Mitchell	2008	M-07-059	335	337	2.0		VATF		QSP	2		CL	2		lower panel	below	pit wall	M-07-59_9	X12543	34
Mitchell	2009	M-08-076	214	216	2.0		VULT		CL2	2		QSP	1		lower panel	in	ore	M-08-76_6	X14656	34
Mitchell	2008	M-07-059	14	16	2.0		VATF		CL	3					lower panel	in	ore	M-07-59_1	X12368	34
Mitchell	2010	M-09-103	61	63	2.0		VU		CL	4					lower panel	in	ore	M-09-103_54	H43779	34
Mitchell	2009	M-08-062	90	91.25	1.3		VUTF		CL	2		QSP	2		lower panel	in	ore	M-08-62_3	X10897	34
Mitchell	2008	M-06-016	210	212	2.0	iarg	VATF		IARG	1					lower panel	in	waste	M-06-16_7	G33322	34
Mitchell	2008	M-07-042	82	84	2.0		PAND		PR	3		SIH	2		lower panel	outside	pit wall	M-07-42_4	G35349	34
Mitchell	2010	M-09-095	400	402	2.0	IARG	VU		IARG	3		CL	2		lower panel	below	pit wall	H40229	H40229	34
Mitchell	2010	M-07-028	297	301	4.0	IARG	VATF		IARG	4					lower panel	below	pit wall	G36484/85	G36484	34
Mitchell	2008	M-07-040	220	222.65	2.7		VATF		CL	2					lower panel	outside	pit wall	M-07-40_7	E192667	34
Mitchell	2008	M-07-027	300	302	2.0		VATF		CL	3					lower panel	in	waste	M-07-27_10	G36294	34
Mitchell	2009	M-09-112	228.5	229.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	below	ore	M-09-112_44	H42253	34
Mitchell	2009	M-09-103	205.5	206.5	1.0	IARG	VU		CL	3					lower panel	in	ore	M-09-103_14	H43857	34
Mitchell	2009	M-09-112	176.5	177.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_31	H42225	34
Mitchell	2009	M-09-106	6.5	7.5	1.0	IARG	VU		CL	4		QSP	1		lower panel	in	ore	M-09-106_1	H41414	34
Mitchell	2008	M-06-023	282	284	2.0	cl-pr	SCHT		QSP	2					lower panel	outside	pit wall	M-06-23_9	G33813	34
Mitchell	2009	M-09-102A	117.5	118.5	1.0	HORN/PROP	PSBX		SI	4		QSP	1		lower panel	in	waste	M-09-102A_1	H41069	34
Mitchell	2008	M-07-059	166	168	2.0		VATF		CL	3		QSP	1		lower panel	in	ore	M-07-59_5	X12452	34
Mitchell	2010	M-08-063	439	443	4.0	CL-PR	VUTF		CL	3		IARG	2		lower panel	outside	pit wall	X06182/83	X06183	34
Mitchell	2009	M-08-064	85	87	2.0		VU		CL	4		IARG	3		lower panel	in	ore	M-08-64_3	X11420	34
Mitchell	2009	M-09-102	120.5	121.5	1.0	HORN/PROP	PSBX		SI	5		QSP	1		lower panel	in	waste	M-09-102_4	H41040	34
Mitchell	2008	M-06-014	301	303	2.0	iarg	VAXT		PR	3					lower panel	in	ore	M-06-14_8	G32060	34
Mitchell	2008	M-07-060	313	315	2.0		VATF		PR	3		KP	2		lower panel	outside	pit wall	M-07-60_10	X14398	34
Mitchell	2009	M-09-103	295.5	296.5	1.0	IARG	VU		CL	3					lower panel	outside	pit wall	M-09-103_35	H43911	34
Mitchell	2009	M-08-076	90	91.55	1.6		VULT		IARG	2		CL2	2		lower panel	in	ore	M-08-76_3	X14583	34
Mitchell	2009	M-09-103	284.5	285.5	1.0	IARG	VU		CL	3					lower panel	outside	pit wall	M-09-103_32	H43904	34
Mitchell	2010	M-08-063	417	423	6.0	CL-PR	VUTF		IARG	3		CL	2		lower panel	in	ore	X06170/72	X06170	34
Mitchell	2009	M-09-105	302.5	303.5	1.0	IARG	VUTF		CL	4					lower panel	in	ore	M-09-105_23	H44106	34
Mitchell	2009	M-08-065	126	128	2.0		VULT		CL2	3		IARG	2		lower panel	in	ore	M-08-65_4	X06372	34
Mitchell	2009	M-08-065	402	404	2.0		VULT		CL2	3		KP	1		lower panel	in	ore	M-08-65_11	X15026	34
Mitchell	2010	M-09-095	380	384	4.0	QSP	VU		IARG	3		CL	2		lower panel	in	waste	H40217/18	H40217	34
Mitchell	2009	M-09-099	289.5	290.5	1.0	QSP	VU		QSP	3		CL	2		lower panel	below	pit wall	M-09-99_5	H43534	34
Mitchell	2009	M-08-064	125	127	2.0		VU		CL2	3-Jan		IARG	2-Jan		lower panel	in	ore	M-08-64_4	X11442	34
Mitchell	2008	M-07-060	145	147	2.0	cl-pr	VATF		CL2	3		KP	2		lower panel	in	ore	M-07-60_6	X14308	34
Mitchell	2009	M-09-103	187.5	188.5	1.0	IARG	VU		CL	3					lower panel	in	ore	M-09-103_9	H43848	34
Mitchell	2008	M-06-023	310	312	2.0	cl-pr	IVOL		QSP	2					lower panel	outside	pit wall	M-06-23_10	G33828	34
Mitchell	2008	M-07-035	120	122	2.0	iarg	VALT		IARG	4		CL	2		lower panel	in	ore	M-07-35_4	G35041	34

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2008	M-06-019	288	290	2.0	cl-pr	ANDS		PR	3					lower panel	below	ore-pit wall	M-06-19_9	G32407	34
Mitchell	2008	M-07-034	222	224	2.0		VALT		CL	4		IARG	3		lower panel	in	ore	M-07-34_7	G36967	34
Mitchell	2008	M-07-042	150	152	2.0		SARG		PR	3-Jan		SIH	3-Jan		lower panel	outside	pit wall	M-07-42_7	G35387	34
Mitchell	2009	M-09-106	34.5	35.5	1.0	IARG	VU		CL	4		QSP	3		lower panel	in	ore	M-09-106_8	H41431	34
Mitchell	2010	M-09-103	268	270	2.0		VU		CL	3					lower panel	in	ore	M-09-103_45	H43895	34
Mitchell	2010	M-09-103	281	283	2.0		VU		CL	3					lower panel	in	ore	M-09-103_52	H43903	34
Mitchell	2009	M-09-112	160.5	161.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_27	H42217	34
Mitchell	2008	M-06-021	200	202	2.0		VAFT		PR	4-Jan					lower panel	outside	pit wall	M-06-21_6	G32516	34
Mitchell	2009	M-09-112	144.5	145.5	1.0	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_23	H42208	34
Mitchell	2010	M-09-103	262	264	2.0		VU		CL	3					lower panel	in	ore	M-09-103_56	H43892	34
Mitchell	2008	M-06-019	256	258	2.0	cl-pr	ANDS		PR	3					lower panel	outside	pit wall	M-06-19_8	G32390	34
Mitchell	2009	M-09-103	222.5	223.5	1.0	IARG	VU		CL	3		IARG	1		lower panel	in	ore	M-09-103_17	H43869	34
Mitchell	2009	M-09-103	294.5	295.5	1.0	IARG	VU		CL	3					lower panel	outside	pit wall	M-09-103_34	H43910	34
Mitchell	2010	M-07-054	400	402	2.0	CL-PR	VUTF		CL2	3		QSP	2		lower panel	in	ore	X10300	X10300	34
Mitchell	2008	M-07-060	267	269	2.0	cl-pr	VATF		CL2	3		KP	2		lower panel	outside	pit wall	M-07-60_9	X14372	34
Mitchell	2009	M-09-105	310.5	311.5	1.0	IARG	VUTF		CL	4					lower panel	in	ore	M-09-105_25	H44112	34
Mitchell	2009	M-09-103	326.5	327.5	1.0	IARG	VU		IARG	3		CL	3		lower panel	outside	pit wall	M-09-103_37	H43929	34
Mitchell	2008	M-07-046	58.7	60	1.3		VALT		CL2	4		KP	1		lower panel	in	ore	M-07-46_2	X09201	34
Mitchell	2008	M-06-016	180	182	2.0	cl-pr	VATF		PR	1					lower panel	in	waste	M-06-16_6	G33307	34
Mitchell	2010	M-07-044	299	303	4.0	IARG	VATF		QSP	2		IARG	1		lower panel	in	ore	G37985/86	G37985	34
Mitchell	2010	M-08-066	298	304	6.0	IARG	VUTF		CL	3		IARG	1		lower panel	below	pit wall	X11807	X11805	34
Mitchell	2009	M-09-103	183.5	184.5	1.0	IARG	VU		CL	3					lower panel	in	ore	M-09-103_8	H43846	34
Mitchell	2010	M-08-077	297	301	4.0	CL-PR	ANDS		CL2	3		IARG	1		lower panel	in	ore	X16693/94	X16693	34
Mitchell	2009	M-09-103	197.5	198.5	1.0	IARG	0		CL	3					lower panel	in	ore	M-09-103_12	H43854	34
Mitchell	2010	M-09-103	203	205	2.0		VU		CL	3					lower panel	in	ore	M-09-103_49	H43856	34
Mitchell	2009	M-09-100	112.5	113.5	1.0	CL-PR	IVOL		PR	2		CL	1		lower panel	in	ore	M-09-100_4	H40631	34
Mitchell	2010	M-09-102	81	86.35	5.3	SW VOLC	PSBX		SIL	2					upper panel	in	waste	H41017/19	H41017	34
Mitchell	2008	M-07-027	340	342	2.0		VATF		CL	3					lower panel	below	waste	M-07-27_11	G36315	34
Mitchell	2010	M-08-061	299.85	302	2.1	IARG	VUTF		CL	3					lower panel	below	pit wall	X06662	X06662	34
Mitchell	2008	M-06-019	152	154	2.0		ANDS		PR	2					lower panel	in	ore	M-06-19_5	G32335	34
Mitchell	2010	M-07-029	258	262	4.0	CL-PR	VALT		CL	1		QSP	1		lower panel	outside	pit wall	G34514/15	G34513	34
Mitchell	2008	M-07-041	194	196	2.0		SEDS		SIH	2					lower panel	below	pit wall	M-07-41_8	G37645	34
Mitchell	2010	M-09-108	174	176	2.0		VU		IARG	4		CL	1		lower panel	in	waste	M-09-108_60	H41699	34
Mitchell	2008	M-07-027	271	273	2.0		VATF		IARG	4		QSP	2		lower panel	in	waste	M-07-27_9	G36278	34
Mitchell	2009	M-09-106	66.5	67.5	1.0	IARG	VU		CL	4		QSP	1		lower panel	in	ore	M-09-106_16	H41448	34
Mitchell	2008	M-07-031	204	206	2.0		VALT		IARG	4		QSP	4		lower panel	in	ore	M-07-31_7	G34662	34
Mitchell	2008	M-07-040	247	249	2.0		VUTF		SIH	2					lower panel	outside	pit wall	M-07-40_8	E192683	34
Mitchell	2008	M-07-034	264	266	2.0		VALT		PR	4		IARG	2		lower panel	in	ore	M-07-34_8	G36991	34
Mitchell	2010	M-09-103	57	59	2.0		VU		CL	4					lower panel	in	ore	M-09-103_48	H43778	34
Mitchell	2009	M-08-076	49.05	51	2.0		VULT		CL2	3		IARG	1		lower panel	in	ore	M-08-76_2	X14560	34
Mitchell	2009	M-09-102	112.5	113.5	1.0	HORN/PROP	VAXT		SIH	3		IARG	1		lower panel	in	waste	M-09-102_2	H41036	34
Mitchell	2009	M-08-062	49.5	51	1.5		VUTF		CL	2		QSP	1		lower panel	in	ore	M-08-62_2	X10872	34
Mitchell	2009	M-09-103	236.5	237.5	1.0	IARG	VU		CL	3		IARG	3		lower panel	in	ore	M-09-103_20	H43877	34
Mitchell	2008	M-07-041	82	84	2.0		SEDS		QSP	4					lower panel	in	waste	M-07-41_5	G37583	34
Mitchell	2008	M-07-060	181	183	2.0		VATF		PR	3		KP	1		lower panel	in	ore	M-07-60_7	X14327	34
Mitchell	2010	M-09-108	162	164	2.0		VU		IARG	4		CL	1		lower panel	in	waste	M-09-108_57	H41691	34
Mitchell	2009	M-09-103	240.5	241.5	1.0	IARG	VU		CL	3		IARG	3		lower panel	in	ore	M-09-103_21	H43880	34
Mitchell	2009	M-09-103	244.5	245.5	1.0	IARG	VU		CL	3					lower panel	below	pit wall	M-09-103_22	H43881	34
Mitchell	2009	M-09-105	338.5	339.5	1.0	IARG	VUTF		CL	3					lower panel	below	pit wall	M-09-105_32	H44127	34
Mitchell	2009	M-08-076	293	295	2.0		VULT		CL2	3					lower panel	below	pit wall	M-08-76_8	X14702	34

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2008	M-07-042	259	261	2.0		SARG		PR	3		SIH	3		lower panel	outside	pit wall	M-07-42_9	G35450	34
Mitchell	2010	M-07-028	279	283	4.0	IARG	VATF		IARG	4					lower panel	in	ore	G36474/75	G36474	34
Mitchell	2010	M-07-024E	518.8	522.8	4.0	QSP	IVOL		IARG	4		CL	1		lower panel	below	pit wall	G36085/86	G36085	34
Mitchell	2009	M-09-102A	129.5	130.5	1.0	HORN/PROP	PSBX		SI	2					lower panel	in	waste	M-09-102A_4	H41077	34
Mitchell	2010	M-09-103	274	276	2.0		VU		CL	3					lower panel	in	ore	M-09-103_55	H43898	34
Mitchell	2009	M-09-103	276.5	277.5	1.0	IARG	VU		CL	3					lower panel	outside	pit wall	M-09-103_29	H43899	34
Mitchell	2009	M-08-083	184.5	186	1.5	iarg	VU		IARG	3		QSP	1		lower panel	in	waste	M-08-83_10	X17305	34
Mitchell	2009	M-09-105	334.5	335.5	1.0	IARG	VUTF		CL	3					lower panel	below	pit wall	M-09-105_31	H44125	34
Mitchell	2008	M-07-060	350	352	2.0		VATF		PR	2		KP	2		lower panel	below	pit wall	M-07-60_11	X14418	34
Mitchell	2008	M-07-052	96.05	98.3	2.3		DDRT								lower panel	in	ore	M-07-52_3	X05422	34
Mitchell	2009	M-09-102A	121.5	122.5	1.0	HORN/PROP	PSBX		SI	4		QSP	1		lower panel	in	waste	M-09-102A_2	H41071	34
Mitchell	2010	M-08-070	297	301	4.0	CL-PR	VULT		CL2	3		KP	2		lower panel	below	pit wall	X15681/82/84	X15681	34
Mitchell	2010	M-09-108	198	200	2.0		VU		CL	3		IARG	2		lower panel	in	waste	M-09-108_62	H41711	34
Mitchell	2010	M-08-093	255	259	4.0	CL-PR	VU		IARG	3		QSP	2		lower panel	below	pit wall	X19614/15	X19614	34
Mitchell	2009	M-09-103	280.5	281.5	1.0	IARG	VU		CL	3					lower panel	outside	pit wall	M-09-103_30	H43901	34
Mitchell	2009	M-09-106	46.5	47.5	1	IARG	VU		CL	4		QSP	3		lower panel	in	ore	M-09-106_11	H41437	34
Mitchell	2010	M-09-111	241	243	2	CL-PR	VUTF		CL	3		QSP	1		lower panel	below	pit wall	H42099	H42099	34
Mitchell	2009	M-09-103	195.5	196.5	1	IARG	VU		CL	3					lower panel	in	ore	M-09-103_11	H43852	34
Mitchell	2009	M-09-103	213.5	214.5	1	IARG	VU		IARG	3		CL	2		lower panel	in	ore	M-09-103_16	H43863	34
Mitchell	2010	M-08-069	480	482	2	CL-PR	PSBX		CL	4		QSP	2		lower panel	below	pit wall	X15439	X15439	34
Mitchell	2009	M-09-112	184.5	185.5	1	IARG	VUTF		IARG	2		CL	1		lower panel	in	waste	M-09-112_33	H42229	34
Mitchell	2009	M-09-102A	133.5	134.5	1	HORN/PROP	SARG		SIH	3		CL	1		lower panel	in	pit wall	M-09-102A_5	H41079	34
Mitchell	2010	M-09-108	158	160	2		VU		IARG	4		CL	1		lower panel	in	waste	M-09-108_56	H41689	34
Mitchell	2008	M-06-012	287	289	2	cl-pr	VAXT		PR	1					lower panel	in	ore	M-06-12_7	E217198	34
Mitchell	2009	M-09-108	158.5	159.5	1	IARG	VU		IARG	4		CL	1		lower panel	in	waste	M-09-108_30	H41689	34
Mitchell	2009	M-09-102	128.5	129.5	1	HORN/PROP	PSBX		SI	5		QSP	1		lower panel	below	waste	M-09-102_6	H41045	34
Mitchell	2010	M-09-104	260	264	4	IARG	VU		PR	3		IARG	1		lower panel	below	pit wall	H41364/65	H41364	34
Mitchell	2008	M-06-023	393	394	1	cl-pr	IVOL		PR	4		QSP	3		lower panel	outside	pit wall	M-06-23_12	G33872	34
Mitchell	2008	M-07-042	98.9	101	2.1		PAND		PR	3		SIH	3		lower panel	outside	pit wall	M-07-42_5	G35359	34
Mitchell	2009	M-09-103	55.5	56.5	1	IARG	VU		CL	4					lower panel	in	ore	M-09-103_3	H43777	34
Mitchell	2010	M-09-108	166	168	2		VU		IARG	4		CL	1		lower panel	in	waste	M-09-108_58	H41694	34
Mitchell	2010	M-09-104	240	242	2	IARG	VU		PR	3		IARG	1		lower panel	in	ore	H41354	H41354	34
Mitchell	2008	M-06-012	167	169	2	cl-pr	VATF		PR	3					lower panel	in	ore	M-06-12_5	E217134	34
Mitchell	2010	M-09-106	240	242	2	IARG	VU		CL	3		IARG	1		lower panel	in	ore	H41542	H41542	34
Mitchell	2010	M-08-094	339.47	341	1.53	CL-PR	VULT		IARG	3		CL	1		lower panel	in	ore	X19380	X19380	34
Mitchell	2010	M-09-111	219	225	6	IARG	VUTF		CL	3					lower panel	in	ore	H42087/89	H42087	34
Mitchell	2009	M-09-105	270.5	271.5	1	IARG	VU		IARG	4		CL	2		lower panel	in	ore	M-09-105_15	H44089	34
Mitchell	2009	M-09-106	22.5	23.5	1	IARG	VU		CL	4		QSP	3		lower panel	in	ore	M-09-106_5	H41424	34
Mitchell	2008	M-07-040	125	127	2		VATF		CL2	2					lower panel	in	pit wall	M-07-40_4	E192620	34
Mitchell	2009	M-09-103	59.5	60.5	1	IARG	VU		CL	4					lower panel	in	ore	M-09-103_4	H43778	34
Mitchell	2008	M-07-059	429	431	2		VALT		CL	2		QSP	1		lower panel	outside	pit wall	M-07-59_11	X12593	34
Mitchell	2009	M-09-106	70.5	71.5	1	IARG	VU		CL	4		QSP	1		lower panel	in	ore	M-09-106_17	H41450	34
Mitchell	2010	M-09-108	154	156	2		VU/FLTZ		IARG	3/3		SIL/--	1/--		lower panel	in	waste	M-09-108_55	H41687	34
Mitchell	2010	M-08-066	282	288	6	IARG	VUTF		CL	3		IARG	1		lower panel	in	ore	X11799	X11797	34
Mitchell	2008	M-07-040	91	93	2		VATF		CL2	3					lower panel	in	ore	M-07-40_3	E192601	34
Mitchell	2010	M-09-103	49	51	2		VU		CL	4					lower panel	in	ore	M-09-103_47	H43775	34
Mitchell	2008	M-07-031	92	94	2		VALT		IARG	4		QSP	2		lower panel	in	ore	M-07-31_3	G34602	34
Mitchell	2008	M-06-012	207	209	2		VAXT		PR	4					lower panel	in	ore	M-06-12_6	E217155	34
Mitchell	2009	M-09-103	272.5	273.5	1	IARG	VU		CL	3					lower panel	outside	waste	M-09-103_28	H43897	34
Mitchell	2008	M-07-031	162	164	2		VALT		CL	5		QSP	2		lower panel	in	ore	M-07-31_6	G34638	34

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2009	M-09-103	177.5	178.5	1	IARG	VU		CL	3					lower panel	in	ore	M-09-103_7	H43843	34
Mitchell	2009	M-09-103	191.5	192.5	1	IARG	VU		CL	3					lower panel	in	ore	M-09-103_10	H43850	34
Mitchell	2009	M-09-106	50.5	51.5	1	IARG	VU		CL	4		QSP	3		lower panel	in	ore	M-09-106_12	H41439	34
Mitchell	2009	M-09-102	108.5	109.5	1	HORN/PROP	VAXT		IARG						lower panel	in	waste	M-09-102_1	H41033	34
Mitchell	2009	M-09-103	226.5	227.5	1	IARG	VU		CL	3		IARG	1		lower panel	in	ore	M-09-103_18	H43871	34
Mitchell	2010	M-07-048	359	363	4	CL-PR	VATF		CL	4					lower panel	below	ore	X09610/11	X09610	34
Mitchell	2010	M-07-029	217	221	4	CL-PR	VALT		KP	2		CL	1		lower panel	in	ore	G34490/91	G34490	34
Mitchell	2009	M-09-103	63.5	64.5	1	IARG	VU		CL	4					lower panel	in	ore	M-09-103_5	H43779	34
Mitchell	2009	M-09-102	116.5	117.5	1	HORN/PROP	VAXT/FLTZ		SIH	3/5		IARG	1/		lower panel	in	waste	M-09-102_3	H41039	34
Mitchell	2008	M-07-040	167	169	2		VALT		CL2	2					lower panel	outside	pit wall	M-07-40_5	E192642	34
Mitchell	2010	M-08-094	361	363	2	CL-PR	VALT		CL2	3		IARG	2		lower panel	below	pit wall	X19391	X19391	34
Mitchell	2008	NM-05-03	277.8	280.1	2.3	nm volc	ANDS		SIH	2					upper panel	in	waste	NM-05-03_9	9426	34
Mitchell	2010	M-07-034	320	324	4	CL-PR	VALT		PR	4		IARG	2		lower panel	in	ore	G37020/21	G37020	34
Mitchell	2010	M-09-108	204	206	2		VU		CL	3		IARG	2		lower panel	in	waste	M-09-108_63	H41714	34
Mitchell	2008	M-07-045	299	300	1	cl-pr	VALT		CL2	3		QSP	2		lower panel	in	ore	M-07-45_8	G35715	34
Mitchell	2009	M-09-103	232.5	233.5	1	IARG	VU		CL	3		IARG	1		lower panel	in	ore	M-09-103_19	H43875	34
Mitchell	2008	M-07-042	298	300	2		SARG		SIH	4		PR	2		lower panel	below	pit wall	M-07-42_10	G35470	34
Mitchell	2009	M-09-100	88.5	89.5	1	CL-PR	IVOL		PR	2		CL	1		lower panel	in	ore	M-09-100_1	H40624	34
Mitchell	2010	M-08-065	420	422	2	CL-PR	VULT		KP	4		CL	2		lower panel	below	pit wall	X15038	X15038	34
Mitchell	2008	M-07-040	195	197	2		VALT		CL2	2					lower panel	outside	pit wall	M-07-40_6	E192656	34
Mitchell	2008	M-07-060	221	223	2		VATF		PR	3		KP	1		lower panel	in	ore-pit wall	M-07-60_8	X14347	34
Mitchell	2010	M-09-103	53	55	2		VU		CL	4					lower panel	in	ore	M-09-103_43	H43776	34
Mitchell	2008	M-07-041	23	30	7	sw volc	VALT		CL	4					upper panel	in	ore	M-07-41_2	G37551	34
Mitchell	2008	M-07-034	300	302	2		VALT		PR	4		IARG	2		lower panel	in	ore	M-07-34_9	G37010	34
Mitchell	2010	M-07-051	277.9	282	4.1	CL-PR	VALT		CL	3		CL	2		lower panel	below	pit wall	X09996/97	X09996	34
Mitchell	2010	M-09-108	186	188	2		VU		IARG	4		CL	1		lower panel	in	waste	M-09-108_61	H41705	34
Mitchell	2010	M-07-057	199	201	2	CL-PR	VATF		CL2	3		KP	1		lower panel	below	pit wall	X05908	X05908	34
Mitchell	2010	M-07-034	300	304	4	CL-PR	VALT		PR	4		IARG	2		lower panel	in	ore	G37010/11	G37010	34
Mitchell	2008	M-07-046	153	155	2		VALT		CL2	3		KP	1		lower panel	in	waste	M-07-46_4	X09254	34
Mitchell	2009	M-09-106	38.5	39.5	1	IARG	VU		CL	4		QSP	3		lower panel	in	ore	M-09-106_9	H41433	34
Mitchell	2010	M-09-108	212	214	2		VU		CL	3		IARG	2		lower panel	in	waste	M-09-108_65	H41719	34
Mitchell	2009	M-08-076	334	336	2		VULT		CL2	3		IARG	1		lower panel	outside	pit wall	M-08-76_9	X14726	34
Mitchell	2009	M-09-100	92.5	93.5	1	CL-PR	IVOL		PR	2		CL	1		lower panel	in	ore	M-09-100_2	H40627	34
Mitchell	2008	M-07-046	249.5	251	1.5		DDRT		CL	3					lower panel	outside	pit wall	M-07-46_7	X09311	34
Mitchell	2010	M-08-077	319	323	4	CL-PR	ANDS		CL2	3		IARG	1		lower panel	below	ore	X16704/05	X16704	34
Mitchell	2010	M-09-108	142	144	2		VU		IARG	3		SIL	1		lower panel	in	waste	M-09-108_52	H41681	34
Mitchell	2008	M-07-059	283	285	2		VATF		CL	3		QSP	1		lower panel	in	ore	M-07-59_8	X12513	34
Mitchell	2009	M-09-106	42.5	43.5	1	IARG	VU		CL	4		QSP	3		lower panel	in	ore	M-09-106_10	H41435	34
Mitchell	2010	M-09-108	216	218	2		VU		CL	3		IARG	2		lower panel	in	waste	M-09-108_66	H41721	34
Mitchell	2008	M-07-041	64	66	2		VALT		CL	2					lower panel	in	ore	M-07-41_4	G37573	34
Mitchell	2010	M-08-070	279	283	4	CL-PR	VULT		CL2	3		KP	2		lower panel	below	pit wall	X15671/72	X15672	34
Mitchell	2010	M-07-034	358	364	6	IARG	VALT		PR	4		IARG	1		lower panel	outside	pit wall	G37041/43	G37041	34
Mitchell	2010	M-09-108	170	172	2		VU		IARG	4		CL	1		lower panel	in	waste	M-09-108_59	H41697	34
Mitchell	2009	M-09-102A	141.5	142.5	1	HORN/PROP	SARG		SIH	3		CL	1		lower panel	below	pit wall	M-09-102A_7	H41083	34
Mitchell	2008	M-07-040	51	53	2		VATF		CL2	3					lower panel	in	waste	M-07-40_2	E192579	34
Mitchell	2008	M-07-042	51	53	2		PAND		CL2	3		HEM	1		lower panel	outside	waste	M-07-42_3	G35331	34
Mitchell	2010	M-06-013	238	240	2	CL-PR	VALT		--	--					lower panel		pit wall	G23392	G23392	34
Mitchell	2008	M-07-046	18	20	2		VALT		CL2	4					lower panel	in	ore	M-07-46_1	X09180	34
Mitchell	2009	M-09-105	184.5	185.5	1	HIGHQTZ	PMON		SIL	3		IARG	3		upper panel	in	waste	M-09-105_14	H44042	34
Mitchell	2010	M-07-053	380	384	4	CL-PR	VATF		CL2	3		CL	2		lower panel	below	pit wall	X12204/05	X12204	34

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2010	M-07-038	199.7	205	5.3	CL-PR	VATF		CL2	3		KP	2		lower panel	below	pit wall	E192502/504	E192502	34
Mitchell	2010	M-07-057	179	181	2	CL-PR	VATF		CL2	3		KP	1		lower panel	in	ore	X05897	X05897	34
Mitchell	2009	M-09-102A	137.5	138.5	1	HORN/PROP	SARG		SIH	3		CL	1		lower panel	below	pit wall	M-09-102A_6	H41081	34
Mitchell	2010	M-09-108	146	148	2		VU		IARG	3		SIL	1		lower panel	in	waste	M-09-108_53	H41683	34
Mitchell	2010	M-07-055	197	201	4	CL-PR	VATF		CL2	3		KP	2		lower panel	in	ore	X05681/82	X05681	34
Mitchell	2008	M-07-046	100	102	2		VALT		CL2	3		KP	1		lower panel	in	ore	M-07-46_3	X09224	34
Mitchell	2008	M-07-059	373	375	2		VATF		CL	2		CL2	1		lower panel	outside	pit wall	M-07-59_10	X12563	34
Mitchell	2010	M-09-108	150	152	2		VU		IARG	3		SIL	1		lower panel	in	waste	M-09-108_54	H41685	34
Mitchell	2008	M-07-042	22	23.1	1.1		VATF		PR	2					lower panel	outside	ore	M-07-42_2	G35312	34
Mitchell	2008	M-07-046	201	203	2		VALT		CL2	2		KP	2		lower panel	outside	pit wall	M-07-46_5	X09282	34
Mitchell	2010	M-09-108	208	210	2		VU		CL	3		IARG	2		lower panel	in	waste	M-09-108_64	H41717	34
Mitchell	2008	M-07-042	218	220	2		SARG		PR	4		SIH	3		lower panel	outside	pit wall	M-07-42_8	G35426	34
Mitchell	2010	M-09-102A	161	163	2	uncat	SARG		SIH	3		CL	1		lower panel	outside	NPAG	H41094	H41094	34
Mitchell	2010	M-07-038	180	184	4	CL-PR	VATF		CL2	3					lower panel	below	pit wall	E192490/91	E192490	34
Mitchell	2010	M-07-055	215	221	6	CL-PR	VATF		CL2	3		KP	2		lower panel	below	pit wall	X05690/91/92	X05690	34
Mitchell	2008	M-07-042	131	133	2		PAND		PR	3		SIH	3		lower panel	outside	pit wall	M-07-42_6	G35377	34
Mitchell	2010	M-07-051	258	261	3	CL-PR	VATF/DDRT		CL	2		KP	2		lower panel	in	ore	X09983/84	X09983	34
Mitchell	2010	M-06-006	220	224	4	CL-PR	DDRT		CARB	2					lower panel	in	ore	G22295	G22294	34
Mitchell	2008	M-07-046	234	236	2		VALT		CL2	4		IARG	2		lower panel	outside	pit wall	M-07-46_6	X09301	34
Mitchell	2008	M-07-041	56	58	2		DDRT		PR	4					lower panel	in	ore	M-07-41_3	G37569	34
Mitchell	2010	M-09-108	138	140	2		VU		IARG	3		SIL	1		lower panel	in	waste	M-09-108_51	H41679	34
Mitchell	2009	M-08-075	13	15	2	nm monz	PMON		SI	2					upper panel	in	waste	M-08-75_22	X16090	35
Mitchell	2008	NM-05-01	4.9	6.9	2	nm volc	GRAN		SIL	2					upper panel	in	waste	NM-05-01_1	67907	35
Mitchell	2009	M-08-075	43	45	2	nm monz	PMON		SI	2					upper panel	in	waste	M-08-75_23	X16106	35
Mitchell	2009	M-09-098	282.5	283.5	1	NM MONZ	VU		MTH	5		HEM	2		upper panel	outside	waste	M-09-98_6	H40514	35
Mitchell	2009	M-08-075	76	78	2	nm monz	PMON		SI	2		CL	1		upper panel	in	waste	M-08-75_24	X16124	35
Mitchell	2009	M-09-098	274.5	275.5	1	NM MONZ	VU		MTH	5		HEM	2		upper panel	outside	waste	M-09-98_4	H40509	35
Mitchell	2009	M-09-098	266.5	267.5	1	NM MONZ	VU		MTH	5		HEM	2		upper panel	outside	waste	M-09-98_3	H40505	35
Mitchell	2009	M-09-098	262.5	263.5	1	NM MONZ	VU		MTH	5		HEM	2		upper panel	outside	waste	M-09-98_2	H40503	35
Mitchell	2009	M-08-079	129	131	2	nm volc	ANDS		SIH	3					upper panel	in	waste	M-08-79_7	X16807	35
Mitchell	2008	NM-05-01	150.4	152.4	2	nm monz	GRAN		KP	2					upper panel	in	waste	NM-05-01_6	67993	35
Mitchell	2009	M-08-079	382	399	17	nm volc	ANDS		MTH	3					upper panel	below	pit wall	M-08-79_17	X16946	35
Mitchell	2009	M-08-075	288	290	2	cl-pr	VU		CL2	3		SIL	2		upper panel	in	waste	M-08-75_31	X16243	35
Mitchell	2009	M-09-098	278.5	279.5	1	NM MONZ	VU		MTH	5		HEM	2		upper panel	outside	waste	M-09-98_5	H40512	35
Mitchell	2008	NM-05-03	82.1	84.1	2	nm monz	PPFP		KP	2					upper panel	in	waste	NM-05-03_4	9310	35
Mitchell	2010	M-09-098	359.6	361.6	2	NM MONZ	VU		MTH	5		HEM	2		upper panel	outside	waste	H40557	H40557	35
Mitchell	2008	NM-05-01	194.4	196.4	2	nm monz	GRAN		KP	2					upper panel	in	waste	NM-05-01_7	8317	35
Mitchell	2009	M-09-098	258.5	259.5	1	NM MONZ	VU		MTH	5		HEM	2		upper panel	below	waste	M-09-98_1	H40501	35
Mitchell	2009	M-08-075	321	323	2	nm monz	PMON		CL	1		HEM	1		upper panel	in	waste	M-08-75_32	X16263	35
Mitchell	2008	M-07-027	10	12	2	sw volc	VUTF		SIL	4		SIH	3		upper panel	in	waste	M-07-27_1	G36128	35
Mitchell	2009	M-08-075	409	411	2	nm monz	PMON		CL	2		HEM	1		upper panel	in	waste	M-08-75_35	X16310	35
Mitchell	2009	M-08-080	123	125	2	sw monz	PMON		SIL	2					upper panel	in	waste	M-08-80_4	X14842	35
Mitchell	2008	NM-05-01	238.4	240.4	2	nm volc	GRAN		SIL	2					upper panel	in	waste	NM-05-01_8	8341	35
Mitchell	2008	M-07-031	47	49	2	sw volc	VALT		PR	1		QSP	1		upper panel	in	waste	M-07-31_2	G34575	35
Mitchell	2008	M-06-023	168	170	2		SARG		SIH	1					lower panel	outside	pit wall	M-06-23_6	G33753	35
Mitchell	2009	M-08-080	92	94	2	sw monz	PAND		CL	1					upper panel	in	waste	M-08-80_3	X14825	35
Mitchell	2008	M-08-075	403	437	34	nm monz	PMON		CL	2/2		HEM/HEM	1/1		upper panel	in	waste	M-08-75_4	X16307	35
Mitchell	2008	M-08-075	379	403	24	nm monz	PMON		CL	2		HEM	1		upper panel	in	waste	M-08-75_5	X16295	35
Mitchell	2009	M-08-080	183	195	12	sw volc	FLTZ/SEDS		/SIH	/3					upper panel	in	waste	M-08-80_14	X14875	35
Mitchell	2008	NM-05-02	35.4	37.4	2	nm monz	GRAN		PR	2					upper panel	in	waste	NM-05-02_2	8394	35

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2012	M-08-075	465	467	2														X16342	35
Mitchell	2012	M-08-075	467	469	2														X16343	35
Mitchell	2012	M-08-075	469	471	2														X16344	35
Mitchell	2012	M-08-075	471	473	2														X16345	35
Mitchell	2012	M-08-075	473	475	2														X16346	35
Mitchell	2012	M-08-075	475	477	2														X16347	35
Mitchell	2012	M-10-118	20	21.25	1.25														H47674	35
Mitchell	2012	M-10-118	82.2	84.4	2.2														H47708	35
Mitchell	2008	M-08-075	359	379	20	nm monz	PMON		CL	2		HEM	1		upper panel	in	waste	M-08-75_6	X16283	35
Mitchell	2009	M-09-110	6.5	7.5	1	NM VOLC	PMON		SIH	3		HEM	3		upper panel	in	ore	M-09-110_1	H41767	35
Mitchell	2008	M-07-027	34.6	36.6	2	sw volc	GRAN		SIH	4			3		upper panel	in	waste	M-07-27_2	G36142	35
Mitchell	2008	M-08-075	437	469	32	nm monz	PMON		CL	2/1		HEM/CL	1/1		upper panel	in	waste	M-08-75_3	X16326	35
Mitchell	2009	M-08-080	63	66	3	sw monz	PMON		SIL	3					upper panel	in	waste	M-08-80_2	X14812	35
Mitchell	2010	M-09-098	3.4	8.04	4.64	NM MONZ	PMON		HEM	2		PR	1		upper panel	in	waste	H0363/64	H40363	35
Mitchell	2009	M-08-080	33	36	3	sw monz	PMON		SIL	3					upper panel	in	waste	M-08-80_1	X14802	35
Mitchell	2010	M-09-098	239	241	2	NM MONZ	VU		MTH	4		HEM	2		upper panel	in	waste	H40491	H40491	35
Mitchell	2008	M-08-075	469	502	33	nm monz	PMON		HEM	1/2		CL/HEM	1/1		upper panel	in	waste	M-08-75_2	X16344	35
Mitchell	2008	NM-05-03	46	48	2	nm monz	PQMZ		KP	2					upper panel	in	waste	NM-05-03_3	9289	35
Mitchell	2010	M-09-098	79	83	4	NM MONZ	PMON		HEM	2		PR	1		upper panel	in	waste	H40403/04	H40403	35
Mitchell	2010	M-09-105	59	61	2	HIGHQTZ	PMON		SIH	3		KP	2		upper panel	in	waste	H43974	H43974	35
Mitchell	2008	M-08-075	337	359	22	nm monz	PMON		CL	2		HEM	1		upper panel	in	waste	M-08-75_7	X16272	35
Mitchell	2009	M-08-075	471	473	2	nm monz	PMON		HEM	1		CL	1		upper panel	in	waste	M-08-75_37	X16345	35
Mitchell	2010	M-09-107	20	22	2	HIGHQTZ	PMON		SIH	3					upper panel	in	waste	H44157	H44157	35
Mitchell	2009	M-08-075	381	383	2	nm monz	PMON		CL	2		HEM	1		upper panel	in	waste	M-08-75_34	X16296	35
Mitchell	2009	M-08-075	502	504	2	nm monz	PMON		PR	2		HEM	1		upper panel	in	waste	M-08-75_38	X16362	35
Mitchell	2009	M-08-080	181	183	2	sw volc	ANDS		SIL	2					upper panel	in	waste	M-08-80_6	X14874	35
Mitchell	2009	M-09-110	10.5	11.5	1	NM VOLC	PMON		SIH	3		HEM	3		upper panel	in	ore	M-09-110_2	H41769	35
Mitchell	2009	M-08-075	351	353	2	nm monz	PMON		CL	2		HEM	1		upper panel	in	waste	M-08-75_33	X16279	35
Mitchell	2010	M-06-020	56	62	6	NM MONZ	PPFP		PR	--					upper panel	outside	pit wall	G33472/73/74	G33472	35
Mitchell	2009	M-08-075	439	441	2	nm monz	PMON		CL	1		HEM	2		upper panel	in	waste	M-08-75_36	X16327	35
Mitchell	2008	M-08-075	502	520	18	nm monz	PMON		PR	2		HEM	1		upper panel	in	waste	M-08-75_1	X16362	35
Mitchell	2008	NM-05-02	195.4	197.4	2	nm monz	GRAN		PR	2					upper panel	in	waste	NM-05-02_6	8983	35
Mitchell	2008	NM-05-02	155.4	157.4	2	nm monz	GRAN		PR	2					upper panel	in	waste	NM-05-02_5	8961	35
Mitchell	2008	NM-05-01	282.8	284.8	2	nm monz	GRAN		AR	2					upper panel	in	waste	NM-05-01_9	8366	35
Mitchell	2009	M-08-075	544	546	2	nm monz	PMON		PR	2		HEM	1		upper panel	in	waste	M-08-75_40	X16384	35
Mitchell	2010	M-09-098	180	182	2	NM MONZ	PMON		PR	3		HEM	2		upper panel	in	waste	H40457	H40457	35
Mitchell	2009	M-08-075	524	526	2	nm monz	PMON		PR	2		HEM	1		upper panel	in	waste	M-08-75_39	X16374	35
Mitchell	2008	M-06-023	24	26	2	nm monz	PQMZ		PR	1					upper panel	in	waste	M-06-23_1	G33676	35
Mitchell	2009	M-08-075	602	604	2	nm monz	PMON		PR	2		HEM	1		upper panel	in	waste	M-08-75_42	X16416	35
Mitchell	2008	NM-05-02	75.4	77.4	2	nm monz	GRAN		PR	2					upper panel	in	waste	NM-05-02_3	8416	35
Mitchell	2008	M-06-023	140	142	2	nm monz	PQMZ		PR	1					upper panel	outside	pit wall	M-06-23_5	G33738	35
Mitchell	2008	NM-05-02	115.4	117.4	2	nm monz	GRAN		PR	2					upper panel	in	waste	NM-05-02_4	8438	35
Mitchell	2009	M-08-075	568	570	2	nm monz	PMON		PR	2		HEM	1		upper panel	in	waste	M-08-75_41	X16397	35
Mitchell	2008	M-07-030	5	7	2	sw monz	VULT		FEOX	4					upper panel	in	waste	M-07-30_1	G36541	35
Mitchell	2008	NM-05-03	109.4	111.4	2	nm monz	PPFP		KP	2					upper panel	in	waste	NM-05-03_5	9327	35
Mitchell	2010	M-09-105	20	24	4	HIGHQTZ	PMON		SIH	4					upper panel	in	waste	H43952/53	H43952	35
Mitchell	2008	M-06-023	100	102	2	nm monz	PQMZ		PR	1					upper panel	outside	pit wall	M-06-23_4	G33716	35
Mitchell	2008	M-06-023	48	50	2	nm monz	PQMZ		CARB	4					upper panel	below	pit wall	M-06-23_2	G33688	35
Mitchell	2008	NM-05-02	4.5	6.5	2	nm monz	GRAN		PR	2					upper panel	in	waste	NM-05-02_1	8374	35
Mitchell	2010	M-06-020	100	104	4	NM MONZ	PPFP		HEM	4					upper panel	outside	pit wall	G33496/97	G33496	35

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Mitchell	2008	M-06-023	80	82	2	nm monz	PQMZ		PR	1					upper panel	below	pit wall	M-06-23_3	G33706	35
Mitchell	2010	M-08-063	100	104	4	IARG	VU		QSP	4					lower panel	in	ore	X06968/69	X06968	36
Mitchell	2010	M-08-067	359	361	2	HIGHQTZ	VUTF		QSP	4		CL	1		lower panel	in	waste	X13074	X13074	36
Mitchell	2009	M-09-110	342.5	343.5	1	QSP	VU		QSP	5					lower panel	in	ore	M-09-110_35	H41951	36
Mitchell	2010	M-08-061	180	182	2	IARG	VULT		QSP	3		CL	1		lower panel	in	waste	X06596	X06596	36
Mitchell	2009	M-08-062	170	172	2		VUTF		QSPSTW	5					lower panel	in	waste	M-08-62_5	X10945	36
Mitchell	2009	M-09-110	334.5	335.5	1	QSP	VU		QSP	5					lower panel	in	ore	M-09-110_33	H41947	36
Mitchell	2009	M-08-062	130	132	2		VUTF		QSP	3		CL			lower panel	in	waste	M-08-62_4	X10920	36
Mitchell	2009	M-09-110	338.5	339.5	1	QSP	VU		QSP	5					lower panel	in	ore	M-09-110_34	H41949	36
Mitchell	2010	M-08-063	140	142	2	IARG	VU		QSP	4					lower panel	in	ore	X06989	X06989	36
Mitchell	2010	M-08-061	200	204	4	IARG	VULT		QSP	3		CL	1		lower panel	in	waste	X06607/08	X06607	36
Mitchell	2008	M-06-014	149	151	2	iarg	VAXT		IARG	3					lower panel	in	waste	M-06-14_4	E217280	36
Mitchell	2008	M-07-045	92	94	2		VALT		QSP	5		IARG	1		lower panel	in	ore	M-07-45_3	G35602	36
Mitchell	2009	M-09-110	330.5	331.5	1	QSP	VU		QSP	5					lower panel	in	ore	M-09-110_32	H41944	36
Mitchell	2010	M-08-061	219	223	4	IARG	VULT		CL	2					lower panel	in	waste	X06618/19	X06618	36
Mitchell	2010	M-08-067	376	382	6	HIGHQTZ	VUTF		QSPSTW	5					lower panel	below	pit wall	X13084/85/86	X13084	36
Mitchell	2008	M-06-014	187	189	2	iarg	VAXT		PR	2					lower panel	in	waste	M-06-14_5	E217300	36
Mitchell	2010	M-08-086	318	320	2	HIGHQTZ	VUTF		QSPSTW	4					lower panel	below	pit wall	X17591	X17591	36
Mitchell	2009	M-08-062	210	212	2		VULT		QSP	2		CL	1		lower panel	in	waste	M-08-62_6	X10967	36
Mitchell	2010	M-08-061	255	261	6	IARG	VULT		CL	2					lower panel	in	ore	X06638	X06638	36
Mitchell	2008	M-07-045	128	130	2		VALT		QSP	4		IARG	1		lower panel	in	ore	M-07-45_4	G35622	36
Mitchell	2010	M-08-086	300	302	2	QSP	PSBX		QSP	4					lower panel	in	waste	X17581	X17581	36
Mitchell	2009	M-08-062	243	245	2		VUTF		QSPSTW	6					lower panel	in	waste	M-08-62_7	X10985	36
Mitchell	2008	M-06-014	231	233	2	cl-pr	VATF		PR	1					lower panel	in	ore	M-06-14_6	G32024	36
Iron Cap	2010	IC-10-015	4	6	2		IU		SIL	5		QSP	2			IN	WASTE	X66542	X66542	41
Iron Cap	2012	IC-10-035	9.6	11	1.4													X29696	X29696	41
Iron Cap	2011	IC-10-017	8.2	10.2	2		IU		SIL	5						IN	WASTE	X66799	X66799	41
Iron Cap	2012	IC-10-041	11	12	1													X26526	X26526	43
Iron Cap	2012	IC-10-044	9	25	16													IC COMP 16	IC COMP 16	43
Iron Cap	2012	IC-10-044	217.5	232.05	14.55													IC COMP 19	IC COMP 19	43
Iron Cap	2011	IC-10-034	352.3	353.65	1.35		PMON		CL	1		KP	1			OUT	MARGINAL	X30431	X30431	43
Iron Cap	2012	IC-10-041	180	196	16													IC COMP 12	IC COMP 12	43
Iron Cap	2012	IC-10-041	24	40	16													IC COMP 9	IC COMP 9	43
Iron Cap	2012	IC-10-041	156	172	16													IC COMP 11	IC COMP 11	43
Iron Cap	2011	IC-10-034	334.3	336.3	2		PMON		CL	1		KP	1			IN	ORE	X30422	X30422	43
Iron Cap	2012	IC-10-041	90	106	16													IC COMP 10	IC COMP 10	43
Iron Cap	2012	IC-10-044	188.5	190.5	2													X26728	X26728	43
Iron Cap	2012	IC-10-044	232.05	248.19	16.14													IC COMP 20	IC COMP 20	43
Iron Cap	2011	IC-10-034	368.5	370.5	2		IU		SIL	2		KP	1			OUT	WASTE	X30441	X30441	43
Iron Cap	2012	IC-10-044	85.5	101.5	16													IC COMP 17	IC COMP 17	43
Iron Cap	2012	IC-10-044	148.66	164.5	15.84													IC COMP 18	IC COMP 18	43
Iron Cap	2012	IC-10-044	32.8	33.13	0.33													X30943	X30943	43
Iron Cap	2012	IC-10-041	210	226	16													IC COMP 13	IC COMP 13	43
Iron Cap	2012	IC-10-041	250	252	2													X26658	X26658	43
Iron Cap	2012	IC-10-044	79	81	2													X30968	X30968	43
Iron Cap	2012	IC-10-044	63	64.2	1.2													X30961	X30961	43
Iron Cap	2012	IC-10-009	501	503	2													H47161	H47161	44
Iron Cap	2011	IC-10-019	371.2	373.2	2		SEDS		SIL	2						IN	WASTE	X25074	X25074	44
Iron Cap	2011	IC-10-032	314	316	2		IVOL		SIL	1						IN	MARGINAL	X30176	X30176	44
Iron Cap	2011	IC-10-019	389.2	391.2	2		IU		IARG	2						IN	WASTE	X25084	X25084	44

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Iron Cap	2010	IC-10-011	385	387	2		PSYN		SIL	3		CL	1			IN	MARGINAL	H47377	H47377	44
Iron Cap	2012	IC-10-019	379	381	2													X25078	X25078	44
Iron Cap	2012	IC-10-009	439.7	441	1.3													H47126	H47126	44
Iron Cap	2012	IC-10-018	409	411	2													X67984	X67984	44
Iron Cap	2012	IC-10-009	404	406	2													H47109	H47109	44
Iron Cap	2011	IC-10-033	224.7	226.7	2		IU		SIH	4		CL	1			IN	MARGINAL	X29624	X29624	44
Iron Cap	2011	IC-10-018	438.3	440.3	2		IU		SIL	3		IARG	1			IN	WASTE	X67999	X67999	44
Iron Cap	2012	IC-10-032	218	219.15	1.15													X30121	X30121	44
Iron Cap	2011	IC-10-024	270.05	272.05	2		VU		SIL	3		CL	2			IN	MARGINAL	X25461	X25461	44
Iron Cap	2011	IC-10-032	333	335	2		IVOL		SIL	2		IARG	1			IN	WASTE	X30187	X30187	44
Iron Cap	2012	IC-10-033	231.25	233.5	2.25													X29626	X29626	44
Iron Cap	2012	IC-10-023	214	216	2													X28499	X28499	44
Iron Cap	2011	IC-10-008	260.3	262.3	2		PSYN		QSP	3		CARB	1			IN	WASTE	H48498	H48498	44
Iron Cap	2012	IC-10-011	486	488	2													H47431	H47431	44
Iron Cap	2011	IC-10-008	229.3	231.5	2.2		PSBX		PSBX	5						IN	MARGINAL	H48481	H48481	44
Iron Cap	2012	IC-10-035	97	99	2													X29743	X29743	44
Iron Cap	2010	IC-10-011	510	512	2		PSYN		SIL	4						OUT	WASTE	H47446	H47446	44
Iron Cap	2010	IC-10-011	484	486	2		PSYN		SIL	4						OUT	WASTE	H47430	H47430	44
Iron Cap	2011	IC-10-018	453.8	455.3	1.5		IU		SIL	3		IARG	1			IN	WASTE	X28009	X28009	44
Iron Cap	2012	IC-10-032	400.15	401.36	1.21													X30222	X30222	44
Iron Cap	2012	IC-10-035	161	163.05	2.05													X29781	X29781	44
Iron Cap	2011	IC-10-025	394.22	396.22	2		VU		SIL	3		CL	1			IN	WASTE	X28815	X28815	44
Iron Cap	2012	IC-10-025	369	371	2													X28802	X28802	44
Iron Cap	2012	IC-10-037	228.5	230.5	2													X30583	X30583	44
Iron Cap	2012	IC-10-011	497.8	499.5	1.7													H47438	H47438	44
Iron Cap	2011	IC-10-025	434.22	436.22	2		VU		CL	3		SIL	3			IN	WASTE	X28837	X28837	44
Iron Cap	2012	IC-10-011	497.8	499.5	1.7													H47438	H47438	44
Iron Cap	2011	IC-10-025	434.22	436.22	2		VU		CL	3		SIL	3			IN	WASTE	X28837	X28837	44
Iron Cap	2012	IC-10-009	432.9	435.1	2.2													H47123	H47123	44
Iron Cap	2011	IC-10-024	344.05	346.05	2		VU		SIL	3		CL	2			OUT	WASTE	X25501	X25501	44
Iron Cap	2011	IC-10-033	284.7	286.7	2		VATF		CL	2						IN	WASTE	X29656	X29656	44
Iron Cap	2011	IC-10-032	393	395	2		IVOL		SIL	2		IARG	1			IN	ORE	X30218	X30218	44
Iron Cap	2012	IC-10-007	246.4	248.15	1.75													H46835	H46835	44
Iron Cap	2012	IC-10-011	410.7	412	1.3													H47391	H47391	44
Iron Cap	2011	IC-10-032	421	423	2		IVOL		CL	2		SIL	1			OUT	WASTE	X30235	X30235	44
Iron Cap	2011	IC-10-034	173.8	175.8	2		IVOL		CL	3		SIL	1			IN	ORE	X30331	X30331	44
Iron Cap	2012	IC-10-040	220	222	2													X30742	X30742	44
Iron Cap	2011	IC-10-024	290.05	292.05	2		VU		SIL	3		CL	2			IN	WASTE	X25471	X25471	44
Iron Cap	2012	IC-10-024	276	278	2													X25463	X25463	44
Iron Cap	2011	IC-10-025	374.22	376.22	2		VU		SIL	3		CL	1			IN	WASTE	X28805	X28805	44
Iron Cap	2012	IC-10-035	258.55	260.6	2.05													X29833	X29833	44
Iron Cap	2012	IC-10-034	229	231	2													X30361	X30361	44
Iron Cap	2011	IC-10-024	310.05	312.05	2		VU		SIL	3		CL	2			IN	WASTE	X25482	X25482	44
Iron Cap	2011	IC-10-024	324.05	326.05	2		VU		SIL	3		CL	2			OUT	WASTE	X25489	X25489	44
Iron Cap	2011	IC-10-032	403	405	2		IVOL		CL	2		SIL	1			OUT	WASTE	X30224	X30224	44
Iron Cap	2011	IC-10-032	248	250	2		IVOL		CL	2		SIL	1			IN	MARGINAL	X30139	X30139	44
Iron Cap	2011	IC-10-033	264.7	266.7	2		VATF		CL	2						IN	WASTE	X29646	X29646	44
Iron Cap	2011	IC-10-033	338.8	340.7	1.9		VU		CL	3						IN	WASTE	X29685	X29685	44
Iron Cap	2011	IC-10-027	383.6	385.6	2		VU		SIL	2						IN	MARGINAL	X25896	X25896	44
Iron Cap	2011	IC-10-025	414.22	416.22	2		VU		CL	3		SIL	3			IN	ORE	X28827	X28827	44
Iron Cap	2011	IC-10-027	363.6	365.6	2		VU		SIL	2						IN	MARGINAL	X25886	X25886	44
Iron Cap	2010	IC-10-007	210	212	2		PSYN		CL	1		CARB	1			IN	WASTE	H46817	H46817	44

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Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Iron Cap	2012	IC-10-033	334	336	2													X29681	X29681	44
Iron Cap	2012	IC-10-017	489.36	491.4	2.04													X24855	X24855	44
Iron Cap	2012	IC-10-027	350	352	2													X25877	X25877	44
Iron Cap	2011	IC-10-027	343.6	345.6	2		VU		SIL	2		CL	3			IN	WASTE	X25875	X25875	44
Iron Cap	2012	IC-10-032	409	411	2													X30227	X30227	44
Iron Cap	2012	IC-10-007	238	240	2													H46831	H46831	44
Iron Cap	2012	IC-10-035	177	179	2													X29789	X29789	44
Iron Cap	2010	IC-10-011	434	436	2		PSYN		CL	3		SIL	2			IN	WASTE	H47403	H47403	44
Iron Cap	2011	IC-10-032	373	375	2		IVOL		SIL	2		IARG	1			IN	MARGINAL	X30208	X30208	44
Iron Cap	2012	IC-10-033	343	344.74	1.74													X29686	X29686	44
Iron Cap	2011	IC-10-033	244.7	246.7	2		VATF		CL	2						IN	WASTE	X29636	X29636	44
Iron Cap	2010	IC-10-007	160	162	2		PSYN		CL	1		CARB	1			IN	MARGINAL	H46789	H46789	44
Iron Cap	2012	IC-10-035	330	332	2													X29871	X29871	44
Iron Cap	2011	IC-10-023	276.9	278.9	2		IU		SIL	3		KP	1			OUT	ORE	X28535	X28535	44
Iron Cap	2011	IC-10-029	476.15	478.15	2		VALT		CL	4		CL2	1			OUT	ORE	X29442	X29442	44
Iron Cap	2011	IC-10-029	496.15	498.15	2		VALT		CL	4		CL2	1			OUT	ORE	X29503	X29503	44
Iron Cap	2010	IC-10-007	259	261	2		PSYN		CL	1		CARB	1			IN	WASTE	H46842	H46842	44
Iron Cap	2011	IC-10-023	296.9	298.9	2		IU		SIL	3		KP	1			OUT	MARGINAL	X28545	X28545	44
Iron Cap	2010	IC-10-007	234	236	2		PSYN		CL	1		CARB	1			IN	WASTE	H46829	H46829	44
Iron Cap	2011	IC-10-029	456.15	458.15	2		VALT		CL	4		CL2	1			IN	WASTE	X29431	X29431	44
Iron Cap	2010	IC-10-007	184	186	2		PSYN		CL	1		CARB	1			IN	WASTE	H46801	H46801	44
Iron Cap	2011	IC-10-031	339.8	341.8	2		VATF		CL	2		SIL	1			IN	WASTE	X26345	X26345	44
Iron Cap	2011	IC-10-033	304.7	306.7	2		VATF		CL	2						IN	WASTE	X29666	X29666	44
Iron Cap	2012	IC-10-029	439	441	2													X29422	X29422	44
Iron Cap	2011	IC-10-029	436.15	438.15	2		VALT		CL	4		CL2	1			IN	WASTE	X29421	X29421	44
Iron Cap	2012	IC-10-037	251.5	253.5	2													X30596	X30596	44
Iron Cap	2011	IC-10-032	353	355	2		IVOL		SIL	2		IARG	1			IN	MARGINAL	X30198	X30198	44
Iron Cap	2012	IC-10-007	196	198	2													H46808	H46808	44
Iron Cap	2011	IC-10-029	414.15	416.15	2		VALT		CL	4		CL2	1			IN	WASTE	X29407	X29407	44
Iron Cap	2010	IC-10-007	331	333	2		PSYN		CL	1		CARB	1			OUT	WASTE	H46881	H46881	44
Iron Cap	2012	IC-10-040	163.5	165.5	2													X30711	X30711	44
Iron Cap	2010	IC-10-007	311	313	2		PSYN		CL	1		CARB	1			OUT	WASTE	H46870	H46870	44
Iron Cap	2012	IC-10-007	257	259	2													H46841	H46841	44
Iron Cap	2012	IC-10-009	466.2	467.7	1.5													H47142	H47142	44
Iron Cap	2011	IC-10-017	327.2	329.2	2		PSYN		CL	3						IN	WASTE	X66971	X66971	44
Iron Cap	2011	IC-10-018	68.3	70.3	2		PPFP		SIL	3						IN	WASTE	X67793	X67793	45
Iron Cap	2011	IC-10-018	107.3	109.3	2		PPFP		SIL	4						IN	WASTE	X67816	X67816	45
Iron Cap	2011	IC-10-020	220.5	222.5	2		PMON		CL	2						IN	WASTE	X28131	X28131	45
Iron Cap	2011	IC-10-020	120.5	122.5	2		PMON		CL	2						IN	WASTE	X28077	X28077	45
Iron Cap	2011	IC-10-020	260.5	262.5	2		PMON		CL	2		SIL	1			IN	ORE	X28151	X28151	45
Iron Cap	2011	IC-10-018	29.3	31.3	2		PMON		CL	3		KP	1			IN	ORE	X67772	X67772	45
Iron Cap	2011	IC-10-020	200.5	202.5	2		PMON		CL	2						IN	WASTE	X28121	X28121	45
Iron Cap	2011	IC-10-021	264.4	266.4	2		PMON		CL	2						IN	WASTE	X25232	X25232	45
Iron Cap	2011	IC-10-021	340.4	342.4	2		PMON		CL	3						IN	WASTE	X25276	X25276	45
Iron Cap	2011	IC-10-020	140.5	142.5	2		PMON		CL	2						IN	WASTE	X28087	X28087	45
Iron Cap	2010	IC-10-013	60	62	2		PMON		KP	2						IN	WASTE	H47484	H47484	45
Iron Cap	2011	IC-10-021	302.4	304.4	2		PMON		CL	2						IN	WASTE	X25254	X25254	45
Iron Cap	2011	IC-10-018	87.3	89.3	2		PPFP		SIL	4						IN	WASTE	X67805	X67805	45
Iron Cap	2011	IC-10-020	240.5	242.5	2		PMON		CL	2		SIL	1			IN	WASTE	X28141	X28141	45
Iron Cap	2011	IC-10-020	182.5	184.5	2		PMON		CL	2						IN	WASTE	X28112	X28112	45

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Iron Cap	2011	IC-10-021	320.8	321.8	1		PMON		CL	2						IN	ORE	X25264	X25264	45
Iron Cap	2011	IC-10-021	282.4	284.3	1.9		PMON		CL	2						IN	WASTE	X25243	X25243	45
Iron Cap	2012	IC-10-018	90	92	2													X67806	X67806	45
Iron Cap	2011	IC-10-018	48.3	50.3	2		PMON		CL	3						IN	WASTE	X67782	X67782	45
Iron Cap	2011	IC-10-020	160.5	162.5	2		PMON		CL	2						IN	WASTE	X28099	X28099	45
Iron Cap	2010	IC-10-013	34	36	2		PMON		SIL	3						IN	ORE	H47469	H47469	45
Iron Cap	2011	IC-10-020	100.5	102.5	2		SARG		MTH	3						IN	WASTE	X28066	X28066	45
Iron Cap	2012	IC-10-021	299	301	2													X25251	X25251	45
Iron Cap	2011	IC-10-018	9.8	11.8	2		PMON		CL	3		KP	2			IN	WASTE	X67761	X67761	45
Iron Cap	2011	IC-10-021	244.4	246.4	2		PMON		CL	2						IN	WASTE	X25221	X25221	45
Iron Cap	2011	IC-10-021	226.4	228.4	2		PMON		CL	2						IN	WASTE	X25211	X25211	45
Iron Cap	2012	IC-10-046	171.2	173.1	1.9													X27667	X27667	49
Iron Cap	2010	IC-10-012	10	12	2		VU		SIL	5						IN	MARGINAL	H48695	H48695	49
Iron Cap	2012	IC-10-016	252	254	2													X67731	X67731	49
Iron Cap	2010	IC-10-011	135	137	2		IU		SIL	4						IN	WASTE	H47241	H47241	49
Iron Cap	2012	IC-10-011	291	293	2													H47325	H47325	49
Iron Cap	2011	IC-10-022	136.7	138.7	2		VU		SIL	3						IN	WASTE	X28273	X28273	49
Iron Cap	2012	IC-10-019	44	46	2													X24881	X24881	49
Iron Cap	2010	IC-10-011	259	261	2		SEDS		SIL	5						IN	MARGINAL	H47307	H47307	49
Iron Cap	2011	IC-10-022	102.7	104.7	2		VU		SIL	3						IN	WASTE	X28256	X28256	49
Iron Cap	2012	IC-10-016	48	50	2													X67618	X67618	49
Iron Cap	2012	IC-10-030	336	337.4	1.4													X26088	X26088	49
Iron Cap	2011	IC-10-028	11.5	13.5	2		IU		SIL	3						IN	MARGINAL	X28851	X28851	49
Iron Cap	2011	IC-10-022	20.7	22.7	2		VU		SIL	3						IN	WASTE	X28211	X28211	49
Iron Cap	2011	IC-10-019	122.2	124.2	2		IU		SIL	3						IN	MARGINAL	X24925	X24925	49
Iron Cap	2012	IC-10-043	218.6	221	2.4													X27364	X27364	49
Iron Cap	2011	IC-10-025	275.22	277.22	2		IU		SIL	4						IN	WASTE	X28751	X28751	49
Iron Cap	2012	IC-10-030	180	182	2													X25998	X25998	49
Iron Cap	2011	IC-10-018	167.3	168.8	1.5		PSBX		PSBX	3						IN	WASTE	X67849	X67849	49
Iron Cap	2010	IC-10-012	134	136	2		VU		SIL	4		IARG	2			IN	WASTE	H48761	H48761	49
Iron Cap	2011	IC-10-022	188.7	190.7	2		IU		SIL	4						IN	WASTE	X28301	X28301	49
Iron Cap	2012	IC-10-045	84.3	86.5	2.2													X27427	X27427	49
Iron Cap	2012	IC-10-043	225.7	228.1	2.4													X27368	X27368	49
Iron Cap	2011	IC-10-014	8.2	10	1.8		IU		SIL	5						IN	WASTE	X67459	X67459	49
Iron Cap	2011	IC-10-030	135.55	137.55	2		VU		CL	3		SIL	2			IN	WASTE	X25974	X25974	49
Iron Cap	2012	IC-10-045	273.2	274.5	1.3													X27532	X27532	49
Iron Cap	2012	IC-10-011	344	346	2													H47353	H47353	49
Iron Cap	2012	IC-10-046	175	176.8	1.8													X27669	X27669	49
Iron Cap	2012	IC-10-007	146	147.9	1.9													H46781	H46781	49
Iron Cap	2012	IC-10-030	366	368	2													X26107	X26107	49
Iron Cap	2010	IC-10-009	111	113	2		VU		SIL	4		IARG	1			IN	WASTE	H46949	H46949	49
Iron Cap	2011	IC-10-022	208.7	210.7	2		IU		SIL	4						IN	ORE	X28314	X28314	49
Iron Cap	2012	IC-10-043	178.75	192	13.25													IC COMP 14	IC COMP 14	49
Iron Cap	2011	IC-10-031	7.8	9.8	2		VU		CL	3						IN	WASTE	X26159	X26159	49
Iron Cap	2011	IC-10-017	138.2	140.2	2		IBX		PSBX	4		SIL	4			IN	WASTE	X66869	X66869	49
Iron Cap	2011	IC-10-019	138.2	140.2	2		IU		SIL	3						IN	WASTE	X24935	X24935	49
Iron Cap	2012	IC-10-012	310.4	312	1.6													H48859	H48859	49
Iron Cap	2010	IC-10-007	84.4	86.3	1.9		SEDS		SIL	4		CARB	1			IN	MARGINAL	H46744	H46744	49
Iron Cap	2011	IC-10-022	320.7	322.7	2		IU		SIL	4						IN	WASTE	X28374	X28374	49
Iron Cap	2012	IC-10-045	271	273.2	2.2													X27531	X27531	49

Note: values in blue are calculated

When reported as below DL half DL was used

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Iron Cap	2011	IC-10-016	272.2	274.4	2.2		IU		SIL	5						IN	ORE	X67741	X67741	49
Iron Cap	2012	IC-10-012	431	433	2													H48926	H48926	49
Iron Cap	2012	IC-10-015	333	335	2													X66721	X66721	49
Iron Cap	2012	IC-10-022	324	326	2													X28375	X28375	49
Iron Cap	2010	IC-10-012	387	389	2		VU		SIL	5		IARG	2			OUT	MARGINAL	H48900	H48900	49
Iron Cap	2011	IC-10-019	158.2	160.2	2		IU		SIL	3						IN	MARGINAL	X24946	X24946	49
Iron Cap	2011	IC-10-022	228.7	230.7	2		IU		SIL	4						IN	MARGINAL	X28325	X28325	49
Iron Cap	2012	IC-10-008	139.75	141.7	1.95													H48432	H48432	49
Iron Cap	2011	IC-10-024	115.05	117.05	2		VU		SIL	4		CL	3			IN	WASTE	X25373	X25373	49
Iron Cap	2012	IC-10-030	330	332	2													X26085	X26085	49
Iron Cap	2011	IC-10-031	24.8	27	2.2		VU		CL	3						IN	WASTE	X26169	X26169	49
Iron Cap	2012	IC-10-029	148	150	2													X29259	X29259	49
Iron Cap	2011	IC-10-027	62.6	64.6	2		IU		SIL	1		CL	1			IN	WASTE	X25718	X25718	49
Iron Cap	2010	IC-10-012	110	112	2		VU		IARG	4		SIL	2			IN	MARGINAL	H48749	H48749	49
Iron Cap	2012	IC-10-029	352	354	2													X29374	X29374	49
Iron Cap	2012	IC-10-043	210	212	2													X27359	X27359	49
Iron Cap	2010	IC-10-013	185	187	2		IU		SIL	3		IARG	1			IN	WASTE	H47552	H47552	49
Iron Cap	2011	IC-10-028	155.5	157.5	2		IU		SIL	3		CL	1			IN	WASTE	X28931	X28931	49
Iron Cap	2011	IC-10-014	178.4	180.3	1.9		SEDS		SIL	5						IN	WASTE	X67553	X67553	49
Iron Cap	2012	IC-10-043	166	168	2													X27334	X27334	49
Iron Cap	2010	NA	NA	NA	#VALUE!													HCT-6	HCT-6	49
Iron Cap	2012	IC-10-019	321	323	2													X25043	HCT-3	49
Iron Cap	2012	IC-10-046	167.7	169.6	1.9													X27664	HCT-5	49
Iron Cap	2011	IC-10-019	244.2	245.2	1		SEDS		IARG	1		CL	1			IN	WASTE	X24997	HCT-2	49
Iron Cap	2011	IC-10-017	30.2	32.2	2		IU		SIL	5						IN	WASTE	X66811	HCT-4	49
Iron Cap	2011	IC-10-017	118.2	120.2	2		IBX		PSBX	4		SIL	4			IN	WASTE	X66857	HCT-1	49
Iron Cap	2012	IC-10-045	121.6	123.95	2.35													X27447	X27447	49
Iron Cap	2011	IC-10-031	42.8	44.8	2		IU		SIL	1		CL	1			IN	WASTE	X26179	X26179	49
Iron Cap	2010	IC-10-010	110	112	2		IBX		QSP	5		IARG	3			IN	WASTE	H48559	H48559A	49
Iron Cap	2010	IC-10-010	10	12	2		IBX		QSP	5		IARG	4			IN	WASTE	H48504	H48504	49
Iron Cap	2011	IC-10-024	230.05	232.05	2		IU		SIL	3		CL	1			IN	MARGINAL	X25438	X25438	49
Iron Cap	2012	IC-10-029	369	371	2													X29384	X29384	49
Iron Cap	2012	IC-10-009	362	364	2													H47085	H47085	49
Iron Cap	2010	NA	NA	NA	#VALUE!													HCT-3	HCT-3	49
Iron Cap	2012	IC-10-045	275.75	290	14.25													IC COMP 22	IC COMP 22	49
Iron Cap	2011	IC-10-022	300.7	302.7	2		IU		SIL	4						IN	WASTE	X28362	X28362	49
Iron Cap	2012	IC-10-029	318	320	2													X29355	X29355	49
Iron Cap	2011	IC-10-030	278.55	280.55	2		IU		SIL	4		CL	1			IN	WASTE	X26055	X26055	49
Iron Cap	2012	IC-10-043	55	57.1	2.1													X27273	X27273	49
Iron Cap	2010	IC-10-010	34	36	2		IBX		QSP	5		IARG	4			IN	MARGINAL	H48517	H48517	49
Iron Cap	2011	IC-10-017	63.95	65.7	1.75		IU		SIL	5						IN	WASTE	X66829	X66829	49
Iron Cap	2012	IC-10-014	160	162	2													X67543	X67543	49
Iron Cap	2010	IC-10-009	135	137	2		IU		SIL	4		QSP	1			IN	MARGINAL	H46962	H46962	49
Iron Cap	2012	IC-10-045	293.2	307.8	14.6													IC COMP 23	IC COMP 23	49
Iron Cap	2012	IC-10-012	400.5	402.6	2.1													H48907	H48907	49
Iron Cap	2012	IC-10-012	403.8	405	1.2													H48909	H48909	49
Iron Cap	2010	IC-10-015	24	26	2		IU		SIL	5		QSP	2			IN	WASTE	X66552	X66552	49
Iron Cap	2012	IC-10-010	104	106	2													H48556	H48556	49
Iron Cap	2011	IC-10-028	59.5	61.5	2		IU		SIL	3						IN	WASTE	X28877	X28877	49
Iron Cap	2012	IC-10-025	339	341	2													X28785	X28785	49

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Iron Cap	2011	IC-10-027	284.6	286.6	2		VU		SIL	2		CL	3			IN	ORE	X25843	X25843	49
Iron Cap	2011	IC-10-019	323.2	325.2	2		SEDS		IARG	1		CL	1			IN	WASTE	X25045	X25045	49
Iron Cap	2012	IC-10-012	299	301	2													H48852	H48852	49
Iron Cap	2012	IC-10-046	184.5	201	16.5													IC COMP 25	IC COMP 25	49
Iron Cap	2011	IC-10-028	79.5	81.5	2		IU		SIL	3						IN	ORE	X28887	X28887	49
Iron Cap	2011	IC-10-014	199	201	2		SEDS		SIL	5						IN	MARGINAL	X67563	X67563	49
Iron Cap	2012	IC-10-046	159.2	161.4	2.2													X27659	X27659	49
Iron Cap	2011	IC-10-022	170.7	172.7	2		IU		SIL	4						IN	WASTE	X28291	X28291	49
Iron Cap	2012	IC-10-038	111.8	113.7	1.9													X29942	X29942	49
Iron Cap	2011	IC-10-028	137.5	139.5	2		IU		SIL	3		CL	1			IN	MARGINAL	X28922	X28922	49
Iron Cap	2011	IC-10-028	99.5	101.5	2		IU		SIL	3						IN	WASTE	X28897	X28897	49
Iron Cap	2011	IC-10-030	254.55	256.55	2		IU		SIL	3						IN	WASTE	X26039	X26039	49
Iron Cap	2011	IC-10-028	39.5	41.5	2		IU		SIL	3						IN	WASTE	X28867	X28867	49
Iron Cap	2012	IC-10-021	397	399	2													X25308	X25308	49
Iron Cap	2010	IC-10-010	60	62	2		IBX		QSP	5		IARG	4			IN	WASTE	H48532	H48532	49
Iron Cap	2010	IC-10-009	9	11	2		PAND		CL	2		QSP	1			IN	MARGINAL	H46895	H46895	49
Iron Cap	2012	IC-10-027	270	272	2													X25832	X25832	49
Iron Cap	2011	IC-10-017	46.2	48.2	2		IU		SIL	5						IN	WASTE	X66819	X66819	49
Iron Cap	2011	IC-10-021	381.4	383.4	2		SEDS		CL	4		SIL	2			IN	ORE	X25301	X25301	49
Iron Cap	2010	IC-10-006	258.6	261	2.4		SEDS		SIL	4		CL	1			IN	ORE	H48305	H48305	49
Iron Cap	2010	IC-10-013	234	236	2		IU		SIL	3						IN	MARGINAL	H47578	H47578	49
Iron Cap	2010	IC-10-006	84	86	2		SEDS		SIH	5		CL	1			IN	ORE	H48210	H48210	49
Iron Cap	2011	IC-10-028	470	471.75	1.75		VU		SIL	4						OUT	ORE	X29099	X29099	49
Iron Cap	2012	IC-10-029	96	98	2													X29231	X29231	49
Iron Cap	2011	IC-10-024	35.05	37.05	2		VU		SIL	2		CL	1			IN	WASTE	X25329	X25329	49
Iron Cap	2012	IC-10-019	190	192	2													X24966	X24966	49
Iron Cap	2010	IC-10-012	409	411	2		VU		SIL	4		IARG	1			OUT	WASTE	H48913	H48913	49
Iron Cap	2011	IC-10-022	340.7	342.7	2		IU		SIL	4						IN	WASTE	X28384	X28384	49
Iron Cap	2012	IC-10-006	270	271.7	1.7													H48312	H48312	49
Iron Cap	2012	IC-10-045	243	245	2													X27515	X27515	49
Iron Cap	2011	IC-10-014	94	96	2		IU		SIL	5						IN	WASTE	X67506	X67506	49
Iron Cap	2011	IC-10-027	265.6	267.6	2		VU		SIL	2		CL	3			IN	WASTE	X25831	X25831	49
Iron Cap	2012	IC-10-009	234	236	2													H47015	H47015	49
Iron Cap	2011	IC-10-014	217	219	2		SEDS		SIL	5						IN	WASTE	X67573	X67573	49
Iron Cap	2011	IC-10-019	219.1	220.2	1.1		IU		SIL	3						IN	WASTE	X24984	X24984	49
Iron Cap	2011	IC-10-014	74	76	2		IU		SIL	5						IN	WASTE	X67495	X67495	49
Iron Cap	2011	IC-10-017	96.2	98.2	2		IBX		PSBX	4		SIL	4			IN	WASTE	X66846	X66846	49
Iron Cap	2010	IC-10-006	134.5	136.5	2		SEDS		SIL	4		CL	2			IN	WASTE	H48238	H48238	49
Iron Cap	2010	IC-10-012	435	437	2		VU		IARG	4		SIL	3			OUT	WASTE	H48929	H48929	49
Iron Cap	2012	IC-10-030	398	400	2													X26126	X26126	49
Iron Cap	2010	IC-10-012	335	337	2		FLTZ									IN	WASTE	H48872	H48872	49
Iron Cap	2012	IC-10-038	31	33	2													X29899	X29899	49
Iron Cap	2011	IC-10-036	36.3	38.3	2		IU		SIL	3						IN	WASTE	X26416	X26416	49
Iron Cap	2012	IC-10-014	86.08	88.25	2.17													X67502	X67502	49
Iron Cap	2010	NA	NA	NA	#VALUE!													HCT-5	HCT-5	49
Iron Cap	2012	IC-10-043	235.9	252	16.1													IC COMP 15	IC COMP 15	49
Iron Cap	2012	IC-10-017	267	269	2													X66938	X66938	49
Iron Cap	2011	IC-10-018	282.3	284.3	2		VU		CL	3						IN	WASTE	X67914	X67914	49
Iron Cap	2012	IC-10-019	230	232	2													X24989	X24989	49
Iron Cap	2010	IC-10-009	7	9	2		PAND		CL	2		QSP	1			IN	WASTE	H46894	H46894	49

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Iron Cap	2012	IC-10-027	328	330	2													X25865	X25865	49
Iron Cap	2012	IC-10-006	210.5	212.5	2													H48278	H48278	49
Iron Cap	2012	IC-10-014	184	186.1	2.1													X67556	X67556	49
Iron Cap	2011	IC-10-017	243.2	245.4	2.2		VU		SIL	4		KP	1			IN	MARGINAL	X66926	X66926	49
Iron Cap	2010	IC-10-006	160	162	2		SEDS		SIL	4						IN	ORE	H48251	H48251	49
Iron Cap	2011	IC-10-036	26.5	27.2	0.7		IU		SIH	4						IN	WASTE	X26408	X26408	49
Iron Cap	2010	IC-10-012	361	363	2		VU		SIL	5		IARG	2			IN	WASTE	H48885	H48885	49
Iron Cap	2012	IC-10-046	99	101	2													X27628	X27628	49
Iron Cap	2012	IC-10-012	347	349	2													H48878	H48878	49
Iron Cap	2012	IC-10-038	139	141	2													X29958	X29958	49
Iron Cap	2012	IC-10-026	207	209	2													X25626	X25626	49
Iron Cap	2011	IC-10-026	270	272	2		PHBX		SIL	3						OUT	WASTE	X25665	X25665	49
Iron Cap	2012	IC-10-006	154.5	156.5	2													H48248	H48248	49
Iron Cap	2010	NA	NA	NA	#VALUE!													HCT-2	HCT-2	49
Iron Cap	2011	IC-10-014	113	115	2		IU		SIL	5						IN	WASTE	X67517	X67517	49
Iron Cap	2012	IC-10-036	25.5	26.5	1													X26407	X26407	49
Iron Cap	2011	IC-10-026	253	255	2		VU		SIL	1						OUT	ORE	X25655	X25655	49
Iron Cap	2010	NA	NA	NA	#VALUE!													HCT-4	HCT-4	49
Iron Cap	2010	IC-10-006	186.5	188.5	2		SEDS		SIL	4		CL	1			IN	WASTE	H48265	H48265	49
Iron Cap	2011	IC-10-024	252.05	254.05	2		VU		SIL	3		CL	2			IN	WASTE	X25451	X25451	49
Iron Cap	2012	IC-10-013	175.4	176.8	1.4													H47546	H47546	49
Iron Cap	2011	IC-10-016	290	292	2		IU		SIL	3		CL	2			OUT	ORE	X67751	X67751	49
Iron Cap	2012	IC-10-026	249	251	2													X25652	X25652	49
Iron Cap	2011	IC-10-027	303.6	305.6	2		VU		SIL	2		CL	3			IN	WASTE	X25854	X25854	49
Iron Cap	2012	IC-10-046	129.3	153	23.7													IC COMP 24	IC COMP 24	49
Iron Cap	2010	IC-10-006	310	312	2		SEDS		SIL	4		CL	1			IN	WASTE	H48336	H48336	49
Iron Cap	2012	IC-10-036	189	191	2													X26501	X26501	49
Iron Cap	2012	IC-10-045	205	221	16													IC COMP 21	IC COMP 21	49
Iron Cap	2012	IC-10-044	383	385	2													X26837	X26837	49
Iron Cap	2012	IC-10-024	221.2	223	1.8													X25432	X25432	49
Iron Cap	2012	IC-10-038	177	179.35	2.35													X29979	X29979	49
Iron Cap	2012	IC-10-014	123	125	2													X67523	X67523	49
Iron Cap	2012	IC-10-009	392.2	394.55	2.35													H47103	H47103	49
Iron Cap	2012	IC-10-026	266	268	2													X25662	X25662	49
Iron Cap	2012	IC-10-014	78	80	2													X67498	X67498	49
Iron Cap	2011	IC-10-014	56	58	2		IU		SIL	5						IN	WASTE	X67485	X67485	49
Iron Cap	2011	IC-10-014	133	135	2		IU		SIL	5						IN	WASTE	X67528	X67528	49
Iron Cap	2012	IC-10-037	284	300	16													IC COMP 2	IC COMP 2	49
Iron Cap	2012	IC-10-028	427	429	2													X29077	X29077	49
Iron Cap	2010	IC-10-010	84	86	2		IBX		QSP	5		IARG	3			IN	WASTE	H48545	H48545	49
Iron Cap	2012	IC-10-028	459	461	2													X29093	X29093	49
Iron Cap	2011	IC-10-027	323.6	325.6	2		VU		SIL	2		CL	3			IN	ORE	X25864	X25864	49
Iron Cap	2010	NA	NA	NA	#VALUE!													HCT-1	HCT-1	49
Iron Cap	2012	IC-10-024	226	228	2													X25435	X25435	49
Iron Cap	2011	IC-10-028	450.35	452.5	2.15		VU		SIL	4						OUT	WASTE	X29089	X29089	49
Iron Cap	2011	IC-10-021	91.4	93.4	2		VU		IARG	4		CL	2			IN	WASTE	X25132	X25132	49
Iron Cap	2010	IC-10-009	309	311	2		PAND		IARG	1		CL	1			IN	MARGINAL	H47057	H47057	49
Iron Cap	2011	IC-10-027	84	86	2		SEDS		SIL	2		CL	1			IN	MARGINAL	X25728	X25728	49
Iron Cap	2012	IC-10-027	82	84	2													X25727	X25727	49
Iron Cap	2012	IC-10-044	299.5	301.5	2													X26791	X26791	49

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Zone	Year Analyzed	Drill Hole	From	To	Interval	Rock Code	Lithology	Reduced Litho	Alteration 1	Alt_1_Intensity	Alt_1_Intensity_Old	Alt_2_Code	Alt_2_Intensity	Alt_2_Intensity_Old	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	2012 Model Code
Iron Cap	2012	IC-10-034	295	297	2													X30399	X30399	49
Iron Cap	2011	IC-10-021	188.4	190.4	2		SEDS		CL	1		SIL	1			IN	WASTE	X25188	X25188	49
Iron Cap	2011	IC-10-014	247.5	249	1.5		SEDS		SIL	5						IN	WASTE	X67591	X67591	49
Iron Cap	2012	IC-10-038	162	164	2													X29971	X29971	49
Iron Cap	2012	IC-10-037	260.72	275	14.28													IC COMP 1	IC COMP 1	49
Iron Cap	2012	IC-10-026	184	186	2													X25611	X25611	49
Iron Cap	2012	IC-10-020	80	82	2													X28052	X28052	49
Iron Cap	2011	IC-10-021	166.4	168.4	2		SEDS		CL	1		SIL	1			IN	ORE	X25175	X25175	49
Iron Cap	2012	IC-10-034	261	263	2													X30379	X30379	49
Iron Cap	2011	IC-10-020	338.5	340.5	2		VU		SIL	3		IARG	1			IN	WASTE	X28196	X28196	49
Iron Cap	2012	IC-10-039	126	140	14													IC COMP 5	IC COMP 5	49
Iron Cap	2012	IC-10-036	132	134	2													X26469	X26469	49
Iron Cap	2012	IC-10-039	152	168	16													IC COMP 6	IC COMP 6	49
Iron Cap	2011	IC-10-021	128.4	130.4	2		VU		CL	4						IN	MARGINAL	X25155	X25155	49
Iron Cap	2012	IC-10-039	117.8	119.2	1.4													X27062	X27062	49
Iron Cap	2012	IC-10-034	273	275	2													X30386	X30386	49
Iron Cap	2012	IC-10-039	75	91	16													IC COMP 4	IC COMP 4	49
Iron Cap	2012	IC-10-039	193.3	204.7	11.4													IC COMP 8	IC COMP 8	49
Iron Cap	2012	IC-10-039	109	111	2													X27058	X27058	49
Iron Cap	2012	IC-10-039	15	31	16													IC COMP 3	IC COMP 3	49
Iron Cap	2012	IC-10-039	121.5	123.8	2.3													X27066	X27066	49
Iron Cap	2012	IC-10-039	182.7	193.3	10.6													IC COMP 7	IC COMP 7	49
Iron Cap	2011	IC-10-020	40.5	42.5	2		VU		SIL	4		CL	1			IN	WASTE	X28031	X28031	49
Iron Cap	2011	IC-10-021	148.4	150.4	2		VU		CL	4						IN	WASTE	X25165	X25165	49
Iron Cap	2011	IC-10-020	20.5	22.5	2		VU		SIL	4		CL	1			IN	WASTE	X28019	X28019	49
Iron Cap	2011	IC-10-021	52.4	54.4	2		SEDS		IARG	4		CL	2			IN	WASTE	X25111	X25111	49
Iron Cap	2011	IC-10-020	20.5	22.5	2		VU		SIL	4		CL	1			IN	WASTE	X28019	X28019	49
Iron Cap	2011	IC-10-021	52.4	54.4	2		SEDS		IARG	4		CL	2			IN	WASTE	X25111	X25111	49
Iron Cap	2011	IC-10-021	14.4	16.4	2		SEDS		IARG	4		CL	2			IN	WASTE	X25091	X25091	49
Iron Cap	2011	IC-10-021	32.4	34.4	2		SEDS		IARG	4		CL	2			IN	WASTE	X25101	X25101	49
Iron Cap	2011	IC-10-021	72.4	73.5	1.1		SEDS		IARG	4		CL	2			IN	WASTE	X25122	X25122	49
Iron Cap	2011	IC-10-021	110.4	112.4	2		SEDS		CL	3						IN	WASTE	X25143	X25143	49

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
H42801	Overburden	KERR			VU	IARG	Waste	Rock	Pulp sample	Cantest	0.2684	Mar-10		H42801		2/18/2010		
H42619	Overburden	KERR			VU	QSP	Waste	Rock	Drillcore WET	Cantest	0.571	Feb-10		K-09-01 22-24		1/15/2010		
H46054	Overburden	KERR			VU	IARG	Waste	Rock	Pulp sample	Cantest	0.2663	Mar-10		H46054/55		2/18/2010		
H46211	CL-PR	KERR			VU	QSP	Ore	Rock	Drillcore	ALS Chemex	4.14	VA09116129		VA09116129R002		9/17/2009		
14541	CL-PR	KERR			SSED	SE	Ore	Rock	Drillcore	ALS Chemex		VA08108753	14541		14541	8/5/2008		
H46155	CL-PR	KERR			VU	SI	Ore	Rock	Pulp sample	Cantest	0.2579	Mar-10		H46155/56		2/18/2010		
H46222	CL-PR	KERR			VU	QSP	Ore	Rock	Drillcore	ALS Chemex	4.22	VA09116129				9/17/2009		
H46210	CL-PR	KERR			VU	QSP	Ore	Rock	Drillcore WET	Cantest	0.363	Feb-10		K-09-04 104-106		1/15/2010		
H46213	CL-PR	KERR			VU	QSP	Ore	Rock	Drillcore	ALS Chemex	3.14	VA09116129		VA09116129R003		9/17/2009		
H46198	CL-PR	KERR			VU	QSP	Ore	Rock	Pulp sample	Cantest	0.2599	Mar-10		H46198/99		2/18/2010		
H46209	CL-PR	KERR			VU	QSP	Ore	Rock	Drillcore	ALS Chemex	4.1	VA09116129		VA09116129R001		9/17/2009		
H46131	CL-PR	KERR			VU	IARG	Ore	Rock	Drillcore WET	Cantest	0.511	Feb-10		K-09-03 134-136		1/15/2010		
H46175	CL-PR	KERR			VU	QSP	Ore	Rock	Pulp sample	Cantest	0.2575	Mar-10		H46175/76		2/18/2010		
H46132	CL-PR	KERR			VU	QSP	Ore	Rock	Drillcore	ALS Chemex	3.38	VA09116128		VA09116128R001		9/17/2009		
H42885	CL-PR	KERR			VU	IARG	Ore	Rock	Drillcore WET	Cantest	0.691	Feb-10		K-09-02 162-164		1/15/2010		
H46123	CL-PR	KERR			VU	QSP	Ore	Rock	Pulp sample	Cantest	0.2498	Mar-10		H46123		2/18/2010		
H46212	CL-PR	KERR			VU	QSP	Ore	Rock	Drillcore WET	Cantest	0.655	Feb-10		K-09-04 108-110		1/15/2010		
H46216	CL-PR	KERR			VU	QSP	Ore	Rock	Drillcore	ALS Chemex	2.8	VA09116129		VA09116129R004		9/17/2009		
H46219	CL-PR	KERR			VU	QSP	Ore	Rock	Drillcore	ALS Chemex	3.28	VA09116129		VA09116129R005		9/17/2009		
H42884	CL-PR	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	3.2	VA09116127		VA09116127R020		9/16/2009		
H42882	CL-PR	KERR			VU	IARG	Ore	Rock	Drillcore WET	Cantest	0.696	Feb-10		K-09-02 158-160		1/15/2010		
H42862	CL-PR	KERR			VU	IARG	Ore	Rock	Pulp sample	Cantest	0.267	Mar-10		H42862/63		2/18/2010		
H42881	CL-PR	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	3.52	VA09116127		VA09116127R019		9/16/2009		
H42887	CL-PR	KERR			VU	IARG	Ore	Rock	Drillcore WET	Cantest	0.765	Feb-10		K-09-02 166-168		1/15/2010		
H46135	CL-PR	KERR			VU	QSP	Ore	Rock	Drillcore	ALS Chemex	3.4	VA09116128				9/17/2009		
H46134	CL-PR	KERR			VU	QSP	Ore	Rock	Drillcore WET	Cantest	0.487	Feb-10		K-09-03 138-140		1/15/2010		
H42772	CL-PR	KERR			VU	CL	Ore	Rock	Pulp sample	Cantest	0.2894	Mar-10		H42772		2/18/2010		
H46076	CL-PR	KERR			VU	IARG	Ore	Rock	Pulp sample	Cantest	0.2821	Mar-10		H46076		2/18/2010		
H42886	CL-PR	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	4	VA09116127		VA09116127R021		9/16/2009		
H46215	CL-PR	KERR			VU	QSP	Ore	Rock	Drillcore WET	Cantest	0.542	Feb-10		K-09-04 112-114		1/15/2010		
H42880	CL-PR	KERR			VU	IARG	Ore	Rock	Drillcore WET	Cantest	0.67	Feb-10		K-09-02 154-156		1/15/2010		
H42895	CL-PR	KERR			VU	IARG	Ore	Rock	Pulp sample	Cantest	0.267	Mar-10		H42895/96		2/18/2010		
H42879	CL-PR	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	3.26	VA09116127		VA09116127R018		9/16/2009		
H42731	CL-PR	KERR			VU	CL	Ore	Rock	Pulp sample	Cantest	0.2145	Mar-10		H42731		2/18/2010		
H42752	CL-PR	KERR			VU	CL	Ore	Rock	Pulp sample	Cantest	0.2645	Mar-10		H42752		2/18/2010		
H46220	CL-PR	KERR			DDRT	CL	Ore	Rock	Drillcore WET	Cantest	0.522	Feb-10		K-09-04 122-123.5		1/15/2010		
H46221	CL-PR	KERR			DDRT	CL	Ore	Rock	Drillcore WET	Cantest	0.481	Feb-10		K-09-04 124.5-126		1/15/2010		
H46221	CL-PR	KERR			DDRT	CL	Ore	Rock	Drillcore	ALS Chemex	1.98	VA09116129		VA09116129R006		9/17/2009		
H42695	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.14	VA09116126		VA09116126R038		9/17/2009		
H42683	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.1	VA09116126		VA09116126R033		9/17/2009		
58437	QSP	KERR			SSST	MY	Ore	Rock	Drillcore	ALS Chemex		VA08108753	58437		58437	8/5/2008		
H42831	QSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.306	Feb-10		K-09-02 64-66		1/15/2010		
14523	QSP	KERR			NQKR	SE	Ore	Rock	Drillcore	ALS Chemex		VA08108753	14523		14523	8/5/2008		
H42816	QSP	KERR			VU	IARG	Ore	Rock	Drillcore WET	Cantest	0.241	Feb-10		K-09-02 38-40		1/15/2010		
H42828	QSP	KERR			VU	QSP	Waste	Rock	Drillcore WET	Cantest	0.361	Feb-10		K-09-02 60-62		1/15/2010		
H42845	QSP	KERR			VU	IARG	Ore	Rock	Drillcore WET	Cantest	0.643	Feb-10		K-09-02 90-92		1/15/2010		
H42832	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.34	VA09116127		VA09116127R009		9/16/2009		
H42834	QSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.371	Feb-10		K-09-02 68-70		1/15/2010		
H42841	QSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.414	Feb-10		K-09-02 80-82		1/15/2010		
H42847	QSP	KERR			VU	IARG	Ore	Rock	Drillcore WET	Cantest	0.304	Feb-10		K-09-02 94-96		1/15/2010		

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
H42818	QSP	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	3.86	VA09116127		VA09116127R005		9/16/2009		
H42814	QSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.386	Feb-10		K-09-02 34-36		1/15/2010		
H42815	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.12	VA09116127		VA09116127R003		9/16/2009		
H42809	QSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.506	Feb-10		K-09-02 26-28		1/15/2010		
H42837	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	2.8	VA09116127		VA09116127R012		9/16/2009		
H42810	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.66	VA09116127		VA09116127R001		9/16/2009		
H42696	QSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.464	Feb-10		K-09-01 162-164		1/15/2010		
H42819	QSP	KERR			VU	IARG	Ore	Rock	Drillcore WET	Cantest	0.324	Feb-10		K-09-02 44-46		1/15/2010		
H42843	QSP	KERR			VU	IARG	Ore	Rock	Drillcore WET	Cantest	0.426	Feb-10		K-09-02 84-86		1/15/2010		
H42835	QSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.322	Feb-10		K-09-02 72-74		1/15/2010		
H42838	QSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.452	Feb-10		K-09-02 76-78		1/15/2010		
H42844	QSP	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	3.3	VA09116127		VA09116127R015		9/16/2009		
H42817	QSP	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	3.26	VA09116127		VA09116127R004		9/16/2009		
H42821	QSP	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	3.44	VA09116127		VA09116127R006		9/16/2009		
H42848	QSP	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	1.48	VA09116127	FLB duplicate	VA09116127R017		9/16/2009		
14507	QSP	KERR			SCNG	SE	Ore	Rock	Drillcore	ALS Chemex		VA08108753	14507		14507	8/5/2008		
H42846	QSP	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	4.06	VA09116127		VA09116127R016		9/16/2009		
H42813	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.24	VA09116127		VA09116127R002		9/16/2009		
H42682	QSP	KERR			VU	IARG	Waste	Rock	Drillcore DRY	Cantest	0.573	Feb-10		S-09-01 136-138		1/15/2010		
H42842	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.64	VA09116127		VA09116127R014		9/16/2009		
H42812	QSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.349	Feb-10		K-09-02 30-32		1/15/2010		
H42835	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	4.48	VA09116127	FLB duplicate	VA09116127R011		9/16/2009		
H42675	QSP	KERR			VU	IARG	Ore	Rock	Drillcore DRY	Cantest	0.646	Feb-10		S-09-01 124-126		1/15/2010		
H42673	QSP	KERR			VU	IARG	Ore	Rock	Drillcore DRY	Cantest	0.624	Feb-10		S-09-01 120-122		1/15/2010		
H42686	QSP	KERR			VU	IARG	Waste	Rock	Drillcore DRY	Cantest	0.668	Feb-10		K-09-01 144-146		1/15/2010		
H42671	QSP	KERR			VU	IARG	Ore	Rock	Drillcore DRY	Cantest	0.57	Feb-10		S-09-01 116-118		1/15/2010		
H42839	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.24	VA09116127		VA09116127R013		9/16/2009		
H42668	QSP	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	4.02	VA09116126	FLB duplicate	VA09116126R026		9/17/2009		
3008	QSP	KERR			INPP	SE	Waste	Rock	Drillcore	ALS Chemex		VA08108753	3008		3008	8/5/2008		
49313	QSP	KERR			VHLP	SE	Waste	Rock	Drillcore	ALS Chemex		VA08108753	49313-49315		49313-49315	8/5/2008		
H42676	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.98	VA09116126		VA09116126R030		9/17/2009		
H42666	QSP	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	3.54	VA09116126		VA09116126R025		9/17/2009		
H46136	QSP	KERR			VU	QSP	Ore	Rock	Drillcore WET	Cantest	0.401	Feb-10		K-09-03142-144		1/15/2010		
H42672	QSP	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	3.26	VA09116126		VA09116126R028		9/17/2009		
H42689	QSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.572	Feb-10		K-09-01 150-152		1/15/2010		
H42663	QSP	KERR			VU	IARG	Ore	Rock	Drillcore WET	Cantest	0.359	Feb-10		K-09-01 100-102		1/15/2010		
3048	QSP	KERR			INPP	SE	Ore	Rock	Drillcore	ALS Chemex		VA08108753	3048		3048	8/5/2008		
H42668	QSP	KERR			VU	IARG	Ore	Rock	Drillcore WET	Cantest	0.241	Feb-10		K-09-01 110-112		1/15/2010		
H42685	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.42	VA09116126		VA09116126R034		9/17/2009		
H42688	QSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.542	Feb-10		K-09-01 148-150		1/15/2010		
H42687	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.34	VA09116126		VA09116126R035		9/17/2009		
H42669	QSP	KERR			VU	IARG	Ore	Rock	Drillcore WET	Cantest	0.524	Feb-10		K-09-01 112-114		1/15/2010		
H42701	QSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.328	Feb-10		K-09-01 170-172		1/15/2010		
H42699	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	1.58	VA09116126		VA09116126R040		9/17/2009		
H42684	QSP	KERR			VU	IARG	Waste	Rock	Drillcore DRY	Cantest	0.646	Feb-10		S-09-01 140-142		1/15/2010		
H42707	QSP	KERR			SSLT	IARG	Waste	Rock	Drillcore	ALS Chemex	3.68	VA09116126		VA09116126R043		9/17/2009		
H42703	QSP	KERR			VU	CARB	Waste	Rock	Drillcore WET	Cantest	0.605	Feb-10		K-09-01 174-176		1/15/2010		
H42681	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.3	VA09116126		VA09116126R032		9/17/2009		
H42693	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	2.82	VA09116126		VA09116126R037		9/17/2009		
H42694	QSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.552	Feb-10		K-09-01 158-160		1/15/2010		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
H42680	QSP	KERR			VU	IARG	Waste	Rock	Drillcore DRY	Cantest	0.759	Feb-10		S-09-01 132-134		1/15/2010		
H42697	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.22	VA09116126		VA09116126R039		9/17/2009		
H42704	QSP	KERR			SSLT	IARG	Waste	Rock	Drillcore	ALS Chemex	3.62	VA09116126		VA09116126R042		9/17/2009		
H42710	QSP	KERR			SSLT	IARG	Waste	Rock	Drillcore WET	Cantest	0.325	Feb-10		K-09-01 186-188		1/15/2010		
H42706	QSP	KERR			SSLT	IARG	Waste	Rock	Drillcore WET	Cantest	0.251	Feb-10		K-09-01 178-180		1/15/2010		
H42664	QSP	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	3.04	VA09116126		VA09116126R024		9/17/2009		
H42702	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	2.9	VA09116126		VA09116126R041		9/17/2009		
H42708	QSP	KERR			SSLT	IARG	Waste	Rock	Drillcore WET	Cantest	0.496	Feb-10		K-09-01 182-184		1/15/2010		
H42674	QSP	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	3.18	VA09116126		VA09116126R029		9/17/2009		
H42709	QSP	KERR			SSLT	IARG	Waste	Rock	Drillcore	ALS Chemex	4.24	VA09116126		VA09116126R044		9/17/2009		
49852	QSP	KERR			VHLP	SE	Waste	Rock	Drillcore	ALS Chemex		VA08108753	49852-49854		49852-49854	8/5/2008		
H42678	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.62	VA09116126		VA09116126R031		9/17/2009		
H42670	QSP	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	3.34	VA09116126		VA09116126R027		9/17/2009		
H42698	QSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.607	Feb-10		K-09-01 166-168		1/15/2010		
H42690	QSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.72	VA09116126		VA09116126R036		9/17/2009		
H42691	QSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.421	Feb-10		K-09-01 154-156		1/15/2010		
H42677	QSP	KERR			VU	IARG	Waste	Rock	Drillcore DRY	Cantest	0.59	Feb-10		S-09-01 128-130		1/15/2010		
H42665	QSP	KERR			VU	IARG	Ore	Rock	Drillcore WET	Cantest	0.491	Feb-10		K-09-01 104-106		1/15/2010		
3027	QSP	KERR			DMON	CL	Ore	Rock	Drillcore	ALS Chemex		VA08108753	3027		3027	8/5/2008		
H46138	QSP	KERR			ANDS	CL	Ore	Rock	Drillcore WET	Cantest	0.43	Feb-10		K-09-03 146-148		1/15/2010		
H46137	QSP	KERR			ANDS	CL	Ore	Rock	Drillcore	ALS Chemex	3.7	VA09116128		VA09116128R003		9/17/2009		
H46142	QSP	KERR			ANDS	CL	Ore	Rock	Drillcore	ALS Chemex	3.32	VA09116128		VA09116128R005		9/17/2009		
H46144	QSP	KERR			ANDS	CL	Ore	Rock	Drillcore	ALS Chemex	3.16	VA09116128		VA09116128R006		9/17/2009		
H46139	QSP	KERR			ANDS	CL	Ore	Rock	Drillcore	ALS Chemex	3.24	VA09116128		VA09116128R004		9/17/2009		
H46143	QSP	KERR			ANDS	CL	Ore	Rock	Drillcore WET	Cantest	0.483	Feb-10		K-09-03 154-156		1/15/2010		
H46141	QSP	KERR			ANDS	CL	Ore	Rock	Drillcore WET	Cantest	0.473	Feb-10		K-09-03 150-152		1/15/2010		
X66086		KERR			VU	FEOX	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X66087		KERR			VU	CL2	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X66116		KERR			VULT	CL2	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X66117		KERR			VU	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X66217		KERR			VU	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X63932		KERR			VU	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X63953		KERR			VU	IARG	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X63972		KERR			DDRT	UDEF	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X63980		KERR			VU	IARG	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X67079		KERR			VU	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X66229		KERR			VU	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X66249		KERR			VU	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X66250		KERR			SEDS	SIL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X66286		KERR			VU	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X66287		KERR			PAND	SIL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X66304		KERR			PAND	SIL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X66305		KERR			VU	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X66332		KERR			SARG	UDEF	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X66338		KERR			SARG	UDEF	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X66340		KERR			PAND	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X66346		KERR			DDRT	UDEF	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X66347		KERR			PAND	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X66373		KERR			PAND	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X67132		KERR			VULT	SIL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		

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When reported as below DL half DL was used

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
X67133		KERR			DDRT	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X67143		KERR			VUTF	SIL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X67144		KERR			VUTF	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X67174		KERR			ANDS	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X67175		KERR			SEDS	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X67268		KERR			VU	SIL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X67292		KERR			PAND	SIL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X67297		KERR			DDRT	UDEF	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X67322		KERR			VU	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X67347		KERR			PPFP	CARB	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X67354		KERR			DDRT	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X67374		KERR			VU	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X67396		KERR			VU	IARG	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X67432		KERR			VU	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
X67438		KERR			PSYN	CARB	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156638		KERR			SCHT	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156644		KERR			SCHT	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156654		KERR			FLTZ	ARG	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156683		KERR			VULT	IARG	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156689		KERR			VU	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156694		KERR			VU	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156698		KERR			DDRT	CARB	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156709		KERR			VU	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156710		KERR			DDRT	CARB	Waste	Rock	Drillcore	Maxxam		B249142				1-Jun-12		
S156717		KERR			SCHT	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156723		KERR			SCHT	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156734		KERR			SCHT	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156743		KERR			IBX	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156752		KERR			IU	ARG	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156759		KERR			DDRT	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156769		KERR			VU	QSP	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156780		KERR			DDRT	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156784		KERR			IBX	QSP	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156790		KERR			FDYK	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156800		KERR			IVOL	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156810		KERR			DDRT	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156824		KERR			PAND	IARG	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156829		KERR			PPFP	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156835		KERR			IU	AH	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156847		KERR			IBX	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154641		KERR			PMON	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154644		KERR			SEDS	SIH	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154647		KERR			SEDS	SIH	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154955		KERR			SEDS	SIH	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154956		KERR			PPFP	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154961		KERR			PPFP	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154962		KERR			PMFP	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154973		KERR			PAND	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154974		KERR			PPFP	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154653		KERR			IVOL	UDEF	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
S154666		KERR			DDRT	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154696		KERR			IVOL	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154697		KERR			IVOL	SIL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154739		KERR			VU	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154746		KERR			IVOL	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154766		KERR			DDRT	PR	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154788		KERR			VUAT	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154798		KERR			DDRT	PR	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154805		KERR			VUAT	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154841		KERR			VUTF	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154857		KERR			VU	SIL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154858		KERR			DDRT	PR	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154871		KERR			DDRT	UDEF	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154872		KERR			PSBX	PSBX	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154884		KERR			IVOL	SIL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156852		KERR			SARG	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156860		KERR			SARG	QSP	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156877		KERR			SCHT	QSP	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156889		KERR			VU	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156900		KERR			VU	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156913		KERR			VUTF	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156922		KERR			SARG	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156942		KERR			SCHT	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156970		KERR			VU	QSP	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156983		KERR			VU	SI	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S156999		KERR			IU	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157030		KERR			IBX	QSP	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157047		KERR			VU	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157055		KERR			DDRT	UDEF	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157066		KERR			SARG	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157078		KERR			SARG	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157082		KERR			VALT	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157109		KERR			VALT	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157122		KERR			VALT	CL	Ore	Rock	Drillcore	Maxxam		B249142				1-Jun-12		
S157132		KERR			SARG	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157181		KERR			VU	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157212		KERR			SARG	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157239		KERR			IVOL	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157266		KERR			DDRT	UDEF	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157287		KERR			SARG	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157300		KERR			VU	QSP	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154899		KERR			VU	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154900		KERR			VUTF	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154925		KERR			PAND	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154926		KERR			VU	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154942		KERR			IVOL	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S154943		KERR			DDRT	UDEF	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S155508		KERR			VUAT	SIH	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S155509		KERR			DDRT	SIL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S155017		KERR			PAND	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		

Note: values in blue are calculated

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
S155048		KERR			VU	IARG	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S155067		KERR			VUAT	SIL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S155075		KERR			SARG	SIL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S155098		KERR			SARG	SIL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S155112		KERR			VU	QSP	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S155119		KERR			PPFP	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S155125		KERR			VU	QSP	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S155147		KERR			VU	QSP	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157321		KERR			VU	QSP	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157345		KERR			DDRT	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157360		KERR			IVOL	CL	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157388		KERR			FLTZ	CL	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157426		KERR			VU	AH	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157460		KERR			VU	AH	Ore	Rock	Drillcore	Maxxam		B249142				6/1/2012		
S157484		KERR			VU	AH	Waste	Rock	Drillcore	Maxxam		B249142				6/1/2012		
H42636	Weak CLQSP	KERR			VU	QSP	Waste	Rock	Drillcore WET	Cantest	0.515	Feb-10		K-09-01 50-52		1/15/2010		
H42628	Weak CLQSP	KERR			VU	QSP	Waste	Rock	Drill core	ALS Chemex	1.14	VA09116126		VA09116126R008		9/17/2009		
H42630	Weak CLQSP	KERR			VU	QSP	Waste	Rock	Drillcore	ALS Chemex	3.42	VA09116126		VA09116126R009		9/17/2009		
H42623	Weak CLQSP	KERR			VU	QSP	Waste	Rock	Drillcore	ALS Chemex	3.24	VA09116126		VA09116126R006		9/17/2009		
H42631	Weak CLQSP	KERR			VU	QSP	Waste	Rock	Drillcore WET	Cantest	0.571	Feb-10		K-09-01 42-44		1/15/2010		
H42624	Weak CLQSP	KERR			VU	QSP	Waste	Rock	Drillcore WET	Cantest	0.484	40210		K-09-01 30-32		1/15/2010		
H42659	Weak CLQSP	KERR			VU	IARG	Ore	Rock	Drillcore WET	Cantest	0.43	40210		K-09-01 94-96		1/15/2010		
H42652	Weak CLQSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	2.88	VA09116126		VA09116126R019		9/17/2009		
H42643	Weak CLQSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.08	VA09116126		VA09116126R015		9/17/2009		
H42641	Weak CLQSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.06	VA09116126		VA09116126R014		9/17/2009		
H42657	Weak CLQSP	KERR			VU	IARG	Ore	Rock	Drillcore WET	Cantest	0.448	40210		K-09-01 90-92		1/15/2010		
H42637	Weak CLQSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.2	VA09116126		VA09116126R012		9/17/2009		
H42639	Weak CLQSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.4	VA09116126		VA09116126R013		9/17/2009		
H42625	Weak CLQSP	KERR			VU	QSP	Waste	Rock	Drillcore	ALS Chemex	3	VA09116126		VA09116126R007		9/17/2009		
H42648	Weak CLQSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	3.04	VA09116126		VA09116126R017		9/17/2009		
H42632	Weak CLQSP	KERR			VU	QSP	Waste	Rock	Drillcore	ALS Chemex	2.92	VA09116126		VA09116126R010		9/17/2009		
H42653	Weak CLQSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.433	40210		K-09-01 82-84		1/15/2010		
H42627	Weak CLQSP	KERR			VU	QSP	Waste	Rock	Drillcore WET	Cantest	0.559	40210		K-09-01 34-36		1/15/2010		
H42642	Weak CLQSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.394	40210		K-09-01 62-64		1/15/2010		
H42645	Weak CLQSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	2.82	VA09116126		VA09116126R016		9/17/2009		
H42658	Weak CLQSP	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	1.48	VA09116126		VA09116126R022		9/17/2009		
H42644	Weak CLQSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.494	40210		K-09-01 66-68		1/15/2010		
H42656	Weak CLQSP	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	3.44	VA09116126		VA09116126R021		9/17/2009		
H42621	Weak CLQSP	KERR			VU	QSP	Waste	Rock	Drillcore	ALS Chemex	2.7	VA09116126		VA09116126R005		9/17/2009		
H42640	Weak CLQSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.515	1-Feb-10		K-09-01 58-60		15-Jan-10		
H42649	Weak CLQSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.544	Feb-10		K-09-01 74-76		1/15/2010		
H42638	Weak CLQSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.67	40210		K-09-01 54-56		1/15/2010		
H42633	Weak CLQSP	KERR			VU	QSP	Waste	Rock	Drillcore	ALS Chemex	3.16	VA09116126		VA09116126R011		9/17/2009		
H42654	Weak CLQSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	2.78	VA09116126				17-Sep-09		
H42661	Weak CLQSP	KERR			VU	IARG	Ore	Rock	Drillcore	ALS Chemex	3.48	VA09116126		VA09116126R023		9/17/2009		
H42651	Weak CLQSP	KERR			VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.496	40210		K-09-01 78-80		1/15/2010		
H42650	Weak CLQSP	KERR			VU	IARG	Waste	Rock	Drillcore	ALS Chemex	2.94	VA09116126		VA09116126R018		17-Sep-09		
58450	Premier dike	KERR			SSED	MY	Waste	Rock	Drillcore	ALS Chemex		VA08108753	58450		58450	8/5/2008		
58464	Undefined	KERR			SSED	MY	Waste	Rock	Drillcore	ALS Chemex		VA08108753	58464		58464	5-Aug-08		
17086	Undefined	KERR			SSED	QS	Ore	Rock	Drillcore	ALS Chemex		VA08108753	17086-17087		17086-17087	5-Aug-08		

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
17062	Undefined	KERR			SSED	QS	Waste	Rock	Drillcore	ALS Chemex		VA08108753	17062-17064		17062-17064	5-Aug-08		
17109	Undefined	KERR			SMUD	QS	Waste	Rock	Drillcore	ALS Chemex		VA08108753	17109-17110		17109-17110	8/5/2008		
17148	Undefined	KERR			VTXL	UDEF	Waste	Rock	Drillcore	ALS Chemex		VA08108753	17148-17149		17148-17149	5-Aug-08		
58479	Undefined	KERR			DDPL	SE	Waste	Rock	Drillcore	ALS Chemex		VA08108753	58479		58479	8/5/2008		
58493	Undefined	KERR			DDRK	CL	Waste	Rock	Drillcore	ALS Chemex		VA08108753	58493		58493	5-Aug-08		
G24857	Overburden	RAEWN_CU	ORE	IN	VU	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G24857		G24857	2-Sep-08		
SG92-17_C11049	Overburden	HAZLVOLC_FW	WASTE	IN	SSLT	PR	Waste	Rock	Drillcore	ALS Chemex		VA08108753	SG92-17_C11049		SG92-17_C11049	8/5/2008		
9593	Overburden	HAZLVOLC_FW	WASTE	OUT	VU	SIH	Waste	Rock	Pulp sample	Cantest	0.255	Mar-10		9593/95		2/18/2010		
S91-388_5219	Overburden	#N/A		#N/A	CCSD	PR	Waste	Rock	Drillcore	ALS Chemex		VA08108753	S91-388_5219		S91-388_5219	8/5/2008		
H44700	Overburden	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Pulp sample	Cantest	0.2667	Mar-10		H44700/01		2/18/2010		
G24650	Overburden	MCMONZ	WASTE	IN	PPFP	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G24650		G24650	9/2/2008		
H42333	Overburden	HAZLVOLC_HW	WASTE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	1.64	VA09124617		VA09124617R035		16-Sep-09		
MC-05-03 6.0-20	Overburden	HAZLVOLC_HW	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
10335	Overburden	HAZLVOLC_HW	MARGINAL	IN	PHBX	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	10335		10335	9/2/2008		
H45368	Au, Leach, Raewn zones	LEACH_AU	WASTE	IN	PSBX	PSBX	Ore	Rock	Pulp sample	Cantest	0.2957	40238		H45368		2/18/2010		
H45505	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	PSBX	PSBX	Ore	Rock	Pulp sample	Cantest	0.2578	40238		H45504/05		2/18/2010		
G24888	Au, Leach, Raewn zones	SULPH_AU	MARGINAL	IN	PHBX	SIL	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G24888		G24888	9/2/2008		
S91-388_5274	Au, Leach, Raewn zones	#N/A		#N/A	PQMZ	SI	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-388_5274		S91-388_5274	5-Aug-08		
H45279	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	SIL	Ore	Rock	Pulp sample	Cantest	0.2825	1-Mar-10		H45279		18-Feb-10		
G24806	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	SI	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G24806		G24806	2-Sep-08		
G24829	Au, Leach, Raewn zones	HAZLVOLC_FW	WASTE	IN	PHBX	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G24830		G24830	9/2/2008		
G24902	Au, Leach, Raewn zones	LEACH_AU	WASTE	IN	FLTZ	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G24902		G24902	2-Sep-08		
G24874	Au, Leach, Raewn zones	LEACH_AU	ORE	IN	VU	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G24874		G24874	9/2/2008		
SG92-22_C9763	Au, Leach, Raewn zones	LEACH_AU	WASTE	IN	PSBX	QP	Waste	Rock	Drillcore	ALS Chemex		VA08108753	SG92-22_C9763		SG92-22_C9763	5-Aug-08		
SG92-22_C9711	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VUAT	QP	Ore	Rock	Drillcore	ALS Chemex		VA08108753	SG92-22_C9711		SG92-22_C9711	8/5/2008		
G24782	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	SI	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G24782		G24782	9/2/2008		
H44956	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	SIL	Ore	Rock	Pulp sample	Cantest	0.2722	Mar-10		H44956		2/18/2010		
H42509	Au, Leach, Raewn zones	LEACH_AU	WASTE	IN	VAAT	SI	Ore	Rock	Pulp sample	Cantest	0.2578	40238		H42509/10		2/18/2010		
S91-388_5261	Au, Leach, Raewn zones	#N/A		#N/A	PQMZ	SI	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-388_5261		S91-388_5261	8/5/2008		
H44939	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	2.64	VA09124617		VA09124617R017		16-Sep-09		
H44935	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.78	1-Feb-10		S-09-10 424-426		15-Jan-10		
G21680	Au, Leach, Raewn zones	HAZLVOLC_FW	ORE	IN	VUAT	SI	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G21680		G21680	2-Sep-08		
H42532	Au, Leach, Raewn zones	LEACH_AU	WASTE	IN	VAAT	SI	Waste	Rock	Pulp sample	Cantest	0.2806	1-Mar-10		H42532		18-Feb-10	mean of duplicates	
H44942	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	SIL	Ore	Rock	Drillcore	ALS Chemex	2.08	VA09116247				9/16/2009		
SG92-02_C8906	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	PQMZ	QB	Ore	Rock	Drillcore	ALS Chemex		VA08108753	SG92-02_C8906		SG92-02_C8906	5-Aug-08		
H42460	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VAAT	CL	Ore	Rock	Drillcore	ALS Chemex	1.06	VA09124617		VA09124617R058		9/16/2009		
SG92-02_C8897	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VULT	QB	Ore	Rock	Drillcore	ALS Chemex		VA08108753	SG92-02_C8897		SG92-02_C8897	5-Aug-08		
SG92-02_C8901	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VULT	QB	Ore	Rock	Drillcore	ALS Chemex		VA08108753	SG92-02_C8901		SG92-02_C8901	8/5/2008		
SG92-06_C12601	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VUXT	QA	Ore	Rock	Drillcore	ALS Chemex		VA08108753	SG92-06_C12601		SG92-06_C12601	8/5/2008		
SG92-22_C9736	Au, Leach, Raewn zones	LEACH_AU	MARGINAL	IN	VUAT	QP	Ore	Rock	Drillcore	ALS Chemex		VA08108753	SG92-22_C9736		SG92-22_C9736	8/5/2008		
H44936	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	1.98	VA09124617		VA09124617R016		9/16/2009		
H45187	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	1.98	VA09124617		VA09124617R022		9/15/2009		
H45191	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	1.88	VA09124617		VA09124617R024		15-Sep-09		
H44940	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.658	1-Feb-10		S-09-10 434-436		15-Jan-10		
G24756	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	PSBX	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G24756		G24756	9/2/2008		
H44937	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.895	40210		S-09-10 428-430		1/15/2010		
G24926	Au, Leach, Raewn zones	LEACH_AU	ORE	IN	IVOL	SIL	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G24926		G24926	2-Sep-08		
S91-388_5249	Au, Leach, Raewn zones	#N/A		#N/A	PQMZ	SI	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-388_5249		S91-388_5249	5-Aug-08		
H45803	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	DDRT	CL	Ore	Rock	Pulp sample	Cantest	0.2565	40238		H45803		2/18/2010		
H45188	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.361	40210		S-09-11 336-338		1/15/2010		

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PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
H45189	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	1.9	VA09124617		VA09124617R023		9/15/2009		
G24852	Au, Leach, Raewn zones	LWSUL_AU	WASTE	IN	IVOL	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G24852		G24852	9/2/2008		
H44933	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	2.06	VA09124617		VA09124617R015		9/16/2009		
X15955	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VULT	CL	Ore	Rock	Pulp sample	Cantest	0.2098	Mar-10		X15955/56		2/18/2010		
H45591	Au, Leach, Raewn zones	LEACH_AU	MARGINAL	IN	IVOL	CL	Ore	Rock	Pulp sample	Cantest	0.2561	40238		H45591		2/18/2010	mean of duplicates	
X15979	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	CL	Ore	Rock	Pulp sample	Cantest	0.2698	1-Mar-10		X15979/80		18-Feb-10		
G21668	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VATF	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G21668		G21668	9/2/2008		
H45190	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.617	Feb-10		S-09-11 340-342		1/15/2010		
H45814	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	IVOL	CL	Ore	Rock	Pulp sample	Cantest	0.3072	1-Mar-10		H45814		18-Feb-10	mean of duplicates	
H45186	Au, Leach, Raewn zones	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.678	40210		S-09-11 332-334		1/15/2010		
G24942	Au, Leach, Raewn zones	LWSUL_AU	WASTE	IN	IVOL	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G24942		G24942	9/2/2008		
X15939	Au, Leach, Raewn zones	RAEWN_CU	WASTE	IN	SARG	CL	Ore	Rock	Drillcore	ALS Chemex	1.96	VA09124617		VA09124617R012		9/16/2009		
G24952	Au, Leach, Raewn zones	LWSUL_AU	MARGINAL	IN	PQMZ	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G24952		G24952	9/2/2008		
G21701	Au, Leach, Raewn zones	HAZLVOLC_FW	WASTE	OUT	ANDS	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G21701		G21701	9/2/2008		
SG92-22_C9681	Au, Leach, Raewn zones	HAZLVOLC_FW	WASTE	IN	SSLT	PR	Ore	Rock	Drillcore	ALS Chemex		VA08108753	SG92-22_C9681		SG92-22_C9681	8/5/2008		
SG92-06_C12669	Lower Au zone	HAZLVOLC_FW	ORE	OUT	VUXT	QP	Ore	Rock	Drillcore	ALS Chemex		VA08108753	SG92-06_C12669		SG92-06_C12669	8/5/2008		
H45390	Lower Au zone	LEACH_AU	MARGINAL	IN	VU	SIH	Ore	Rock	Pulp sample	Cantest	0.2901	Mar-10		H45390		2/18/2010	mean of duplicates	
H45199	Lower Au zone	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.646	40210		S-09-11 356-358		1/15/2010		
SG92-22_C9794	Lower Au zone	LEACH_AU	ORE	IN	SSLT	QP	Waste	Rock	Drillcore	ALS Chemex		VA08108753	SG92-22_C9794		SG92-22_C9794	8/5/2008		
H45195	Lower Au zone	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	1.88	VA09124617		VA09124617R026		9/15/2009		
H45198	Lower Au zone	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	1.78	VA09124617		VA09124617R027		9/15/2009		
H45200	Lower Au zone	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	1.74	VA09124617		VA09124617R028		9/15/2009		
S-10-29 115.5-129.5	Lower Au zone	CANYN_AU	ORE	OUT			Ore	Pulp	Composite	Maxxam		40920				1/12/2012		
H45202	Lower Au zone	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	1.62	VA09124617		VA09124617R029		9/15/2009		
SG92-02_C8937	Lower Au zone	HAZLVOLC_FW	MARGINAL	IN	BVXT	PR	Waste	Rock	Drillcore	ALS Chemex		VA08108753	SG92-02_C8937		SG92-02_C8937	8/5/2008		
H45206	Lower Au zone	HAZLVOLC_FW	MARGINAL	OUT	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	1.9	VA09124617		VA09124617R031		9/15/2009		
H45614	Lower Au zone	LWSUL_AU	WASTE	IN	SEDS	SIH	Ore	Rock	Pulp sample	Cantest	0.2543	Mar-10		H45614		2/18/2010		
H45192	Lower Au zone	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.52	40210		S-09-11 344-346		1/15/2010		
H45211	Lower Au zone	LWSUL_AU	ORE	OUT	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	1.94	VA09124617		VA09124617R033		15-Sep-09		
SG92-22_C9822	Lower Au zone	LWSUL_AU	ORE	IN	VUAT	QP	Ore	Rock	Drillcore	ALS Chemex		VA08108753	SG92-22_C9822		SG92-22_C9822	8/5/2008		
H45197	Lower Au zone	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.648	1-Feb-10		S-09-11 352-354		15-Jan-10		
H45208	Lower Au zone	HAZLVOLC_FW	MARGINAL	OUT	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	1.34	VA09124617		VA09124617R032		9/15/2009		
H45207	Lower Au zone	HAZLVOLC_FW	MARGINAL	OUT	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.638	1-Feb-10		S-09-11 372-374		15-Jan-10		
H44977	Lower Au zone	LWSUL_AU	ORE	IN	VUTF	SIL	Ore	Rock	Pulp sample	Cantest	0.2471	1-Mar-10		H44977		18-Feb-10		
H45210	Lower Au zone	LWSUL_AU	ORE	OUT	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.675	Feb-10		S-09-11 376-378		1/15/2010		
G24977	Lower Au zone	LWSUL_AU	ORE	IN	IVOL	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G24977		G24977	9/2/2008		
H45224	Lower Au zone	LWSUL_AU	ORE	OUT	VU	SIH	Waste	Rock	Pulp sample	Cantest	0.2605	1-Mar-10		H45224		18-Feb-10		
H44683	Lower Au zone	HAZLVOLC_FW	WASTE	OUT	VU	SIH	Ore	Rock	Pulp sample	Cantest	0.2667	Mar-10		H44683		2/18/2010		
H45193	Lower Au zone	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	1.64	VA09124617		VA09124617R025		15-Sep-09		
G24999	Lower Au zone	LWSUL_AU	ORE	IN	IVOL	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G24999		G24999	9/2/2008		
H45194	Lower Au zone	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.659	1-Feb-10		S-09-11 348-350		15-Jan-10		
H45204	Lower Au zone	HAZLVOLC_FW	WASTE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	1.96	VA09124617		VA09124617R030		9/15/2009		
H45205	Lower Au zone	HAZLVOLC_FW	WASTE	OUT	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.718	1-Feb-10		S-09-11 368-370		15-Jan-10		
H45203	Lower Au zone	HAZLVOLC_FW	MARGINAL	IN	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.42	Feb-10		S-09-11 364-366		1/15/2010		
H45201	Lower Au zone	RAEWN_CU	ORE	IN	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.676	Feb-10		S-09-11 360-362		1/15/2010		
H45212	Lower Au zone	LWSUL_AU	ORE	OUT	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.639	40210		S-09-11 380-382		1/15/2010		
X15937	LP Hazelton	RAEWN_CU	ORE	IN	SARG	CL	Ore	Rock	Drillcore	ALS Chemex	2.62	VA09124617		VA09124617R011		9/16/2009		
H45086	LP Hazelton	HAZLVOLC_FW	WASTE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	1.8	VA09124617		VA09124617R020		9/15/2009		
H44866	LP Hazelton	HAZLVOLC_FW	ORE	IN	VU	SIH	Ore	Rock	Pulp sample	Cantest	0.2508	40238		H44866		2/18/2010		
H45087	LP Hazelton	HAZLVOLC_FW	ORE	IN	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.673	40210		S-09-11 152-154		1/15/2010		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
H45085	LP Hazelton	HAZLVOLC_FW	ORE	IN	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.567	40210		S-09-11 148-150		1/15/2010		
H45083	LP Hazelton	HAZLVOLC_FW	WASTE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	2.3	VA09124617		VA09124617R019		9/15/2009		
X15934	LP Hazelton	RAEWN_CU	ORE	IN	SARG	CL	Ore	Rock	Drillcore	ALS Chemex	1.96	VA09124617		VA09124617R010		9/16/2009		
H45102	LP Hazelton	HAZLVOLC_FW	ORE	IN	VUTF	CL	Ore	Pulp	Composite	Cantest	0.2599	40238		H45102/03		2/18/2010	mean of duplicates	
X15912	LP Hazelton	HAZLVOLC_FW	ORE	IN	VU	CL	Ore	Rock	Pulp sample	Cantest	0.2535	40238		X15912/13/14		2/18/2010		
H45082	LP Hazelton	HAZLVOLC_FW	ORE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	0.62	VA09124617				9/15/2009		
20856	LP Hazelton	HAZLVOLC_FW	ORE	IN	CCSD	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125686	20856		20856	2-Sep-08		
H45088	LP Hazelton	HAZLVOLC_FW	WASTE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	1.64	VA09116248				9/15/2009		
H44554	LP Hazelton	HAZLVOLC_FW	ORE	IN	VU	SIL	Waste	Rock	Pulp sample	Cantest	0.267	40238		H44554/55		2/18/2010		
SG92-06_C12577	LP Hazelton	HAZLVOLC_FW	ORE	IN	CCSD	PR	Ore	Rock	Drillcore	ALS Chemex		VA08108753	SG92-06_C12577		SG92-06_C12577	8/5/2008		
H45081	LP Hazelton				FLTZ	IARG	Ore	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H45082	LP Hazelton				VU	SIH	Ore	Rock	Drillcore	Maxxam		B239368				11-May-12		
H45083	LP Hazelton				VU	SIH	Ore	Rock	Drillcore	Maxxam		B239368				11-May-12		
H45085	LP Hazelton				VU	SIH	Ore	Rock	Drillcore	Maxxam		B239368				11-May-12		
H45086	LP Hazelton				VU	SIH	Ore	Rock	Drillcore	Maxxam		B239368				11-May-12		
H45102	LP Hazelton				VUTF	CL	Ore	Rock	Drillcore	Maxxam		B249116				6/8/2012		
H45103	LP Hazelton				VU	SIH	Ore	Rock	Drillcore	Maxxam		B249116				6/8/2012		
H45104	LP Hazelton				VU	SIH	Ore	Rock	Drillcore	Maxxam		B249116				6/8/2012		
X64717	LP Hazelton				SEDS	SIH	Ore	Rock	Drillcore	Maxxam		B266202				27-Jul-12		
X64718	LP Hazelton				SEDS	SIH	Ore	Rock	Drillcore	Maxxam		B266202				27-Jul-12		
X64719	LP Hazelton				SEDS	SIH	Ore	Rock	Drillcore	Maxxam		B266202				27-Jul-12		
X64724	LP Hazelton				SEDS	SIH	Ore	Rock	Drillcore	Maxxam		B266202				7/27/2012		
X64743	LP Hazelton				VU	CL	Waste	Rock	Drillcore	Maxxam		B266202				7/27/2012		
X64746	LP Hazelton				SEDS	CL	Waste	Rock	Drillcore	Maxxam		B266202				27-Jul-12		
X62696	LP Hazelton				SEDS	SIH	Waste	Rock	Drillcore	Maxxam		B266202				27-Jul-12		
X64747	LP Hazelton				SEDS	CL	Waste	Rock	Drillcore	Maxxam		B266202				7/27/2012		
H45104	LP Hazelton	HAZLVOLC_FW	ORE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex	2.16	VA09124617		VA09124617R021		9/15/2009		
X15938	LP Hazelton	RAEWN_CU	ORE	IN	SARG	CL	Ore	Rock	Drillcore DRY	Cantest	0.394	Feb-10		S-08-06 388-390		1/15/2010		
H45103	LP Hazelton	HAZLVOLC_FW	MARGINAL	IN	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.544	Feb-10		S-09-11 182-184		1/15/2010		
H44876	LP Hazelton	HAZLVOLC_FW	ORE	IN	VU	SIH	Ore	Rock	Pulp sample	Cantest	0.2855	40238		H44876		2/18/2010		
X15932	LP Hazelton	RAEWN_CU	ORE	IN	SARG	CL	Ore	Rock	Drillcore	ALS Chemex	2.36	VA09124617		VA09124617R009		16-Sep-09		
H44843	LP Hazelton	HAZLVOLC_FW	MARGINAL	IN	VU	CL	Waste	Rock	Pulp sample	Cantest	0.3206	40238		H44843		2/18/2010		
H45089	LP Hazelton	HAZLVOLC_FW	WASTE	IN	VU	SIH	Ore	Rock	Drillcore DRY	Cantest	0.486	Feb-10		S-09-11 156-158		1/15/2010		
X15936	LP Hazelton	RAEWN_CU	WASTE	IN	SARG	CL	Ore	Rock	Drillcore DRY	Cantest	0.433	40210		S-08-06 384-386		1/15/2010		
S91-388_5235	LP Hazelton	#N/A		#N/A	CCSD	PR	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-388_5235		S91-388_5235	8/5/2008		
X15933	LP Hazelton	RAEWN_CU	ORE	IN	SARG	CL	Ore	Rock	Drillcore DRY	Cantest	0.382	Feb-10		S-08-06 380-382		1/15/2010		
H45078	UP Hazelton	HAZLVOLC_HW	MARGINAL	IN	PMON	CL	Waste	Rock	Drillcore DRY	Cantest	0.573	2-21-958		S-09-01 136-138		1/15/2010		
H45071	UP Hazelton	HAZLVOLC_HW	MARGINAL	IN	VU	CL	Ore	Rock	Drillcore DRY	Cantest	0.646	2-21-958		S-09-01 124-126		1/15/2010		
H45068	UP Hazelton	HAZLVOLC_HW	ORE	IN	VU	CL	Ore	Rock	Drillcore DRY	Cantest	0.624	2-21-958		S-09-01 120-122		1/15/2010		
H45065	UP Hazelton	HAZLVOLC_HW	ORE	IN	VU	CL	Ore	Rock	Drillcore DRY	Cantest	0.57	2-21-958		S-09-01 116-118		1/15/2010		
H45080	UP Hazelton	HAZLVOLC_HW	MARGINAL	IN	FLTZ	IARG	Waste	Rock	Drillcore DRY	Cantest	0.646	2-21-958		S-09-01 140-142		1/15/2010		
H45075	UP Hazelton	HAZLVOLC_HW	ORE	IN	VU	CL	Waste	Rock	Drillcore DRY	Cantest	0.759	2-21-958		S-09-01 132-134		15-Jan-10		
X15748	UP Hazelton	HAZLVOLC_HW	ORE	IN	VULT	CL	Waste	Rock	Drillcore	ALS Chemex	1.6	VA09124617		VA09124617R002		9/16/2009		
H45073	UP Hazelton	HAZLVOLC_HW	ORE	IN	VU	CL	Waste	Rock	Drillcore DRY	Cantest	0.59	2-21-958		S-09-01 128-130		1/15/2010		
S-11-70 122.4-136.9	UP Hazelton	Sulph_Uncat	ORE	IN			Ore	Pulp	Composite	Maxxam		Jan-12				1/12/2012		
9976	UP Hazelton	HAZLVOLC_HW	ORE	OUT	VALT	KP	Ore	Rock	Pulp sample	Cantest	0.2071	Mar-10		9976/77		2/18/2010	mean of duplicates	
S91-398_5495	UP Hazelton	#N/A			BVTF	UDEF	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-398_5495		S91-398_5495	8/5/2008		
H44453	UP Hazelton	HAZLVOLC_HW	WASTE	IN	VU	SIH	Waste	Rock	Drillcore DRY	Cantest	0.483	40210		S-09-09 14-16		1/15/2010		
S-11-70 85.4-103.4	UP Hazelton	Sulph_Uncat	WASTE	IN			Ore	Pulp	Composite	Maxxam		40920				1/12/2012		
H42341	UP Hazelton	HAZLVOLC_HW	MARGINAL	IN	PMON	CL	Waste	Rock	Drillcore	ALS Chemex	1.54	VA09124617		VA09124617R039		9/16/2009		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
X15862	UP Hazelton	HAZLVOLC_HW	ORE	IN	VUTF	CL	Ore	Rock	Drillcore	ALS Chemex	1.9	VA09124617		VA09124617R006		9/16/2009		
S-10-21 94-110	UP Hazelton	HAZLVOLC_HW	ORE	IN			Ore	Pulp	Composite	Maxxam		Jan-12				1/12/2012		
E192812	UP Hazelton	HAZLVOLC_HW	ORE	IN	ANDS	PR	Ore	Rock	Pulp sample	Cantest	0.2598	Mar-10		E192812/13		2/18/2010		
S-11-68 183.46-199.46	UP Hazelton	Sulph_Uncat	WASTE	OUT			Waste	Pulp	Composite	Maxxam		Jan-12				1/12/2012		
S-11-68 41.46-57.46	UP Hazelton	Sulph_Uncat	ORE	IN			Ore	Pulp	Composite	Maxxam		40920				1/12/2012		
MC-05-02 90-106	UP Hazelton	HAZLVOLC_HW	ORE	OUT			Ore	Pulp	Composite	Maxxam		40920				1/12/2012		
E192834	UP Hazelton	MCMONZ	ORE	IN	PMON	PR	Waste	Rock	Pulp sample	Cantest	0.2667	Mar-10		E192834/35		2/18/2010		
E192868	UP Hazelton				PMON	PR	Ore	Rock	Drillcore	Maxxam		B249116				6/8/2012		
E192869	UP Hazelton				ANDS	PR	Ore	Rock	Drillcore	Maxxam		B249116				6/8/2012		
E192870	UP Hazelton				ANDS	PR	Ore	Rock	Drillcore	Maxxam		B249116				6/8/2012		
H44450	UP Hazelton				PMON	SIL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H44451	UP Hazelton				PMON	SIL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H44452	UP Hazelton				PMON	SIL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H44453	UP Hazelton				VU	SIH	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H44454	UP Hazelton				VU	SIH	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H45078	UP Hazelton				PMON	CL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H45079	UP Hazelton				PMON	CL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H45080	UP Hazelton				FLTZ	IARG	Waste	Rock	Drillcore	Maxxam		B239368				11-May-12		
S157569	UP Hazelton				IVOL	PR	Ore	Rock	Drillcore	Maxxam		B266202				27-Jul-12		
S157570	UP Hazelton				IVOL	PR	Ore	Rock	Drillcore	Maxxam		B266202				7/27/2012		
X62639	UP Hazelton				VU	KP	Ore	Rock	Drillcore	Maxxam		B266202				7/27/2012		
X62640	UP Hazelton				VU	KP	Ore	Rock	Drillcore	Maxxam		B266202				7/27/2012		
X63892	UP Hazelton				VU	CL2	Waste	Rock	Drillcore	Maxxam		B266202				7/27/2012		
X63893	UP Hazelton				VU	CL2	Waste	Rock	Drillcore	Maxxam		B266202				7/27/2012		
S-10-33 170-186	UP Hazelton	HAZLVOLC_HW	WASTE	OUT			Ore	Pulp	Composite	Maxxam		40920				1/12/2012		
H44504	UP Hazelton	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore DRY	Cantest	0.466	40210		S-09-09 110-112		1/15/2010		
S-11-72 101.95-118.3	UP Hazelton	Sulph_Uncat	ORE	IN			Waste	Pulp	Composite	Maxxam		12-Jan-12				12-Jan-12		
S-11-70 156.4-172.4	UP Hazelton	Sulph_Uncat	ORE	OUT			Ore	Pulp	Composite	Maxxam		40920				1/12/2012		
X15753	UP Hazelton	HAZLVOLC_HW	ORE	IN	VULT	CL	Waste	Rock	Drillcore	ALS Chemex	1.9	VA09124617		VA09124617R004		9/16/2009		
20847	UP Hazelton	HAZLVOLC_FW	ORE	IN	PQMZ	SIL	Waste	Rock	Pulp sample	Cantest	0.2798	40238		20847/48/49		2/18/2010		
S91-398_5851	UP Hazelton	#N/A			BVTF	UDEF	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-398_5851		S91-398_5851	5-Aug-08		
H44544	UP Hazelton	HAZLVOLC_HW	ORE	IN	VU	SIL	Waste	Rock	Pulp sample	Cantest	0.3303	40238		H44544		2/18/2010		
X15861	UP Hazelton	HAZLVOLC_HW	ORE	IN	VUTF	CL	Waste	Rock	Drillcore DRY	Cantest	0.318	40210		S-08-06 254-256		1/15/2010		
S-10-33 210-226	UP Hazelton	HAZLVOLC_HW	ORE	OUT			Waste	Pulp	Composite	Maxxam		12-Jan-12				12-Jan-12		
H44505	UP Hazelton	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	0.6	VA09116246				9/15/2009		
X15860	UP Hazelton	HAZLVOLC_HW	ORE	IN	VUTF	CL	Waste	Rock	Drillcore	ALS Chemex	1.68	VA09124617				9/16/2009		
S91-398_5865	UP Hazelton	#N/A			PQMZ	UDEF	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-398_5865		S91-398_5865	8/5/2008		
20831	UP Hazelton	MCMONZ	ORE	IN	PQMZ	SIL	Ore	Rock	Drillcore	ALS Chemex		VA08125686	20831		20831	9/2/2008		
H42381	UP Hazelton	HAZLVOLC_HW	ORE	IN	VU	IARG	Ore	Rock	Pulp sample	Cantest	0.3151	1-Mar-10		H42381		18-Feb-10		
S-09-11 130-146	UP Hazelton	HAZLVOLC_HW	ORE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
S-11-68 1.31-17.46	UP Hazelton	Sulph_Uncat	ORE	IN			Ore	Pulp	Composite	Maxxam		12-Jan-12				12-Jan-12		
MC-05-02 210-226.6	UP Hazelton	HAZLVOLC_HW	ORE	OUT			Ore	Pulp	Composite	Maxxam		40920				1/12/2012		
H44831	UP Hazelton	HAZLVOLC_HW	ORE	IN	VU	CL2	Ore	Rock	Pulp sample	Cantest	0.2578	40238		H44831		2/18/2010		
S-10-21 44.9-61	UP Hazelton	HAZLVOLC_HW	ORE	IN			Ore	Pulp	Composite	Maxxam		12-Jan-12				12-Jan-12		
G24663	UP Hazelton	MCMONZ	WASTE	IN	PPFP	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G24663		G24663	9/2/2008		
S-11-68 81.46-96.56	UP Hazelton	Sulph_Uncat	ORE	IN			Ore	Pulp	Composite	Maxxam		40920				1/12/2012		
X15779	UP Hazelton	MCMONZ	WASTE	IN	PPFP	PR	Waste	Rock	Pulp sample	Cantest	0.2499	1-Mar-10		X15779/80		18-Feb-10	mean of duplicates	
H42394	UP Hazelton	HAZLVOLC_FW	WASTE	IN	VU	IARG	Waste	Rock	Pulp sample	Cantest	0.2506	1-Mar-10		H42394		18-Feb-10		
X15747	UP Hazelton	HAZLVOLC_HW	ORE	IN	VULT	CL	Waste	Rock	Drillcore DRY	Cantest	0.371	1-Feb-10		S-08-06 40-42		15-Jan-10		
G24688	UP Hazelton	HAZLVOLC_HW	ORE	IN	IVOL	SI	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G24688		G24688	9/2/2008		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
E192869	UP Hazelton	HAZLVOLC_HW	WASTE	IN	ANDS	PR	Ore	Rock	Pulp sample	Cantest	0.2577	Mar-10		E192869/70		2/18/2010		
S-11-72 62.3-77.5	UP Hazelton	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		12-Jan-12				12-Jan-12		
S-11-72 142.3-158.3	UP Hazelton	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		Jan-12				1/12/2012		
S-09-11 90.7-104.7	UP Hazelton	HAZLVOLC_HW	ORE	IN			Ore	Pulp	Composite	Maxxam		12-Jan-12				12-Jan-12		
MC-05-02 150-166	UP Hazelton	HAZLVOLC_HW	ORE	OUT			Ore	Pulp	Composite	Maxxam		40920				1/12/2012		
10043	UP Hazelton	HAZLVOLC_HW	ORE	OUT	ANDS	PR	Ore	Rock	Pulp sample	Cantest	0.2598	40238		10043/44		2/18/2010		
S-09-11 49-65	UP Hazelton	HAZLVOLC_HW	ORE	IN			Ore	Pulp	Composite	Maxxam		12-Jan-12				12-Jan-12		
9817	UP Hazelton	HAZLVOLC_HW	ORE	IN	SSED	MY	Ore	Rock	Drillcore	ALS Chemex		VA08125686	9817		9817	2-Sep-08		
S-11-68 163.46-175.46	UP Hazelton	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
H42328	UP Hazelton	HAZLVOLC_HW	ORE	IN	VU	CL	Waste	Rock	Drillcore	ALS Chemex	1.34	VA09124617		VA09124617R034		16-Sep-09		
X15752	UP Hazelton	HAZLVOLC_HW	ORE	IN	VULT	CL	Waste	Rock	Drillcore DRY	Cantest	0.385	40210		S-08-06 48-50		1/15/2010		
H45036	UP Hazelton	HAZLVOLC_HW	ORE	IN	VU	CL	Ore	Rock	Pulp sample	Cantest	0.2802	1-Mar-10		H45036		18-Feb-10		
10032	UP Hazelton	HAZLVOLC_HW	ORE	OUT	ANDS	PR	Ore	Rock	Pulp sample	Cantest	0.2598	1-Mar-10		100321/33		18-Feb-10		
H45080	UP Hazelton	HAZLVOLC_HW	MARGINAL	IN	FLTZ	IARG	Waste	Pulp	Pulp sample	Cantest	0.2694	1-Mar-10	Duplicate	H45080		18-Feb-10		
S-11-68 121.46-137.46	UP Hazelton	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
S-11-71 24.7-40.2	UP Hazelton	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		12-Jan-12				12-Jan-12	mean of duplicates	
X15859	UP Hazelton	HAZLVOLC_HW	ORE	IN	FLTZ	CL	Waste	Rock	Drillcore DRY	Cantest	0.355	40210		S-08-06 250-252		1/15/2010		
H44503	UP Hazelton	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	2	VA09116246				9/15/2009		
MC-05-02 190-206	UP Hazelton	HAZLVOLC_HW	ORE	OUT			Ore	Pulp	Composite	Maxxam		12-Jan-12				12-Jan-12		
S-09-11 9.0-25	UP Hazelton	HAZLVOLC_HW	ORE	IN			Waste	Pulp	Composite	Maxxam		Jan-12				1/12/2012		
G24670	UP Hazelton	MCMONZ	ORE	IN	FLTZ	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G24670		G24670	2-Sep-08		
H42343	UP Hazelton	HAZLVOLC_HW	WASTE	IN	VU	CL	Waste	Rock	Drillcore	ALS Chemex	1.38	VA09124617		VA09124617R040		9/16/2009		
X15751	UP Hazelton	HAZLVOLC_HW	MARGINAL	IN	VULT	CL	Waste	Rock	Drillcore	ALS Chemex	2.32	VA09124617		VA09124617R003		9/16/2009		
E192892	UP Hazelton	HAZLVOLC_HW	MARGINAL	IN	FLTZ	CARB	Waste	Rock	Pulp sample	Cantest	0.2515	40238		E192892/93		2/18/2010		
H45436	UP Hazelton	HAZLVOLC_HW	ORE	IN	ANDS	CL	Waste	Rock	Pulp sample	Cantest	0.2579	Mar-10		H45436		2/18/2010		
X15749	UP Hazelton	HAZLVOLC_HW	ORE	IN	VULT	CL	Waste	Rock	Drillcore DRY	Cantest	0.353	Feb-10		S-08-06 44-46		1/15/2010		
H44462	UP Hazelton	HAZLVOLC_HW	WASTE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	2.02	VA09116246				9/15/2009		
S-08-07 105.6-120.05	UP Hazelton	HAZLVOLC_HW	WASTE	IN			Waste	Pulp	Composite	Maxxam		12-Jan-12				12-Jan-12		
H44458	UP Hazelton	HAZLVOLC_HW	MARGINAL	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	2.1	VA09116246				9/15/2009		
H44800	UP Hazelton	HAZLVOLC_HW	ORE	IN	VU	SIL	Ore	Rock	Pulp sample	Cantest	0.2542	Mar-10		H44799		2/18/2010		
S-11-73 160.2-176.2	UP Hazelton	Sulph_Uncat	WASTE	OUT			Waste	Pulp	Composite	Maxxam		Jan-12				1/12/2012		
H44454	UP Hazelton	HAZLVOLC_HW	ORE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	1.26	VA09124617		VA09124617R013		9/15/2009		
9841	UP Hazelton	HAZLVOLC_HW	ORE	IN	SSED	MY	Ore	Rock	Drillcore	ALS Chemex		VA08125686	9841		9841	2-Sep-08		
X15864	UP Hazelton	HAZLVOLC_HW	ORE	IN	VUTF	CL	Ore	Rock	Drillcore DRY	Cantest	0.194	40210		S-08-06 258-260		1/15/2010		
H44459	UP Hazelton	HAZLVOLC_HW	ORE	IN	VU	SIH	Waste	Rock	Drillcore DRY	Cantest	0.8	40210		S-09-09 26-28		1/15/2010		
X15767	UP Hazelton	HAZLVOLC_HW	MARGINAL	IN	VUTF	PR	Ore	Rock	Pulp sample	Cantest	0.23	Mar-10		X15767		2/18/2010		
H42338	UP Hazelton	HAZLVOLC_HW	ORE	IN	VU	CL	Waste	Rock	Drillcore	ALS Chemex	1.5	VA09124617		VA09124617R037		9/16/2009		
9826	UP Hazelton	HAZLVOLC_HW	ORE	IN	SSED	MY	Ore	Rock	Drillcore	ALS Chemex		VA08125686	9826		9826	9/2/2008		
H44471	UP Hazelton	HAZLVOLC_HW	MARGINAL	IN	VU	SIH	Waste	Rock	Drillcore DRY	Cantest	0.721	40210		S-09-09 50-52		1/15/2010		
9807	UP Hazelton	HAZLVOLC_HW	WASTE	IN	SSED	MY	Ore	Rock	Drillcore	ALS Chemex		VA08125686	9807		9807	9/2/2008		
H44464	UP Hazelton	HAZLVOLC_HW	MARGINAL	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	1.96	VA09116246				9/15/2009		
H44461	UP Hazelton	HAZLVOLC_HW	WASTE	IN	VU	SIH	Waste	Rock	Drillcore DRY	Cantest	0.609	40210		S-09-09 30-32		1/15/2010		
H44463	UP Hazelton	HAZLVOLC_HW	WASTE	IN	VU	SIH	Waste	Rock	Drillcore DRY	Cantest	0.665	40210		S-09-09 34-36		1/15/2010		
H44456	UP Hazelton	HAZLVOLC_HW	WASTE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	3.22	VA09124617		VA09124617R014		9/15/2009		
H42335	UP Hazelton	HAZLVOLC_HW	MARGINAL	IN	VU	CL	Waste	Rock	Drillcore	ALS Chemex	1.64	VA09124617		VA09124617R036		9/16/2009		
H44472	UP Hazelton	HAZLVOLC_HW	MARGINAL	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	1.66	VA09116246				9/15/2009		
H44506	UP Hazelton	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore DRY	Cantest	0.412	40210		S-09-09 114-116		1/15/2010		
H44455	UP Hazelton	HAZLVOLC_HW	WASTE	IN	VU	SIH	Waste	Rock	Drillcore DRY	Cantest	0.688	40210		S-09-09 18-20		1/15/2010		
H44457	UP Hazelton	HAZLVOLC_HW	WASTE	IN	VU	SIH	Waste	Rock	Drillcore DRY	Cantest	0.572	40210		S-09-09 22-24		1/15/2010		
H44460	UP Hazelton	HAZLVOLC_HW	ORE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	0.96	VA09116246				9/15/2009		

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
S-10-31 145-161	Monzonite	MCMONZ	WASTE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
9924	Monzonite	MCMONZ	ORE	OUT	VHLP	SE	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9924		9924	9/2/2008		
S-11-71 106.9-122.2	Monzonite	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		Jan-12				1/12/2012	mean of duplicates	
H42350	Monzonite	HAZLVOLC_HW	ORE	IN	VU	CL	Waste	Rock	Drillcore	ALS Chemex	1.5	VA09124617		VA09124617R043		9/16/2009		
S-11-72 181.96-197.3	Monzonite	Sulph_Uncat	ORE	OUT			Ore	Pulp	Composite	Maxxam		40920				1/12/2012		
S-11-71 146.2-162.2	Monzonite	Sulph_Uncat	WASTE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
10098	Monzonite	MCMONZ	WASTE	OUT	PQMZ	KP	Waste	Rock	Pulp sample	Cantest	0.2571	40238		10098/99		2/18/2010	mean of duplicates	
H44488	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore DRY	Cantest	0.589	40210		S-09-09 82-84		1/15/2010		
S-06-02 60-76	Monzonite	MCMONZ	WASTE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012	mean of duplicates	
H44742	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Pulp sample	Cantest	0.2667	40238		H44742		2/18/2010		
S-10-31 194-210	Monzonite	MCMONZ	WASTE	OUT			Waste	Pulp	Composite	Maxxam		Jan-12				1/12/2012		
20815	Monzonite	MCMONZ	ORE	IN	FLTZ	UDEF	Waste	Rock	Drillcore	ALS Chemex		VA08125686	20815		20815	9/2/2008		
S-10-31 95-111	Monzonite	MCMONZ	WASTE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
S91-398_5880	Monzonite	#N/A			PQMZ	UDEF	Waste	Rock	Drillcore	ALS Chemex		VA08108753	S91-398_5880		S91-398_5880	8/5/2008		
S-10-31 245-260	Monzonite	MCMONZ	WASTE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
X15886	Monzonite	HAZLVOLC_HW	ORE	IN	PSBX	CL	Waste	Rock	Drillcore DRY	Cantest	0.334	40210		S-08-06 296-298		1/15/2010		
H44495	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore DRY	Cantest	0.556	40210		S-09-09 94-96		1/15/2010		
H44481	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	2.04	VA09116246				9/15/2009		
H44502	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore DRY	Cantest	0.492	40210		S-09-09 106-108		1/15/2010		
H44497	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	2.02	VA09116246				9/15/2009		
H42345	Monzonite	HAZLVOLC_HW	MARGINAL	IN	VU	CL	Waste	Rock	Drillcore	ALS Chemex	2.1	VA09124617		VA09124617R041		9/16/2009		
H44491	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	1.52	VA09116246				9/15/2009		
9878	Monzonite	HAZLVOLC_HW	WASTE	OUT	VTUF	CL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9878		9878	9/2/2008		
H44480	Monzonite				PMON	SIL	Waste	Rock	Drillcore	Maxxam		B249116				6/8/2012		
H44481	Monzonite				PMON	SIL	Waste	Rock	Drillcore	Maxxam		B249116				6/8/2012		
H44490	Monzonite				PMON	SIL	Waste	Rock	Drillcore	Maxxam		B249116				6/8/2012		
H44491	Monzonite				PMON	SIL	Waste	Rock	Drillcore	Maxxam		B249116				6/8/2012		
H44494	Monzonite				PMON	SIL	Waste	Rock	Drillcore	Maxxam		B249116				6/8/2012		
H44495	Monzonite				PMON	SIL	Waste	Rock	Drillcore	Maxxam		B249116				6/8/2012		
H44497	Monzonite				PMON	SIL	Waste	Rock	Drillcore	Maxxam		B249116				6/8/2012		
H44501	Monzonite				PMON	SIL	Waste	Rock	Drillcore	Maxxam		B249116				6/8/2012		
H44502	Monzonite				PMON	SIL	Waste	Rock	Drillcore	Maxxam		B249116				6/8/2012		
G21779	Monzonite	MCMONZ	WASTE	OUT	PPFP	FEOX	Waste	Rock	Pulp sample	Cantest	0.2087	40238		G21779		2/18/2010		
H42352	Monzonite	HAZLVOLC_HW	MARGINAL	IN	VU	CL	Waste	Rock	Drillcore	ALS Chemex	1.86	VA09124617		VA09124617R044		9/16/2009		
H44499	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	1.6	VA09116246				9/15/2009		
10377	Monzonite	MCMONZ	WASTE	IN	PQMZ	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	10377		10377	9/2/2008		
H44482	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore DRY	Cantest	0.513	40210		S-09-09 70-72		1/15/2010		
S-10-31 294-310	Monzonite	HAZLVOLC_FW	WASTE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
X15842	Monzonite	MCMONZ	WASTE	IN	PPFP	PR	Waste	Rock	Pulp sample	Cantest	0.2886	40238		X15842		2/18/2010		
H44487	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	2.02	VA09116246				9/15/2009		
9891	Monzonite	HAZLVOLC_HW	ORE	OUT	VHLP	SE	Ore	Rock	Drillcore	ALS Chemex		VA08125686	9891		9891	9/2/2008		
H44494	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	1.68	VA09116246				9/15/2009		
S-11-71 65.7-81.2	Monzonite	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
S-10-31 44-60	Monzonite	MCMONZ	WASTE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
MC-05-02 250-266	Monzonite	MCMONZ	WASTE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
MC-05-01 230-255	Monzonite	HAZLVOLC_HW	WASTE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
H44500	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore DRY	Cantest	0.467	40210		S-09-09 102-104		1/15/2010		
10362	Monzonite	MCMONZ	WASTE	IN	PHBX	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	10362		10362	9/2/2008		
20809	Monzonite	MCMONZ	WASTE	IN	PHBX	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	20809		20809	9/2/2008		
MC-05-01 279-295	Monzonite	HAZLVOLC_HW	WASTE	OUT			Ore	Pulp	Composite	Maxxam		40920				1/12/2012		

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
MC-05-02 314-330	Monzonite	MCMONZ	WASTE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
MC-05-01 319-335	Monzonite	MCMONZ	WASTE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
H44501	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	2.08	VA09116246				9/15/2009		
10353	Monzonite	MCMONZ	WASTE	IN	PQMZ	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	10353		10353	9/2/2008		
MC-05-01 199-215	Monzonite	HAZLVOLC_HW	ORE	OUT			Ore	Pulp	Composite	Maxxam		40920				1/12/2012		
S-06-02 20-26	Monzonite	MCMONZ	WASTE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
X15887	Monzonite	HAZLVOLC_HW	ORE	IN	PSBX	CL	Waste	Rock	Drillcore	ALS Chemex	1.7	VA09124617		VA09124617R007		9/16/2009		
H44490	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore DRY	Cantest	0.561	40210		S-09-09 86-88		1/15/2010		
H44465	Monzonite	HAZLVOLC_HW	MARGINAL	IN	VU	SIH	Waste	Rock	Drillcore DRY	Cantest	0.532	40210		S-09-09 38-40		1/15/2010		
H44486	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore DRY	Cantest	0.489	40210		S-09-09 78-80		1/15/2010		
H44468	Monzonite	HAZLVOLC_HW	MARGINAL	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	1.9	VA09116246				9/15/2009		
MC-05-03 44-60	Monzonite	MCMONZ	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
H44474	Monzonite	HAZLVOLC_HW	ORE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	2.06	VA09116246				9/15/2009		
H44473	Monzonite	HAZLVOLC_HW	MARGINAL	IN	VU	SIH	Waste	Rock	Drillcore DRY	Cantest	0.572	40210		S-09-09 54-56		1/15/2010		
H44483	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	1.66	VA09116246				9/15/2009		
H44485	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	1.72	VA09116246				9/15/2009		
H44498	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore DRY	Cantest	0.518	40210		S-09-09 98-100		1/15/2010		
10343	Monzonite	MCMONZ	WASTE	IN	PQMZ	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	10343		10343	9/2/2008		
10383	Monzonite	MCMONZ	ORE	IN	PHBX	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	10383		10383	9/2/2008		
H44492	Monzonite	MCMONZ	MARGINAL	IN	PMON	SIL	Waste	Rock	Drillcore DRY	Cantest	0.571	40210		S-09-09 90-92		1/15/2010		
H44469	Monzonite	HAZLVOLC_HW	MARGINAL	IN	VU	SIH	Waste	Rock	Drillcore DRY	Cantest	0.6	40210		S-09-09 46-48		1/15/2010		
H44489	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	0.66	VA09116246				9/15/2009		
MC-05-03 84-100	Monzonite	MCMONZ	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
H42347	Monzonite	HAZLVOLC_HW	ORE	IN	VU	CL	Waste	Rock	Drillcore	ALS Chemex	2.18	VA09124617		VA09124617R042		9/16/2009		
H44470	Monzonite	HAZLVOLC_HW	MARGINAL	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	2.06	VA09116246				9/15/2009		
H44787	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Pulp sample	Cantest	0.2615	40238		H44789		2/18/2010		
H42358	Monzonite	MCMONZ	WASTE	IN	PMON	KP	Waste	Rock	Pulp sample	Cantest	0.2591	40238		H42358		2/18/2010		
H44467	Monzonite	HAZLVOLC_HW	WASTE	IN	VU	SIH	Waste	Rock	Drillcore DRY	Cantest	0.528	40210		S-09-09 42-44		1/15/2010		
G21604	Monzonite	MCMONZ	WASTE	IN	PQMZ	HEM	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G21604		G21604	9/2/2008		
9861	Monzonite	HAZLVOLC_HW	ORE	OUT	SSED	SE	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9861		9861	9/2/2008		
H44475	Monzonite	HAZLVOLC_HW	MARGINAL	IN	VU	SIH	Waste	Rock	Drillcore DRY	Cantest	0.761	40210		S-09-09 58-60		1/15/2010		
H44466	Monzonite	HAZLVOLC_HW	WASTE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	1.68	VA09116246				9/15/2009		
G21756	Monzonite	MCMONZ	WASTE	OUT	PPFP	FEOX	Waste	Rock	Pulp sample	Cantest	0.2001	40238		G21756		2/18/2010		
H44480	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore DRY	Cantest	0.635	40210		S-09-09 66-68		1/15/2010		
H44484	Monzonite	MCMONZ	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore DRY	Cantest	0.679	40210		S-09-09 74-76		1/15/2010		
SG92-06_C12632	Undefined	HAZLVOLC_FW	MARGINAL	IN	VUXT	QP	Waste	Rock	Drillcore	ALS Chemex		VA08108753	SG92-06_C12632		SG92-06_C12632	8/5/2008		
SG92-06_C12700	Undefined	HAZLVOLC_FW	WASTE	OUT	VUXT	QP	Waste	Rock	Drillcore	ALS Chemex		VA08108753	SG92-06_C12700		SG92-06_C12700	8/5/2008		
10276	Undefined	HAZLVOLC_FW	ORE	IN	ANDS	SIL	Ore	Rock	Pulp sample	Cantest	0.2598	40238		10276/77		2/18/2010		
X15896	Undefined	HAZLVOLC_FW	WASTE	IN	VU	CL	Waste	Rock	Drillcore	ALS Chemex	2.28	VA09124617		VA09124617R008		9/16/2009		
9756	Undefined	HAZLVOLC_HW	ORE	IN	INPP	SI	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9756		9756	9/2/2008		
10298	Undefined	HAZLVOLC_FW	ORE	OUT	ANDS	SIL	Ore	Rock	Pulp sample	Cantest	0.25	40238		H10298/99		2/18/2010		
SG92-02_C8856	Undefined	HAZLVOLC_FW	WASTE	IN	VAAT	PR	Waste	Rock	Drillcore	ALS Chemex		VA08108753	SG92-02_C8856		SG92-02_C8856	8/5/2008		
H42421	Undefined	HAZLVOLC_FW	WASTE	IN	VAAT	CL	Waste	Rock	Drillcore	ALS Chemex	1.72	VA09124617				9/16/2009		
G21749	Undefined	HAZLVOLC_FW	WASTE	OUT	VUAT	SI	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G21749		G21749	9/2/2008		
G21731	Undefined	HAZLVOLC_FW	WASTE	OUT	ANDS	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G21731		G21731	9/2/2008		
X15894	Undefined	HAZLVOLC_FW	WASTE	IN	VU	CL	Waste	Rock	Drillcore DRY	Cantest	0.352	Feb-10		S-08-06 310-312 DUP		1/16/2010		
H42450	Undefined	HAZLVOLC_FW	WASTE	IN	VAAT	CL	Waste	Rock	Drillcore	ALS Chemex	1.88	VA09124617		VA09124617R057		9/16/2009		
H44580	Undefined	HAZLVOLC_FW	ORE	IN	VU	CL	Waste	Rock	Pulp sample	Cantest	0.302	40238		H44580		2/18/2010		
S-11-70 47.4-63.4	Undefined	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
S-11-73 4.65-20.2	Undefined	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
H42415	Undefined	HAZLVOLC_FW	MARGINAL	IN	PMON	CL	Waste	Rock	Drillcore	ALS Chemex	1.88	VA09124617		VA09124617R050		9/16/2009		
H42412	Undefined	HAZLVOLC_FW	WASTE	IN	PMON	CL	Waste	Rock	Drillcore	ALS Chemex	2.28	VA09124617		VA09124617R049		9/16/2009		
H42406	Undefined				PMON	CL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H42407	Undefined				PMON	CL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H42408	Undefined				PMON	CL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H42409	Undefined				PMON	CL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H42410	Undefined				PMON	CL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H42417	Undefined				PMON	CL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H42418	Undefined				PMON	CL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H42420	Undefined				VAAT	CL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H42421	Undefined				VAAT	CL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H42445	Undefined				VAAT	CL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H42446	Undefined				VAAT	CL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H42447	Undefined				VAAT	CL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H42449	Undefined				VAAT	CL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
H42450	Undefined				VAAT	CL	Waste	Rock	Drillcore	Maxxam		B239368				5/11/2012		
S154096	Undefined				IVOL	QSP	Waste	Rock	Drillcore	Maxxam		B266202				7/27/2012		
S154097	Undefined				IVOL	QSP	Waste	Rock	Drillcore	Maxxam		B266202				7/27/2012		
S155917	Undefined				VATF	PR	Waste	Rock	Drillcore	Maxxam		B266202				7/27/2012		
S155918	Undefined				VATF	PR	Waste	Rock	Drillcore	Maxxam		B266202				7/27/2012		
S156364	Undefined				IU	PR	Waste	Rock	Drillcore	Maxxam		B266202				7/27/2012		
S156365	Undefined				IU	PR	Waste	Rock	Drillcore	Maxxam		B266202				7/27/2012		
H42406	Undefined	HAZLVOLC_FW	WASTE	IN	PMON	CL	Waste	Rock	Drillcore	ALS Chemex	1.82	VA09124617				9/16/2009		
E192902	Undefined	HAZLVOLC_FW	MARGINAL	IN	VU	IARG	Waste	Rock	Pulp sample	Cantest	0.2868	40238		E192902		2/18/2010		
H42440	Undefined	HAZLVOLC_FW	WASTE	IN	VAAT	QB	Waste	Rock	Drillcore	ALS Chemex	2.18	VA09124617		VA09124617R054		9/16/2009		
S91-388_5285	Undefined	#N/A		#N/A	VAAT	PR	Waste	Rock	Drillcore	ALS Chemex		VA08108753	S91-388_5285		S91-388_5285	8/5/2008		
G21649	Undefined	HAZLVOLC_FW	WASTE	IN	VATF	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G21649		G21649	9/2/2008		
S-11-70 7.25-23.4	Undefined	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
G21640	Undefined	HAZLVOLC_FW	WASTE	IN	VATF	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G21640		G21640	9/2/2008		
G23418	Undefined	LWSUL_AU	WASTE	OUT	IVOL	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G23418		G23418	9/2/2008		
G24731	Undefined	HAZLVOLC_FW	WASTE	IN	BVTF	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G24731		G24731	9/2/2008		
S-11-73 42.45-57.35	Undefined	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
SG92-17_C11112	Undefined	RAEWN_CU	WASTE	IN	VUXT	QP	Waste	Rock	Drillcore	ALS Chemex		VA08108753	SG92-17_C11112		SG92-17_C11112	8/5/2008		
H42417	Undefined	HAZLVOLC_FW	WASTE	IN	PMON	CL	Waste	Rock	Drillcore	ALS Chemex	1.92	VA09124617		VA09124617R051		9/16/2009		
S-11-74 75.9-91.9	Undefined	Sulph_Uncat	WASTE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
X15897	Undefined	HAZLVOLC_FW	WASTE	IN	VU	CL	Waste	Rock	Drillcore DRY	Cantest	0.288	40210		S-08-06 314-316		1/15/2010		
SG92-17_C11169	Undefined	HAZLVOLC_FW	WASTE	OUT	VAAT	PR	Waste	Rock	Drillcore	ALS Chemex		VA08108753	SG92-17_C11169		SG92-17_C11169	8/5/2008		
9926	Undefined	HAZLVOLC_HW	ORE	OUT	VHLP	SE	Ore	Rock	Pulp sample	Cantest	0.2566	40238		9926/27		2/18/2010		
SG92-17_C11087	Undefined	HAZLVOLC_FW	WASTE	IN	SARG	UDEF	Waste	Rock	Drillcore	ALS Chemex		VA08108753	SG92-17_C11087		SG92-17_C11087	8/5/2008		
S-11-69 1.76-16.9	Undefined	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012	mean of duplicates	
SG92-15_C12893	Undefined	HAZLVOLC_FW	WASTE	IN	SARG	UDEF	Waste	Rock	Drillcore	ALS Chemex		VA08108753	SG92-15_C12894		SG92-15_C12894	8/5/2008		
S-11-74 5.9-21.9	Undefined	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		Jan-12				1/12/2012		
H42404	Undefined	HAZLVOLC_FW	WASTE	IN	PMON	CL	Waste	Rock	Drillcore	ALS Chemex	2.02	VA09124617		VA09124617R045		9/16/2009		
H42410	Undefined	HAZLVOLC_FW	WASTE	IN	PMON	CL	Waste	Rock	Drillcore	ALS Chemex	1.64	VA09124617		VA09124617R048		9/16/2009		
S-08-07 55-70	Undefined	HAZLVOLC_HW	WASTE	IN			Ore	Pulp	Composite	Maxxam		40920				1/12/2012		
H42419	Undefined	HAZLVOLC_FW	WASTE	IN	VAAT	CL	Waste	Rock	Drillcore	ALS Chemex	2	VA09124617		VA09124617R052		9/16/2009		
G21714	Undefined	HAZLVOLC_FW	WASTE	OUT	VUAT	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G21714		G21714	9/2/2008		
S-11-69 42.1-56.9	Undefined	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
S-11-74 37.9-53.9	Undefined	Sulph_Uncat	WASTE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012	mean of duplicates	
S-11-74 117.9-133.9	Undefined	Sulph_Uncat	WASTE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
10264	Undefined	HAZLVOLC_FW	WASTE	IN	ANDS	SIL	Ore	Rock	Pulp sample	Cantest	0.256	40238		10263/64		2/18/2010		
10253	Undefined	HAZLVOLC_HW	WASTE	IN	VFLT	QSP	Ore	Rock	Pulp sample	Cantest	0.2013	Mar-10		10250/51		2/18/2010		
S-11-69 125.1-140.9	Undefined	Sulph_Uncat	ORE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
H44593	Undefined	HAZLVOLC_FW	WASTE	IN	VUTF	PR	Waste	Rock	Pulp sample	Cantest	0.2827	40238		H44593		2/18/2010		
S-11-69 82.9-98.9	Undefined	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
9759	Undefined	HAZLVOLC_HW	ORE	IN	INPP	SI	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9759		9759	9/2/2008		
H42447	Undefined	HAZLVOLC_FW	WASTE	IN	VAAT	CL	Waste	Rock	Drillcore	ALS Chemex	1.96	VA09124617		VA09124617R056		9/16/2009		
S-11-73 118.2-134.2	Undefined	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
S-11-72 23.3-38.3	Undefined	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
G21620	Undefined	HAZLVOLC_FW	WASTE	IN	VUTF	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G21620		G21620	9/2/2008		
S-10-29 65.5-79.5	Undefined	HAZLVOLC_HW	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
H42408	Undefined	HAZLVOLC_FW	WASTE	IN	PMON	CL	Waste	Rock	Drillcore	ALS Chemex	1.86	VA09124617		VA09124617R047		9/16/2009		
MC-05-01 49-65	Undefined	HAZLVOLC_HW	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
S-10-29 14.4-29.5	Undefined	HAZLVOLC_HW	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
S-10-33 129-146	Undefined	HAZLVOLC_HW	ORE	OUT			Ore	Pulp	Composite	Maxxam		40920				1/12/2012		
9801	Undefined	HAZLVOLC_HW	WASTE	IN	INPP	SE	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9801		9801	9/2/2008		
S-08-07 190-204.5	Undefined	HAZLVOLC_HW	WASTE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
H42443	Undefined	HAZLVOLC_FW	WASTE	IN	VAAT	CL	Waste	Rock	Drillcore	ALS Chemex	1.9	VA09124617		VA09124617R055		9/16/2009		
9770	Undefined	HAZLVOLC_HW	MARGINAL	IN	INPP	SI	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9770		9770	9/2/2008		
MC-05-01 89-105	Undefined	HAZLVOLC_HW	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
H45459	Undefined	HAZLVOLC_FW	WASTE	IN	DDRT	CL	Waste	Rock	Pulp sample	Cantest	0.2582	40238		H45459		2/18/2010		
S-11-73 79.2-94.2	Undefined	Sulph_Uncat	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
X18487	Undefined	HAZLVOLC_FW	WASTE	OUT	FDYK	IARG	Waste	Rock	Pulp sample	Cantest	0.2708	40238		X18487/88		2/18/2010		
E216203	Undefined	HAZLVOLC_FW	WASTE	OUT	VU	PR	Waste	Rock	Pulp sample	Cantest	0.2871	40238		G216203		2/18/2010		
SG92-17_C11080	Undefined	HAZLVOLC_FW	WASTE	IN	VAAT	PR	Waste	Rock	Drillcore	ALS Chemex		VA08108753	SG92-17_C11080		SG92-17_C11080	8/5/2008		
X18455	Undefined	HAZLVOLC_HW	WASTE	OUT	IVOL	PR	Waste	Rock	Pulp sample	Cantest	0.254	40238		X18455		2/18/2010		
X18478	Undefined	HAZLVOLC_FW	WASTE	OUT	FDYK	IARG	Waste	Rock	Pulp sample	Cantest	0.2578	40238		X18477/79		2/18/2010		
9742	Undefined	MCMONZ	MARGINAL	IN	INPP	SI	Ore	Rock	Drillcore	ALS Chemex		VA08125686	9742		9742	9/2/2008		
S-08-07 155.1-170.5	Undefined	HAZLVOLC_HW	WASTE	IN			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
X18433	Undefined	HAZLVOLC_HW	WASTE	IN	SEDS	PR	Waste	Rock	Pulp sample	Cantest	0.2745	40238		X18433		2/18/2010		
H44569	Undefined	HAZLVOLC_FW	WASTE	IN	DDRT	PR	Waste	Rock	Pulp sample	Cantest	0.2669	40238		H44569/70		2/18/2010		
H45267	Undefined	HAZLVOLC_FW	WASTE	IN	VUTF	CL	Waste	Rock	Pulp sample	Cantest	0.2573	40238		H45267		2/18/2010		
H45245	Undefined	HAZLVOLC_FW	WASTE	IN	VUTF	CL	Waste	Rock	Pulp sample	Cantest	0.2571	40238		H45245/46		2/18/2010		
S-10-33 52-69	Undefined	HAZLVOLC_HW	WASTE	OUT			Waste	Pulp	Composite	Maxxam		40920				1/12/2012		
G24711	Undefined	HAZLVOLC_FW	WASTE	IN	VU	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G24711		G24711	9/2/2008		
#N/A	Undefined	HAZLVOLC_FW	WASTE	IN			#N/A	Rock	Drillcore	ALS Chemex		VA08108753	NA		NA	8/5/2008		
E192923	Undefined	HAZLVOLC_FW	WASTE	IN	DDRT	CARB	Ore	Rock	Pulp sample	Cantest	0.2414	40238		E192924		2/18/2010		
H45491	Undefined	HAZLVOLC_FW	WASTE	IN	DDRT	CARB	Waste	Rock	Pulp sample	Cantest	0.3302	40238		H45491		2/18/2010		
S91-387_5160	Overburden	#N/A			SCHT	QC	Waste	Rock	Drillcore	ALS Chemex		VA08108753	S91-387_5160		S91-387_5160	8/5/2008		
X18179	Overburden	SW Hazelton Volcanics Upper Panel	WASTE	IN	VU	SIL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X18179	VA09013339R055	X18179	2/6/2009		
S91-395_5370	Overburden	#N/A			SCHT	CL	Waste	Rock	Drillcore	ALS Chemex		VA08108753	S91-395_5370		S91-395_5370	8/5/2008		
G37543	Overburden	SW Hazelton Volcanics Upper Panel	MARGINAL	IN	FLTZ	QSP	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G37543		G37543	9/2/2008		
E192557	Overburden	CL-PR Lower Panel	MARGINAL	IN	VATF	CL2	Waste	Rock	Drillcore	ALS Chemex		VA08125685	E192557		E192557	9/2/2008		
G33225	Overburden	NM Hazelton Volcanics Upper Panel	WASTE	IN	FLTZ	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33225		G33225	9/2/2008		
G33213	Overburden	NM Hazelton Volcanics Upper Panel	ORE	IN	ANDS	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33213		G33213	9/2/2008		
G37849	UP Hazelton	Uncategorized Rocks Lower Panel	ORE	IN	VATF	IARG	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G37849		G37849	9/2/2008		
X17096	UP Hazelton	0	WASTE	IN	PMON	IARG	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X17096	VA09013339R014	X17096	2/6/2009		
H43066	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097253		VA09097253R007		9/4/2009		
H43070	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	HEM	Waste	Rock	Drillcore	ALS Chemex		VA09097255		VA09097255R002		9/4/2009		
H41606	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	2.22	VA09116243		VA09116243R002		9/13/2009		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
H43086	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097254				9/4/2009		
H43064	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097253		VA09097253R003		9/4/2009		
X17168	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17168	VA09013339R020	X17168	2/6/2009		
H40759	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	SARG	SIH	Waste	Rock	Pulp sample	Cantest	0.267	40238		H40759/60		2/18/2010		
X17119	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	VATF	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17119	VA09013339R016	X17119	2/6/2009		
9265	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	INPP	CL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9265		9265	9/2/2008		
H43100	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097254		VA09097254R003		9/4/2009		
H43084	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	IVOL	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097254		VA09097254R008		9/4/2009		
H43060	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097255		VA09097255R004		9/4/2009		
X17129	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	PMON	IARG	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X17129	VA09013339R017	X17129	2/6/2009		
X17105	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	VATF	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17105	VA09013339R015	X17105	2/6/2009		
X06508	UP Hazelton	QSP Lower Panel	WASTE	IN	VUTF	QSP	Waste	Rock	Pulp sample	Cantest	0.2576	40238		X06508		2/18/2010		
X16763	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	ANDS	SIH	Waste	Pulp	Composite	ALS Chemex		VA09027962		VA09013336M007		2/5/2009		
G37888	UP Hazelton	IARG Lower Panel	ORE	IN	VALT	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G37888		G37888	9/2/2008		
X14984	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	SEDS	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09027962		VA09013336M020		2/5/2009		
X17360	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	HEM	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17360	VA09013339R040	X17360	2/6/2009		
H43113	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097255		VA09097255R001		9/4/2009		
G36677	UP Hazelton	SW Hazelton Volcanics Upper Panel	ORE	IN	VUTF	SIH	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G36677		G36677	9/2/2008		
G33512	UP Hazelton	Uncategorized Rocks Lower Panel	WASTE	OUT	SARG	SIH	Waste	Rock	Pulp sample	Cantest	0.2295	40238		G33512		2/18/2010	mean of duplicates	
H41633	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	1.98	VA09116243				9/13/2009		
X17271	UP Hazelton	QSP Lower Panel	WASTE	IN	VU	QSP	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17271	VA09013339R031	X17271	2/6/2009		
H43074	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097255		VA09097255R005		9/4/2009		
X17202	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	PSBX	MTH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17202	VA09013339R024	X17202	2/6/2009		
X17350	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	ANDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X17350	VA09013339R039	X17350	2/6/2009		
X17069	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	VALT	IARG	Waste	Rock	Pulp sample	Cantest	0.2433	Mar-10		X17069/70/71		2/18/2010		
X17270	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	FLTZ	UDEF	Waste	Pulp	Composite	ALS Chemex		VA09027962		VA09027962R008		2/5/2009		
H43068	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	HEM	Waste	Rock	Drillcore	ALS Chemex		VA09097253		VA09097253R010		9/4/2009		
X18147	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	VU	SIL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X18147	VA09013339R052	X18147	2/6/2009		
X16787	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	ANDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16787	VA09013337R070	X16787	2/6/2009		
67950	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	GRAN	AR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	67950		67950	9/2/2008		
H41661	UP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	VU	SIL	Waste	Rock	Drillcore	ALS Chemex	2.48	VA09116243		VA09116243R017		9/13/2009		
G37829	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	VUTF	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G37829		G37829	9/2/2008		
X17354	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	HEM	Waste	Pulp	Composite	ALS Chemex		VA09027962		VA09013336M011		2/5/2009		
X17404	UP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17404	VA09013339R044	X17404	2/6/2009		
H43134	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097253		VA09097253R005		9/4/2009		
X14912	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	SEDS	SIH	Waste	Pulp	Composite	ALS Chemex		VA09027962		VA09013336M017		2/5/2009		
H43078	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	IVOL	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097254		VA09097254R001		9/4/2009		
H43082	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097253		VA09097253R004		9/4/2009		
H41615	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	1.44	VA09116243	FLB duplicate	VA09116243R006		9/13/2009		
X14921	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	SEDS	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09027962		VA09013336M018		2/5/2009		
X16837	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	ANDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16837	VA09013337R075	X16837	2/6/2009		
X16765	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	ANDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X16765	VA09013337R068	X16765	2/6/2009		
X17225	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	IVOL	MTH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17225	VA09013339R027	X17225	2/6/2009		
X17188	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	VATF	MTH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17188	VA09013339R022	X17188	2/6/2009		
H43091	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097253		VA09097253R002		9/4/2009		
X16185	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	HEM	Waste	Pulp	Composite	ALS Chemex		VA08108753		VA08108753M074		8/5/2008		
X16775	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	ANDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16775	VA09013337R069	X16775	2/6/2009		
H43093	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097254		VA09097254R006		9/4/2009		
X14969	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	ANDS	SIL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X14969	VA09013339R013	X14969	2/6/2009		
X18198	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X18198	VA09013339R057	X18198	2/6/2009		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
X17394	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	ANDS	MTH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17394	VA09013339R043	X17394	2/6/2009		
X14977	UP Hazelton	SW Hazelton Volcanics Upper Panel	ORE	IN	ANDS	SIL	Waste	Rock	Drillcore	ALS Chemex		VA09027962		VA09013336M019		2/5/2009		
H40884	UP Hazelton	SW Hazelton Volcanics Upper Panel	MARGINAL	IN	VAAT	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09097251		VA09097251R004		9/4/2009		
X16754	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	ANDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X16754	VA09013337R067	X16754	2/6/2009		
X14904	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex		VA09027962		VA09013336M016		2/5/2009		
X16756	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	ANDS	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09027962		VA09013336M006		2/5/2009		
X17340	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	ANDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X17340	VA09013339R038	X17340	2/6/2009		
X16750	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	ANDS	SIH	Waste	Pulp	Composite	ALS Chemex		VA09027962		VA09013336M005		2/5/2009		
G37869	UP Hazelton	IARG Lower Panel	MARGINAL	IN	VALT	IARG	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G37869		G37869	9/2/2008		
X17142	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	VATF	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17142	VA09013339R018	X17142	2/6/2009		
X17198	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	PSBX	MTH	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X17198	VA09013339R023	X17198	2/6/2009		
X14956	UP Hazelton	SW Hazelton Volcanics Upper Panel	MARGINAL	IN	ANDS	SIL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X14956	VA09013339R012	X14956	2/6/2009		
H43123	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097254		VA09097254R009		9/4/2009		
X14946	UP Hazelton	SW Hazelton Volcanics Upper Panel	MARGINAL	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X14946	VA09013339R011	X14946	2/6/2009		
X17261	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	IARG	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X17261	VA09013339R030	X17261	2/6/2009		
G36716	UP Hazelton	SW Hazelton Volcanics Upper Panel	ORE	IN	VUTF	SIH	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G36716		G36716	9/2/2008		
X16227	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	VU	CL2	Waste	Rock	Drillcore	ALS Chemex	0.32	VA09013337	X16227	VA09013337R042	X16227	2/5/2009		
X16743	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	ANDS	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09027962		VA09013336M004		2/5/2009		
X18236	UP Hazelton	SW Hazelton Volcanics Upper Panel	ORE	IN	SEDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X18236	VA09013339R060	X18236	2/6/2009		
G34684	UP Hazelton	SW Hazelton Volcanics Upper Panel	ORE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G34684		G34684	9/2/2008		
H43140	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	PMON	PR	Waste	Rock	Drillcore	ALS Chemex	1.68	VA09097257				9/4/2009		
X14918	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	SEDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X14918	VA09013339R009	X14918	2/6/2009		
H43131	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex	2.6	VA09124617		VA09124617R001		9/4/2009		
X17346	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	ANDS	SIH	Waste	Pulp	Composite	ALS Chemex		VA09027962		VA09013336M010		2/5/2009		
X16176	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16176	VA09013337R039	X16176	2/5/2009		
H40882	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	VAAT	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09097251		VA09097251R007		9/4/2009		
H43120	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097255		VA09097255R011		9/4/2009		
X17974	UP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	SEDS	SIH	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17974	VA09013339R072	X17974	2/6/2009		
H41608	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	1.92	VA09116243	FLB duplicate	VA09116243R003		9/13/2009		
X14856	UP Hazelton	SW Monzonite Upper Panel	ORE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X14856	VA09013339R005	X14856	2/6/2009		
H43102	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097254		VA09097254R002		9/4/2009		
H41619	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	1.74	VA09116243	FLB duplicate	VA09116243R008		9/13/2009		
H43143	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	PR	Waste	Rock	Drillcore	ALS Chemex	1.42	VA09097257		VA09097257R007		9/4/2009		
X14902	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	SEDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X14902	VA09013339R008	X14902	2/6/2009		
G36584	UP Hazelton	HIGHQTZ Lower Panel	MARGINAL	IN	VULT	SIH	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36584		G36584	9/2/2008		
67916	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	GRAN	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	67916		67916	9/2/2008		
H44025	UP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	1.52	VA09116241				9/12/2009		
H41621	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	1.78	VA09116243	FLB duplicate	VA09116243R009		9/13/2009		
X16798	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	ANDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X16798	VA09013337R071	X16798	2/6/2009		
X17179	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	VATF	MTH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17179	VA09013339R021	X17179	2/6/2009		
H40878	UP Hazelton	SW Hazelton Volcanics Upper Panel	ORE	IN	VAXT	CL	Waste	Rock	Drillcore	ALS Chemex		VA09097251		VA09097251R005		9/4/2009		
X16141	UP Hazelton	NM Monzonite Upper Panel	WASTE	IN	PMON	SI	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16141	VA09013337R037	X16141	2/5/2009		
G36604	UP Hazelton	HIGHQTZ Lower Panel	MARGINAL	IN	VUTF	SIH	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36604		G36604	9/2/2008		
X14897	UP Hazelton	SW Hazelton Volcanics Upper Panel	ORE	IN	SEDS	SIH	Waste	Pulp	Composite	ALS Chemex		VA09027962		VA09013336M015		2/5/2009		
H41617	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	1.24	VA09116243	FLB duplicate	VA09116243R007		9/13/2009		
G34743	UP Hazelton	SW Hazelton Volcanics Upper Panel	ORE	IN	SEDS	QSP	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G34743		G34743	9/2/2008		
X17040	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	VALT	SIH	Waste	Rock	Pulp sample	Cantest	0.1431	40238		X17040/41/42		2/18/2010		
H40799	UP Hazelton	SW Hazelton Volcanics Upper Panel	ORE	IN	VU	SIH	Ore	Rock	Pulp sample	Cantest	0.2668	Mar-10		H40799/80		2/18/2010		
H43111	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097255		VA09097255R007		9/4/2009		
H41624	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	1.84	VA09116243	FLB duplicate	VA09116243R010		9/13/2009		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
X16829	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	ANDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16829	VA09013337R074	X16829	2/6/2009		
X17338	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	SEDS	SIH	Waste	Pulp	Composite	ALS Chemex		VA09027962		VA09013336M009		2/5/2009		
H43127	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097253		VA09097253R011		9/4/2009		
H43076	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097255		VA09097255R003		9/4/2009		
X17383	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	ANDS	MTH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17383	VA09013339R042	X17383	2/6/2009		
X18074	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	VUTF	SIL	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X18074	VA09013339R045	X18074	2/6/2009		
X18250	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	SEDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X18250	VA09013339R061	X18250	2/6/2009		
H43135	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097254		VA09097254R010		9/4/2009		
G34723	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	SEDS	SIH	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G34723		G34723	9/2/2008		
X18095	UP Hazelton	SW Hazelton Volcanics Upper Panel	MARGINAL	IN	VUTF	SIL	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X18095	VA09013339R047	X18095	2/6/2009		
X18289	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	SEDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X18289	VA09013339R064	X18289	2/6/2009		
X17371	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	ANDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17371	VA09013339R041	X17371	2/6/2009		
X16995	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	VALT	SIH	Waste	Rock	Pulp sample	Cantest	0.213	40238		X16995/96/98		2/18/2010		
X16205	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	PMON	HEM	Waste	Pulp	Composite	ALS Chemex		VA08108753		VA08108753M072		8/5/2008		
X17080	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	VALT	SIH	Waste	Rock	Pulp sample	Cantest	0.2479	Mar-10		X17080/81/82		2/18/2010		
X16209	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	HEM	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16209	VA09013337R040	X16209	2/5/2009		
H41610	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	2.16	VA09116243	FLB duplicate	VA09116243R004		9/13/2009		
H41664	UP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	VU	SIL	Waste	Rock	Drillcore	ALS Chemex	2.02	VA09116243		VA09116243R018		9/13/2009		
H40834	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	PSYN	IARG	Waste	Rock	Pulp sample	Cantest	0.2599	40238		H40834/35		2/18/2010		
X16857	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	ANDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16857	VA09013337R077	X16857	2/6/2009		
H44032	UP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	2.24	VA09116241				9/12/2009		
X17957	UP Hazelton	HIGHQTZ Lower Panel	ORE	IN	PSBX	PSBX	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17957	VA09013339R071	X17957	2/6/2009		
G36725	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	PPFP	SIH	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36725		G36725	9/2/2008		
H41797	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09116244				9/14/2009		
H44036	UP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	1.94	VA09116241				9/12/2009		
X16439	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	ANDS	CL	Waste	Rock	Drillcore	ALS Chemex		VA09027962		VA09013336M001		2/6/2009		
H43116	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex	1.46	VA09097257		VA09097257R008		9/4/2009		
H41631	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	1.92	VA09116243	FLB duplicate	VA09116243R013		9/13/2009		
X16176	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	PMON	SIL	Waste	Pulp	Composite	ALS Chemex		VA08108753		VA08108753M075		8/5/2008		
H41814	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09116244		VA09116244R022		9/14/2009		
H43098	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097254		VA09097254R004		9/4/2009		
X17910	UP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	SEDS	SIH	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17910	VA09013339R068	X17910	2/6/2009		
H41613	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	2.04	VA09116243	FLB duplicate	VA09116243R005		9/13/2009		
H44018	UP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	1.82	VA09116241				9/12/2009		
X18152	UP Hazelton	SW Hazelton Volcanics Upper Panel	ORE	IN	VU	SIL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X18152	VA09013339R053	X18152	2/6/2009		
H41800	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09116244				9/14/2009		
X16447	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	ANDS	SIL	Waste	Rock	Drillcore	ALS Chemex		VA09027962				2/6/2009		
X16229	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	GRAN	CL2	Waste	Rock	Drillcore	ALS Chemex		VA09027962		VA09027962R002		2/6/2009		
G36696	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	VUTF	SIH	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36696		G36696	9/2/2008		
X17213	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	IVOL	MTH	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X17213	VA09013339R026	X17213	2/6/2009		
X17234	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	IVOL	MTH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17234	VA09013339R028	X17234	2/6/2009		
H43145	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	PR	Waste	Rock	Drillcore	ALS Chemex	1.36	VA09097257		VA09097257R003		9/4/2009		
X16962	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	VALT	SIH	Waste	Rock	Pulp sample	Cantest	0.2132	Mar-10		X16962		2/18/2010		
H43088	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097253		VA09097253R001		9/4/2009		
67933	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	ANDS	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	67933		67933	9/2/2008		
H41776	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex	1.74	VA09124617		VA09124617R063		9/14/2009		
X17245	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	IVOL	MTH	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X17245	VA09013339R029	X17245	2/6/2009		
X16222	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	VU	CL2	Waste	Pulp	Composite	ALS Chemex		VA09027962		VA09027962R001		2/6/2009		
X17925	UP Hazelton	HIGHQTZ Lower Panel	ORE	IN	SEDS	SIH	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17925	VA09013339R069	X17925	2/6/2009		
H44040	UP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	2.22	VA09116241				9/12/2009		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
X16158	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	FLTZ	CL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16158	VA09013337R038	X16158	2/5/2009		
G34713	UP Hazelton	SW Monzonite Upper Panel	ORE	IN	PQMZ	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G34713		G34713	9/2/2008		
H44174	UP Hazelton	HIGHQTZ Lower Panel	ORE	IN	PMON	SIH	Ore	Rock	Pulp sample	Cantest	0.2601	40238		H44174/75		2/18/2010		
H43080	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097255		VA09097255R006		9/4/2009		
H44030	UP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VUTF	SIL	Waste	Rock	Drillcore	ALS Chemex	2.38	VA09116241				9/12/2009		
9042	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	VTLP	SE	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9042		9042	9/2/2008		
H44016	UP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	2.06	VA09116241				9/12/2009		
H44020	UP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	2.18	VA09116241				9/12/2009		
H40891	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	VAAT	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09097251		VA09097251R003		9/4/2009		
H44034	UP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	2.42	VA09116241				9/12/2009		
67974	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	ANDS	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	67974		67974	9/2/2008		
G34694	UP Hazelton	SW Hazelton Volcanics Upper Panel	ORE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G34694		G34694	9/2/2008		
H43118	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097255		VA09097255R012		9/4/2009		
X17940	UP Hazelton	HIGHQTZ Lower Panel	MARGINAL	IN	SEDS	SIH	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17940	VA09013339R070	X17940	2/6/2009		
H41635	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	1.48	VA09116243		VA09116243R015		9/13/2009		
H41793	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09116244				9/14/2009		
X14886	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	SEDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X14886	VA09013339R007	X14886	2/6/2009		
X18104	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	SEDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X18104	VA09013339R048	X18104	2/6/2009		
H41795	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09116244				9/14/2009		
X18206	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	IVOL	CL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X18206	VA09013339R058	X18206	2/6/2009		
H41789	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex	1.72	VA09124617		VA09124617R067		9/14/2009		
H43147	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	PR	Waste	Rock	Drillcore	ALS Chemex	1.66	VA09097257		VA09097257R002		9/4/2009		
X16844	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	ANDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X16844	VA09013337R076	X16844	2/6/2009		
X18278	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	SEDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X18278	VA09013339R063	X18278	2/6/2009		
X17892	UP Hazelton	HIGHQTZ Lower Panel	ORE	IN	SEDS	SIH	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17892	VA09013339R067	X17892	2/6/2009		
H41812	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09116244				9/14/2009		
G36622	UP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	PPFP	SIH	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G36622		G36622	9/2/2008		
X18223	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	SARG	SIH	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X18223	VA09013339R059	X18223	2/6/2009		
X18158	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	VU	SIL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X18158	VA09013339R054	X18158	2/6/2009		
H41818	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	FLTZ	SI	Waste	Rock	Drillcore	ALS Chemex		VA09116244		VA09116244R023		9/14/2009		
H41629	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	1.78	VA09116243	FLB duplicate	VA09116243R012		9/13/2009		
H41604	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex	1.56	VA09116243		VA09116243R001		9/13/2009		
H41782	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex	1.72	VA09124617				9/14/2009		
X16237	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	VU	CL2	Waste	Pulp	Composite	ALS Chemex		VA09027962		VA09027962R003		2/6/2009		
X14888	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	ANDS	CL	Waste	Rock	Drillcore	ALS Chemex		VA09027962		VA09013336M014		2/5/2009		
H41626	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	1.66	VA09116243	FLB duplicate	VA09116243R011		9/13/2009		
G36209	UP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36209		G36209	9/2/2008		
H44022	UP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	2.36	VA09116241				9/12/2009		
H44028	UP Hazelton	HIGHQTZ Lower Panel	MARGINAL	IN	VUTF	SIL	Waste	Rock	Drillcore	ALS Chemex	2.42	VA09116241				9/12/2009		
X18188	UP Hazelton	SW Hazelton Volcanics Upper Panel	ORE	IN	VU	CL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X18188	VA09013339R056	X18188	2/6/2009		
H43151	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	PR	Waste	Rock	Drillcore	ALS Chemex	1.88	VA09097257		VA09097257R001		9/4/2009		
9374	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	INPP	CL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9374		9374	9/2/2008		
H41605	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	VU	SIH	Waste	Rock	Drillcore WET	Cantest	0.472	40210		M-09-108 6-8		1/15/2010		
H40976	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	VAXT	SIH	Waste	Rock	Pulp sample	Cantest	0.2571	40238		H40976/77		2/18/2010		
9051	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	VTLP	SE	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9051		9051	9/2/2008		
H41807	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09116244				9/14/2009		
9352	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	INPP	SE	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9352		9352	9/2/2008		
X14882	UP Hazelton	SW Hazelton Volcanics Upper Panel	ORE	IN	SEDS	SIH	Waste	Pulp	Composite	ALS Chemex		VA09027962				2/5/2009		
H40886	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	VAAT	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09097251		VA09097251R001		9/4/2009		
H43106	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097255		VA09097255R009		9/4/2009		

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
H41791	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex	1.9	VA09124617		VA09124617R068		9/14/2009		
H43129	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097253		VA09097253R009		9/4/2009		
X17203	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	IVOL	MTH	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X17203	VA09013339R025	X17203	2/6/2009		
H43136	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097253		VA09097253R006		9/4/2009		
X16819	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	ANDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X16819	VA09013337R073	X16819	2/6/2009		
X16195	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08108753		VA08108753M073		8/5/2008		
X17863	UP Hazelton	HIGHQTZ Lower Panel	MARGINAL	IN	SEDS	SIH	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17863	VA09013339R065	X17863	2/6/2009		
X16454	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	ANDS	CL	Waste	Rock	Drillcore	ALS Chemex		VA09027962		VA09013336M003		2/6/2009		
G36562	UP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VULT	SIH	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36562		G36562	9/2/2008		
H43149	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	PR	Waste	Rock	Drillcore	ALS Chemex	1.5	VA09097257		VA09097257R004		9/4/2009		
X18135	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	VU	CL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X18135	VA09013339R050	X18135	2/6/2009		
H41644	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	1.44	VA09116243		VA09116243R016		9/13/2009		
H43109	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097255				9/4/2009		
X14933	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	SEDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X14933	VA09013339R010	X14933	2/6/2009		
G36652	UP Hazelton	SW Hazelton Volcanics Upper Panel	ORE	IN	VUTF	SIH	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36652		G36652	9/2/2008		
G34782	UP Hazelton	SW Hazelton Volcanics Upper Panel	ORE	IN	VU	SIH	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G34782		G34782	9/2/2008		
H41803	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09116244				9/14/2009		
H43096	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097254		VA09097254R005		9/4/2009		
H40994	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	VAXT	CL	Waste	Rock	Pulp sample	Cantest	0.26	40238		H40994/95		2/18/2010		
H41810	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09116244		VA09116244R020		9/14/2009		
H43104	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	KP	Waste	Rock	Drillcore	ALS Chemex		VA09097255		VA09097255R010		9/4/2009		
H41772	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex	2.06	VA09124617		VA09124617R062		9/14/2009		
H40888	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	VAAT	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09097251		VA09097251R002		9/4/2009		
X18120	UP Hazelton	SW Hazelton Volcanics Upper Panel	MARGINAL	IN	SEDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X18120	VA09013339R049	X18120	2/6/2009		
H44014	UP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	PMON	SIL	Ore	Rock	Drillcore	ALS Chemex	2.18	VA09116241				9/12/2009		
H40855	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	SEDS	SIL	Waste	Rock	Pulp sample	Cantest	0.2611	40238		H40855		2/18/2010		
G36639	UP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VUTF	SIH	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36639		G36639	9/2/2008		
H44038	UP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	1.6	VA09116241				9/12/2009		
X18142	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	VU	SIL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X18142	VA09013339R051	X18142	2/6/2009		
H43153	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	PR	Waste	Rock	Drillcore	ALS Chemex	2.06	VA09097257		VA09097257R006		9/4/2009		
H41805	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09116244				9/14/2009		
G34704	UP Hazelton	SW Monzonite Upper Panel	ORE	IN	PQMZ	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G34704		G34704	9/2/2008		
H44230	UP Hazelton	HIGHQTZ Lower Panel	MARGINAL	IN	PMON	SIH	Ore	Rock	Pulp sample	Cantest	0.2505	Mar-10		H44230/31		2/18/2010		
X17877	UP Hazelton	HIGHQTZ Lower Panel	ORE	IN	SEDS	SIH	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17877	VA09013339R066	X17877	2/6/2009		
G36186	UP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VU	SIH	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36186		G36186	9/2/2008		
H41613	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	VU	SIH	Waste	Rock	Drillcore WET	Cantest	0.52	40210		M-09-108 20-22		1/15/2010		
H41771	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex	1.44	VA09124617		VA09124617R061		9/14/2009		
X17306	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	IVOL	UDEF	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17306	VA09013339R035	X17306	2/6/2009		
9399	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	INPP	SE	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9399		9399	9/2/2008		
G34763	UP Hazelton	SW Hazelton Volcanics Upper Panel	ORE	IN	VU	CL	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G34763		G34763	9/2/2008		
H40880	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	VAAT	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09097251		VA09097251R006		9/4/2009		
X17327	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	SEDS	MTH	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X17327	VA09013339R037	X17327	2/6/2009		
X18084	UP Hazelton	SW Hazelton Volcanics Upper Panel	MARGINAL	IN	VUTF	SIL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X18084	VA09013339R046	X18084	2/6/2009		
X18265	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	FLTZ	UDEF	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X18265	VA09013339R062	X18265	2/6/2009		
H41780	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09116244				9/14/2009		
H41787	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex	1.92	VA09124617		VA09124617R066		9/14/2009		
X17317	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	SEDS	MTH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17317	VA09013339R036	X17317	2/6/2009		
G36745	UP Hazelton	SW Hazelton Volcanics Upper Panel	ORE	IN	VUTF	SIH	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36745		G36745	9/2/2008		
X16193	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16193	VA09013337R040	X16193	2/5/2009		
H41621	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	VU	SIH	Waste	Rock	Drillcore DRY	Cantest	0.531	40210		M-09-108 36-38		1/15/2010		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
9008	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	VTLP	SE	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9008		9008	9/2/2008		
G34556	UP Hazelton	HIGHQTZ Lower Panel	ORE	IN	ANDS	SIH	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G34556		G34556	9/2/2008		
9027	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	VTLP	SE	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9027		9027	9/2/2008		
H44187	UP Hazelton	HIGHQTZ Lower Panel	ORE	IN	PMON	SIH	Ore	Rock	Pulp sample	Cantest	0.2381	40238		H44187		2/18/2010		
H41619	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	VU	SIH	Waste	Rock	Drillcore WET	Cantest	0.573	40210		M-09-108 32-34		1/15/2010		
G36155	UP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	IVOL	SIH	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G36155		G36155	9/2/2008		
H41785	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex	1.88	VA09124617		VA09124617R065		9/14/2009		
H41778	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09116244				9/14/2009		
G36165	UP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VULT	SIH	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G36165		G36165	9/2/2008		
H41617	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	VU	SIH	Waste	Rock	Drillcore WET	Cantest	0.397	40210		M-09-108 28-30		1/15/2010		
G34753	UP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	PQMZ	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G34753		G34753	9/2/2008		
H43984	UP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	FLTZ	SIH	Ore	Rock	Pulp sample	Cantest	0.2573	40238		H43984/85		2/18/2010		
H41615	UP Hazelton	NM Hazelton Volcanics Upper Panel	MARGINAL	IN	VU	SIH	Waste	Rock	Drillcore WET	Cantest	0.655	40210		M-09-108 24-26		1/15/2010		
G33506	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	OUT	PPFP	HEM	Waste	Rock	Pulp sample	Cantest	0.2582	Mar-10		G33506/07		2/18/2010		
H41608	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	VU	SIH	Waste	Rock	Drillcore WET	Cantest	0.6	40210		M-09-108 12-14		1/15/2010		
H41610	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	VU	SIH	Waste	Rock	Drillcore WET	Cantest	0.478	40210		M-09-108 16-18		1/15/2010		
H41622	UP Hazelton	NM Hazelton Volcanics Upper Panel	ORE	IN	VU	SIH	Waste	Rock	Drillcore WET	Cantest	0.613	40210		M-09-108 40-42		1/15/2010		
H41626	UP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore DRY	Cantest	0.397	40210		M-09-108 44-46		1/15/2010		
X10676	LP Hazelton	QSP Lower Panel	ORE	IN	VUTF	QSP	Ore	Rock	Pulp sample	Cantest	0.2598	40238		X10676/77		2/18/2010		
X13711	LP Hazelton	QSP Lower Panel	WASTE	IN	VUTF	QSP	Waste	Rock	Pulp sample	Cantest	0.2798	Mar-10		X13711/12/13		2/18/2010		
X13701	LP Hazelton	QSP Lower Panel	MARGINAL	IN	VUTF	QSP	Waste	Rock	Pulp sample	Cantest	0.2231	40238		X13701/03/04		2/18/2010		
G33182	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VU	QSTW	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33182		G33182	9/2/2008		
S91-395_5431	LP Hazelton	#N/A			SCHT	QC	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-395_5431		S91-395_5431	8/5/2008		
G37665	LP Hazelton	HIGHQTZ Lower Panel	ORE	IN	QTVN	QTVN	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G37665		G37665	9/2/2008		
S91-387_5210	LP Hazelton	#N/A			SCHT	QS	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-387_5210		S91-387_5210	8/5/2008		
G21564	LP Hazelton	QSP Lower Panel	WASTE	IN	VU	QSTW	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G21564		G21564	9/2/2008		
G37342	LP Hazelton	IARG Lower Panel	ORE	IN	VATF	IARG	Ore	Rock	Pulp sample	Cantest	0.2269	40238		G37341/42		2/18/2010		
S91-395_5417	LP Hazelton	#N/A			SCHT	QC	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-395_5417		S91-395_5417	8/5/2008		
G36847	LP Hazelton	HIGHQTZ Lower Panel	ORE	IN	QTVN	QSP	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G36847		G36847	9/2/2008		
S91-387_5199	LP Hazelton	#N/A			SCHT	QC	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-387_5199		S91-387_5199	8/5/2008		
X13520	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	IARG	Waste	Rock	Pulp sample	Cantest	0.1848	40238		X13520/22		2/18/2010		
S91-387_5179	LP Hazelton	#N/A			SCHT	QS	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-387_5179		S91-387_5179	8/5/2008		
G37937	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G37937		G37937	9/2/2008		
S91-386_5101	LP Hazelton	#N/A			SCHT	QC	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-386_5101		S91-386_5101	8/5/2008		
S91-386_5158	LP Hazelton	#N/A			SCHT	QS	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-386_5158		S91-386_5158	8/5/2008		
G37330	LP Hazelton	IARG Lower Panel	ORE	IN	VATF	IARG	Ore	Rock	Pulp sample	Cantest	0.2599	40238		G37330/31		2/18/2010		
G22009	LP Hazelton	QSP Lower Panel	WASTE	OUT	VU	QSTW	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G22009		G22009	9/2/2008		
G33396	LP Hazelton	QSP Lower Panel	WASTE	IN	VAXT	IARG	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33396		G33396	9/2/2008		
S91-386_5141	LP Hazelton	#N/A			SCHT	QC	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-386_5141		S91-386_5141	8/5/2008		
G36855	LP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36855		G36855	9/2/2008		
X05423	LP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VU	QTVN	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X05423		X05423	9/2/2008		
G21583	LP Hazelton	QSP Lower Panel	WASTE	IN	VU	QSTW	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G21583		G21583	9/2/2008		
S91-386_5122	LP Hazelton	#N/A			SCHT	QC	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-386_5122		S91-386_5122	8/5/2008		
G37684	LP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VU	QSTW	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G37684		G37684	9/2/2008		
S91-395_5405	LP Hazelton	#N/A			SCHT	QC	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-395_5405		S91-395_5405	8/5/2008		
G21535	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	QSTW	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G21535		G21535	9/2/2008		
X05453	LP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VU	QSTW	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X05453		X05453	9/2/2008		
G37785	LP Hazelton	IARG Lower Panel	ORE	IN	VALT	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G37785		G37785	9/2/2008		
H44263	LP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VU	QSTW	Ore	Rock	Pulp sample	Cantest	0.26	40238		H44363/64		2/18/2010		
X11530	LP Hazelton	QSP Lower Panel	ORE	IN	VU	QSP	Ore	Rock	Drillcore	ALS Chemex	0.4	VA09013337	X11530	VA09013337R019	X11530	2/6/2009		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
G21048	LP Hazelton	IARG Lower Panel	ORE	IN	VU	QSP	Ore	Rock	Pulp sample	Cantest	0.2702	40238		G21048		2/18/2010		
G21508	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VU	UDEF	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G21508		G21508	9/2/2008		
X05339	LP Hazelton	IARG Lower Panel	MARGINAL	IN	SARG	QSP	Ore	Rock	Pulp sample	Cantest	0.2599	40238		X05339/41		2/18/2010		
G33162	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VU	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G33162		G33162	9/2/2008		
H43405	LP Hazelton	IARG Lower Panel	ORE	IN	IVOL	QSP	Ore	Rock	Drillcore	ALS Chemex		VA09097258		VA09097258R006		9/4/2009		
H43880	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore DRY	Cantest	0.257	40210		M-09 103 242-244		1/15/2010		
G37699	LP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VU	QSTW	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G37699		G37699	9/2/2008		
X05402	LP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VU	QSTW	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X05403		X05403	9/2/2008		
X11553	LP Hazelton	QSP Lower Panel	ORE	IN	VU	QSP	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X11553	VA09013337R020	X11553	2/6/2009		
G37809	LP Hazelton	QSP Lower Panel	ORE	IN	VALT	QSP	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G37809		G37809	9/2/2008		
X19143	LP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VU	CSTW	Ore	Rock	Pulp sample	Cantest	0.2577	40238		X19143/44/45		2/18/2010		
G33142	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VU	QSTW	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G33142		G33142	9/2/2008		
G21490	LP Hazelton	IARG Lower Panel	ORE	IN	VATF	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G21490		G21490	9/2/2008		
X06441	LP Hazelton	QSP Lower Panel	ORE	IN	VULT	CL	Ore	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X06441	VA09013337R029	X06441	2/6/2009		
G37719	LP Hazelton	QSP Lower Panel	ORE	IN	FLTZ	QSTW	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G37719		G37719	9/2/2008		
H44434	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Pulp sample	Cantest	0.2877	40238		H44434		2/18/2010		
G36074	LP Hazelton	QSP Lower Panel	ORE	IN	IVOL	IARG	Ore	Rock	Pulp sample	Cantest	0.2625	Mar-10		G36074		2/18/2010		
G21477	LP Hazelton	IARG Lower Panel	WASTE	IN	VATF	QTVN	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G21477		G21477	9/2/2008		
X14258	LP Hazelton	QSP Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X14258		X14258	9/2/2008		
H43397	LP Hazelton	IARG Lower Panel	ORE	IN	IVOL	QSP	Ore	Rock	Drillcore	ALS Chemex		VA09097258		VA09097258R003		9/4/2009		
H43401	LP Hazelton	IARG Lower Panel	ORE	IN	IVOL	QSP	Ore	Rock	Drillcore	ALS Chemex		VA09097258				9/4/2009		
H43395	LP Hazelton	IARG Lower Panel	ORE	IN	IVOL	QSP	Ore	Rock	Drillcore	ALS Chemex		VA09097258		VA09097258R002		9/4/2009		
H43403	LP Hazelton	IARG Lower Panel	ORE	IN	IVOL	QSP	Ore	Rock	Drillcore	ALS Chemex		VA09097258		VA09097258R005		9/4/2009		
X14278	LP Hazelton	QSP Lower Panel	ORE	IN	VU	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X14278		X14278	9/2/2008		
E217257	LP Hazelton	IARG Lower Panel	ORE	IN	VATF	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125685	E217257		E217257	9/2/2008		
G22025	LP Hazelton	QSP Lower Panel	WASTE	OUT	VU	QSTW	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G22025		G22025	9/2/2008		
S91-395_5388	LP Hazelton	#N/A			SCHT	CL	Ore	Rock	Drillcore	ALS Chemex		VA08108753	S91-395_5388		S91-395_5388	8/5/2008		
H41708	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex	2.3	VA09116243		VA09116243R038		9/13/2009		
G35241	LP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VU	QSTW	Ore	Rock	Pulp sample	Cantest	0.2849	40238		G35241/42/43		2/18/2010		
X11486	LP Hazelton	QSP Lower Panel	ORE	IN	VU	QSP	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X11486	VA09013337R017	X11486	2/6/2009		
H41422	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.54	VA09116242		VA09116242R004		9/13/2009		
G37917	LP Hazelton	IARG Lower Panel	ORE	IN	VATF	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G37917		G37917	9/2/2008		
H43399	LP Hazelton	IARG Lower Panel	ORE	IN	IVOL	QSP	Ore	Rock	Drillcore	ALS Chemex		VA09097258		VA09097258R007		9/4/2009		
X05483	LP Hazelton	QSP Lower Panel	ORE	IN	VU	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X05483		X05483	9/2/2008		
G24020	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VATF	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G24020		G24020	9/2/2008		
X14180	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VU	IARG	Waste	Rock	Pulp sample	Cantest	0.2598	Mar-10		X14180/81		2/18/2010		
H43407	LP Hazelton	IARG Lower Panel	ORE	IN	IVOL	QSP	Ore	Rock	Drillcore	ALS Chemex		VA09097258		VA09097258R001		9/4/2009		
H42161	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.24	VA09116245				9/14/2009		
X11377	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X11377	VA09013337R012	X11377	2/6/2009		
X10664	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL	Ore	Rock	Pulp sample	Cantest	0.257	40238		X10664/65		2/18/2010		
G37739	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G37739		G37739	9/2/2008		
H41706	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex	2.1	VA09116243		VA09116243R037		9/13/2009		
G36943	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36943		G36943	9/2/2008		
G35228	LP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VALT	QSP	Ore	Rock	Pulp sample	Cantest	0.2849	40238		G35228/29/30		2/18/2010		
G32981	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL	Ore	Rock	Pulp sample	Cantest	0.2601	40238		G32981/82		2/18/2010		
X15427	LP Hazelton	CL-PR Lower Panel	ORE	IN	VUTF	CL	Ore	Rock	Pulp sample	Cantest	0.2576	40238		X15427/28/29		2/18/2010		
H42163	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.56	VA09116245				9/14/2009		
G37966	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G37966		G37966	9/2/2008		
G21287	LP Hazelton	QSP Lower Panel	ORE	IN	VALT	IARG	Ore	Rock	Pulp sample	Cantest	0.2595	40238		G21286/87		2/18/2010		
G36878	LP Hazelton	CL-PR Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36878		G36878	9/2/2008		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
X14630	LP Hazelton	CL-PR Lower Panel	ORE	IN	VU	QSP	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X14630	VA09013337R059	X14630	2/6/2009		
H43874	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore DRY	Cantest	0.262	40210		M-09 103 230-232		1/15/2010		
G33119	LP Hazelton	IARG Lower Panel	ORE	IN	PPFP	QSTW	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G33119		G33119	9/2/2008		
G33357	LP Hazelton	IARG Lower Panel	WASTE	IN	VATF	IARG	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33357		G33357	9/2/2008		
X14171	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Pulp sample	Cantest	0.2597	40238		X14171/72		2/18/2010		
H42169	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	1.06	VA09116245				9/14/2009		
X13511	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	IARG	Waste	Rock	Pulp sample	Cantest	0.29	Mar-10		X13511		2/18/2010		
H41839	LP Hazelton	IARG Lower Panel	ORE	IN	VU	SI	Waste	Rock	Drillcore	ALS Chemex		VA09116244				9/14/2009		
X06419	LP Hazelton	QSP Lower Panel	ORE	IN	VULT	QSP	Ore	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X06419	VA09013337R028	X06419	2/6/2009		
G24041	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VAXT	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G24041		G24041	9/2/2008		
G23998	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VATF	IARG	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G23998		G23998	9/2/2008		
X15009	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	CL2	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X15009	VA09013337R032	X15009	2/6/2009		
G32047	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G32047		G32047	9/2/2008		
G35583	LP Hazelton	IARG Lower Panel	ORE	IN	VALT	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G35583		G35583	9/2/2008		
X06463	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	CL	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X06463	VA09013337R030	X06463	2/6/2009		
G33796	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	SARG	QSP	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33796		G33796	9/2/2008		
X11008	LP Hazelton	QSP Lower Panel	ORE	IN	VUTF	QSTW	Ore	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X11008	VA09013337R008	X11008	2/6/2009		
H43862	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Coarse DRY	Cantest	0.3	40210		M-09 103 211-213		1/15/2010		
X11578	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X11578	VA09013337R021	X11578	2/6/2009		
H43766	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL2	Ore	Rock	Coarse WET	Cantest	0.302	40210		M-09 103 28-30		1/15/2010		
G33097	LP Hazelton	IARG Lower Panel	ORE	IN	ANDS	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G33097		G33097	9/2/2008		
G33415	LP Hazelton	HIGHQTZ Lower Panel	WASTE	OUT	VUAT	QSTW	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33415		G33415	9/2/2008		
H43518	LP Hazelton	CL-PR Lower Panel	ORE	IN	VU	QSP	Ore	Rock	Pulp sample	Cantest	0.2816	40238		H43518		2/18/2010		
X11031	LP Hazelton	QSP Lower Panel	ORE	IN	VUTF	QSTW	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X11031	VA09013337R009	X11031	2/6/2009		
X06146	LP Hazelton	QSP Lower Panel	ORE	IN	VUTF	IARG	Ore	Rock	Pulp sample	Cantest	0.0855	40238		X06150/51		2/18/2010		
X11599	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X11599	VA09013337R022	X11599	2/6/2009		
H42210	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.46	VA09124617		VA09124617R092		9/14/2009		
G37765	LP Hazelton	IARG Lower Panel	ORE	IN	VALT	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G37765		G37765	9/2/2008		
G33436	LP Hazelton	QSP Lower Panel	WASTE	OUT	IVOL	QSP	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33436		G33436	9/2/2008		
X19131	LP Hazelton	HIGHQTZ Lower Panel	ORE	IN	PMON	CL2	Ore	Rock	Pulp sample	Cantest	0.2147	40238		X19131		2/18/2010		
X12874	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	IARG	Ore	Rock	Pulp sample	Cantest	0.2443	40238		X12874		2/18/2010		
G33072	LP Hazelton	IARG Lower Panel	ORE	IN	ANDS	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G33072		G33072	9/2/2008		
H41673	LP Hazelton	QSP Lower Panel	WASTE	IN	VU	SIL	Waste	Rock	Drillcore	ALS Chemex	2.02	VA09116243		VA09116243R022		9/13/2009		
X06396	LP Hazelton	QSP Lower Panel	ORE	IN	VULT	CL2	Ore	Rock	Drillcore	ALS Chemex	0.4	VA09013337	X06396	VA09013337R027	X06396	2/6/2009		
H43905	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse WET	Cantest	0.319	40210		M-09 103 286-288		1/15/2010		
H41835	LP Hazelton	QSP Lower Panel	WASTE	IN	VU	SI	Waste	Rock	Drillcore	ALS Chemex		VA09116244		VA09116244R029		9/14/2009		
H43762	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Coarse WET	Cantest	0.406	40210		M-09 103 24-26		1/15/2010		
X05329	LP Hazelton	IARG Lower Panel	WASTE	IN	SARG	HFLS	Waste	Rock	Pulp sample	Cantest	0.2598	40238		X05329/30		2/18/2010		
G36231	LP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VU	QSTW	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36231		G36231	9/2/2008		
G35563	LP Hazelton	IARG Lower Panel	ORE	IN	VALT	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G35563		G35563	9/2/2008		
H41829	LP Hazelton	QSP Lower Panel	WASTE	IN	VU	SI	Waste	Rock	Drillcore	ALS Chemex		VA09116244		VA09116244R026		9/14/2009		
H41561	LP Hazelton	CL-PR Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.44	VA09116242		VA09116242R019		9/13/2009		
H43887	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore DRY	Cantest	0.357	40210		M-09 103 254-256		1/15/2010		
G37602	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	SEDS	QSP	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G37602		G37602	9/2/2008		
G36814	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	VATF	QSP	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G36814		G36814	9/2/2008		
G33116	LP Hazelton	IARG Lower Panel	ORE	IN	VU	QSTW	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G33116		G33116	9/2/2008		
X11508	LP Hazelton	QSP Lower Panel	ORE	IN	VU	QSP	Ore	Rock	Drillcore	ALS Chemex	0.4	VA09013337	X11508	VA09013337R018	X11508	2/6/2009		
H42245	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Waste	Rock	Drillcore	ALS Chemex	2.04	VA09124617		VA09124617R099		9/14/2009		
G36794	LP Hazelton	QSP Lower Panel	WASTE	IN	VATF	QSP	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G36794		G36794	9/2/2008		
G35060	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G35060		G35060	9/2/2008		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
E217242	LP Hazelton	IARG Lower Panel	ORE	IN	VAXT	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125685	E217242		E217242	9/2/2008		
H43780	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse DRY	Cantest	0.145	Feb-10		M-09 103 69-71		1/15/2010		
G32420	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	PQMZ	SI	Waste	Rock	Drillcore	ALS Chemex		VA08125686	G32420		G32420	9/2/2008		
H42249	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	IARG	Waste	Rock	Drillcore	ALS Chemex	2.1	VA09124617		VA09124617R101		9/14/2009		
H41685	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Waste	Rock	Drillcore	ALS Chemex	2.2	VA09116243	FLB duplicate	VA09116243R028		9/13/2009		
9069	LP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	VTLP	SE	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9069		9069	9/2/2008		
H43765	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL2	Ore	Rock	Drillcore	ALS Chemex	2.44	VA09116240				9/12/2009		
X12852	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	CL	Ore	Rock	Pulp sample	Cantest	0.2571	40238		X12852/53		2/18/2010		
H43903	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	1.8	VA09116240	FLB duplicate			9/12/2009		
G35079	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G35079		G35079	9/2/2008		
E217224	LP Hazelton	QSP Lower Panel	WASTE	IN	VAXT	IARG	Waste	Rock	Drillcore	ALS Chemex		VA08125685	E217224		E217224	9/2/2008		
G36254	LP Hazelton	QSP Lower Panel	ORE	IN	VU	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36254		G36254	9/2/2008		
H41441	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.44	VA09116242		VA09116242R013		9/13/2009		
H41563	LP Hazelton	CL-PR Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.7	VA09116242		VA09116242R020		9/13/2009		
G33049	LP Hazelton	IARG Lower Panel	ORE	IN	ANDS	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G33049		G33049	9/2/2008		
H42195	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.12	VA09124617		VA09124617R086		9/14/2009		
G32137	LP Hazelton	QSP Lower Panel	ORE	IN	VAXT	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G32137		G32137	9/2/2008		
H41427	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.12	VA09116242		VA09116242R006		9/13/2009		
X12417	LP Hazelton	QSP Lower Panel	ORE	IN	VATF	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X12417		X12417	9/2/2008		
G33773	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	SARG	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33773		G33773	9/2/2008		
X13902	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	CL2	Ore	Rock	Pulp sample	Cantest	0.2613	Mar-10		X13902		2/18/2010		
X05383	LP Hazelton	QSP Lower Panel	ORE	IN	VU	UDEF	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X05383		X05383	9/2/2008		
H41559	LP Hazelton	CL-PR Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.48	VA09116242		VA09116242R018		9/13/2009		
X17281	LP Hazelton	QSP Lower Panel	WASTE	IN	VU	QSP	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X17281	VA09013339R032	X17281	2/6/2009		
H42240	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	IARG	Waste	Rock	Drillcore	ALS Chemex	2.44	VA09124617		VA09124617R097		9/14/2009		
X12432	LP Hazelton	QSP Lower Panel	ORE	IN	VATF	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X12432		X12432	9/2/2008		
H41699	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex	1.78	VA09116243	FLB duplicate	VA09116243R034		9/13/2009		
G35113	LP Hazelton	QSP Lower Panel	ORE	IN	VALT	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G35113		G35113	9/2/2008		
X14288	LP Hazelton	Uncategorized Rocks Lower Panel	MARGINAL	IN	VU	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X14288		X14288	9/2/2008		
H42251	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Waste	Rock	Drillcore	ALS Chemex	2.12	VA09124617				9/14/2009		
H41429	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	1.94	VA09116242		VA09116242R007		9/13/2009		
G34623	LP Hazelton	CL-PR Lower Panel	ORE	IN	QTVN	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G34623		G34623	9/2/2008		
G32259	LP Hazelton	IARG Lower Panel	WASTE	IN	VATF	IARG	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G32259		G32259	9/2/2008		
H43864	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Coarse WET	Cantest	0.252	40210		M-09 103 215-217		1/15/2010		
X06946	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	CL	Ore	Rock	Pulp sample	Cantest	0.2576	40238		X06946		2/18/2010	mean of duplicates	
G33259	LP Hazelton	QSP Lower Panel	WASTE	IN	VATF	IARG	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33260		G33260	9/2/2008		
H42221	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.42	VA09116245				9/14/2009		
H43878	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse WET	Cantest	0.313	40210		M-09 103 238-240		1/15/2010		
H41669	LP Hazelton	Uncategorized Rocks Lower Panel	ORE	IN	VU	SIL	Waste	Rock	Drillcore	ALS Chemex	2.2	VA09116243				9/13/2009		
G36775	LP Hazelton	QSP Lower Panel	WASTE	IN	VUTF	IARG	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G36775		G36775	9/2/2008		
H41702	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex	1.96	VA09116243		VA09116243R035		9/13/2009		
H43885	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse DRY	Cantest	0.3	40210		M-09 103 250-252		1/15/2010		
X05177	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL	Ore	Rock	Pulp sample	Cantest	0.2599	Mar-10		X05177/79		2/18/2010		
H40630	LP Hazelton	CL-PR Lower Panel	MARGINAL	IN	IVOL	PR	Ore	Rock	Drillcore	ALS Chemex		VA09097259		VA09097259R009		9/4/2009		
H43882	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse WET	Cantest	0.321	40210		M-09 103 246-248		1/15/2010		
X13930	LP Hazelton	HIGHQTZ Lower Panel	ORE	IN	VU	CL	Ore	Rock	Pulp sample	Cantest	0.2799	40238		X13930		2/18/2010		
G32496	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	OUT	VAXT	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G32496		G32496	9/2/2008		
H42193	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.48	VA09124617		VA09124617R085		9/14/2009		
H43868	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore DRY	Cantest	0.316	40210		M-09 103 220-222		1/15/2010		
H43890	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore DRY	Cantest	0.308	40210		M-09 103 258-260		1/15/2010		

Note: values in blue are calculated

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highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
X17284	LP Hazelton	QSP Lower Panel	ORE	IN	VU	QSP	Waste	Pulp	Composite	ALS Chemex		VA09027962		VA09027962R010		2/5/2009		
H42242	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Waste	Rock	Drillcore	ALS Chemex	2.26	VA09124617		VA09124617R098		9/14/2009		
X11464	LP Hazelton	CL-PR Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	0.4	VA09013337	X11464	VA09013337R016	X11464	2/6/2009		
H43891	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.28	VA09116240				9/12/2009		
X06485	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	CL2	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X06485	VA09013337R031	X06485	2/6/2009		
X12614	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	0.3	VA09016997	X12614		X12614	2/13/2009		
H42247	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Waste	Rock	Drillcore	ALS Chemex	2.14	VA09124617		VA09124617R100		9/14/2009		
G34338	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	QSP	Ore	Rock	Pulp sample	Cantest	0.2598	40238		G34338/39		2/18/2010		
H41443	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.34	VA09116242				9/13/2009		
X12393	LP Hazelton	QSP Lower Panel	ORE	IN	VATF	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X12393		X12393	9/2/2008		
H42186	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.34	VA09124617		VA09124617R082		9/14/2009		
H41679	LP Hazelton	QSP Lower Panel	WASTE	IN	VU	IARG	Waste	Rock	Drillcore	ALS Chemex	2.14	VA09116243	FLB duplicate	VA09116243R025		9/13/2009		
H41681	LP Hazelton	QSP Lower Panel	WASTE	IN	VU	IARG	Waste	Rock	Drillcore	ALS Chemex	2.14	VA09116243	FLB duplicate	VA09116243R026		9/13/2009		
G32325	LP Hazelton	QSP Lower Panel	WASTE	IN	VATF	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G32325		G32325	9/2/2008		
G32992	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL	Ore	Rock	Pulp sample	Cantest	0.2655	40238		G32992		2/18/2010		
G35021	LP Hazelton	IARG Lower Panel	ORE	IN	VALT	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G35021		G35021	9/2/2008		
H43525	LP Hazelton	QSP Lower Panel	ORE	IN	VU	QSP	Ore	Rock	Drillcore	ALS Chemex		VA09097259		VA09097259R001		9/4/2009		
G37907	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G37907		G37907	9/2/2008		
X16510	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	QSP	Waste	Rock	Drillcore	ALS Chemex		VA09027962		VA09027962R005		2/6/2009		
X05538	LP Hazelton	IARG Lower Panel	ORE	IN	SARG	HFLS	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X05538		X05538	9/2/2008		
G35749	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL2	Ore	Rock	Pulp sample	Cantest	0.2599	40238		G35749/50		2/18/2010		
G32474	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	OUT	VAXT	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G32474		G32474	9/2/2008		
H42238	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	IARG	Waste	Rock	Drillcore	ALS Chemex	2.18	VA09116245				9/14/2009		
G32563	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	OUT	VAXT	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G32563		G32563	9/2/2008		
H42197	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.38	VA09124617		VA09124617R087		9/14/2009		
G32537	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	OUT	VAXT	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G32537		G32537	9/2/2008		
X05559	LP Hazelton	IARG Lower Panel	ORE	IN	SARG	HFLS	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X05559		X05559	9/2/2008		
H41683	LP Hazelton	QSP Lower Panel	WASTE	IN	VU	IARG	Waste	Rock	Drillcore	ALS Chemex	2.14	VA09116243	FLB duplicate	VA09116243R027		9/13/2009		
H41745	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Pulp sample	Cantest	0.26	40238		H41745		2/18/2010		
X10851	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	CL	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X10851	VA09013337R001	X10851	2/6/2009		
H43876	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore DRY	Cantest	0.32	40210		M-09 103 234-236		1/15/2010		
X11052	LP Hazelton	CL-PR Lower Panel	ORE	IN	VUTF	CL	Ore	Rock	Drillcore	ALS Chemex	0.4	VA09013337	X11052	VA09013337R010	X11052	2/6/2009		
G36921	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36921		G36921	9/2/2008		
G32413	LP Hazelton	Uncategorized Rocks Lower Panel	ORE	IN	SARG	SIH	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G32413		G32413	9/2/2008		
H41731	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore DRY	Cantest	0.592	40210		M-09-108 234-236		1/15/2010		
X17277	LP Hazelton	QSP Lower Panel	WASTE	IN	VU	QSP	Waste	Pulp	Composite	ALS Chemex		VA09027962		VA09027962R009		2/5/2009		
H41687	LP Hazelton	IARG Lower Panel	WASTE	IN	FLTZ	IARG	Waste	Rock	Drillcore	ALS Chemex	2	VA09116243	FLB duplicate	VA09116243R029		9/13/2009		
G34982	LP Hazelton	IARG Lower Panel	ORE	IN	VALT	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G34982		G34982	9/2/2008		
H41756	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Pulp sample	Cantest	0.2808	40238		H41756		2/18/2010		
X05514	LP Hazelton	IARG Lower Panel	ORE	IN	SARG	HFLS	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X05514		X05514	9/2/2008		
H42182	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.16	VA09124617		VA09124617R080		9/14/2009		
X16527	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	IARG	Waste	Rock	Drillcore	ALS Chemex		VA09027962		VA09027962R007		2/6/2009		
G33283	LP Hazelton	QSP Lower Panel	WASTE	IN	VATF	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33283		G33283	9/2/2008		
H44275	LP Hazelton	QSP Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Pulp sample	Cantest	0.2847	40238		H44275		2/18/2010		
G35686	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL2	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G35686		G35686	9/2/2008		
H42176	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.4	VA09124617		VA09124617R077		9/14/2009		
H42203	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	1.5	VA09124617		VA09124617R089		9/14/2009		
H43851	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse DRY	Cantest	0.298	40210		M-09 103 193-195 CL DUP		1/16/2010		
H42165	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.2	VA09124617		VA09124617R073		9/14/2009		
H41675	LP Hazelton	QSP Lower Panel	WASTE	IN	VU	IARG	Waste	Rock	Drillcore	ALS Chemex	2.18	VA09116243		VA09116243R023		9/13/2009		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
H42215	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.54	VA09124617		VA09124617R094		9/14/2009		
H42167	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.12	VA09124617		VA09124617R074		9/14/2009		
H41691	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex	2.3	VA09116243	FLB duplicate			9/13/2009		
G32428	LP Hazelton	Uncategorized Rocks Lower Panel	ORE	IN	VAXT	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G32428		G32428	9/2/2008		
H43849	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse DRY	Cantest	0.273	40210		M-09 103 189-191 CL		1/15/2010		
X17992	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	0.22	VA09016997	X17992		X17992	2/13/2009		
G35667	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL2	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G35667		G35667	9/2/2008		
H43886	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	1.88	VA09116240				9/12/2009		
X19627	LP Hazelton	CL-PR Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Pulp sample	Cantest	0.2599	40238		X19627/28		2/18/2010		
X11073	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	CL	Ore	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X11073	VA09013337R011	X11073	2/6/2009		
H43913	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse DRY	Cantest	0.329	Feb-10		M-09 103 300-302		1/15/2010		
G32353	LP Hazelton	CL-PR Lower Panel	ORE	IN	ANDS	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G32353		G32353	9/2/2008		
H43893	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.08	VA09116240				9/12/2009		
X14768	LP Hazelton	CL-PR Lower Panel	MARGINAL	IN	VULT	CL2	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X14768	VA09013337R065	X14768	2/6/2009		
H42190	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.26	VA09124617		VA09124617R084		9/14/2009		
X10310	LP Hazelton	CL-PR Lower Panel	ORE	IN	VUTF	CL2	Ore	Rock	Pulp sample	Cantest	0.2598	Mar-10		X10310/11		2/18/2010		
G36831	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	VATF	IARG	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G36831		G36831	9/2/2008		
H43844	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse DRY	Cantest	0.247	40210		M-09 103 179-181 CL		1/15/2010		
G32282	LP Hazelton	IARG Lower Panel	WASTE	IN	VATF	IARG	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G32282		G32282	9/2/2008		
H41420	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	1.62	VA09116242		VA09116242R003		9/13/2009		
G36899	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36899		G36899	9/2/2008		
H41075	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	PSBX	SI	Waste	Rock	Drillcore	ALS Chemex		VA09097252				9/4/2009		
X14248	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VU	IARG	Waste	Rock	Drillcore	ALS Chemex		VA08125686	X14248		X14248	9/2/2008		
X05493	LP Hazelton	IARG Lower Panel	ORE	IN	VU	HFLS	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X05493		X05493	9/2/2008		
X06348	LP Hazelton	QSP Lower Panel	ORE	IN	VULT	QSP	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X06348	VA09013337R025	X06348	2/6/2009		
H43532	LP Hazelton	QSP Lower Panel	ORE	IN	VU	QSP	Ore	Rock	Drillcore	ALS Chemex		VA09097259		VA09097259R004		9/4/2009		
G32087	LP Hazelton	QSP Lower Panel	ORE	IN	VATF	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G32087		G32087	9/2/2008		
H41837	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	SI	Waste	Rock	Drillcore	ALS Chemex		VA09116244				9/14/2009		
H42219	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	1.94	VA09116245				9/14/2009		
H41671	LP Hazelton	Uncategorized Rocks Lower Panel	ORE	IN	VU	SIL	Waste	Rock	Drillcore	ALS Chemex	1.82	VA09116243		VA09116243R021		9/13/2009		
X14539	LP Hazelton	CL-PR Lower Panel	ORE	IN	VU	CL2	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X14539	VA09013337R055	X14539	2/6/2009		
G34616	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G34616		G34616	9/2/2008		
X12194	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL2	Ore	Rock	Pulp sample	Cantest	0.2288	Mar-10		X12194		2/18/2010		
H42234	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Waste	Rock	Drillcore	ALS Chemex	2.12	VA09116245				9/14/2009		
H42236	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Waste	Rock	Drillcore	ALS Chemex	2.24	VA09116245				9/14/2009		
H42223	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.06	VA09124617		VA09124617R095		9/14/2009		
H43870	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VU	CL	Ore	Rock	Coarse WET	Cantest	0.301	40210		M-09 103 224-226		1/15/2010		
H41677	LP Hazelton	QSP Lower Panel	WASTE	IN	VU	IARG	Waste	Rock	Drillcore	ALS Chemex	1.02	VA09116243				9/13/2009		
H42199	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.46	VA09124617		VA09124617R088		9/14/2009		
G35099	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	KP	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G35099		G35099	9/2/2008		
H42178	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	1.74	VA09124617		VA09124617R078		9/14/2009		
H43847	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse DRY	Cantest	0.314	Feb-10		M-09 103 185-187 CL		1/15/2010		
H41697	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex	2.12	VA09116243	FLB duplicate	VA09116243R033		9/13/2009		
H41704	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex	2.42	VA09116243		VA09116243R036		9/13/2009		
H42174	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.02	VA09124617		VA09124617R076		9/14/2009		
G33025	LP Hazelton	IARG Lower Panel	ORE	IN	ANDS	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G33025		G33025	9/2/2008		
H43914	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.94	VA09116240				9/12/2009		
H43779	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse WET	Cantest	0.142	40210		M-09 103 65-67		1/15/2010		
X14681	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	CL2	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X14681	VA09013337R061	X14681	2/6/2009		
G35302	LP Hazelton	Uncategorized Rocks Lower Panel	ORE	IN	VATF	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G35302		G35302	9/2/2008		

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
G35490	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	OUT	SARG	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G35490		G35490	9/2/2008		
H43854	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse DRY	Cantest	0.29	40210		M-09 103 199-201 CL		1/15/2010		
H41418	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	CL	Waste	Rock	Drillcore	ALS Chemex	1.86	VA09116242		VA09116242R002		9/13/2009		
X12487	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X12487		X12487	9/2/2008		
H42258	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.7	VA09116245				9/14/2009		
G32302	LP Hazelton	IARG Lower Panel	WASTE	IN	VATF	IARG	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G32302		G32302	9/2/2008		
X14608	LP Hazelton	QSP Lower Panel	ORE	IN	VULT	CL2	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X14608	VA09013337R058	X14608	2/6/2009		
X06923	LP Hazelton	QSP Lower Panel	WASTE	IN	VUTF	IARG	Waste	Rock	Pulp sample	Cantest	0.2571	40238		X06923/24		2/18/2010		
H43540	LP Hazelton	QSP Lower Panel	ORE	IN	VU	QSP	Ore	Rock	Pulp sample	Cantest	0.2668	40238		H43540/41		2/18/2010		
H41833	LP Hazelton	QSP Lower Panel	WASTE	IN	VU	SI	Waste	Rock	Drillcore	ALS Chemex		VA09116244		VA09116244R028		9/14/2009		
X11398	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X11398	VA09013337R013	X11398	2/6/2009		
G37625	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	SEDS	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G37625		G37625	9/2/2008		
X16518	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	IARG	Waste	Rock	Drillcore	ALS Chemex		VA09027962		VA09027962R006		2/6/2009		
H41694	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex	1.9	VA09116243	FLB duplicate	VA09116243R032		9/13/2009		
G35001	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VALT	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G35001		G35001	9/2/2008		
G33237	LP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	IVOL	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33237		G33237	9/2/2008		
H42188	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.16	VA09124617		VA09124617R083		9/14/2009		
X06531	LP Hazelton	QSP Lower Panel	WASTE	IN	VUTF	IARG	Waste	Rock	Pulp sample	Cantest	0.2644	Mar-10		X06531		2/18/2010		
G35642	LP Hazelton	QSP Lower Panel	ORE	IN	VALT	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G35642		G35642	9/2/2008		
G32371	LP Hazelton	CL-PR Lower Panel	ORE	IN	ANDS	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G32371		G32371	9/2/2008		
H42232	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.42	VA09116245				9/14/2009		
H43884	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.96	VA09116240				9/12/2009		
X12493	LP Hazelton	CL-PR Lower Panel	ORE	IN	QTVN	UDEF	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X12493		X12493	9/2/2008		
H41446	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.76	VA09116242		VA09116242R015		9/13/2009		
H42213	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.08	VA09124617		VA09124617R093		9/14/2009		
X06326	LP Hazelton	QSP Lower Panel	ORE	IN	VULT	CL2	Ore	Rock	Drillcore	ALS Chemex	0.4	VA09013337	X06326	VA09013337R024	X06326	2/6/2009		
H43861	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.56	VA09116240				9/12/2009		
H42184	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	1.84	VA09124617		VA09124617R081		9/14/2009		
H41827	LP Hazelton	QSP Lower Panel	MARGINAL	IN	VU	SI	Waste	Rock	Drillcore	ALS Chemex		VA09116244		VA09116244R025		9/14/2009		
H43888	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.5	VA09116240				9/12/2009		
X17292	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	QSP	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X17292	VA09013339R033	X17292	2/6/2009		
H43906	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex	2.02	VA09116240	FLB duplicate			9/12/2009		
X14228	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	IARG	Waste	Rock	Drillcore	ALS Chemex		VA08125686	X14228		X14228	9/2/2008		
H44123	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	CL	Ore	Rock	Drillcore	ALS Chemex	2.02	VA09116241				9/12/2009		
H42172	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.2	VA09124617		VA09124617R075		9/14/2009		
X14747	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	CL2	Ore	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X14747	VA09013337R064	X14747	2/6/2009		
X06302	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	CL2	Ore	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X06302	VA09013337R023	X06302	2/6/2009		
H41831	LP Hazelton	QSP Lower Panel	ORE	IN	VU	SI	Waste	Rock	Drillcore	ALS Chemex		VA09116244		VA09116244R027		9/14/2009		
G32453	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	VAXT	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G32453		G32453	9/2/2008		
X16501	LP Hazelton	QSP Lower Panel	WASTE	IN	VU	IARG	Waste	Rock	Drillcore	ALS Chemex		VA09027962		VA09027962R004		2/6/2009		
H42180	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.52	VA09124617		VA09124617R079		9/14/2009		
H44093	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex	1.98	VA09116241				9/12/2009		
E217112	LP Hazelton	IARG Lower Panel	ORE	IN	VATF	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125685	E217112		E217112	9/2/2008		
H42227	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.54	VA09116245				9/14/2009		
G35770	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL2	Ore	Rock	Pulp sample	Cantest	0.2062	40238		G35770/71		2/18/2010		
H41666	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	VU	SIL	Waste	Rock	Drillcore	ALS Chemex	1.64	VA09116243		VA09116243R019		9/13/2009		
H43858	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse DRY	Cantest	0.248	40210		M-09 103 207-209 CL		1/15/2010		
H43527	LP Hazelton	QSP Lower Panel	ORE	IN	VU	QSP	Ore	Rock	Drillcore	ALS Chemex		VA09097259		VA09097259R005		9/4/2009		
H44104	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	CL	Ore	Rock	Drillcore	ALS Chemex	2.3	VA09116241				9/12/2009		
H42255	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.06	VA09124617		VA09124617R104		9/14/2009		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
H41048	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	PSBX	SI	Waste	Rock	Drillcore	ALS Chemex		VA09097250		VA09097250R005		9/4/2009		
H43529	LP Hazelton	QSP Lower Panel	ORE	IN	VU	QSP	Ore	Rock	Drillcore	ALS Chemex		VA09097259		VA09097259R002		9/4/2009		
H43900	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore DRY	Cantest	0.291	Feb-10		M-09 103 278-280		1/15/2010		
H41043	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	PSBX	SI	Waste	Rock	Drillcore	ALS Chemex		VA09097250		VA09097250R003		9/4/2009		
H44109	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	CL	Ore	Rock	Drillcore	ALS Chemex	2.06	VA09116241				9/12/2009		
H42260	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.08	VA09116245				9/14/2009		
H42262	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.36	VA09116245				9/14/2009		
H43780	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	0.16	VA09116240				9/12/2009		
H43776	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	0.42	VA09116240				9/12/2009		
H42206	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.48	VA09124617		VA09124617R090		9/14/2009		
H44091	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex	1.86	VA09116241				9/12/2009		
G33372	LP Hazelton	IARG Lower Panel	WASTE	IN	VATF	IARG	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33372		G33372	9/2/2008		
X09587	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL	Ore	Rock	Pulp sample	Cantest	0.2382	Mar-10		X09587/88		2/18/2010		
X12543	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X12543		X12543	9/2/2008		
X14656	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	CL2	Ore	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X14656	VA09013337R060	X14656	2/6/2009		
X12368	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X12368		X12368	9/2/2008		
H43779	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse DRY	Cantest	0.078	Feb-10		M-09 103 61-63		1/15/2010		
X10897	LP Hazelton	QSP Lower Panel	ORE	IN	VUTF	CL	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X10897	VA09013337R003	X10897	2/6/2009		
G33322	LP Hazelton	IARG Lower Panel	WASTE	IN	VATF	IARG	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33322		G33322	9/2/2008		
G35349	LP Hazelton	Uncategorized Rocks Lower Panel	MARGINAL	IN	PAND	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G35349		G35349	9/2/2008		
H40229	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VU	IARG	Ore	Rock	Pulp sample	Cantest	0.2599	40238		H40229		2/18/2010		
G36484	LP Hazelton	IARG Lower Panel	ORE	IN	VATF	IARG	Ore	Rock	Pulp sample	Cantest	0.2569	40238		G36484/85		2/18/2010		
E192667	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	VATF	CL	Waste	Rock	Drillcore	ALS Chemex		VA08125685	E192667		E192667	9/2/2008		
G36294	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VATF	CL	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G36294		G36294	9/2/2008		
H42253	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	1.88	VA09124617		VA09124617R103		9/14/2009		
H43857	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.04	VA09116240				9/12/2009		
H42225	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.24	VA09124617		VA09124617R096		9/14/2009		
H41414	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VU	CL	Waste	Rock	Drillcore	ALS Chemex	1.84	VA09116242		VA09116242R001		9/13/2009		
G33813	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	SCHT	QSP	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33813		G33813	9/2/2008		
H41069	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	PSBX	SI	Waste	Rock	Drillcore	ALS Chemex		VA09097252		VA09097252R001		9/4/2009		
X12452	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X12452		X12452	9/2/2008		
X06183	LP Hazelton	CL-PR Lower Panel	ORE	IN	VUTF	CL	Ore	Rock	Pulp sample	Cantest	0.2571	40238		X06182/83		2/18/2010		
X11420	LP Hazelton	CL-PR Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	0.4	VA09013337	X11420	VA09013337R014	X11420	2/6/2009		
H41040	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	PSBX	SI	Waste	Rock	Drillcore	ALS Chemex		VA09097250				9/4/2009		
G32060	LP Hazelton	CL-PR Lower Panel	ORE	IN	VAXT	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G32060		G32060	9/2/2008		
X14398	LP Hazelton	CL-PR Lower Panel	ORE	OUT	VATF	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X14398		X14398	9/2/2008		
H43911	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.66	VA09116240				9/12/2009		
X14583	LP Hazelton	QSP Lower Panel	ORE	IN	VULT	IARG	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X14583	VA09013337R057	X14583	2/6/2009		
H43904	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.32	VA09116240				9/12/2009		
X06170	LP Hazelton	CL-PR Lower Panel	ORE	IN	VUTF	IARG	Ore	Rock	Pulp sample	Cantest	0.2573	40238		X06170/72		2/18/2010		
H44106	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	CL	Ore	Rock	Drillcore	ALS Chemex	2.08	VA09116241				9/12/2009		
X06372	LP Hazelton	QSP Lower Panel	ORE	IN	VULT	CL2	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X06372	VA09013337R026	X06372	2/6/2009		
X15026	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	CL2	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X15026	VA09013337R033	X15026	2/6/2009		
H40217	LP Hazelton	QSP Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Pulp sample	Cantest	0.2632	40238		H40217/18		2/18/2010		
H43534	LP Hazelton	QSP Lower Panel	ORE	IN	VU	QSP	Ore	Rock	Drillcore	ALS Chemex		VA09097259		VA09097259R003		9/4/2009		
X11442	LP Hazelton	CL-PR Lower Panel	ORE	IN	VU	CL2	Ore	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X11442	VA09013337R015	X11442	2/6/2009		
X14308	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL2	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X14308		X14308	9/2/2008		
H43848	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.6	VA09116240				9/12/2009		
G33828	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	OUT	IVOL	QSP	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33828		G33828	9/2/2008		
G35041	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G35041		G35041	9/2/2008		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
G32407	LP Hazelton	CL-PR Lower Panel	WASTE	OUT	ANDS	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G32407		G32407	9/2/2008		
G36967	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36967		G36967	9/2/2008		
G35387	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	OUT	SARG	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G35387		G35387	9/2/2008		
H41431	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	1.46	VA09116242				9/13/2009		
H43895	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse DRY	Cantest	0.27	Feb-10		M-09 103 268-270		1/15/2010		
H43903	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse DRY	Cantest	0.316	40210		M-09 103 282-284		1/15/2010		
H42217	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.5	VA09116245				9/14/2009		
G32516	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	OUT	VATF	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G32516		G32516	9/2/2008		
H42208	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.12	VA09124617		VA09124617R091		9/14/2009		
H43892	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore DRY	Cantest	0.26	Feb-10		M-09 103 262-264		1/15/2010		
G32390	LP Hazelton	CL-PR Lower Panel	MARGINAL	OUT	ANDS	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G32390		G32390	9/2/2008		
H43869	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	0.76	VA09116240				9/12/2009		
H43910	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.08	VA09116240				9/12/2009		
X10300	LP Hazelton	CL-PR Lower Panel	ORE	IN	VUTF	CL2	Ore	Rock	Pulp sample	Cantest	0.2521	Mar-10		X10300		2/18/2010		
X14372	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL2	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X14372		X14372	9/2/2008		
H44112	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VUTF	CL	Ore	Rock	Drillcore	ALS Chemex	2.04	VA09116241				9/12/2009		
H43929	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex	2.22	VA09116240				9/12/2009		
X09201	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL2	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X09201		X09201	9/2/2008		
G33307	LP Hazelton	QSP Lower Panel	WASTE	IN	VATF	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33308		G33308	9/2/2008		
G37985	LP Hazelton	IARG Lower Panel	ORE	IN	VATF	QSP	Ore	Rock	Pulp sample	Cantest	0.2568	Mar-10		G37985/86		2/18/2010		
X11805	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	CL	Ore	Rock	Pulp sample	Cantest	0.2404	40238		X11807		2/18/2010		
H43846	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.66	VA09116240				9/12/2009		
X16693	LP Hazelton	CL-PR Lower Panel	ORE	IN	ANDS	CL2	Ore	Rock	Pulp sample	Cantest	0.2598	40238		X16693/94		2/18/2010		
H43854	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.54	VA09116240				9/12/2009		
H43856	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse DRY	Cantest	0.252	40210		M-09 103 203-205 C		1/15/2010		
H40631	LP Hazelton	CL-PR Lower Panel	WASTE	IN	IVOL	PR	Ore	Rock	Drillcore	ALS Chemex		VA09097259		VA09097259R008		9/4/2009		
H41017	LP Hazelton	SW Hazelton Volcanics Upper Panel	WASTE	IN	PSBX	SIL	Waste	Rock	Pulp sample	Cantest	0.2599	Mar-10		H41017/19		2/18/2010		
G36315	LP Hazelton	IARG Lower Panel	WASTE	IN	VATF	CL	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G36315		G36315	9/2/2008		
X06662	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	CL	Ore	Rock	Pulp sample	Cantest	0.2281	40238		X06662		2/18/2010		
G32335	LP Hazelton	CL-PR Lower Panel	ORE	IN	ANDS	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G32335		G32335	9/2/2008		
G34513	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL	Ore	Rock	Pulp sample	Cantest	0.2572	40238		G34514/15		2/18/2010		
G37645	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	SEDS	SIH	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G37645		G37645	9/2/2008		
H41699	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VU	IARG	Ore	Rock	Drillcore WET	Cantest	0.52	40210		M-09-108 174-176		1/15/2010		
G36278	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36278		G36278	9/2/2008		
H41448	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	1.86	VA09116242		VA09116242R016		9/13/2009		
G34662	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G34662		G34662	9/2/2008		
E192683	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	VUTF	SIH	Waste	Rock	Drillcore	ALS Chemex		VA08125685	E192683		E192683	9/2/2008		
G36991	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G36991		G36991	9/2/2008		
H43778	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	CL	Ore	Rock	Coarse WET	Cantest	0.118	40210		M-09 103 57-59		1/15/2010		
X14560	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	CL2	Ore	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X14560	VA09013337R056	X14560	2/6/2009		
H41036	LP Hazelton	Uncategorized Rocks Lower Panel	MARGINAL	IN	VAXT	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09097250		VA09097250R004		9/4/2009		
X10872	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	CL	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X10872	VA09013337R002	X10872	2/6/2009		
H43877	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.24	VA09116240				9/12/2009		
G37583	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	SEDS	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G37583		G37583	9/2/2008		
X14327	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X14327		X14327	9/2/2008		
H41691	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Drillcore DRY	Cantest	0.415	Feb-10		M-09-108 162-164		1/15/2010		
H43880	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.36	VA09116240				9/12/2009		
H43881	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.6	VA09116240				9/12/2009		
H44127	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	CL	Ore	Rock	Drillcore	ALS Chemex	2.28	VA09116241				9/12/2009		
X14702	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	CL2	Ore	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X14702	VA09013337R062	X14702	2/6/2009		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
G35450	LP Hazelton	Uncategorized Rocks Lower Panel	ORE	OUT	SARG	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G35450		G35450	9/2/2008		
G36474	LP Hazelton	IARG Lower Panel	ORE	IN	VATF	IARG	Ore	Rock	Pulp sample	Cantest	0.2572	Mar-10		G36474/75		2/18/2010		
G36085	LP Hazelton	QSP Lower Panel	ORE	IN	IVOL	IARG	Ore	Rock	Pulp sample	Cantest	0.2584	40238		G36085/86		2/18/2010		
H41077	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	PSBX	SI	Waste	Rock	Drillcore	ALS Chemex		VA09097252		VA09097252R004		9/4/2009		
H43898	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse WET	Cantest	0.255	40210		M-09 103 274-276		1/15/2010		
H43899	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.2	VA09116240				9/12/2009		
X17305	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X17305	VA09013339R034	X17305	2/6/2009		
H44125	LP Hazelton	IARG Lower Panel	ORE	IN	VUTF	CL	Ore	Rock	Drillcore	ALS Chemex	1.68	VA09116241				9/12/2009		
X14418	LP Hazelton	CL-PR Lower Panel	ORE	OUT	VATF	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X14419		X14419	9/2/2008		
X05422	LP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	DDRT	UDEF	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X05422		X05422	9/2/2008		
H41071	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	PSBX	SI	Waste	Rock	Drillcore	ALS Chemex		VA09097252		VA09097252R002		9/4/2009		
X15681	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	CL2	Ore	Rock	Pulp sample	Cantest	0.228	40238		X15681/82/84		2/18/2010		
H41711	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore DRY	Cantest	0.66	Feb-10		M-09-108 198-200		1/15/2010		
X19614	LP Hazelton	CL-PR Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Pulp sample	Cantest	2.2573	40238		X19614/15		2/18/2010		
H43901	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.08	VA09116240				9/12/2009		
H41437	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.24	VA09116242		VA09116242R011		13-Sep-09		
H42099	LP Hazelton	CL-PR Lower Panel	WASTE	IN	VUTF	CL	Ore	Rock	Pulp sample	Cantest	0.3533	1-Mar-10		H42099		18-Feb-10		
H43852	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.48	VA09116240				12-Sep-09		
H43863	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex	2.44	VA09116240				12-Sep-09		
X15439	LP Hazelton	CL-PR Lower Panel	ORE	IN	VUTF	CL	Ore	Rock	Pulp sample	Cantest	0.231	1-Mar-10		X15439		18-Feb-10		
H42229	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	IARG	Ore	Rock	Drillcore	ALS Chemex	2.38	VA09116245				14-Sep-09		
H41079	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	SARG	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09097252				4-Sep-09		
H41689	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	IARG	Ore	Rock	Drillcore DRY	Cantest	0.489	1-Feb-10		M-09-108 158-160		15-Jan-10		
E217198	LP Hazelton	CL-PR Lower Panel	ORE	IN	VAXT	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	E217198		E217198	2-Sep-08		
H41689	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex	2.06	VA09116243	FLB duplicate	VA09116243R030		13-Sep-09		
H41045	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	PSBX	SI	Waste	Rock	Drillcore	ALS Chemex		VA09097250		VA09097250R002		4-Sep-09		
H41364	LP Hazelton	IARG Lower Panel	ORE	IN	VU	PR	Ore	Rock	Pulp sample	Cantest	0.2599	1-Mar-10		H41364/65		18-Feb-10		
G33872	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	OUT	IVOL	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33872		G33872	2-Sep-08		
G35359	LP Hazelton	Uncategorized Rocks Lower Panel	ORE	IN	PAND	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G35359		G35359	2-Sep-08		
H43777	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	0.36	VA09116240				12-Sep-09		
H41694	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	IARG	Ore	Rock	Drillcore DRY	Cantest	0.576	1-Feb-10		M-09-108 166-168		15-Jan-10		
H41354	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	PR	Waste	Rock	Pulp sample	Cantest	0.2499	1-Mar-10		H41354		18-Feb-10		
E217134	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	E217134		E217134	2-Sep-08		
H41542	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Pulp sample	Cantest	0.223	1-Mar-10		H41542		18-Feb-10		
X19380	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	IARG	Ore	Rock	Pulp sample	Cantest	0.2693	1-Mar-10		X19380		18-Feb-10		
H42087	LP Hazelton	IARG Lower Panel	WASTE	IN	VUTF	CL	Ore	Rock	Pulp sample	Cantest	0.267	1-Mar-10		H42087/89		18-Feb-10		
H44089	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Drillcore	ALS Chemex	2	VA09116241				12-Sep-09		
H41424	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	1.44	VA09116242		VA09116242R005		13-Sep-09		
E192620	LP Hazelton	IARG Lower Panel	MARGINAL	IN	VALT	CL2	Ore	Rock	Drillcore	ALS Chemex		VA08125685	E192620		E192620	2-Sep-08		
H43778	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	0.18	VA09116240				12-Sep-09		
X12593	LP Hazelton	IARG Lower Panel	ORE	IN	VALT	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X12593		X12593	2-Sep-08		
H41450	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	1.52	VA09116242		VA09116242R017		13-Sep-09		
H41687	LP Hazelton	IARG Lower Panel	WASTE	IN	FLTZ	IARG	Waste	Rock	Drillcore WET	Cantest	0.341	1-Feb-10		M-09-108 154-156		15-Jan-10		
X11797	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Pulp sample	Cantest	0.2264	1-Mar-10		X11799		18-Feb-10		
E192601	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL2	Ore	Rock	Drillcore	ALS Chemex		VA08125685	E192601		E192601	2-Sep-08		
H43775	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	CL	Ore	Rock	Coarse DRY	Cantest	0.15	1-Feb-10		M-09 103 49-51		15-Jan-10		
G34602	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	IARG	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G34602		G34602	2-Sep-08		
E217155	LP Hazelton	CL-PR Lower Panel	ORE	IN	VAXT	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	E217155		E217155	2-Sep-08		
H43897	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.2	VA09116240				12-Sep-09		
G34638	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G34638		G34638	2-Sep-08		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
H43843	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.06	VA09116240				12-Sep-09		
H43850	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.42	VA09116240				12-Sep-09		
H41439	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	1.92	VA09116242		VA09116242R012		13-Sep-09		
H41033	LP Hazelton	Uncategorized Rocks Lower Panel	ORE	IN	VAXT	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09097250		VA09097250R001		4-Sep-09		
H43871	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.22	VA09116240				12-Sep-09		
X09610	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL	Ore	Rock	Pulp sample	Cantest	0.2514	40238		X09610/11		18-Feb-10		
G34490	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	KP	Ore	Rock	Pulp sample	Cantest	0.2572	1-Mar-10		G34490/91		18-Feb-10	mean of duplicates	
H43779	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	0.22	VA09116240				12-Sep-09		
H41039	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	PSBX	SI	Waste	Rock	Drillcore	ALS Chemex		VA09097250		VA09097250R007		4-Sep-09		
E192642	LP Hazelton	IARG Lower Panel	ORE	IN	VALT	CL2	Ore	Rock	Drillcore	ALS Chemex		VA08125685	E192642		E192642	2-Sep-08		
X19391	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL2	Ore	Rock	Pulp sample	Cantest	0.297	1-Mar-10		X19391		18-Feb-10		
9426	LP Hazelton	NM Hazelton Volcanics Upper Panel	WASTE	IN	INPP	SE	Waste	Rock	Drillcore	ALS Chemex		VA08125686	21-Oct-25		21-Oct-25	2-Sep-08		
G37020	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	PR	Ore	Rock	Pulp sample	Cantest	0.2608	40238		G37020/21		18-Feb-10		
H41714	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore WET	Cantest	0.415	1-Feb-10		M-09-108 204-206		15-Jan-10		
G35715	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL2	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G35715		G35715	2-Sep-08		
H43875	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	2.16	VA09116240				12-Sep-09		
G35470	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	OUT	SARG	SIH	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G35470		G35470	2-Sep-08		
H40624	LP Hazelton	CL-PR Lower Panel	ORE	IN	IVOL	PR	Ore	Rock	Drillcore	ALS Chemex		VA09097259		VA09097259R006		4-Sep-09		
X15038	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	KP	Ore	Rock	Pulp sample	Cantest	0.2571	40238		X15038		18-Feb-10		
E192656	LP Hazelton	Uncategorized Rocks Lower Panel	ORE	IN	VALT	CL2	Waste	Rock	Drillcore	ALS Chemex		VA08125685	E192656		E192656	2-Sep-08		
X14347	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X14347		X14347	2-Sep-08		
H43776	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Coarse DRY	Cantest	0.211	1-Feb-10		M-09 103 53-55 CL		15-Jan-10		
G37551	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G37554		G37554	2-Sep-08		
G37010	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G37010		G37010	2-Sep-08		
X09996	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL	Ore	Rock	Pulp sample	Cantest	0.2598	40238		X09996/97		18-Feb-10		
H41705	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Ore	Rock	Drillcore DRY	Cantest	0.628	1-Feb-10		M-09-108 186-188		15-Jan-10		
X05908	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL2	Ore	Rock	Pulp sample	Cantest	0.2016	40238		X05908		18-Feb-10		
G37010	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	PR	Ore	Pulp	Composite	Cantest	0.2568	1-Mar-10		G37010/11		18-Feb-10		
X09254	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL2	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X09254		X09254	2-Sep-08		
H41433	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	1.9	VA09116242		VA09116242R009		13-Sep-09		
H41719	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore WET	Cantest	0.471	1-Feb-10		M-09-108 212-214		15-Jan-10		
X14726	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	CL2	Ore	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X14726	VA09013337R063	X14726	6-Feb-09		
H40627	LP Hazelton	CL-PR Lower Panel	ORE	IN	IVOL	PR	Ore	Rock	Drillcore	ALS Chemex		VA09097259		VA09097259R007		4-Sep-09		
X09311	LP Hazelton	CL-PR Lower Panel	WASTE	IN	DDRT	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X09311		X09311	2-Sep-08		
X16704	LP Hazelton	CL-PR Lower Panel	ORE	IN	ANDS	CL2	Ore	Rock	Pulp sample	Cantest	0.2598	40238		X16704/05		18-Feb-10		
H41681	LP Hazelton	QSP Lower Panel	WASTE	IN	VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.55	40210		M-09-108 142-144		15-Jan-10		
X12513	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X12513		X12513	2-Sep-08		
H41435	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	CL	Ore	Rock	Drillcore	ALS Chemex	1.92	VA09116242		VA09116242R010		13-Sep-09		
H41721	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore WET	Cantest	0.498	40210		M-09-108 216-218		15-Jan-10		
G37573	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G37573		G37573	2-Sep-08		
X15672	LP Hazelton	CL-PR Lower Panel	ORE	IN	VULT	CL2	Ore	Rock	Pulp sample	Cantest	0.2548	1-Mar-10		X15671/72		18-Feb-10		
G37041	LP Hazelton	IARG Lower Panel	ORE	IN	VALT	PR	Ore	Rock	Pulp sample	Cantest	0.2599	1-Mar-10		G37041/43		18-Feb-10		
H41697	LP Hazelton	IARG Lower Panel	WASTE	IN	VU	IARG	Ore	Rock	Drillcore DRY	Cantest	0.521	1-Feb-10		M-09-108 170-172		15-Jan-10		
H41083	LP Hazelton	Uncategorized Rocks Lower Panel	MARGINAL	IN	SARG	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09097252		VA09097252R005		4-Sep-09		
E192579	LP Hazelton	CL-PR Lower Panel	MARGINAL	IN	VATF	CL2	Ore	Rock	Drillcore	ALS Chemex		VA08125685	E192579		E192579	2-Sep-08		
G35331	LP Hazelton	Uncategorized Rocks Lower Panel	ORE	IN	PAND	CL2	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G35331		G35331	2-Sep-08		
G23392	LP Hazelton	CL-PR Lower Panel	ORE	IN	VAXT	PR	Ore	Rock	Pulp sample	Cantest	0.3002	1-Mar-10		G23392		18-Feb-10	mean of duplicates	
X09180	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL2	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X09180		X09180	2-Sep-08		
H44042	LP Hazelton	HIGHQTZ Lower Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	2.16	VA09116241				12-Sep-09		
X12204	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL2	Ore	Rock	Pulp sample	Cantest	0.2572	40238		X12204/05		18-Feb-10		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
E192502	LP Hazelton	CL-PR Lower Panel	MARGINAL	IN	VATF	CL2	Ore	Rock	Pulp sample	Cantest	0.2602	1-Mar-10		E192502/504		18-Feb-10		
X05897	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL2	Ore	Rock	Pulp sample	Cantest	0.2356	40238		X05897		18-Feb-10		
H41081	LP Hazelton	Uncategorized Rocks Lower Panel	ORE	IN	SARG	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09097252		VA09097252R006		4-Sep-09		
H41683	LP Hazelton	QSP Lower Panel	WASTE	IN	VU	IARG	Waste	Rock	Drillcore DRY	Cantest	0.56	1-Feb-10		M-09-108 146-148		15-Jan-10		
X05681	LP Hazelton	CL-PR Lower Panel	MARGINAL	IN	VATF	CL2	Ore	Rock	Pulp sample	Cantest	0.2597	40238		X05681/82		18-Feb-10		
X09224	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL2	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X09224		X09224	2-Sep-08		
X12563	LP Hazelton	CL-PR Lower Panel	MARGINAL	IN	VATF	CL	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X12563		X12563	2-Sep-08		
H41685	LP Hazelton	IARG Lower Panel	ORE	IN	VU	IARG	Waste	Rock	Drillcore WET	Cantest	0.508	1-Feb-10		M-09-108 150-152		15-Jan-10		
G35312	LP Hazelton	Uncategorized Rocks Lower Panel	ORE	IN	VATF	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G35312		G35312	2-Sep-08		
X09282	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL2	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X09282		X09282	2-Sep-08		
H41717	LP Hazelton	IARG Lower Panel	ORE	IN	VU	CL	Ore	Rock	Drillcore WET	Cantest	0.522	40210		M-09-108 208-210		15-Jan-10		
G35426	LP Hazelton	Uncategorized Rocks Lower Panel	MARGINAL	OUT	SARG	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G35426		G35426	2-Sep-08		
H41094	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	IN	SARG	SIH	Waste	Rock	Pulp sample	Cantest	0.1893	40238		H41094		18-Feb-10		
E192490	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL2	Ore	Rock	Pulp sample	Cantest	0.2504	40238		E192490/91		18-Feb-10		
X05690	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL2	Ore	Rock	Pulp sample	Cantest	0.2799	1-Mar-10		X05690/91/92		18-Feb-10		
G35377	LP Hazelton	Uncategorized Rocks Lower Panel	WASTE	OUT	PAND	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G35377		G35377	2-Sep-08		
X09983	LP Hazelton	CL-PR Lower Panel	ORE	IN	VATF	CL	Ore	Rock	Pulp sample	Cantest	0.2618	1-Mar-10		X09983/84		18-Feb-10		
G22294	LP Hazelton	CL-PR Lower Panel	ORE	IN	IVOL	PR	Ore	Rock	Pulp sample	Cantest	0.2857	40238		G22295		18-Feb-10		
X09301	LP Hazelton	CL-PR Lower Panel	ORE	IN	VALT	CL2	Ore	Rock	Drillcore	ALS Chemex		VA08125686	X09301		X09301	2-Sep-08		
G37569	LP Hazelton	CL-PR Lower Panel	WASTE	IN	DDRT	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G37569		G37569	2-Sep-08		
H41679	LP Hazelton	QSP Lower Panel	WASTE	IN	VU	IARG	Waste	Rock	Drillcore DRY	Cantest	0.429	1-Feb-10		M-09-108 138-140		15-Jan-10		
X16090	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	SI	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16090	VA09013337R034	X16090	5-Feb-09		
67907	Monzonite	NM Monzonite Upper Panel	MARGINAL	IN	GRAN	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	1-Dec-85		1-Dec-85	2-Sep-08		
X16106	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	SI	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16106	VA09013337R035	X16106	5-Feb-09		
H40514	Monzonite	NM Monzonite Upper Panel	WASTE	IN	VU	MTH	Waste	Rock	Drillcore	ALS Chemex	1.98	VA09097256		VA09097256R005		4-Sep-09		
X16124	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	SI	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16124	VA09013337R036	X16124	5-Feb-09		
H40509	Monzonite	NM Monzonite Upper Panel	ORE	IN	VU	MTH	Waste	Rock	Drillcore	ALS Chemex	2.28	VA09097256		VA09097256R001		4-Sep-09		
H40505	Monzonite	NM Monzonite Upper Panel	ORE	IN	VU	MTH	Waste	Rock	Drillcore	ALS Chemex	1.42	VA09097256		VA09097256R003		4-Sep-09		
H40503	Monzonite	NM Monzonite Upper Panel	WASTE	IN	VU	MTH	Waste	Rock	Drillcore	ALS Chemex	1.78	VA09097256		VA09097256R006		4-Sep-09		
X16807	Monzonite	NM Hazelton Volcanics Upper Panel	WASTE	IN	ANDS	SIH	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16807	VA09013337R072	X16807	6-Feb-09		
67993	Monzonite	NM Monzonite Upper Panel	WASTE	IN	GRAN	KP	Waste	Rock	Drillcore	ALS Chemex		VA08125686	67993		67993	2-Sep-08		
X16946	Monzonite	NM Hazelton Volcanics Upper Panel	ORE	OUT	ANDS	MTH	Waste	Rock	Drillcore	ALS Chemex		VA09027962		VA09013336M008		5-Feb-09		
X16243	Monzonite	NM Hazelton Volcanics Upper Panel	ORE	IN	VU	CL2	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X16243	VA09013337R043	X16243	5-Feb-09		
H40512	Monzonite	NM Monzonite Upper Panel	WASTE	IN	VU	MTH	Waste	Rock	Drillcore	ALS Chemex	1.54	VA09097256		VA09097256R004		4-Sep-09		
9310	Monzonite	NM Monzonite Upper Panel	WASTE	IN	VHLP	CL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9310		9310	2-Sep-08		
H40557	Monzonite	NM Monzonite Upper Panel	MARGINAL	IN	VU	MTH	Waste	Rock	Pulp sample	Cantest	0.2681	40238		H40557		18-Feb-10		
8317	Monzonite	NM Monzonite Upper Panel	WASTE	IN	GRAN	KP	Waste	Rock	Drillcore	ALS Chemex		VA08125686	8-Oct-22		8-Oct-22	2-Sep-08		
H40501	Monzonite	NM Monzonite Upper Panel	WASTE	IN	VU	MTH	Waste	Rock	Drillcore	ALS Chemex	1.58	VA09097256		VA09097256R002		4-Sep-09		
X16263	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	CL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16263	VA09013337R044	X16263	5-Feb-09		
G36128	Monzonite	HIGHQTZ Lower Panel	MARGINAL	IN	VUTF	SIL	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G36128		G36128	2-Sep-08		
X16310	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	CL	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X16310	VA09013337R047	X16310	5-Feb-09		
X14842	Monzonite	SW Monzonite Upper Panel	ORE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X14842	VA09013339R004	X14842	6-Feb-09		
8341	Monzonite	NM Monzonite Upper Panel	WASTE	IN	GRAN	KP	Waste	Rock	Drillcore	ALS Chemex		VA08125686	8341		8341	2-Sep-08		
G34575	Monzonite	HIGHQTZ Lower Panel	ORE	IN	VALT	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G34575		G34575	2-Sep-08		
G33753	Monzonite	NM Hazelton Volcanics Upper Panel	WASTE	IN	SARG	SIH	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33753		G33753	2-Sep-08		
X14825	Monzonite	SW Monzonite Upper Panel	ORE	IN	PAND	CL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X14825	VA09013339R003	X14825	6-Feb-09		
X16307	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	CL	Waste	Pulp	Composite	ALS Chemex		VA08108753		VA08108753M068		5-Aug-08		
X16295	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	CL	Waste	Pulp	Composite	ALS Chemex		VA08108753		VA08108753M069		5-Aug-08		
X14875	Monzonite	SW Hazelton Volcanics Upper Panel	WASTE	IN	SEDS	SIH	Waste	Rock	Drillcore	ALS Chemex		VA09027962		VA09013336M012		5-Feb-09		
8394	Monzonite	NM Monzonite Upper Panel	ORE	IN	GRAN	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	8394		8394	2-Sep-08		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
X16342	Monzonite				PMON	HEM	Waste	Rock	Drillcore	Maxxam		B239368				11-May-12		
X16343	Monzonite				PMON	HEM	Waste	Rock	Drillcore	Maxxam		B239368				11-May-12		
X16344	Monzonite				PMON	HEM	Waste	Rock	Drillcore	Maxxam		B239368				11-May-12		
X16345	Monzonite				PMON	HEM	Waste	Rock	Drillcore	Maxxam		B239368				11-May-12		
X16346	Monzonite				PMON	HEM	Waste	Rock	Drillcore	Maxxam		B239368				11-May-12		
X16347	Monzonite				PMON	HEM	Waste	Rock	Drillcore	Maxxam		B239368				11-May-12		
H47674	Monzonite				PMON	SIL	Waste	Rock	Drillcore	Maxxam		B266202				27-Jul-12		
H47708	Monzonite				PMON	SIL	Waste	Rock	Drillcore	Maxxam		B266202				27-Jul-12		
X16283	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	CL	Waste	Rock	Drillcore	ALS Chemex		VA08108753		VA08108753M070		5-Aug-08		
H41767	Monzonite	0	ORE	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex	1.88	VA09124617		VA09124617R059		14-Sep-09		
G36142	Monzonite	HIGHQTZ Lower Panel	WASTE	IN	GRAN	SIH	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G36142		G36142	2-Sep-08		
X16326	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	CL	Waste	Pulp	Composite	ALS Chemex		VA08108753		VA08108753M067		5-Aug-08		
X14812	Monzonite	SW Monzonite Upper Panel	WASTE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X14812	VA09013339R002	X14812	6-Feb-09		
H40363	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	HEM	Waste	Rock	Pulp sample	Cantest	0.2722	40238		H0363/64		18-Feb-10		
X14802	Monzonite	SW Monzonite Upper Panel	ORE	IN	PMON	SIL	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013339	X14802	VA09013339R001	X14802	6-Feb-09		
H40491	Monzonite	NM Monzonite Upper Panel	WASTE	IN	VU	MTH	Waste	Rock	Pulp sample	Cantest	0.2348	40238		H40491		18-Feb-10		
X16344	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	HEM	Waste	Pulp	Composite	ALS Chemex		VA08108753		VA08108753M066		5-Aug-08		
9289	Monzonite	NM Monzonite Upper Panel	WASTE	IN	DDHB	CL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	9289		9289	2-Sep-08		
H40403	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	HEM	Waste	Rock	Pulp sample	Cantest	0.2668	1-Mar-10		H40403/04		18-Feb-10		
H43974	Monzonite	HIGHQTZ Lower Panel	ORE	IN	PMON	SIH	Ore	Rock	Pulp sample	Cantest	0.2564	40238		H43974		18-Feb-10		
X16272	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	CL	Waste	Pulp	Composite	ALS Chemex		VA08108753		VA08108753M071		5-Aug-08		
X16345	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	HEM	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16345	VA09013337R049	X16345	5-Feb-09		
H44157	Monzonite	HIGHQTZ Lower Panel	WASTE	IN	PMON	SIH	Waste	Rock	Pulp sample	Cantest	0.2519	1-Mar-10		H44157		18-Feb-10		
X16296	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	CL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16296	VA09013337R046	X16296	5-Feb-09		
X16362	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	PR	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16362	VA09013337R050	X16362	5-Feb-09		
X14874	Monzonite	SW Hazelton Volcanics Upper Panel	MARGINAL	IN	ANDS	SIL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013339	X14874	VA09013339R006	X14874	6-Feb-09		
H41769	Monzonite	NM Hazelton Volcanics Upper Panel	ORE	IN	PMON	SIH	Waste	Rock	Drillcore	ALS Chemex	1.92	VA09124617		VA09124617R060		14-Sep-09		
X16279	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	CL	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16279	VA09013337R045	X16279	5-Feb-09		
G33472	Monzonite	NM Monzonite Upper Panel	WASTE	OUT	DDRT	PR	Waste	Rock	Pulp sample	Cantest	0.2922	1-Mar-10		G33472/73/74		18-Feb-10		
X16327	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	CL	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X16327	VA09013337R048	X16327	5-Feb-09		
X16362	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	PR	Waste	Pulp	Composite	ALS Chemex		VA08108753		VA08108753M065		5-Aug-08		
8983	Monzonite	NM Monzonite Upper Panel	ORE	IN	GRAN	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	4-Aug-24		4-Aug-24	2-Sep-08		
8961	Monzonite	NM Monzonite Upper Panel	WASTE	IN	GRAN	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	8961		8961	2-Sep-08		
8366	Monzonite	NM Monzonite Upper Panel	WASTE	IN	GRAN	AR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	26-Nov-22		26-Nov-22	2-Sep-08		
X16384	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	PR	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16384	VA09013337R052	X16384	5-Feb-09		
H40457	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	PR	Waste	Rock	Pulp sample	Cantest	0.2733	40238		H40457		18-Feb-10		
X16374	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	PR	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16374	VA09013337R051	X16374	5-Feb-09		
G33676	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PQMZ	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33676		G33676	2-Sep-08		
X16416	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	PR	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X16416	VA09013337R054	X16416	5-Feb-09		
8416	Monzonite	NM Monzonite Upper Panel	WASTE	IN	INPP	SE	Waste	Rock	Drillcore	ALS Chemex		VA08125686	8416		8416	2-Sep-08		
G33738	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PQMZ	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33738		G33738	2-Sep-08		
8438	Monzonite	NM Monzonite Upper Panel	WASTE	IN	VTUF	SE	Waste	Rock	Drillcore	ALS Chemex		VA08125686	8438		8438	2-Sep-08		
X16397	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PMON	PR	Waste	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X16397	VA09013337R053	X16397	5-Feb-09		
G36541	Monzonite	HIGHQTZ Lower Panel	WASTE	IN	VULT	FEOX	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G36541		G36541	2-Sep-08		
9327	Monzonite	NM Monzonite Upper Panel	WASTE	IN	INPP	CL	Waste	Rock	Drillcore	ALS Chemex		VA08125686	14-Jul-25		14-Jul-25	2-Sep-08		
H43952	Monzonite	HIGHQTZ Lower Panel	ORE	IN	PMON	SIH	Ore	Rock	Pulp sample	Cantest	0.2599	1-Mar-10		H43952/53		18-Feb-10		
G33716	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PQMZ	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33716		G33716	2-Sep-08		
G33688	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PQMZ	CARB	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33688		G33688	2-Sep-08		
8374	Monzonite	NM Monzonite Upper Panel	WASTE	IN	GRAN	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125686	4-Dec-22		4-Dec-22	2-Sep-08		
G33496	Monzonite	NM Monzonite Upper Panel	WASTE	OUT	PPFP	HEM	Waste	Rock	Pulp sample	Cantest	0.2271	40238		G33496/97		18-Feb-10		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
G33706	Monzonite	NM Monzonite Upper Panel	WASTE	IN	PQMZ	PR	Waste	Rock	Drillcore	ALS Chemex		VA08125685	G33706		G33706	2-Sep-08		
X06968	Leach breccia/bornite breccia	IARG Lower Panel	WASTE	IN	VU	QSP	Waste	Rock	Pulp sample	Cantest	0.2579	40238		X06968/69		18-Feb-10		
X13074	Leach breccia/bornite breccia	HIGHQTZ Lower Panel	ORE	IN	VUTF	QSP	Ore	Rock	Pulp sample	Cantest	0.134	1-Mar-10		X13074		18-Feb-10		
H41951	Leach breccia/bornite breccia	QSP Lower Panel	WASTE	IN	VU	QSP	Waste	Rock	Drillcore	ALS Chemex	2.28	VA09124617				14-Sep-09		
X06596	Leach breccia/bornite breccia	IARG Lower Panel	WASTE	IN	VULT	QSP	Waste	Rock	Pulp sample	Cantest	0.2502	1-Mar-10		X06596		18-Feb-10		
X10945	Leach breccia/bornite breccia	QSP Lower Panel	WASTE	IN	VUTF	QSTW	Waste	Rock	Drillcore	ALS Chemex	0.34	VA09013337	X10945	VA09013337R005	X10945	6-Feb-09		
H41947	Leach breccia/bornite breccia	QSP Lower Panel	WASTE	IN	VU	QSP	Waste	Rock	Drillcore	ALS Chemex	2.12	VA09124617		VA09124617R070		14-Sep-09		
X10920	Leach breccia/bornite breccia	QSP Lower Panel	MARGINAL	IN	VUTF	QSP	Waste	Rock	Drillcore	ALS Chemex	0.4	VA09013337	X10920	VA09013337R004	X10920	6-Feb-09		
H41949	Leach breccia/bornite breccia	QSP Lower Panel	WASTE	IN	VU	QSP	Waste	Rock	Drillcore	ALS Chemex	2.2	VA09124617		VA09124617R071		14-Sep-09		
X06989	Leach breccia/bornite breccia	IARG Lower Panel	MARGINAL	IN	VU	QSP	Waste	Rock	Pulp sample	Cantest	0.1955	40238		X06989		18-Feb-10		
X06607	Leach breccia/bornite breccia	IARG Lower Panel	WASTE	IN	VULT	QSP	Waste	Rock	Pulp sample	Cantest	0.26	1-Mar-10		X06607/08		18-Feb-10		
E217280	Leach breccia/bornite breccia	IARG Lower Panel	WASTE	IN	VAXT	IARG	Waste	Rock	Drillcore	ALS Chemex		VA08125685	E217280		E217280	2-Sep-08		
G35602	Leach breccia/bornite breccia	IARG Lower Panel	MARGINAL	IN	VALT	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G35602		G35602	2-Sep-08		
H41944	Leach breccia/bornite breccia	QSP Lower Panel	MARGINAL	IN	VU	QSP	Ore	Rock	Drillcore	ALS Chemex	2.02	VA09124617		VA09124617R069		14-Sep-09		
X06618	Leach breccia/bornite breccia	IARG Lower Panel	MARGINAL	IN	VULT	CL	Ore	Rock	Pulp sample	Cantest	0.2598	40238		X06618/19		18-Feb-10		
X13084	Leach breccia/bornite breccia	HIGHQTZ Lower Panel	WASTE	IN	VUTF	QSTW	Ore	Rock	Pulp sample	Cantest	0.2525	40238		X13084/85/86		18-Feb-10		
E217300	Leach breccia/bornite breccia	IARG Lower Panel	ORE	IN	VAXT	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	E217300		E217300	2-Sep-08		
X17591	Leach breccia/bornite breccia	HIGHQTZ Lower Panel	WASTE	IN	VUTF	QSTW	Waste	Rock	Pulp sample	Cantest	0.2734	1-Mar-10		X17591		18-Feb-10		
X10967	Leach breccia/bornite breccia	QSP Lower Panel	ORE	IN	VULT	QSP	Ore	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X10967	VA09013337R006	X10967	6-Feb-09		
X06638	Leach breccia/bornite breccia	IARG Lower Panel	ORE	IN	VULT	CL	Ore	Rock	Pulp sample	Cantest	0.2572	1-Mar-10		X06638		18-Feb-10		
G35622	Leach breccia/bornite breccia	QSP Lower Panel	ORE	IN	VALT	QSP	Ore	Rock	Drillcore	ALS Chemex		VA08125686	G35622		G35622	2-Sep-08		
X17581	Leach breccia/bornite breccia	QSP Lower Panel	ORE	IN	PSBX	QSP	Ore	Rock	Pulp sample	Cantest	0.23945	40238		X17581		18-Feb-10		
X10985	Leach breccia/bornite breccia	QSP Lower Panel	MARGINAL	IN	VUTF	QSTW	Ore	Rock	Drillcore	ALS Chemex	0.36	VA09013337	X10985	VA09013337R007	X10985	6-Feb-09		
G32024	Leach breccia/bornite breccia	CL-PR Lower Panel	MARGINAL	IN	VATF	PR	Ore	Rock	Drillcore	ALS Chemex		VA08125685	G32024		G32024	2-Sep-08		
X66542	Overburden	IRON CAP	WASTE	IN	IU	QSP	Waste	Rock	Wet Coarse Rock	Maxxam		1-Nov-10				1-Nov-10		
X29696	Overburden	IRON CAP	ORE	IN	SEDS	SIL	Waste	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X66799	Overburden	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X26526	Hazelton	IRON CAP	ORE	IN	PMON	SIL	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
IC COMP 16	Hazelton	IRON CAP	WASTE	IN			Ore	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
IC COMP 19	Hazelton	IRON CAP	WASTE	IN			Ore	Rock	Composite pulp	Maxxam		12-Feb-12				1-Oct-11		
X30431	Hazelton	IRON CAP	ORE	OUT	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
IC COMP 12	Hazelton	IRON CAP	WASTE	IN			Ore	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
IC COMP 9	Hazelton	IRON CAP	WASTE	IN			Ore	Rock	Composite pulp	Maxxam		12-Feb-12				1-Oct-11		
IC COMP 11	Hazelton	IRON CAP	WASTE	IN			Ore	Rock	Composite pulp	Maxxam		12-Feb-12				1-Oct-11		
X30422	Hazelton	IRON CAP	ORE	OUT	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
IC COMP 10	Hazelton	IRON CAP	WASTE	IN			Ore	Rock	Composite pulp	Maxxam		12-Feb-12				1-Oct-11		
X26728	Hazelton	IRON CAP	ORE	OUT	IBX	SIL	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
IC COMP 20	Hazelton	IRON CAP	WASTE	OUT			Ore	Rock	Composite pulp	Maxxam		12-Feb-12				1-Oct-11		
X30441	Hazelton	IRON CAP	WASTE	OUT	PMON	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
IC COMP 17	Hazelton	IRON CAP	WASTE	IN			Ore	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
IC COMP 18	Hazelton	IRON CAP	WASTE	IN			Ore	Rock	Composite pulp	Maxxam		12-Feb-12				1-Oct-11		
X30943	Hazelton	IRON CAP	ORE	IN	QTVN	QTVN	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
IC COMP 13	Hazelton	IRON CAP	WASTE	OUT			Ore	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
X26658	Hazelton	IRON CAP	ORE	OUT	VU	SIL	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X30968	Hazelton	IRON CAP	ORE	IN	IVOL	CL	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X30961	Hazelton	IRON CAP	ORE	IN	FLTZ	CARB	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H47161	Diorite	IRON CAP	ORE	IN	IU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X25074	Diorite	IRON CAP	WASTE	OUT	IU	IARG	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X30176	Diorite	IRON CAP	ORE	IN	IVOL	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25084	Diorite	IRON CAP	WASTE	OUT	IU	IARG	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
H47377	Diorite	IRON CAP	MARGINAL	IN	PSYN	SIL	Ore	Rock	Dry Coarse Rock	Maxxam	0.565	40422				2-Aug-10		
X25078	Diorite	IRON CAP	ORE	OUT	IU	IARG	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H47126	Diorite	IRON CAP	ORE	IN	IU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X67984	Diorite	IRON CAP	ORE	IN	IU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H47109	Diorite	IRON CAP	ORE	IN	PSYN	SIL	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X29624	Diorite	IRON CAP	MARGINAL	IN	IU	SIH	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X67999	Diorite	IRON CAP	WASTE	OUT	IU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X30121	Diorite	IRON CAP	ORE	IN	IU	SIL	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X25461	Diorite	IRON CAP	ORE	IN	VU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X30187	Diorite	IRON CAP	WASTE	IN	IVOL	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X29626	Diorite	IRON CAP	ORE	IN	IU	SIH	Waste	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X28499	Diorite	IRON CAP	ORE	IN	IU	SIL	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
H48498	Diorite	IRON CAP	WASTE	OUT	PSYN	QSP	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H47431	Diorite	IRON CAP	WASTE	OUT	PSYN	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
H48481	Diorite	IRON CAP	ORE	IN	PSBX	PSBX	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X29743	Diorite	IRON CAP	ORE	IN	IU	QSP	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H47446	Diorite	IRON CAP	WASTE	OUT	PSYN	SIL	Waste	Rock	Dry Coarse Rock	Maxxam	0.435	1-Sep-10				2-Aug-10		
H47430	Diorite	IRON CAP	WASTE	OUT	PSYN	SIL	Waste	Rock	Wet Coarse Rock	Maxxam	0.25	1-Sep-10				2-Aug-10		
X28009	Diorite	IRON CAP	WASTE	OUT	IU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X30222	Diorite	IRON CAP	ORE	OUT	IVOL	SIL	Waste	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X29781	Diorite	IRON CAP	ORE	IN	PSYN	QSP	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X28815	Diorite	IRON CAP	WASTE	IN	VU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X28802	Diorite	IRON CAP	WASTE	IN	VU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X30583	Diorite	IRON CAP	ORE	IN	IVOL	CL	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
H47438	Diorite	IRON CAP	WASTE	OUT	PSBX	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X28837	Diorite	IRON CAP	WASTE	IN	VU	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H47123	Diorite	IRON CAP	ORE	IN	QTVN	QTVN	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X25501	Diorite	IRON CAP	WASTE	OUT	VU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X29656	Diorite	IRON CAP	WASTE	IN	VATF	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X30218	Diorite	IRON CAP	ORE	OUT	IVOL	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H46835	Diorite	IRON CAP	ORE	OUT	PSBX	PSBX	Waste	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
H47391	Diorite	IRON CAP	ORE	IN	PSYN	CL	Waste	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X30235	Diorite	IRON CAP	WASTE	OUT	IVOL	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X30331	Diorite	IRON CAP	ORE	IN	IVOL	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X30742	Diorite	IRON CAP	ORE	IN	IVOL	QSP	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X25471	Diorite	IRON CAP	WASTE	OUT	VU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25463	Diorite	IRON CAP	ORE	IN	VU	SIL	Waste	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X28805	Diorite	IRON CAP	WASTE	IN	VU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X29833	Diorite	IRON CAP	ORE	IN	PSBX	PSBX	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X30361	Diorite	IRON CAP	ORE	IN	IVOL	CL	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X25482	Diorite	IRON CAP	WASTE	OUT	VU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25489	Diorite	IRON CAP	WASTE	OUT	VU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X30224	Diorite	IRON CAP	WASTE	OUT	IVOL	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X30139	Diorite	IRON CAP	MARGINAL	IN	IVOL	CL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X29646	Diorite	IRON CAP	WASTE	IN	VATF	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X29685	Diorite	IRON CAP	WASTE	OUT	IU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25896	Diorite	IRON CAP	MARGINAL	OUT	VU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X28827	Diorite	IRON CAP	ORE	IN	VU	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25886	Diorite	IRON CAP	ORE	OUT	VU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H46817	Diorite	IRON CAP	WASTE	OUT	PSYN	CL	Waste	Rock	Dry Coarse Rock	Maxxam	0.495	1-Sep-10				2-Aug-10		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
X29681	Diorite	IRON CAP	ORE	OUT	VU	CL	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X24855	Diorite	IRON CAP	ORE	OUT	PPFP	KP	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X25877	Diorite	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X25875	Diorite	IRON CAP	WASTE	IN	VU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X30227	Diorite	IRON CAP	WASTE	OUT	IVOL	CL	Waste	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
H46831	Diorite	IRON CAP	MARGINAL	OUT	IBX	CL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X29789	Diorite	IRON CAP	ORE	IN	PSYN	QSP	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
H47403	Diorite	IRON CAP	WASTE	OUT	PSYN	CL	Waste	Rock	Wet Coarse Rock	Maxxam	0.506	40422				2-Aug-10		
X30208	Diorite	IRON CAP	ORE	OUT	IVOL	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X29686	Diorite	IRON CAP	ORE	OUT	IU	SIL	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X29636	Diorite	IRON CAP	WASTE	IN	VATF	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H46789	Diorite	IRON CAP	MARGINAL	IN	PSYN	CL	Waste	Rock	Dry Coarse Rock	Maxxam	0.505	1-Sep-10				2-Aug-10		
X29871	Diorite	IRON CAP	ORE	OUT	IU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X28535	Diorite	IRON CAP	ORE	OUT	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X29442	Diorite	IRON CAP	ORE	OUT	VALT	CL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X29503	Diorite	IRON CAP	ORE	OUT	VALT	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H46842	Diorite	IRON CAP	WASTE	OUT	PSYN	CL	Waste	Rock	Dry Coarse Rock	Maxxam	0.49	1-Sep-10				2-Aug-10		
X28545	Diorite	IRON CAP	MARGINAL	OUT	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H46829	Diorite	IRON CAP	WASTE	OUT	PSYN	CL	Waste	Rock	Dry Coarse Rock	Maxxam	0.455	1-Sep-10				2-Aug-10		
X29431	Diorite	IRON CAP	WASTE	OUT	VALT	CL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H46801	Diorite	IRON CAP	WASTE	IN	PSYN	CL	Waste	Rock	Wet Coarse Rock	Maxxam	0.244	1-Sep-10				2-Aug-10		
X26345	Diorite	IRON CAP	WASTE	IN	VATF	CL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X29666	Diorite	IRON CAP	WASTE	OUT	VATF	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X29422	Diorite	IRON CAP	WASTE	OUT	VALT	CL	Waste	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X29421	Diorite	IRON CAP	WASTE	OUT	VALT	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X30596	Diorite	IRON CAP	ORE	IN	IU	CL	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X30198	Diorite	IRON CAP	ORE	IN	IVOL	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H46808	Diorite	IRON CAP	WASTE	OUT	PSYN	CL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X29407	Diorite	IRON CAP	WASTE	OUT	VALT	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H46881	Diorite	IRON CAP	WASTE	OUT	PSYN	CL	Waste	Rock	Dry Coarse Rock	Maxxam	0.435	1-Sep-10				2-Aug-10		
X30711	Diorite	IRON CAP	ORE	IN	IVOL	CL	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
H46870	Diorite	IRON CAP	WASTE	OUT	PSYN	CL	Waste	Rock	Dry Coarse Rock	Maxxam	0.455	1-Sep-10				2-Aug-10		
H46841	Diorite	IRON CAP	WASTE	OUT	PSYN	CL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
H47142	Diorite	IRON CAP	WASTE	IN	DDRT	UDEF	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X66971	Diorite	IRON CAP	WASTE	IN	PSYN	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X67793	Monzonite	IRON CAP	WASTE	IN	PPFP	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X67816	Monzonite	IRON CAP	WASTE	IN	PPFP	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X28131	Monzonite	IRON CAP	WASTE	IN	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X28077	Monzonite	IRON CAP	WASTE	IN	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X28151	Monzonite	IRON CAP	ORE	IN	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X67772	Monzonite	IRON CAP	ORE	IN	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X28121	Monzonite	IRON CAP	WASTE	IN	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25232	Monzonite	IRON CAP	WASTE	IN	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25276	Monzonite	IRON CAP	WASTE	IN	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X28087	Monzonite	IRON CAP	WASTE	IN	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H47484	Monzonite	IRON CAP	WASTE	IN	PMON	KP	Waste	Rock	Dry Coarse Rock	Maxxam	0.325	1-Sep-10				2-Aug-10		
X25254	Monzonite	IRON CAP	WASTE	IN	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X67805	Monzonite	IRON CAP	WASTE	IN	PPFP	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X28141	Monzonite	IRON CAP	WASTE	IN	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X28112	Monzonite	IRON CAP	WASTE	IN	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
X25264	Monzonite	IRON CAP	ORE	IN	QTVN	UDEF	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25243	Monzonite	IRON CAP	WASTE	IN	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X67806	Monzonite	IRON CAP	WASTE	IN	PPFP	SIL	Waste	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X67782	Monzonite	IRON CAP	WASTE	IN	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X28099	Monzonite	IRON CAP	WASTE	IN	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H47469	Monzonite	IRON CAP	ORE	IN	PMON	KP	Ore	Rock	Dry Coarse Rock	Maxxam	0.55	1-Sep-10				2-Aug-10		
X28066	Monzonite	IRON CAP	WASTE	IN	PMON	CL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25251	Monzonite	IRON CAP	WASTE	IN	PMON	CL	Waste	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
X67761	Monzonite	IRON CAP	WASTE	IN	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25221	Monzonite	IRON CAP	WASTE	IN	PMON	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25211	Monzonite	IRON CAP	WASTE	IN	PMON	CL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X27667	Undefined	IRON CAP	ORE	IN	QTVN	UDEF	Ore	Rock	Pulp	Maxxam		12-Feb-12				1-Oct-11		
H48695	Undefined	IRON CAP	ORE	IN	VU	SIL	Waste	Rock	Wet Coarse Rock	Maxxam	0.558	1-Sep-10				2-Aug-10		
X67731	Undefined	IRON CAP	ORE	IN	IU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H47241	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Dry Coarse Rock	Maxxam	0.36	40422				2-Aug-10		
H47325	Undefined	IRON CAP	ORE	IN	SEDS	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X28273	Undefined	IRON CAP	WASTE	IN	VU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X24881	Undefined	IRON CAP	ORE	IN	IU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H47307	Undefined	IRON CAP	MARGINAL	IN	SEDS	SIL	Ore	Rock	Dry Coarse Rock	Maxxam	0.385	40422				2-Aug-10		
X28256	Undefined	IRON CAP	WASTE	IN	VU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X67618	Undefined	IRON CAP	MARGINAL	IN	IU	QSP	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X26088	Undefined	IRON CAP	MARGINAL	IN	IU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X28851	Undefined	IRON CAP	MARGINAL	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X28211	Undefined	IRON CAP	WASTE	IN	VU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X24925	Undefined	IRON CAP	MARGINAL	IN	IU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X27364	Undefined	IRON CAP	ORE	IN	FDYK	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X28751	Undefined	IRON CAP	WASTE	IN	IU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25998	Undefined	IRON CAP	ORE	IN	VU	CL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X67849	Undefined	IRON CAP	WASTE	IN	PSBX	PSBX	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H48761	Undefined	IRON CAP	WASTE	IN	VU	SIL	Waste	Rock	Dry Coarse Rock	Maxxam	0.43	40422				2-Aug-10		
X28301	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X27427	Undefined	IRON CAP	ORE	IN	FLTZ	UDEF	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X27368	Undefined	IRON CAP	ORE	IN	QTVN	QTVN	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X67459	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25974	Undefined	IRON CAP	WASTE	IN	VU	CL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X27532	Undefined	IRON CAP	ORE	IN	QTVN	QTVN	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H47353	Undefined	IRON CAP	ORE	IN	SEDS	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X27669	Undefined	IRON CAP	ORE	IN	VU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H46781	Undefined	IRON CAP	ORE	IN	PSYN	CL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X26107	Undefined	IRON CAP	ORE	OUT	VU	SIH	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H46949	Undefined	IRON CAP	WASTE	IN	VU	SIL	Waste	Rock	Dry Coarse Rock	Maxxam	0.415	40422				2-Aug-10		
X28314	Undefined	IRON CAP	ORE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
IC COMP 14	Undefined	IRON CAP	WASTE	IN			Ore	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
X26159	Undefined	IRON CAP	WASTE	IN	VU	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X66869	Undefined	IRON CAP	WASTE	IN	IBX	PSBX	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X24935	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H48859	Undefined	IRON CAP	ORE	IN	QTVN	QTVN	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
H46744	Undefined	IRON CAP	MARGINAL	IN	SEDS	SIL	Ore	Rock	Dry Coarse Rock	Maxxam	0.415	40422				2-Aug-10		
X28374	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X27531	Undefined	IRON CAP	WASTE	IN	SEDS	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
X67741	Undefined	IRON CAP	ORE	OUT	IU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H48926	Undefined	IRON CAP	ORE	OUT	VU	IARG	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X66721	Undefined	IRON CAP	ORE	IN	PSBX	PSBX	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X28375	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
H48900	Undefined	IRON CAP	ORE	OUT	VU	SIL	Waste	Rock	Dry Coarse Rock	Maxxam	0.4	40422				2-Aug-10		
X24946	Undefined	IRON CAP	ORE	IN	IU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X28325	Undefined	IRON CAP	MARGINAL	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H48432	Undefined	IRON CAP	ORE	IN	SEDS	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X25373	Undefined	IRON CAP	WASTE	IN	VU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X26085	Undefined	IRON CAP	WASTE	IN	IU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X26169	Undefined	IRON CAP	WASTE	IN	VU	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X29259	Undefined	IRON CAP	ORE	IN	VU	CL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X25718	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H48749	Undefined	IRON CAP	MARGINAL	IN	VU	IARG	Waste	Rock	Dry Coarse Rock	Maxxam	0.545	40422				2-Aug-10		
X29374	Undefined	IRON CAP	ORE	IN	IU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X27359	Undefined	IRON CAP	ORE	IN	IU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H47552	Undefined	IRON CAP	WASTE	IN	IU	SIL	Ore	Rock	Dry Coarse Rock	Maxxam	0.37	40422				2-Aug-10		
X28931	Undefined	IRON CAP	WASTE	IN	IU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X67553	Undefined	IRON CAP	WASTE	IN	SEDS	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X27334	Undefined	IRON CAP	ORE	IN	SEDS	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
HCT-6	#N/A	IRON CAP					#N/A	Rock	Dry Coarse Rock	Maxxam	1	40415				25-Aug-10		
HCT-3	Undefined	IRON CAP	WASTE	IN			Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
HCT-5	Undefined	IRON CAP	WASTE	IN			Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
HCT-2	Undefined	IRON CAP	WASTE	IN			Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
HCT-4	Undefined	IRON CAP	WASTE	IN			Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
HCT-1	Undefined	IRON CAP	WASTE	IN			Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X27447	Undefined	IRON CAP	MARGINAL	IN	IU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X26179	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H48559A	Undefined	IRON CAP	WASTE	IN			Waste	Rock	Wet Coarse Rock	Maxxam	0.49	40422				2-Aug-10		
H48504	Undefined	IRON CAP	WASTE	IN	IBX	QSP	Waste	Rock	Dry Coarse Rock	Maxxam	0.5	40422				2-Aug-10		
X25438	Undefined	IRON CAP	MARGINAL	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X29384	Undefined	IRON CAP	ORE	IN	VU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H47085	Undefined	IRON CAP	ORE	IN	PAND	IARG	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
HCT-3	#N/A	IRON CAP					Ore	Rock	Dry Coarse Rock	Maxxam	1	40412				22-Aug-10		
IC COMP 22	Undefined	IRON CAP	WASTE	IN			Ore	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
X28362	Undefined	IRON CAP	WASTE	IN	IU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X29355	Undefined	IRON CAP	ORE	IN	IU	SIH	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X26055	Undefined	IRON CAP	WASTE	IN	IU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X27273	Undefined	IRON CAP	ORE	IN	FLTZ	UDEF	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H48517	Undefined	IRON CAP	ORE	IN	IBX	QSP	Ore	Rock	Dry Coarse Rock	Maxxam	0.52	40422				2-Aug-10		
X66829	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X67543	Undefined	IRON CAP	ORE	IN	SEDS	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H46962	Undefined	IRON CAP	ORE	IN	IU	SIL	Waste	Rock	Wet Coarse Rock	Maxxam	0.453	40422				2-Aug-10		
IC COMP 23	Undefined	IRON CAP	WASTE	OUT			Ore	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
H48907	Undefined	IRON CAP	WASTE	OUT	PSBX	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
H48909	Undefined	IRON CAP	WASTE	OUT	VU	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X66552	Undefined	IRON CAP	WASTE	IN	IU	QSP	Waste	Rock	Wet Coarse Rock	Maxxam		40483				1-Nov-10		
H48556	Undefined	IRON CAP	WASTE	IN	IBX	QSP	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X28877	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X28785	Undefined	IRON CAP	ORE	IN	IU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
X25843	Undefined	IRON CAP	ORE	IN	VU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25045	Undefined	IRON CAP	WASTE	IN	SEDS	IARG	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H48852	Undefined	IRON CAP	WASTE	IN	SEDS	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
IC COMP 25	Undefined	IRON CAP	WASTE	IN			Ore	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
X28887	Undefined	IRON CAP	ORE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X67563	Undefined	IRON CAP	ORE	OUT	SEDS	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X27659	Undefined	IRON CAP	ORE	IN	VU	UDEF	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X28291	Undefined	IRON CAP	WASTE	IN	IU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X29942	Undefined	IRON CAP	ORE	IN	SEDS	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X28922	Undefined	IRON CAP	MARGINAL	IN	IU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X28897	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X26039	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X28867	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25308	Undefined	IRON CAP	ORE	IN	SEDS	CL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H48532	Undefined	IRON CAP	WASTE	IN	IBX	QSP	Waste	Rock	Wet Coarse Rock	Maxxam	0.243	40422				2-Aug-10		
H46895	Undefined	IRON CAP	ORE	IN	PAND	CL	Waste	Rock	Dry Coarse Rock	Maxxam	0.4	40422				2-Aug-10		
X25832	Undefined	IRON CAP	ORE	IN	VU	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X66819	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25301	Undefined	IRON CAP	ORE	IN	SEDS	CL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H48305	Undefined	IRON CAP	ORE	IN	SEDS	SIL	Waste	Rock	Dry Coarse Rock	Maxxam	0.46	40422				2-Aug-10		
H47578	Undefined	IRON CAP	MARGINAL	IN	IU	SIL	Waste	Rock	Dry Coarse Rock	Maxxam	0.58	40422				2-Aug-10		
H48210	Undefined	IRON CAP	ORE	IN	SEDS	SIH	Ore	Rock	Dry Coarse Rock	Maxxam	0.44	40422				2-Aug-10		
X29099	Undefined	IRON CAP	ORE	OUT	VU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X29231	Undefined	IRON CAP	ORE	IN	IU	CL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X25329	Undefined	IRON CAP	WASTE	IN	VU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X24966	Undefined	IRON CAP	ORE	IN	IU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H48913	Undefined	IRON CAP	WASTE	OUT	VU	SIL	Waste	Rock	Dry Coarse Rock	Maxxam	0.44	40422				2-Aug-10		
X28384	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H48312	Undefined	IRON CAP	WASTE	IN	SEDS	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X27515	Undefined	IRON CAP	ORE	IN	VU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X67506	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25831	Undefined	IRON CAP	WASTE	IN	VU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H47015	Undefined	IRON CAP	ORE	IN	PAND	IARG	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X67573	Undefined	IRON CAP	WASTE	OUT	SEDS	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X24984	Undefined	IRON CAP	WASTE	IN	IU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X67495	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X66846	Undefined	IRON CAP	WASTE	IN	IBX	PSBX	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H48238	Undefined	IRON CAP	WASTE	IN	SEDS	SIL	Ore	Rock	Dry Coarse Rock	Maxxam	0.47	40422				2-Aug-10		
H48929	Undefined	IRON CAP	WASTE	OUT	VU	IARG	Waste	Rock	Dry Coarse Rock	Maxxam	0.285	40422				2-Aug-10		
X26126	Undefined	IRON CAP	ORE	OUT	VU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H48872	Undefined	IRON CAP	WASTE	IN	VU	SIL	Waste	Rock	Dry Coarse Rock	Maxxam	0.445	40422				2-Aug-10		
X29899	Undefined	IRON CAP	ORE	IN	PSBX	QSP	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X26416	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X67502	Undefined	IRON CAP	WASTE	IN	FLTZ	UDEF	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
HCT-5	#N/A	IRON CAP					Ore	Rock	Dry Coarse Rock	Maxxam	1	40414				24-Aug-10		
IC COMP 15	Undefined	IRON CAP	WASTE	IN			Ore	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
X66938	Undefined	IRON CAP	ORE	IN	IBX	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X67914	Undefined	IRON CAP	WASTE	IN	VU	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X24989	Undefined	IRON CAP	ORE	IN	SEDS	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H46894	Undefined	IRON CAP	WASTE	IN	PAND	CL	Waste	Rock	Dry Coarse Rock	Maxxam	0.45	40422				2-Aug-10		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
X25865	Undefined	IRON CAP	MARGINAL	IN	VU	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
H48278	Undefined	IRON CAP	ORE	IN	SEDS	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X67556	Undefined	IRON CAP	ORE	IN	IU	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X66926	Undefined	IRON CAP	MARGINAL	IN	VU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H48251	Undefined	IRON CAP	ORE	IN	SEDS	SIL	Waste	Rock	Dry Coarse Rock	Maxxam	0.48	40422				2-Aug-10		
X26408	Undefined	IRON CAP	WASTE	IN	IU	SIH	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H48885	Undefined	IRON CAP	WASTE	OUT	VU	SIL	Waste	Rock	Dry Coarse Rock	Maxxam	0.395	40422				2-Aug-10		
X27628	Undefined	IRON CAP	ORE	IN	VU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H48878	Undefined	IRON CAP	WASTE	OUT	VU	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X29958	Undefined	IRON CAP	WASTE	IN	IBX	QSP	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X25626	Undefined	IRON CAP	ORE	OUT	VU	CL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X25665	Undefined	IRON CAP	WASTE	OUT	PHBX	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H48248	Undefined	IRON CAP	ORE	IN	FLTZ	UDEF	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
HCT-2	#N/A	IRON CAP					Ore	Rock	Dry Coarse Rock	Maxxam	1	40411				21-Aug-10		
X67517	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X26407	Undefined	IRON CAP	MARGINAL	IN	IU	SIH	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X25655	Undefined	IRON CAP	ORE	OUT	VU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
HCT-4	#N/A	IRON CAP					Waste	Rock	Dry Coarse Rock	Maxxam	1	40413				23-Aug-10		
H48265	Undefined	IRON CAP	WASTE	IN	SEDS	SIL	Waste	Rock	Wet Coarse Rock	Maxxam	0.194	40422				2-Aug-10		
X25451	Undefined	IRON CAP	WASTE	IN	VU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H47546	Undefined	IRON CAP	ORE	IN	IU	CL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X67751	Undefined	IRON CAP	ORE	OUT	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25652	Undefined	IRON CAP	ORE	OUT	VU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X25854	Undefined	IRON CAP	WASTE	IN	VU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
IC COMP 24	Undefined	IRON CAP	WASTE	IN			Ore	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
H48336	Undefined	IRON CAP	WASTE	OUT	SEDS	SIL	Waste	Rock	Dry Coarse Rock	Maxxam	0.39	40422				2-Aug-10		
X26501	Undefined	IRON CAP	WASTE	OUT	IU	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
IC COMP 21	Undefined	IRON CAP	WASTE	IN			Ore	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
X26837	Undefined	IRON CAP	ORE	OUT	VU	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X25432	Undefined	IRON CAP	ORE	IN	VU	CL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X29979	Undefined	IRON CAP	ORE	IN	PSBX	PSBX	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X67523	Undefined	IRON CAP	ORE	IN	IU	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
H47103	Undefined	IRON CAP	ORE	IN	PSBX	PSBX	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X25662	Undefined	IRON CAP	ORE	OUT	PHBX	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X67498	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X67485	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X67528	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
IC COMP 2	Undefined	IRON CAP	WASTE	IN			Ore	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
X29077	Undefined	IRON CAP	ORE	OUT	IU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
H48545	Undefined	IRON CAP	WASTE	IN	IBX	QSP	Waste	Rock	Dry Coarse Rock	Maxxam	0.51	40422				2-Aug-10		
X29093	Undefined	IRON CAP	WASTE	OUT	VU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X25864	Undefined	IRON CAP	ORE	IN	VU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
HCT-1	#N/A	IRON CAP					Waste	Rock	Dry Coarse Rock	Maxxam	1	40410				20-Aug-10		
X25435	Undefined	IRON CAP	MARGINAL	IN	IU	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X29089	Undefined	IRON CAP	WASTE	OUT	VU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25132	Undefined	IRON CAP	WASTE	IN	VU	IARG	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
H47057	Undefined	IRON CAP	WASTE	IN	PAND	IARG	Ore	Rock	Dry Coarse Rock	Maxxam	0.5	40422				2-Aug-10		
X25728	Undefined	IRON CAP	MARGINAL	IN	SEDS	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25727	Undefined	IRON CAP	WASTE	IN	SEDS	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X26791	Undefined	IRON CAP	ORE	OUT	VU	SIL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	2012 Model Code	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	2012 EA Waste/Ore	Sample Matrix	Sample Type	udf_LabID	Weight Received (kg)	Lab_Certificate_ Number	Geo_Tech_ Lab_ID	Lab_Sample_ID	Client ID	Collect Date	Description	Comment
X30399	Undefined	IRON CAP	WASTE	OUT	PMON	CL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X25188	Undefined	IRON CAP	WASTE	IN	SEDS	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X67591	Undefined	IRON CAP	WASTE	OUT	SEDS	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X29971	Undefined	IRON CAP	WASTE	IN	VU	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
IC COMP 1	Undefined	IRON CAP	WASTE	IN			Ore	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
X25611	Undefined	IRON CAP	ORE	IN	IU	CL	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X28052	Undefined	IRON CAP	MARGINAL	IN	SEDS	SIH	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X25175	Undefined	IRON CAP	ORE	IN	SEDS	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X30379	Undefined	IRON CAP	ORE	IN	FLTZ	QTVN	Ore	Rock	Pulp	Maxxam		40951				1-Oct-11		
X28196	Undefined	IRON CAP	WASTE	IN	VU	SIL	Ore	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
IC COMP 5	Undefined	IRON CAP	WASTE	IN			Waste	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
X26469	Undefined	IRON CAP	WASTE	IN	IU	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
IC COMP 6	Undefined	IRON CAP	WASTE	IN			Waste	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
X25155	Undefined	IRON CAP	WASTE	IN	VU	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X27062	Undefined	IRON CAP	WASTE	IN	DDRT	CL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
X30386	Undefined	IRON CAP	ORE	IN	IU	SIL	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
IC COMP 4	Undefined	IRON CAP	WASTE	IN			Waste	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
IC COMP 8	Undefined	IRON CAP	ORE	OUT			Ore	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
X27058	Undefined	IRON CAP	MARGINAL	IN	IVOL	SIH	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
IC COMP 3	Undefined	IRON CAP	WASTE	IN			Waste	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
X27066	Undefined	IRON CAP	WASTE	IN	SEDS	SIH	Waste	Rock	Pulp	Maxxam		40951				1-Oct-11		
IC COMP 7	Undefined	IRON CAP	ORE	IN			Waste	Rock	Composite pulp	Maxxam		40951				1-Oct-11		
X28031	Undefined	IRON CAP	WASTE	IN	VU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25165	Undefined	IRON CAP	WASTE	IN	VU	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X28019	Undefined	IRON CAP	WASTE	IN	VU	SIL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25111	Undefined	IRON CAP	WASTE	IN	SEDS	IARG	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25091	Undefined	IRON CAP	WASTE	IN	SEDS	IARG	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25101	Undefined	IRON CAP	WASTE	IN	SEDS	IARG	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25122	Undefined	IRON CAP	WASTE	IN	SEDS	IARG	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		
X25143	Undefined	IRON CAP	WASTE	IN	SEDS	CL	Waste	Rock	Iron Cap Deposits	ALS Chemex		VA11048868				25-Mar-11		

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
H42801	Kerr	3.93		8.27	4.63	8.21	8.21		0.06	0.00	3.58	3.58	258.44	144.69	256.55	1	0.001	1.199	0.01		0.10	0.01
H42619	Kerr	6.55		3.02		3.02	3.02			0.00	0.00	0.00	94.38	94.38	94.38	3	0.001	2.599	0.04		0.10	0.04
H46054	Kerr	4.48		6.50	3.93	6.46	6.46		0.04	0.00	2.53	2.53	203.13	122.81	201.87	6	0.001	5.799	0.01		0.09	0.01
H46211	Kerr	6.40	6.60	10.10	8.54	9.89	9.89	0.22	0.21	0.00	1.35	1.35	315.63	266.88	309.04	0	0.001	-0.001	0.01	0.03	0.10	0.00
14541	Kerr	4.40		7.91	6.70	7.82	7.80	0.09	0.09	0.02	1.10	1.10	247.19	209.38	243.86	1	0.001	0.999	0.01	0.03	0.10	0.00
H46155	Kerr	4.57		2.50	1.21	2.39	2.39		0.11	0.00	1.18	1.18	78.13	37.81	74.63	1	0.001	0.499	0.01		0.07	0.01
H46222	Kerr	6.00	6.30	9.53	9.36	9.43	9.43	0.20	0.10	0.00	0.07	0.07	297.81	292.50	294.67	5	0.001	4.999	0.01	0.03	0.10	0.00
H46210	Kerr	6.09		10.97		10.97	10.97			0.00	0.00	0.00	342.81	342.81	342.81	7	0.001	7.299	0.01		0.09	0.01
H46213	Kerr	7.40	6.80	6.97	5.85	6.84	6.84	0.21	0.13	0.00	0.99	0.99	217.81	182.81	213.71	5	0.001	4.999	0.02	0.03	0.10	0.00
H46198	Kerr	4.64		9.86	6.24	9.82	9.82		0.04	0.00	3.58	3.58	308.13	195.00	306.87	8	0.001	7.499	0.01		0.07	0.01
H46209	Kerr	6.20	6.50	9.76	8.10	9.70	9.70	0.15	0.06	0.00	1.60	1.60	305.00	253.13	303.10	8	0.001	7.999	0.01	0.03	0.10	0.00
H46131	Kerr	6.10		5.95		5.95	5.95			0.00	0.00	0.00	185.94	185.94	185.94	5	0.001	5.199	0.01		0.01	0.01
H46175	Kerr	4.54		6.93	4.51	6.89	6.89		0.04	0.00	2.38	2.38	216.56	140.94	215.30	6	0.001	6.199	0.01		0.07	0.01
H46132	Kerr	6.20	6.90	8.98	8.28	8.85	8.85	0.15	0.13	0.00	0.57	0.57	280.63	258.75	276.53	8	0.001	7.999	0.03	0.03	0.20	0.01
H42885	Kerr	7.02		8.50		8.50	8.50			0.00	0.00	0.00	265.63	265.63	265.63	9	0.001	8.699	0.01		0.01	0.01
H46123	Kerr	4.12		8.17	5.05	8.13	8.13		0.04	0.00	3.08	3.08	255.31	157.81	254.06	9	0.001	9.099	0.01		0.08	0.01
H46212	Kerr	6.15		6.43		6.43	6.43			0.00	0.00	0.00	200.94	200.94	200.94	7	0.001	7.199	0.03		0.11	0.03
H46216	Kerr	6.50	6.70	9.98	8.62	9.76	9.76	0.29	0.22	0.00	1.14	1.14	311.88	269.38	304.98	12	0.001	11.999	0.04	0.05	0.20	0.00
H46219	Kerr	7.10	7.00	7.93	6.74	7.53	7.53	0.46	0.40	0.00	0.79	0.79	247.81	210.63	235.28	10	0.001	9.999	0.01	0.03	0.10	0.00
H42884	Kerr	7.20	6.40	7.62	4.41	4.73	4.73	2.89	2.89	0.00	0.32	0.32	238.13	137.81	147.74	7	0.001	6.999	0.01	0.03	0.10	0.00
H42882	Kerr	7.11		7.18		7.18	7.18			0.00	0.00	0.00	224.38	224.38	224.38	11	0.001	10.799	0.02		0.01	0.02
H42862	Kerr	5.16		5.57	3.51	5.52	5.52		0.05	0.00	2.01	2.01	174.06	109.69	172.49	9	0.001	9.099	0.01		0.07	0.01
H42881	Kerr	7.30	6.40	10.70	4.56	4.83	4.83	5.99	5.87	0.00	0.27	0.27	334.38	142.50	150.88	9	0.001	8.999	0.04	0.05	0.20	0.00
H42887	Kerr	7.17		5.61		5.61	5.61			0.00	0.00	0.00	175.31	175.31	175.31	11	0.001	11.399	0.04		0.03	0.04
H46135	Kerr	7.10	7.60	7.13	6.42	7.13	7.12	0.05	0.01	0.00	0.70	0.70	222.81	200.63	222.62	15	0.001	14.999	0.12	0.15	0.50	0.00
H46134	Kerr	6.39		7.45		7.45	7.45			0.00	0.00	0.00	232.81	232.81	232.81	16	1.3	15	0.16		0.43	0.16
H42772	Kerr	7.28		5.68	4.15	5.64	5.64		0.04	0.00	1.49	1.49	177.50	129.69	176.24	14	0.001	13.799	0.12		0.43	0.12
H46076	Kerr	6.25		6.94	3.50	6.90	6.90		0.04	0.00	3.40	3.40	216.88	109.38	215.61	17	1.9	15	0.16		0.45	0.16
H42886	Kerr	7.90	7.40	6.22	2.92	3.67	3.63	3.08	2.55	0.04	0.71	0.71	194.38	91.25	113.49	11	0.001	10.999	0.04	0.03	0.10	0.02
H46215	Kerr	6.77		8.17		8.17	8.17			0.00	0.00	0.00	255.31	255.31	255.31	25	10.4	15	0.25		0.93	0.25
H42880	Kerr	7.21		13.81		13.81	13.81			0.00	0.00	0.00	431.56	431.56	431.56	76	61.1	15	0.83		2.30	0.83
H42895	Kerr	7.17		6.37	1.77	3.04	3.04		3.33	0.00	1.27	1.27	199.06	55.31	94.98	18	2.9	15	0.14		0.45	0.14
H42879	Kerr	7.90	6.40	5.16	2.07	2.23	2.18	2.97	2.93	0.05	0.11	0.11	161.25	64.69	68.26	19	4	15	0.14	0.13	0.50	0.01
H42731	Kerr	7.91		5.79	4.66	5.75	5.75		0.04	0.00	1.09	1.09	180.94	145.63	179.67	51	36.4	15	0.50		1.76	0.50
H42752	Kerr	8.26		3.52	2.36	3.49	3.49		0.03	0.00	1.13	1.13	110.00	73.75	109.03	34	18.8	15	0.18		0.58	0.18
H46220	Kerr	7.95		0.45		0.45	0.45			0.03	-0.03	0.00	14.06	14.06	14.06	13	0.001	12.699	0.05		0.16	0.05
H46221	Kerr	8.10		0.10		0.10	0.10			0.01	-0.01	0.00	3.13	3.13	3.13	23	7.8	15	0.23		0.81	0.23
H46221	Kerr	8.10	8.00	0.82	0.04	0.07	0.04	0.80	0.75	0.03	0.00	0.00	25.63	1.25	1.25	118	103	15	1.18	1.16	4.30	0.02
H42695	Kerr	8.30	8.50	1.00	0.88	0.86	0.88	0.08	0.14	0.09	-0.11	0.00	31.25	27.50	27.50	0	0.001	-0.001	0.63	0.66	2.40	0.00
H42683	Kerr	8.60	8.90	1.16	1.00	1.10	1.04	0.05	0.06	0.06	0.04	0.04	36.25	31.25	32.65	0	0.001	-0.001	1.01	1.04	3.80	0.00
58437	Kerr	3.30		8.93	7.67	8.69	8.68	0.19	0.24	0.01	1.01	1.01	279.06	239.69	271.39	0	0.001	-0.001	0.01	0.03	0.10	0.00
H42831	Kerr	4.76		9.05		9.05	9.05			0.00	0.00	0.00	282.81	282.81	282.81	1	0.001	0.899	0.01		0.01	0.01
14523	Kerr	4.70		9.94	8.81	9.85	9.84	0.12	0.09	0.01	1.03	1.03	310.63	275.31	307.65	4	0.001	3.999	0.01	0.03	0.10	0.00
H42816	Kerr	4.56		9.22		9.22	9.22			0.00	0.00	0.00	288.13	288.13	288.13	4	0.001	3.999	0.01		0.01	0.01
H42828	Kerr	4.87		11.15		11.15	11.15			0.00	0.00	0.00	348.44	348.44	348.44	5	0.001	5.099	0.01		0.01	0.01
H42845	Kerr	5.25		7.02		7.02	7.02			0.00	0.00	0.00	219.38	219.38	219.38	5	0.001	4.599	0.01		0.01	0.01
H42832	Kerr	5.30	5.30	10.65	10.30	10.59	10.59	0.05	0.06	0.00	0.29	0.29	332.81	321.88	330.89	7	0.001	6.999	0.01	0.03	0.10	0.00
H42834	Kerr	5.16		6.90		6.90	6.90			0.00	0.00	0.00	215.63	215.63	215.63	5	0.001	4.599	0.01		0.01	0.01
H42841	Kerr	5.47		4.58		4.58	4.58			0.00	0.00	0.00	143.13	143.13	143.13	3	0.001	3.099	0.01		0.01	0.01
H42847	Kerr	5.33		7.03		7.03	7.03			0.00	0.00	0.00	219.69	219.69	219.69	5	0.001	4.899	0.01		0.01	0.01

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
H42818	Kerr	5.80	6.00	8.49	7.83	8.36	8.36	0.08	0.13	0.00	0.53	0.53	265.31	244.69	261.18	6	0.001	5.999	0.01	0.03	0.10	0.00
H42814	Kerr	5.09		6.89		6.89	6.89			0.00	0.00	0.00	215.31	215.31	215.31	5	0.001	5.299	0.01		0.05	0.01
H42815	Kerr	5.90	6.40	7.86	7.49	7.78	7.78	0.07	0.08	0.00	0.29	0.29	245.63	234.06	243.04	6	0.001	5.999	0.01	0.03	0.10	0.00
H42809	Kerr	4.80		7.18		7.18	7.18			0.00	0.00	0.00	224.38	224.38	224.38	6	0.001	5.699	0.01		0.01	0.01
H42837	Kerr	5.70	6.80	8.76	8.31	8.73	8.73	0.05	0.03	0.00	0.42	0.42	273.75	259.69	272.76	7	0.001	6.999	0.01	0.03	0.10	0.00
H42810	Kerr	5.70	6.20	8.33	7.91	8.28	8.28	0.06	0.05	0.00	0.37	0.37	260.31	247.19	258.68	7	0.001	6.999	0.01	0.03	0.10	0.00
H42696	Kerr	5.27		6.37		6.37	6.37			0.00	0.00	0.00	199.06	199.06	199.06	6	0.001	5.499	0.01		0.01	0.01
H42819	Kerr	5.16		6.08		6.08	6.08			0.00	0.00	0.00	190.00	190.00	190.00	6	0.001	5.599	0.01		0.01	0.01
H42843	Kerr	6.05		5.40		5.40	5.40			0.00	0.00	0.00	168.75	168.75	168.75	5	0.001	5.099	0.01		0.01	0.01
H42835	Kerr	5.00		6.87		6.87	6.87			0.00	0.00	0.00	214.69	214.69	214.69	7	0.001	6.499	0.01		0.01	0.01
H42838	Kerr	5.27		6.64		6.64	6.64			0.00	0.00	0.00	207.50	207.50	207.50	6	0.001	6.299	0.01		0.01	0.01
H42844	Kerr	5.70	5.90	7.36	6.63	7.35	7.35	0.03	0.01	0.00	0.72	0.72	230.00	207.19	229.61	7	0.001	6.999	0.01	0.03	0.10	0.00
H42817	Kerr	6.40	6.40	6.20	5.91	6.17	6.17	0.06	0.03	0.00	0.26	0.26	193.75	184.69	192.73	6	0.001	5.999	0.01	0.03	0.10	0.00
H42821	Kerr	6.40	6.30	6.17	5.41	6.09	6.09	0.09	0.08	0.00	0.68	0.68	192.81	169.06	190.23	6	0.001	5.999	0.01	0.03	0.10	0.00
H42848	Kerr	5.60	6.80	7.97	7.74	7.94	7.94	0.06	0.03	0.00	0.20	0.20	249.06	241.88	248.07	8	0.001	7.999	0.01	0.03	0.10	0.00
14507	Kerr	5.80		5.46	4.66	5.44	5.44	0.05	0.02	0.00	0.78	0.78	170.63	145.63	169.85	6	0.001	5.999	0.01	0.03	0.10	0.00
H42846	Kerr	5.70	5.70	7.78	7.28	7.74	7.74	0.04	0.04	0.00	0.46	0.46	243.13	227.50	241.82	9	0.001	8.999	0.01	0.03	0.10	0.00
H42813	Kerr	6.30	6.60	7.32	6.87	7.30	7.30	0.05	0.02	0.00	0.43	0.43	228.75	214.69	228.07	9	0.001	8.999	0.01	0.03	0.10	0.00
H42682	Kerr	6.93		6.62		6.62	6.62			0.00	0.00	0.00	206.88	206.88	206.88	8	0.001	8.199	0.08		0.36	0.08
H42842	Kerr	6.10	5.60	6.25	6.40	6.24	6.40	0.03	0.01	0.00	-0.16	0.00	195.31	200.00	200.00	8	0.001	7.999	0.01	0.03	0.10	0.00
H42812	Kerr	5.34		3.73		3.73	3.73			0.00	0.00	0.00	116.56	116.56	116.56	5	0.001	4.899	0.01		0.01	0.01
H42835	Kerr	6.00	5.80	7.53	6.82	7.50	7.50	0.04	0.03	0.00	0.68	0.68	235.31	213.13	234.32	10	0.001	9.999	0.01	0.03	0.10	0.00
H42675	Kerr	6.24		5.47		5.47	5.47			0.00	0.00	0.00	170.94	170.94	170.94	8	0.001	7.999	0.01		0.10	0.01
H42673	Kerr	6.56		5.19		5.19	5.19			0.00	0.00	0.00	162.19	162.19	162.19	8	0.001	8.099	0.02		0.11	0.02
H42686	Kerr	7.34		5.97		5.97	5.97			0.00	0.00	0.00	186.56	186.56	186.56	10	0.001	9.599	0.03		0.10	0.03
H42671	Kerr	7.47		5.16		5.16	5.16			0.00	0.00	0.00	161.25	161.25	161.25	9	0.001	8.499	0.01		0.10	0.01
H42839	Kerr	6.10	5.80	5.43	5.08	5.42	5.42	0.02	0.01	0.00	0.34	0.34	169.69	158.75	169.29	9	0.001	8.999	0.01	0.03	0.10	0.00
H42668	Kerr	7.30	7.50	5.99	5.90	5.95	5.95	0.01	0.04	0.00	0.05	0.05	187.19	184.38	185.85	11	0.001	10.999	0.04	0.08	0.30	0.00
3008	Kerr	5.90		5.39	4.44	5.34	5.34	0.06	0.05	0.00	0.90	0.90	168.44	138.75	166.73	10	0.001	9.999	0.04	0.03	0.10	0.02
49313	Kerr	5.10		1.18	0.86	1.05	1.01	0.11	0.13	0.04	0.15	0.15	36.88	26.88	31.49	2	0.001	1.999	0.03	0.03	0.10	0.01
H42676	Kerr	7.20	7.20	5.48	5.36	5.39	5.39	0.05	0.09	0.00	0.03	0.03	171.25	167.50	168.28	11	0.001	10.999	0.01	0.03	0.10	0.00
H42666	Kerr	7.40	7.60	4.99	4.50	4.94	4.94	0.01	0.05	0.00	0.44	0.44	155.94	140.63	154.23	11	0.001	10.999	0.06	0.06	0.20	0.00
H46136	Kerr	6.83		6.43		6.43	6.43			0.00	0.00	0.00	200.94	200.94	200.94	14	0.001	14.399	0.07		0.14	0.07
H42672	Kerr	7.30	7.40	5.84	5.15	5.79	5.79	0.05	0.05	0.00	0.64	0.64	182.50	160.94	180.83	13	0.001	12.999	0.08	0.09	0.30	0.00
H42689	Kerr	5.66		3.19		3.19	3.19			0.00	0.00	0.00	99.69	99.69	99.69	7	0.001	7.399	0.01		0.01	0.01
H42663	Kerr	7.42		4.14		4.14	4.14			0.00	0.00	0.00	129.38	129.38	129.38	10	0.001	10.399	0.32		0.01	0.32
3048	Kerr	6.40		3.79	3.17	3.71	3.70	0.09	0.08	0.01	0.53	0.53	118.44	99.06	115.75	10	0.001	9.999	0.08	0.03	0.20	0.06
H42668	Kerr	7.73		4.15		4.15	4.15			0.00	0.00	0.00	129.69	129.69	129.69	12	0.001	11.799	0.01		0.01	0.01
H42685	Kerr	7.80	7.70	4.76	4.34	4.74	4.73	0.06	0.02	0.01	0.39	0.39	148.75	135.63	147.85	15	0.001	14.999	0.06	0.09	0.30	0.00
H42688	Kerr	7.25		7.25		7.25	7.25			0.00	0.00	0.00	226.56	226.56	226.56	25	9.5	15	0.29		1.13	0.29
H42687	Kerr	8.00	7.80	4.99	4.64	4.98	4.97	0.03	0.01	0.01	0.33	0.33	155.94	145.00	155.42	17	2	15	0.10	0.12	0.40	0.00
H42669	Kerr	7.24		9.25		9.25	9.25			0.00	0.00	0.00	289.06	289.06	289.06	33	17.7	15	0.39		1.57	0.39
H42701	Kerr	7.57		3.46		3.46	3.46			0.00	0.00	0.00	108.13	108.13	108.13	14	0.001	14.399	0.18		0.67	0.18
H42699	Kerr	7.90	7.80	3.23	2.82	3.18	3.17	0.03	0.05	0.01	0.35	0.35	100.94	88.13	99.10	14	0.001	13.999	0.06	0.09	0.30	0.00
H42684	Kerr	7.82		3.79		3.79	3.79			0.00	0.00	0.00	118.44	118.44	118.44	18	2.9	15	0.69		2.73	0.69
H42707	Kerr	7.70	7.70	6.22	6.24	6.20	6.24	0.01	0.02	0.00	-0.04	0.00	194.38	195.00	195.00	30	15	15	0.28	0.27	1.00	0.01
H42703	Kerr	7.46		5.86		5.86	5.86			0.00	0.00	0.00	183.13	183.13	183.13	28	13.3	15	0.20		0.18	0.20
H42681	Kerr	7.90	8.00	6.13	6.01	5.99	6.01	0.05	0.14	0.00	-0.02	0.00	191.56	187.81	187.81	32	17	15	0.31	0.34	1.30	0.00
H42693	Kerr	7.70	7.70	2.14	1.92	2.11	2.07	0.01	0.03	0.04	0.15	0.15	66.88	60.00	64.71	13	0.001	12.999	0.11	0.12	0.40	0.00
H42694	Kerr	6.57		2.54		2.54	2.54			0.00	0.00	0.00	79.38	79.38	79.38	16	1.4	15	0.15		0.48	0.15

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
H42680	Kerr	7.80		5.73		5.73	5.73			0.00	0.00	0.00	179.06	179.06	179.06	37	22.4	15	0.34		1.30	0.34
H42697	Kerr	7.70	7.70	4.34	4.05	4.27	4.27	0.05	0.07	0.00	0.22	0.22	135.63	126.56	133.31	28	13	15	0.23	0.26	1.00	0.00
H42704	Kerr	8.00	8.00	5.40	5.21	5.39	5.39	0.01	0.01	0.00	0.18	0.18	168.75	162.81	168.32	36	21	15	0.37	0.39	1.40	0.00
H42710	Kerr	8.26		5.58		5.58	5.58			0.00	0.00	0.00	174.38	174.38	174.38	42	26.5	15	0.44		1.76	0.44
H42706	Kerr	8.20		3.62		3.62	3.62			0.00	0.00	0.00	113.13	113.13	113.13	29	14.3	15	0.19		0.72	0.19
H42664	Kerr	7.70	7.80	3.73	3.69	3.67	3.69	0.02	0.06	0.01	-0.03	0.00	116.56	115.31	115.31	32	17	15	0.20	0.22	0.80	0.00
H42702	Kerr	7.80	7.90	4.55	4.32	4.50	4.50	0.01	0.05	0.00	0.18	0.18	142.19	135.00	140.50	44	29	15	0.46	0.46	1.70	0.00
H42708	Kerr	7.84		5.35		5.35	5.35			0.00	0.00	0.00	167.19	167.19	167.19	53	37.8	15	0.61		1.75	0.61
H42674	Kerr	8.20	8.10	4.32	3.98	4.15	4.14	0.01	0.17	0.01	0.16	0.16	135.00	124.38	129.51	51	36	15	0.54	0.54	2.00	0.00
H42709	Kerr	8.20	8.10	5.32	5.37	5.30	5.37	0.03	0.02	0.00	-0.07	0.00	166.25	167.81	167.81	70	55	15	0.80	0.76	2.80	0.04
49852	Kerr	8.30		6.16	5.77	6.15	6.13	0.03	0.01	0.02	0.36	0.36	192.50	180.31	191.44	80	65	15	0.98	0.97	3.50	0.01
H42678	Kerr	7.10	8.20	4.85	4.66	4.78	4.78	0.04	0.07	0.00	0.12	0.12	151.56	145.63	149.24	68	53	15	0.78	0.74	2.70	0.04
H42670	Kerr	7.90	7.90	3.14	3.12	3.12	3.12	0.01	0.02	0.01	-0.01	0.00	98.13	97.50	97.50	45	30	15	0.50	0.51	1.90	0.00
H42698	Kerr	8.49		3.66		3.66	3.66			0.00	0.00	0.00	114.38	114.38	114.38	69	54.1	15	0.60		0.56	0.60
H42690	Kerr	8.40	8.50	3.23	2.85	3.11	3.10	0.11	0.12	0.01	0.25	0.25	100.94	89.06	96.98	59	44	15	0.55	0.57	2.10	0.00
H42691	Kerr	8.47		3.65		3.65	3.65			0.00	0.00	0.00	114.06	114.06	114.06	85	70.4	15	0.75		3.05	0.75
H42677	Kerr	8.69		2.17		2.17	2.17			0.00	0.00	0.00	67.81	67.81	67.81	66	51.1	15	0.62		2.06	0.62
H42665	Kerr	8.74		1.82		1.82	1.82			0.00	0.00	0.00	56.88	56.88	56.88	63	47.8	15	0.56		2.24	0.56
3027	Kerr	8.70		0.31	0.33	0.29	0.33	0.02	0.02	0.01	-0.05	0.00	9.69	10.31	10.31	32	17	15	0.46	0.46	1.70	0.00
H46138	Kerr	8.26		0.30		0.30	0.30			0.03	-0.03	0.00	9.38	9.38	9.38	259	244.4	15	2.64		9.47	2.64
H46137	Kerr	9.00	8.60	0.06	0.03	0.05	0.03	0.07	0.01	0.05	-0.03	0.00	1.88	0.94	0.94	100	85	15	1.04	1.06	3.90	0.00
H46142	Kerr	9.10	8.70	0.05	0.03	0.02	0.03	0.05	0.03	0.07	-0.08	0.00	1.56	0.94	0.94	123	108	15	1.46	1.42	5.20	0.04
H46144	Kerr	9.00	8.60	0.06	0.02	0.02	0.02	0.04	0.04	0.06	-0.06	0.00	1.88	0.63	0.63	128	113	15	1.32	1.26	4.60	0.06
H46139	Kerr	8.80	8.50	0.05	0.02	0.00	0.02	0.06	0.05	0.06	-0.08	0.00	1.56	0.63	0.63	142	127	15	1.45	1.47	5.40	0.00
H46143	Kerr	9.18		0.04		0.04	0.04			0.06	-0.06	0.00	1.25	1.25	1.25	138	123.4	15	1.36		4.70	1.36
H46141	Kerr	9.11		0.06		0.06	0.06			0.07	-0.07	0.00	1.88	1.88	1.88	176	160.8	15	1.78		6.62	1.78
X66086	Kerr	8.79		0.02	0.03	-0.01	0.03		0.03	0.01	-0.05	0.00	0.63	0.94	0.94	482	467.4	15	5.17	5.08	18.60	0.09
X66087	Kerr	9.13		0.03	0.03	0.00	0.03		0.03	0.04	-0.07	0.00	0.94	0.94	0.94	171	155.5	15	1.13	0.94	3.46	0.19
X66116	Kerr	9.26		0.01	0.02	-0.01	0.02		0.02	0.03	-0.06	0.00	0.31	0.63	0.63	224	208.5	15	1.74	1.67	6.13	0.07
X66117	Kerr	9.15		0.21	0.12	0.19	0.17		0.02	0.02	0.05	0.05	6.56	3.75	5.27	240	224.9	15	2.06	1.96	7.20	0.10
X66217	Kerr	9.34		0.13	0.07	0.10	0.07		0.03	0.05	-0.02	0.00	4.06	2.19	2.19	258	242.6	15	1.70	1.65	6.06	0.05
X63932	Kerr	6.65		6.91	6.28	6.86	6.86		0.05	0.00	0.58	0.58	215.94	196.25	214.36	7	0.001	6.799	0.01	0.01	0.02	0.00
X63953	Kerr	7.24		6.29	5.46	6.25	6.25		0.04	0.00	0.79	0.79	196.56	170.63	195.29	19	3.6	15	0.05	0.04	0.15	0.01
X63972	Kerr	8.83		0.75	0.52	0.71	0.68		0.04	0.03	0.16	0.16	23.44	16.25	21.40	63	47.8	15	0.37	0.33	1.21	0.04
X63980	Kerr	6.14		11.35	10.17	11.31	11.31		0.04	0.00	1.14	1.14	354.69	317.81	353.42	13	0.001	13.299	0.03	0.02	0.09	0.01
X67079	Kerr	8.59		10.27	9.23	10.25	10.25		0.02	0.00	1.02	1.02	320.94	288.44	320.30	86	70.9	15	0.95	0.90	3.29	0.05
X66229	Kerr	8.68		2.44	2.43	2.42	2.43		0.02	0.00	-0.01	0.00	76.25	75.94	75.94	224	208.5	15	1.84	1.67	6.11	0.17
X66249	Kerr	8.58		4.27	3.85	4.26	4.26		0.01	0.00	0.41	0.41	133.44	120.31	133.10	143	127.7	15	0.87	0.78	2.85	0.09
X66250	Kerr	8.94		2.31	2.20	2.30	2.30		0.01	0.00	0.10	0.10	72.19	68.75	71.82	187	171.9	15	1.46	1.33	4.89	0.13
X66286	Kerr	9.13		1.50	1.20	1.49	1.48		0.01	0.01	0.28	0.28	46.88	37.50	46.39	182	166.8	15	1.33	1.28	4.70	0.05
X66287	Kerr	9.07		2.11	1.89	2.10	2.10		0.01	0.00	0.21	0.21	65.94	59.06	65.56	224	208.5	15	1.24	1.07	3.91	0.17
X66304	Kerr	8.97		2.10	0.99	2.03	2.03		0.07	0.00	1.04	1.04	65.63	30.94	63.33	231	216.1	15	1.03	0.97	3.57	0.06
X66305	Kerr	9.06		1.16	0.94	1.16	1.15		0.01	0.01	0.21	0.21	36.25	29.38	35.79	200	184.5	15	1.24	1.16	4.25	0.08
X66332	Kerr	8.73		4.16	3.60	4.15	4.15		0.01	0.00	0.55	0.55	130.00	112.50	129.62	197	182	15	3.28	2.28	8.36	1.00
X66338	Kerr	8.80		3.15	2.94	3.14	3.14		0.01	0.00	0.20	0.20	98.44	91.88	98.09	279	264	15	6.72	3.25	11.90	3.47
X66340	Kerr	9.05		0.84	0.71	0.83	0.81		0.01	0.02	0.10	0.10	26.25	22.19	25.41	255	240.1	15	1.52	1.16	4.25	0.36
X66346	Kerr	9.04		1.21	0.91	1.20	1.19		0.01	0.01	0.28	0.28	37.81	28.44	37.31	212	197.1	15	1.38	1.00	3.67	0.38
X66347	Kerr	8.97		1.33	1.03	1.32	1.31		0.01	0.01	0.28	0.28	41.56	32.19	41.07	254	238.8	15	1.33	1.11	4.05	0.22
X66373	Kerr	8.54		5.86	5.26	5.85	5.85		0.01	0.00	0.59	0.59	183.13	164.38	182.76	200	184.5	15	2.72	2.34	8.59	0.38
X67132	Kerr	6.83		5.16	4.54	5.14	5.14		0.02	0.00	0.60	0.60	161.25	141.88	160.59	11	0.001	11.299	0.01	0.01	0.03	0.00

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
X67133	Kerr	7.45		2.77	2.53	2.66	2.66		0.11	0.00	0.13	0.13	86.56	79.06	83.10	17	1.6	15	0.06	0.02	0.08	0.04
X67143	Kerr	8.17		1.02	0.81	0.97	0.97		0.05	0.00	0.16	0.16	31.88	25.31	30.16	30	14.9	15	0.13	0.07	0.26	0.06
X67144	Kerr	8.65		1.25	1.06	1.22	1.22		0.03	0.00	0.16	0.16	39.06	33.13	38.02	145	130.2	15	0.84	0.71	2.62	0.13
X67174	Kerr	9.21		1.64	1.27	1.62	1.62		0.02	0.00	0.35	0.35	51.25	39.69	50.52	173	158	15	1.24	1.11	4.08	0.13
X67175	Kerr	8.64		3.17	2.94	3.14	3.14		0.03	0.00	0.20	0.20	99.06	91.88	98.08	88	72.9	15	0.82	0.71	2.59	0.11
X67268	Kerr	8.59		5.87	4.94	5.84	5.84		0.03	0.00	0.90	0.90	183.44	154.38	182.47	90	74.6	15	1.01	0.89	3.26	0.12
X67292	Kerr	9.34		1.30	1.09	1.29	1.28		0.01	0.01	0.19	0.19	40.63	34.06	39.91	155	140.3	15	1.11	0.95	3.47	0.16
X67297	Kerr	9.53		0.20	0.15	0.17	0.15		0.03	0.03	-0.01	0.00	6.25	4.69	4.69	128	113.1	15	0.90	0.83	3.05	0.07
X67322	Kerr	8.31		6.48	5.97	6.47	6.47		0.01	0.00	0.50	0.50	202.50	186.56	202.16	48	33.2	15	0.56	0.50	1.82	0.06
X67347	Kerr	9.38		0.51	0.44	0.47	0.44		0.04	0.05	-0.02	0.00	15.94	13.75	13.75	179	164.3	15	1.32	1.18	4.33	0.14
X67354	Kerr	8.70		0.03	0.02	-0.05	0.02		0.08	0.01	-0.08	0.00	0.94	0.63	0.63	242	227.4	15	1.19	1.00	3.68	0.19
X67374	Kerr	8.79		5.09	4.28	5.08	5.08		0.01	0.00	0.80	0.80	159.06	133.75	158.71	77	62	15	0.74	0.64	2.33	0.10
X67396	Kerr	8.99		4.01	3.41	4.00	4.00		0.01	0.00	0.59	0.59	125.31	106.56	124.95	90	74.6	15	0.69	0.57	2.08	0.12
X67432	Kerr	8.89		5.76	5.10	5.72	5.72		0.04	0.00	0.62	0.62	180.00	159.38	178.72	98	83	15	1.02	0.92	3.37	0.10
X67438	Kerr	9.18		3.26	2.53	3.17	3.17		0.09	0.00	0.64	0.64	101.88	79.06	99.00	120	104.9	15	0.89	0.76	2.78	0.13
S156638	Kerr	5.82		5.90	5.58	5.88	5.88		0.02	0.00	0.30	0.30	184.38	174.38	183.74	4	0.001	3.999	0.02	0.00	0.01	0.02
S156644	Kerr	5.67		5.52	4.79	5.50	5.50		0.02	0.00	0.71	0.71	172.50	149.69	171.85	5	0.001	4.899	0.01	0.01	0.04	0.00
S156654	Kerr	5.73		7.47	6.73	7.44	7.44		0.03	0.00	0.71	0.71	233.44	210.31	232.49	8	0.001	7.699	0.02	0.01	0.02	0.01
S156683	Kerr	8.27		4.90	4.55	4.85	4.85		0.05	0.00	0.30	0.30	153.13	142.19	151.54	24	9.2	15	0.16	0.13	0.48	0.03
S156689	Kerr	6.61		7.18	7.15	7.16	7.16		0.02	0.00	0.01	0.01	224.38	223.44	223.73	8	0.001	7.899	0.03	0.02	0.08	0.01
S156694	Kerr	6.48		7.12	6.53	7.11	7.11		0.01	0.00	0.58	0.58	222.50	204.06	222.17	8	0.001	7.699	0.01	0.00	0.01	0.01
S156698	Kerr	9.18		0.09	0.07	0.04	0.07		0.05	0.09	-0.12	0.00	2.81	2.19	2.19	194	178.9	15	1.79	1.59	5.82	0.20
S156709	Kerr	8.49		5.51	4.99	5.49	5.49		0.02	0.00	0.50	0.50	172.19	155.94	171.54	43	27.8	15	0.48	0.31	1.12	0.17
S156710	Kerr	9.12		0.26	0.12	0.18	0.12		0.08	0.11	-0.05	0.00	8.13	3.75	3.75	177	162.3	15	1.54	1.27	4.66	0.27
S156717	Kerr	6.54		4.96	4.12	4.91	4.91		0.05	0.00	0.79	0.79	155.00	128.75	153.42	14	0.001	14.299	0.12	0.03	0.10	0.09
S156723	Kerr	7.59		6.10	5.47	6.06	6.06		0.04	0.00	0.59	0.59	190.63	170.94	189.36	65	49.5	15	0.89	0.76	2.80	0.13
S156734	Kerr	6.90		4.74	3.88	4.73	4.73		0.01	0.00	0.85	0.85	148.13	121.25	147.80	35	20	15	0.44	0.32	1.17	0.12
S156743	Kerr	8.40		3.13	2.60	3.12	3.12		0.01	0.00	0.52	0.52	97.81	81.25	97.46	65	50.1	15	0.49	0.36	1.31	0.13
S156752	Kerr	8.79		2.35	2.11	2.34	2.34		0.01	0.00	0.23	0.23	73.44	65.94	73.08	137	121.5	15	1.13	0.88	3.21	0.25
S156759	Kerr	9.31		0.02	0.03	0.01	0.03		0.01	0.02	-0.04	0.00	0.63	0.94	0.94	102	86.8	15	0.52	0.38	1.39	0.14
S156769	Kerr	6.75		6.20	5.39	6.18	6.18		0.02	0.00	0.79	0.79	193.75	168.44	193.11	7	0.001	7.199	0.01	0.01	0.04	0.00
S156780	Kerr	9.44		0.10	0.07	0.09	0.07		0.01	0.03	-0.01	0.00	3.13	2.19	2.19	38	22.5	15	0.43	0.34	1.23	0.09
S156784	Kerr	8.39		6.72	6.60	6.71	6.71		0.01	0.00	0.11	0.11	210.00	206.25	209.66	74	59	15	0.89	0.73	2.69	0.16
S156790	Kerr	7.91		6.47	5.51	6.44	6.44		0.03	0.00	0.93	0.93	202.19	172.19	201.23	30	15.1	15	0.34	0.26	0.94	0.08
S156800	Kerr	9.11		0.46	0.40	0.45	0.42		0.01	0.03	0.02	0.02	14.38	12.50	13.08	172	157.2	15	1.75	1.48	5.41	0.27
S156810	Kerr	9.59		0.08	0.05	0.08	0.05		0.01	0.03	0.00	0.00	2.50	1.56	1.56	29	13.8	15	0.34	0.29	1.08	0.05
S156824	Kerr	8.99		2.04	1.77	1.98	1.98		0.06	0.00	0.21	0.21	63.75	55.31	61.82	120	104.9	15	0.98	0.82	3.00	0.16
S156829	Kerr	8.85		4.77	4.44	4.74	4.74		0.03	0.00	0.30	0.30	149.06	138.75	148.10	87	71.7	15	1.17	0.94	3.44	0.23
S156835	Kerr	6.66		9.37	5.51	5.93	5.93		3.44	0.00	0.42	0.42	292.81	172.19	185.30	6	0.001	5.599	0.01	0.02	0.06	0.00
S156847	Kerr	7.88		7.98	3.42	3.77	3.77		4.21	0.00	0.35	0.35	249.38	106.88	117.80	16	0.6	15	0.06	0.04	0.14	0.02
S154641	Kerr	8.49		0.19	0.09	0.15	0.09		0.04	0.07	-0.01	0.00	5.94	2.81	2.81	111	95.6	15	0.65	0.18	0.66	0.47
S154644	Kerr	8.74		1.67	1.26	1.65	1.65		0.02	0.00	0.39	0.39	52.19	39.38	51.50	31	15.8	15	0.23	0.14	0.50	0.09
S154647	Kerr	8.55		2.46	1.92	2.44	2.44		0.02	0.00	0.52	0.52	76.88	60.00	76.18	126	111.3	15	1.06	0.88	3.21	0.18
S154955	Kerr	9.12		1.16	0.91	1.15	1.14		0.01	0.01	0.23	0.23	36.25	28.44	35.78	122	107.4	15	0.81	0.58	2.13	0.23
S154956	Kerr	9.07		1.93	1.68	1.93	1.92		0.01	0.00	0.24	0.24	60.31	52.50	60.07	110	94.7	15	1.10	0.79	2.91	0.31
S154961	Kerr	9.23		0.85	0.68	0.84	0.83		0.01	0.01	0.15	0.15	26.56	21.25	25.99	107	92.1	15	0.87	0.64	2.36	0.23
S154962	Kerr	9.16		0.68	0.51	0.67	0.66		0.01	0.01	0.15	0.15	21.25	15.94	20.57	106	90.5	15	0.91	0.86	3.14	0.05
S154973	Kerr	9.09		1.17	0.93	1.16	1.15		0.01	0.01	0.22	0.22	36.56	29.06	36.07	122	107.4	15	1.31	1.21	4.45	0.10
S154974	Kerr	8.56		1.61	1.21	1.60	1.60		0.01	0.00	0.39	0.39	50.31	37.81	49.91	101	85.5	15	0.57	0.53	1.93	0.04
S154653	Kerr	8.90		1.95	1.74	1.94	1.94		0.01	0.00	0.20	0.20	60.94	54.38	60.56	32	17.2	15	0.20	0.13	0.46	0.07

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
S154666	Kerr	9.31		0.09	0.11	0.05	0.11		0.04	0.04	-0.10	0.00	2.81	3.44	3.44	75	60.3	15	0.48	0.34	1.26	0.14
S154696	Kerr	8.52		4.08	3.73	4.07	4.07		0.01	0.00	0.34	0.34	127.50	116.56	127.17	38	22.5	15	0.21	0.14	0.51	0.07
S154697	Kerr	8.00		6.73	5.74	6.72	6.72		0.01	0.00	0.98	0.98	210.31	179.38	209.98	16	1.3	15	0.09	0.05	0.19	0.04
S154739	Kerr	8.88		3.56	2.81	3.55	3.55		0.01	0.00	0.74	0.74	111.25	87.81	110.90	72	56.6	15	0.60	0.49	1.79	0.11
S154746	Kerr	9.21		1.55	1.20	1.54	1.54		0.01	0.00	0.34	0.34	48.44	37.50	48.05	168	153.4	15	1.54	1.39	5.11	0.15
S154766	Kerr	9.05		0.67	0.56	0.58	0.57		0.09	0.01	0.01	0.01	20.94	17.50	17.95	131	116.4	15	0.55	0.49	1.81	0.06
S154788	Kerr	8.21		6.00	4.83	5.93	5.93		0.07	0.00	1.10	1.10	187.50	150.94	185.30	23	7.5	15	0.19	0.14	0.51	0.05
S154798	Kerr	9.28		0.93	0.70	0.92	0.92		0.01	0.00	0.22	0.22	29.06	21.88	28.62	129	114.4	15	0.84	0.69	2.52	0.15
S154805	Kerr	9.36		5.90	4.52	5.89	5.89		0.01	0.00	1.37	1.37	184.38	141.25	184.04	84	69.2	15	0.69	0.56	2.05	0.13
S154841	Kerr	8.67		5.53	4.94	5.46	5.46		0.07	0.00	0.52	0.52	172.81	154.38	170.61	67	52.3	15	0.64	0.53	1.95	0.11
S154857	Kerr	7.59		7.81	6.47	7.52	7.52		0.29	0.00	1.05	1.05	244.06	202.19	234.99	12	0.001	11.999	0.11	0.05	0.19	0.06
S154858	Kerr	8.11		0.78	0.59	0.71	0.70		0.07	0.01	0.11	0.11	24.38	18.44	21.92	59	43.8	15	0.57	0.43	1.59	0.14
S154871	Kerr	8.22		0.38	0.29	0.33	0.29		0.05	0.04	0.00	0.00	11.88	9.06	9.19	189	174.1	15	0.85	0.76	2.79	0.09
S154872	Kerr	7.93		9.47	6.70	9.14	9.14		0.33	0.00	2.44	2.44	295.94	209.38	285.61	74	58.6	15	0.50	0.40	1.46	0.10
S154884	Kerr	8.00		5.65	3.69	5.64	5.64		0.01	0.00	1.95	1.95	176.56	115.31	176.23	57	41.5	15	0.48	0.40	1.46	0.08
S156852	Kerr	4.90		8.07	6.85	8.02	8.02		0.05	0.00	1.17	1.17	252.19	214.06	250.61	3	0.001	2.999	0.01	0.00	0.01	0.01
S156860	Kerr	5.07		7.88	6.47	7.84	7.84		0.04	0.00	1.37	1.37	246.25	202.19	244.99	10	0.001	10.299	0.02	0.00	0.01	0.02
S156877	Kerr	5.08		7.48	6.59	7.46	7.46		0.02	0.00	0.87	0.87	233.75	205.94	233.11	7	0.001	6.499	0.03	0.01	0.03	0.02
S156889	Kerr	8.13		6.56	5.07	6.54	6.54		0.02	0.00	1.47	1.47	205.00	158.44	204.36	60	45.3	15	0.57	0.48	1.75	0.09
S156900	Kerr	6.48		9.69	8.65	9.57	9.57		0.12	0.00	0.92	0.92	302.81	270.31	299.05	12	0.001	12.099	0.06	0.02	0.09	0.04
S156913	Kerr	8.01		8.87	8.42	8.78	8.78		0.09	0.00	0.36	0.36	277.19	263.13	274.36	37	22.2	15	0.38	0.33	1.22	0.05
S156922	Kerr	5.56		6.64	6.22	6.60	6.60		0.04	0.00	0.38	0.38	207.50	194.38	206.24	8	0.001	7.999	0.03	0.00	0.01	0.03
S156942	Kerr	7.06		6.63	6.13	6.56	6.56		0.07	0.00	0.43	0.43	207.19	191.56	204.98	10	0.001	9.799	0.04	0.02	0.09	0.02
S156970	Kerr	5.58		5.40	4.85	5.39	5.39		0.01	0.00	0.54	0.54	168.75	151.56	168.42	13	0.001	12.599	0.04	0.00	0.01	0.04
S156983	Kerr	4.90		8.82	7.34	8.81	8.81		0.01	0.00	1.47	1.47	275.63	229.38	275.30	5	0.001	4.999	0.01	0.01	0.02	0.00
S156999	Kerr	9.21		1.26	1.08	1.25	1.25		0.01	0.00	0.17	0.17	39.38	33.75	38.93	176	161.4	15	1.41	1.20	4.40	0.21
S157030	Kerr	7.31		9.29	2.92	9.26	9.26		0.03	0.00	6.34	6.34	290.31	91.25	289.36	16	0.6	15	0.15	0.08	0.30	0.07
S157047	Kerr	5.36		8.31	6.87	8.26	8.26		0.05	0.00	1.39	1.39	259.69	214.69	258.11	7	0.001	6.799	0.03	0.00	0.01	0.03
S157055	Kerr	9.02		0.54	0.41	0.49	0.48		0.05	0.01	0.07	0.07	16.88	12.81	14.85	164	148.7	15	1.36	1.23	4.52	0.13
S157066	Kerr	6.36		7.59	6.57	7.56	7.56		0.03	0.00	0.99	0.99	237.19	205.31	236.24	8	0.001	7.499	0.01	0.00	0.01	0.01
S157078	Kerr	7.55		5.38	3.84	5.36	5.36		0.02	0.00	1.52	1.52	168.13	120.00	167.48	25	9.6	15	0.34	0.11	0.42	0.23
S157082	Kerr	8.61		1.24	0.74	1.17	1.17		0.07	0.00	0.43	0.43	38.75	23.13	36.47	108	92.9	15	0.35	0.27	0.99	0.08
S157109	Kerr	7.84		1.08	0.70	1.06	1.06		0.02	0.00	0.36	0.36	33.75	21.88	33.01	30	14.9	15	0.82	0.66	2.41	0.16
S157122	Kerr	8.33		1.16	0.72	1.15	1.15		0.01	0.00	0.43	0.43	36.25	22.50	35.81	56	40.5	15	1.37	1.15	4.22	0.22
S157132	Kerr	6.50		4.49	2.83	4.48	4.48		0.01	0.00	1.65	1.65	140.31	88.44	139.92	20	4.8	15	0.34	0.24	0.87	0.10
S157181	Kerr	6.29		9.61	7.20	9.58	9.58		0.03	0.00	2.38	2.38	300.31	225.00	299.36	10	0.001	9.799	0.07	0.05	0.17	0.02
S157212	Kerr	7.59		3.55	2.62	3.54	3.54		0.01	0.00	0.92	0.92	110.94	81.88	110.57	23	7.6	15	0.23	0.17	0.62	0.06
S157239	Kerr	8.25		3.91	2.66	3.89	3.89		0.02	0.00	1.23	1.23	122.19	83.13	121.51	49	33.5	15	0.38	0.30	1.11	0.08
S157266	Kerr	8.69		3.27	2.50	3.26	3.26		0.01	0.00	0.76	0.76	102.19	78.13	101.82	82	67.4	15	1.46	1.23	4.51	0.23
S157287	Kerr	7.50		6.54	5.17	6.53	6.53		0.01	0.00	1.36	1.36	204.38	161.56	204.04	26	11.1	15	0.29	0.21	0.78	0.08
S157300	Kerr	8.19		7.37	6.78	7.35	7.35		0.02	0.00	0.57	0.57	230.31	211.88	229.67	42	26.7	15	0.51	0.45	1.65	0.06
S154899	Kerr	7.55		0.92	0.87	0.87	0.87		0.05	0.02	-0.02	0.00	28.75	27.19	27.19	17	2.3	15	0.11	0.05	0.19	0.06
S154900	Kerr	7.89		4.24	3.43	4.22	4.22		0.02	0.00	0.79	0.79	132.50	107.19	131.84	17	1.8	15	0.04	0.04	0.13	0.00
S154925	Kerr	7.73		3.97	3.02	3.94	3.94		0.03	0.00	0.92	0.92	124.06	94.38	123.08	19	4.3	15	0.08	0.06	0.23	0.02
S154926	Kerr	7.22		3.86	2.67	3.80	3.80		0.06	0.00	1.13	1.13	120.63	83.44	118.71	20	5.4	15	0.11	0.06	0.23	0.05
S154942	Kerr	8.26		0.76	0.63	0.73	0.71		0.03	0.02	0.08	0.08	23.75	19.69	22.10	110	95.4	15	0.83	0.73	2.67	0.10
S154943	Kerr	7.61		0.45	0.36	0.41	0.36		0.04	0.05	0.00	0.00	14.06	11.25	11.34	77	62.1	15	0.66	0.52	1.89	0.14
S155508	Kerr	8.46		1.96	1.64	1.92	1.92		0.04	0.00	0.28	0.28	61.25	51.25	59.89	31	16.3	15	0.48	0.33	1.21	0.15
S155509	Kerr	9.26		0.15	0.09	0.14	0.10		0.01	0.04	0.01	0.01	4.69	2.81	3.06	55	39.6	15	0.40	0.29	1.07	0.11
S155017	Kerr	8.98		3.08	2.64	3.04	3.04		0.04	0.00	0.40	0.40	96.25	82.50	94.94	107	91.8	15	0.91	0.75	2.76	0.16

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
S155048	Kerr	8.47		4.54	3.94	4.53	4.53		0.01	0.00	0.59	0.59	141.88	123.13	141.52	40	24.5	15	0.35	0.22	0.79	0.13
S155067	Kerr	7.60		3.46	3.15	3.45	3.45		0.01	0.00	0.30	0.30	108.13	98.44	107.76	26	10.8	15	0.13	0.09	0.32	0.04
S155075	Kerr	8.02		5.62	5.28	5.60	5.60		0.02	0.00	0.32	0.32	175.63	165.00	174.97	22	6.5	15	0.21	0.14	0.53	0.07
S155098	Kerr	6.91		5.78	4.97	5.77	5.77		0.01	0.00	0.80	0.80	180.63	155.31	180.29	15	0.4	15	0.10	0.05	0.20	0.05
S155112	Kerr	7.53		6.69	3.83	4.69	4.68		2.00	0.01	0.85	0.85	209.06	119.69	146.18	22	7.2	15	0.18	0.16	0.59	0.02
S155119	Kerr	9.09		0.05	0.02	0.01	0.02		0.04	0.04	-0.05	0.00	1.56	0.63	0.63	101	85.5	15	0.93	0.73	2.69	0.20
S155125	Kerr	7.06		8.16	4.21	5.13	5.12		3.03	0.01	0.91	0.91	255.00	131.56	160.03	12	0.001	11.899	0.21	0.02	0.07	0.19
S155147	Kerr	7.72		6.20	3.00	4.79	4.79		1.41	0.00	1.79	1.79	193.75	93.75	149.64	15	0.4	15	0.16	0.13	0.48	0.03
S157321	Kerr	5.17		8.87	7.99	8.84	8.84		0.03	0.00	0.85	0.85	277.19	249.69	276.23	7	0.001	6.799	0.01	0.02	0.06	0.00
S157345	Kerr	8.85		0.66	0.53	0.57	0.55		0.09	0.02	0.02	0.02	20.63	16.56	17.26	265	250.2	15	1.66	1.44	5.27	0.22
S157360	Kerr	7.86		2.02	1.30	2.00	1.99		0.02	0.01	0.69	0.69	63.13	40.63	62.33	86	71.3	15	0.44	0.33	1.22	0.11
S157388	Kerr	6.80		5.72	5.47	5.66	5.66		0.06	0.00	0.19	0.19	178.75	170.94	176.86	14	0.001	13.899	0.18	0.11	0.41	0.07
S157426	Kerr	7.56		8.11	5.09	6.04	6.04		2.07	0.00	0.95	0.95	253.44	159.06	188.72	24	8.7	15	0.30	0.22	0.79	0.08
S157460	Kerr	7.08		6.29	2.22	2.95	2.95		3.34	0.00	0.73	0.73	196.56	69.38	92.05	8	0.001	8.299	0.01	0.02	0.06	0.00
S157484	Kerr	8.03		6.97	4.45	4.72	4.72		2.25	0.00	0.27	0.27	217.81	139.06	147.38	81	66.3	15	1.16	0.96	3.51	0.20
H42636	Kerr	4.72		4.30		4.30	4.30			0.00	0.00	0.00	134.38	134.38	134.38	0	0.001	0.099	0.01		0.01	0.01
H42628	Kerr	5.10	5.10	1.14	0.72	1.14	1.10	0.37	0.01	0.03	0.38	0.38	35.63	22.50	34.51	-1	0.001	-1.001	0.02	0.03	0.10	0.00
H42630	Kerr	5.50	5.70	1.94	1.82	1.90	1.87	0.08	0.04	0.03	0.05	0.05	60.63	56.88	58.49	2	0.001	1.999	0.01	0.03	0.10	0.00
H42623	Kerr	5.90	6.60	4.49	4.32	4.46	4.46	0.07	0.03	0.00	0.14	0.14	140.31	135.00	139.25	5	0.001	4.999	0.01	0.03	0.10	0.00
H42631	Kerr	5.18		2.03		2.03	2.03			0.00	0.00	0.00	63.44	63.44	63.44	4	0.001	3.899	0.01		0.02	0.01
H42624	Kerr	6.06		3.33		3.33	3.33			0.00	0.00	0.00	104.06	104.06	104.06	7	0.001	7.299	0.01		0.01	0.01
H42659	Kerr	5.26		2.75		2.75	2.75			0.00	0.00	0.00	85.94	85.94	85.94	6	0.001	6.099	0.01		0.01	0.01
H42652	Kerr	7.10	7.00	4.73	4.31	4.72	4.72	0.04	0.01	0.00	0.41	0.41	147.81	134.69	147.38	12	0.001	11.999	0.03	0.05	0.20	0.00
H42643	Kerr	6.40	6.40	2.50	2.38	2.46	2.44	0.03	0.04	0.02	0.06	0.06	78.13	74.38	76.36	8	0.001	7.999	0.01	0.03	0.10	0.00
H42641	Kerr	6.70	6.60	2.65	2.39	2.63	2.61	0.05	0.02	0.02	0.22	0.22	82.81	74.69	81.69	9	0.001	8.999	0.01	0.03	0.10	0.00
H42657	Kerr	7.31		2.79		2.79	2.79			0.00	0.00	0.00	87.19	87.19	87.19	11	0.001	10.499	0.06		0.08	0.06
H42637	Kerr	6.50	6.80	2.11	1.83	2.10	2.08	0.03	0.01	0.02	0.25	0.25	65.94	57.19	64.90	8	0.001	7.999	0.01	0.03	0.10	0.00
H42639	Kerr	7.30	7.20	3.25	3.23	3.23	3.23	0.05	0.02	0.01	-0.01	0.00	101.56	100.94	100.94	13	0.001	12.999	0.05	0.06	0.20	0.00
H42625	Kerr	6.80	7.20	2.78	2.57	2.65	2.64	0.14	0.13	0.01	0.07	0.07	86.88	80.31	82.39	11	0.001	10.999	0.01	0.03	0.20	0.00
H42648	Kerr	7.30	7.30	2.51	2.14	2.49	2.47	0.05	0.02	0.02	0.33	0.33	78.44	66.88	77.24	11	0.001	10.999	0.03	0.05	0.20	0.00
H42632	Kerr	6.80	7.00	2.00	1.72	1.99	1.97	0.19	0.01	0.02	0.25	0.25	62.50	53.75	61.67	9	0.001	8.999	0.01	0.03	0.20	0.00
H42653	Kerr	8.23		4.22		4.22	4.22			0.00	0.00	0.00	131.88	131.88	131.88	20	4.8	15	0.12		0.32	0.12
H42627	Kerr	5.39		0.89		0.89	0.89			0.00	0.00	0.00	27.81	27.81	27.81	5	0.001	4.999	0.01		0.02	0.01
H42642	Kerr	4.86		1.02		1.02	1.02			0.01	-0.01	0.00	31.88	31.88	31.88	6	0.001	6.099	0.01		0.03	0.01
H42645	Kerr	7.60	7.60	2.40	2.02	2.39	2.36	0.02	0.01	0.03	0.34	0.34	75.00	63.13	73.87	15	0.001	14.999	0.17	0.07	0.30	0.10
H42658	Kerr	6.40	6.10	0.83	0.75	0.79	0.75	0.08	0.04	0.05	-0.01	0.00	25.94	23.44	23.44	5	0.001	4.999	0.11	0.03	0.10	0.09
H42644	Kerr	7.43		5.69		5.69	5.69			0.00	0.00	0.00	177.81	177.81	177.81	40	24.6	15	0.31		0.94	0.31
H42656	Kerr	7.30	7.50	1.67	1.61	1.65	1.62	0.03	0.02	0.03	0.01	0.01	52.19	50.31	50.64	12	0.001	11.999	0.02	0.05	0.20	0.00
H42621	Kerr	7.50	8.00	3.63	3.57	3.63	3.62	0.01	0.01	0.01	0.05	0.05	113.44	111.56	113.07	30	15	15	0.25	0.25	0.90	0.00
H42640	Kerr	8.74		2.42		2.42	2.42			0.00	0.00	0.00	75.63	75.63	75.63	21	6	15	0.10		0.26	0.10
H42649	Kerr	8.71		2.04		2.04	2.04			0.00	0.00	0.00	63.75	63.75	63.75	19	3.9	15	0.06		0.15	0.06
H42638	Kerr	8.02		2.26		2.26	2.26			0.00	0.00	0.00	70.63	70.63	70.63	22	6.8	15	0.12		0.30	0.12
H42633	Kerr	6.10	6.40	0.74	0.64	0.65	0.64	0.03	0.09	0.07	-0.06	0.00	23.13	20.00	20.00	7	0.001	6.999	0.01	0.03	0.10	0.00
H42654	Kerr	8.30	8.10	3.57	3.41	3.55	3.54	0.03	0.02	0.01	0.13	0.13	111.56	106.56	110.66	40	25	15	0.39	0.39	1.40	0.00
H42661	Kerr	7.70	7.70	2.05	1.98	2.02	1.99	0.04	0.03	0.03	0.01	0.01	64.06	61.88	62.29	30	15	15	0.26	0.30	1.10	0.00
H42651	Kerr	7.28		0.08		0.08	0.08			0.04	-0.04	0.00	2.50	2.50	2.50	5	0.001	5.299	0.01		0.01	0.01
H42650	Kerr	8.30	8.30	0.08	0.05	0.05	0.05	0.03	0.03	0.06	-0.06	0.00	2.50	1.56	1.56	14	0.001	13.999	0.05	0.08	0.30	0.00
58450	Kerr	8.00		8.98	8.26	8.97	8.94	0.02	0.01	0.03	0.68	0.68	280.63	258.13	279.50	93	78	15	1.16	1.15	4.20	0.01
58464	Kerr	7.70		8.68	7.74	8.66	8.63	0.03	0.02	0.03	0.89	0.89	271.25	241.88	269.73	79	64	15	0.96	0.97	3.50	0.00
17086	Kerr	8.00		4.38	3.75	4.38	4.36	0.02	0.01	0.01	0.61	0.61	136.88	117.19	136.40	51	36	15	0.75	0.65	2.40	0.10

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
17062	Kerr	8.10		7.07	6.41	7.06	7.03	0.03	0.01	0.03	0.62	0.62	220.94	200.31	219.71	88	73	15	1.13	1.10	4.10	0.03
17109	Kerr	8.50		5.75	4.78	5.75	5.72	0.02	0.01	0.02	0.94	0.94	179.69	149.38	178.76	142	127	15	1.50	1.42	5.20	0.08
17148	Kerr	8.70		2.42	2.06	2.41	2.38	0.04	0.01	0.03	0.32	0.32	75.63	64.38	74.47	78	63	15	1.36	0.85	3.10	0.51
58479	Kerr	8.60		3.38	2.85	3.37	3.35	0.02	0.01	0.02	0.50	0.50	105.63	89.06	104.83	135	120	15	1.65	1.67	6.10	0.00
58493	Kerr	9.40		0.04	0.03	0.02	0.03	0.02	0.02	0.05	-0.06	0.00	1.25	0.94	0.94	112	97	15	1.19	1.17	4.30	0.02
G24857	Sulphurets	7.30		3.47	3.41	3.46	3.45	0.01	0.01	0.01	0.04	0.04	108.44	106.56	107.80	7	0.001	6.999	0.01	0.03	0.10	0.00
SG92-17_C11049	Sulphurets	8.40		1.79	1.49	1.70	1.66	0.02	0.09	0.04	0.17	0.17	55.94	46.56	51.84	39	24	15	0.38	0.38	1.40	0.00
9593	Sulphurets	8.31		1.24	0.90	1.22	1.22		0.02	0.00	0.32	0.32	38.75	28.13	38.02	80	65.4	15	0.46		1.67	0.46
S91-388_5219	Sulphurets	8.70		1.04	0.81	1.04	1.00	0.02	0.01	0.04	0.19	0.19	32.50	25.31	31.23	70	55	15	0.75	0.72	2.60	0.03
H44700	Sulphurets	9.20		0.25	0.24	0.24	0.24		0.01	0.05	-0.05	0.00	7.81	7.50	7.50	54	39.0201	15	0.41		1.15	0.41
G24650	Sulphurets	9.00		0.06	0.04	0.06	0.04	0.01	0.01	0.07	-0.05	0.00	1.88	1.25	1.25	11	0.001	10.999	0.03	0.03	0.10	0.01
H42333	Sulphurets	9.00	8.90	0.30	0.28	0.30	0.28	0.01	0.01	0.04	-0.03	0.00	9.38	8.75	8.75	98	83	15	0.95	0.63	2.30	0.32
MC-05-03 6.0-20	Sulphurets	8.57		0.36	0.19	0.35	0.32		0.01	0.03	0.13	0.13	11.25	5.94	10.01	183	168.2917706	15	1.41		5.67	1.41
10335	Sulphurets	8.90		0.23	0.14	0.21	0.17	0.01	0.02	0.04	0.03	0.03	7.19	4.38	5.45	153	138	15	1.53	1.44	5.30	0.09
H45368	Sulphurets	7.50		5.34	5.15	5.33	5.33		0.01	0.00	0.18	0.18	166.88	160.94	166.53	7	0.001	7.3191	0.03		0.14	0.03
H45505	Sulphurets	6.69		4.77	4.73	4.73	4.73		0.04	0.00	0.00	0.00	149.06	147.81	147.81	8	0.001	8.18759	0.04		0.17	0.04
G24888	Sulphurets	7.80		4.19	4.17	4.18	4.17	0.03	0.01	0.01	0.00	0.00	130.94	130.31	130.31	10	0.001	9.999	0.05	0.06	0.20	0.00
S91-388_5274	Sulphurets	7.00		2.51	2.29	2.51	2.49	0.02	0.01	0.02	0.20	0.20	78.44	71.56	77.79	6	0.001	5.999	0.01	0.03	0.10	0.00
H45279	Sulphurets	7.48		4.17	4.15	4.15	4.15		0.02	0.00	0.00	0.00	130.31	129.69	129.69	10	0.001	10.42084	0.05		0.21	0.05
G24806	Sulphurets	7.30		3.59	3.55	3.59	3.57	0.01	0.01	0.01	0.02	0.02	112.19	110.94	111.62	9	0.001	8.999	0.04	0.06	0.20	0.00
G24829	Sulphurets	7.60		2.37	2.05	2.37	2.35	0.01	0.01	0.02	0.30	0.30	74.06	64.06	73.29	7	0.001	6.999	0.02	0.03	0.10	0.00
G24902	Sulphurets	7.70		5.15	4.37	5.14	5.13	0.07	0.01	0.01	0.76	0.76	160.94	136.56	160.37	17	2	15	0.12	0.14	0.50	0.00
G24874	Sulphurets	7.90		6.62	5.67	6.53	6.52	0.04	0.09	0.01	0.85	0.85	206.88	177.19	203.85	22	7	15	0.18	0.18	0.70	0.00
SG92-22_C9763	Sulphurets	7.80		4.09	3.68	4.08	4.07	0.09	0.01	0.01	0.39	0.39	127.81	115.00	127.23	16	1	15	0.18	0.18	0.60	0.00
SG92-22_C9711	Sulphurets	7.80		3.28	2.66	3.27	3.26	0.05	0.01	0.01	0.60	0.60	102.50	83.13	101.83	13	0.001	12.999	0.05	0.08	0.30	0.00
G24782	Sulphurets	7.90		1.17	1.10	1.17	1.12	0.01	0.01	0.05	0.02	0.02	36.56	34.38	34.91	5	0.001	4.999	0.06	0.06	0.20	0.00
H44956	Sulphurets	7.87		1.40	1.39	1.39	1.39		0.01	0.00	0.00	0.00	43.75	43.44	43.44	7	0.001	6.94689	0.04		0.17	0.04
H42509	Sulphurets	8.49		2.60	2.59	2.59	2.59		0.01	0.00	0.00	0.00	81.25	80.94	80.94	14	0.001	14.40967	0.07		0.29	0.07
S91-388_5261	Sulphurets	8.20		1.30	1.23	1.29	1.24	0.04	0.01	0.05	0.01	0.01	40.63	38.44	38.81	7	0.001	6.999	0.25	0.06	0.20	0.19
H44939	Sulphurets	8.30	8.00	3.08	2.80	3.08	3.06	0.02	0.01	0.01	0.26	0.26	96.25	87.50	95.69	18	3	15	0.15	0.09	0.30	0.06
H44935	Sulphurets	8.00		2.19		2.19	2.19			0.01	-0.01	0.00	68.44	68.44	68.44	13	0.001	13.299	0.08		0.32	0.08
G21680	Sulphurets	8.10		3.76	3.71	3.76	3.74	0.01	0.01	0.01	0.03	0.03	117.50	115.94	116.92	29	14	15	0.21	0.23	0.90	0.00
H42532	Sulphurets	8.70		4.52	3.72	4.51	4.51		0.02	0.00	0.79	0.79	141.35	116.09	140.80	37	22.45370333	15	0.39		1.22	0.39
H44942	Sulphurets	8.40	8.20	2.23	2.05	2.22	2.20	0.03	0.01	0.02	0.15	0.15	69.69	64.06	68.85	18	3	15	0.27	0.20	0.70	0.07
SG92-02_C8906	Sulphurets	8.40		1.96	1.82	1.94	1.91	0.02	0.02	0.03	0.09	0.09	61.25	56.88	59.80	17	2	15	0.14	0.16	0.60	0.00
H42460	Sulphurets	8.70	8.40	3.25	3.12	3.23	3.22	0.03	0.02	0.01	0.10	0.10	101.56	97.50	100.57	31	16	15	0.30	0.31	1.10	0.00
SG92-02_C8897	Sulphurets	7.90		3.55	3.44	3.44	3.44	0.05	0.11	0.01	-0.01	0.00	110.94	107.50	107.50	42	27	15	0.55	0.51	1.90	0.04
SG92-02_C8901	Sulphurets	8.10		2.03	1.90	2.00	1.97	0.06	0.03	0.03	0.07	0.07	63.44	59.38	61.59	26	11	15	0.14	0.15	0.60	0.00
SG92-06_C12601	Sulphurets	7.70		1.95	1.61	1.88	1.84	0.09	0.07	0.04	0.23	0.23	60.94	50.31	57.60	26	11	15	0.23	0.28	1.00	0.00
SG92-22_C9736	Sulphurets	8.40		5.45	4.79	5.40	5.40	0.04	0.05	0.00	0.61	0.61	170.31	149.69	168.62	80	65	15	0.95	0.98	3.60	0.00
H44936	Sulphurets	8.60	8.30	2.69	2.55	2.69	2.67	0.04	0.01	0.02	0.12	0.12	84.06	79.69	83.43	42	27	15	0.45	0.36	1.30	0.09
H45187	Sulphurets	8.90	8.80	2.10	2.06	2.10	2.07	0.02	0.01	0.03	0.01	0.01	65.63	64.38	64.60	36	21	15	0.37	0.33	1.20	0.04
H45191	Sulphurets	8.80	8.60	3.08	2.98	3.08	3.06	0.05	0.01	0.01	0.08	0.08	96.25	93.13	95.77	56	41	15	0.63	0.10	0.40	0.53
H44940	Sulphurets	8.68		0.86		0.86	0.86			0.01	-0.01	0.00	26.88	26.88	26.88	18	3.1	15	0.14		0.52	0.14
G24756	Sulphurets	8.20		1.46	1.23	1.46	1.42	0.01	0.01	0.04	0.19	0.19	45.63	38.44	44.27	31	16	15	0.28	0.27	1.00	0.01
H44937	Sulphurets	8.41		1.38		1.38	1.38			0.01	-0.01	0.00	43.13	43.13	43.13	34	18.7	15	0.20		0.72	0.20
G24926	Sulphurets	8.60		4.90	4.27	4.90	4.88	0.01	0.01	0.02	0.61	0.61	153.13	133.44	152.43	142	127	15	1.28	1.25	4.60	0.03
S91-388_5249	Sulphurets	8.60		1.16	1.18	1.16	1.18	0.02	0.01	0.04	-0.06	0.00	36.25	36.88	36.88	36	21	15	0.45	0.42	1.50	0.03
H45803	Sulphurets	8.64		3.05	2.29	3.03	3.03		0.02	0.00	0.74	0.74	95.31	71.56	94.64	95	79.69697	15	0.81		3.01	0.81
H45188	Sulphurets	9.05		1.98		1.98	1.98			0.01	-0.01	0.00	61.88	61.88	61.88	64	48.6	15	0.61		2.31	0.61

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
H45189	Sulphurets	9.10	8.90	1.17	1.13	1.17	1.15	0.04	0.01	0.02	0.02	0.02	36.56	35.31	35.82	40	25	15	0.40	0.36	1.30	0.04
G24852	Sulphurets	9.10		1.36	1.34	1.36	1.34	0.01	0.01	0.02	0.00	0.00	42.50	41.88	41.88	51	36	15	0.61	0.59	2.20	0.02
H44933	Sulphurets	8.90	8.70	1.76	1.64	1.76	1.72	0.04	0.01	0.04	0.08	0.08	55.00	51.25	53.68	74	59	15	0.86	0.49	1.80	0.37
X15955	Sulphurets	8.67		0.94	0.79	0.93	0.91		0.01	0.02	0.12	0.12	29.38	24.69	28.59	44	28.9	15	0.22		0.88	0.22
H45591	Sulphurets	8.84		1.94	1.61	1.93	1.92		0.02	0.00	0.32	0.32	60.68	50.21	60.08	136	121.3850167	15	0.52		1.68	0.52
X15979	Sulphurets	8.66		1.40	1.38	1.38	1.38		0.02	0.01	-0.01	0.00	43.75	43.13	43.13	78	62.7	15	0.56		2.26	0.56
G21668	Sulphurets	8.50		0.78	0.72	0.78	0.72	0.03	0.01	0.11	-0.05	0.00	24.38	22.50	22.50	49	34	15	0.54	0.50	1.80	0.04
H45190	Sulphurets	9.16		1.66		1.66	1.66			0.01	-0.01	0.00	51.88	51.88	51.88	114	99.1	15	0.86		3.29	0.86
H45814	Sulphurets	8.93		1.03	0.85	1.02	1.00		0.02	0.01	0.16	0.16	32.29	26.46	31.40	90	75.13451167	15	0.31		0.97	0.31
H45186	Sulphurets	9.15		1.24		1.24	1.24			0.01	-0.01	0.00	38.75	38.75	38.75	91	76	15	0.65		2.34	0.65
G24942	Sulphurets	8.90		1.56	1.48	1.56	1.51	0.01	0.01	0.04	0.03	0.03	48.75	46.25	47.30	124	109	15	1.01	0.99	3.60	0.02
X15939	Sulphurets	9.30	9.20	0.60	0.50	0.60	0.57	0.01	0.01	0.02	0.07	0.07	18.75	15.63	17.94	52	37	15	0.39	0.33	1.20	0.06
G24952	Sulphurets	9.10		0.90	0.88	0.88	0.88	0.01	0.02	0.02	-0.02	0.00	28.13	27.50	27.50	87	72	15	1.32	0.87	3.20	0.45
G21701	Sulphurets	8.80		0.49	0.45	0.49	0.45	0.02	0.01	0.08	-0.04	0.00	15.31	14.06	14.06	78	63	15	1.04	0.99	3.60	0.05
SG92-22_C9681	Sulphurets	9.00		0.20	0.10	0.17	0.10	0.02	0.03	0.09	-0.02	0.00	6.25	3.13	3.13	96	81	15	0.72	0.72	2.60	0.00
SG92-06_C12669	Sulphurets	8.60		4.12	3.74	4.04	4.04	0.04	0.08	0.00	0.30	0.30	128.75	116.88	126.12	50	35	15	0.47	0.41	1.50	0.06
H45390	Sulphurets	8.83		3.76	3.06	3.74	3.74		0.02	0.00	0.68	0.68	117.34	95.52	116.79	51	35.57575833	15	0.30		0.87	0.30
H45199	Sulphurets	8.35		6.23		6.23	6.23			0.00	0.00	0.00	194.69	194.69	194.69	80	64.8	15	0.48		1.72	0.48
SG92-22_C9794	Sulphurets	8.80		2.72	2.41	2.70	2.68	0.01	0.02	0.02	0.27	0.27	85.00	75.31	83.86	35	20	15	0.31	0.35	1.30	0.00
H45195	Sulphurets	8.90	8.80	2.27	2.19	2.27	2.25	0.02	0.01	0.02	0.06	0.06	70.94	68.44	70.23	33	18	15	0.27	0.19	0.70	0.08
H45198	Sulphurets	9.00	8.90	2.79	2.70	2.79	2.77	0.03	0.01	0.02	0.07	0.07	87.19	84.38	86.55	47	32	15	0.46	0.46	1.70	0.00
H45200	Sulphurets	8.90	8.80	2.21	2.11	2.21	2.18	0.06	0.01	0.02	0.07	0.07	69.06	65.94	68.24	40	25	15	0.40	0.38	1.40	0.02
S-10-29 115.5-129.5	Sulphurets	8.81		3.19	5.22	3.16	5.22		0.03	0.00	-2.06	0.00	99.69	163.13	163.13	118	103.4538653	15	0.97		3.66	0.97
H45202	Sulphurets	8.70	8.90	1.11	1.03	1.11	1.07	0.03	0.01	0.04	0.04	0.04	34.69	32.19	33.29	26	11	15	0.15	0.15	0.60	0.00
SG92-02_C8937	Sulphurets	9.00		2.06	1.93	2.05	2.03	0.01	0.01	0.02	0.10	0.10	64.38	60.31	63.51	63	48	15	0.77	0.78	2.90	0.00
H45206	Sulphurets	8.80	8.80	1.87	1.78	1.87	1.84	0.03	0.01	0.03	0.06	0.06	58.44	55.63	57.37	62	47	15	0.66	0.63	2.30	0.03
H45614	Sulphurets	8.66		3.42	3.41	3.41	3.41		0.01	0.00	0.00	0.00	106.88	106.56	106.56	117	101.79293	15	0.75		2.75	0.75
H45192	Sulphurets	9.02		2.27		2.27	2.27			0.00	0.00	0.00	70.94	70.94	70.94	84	68.5	15	0.43		1.72	0.43
H45211	Sulphurets	9.00	9.00	1.68	1.56	1.68	1.65	0.02	0.01	0.03	0.09	0.09	52.50	48.75	51.53	61	46	15	0.67	0.57	2.10	0.10
SG92-22_C9822	Sulphurets	8.40		2.74	2.46	2.72	2.70	0.04	0.02	0.02	0.24	0.24	85.63	76.88	84.45	106	91	15	1.30	1.27	4.60	0.03
H45197	Sulphurets	9.18		1.34		1.34	1.34			0.00	0.00	0.00	41.88	41.88	41.88	54	38.6	15	0.31		1.25	0.31
H45208	Sulphurets	8.60	8.60	3.66	3.51	3.65	3.64	0.03	0.01	0.01	0.13	0.13	114.38	109.69	113.68	147	132	15	1.57	1.54	5.70	0.03
H45207	Sulphurets	8.86		2.97		2.97	2.97			0.00	0.00	0.00	92.81	92.81	92.81	122	106.6	15	0.64		2.15	0.64
H44977	Sulphurets	8.80		1.43	1.21	1.43	1.42		0.01	0.00	0.21	0.21	44.69	37.81	44.46	59	44.34343	15	0.35		1.31	0.35
H45210	Sulphurets	8.69		3.83		3.83	3.83			0.00	0.00	0.00	119.69	119.69	119.69	165	149.6	15	1.12		3.90	1.12
G24977	Sulphurets	9.10		2.28	2.14	2.28	2.24	0.01	0.01	0.03	0.10	0.10	71.25	66.88	70.06	97	82	15	0.60	0.61	2.20	0.00
H45224	Sulphurets	8.81		1.83	1.35	1.82	1.82		0.01	0.00	0.47	0.47	57.19	42.19	56.74	88	73.38384	15	0.67		2.52	0.67
H44683	Sulphurets	9.17		1.64	1.63	1.63	1.63		0.01	0.00	0.00	0.00	51.25	50.94	50.94	98	82.98995	15	0.73		2.69	0.73
H45193	Sulphurets	9.10	8.90	0.82	0.80	0.81	0.80	0.03	0.01	0.05	-0.04	0.00	25.63	25.00	25.00	50	35	15	0.56	0.47	1.70	0.09
G24999	Sulphurets	8.70		2.77	2.78	2.76	2.78	0.02	0.01	0.02	-0.04	0.00	86.56	86.88	86.88	177	162	15	1.33	1.29	4.70	0.04
H45194	Sulphurets	8.99		2.42		2.42	2.42			0.00	0.00	0.00	75.63	75.63	75.63	162	147.1	15	2.15		7.73	2.15
H45204	Sulphurets	8.70	8.60	2.22	2.22	2.22	2.22	0.02	0.01	0.02	-0.03	0.00	69.38	69.38	69.38	151	136	15	1.68	1.56	5.70	0.12
H45205	Sulphurets	9.01		1.77		1.77	1.77			0.00	0.00	0.00	55.31	55.31	55.31	130	114.7	15	0.84		3.09	0.84
H45203	Sulphurets	9.01		1.08		1.08	1.08			0.01	-0.01	0.00	33.75	33.75	33.75	99	84.1	15	0.71		2.73	0.71
H45201	Sulphurets	8.85		1.12		1.12	1.12			0.01	-0.01	0.00	35.00	35.00	35.00	153	138.4	15	1.72		6.17	1.72
H45212	Sulphurets	8.83		0.80		0.80	0.80			0.01	-0.01	0.00	25.00	25.00	25.00	115	100.3	15	0.42		1.52	0.42
X15937	Sulphurets	8.70	8.50	2.93	2.83	2.93	2.92	0.02	0.01	0.01	0.09	0.09	91.56	88.44	91.10	38	23	15	0.42	0.33	1.20	0.09
H45086	Sulphurets	9.00	8.90	2.70	2.60	2.70	2.67	0.02	0.01	0.02	0.07	0.07	84.38	81.25	83.47	40	25	15	0.40	0.38	1.40	0.02
H44866	Sulphurets	9.15		1.74	1.28	1.73	1.73		0.01	0.00	0.45	0.45	54.38	40.00	54.00	29	14.0404	15	0.27		0.89	0.27
H45087	Sulphurets	8.42		7.01		7.01	7.01			0.00	0.00	0.00	219.06	219.06	219.06	151	135.9	15	1.19		4.39	1.19

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
H45085	Sulphurets	8.56		2.76		2.76	2.76			0.00	0.00	0.00	86.25	86.25	86.25	77	61.7	15	0.71		2.57	0.71
H45083	Sulphurets	8.70	8.50	2.12	2.02	2.12	2.09	0.02	0.01	0.03	0.07	0.07	66.25	63.13	65.30	62	47	15	0.69	0.60	2.20	0.09
X15934	Sulphurets	9.00	8.90	1.74	1.76	1.73	1.76	0.03	0.01	0.03	-0.06	0.00	54.38	55.00	55.00	59	44	15	0.71	0.75	2.70	0.00
H45102	Sulphurets	8.65		2.40	1.94	2.37	2.37		0.03	0.00	0.43	0.43	74.84	60.52	73.94	124	108.8328283	15	0.68		2.09	0.68
X15912	Sulphurets	9.18		1.37	0.87	1.36	1.35		0.01	0.01	0.48	0.48	42.81	27.19	42.20	58	42.6	15	0.35		1.34	0.35
H45082	Sulphurets	8.50	8.30	4.50	4.17	4.50	4.49	0.08	0.01	0.01	0.32	0.32	140.63	130.31	140.17	193	178	15	2.45	2.25	8.20	0.20
20856	Sulphurets	9.00		1.83	1.67	1.78	1.75	0.05	0.05	0.03	0.08	0.08	57.19	52.19	54.73	79	64	15	1.53	1.55	5.70	0.00
H45088	Sulphurets	8.90	8.70	2.28	1.90	2.24	2.22	0.04	0.04	0.02	0.32	0.32	71.25	59.38	69.42	102	87	15	0.98	0.95	3.50	0.03
H44554	Sulphurets	8.91		2.30	1.84	2.27	2.27		0.03	0.00	0.43	0.43	71.88	57.50	70.89	119	104.34673	15	1.14		4.14	1.14
SG92-06_C12577	Sulphurets	9.10		2.91	2.69	2.90	2.88	0.05	0.01	0.02	0.19	0.19	90.94	84.06	89.95	169	154	15	1.62	1.63	6.00	0.00
H45081	Sulphurets	9.17		0.52	0.46	0.48	0.46		0.04	0.02	0.00	0.00	16.25	14.38	14.52	283	267.8	15	3.31		8.50	3.31
H45082	Sulphurets	8.61		4.78	4.30	4.76	4.76		0.02	0.00	0.46	0.46	149.38	134.38	148.71	189	174.4	15	2.46		6.19	2.46
H45083	Sulphurets	8.65		1.80	1.80	1.78	1.80		0.02	0.00	-0.02	0.00	56.25	56.25	56.25	104	88.5	15	0.93		2.23	0.93
H45085	Sulphurets	8.69		3.00	2.82	2.99	2.99		0.01	0.00	0.17	0.17	93.75	88.13	93.38	92	77.2	15	0.91		2.28	0.91
H45086	Sulphurets	8.87		1.76	1.59	1.75	1.74		0.01	0.01	0.15	0.15	55.00	49.69	54.27	56	40.8	15	0.36		0.79	0.36
H45102	Sulphurets	8.87		2.68	2.43	2.66	2.66		0.02	0.00	0.23	0.23	83.75	75.94	83.08	155	139.5	15	1.18		3.96	1.18
H45103	Sulphurets	9.06		2.01	2.30	1.98	2.30		0.03	0.00	-0.32	0.00	62.81	71.88	71.88	47	31.5	15	0.47		0.99	0.47
H45104	Sulphurets	8.98		2.09	2.03	2.08	2.08		0.01	0.00	0.05	0.05	65.31	63.44	64.93	35	19.8	15	0.26		0.85	0.26
X64717	Sulphurets	8.80		1.56	1.11	1.56	1.55		0.01	0.01	0.44	0.44	48.75	34.69	48.37	123	107.5	15	1.01		3.22	1.01
X64718	Sulphurets	8.65		1.54	1.22	1.54	1.53		0.01	0.01	0.31	0.31	48.13	38.13	47.80	165	150	15	1.53		4.88	1.53
X64719	Sulphurets	8.88		1.76	1.25	1.76	1.75		0.01	0.01	0.50	0.50	55.00	39.06	54.67	131	116.3	15	1.16		3.64	1.16
X64724	Sulphurets	8.87		3.12	2.28	3.09	3.09		0.03	0.00	0.81	0.81	97.50	71.25	96.50	138	122.5	15	1.07		3.31	1.07
X64743	Sulphurets	9.10		2.31	1.78	2.31	2.30		0.01	0.00	0.52	0.52	72.19	55.63	71.96	130	115	15	0.50		1.50	0.50
X64746	Sulphurets	8.46		2.82	1.93	2.73	2.73		0.09	0.00	0.80	0.80	88.13	60.31	85.24	350	335	15	2.49		7.51	2.49
X62696	Sulphurets	8.88		2.06	1.63	2.05	2.05		0.01	0.00	0.42	0.42	64.38	50.94	64.00	140	125	15	0.70		2.04	0.70
X64747	Sulphurets	8.53		3.20	2.36	3.15	3.15		0.05	0.00	0.79	0.79	100.00	73.75	98.41	308	292.5	15	2.13		6.25	2.13
H45104	Sulphurets	9.10	8.90	0.86	0.76	0.85	0.82	0.01	0.01	0.03	0.06	0.06	26.88	23.75	25.51	50	35	15	0.52	0.48	1.80	0.04
X15938	Sulphurets	8.86		1.78		1.78	1.78			0.00	0.00	0.00	55.63	55.63	55.63	126	110.6	15	0.65		2.02	0.65
H45103	Sulphurets	8.96		1.17		1.17	1.17			0.00	0.00	0.00	36.56	36.56	36.56	89	73.5	15	0.49		1.73	0.49
H44876	Sulphurets	9.13		0.84	0.83	0.84	0.83		0.01	0.01	0.00	0.00	26.25	25.94	25.94	70	55.07576	15	0.55		1.95	0.55
X15932	Sulphurets	8.80	8.50	1.75	1.67	1.74	1.72	0.02	0.01	0.02	0.05	0.05	54.69	52.19	53.78	164	149	15	2.77	1.82	6.70	0.95
H44843	Sulphurets	8.66		1.80	1.78	1.78	1.78		0.02	0.00	0.00	0.00	56.25	55.63	55.63	184	169.34343	15	1.91		7.00	1.91
H45089	Sulphurets	9.19		1.38		1.38	1.38			0.00	0.00	0.00	43.13	43.13	43.13	163	147.7	15	1.54		5.54	1.54
X15936	Sulphurets	7.29		0.89		0.89	0.89			0.01	-0.01	0.00	27.81	27.81	27.81	112	97.2	15	0.57		1.72	0.57
S91-388_5235	Sulphurets	9.40		0.68	0.58	0.68	0.66	0.02	0.01	0.02	0.08	0.08	21.25	18.13	20.62	129	114	15	1.19	1.20	4.40	0.00
X15933	Sulphurets	9.51		0.43		0.43	0.43			0.02	-0.02	0.00	13.44	13.44	13.44	104	88.5	15	0.76		2.52	0.76
H45078	Sulphurets	6.93		6.62		6.62	6.62			0.00	0.00	0.00	206.88	206.88	206.88	8	0.001	8.199	0.08		0.36	0.08
H45071	Sulphurets	6.24		5.47		5.47	5.47			0.00	0.00	0.00	170.94	170.94	170.94	8	0.001	7.999	0.01		0.10	0.01
H45068	Sulphurets	6.56		5.19		5.19	5.19			0.00	0.00	0.00	162.19	162.19	162.19	8	0.001	8.099	0.02		0.11	0.02
H45065	Sulphurets	7.47		5.16		5.16	5.16			0.00	0.00	0.00	161.25	161.25	161.25	9	0.001	8.499	0.01		0.10	0.01
H45080	Sulphurets	7.82		3.79		3.79	3.79			0.00	0.00	0.00	118.44	118.44	118.44	18	2.9	15	0.69		2.73	0.69
H45075	Sulphurets	7.80		5.73		5.73	5.73			0.00	0.00	0.00	179.06	179.06	179.06	37	22.4	15	0.34		1.30	0.34
X15748	Sulphurets	8.60	8.60	2.14	2.05	2.14	2.12	0.06	0.01	0.02	0.07	0.07	66.88	64.06	66.10	25	10	15	0.91	0.92	3.40	0.00
H45073	Sulphurets	8.69		2.17		2.17	2.17			0.00	0.00	0.00	67.81	67.81	67.81	66	51.1	15	0.62		2.06	0.62
S-11-70 122.4-136.9	Sulphurets	8.64		4.75	3.88	4.72	4.72		0.03	0.00	0.84	0.84	148.44	121.25	147.55	159	143.8669951	15	0.84		3.20	0.84
9976	Sulphurets	8.27		2.08	1.74	2.04	2.04		0.04	0.00	0.30	0.30	65.10	54.32	63.66	44	29.31666667	15	0.24		0.60	0.24
S91-398_5495	Mitchell	7.70		0.62	0.43	0.54	0.46	0.05	0.08	0.08	0.03	0.03	19.38	13.44	14.43	18	3	15	0.11	0.11	0.40	0.00
H44453	Sulphurets	8.30		1.70		1.70	1.70			0.00	0.00	0.00	53.13	53.13	53.13	67	52.3	15	0.45		1.57	0.45
S-11-70 85.4-103.4	Sulphurets	8.81		3.91	3.07	3.89	3.89		0.02	0.00	0.82	0.82	122.19	95.83	121.61	159	143.8669951	15	0.89		3.42	0.89
H42341	Sulphurets	8.70	8.70	0.51	0.44	0.51	0.44	0.01	0.01	0.08	-0.01	0.00	15.94	13.75	13.75	19	4	15	0.08	0.07	0.30	0.01

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
X15862	Sulphurets	8.70	8.60	2.05	1.99	1.97	1.99	0.12	0.08	0.01	-0.03	0.00	64.06	62.19	62.19	90	75	15	0.96	0.98	3.60	0.00
S-10-21 94-110	Sulphurets	8.15		3.37	2.69	3.33	3.32		0.04	0.00	0.64	0.64	105.31	83.96	103.85	152	137.1197007	15	1.23		4.70	1.23
E192812	Sulphurets	8.71		1.96	1.08	1.95	1.95		0.01	0.00	0.87	0.87	61.25	33.75	60.89	92	76.5	15	0.62		1.99	0.62
S-11-68 183.46-199.46	Sulphurets	8.82		1.81	1.25	1.79	1.78		0.02	0.01	0.53	0.53	56.56	39.17	55.68	84	69.35960591	15	0.62		2.48	0.62
S-11-68 41.46-57.46	Sulphurets	8.87		3.42	2.82	3.40	3.40		0.02	0.00	0.58	0.58	106.88	88.13	106.17	163	147.5615764	15	1.30		5.03	1.30
MC-05-02 90-106	Sulphurets	8.34		2.41	1.91	2.37	2.37		0.04	0.00	0.46	0.46	75.31	59.79	74.02	117	102.2069825	15	0.61		2.18	0.61
E192834	Sulphurets	8.63		2.34	2.00	2.33	2.33		0.01	0.00	0.33	0.33	73.13	62.50	72.76	118	103.4	15	1.14		3.92	1.14
E192868	Sulphurets	8.84		1.39	0.95	1.36	1.36		0.03	0.00	0.41	0.41	43.44	29.69	42.38	108	93	15	0.73		2.22	0.73
E192869	Sulphurets	9.13		0.89	0.93	0.81	0.93		0.08	0.01	-0.13	0.00	27.81	29.06	29.06	111	95.6	15	0.76		2.16	0.76
E192870	Sulphurets	9.04		1.10	0.79	1.01	1.01		0.09	0.00	0.22	0.22	34.38	24.69	31.42	147	132	15	1.21		4.17	1.21
H44450	Sulphurets	9.48		0.12	0.11	0.10	0.11		0.02	0.07	-0.08	0.00	3.75	3.44	3.44	78	63.3	15	0.68		1.40	0.68
H44451	Sulphurets	9.44		0.10	0.08	0.09	0.08		0.01	0.07	-0.06	0.00	3.13	2.50	2.50	67	52.3	15	0.61		1.74	0.61
H44452	Sulphurets	8.95		0.01	0.02	0.00	0.02		0.01	0.04	-0.06	0.00	0.31	0.63	0.63	69	54.4	15	0.61		1.87	0.61
H44453	Sulphurets	8.33		1.92	1.82	1.89	1.89		0.03	0.00	0.07	0.07	60.00	56.88	58.93	129	113.8	15	0.99		3.07	0.99
H44454	Sulphurets	8.65		1.11	1.00	1.09	1.08		0.02	0.01	0.08	0.08	34.69	31.25	33.75	183	168.1	15	1.36		3.26	1.36
H45078	Sulphurets	8.68		1.38	1.22	1.34	1.34		0.04	0.00	0.12	0.12	43.13	38.13	41.75	113	97.9	15	0.71		1.73	0.71
H45079	Sulphurets	8.46		1.28	1.06	1.14	1.14		0.14	0.00	0.08	0.08	40.00	33.13	35.48	138	123	15	0.75		1.85	0.75
H45080	Sulphurets	8.33		1.74	1.54	1.68	1.68		0.06	0.00	0.14	0.14	54.38	48.13	52.41	266	251.4	15	3.11		8.30	3.11
S157569	Sulphurets	8.73		3.77	2.93	3.76	3.76		0.01	0.00	0.83	0.83	117.81	91.56	117.43	189	173.8	15	0.95		3.02	0.95
S157570	Sulphurets	8.90		2.76	1.96	2.66	2.66		0.10	0.00	0.70	0.70	86.25	61.25	83.04	229	213.8	15	1.61		5.43	1.61
X62639	Sulphurets	8.60		2.14	1.51	2.12	2.12		0.02	0.00	0.61	0.61	66.88	47.19	66.17	184	168.8	15	0.93		2.73	0.93
X62640	Sulphurets	8.77		1.39	0.88	1.35	1.35		0.04	0.00	0.47	0.47	43.44	27.50	42.08	143	127.5	15	0.78		2.54	0.78
X63892	Sulphurets	8.79		1.86	1.44	1.85	1.85		0.01	0.00	0.41	0.41	58.13	45.00	57.70	198	182.5	15	0.93		2.84	0.93
X63893	Sulphurets	8.96		2.12	1.64	2.11	2.11		0.01	0.00	0.47	0.47	66.25	51.25	65.83	184	168.8	15	0.99		3.29	0.99
S-10-33 170-186	Sulphurets	8.54		2.68	2.23	2.65	2.65		0.03	0.00	0.42	0.42	83.75	69.58	82.74	137	121.9346734	15	0.89		3.41	0.89
H44504	Sulphurets	8.61		1.48		1.48	1.48			0.00	0.00	0.00	46.25	46.25	46.25	77	62.3	15	0.81		2.54	0.81
S-11-72 101.95-118.3	Sulphurets	8.91		2.37	2.00	2.35	2.35		0.02	0.01	0.35	0.35	74.06	62.50	73.30	123	108.1527094	15	0.91		3.42	0.91
S-11-70 156.4-172.4	Sulphurets	8.74		3.27	2.49	3.20	3.19		0.07	0.00	0.70	0.70	102.19	77.92	99.81	170	154.9507389	15	1.04		3.88	1.04
X15753	Sulphurets	8.40	8.40	1.20	1.21	1.19	1.21	0.05	0.01	0.05	-0.07	0.00	37.50	37.81	37.81	66	51	15	0.73	0.74	2.70	0.00
20847	Sulphurets	8.25		2.59	2.01	2.55	2.55		0.04	0.00	0.54	0.54	80.94	62.81	79.62	146	130.7	15	1.36		4.90	1.36
S91-398_5851	Mitchell	8.60		0.49	0.40	0.47	0.43	0.03	0.02	0.04	0.03	0.03	15.31	12.50	13.37	25	10	15	0.14	0.14	0.50	0.00
H44544	Sulphurets	8.60		2.55	2.53	2.53	2.53		0.02	0.00	0.00	0.00	79.69	79.06	79.06	150	135.12563	15	1.46		4.17	1.46
X15861	Sulphurets	8.61		1.75		1.75	1.75			0.00	0.00	0.00	54.69	54.69	54.69	108	92.9	15	0.81		2.51	0.81
S-10-33 210-226	Sulphurets	8.37		2.71	2.21	2.70	2.68		0.01	0.01	0.47	0.47	84.69	69.17	83.79	175	159.563591	15	0.99		3.71	0.99
H44505	Sulphurets	8.70	8.70	0.70	0.58	0.69	0.63	0.01	0.01	0.06	0.05	0.05	21.88	18.13	19.75	44	29	15	0.41	0.44	1.60	0.00
X15860	Sulphurets	9.00	9.00	1.28	1.21	1.24	1.21	0.08	0.04	0.05	-0.02	0.00	40.00	37.81	37.81	88	73	15	0.85	0.88	3.20	0.00
S91-398_5865	Mitchell	8.20		0.43	0.42	0.35	0.42	0.06	0.08	0.05	-0.12	0.00	13.44	13.13	13.13	33	18	15	0.37	0.27	1.00	0.10
20831	Sulphurets	8.90		1.59	1.56	1.57	1.56	0.02	0.02	0.05	-0.04	0.00	49.69	48.75	48.75	124	109	15	1.16	1.12	4.10	0.04
H42381	Sulphurets	8.66		1.73	1.71	1.71	1.71		0.02	0.00	0.00	0.00	54.06	53.44	53.44	145	130.20202	15	1.75		6.38	1.75
S-09-11 130-146	Sulphurets	8.49		2.11	1.32	2.08	2.07		0.03	0.01	0.75	0.75	65.94	41.25	64.74	177	162.0573566	15	1.43		5.31	1.43
S-11-68 1.31-17.46	Sulphurets	8.88		1.77	1.19	1.72	1.71		0.05	0.01	0.53	0.53	55.31	37.08	53.55	148	132.7832512	15	0.81		3.18	0.81
MC-05-02 210-226.6	Sulphurets	8.09		1.67	1.06	1.64	1.63		0.03	0.01	0.57	0.57	52.19	33.13	50.95	143	128.3915212	15	0.86		2.87	0.86
H44831	Sulphurets	8.74		2.02	2.00	2.00	2.00		0.02	0.00	0.00	0.00	63.13	62.50	62.50	180	164.92424	15	1.95		7.18	1.95
S-10-21 44.9-61	Sulphurets	8.43		1.62	1.07	1.61	1.59		0.01	0.02	0.51	0.51	50.63	33.54	49.62	146	130.8852868	15	1.21		4.71	1.21
G24663	Sulphurets	9.00		0.53	0.42	0.53	0.47	0.01	0.01	0.06	0.05	0.05	16.56	13.13	14.60	43	28	15	0.43	0.42	1.60	0.01
S-11-68 81.46-96.56	Sulphurets	8.95		1.74	1.20	1.66	1.65		0.09	0.00	0.45	0.45	54.38	37.50	51.64	155	140.1724138	15	1.20		4.77	1.20
X15779	Sulphurets	9.17		1.02	0.81	0.99	0.98		0.03	0.01	0.18	0.18	31.88	25.21	30.78	99	83.9	15	0.88		2.78	0.88
H42394	Sulphurets	8.81		1.80	1.45	1.79	1.78		0.01	0.01	0.33	0.33	56.25	45.31	55.68	182	166.81818	15	1.68		6.20	1.68
X15747	Sulphurets	8.51		0.99		0.99	0.99			0.01	-0.01	0.00	30.94	30.94	30.94	100	85.4	15	0.86		2.55	0.86
G24688	Sulphurets	8.50		1.63	1.37	1.63	1.58	0.01	0.01	0.05	0.21	0.21	50.94	42.81	49.36	165	150	15	2.06	2.07	7.60	0.00

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
E192869	Sulphurets	8.88		1.18	0.76	1.17	1.16		0.01	0.01	0.40	0.40	36.88	23.75	36.39	124	109.1	15	0.87		2.86	0.87
S-11-72 62.3-77.5	Sulphurets	9.05		1.50	1.05	1.47	1.44		0.03	0.03	0.39	0.39	46.88	32.92	44.99	161	146.3300493	15	1.16		4.30	1.16
S-11-72 142.3-158.3	Sulphurets	9.09		1.43	1.02	1.42	1.40		0.01	0.02	0.38	0.38	44.69	31.88	43.70	158	142.635468	15	1.23		4.70	1.23
S-09-11 90.7-104.7	Sulphurets	8.30		1.43	0.85	1.38	1.37		0.05	0.01	0.51	0.51	44.69	26.67	42.71	155	139.6134663	15	1.12		4.20	1.12
MC-05-02 150-166	Sulphurets	8.49		1.09	0.73	1.08	1.05		0.01	0.03	0.32	0.32	34.06	22.92	32.80	120	104.7007481	15	0.53		1.97	0.53
10043	Sulphurets	8.10		1.21	1.09	1.17	1.16		0.04	0.01	0.07	0.07	37.81	34.06	36.33	137	121.9	15	0.94		3.72	0.94
S-09-11 49-65	Sulphurets	8.64		1.73	1.03	1.65	1.64		0.08	0.01	0.61	0.61	54.06	32.29	51.25	197	182.0074813	15	1.38		5.40	1.38
9817	Sulphurets	8.40		1.22	0.97	1.21	1.15	0.02	0.01	0.06	0.18	0.18	38.13	30.31	35.92	139	124	15	1.19	1.14	4.20	0.05
S-11-68 163.46-175.46	Sulphurets	9.30		0.80	0.57	0.78	0.74		0.02	0.05	0.17	0.17	25.00	17.85	23.02	90	74.90147783	15	0.68		2.65	0.68
H42328	Sulphurets	8.50	8.40	0.12	0.12	0.12	0.12	0.01	0.01	0.03	-0.04	0.00	3.75	3.75	3.75	15	0.001	14.999	0.09	0.07	0.30	0.02
X15752	Sulphurets	8.53		0.55		0.55	0.55			0.01	-0.01	0.00	17.19	17.19	17.19	69	54.2	15	0.31		0.95	0.31
H45036	Sulphurets	8.84		1.09	0.97	1.08	1.07		0.01	0.01	0.10	0.10	34.06	30.31	33.29	138	122.62626	15	1.11		3.81	1.11
10032	Sulphurets	7.89		1.27	0.98	1.25	1.24		0.02	0.01	0.26	0.26	39.69	30.63	38.65	164	148.9	15	0.93		3.33	0.93
H45080	Sulphurets	8.35		1.87	1.68	1.85	1.85		0.02	0.00	0.17	0.17	58.44	52.50	57.72	249	233.73737	15	2.94		10.89	2.94
S-11-68 121.46-137.46	Sulphurets	9.11		0.85	1.13	0.83	1.13		0.02	0.03	-0.32	0.00	26.56	35.21	35.21	156	141.4039409	15	1.14		4.29	1.14
S-11-71 24.7-40.2	Sulphurets	9.05		0.75	0.62	0.74	0.70		0.01	0.04	0.08	0.08	23.44	19.42	21.89	101	86.37704433	15	0.57		1.81	0.57
X15859	Sulphurets	8.65		1.13		1.13	1.13			0.01	-0.01	0.00	35.31	35.31	35.31	171	155.8	15	1.72		5.89	1.72
H44503	Sulphurets	8.70	8.70	1.08	0.96	1.04	1.00	0.01	0.04	0.04	0.04	0.04	33.75	30.00	31.11	158	143	15	1.79	1.72	6.30	0.07
MC-05-02 190-206	Sulphurets	8.11		1.05	0.59	0.99	0.96		0.06	0.03	0.37	0.37	32.81	18.46	29.95	161	145.8478803	15	0.97		3.55	0.97
S-09-11 9.0-25	Sulphurets	8.61		1.04	0.64	1.00	0.95		0.04	0.05	0.31	0.31	32.50	20.06	29.83	170	155.1995012	15	1.16		4.43	1.16
G24670	Sulphurets	8.90		1.02	0.85	1.02	0.98	0.01	0.01	0.04	0.13	0.13	31.88	26.56	30.53	176	161	15	1.89	1.89	6.90	0.00
H42343	Sulphurets	8.90	8.80	0.31	0.31	0.29	0.31	0.01	0.02	0.03	-0.05	0.00	9.69	9.69	9.69	58	43	15	0.62	0.50	1.80	0.12
X15751	Sulphurets	8.30	8.80	0.45	0.39	0.44	0.40	0.04	0.01	0.04	0.01	0.01	14.06	12.19	12.35	74	59	15	0.80	0.82	3.00	0.00
E192892	Sulphurets	8.86		1.15	1.07	1.12	1.10		0.03	0.02	0.03	0.03	35.94	33.44	34.49	224	208.7	15	2.61		9.24	2.61
H45436	Sulphurets	8.66		0.81	0.79	0.79	0.79		0.02	0.02	-0.02	0.00	25.31	24.69	24.69	162	146.61616	15	1.56		5.79	1.56
X15749	Sulphurets	8.70		0.67		0.67	0.67			0.01	-0.01	0.00	20.94	20.94	20.94	137	121.5	15	1.21		3.83	1.21
H44462	Sulphurets	8.80	8.70	0.71	0.46	0.49	0.46	0.26	0.22	0.17	-0.14	0.00	22.19	14.38	14.38	112	97	15	0.98	0.97	3.60	0.01
S-08-07 105.6-120.05	Sulphurets	8.95		0.68	0.43	0.63	0.60		0.05	0.03	0.17	0.17	21.25	13.29	18.65	147	132.1321696	15	1.16		4.36	1.16
H44458	Sulphurets	8.90	8.70	0.72	0.64	0.70	0.65	0.05	0.02	0.05	0.01	0.01	22.50	20.00	20.23	160	145	15	1.60	1.58	5.80	0.02
H44800	Sulphurets	9.06		0.44	0.38	0.43	0.41		0.01	0.02	0.03	0.03	13.75	11.88	12.78	113	98.06533	15	0.90		3.29	0.90
S-11-73 160.2-176.2	Sulphurets	9.14		0.58	0.36	0.57	0.54		0.01	0.03	0.19	0.19	18.13	11.10	16.98	164	148.7931034	15	1.12		4.21	1.12
H44454	Sulphurets	8.40	8.40	0.46	0.41	0.46	0.44	0.01	0.01	0.02	0.03	0.03	14.38	12.81	13.67	141	126	15	1.60	0.54	2.00	1.06
9841	Sulphurets	8.70		0.48	0.45	0.47	0.45	0.01	0.01	0.04	-0.02	0.00	15.00	14.06	14.06	154	139	15	1.45	1.37	5.00	0.08
X15864	Sulphurets	8.79		0.58		0.58	0.58			0.06	-0.06	0.00	18.13	18.13	18.13	193	177.6	15	1.56		4.84	1.56
H44459	Sulphurets	8.97		0.42		0.42	0.42			0.02	-0.02	0.00	13.13	13.13	13.13	163	148.3	15	1.40		5.16	1.40
X15767	Sulphurets	8.92		0.29	0.26	0.28	0.26		0.01	0.02	0.00	0.00	9.06	8.13	8.13	121	106.2	15	0.63		2.38	0.63
H42338	Sulphurets	9.10	8.90	0.06	0.06	0.06	0.06	0.01	0.01	0.02	-0.03	0.00	1.88	1.88	1.88	30	15	15	0.24	0.21	0.80	0.03
9826	Sulphurets	8.80		0.31	0.24	0.31	0.24	0.01	0.01	0.08	-0.01	0.00	9.69	7.50	7.50	126	111	15	1.11	1.07	3.90	0.04
H44471	Sulphurets	9.05		0.36		0.36	0.36			0.07	-0.07	0.00	11.25	11.25	11.25	165	150.2	15	1.59		5.89	1.59
9807	Sulphurets	9.20		0.14	0.10	0.12	0.10	0.01	0.02	0.09	-0.07	0.00	4.38	3.13	3.13	57	42	15	0.62	0.60	2.20	0.02
H44464	Sulphurets	8.70	8.60	0.28	0.19	0.27	0.24	0.05	0.01	0.03	0.05	0.05	8.75	5.94	7.39	173	158	15	1.83	1.85	6.80	0.00
H44461	Sulphurets	8.95		0.29		0.29	0.29			0.04	-0.04	0.00	9.06	9.06	9.06	183	168.3	15	1.91		6.93	1.91
H44463	Sulphurets	8.88		0.18		0.18	0.18			0.03	-0.03	0.00	5.63	5.63	5.63	129	114.1	15	1.18		4.32	1.18
H44456	Sulphurets	8.90	8.70	0.18	0.14	0.18	0.14	0.03	0.01	0.04	0.00	0.00	5.63	4.38	4.38	163	148	15	1.87	1.69	6.20	0.18
H42335	Sulphurets	8.90	8.60	0.08	0.06	0.08	0.06	0.01	0.01	0.06	-0.05	0.00	2.50	1.88	1.88	91	76	15	0.85	0.64	2.30	0.21
H44472	Sulphurets	8.80	8.70	0.13	0.11	0.11	0.11	0.04	0.02	0.06	-0.06	0.00	4.06	3.44	3.44	181	166	15	2.05	2.06	7.60	0.00
H44506	Sulphurets	8.98		0.11		0.11	0.11			0.02	-0.02	0.00	3.44	3.44	3.44	232	216.8	15	2.00		7.00	2.00
H44455	Sulphurets	8.77		0.11		0.11	0.11			0.04	-0.04	0.00	3.44	3.44	3.44	246	230.6	15	2.33		8.81	2.33
H44457	Sulphurets	8.89		0.12		0.12	0.12			0.06	-0.06	0.00	3.75	3.75	3.75	218	202.6	15	1.89		7.11	1.89
H44460	Sulphurets	8.60	8.60	0.08	0.05	0.06	0.05	0.05	0.02	0.04	-0.03	0.00	2.50	1.56	1.56	179	164	15	1.65	1.56	5.70	0.09

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
S-10-31 145-161	Sulphurets	8.94		1.63	2.66	1.61	2.66		0.02	0.00	-1.05	0.00	50.94	83.13	83.13	135	119.6633416	15	0.81		3.20	0.81
9924	Sulphurets	8.70		1.10	0.86	1.09	1.02	0.02	0.01	0.07	0.16	0.16	34.38	26.88	31.75	62	47	15	0.69	0.65	2.40	0.04
S-11-71 106.9-122.2	Sulphurets	8.97		0.70	0.60	0.69	0.67		0.01	0.02	0.06	0.06	21.75	18.86	20.89	43	28.49396985	15	0.40		1.33	0.40
H42350	Sulphurets	9.10	8.90	0.34	0.32	0.34	0.32	0.01	0.01	0.02	-0.01	0.00	10.63	10.00	10.00	21	6	15	0.08	0.05	0.20	0.03
S-11-72 181.96-197.3	Sulphurets	9.50		0.91	0.58	0.89	0.82		0.02	0.07	0.24	0.24	28.44	18.06	25.65	63	47.80788177	15	0.60		2.30	0.60
S-11-71 146.2-162.2	Sulphurets	9.56		0.60	0.49	0.59	0.54		0.01	0.05	0.06	0.06	18.75	15.17	16.95	43	27.71356784	15	0.26		1.03	0.26
10098	Sulphurets	8.72		1.00	0.90	0.97	0.97		0.03	0.01	0.07	0.07	31.30	27.97	30.23	92	77.48333333	15	0.58		1.86	0.58
H44488	Sulphurets	8.77		0.87		0.87	0.87			0.01	-0.01	0.00	27.19	27.19	27.19	77	61.6	15	0.70		2.25	0.70
S-06-02 60-76	Sulphurets	8.37		0.91	0.78	0.83	0.82		0.09	0.01	0.04	0.04	28.56	24.35	25.70	92	76.57760599	15	0.65		2.27	0.65
H44742	Sulphurets	9.05		0.71	0.48	0.69	0.68		0.02	0.01	0.20	0.20	22.19	15.00	21.32	65	50.32663	15	0.53		1.71	0.53
S-10-31 194-210	Sulphurets	9.17		0.87	0.61	0.85	0.79		0.02	0.05	0.18	0.18	27.19	19.13	24.72	77	62.26130653	15	0.59		1.59	0.59
20815	Sulphurets	8.60		1.71	1.63	1.70	1.66	0.03	0.01	0.04	0.03	0.03	53.44	50.94	51.90	167	152	15	1.73	1.71	6.30	0.02
S-10-31 95-111	Sulphurets	8.06		1.35	0.97	1.32	1.31		0.03	0.01	0.34	0.34	42.19	30.21	40.90	132	117.1695761	15	0.94		3.41	0.94
S91-398_5880	Mitchell	9.20		0.22	0.21	0.20	0.21	0.01	0.02	0.04	-0.05	0.00	6.88	6.56	6.56	23	8	15	0.15	0.15	0.60	0.00
S-10-31 245-260	Sulphurets	8.99		1.22	0.89	1.18	1.18		0.04	0.00	0.29	0.29	38.13	27.71	36.76	135	119.6633416	15	0.91		3.60	0.91
X15886	Sulphurets	8.81		2.20		2.20	2.20			0.00	0.00	0.00	68.75	68.75	68.75	253	238.1	15	3.10		10.10	3.10
H44495	Sulphurets	9.00		0.56		0.56	0.56			0.03	-0.03	0.00	17.50	17.50	17.50	65	50.3	15	0.56		1.73	0.56
H44481	Sulphurets	8.80	8.70	0.88	0.75	0.85	0.77	0.09	0.03	0.08	0.02	0.02	27.50	23.44	24.17	97	82	15	1.05	1.01	3.70	0.04
H44502	Sulphurets	8.88		1.23		1.23	1.23			0.01	-0.01	0.00	38.44	38.44	38.44	178	162.8	15	1.66		5.43	1.66
H44497	Sulphurets	9.00	9.00	0.54	0.49	0.53	0.49	0.03	0.01	0.07	-0.03	0.00	16.88	15.31	15.31	72	57	15	0.63	0.65	2.40	0.00
H42345	Sulphurets	8.90	8.90	0.28	0.25	0.26	0.25	0.01	0.02	0.02	-0.01	0.00	8.75	7.81	7.81	40	25	15	0.39	0.06	0.20	0.33
H44491	Sulphurets	9.00	8.90	0.50	0.43	0.48	0.43	0.04	0.02	0.07	-0.02	0.00	15.63	13.44	13.44	69	54	15	0.66	0.66	2.40	0.00
9878	Sulphurets	9.20		0.41	0.28	0.40	0.32	0.01	0.01	0.08	0.04	0.04	12.81	8.75	10.01	54	39	15	0.56	0.55	2.00	0.01
H44480	Sulphurets	9.43		0.03	0.01	0.02	0.01		0.01	0.07	-0.06	0.00	0.94	0.31	0.31	65	50.3	15	0.70		1.53	0.70
H44481	Sulphurets	9.12		0.89	0.70	0.86	0.86		0.03	0.00	0.16	0.16	27.81	21.88	26.72	148	133.2	15	1.08		3.05	1.08
H44490	Sulphurets	9.18		0.18	0.12	0.16	0.12		0.02	0.07	-0.03	0.00	5.63	3.75	3.75	62	46.6	15	0.40		0.34	0.40
H44491	Sulphurets	9.14		0.35	0.26	0.34	0.32		0.01	0.02	0.06	0.06	10.94	8.13	9.97	94	79.2	15	0.71		1.79	0.71
H44494	Sulphurets	9.45		0.09	0.03	0.07	0.03		0.02	0.07	-0.03	0.00	2.81	0.94	0.94	108	93	15	0.93		2.48	0.93
H44495	Sulphurets	9.36		0.62	0.49	0.60	0.59		0.02	0.01	0.10	0.10	19.38	15.31	18.38	84	69.2	15	0.72		1.51	0.72
H44497	Sulphurets	9.33		0.63	0.46	0.63	0.61		0.01	0.01	0.15	0.15	19.69	14.38	19.18	85	70.4	15	0.71		1.72	0.71
H44501	Sulphurets	9.29		0.52	0.39	0.51	0.50		0.01	0.01	0.11	0.11	16.25	12.19	15.52	68	52.8	15	0.50		1.12	0.50
H44502	Sulphurets	8.95		0.40	0.32	0.39	0.36		0.01	0.03	0.04	0.04	12.50	10.00	11.35	97	81.7	15	0.96		1.84	0.96
G21779	Sulphurets	8.82		0.08	0.05	0.06	0.05		0.02	0.07	-0.06	0.00	2.50	1.56	1.56	9	0.001	8.599	0.03		0.08	0.03
H42352	Sulphurets	9.10	9.00	0.41	0.38	0.39	0.38	0.01	0.02	0.02	-0.01	0.00	12.81	11.88	11.88	73	58	15	0.65	0.43	1.60	0.22
H44499	Sulphurets	8.90	8.90	0.48	0.42	0.46	0.42	0.02	0.02	0.08	-0.04	0.00	15.00	13.13	13.13	83	68	15	0.81	0.86	3.20	0.00
10377	Sulphurets	9.30		0.41	0.37	0.40	0.37	0.01	0.01	0.06	-0.03	0.00	12.81	11.56	11.56	75	60	15	0.79	0.72	2.60	0.07
H44482	Sulphurets	9.09		0.43		0.43	0.43			0.03	-0.03	0.00	13.44	13.44	13.44	82	66.7	15	0.82		3.08	0.82
S-10-31 294-310	Sulphurets	9.28		0.66	0.55	0.64	0.58		0.02	0.06	0.03	0.03	20.63	17.06	18.06	127	112.1820449	15	0.90		3.48	0.90
X15842	Sulphurets	9.13		0.25	0.23	0.23	0.23		0.02	0.10	-0.10	0.00	7.81	7.19	7.19	53	37.6	15	0.36		1.21	0.36
H44487	Sulphurets	9.00	8.90	0.37	0.30	0.34	0.30	0.05	0.03	0.09	-0.05	0.00	11.56	9.38	9.38	69	54	15	0.65	0.69	2.50	0.00
9891	Sulphurets	9.00		0.46	0.32	0.41	0.34	0.05	0.05	0.07	0.02	0.02	14.38	10.00	10.54	78	63	15	0.94	0.85	3.10	0.09
H44494	Sulphurets	9.00	8.90	0.40	0.31	0.40	0.33	0.05	0.01	0.07	0.02	0.02	12.50	9.69	10.24	78	63	15	0.75	0.79	2.90	0.00
S-11-71 65.7-81.2	Sulphurets	9.35		0.28	0.24	0.28	0.25		0.01	0.02	0.01	0.01	8.75	7.50	7.90	62	46.57635468	15	0.40		1.54	0.40
S-10-31 44-60	Sulphurets	7.76		0.71	0.48	0.56	0.51		0.15	0.05	0.02	0.02	22.19	15.08	15.84	130	114.6758105	15	0.98		3.69	0.98
MC-05-02 250-266	Sulphurets	8.94		0.41	0.30	0.38	0.31		0.03	0.07	0.01	0.01	12.81	9.25	9.54	80	65.40201005	15	0.55		1.88	0.55
MC-05-01 230-255	Sulphurets	8.85		0.63	0.49	0.61	0.53		0.02	0.08	0.03	0.03	19.69	15.46	16.53	141	125.8977556	15	0.93		3.54	0.93
H44500	Sulphurets	9.03		0.38		0.38	0.38			0.06	-0.06	0.00	11.88	11.88	11.88	86	71.1	15	0.62		1.98	0.62
10362	Sulphurets	9.00		0.53	0.52	0.52	0.52	0.01	0.01	0.05	-0.05	0.00	16.56	16.25	16.25	142	127	15	1.48	1.41	5.20	0.07
20809	Sulphurets	8.90		0.59	0.52	0.56	0.52	0.01	0.03	0.05	-0.01	0.00	18.44	16.25	16.25	148	133	15	1.53	1.45	5.30	0.08
MC-05-01 279-295	Sulphurets	8.54		0.61	0.34	0.54	0.45		0.07	0.09	0.11	0.11	19.06	10.71	14.08	130	114.6758105	15	0.70		2.80	0.70

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
MC-05-02 314-330	Sulphurets	9.01		0.33	0.25	0.31	0.25		0.02	0.10	-0.04	0.00	10.31	7.96	7.96	78	62.88944724	15	0.61		2.26	0.61
MC-05-01 319-335	Sulphurets	8.77		0.40	0.30	0.37	0.30		0.03	0.10	-0.03	0.00	12.50	9.46	9.46	96	81.00997506	15	0.70		2.65	0.70
H44501	Sulphurets	9.00	9.00	0.32	0.26	0.27	0.26	0.02	0.05	0.05	-0.04	0.00	10.00	8.13	8.13	93	78	15	1.03	0.94	3.40	0.09
10353	Sulphurets	9.30		0.32	0.30	0.31	0.30	0.04	0.01	0.07	-0.06	0.00	10.00	9.38	9.38	118	103	15	1.30	1.24	4.60	0.06
MC-05-01 199-215	Sulphurets	8.60		0.50	0.30	0.47	0.42		0.03	0.06	0.12	0.12	15.63	9.38	13.05	172	157.0698254	15	1.24		4.70	1.24
S-06-02 20-26	Sulphurets	9.05		0.12	0.08	0.11	0.08		0.01	0.07	-0.05	0.00	3.75	2.58	2.58	35	20.1758794	15	0.16		0.66	0.16
X15887	Sulphurets	9.20	8.80	0.49	0.46	0.48	0.46	0.02	0.01	0.05	-0.03	0.00	15.31	14.38	14.38	206	191	15	2.83	2.79	10.20	0.04
H44490	Sulphurets	9.00		0.19		0.19	0.19			0.08	-0.08	0.00	5.94	5.94	5.94	49	34	15	0.34		0.43	0.34
H44465	Sulphurets	9.17		0.35		0.35	0.35			0.03	-0.03	0.00	10.94	10.94	10.94	153	137.7	15	1.35		4.46	1.35
H44486	Sulphurets	8.93		0.23		0.23	0.23			0.06	-0.06	0.00	7.19	7.19	7.19	80	65.4	15	0.71		2.42	0.71
H44468	Sulphurets	8.60	8.70	0.36	0.27	0.30	0.27	0.13	0.06	0.11	-0.08	0.00	11.25	8.44	8.44	131	116	15	1.35	1.27	4.60	0.08
MC-05-03 44-60	Sulphurets	8.79		0.47	0.34	0.39	0.34		0.08	0.11	-0.06	0.00	14.69	10.48	10.48	172	157.0698254	15	1.50		5.47	1.50
H44474	Sulphurets	8.70	8.80	0.45	0.39	0.40	0.39	0.05	0.05	0.04	-0.03	0.00	14.06	12.19	12.19	201	186	15	2.18	2.07	7.60	0.11
H44473	Sulphurets	8.86		0.45		0.45	0.45			0.08	-0.08	0.00	14.06	14.06	14.06	216	200.7	15	1.69		6.06	1.69
H44483	Sulphurets	9.20	9.10	0.15	0.11	0.00	0.11	0.03	0.15	0.08	-0.19	0.00	4.69	3.44	3.44	65	50	15	0.68	0.65	2.40	0.03
H44485	Sulphurets	9.00	8.90	0.16	0.14	0.14	0.14	0.03	0.02	0.08	-0.08	0.00	5.00	4.38	4.38	84	69	15	0.86	0.86	3.20	0.00
H44498	Sulphurets	9.03		0.20		0.20	0.20			0.08	-0.08	0.00	6.25	6.25	6.25	74	59.1	15	0.51		1.57	0.51
10343	Sulphurets	9.10		0.39	0.18	0.33	0.20	0.08	0.06	0.13	0.02	0.02	12.19	5.63	6.12	136	121	15	1.53	1.52	5.60	0.01
10383	Sulphurets	8.80		0.22	0.18	0.20	0.18	0.01	0.02	0.04	-0.02	0.00	6.88	5.63	5.63	133	118	15	1.10	1.05	3.80	0.05
H44492	Sulphurets	9.03		0.19		0.19	0.19			0.08	-0.08	0.00	5.94	5.94	5.94	84	69.2	15	0.75		2.33	0.75
H44469	Sulphurets	8.82		0.31		0.31	0.31			0.05	-0.05	0.00	9.69	9.69	9.69	206	191.4	15	1.63		5.64	1.63
H44489	Sulphurets	8.80	8.90	0.13	0.08	0.12	0.08	0.05	0.01	0.08	-0.04	0.00	4.06	2.50	2.50	64	49	15	0.71	0.65	2.40	0.06
MC-05-03 84-100	Sulphurets	9.14		0.18	0.11	0.17	0.11		0.01	0.07	-0.01	0.00	5.63	3.46	3.46	122	107.1945137	15	0.81		3.00	0.81
H42347	Sulphurets	8.90	8.90	0.03	0.03	0.02	0.03	0.01	0.01	0.02	-0.03	0.00	0.94	0.94	0.94	35	20	15	0.27	0.21	0.80	0.06
H44470	Sulphurets	8.60	8.70	0.22	0.16	0.17	0.16	0.11	0.05	0.08	-0.07	0.00	6.88	5.00	5.00	198	183	15	2.17	2.22	8.20	0.00
H44787	Sulphurets	9.58		0.08	0.06	0.06	0.06		0.02	0.09	-0.09	0.00	2.50	1.88	1.88	87	71.68342	15	0.76		2.72	0.76
H42358	Sulphurets	9.33		0.09	0.06	0.09	0.06		0.01	0.04	-0.01	0.00	2.81	1.88	1.88	87	72.12121	15	0.64		2.32	0.64
H44467	Sulphurets	9.15		0.17		0.17	0.17			0.10	-0.10	0.00	5.31	5.31	5.31	143	127.8	15	1.43		5.19	1.43
G21604	Sulphurets	9.50		0.09	0.03	0.09	0.03	0.03	0.01	0.09	-0.04	0.00	2.81	0.94	0.94	62	47	15	0.62	0.64	2.40	0.00
9861	Sulphurets	8.70		0.11	0.06	0.09	0.06	0.06	0.02	0.09	-0.06	0.00	3.44	1.88	1.88	151	136	15	1.54	1.39	5.10	0.15
H44475	Sulphurets	9.01		0.09		0.09	0.09			0.02	-0.02	0.00	2.81	2.81	2.81	203	188.2	15	1.85		6.69	1.85
H44466	Sulphurets	8.80	8.80	0.10	0.06	0.08	0.06	0.05	0.02	0.06	-0.04	0.00	3.13	1.88	1.88	232	217	15	2.58	2.44	9.00	0.14
G21756	Sulphurets	8.76		0.03	0.02	0.01	0.02		0.02	0.11	-0.12	0.00	0.94	0.63	0.63	79	64.1	15	0.60		2.22	0.60
H44480	Sulphurets	9.19		0.07		0.07	0.07			0.07	-0.07	0.00	2.19	2.19	2.19	57	41.7	15	0.46		1.83	0.46
H44484	Sulphurets	9.40		0.07		0.07	0.07			0.08	-0.08	0.00	2.19	2.19	2.19	74	58.5	15	0.71		2.47	0.71
SG92-06_C12632	Sulphurets	8.30		3.39	3.01	3.34	3.32	0.05	0.05	0.02	0.31	0.31	105.94	94.06	103.78	24	9	15	0.18	0.19	0.70	0.00
SG92-06_C12700	Sulphurets	8.10		2.99	2.67	2.97	2.96	0.08	0.02	0.01	0.29	0.29	93.44	83.44	92.61	23	8	15	0.18	0.21	0.80	0.00
10276	Sulphurets	8.16		7.50	5.82	7.47	7.47		0.03	0.00	1.65	1.65	234.38	181.88	233.43	96	80.5	15	1.16		4.24	1.16
X15896	Sulphurets	8.90	8.80	3.10	3.04	3.10	3.09	0.05	0.01	0.01	0.05	0.05	96.88	95.00	96.49	41	26	15	0.40	0.44	1.60	0.00
9756	Sulphurets	7.70		0.95	0.75	0.87	0.83	0.06	0.08	0.04	0.08	0.08	29.69	23.44	25.87	12	0.001	11.999	0.07	0.07	0.30	0.00
10298	Sulphurets	8.38		3.75	3.29	3.74	3.74		0.01	0.00	0.45	0.45	117.19	102.81	116.83	73	57.9	15	0.84		2.46	0.84
SG92-02_C8856	Sulphurets	8.60		2.96	2.80	2.93	2.91	0.02	0.03	0.02	0.11	0.11	92.50	87.50	90.90	59	44	15	0.60	0.60	2.20	0.00
H42421	Sulphurets	8.70	8.70	2.42	2.19	2.41	2.39	0.01	0.01	0.02	0.20	0.20	75.63	68.44	74.80	51	36	15	0.51	0.46	1.70	0.05
G21749	Sulphurets	8.80		2.89	2.86	2.89	2.87	0.01	0.01	0.01	0.01	0.01	90.31	89.38	89.79	65	50	15	0.69	0.70	2.60	0.00
G21731	Sulphurets	9.00		2.92	2.77	2.92	2.90	0.01	0.01	0.01	0.13	0.13	91.25	86.56	90.71	67	52	15	0.73	0.73	2.70	0.00
X15894	Sulphurets	8.62		3.74		3.74	3.74			0.00	0.00	0.00	116.88	116.88	116.88	95	80.4	15	0.77		2.35	0.77
H42450	Sulphurets	9.00	8.90	2.94	2.67	2.93	2.92	0.03	0.01	0.01	0.25	0.25	91.88	83.44	91.19	76	61	15	0.95	0.88	3.20	0.07
H44580	Sulphurets	8.41		3.75	3.74	3.74	3.74		0.01	0.00	0.00	0.00	117.19	116.88	116.88	106	91.15578	15	1.17		4.28	1.17
S-11-70 47.4-63.4	Sulphurets	8.67		4.13	3.50	4.10	4.09		0.03	0.00	0.59	0.59	129.06	109.38	127.95	118	103.226601	15	0.99		3.64	0.99
S-11-73 4.65-20.2	Sulphurets	8.87		4.17	3.26	4.16	4.16		0.01	0.00	0.90	0.90	130.31	101.88	129.88	121	105.6896552	15	0.69		2.53	0.69

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
H42415	Sulphurets	8.50	8.40	3.05	2.74	3.03	2.99	0.03	0.02	0.04	0.25	0.25	95.31	85.63	93.57	91	76	15	0.81	0.76	2.80	0.05
H42412	Sulphurets	8.40	8.30	3.07	2.98	3.06	3.05	0.02	0.01	0.01	0.07	0.07	95.94	93.13	95.31	96	81	15	0.81	0.79	2.90	0.02
H42406	Sulphurets	8.31		2.72	2.34	2.64	2.64		0.08	0.00	0.30	0.30	85.00	73.13	82.46	306	290.6	15	1.43		3.70	1.43
H42407	Sulphurets	8.36		1.43	1.33	1.40	1.40		0.03	0.00	0.07	0.07	44.69	41.56	43.64	251	236.3	15	1.48		3.33	1.48
H42408	Sulphurets	8.85		1.09	1.08	1.08	1.08		0.01	0.02	-0.02	0.00	34.06	33.75	33.75	265	250.2	15	1.18		2.96	1.18
H42409	Sulphurets	8.79		0.87	0.75	0.86	0.84		0.01	0.02	0.09	0.09	27.19	23.44	26.37	273	257.7	15	0.90		2.22	0.90
H42410	Sulphurets	8.80		0.77	0.81	0.73	0.81		0.04	0.02	-0.10	0.00	24.06	25.31	25.31	231	216.1	15	0.97		2.46	0.97
H42417	Sulphurets	8.64		1.58	1.56	1.56	1.56		0.02	0.00	0.00	0.00	49.38	48.75	48.75	248	232.5	15	1.53		3.24	1.53
H42418	Sulphurets	8.63		1.82	1.78	1.80	1.80		0.02	0.00	0.02	0.02	56.88	55.63	56.17	225	209.7	15	0.90		2.15	0.90
H42420	Sulphurets	8.72		1.66	1.64	1.64	1.64		0.02	0.00	0.00	0.00	51.88	51.25	51.25	202	187	15	1.31		3.34	1.31
H42421	Sulphurets	8.50		2.15	1.91	2.12	2.12		0.03	0.00	0.21	0.21	67.19	59.69	66.18	206	190.8	15	0.84		1.97	0.84
H42445	Sulphurets	9.20		0.36	0.38	0.35	0.38		0.01	0.05	-0.08	0.00	11.25	11.88	11.88	207	192.1	15	1.02		2.73	1.02
H42446	Sulphurets	8.58		1.80	1.75	1.78	1.78		0.02	0.00	0.03	0.03	56.25	54.69	55.55	147	132.2	15	0.99		2.55	0.99
H42447	Sulphurets	8.60		0.89	0.90	0.87	0.90		0.02	0.01	-0.04	0.00	27.81	28.13	28.13	174	159.2	15	1.04		2.53	1.04
H42449	Sulphurets	8.94		0.66	0.60	0.65	0.64		0.01	0.01	0.04	0.04	20.63	18.75	19.91	154	139	15	0.96		2.05	0.96
H42450	Sulphurets	8.51		2.04	1.87	2.02	2.02		0.02	0.00	0.15	0.15	63.75	58.44	63.06	153	137.8	15	0.83		1.70	0.83
S154096	Sulphurets	9.22		1.48	1.06	1.48	1.47		0.01	0.00	0.41	0.41	46.25	33.13	46.01	171	156.3	15	1.05		3.37	1.05
S154097	Sulphurets	9.09		1.10	0.84	1.10	1.09		0.01	0.01	0.25	0.25	34.38	26.25	33.98	166	151.3	15	1.04		3.32	1.04
S155917	Sulphurets	9.12		0.98	0.76	0.97	0.96		0.01	0.01	0.20	0.20	30.63	23.75	30.11	130	115	15	0.84		2.26	0.84
S155918	Sulphurets	9.26		0.67	0.53	0.67	0.65		0.01	0.02	0.12	0.12	20.94	16.56	20.29	103	87.5	15	0.66		1.94	0.66
S156364	Sulphurets	9.33		1.03	0.77	1.03	1.02		0.01	0.01	0.25	0.25	32.19	24.06	31.78	169	153.8	15	1.12		2.97	1.12
S156365	Sulphurets	9.20		1.26	0.96	1.26	1.25		0.01	0.00	0.29	0.29	39.38	30.00	39.07	176	161.3	15	1.06		2.85	1.06
H42406	Sulphurets	8.30	8.30	3.88	3.56	3.88	3.87	0.08	0.01	0.01	0.31	0.31	121.25	111.25	120.79	125	110	15	0.12	0.10	0.40	0.02
E192902	Sulphurets	8.51		5.56	4.91	5.53	5.53		0.03	0.00	0.62	0.62	173.75	153.44	172.79	179	164.2	15	2.02		7.15	2.02
H42440	Sulphurets	8.50	8.40	3.46	3.19	3.45	3.44	0.01	0.01	0.01	0.25	0.25	108.13	99.69	107.57	114	99	15	1.50	1.39	5.10	0.11
S91-388_5285	Sulphurets	9.00		1.11	1.09	1.11	1.09	0.01	0.01	0.05	-0.04	0.00	34.69	34.06	34.06	37	22	15	0.37	0.37	1.30	0.00
G21649	Sulphurets	8.50		1.82	1.69	1.82	1.78	0.06	0.01	0.03	0.09	0.09	56.88	52.81	55.77	61	46	15	0.80	0.77	2.80	0.03
S-11-70 7.25-23.4	Sulphurets	8.63		4.03	3.27	3.95	3.95		0.08	0.00	0.69	0.69	125.94	102.08	123.53	143	127.8571429	15	1.18		4.57	1.18
G21640	Sulphurets	9.10		1.64	1.46	1.64	1.61	0.06	0.01	0.02	0.15	0.15	51.25	45.63	50.38	61	46	15	0.68	0.64	2.30	0.04
G23418	Sulphurets	9.00		2.09	1.77	2.08	2.05	0.02	0.01	0.03	0.28	0.28	65.31	55.31	64.17	79	64	15	0.45	0.42	1.50	0.03
G24731	Sulphurets	8.40		1.58	1.49	1.58	1.53	0.01	0.01	0.05	0.04	0.04	49.38	46.56	47.74	61	46	15	0.79	0.46	1.70	0.33
S-11-73 42.45-57.35	Sulphurets	8.94		3.07	2.45	3.06	3.05		0.01	0.02	0.59	0.59	95.94	76.67	95.20	150	135.2463054	15	0.99		3.71	0.99
SG92-17_C11112	Sulphurets	9.00		0.87	0.66	0.85	0.81	0.03	0.02	0.04	0.15	0.15	27.19	20.63	25.43	43	28	15	0.43	0.39	1.40	0.04
H42417	Sulphurets	8.60	8.50	2.33	2.15	2.31	2.30	0.03	0.02	0.01	0.15	0.15	72.81	67.19	71.76	124	109	15	0.88	0.86	3.20	0.02
S-11-74 75.9-91.9	Sulphurets	9.07		1.72	1.13	1.71	1.67		0.01	0.04	0.54	0.54	53.75	35.42	52.31	91	76.13300493	15	0.62		2.43	0.62
X15897	Sulphurets	8.91		3.22		3.22	3.22			0.00	0.00	0.00	100.63	100.63	100.63	181	166.4	15	0.66		1.86	0.66
SG92-17_C11169	Sulphurets	9.20		0.77	0.66	0.74	0.72	0.01	0.03	0.02	0.06	0.06	24.06	20.63	22.62	42	27	15	0.43	0.36	1.30	0.07
9926	Sulphurets	7.85		1.59	1.43	1.56	1.54		0.03	0.02	0.11	0.11	49.69	44.69	48.18	91	76.1	15	0.37		1.28	0.37
SG92-17_C11087	Sulphurets	9.00		1.12	0.88	1.10	1.03	0.04	0.02	0.07	0.15	0.15	35.00	27.50	32.22	63	48	15	0.60	0.53	2.00	0.07
S-11-69 1.76-16.9	Sulphurets	8.37		0.90	0.81	0.87	0.84		0.03	0.03	0.03	0.03	28.00	25.42	26.22	54	38.971133	15	0.16		0.44	0.16
SG92-15_C12893	Sulphurets	8.30		1.41	0.95	1.40	1.36	0.06	0.01	0.04	0.41	0.41	44.06	29.69	42.53	85	70	15	1.12	0.78	2.90	0.34
S-11-74 5.9-21.9	Sulphurets	8.96		2.15	1.79	2.14	2.12		0.01	0.02	0.34	0.34	67.19	55.83	66.33	139	124.1625616	15	0.60		2.28	0.60
H42404	Sulphurets	8.50	8.50	2.02	1.81	2.02	2.00	0.03	0.01	0.02	0.19	0.19	63.13	56.56	62.38	136	121	15	1.39	0.50	1.80	0.89
H42410	Sulphurets	8.90	8.70	1.34	1.13	1.31	1.27	0.03	0.03	0.04	0.14	0.14	41.88	35.31	39.54	88	73	15	1.03	0.93	3.40	0.10
S-08-07 55-70	Sulphurets	8.50		2.32	2.45	2.31	2.45		0.01	0.01	-0.15	0.00	72.50	76.67	76.67	172	157.0698254	15	1.48		5.80	1.48
H42419	Sulphurets	9.20	9.00	1.65	1.47	1.64	1.60	0.03	0.01	0.04	0.13	0.13	51.56	45.94	50.08	114	99	15	1.05	0.96	3.50	0.09
G21714	Sulphurets	9.10		1.82	1.73	1.82	1.79	0.02	0.01	0.03	0.06	0.06	56.88	54.06	55.86	130	115	15	1.22	1.18	4.30	0.04
S-11-69 42.1-56.9	Sulphurets	8.98		1.58	1.17	1.58	1.55		0.01	0.02	0.38	0.38	49.38	36.67	48.55	116	100.7635468	15	0.77		3.08	0.77
S-11-74 37.9-53.9	Sulphurets	8.73		1.29	1.18	1.27	1.25		0.02	0.02	0.07	0.07	40.19	36.75	39.08	138	123.2337931	15	0.84		2.82	0.84
S-11-74 117.9-133.9	Sulphurets	9.19		1.69	1.16	1.68	1.65		0.01	0.03	0.49	0.49	52.81	36.25	51.63	127	111.8472906	15	0.94		3.53	0.94

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
10264	Sulphurets	8.64		2.53	2.11	2.51	2.51		0.02	0.00	0.40	0.40	79.06	65.94	78.37	194	178.5	15	2.27		8.12	2.27
10253	Sulphurets	8.68		1.97	1.35	1.94	1.93		0.03	0.01	0.58	0.58	61.56	42.19	60.44	185	169.7	15	2.29		8.34	2.29
S-11-69 125.1-140.9	Sulphurets	9.01		2.06	1.83	2.03	2.00		0.03	0.03	0.17	0.17	64.38	57.29	62.60	192	177.1182266	15	1.47		5.70	1.47
H44593	Sulphurets	9.09		0.97	0.96	0.96	0.96		0.01	0.01	-0.01	0.00	30.31	30.00	30.00	99	84.24623	15	0.98		3.59	0.98
S-11-69 82.9-98.9	Sulphurets	8.88		1.18	0.86	1.18	1.14		0.01	0.04	0.28	0.28	36.88	26.88	35.47	119	104.4581281	15	0.70		2.68	0.70
9759	Sulphurets	8.60		0.59	0.42	0.59	0.56	0.02	0.01	0.03	0.14	0.14	18.44	13.13	17.36	60	45	15	0.68	0.65	2.40	0.03
H42447	Sulphurets	9.00	8.70	0.80	0.66	0.80	0.75	0.01	0.01	0.04	0.09	0.09	25.00	20.63	23.47	82	67	15	1.03	0.90	3.30	0.13
S-11-73 118.2-134.2	Sulphurets	8.76		1.34	0.90	1.32	1.31		0.02	0.01	0.41	0.41	41.88	28.13	41.01	154	138.9408867	15	0.98		3.71	0.98
S-11-72 23.3-38.3	Sulphurets	9.10		1.44	1.01	1.43	1.40		0.01	0.03	0.39	0.39	45.00	31.67	43.78	176	161.1083744	15	1.49		5.75	1.49
G21620	Sulphurets	8.80		1.28	1.15	1.28	1.25	0.03	0.01	0.03	0.10	0.10	40.00	35.94	38.91	161	146	15	1.38	1.31	4.80	0.07
S-10-29 65.5-79.5	Sulphurets	9.25		0.39	0.54	0.35	0.54		0.04	0.04	-0.23	0.00	12.19	16.92	16.92	71	56.0723192	15	0.44		1.77	0.44
H42408	Sulphurets	8.60	8.50	0.60	0.61	0.59	0.61	0.01	0.01	0.06	-0.08	0.00	18.75	19.06	19.06	86	71	15	0.65	0.64	2.30	0.01
MC-05-01 49-65	Sulphurets	8.30		1.08	0.83	1.07	1.04		0.01	0.03	0.21	0.21	33.75	25.83	32.43	148	133.3790524	15	0.74		3.01	0.74
S-10-29 14.4-29.5	Sulphurets	8.98		0.75	0.52	0.72	0.69		0.03	0.03	0.17	0.17	23.44	16.38	21.57	100	84.75062344	15	0.88		3.39	0.88
S-10-33 129-146	Sulphurets	8.67		1.34	0.94	1.33	1.32		0.01	0.01	0.38	0.38	41.88	29.38	41.26	195	179.5137157	15	1.48		5.75	1.48
9801	Sulphurets	8.80		0.90	0.86	0.87	0.86	0.02	0.03	0.07	-0.06	0.00	28.13	26.88	26.88	127	112	15	1.19	1.11	4.10	0.08
S-08-07 190-204.5	Sulphurets	8.20		1.23	0.85	1.16	1.12		0.07	0.04	0.27	0.27	38.44	26.46	34.99	170	154.5760599	15	1.20		4.46	1.20
H42443	Sulphurets	8.90	8.70	0.69	0.65	0.67	0.65	0.01	0.02	0.07	-0.05	0.00	21.56	20.31	20.31	120	105	15	1.11	1.07	3.90	0.04
9770	Sulphurets	8.30		0.44	0.22	0.43	0.32	0.03	0.01	0.11	0.10	0.10	13.75	6.88	10.12	60	45	15	0.68	0.62	2.30	0.06
MC-05-01 89-105	Sulphurets	8.74		0.83	0.61	0.82	0.76		0.01	0.06	0.15	0.15	25.94	19.10	23.89	143	128.3915212	15	0.89		3.55	0.89
H45459	Sulphurets	8.88		0.81	0.72	0.80	0.79		0.01	0.01	0.07	0.07	25.31	22.50	24.80	154	139.0404	15	0.87		3.23	0.87
S-11-73 79.2-94.2	Sulphurets	9.21		0.63	0.44	0.62	0.59		0.01	0.03	0.16	0.16	19.69	13.63	18.57	126	110.6157635	15	0.98		3.69	0.98
X18487	Sulphurets	8.58		0.95	0.56	0.94	0.91		0.01	0.03	0.35	0.35	29.69	17.50	28.33	197	181.7	15	1.61		5.65	1.61
E216203	Sulphurets	9.40		0.30	0.29	0.29	0.29		0.01	0.03	-0.03	0.00	9.38	9.06	9.06	74	59.1	15	0.48		1.75	0.48
SG92-17_C11080	Sulphurets	8.60		0.75	0.52	0.74	0.67	0.03	0.01	0.07	0.15	0.15	23.44	16.25	20.89	173	158	15	1.74	1.72	6.30	0.02
X18455	Sulphurets	8.59		0.55	0.40	0.54	0.48		0.01	0.06	0.08	0.08	17.19	12.50	15.08	128	112.8	15	0.85		2.79	0.85
X18478	Sulphurets	8.63		0.79	0.78	0.78	0.78		0.01	0.03	-0.03	0.00	24.69	24.38	24.38	229	214.3	15	1.74		5.54	1.74
9742	Sulphurets	8.80		0.11	0.04	0.10	0.08	0.02	0.01	0.02	0.04	0.04	3.44	1.25	2.63	25	10	15	0.15	0.15	0.60	0.00
S-08-07 155.1-170.5	Sulphurets	8.91		0.27	0.37	0.25	0.37		0.02	0.07	-0.19	0.00	8.44	11.48	11.48	140	124.6508728	15	0.93		3.50	0.93
X18433	Sulphurets	8.83		0.49	0.31	0.48	0.37		0.01	0.11	0.06	0.06	15.31	9.69	11.58	173	157.9	15	1.40		4.77	1.40
H44569	Sulphurets	8.44		0.24	0.23	0.23	0.23		0.01	0.05	-0.05	0.00	7.50	7.19	7.19	148	133.24121	15	0.98		3.34	0.98
H45267	Sulphurets	8.66		0.24	0.23	0.23	0.23		0.01	0.10	-0.10	0.00	7.50	7.19	7.19	165	150.40404	15	1.31		4.77	1.31
H45245	Sulphurets	9.12		0.29	0.19	0.28	0.19		0.01	0.09	0.00	0.00	9.06	5.94	6.01	139	123.88889	15	1.19		4.14	1.19
S-10-33 52-69	Sulphurets	9.07		0.19	0.14	0.18	0.14		0.01	0.04	0.00	0.00	5.94	4.35	4.50	132	117.1695761	15	0.58		2.26	0.58
G24711	Sulphurets	8.60		0.18	0.12	0.18	0.12	0.01	0.01	0.08	-0.03	0.00	5.63	3.75	3.75	118	103	15	0.94	0.96	3.50	0.00
#N/A	Sulphurets	9.20		0.13	0.07	0.12	0.07	0.01	0.01	0.09	-0.04	0.00	4.06	2.19	2.19	76	61	15	0.47	0.49	1.80	0.00
E192923	Sulphurets	8.69		0.12	0.09	0.12	0.09		0.01	0.06	-0.04	0.00	3.75	2.81	2.81	196	180.5	15	1.52		4.73	1.52
H45491	Sulphurets	8.87		0.07	0.07	0.07	0.07		0.01	0.06	-0.06	0.00	2.19	2.19	2.19	164	149.14141	15	1.30		4.77	1.30
S91-387_5160	Sulphurets	6.00		2.71	2.27	2.70	2.69	0.05	0.01	0.01	0.42	0.42	84.69	70.94	84.00	8	0.001	7.999	0.01	0.03	0.10	0.00
X18179	Mitchell	8.20		0.85	0.71	0.84	0.77	0.05	0.01	0.07	0.06	0.06	26.56	22.19	23.93	11	0.001	10.999	0.03	0.06	0.20	0.00
S91-395_5370	Mitchell	8.30		2.59	2.33	2.57	2.55	0.02	0.02	0.02	0.22	0.22	80.94	72.81	79.69	43	28	15	0.51	0.50	1.80	0.01
G37543	Mitchell	8.50		2.02	1.89	1.97	1.94	0.03	0.05	0.03	0.05	0.05	63.13	59.06	60.65	76	61	15	1.22	1.19	4.40	0.03
E192557	Mitchell	8.60		0.90	0.74	0.87	0.76	0.01	0.03	0.11	0.02	0.02	28.13	23.13	23.79	42	27	15	0.41	0.40	1.50	0.01
G33225	Mitchell	9.10		0.50	0.36	0.49	0.46	0.01	0.01	0.03	0.10	0.10	15.63	11.25	14.23	47	32	15	0.47	0.45	1.60	0.02
G33213	Mitchell	9.20		0.57	0.42	0.56	0.51	0.01	0.01	0.05	0.09	0.09	17.81	13.13	16.08	125	110	15	1.13	1.11	4.10	0.02
G37849	Mitchell	7.80		12.75	9.17	12.74	12.73	0.04	0.01	0.01	3.56	3.56	398.44	286.56	397.85	35	20	15	0.40	0.37	1.40	0.03
X17096	Mitchell	7.30		2.95	2.69	2.92	2.91	0.02	0.03	0.01	0.22	0.22	92.19	84.06	91.03	14	0.001	13.999	0.08	0.10	0.40	0.00
H43066	Mitchell	8.00	7.70	3.27	2.98	3.27	3.26	0.08	0.01	0.01	0.28	0.28	102.19	93.13	101.79	16	1	15	0.19	0.03	0.20	0.17
H43070	Mitchell	8.60	8.60	4.39	3.80	4.39	4.38	0.03	0.01	0.00	0.58	0.58	137.19	118.75	136.92	22	7	15	0.16	0.16	0.60	0.00
H41606	Mitchell	8.70	7.90	6.02	5.19	6.02	6.01	0.04	0.01	0.00	0.82	0.82	188.13	162.19	187.89	33	18	15	0.33	0.32	1.20	0.01

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
H43086	Mitchell	8.20	8.30	2.22	1.90	2.22	2.18	0.02	0.01	0.03	0.28	0.28	69.38	59.38	68.26	12	0.001	11.999	0.03	0.03	0.20	0.01
H43064	Mitchell	8.50	8.50	2.99	2.72	2.99	2.97	0.03	0.01	0.02	0.25	0.25	93.44	85.00	92.79	17	2	15	0.02	0.05	0.20	0.00
X17168	Mitchell	9.00		3.17	2.82	3.15	3.13	0.08	0.02	0.02	0.31	0.31	99.06	88.13	97.75	19	4	15	0.08	0.09	0.30	0.00
H40759	Mitchell	7.96		2.52	1.89	2.51	2.51		0.01	0.00	0.62	0.62	78.75	59.06	78.40	16	1.3	15	0.21		0.82	0.21
X17119	Mitchell	7.60		1.78	1.40	1.65	1.63	0.14	0.13	0.02	0.23	0.23	55.63	43.75	50.86	11	0.001	10.999	0.01	0.03	0.20	0.00
9265	Mitchell	8.70		3.53	3.17	3.53	3.51	0.01	0.01	0.01	0.34	0.34	110.31	99.06	109.76	24	9	15	0.18	0.19	0.70	0.00
H43100	Mitchell	8.30	8.50	1.50	1.27	1.50	1.47	0.02	0.01	0.02	0.20	0.20	46.88	39.69	46.07	11	0.001	10.999	0.05	0.05	0.20	0.00
H43084	Mitchell	8.30	8.40	2.49	2.17	2.40	2.39	0.12	0.09	0.01	0.22	0.22	77.81	67.81	74.72	18	3	15	0.11	0.12	0.50	0.00
H43060	Mitchell	6.80	7.10	1.19	0.87	1.18	1.12	0.03	0.01	0.06	0.25	0.25	37.19	27.19	34.99	9	0.001	8.999	0.07	0.03	0.20	0.05
X17129	Mitchell	8.90		1.78	1.47	1.73	1.71	0.06	0.05	0.02	0.24	0.24	55.63	45.94	53.35	15	0.001	14.999	0.19	0.15	0.50	0.04
X17105	Mitchell	8.20		2.75	2.27	2.73	2.72	0.02	0.02	0.01	0.45	0.45	85.94	70.94	84.96	24	9	15	0.18	0.17	0.60	0.01
X06508	Mitchell	8.35		5.37	3.19	5.35	5.35		0.02	0.00	2.16	2.16	167.81	99.69	167.16	48	32.5	15	0.50		1.75	0.50
X16763	Mitchell	9.10		3.35	2.95	3.34	3.33	0.02	0.01	0.01	0.38	0.38	104.69	92.19	104.03	30	15	15		0.21	0.80	0.00
G37888	Mitchell	8.10		3.67	3.52	3.66	3.65	0.02	0.01	0.01	0.13	0.13	114.69	110.00	114.02	33	18	15	0.27	0.28	1.00	0.00
X14984	Mitchell	9.10		5.54	4.72	5.54	5.53	0.04	0.01	0.00	0.81	0.81	173.13	147.50	172.86	53	38	15		0.54	2.00	0.00
X17360	Mitchell	9.90		0.99	0.80	0.98	0.93	0.03	0.01	0.05	0.13	0.13	30.94	25.00	29.10	9	0.001	8.999	0.04	0.08	0.30	0.00
H43113	Mitchell	8.90	8.90	4.13	3.48	4.12	4.11	0.03	0.01	0.01	0.63	0.63	129.06	108.75	128.57	40	25	15	0.40	0.36	1.30	0.04
G36677	Mitchell	8.80		3.14	2.92	3.14	3.12	0.01	0.01	0.02	0.20	0.20	98.13	91.25	97.41	31	16	15	0.26	0.26	1.00	0.00
G33512	Mitchell	8.10		3.27	2.73	3.23	3.23		0.04	0.00	0.49	0.49	102.03	85.36	100.79	25	10.25	15	0.15		0.43	0.15
H41633	Mitchell	8.60	7.50	4.45	4.23	4.45	4.44	0.05	0.01	0.00	0.21	0.21	139.06	132.19	138.81	45	30	15	0.33	0.34	1.30	0.00
X17271	Mitchell	8.80		5.45	5.15	5.41	5.41	0.05	0.04	0.00	0.26	0.26	170.31	160.94	168.92	55	40	15	0.60	0.55	2.00	0.05
H43074	Mitchell	8.60	8.50	4.13	3.75	3.99	3.99	0.17	0.14	0.00	0.24	0.24	129.06	117.19	124.60	42	27	15	0.48	0.40	1.50	0.08
X17202	Mitchell	9.20		2.77	2.68	2.74	2.72	0.01	0.03	0.02	0.04	0.04	86.56	83.75	84.96	29	14	15	0.29	0.25	0.90	0.04
X17350	Mitchell	9.30		2.98	2.91	2.97	2.96	0.05	0.01	0.01	0.05	0.05	93.13	90.94	92.51	32	17	15	0.17	0.20	0.70	0.00
X17069	Mitchell	8.13		4.71	3.56	4.68	4.68		0.03	0.00	1.12	1.12	147.19	111.25	146.22	52	36.5	15	0.30		1.01	0.30
X17270	Mitchell	8.90		5.02	4.44	5.01	5.01	0.02	0.01	0.00	0.57	0.57	156.88	138.75	156.43	58	43	15		0.62	2.30	0.00
H43068	Mitchell	8.30	8.30	2.85	2.17	2.73	2.72	0.23	0.12	0.01	0.55	0.55	89.06	67.81	85.12	32	17	15	0.29	0.17	0.60	0.12
X18147	Mitchell	9.10		3.27	2.83	3.22	3.21	0.05	0.05	0.01	0.38	0.38	102.19	88.44	100.42	38	23	15	0.47	0.48	1.80	0.00
X16787	Mitchell	9.10		3.37	3.21	3.34	3.33	0.06	0.03	0.01	0.12	0.12	105.31	100.31	104.13	40	25	15	0.30	0.33	1.20	0.00
67950	Mitchell	8.50		2.53	2.33	2.51	2.49	0.01	0.02	0.02	0.16	0.16	79.06	72.81	77.84	30	15	15	0.20	0.20	0.70	0.00
H41661	Mitchell	8.70	7.60	4.87	4.43	4.84	4.84	0.11	0.03	0.00	0.41	0.41	152.19	138.44	151.17	59	44	15	0.65	0.63	2.30	0.02
G37829	Mitchell	8.80		3.10	2.94	3.09	3.09	0.10	0.01	0.00	0.15	0.15	96.88	91.88	96.42	39	24	15	0.38	0.40	1.50	0.00
X17354	Mitchell	9.90		0.77	0.66	0.75	0.71	0.02	0.02	0.04	0.05	0.05	24.06	20.63	22.24	9	0.001	8.999		0.09	0.30	0.00
X17404	Mitchell	9.30		5.88	5.07	5.85	5.85	0.06	0.03	0.00	0.78	0.78	183.75	158.44	182.73	74	59	15	0.70	0.72	2.70	0.00
H43134	Mitchell	9.00	8.90	3.79	3.59	3.79	3.77	0.02	0.01	0.01	0.18	0.18	118.44	112.19	117.89	49	34	15	0.46	0.44	1.60	0.02
X14912	Mitchell	9.60		2.94	2.66	2.92	2.91	0.03	0.02	0.01	0.25	0.25	91.88	83.13	90.86	38	23	15		0.38	1.40	0.00
H43078	Mitchell	8.60	8.70	2.92	2.66	2.92	2.89	0.05	0.01	0.02	0.23	0.23	91.25	83.13	90.38	39	24	15	0.40	0.37	1.40	0.03
H43082	Mitchell	8.90	8.90	1.59	1.37	1.50	1.48	0.14	0.09	0.02	0.11	0.11	49.69	42.81	46.17	20	5	15	0.16	0.16	0.60	0.00
H41615	Mitchell	8.90	8.50	3.26	3.18	3.25	3.25	0.08	0.01	0.00	0.07	0.07	101.88	99.38	101.42	44	29	15	0.41	0.42	1.50	0.00
X14921	Mitchell	9.10		3.50	2.96	3.48	3.47	0.02	0.02	0.01	0.51	0.51	109.38	92.50	108.58	48	33	15		0.55	2.00	0.00
X16837	Mitchell	9.20		3.13	2.89	3.12	3.11	0.01	0.01	0.01	0.22	0.22	97.81	90.31	97.24	43	28	15	0.47	0.48	1.80	0.00
X16765	Mitchell	9.20		2.70	2.36	2.69	2.67	0.04	0.01	0.02	0.31	0.31	84.38	73.75	83.52	37	22	15	0.31	0.34	1.20	0.00
X17225	Mitchell	9.10		3.87	3.54	3.85	3.84	0.01	0.02	0.01	0.30	0.30	120.94	110.63	120.14	54	39	15	0.49	0.46	1.70	0.03
X17188	Mitchell	8.90		3.04	2.85	3.02	3.00	0.01	0.02	0.02	0.15	0.15	95.00	89.06	93.81	43	28	15	0.40	0.38	1.40	0.02
H43091	Mitchell	9.10	9.00	0.72	0.59	0.71	0.68	0.02	0.01	0.03	0.09	0.09	22.50	18.44	21.31	10	0.001	9.999	0.07	0.03	0.20	0.05
X16185	Mitchell	8.80		1.60	1.35	1.57	1.55	0.04	0.03	0.02	0.20	0.20	50.00	42.19	48.33	23	8	15	0.26	0.30	1.10	0.00
X16775	Mitchell	9.30		2.50	2.35	2.50	2.48	0.03	0.01	0.01	0.13	0.13	78.13	73.44	77.62	37	22	15	0.26	0.29	1.10	0.00
H43093	Mitchell	8.90	8.90	0.62	0.46	0.62	0.60	0.01	0.01	0.01	0.14	0.14	19.38	14.38	18.77	9	0.001	8.999	0.03	0.05	0.20	0.00
X14969	Mitchell	9.50		1.94	1.68	1.93	1.92	0.01	0.01	0.01	0.24	0.24	60.63	52.50	59.87	29	14	15	0.32	0.32	1.20	0.00
X18198	Mitchell	9.30		1.04	0.90	1.00	0.92	0.05	0.04	0.08	0.02	0.02	32.50	28.13	28.89	14	0.001	13.999	0.18	0.21	0.80	0.00

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
X17394	Mitchell	9.40		3.76	3.66	3.75	3.74	0.02	0.01	0.01	0.08	0.08	117.50	114.38	117.00	57	42	15	0.53	0.55	2.00	0.00
X14977	Mitchell	9.30		2.98	2.59	2.97	2.96	0.01	0.01	0.01	0.37	0.37	93.13	80.94	92.61	46	31	15		0.48	1.80	0.00
H40884	Mitchell	8.90	8.60	3.87	3.43	3.87	3.86	0.02	0.01	0.01	0.43	0.43	120.94	107.19	120.58	60	45	15	0.60	0.57	2.10	0.03
X16754	Mitchell	9.00		2.94	2.60	2.90	2.89	0.08	0.04	0.01	0.29	0.29	91.88	81.25	90.37	45	30	15	0.38	0.40	1.50	0.00
X14904	Mitchell	9.10		2.14	1.87	2.13	2.11	0.01	0.01	0.02	0.24	0.24	66.88	58.44	65.85	33	18	15		0.37	1.40	0.00
X16756	Mitchell	9.00		3.22	2.97	3.20	3.19	0.05	0.02	0.01	0.22	0.22	100.63	92.81	99.74	50	35	15		0.48	1.80	0.00
X17340	Mitchell	9.20		2.51	2.47	2.49	2.48	0.02	0.02	0.01	0.01	0.01	78.44	77.19	77.44	40	25	15	0.23	0.26	1.00	0.00
X16750	Mitchell	9.10		2.84	2.45	2.83	2.82	0.05	0.01	0.01	0.37	0.37	88.75	76.56	88.16	46	31	15		0.43	1.60	0.00
G37869	Mitchell	8.50		3.80	3.39	3.77	3.76	0.06	0.03	0.01	0.37	0.37	118.75	105.94	117.65	62	47	15	0.78	0.76	2.80	0.02
X17142	Mitchell	8.70		3.77	3.25	3.74	3.73	0.03	0.03	0.01	0.48	0.48	117.81	101.56	116.63	63	48	15	0.71	0.73	2.70	0.00
X17198	Mitchell	9.20		2.43	2.19	2.41	2.38	0.01	0.02	0.03	0.19	0.19	75.94	68.44	74.44	41	26	15	0.45	0.41	1.50	0.04
X14956	Mitchell	9.30		2.69	2.46	2.68	2.67	0.02	0.01	0.01	0.21	0.21	84.06	76.88	83.31	46	31	15	0.58	0.54	2.00	0.04
H43123	Mitchell	9.10	8.90	3.35	3.19	3.35	3.33	0.14	0.01	0.01	0.14	0.14	104.69	99.69	104.13	58	43	15	0.54	0.51	1.90	0.03
X14946	Mitchell	9.20		1.52	1.27	1.50	1.47	0.01	0.02	0.03	0.20	0.20	47.50	39.69	45.88	26	11	15	0.28	0.33	1.20	0.00
X17261	Mitchell	9.70		0.80	0.72	0.78	0.72	0.01	0.02	0.07	-0.01	0.00	25.00	22.50	22.50	13	0.001	12.999	0.20	0.18	0.70	0.02
G36716	Mitchell	8.10		4.15	3.69	4.15	4.14	0.01	0.01	0.01	0.45	0.45	129.69	115.31	129.31	75	60	15	0.91	0.87	3.20	0.04
X16227	Mitchell	9.20		1.78	1.55	1.77	1.75	0.01	0.01	0.02	0.20	0.20	55.63	48.44	54.60	32	17	15	0.32	0.29	1.10	0.03
X16743	Mitchell	9.10		3.02	2.72	3.01	3.00	0.08	0.01	0.01	0.28	0.28	94.38	85.00	93.81	55	40	15	0.44	0.52	1.90	0.00
X18236	Mitchell	9.30		3.24	3.07	3.24	3.23	0.05	0.01	0.01	0.16	0.16	101.25	95.94	100.84	60	45	15	0.69	0.65	2.40	0.04
G34684	Mitchell	8.10		2.53	2.30	2.53	2.51	0.16	0.01	0.02	0.21	0.21	79.06	71.88	78.43	47	32	15	0.82	0.81	3.00	0.01
H43140	Mitchell	9.10	8.80	3.12	2.80	3.10	3.09	0.03	0.02	0.01	0.29	0.29	97.50	87.50	96.47	58	43	15	0.63	0.60	2.20	0.03
X14918	Mitchell	9.80		2.48	1.94	2.47	2.44	0.04	0.01	0.03	0.50	0.50	77.50	60.63	76.33	47	32	15	0.39	0.36	1.30	0.03
H43131	Mitchell	8.40	8.50	4.23	4.19	4.20	4.20	0.08	0.03	0.00	0.01	0.01	132.19	130.94	131.13	81	66	15	0.21	0.26	1.00	0.00
X17346	Mitchell	9.40		2.47	2.29	2.45	2.43	0.03	0.02	0.02	0.14	0.14	77.19	71.56	76.07	47	32	15		0.33	1.20	0.00
X16176	Mitchell	9.20		2.00	1.78	1.98	1.95	0.02	0.02	0.03	0.17	0.17	62.50	55.63	60.96	38	23	15	0.38	0.34	1.30	0.04
H40882	Mitchell	9.20	9.10	2.94	2.79	2.94	2.92	0.01	0.01	0.01	0.13	0.13	91.88	87.19	91.38	57	42	15	0.65	0.65	2.40	0.00
H43120	Mitchell	9.10	9.00	2.29	1.91	2.29	2.26	0.02	0.01	0.03	0.35	0.35	71.56	59.69	70.49	44	29	15	0.31	0.28	1.00	0.03
X17974	Mitchell	9.80		1.77	1.57	1.76	1.72	0.04	0.01	0.04	0.15	0.15	55.31	49.06	53.88	34	19	15	0.26	0.29	1.10	0.00
H41608	Mitchell	8.90	8.30	3.02	2.90	3.01	3.01	0.02	0.01	0.00	0.11	0.11	94.38	90.63	93.92	60	45	15	0.58	0.56	2.00	0.02
X14856	Mitchell	8.70		3.18	2.50	3.16	3.15	0.01	0.02	0.01	0.65	0.65	99.38	78.13	98.30	63	48	15	0.77	0.73	2.70	0.04
H43102	Mitchell	9.10	9.10	0.58	0.50	0.58	0.55	0.06	0.01	0.03	0.05	0.05	18.13	15.63	17.07	11	0.001	10.999	0.06	0.07	0.30	0.00
H41619	Mitchell	9.10	8.50	2.57	2.47	2.53	2.52	0.06	0.04	0.01	0.05	0.05	80.31	77.19	78.81	51	36	15	0.49	0.46	1.70	0.03
H43143	Mitchell	9.20	9.10	2.77	2.47	2.76	2.74	0.04	0.01	0.02	0.27	0.27	86.56	77.19	85.72	56	41	15	0.46	0.44	1.60	0.02
X14902	Mitchell	9.60		2.52	2.27	2.51	2.50	0.02	0.01	0.01	0.23	0.23	78.75	70.94	78.04	51	36	15	0.68	0.66	2.40	0.02
G36584	Mitchell	8.20		2.93	2.46	2.93	2.91	0.01	0.01	0.02	0.45	0.45	91.56	76.88	90.87	60	45	15	0.61	0.60	2.20	0.01
67916	Mitchell	8.40		3.08	2.99	3.07	3.06	0.01	0.01	0.01	0.07	0.07	96.25	93.44	95.62	64	49	15	0.65	0.65	2.40	0.00
H44025	Mitchell	9.40	9.30	1.11	0.99	1.11	1.05	0.07	0.01	0.06	0.06	0.06	34.69	30.94	32.73	22	7	15	0.21	0.25	0.90	0.00
H41621	Mitchell	9.10	8.80	2.71	2.52	2.71	2.70	0.05	0.01	0.01	0.18	0.18	84.69	78.75	84.28	57	42	15	0.51	0.54	2.00	0.00
X16798	Mitchell	9.20		2.94	2.83	2.89	2.88	0.06	0.05	0.01	0.05	0.05	91.88	88.44	90.08	61	46	15	0.59	0.62	2.30	0.00
X17179	Mitchell	8.90		2.77	2.67	2.76	2.74	0.01	0.01	0.02	0.07	0.07	86.56	83.44	85.65	59	44	15	0.45	0.41	1.50	0.04
H40878	Mitchell	8.80	8.70	3.08	3.09	3.03	3.09	0.03	0.05	0.01	-0.07	0.00	96.25	96.56	96.56	67	52	15	0.81	0.73	2.70	0.08
X16141	Mitchell	9.20		2.02	1.75	2.01	1.98	0.02	0.01	0.03	0.23	0.23	63.13	54.69	61.92	43	28	15	0.37	0.41	1.50	0.00
G36604	Mitchell	8.00		1.75	1.61	1.75	1.70	0.01	0.01	0.04	0.09	0.09	54.69	50.31	53.27	37	22	15	0.52	0.54	2.00	0.00
X14897	Mitchell	9.10		3.10	2.42	3.09	3.08	0.02	0.01	0.01	0.66	0.66	96.88	75.63	96.28	67	52	15		0.68	2.50	0.00
H41617	Mitchell	9.10	8.30	2.46	2.39	2.44	2.43	0.01	0.02	0.01	0.04	0.04	76.88	74.69	75.86	53	38	15	0.45	0.45	1.70	0.00
G34743	Mitchell	8.50		4.13	3.25	4.13	4.12	0.01	0.01	0.01	0.87	0.87	129.06	101.56	128.66	91	76	15	1.23	1.25	4.60	0.00
X17040	Mitchell	8.35		3.04	3.01	3.01	3.01		0.03	0.00	0.00	0.00	95.00	94.06	94.06	67	51.6	15	0.64		2.25	0.64
H40799	Mitchell	8.19		4.40	3.54	4.38	4.38		0.02	0.00	0.84	0.84	137.50	110.63	136.84	97	82.4	15	1.14		3.93	1.14
H43111	Mitchell	9.00	9.00	2.30	1.74	2.29	2.26	0.04	0.01	0.03	0.52	0.52	71.88	54.38	70.66	51	36	15	0.60	0.48	1.80	0.12
H41624	Mitchell	9.30	8.40	0.92	0.79	0.87	0.84	0.11	0.05	0.03	0.05	0.05	28.75	24.69	26.24	19	4	15	0.19	0.20	0.70	0.00

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
X16829	Mitchell	8.70		2.88	2.56	2.86	2.85	0.01	0.02	0.01	0.29	0.29	90.00	80.00	89.11	65	50	15	0.65	0.62	2.30	0.03
X17338	Mitchell	9.20		2.26	2.06	2.25	2.23	0.04	0.01	0.02	0.17	0.17	70.63	64.38	69.77	51	36	15		0.38	1.40	0.00
H43127	Mitchell	9.20	8.90	3.37	3.32	3.37	3.35	0.04	0.01	0.01	0.03	0.03	105.31	103.75	104.75	77	62	15	0.91	0.86	3.20	0.05
H43076	Mitchell	8.90	8.80	2.90	2.27	2.89	2.88	0.06	0.01	0.01	0.61	0.61	90.63	70.94	90.11	67	52	15	0.90	0.85	3.10	0.05
X17383	Mitchell	9.50		2.38	2.13	2.38	2.37	0.04	0.01	0.01	0.24	0.24	74.38	66.56	73.96	55	40	15	0.46	0.49	1.80	0.00
X18074	Mitchell	9.40		3.04	2.91	3.02	3.01	0.04	0.02	0.01	0.10	0.10	95.00	90.94	94.02	70	55	15	0.83	0.84	3.10	0.00
X18250	Mitchell	9.60		1.86	1.67	1.85	1.83	0.07	0.01	0.02	0.16	0.16	58.13	52.19	57.19	43	28	15	0.49	0.51	1.90	0.00
H43135	Mitchell	9.20	9.00	1.89	1.75	1.89	1.86	0.02	0.01	0.02	0.11	0.11	59.06	54.69	58.22	44	29	15	0.41	0.39	1.50	0.02
G34723	Mitchell	8.60		2.60	2.37	2.59	2.58	0.01	0.01	0.01	0.21	0.21	81.25	74.06	80.65	62	47	15	0.85	0.82	3.00	0.03
X18095	Mitchell	8.60		2.85	2.54	2.81	2.80	0.03	0.04	0.01	0.26	0.26	89.06	79.38	87.52	68	53	15	0.79	0.78	2.90	0.01
X18289	Mitchell	9.60		2.71	2.51	2.71	2.69	0.02	0.01	0.01	0.18	0.18	84.69	78.44	84.09	66	51	15	0.65	0.67	2.50	0.00
X17371	Mitchell	9.60		2.58	2.47	2.57	2.56	0.07	0.01	0.01	0.09	0.09	80.63	77.19	80.03	63	48	15	0.54	0.56	2.10	0.00
X16995	Mitchell	8.58		3.03	2.31	3.01	3.01		0.02	0.00	0.70	0.70	94.69	72.19	94.01	74	59.1	15	0.49		1.85	0.49
X16205	Mitchell	8.70		2.35	2.05	2.33	2.31	0.03	0.02	0.02	0.26	0.26	73.44	64.06	72.11	57	42	15	0.63	0.62	2.30	0.01
X17080	Mitchell	8.68		2.77	2.02	2.74	2.74		0.03	0.00	0.72	0.72	86.56	63.13	85.58	68	52.8	15	0.33		1.18	0.33
X16209	Mitchell	9.00		1.59	1.32	1.59	1.56	0.03	0.01	0.02	0.24	0.24	49.69	41.25	48.82	39	24	15	0.58	0.55	2.00	0.03
H41610	Mitchell	8.90	8.30	2.87	2.84	2.87	2.86	0.06	0.01	0.01	0.02	0.02	89.69	88.75	89.25	72	57	15	0.81	0.77	2.80	0.04
H41664	Mitchell	9.00	8.50	3.99	3.78	3.99	3.98	0.06	0.01	0.00	0.20	0.20	124.69	118.13	124.41	101	86	15	1.26	1.28	4.70	0.00
H40834	Mitchell	8.80		2.25	1.77	2.24	2.24		0.01	0.00	0.47	0.47	70.31	55.31	69.95	58	43.4	15	0.53		2.09	0.53
X16857	Mitchell	9.20		2.21	1.98	2.19	2.17	0.01	0.02	0.02	0.19	0.19	69.06	61.88	67.90	57	42	15	0.57	0.57	2.10	0.00
H44032	Mitchell	9.00	8.90	2.41	2.04	2.41	2.39	0.04	0.01	0.02	0.35	0.35	75.31	63.75	74.65	63	48	15	0.77	0.68	2.50	0.09
X17957	Mitchell	9.50		3.32	3.08	3.31	3.30	0.08	0.01	0.01	0.22	0.22	103.75	96.25	103.09	87	72	15	0.88	0.91	3.30	0.00
G36725	Mitchell	7.70		1.42	1.06	1.42	1.36	0.01	0.01	0.05	0.30	0.30	44.38	33.13	42.57	36	21	15	0.41	0.43	1.60	0.00
H41797	Mitchell	9.40	9.40	3.16	2.84	3.16	3.15	0.03	0.01	0.01	0.31	0.31	98.75	88.75	98.29	84	69	15	0.74	0.77	2.80	0.00
H44036	Mitchell	9.10	9.10	1.22	1.13	1.22	1.19	0.01	0.01	0.02	0.06	0.06	38.13	35.31	37.25	32	17	15	0.38	0.37	1.40	0.01
X16439	Mitchell	9.60		1.58	1.49	1.56	1.53	0.05	0.02	0.03	0.04	0.04	49.38	46.56	47.68	41	26	15		0.34	1.30	0.00
H43116	Mitchell	9.10	9.00	2.40	2.04	2.37	2.36	0.03	0.03	0.01	0.32	0.32	75.00	63.75	73.71	65	50	15	0.69	0.68	2.50	0.01
H41631	Mitchell	8.90	7.80	3.17	2.97	3.03	3.02	0.19	0.14	0.01	0.05	0.05	99.06	92.81	94.45	84	69	15	0.92	0.90	3.30	0.02
X16176	Mitchell	9.00		1.45	1.18	1.45	1.41	0.02	0.01	0.03	0.23	0.23	45.31	36.88	44.14	40	25	15	0.53	0.52	1.90	0.01
H41814	Mitchell	9.20	9.20	2.78	2.51	2.74	2.73	0.04	0.04	0.01	0.22	0.22	86.88	78.44	85.40	78	63	15	0.61	0.60	2.20	0.01
H43098	Mitchell	9.30	9.10	0.89	0.78	0.89	0.87	0.03	0.01	0.02	0.09	0.09	27.81	24.38	27.09	25	10	15	0.21	0.22	0.80	0.00
X17910	Mitchell	9.30		2.30	2.10	2.30	2.28	0.06	0.01	0.01	0.18	0.18	71.88	65.63	71.26	66	51	15	0.83	0.85	3.10	0.00
H41613	Mitchell	9.20	8.60	2.74	2.65	2.73	2.72	0.05	0.01	0.01	0.07	0.07	85.63	82.81	85.08	79	64	15	0.81	0.83	3.10	0.00
H44018	Mitchell	9.30	9.30	0.86	0.79	0.86	0.79	0.11	0.01	0.07	-0.01	0.00	26.88	24.69	24.69	23	8	15	0.23	0.26	1.00	0.00
X18152	Mitchell	9.40		2.59	2.42	2.59	2.57	0.05	0.01	0.01	0.15	0.15	80.94	75.63	80.33	75	60	15	0.84	0.87	3.20	0.00
H41800	Mitchell	9.50	9.10	2.42	2.20	2.41	2.39	0.04	0.01	0.02	0.19	0.19	75.63	68.75	74.55	70	55	15	0.51	0.45	1.70	0.06
X16447	Mitchell	9.60		1.77	1.66	1.75	1.72	0.04	0.02	0.03	0.06	0.06	55.31	51.88	53.64	51	36	15		0.46	1.70	0.00
X16229	Mitchell	9.40		1.60	1.48	1.59	1.57	0.02	0.01	0.02	0.09	0.09	50.00	46.25	48.92	47	32	15		0.43	1.60	0.00
G36696	Mitchell	8.50		2.04	1.78	2.04	2.00	0.01	0.01	0.04	0.22	0.22	63.75	55.63	62.43	60	45	15	0.67	0.64	2.30	0.03
X17213	Mitchell	9.60		1.41	1.21	1.37	1.33	0.03	0.04	0.04	0.12	0.12	44.06	37.81	41.44	40	25	15	0.40	0.37	1.40	0.03
X17234	Mitchell	9.40		2.85	2.31	2.84	2.81	0.01	0.01	0.03	0.50	0.50	89.06	72.19	87.93	86	71	15	0.94	0.94	3.50	0.00
H43145	Mitchell	9.40	9.30	0.97	0.80	0.92	0.91	0.04	0.05	0.01	0.11	0.11	30.31	25.00	28.38	28	13	15	0.29	0.28	1.00	0.01
X16962	Mitchell	8.59		2.75	2.52	2.74	2.74		0.01	0.00	0.22	0.22	85.94	78.75	85.58	85	70.4	15	0.66		2.25	0.66
H43088	Mitchell	9.10	8.90	1.84	1.60	1.84	1.81	0.02	0.01	0.02	0.21	0.21	57.50	50.00	56.58	57	42	15	0.61	0.59	2.20	0.02
67933	Mitchell	8.80		1.34	1.26	1.32	1.27	0.01	0.02	0.05	0.01	0.01	41.88	39.38	39.67	40	25	15	0.33	0.32	1.20	0.01
H41776	Mitchell	9.40	9.10	1.08	0.95	1.07	1.04	0.01	0.01	0.03	0.09	0.09	33.75	29.69	32.55	33	18	15	0.29	0.27	1.00	0.02
X17245	Mitchell	9.50		3.83	3.65	3.82	3.81	0.01	0.01	0.01	0.16	0.16	119.69	114.06	119.18	121	106	15	1.43	1.28	4.70	0.15
X16222	Mitchell	9.40		1.49	1.37	1.47	1.44	0.02	0.02	0.03	0.07	0.07	46.56	42.81	45.14	46	31	15		0.28	1.00	0.00
X17925	Mitchell	9.00		4.84	4.41	4.81	4.77	0.08	0.03	0.04	0.36	0.36	151.25	137.81	149.04	152	137	15	1.79	1.72	6.30	0.07
H44040	Mitchell	9.00	9.00	2.61	2.23	2.61	2.59	0.03	0.01	0.02	0.36	0.36	81.56	69.69	80.84	83	68	15	0.98	0.94	3.40	0.04

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
X16158	Mitchell	8.40		1.88	1.62	1.86	1.83	0.04	0.02	0.03	0.21	0.21	58.75	50.63	57.26	59	44	15	0.84	0.80	2.90	0.04
G34713	Mitchell	8.40		1.54	1.35	1.54	1.51	0.01	0.01	0.03	0.16	0.16	48.13	42.19	47.15	50	35	15	0.70	0.73	2.70	0.00
H44174	Mitchell	8.65		3.53	2.83	3.52	3.52		0.01	0.00	0.69	0.69	110.31	88.44	109.92	117	102.46231	15	1.73		6.37	1.73
H43080	Mitchell	8.90	8.90	0.90	0.65	0.89	0.84	0.06	0.01	0.05	0.19	0.19	28.13	20.31	26.11	28	13	15	0.30	0.27	1.00	0.03
H44030	Mitchell	8.90	8.80	3.19	2.89	3.19	3.18	0.03	0.01	0.01	0.29	0.29	99.69	90.31	99.37	108	93	15	1.18	1.12	4.10	0.06
9042	Mitchell	9.00		1.71	1.52	1.71	1.67	0.01	0.01	0.03	0.15	0.15	53.44	47.50	52.33	57	42	15	0.55	0.55	2.00	0.00
H44016	Mitchell	9.70	9.50	0.77	0.70	0.77	0.70	0.03	0.01	0.06	0.00	0.00	24.06	21.88	21.92	24	9	15	0.24	0.27	1.00	0.00
H44020	Mitchell	9.30	9.20	0.87	0.75	0.86	0.79	0.05	0.01	0.07	0.04	0.04	27.19	23.44	24.61	27	12	15	0.27	0.29	1.10	0.00
H40891	Mitchell	9.20	9.00	1.98	1.85	1.97	1.95	0.01	0.01	0.02	0.10	0.10	61.88	57.81	60.79	67	52	15	0.77	0.68	2.50	0.09
H44034	Mitchell	9.40	9.20	1.09	0.91	1.09	1.04	0.04	0.01	0.04	0.13	0.13	34.06	28.44	32.63	36	21	15	0.44	0.43	1.60	0.01
67974	Mitchell	8.70		1.37	1.21	1.36	1.33	0.01	0.01	0.03	0.12	0.12	42.81	37.81	41.51	47	32	15	0.59	0.59	2.20	0.00
G34694	Mitchell	8.30		1.56	1.47	1.56	1.51	0.02	0.01	0.04	0.04	0.04	48.75	45.94	47.20	54	39	15	1.18	1.11	4.10	0.07
H43118	Mitchell	9.10	9.00	1.58	1.18	1.57	1.53	0.05	0.01	0.04	0.35	0.35	49.38	36.88	47.87	55	40	15	0.53	0.50	1.80	0.03
X17940	Mitchell	9.60		1.73	1.36	1.72	1.69	0.06	0.01	0.03	0.33	0.33	54.06	42.50	52.79	61	46	15	0.64	0.65	2.40	0.00
H41635	Mitchell	9.40	8.00	0.76	0.72	0.76	0.72	0.03	0.01	0.05	-0.02	0.00	23.75	22.50	22.50	26	11	15	0.22	0.25	0.90	0.00
H41793	Mitchell	9.30	9.30	2.32	2.10	2.30	2.27	0.02	0.02	0.03	0.17	0.17	72.50	65.63	71.04	83	68	15	0.74	0.75	2.80	0.00
X14886	Mitchell	9.30		2.25	1.71	2.24	2.23	0.01	0.01	0.01	0.52	0.52	70.31	53.44	69.66	82	67	15	0.90	0.89	3.30	0.01
X18104	Mitchell	9.40		2.74	2.60	2.72	2.71	0.03	0.02	0.01	0.11	0.11	85.63	81.25	84.70	100	85	15	1.20	1.23	4.50	0.00
H41795	Mitchell	9.10	9.10	2.52	2.19	2.52	2.50	0.03	0.01	0.02	0.31	0.31	78.75	68.44	78.04	93	78	15	0.93	0.92	3.40	0.01
X18206	Mitchell	9.30		1.74	1.55	1.68	1.65	0.04	0.06	0.03	0.10	0.10	54.38	48.44	51.63	63	48	15	0.52	0.54	2.00	0.00
H41789	Mitchell	9.60	9.40	1.47	1.16	1.46	1.43	0.03	0.01	0.03	0.27	0.27	45.94	36.25	44.63	55	40	15	0.56	0.53	2.00	0.03
H43147	Mitchell	9.50	9.20	1.90	1.66	1.90	1.87	0.04	0.01	0.03	0.21	0.21	59.38	51.88	58.38	72	57	15	0.73	0.66	2.40	0.07
X16844	Mitchell	9.10		2.01	1.79	2.00	1.97	0.02	0.01	0.03	0.18	0.18	62.81	55.94	61.60	76	61	15	0.86	0.84	3.10	0.02
X18278	Mitchell	9.30		1.96	1.73	1.96	1.94	0.03	0.01	0.02	0.21	0.21	61.25	54.06	60.55	76	61	15	0.76	0.78	2.90	0.00
X17892	Mitchell	9.50		1.42	1.26	1.42	1.37	0.04	0.01	0.04	0.11	0.11	44.38	39.38	42.84	54	39	15	0.60	0.60	2.20	0.00
H41812	Mitchell	9.20	9.20	1.85	1.67	1.84	1.81	0.04	0.01	0.03	0.14	0.14	57.81	52.19	56.67	72	57	15	0.54	0.59	2.20	0.00
G36622	Mitchell	8.50		1.52	1.33	1.52	1.48	0.01	0.01	0.04	0.15	0.15	47.50	41.56	46.11	59	44	15	0.60	0.63	2.30	0.00
X18223	Mitchell	9.40		1.72	1.52	1.72	1.69	0.06	0.01	0.03	0.17	0.17	53.75	47.50	52.70	68	53	15	0.62	0.64	2.30	0.00
X18158	Mitchell	9.20		2.29	2.01	2.27	2.26	0.02	0.02	0.01	0.25	0.25	71.56	62.81	70.69	92	77	15	1.10	1.10	4.00	0.00
H41818	Mitchell	8.90	8.80	2.78	2.60	2.77	2.76	0.05	0.01	0.01	0.16	0.16	86.88	81.25	86.27	113	98	15	1.36	1.25	4.60	0.11
H41629	Mitchell	8.90	8.50	2.55	2.52	2.55	2.54	0.04	0.01	0.01	0.02	0.02	79.69	78.75	79.28	104	89	15	0.80	0.78	2.90	0.02
H41604	Mitchell	9.00	8.50	2.92	2.74	2.90	2.89	0.03	0.02	0.01	0.15	0.15	91.25	85.63	90.44	119	104	15	1.31	1.32	4.80	0.00
H41782	Mitchell	9.00	8.90	0.67	0.63	0.65	0.63	0.02	0.02	0.04	-0.02	0.00	20.94	19.69	19.69	26	11	15	0.21	0.21	0.80	0.00
X16237	Mitchell	9.40		0.97	0.89	0.97	0.92	0.02	0.01	0.04	0.03	0.03	30.31	27.81	28.89	39	24	15		0.39	1.40	0.00
X14888	Mitchell	9.10		2.65	2.19	2.64	2.63	0.01	0.01	0.01	0.44	0.44	82.81	68.44	82.14	111	96	15		1.13	4.10	0.00
H41626	Mitchell	9.50	9.20	0.82	0.75	0.78	0.75	0.04	0.04	0.05	-0.02	0.00	25.63	23.44	23.44	32	17	15	0.34	0.35	1.30	0.00
G36209	Mitchell	8.40		1.95	1.46	1.95	1.92	0.01	0.01	0.03	0.46	0.46	60.94	45.63	59.87	82	67	15	0.80	0.81	3.00	0.00
H44022	Mitchell	9.40	9.10	1.73	1.52	1.73	1.70	0.08	0.01	0.02	0.18	0.18	54.06	47.50	53.21	73	58	15	0.85	0.90	3.30	0.00
H44028	Mitchell	9.30	9.10	1.94	1.72	1.94	1.92	0.07	0.01	0.02	0.20	0.20	60.63	53.75	59.86	83	68	15	0.84	0.88	3.20	0.00
X18188	Mitchell	6.90		0.18	0.16	0.18	0.16	0.02	0.01	0.08	-0.06	0.00	5.63	5.00	5.00	7	0.001	6.999	0.02	0.03	0.20	0.00
H43151	Mitchell	9.10	9.00	2.00	1.72	1.96	1.94	0.06	0.04	0.02	0.22	0.22	62.50	53.75	60.65	85	70	15	0.96	0.93	3.40	0.03
9374	Mitchell	9.20		1.74	1.53	1.74	1.71	0.03	0.01	0.02	0.18	0.18	54.38	47.81	53.45	77	62	15	1.00	0.73	2.70	0.27
H41605	Mitchell	8.51		0.88		0.88	0.88			0.01	-0.01	0.00	27.50	27.50	27.50	40	24.6	15	0.15		0.47	0.15
H40976	Mitchell	8.75		2.56	2.23	2.54	2.54		0.02	0.00	0.31	0.31	80.00	69.69	79.31	116	101.2	15	1.41		5.16	1.41
9051	Mitchell	9.20		1.21	1.00	1.20	1.15	0.08	0.01	0.05	0.15	0.15	37.81	31.25	36.05	53	38	15	0.53	0.52	1.90	0.01
H41807	Mitchell	9.40	9.40	1.77	1.57	1.74	1.71	0.03	0.03	0.03	0.14	0.14	55.31	49.06	53.32	79	64	15	0.67	0.62	2.30	0.05
9352	Mitchell	9.60		1.27	1.00	1.27	1.19	0.01	0.01	0.07	0.19	0.19	39.69	31.25	37.34	56	41	15	0.57	0.56	2.00	0.01
X14882	Mitchell	9.20		2.37	1.94	2.36	2.35	0.01	0.01	0.01	0.41	0.41	74.06	60.63	73.38	112	97	15		1.20	4.40	0.00
H40886	Mitchell	9.20	9.00	1.74	1.65	1.73	1.70	0.01	0.01	0.03	0.05	0.05	54.38	51.56	53.14	82	67	15	0.96	0.91	3.40	0.05
H43106	Mitchell	9.10	9.00	1.24	0.94	1.23	1.17	0.02	0.01	0.06	0.23	0.23	38.75	29.38	36.49	58	43	15	0.59	0.56	2.00	0.03

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
H41791	Mitchell	9.80	9.50	1.54	1.32	1.52	1.50	0.02	0.02	0.02	0.18	0.18	48.13	41.25	46.88	77	62	15	0.84	0.77	2.80	0.07
H43129	Mitchell	9.20	9.00	1.52	1.32	1.52	1.48	0.02	0.01	0.03	0.16	0.16	47.50	41.25	46.32	78	63	15	0.84	0.82	3.00	0.02
X17203	Mitchell	9.50		1.39	1.18	1.36	1.31	0.03	0.03	0.05	0.13	0.13	43.44	36.88	40.85	69	54	15	0.70	0.66	2.40	0.04
H43136	Mitchell	8.90	8.50	2.52	2.34	2.52	2.50	0.03	0.01	0.02	0.16	0.16	78.75	73.13	78.11	132	117	15	1.13	1.09	4.00	0.04
X16819	Mitchell	9.50		1.58	1.46	1.54	1.50	0.02	0.04	0.04	0.04	0.04	49.38	45.63	47.00	80	65	15	0.94	0.90	3.30	0.04
X16195	Mitchell	8.80		1.14	0.90	1.13	1.11	0.01	0.01	0.02	0.21	0.21	35.63	28.13	34.54	59	44	15	0.85	0.68	2.50	0.17
X17863	Mitchell	9.30		1.36	1.21	1.36	1.32	0.04	0.01	0.04	0.11	0.11	42.50	37.81	41.10	71	56	15	0.72	0.76	2.80	0.00
X16454	Mitchell	9.70		1.26	1.12	1.26	1.23	0.03	0.01	0.03	0.11	0.11	39.38	35.00	38.35	67	52	15		0.70	2.60	0.00
G36562	Mitchell	8.20		2.06	1.74	2.06	2.03	0.01	0.01	0.03	0.29	0.29	64.38	54.38	63.37	114	99	15	1.18	1.14	4.20	0.04
H43149	Mitchell	9.10	8.90	1.59	1.39	1.59	1.56	0.01	0.01	0.03	0.17	0.17	49.69	43.44	48.66	89	74	15	0.94	0.91	3.30	0.03
X18135	Mitchell	9.60		1.64	1.51	1.64	1.60	0.02	0.01	0.04	0.09	0.09	51.25	47.19	49.93	92	77	15	0.96	0.98	3.60	0.00
H41644	Mitchell	9.30	9.00	0.47	0.43	0.47	0.43	0.03	0.01	0.06	-0.02	0.00	14.69	13.44	13.44	25	10	15	0.22	0.23	0.80	0.00
H43109	Mitchell	8.70	8.60	4.12	3.58	4.12	4.11	0.03	0.01	0.01	0.53	0.53	128.75	111.88	128.29	241	226	15	2.69	2.64	9.70	0.05
X14933	Mitchell	9.60		1.00	0.86	0.99	0.95	0.01	0.01	0.04	0.09	0.09	31.25	26.88	29.65	56	41	15	0.65	0.62	2.30	0.03
G36652	Mitchell	8.30		1.17	0.95	1.17	1.11	0.01	0.01	0.06	0.16	0.16	36.56	29.69	34.55	66	51	15	1.03	0.94	3.40	0.09
G34782	Mitchell	8.70		0.90	0.71	0.90	0.85	0.01	0.01	0.04	0.14	0.14	28.13	22.19	26.57	52	37	15	0.56	0.56	2.10	0.00
H41803	Mitchell	9.50	9.40	1.55	1.37	1.52	1.48	0.04	0.03	0.04	0.11	0.11	48.44	42.81	46.22	93	78	15	0.79	0.75	2.80	0.04
H43096	Mitchell	9.10	9.00	0.73	0.61	0.73	0.70	0.01	0.01	0.02	0.09	0.09	22.81	19.06	22.03	45	30	15	0.48	0.45	1.70	0.03
H40994	Mitchell	8.98		1.60	1.37	1.59	1.59		0.01	0.00	0.22	0.22	50.00	42.81	49.60	102	86.8	15	1.62		5.82	1.62
H41810	Mitchell	9.40	9.30	1.52	1.41	1.51	1.48	0.03	0.01	0.03	0.07	0.07	47.50	44.06	46.25	95	80	15	0.89	0.90	3.30	0.00
H43104	Mitchell	9.10	9.00	1.31	0.96	1.25	1.21	0.12	0.06	0.04	0.25	0.25	40.94	30.00	37.90	78	63	15	0.96	0.89	3.30	0.07
H41772	Mitchell	9.20	9.10	0.91	0.82	0.90	0.87	0.01	0.01	0.03	0.05	0.05	28.44	25.63	27.21	56	41	15	0.49	0.48	1.80	0.01
H40888	Mitchell	9.10	9.10	1.86	1.79	1.85	1.83	0.01	0.01	0.02	0.04	0.04	58.13	55.94	57.11	118	103	15	1.25	1.19	4.40	0.06
X18120	Mitchell	9.00		1.80	1.66	1.79	1.75	0.03	0.01	0.04	0.09	0.09	56.25	51.88	54.66	116	101	15	1.22	1.24	4.50	0.00
H44014	Mitchell	9.60	9.40	0.75	0.60	0.73	0.67	0.04	0.02	0.06	0.07	0.07	23.44	18.75	21.05	45	30	15	0.48	0.48	1.80	0.00
H40855	Mitchell	9.72		0.84	0.77	0.84	0.83		0.01	0.00	0.06	0.06	26.25	24.06	25.95	56	40.9	15	0.57		2.06	0.57
G36639	Mitchell	8.30		1.62	1.43	1.62	1.58	0.01	0.01	0.04	0.15	0.15	50.63	44.69	49.35	109	94	15	1.08	1.12	4.10	0.00
H44038	Mitchell	9.30	9.20	0.86	0.77	0.86	0.83	0.04	0.01	0.02	0.06	0.06	26.88	24.06	25.97	58	43	15	0.70	0.62	2.30	0.08
X18142	Mitchell	9.60		1.42	1.20	1.42	1.40	0.01	0.01	0.02	0.20	0.20	44.38	37.50	43.68	100	85	15	1.20	1.23	4.50	0.00
H43153	Mitchell	9.20	9.00	2.01	1.94	2.00	1.98	0.03	0.01	0.02	0.04	0.04	62.81	60.63	61.87	143	128	15	1.18	1.08	4.00	0.10
H41805	Mitchell	9.50	9.40	1.06	1.03	1.05	1.03	0.03	0.01	0.03	-0.01	0.00	33.13	32.19	32.19	75	60	15	0.56	0.60	2.20	0.00
G34704	Mitchell	8.50		1.04	0.92	1.04	1.00	0.03	0.01	0.04	0.08	0.08	32.50	28.75	31.23	73	58	15	1.03	1.05	3.90	0.00
H44230	Mitchell	8.81		2.35	1.81	2.33	2.33		0.02	0.00	0.52	0.52	73.44	56.56	72.76	172	157.11055	15	1.98		7.14	1.98
X17877	Mitchell	9.10		1.85	1.75	1.84	1.81	0.02	0.01	0.03	0.06	0.06	57.81	54.69	56.48	139	124	15	1.60	1.51	5.50	0.09
G36186	Mitchell	8.30		1.65	1.04	1.64	1.61	0.01	0.01	0.03	0.57	0.57	51.56	32.50	50.29	135	120	15	1.46	1.39	5.10	0.07
H41613	Mitchell	8.72		2.13		2.13	2.13			0.00	0.00	0.00	66.56	66.56	66.56	184	169	15	1.43		4.21	1.43
H41771	Mitchell	9.30	8.80	0.16	0.13	0.15	0.14	0.01	0.01	0.01	0.01	0.01	5.00	4.06	4.31	12	0.001	11.999	0.12	0.14	0.50	0.00
X17306	Mitchell	10.00		0.32	0.27	0.31	0.27	0.06	0.01	0.07	-0.03	0.00	10.00	8.44	8.44	24	9	15	0.16	0.15	0.60	0.01
9399	Mitchell	9.50		1.00	0.84	1.00	0.94	0.01	0.01	0.05	0.10	0.10	31.25	26.25	29.42	84	69	15	0.99	0.94	3.50	0.05
G34763	Mitchell	8.30		0.75	0.65	0.75	0.73	0.01	0.01	0.02	0.08	0.08	23.44	20.31	22.66	67	52	15	1.20	1.22	4.50	0.00
H40880	Mitchell	9.20	9.00	1.10	0.96	1.09	1.05	0.01	0.01	0.04	0.09	0.09	34.38	30.00	32.96	102	87	15	1.14	1.11	4.10	0.03
X17327	Mitchell	9.90		0.88	0.76	0.84	0.79	0.10	0.04	0.05	0.03	0.03	27.50	23.75	24.55	76	61	15	0.67	0.70	2.60	0.00
X18084	Mitchell	9.30		1.00	0.86	0.99	0.91	0.01	0.01	0.08	0.05	0.05	31.25	26.88	28.40	88	73	15	1.13	1.12	4.10	0.01
X18265	Mitchell	9.50		1.83	1.73	1.79	1.77	0.04	0.04	0.02	0.04	0.04	57.19	54.06	55.24	174	159	15	2.08	1.96	7.20	0.12
H41780	Mitchell	9.60	9.50	0.74	0.66	0.74	0.69	0.03	0.01	0.04	0.03	0.03	23.13	20.63	21.61	69	54	15	0.42	0.46	1.70	0.00
H41787	Mitchell	9.60	9.40	0.50	0.41	0.39	0.41	0.13	0.11	0.10	-0.12	0.00	15.63	12.81	12.81	42	27	15	0.48	0.49	1.80	0.00
X17317	Mitchell	9.90		0.35	0.27	0.34	0.30	0.09	0.01	0.04	0.03	0.03	10.94	8.44	9.52	35	20	15	0.21	0.20	0.70	0.01
G36745	Mitchell	7.90		0.96	0.78	0.95	0.88	0.01	0.01	0.07	0.10	0.10	30.00	24.38	27.61	116	101	15	0.98	0.98	3.60	0.00
X16193	Mitchell	9.00		0.76	0.64	0.74	0.72	0.13	0.02	0.02	0.08	0.08	23.75	20.00	22.42	110	95	15	1.33	1.27	4.70	0.06
H41621	Mitchell	9.09		0.30		0.30	0.30			0.03	-0.03	0.00	9.38	9.38	9.38	50	35.3	15	0.21		0.41	0.21

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
9008	Mitchell	9.20		0.43	0.34	0.43	0.37	0.01	0.01	0.06	0.03	0.03	13.44	10.63	11.44	70	55	15	0.54	0.54	2.00	0.00
G34556	Mitchell	8.70		0.41	0.33	0.41	0.34	0.01	0.01	0.07	0.01	0.01	12.81	10.31	10.51	77	62	15	0.66	0.69	2.50	0.00
9027	Mitchell	9.20		0.53	0.55	0.53	0.55	0.01	0.01	0.09	-0.11	0.00	16.56	17.19	17.19	129	114	15	1.33	1.25	4.60	0.08
H44187	Mitchell	9.09		0.71	0.61	0.70	0.69		0.01	0.01	0.08	0.08	22.19	19.06	21.59	170	154.59799	15	1.90		7.18	1.90
H41619	Mitchell	8.88		0.46		0.46	0.46			0.02	-0.02	0.00	14.38	14.38	14.38	123	107.5	15	0.41		1.11	0.41
G36155	Mitchell	8.90		0.40	0.26	0.40	0.34	0.01	0.01	0.05	0.08	0.08	12.50	8.13	10.78	101	86	15	1.07	1.07	3.90	0.00
H41785	Mitchell	9.40	9.20	0.26	0.21	0.25	0.21	0.05	0.01	0.07	-0.03	0.00	8.13	6.56	6.56	68	53	15	0.65	0.63	2.30	0.02
H41778	Mitchell	9.30	9.30	0.28	0.23	0.26	0.23	0.02	0.02	0.07	-0.04	0.00	8.75	7.19	7.19	75	60	15	0.55	0.56	2.10	0.00
G36165	Mitchell	8.30		0.41	0.32	0.39	0.33	0.01	0.02	0.06	0.01	0.01	12.81	10.00	10.35	136	121	15	1.53	1.47	5.40	0.06
H41617	Mitchell	9.10		0.20		0.20	0.20			0.09	-0.09	0.00	6.25	6.25	6.25	63	47.8	15	0.38		0.93	0.38
G34753	Mitchell	8.80		0.24	0.20	0.24	0.20	0.01	0.01	0.03	0.00	0.00	7.50	6.25	6.33	127	112	15	2.06	2.03	7.40	0.03
H43984	Mitchell	9.17		0.27	0.20	0.25	0.21		0.02	0.04	0.01	0.01	8.44	6.25	6.63	152	137.01005	15	1.56		5.82	1.56
H41615	Mitchell	9.17		0.09		0.09	0.09			0.04	-0.04	0.00	2.81	2.81	2.81	83	67.9	15	0.40		0.97	0.40
G33506	Mitchell	9.24		0.04	0.03	0.03	0.03		0.01	0.11	-0.11	0.00	1.25	0.94	0.94	105	89.9	15	1.37		4.88	1.37
H41608	Mitchell	8.76		0.06		0.06	0.06			0.04	-0.04	0.00	1.88	1.88	1.88	78	62.9	15	0.27		0.52	0.27
H41610	Mitchell	9.16		0.04		0.04	0.04			0.03	-0.03	0.00	1.25	1.25	1.25	122	106.9	15	0.78		2.07	0.78
H41622	Mitchell	9.35		0.02		0.02	0.02			0.02	-0.02	0.00	0.63	0.63	0.63	58	42.8	15	0.22		0.47	0.22
H41626	Mitchell	9.33		0.02		0.02	0.02			0.03	-0.03	0.00	0.63	0.63	0.63	87	71.7	15	0.46		1.13	0.46
X10676	Mitchell	3.79		8.97	8.69	8.86	8.86		0.11	0.00	0.17	0.17	280.31	271.56	276.87	0	0.001	-0.401	0.01		0.02	0.01
X13711	Mitchell	3.24		5.33	3.65	5.12	5.12		0.21	0.00	1.47	1.47	166.56	114.06	159.98	0	0.001	-0.001	0.01		0.02	0.01
X13701	Mitchell	3.43		5.53	4.57	5.32	5.32		0.21	0.00	0.75	0.75	172.81	142.81	166.23	1	0.001	0.899	0.01		0.02	0.01
G33182	Mitchell	4.90		5.16	4.29	5.15	5.15	0.02	0.01	0.00	0.86	0.86	161.25	134.06	160.87	1	0.001	0.999	0.01	0.03	0.20	0.00
S91-395_5431	Sulphurets	5.10		3.75	3.05	3.62	3.60	0.12	0.13	0.02	0.55	0.55	117.19	95.31	112.46	1	0.001	0.999	0.01	0.03	0.10	0.00
G37665	Mitchell	6.50		5.22	4.54	5.22	5.21	0.01	0.01	0.00	0.67	0.67	163.13	141.88	162.85	2	0.001	1.999	0.01	0.03	0.20	0.00
S91-387_5210	Sulphurets	4.60		5.06	3.34	5.02	5.01	0.06	0.04	0.01	1.67	1.67	158.13	104.38	156.51	2	0.001	1.999	0.01	0.03	0.10	0.00
G21564	Mitchell	4.90		4.94	4.89	4.94	4.93	0.03	0.01	0.00	0.04	0.04	154.38	152.81	154.16	2	0.001	1.999	0.01	0.03	0.20	0.00
G37342	Mitchell	4.20		3.70	2.76	3.62	3.62		0.08	0.00	0.86	0.86	115.63	86.25	113.11	2	0.001	1.499	0.01		0.03	0.01
S91-395_5417	Sulphurets	5.10		4.01	3.56	3.93	3.92	0.07	0.08	0.01	0.36	0.36	125.31	111.25	122.52	2	0.001	1.999	0.01	0.03	0.10	0.00
G36847	Mitchell	6.30		3.61	3.19	3.57	3.57	0.04	0.04	0.00	0.38	0.38	112.81	99.69	111.41	2	0.001	1.999	0.02	0.03	0.20	0.00
S91-387_5199	Sulphurets	5.20		1.76	1.55	1.76	1.75	0.03	0.01	0.01	0.20	0.20	55.00	48.44	54.66	1	0.001	0.999	0.01	0.03	0.10	0.00
X13520	Mitchell	3.75		5.79	3.44	5.66	5.66		0.13	0.00	2.22	2.22	180.94	107.50	176.86	3	0.001	3.299	0.01		0.02	0.01
S91-387_5179	Sulphurets	4.90		3.26	2.67	3.26	3.25	0.03	0.01	0.01	0.58	0.58	101.88	83.44	101.46	2	0.001	1.999	0.01	0.03	0.10	0.00
G37937	Mitchell	5.00		7.18	5.86	7.17	7.17	0.02	0.01	0.00	1.31	1.31	224.38	183.13	223.99	5	0.001	4.999	0.01	0.03	0.20	0.00
S91-386_5101	Sulphurets	4.10		8.62	7.70	8.54	8.53	0.09	0.08	0.01	0.83	0.83	269.38	240.63	266.42	6	0.001	5.999	0.04	0.03	0.10	0.02
S91-386_5158	Sulphurets	5.00		5.60	3.83	5.56	5.55	0.11	0.04	0.01	1.72	1.72	175.00	119.69	173.39	4	0.001	3.999	0.01	0.03	0.10	0.00
G37330	Mitchell	3.84		6.51	3.27	6.40	6.40		0.11	0.00	3.13	3.13	203.44	102.19	199.99	5	0.001	4.699	0.01		0.03	0.01
G22009	Mitchell	4.40		5.42	4.61	5.40	5.40	0.07	0.02	0.00	0.79	0.79	169.38	144.06	168.67	4	0.001	3.999	0.01	0.03	0.20	0.00
G33396	Mitchell	6.80		8.08	7.48	8.06	8.06	0.09	0.02	0.00	0.58	0.58	252.50	233.75	251.81	6	0.001	5.999	0.01	0.03	0.20	0.00
S91-386_5141	Sulphurets	5.00		5.20	4.15	5.19	5.18	0.06	0.01	0.01	1.03	1.03	162.50	129.69	161.98	4	0.001	3.999	0.02	0.03	0.10	0.00
G36855	Mitchell	3.90		3.93	3.62	3.88	3.87	0.05	0.05	0.01	0.25	0.25	122.81	113.13	121.03	3	0.001	2.999	0.02	0.03	0.20	0.00
X05423	Mitchell	5.50		5.12	4.37	5.12	5.11	0.01	0.01	0.01	0.74	0.74	160.00	136.56	159.60	4	0.001	3.999	0.01	0.03	0.20	0.00
G21583	Mitchell	4.30		6.09	5.13	6.03	6.03	0.08	0.06	0.00	0.90	0.90	190.31	160.31	188.39	5	0.001	4.999	0.01	0.03	0.20	0.00
S91-386_5122	Sulphurets	5.00		6.04	5.19	6.03	6.01	0.05	0.01	0.02	0.82	0.82	188.75	162.19	187.87	5	0.001	4.999	0.01	0.03	0.10	0.00
G37684	Mitchell	5.90		5.50	4.50	5.50	5.49	0.08	0.01	0.00	0.99	0.99	171.88	140.63	171.67	5	0.001	4.999	0.01	0.03	0.20	0.00
S91-395_5405	Sulphurets	5.50		4.42	3.96	4.37	4.35	0.04	0.05	0.02	0.39	0.39	138.13	123.75	136.04	4	0.001	3.999	0.22	0.03	0.10	0.20
G21535	Mitchell	5.70		3.28	2.76	3.26	3.26	0.05	0.02	0.00	0.50	0.50	102.50	86.25	101.81	3	0.001	2.999	0.02	0.03	0.20	0.00
X05453	Mitchell	5.60		4.35	3.85	4.34	4.32	0.02	0.01	0.02	0.47	0.47	135.94	120.31	135.03	4	0.001	3.999	0.02	0.03	0.20	0.00
G37785	Mitchell	4.80		7.34	6.55	7.33	7.33	0.01	0.01	0.00	0.78	0.78	229.38	204.69	228.94	7	0.001	6.999	0.05	0.03	0.20	0.03
H44263	Mitchell	4.98		4.87	3.07	4.85	4.85		0.02	0.00	1.78	1.78	152.19	95.94	151.54	5	0.001	4.749	0.01		0.20	0.01
X11530	Mitchell	5.80		4.94	4.35	4.93	4.92	0.05	0.01	0.01	0.57	0.57	154.38	135.94	153.89	5	0.001	4.999	0.01	0.03	0.20	0.00

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
G21048	Mitchell	3.93		6.36	6.28	6.28	6.28		0.08	0.00	0.00	0.00	198.75	196.25	196.25	6	0.001	6.399	0.01		0.26	0.01
G21508	Mitchell	5.90		4.86	4.46	4.84	4.84	0.02	0.02	0.00	0.38	0.38	151.88	139.38	151.19	5	0.001	4.999	0.01	0.03	0.10	0.00
X05339	Mitchell	6.31		8.40	4.96	8.34	8.34		0.06	0.00	3.38	3.38	262.50	155.00	260.62	9	0.001	8.799	0.02		0.06	0.02
G33162	Mitchell	5.40		4.72	4.20	4.72	4.71	0.03	0.01	0.00	0.51	0.51	147.50	131.25	147.28	5	0.001	4.999	0.01	0.03	0.20	0.00
H43405	Mitchell	5.80	6.10	8.85	8.24	8.80	8.80	0.05	0.05	0.00	0.56	0.56	276.56	257.50	274.95	10	0.001	9.999	0.02	0.03	0.20	0.00
H43880	Mitchell	7.39		8.72		8.72	8.72			0.00	0.00	0.00	272.50	272.50	272.50	11	0.001	10.699	0.09		0.33	0.09
G37699	Mitchell	4.70		5.63	4.78	5.63	5.62	0.06	0.01	0.00	0.84	0.84	175.94	149.38	175.73	7	0.001	6.999	0.01	0.03	0.20	0.00
X05402	Mitchell	6.20		5.64	4.56	5.63	5.61	0.03	0.01	0.02	1.05	1.05	176.25	142.50	175.35	7	0.001	6.999	0.02	0.03	0.20	0.00
X11553	Mitchell	6.20		5.46	4.66	5.44	5.44	0.04	0.02	0.00	0.78	0.78	170.63	145.63	169.91	7	0.001	6.999	0.01	0.05	0.20	0.00
G37809	Mitchell	6.10		5.94	4.60	5.94	5.93	0.01	0.01	0.00	1.33	1.33	185.63	143.75	185.37	8	0.001	7.999	0.01	0.03	0.20	0.00
X19143	Mitchell	7.69		5.53	5.43	5.43	5.43		0.10	0.00	0.00	0.00	172.81	169.69	169.69	8	0.001	7.699	0.08		0.26	0.08
G33142	Mitchell	5.70		5.37	4.64	5.35	5.35	0.04	0.02	0.00	0.71	0.71	167.81	145.00	167.14	8	0.001	7.999	0.01	0.03	0.20	0.00
G21490	Mitchell	5.30		5.93	5.16	5.88	5.88	0.05	0.05	0.00	0.72	0.72	185.31	161.25	183.70	9	0.001	8.999	0.02	0.03	0.20	0.00
X06441	Mitchell	6.80		4.42	3.87	4.41	4.41	0.05	0.01	0.00	0.54	0.54	138.13	120.94	137.71	7	0.001	6.999	0.02	0.05	0.20	0.00
G37719	Mitchell	2.00		4.85	4.19	4.84	4.84	0.06	0.01	0.00	0.65	0.65	151.56	130.94	151.18	8	0.001	7.999	0.01	0.03	0.20	0.00
H44434	Mitchell	4.46		5.47	4.25	5.43	5.43		0.04	0.00	1.18	1.18	170.94	132.81	169.67	9	0.001	8.999	0.01		0.02	0.01
G36074	Mitchell	5.46		3.76	3.72	3.72	3.72		0.04	0.00	0.00	0.00	117.50	116.25	116.25	6	0.001	6.199	0.01		0.06	0.01
G21477	Mitchell	6.90		3.59	2.97	3.59	3.58	0.01	0.01	0.00	0.61	0.61	112.19	92.81	111.94	6	0.001	5.999	0.01	0.03	0.20	0.00
X14258	Mitchell	7.60		5.98	4.92	5.97	5.97	0.03	0.01	0.00	1.05	1.05	186.88	153.75	186.51	10	0.001	9.999	0.03	0.05	0.20	0.00
H43397	Mitchell	6.30	6.20	8.32	7.61	8.29	8.29	0.07	0.03	0.00	0.68	0.68	260.00	237.81	259.03	14	0.001	13.999	0.02	0.03	0.20	0.00
H43401	Mitchell	6.90	7.00	5.15	5.01	5.09	5.09	0.05	0.06	0.00	0.08	0.08	160.94	156.56	158.99	9	0.001	8.999	0.03	0.03	0.20	0.01
H43395	Mitchell	7.90	8.10	5.93	5.48	5.91	5.91	0.07	0.02	0.00	0.43	0.43	185.31	171.25	184.64	11	0.001	10.999	0.04	0.06	0.20	0.00
H43403	Mitchell	6.50	6.50	6.43	6.01	6.39	6.39	0.05	0.04	0.00	0.38	0.38	200.94	187.81	199.62	12	0.001	11.999	0.02	0.03	0.20	0.00
X14278	Mitchell	7.60		4.80	3.71	4.78	4.78	0.04	0.02	0.00	1.07	1.07	150.00	115.94	149.33	9	0.001	8.999	0.09	0.05	0.20	0.04
E217257	Mitchell	5.50		6.86	6.11	6.83	6.83	0.05	0.03	0.00	0.72	0.72	214.38	190.94	213.38	13	0.001	12.999	0.43	0.03	0.20	0.41
G22025	Mitchell	6.80		5.35	4.77	5.21	5.21	0.25	0.14	0.00	0.44	0.44	167.19	149.06	162.76	10	0.001	9.999	0.04	0.03	0.20	0.02
S91-395_5388	Sulphurets	6.80		3.08	2.82	3.05	3.04	0.04	0.03	0.01	0.22	0.22	96.25	88.13	94.97	6	0.001	5.999	0.03	0.03	0.10	0.01
H41708	Mitchell	7.90	7.60	4.69	4.36	4.55	4.55	0.13	0.14	0.00	0.19	0.19	146.56	136.25	142.11	9	0.001	8.999	0.04	0.07	0.30	0.00
G35241	Mitchell	7.71		5.09	5.02	5.02	5.02		0.07	0.00	0.00	0.00	159.06	156.88	156.88	10	0.001	10.199	0.09		0.23	0.09
X11486	Mitchell	7.10		3.00	2.62	2.95	2.95	0.07	0.05	0.00	0.33	0.33	93.75	81.88	92.06	6	0.001	5.999	0.05	0.07	0.30	0.00
H41422	Mitchell	7.70	7.70	7.28	6.53	7.23	7.23	0.11	0.05	0.00	0.70	0.70	227.50	204.06	225.90	15	0.001	14.999	0.08	0.07	0.30	0.01
G37917	Mitchell	6.70		6.83	5.48	6.82	6.82	0.02	0.01	0.00	1.34	1.34	213.44	171.25	213.03	15	0.001	14.999	0.02	0.03	0.20	0.00
H43399	Mitchell	6.70	6.80	4.96	4.87	4.92	4.92	0.06	0.04	0.00	0.05	0.05	155.00	152.19	153.67	11	0.001	10.999	0.01	0.03	0.20	0.00
X05483	Mitchell	7.70		4.75	4.43	4.75	4.74	0.01	0.01	0.01	0.31	0.31	148.44	138.44	148.08	11	0.001	10.999	1.01	0.03	0.20	0.99
G24020	Mitchell	7.60		7.32	6.02	7.31	7.31	0.03	0.01	0.00	1.29	1.29	228.75	188.13	228.39	17	2	15	0.04	0.07	0.30	0.00
X14180	Mitchell	6.07		4.57	3.04	4.42	4.42		0.15	0.00	1.38	1.38	142.81	95.00	138.11	11	0.001	10.799	0.05		0.06	0.05
H43407	Mitchell	7.40	7.60	5.38	5.19	5.32	5.32	0.09	0.06	0.00	0.13	0.13	168.13	162.19	166.20	13	0.001	12.999	0.17	0.06	0.20	0.11
H42161	Mitchell	8.20	8.20	4.89	4.35	4.88	4.88	0.06	0.01	0.00	0.53	0.53	152.81	135.94	152.41	12	0.001	11.999	0.04	0.05	0.20	0.00
X11377	Mitchell	7.40		3.94	3.52	3.88	3.88	0.08	0.06	0.00	0.36	0.36	123.13	110.00	121.12	10	0.001	9.999	0.02	0.03	0.20	0.00
X10664	Mitchell	7.86		4.43	3.36	4.27	4.27		0.16	0.00	0.91	0.91	138.44	105.00	133.42	12	0.001	11.599	0.12		0.39	0.12
G37739	Mitchell	6.00		4.79	4.67	4.78	4.78	0.05	0.01	0.00	0.11	0.11	149.69	145.94	149.32	13	0.001	12.999	0.01	0.03	0.20	0.00
H41706	Mitchell	8.00	7.90	5.67	5.02	5.46	5.46	0.21	0.21	0.00	0.44	0.44	177.19	156.88	170.54	15	0.001	14.999	0.11	0.13	0.50	0.00
G36943	Mitchell	7.50		4.01	3.99	4.00	4.00	0.01	0.01	0.00	0.01	0.01	125.31	124.69	124.90	11	0.001	10.999	0.05	0.05	0.20	0.00
G35228	Mitchell	7.92		6.26	4.17	6.19	6.19		0.07	0.00	2.02	2.02	195.63	130.31	193.43	17	2.3	15	0.12		0.43	0.12
G32981	Mitchell	7.25		3.48	3.42	3.42	3.42		0.06	0.00	0.00	0.00	108.75	106.88	106.88	10	0.001	9.999	0.06		0.23	0.06
X15427	Mitchell	6.26		2.81	2.21	2.77	2.77		0.04	0.00	0.56	0.56	87.81	69.06	86.52	8	0.001	8.199	0.04		0.11	0.04
H42163	Mitchell	8.50	8.40	3.99	3.37	3.98	3.98	0.08	0.01	0.00	0.61	0.61	124.69	105.31	124.29	12	0.001	11.999	0.08	0.08	0.30	0.00
G37966	Mitchell	6.50		4.18	3.96	4.17	4.17	0.01	0.01	0.00	0.21	0.21	130.63	123.75	130.19	13	0.001	12.999	0.01	0.03	0.20	0.00
G21287	Mitchell	7.88		3.14	3.10	3.10	3.10		0.04	0.00	0.00	0.00	98.13	96.88	96.88	10	0.001	9.699	0.04		0.21	0.04
G36878	Mitchell	5.00		2.80	2.66	2.78	2.77	0.01	0.02	0.01	0.11	0.11	87.50	83.13	86.71	9	0.001	8.999	0.17	0.03	0.20	0.15

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
X14630	Mitchell	8.20		3.41	3.28	3.40	3.39	0.04	0.01	0.01	0.11	0.11	106.56	102.50	105.83	11	0.001	10.999	0.01	0.03	0.20	0.00
H43874	Mitchell	8.09		4.95		4.95	4.95			0.00	0.00	0.00	154.69	154.69	154.69	16	1.4	15	0.09		0.34	0.09
G33119	Mitchell	7.30		3.91	3.50	3.91	3.90	0.03	0.01	0.00	0.40	0.40	122.19	109.38	121.96	13	0.001	12.999	0.32	0.12	0.40	0.20
G33357	Mitchell	8.20		5.67	5.21	5.64	5.64	0.04	0.03	0.00	0.43	0.43	177.19	162.81	176.16	19	4	15	0.09	0.12	0.40	0.00
X14171	Mitchell	6.84		3.02	2.68	2.98	2.98		0.04	0.00	0.30	0.30	94.38	83.75	93.10	10	0.001	10.299	0.03		0.05	0.03
H42169	Mitchell	8.20	8.20	5.21	4.60	5.20	5.20	0.05	0.01	0.00	0.60	0.60	162.81	143.75	162.41	18	3	15	0.10	0.10	0.40	0.00
X13511	Mitchell	6.66		3.15	3.14	3.14	3.14		0.01	0.00	0.00	0.00	98.44	98.13	98.13	11	0.001	10.999	0.01		0.02	0.01
H41839	Mitchell	8.40	8.70	5.96	5.17	5.95	5.95	0.05	0.01	0.00	0.78	0.78	186.25	161.56	185.89	21	6	15	0.16	0.18	0.70	0.00
X06419	Mitchell	7.10		3.41	2.94	3.40	3.39	0.04	0.01	0.01	0.45	0.45	106.56	91.88	106.09	12	0.001	11.999	0.03	0.05	0.20	0.00
G24041	Mitchell	7.70		3.84	3.54	3.83	3.83	0.02	0.01	0.00	0.29	0.29	120.00	110.63	119.59	14	0.001	13.999	0.03	0.03	0.20	0.01
G23998	Mitchell	7.20		3.00	2.80	2.99	2.98	0.04	0.01	0.01	0.18	0.18	93.75	87.50	93.24	11	0.001	10.999	0.01	0.03	0.20	0.00
X15009	Mitchell	8.60		3.78	3.02	3.74	3.73	0.12	0.04	0.01	0.71	0.71	118.13	94.38	116.66	14	0.001	13.999	0.07	0.09	0.30	0.00
G32047	Mitchell	7.90		6.42	4.49	5.29	5.29	1.12	1.13	0.00	0.80	0.80	200.63	140.31	165.27	21	6	15	0.19	0.19	0.70	0.00
G35583	Mitchell	7.70		5.05	4.31	5.03	5.02	0.03	0.02	0.01	0.71	0.71	157.81	134.69	156.98	20	5	15	0.10	0.10	0.40	0.00
X06463	Mitchell	8.10		5.07	3.51	4.94	4.93	0.09	0.13	0.01	1.42	1.42	158.44	109.69	153.92	20	5	15	0.22	0.22	0.80	0.00
G33796	Mitchell	7.40		5.07	4.59	5.07	5.06	0.04	0.01	0.00	0.47	0.47	158.44	143.44	158.16	21	6	15	0.18	0.21	0.80	0.00
X11008	Mitchell	7.60		6.79	4.31	6.10	6.09	0.71	0.69	0.01	1.78	1.78	212.19	134.69	190.45	26	11	15	0.32	0.31	1.10	0.01
H43862	Mitchell	7.85		7.10		7.10	7.10			0.00	0.00	0.00	221.88	221.88	221.88	30	15.3	15	0.33		0.99	0.33
X11578	Mitchell	8.40		2.81	2.43	2.80	2.80	0.04	0.01	0.00	0.37	0.37	87.81	75.94	87.36	12	0.001	11.999	0.07	0.10	0.40	0.00
H43766	Mitchell	7.28		5.36		5.36	5.36			0.00	0.00	0.00	167.50	167.50	167.50	24	8.8	15	0.98		3.49	0.98
G33097	Mitchell	7.30		5.44	4.98	5.43	5.43	0.06	0.01	0.00	0.45	0.45	170.00	155.63	169.63	25	10	15	0.26	0.27	1.00	0.00
G33415	Mitchell	8.40		4.08	3.49	4.07	4.07	0.03	0.01	0.00	0.58	0.58	127.50	109.06	127.09	19	4	15	0.17	0.21	0.80	0.00
H43518	Mitchell	7.61		6.24	4.00	4.15	4.15		2.09	0.00	0.15	0.15	195.00	125.00	129.67	20	4.5	15	0.24		0.72	0.24
X11031	Mitchell	8.00		4.49	3.80	4.44	4.43	0.09	0.05	0.01	0.63	0.63	140.31	118.75	138.54	21	6	15	0.25	0.27	1.00	0.00
X06146	Mitchell	7.72		3.04	2.89	2.99	2.99		0.05	0.00	0.10	0.10	95.00	90.31	93.41	14	0.001	14.299	0.07		0.12	0.07
X11599	Mitchell	8.40		3.88	3.45	3.86	3.86	0.05	0.02	0.00	0.41	0.41	121.25	107.81	120.49	19	4	15	0.18	0.21	0.80	0.00
H42210	Mitchell	8.00	7.60	4.35	2.99	3.21	3.21	1.24	1.14	0.00	0.22	0.22	135.94	93.44	100.21	16	1	15	0.09	0.09	0.30	0.00
G37765	Mitchell	6.90		2.39	2.25	2.38	2.37	0.03	0.01	0.01	0.12	0.12	74.69	70.31	74.11	12	0.001	11.999	0.01	0.03	0.20	0.00
G33436	Mitchell	8.40		3.43	2.81	3.36	3.36	0.11	0.07	0.00	0.55	0.55	107.19	87.81	104.88	17	2	15	0.12	0.16	0.60	0.00
X19131	Mitchell	7.82		5.14	4.61	5.08	5.08		0.06	0.00	0.47	0.47	160.63	144.06	158.74	26	11.4	15	0.08		0.30	0.08
X12874	Mitchell	7.83		3.91	2.38	3.88	3.88		0.03	0.00	1.50	1.50	122.19	74.38	121.23	20	5.2	15	0.23		0.69	0.23
G33072	Mitchell	6.90		4.04	3.79	4.03	4.03	0.02	0.01	0.00	0.24	0.24	126.25	118.44	125.86	21	6	15	0.28	0.30	1.10	0.00
H41673	Mitchell	8.50	8.30	5.54	5.09	5.53	5.53	0.08	0.01	0.00	0.44	0.44	173.13	159.06	172.72	29	14	15	0.31	0.29	1.10	0.02
X06396	Mitchell	9.10		1.99	1.64	1.91	1.89	0.10	0.08	0.02	0.25	0.25	62.19	51.25	59.21	10	0.001	9.999	0.15	0.16	0.60	0.00
H43905	Mitchell	7.82		8.03		8.03	8.03			0.00	0.00	0.00	250.94	250.94	250.94	43	27.5	15	0.52		2.02	0.52
H41835	Mitchell	8.70	8.80	6.15	5.28	6.11	6.11	0.11	0.04	0.00	0.83	0.83	192.19	165.00	190.90	33	18	15	0.30	0.34	1.30	0.00
H43762	Mitchell	7.36		4.40		4.40	4.40			0.00	0.00	0.00	137.50	137.50	137.50	24	9.4	15	1.65		5.98	1.65
X05329	Mitchell	7.23		2.13	2.12	2.12	2.12		0.01	0.00	0.00	0.00	66.56	66.25	66.25	12	0.001	11.799	0.01		0.02	0.01
G36231	Mitchell	7.50		2.72	2.19	2.70	2.69	0.01	0.02	0.01	0.50	0.50	85.00	68.44	84.11	15	0.001	14.999	0.13	0.16	0.60	0.00
G35563	Mitchell	7.80		5.65	4.48	5.17	5.16	0.47	0.48	0.01	0.68	0.68	176.56	140.00	161.34	29	14	15	0.23	0.22	0.80	0.01
H41829	Mitchell	8.40	8.40	6.06	5.31	6.03	6.03	0.07	0.03	0.00	0.72	0.72	189.38	165.94	188.39	34	19	15	0.33	0.35	1.30	0.00
H41561	Mitchell	8.10	8.00	5.20	4.73	4.96	4.96	0.28	0.24	0.00	0.23	0.23	162.50	147.81	154.95	28	13	15	0.28	0.27	1.00	0.01
H43887	Mitchell	7.95		7.08		7.08	7.08			0.00	0.00	0.00	221.25	221.25	221.25	41	25.8	15	0.24		0.86	0.24
G37602	Mitchell	7.90		5.89	4.85	5.78	5.78	0.09	0.11	0.00	0.93	0.93	184.06	151.56	180.54	34	19	15	0.33	0.33	1.20	0.00
G36814	Mitchell	7.90		6.81	6.06	6.55	6.55	0.24	0.26	0.00	0.49	0.49	212.81	189.38	204.54	39	24	15	0.42	0.41	1.50	0.01
G33116	Mitchell	7.60		4.84	4.22	4.79	4.79	0.04	0.05	0.00	0.57	0.57	151.25	131.88	149.62	29	14	15	0.27	0.31	1.10	0.00
X11508	Mitchell	7.70		2.98	2.55	2.97	2.97	0.05	0.01	0.00	0.42	0.42	93.13	79.69	92.67	18	3	15	0.27	0.24	0.90	0.03
H42245	Mitchell	8.40	7.90	6.43	4.23	5.04	5.04	1.48	1.39	0.00	0.81	0.81	200.94	132.19	157.43	31	16	15	0.27	0.28	1.00	0.00
G36794	Mitchell	8.00		5.53	5.12	5.48	5.48	0.08	0.05	0.00	0.36	0.36	172.81	160.00	171.13	34	19	15	0.35	0.34	1.20	0.01
G35060	Mitchell	7.80		3.72	3.48	3.69	3.68	0.02	0.03	0.01	0.20	0.20	116.25	108.75	115.15	23	8	15	0.24	0.21	0.80	0.03

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
E217242	Mitchell	8.00		4.80	4.13	4.79	4.79	0.05	0.01	0.00	0.66	0.66	150.00	129.06	149.60	30	15	15	0.23	0.27	1.00	0.00
H43780	Mitchell	7.66		5.43		5.43	5.43			0.00	0.00	0.00	169.69	169.69	169.69	35	19.5	15	0.43		1.62	0.43
G32420	Mitchell	8.40		2.22	1.82	2.21	2.19	0.01	0.01	0.02	0.37	0.37	69.38	56.88	68.34	14	0.001	13.999	0.91	0.16	0.60	0.75
H42249	Mitchell	8.40	7.70	6.54	5.25	5.59	5.59	1.03	0.95	0.00	0.34	0.34	204.38	164.06	174.64	36	21	15	0.33	0.36	1.30	0.00
H41685	Mitchell	8.40	8.00	5.38	4.74	5.37	5.37	0.04	0.01	0.00	0.63	0.63	168.13	148.13	167.75	36	21	15	0.35	0.36	1.30	0.00
9069	Mitchell	9.10		4.48	4.33	4.48	4.47	0.01	0.01	0.00	0.14	0.14	140.00	135.31	139.73	30	15	15	0.23	0.13	0.50	0.10
H43765	Mitchell	8.00	8.00	2.66	2.66	2.63	2.66	0.01	0.03	0.03	-0.06	0.00	83.13	83.13	83.13	18	3	15	0.95	0.16	0.60	0.79
X12852	Mitchell	7.98		2.71	2.02	2.69	2.69		0.02	0.00	0.67	0.67	84.69	63.13	84.03	18	3.2	15	0.12		0.47	0.12
H43903	Mitchell	8.10	7.90	3.12	2.83	3.12	3.10	0.10	0.01	0.01	0.27	0.27	97.50	88.44	96.88	21	6	15	0.19	0.23	0.90	0.00
G35079	Mitchell	7.80		3.09	2.77	3.07	3.06	0.09	0.02	0.01	0.29	0.29	96.56	86.56	95.73	21	6	15	0.17	0.17	0.60	0.00
E217224	Mitchell	8.40		4.86	4.23	4.85	4.85	0.03	0.01	0.00	0.62	0.62	151.88	132.19	151.50	34	19	15	0.29	0.30	1.10	0.00
G36254	Mitchell	7.70		1.76	1.48	1.76	1.70	0.01	0.01	0.05	0.22	0.22	55.00	46.25	53.24	12	0.001	11.999	0.01	0.03	0.20	0.00
H41441	Mitchell	8.30	8.20	4.13	3.62	4.12	4.12	0.14	0.01	0.00	0.50	0.50	129.06	113.13	128.61	29	14	15	0.25	0.22	0.80	0.03
H41563	Mitchell	8.20	8.00	5.89	4.64	4.95	4.95	0.99	0.94	0.00	0.31	0.31	184.06	145.00	154.64	35	20	15	0.40	0.35	1.30	0.05
G33049	Mitchell	7.40		2.80	2.71	2.79	2.78	0.01	0.01	0.01	0.07	0.07	87.50	84.69	86.91	20	5	15	0.74	0.74	2.70	0.00
H42195	Mitchell	8.50	7.90	3.38	3.31	3.33	3.33	0.10	0.05	0.00	0.02	0.02	105.63	103.44	103.96	24	9	15	0.22	0.24	0.90	0.00
G32137	Mitchell	8.20		3.32	2.85	3.32	3.31	0.06	0.01	0.00	0.46	0.46	103.75	89.06	103.47	24	9	15	0.20	0.20	0.70	0.00
H41427	Mitchell	8.20	8.20	4.37	3.58	4.27	4.27	0.15	0.10	0.00	0.69	0.69	136.56	111.88	133.36	31	16	15	0.31	0.29	1.10	0.02
X12417	Mitchell	7.90		4.11	3.96	4.10	4.09	0.04	0.01	0.01	0.13	0.13	128.44	123.75	127.92	30	15	15	0.35	0.36	1.30	0.00
G33773	Mitchell	8.10		4.92	4.45	4.92	4.91	0.01	0.01	0.01	0.46	0.46	153.75	139.06	153.43	36	21	15	0.43	0.42	1.50	0.01
X13902	Mitchell	7.97		6.61	3.72	6.11	6.11		0.50	0.00	2.39	2.39	206.56	116.25	190.92	45	30.2	15	0.31		1.10	0.31
X05383	Mitchell	8.40		1.91	1.59	1.90	1.88	0.01	0.01	0.02	0.29	0.29	59.69	49.69	58.75	14	0.001	13.999	0.06	0.05	0.20	0.01
H41559	Mitchell	8.10	8.00	5.20	4.07	4.56	4.56	0.68	0.64	0.00	0.49	0.49	162.50	127.19	142.46	34	19	15	0.38	0.34	1.20	0.04
X17281	Mitchell	8.80		5.33	4.56	5.05	5.05	0.34	0.28	0.00	0.49	0.49	166.56	142.50	157.72	38	23	15	0.36	0.33	1.20	0.03
H42240	Mitchell	8.30	7.80	5.08	4.19	4.36	4.36	0.81	0.72	0.00	0.17	0.17	158.75	130.94	136.18	33	18	15	0.30	0.32	1.20	0.00
X12432	Mitchell	8.00		4.01	3.93	4.00	3.99	0.04	0.01	0.01	0.06	0.06	125.31	122.81	124.77	31	16	15	0.38	0.37	1.40	0.01
H41699	Mitchell	8.60	8.50	2.75	2.59	2.70	2.69	0.07	0.05	0.01	0.10	0.10	85.94	80.94	84.04	21	6	15	0.13	0.15	0.60	0.00
G35113	Mitchell	7.80		5.29	3.71	4.59	4.59	0.71	0.70	0.00	0.88	0.88	165.31	115.94	143.30	36	21	15	0.48	0.44	1.60	0.04
X14288	Mitchell	7.90		6.58	3.04	3.54	3.54	3.04	3.04	0.00	0.50	0.50	205.63	95.00	110.54	28	13	15	0.89	0.40	1.50	0.49
H42251	Mitchell	8.30	7.70	8.14	6.04	6.32	6.31	1.91	1.82	0.01	0.27	0.27	254.38	188.75	197.33	50	35	15	0.58	0.57	2.10	0.01
H41429	Mitchell	8.40	8.30	3.54	2.92	3.41	3.41	0.17	0.13	0.00	0.49	0.49	110.63	91.25	106.45	27	12	15	0.21	0.19	0.70	0.02
G34623	Mitchell	7.60		2.51	2.05	2.51	2.50	0.01	0.01	0.01	0.45	0.45	78.44	64.06	77.99	20	5	15	0.19	0.22	0.80	0.00
G32259	Mitchell	8.00		4.50	3.87	4.49	4.49	0.01	0.01	0.00	0.62	0.62	140.63	120.94	140.24	36	21	15	0.30	0.35	1.30	0.00
H43864	Mitchell	8.10		5.67		5.67	5.67			0.00	0.00	0.00	177.19	177.19	177.19	47	31.5	15	0.57		2.24	0.57
X06946	Mitchell	7.97		3.61	3.04	3.53	3.53		0.08	0.00	0.49	0.49	112.81	94.84	110.28	28	13.48333333	15	0.31		0.99	0.31
G33259	Mitchell	8.60		4.24	3.84	4.23	4.23	0.03	0.01	0.00	0.39	0.39	132.50	120.00	132.04	35	20	15	0.31	0.34	1.30	0.00
H42221	Mitchell	8.10	8.00	4.78	2.84	3.32	3.32	1.58	1.46	0.00	0.48	0.48	149.38	88.75	103.67	28	13	15	0.23	0.26	1.00	0.00
H43878	Mitchell	8.14		5.94		5.94	5.94			0.00	0.00	0.00	185.63	185.63	185.63	50	35.3	15	0.41		1.58	0.41
H41669	Mitchell	8.60	7.60	5.23	4.71	5.23	5.22	0.05	0.01	0.00	0.51	0.51	163.44	147.19	163.21	45	30	15	0.45	0.47	1.70	0.00
G36775	Mitchell	7.90		3.70	3.49	3.69	3.68	0.01	0.01	0.01	0.19	0.19	115.63	109.06	115.14	32	17	15	0.28	0.31	1.10	0.00
H41702	Mitchell	8.80	7.70	3.22	3.01	3.21	3.20	0.08	0.01	0.01	0.19	0.19	100.63	94.06	100.14	28	13	15	0.21	0.24	0.90	0.00
H43885	Mitchell	8.15		4.05		4.05	4.05			0.00	0.00	0.00	126.56	126.56	126.56	36	20.8	15	0.15		0.44	0.15
X05177	Mitchell	8.15		3.02	2.98	2.98	2.98		0.04	0.00	0.00	0.00	94.38	93.13	93.13	26	11.4	15	0.18		0.63	0.18
H40630	Mitchell	9.00	8.90	2.84	2.39	2.83	2.82	0.09	0.01	0.01	0.43	0.43	88.75	74.69	88.18	25	10	15	0.12	0.12	0.40	0.00
H43882	Mitchell	8.09		5.08		5.08	5.08			0.00	0.00	0.00	158.75	158.75	158.75	45	30.2	15	0.39		1.43	0.39
X13930	Mitchell	8.06		6.61	3.93	5.76	5.76		0.85	0.00	1.83	1.83	206.56	122.81	179.96	52	36.5	15	0.53		1.93	0.53
G32496	Mitchell	8.10		4.00	3.54	3.99	3.99	0.01	0.01	0.00	0.45	0.45	125.00	110.63	124.61	36	21	15	0.28	0.32	1.20	0.00
H42193	Mitchell	8.60	8.10	4.10	3.94	4.06	4.06	0.10	0.04	0.00	0.12	0.12	128.13	123.13	126.79	37	22	15	0.39	0.40	1.50	0.00
H43868	Mitchell	8.11		5.23		5.23	5.23			0.00	0.00	0.00	163.44	163.44	163.44	48	32.7	15	0.33		1.24	0.33
H43890	Mitchell	8.13		5.50		5.50	5.50			0.00	0.00	0.00	171.88	171.88	171.88	50	35.3	15	0.47		1.94	0.47

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
X17284	Mitchell	9.10		5.02	4.47	5.01	5.01	0.04	0.01	0.00	0.54	0.54	156.88	139.69	156.43	46	31	15		0.47	1.70	0.00
H42242	Mitchell	8.40	7.80	4.43	3.61	3.44	3.61	1.05	0.99	0.00	-0.17	0.00	138.44	112.81	112.81	34	19	15	0.30	0.33	1.20	0.00
X11464	Mitchell	8.00		2.85	2.48	2.76	2.75	0.10	0.09	0.01	0.27	0.27	89.06	77.50	85.94	26	11	15	0.28	0.27	1.00	0.01
H43891	Mitchell	8.20	8.00	6.39	3.01	3.32	3.31	3.10	3.07	0.01	0.30	0.30	199.69	94.06	103.53	32	17	15	0.26	0.30	1.10	0.00
X06485	Mitchell	8.70		3.77	3.29	3.73	3.72	0.07	0.04	0.01	0.43	0.43	117.81	102.81	116.31	36	21	15	0.40	0.39	1.40	0.01
X12614	Mitchell	8.60		4.65	4.23	4.64	4.64	0.05	0.01	0.00	0.41	0.41	145.31	132.19	144.90	45	30	15	0.44	0.45	1.70	0.00
H42247	Mitchell	8.50	7.70	5.52	4.43	4.68	4.68	0.92	0.84	0.00	0.25	0.25	172.50	138.44	146.18	47	32	15	0.47	0.49	1.80	0.00
G34338	Mitchell	8.25		2.46	2.28	2.44	2.44		0.02	0.00	0.16	0.16	76.88	71.25	76.20	25	9.5	15	0.19		0.63	0.19
H41443	Mitchell	8.30	8.30	8.25	7.22	8.09	8.09	0.20	0.16	0.00	0.87	0.87	257.81	225.63	252.78	82	67	15	0.95	0.93	3.40	0.02
X12393	Mitchell	7.90		2.40	2.11	2.37	2.37	0.04	0.03	0.00	0.26	0.26	75.00	65.94	73.93	24	9	15	0.20	0.21	0.80	0.00
H42186	Mitchell	8.50	8.20	4.52	4.05	4.41	4.41	0.14	0.11	0.00	0.36	0.36	141.25	126.56	137.67	45	30	15	0.54	0.51	1.90	0.03
H41679	Mitchell	8.50	7.50	4.59	4.50	4.58	4.58	0.04	0.01	0.00	0.08	0.08	143.44	140.63	143.04	47	32	15	0.56	0.59	2.10	0.00
H41681	Mitchell	8.70	7.80	5.06	4.34	5.05	5.05	0.09	0.01	0.00	0.71	0.71	158.13	135.63	157.74	53	38	15	0.62	0.60	2.20	0.02
G32325	Mitchell	8.00		4.52	4.25	4.51	4.51	0.02	0.01	0.00	0.26	0.26	141.25	132.81	140.84	48	33	15	0.49	0.46	1.70	0.03
G32992	Mitchell	8.36		3.43	3.12	3.41	3.41		0.02	0.00	0.29	0.29	107.19	97.50	106.53	36	21.4	15	0.24		0.89	0.24
G35021	Mitchell	7.70		2.56	2.30	2.53	2.52	0.02	0.03	0.01	0.22	0.22	80.00	71.88	78.81	27	12	15	0.25	0.24	0.90	0.01
H43525	Mitchell	8.00	8.10	5.35	2.31	3.08	3.08	2.57	2.27	0.00	0.77	0.77	167.19	72.19	96.18	33	18	15	0.46	0.36	1.30	0.10
G37907	Mitchell	7.80		6.65	3.70	4.21	4.19	2.45	2.44	0.02	0.49	0.49	207.81	115.63	130.81	45	30	15	0.52	0.47	1.70	0.05
X16510	Mitchell	8.90		4.75	4.28	4.73	4.72	0.06	0.02	0.01	0.44	0.44	148.44	133.75	147.53	51	36	15		0.56	2.00	0.00
X05538	Mitchell	8.30		3.52	3.16	3.51	3.49	0.01	0.01	0.02	0.33	0.33	110.00	98.75	109.11	38	23	15	0.48	0.45	1.70	0.03
G35749	Mitchell	8.03		3.93	1.97	3.89	3.89		0.04	0.00	1.92	1.92	122.81	61.56	121.54	43	27.7	15	0.23		0.80	0.23
G32474	Mitchell	8.10		3.74	3.35	3.71	3.71	0.01	0.03	0.00	0.36	0.36	116.88	104.69	115.85	41	26	15	0.44	0.41	1.50	0.03
H42238	Mitchell	8.50	8.20	5.18	3.77	4.33	4.33	0.89	0.85	0.00	0.56	0.56	161.88	117.81	135.26	48	33	15	0.43	0.44	1.60	0.00
G32563	Mitchell	8.20		3.92	3.35	3.91	3.91	0.05	0.01	0.00	0.56	0.56	122.50	104.69	122.09	44	29	15	0.46	0.43	1.60	0.03
H42197	Mitchell	8.70	7.70	3.31	3.15	3.28	3.28	0.11	0.03	0.00	0.13	0.13	103.44	98.44	102.38	37	22	15	0.40	0.39	1.40	0.01
G32537	Mitchell	8.30		2.93	2.58	2.92	2.92	0.02	0.01	0.00	0.34	0.34	91.56	80.63	91.10	33	18	15	0.26	0.25	0.90	0.01
X05559	Mitchell	8.60		3.71	3.33	3.70	3.69	0.05	0.01	0.01	0.36	0.36	115.94	104.06	115.46	42	27	15	0.41	0.39	1.40	0.02
H41683	Mitchell	8.40	7.80	4.76	4.37	4.75	4.75	0.03	0.01	0.00	0.38	0.38	148.75	136.56	148.36	54	39	15	0.56	0.58	2.10	0.00
H41745	Mitchell	8.11		6.33	2.78	4.19	4.19		2.14	0.00	1.41	1.41	197.81	86.88	130.91	48	32.73869	15	0.45		1.47	0.45
X10851	Mitchell	8.00		5.12	2.14	2.46	2.46	2.66	2.66	0.00	0.32	0.32	160.00	66.88	76.75	28	13	15	0.33	0.32	1.20	0.01
H43876	Mitchell	8.14		5.43		5.43	5.43			0.00	0.00	0.00	169.69	169.69	169.69	63	47.8	15	0.44		1.75	0.44
X11052	Mitchell	8.30		3.58	2.62	2.92	2.91	0.69	0.66	0.01	0.29	0.29	111.88	81.88	90.90	34	19	15	0.42	0.41	1.50	0.01
G36921	Mitchell	7.50		2.33	1.98	2.31	2.30	0.01	0.02	0.01	0.32	0.32	72.81	61.88	71.98	27	12	15	0.28	0.28	1.00	0.00
G32413	Mitchell	8.30		2.74	2.59	2.73	2.72	0.04	0.01	0.01	0.13	0.13	85.63	80.94	84.93	32	17	15	0.29	0.32	1.20	0.00
H41731	Mitchell	8.83		2.88		2.88	2.88			0.00	0.00	0.00	90.00	90.00	90.00	34	18.9	15	0.21		0.60	0.21
X17277	Mitchell	9.10		4.18	4.08	4.14	4.14	0.08	0.04	0.00	0.06	0.06	130.63	127.50	129.24	49	34	15		0.51	1.90	0.00
H41687	Mitchell	8.30	7.30	4.40	4.28	4.39	4.39	0.01	0.01	0.00	0.11	0.11	137.50	133.75	137.11	53	38	15	0.58	0.57	2.10	0.01
G34982	Mitchell	7.80		3.35	2.86	3.31	3.30	0.16	0.04	0.01	0.44	0.44	104.69	89.38	103.28	40	25	15	0.43	0.41	1.50	0.02
H41756	Mitchell	8.15		6.08	2.95	4.25	4.25		1.83	0.00	1.30	1.30	190.00	92.19	132.79	52	36.50754	15	0.42		1.36	0.42
X05514	Mitchell	8.10		3.72	3.43	3.71	3.70	0.01	0.01	0.01	0.27	0.27	116.25	107.19	115.75	45	30	15	0.48	0.50	1.80	0.00
H42182	Mitchell	8.60	8.40	4.21	3.86	4.20	4.20	0.05	0.01	0.00	0.34	0.34	131.56	120.63	131.15	51	36	15	0.57	0.53	2.00	0.04
X16527	Mitchell	9.30		3.88	3.29	3.87	3.86	0.04	0.01	0.01	0.57	0.57	121.25	102.81	120.70	47	32	15		0.48	1.80	0.00
G33283	Mitchell	8.90		3.04	2.74	3.04	3.03	0.11	0.01	0.00	0.29	0.29	95.00	85.63	94.74	37	22	15	0.33	0.28	1.00	0.05
H44275	Mitchell	8.23		3.27	1.62	3.26	3.26		0.01	0.00	1.64	1.64	102.19	50.63	101.85	40	25.20101	15	0.36		1.35	0.36
G35686	Mitchell	8.20		3.29	1.39	2.19	2.18	1.68	1.10	0.01	0.79	0.79	102.81	43.44	68.20	27	12	15	0.19	0.21	0.80	0.00
H42176	Mitchell	8.70	8.30	3.77	3.58	3.75	3.75	0.04	0.02	0.00	0.17	0.17	117.81	111.88	117.04	47	32	15	0.53	0.50	1.80	0.03
H42203	Mitchell	8.60	7.80	3.52	3.39	3.51	3.50	0.05	0.01	0.01	0.11	0.11	110.00	105.94	109.52	44	29	15	0.44	0.44	1.60	0.00
H43851	Mitchell	8.07		4.55		4.55	4.55			0.00	0.00	0.00	142.19	142.19	142.19	57	42.2	15	0.24		0.56	0.24
H42165	Mitchell	8.70	8.40	4.70	3.96	4.69	4.69	0.04	0.01	0.00	0.73	0.73	146.88	123.75	146.47	59	44	15	0.63	0.63	2.30	0.00
H41675	Mitchell	8.70	8.00	4.38	4.08	4.37	4.37	0.05	0.01	0.00	0.29	0.29	136.88	127.50	136.47	55	40	15	0.66	0.63	2.30	0.03

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
H42215	Mitchell	8.10	7.50	6.40	3.34	3.39	3.38	3.17	3.01	0.01	0.04	0.04	200.00	104.38	105.70	43	28	15	0.43	0.46	1.70	0.00
H42167	Mitchell	8.70	8.40	4.01	3.89	3.99	3.99	0.02	0.02	0.00	0.10	0.10	125.31	121.56	124.59	51	36	15	0.52	0.50	1.80	0.02
H41691	Mitchell	8.60	7.30	3.92	3.68	3.83	3.83	0.11	0.09	0.00	0.15	0.15	122.50	115.00	119.61	49	34	15	0.50	0.53	2.00	0.00
G32428	Mitchell	8.00		3.43	3.10	3.43	3.42	0.03	0.01	0.01	0.32	0.32	107.19	96.88	106.81	44	29	15	0.51	0.50	1.90	0.01
H43849	Mitchell	7.98		4.18		4.18	4.18			0.00	0.00	0.00	130.63	130.63	130.63	54	39	15	0.20		0.80	0.20
X17992	Mitchell	9.00		2.67	2.37	2.63	2.63	0.08	0.04	0.00	0.26	0.26	83.44	74.06	82.03	34	19	15	0.29	0.30	1.10	0.00
G35667	Mitchell	8.00		3.81	2.25	2.44	2.43	1.49	1.37	0.01	0.18	0.18	119.06	70.31	75.99	32	17	15	0.24	0.25	0.90	0.00
H43886	Mitchell	8.20	7.80	4.84	1.54	1.60	1.59	3.36	3.24	0.01	0.05	0.05	151.25	48.13	49.82	21	6	15	0.14	0.18	0.60	0.00
X19627	Mitchell	8.06		4.47	2.01	2.65	2.65		1.82	0.00	0.64	0.64	139.69	62.81	82.79	35	20.2	15	0.18		0.62	0.18
X11073	Mitchell	8.40		2.48	1.70	1.88	1.86	0.64	0.60	0.02	0.16	0.16	77.50	53.13	58.27	25	10	15	0.26	0.25	0.90	0.01
H43913	Mitchell	7.94		6.31		6.31	6.31			0.00	0.00	0.00	197.19	197.19	197.19	85	69.8	15	0.58		2.24	0.58
G32353	Mitchell	8.00		3.19	1.59	1.64	1.64	1.55	1.55	0.00	0.05	0.05	99.69	49.69	51.10	22	7	15	0.13	0.16	0.60	0.00
H43893	Mitchell	8.20	8.10	5.88	2.94	3.49	3.48	2.47	2.39	0.01	0.54	0.54	183.75	91.88	108.89	47	32	15	0.46	0.53	2.00	0.00
X14768	Mitchell	9.30		2.95	2.58	2.92	2.89	0.03	0.03	0.03	0.31	0.31	92.19	80.63	90.31	39	24	15	0.37	0.39	1.40	0.00
H42190	Mitchell	8.70	8.10	2.97	2.58	2.89	2.89	0.15	0.08	0.00	0.31	0.31	92.81	80.63	90.19	39	24	15	0.40	0.42	1.60	0.00
X10310	Mitchell	8.15		3.68	2.25	3.64	3.64		0.04	0.00	1.39	1.39	115.00	70.31	113.72	49	34.4	15	0.17	0.67		0.00
G36831	Mitchell	8.10		4.14	3.86	4.12	4.12	0.01	0.02	0.00	0.26	0.26	129.38	120.63	128.63	56	41	15	0.61	0.60	2.20	0.01
H43844	Mitchell	8.19		3.74		3.74	3.74			0.00	0.00	0.00	116.88	116.88	116.88	51	35.9	15	0.21		0.58	0.21
G32282	Mitchell	8.30		4.55	4.16	4.54	4.54	0.02	0.01	0.00	0.38	0.38	142.19	130.00	141.77	63	48	15	0.69	0.72	2.60	0.00
H41420	Mitchell	8.50	8.20	2.93	2.39	2.85	2.84	0.09	0.08	0.01	0.45	0.45	91.56	74.69	88.89	40	25	15	0.42	0.38	1.40	0.04
G36899	Mitchell	7.80		1.40	1.24	1.38	1.35	0.01	0.02	0.03	0.11	0.11	43.75	38.75	42.15	19	4	15	0.17	0.17	0.60	0.00
H41075	Mitchell	8.90	8.80	5.38	5.31	5.37	5.37	0.06	0.01	0.00	0.06	0.06	168.13	165.94	167.72	76	61	15	0.99	0.93	3.40	0.06
X14248	Mitchell	8.40		3.59	3.08	3.58	3.58	0.02	0.01	0.00	0.50	0.50	112.19	96.25	111.74	51	36	15	0.55	0.52	1.90	0.03
X05493	Mitchell	8.40		2.70	2.56	2.69	2.66	0.02	0.01	0.03	0.10	0.10	84.38	80.00	83.22	38	23	15	0.41	0.37	1.40	0.04
X06348	Mitchell	8.50		4.01	3.51	4.00	3.99	0.04	0.01	0.01	0.48	0.48	125.31	109.69	124.72	57	42	15	0.68	0.64	2.30	0.04
H43532	Mitchell	8.10	8.20	5.22	3.64	4.06	4.06	1.19	1.16	0.00	0.42	0.42	163.13	113.75	126.84	58	43	15	0.79	0.71	2.60	0.08
G32087	Mitchell	8.00		4.23	2.39	2.45	2.45	1.84	1.78	0.00	0.06	0.06	132.19	74.69	76.42	35	20	15	0.41	0.36	1.30	0.05
H41837	Mitchell	8.80	8.90	4.90	4.28	4.88	4.88	0.12	0.02	0.00	0.60	0.60	153.13	133.75	152.44	70	55	15	0.84	0.83	3.10	0.01
H42219	Mitchell	8.20	8.00	4.39	3.69	4.12	4.11	0.36	0.27	0.01	0.42	0.42	137.19	115.31	128.48	59	44	15	0.51	0.52	1.90	0.00
H41671	Mitchell	8.60	7.50	4.53	4.09	4.53	4.52	0.05	0.01	0.00	0.43	0.43	141.56	127.81	141.32	65	50	15	0.76	0.74	2.70	0.02
X14539	Mitchell	8.90		3.25	2.87	3.23	3.21	0.03	0.02	0.02	0.34	0.34	101.56	89.69	100.34	47	32	15	0.43	0.44	1.60	0.00
G34616	Mitchell	7.90		1.59	1.38	1.58	1.56	0.01	0.01	0.02	0.18	0.18	49.69	43.13	48.89	23	8	15	0.17	0.20	0.70	0.00
X12194	Mitchell	8.16		1.26	1.23	1.23	1.23		0.03	0.00	0.00	0.00	39.38	38.44	38.44	18	3.1	15	0.08		0.28	0.08
H42234	Mitchell	8.50	8.20	5.53	3.56	4.41	4.41	1.21	1.12	0.00	0.85	0.85	172.81	111.25	137.77	65	50	15	0.50	0.51	1.90	0.00
H42236	Mitchell	8.50	8.30	4.90	2.90	3.44	3.44	1.61	1.46	0.00	0.54	0.54	153.13	90.63	107.44	51	36	15	0.41	0.44	1.60	0.00
H42223	Mitchell	8.20	7.60	4.83	3.42	3.43	3.43	1.50	1.40	0.00	0.01	0.01	150.94	106.88	107.08	51	36	15	0.53	0.55	2.00	0.00
H43870	Mitchell	8.19		4.07		4.07	4.07			0.00	0.00	0.00	127.19	127.19	127.19	61	45.9	15	0.56		2.26	0.56
H41677	Mitchell	8.90	8.00	3.59	3.34	3.58	3.58	0.06	0.01	0.00	0.24	0.24	112.19	104.38	111.79	54	39	15	0.51	0.49	1.80	0.02
H42199	Mitchell	8.60	8.20	3.88	3.56	3.68	3.64	0.25	0.20	0.04	0.08	0.08	121.25	111.25	113.83	55	40	15	0.57	0.58	2.10	0.00
G35099	Mitchell	7.80		4.36	2.96	3.37	3.37	1.03	0.99	0.00	0.41	0.41	136.25	92.50	105.17	51	36	15	0.62	0.60	2.20	0.02
H42178	Mitchell	8.60	8.30	3.91	3.51	3.76	3.76	0.15	0.15	0.00	0.25	0.25	122.19	109.69	117.39	57	42	15	0.65	0.63	2.30	0.02
H43847	Mitchell	8.20		3.63		3.63	3.63			0.00	0.00	0.00	113.44	113.44	113.44	56	40.9	15	0.22		0.52	0.22
H41697	Mitchell	8.80	8.50	3.07	2.85	2.92	2.92	0.18	0.15	0.00	0.07	0.07	95.94	89.06	91.10	45	30	15	0.44	0.46	1.70	0.00
H41704	Mitchell	8.80	8.10	3.70	3.50	3.69	3.68	0.03	0.01	0.01	0.18	0.18	115.63	109.38	115.09	57	42	15	0.54	0.57	2.10	0.00
H42174	Mitchell	8.70	8.50	3.22	3.02	3.20	3.19	0.03	0.02	0.01	0.17	0.17	100.63	94.38	99.83	50	35	15	0.55	0.53	2.00	0.02
G33025	Mitchell	7.80		1.32	1.15	1.20	1.15	0.10	0.12	0.08	-0.03	0.00	41.25	35.94	35.94	18	3	15	0.26	0.09	0.30	0.17
H43914	Mitchell	8.00	7.90	7.15	2.15	2.19	2.16	5.05	4.96	0.03	0.01	0.01	223.44	67.19	67.55	34	19	15	0.33	0.34	1.20	0.00
H43779	Mitchell	7.91		1.30		1.30	1.30			0.00	0.00	0.00	40.63	40.63	40.63	20	5.4	15	0.17		0.08	0.17
X14681	Mitchell	9.00		1.62	1.44	1.61	1.59	0.04	0.01	0.02	0.15	0.15	50.63	45.00	49.60	25	10	15	0.14	0.17	0.60	0.00
G35302	Mitchell	8.10		3.45	3.34	3.42	3.41	0.02	0.03	0.01	0.07	0.07	107.81	104.38	106.69	54	39	15	0.60	0.57	2.10	0.03

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
G35490	Mitchell	8.70		2.19	2.05	2.19	2.14	0.02	0.01	0.04	0.09	0.09	68.44	64.06	66.96	34	19	15	0.24	0.24	0.90	0.00
H43854	Mitchell	8.18		2.94		2.94	2.94			0.00	0.00	0.00	91.88	91.88	91.88	47	32.1	15	0.26		0.97	0.26
H41418	Mitchell	8.60	8.50	3.00	2.40	3.00	2.97	0.05	0.01	0.02	0.57	0.57	93.75	75.00	92.88	48	33	15	0.51	0.47	1.70	0.04
X12487	Mitchell	8.50		3.12	2.71	3.10	3.09	0.01	0.02	0.01	0.38	0.38	97.50	84.69	96.67	50	35	15	0.58	0.56	2.10	0.02
H42258	Mitchell	8.40	8.10	4.27	2.90	3.40	3.40	0.99	0.87	0.00	0.50	0.50	133.44	90.63	106.16	55	40	15	0.51	0.50	1.80	0.01
G32302	Mitchell	8.20		3.73	3.39	3.68	3.68	0.09	0.05	0.00	0.29	0.29	116.56	105.94	114.89	60	45	15	0.66	0.64	2.40	0.02
X14608	Mitchell	8.90		2.66	2.19	2.48	2.44	0.23	0.18	0.04	0.25	0.25	83.13	68.44	76.33	40	25	15	0.41	0.43	1.60	0.00
X06923	Mitchell	8.52		3.52	2.21	3.50	3.50		0.02	0.00	1.29	1.29	110.00	69.06	109.35	58	42.5	15	0.48		1.75	0.48
H43540	Mitchell	8.09		4.79	3.87	4.40	4.40		0.39	0.00	0.53	0.53	149.69	120.94	137.48	73	57.9	15	0.88		3.15	0.88
H41833	Mitchell	9.20	9.00	4.38	4.29	4.37	4.37	0.04	0.01	0.00	0.08	0.08	136.88	134.06	136.49	73	58	15	0.77	0.78	2.90	0.00
X11398	Mitchell	8.40		2.47	2.01	2.36	2.33	0.14	0.11	0.03	0.32	0.32	77.19	62.81	72.92	39	24	15	0.51	0.47	1.70	0.04
G37625	Mitchell	8.30		2.30	2.25	2.23	2.25	0.06	0.07	0.01	-0.03	0.00	71.88	70.31	70.31	38	23	15	0.41	0.40	1.50	0.01
X16518	Mitchell	9.20		3.37	3.27	3.36	3.35	0.05	0.01	0.01	0.08	0.08	105.31	102.19	104.75	57	42	15		0.58	2.10	0.00
H41694	Mitchell	8.90	8.50	3.30	3.13	3.16	3.16	0.18	0.14	0.00	0.03	0.03	103.13	97.81	98.65	54	39	15	0.54	0.57	2.10	0.00
G35001	Mitchell	7.90		1.70	1.58	1.69	1.64	0.01	0.01	0.05	0.06	0.06	53.13	49.38	51.14	28	13	15	0.24	0.23	0.80	0.01
G33237	Mitchell	8.70		4.00	3.61	4.00	3.99	0.02	0.01	0.01	0.38	0.38	125.00	112.81	124.65	69	54	15	0.68	0.72	2.70	0.00
H42188	Mitchell	8.80	8.20	2.77	2.57	2.76	2.75	0.07	0.01	0.01	0.18	0.18	86.56	80.31	86.05	48	33	15	0.54	0.51	1.90	0.03
X06531	Mitchell	8.54		3.31	2.02	3.30	3.30		0.01	0.00	1.28	1.28	103.44	63.13	103.08	58	42.5	15	0.47		1.67	0.47
G35642	Mitchell	8.10		3.72	1.36	1.78	1.77	2.12	1.94	0.01	0.41	0.41	116.25	42.50	55.41	31	16	15	0.24	0.24	0.90	0.00
G32371	Mitchell	8.00		2.86	1.14	1.31	1.30	1.53	1.55	0.01	0.16	0.16	89.38	35.63	40.76	23	8	15	0.14	0.18	0.70	0.00
H42232	Mitchell	8.30	8.10	4.24	2.98	3.61	3.61	0.71	0.63	0.00	0.63	0.63	132.50	93.13	112.70	64	49	15	0.61	0.62	2.30	0.00
H43884	Mitchell	8.20	8.10	6.54	1.39	2.41	2.40	4.28	4.13	0.01	1.01	1.01	204.38	43.44	75.09	43	28	15	0.43	0.48	1.80	0.00
X12493	Mitchell	8.40		3.48	2.81	3.46	3.46	0.01	0.02	0.00	0.65	0.65	108.75	87.81	108.01	62	47	15	0.77	0.75	2.80	0.02
H41446	Mitchell	8.70	8.60	3.20	2.86	3.06	3.06	0.16	0.14	0.00	0.20	0.20	100.00	89.38	95.54	55	40	15	0.61	0.56	2.10	0.05
H42213	Mitchell	8.20	7.60	4.08	2.80	2.92	2.92	1.24	1.16	0.00	0.12	0.12	127.50	87.50	91.14	53	38	15	0.60	0.58	2.10	0.02
X06326	Mitchell	8.80		2.62	2.28	2.60	2.59	0.05	0.02	0.01	0.31	0.31	81.88	71.25	80.81	47	32	15	0.59	0.55	2.00	0.04
H43861	Mitchell	8.20	8.10	5.56	2.37	2.49	2.48	3.17	3.07	0.01	0.11	0.11	173.75	74.06	77.35	45	30	15	0.45	0.50	1.80	0.00
H42184	Mitchell	8.50	8.20	4.27	3.85	4.26	4.23	0.05	0.01	0.03	0.38	0.38	133.44	120.31	132.32	77	62	15	0.92	0.88	3.20	0.04
H41827	Mitchell	8.90	8.90	4.97	4.49	4.82	4.82	0.13	0.15	0.00	0.33	0.33	155.31	140.31	150.56	89	74	15	1.03	0.98	3.60	0.05
H43888	Mitchell	8.20	7.30	4.54	1.72	1.73	1.72	2.84	2.81	0.01	0.00	0.00	141.88	53.75	53.87	32	17	15	0.28	0.31	1.10	0.00
X17292	Mitchell	9.10		4.10	3.99	4.08	4.07	0.04	0.02	0.01	0.08	0.08	128.13	124.69	127.32	76	61	15	0.93	0.86	3.10	0.07
H43906	Mitchell	8.50	8.20	2.27	2.23	2.25	2.24	0.10	0.02	0.01	0.01	0.01	70.94	69.69	69.98	42	27	15	0.38	0.23	0.80	0.15
X14228	Mitchell	8.60		4.10	3.57	4.09	4.09	0.02	0.01	0.00	0.52	0.52	128.13	111.56	127.70	78	63	15	0.98	0.91	3.30	0.07
H44123	Mitchell	8.80	8.70	2.72	2.17	2.72	2.71	0.04	0.01	0.01	0.54	0.54	85.00	67.81	84.65	52	37	15	0.50	0.50	1.80	0.00
H42172	Mitchell	9.00	8.80	2.37	2.16	2.36	2.34	0.04	0.01	0.02	0.18	0.18	74.06	67.50	73.24	45	30	15	0.40	0.37	1.40	0.03
X14747	Mitchell	9.20		2.59	2.41	2.58	2.55	0.03	0.01	0.03	0.14	0.14	80.94	75.31	79.63	49	34	15	0.39	0.42	1.60	0.00
X06302	Mitchell	8.60		2.52	2.13	2.40	2.39	0.11	0.12	0.01	0.26	0.26	78.75	66.56	74.72	46	31	15	0.46	0.44	1.60	0.02
H41831	Mitchell	8.80	8.80	4.35	4.10	4.30	4.30	0.04	0.05	0.00	0.20	0.20	135.94	128.13	134.29	83	68	15	1.01	1.04	3.80	0.00
G32453	Mitchell	8.20		3.48	3.15	3.47	3.47	0.01	0.01	0.00	0.32	0.32	108.75	98.44	108.33	67	52	15	0.75	0.73	2.70	0.02
X16501	Mitchell	9.00		4.02	3.72	3.98	3.97	0.07	0.04	0.01	0.25	0.25	125.63	116.25	124.20	77	62	15		0.92	3.40	0.00
H42180	Mitchell	8.70	8.30	3.31	2.61	3.19	3.19	0.15	0.12	0.00	0.58	0.58	103.44	81.56	99.58	62	47	15	0.74	0.71	2.60	0.03
H44093	Mitchell	8.70	8.60	2.51	2.08	2.50	2.49	0.03	0.01	0.01	0.41	0.41	78.44	65.00	77.86	49	34	15	0.52	0.50	1.80	0.02
E217112	Mitchell	8.50		1.69	1.58	1.68	1.67	0.08	0.01	0.01	0.09	0.09	52.81	49.38	52.08	33	18	15	0.36	0.39	1.40	0.00
H42227	Mitchell	8.30	8.20	4.73	2.63	3.26	3.26	1.62	1.47	0.00	0.63	0.63	147.81	82.19	101.81	65	50	15	0.56	0.56	2.10	0.00
G35770	Mitchell	8.29		2.39	2.01	2.36	2.36		0.03	0.00	0.35	0.35	74.69	62.81	73.70	47	32.1	15	0.30		0.79	0.30
H41666	Mitchell	9.00	8.50	3.79	3.60	3.79	3.78	0.05	0.01	0.00	0.18	0.18	118.44	112.50	118.16	76	61	15	0.83	0.86	3.20	0.00
H43858	Mitchell	8.10		4.59		4.59	4.59			0.00	0.00	0.00	143.44	143.44	143.44	92	77.3	15	0.61		1.79	0.61
H43527	Mitchell	8.10	8.30	4.07	1.38	1.74	1.74	2.37	2.33	0.00	0.36	0.36	127.19	43.13	54.31	35	20	15	0.38	0.33	1.20	0.05
H44104	Mitchell	8.70	8.60	3.27	2.64	3.26	3.26	0.05	0.01	0.00	0.62	0.62	102.19	82.50	101.74	67	52	15	0.67	0.56	2.10	0.11
H42255	Mitchell	8.50	8.00	4.24	2.55	2.62	2.62	1.69	1.62	0.00	0.07	0.07	132.50	79.69	81.79	54	39	15	0.55	0.58	2.10	0.00

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
H41048	Mitchell	9.10	8.80	2.97	2.71	2.96	2.95	0.02	0.01	0.01	0.24	0.24	92.81	84.69	92.25	61	46	15	0.86	0.77	2.80	0.09
H43529	Mitchell	8.20	8.20	3.79	1.71	2.37	2.37	1.50	1.42	0.00	0.66	0.66	118.44	53.44	73.97	49	34	15	0.60	0.55	2.00	0.05
H43900	Mitchell	8.15		4.33		4.33	4.33			0.00	0.00	0.00	135.31	135.31	135.31	92	76.7	15	0.83		3.12	0.83
H41043	Mitchell	9.30	8.90	1.69	1.60	1.67	1.65	0.07	0.02	0.02	0.05	0.05	52.81	50.00	51.44	35	20	15	0.39	0.38	1.40	0.01
H44109	Mitchell	9.00	8.90	2.30	1.66	2.17	2.16	0.15	0.13	0.01	0.50	0.50	71.88	51.88	67.58	46	31	15	0.47	0.40	1.50	0.07
H42260	Mitchell	8.40	8.10	3.91	2.53	2.86	2.85	1.15	1.05	0.01	0.32	0.32	122.19	79.06	89.21	61	46	15	0.62	0.61	2.20	0.01
H42262	Mitchell	8.40	8.20	3.61	2.49	2.75	2.75	0.94	0.86	0.00	0.26	0.26	112.81	77.81	85.84	59	44	15	0.64	0.64	2.40	0.00
H43780	Mitchell	8.60	8.50	1.28	1.07	1.20	1.11	0.16	0.08	0.09	0.04	0.04	40.00	33.44	34.66	24	9	15	0.17	0.18	0.70	0.00
H43776	Mitchell	8.50	8.30	3.25	3.07	3.25	3.23	0.06	0.01	0.01	0.16	0.16	101.56	95.94	100.98	70	55	15	0.67	0.69	2.50	0.00
H42206	Mitchell	8.20	7.40	4.05	2.88	2.99	2.98	1.11	1.06	0.01	0.10	0.10	126.56	90.00	93.28	65	50	15	0.68	0.71	2.60	0.00
H44091	Mitchell	8.60	8.60	2.67	2.16	2.66	2.65	0.03	0.01	0.01	0.49	0.49	83.44	67.50	82.91	58	43	15	0.62	0.48	1.80	0.14
G33372	Mitchell	8.90		2.91	2.51	2.89	2.88	0.01	0.02	0.01	0.37	0.37	90.94	78.44	90.05	63	48	15	0.69	0.65	2.40	0.04
X09587	Mitchell	8.50		1.66	1.64	1.64	1.64		0.02	0.00	0.00	0.00	51.88	51.25	51.25	36	20.9	15	0.27		1.40	0.27
X12543	Mitchell	8.70		2.82	2.61	2.81	2.79	0.01	0.01	0.02	0.18	0.18	88.13	81.56	87.22	62	47	15	0.71	0.67	2.50	0.04
X14656	Mitchell	9.10		2.01	1.91	2.00	1.97	0.02	0.01	0.03	0.06	0.06	62.81	59.69	61.65	44	29	15	0.45	0.47	1.70	0.00
X12368	Mitchell	8.60		2.53	2.35	2.51	2.49	0.01	0.02	0.02	0.14	0.14	79.06	73.44	77.96	56	41	15	0.72	0.72	2.70	0.00
H43779	Mitchell	8.37		1.58		1.58	1.58			0.00	0.00	0.00	49.38	49.38	49.38	36	20.5	15	0.34		1.18	0.34
X10897	Mitchell	8.30		2.05	1.68	1.98	1.95	0.09	0.07	0.03	0.27	0.27	64.06	52.50	61.03	44	29	15	0.44	0.42	1.50	0.02
G33322	Mitchell	8.90		2.78	2.48	2.77	2.76	0.01	0.01	0.01	0.28	0.28	86.88	77.50	86.34	63	48	15	0.68	0.67	2.50	0.01
G35349	Mitchell	8.20		3.04	2.78	3.03	3.02	0.03	0.01	0.01	0.24	0.24	95.00	86.88	94.51	69	54	15	0.76	0.74	2.70	0.02
H40229	Mitchell	8.55		3.53	3.00	3.50	3.50		0.03	0.00	0.50	0.50	110.31	93.75	109.34	80	65.2	15	0.89		3.01	0.89
G36484	Mitchell	8.20		7.32	6.64	7.30	7.30		0.02	0.00	0.66	0.66	228.75	207.50	228.10	168	152.7	15	2.08		6.05	2.08
E192667	Mitchell	8.40		2.45	2.14	2.43	2.42	0.07	0.02	0.01	0.28	0.28	76.56	66.88	75.47	56	41	15	0.57	0.55	2.00	0.02
G36294	Mitchell	8.20		2.22	1.84	2.21	2.20	0.01	0.01	0.01	0.36	0.36	69.38	57.50	68.67	51	36	15	0.52	0.53	2.00	0.00
H42253	Mitchell	8.40	8.00	4.61	3.26	3.27	3.27	1.42	1.34	0.00	0.01	0.01	144.06	101.88	102.12	76	61	15	0.86	0.82	3.00	0.04
H43857	Mitchell	8.30	8.10	4.40	1.84	1.83	1.84	2.68	2.57	0.01	-0.02	0.00	137.50	57.50	57.50	43	28	15	0.40	0.45	1.70	0.00
H42225	Mitchell	8.40	7.80	3.90	1.96	1.98	1.98	1.87	1.92	0.00	0.02	0.02	121.88	61.25	61.78	47	32	15	0.46	0.48	1.80	0.00
H41414	Mitchell	8.60	8.50	1.82	1.44	1.73	1.72	0.15	0.09	0.01	0.28	0.28	56.88	45.00	53.60	41	26	15	0.40	0.34	1.30	0.06
G33813	Mitchell	8.30		2.78	2.39	2.77	2.76	0.01	0.01	0.01	0.37	0.37	86.88	74.69	86.18	66	51	15	0.46	0.50	1.80	0.00
H41069	Mitchell	9.30	9.20	2.07	1.84	2.07	2.05	0.02	0.01	0.02	0.21	0.21	64.69	57.50	63.92	49	34	15	0.53	0.51	1.90	0.02
X12452	Mitchell	8.10		2.38	2.20	2.37	2.36	0.01	0.01	0.01	0.16	0.16	74.38	68.75	73.72	57	42	15	0.68	0.70	2.60	0.00
X06183	Mitchell	8.41		2.03	1.60	2.01	2.01		0.02	0.00	0.41	0.41	63.44	50.00	62.77	49	33.8	15	0.34		1.23	0.34
X11420	Mitchell	8.60		3.51	2.73	3.42	3.40	0.11	0.09	0.02	0.67	0.67	109.69	85.31	106.12	83	68	15	1.05	0.97	3.60	0.08
H41040	Mitchell	9.00	8.70	3.10	3.09	3.10	3.09	0.03	0.01	0.01	0.00	0.00	96.88	96.56	96.56	76	61	15	1.02	0.98	3.60	0.04
G32060	Mitchell	8.20		3.73	1.86	1.90	1.90	1.86	1.83	0.00	0.04	0.04	116.56	58.13	59.29	47	32	15	0.58	0.54	2.00	0.04
X14398	Mitchell	8.30		2.31	1.26	1.66	1.65	0.69	0.65	0.01	0.39	0.39	72.19	39.38	51.64	41	26	15	0.41	0.39	1.40	0.02
H43911	Mitchell	8.20	7.70	5.39	1.76	2.15	2.13	3.36	3.24	0.02	0.37	0.37	168.44	55.00	66.45	53	38	15	0.63	0.64	2.30	0.00
X14583	Mitchell	8.80		2.79	2.51	2.73	2.72	0.09	0.06	0.01	0.21	0.21	87.19	78.44	85.03	68	53	15	0.68	0.70	2.60	0.00
H43904	Mitchell	8.20	7.50	5.09	1.48	1.58	1.55	3.62	3.51	0.03	0.07	0.07	159.06	46.25	48.54	39	24	15	0.41	0.46	1.70	0.00
X06170	Mitchell	8.34		2.07	2.03	2.03	2.03		0.04	0.00	0.00	0.00	64.69	63.44	63.44	51	36.3	15	0.37		1.33	0.37
H44106	Mitchell	8.90	8.80	2.30	1.78	2.28	2.27	0.04	0.02	0.01	0.49	0.49	71.88	55.63	70.91	58	43	15	0.66	0.63	2.30	0.03
X06372	Mitchell	9.10		2.23	1.93	2.17	2.15	0.07	0.06	0.02	0.22	0.22	69.69	60.31	67.05	55	40	15	0.65	0.62	2.30	0.03
X15026	Mitchell	9.40		1.83	1.59	1.77	1.75	0.07	0.06	0.02	0.16	0.16	57.19	49.69	54.75	46	31	15	0.47	0.44	1.60	0.03
H40217	Mitchell	8.52		3.00	2.47	2.99	2.99		0.01	0.00	0.52	0.52	93.75	77.19	93.41	79	63.9	15	0.75		2.55	0.75
H43534	Mitchell	8.30	8.20	4.52	2.37	3.03	3.03	1.58	1.49	0.00	0.66	0.66	141.25	74.06	94.63	80	65	15	1.13	1.04	3.80	0.09
X11442	Mitchell	8.10		3.27	1.12	1.33	1.32	1.93	1.94	0.01	0.20	0.20	102.19	35.00	41.38	35	20	15	0.46	0.40	1.50	0.06
X14308	Mitchell	8.40		2.07	1.69	2.01	1.99	0.07	0.06	0.02	0.30	0.30	64.69	52.81	62.09	53	38	15	0.57	0.54	2.00	0.03
H43848	Mitchell	8.30	8.30	4.49	1.02	1.43	1.42	3.16	3.06	0.01	0.40	0.40	140.31	31.88	44.49	38	23	15	0.01	0.34	1.20	0.00
G33828	Mitchell	8.10		3.49	2.81	3.48	3.47	0.03	0.01	0.01	0.66	0.66	109.06	87.81	108.50	93	78	15	0.98	0.99	3.60	0.00
G35041	Mitchell	8.10		1.68	1.48	1.66	1.64	0.07	0.02	0.02	0.16	0.16	52.50	46.25	51.10	44	29	15	0.46	0.47	1.70	0.00

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
G32407	Mitchell	8.00		2.86	0.91	0.96	0.95	1.88	1.90	0.01	0.04	0.04	89.38	28.44	29.84	26	11	15	0.14	0.16	0.60	0.00
G36967	Mitchell	8.10		0.94	0.91	0.92	0.91	0.01	0.02	0.04	-0.03	0.00	29.38	28.44	28.44	25	10	15	0.23	0.23	0.90	0.00
G35387	Mitchell	8.50		1.52	1.30	1.51	1.47	0.01	0.01	0.04	0.17	0.17	47.50	40.63	45.95	41	26	15	0.40	0.40	1.50	0.00
H41431	Mitchell	8.70	8.60	2.46	1.99	2.33	2.32	0.16	0.13	0.01	0.33	0.33	76.88	62.19	72.64	66	51	15	0.71	0.62	2.30	0.09
H43895	Mitchell	8.28		4.01		4.01	4.01			0.00	0.00	0.00	125.31	125.31	125.31	114	99.3	15	1.29		4.18	1.29
H43903	Mitchell	8.16		3.62		3.62	3.62			0.00	0.00	0.00	113.13	113.13	113.13	104	88.6	15	0.69		2.72	0.69
H42217	Mitchell	8.20	8.00	4.40	2.64	2.79	2.79	1.69	1.61	0.00	0.15	0.15	137.50	82.50	87.11	80	65	15	0.77	0.79	2.90	0.00
G32516	Mitchell	8.50		1.57	1.23	1.56	1.53	0.01	0.01	0.03	0.30	0.30	49.06	38.44	47.90	44	29	15	0.42	0.41	1.50	0.01
H42208	Mitchell	8.20	7.70	2.99	2.18	2.19	2.19	0.87	0.80	0.00	0.01	0.01	93.44	68.13	68.31	63	48	15	0.71	0.71	2.60	0.00
H43892	Mitchell	8.19		1.89		1.89	1.89			0.00	0.00	0.00	59.06	59.06	59.06	55	39.6	15	0.31		1.16	0.31
G32390	Mitchell	8.10		2.56	0.78	0.80	0.79	1.73	1.76	0.01	0.01	0.01	80.00	24.38	24.80	23	8	15	0.11	0.14	0.50	0.00
H43869	Mitchell	8.20	8.20	3.64	0.74	0.80	0.79	2.94	2.84	0.01	0.05	0.05	113.75	23.13	24.64	23	8	15	0.16	0.19	0.70	0.00
H43910	Mitchell	8.40	7.20	1.90	1.76	1.82	1.81	0.12	0.08	0.01	0.05	0.05	59.38	55.00	56.48	53	38	15	0.52	0.54	2.00	0.00
X10300	Mitchell	8.27		1.40	1.07	1.29	1.29		0.11	0.00	0.22	0.22	43.75	33.44	40.22	38	23.1	15	0.12	0.41		0.00
X14372	Mitchell	8.30		1.84	1.29	1.43	1.42	0.36	0.41	0.01	0.13	0.13	57.50	40.31	44.32	42	27	15	0.40	0.36	1.30	0.04
H44112	Mitchell	8.80	8.80	2.69	2.36	2.64	2.64	0.09	0.05	0.00	0.28	0.28	84.06	73.75	82.38	79	64	15	0.83	0.81	3.00	0.02
H43929	Mitchell	8.30	8.10	2.59	2.31	2.55	2.54	0.11	0.04	0.01	0.23	0.23	80.94	72.19	79.35	77	62	15	0.82	0.86	3.10	0.00
X09201	Mitchell	8.70		2.16	1.94	2.14	2.10	0.01	0.02	0.04	0.16	0.16	67.50	60.63	65.59	64	49	15	0.70	0.69	2.50	0.01
G33307	Mitchell	9.20		1.97	1.78	1.95	1.93	0.02	0.02	0.02	0.15	0.15	61.56	55.63	60.32	59	44	15	0.64	0.60	2.20	0.04
G37985	Mitchell	8.15		4.34	1.81	2.12	2.12		2.22	0.00	0.31	0.31	135.63	56.56	66.22	65	50.3	15	0.38		1.20	0.38
X11805	Mitchell	8.07		5.17	1.22	2.07	2.07		3.10	0.00	0.85	0.85	161.56	38.13	64.66	64	48.8	15	0.70		2.48	0.70
H43846	Mitchell	8.20	8.10	4.08	0.97	0.97	0.97	3.22	3.11	0.01	-0.01	0.00	127.50	30.31	30.31	30	15	15	0.22	0.24	0.90	0.00
X16693	Mitchell	8.56		1.72	0.92	1.70	1.70		0.02	0.00	0.78	0.78	53.75	28.75	53.03	53	37.8	15	0.31		1.11	0.31
H43854	Mitchell	8.30	8.20	3.62	1.15	1.29	1.28	2.44	2.33	0.01	0.13	0.13	113.13	35.94	40.08	40	25	15	0.37	0.38	1.40	0.00
H43856	Mitchell	8.34		4.04		4.04	4.04			0.00	0.00	0.00	126.25	126.25	126.25	126	111.3	15	1.62		5.87	1.62
H40631	Mitchell	9.40	9.20	1.19	1.02	1.19	1.15	0.10	0.01	0.04	0.13	0.13	37.19	31.88	35.92	36	21	15	0.31	0.27	1.00	0.04
H41017	Mitchell	8.59		1.53	1.51	1.51	1.51		0.02	0.00	0.00	0.00	47.81	47.19	47.19	48	32.7	15	0.57		2.06	0.57
G36315	Mitchell	8.40		1.68	1.38	1.63	1.61	0.04	0.05	0.02	0.23	0.23	52.50	43.13	50.38	51	36	15	0.53	0.54	2.00	0.00
X06662	Mitchell	8.10		3.43	1.70	1.70	1.70		1.73	0.00	0.00	0.00	107.19	53.13	53.13	54	38.8	15	0.31		1.15	0.31
G32335	Mitchell	7.90		3.88	1.70	1.83	1.83	2.09	2.05	0.00	0.13	0.13	121.25	53.13	57.10	58	43	15	0.68	0.65	2.40	0.03
G34513	Mitchell	8.42		2.24	2.06	2.23	2.23		0.01	0.00	0.17	0.17	70.00	64.38	69.64	71	56	15	0.47		1.55	0.47
G37645	Mitchell	8.40		2.70	2.54	2.68	2.66	0.01	0.02	0.02	0.12	0.12	84.38	79.38	83.22	85	70	15	1.00	0.97	3.60	0.03
H41699	Mitchell	8.64		3.82		3.82	3.82			0.00	0.00	0.00	119.38	119.38	119.38	122	106.9	15	0.80		2.70	0.80
G36278	Mitchell	8.10		1.44	1.10	1.43	1.41	0.01	0.01	0.02	0.31	0.31	45.00	34.38	43.91	45	30	15	0.52	0.52	1.90	0.00
H41448	Mitchell	8.90	8.80	2.38	1.87	2.34	2.33	0.08	0.04	0.01	0.46	0.46	74.38	58.44	72.73	75	60	15	0.77	0.64	2.40	0.13
G34662	Mitchell	8.00		1.49	1.26	1.48	1.45	0.01	0.01	0.03	0.19	0.19	46.56	39.38	45.40	47	32	15	0.50	0.50	1.80	0.00
E192683	Mitchell	8.70		2.72	2.58	2.69	2.68	0.01	0.03	0.01	0.10	0.10	85.00	80.63	83.79	87	72	15	1.01	0.95	3.50	0.06
G36991	Mitchell	8.30		1.37	1.24	1.36	1.35	0.04	0.01	0.01	0.11	0.11	42.81	38.75	42.12	44	29	15	0.42	0.42	1.50	0.00
H43778	Mitchell	8.19		1.56		1.56	1.56			0.00	0.00	0.00	48.75	48.75	48.75	51	35.9	15	0.69		1.95	0.69
X14560	Mitchell	8.90		2.39	1.97	2.32	2.28	0.08	0.07	0.04	0.31	0.31	74.69	61.56	71.32	75	60	15	0.72	0.72	2.60	0.00
H41036	Mitchell	8.70	8.30	3.03	2.77	3.02	3.01	0.02	0.01	0.01	0.24	0.24	94.69	86.56	94.12	99	84	15	1.24	1.20	4.40	0.04
X10872	Mitchell	8.20		2.33	0.76	0.86	0.85	1.46	1.47	0.01	0.09	0.09	72.81	23.75	26.55	28	13	15	0.29	0.29	1.10	0.00
H43877	Mitchell	8.20	8.20	4.37	0.87	1.01	1.00	3.42	3.36	0.01	0.13	0.13	136.56	27.19	31.27	33	18	15	0.29	0.31	1.20	0.00
G37583	Mitchell	8.20		3.27	2.85	2.84	2.85	0.42	0.43	0.01	-0.02	0.00	102.19	89.06	89.06	94	79	15	1.12	1.09	4.00	0.03
X14327	Mitchell	8.40		0.74	0.54	0.72	0.64	0.05	0.02	0.08	0.10	0.10	23.13	16.88	19.85	21	6	15	0.08	0.09	0.30	0.00
H41691	Mitchell	8.56		3.84		3.84	3.84			0.00	0.00	0.00	120.00	120.00	120.00	129	114.4	15	0.89		2.98	0.89
H43880	Mitchell	8.30	8.20	4.23	1.04	1.21	1.20	3.15	3.02	0.01	0.16	0.16	132.19	32.50	37.58	41	26	15	0.37	0.43	1.60	0.00
H43881	Mitchell	8.30	8.20	3.98	1.24	1.14	1.24	2.88	2.84	0.01	-0.11	0.00	124.38	38.75	38.75	43	28	15	0.40	0.44	1.60	0.00
H44127	Mitchell	8.50	8.40	3.41	3.06	3.41	3.40	0.03	0.01	0.00	0.34	0.34	106.56	95.63	106.29	120	105	15	1.37	1.30	4.80	0.07
X14702	Mitchell	9.40		1.59	1.35	1.58	1.55	0.02	0.01	0.03	0.20	0.20	49.69	42.19	48.38	55	40	15	0.51	0.54	2.00	0.00

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
G35450	Mitchell	8.50		2.47	2.19	2.46	2.44	0.01	0.01	0.02	0.25	0.25	77.19	68.44	76.36	87	72	15	0.98	0.95	3.50	0.03
G36474	Mitchell	8.35		1.68	1.67	1.67	1.67		0.01	0.00	0.00	0.00	52.50	52.19	52.19	60	45.3	15	0.66		2.59	0.66
G36085	Mitchell	8.29		2.14	1.70	2.05	2.05		0.09	0.00	0.35	0.35	66.88	53.13	64.03	74	59.1	15	0.63		2.13	0.63
H41077	Mitchell	9.30	9.10	2.12	1.87	2.12	2.10	0.03	0.01	0.02	0.23	0.23	66.25	58.44	65.51	76	61	15	1.00	0.94	3.50	0.06
H43898	Mitchell	8.25		3.09		3.09	3.09			0.00	0.00	0.00	96.56	96.56	96.56	112	97.4	15	0.93		3.59	0.93
H43899	Mitchell	8.20	7.50	4.84	1.12	1.52	1.51	3.38	3.32	0.01	0.39	0.39	151.25	35.00	47.16	55	40	15	0.65	0.68	2.50	0.00
X17305	Mitchell	9.30		3.07	2.67	2.95	2.94	0.15	0.12	0.01	0.27	0.27	95.94	83.44	91.98	109	94	15	1.24	1.22	4.50	0.02
H44125	Mitchell	8.90	8.70	2.11	1.59	2.11	2.09	0.03	0.01	0.01	0.50	0.50	65.94	49.69	65.47	78	63	15	0.86	0.82	3.00	0.04
X14418	Mitchell	8.30		2.02	1.78	1.97	1.95	0.09	0.05	0.02	0.17	0.17	63.13	55.63	61.02	73	58	15	0.86	0.80	2.90	0.06
X05422	Mitchell	8.10		0.34	0.32	0.32	0.32	0.01	0.02	0.02	-0.02	0.00	10.63	10.00	10.00	12	0.001	11.999	0.01	0.03	0.10	0.00
H41071	Mitchell	9.20	9.10	2.23	2.04	2.23	2.21	0.01	0.01	0.02	0.17	0.17	69.69	63.75	69.03	83	68	15	0.98	0.95	3.50	0.03
X15681	Mitchell	8.56		1.44	1.15	1.41	1.41		0.03	0.00	0.26	0.26	45.00	35.94	44.00	54	39	15	0.38		1.32	0.38
H41711	Mitchell	8.74		1.77		1.77	1.77			0.00	0.00	0.00	55.31	55.31	55.31	68	52.8	15	0.60		1.37	0.60
X19614	Mitchell	8.18		3.26	1.33	1.57	1.57		1.69	0.00	0.24	0.24	101.88	41.56	49.04	60	45.3	15	0.38		1.18	0.38
H43901	Mitchell	8.30	7.80	5.00	1.29	1.77	1.76	3.34	3.23	0.01	0.47	0.47	156.25	40.31	55.14	68	53	15	0.78	0.84	3.10	0.00
H41437	Mitchell	8.70	8.30	2.15	1.75	2.11	2.07	0.06	0.04	0.04	0.32	0.32	67.19	54.69	64.82	80	65	15	0.82	0.75	2.80	0.07
H42099	Mitchell	8.20		2.65	1.17	1.17	1.17		1.48	0.00	0.00	0.00	82.81	36.56	36.56	45	30.22613	15	0.18		0.65	0.18
H43852	Mitchell	8.30	8.10	3.91	1.03	1.06	1.05	2.93	2.85	0.01	0.02	0.02	122.19	32.19	32.87	41	26	15	0.37	0.42	1.50	0.00
H43863	Mitchell	8.30	8.20	4.50	1.05	0.99	1.05	3.64	3.51	0.01	-0.07	0.00	140.63	32.81	32.81	41	26	15	0.41	0.45	1.70	0.00
X15439	Mitchell	8.63		1.97	1.17	1.94	1.94		0.03	0.00	0.77	0.77	61.56	36.56	60.55	76	61.2	15	0.62		2.26	0.62
H42229	Mitchell	8.40	8.10	3.61	1.98	2.46	2.46	1.31	1.15	0.00	0.48	0.48	112.81	61.88	76.79	98	83	15	1.02	0.98	3.60	0.04
H41079	Mitchell	9.40	9.20	2.04	1.95	2.04	2.02	0.02	0.01	0.01	0.07	0.07	63.75	60.94	63.13	81	66	15	1.08	1.05	3.80	0.03
H41689	Mitchell	8.36		3.34		3.34	3.34			0.00	0.00	0.00	104.38	104.38	104.38	137	121.9	15	0.68		2.48	0.68
E217198	Mitchell	8.30		1.65	0.86	0.97	0.95	0.76	0.68	0.02	0.09	0.09	51.56	26.88	29.69	39	24	15	0.32	0.34	1.30	0.00
H41689	Mitchell	8.80	7.80	2.56	2.56	2.55	2.56	0.02	0.01	0.01	-0.02	0.00	80.00	80.00	80.00	108	93	15	1.36	1.42	5.20	0.00
H41045	Mitchell	9.10	8.70	2.18	2.14	2.17	2.16	0.02	0.01	0.01	0.02	0.02	68.13	66.88	67.35	91	76	15	1.37	1.30	4.80	0.07
H41364	Mitchell	8.23		3.00	1.14	1.53	1.53		1.47	0.00	0.39	0.39	93.75	35.63	47.77	65	50.3	15	0.51		1.90	0.51
G33872	Mitchell	8.10		4.17	3.47	4.16	4.15	0.09	0.01	0.01	0.68	0.68	130.31	108.44	129.84	179	164	15	2.07	2.04	7.50	0.03
G35359	Mitchell	8.40		1.06	0.85	1.06	1.01	0.01	0.01	0.04	0.16	0.16	33.13	26.56	31.71	44	29	15	0.41	0.40	1.50	0.01
H43777	Mitchell	8.80	8.20	1.22	1.11	1.21	1.17	0.09	0.01	0.04	0.06	0.06	38.13	34.69	36.46	51	36	15	0.62	0.63	2.30	0.00
H41694	Mitchell	8.59		2.88		2.88	2.88			0.00	0.00	0.00	90.00	90.00	90.00	126	111.3	15	0.86		2.87	0.86
H41354	Mitchell	8.23		2.61	1.26	1.29	1.29		1.32	0.00	0.03	0.03	81.56	39.38	40.25	57	42.2	15	0.29		1.07	0.29
E217134	Mitchell	8.30		2.50	1.48	1.49	1.48	1.01	1.01	0.01	0.00	0.00	78.13	46.25	46.40	66	51	15	0.79	0.76	2.80	0.03
H41542	Mitchell	8.21		2.91	1.30	1.30	1.30		1.61	0.00	0.00	0.00	90.94	40.63	40.63	58	42.78894	15	0.36		1.35	0.36
X19380	Mitchell	8.97		1.83	1.04	1.81	1.81		0.02	0.00	0.77	0.77	57.19	32.50	56.48	80	65.4	15	0.69		2.34	0.69
H42087	Mitchell	8.27		2.36	0.63	1.13	1.13		1.23	0.00	0.50	0.50	73.75	19.69	35.26	50	35.25126	15	0.21		0.55	0.21
H44089	Mitchell	8.80	8.80	2.73	2.19	2.72	2.71	0.10	0.01	0.01	0.52	0.52	85.31	68.44	84.80	122	107	15	1.42	1.18	4.30	0.24
H41424	Mitchell	9.00	8.80	1.83	1.46	1.78	1.76	0.14	0.05	0.02	0.30	0.30	57.19	45.63	55.06	80	65	15	0.82	0.76	2.80	0.06
E192620	Mitchell	8.40		1.25	1.15	1.24	1.18	0.01	0.01	0.06	0.03	0.03	39.06	35.94	36.97	54	39	15	0.63	0.58	2.10	0.05
H43778	Mitchell	8.90	8.20	1.36	1.36	1.32	1.36	0.11	0.04	0.06	-0.10	0.00	42.50	42.50	42.50	63	48	15	0.77	0.84	3.10	0.00
X12593	Mitchell	8.90		1.72	1.45	1.71	1.67	0.02	0.01	0.04	0.22	0.22	53.75	45.31	52.11	78	63	15	0.97	0.90	3.30	0.07
H41450	Mitchell	8.90	8.80	1.65	1.22	1.53	1.51	0.16	0.12	0.02	0.29	0.29	51.56	38.13	47.09	71	56	15	0.83	0.78	2.90	0.05
H41687	Mitchell	8.70		2.78		2.78	2.78			0.00	0.00	0.00	86.88	86.88	86.88	131	116.3	15	0.75		2.60	0.75
X11797	Mitchell	8.21		4.39	1.08	1.73	1.72		2.66	0.01	0.64	0.64	137.19	33.75	53.90	82	66.9	15	0.85		3.04	0.85
E192601	Mitchell	8.40		1.20	1.08	1.18	1.11	0.02	0.02	0.07	0.03	0.03	37.50	33.75	34.76	53	38	15	0.57	0.52	1.90	0.05
H43775	Mitchell	8.26		1.56		1.56	1.56			0.00	0.00	0.00	48.75	48.75	48.75	75	60.4	15	0.66		2.05	0.66
G34602	Mitchell	8.10		0.76	0.65	0.75	0.71	0.01	0.01	0.04	0.06	0.06	23.75	20.31	22.23	35	20	15	0.50	0.41	1.50	0.09
E217155	Mitchell	8.30		1.57	0.97	0.95	0.97	0.60	0.62	0.02	-0.04	0.00	49.06	30.31	30.31	48	33	15	0.55	0.53	1.90	0.02
H43897	Mitchell	8.40	8.00	3.17	2.00	2.13	2.11	1.12	1.04	0.02	0.11	0.11	99.06	62.50	66.02	105	90	15	1.33	1.43	5.30	0.00
G34638	Mitchell	8.00		0.87	0.70	0.87	0.82	0.02	0.01	0.04	0.12	0.12	27.19	21.88	25.66	41	26	15	0.37	0.41	1.50	0.00

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
H43843	Mitchell	8.30	8.20	3.05	0.66	0.65	0.66	2.46	2.40	0.01	-0.02	0.00	95.31	20.63	20.63	33	18	15	0.30	0.32	1.20	0.00
H43850	Mitchell	8.30	8.10	3.03	0.50	0.61	0.60	2.51	2.42	0.01	0.10	0.10	94.69	15.63	18.71	31	16	15	0.26	0.29	1.10	0.00
H41439	Mitchell	8.80	8.60	2.06	1.53	1.82	1.81	0.28	0.24	0.01	0.28	0.28	64.38	47.81	56.66	94	79	15	1.02	0.99	3.60	0.03
H41033	Mitchell	8.90	8.50	2.17	2.04	2.16	2.14	0.02	0.01	0.02	0.10	0.10	67.81	63.75	66.91	111	96	15	1.38	1.34	4.90	0.04
H43871	Mitchell	8.30	8.20	3.82	0.46	0.39	0.46	3.50	3.43	0.01	-0.08	0.00	119.38	14.38	14.38	24	9	15	0.19	0.21	0.80	0.00
X09610	Mitchell	8.78		1.77	1.76	1.76	1.76		0.01	0.00	0.00	0.00	55.31	55.00	55.00	92	76.9	15	0.90		3.36	0.90
G34490	Mitchell	8.68		0.89	0.63	0.76	0.75		0.13	0.01	0.12	0.12	27.92	19.64	23.53	54	38.8	15	0.36		1.10	0.36
H43779	Mitchell	8.60	8.40	0.64	0.50	0.56	0.50	0.16	0.08	0.11	-0.05	0.00	20.00	15.63	15.63	28	13	15	0.23	0.24	0.90	0.00
H41039	Mitchell	8.70	8.40	2.32	2.29	2.32	2.30	0.02	0.01	0.02	0.01	0.01	72.50	71.56	71.75	132	117	15	1.66	1.58	5.80	0.08
E192642	Mitchell	8.40		0.93	0.84	0.91	0.87	0.05	0.02	0.04	0.03	0.03	29.06	26.25	27.09	50	35	15	0.55	0.51	1.90	0.04
X19391	Mitchell	8.94		2.28	1.15	2.26	2.26		0.02	0.00	1.11	1.11	71.25	35.94	70.58	131	116.3	15	1.42		5.12	1.42
9426	Mitchell	8.70		1.56	1.43	1.54	1.50	0.01	0.02	0.04	0.07	0.07	48.75	44.69	46.89	88	73	15	1.18	1.19	4.40	0.00
G37020	Mitchell	8.71		1.45	1.04	1.43	1.43		0.02	0.00	0.39	0.39	45.31	32.50	44.62	85	69.8	15	0.72		2.41	0.72
H41714	Mitchell	8.63		2.36		2.36	2.36			0.00	0.00	0.00	73.75	73.75	73.75	146	131.4	15	1.43		4.36	1.43
G35715	Mitchell	8.50		0.70	0.56	0.67	0.62	0.05	0.03	0.05	0.06	0.06	21.88	17.50	19.51	40	25	15	0.37	0.34	1.20	0.03
H43875	Mitchell	8.20	8.30	3.84	0.45	0.49	0.48	3.41	3.35	0.01	0.03	0.03	120.00	14.06	14.91	31	16	15	0.25	0.27	1.00	0.00
G35470	Mitchell	8.80		1.65	1.55	1.64	1.61	0.01	0.01	0.03	0.06	0.06	51.56	48.44	50.18	109	94	15	1.33	1.33	4.90	0.00
H40624	Mitchell	8.70	8.50	1.24	0.88	1.15	1.13	0.14	0.09	0.02	0.25	0.25	38.75	27.50	35.31	77	62	15	0.73	0.67	2.50	0.06
X15038	Mitchell	8.99		1.17	0.71	1.14	1.14		0.03	0.00	0.43	0.43	36.56	22.19	35.53	79	64.4	15	0.43		1.48	0.43
E192656	Mitchell	8.30		0.73	0.64	0.70	0.65	0.06	0.03	0.05	0.01	0.01	22.81	20.00	20.41	48	33	15	0.53	0.50	1.80	0.03
X14347	Mitchell	9.10		0.64	0.47	0.63	0.56	0.02	0.01	0.07	0.09	0.09	20.00	14.69	17.43	41	26	15	0.36	0.38	1.40	0.00
H43776	Mitchell	8.28		1.24		1.24	1.24			0.01	-0.01	0.00	38.75	38.75	38.75	91	75.5	15	0.78		2.63	0.78
G37551	Mitchell	8.30		0.69	0.63	0.67	0.63	0.03	0.02	0.09	-0.05	0.00	21.56	19.69	19.69	47	32	15	0.56	0.55	2.00	0.01
G37010	Mitchell	8.50		0.94	0.82	0.92	0.85	0.05	0.02	0.07	0.03	0.03	29.38	25.63	26.64	64	49	15	0.70	0.68	2.50	0.02
X09996	Mitchell	8.84		0.71	0.37	0.69	0.68		0.02	0.01	0.31	0.31	22.19	11.56	21.31	53	38.1	15	0.36		1.39	0.36
H41705	Mitchell	9.18		0.63		0.63	0.63			0.04	-0.04	0.00	19.69	19.69	19.69	48	32.7	15	0.19		0.58	0.19
X05908	Mitchell	8.89		1.34	0.96	1.32	1.32		0.02	0.00	0.36	0.36	41.88	30.00	41.18	113	97.5	15	0.83	3.00		0.00
G37010	Mitchell	8.73		1.04	1.01	1.01	1.01		0.03	0.00	0.00	0.00	32.50	31.56	31.56	87	71.7	15	0.66		2.30	0.66
X09254	Mitchell	8.90		0.66	0.54	0.64	0.55	0.03	0.02	0.09	0.01	0.01	20.63	16.88	17.09	47	32	15	0.48	0.47	1.70	0.01
H41433	Mitchell	8.90	8.80	1.31	0.92	1.12	1.10	0.20	0.19	0.02	0.18	0.18	40.94	28.75	34.23	100	85	15	1.08	0.94	3.50	0.14
H41719	Mitchell	9.04		1.26		1.26	1.26			0.01	-0.01	0.00	39.38	39.38	39.38	117	101.8	15	1.03		2.70	1.03
X14726	Mitchell	9.40		0.89	0.80	0.88	0.84	0.05	0.01	0.04	0.04	0.04	27.81	25.00	26.19	81	66	15	0.84	0.87	3.20	0.00
H40627	Mitchell	9.30	9.10	0.59	0.35	0.58	0.49	0.09	0.01	0.09	0.14	0.14	18.44	10.94	15.32	48	33	15	0.52	0.44	1.60	0.08
X09311	Mitchell	9.20		0.60	0.47	0.59	0.49	0.03	0.01	0.10	0.02	0.02	18.75	14.69	15.26	48	33	15	0.47	0.49	1.80	0.00
X16704	Mitchell	8.91		1.09	0.72	1.07	1.06		0.02	0.01	0.34	0.34	34.06	22.50	33.21	106	90.5	15	0.96		3.36	0.96
H41681	Mitchell	8.64		2.17		2.17	2.17			0.00	0.00	0.00	67.81	67.81	67.81	222	206.7	15	1.12		3.38	1.12
X12513	Mitchell	9.10		0.72	0.56	0.70	0.64	0.01	0.02	0.06	0.08	0.08	22.50	17.50	20.00	68	53	15	0.81	0.75	2.80	0.06
H41435	Mitchell	9.00	8.80	0.83	0.69	0.80	0.74	0.06	0.03	0.06	0.05	0.05	25.94	21.56	23.13	79	64	15	0.82	0.76	2.80	0.06
H41721	Mitchell	9.15		0.93		0.93	0.93			0.02	-0.02	0.00	29.06	29.06	29.06	98	83	15	0.77		1.64	0.77
G37573	Mitchell	8.60		0.60	0.51	0.58	0.51	0.01	0.02	0.10	-0.03	0.00	18.75	15.94	15.94	57	42	15	0.59	0.57	2.10	0.02
X15672	Mitchell	8.74		0.71	0.58	0.68	0.68		0.03	0.00	0.10	0.10	22.19	18.13	21.10	78	62.5	15	0.47		1.67	0.47
G37041	Mitchell	8.96		0.72	0.43	0.70	0.69		0.02	0.01	0.26	0.26	22.50	13.44	21.55	80	64.8	15	0.53		1.88	0.53
H41697	Mitchell	8.82		1.26		1.26	1.26			0.00	0.00	0.00	39.38	39.38	39.38	146	131.4	15	1.26		4.03	1.26
H41083	Mitchell	9.10	9.10	1.65	1.57	1.65	1.62	0.03	0.01	0.02	0.05	0.05	51.56	49.06	50.68	195	180	15	2.40	2.18	8.00	0.22
E192579	Mitchell	8.80		0.44	0.34	0.41	0.34	0.09	0.03	0.11	-0.04	0.00	13.75	10.63	10.63	42	27	15	0.39	0.36	1.30	0.03
G35331	Mitchell	8.80		0.26	0.25	0.25	0.25	0.01	0.01	0.07	-0.07	0.00	8.13	7.81	7.81	32	17	15	0.33	0.33	1.20	0.00
G23392	Mitchell	8.58		0.88	0.64	0.84	0.83		0.04	0.01	0.19	0.19	27.40	19.84	25.82	115	100.0333333	15	1.02		3.38	1.02
X09180	Mitchell	8.70		0.49	0.40	0.48	0.40	0.04	0.01	0.11	-0.03	0.00	15.31	12.50	12.50	53	38	15	0.56	0.54	2.00	0.02
H44042	Mitchell	9.40	9.20	0.74	0.65	0.74	0.70	0.01	0.01	0.03	0.05	0.05	23.13	20.31	21.95	95	80	15	1.08	1.07	3.90	0.01
X12204	Mitchell	8.62		0.93	0.90	0.90	0.90		0.03	0.00	0.00	0.00	29.06	28.13	28.13	126	110.6	15	0.54	2.34		0.00

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
E192502	Mitchell	8.73		0.89	0.40	0.87	0.86		0.02	0.01	0.46	0.46	27.81	12.50	26.84	124	108.7	15	1.20		4.40	1.20
X05897	Mitchell	8.82		0.84	0.62	0.83	0.83		0.01	0.00	0.21	0.21	26.25	19.38	25.81	123	108.1	15	1.02	3.67		0.00
H41081	Mitchell	9.30	9.00	1.20	1.07	1.19	1.17	0.01	0.01	0.02	0.10	0.10	37.50	33.44	36.44	174	159	15	2.10	2.01	7.40	0.09
H41683	Mitchell	8.55		1.39		1.39	1.39			0.00	0.00	0.00	43.44	43.44	43.44	211	196.1	15	1.15		3.35	1.15
X05681	Mitchell	9.11		0.71	0.39	0.70	0.69		0.01	0.01	0.30	0.30	22.19	12.19	21.65	106	90.6	15	0.98	3.71		0.00
X09224	Mitchell	9.20		0.36	0.25	0.34	0.26	0.01	0.02	0.08	0.01	0.01	11.25	7.81	8.04	50	35	15	0.50	0.48	1.80	0.02
X12563	Mitchell	9.30		0.43	0.26	0.42	0.36	0.01	0.01	0.06	0.10	0.10	13.44	8.13	11.33	80	65	15	1.34	0.90	3.30	0.44
H41685	Mitchell	8.86		0.93		0.93	0.93			0.00	0.00	0.00	29.06	29.06	29.06	210	195.4	15	0.97		1.94	0.97
G35312	Mitchell	8.60		0.39	0.32	0.38	0.32	0.02	0.01	0.07	-0.01	0.00	12.19	10.00	10.00	74	59	15	0.85	0.86	3.10	0.00
X09282	Mitchell	9.30		0.27	0.21	0.24	0.21	0.01	0.03	0.09	-0.06	0.00	8.44	6.56	6.56	50	35	15	0.50	0.48	1.70	0.02
H41717	Mitchell	9.17		0.88		0.88	0.88			0.01	-0.01	0.00	27.50	27.50	27.50	212	197.3	15	1.71		5.28	1.71
G35426	Mitchell	8.90		0.30	0.29	0.29	0.29	0.02	0.01	0.03	-0.03	0.00	9.38	9.06	9.06	81	66	15	0.85	0.84	3.10	0.01
H41094	Mitchell	9.24		0.87	0.86	0.87	0.86		0.01	0.01	-0.01	0.00	27.19	26.88	26.88	263	247.6	15	3.10		11.65	3.10
E192490	Mitchell	8.74		0.34	0.23	0.32	0.25		0.02	0.07	0.02	0.02	10.63	7.19	7.90	89	74.2	15	0.65		2.14	0.65
X05690	Mitchell	9.04		0.22	0.20	0.20	0.20		0.02	0.03	-0.03	0.00	6.88	6.25	6.25	87	71.9	15	0.66	2.45		0.00
G35377	Mitchell	8.90		0.10	0.10	0.09	0.10	0.01	0.01	0.03	-0.04	0.00	3.13	3.13	3.13	57	42	15	0.66	0.66	2.40	0.00
X09983	Mitchell	8.05		0.23	0.12	0.12	0.12		0.11	0.01	-0.01	0.00	7.19	3.75	3.75	79	63.8	15	0.45		1.50	0.45
G22294	Mitchell	8.90		0.21	0.17	0.19	0.17		0.02	0.04	-0.02	0.00	6.56	5.31	5.31	134	118.8	15	1.02		3.92	1.02
X09301	Mitchell	8.80		0.14	0.13	0.13	0.13	0.01	0.01	0.03	-0.03	0.00	4.38	4.06	4.06	166	151	15	1.67	1.63	6.00	0.04
G37569	Mitchell	8.40		0.07	0.07	0.05	0.07	0.01	0.02	0.02	-0.04	0.00	2.19	2.19	2.19	160	145	15	1.55	1.53	5.60	0.02
H41679	Mitchell	9.13		0.13		0.13	0.13			0.04	-0.04	0.00	4.06	4.06	4.06	238	223.1	15	2.61		8.12	2.61
X16090	Mitchell	8.00		4.43	4.11	4.41	4.41	0.06	0.02	0.00	0.30	0.30	138.44	128.44	137.69	10	0.001	9.999	0.01	0.05	0.20	0.00
67907	Mitchell	7.60		1.46	1.43	1.44	1.43	0.02	0.02	0.05	-0.04	0.00	45.63	44.69	44.69	14	0.001	13.999	0.04	0.03	0.20	0.02
X16106	Mitchell	9.30		3.11	2.74	3.10	3.09	0.04	0.01	0.01	0.35	0.35	97.19	85.63	96.51	32	17	15	0.32	0.31	1.10	0.01
H40514	Mitchell	9.50	9.20	2.13	1.89	2.13	2.10	0.03	0.01	0.02	0.21	0.21	66.56	59.06	65.67	39	24	15	0.28	0.29	1.10	0.00
X16124	Mitchell	9.40		2.74	2.18	2.73	2.72	0.05	0.01	0.01	0.54	0.54	85.63	68.13	84.99	51	36	15	0.48	0.43	1.60	0.05
H40509	Mitchell	9.10	8.90	2.23	1.86	2.22	2.19	0.02	0.01	0.03	0.33	0.33	69.69	58.13	68.38	42	27	15	0.42	0.36	1.30	0.06
H40505	Mitchell	9.40	9.30	1.80	1.56	1.76	1.72	0.04	0.04	0.04	0.16	0.16	56.25	48.75	53.86	36	21	15	0.28	0.28	1.00	0.00
H40503	Mitchell	9.50	9.20	1.81	1.65	1.80	1.76	0.05	0.01	0.04	0.11	0.11	56.56	51.56	55.13	40	25	15	0.28	0.17	0.60	0.11
X16807	Mitchell	9.20		2.00	1.78	1.97	1.95	0.06	0.03	0.02	0.17	0.17	62.50	55.63	60.90	45	30	15	0.30	0.33	1.20	0.00
67993	Mitchell	9.00		1.13	1.02	1.13	1.10	0.01	0.01	0.03	0.08	0.08	35.31	31.88	34.28	27	12	15	0.54	0.26	0.90	0.28
X16946	Mitchell	8.90		2.43	2.25	2.42	2.40	0.02	0.01	0.02	0.15	0.15	75.94	70.31	75.09	64	49	15		0.79	2.90	0.00
X16243	Mitchell	9.10		1.98	1.80	1.98	1.95	0.04	0.01	0.02	0.15	0.15	61.88	56.25	60.96	58	43	15	0.49	0.51	1.90	0.00
H40512	Mitchell	9.20	9.00	1.92	1.67	1.91	1.88	0.03	0.01	0.03	0.21	0.21	60.00	52.19	58.77	58	43	15	0.61	0.58	2.10	0.03
9310	Mitchell	9.30		0.79	0.62	0.79	0.67	0.01	0.01	0.11	0.05	0.05	24.69	19.38	20.95	23	8	15	0.19	0.19	0.70	0.00
H40557	Mitchell	8.70		2.49	2.48	2.48	2.48		0.01	0.00	0.00	0.00	77.81	77.50	77.50	91	75.5	15	0.41		1.52	0.41
8317	Mitchell	9.10		1.01	0.87	1.00	0.98	0.03	0.01	0.02	0.11	0.11	31.56	27.19	30.62	41	26	15	0.42	0.42	1.50	0.00
H40501	Mitchell	9.50	9.20	1.35	1.15	1.35	1.30	0.02	0.01	0.04	0.15	0.15	42.19	35.94	40.64	56	41	15	0.55	0.54	2.00	0.01
X16263	Mitchell	9.30		1.20	1.00	1.18	1.12	0.02	0.02	0.06	0.12	0.12	37.50	31.25	34.95	58	43	15	0.65	0.66	2.40	0.00
G36128	Mitchell	8.20		1.10	0.79	1.09	1.06	0.01	0.01	0.03	0.27	0.27	34.38	24.69	33.06	56	41	15	0.65	0.67	2.50	0.00
X16310	Mitchell	9.00		1.42	1.24	1.40	1.35	0.03	0.02	0.05	0.11	0.11	44.38	38.75	42.34	80	65	15	0.84	0.87	3.20	0.00
X14842	Mitchell	9.20		0.69	0.55	0.68	0.62	0.01	0.01	0.06	0.07	0.07	21.56	17.19	19.40	40	25	15	0.52	0.41	1.50	0.11
8341	Mitchell	9.00		0.48	0.47	0.46	0.47	0.01	0.02	0.02	-0.03	0.00	15.00	14.69	14.69	32	17	15	0.32	0.30	1.10	0.02
G34575	Mitchell	8.20		1.69	1.39	1.69	1.65	0.01	0.01	0.03	0.26	0.26	52.81	43.44	51.60	120	105	15	1.29	1.28	4.70	0.01
G33753	Mitchell	8.90		1.12	0.89	1.12	1.09	0.01	0.01	0.02	0.20	0.20	35.00	27.81	34.06	84	69	15	0.95	0.96	3.50	0.00
X14825	Mitchell	8.50		1.69	1.31	1.68	1.65	0.01	0.01	0.03	0.34	0.34	52.81	40.94	51.67	130	115	15	1.08	1.06	3.90	0.02
X16307	Mitchell	9.20		1.19	0.94	1.16	1.09	0.03	0.03	0.07	0.15	0.15	37.19	29.38	34.18	93	78	15	0.89	0.87	3.20	0.02
X16295	Mitchell	9.20		1.08	0.96	1.07	1.01	0.02	0.01	0.06	0.05	0.05	33.75	30.00	31.45	88	73	15	0.96	0.98	3.60	0.00
X14875	Mitchell	9.10		1.84	1.63	1.82	1.80	0.03	0.02	0.02	0.17	0.17	57.50	50.94	56.28	160	145	15		1.53	5.60	0.00
8394	Mitchell	8.40		1.18	1.11	1.17	1.12	0.01	0.01	0.05	0.01	0.01	36.88	34.69	35.08	108	93	15	1.19	1.11	4.10	0.08

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
X16342	Mitchell	9.27		0.07	0.06	0.03	0.06		0.04	0.13	-0.16	0.00	2.19	1.88	1.88	65	49.7	15	0.65		1.51	0.65
X16343	Mitchell	9.36		0.31	0.28	0.25	0.28		0.06	0.12	-0.15	0.00	9.69	8.75	8.75	80	64.9	15	0.74		2.32	0.74
X16344	Mitchell	9.17		0.54	0.55	0.48	0.55		0.06	0.02	-0.09	0.00	16.88	17.19	17.19	95	79.7	15	1.02		2.48	1.02
X16345	Mitchell	9.08		0.50	0.40	0.44	0.41		0.06	0.03	0.01	0.01	15.63	12.50	12.88	96	81	15	1.07		2.54	1.07
X16346	Mitchell	9.32		0.21	0.24	0.16	0.24		0.05	0.13	-0.21	0.00	6.56	7.50	7.50	107	91.6	15	1.00		2.47	1.00
X16347	Mitchell	9.26		0.33	0.25	0.26	0.25		0.07	0.12	-0.11	0.00	10.31	7.81	7.81	105	89.8	15	1.20		2.93	1.20
H47674	Mitchell	8.53		0.34	0.27	0.33	0.29		0.01	0.04	0.02	0.02	10.63	8.44	8.98	61	46.3	15	0.29		0.81	0.29
H47708	Mitchell	8.71		1.39	1.05	1.37	1.37		0.02	0.00	0.32	0.32	43.44	32.81	42.68	64	48.8	15	0.53		1.61	0.53
X16283	Mitchell	9.00		0.92	0.70	0.88	0.80	0.04	0.04	0.08	0.10	0.10	28.75	21.88	25.01	79	64	15	0.75	0.74	2.70	0.01
H41767	Mitchell	9.60	9.20	0.20	0.15	0.18	0.15	0.04	0.02	0.04	-0.01	0.00	6.25	4.69	4.69	16	1	15	0.20	0.21	0.80	0.00
G36142	Mitchell	9.00		0.34	0.20	0.32	0.28	0.01	0.02	0.04	0.08	0.08	10.63	6.25	8.67	35	20	15	0.42	0.41	1.50	0.01
X16326	Mitchell	9.30		0.73	0.58	0.68	0.59	0.03	0.05	0.09	0.01	0.01	22.81	18.13	18.31	79	64	15	0.81	0.84	3.10	0.00
X14812	Mitchell	8.50		0.06	0.05	0.05	0.05	0.01	0.01	0.10	-0.10	0.00	1.88	1.56	1.56	7	0.001	6.999	0.04	0.03	0.20	0.02
H40363	Mitchell	8.39		0.09	0.06	0.06	0.06		0.03	0.14	-0.14	0.00	2.81	1.88	1.88	9	0.001	8.599	0.04		0.02	0.04
X14802	Mitchell	8.80		0.13	0.08	0.12	0.08	0.01	0.01	0.09	-0.05	0.00	4.06	2.50	2.50	12	0.001	11.999	0.02	0.03	0.20	0.00
H40491	Mitchell	8.92		0.61	0.58	0.58	0.58		0.03	0.01	-0.01	0.00	19.06	18.13	18.13	89	74.2	15	0.64		2.34	0.64
X16344	Mitchell	9.20		0.49	0.34	0.44	0.34	0.04	0.05	0.11	-0.01	0.00	15.31	10.63	10.63	55	40	15	0.61	0.62	2.30	0.00
9289	Mitchell	9.60		0.23	0.18	0.21	0.19	0.01	0.02	0.02	0.01	0.01	7.19	5.63	5.94	31	16	15	0.29	0.28	1.00	0.01
H40403	Mitchell	8.96		0.46	0.31	0.43	0.38		0.03	0.05	0.07	0.07	14.38	9.69	11.80	63	47.7	15	0.56		1.61	0.56
H43974	Mitchell	9.27		0.55	0.54	0.54	0.54		0.01	0.01	-0.01	0.00	17.19	16.88	16.88	90	75.45226	15	0.73		2.67	0.73
X16272	Mitchell	9.10		0.52	0.44	0.51	0.44	0.01	0.01	0.07	0.00	0.00	16.25	13.75	13.87	81	66	15	0.80	0.81	3.00	0.00
X16345	Mitchell	9.10		0.62	0.43	0.53	0.43	0.09	0.09	0.11	-0.01	0.00	19.38	13.44	13.44	81	66	15	0.90	0.91	3.30	0.00
H44157	Mitchell	9.21		0.57	0.54	0.56	0.54		0.01	0.02	0.00	0.00	17.81	16.88	17.01	104	88.64322	15	1.25		4.61	1.25
X16296	Mitchell	9.30		0.52	0.42	0.50	0.43	0.02	0.02	0.07	0.01	0.01	16.25	13.13	13.55	84	69	15	0.90	0.92	3.40	0.00
X16362	Mitchell	9.20		0.24	0.19	0.23	0.19	0.01	0.01	0.12	-0.08	0.00	7.50	5.94	5.94	39	24	15	0.40	0.42	1.50	0.00
X14874	Mitchell	9.10		0.88	0.75	0.83	0.77	0.01	0.05	0.06	0.02	0.02	27.50	23.44	24.15	166	151	15	2.11	1.97	7.20	0.14
H41769	Mitchell	9.50	9.00	0.22	0.19	0.19	0.19	0.04	0.03	0.06	-0.06	0.00	6.88	5.94	5.94	41	26	15	0.48	0.45	1.60	0.03
X16279	Mitchell	9.20		0.46	0.38	0.46	0.40	0.02	0.01	0.06	0.02	0.02	14.38	11.88	12.42	87	72	15	0.94	0.93	3.40	0.01
G33472	Mitchell	9.02		0.38	0.34	0.36	0.34		0.02	0.08	-0.06	0.00	11.88	10.63	10.63	76	60.9	15	0.65		1.85	0.65
X16327	Mitchell	9.20		0.35	0.27	0.35	0.27	0.04	0.01	0.09	-0.02	0.00	10.94	8.44	8.44	62	47	15	0.67	0.69	2.50	0.00
X16362	Mitchell	9.10		0.18	0.12	0.15	0.12	0.01	0.03	0.11	-0.08	0.00	5.63	3.75	3.75	28	13	15	0.26	0.28	1.00	0.00
8983	Mitchell	8.70		0.42	0.43	0.42	0.43	0.01	0.01	0.09	-0.10	0.00	13.13	13.44	13.44	104	89	15	0.95	0.93	3.40	0.02
8961	Mitchell	9.00		0.28	0.28	0.27	0.28	0.01	0.01	0.11	-0.12	0.00	8.75	8.75	8.75	70	55	15	0.60	0.59	2.10	0.01
8366	Mitchell	9.30		0.39	0.32	0.38	0.32	0.01	0.01	0.09	-0.03	0.00	12.19	10.00	10.00	88	73	15	0.90	0.90	3.30	0.00
X16384	Mitchell	9.10		0.23	0.08	0.21	0.10	0.02	0.02	0.11	0.02	0.02	7.19	2.50	3.16	29	14	15	0.25	0.28	1.00	0.00
H40457	Mitchell	9.04		0.18	0.16	0.16	0.16		0.02	0.13	-0.13	0.00	5.63	5.00	5.00	48	33.4	15	0.44		1.25	0.44
X16374	Mitchell	9.10		0.22	0.19	0.19	0.19	0.01	0.03	0.12	-0.12	0.00	6.88	5.94	5.94	63	48	15	0.64	0.66	2.40	0.00
G33676	Mitchell	8.50		0.07	0.04	0.06	0.04	0.02	0.01	0.10	-0.08	0.00	2.19	1.25	1.25	14	0.001	13.999	0.04	0.06	0.20	0.00
X16416	Mitchell	9.30		0.24	0.17	0.21	0.17	0.04	0.03	0.09	-0.05	0.00	7.50	5.31	5.31	64	49	15	0.66	0.66	2.40	0.00
8416	Mitchell	8.90		0.19	0.18	0.16	0.18	0.02	0.03	0.11	-0.13	0.00	5.94	5.63	5.63	75	60	15	0.65	0.62	2.30	0.03
G33738	Mitchell	8.90		0.22	0.15	0.21	0.15	0.01	0.01	0.10	-0.04	0.00	6.88	4.69	4.69	88	73	15	0.86	0.87	3.20	0.00
8438	Mitchell	9.10		0.18	0.13	0.18	0.13	0.01	0.01	0.09	-0.04	0.00	5.63	4.06	4.06	83	68	15	0.88	0.86	3.10	0.02
X16397	Mitchell	9.20		0.15	0.08	0.10	0.08	0.05	0.05	0.10	-0.08	0.00	4.69	2.50	2.50	63	48	15	0.62	0.65	2.40	0.00
G36541	Mitchell	7.90		0.04	0.02	0.03	0.02	0.01	0.01	0.04	-0.03	0.00	1.25	0.63	0.63	17	2	15	0.14	0.18	0.70	0.00
9327	Mitchell	9.70		0.04	0.02	0.04	0.02	0.01	0.01	0.01	0.00	0.00	1.25	0.63	0.70	22	7	15	0.19	0.17	0.60	0.02
H43952	Mitchell	9.29		0.33	0.32	0.32	0.32		0.01	0.02	-0.02	0.00	10.31	10.00	10.00	342	326.7	15	4.76		17.59	4.76
G33716	Mitchell	8.80		0.10	0.06	0.08	0.06	0.01	0.02	0.09	-0.07	0.00	3.13	1.88	1.88	73	58	15	0.75	0.74	2.70	0.01
G33688	Mitchell	8.70		0.09	0.04	0.06	0.04	0.04	0.03	0.09	-0.07	0.00	2.81	1.25	1.25	67	52	15	0.92	0.90	3.30	0.02
8374	Mitchell	9.30		0.03	0.01	0.02	0.01	0.01	0.01	0.09	-0.08	0.00	0.94	0.31	0.31	19	4	15	0.10	0.10	0.40	0.00
G33496	Mitchell	9.28		0.06	0.02	0.04	0.02		0.02	0.11	-0.09	0.00	1.88	0.63	0.63	94	78.6	15	1.27		4.29	1.27

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
G33706	Mitchell	8.70		0.04	0.01	0.03	0.01	0.01	0.01	0.10	-0.08	0.00	1.25	0.31	0.31	92	77	15	1.00	1.01	3.70	0.00
X06968	Mitchell	3.48		6.62	5.49	6.45	6.45		0.17	0.00	0.96	0.96	206.88	171.56	201.55	-4	0.001	-4.301	0.01		0.02	0.01
X13074	Mitchell	3.62		9.48	8.15	9.16	9.16		0.32	0.00	1.01	1.01	296.25	254.69	286.24	-3	0.001	-2.901	0.01		0.02	0.01
H41951	Mitchell	4.90	6.60	19.05	16.35	19.00	18.99	0.05	0.05	0.01	2.64	2.64	595.31	510.94	593.52	5	0.001	4.999	0.01	0.03	0.20	0.00
X06596	Mitchell	3.76		5.26	4.20	5.18	5.18		0.08	0.00	0.98	0.98	164.38	131.25	161.86	2	0.001	1.599	0.01		0.02	0.01
X10945	Mitchell	6.60		4.04	3.74	4.01	4.00	0.05	0.03	0.01	0.26	0.26	126.25	116.88	125.07	2	0.001	1.999	0.01	0.03	0.20	0.00
H41947	Mitchell	7.00	7.10	10.75	8.90	10.74	10.74	0.03	0.01	0.00	1.84	1.84	335.94	278.13	335.54	6	0.001	5.999	0.01	0.03	0.20	0.00
X10920	Mitchell	6.40		7.42	6.43	7.40	7.40	0.07	0.02	0.00	0.97	0.97	231.88	200.94	231.11	6	0.001	5.999	0.04	0.06	0.20	0.00
H41949	Mitchell	6.60	7.10	7.31	5.42	7.31	7.30	0.03	0.01	0.00	1.88	1.88	228.44	169.38	228.23	6	0.001	5.999	0.01	0.03	0.20	0.00
X06989	Mitchell	3.71		5.57	3.76	5.46	5.46		0.11	0.00	1.70	1.70	174.06	117.50	170.61	5	0.001	5.299	0.01		0.02	0.01
X06607	Mitchell	3.80		3.70	3.58	3.58	3.58		0.12	0.00	0.00	0.00	115.63	111.88	111.88	4	0.001	4.099	0.01		0.02	0.01
E217280	Mitchell	6.10		4.81	4.02	4.80	4.80	0.01	0.01	0.00	0.78	0.78	150.31	125.63	149.95	8	0.001	7.999	0.01	0.03	0.20	0.00
G35602	Mitchell	6.20		5.26	4.37	5.26	5.25	0.02	0.01	0.00	0.88	0.88	164.38	136.56	164.10	9	0.001	8.999	0.01	0.03	0.20	0.00
H41944	Mitchell	8.00	7.90	5.26	4.35	5.25	5.25	0.04	0.01	0.00	0.90	0.90	164.38	135.94	163.97	9	0.001	8.999	0.01	0.05	0.20	0.00
X06618	Mitchell	4.75		3.86	3.22	3.80	3.80		0.06	0.00	0.58	0.58	120.63	100.63	118.73	8	0.001	7.799	0.01		0.02	0.01
X13084	Mitchell	7.02		8.05	2.75	3.95	3.95		4.10	0.00	1.20	1.20	251.56	85.94	123.38	10	0.001	10.099	0.09		0.30	0.09
E217300	Mitchell	6.50		4.40	4.04	4.40	4.39	0.02	0.01	0.00	0.35	0.35	137.50	126.25	137.29	12	0.001	11.999	0.23	0.03	0.20	0.21
X17591	Mitchell	7.47		1.96	1.21	1.93	1.93		0.03	0.00	0.72	0.72	61.25	37.81	60.27	6	0.001	6.299	0.07		0.22	0.07
X10967	Mitchell	7.30		5.51	4.89	5.50	5.50	0.05	0.01	0.00	0.61	0.61	172.19	152.81	171.77	18	3	15	0.14	0.16	0.60	0.00
X06638	Mitchell	6.51		5.48	3.65	5.44	5.44		0.04	0.00	1.79	1.79	171.25	114.06	169.99	19	3.7	15	0.10		0.38	0.10
G35622	Mitchell	7.60		7.71	6.28	7.71	7.70	0.03	0.01	0.01	1.42	1.42	240.94	196.25	240.61	29	14	15	0.30	0.27	1.00	0.03
X17581	Mitchell	7.34		8.69	2.75	4.35	4.35		4.34	0.00	1.60	1.60	271.56	85.94	135.91	21	5.6	15	0.20		0.68	0.20
X10985	Mitchell	7.90		3.50	3.01	3.48	3.48	0.06	0.02	0.00	0.47	0.47	109.38	94.06	108.61	19	4	15	0.25	0.24	0.90	0.01
G32024	Mitchell	8.10		4.04	2.88	2.92	2.92	1.18	1.12	0.00	0.04	0.04	126.25	90.00	91.18	57	42	15	0.57	0.31	1.10	0.26
X66542	IronCap	7.00		2.78	0.66	2.74	2.74		0.04	0.00	2.08	2.08	86.88	20.62	85.56	4	0.001	3.749	0.01	0.05		0.00
X29696	IronCap	5.08		2.24	1.43	2.22	2.22		0.02	0	0.78	0.78	70.00	44.79	69.23	4	0.001	4.335734694	0.01		0.05	0.01
X66799	IronCap	5.50		1.72	1.60	1.67	1.67	0.08	0.05	0	0.07	0.07	53.75	50.00	52.19	5	0.001	4.999	0.01	0.03	0.10	0.00
X26526	IronCap	8.28		3.65	2.64	3.63	3.63		0.02	0	0.99	0.99	114.06	82.50	113.35	25	9.623115578	15	0.15		0.48	0.15
IC COMP 16	IronCap	8.41		5.85	4.57	5.82	5.82		0.03	0.00	1.25	1.25	182.81	142.71	181.87	61	46.25	15	0.48		1.81	0.48
IC COMP 19	IronCap	9.25		1.31	0.97	1.31	1.30		0.00	0.00	0.34	0.34	40.94	30.21	40.70	14	0.001	13.88788889	0.13		0.44	0.13
X30431	IronCap	8.70		2.23	2.04	2.22	2.22	0.04	0.01	0	0.18	0.18	69.69	63.75	69.38	24	9	15	0.15	0.18	0.70	0.00
IC COMP 12	IronCap	8.50		4.44	3.11	4.42	4.41		0.02	0.00	1.31	1.31	138.75	97.08	137.87	56	41.25	15	0.44		1.59	0.44
IC COMP 9	IronCap	8.56		3.71	2.77	3.68	3.68		0.03	0.00	0.91	0.91	115.94	86.46	114.92	53	37.5	15	0.49		1.83	0.49
IC COMP 11	IronCap	8.43		3.79	2.76	3.77	3.77		0.02	0.00	1.01	1.01	118.44	86.25	117.70	57	42.5	15	0.58		2.06	0.58
X30422	IronCap	8.60		3.58	3.43	3.58	3.58	0.02	0.01	0	0.15	0.15	111.88	107.19	111.72	55	40	15	0.49	0.32	1.20	0.17
IC COMP 10	IronCap	8.65		4.25	3.23	4.22	4.22		0.03	0.00	0.99	0.99	132.81	100.83	131.79	71	56.25	15	0.49		1.88	0.49
X26728	IronCap	8.28		2.88	1.83	2.87	2.87		0.01	0	1.04	1.04	90.00	57.08	89.65	51	36.02040816	15	0.59		2.10	0.59
IC COMP 20	IronCap	8.80		2.13	1.59	2.12	2.11		0.01	0.00	0.53	0.53	66.56	49.58	66.07	40	25	15	0.42		1.34	0.42
X30441	IronCap	8.80		2.26	2.06	2.26	2.26	0.02	0.01	0	0.20	0.20	70.63	64.38	70.47	46	31	15	0.55	0.33	1.20	0.22
IC COMP 17	IronCap	8.69		3.12	2.33	3.08	3.05		0.04	0.03	0.72	0.72	97.50	72.92	95.29	88	72.5	15	0.84		3.03	0.84
IC COMP 18	IronCap	8.78		2.23	1.76	2.21	2.21		0.02	0.00	0.45	0.45	69.69	55.00	69.05	85	70	15	0.67		2.49	0.67
X30943	IronCap	8.19		1.31	0.84	1.28	1.28		0.03	0	0.44	0.44	40.94	26.25	40.03	69	54.09547739	15	0.74		2.60	0.74
IC COMP 13	IronCap	8.36		3.19	2.38	3.13	3.11		0.06	0.01	0.73	0.73	99.69	74.38	97.27	170	155	15	1.90		7.25	1.90
X26658	IronCap	8.11		3.24	2.39	3.20	3.20		0.04	0	0.82	0.82	101.25	74.58	100.07	179	163.5714286	15	1.39		5.34	1.39
X30968	IronCap	8.25		1.70	1.27	1.69	1.69		0.01	0	0.42	0.42	53.13	39.58	52.69	110	94.72222222	15	0.75		3.07	0.75
X30961	IronCap	8.24		2.75	1.85	2.73	2.73		0.02	0	0.87	0.87	85.94	57.92	85.24	239	223.5204082	15	2.88		10.97	2.88
H47161	IronCap	6.69		7.43	5.42	7.30	7.30		0.13	0	1.88	1.88	232.19	169.38	228.22	8	0.001	7.907163265	0.04		0.09	0.04
X25074	IronCap	6.80		3.08	2.99	3.08	3.08	0.03	0.01	0	0.08	0.08	96.25	93.44	96.09	4	0.001	3.999	0.01	0.03	0.10	0.00
X30176	IronCap	6.70		4.66	4.02	4.65	4.65	0.01	0.01	0	0.63	0.63	145.63	125.63	145.31	7	0.001	6.999	0.01	0.03	0.20	0.00
X25084	IronCap	7.40		5.06	4.74	5.06	5.06	0.06	0.01	0	0.31	0.31	158.13	148.13	157.97	9	0.001	8.999	0.04	0.03	0.20	0.02

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
H47377	IronCap	7.66		4.71	2.99	4.69	4.69		0.02	0.00	1.70	1.70	147.19	93.44	146.53	9	0.001	8.599	0.03	0.08		0.00
X25078	IronCap	7.62		2.10	1.15	2.09	2.09		0.01	0	0.94	0.94	65.63	36.04	65.39	4	0.001	4.019100503	0.01		0.05	0.01
H47126	IronCap	6.97		6.91	5.38	6.85	6.85		0.06	0	1.47	1.47	215.94	168.13	214.04	14	0.001	14.28471429	0.08		0.26	0.08
X67984	IronCap	7.29		3.47	2.05	3.45	3.45		0.02	0	1.40	1.40	108.44	63.96	107.75	8	0.001	7.536688442	0.02		0.07	0.02
H47109	IronCap	7.37		5.03	3.72	4.98	4.98		0.05	0	1.26	1.26	157.19	116.25	155.60	12	0.001	11.73369388	0.08		0.26	0.08
X29624	IronCap	8.10		5.09	4.27	5.09	5.09	0.01	0.01	0	0.82	0.82	159.06	133.44	158.91	14	0.001	13.999	0.14	0.17	0.60	0.00
X67999	IronCap	7.80		2.78	2.54	2.78	2.78	0.03	0.01	0	0.24	0.24	86.88	79.38	86.72	9	0.001	8.999	0.02	0.03	0.20	0.00
X30121	IronCap	7.75		3.11	2.27	3.09	3.09		0.02	0	0.83	0.83	97.19	70.83	96.62	12	0.001	12.05930151	0.07		0.27	0.07
X25461	IronCap	8.20		4.60	4.41	4.60	4.60	0.01	0.01	0	0.18	0.18	143.75	137.81	143.59	22	7	15	0.12	0.12	0.40	0.00
X30187	IronCap	8.60		2.46	2.40	2.46	2.46	0.01	0.01	0	0.06	0.06	76.88	75.00	76.72	13	0.001	12.999	0.04	0.03	0.20	0.02
X29626	IronCap	8.25		4.25	3.13	4.23	4.23		0.02	0	1.10	1.10	132.81	97.92	132.30	24	9.234693878	15	0.28		1.06	0.28
X28499	IronCap	7.77		5.45	4.01	5.42	5.42		0.03	0	1.41	1.41	170.31	125.42	169.52	32	16.90954774	15	0.18		0.69	0.18
H48498	IronCap	8.00		1.28	1.17	1.19	1.19	0.02	0.09	0	0.02	0.02	40.00	36.56	37.19	7	0.001	6.999	0.07	0.08	0.30	0.00
H47431	IronCap	8.41		5.55	4.58	5.53	5.53		0.02	0	0.95	0.95	173.44	143.13	172.96	34	19.09090909	15	0.31		1.07	0.31
H48481	IronCap	8.20		3.40	3.32	3.39	3.39	0.04	0.01	0	0.07	0.07	106.25	103.75	105.94	21	6	15	0.19	0.20	0.70	0.00
X29743	IronCap	7.82		4.09	2.93	4.07	4.07		0.02	0	1.14	1.14	127.81	91.46	127.12	27	11.78571429	15	0.26		1.00	0.26
H47446	IronCap	8.42		5.94	3.90	5.93	5.93		0.01	0.00	2.03	2.03	185.63	121.88	185.29	44	28.6	15	0.36	1.31	1.37	0.00
H47430	IronCap	8.36		5.49	5.03	5.47	5.47		0.02	0.00	0.44	0.44	171.56	157.19	170.92	40	25.4	15	0.34	1.13		0.00
X28009	IronCap	7.50		0.80	0.70	0.79	0.79	0.03	0.01	0	0.09	0.09	25.00	21.88	24.69	6	0.001	5.999	0.01	0.03	0.10	0.00
X30222	IronCap	8.36		3.94	2.63	3.93	3.93		0.01	0	1.29	1.29	123.13	82.29	122.67	32	16.8877551	15	0.17		0.63	0.17
X29781	IronCap	7.93		4.94	3.75	4.87	4.87		0.07	0	1.11	1.11	154.38	117.29	152.08	40	25.4040404	15	0.54		2.08	0.54
X28815	IronCap	8.30		5.18	4.81	5.18	5.18	0.02	0.01	0	0.37	0.37	161.88	150.31	161.72	43	28	15	0.44	0.43	1.60	0.01
X28802	IronCap	8.45		4.59	3.04	4.58	4.58		0.01	0	1.54	1.54	143.44	95.00	143.12	38	23.26530612	15	0.39		1.62	0.39
X30583	IronCap	8.02		4.70	3.70	4.66	4.66		0.04	0	0.96	0.96	146.88	115.63	145.60	41	25.81632653	15	0.41		1.65	0.41
H47438	IronCap	8.18		6.32	4.87	6.30	6.30		0.02	0	1.43	1.43	197.50	152.29	196.86	57	42.39795918	15	0.53		1.94	0.53
X28837	IronCap	8.70		4.95	4.49	4.95	4.95	0.01	0.01	0	0.46	0.46	154.69	140.31	154.53	50	35	15	0.57	0.53	2.00	0.04
H47123	IronCap	8.02		4.11	2.85	4.08	4.08		0.03	0	1.23	1.23	128.44	88.96	127.46	42	27.09183673	15	0.41		1.57	0.41
X25501	IronCap	8.70		2.41	2.31	2.41	2.41	0.01	0.01	0	0.10	0.10	75.31	72.19	75.16	27	12	15	0.21	0.17	0.60	0.04
X29656	IronCap	8.40		3.09	3.08	3.09	3.09	0.01	0.01	0	0.00	0.00	96.56	96.25	96.41	35	20	15	0.34	0.35	1.30	0.00
X30218	IronCap	9.10		2.97	2.90	2.95	2.95	0.03	0.02	0	0.05	0.05	92.81	90.63	92.19	35	20	15	0.29	0.31	1.20	0.00
H46835	IronCap	8.02		3.99	2.51	3.97	3.97		0.02	0	1.47	1.47	124.69	78.33	124.14	47	32.19387755	15	0.32		1.13	0.32
H47391	IronCap	8.28		3.92	2.77	3.90	3.90		0.02	0	1.13	1.13	122.50	86.46	121.89	47	32.19387755	15	0.42		1.61	0.42
X30235	IronCap	9.10		3.64	3.57	3.64	3.64	0.01	0.01	0	0.07	0.07	113.75	111.56	113.59	44	29	15	0.45	0.46	1.70	0.00
X30331	IronCap	8.50		2.78	2.51	2.78	2.78	0.02	0.01	0	0.27	0.27	86.88	78.44	86.72	34	19	15	0.20	0.14	0.50	0.06
X30742	IronCap	8.27		4.68	3.11	4.66	4.66		0.02	0	1.55	1.55	146.25	97.08	145.56	57	42.39795918	15	0.62		2.27	0.62
X25471	IronCap	8.70		3.17	3.03	3.16	3.16	0.01	0.01	0	0.13	0.13	99.06	94.69	98.75	39	24	15	0.30	0.28	1.00	0.02
X25463	IronCap	7.91		3.84	2.40	3.82	3.82		0.02	0	1.42	1.42	120.00	75.00	119.46	47	32.19387755	15	0.12		0.48	0.12
X28805	IronCap	8.50		3.58	3.38	3.58	3.58	0.01	0.01	0	0.20	0.20	111.88	105.63	111.72	46	31	15	0.48	0.47	1.70	0.01
X29833	IronCap	8.14		3.53	2.25	3.48	3.48		0.05	0	1.23	1.23	110.31	70.42	108.74	46	30.91836735	15	0.71		2.65	0.71
X30361	IronCap	8.29		4.17	3.05	4.15	4.15		0.02	0	1.11	1.11	130.31	95.21	129.81	60	44.94897959	15	0.42		1.70	0.42
X25482	IronCap	8.80		3.01	2.89	3.01	3.01	0.01	0.01	0	0.12	0.12	94.06	90.31	93.91	44	29	15	0.47	0.45	1.60	0.02
X25489	IronCap	8.70		2.55	2.40	2.55	2.55	0.02	0.01	0	0.15	0.15	79.69	75.00	79.53	39	24	15	0.38	0.33	1.20	0.05
X30224	IronCap	9.20		2.67	2.50	2.67	2.67	0.01	0.01	0	0.17	0.17	83.44	78.13	83.28	41	26	15	0.40	0.30	1.10	0.10
X30139	IronCap	8.50		3.11	2.86	3.11	3.11	0.04	0.01	0	0.25	0.25	97.19	89.38	97.03	48	33	15	0.52	0.53	1.90	0.00
X29646	IronCap	8.80		2.46	2.35	2.46	2.46	0.01	0.01	0	0.11	0.11	76.88	73.44	76.72	38	23	15	0.37	0.37	1.40	0.00
X29685	IronCap	8.60		2.85	2.80	2.84	2.84	0.02	0.01	0	0.04	0.04	89.06	87.50	88.75	44	29	15	0.45	0.44	1.60	0.01
X25896	IronCap	8.60		3.51	3.48	3.50	3.50	0.01	0.01	0	0.02	0.02	109.69	108.75	109.38	55	40	15	0.49	0.46	1.70	0.03
X28827	IronCap	9.00		3.06	2.86	3.06	3.06	0.01	0.01	0	0.20	0.20	95.63	89.38	95.47	50	35	15	0.42	0.41	1.50	0.01
X25886	IronCap	8.80		2.87	2.89	2.87	2.89	0.03	0.01	0	-0.03	0.00	89.69	90.31	90.31	50	35	15	0.40	0.38	1.40	0.02
H46817	IronCap	8.52		2.73	1.78	2.72	2.72		0.01	0.00	0.94	0.94	85.31	55.63	84.96	48	33	15	0.23	0.88		0.00

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
X29681	IronCap	8.48		3.76	3.32	3.74	3.74		0.02	0	0.42	0.42	117.50	103.75	116.88	69	53.87755102	15	0.37		1.38	0.37
X24855	IronCap	8.34		1.27	0.91	1.26	1.26		0.01	0	0.35	0.35	39.69	28.33	39.34	24	8.869346734	15	0.11		0.41	0.11
X25877	IronCap	8.40		4.06	2.88	4.04	4.04		0.02	0	1.16	1.16	126.88	90.00	126.19	77	61.63316583	15	0.73		2.97	0.73
X25875	IronCap	8.60		3.73	3.69	3.71	3.71	0.01	0.02	0	0.02	0.02	116.56	115.31	115.94	71	56	15	0.82	0.80	2.90	0.02
X30227	IronCap	8.98		2.37	1.65	2.36	2.36		0.01	0	0.71	0.71	74.06	51.67	73.78	46	31.04591837	15	0.40		1.61	0.40
H46831	IronCap	8.45		3.35	2.34	3.34	3.34		0.01	0	1.00	1.00	104.69	73.13	104.45	66	51.32653061	15	0.35		1.27	0.35
X29789	IronCap	8.33		3.19	2.24	3.18	3.18		0.01	0	0.94	0.94	99.69	70.00	99.25	64	48.7755102	15	0.44		1.69	0.44
H47403	IronCap	8.66		3.28	3.20	3.27	3.27		0.01	0.00	0.07	0.07	102.50	100.00	102.15	66	50.7	15	0.61	2.12		0.00
X30208	IronCap	9.00		1.96	1.80	1.95	1.95	0.02	0.01	0	0.15	0.15	61.25	56.25	60.94	41	26	15	0.38	0.28	1.00	0.10
X29686	IronCap	8.42		3.01	1.99	3.00	3.00		0.01	0	1.01	1.01	94.06	62.08	93.66	63	48.13131313	15	0.54		2.12	0.54
X29636	IronCap	8.80		2.13	2.07	2.13	2.13	0.02	0.01	0	0.06	0.06	66.56	64.69	66.41	45	30	15	0.47	0.47	1.70	0.00
H46789	IronCap	8.77		2.81	2.10	2.80	2.80		0.01	0.00	0.70	0.70	87.81	65.63	87.46	59	44.3	15	0.50	1.93		0.00
X29871	IronCap	8.38		2.16	1.77	2.14	2.14		0.02	0	0.37	0.37	67.50	55.21	66.74	47	31.71717172	15	0.38		1.44	0.38
X28535	IronCap	8.60		2.38	2.23	2.38	2.38	0.02	0.01	0	0.15	0.15	74.38	69.69	74.22	55	40	15	0.56	0.55	2.00	0.01
X29442	IronCap	8.90		0.91	0.80	0.89	0.89	0.04	0.02	0	0.09	0.09	28.44	25.00	27.81	21	6	15	0.10	0.13	0.50	0.00
X29503	IronCap	9.00		1.66	1.58	1.64	1.64	0.02	0.02	0	0.06	0.06	51.88	49.38	51.25	40	25	15	0.38	0.37	1.40	0.01
H46842	IronCap	8.77		2.01	1.19	2.00	2.00		0.01	0.00	0.81	0.81	62.81	37.19	62.43	50	34.9	15	0.16	0.52		0.00
X28545	IronCap	8.70		2.18	2.00	2.18	2.18	0.02	0.01	0	0.18	0.18	68.13	62.50	67.97	55	40	15	0.65	0.65	2.40	0.00
H46829	IronCap	8.71		1.84	0.85	1.83	1.83		0.01	0.00	0.98	0.98	57.50	26.56	57.12	47	32.3	15	0.16	0.57		0.00
X29431	IronCap	9.20		1.34	1.15	1.33	1.33	0.01	0.01	0	0.18	0.18	41.88	35.94	41.56	35	20	15	0.32	0.31	1.20	0.01
H46801	IronCap	8.53		2.95	2.45	2.93	2.93		0.02	0.00	0.48	0.48	92.19	76.56	91.51	78	63.3	15	0.72	2.54		0.00
X26345	IronCap	8.90		1.27	1.18	1.27	1.27	0.03	0.01	0	0.09	0.09	39.69	36.88	39.53	35	20	15	0.28	0.29	1.10	0.00
X29666	IronCap	8.90		1.36	1.27	1.36	1.36	0.01	0.01	0	0.09	0.09	42.50	39.69	42.34	38	23	15	0.34	0.36	1.30	0.00
X29422	IronCap	8.80		2.11	1.51	2.09	2.09		0.02	0	0.59	0.59	65.94	47.08	65.41	61	46.2244898	15	0.59		2.29	0.59
X29421	IronCap	9.00		1.50	1.39	1.50	1.50	0.06	0.01	0	0.11	0.11	46.88	43.44	46.72	45	30	15	0.45	0.43	1.60	0.02
X30596	IronCap	8.40		1.54	1.08	1.53	1.53		0.01	0	0.45	0.45	48.13	33.75	47.74	48	33.46938776	15	0.53		2.12	0.53
X30198	IronCap	8.90		2.00	1.88	2.00	2.00	0.01	0.01	0	0.12	0.12	62.50	58.75	62.34	64	49	15	0.92	0.87	3.20	0.05
H46808	IronCap	8.38		1.85	1.67	1.84	1.84		0.01	0	0.16	0.16	57.81	52.29	57.37	68	53.18181818	15	0.54		2.08	0.54
X29407	IronCap	9.30		1.24	1.04	1.21	1.21	0.04	0.03	0	0.17	0.17	38.75	32.50	37.81	45	30	15	0.46	0.45	1.70	0.01
H46881	IronCap	8.83		2.80	1.59	2.79	2.79		0.01	0.00	1.20	1.20	87.50	49.69	87.13	104	89.2	15	0.69	2.60		0.00
X30711	IronCap	8.07		1.78	1.02	1.76	1.76		0.02	0	0.74	0.74	55.63	31.88	54.97	70	55.15306122	15	0.46		1.80	0.46
H46870	IronCap	9.03		1.49	1.32	1.48	1.48		0.01	0.00	0.16	0.16	46.56	41.25	46.13	116	100.5	15	0.59	2.17		0.00
H46841	IronCap	8.81		1.06	0.83	1.05	1.05		0.01	0	0.22	0.22	33.13	26.04	32.95	130	115.1020408	15	0.75		2.41	0.75
H47142	IronCap	8.59		1.48	1.13	1.41	1.41		0.07	0	0.29	0.29	46.25	35.21	44.20	184	168.6734694	15	1.03		3.74	1.03
X66971	IronCap	9.50		0.24	0.22	0.24	0.24	0.01	0.01	0	0.02	0.02	7.50	6.88	7.34	42	27	15	0.47	0.47	1.70	0.00
X67793	IronCap	8.50		2.08	1.91	2.08	2.08	0.03	0.01	0	0.17	0.17	65.00	59.69	64.84	21	6	15	0.22	0.24	0.90	0.00
X67816	IronCap	8.40		2.01	1.89	2.00	2.00	0.03	0.01	0	0.11	0.11	62.81	59.06	62.50	25	10	15	0.25	0.20	0.80	0.05
X28131	IronCap	8.90		1.55	1.41	1.55	1.55	0.02	0.01	0	0.14	0.14	48.44	44.06	48.28	44	29	15	0.50	0.44	1.60	0.06
X28077	IronCap	8.70		1.51	1.46	1.51	1.51	0.04	0.01	0	0.05	0.05	47.19	45.63	47.03	44	29	15	0.50	0.38	1.40	0.12
X28151	IronCap	8.50		1.83	1.86	1.83	1.86	0.05	0.01	0	-0.04	0.00	57.19	58.13	58.13	56	41	15	0.61	0.59	2.20	0.02
X67772	IronCap	8.80		1.89	1.82	1.88	1.88	0.02	0.01	0	0.06	0.06	59.06	56.88	58.75	59	44	15	0.69	0.67	2.50	0.02
X28121	IronCap	8.80		1.39	1.27	1.39	1.39	0.02	0.01	0	0.12	0.12	43.44	39.69	43.28	49	34	15	0.58	0.53	1.90	0.05
X25232	IronCap	9.10		0.89	0.84	0.89	0.89	0.01	0.01	0	0.05	0.05	27.81	26.25	27.66	33	18	15	0.39	0.35	1.30	0.04
X25276	IronCap	8.90		1.24	1.14	1.24	1.24	0.01	0.01	0	0.10	0.10	38.75	35.63	38.59	53	38	15	0.66	0.61	2.20	0.05
X28087	IronCap	8.80		1.19	1.09	1.19	1.19	0.03	0.01	0	0.09	0.09	37.19	34.06	37.03	51	36	15	0.60	0.49	1.80	0.11
H47484	IronCap	8.99		1.22	1.01	1.21	1.21		0.01	0.00	0.20	0.20	38.13	31.56	37.72	52	37.4	15	0.37	1.46		0.00
X25254	IronCap	9.00		0.85	0.83	0.85	0.85	0.01	0.01	0	0.02	0.02	26.56	25.94	26.41	38	23	15	0.46	0.41	1.50	0.05
X67805	IronCap	8.90		0.87	0.78	0.86	0.86	0.02	0.01	0	0.08	0.08	27.19	24.38	26.88	41	26	15	0.46	0.44	1.60	0.02
X28141	IronCap	8.90		1.10	1.07	1.10	1.10	0.01	0.01	0	0.03	0.03	34.38	33.44	34.22	57	42	15	0.67	0.58	2.10	0.09
X28112	IronCap	9.00		0.90	0.84	0.90	0.90	0.01	0.01	0	0.06	0.06	28.13	26.25	27.97	69	54	15	0.86	0.79	2.90	0.07

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
X25264	IronCap	8.40		0.72	0.73	0.71	0.73	0.01	0.01	0	-0.02	0.00	22.50	22.81	22.81	60	45	15	0.68	0.61	2.20	0.07
X25243	IronCap	9.20		0.47	0.47	0.47	0.47	0.01	0.01	0	-0.01	0.00	14.69	14.69	14.69	45	30	15	0.51	0.46	1.70	0.05
X67806	IronCap	8.84		0.58	0.47	0.58	0.58		0.00	0	0.10	0.10	18.13	14.79	17.98	57	41.81818182	15	0.34		1.27	0.34
X67782	IronCap	9.10		0.31	0.27	0.31	0.31	0.01	0.01	0	0.04	0.04	9.69	8.44	9.53	37	22	15	0.41	0.36	1.30	0.05
X28099	IronCap	8.90		0.57	0.58	0.57	0.58	0.02	0.01	0	-0.02	0.00	17.81	18.13	18.13	72	57	15	0.87	0.80	2.90	0.07
H47469	IronCap	8.74		0.64	0.57	0.63	0.59		0.01	0.04	0.02	0.02	20.00	17.81	18.41	76	60.8	15	0.32	1.09		0.00
X28066	IronCap	9.00		0.42	0.42	0.42	0.42	0.01	0.01	0	-0.01	0.00	13.13	13.13	13.13	61	46	15	0.75	0.54	2.00	0.21
X25251	IronCap	9.12		0.41	0.26	0.41	0.41		0.00	0	0.14	0.14	12.81	8.27	12.70	73	57.70408163	15	0.54		2.01	0.54
X67761	IronCap	9.00		0.24	0.25	0.24	0.25	0.01	0.01	0	-0.02	0.00	7.50	7.81	7.81	62	47	15	0.72	0.68	2.50	0.04
X25221	IronCap	9.10		0.16	0.16	0.15	0.16	0.02	0.01	0	-0.01	0.00	5.00	5.00	5.00	59	44	15	0.69	0.62	2.30	0.07
X25211	IronCap	9.20		0.12	0.13	0.11	0.13	0.01	0.01	0	-0.02	0.00	3.75	4.06	4.06	67	52	15	0.83	0.74	2.70	0.09
X27667	IronCap	2.95		11.86	8.60	11.67	11.67		0.19	0	3.07	3.07	370.63	268.75	364.65	-5	0.001	-5.026125628	0.01		0.03	0.01
H48695	IronCap	4.93		4.19	4.17	4.17	4.17		0.02	0.00	0.00	0.00	130.94	130.31	130.31	0	0.001	0.399	0.01	0.01		0.00
X67731	IronCap	4.50		3.98	3.12	3.94	3.94		0.04	0	0.82	0.82	124.38	97.50	123.22	1	0.001	0.501512563	0.01		0.01	0.01
H47241	IronCap	6.13		3.11	2.94	3.10	3.10		0.01	0.00	0.16	0.16	97.19	91.88	96.83	1	0.001	0.799	0.01	0.01		0.00
H47325	IronCap	5.02		4.15	3.23	4.11	4.11		0.04	0	0.89	0.89	129.69	100.83	128.50	1	0.001	1.255281407	0.01		0.03	0.01
X28273	IronCap	6.20		6.23	5.06	5.99	5.99	0.58	0.24	0	0.93	0.93	194.69	158.13	187.19	2	0.001	1.999	0.01	0.03	0.10	0.00
X24881	IronCap	4.62		4.49	3.39	4.45	4.45		0.04	0	1.05	1.05	140.31	106.04	138.97	2	0.001	2.009050251	0.01		0.03	0.01
H47307	IronCap	8.02		1.74	1.47	1.73	1.73		0.01	0.00	0.26	0.26	54.38	45.94	53.97	1	0.001	0.899	0.01	0.01		0.00
X28256	IronCap	5.60		5.73	4.69	5.64	5.64	0.14	0.09	0	0.95	0.95	179.06	146.56	176.25	3	0.001	2.999	0.01	0.03	0.10	0.00
X67618	IronCap	5.11		3.38	2.02	3.31	3.31		0.07	0	1.29	1.29	105.63	63.13	103.32	2	0.001	1.75779397	0.01		0.01	0.01
X26088	IronCap	6.23		2.63	1.65	2.61	2.61		0.02	0	0.96	0.96	82.19	51.67	81.68	2	0.001	1.529612245	0.01		0.02	0.01
X28851	IronCap	4.50		8.36	8.06	8.34	8.34	0.03	0.02	0	0.28	0.28	261.25	251.88	260.63	5	0.001	4.999	0.01	0.03	0.10	0.00
X28211	IronCap	6.80		4.86	4.37	4.86	4.86	0.05	0.01	0	0.49	0.49	151.88	136.56	151.72	3	0.001	2.999	0.01	0.03	0.10	0.00
X24925	IronCap	6.90		6.15	5.34	6.14	6.14	0.03	0.01	0	0.80	0.80	192.19	166.88	191.88	4	0.001	3.999	0.02	0.03	0.10	0.00
X27364	IronCap	5.69		3.57	2.79	3.55	3.55		0.02	0	0.75	0.75	111.56	87.29	110.80	2	0.001	2.385934673	0.01		0.02	0.01
X28751	IronCap	6.70		2.54	2.46	2.54	2.54	0.01	0.01	0	0.08	0.08	79.38	76.88	79.22	2	0.001	1.999	0.01	0.03	0.10	0.00
X25998	IronCap	7.15		4.46	3.27	4.42	4.42		0.04	0	1.15	1.15	139.38	102.29	138.11	4	0.001	3.825530612	0.06		0.11	0.06
X67849	IronCap	4.60		5.78	4.90	5.62	5.62	0.16	0.16	0	0.72	0.72	180.63	153.13	175.63	5	0.001	4.999	0.04	0.03	0.10	0.02
H48761	IronCap	6.31		6.31	3.05	6.29	6.29		0.02	0.00	3.24	3.24	197.19	95.31	196.55	6	0.001	5.899	0.02	0.03		0.00
X28301	IronCap	7.00		5.19	5.01	5.19	5.19	0.05	0.01	0	0.18	0.18	162.19	156.56	162.03	5	0.001	4.999	0.01	0.03	0.10	0.00
X27427	IronCap	4.52		4.67	3.15	4.59	4.59		0.08	0	1.45	1.45	145.94	98.33	143.49	5	0.001	4.521613065	0.02		0.06	0.02
X27368	IronCap	7.08		5.77	4.04	5.73	5.73		0.04	0	1.69	1.69	180.31	126.25	179.20	6	0.001	5.652266332	0.05		0.08	0.05
X67459	IronCap	5.70		3.97	3.70	3.95	3.95	0.03	0.02	0	0.25	0.25	124.06	115.63	123.44	4	0.001	3.999	0.01	0.03	0.10	0.00
X25974	IronCap	6.00		4.92	4.39	4.91	4.91	0.02	0.01	0	0.52	0.52	153.75	137.19	153.44	5	0.001	4.999	0.01	0.03	0.20	0.00
X27532	IronCap	4.16		7.81	5.28	7.70	7.70		0.11	0	2.42	2.42	244.06	165.00	240.58	8	0.001	8.039201005	0.02		0.03	0.02
H47353	IronCap	5.78		3.27	2.31	3.25	3.25		0.02	0	0.94	0.94	102.19	72.08	101.43	4	0.001	3.570428571	0.01		0.04	0.01
X27669	IronCap	5.96		6.28	4.80	6.24	6.24		0.04	0	1.44	1.44	196.25	150.00	194.88	7	0.001	6.908547739	0.03		0.06	0.03
H46781	IronCap	6.53		5.40	4.43	5.37	5.37		0.03	0	0.94	0.94	168.75	138.33	167.71	6	0.001	6.029150754	0.03		0.09	0.03
X26107	IronCap	4.77		4.49	2.99	4.46	4.46		0.03	0	1.47	1.47	140.31	93.33	139.43	5	0.001	5.101040816	0.01		0.03	0.01
H46949	IronCap	7.11		3.37	2.15	3.36	3.36		0.01	0.00	1.21	1.21	105.31	67.19	104.96	4	0.001	3.899	0.01	0.01		0.00
X28314	IronCap	7.10		5.16	4.92	5.16	5.16	0.01	0.01	0	0.24	0.24	161.25	153.75	161.09	6	0.001	5.999	0.01	0.03	0.10	0.00
IC COMP 14	IronCap	5.95		4.34	3.39	4.31	4.31		0.03	0.00	0.92	0.92	135.63	105.83	134.59	5	0.001	5.049505051	0.02		0.07	0.02
X26159	IronCap	5.20		6.68	6.19	6.68	6.68	0.02	0.01	0	0.48	0.48	208.75	193.44	208.59	8	0.001	7.999	0.01	0.03	0.20	0.00
X66869	IronCap	6.40		4.99	3.97	4.92	4.92	0.09	0.07	0	0.95	0.95	155.94	124.06	153.75	6	0.001	5.999	0.01	0.03	0.10	0.00
X24935	IronCap	7.70		6.51	5.53	6.51	6.51	0.04	0.01	0	0.98	0.98	203.44	172.81	203.28	8	0.001	7.999	0.10	0.08	0.30	0.02
H48859	IronCap	7.61		6.78	4.83	6.76	6.76		0.02	0	1.93	1.93	211.88	150.83	211.18	8	0.001	8.417367347	0.11		0.36	0.11
H46744	IronCap	7.61		2.71	2.47	2.70	2.70		0.01	0.00	0.23	0.23	84.69	77.19	84.32	3	0.001	3.399	0.04	0.15		0.00
X28374	IronCap	7.30		2.30	2.15	2.29	2.29	0.03	0.01	0	0.14	0.14	71.88	67.19	71.56	3	0.001	2.999	0.01	0.03	0.10	0.00
X27531	IronCap	7.57		5.34	4.07	5.31	5.31		0.03	0	1.24	1.24	166.88	127.29	165.90	7	0.001	7.034175879	0.04		0.11	0.04

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
X67741	IronCap	7.70		3.99	3.31	3.77	3.77	0.58	0.22	0	0.46	0.46	124.69	103.44	117.81	5	0.001	4.999	0.03	0.05	0.20	0.00
H48926	IronCap	7.41		6.76	5.50	6.73	6.73		0.03	0	1.23	1.23	211.25	171.88	210.34	9	0.001	8.927571429	0.09		0.28	0.09
X66721	IronCap	4.75		3.98	2.66	3.95	3.95		0.03	0	1.29	1.29	124.38	83.13	123.34	5	0.001	5.27538191	0.01		0.02	0.01
X28375	IronCap	6.93		2.60	1.51	2.59	2.59		0.01	0	1.07	1.07	81.25	47.29	80.81	4	0.001	3.51658794	0.01		0.05	0.01
H48900	IronCap	7.15		3.76	2.51	3.75	3.75		0.01	0.00	1.24	1.24	117.50	78.44	117.14	5	0.001	5.199	0.01	0.02		0.00
X24946	IronCap	7.50		2.16	2.00	2.16	2.16	0.02	0.01	0	0.16	0.16	67.50	62.50	67.34	3	0.001	2.999	0.01	0.03	0.10	0.00
X28325	IronCap	6.30		4.23	3.91	4.23	4.23	0.01	0.01	0	0.32	0.32	132.19	122.19	132.03	6	0.001	5.999	0.01	0.03	0.10	0.00
H48432	IronCap	6.65		4.78	3.23	4.73	4.73		0.05	0	1.50	1.50	149.38	100.83	147.72	7	0.001	6.886755102	0.05		0.15	0.05
X25373	IronCap	6.30		2.70	2.57	2.70	2.70	0.02	0.01	0	0.13	0.13	84.38	80.31	84.22	4	0.001	3.999	0.01	0.03	0.10	0.00
X26085	IronCap	7.31		2.19	1.59	2.18	2.18		0.01	0	0.59	0.59	68.44	49.58	68.11	3	0.001	3.315326531	0.01		0.05	0.01
X26169	IronCap	6.20		3.96	3.79	3.92	3.92	0.06	0.04	0	0.13	0.13	123.75	118.44	122.50	6	0.001	5.999	0.01	0.03	0.10	0.00
X29259	IronCap	4.48		5.23	4.45	5.19	5.19		0.04	0	0.74	0.74	163.44	139.17	162.18	8	0.001	8.039201005	0.01		0.03	0.01
X25718	IronCap	7.60		1.28	1.08	1.28	1.28	0.01	0.01	0	0.20	0.20	40.00	33.75	39.84	2	0.001	1.999	0.01	0.03	0.10	0.00
H48749	IronCap	7.23		4.93	3.41	4.91	4.91		0.02	0.00	1.50	1.50	154.06	106.56	153.41	8	0.001	7.799	0.03	0.03		0.00
X29374	IronCap	4.99		3.93	2.66	3.90	3.90		0.03	0	1.24	1.24	122.81	83.13	122.00	6	0.001	6.37655102	0.01		0.01	0.01
X27359	IronCap	7.50		4.81	3.67	4.79	4.79		0.02	0	1.12	1.12	150.31	114.58	149.64	8	0.001	7.913572864	0.05		0.17	0.05
H47552	IronCap	7.27		2.98	1.73	2.96	2.96		0.02	0.00	1.23	1.23	93.13	54.06	92.46	5	0.001	4.899	0.01	0.01		0.00
X28931	IronCap	6.50		2.99	2.81	2.97	2.97	0.10	0.02	0	0.16	0.16	93.44	87.81	92.81	5	0.001	4.999	0.45	0.03	0.20	0.43
X67553	IronCap	7.70		2.95	2.55	2.94	2.94	0.02	0.01	0	0.39	0.39	92.19	79.69	91.88	5	0.001	4.999	0.02	0.03	0.10	0.00
X27334	IronCap	5.00		3.85	2.99	3.82	3.82		0.03	0	0.83	0.83	120.31	93.54	119.52	7	0.001	6.531663317	0.01		0.04	0.01
HCT-6	IronCap	7.96		4.40	2.30	4.39	4.39		0.01	0.00	2.09	2.09	137.50	71.88	137.17	8	0.001	7.787944724	0.03		0.11	0.03
HCT-3	IronCap	6.59		2.21	1.83	2.20	2.20		0.01	0	0.37	0.37	69.06	57.08	68.74	4	0.001	4.019100503	0.01		0.04	0.01
HCT-5	IronCap	7.40		3.93	2.57	3.91	3.91		0.02	0	1.33	1.33	122.81	80.42	122.03	7	0.001	7.15980402	0.03		0.12	0.03
HCT-2	IronCap	7.10		1.64	1.55	1.64	1.64	0.02	0.01	0	0.08	0.08	51.25	48.44	51.09	3	0.001	2.999	0.01	0.03	0.10	0.00
HCT-4	IronCap	6.80		4.89	4.16	4.88	4.88	0.04	0.01	0	0.72	0.72	152.81	130.00	152.50	9	0.001	8.999	0.02	0.03	0.10	0.00
HCT-1	IronCap	5.70		3.22	2.85	3.21	3.21	0.08	0.01	0	0.36	0.36	100.63	89.06	100.31	6	0.001	5.999	0.01	0.03	0.10	0.00
X27447	IronCap	7.77		2.78	1.61	2.77	2.77		0.01	0	1.15	1.15	86.88	50.42	86.46	5	0.001	5.27538191	0.02		0.08	0.02
X26179	IronCap	6.60		3.64	3.35	3.64	3.64	0.03	0.01	0	0.29	0.29	113.75	104.69	113.59	7	0.001	6.999	0.01	0.03	0.10	0.00
H48559A	IronCap	6.29		2.19	1.17	2.18	2.18		0.01	0.00	1.01	1.01	68.44	36.56	68.05	4	0.001	4.199	0.01	0.01		0.00
H48504	IronCap	5.62		4.68	3.69	4.65	4.65		0.03	0.00	0.96	0.96	146.25	115.31	145.29	9	0.001	9.199	0.01	0.01		0.00
X25438	IronCap	7.60		1.99	1.84	1.99	1.99	0.01	0.01	0	0.15	0.15	62.19	57.50	62.03	4	0.001	3.999	0.01	0.03	0.10	0.00
X29384	IronCap	6.74		3.84	2.61	3.81	3.81		0.03	0	1.20	1.20	120.00	81.46	119.06	8	0.001	7.907163265	0.02		0.06	0.02
H47085	IronCap	7.47		4.27	3.03	4.23	4.23		0.04	0	1.20	1.20	133.44	94.58	132.11	9	0.001	9.182673469	0.06		0.20	0.06
HCT-3	IronCap	6.94		3.61	3.59	3.59	3.59		0.02	0.00	0.00	0.00	112.81	112.19	112.19	8	0.001	7.913572864	0.01		0.07	0.01
IC COMP 22	IronCap	7.70		4.83	3.62	4.81	4.80		0.02	0.00	1.18	1.18	150.94	113.13	150.14	11	0.001	10.60506061	0.07		0.19	0.07
X28362	IronCap	7.80		2.25	2.13	2.25	2.25	0.02	0.01	0	0.12	0.12	70.31	66.56	70.16	5	0.001	4.999	0.01	0.03	0.10	0.00
X29355	IronCap	7.09		4.15	2.74	4.12	4.12		0.03	0	1.38	1.38	129.69	85.63	128.72	10	0.001	9.692877551	0.03		0.10	0.03
X26055	IronCap	8.40		1.26	1.10	1.26	1.26	0.01	0.01	0	0.16	0.16	39.38	34.38	39.22	3	0.001	2.999	0.01	0.03	0.20	0.00
X27273	IronCap	5.44		3.20	2.45	3.17	3.17		0.03	0	0.72	0.72	100.00	76.46	99.01	8	0.001	7.913572864	0.07		0.26	0.07
H48517	IronCap	7.66		2.66	1.46	2.63	2.63		0.03	0.00	1.17	1.17	83.13	45.63	82.14	7	0.001	6.899	0.04	0.10		0.00
X66829	IronCap	6.30		2.96	2.79	2.96	2.96	0.01	0.01	0	0.17	0.17	92.50	87.19	92.34	8	0.001	7.999	0.01	0.03	0.10	0.00
X67543	IronCap	7.61		4.99	3.45	4.96	4.96		0.03	0	1.51	1.51	155.94	107.92	155.08	14	0.001	13.5668392	0.11		0.40	0.11
H46962	IronCap	7.09		2.27	1.52	2.25	2.25		0.02	0.00	0.73	0.73	70.94	47.50	70.16	6	0.001	6.299	0.01	0.01		0.00
IC COMP 23	IronCap	7.34		4.63	3.51	4.60	4.60		0.03	0.00	1.09	1.09	144.69	109.79	143.76	13	0.001	13.13031313	0.13		0.43	0.13
H48907	IronCap	7.91		4.05	2.65	4.03	4.03		0.02	0	1.38	1.38	126.56	82.92	126.05	12	0.001	11.98879592	0.14		0.53	0.14
H48909	IronCap	7.93		3.70	3.14	3.68	3.68		0.02	0	0.54	0.54	115.63	98.13	115.05	11	0.001	11.05427638	0.09		0.36	0.09
X66552	IronCap	7.48		2.39	0.64	2.33	2.33		0.06	0.00	1.69	1.69	74.69	19.99	72.76	7	0.001	7.249	0.01	0.04		0.00
H48556	IronCap	6.69		1.27	1.01	1.26	1.26		0.01	0	0.25	0.25	39.69	31.46	39.23	4	0.001	3.953081633	0.01		0.03	0.01
X28877	IronCap	6.90		2.20	2.16	2.20	2.20	0.04	0.01	0	0.04	0.04	68.75	67.50	68.59	7	0.001	6.999	0.01	0.03	0.10	0.00
X28785	IronCap	8.08		1.30	0.92	1.29	1.29		0.01	0	0.37	0.37	40.63	28.75	40.33	4	0.001	4.270356784	0.03		0.08	0.03

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
X25843	IronCap	8.10		3.31	3.16	3.31	3.31	0.01	0.01	0	0.15	0.15	103.44	98.75	103.28	11	0.001	10.999	0.09	0.10	0.40	0.00
X25045	IronCap	8.50		2.08	1.99	2.08	2.08	0.04	0.01	0	0.09	0.09	65.00	62.19	64.84	7	0.001	6.999	0.05	0.05	0.20	0.00
H48852	IronCap	7.92		3.19	2.07	3.17	3.17		0.02	0	1.10	1.10	99.69	64.79	99.20	11	0.001	10.71328571	0.09		0.30	0.09
IC COMP 25	IronCap	8.00		4.51	4.09	4.48	4.48		0.03	0.00	0.39	0.39	140.94	127.92	140.08	15	0.151515152	15	0.15		0.51	0.15
X28887	IronCap	6.40		2.04	1.85	2.02	2.02	0.07	0.02	0	0.17	0.17	63.75	57.81	63.13	7	0.001	6.999	0.01	0.03	0.10	0.00
X67563	IronCap	8.10		5.73	5.06	5.72	5.72	0.01	0.01	0	0.66	0.66	179.06	158.13	178.75	20	5	15	0.22	0.22	0.80	0.00
X27659	IronCap	8.09		3.84	2.94	3.83	3.83		0.01	0	0.89	0.89	120.00	91.88	119.59	14	0.001	13.94372362	0.12		0.33	0.12
X28291	IronCap	8.10		3.80	3.57	3.80	3.80	0.05	0.01	0	0.23	0.23	118.75	111.56	118.59	14	0.001	13.999	0.17	0.15	0.60	0.02
X29942	IronCap	8.11		3.71	2.68	3.69	3.69		0.02	0	1.01	1.01	115.94	83.75	115.45	14	0.001	14.02961224	0.13		0.46	0.13
X28922	IronCap	7.00		1.85	1.71	1.83	1.83	0.09	0.02	0	0.12	0.12	57.81	53.44	57.19	7	0.001	6.999	0.01	0.03	0.20	0.00
X28897	IronCap	6.60		1.81	1.71	1.80	1.80	0.07	0.01	0	0.09	0.09	56.56	53.44	56.25	7	0.001	6.999	0.01	0.03	0.20	0.00
X26039	IronCap	8.50		3.08	2.80	3.06	3.06	0.01	0.02	0	0.26	0.26	96.25	87.50	95.63	12	0.001	11.999	0.12	0.14	0.50	0.00
X28867	IronCap	6.20		2.55	2.48	2.52	2.52	0.03	0.03	0	0.04	0.04	79.69	77.50	78.75	10	0.001	9.999	0.01	0.03	0.10	0.00
X25308	IronCap	7.92		2.87	1.67	2.80	2.80		0.07	0	1.12	1.12	89.69	52.29	87.40	11	0.001	11.30553266	0.04		0.14	0.04
H48532	IronCap	8.01		0.99	0.73	0.97	0.96		0.02	0.01	0.23	0.23	30.94	22.81	30.00	4	0.001	3.899	0.01	0.03		0.00
H46895	IronCap	7.98		3.71	2.52	3.69	3.69		0.02	0.00	1.17	1.17	115.94	78.75	115.28	15	0.1	15	0.06	0.17		0.00
X25832	IronCap	8.03		7.01	4.95	6.98	6.98		0.03	0	2.03	2.03	219.06	154.79	218.25	29	14.33673469	15	0.25		0.98	0.25
X66819	IronCap	6.90		1.96	1.75	1.88	1.88	0.11	0.08	0	0.13	0.13	61.25	54.69	58.75	8	0.001	7.999	0.01	0.06	0.20	0.00
X25301	IronCap	8.50		4.40	4.12	4.40	4.40	0.03	0.01	0	0.28	0.28	137.50	128.75	137.34	19	4	15	0.15	0.16	0.60	0.00
H48305	IronCap	8.13		5.68	5.67	5.67	5.67		0.01	0.00	0.00	0.00	177.50	177.19	177.19	25	9.6	15	0.26	0.73		0.00
H47578	IronCap	8.30		4.14	3.01	4.13	4.13		0.01	0.00	1.12	1.12	129.38	94.06	129.02	18	3.1	15	0.14	0.50		0.00
H48210	IronCap	8.30		3.38	2.37	3.37	3.37		0.01	0.00	1.00	1.00	105.63	74.06	105.28	15	0.001	14.899	0.11	0.32		0.00
X29099	IronCap	8.60		2.49	2.31	2.47	2.47	0.03	0.02	0	0.16	0.16	77.81	72.19	77.19	11	0.001	10.999	0.07	0.08	0.30	0.00
X29231	IronCap	6.66		1.89	1.27	1.85	1.85		0.04	0	0.59	0.59	59.06	39.58	57.90	9	0.001	8.541713568	0.01		0.03	0.01
X25329	IronCap	8.20		2.39	2.26	2.39	2.39	0.01	0.01	0	0.13	0.13	74.69	70.63	74.53	11	0.001	10.999	0.11	0.14	0.50	0.00
X24966	IronCap	7.95		2.33	1.06	2.33	2.33		0.01	0	1.27	1.27	72.81	33.13	72.66	11	0.001	10.8030201	0.09		0.32	0.09
H48913	IronCap	8.34		3.73	2.29	3.72	3.72		0.01	0.00	1.43	1.43	116.56	71.56	116.22	17	2.4	15	0.15	0.51		0.00
X28384	IronCap	8.40		3.49	3.22	3.49	3.49	0.03	0.01	0	0.27	0.27	109.06	100.63	108.91	17	2	15	0.14	0.15	0.60	0.00
H48312	IronCap	8.24		3.41	2.17	3.40	3.40		0.01	0	1.23	1.23	106.56	67.71	106.20	17	1.581632653	15	0.18		0.63	0.18
X27515	IronCap	7.67		6.09	3.94	6.06	6.06		0.03	0	2.12	2.12	190.31	123.13	189.35	30	15.2	15	0.47		1.82	0.47
X67506	IronCap	8.00		4.90	4.40	4.88	4.88	0.01	0.02	0	0.48	0.48	153.13	137.50	152.50	25	10	15	0.26	0.24	0.90	0.02
X25831	IronCap	8.20		5.40	4.92	5.40	5.40	0.01	0.01	0	0.48	0.48	168.75	153.75	168.59	28	13	15	0.28	0.28	1.00	0.00
H47015	IronCap	7.31		2.16	1.65	2.14	2.14		0.02	0	0.49	0.49	67.50	51.46	66.88	11	0.001	11.2234898	0.04		0.10	0.04
X67573	IronCap	8.00		5.40	4.71	5.35	5.35	0.02	0.05	0	0.64	0.64	168.75	147.19	167.19	29	14	15	0.34	0.32	1.20	0.02
X24984	IronCap	8.50		1.46	1.36	1.46	1.46	0.03	0.01	0	0.09	0.09	45.63	42.50	45.47	8	0.001	7.999	0.08	0.09	0.30	0.00
X67495	IronCap	8.30		5.59	4.73	5.58	5.58	0.02	0.01	0	0.85	0.85	174.69	147.81	174.38	31	16	15	0.35	0.32	1.20	0.03
X66846	IronCap	6.90		1.39	1.31	1.38	1.38	0.03	0.01	0	0.07	0.07	43.44	40.94	43.13	8	0.001	7.999	0.01	0.03	0.10	0.00
H48238	IronCap	8.32		3.58	2.84	3.57	3.57		0.01	0.00	0.73	0.73	111.88	88.75	111.52	21	5.8	15	0.20	0.71		0.00
H48929	IronCap	8.46		3.58	2.42	3.57	3.57		0.01	0.00	1.15	1.15	111.88	75.63	111.53	22	6.5	15	0.21	0.80		0.00
X26126	IronCap	7.84		4.22	2.41	4.20	4.20		0.02	0	1.79	1.79	131.88	75.21	131.26	26	10.51020408	15	0.24		0.95	0.24
H48872	IronCap	8.13		5.55	4.81	5.53	5.53		0.02	0.00	0.72	0.72	173.44	150.31	172.79	35	19.7	15	0.31	1.12		0.00
X29899	IronCap	7.96		3.64	2.33	3.61	3.61		0.03	0	1.29	1.29	113.75	72.71	112.94	23	7.959183673	15	0.29		1.05	0.29
X26416	IronCap	8.30		2.96	2.99	2.96	2.99	0.02	0.01	0	-0.04	0.00	92.50	93.44	93.44	19	4	15	0.17	0.17	0.60	0.00
X67502	IronCap	7.78		4.82	4.01	4.79	4.79		0.03	0	0.78	0.78	150.63	125.42	149.74	31	15.65326633	15	0.29		1.09	0.29
HCT-5	IronCap	8.75		5.24	5.22	5.22	5.22		0.02	0.00	0.00	0.00	163.75	163.13	163.13	34	18.91959799	15	0.37		1.43	0.37
IC COMP 15	IronCap	8.41		3.77	2.99	3.75	3.75		0.02	0.00	0.77	0.77	117.81	93.33	117.25	25	10	15	0.19		0.67	0.19
X66938	IronCap	8.20		5.00	3.71	4.98	4.98		0.02	0	1.27	1.27	156.25	116.04	155.66	34	19.43877551	15	0.26		0.94	0.26
X67914	IronCap	8.50		2.00	1.88	2.00	2.00	0.02	0.01	0	0.12	0.12	62.50	58.75	62.34	14	0.001	13.999	0.11	0.12	0.50	0.00
X24989	IronCap	8.12		2.92	2.20	2.91	2.91		0.01	0	0.71	0.71	91.25	68.75	90.86	20	5.408163265	15	0.17		0.63	0.17
H46894	IronCap	8.26		4.25	3.73	4.23	4.23		0.02	0.00	0.50	0.50	132.81	116.56	132.16	30	15.3	15	0.19	0.72		0.00

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
X25865	IronCap	8.18		4.77	3.30	4.74	4.74		0.03	0	1.44	1.44	149.06	103.13	148.28	36	20.71428571	15	0.37		1.42	0.37
H48278	IronCap	7.88		6.75	5.06	6.73	6.73		0.02	0	1.67	1.67	210.94	158.13	210.22	51	36.02040816	15	0.42		1.46	0.42
X67556	IronCap	8.06		4.97	3.41	4.94	4.94		0.03	0	1.54	1.54	155.31	106.46	154.46	38	23.26530612	15	0.42		1.59	0.42
X66926	IronCap	8.50		2.53	2.32	2.52	2.52	0.02	0.01	0	0.20	0.20	79.06	72.50	78.75	20	5	15	0.17	0.18	0.70	0.00
H48251	IronCap	8.34		4.21	3.01	4.20	4.20		0.01	0.00	1.19	1.19	131.56	94.06	131.22	34	18.5	15	0.31	1.15		0.00
X26408	IronCap	7.90		4.73	4.75	4.73	4.75	0.03	0.01	0	-0.02	0.00	147.81	148.44	148.44	38	23	15	0.46	0.45	1.70	0.01
H48885	IronCap	8.40		3.58	2.65	3.57	3.57		0.01	0.00	0.92	0.92	111.88	82.81	111.53	30	15.3	15	0.24	0.88		0.00
X27628	IronCap	8.11		2.72	1.65	2.70	2.70		0.02	0	1.06	1.06	85.00	51.46	84.52	23	8.366834171	15	0.16		0.58	0.16
H48878	IronCap	8.07		5.87	4.93	5.85	5.85		0.02	0	0.92	0.92	183.44	154.17	182.88	51	36.02040816	15	0.58		2.31	0.58
X29958	IronCap	8.22		2.64	1.85	2.63	2.63		0.01	0	0.78	0.78	82.50	57.92	82.15	23	7.959183673	15	0.22		0.82	0.22
X25626	IronCap	7.97		3.91	2.77	3.88	3.88		0.03	0	1.11	1.11	122.19	86.46	121.30	34	19.43877551	15	0.18		0.66	0.18
X25665	IronCap	8.60		4.62	4.16	4.62	4.62	0.02	0.01	0	0.46	0.46	144.38	130.00	144.22	41	26	15	0.38	0.36	1.30	0.02
H48248	IronCap	8.17		3.74	2.62	3.72	3.72		0.02	0	1.10	1.10	116.88	81.88	116.23	33	18.16326531	15	0.30		1.03	0.30
HCT-2	IronCap	8.73		4.07	3.69	4.05	4.05		0.02	0.00	0.36	0.36	127.19	115.31	126.55	36	21.4321608	15	0.36		1.40	0.36
X67517	IronCap	8.30		3.43	3.24	3.43	3.43	0.01	0.01	0	0.19	0.19	107.19	101.25	107.03	31	16	15	0.39	0.37	1.30	0.02
X26407	IronCap	8.16		3.65	2.74	3.63	3.63		0.02	0	0.89	0.89	114.06	85.63	113.51	33	18.16326531	15	0.37		1.44	0.37
X25655	IronCap	8.60		3.60	3.39	3.58	3.58	0.02	0.02	0	0.19	0.19	112.50	105.94	111.88	33	18	15	0.24	0.25	0.90	0.00
HCT-4	IronCap	8.80		0.68	0.56	0.67	0.66		0.01	0.01	0.10	0.10	21.25	17.50	20.71	6	0.001	6.280407035	0.01		0.05	0.01
H48265	IronCap	8.34		3.31	2.64	3.30	3.30		0.01	0.00	0.66	0.66	103.44	82.50	103.08	32	16.6	15	0.27	0.98		0.00
X25451	IronCap	8.20		4.49	3.96	4.49	4.49	0.01	0.01	0	0.53	0.53	140.31	123.75	140.16	44	29	15	0.46	0.46	1.70	0.00
H47546	IronCap	7.83		2.84	1.53	2.82	2.82		0.02	0	1.29	1.29	88.75	47.92	88.16	28	13.06122449	15	0.31		1.22	0.31
X67751	IronCap	8.50		3.53	3.30	3.53	3.53	0.04	0.01	0	0.23	0.23	110.31	103.13	110.16	36	21	15	0.37	0.36	1.30	0.01
X25652	IronCap	8.08		4.13	2.70	4.06	4.06		0.07	0	1.36	1.36	129.06	84.38	126.79	42	26.95979899	15	0.15		0.51	0.15
X25854	IronCap	8.50		3.87	3.69	3.87	3.87	0.01	0.01	0	0.18	0.18	120.94	115.31	120.78	40	25	15	0.39	0.39	1.40	0.00
IC COMP 24	IronCap	8.40		3.73	2.79	3.72	3.71		0.01	0.00	0.93	0.93	116.56	87.08	116.05	39	23.75	15	0.41		1.42	0.41
H48336	IronCap	8.67		4.97	2.68	4.96	4.96		0.01	0.00	2.28	2.28	155.31	83.75	154.96	52	37.4	15	0.52	1.89		0.00
X26501	IronCap	8.24		6.35	5.25	6.33	6.33		0.02	0	1.08	1.08	198.44	164.17	197.81	67	51.91919192	15	0.48		1.90	0.48
IC COMP 21	IronCap	8.33		4.81	3.86	4.78	4.78		0.03	0.00	0.92	0.92	150.31	120.63	149.45	51	36.25	15	0.41		1.46	0.41
X26837	IronCap	8.20		4.83	3.53	4.81	4.81		0.02	0	1.28	1.28	150.94	110.21	150.23	52	37.29591837	15	0.56		1.92	0.56
X25432	IronCap	8.02		4.18	2.66	4.16	4.16		0.02	0	1.50	1.50	130.63	83.13	130.05	46	30.91836735	15	0.47		1.95	0.47
X29979	IronCap	8.10		4.08	2.89	4.07	4.07		0.01	0	1.17	1.17	127.50	90.42	127.10	47	32.19387755	15	0.58		2.12	0.58
X67523	IronCap	8.37		3.15	2.27	3.14	3.14		0.01	0	0.87	0.87	98.44	71.04	98.10	37	21.93467337	15	0.18		0.74	0.18
H47103	IronCap	8.48		4.16	3.00	4.15	4.15		0.01	0	1.15	1.15	130.00	93.75	129.63	50	34.74489796	15	0.48		1.86	0.48
X25662	IronCap	8.19		4.84	3.35	4.78	4.78		0.06	0	1.43	1.43	151.25	104.58	149.36	59	43.67346939	15	0.45		1.81	0.45
X67498	IronCap	8.45		2.61	1.48	2.60	2.60		0.01	0	1.12	1.12	81.56	46.25	81.34	33	17.66331658	15	0.29		1.12	0.29
X67485	IronCap	8.50		3.46	3.28	3.39	3.39	0.02	0.07	0	0.11	0.11	108.13	102.50	105.94	44	29	15	0.61	0.57	2.10	0.04
X67528	IronCap	8.40		3.23	3.09	3.23	3.23	0.02	0.01	0	0.14	0.14	100.94	96.56	100.78	42	27	15	0.54	0.49	1.80	0.05
IC COMP 2	IronCap	8.70		3.15	2.35	3.13	3.12		0.02	0.00	0.78	0.78	98.44	73.33	97.63	41	26.25	15	0.40		1.52	0.40
X29077	IronCap	8.39		2.08	1.43	2.07	2.07		0.01	0	0.65	0.65	65.00	44.58	64.77	29	14.33673469	15	0.29		1.04	0.29
H48545	IronCap	8.08		0.50	0.40	0.49	0.47		0.01	0.02	0.07	0.07	15.63	12.50	14.78	7	0.001	6.799	0.01	0.01		0.00
X29093	IronCap	9.22		1.45	1.09	1.44	1.44		0.01	0	0.35	0.35	45.31	33.96	44.90	21	5.663265306	15	0.19		0.72	0.19
X25864	IronCap	8.50		3.58	3.51	3.58	3.58	0.03	0.01	0	0.07	0.07	111.88	109.69	111.72	56	41	15	0.60	0.57	2.10	0.03
HCT-1	IronCap	9.55		2.50	2.49	2.49	2.49		0.01	0.00	0.00	0.00	78.13	77.81	77.81	41	26.20603015	15	0.41		1.52	0.41
X25435	IronCap	8.34		3.71	2.29	3.70	3.70		0.01	0	1.41	1.41	115.94	71.46	115.50	62	46.55778894	15	0.55		2.30	0.55
X29089	IronCap	9.30		1.37	1.22	1.36	1.36	0.09	0.01	0	0.14	0.14	42.81	38.13	42.50	23	8	15	0.21	0.23	0.90	0.00
X25132	IronCap	8.40		0.90	0.87	0.90	0.90	0.05	0.01	0	0.03	0.03	28.13	27.19	27.97	16	1	15	0.08	0.09	0.30	0.00
H47057	IronCap	8.85		2.13	2.12	2.12	2.12		0.01	0.00	0.00	0.00	66.56	66.25	66.25	40	25.4	15	0.24	0.87		0.00
X25728	IronCap	8.60		2.58	2.53	2.57	2.57	0.02	0.01	0	0.04	0.04	80.63	79.06	80.31	52	37	15	0.61	0.60	2.20	0.01
X25727	IronCap	8.36		4.49	3.43	4.47	4.47		0.02	0	1.05	1.05	140.31	107.08	139.78	95	80.47738693	15	1.02		4.02	1.02
X26791	IronCap	8.18		2.24	1.18	2.22	2.22		0.02	0	1.04	1.04	70.00	36.88	69.49	51	36.02040816	15	0.19		0.67	0.19

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Original Zone	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %
X30399	IronCap	8.94		0.65	0.44	0.64	0.64		0.01	0	0.20	0.20	20.31	13.79	19.90	15	0.306122449	15	0.17		0.61	0.17
X25188	IronCap	8.60		2.00	1.98	2.00	2.00	0.06	0.01	0	0.02	0.02	62.50	61.88	62.34	49	34	15	0.57	0.52	1.90	0.05
X67591	IronCap	8.70		2.66	2.44	2.66	2.66	0.01	0.01	0	0.22	0.22	83.13	76.25	82.97	66	51	15	0.84	0.82	3.00	0.02
X29971	IronCap	8.36		2.97	2.33	2.96	2.96		0.01	0	0.63	0.63	92.81	72.71	92.45	82	67.07070707	15	0.62		2.47	0.62
IC COMP 1	IronCap	8.51		2.50	1.81	2.46	2.46		0.04	0.00	0.64	0.64	78.13	56.67	76.79	70	55	15	0.55		2.10	0.55
X25611	IronCap	8.39		1.29	0.89	1.27	1.27		0.02	0	0.38	0.38	40.31	27.71	39.73	38	22.93969849	15	0.17		0.65	0.17
X28052	IronCap	8.63		1.55	1.10	1.54	1.54		0.01	0	0.44	0.44	48.44	34.38	48.17	61	46.2244898	15	0.55		2.09	0.55
X25175	IronCap	8.70		1.45	1.38	1.45	1.45	0.03	0.01	0	0.07	0.07	45.31	43.13	45.16	62	47	15	0.74	0.64	2.30	0.10
X30379	IronCap	8.03		2.40	1.67	2.37	2.37		0.03	0	0.70	0.70	75.00	52.29	74.13	102	87.04081633	15	0.63		2.33	0.63
X28196	IronCap	8.80		0.55	0.54	0.55	0.55	0.02	0.01	0	0.01	0.01	17.19	16.88	17.03	25	10	15	0.25	0.24	0.90	0.01
IC COMP 5	IronCap	8.73		1.73	1.29	1.72	1.72		0.01	0.00	0.43	0.43	54.06	40.42	53.74	94	78.75	15	0.52		1.91	0.52
X26469	IronCap	8.74		1.85	1.49	1.84	1.84		0.01	0	0.36	0.36	57.81	46.46	57.60	108	93.41836735	15	0.42		1.64	0.42
IC COMP 6	IronCap	8.71		2.16	1.76	2.15	2.14		0.01	0.00	0.38	0.38	67.50	55.00	67.03	135	120	15	1.08		4.16	1.08
X25155	IronCap	8.50		1.39	1.30	1.38	1.38	0.01	0.01	0	0.08	0.08	43.44	40.63	43.13	88	73	15	1.10	1.00	3.70	0.10
X27062	IronCap	8.67		1.68	1.11	1.67	1.67		0.01	0	0.56	0.56	52.50	34.79	52.32	111	95.96938776	15	0.93		3.46	0.93
X30386	IronCap	8.62		1.00	0.60	0.98	0.98		0.02	0	0.38	0.38	31.25	18.88	30.72	84	69.18367347	15	0.70		2.59	0.70
IC COMP 4	IronCap	9.37		0.79	0.73	0.79	0.76		0.00	0.03	0.02	0.02	24.69	22.92	23.69	79	63.75	15	0.31		1.18	0.31
IC COMP 8	IronCap	8.88		1.66	1.25	1.65	1.64		0.01	0.01	0.39	0.39	51.88	38.96	51.30	198	182.5	15	1.55		5.81	1.55
X27058	IronCap	8.82		0.66	0.44	0.65	0.65		0.01	0	0.21	0.21	20.63	13.65	20.30	88	73.01020408	15	0.38		1.41	0.38
IC COMP 3	IronCap	9.10		0.90	0.73	0.89	0.87		0.01	0.01	0.15	0.15	28.13	22.71	27.34	126	111.25	15	0.96		3.52	0.96
X27066	IronCap	9.09		0.50	0.35	0.50	0.50		0.00	0	0.14	0.14	15.63	11.08	15.54	85	70.45918367	15	0.36		1.34	0.36
IC COMP 7	IronCap	8.73		1.00	0.60	0.99	0.98		0.01	0.02	0.38	0.38	31.25	18.77	30.54	258	242.5	15	2.11		7.73	2.11
X28031	IronCap	8.40		0.55	0.52	0.55	0.55	0.01	0.01	0	0.03	0.03	17.19	16.25	17.03	153	138	15	1.49	1.10	4.00	0.39
X25165	IronCap	8.40		0.70	0.66	0.68	0.68	0.02	0.02	0	0.02	0.02	21.88	20.63	21.25	193	178	15	2.11	1.88	6.90	0.23
X28019	IronCap	8.30		0.52	0.47	0.52	0.52	0.01	0.01	0	0.05	0.05	16.25	14.69	16.09	158	143	15	1.69	1.20	4.40	0.49
X25111	IronCap	8.20		0.23	0.22	0.22	0.22	0.01	0.01	0	0.00	0.00	7.19	6.88	6.88	144	129	15	1.29	1.18	4.30	0.11
X25091	IronCap	8.60		0.15	0.13	0.14	0.14	0.02	0.01	0	0.01	0.01	4.69	4.06	4.38	126	111	15	1.27	1.28	4.70	0.00
X25101	IronCap	8.20		0.15	0.16	0.14	0.16	0.01	0.01	0	-0.02	0.00	4.69	5.00	5.00	166	151	15	1.66	1.51	5.50	0.15
X25122	IronCap	8.00		0.17	0.16	0.16	0.16	0.01	0.01	0	0.00	0.00	5.31	5.00	5.00	179	164	15	1.74	1.55	5.70	0.19
X25143	IronCap	8.50		0.11	0.12	0.10	0.12	0.01	0.01	0	-0.02	0.00	3.44	3.75	3.75	171	156	15	1.67	1.48	5.40	0.19

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
H42801	0.83	2.27	2.75	7.16	-257.24	-258.4365	-255.35	-256.5527481	-256.16	0.00	3.86941E-06	0.01	0.00	0.010	0.01	0.01	1	Agree		77200	7.72	126.7	12
H42619	3.33	2.27	3.00	19.19	-91.78	-94.374	-91.78	-94.374	-92.10	0.03	1.0596E-05	0.03	0.03	0.028	0.01	0.02	1	Agree		71600	7.16	27	27
H46054	0.83	2.05	7.74	20.90	-197.33	-203.124	-196.07	-201.8674361	-201.08	0.03	4.92308E-06	0.05	0.03	0.029	0.01	0.01	1	Agree		85200	8.52	3.3	9
H46211	0.83	2.27	12.49	20.90	-315.63	-315.624	-309.04	-309.0396202	-313.35	0.00	3.16832E-06	0.00	0.01	0.010	0.01	0.01	2	Disagree	0.77	67100	6.71	22.9	30
14541	0.83	2.27	3.50	8.30	-246.19	-247.1865	-242.86	-243.8634719	-244.91	0.00	4.04551E-06	0.00	0.00	0.010	0.01	0.01	2	Disagree	1.86	55100	5.51	264	700
H46155	0.83	1.59	0.75	8.59	-77.63	-78.124	-74.13	-74.63325921	-76.53	0.01	0.0000128	0.01	0.01	0.010	0.01	0.02	1	Agree		89700	8.97	9.2	73
H46222	0.42	2.27	9.49	19.76	-292.81	-297.8115	-289.67	-294.6646202	-295.54	0.02	3.35782E-06	0.02	0.02	0.017	0.01	0.01	2	Disagree	0.77	71700	7.17	16.5	30
H46210	0.83	2.05	13.73	22.62	-335.51	-342.8115	-335.51	-342.8115	-340.77	0.02	2.91705E-06	0.02	0.02	0.021	0.01	0.01	1	Agree		67300	6.73	2.6	14
H46213	1.67	2.27	13.98	73.02	-212.81	-217.8115	-208.71	-213.7125337	-215.54	0.02	4.5911E-06	0.03	0.02	0.023	0.01	0.01	2	Disagree	0.59	70900	7.09	12.5	50
H46198	0.83	1.59	10.99	20.90	-300.63	-308.124	-299.37	-306.8688947	-306.53	0.02	3.24544E-06	0.04	0.02	0.024	0.01	0.01	1	Agree		68700	6.87	362.8	7
H46209	0.42	2.27	10.99	18.33	-297.00	-304.999	-295.10	-303.094827	-302.73	0.03	3.27869E-06	0.03	0.03	0.026	0.01	0.01	2	Disagree	0.73	80900	8.09	21.5	40
H46131	0.83	0.23	7.74	20.62	-180.74	-185.9365	-180.74	-185.9365	-185.71	0.03	5.37815E-06	0.03	0.03	0.028	0.01	0.00	1	Agree		74700	7.47	2.5	31
H46175	0.83	1.59	8.99	14.89	-210.36	-216.5615	-209.10	-215.3012894	-214.97	0.03	4.6176E-06	0.04	0.03	0.029	0.01	0.01	1	Agree		82000	8.2	210	14
H46132	2.50	4.55	13.24	33.22	-272.63	-280.624	-268.53	-276.5250337	-276.08	0.03	3.56347E-06	0.03	0.03	0.029	0.01	0.02	2	Disagree	1.05	76500	7.65	74.1	50
H42885	0.83	0.23	108.38	145.18	-256.93	-265.624	-256.93	-265.624	-265.40	0.03	3.76471E-06	0.03	0.03	0.033	0.01	0.00	1	Agree		71800	7.18	9.3	20
H46123	0.83	1.82	13.49	23.19	-246.21	-255.3115	-244.96	-254.0549361	-253.49	0.04	3.91677E-06	0.06	0.04	0.036	0.01	0.01	1	Agree		69700	6.97	53.5	9
H46212	2.50	2.50	9.49	25.48	-193.74	-200.9365	-193.74	-200.9365	-198.44	0.04	4.97667E-06	0.04	0.04	0.036	0.01	0.01	1	Agree		57700	5.77	2.2	26
H46216	3.33	4.55	19.98	51.54	-299.88	-311.874	-292.98	-304.9771202	-307.33	0.04	3.20641E-06	0.04	0.04	0.039	0.01	0.01	2	Disagree	0.79	70200	7.02	12.9	30
H46219	0.83	2.27	22.73	60.71	-237.81	-247.8115	-225.28	-235.282327	-245.54	0.04	4.03531E-06	0.05	0.04	0.043	0.01	0.01	2	Disagree	0.49	73400	7.34	20.2	40
H42884	0.42	2.27	92.15	112.82	-231.13	-238.124	-140.74	-147.7385674	-235.85	0.03	4.19948E-06	0.05	0.05	0.047	0.01	0.01	2	Disagree	1.98	68000	6.8	442	100
H42882	1.67	0.23	85.16	120.55	-213.58	-224.374	-213.58	-224.374	-224.15	0.05	4.45682E-06	0.05	0.05	0.048	0.01	0.00	1	Agree		70800	7.08	16.3	27
H42862	0.83	1.59	9.24	40.37	-164.96	-174.0615	-163.39	-172.4902481	-172.47	0.05	5.74506E-06	0.08	0.05	0.053	0.01	0.01	1	Agree		71500	7.15	13.1	12
H42881	3.33	4.55	185.55	221.63	-325.38	-334.374	-141.88	-150.8781539	-329.83	0.03	2.99065E-06	0.06	0.06	0.060	0.01	0.01	2	Disagree	0.68	59600	5.96	9.2	80
H42887	3.33	0.68	85.66	150.05	-163.91	-175.3115	-163.91	-175.3115	-174.63	0.07	5.7041E-06	0.07	0.07	0.065	0.01	0.00	1	Agree		67900	6.79	4.1	26
H46135	10.00	11.37	13.24	31.50	-207.81	-222.8115	-207.62	-222.6187837	-211.44	0.07	4.48808E-06	0.07	0.07	0.067	0.01	0.05	3	Disagree	0.69	50200	5.02	15.1	50
H46134	13.33	9.78	14.98	31.50	-216.51	-231.5125	-216.51	-231.5125	-223.03	0.07	0.005583893	0.07	0.07	0.070	0.01	0.04	2	Disagree		44600	4.46	9.6	19
H42772	10.00	9.78	12.99	31.50	-163.70	-177.499	-162.44	-176.2380601	-167.72	0.08	5.6338E-06	0.11	0.08	0.078	0.01	0.06	2	Disagree		66200	6.62	0.1	15
H46076	13.33	10.23	11.99	39.23	-199.98	-214.975	-198.71	-213.7104135	-206.64	0.08	0.008760807	0.15	0.08	0.078	0.01	0.05	1	Agree		62800	6.28	4.9	20
H42886	3.33	2.27	96.64	160.64	-183.38	-194.374	-102.49	-113.4904055	-192.10	0.06	5.14469E-06	0.12	0.10	0.097	0.01	0.01	2	Disagree	0.54	67000	6.7	5.7	1640
H46215	20.83	21.15	24.72	60.71	-229.91	-244.9125	-229.91	-244.9125	-234.16	0.10	0.040734394	0.10	0.10	0.099	0.040734394	0.08	2	Disagree		52200	5.22	7.6	12
H42880	69.17	52.31	138.35	193.86	-355.46	-370.4625	-355.46	-370.4625	-379.25	0.18	0.141578566	0.18	0.18	0.176	0.141578566	0.12	3	Disagree		52600	5.26	2.5	8
H42895	11.67	10.23	108.38	156.92	-181.16	-196.1625	-77.08	-92.07593225	-188.83	0.09	0.014568289	0.32	0.19	0.188	0.030534051	0.05	1	Agree		69100	6.91	4.9	33
H42879	11.67	11.37	103.14	156.92	-142.25	-157.25	-49.26	-64.25802122	-149.88	0.12	0.024806202	0.29	0.28	0.278	0.058601171	0.07	2	Disagree	0.5	74700	7.47	4.4	1960
H42731	41.67	40.03	35.71	69.01	-129.54	-144.5375	-128.27	-143.2743721	-140.91	0.28	0.201174439	0.35	0.29	0.286	0.202588714	0.22	4	Disagree		77500	7.75	22.5	18
H42752	15.00	13.19	18.98	58.41	-76.20	-91.2	-75.23	-90.23113899	-96.81	0.31	0.170909091	0.46	0.31	0.310	0.172427805	0.12	3	Disagree		74100	7.41	1.4	43
H46220	4.17	3.64	18.48	184.12	-1.36	-14.0615	-1.36	-14.0615	-10.42	0.90	7.11111E-05	0.90	0.90	0.903	0.01	0.26	1	Agree		91500	9.15	3.6	1463
H46221	19.17	18.42	18.73	194.14	19.68	4.675	19.68	4.675	15.30	7.30	2.496	7.30	7.30	7.296	2.496	5.89	1	Agree		96900	9.69	3.7	641
H46221	98.34	97.79	106.88	237.95	92.38	77.375	116.75	101.7460372	72.17	4.60	4.019512195	94.40	94.10	94.102	82.1395953	3.82	4	Disagree	0.08	64100	6.41	3.3	1280
H42695	52.50	54.58	53.44	103.66	-31.25	-31.249	-27.50	-27.499	23.33	0.00	0.000032	0.00	0.01	0.010	0.01	1.75	4	Disagree	0.25	81200	8.12	8	4070
H42683	84.17	86.42	82.41	138.02	-36.25	-36.249	-32.65	-32.65279086	50.17	0.00	2.75862E-05	0.00	0.01	0.010	0.01	2.38	4	Disagree	0.09	74800	7.48	13.1	2360
58437	0.83	2.27	7.49	14.89	-279.06	-279.0615	-271.39	-271.393755	-276.79	0.00	3.58343E-06	0.00	0.01	0.010	0.01	0.01	2	Disagree	0.27	77900	7.79	437	230
H42831	0.83	0.23	1.50	8.88	-281.91	-282.8115	-281.91	-282.8115	-282.59	0.00	3.53591E-06	0.00	0.00	0.010	0.01	0.00	1	Agree		85400	8.54	46.9	21
14523	0.83	2.27	3.50	10.59	-306.63	-310.624	-303.65	-307.6510483	-308.35	0.01	3.21932E-06	0.01	0.01	0.013	0.01	0.01	2	Disagree	8.55	44600	4.46	3450	220
H42816	0.83	0.23	8.74	26.06	-284.13	-288.124	-284.13	-288.124	-287.90	0.01	3.47072E-06	0.01	0.01	0.014	0.01	0.00	1	Agree		74500	7.45	34.2	24
H42828	0.83	0.23	8.24	31.21	-343.34	-348.4365	-343.34	-348.4365	-348.21	0.01	2.86996E-06	0.01	0.01	0.015	0.01	0.00	1	Agree		62200	6.22	36.2	11
H42845	0.83	0.23	6.74	16.32	-214.78	-219.374	-214.78	-219.374	-219.15	0.02	4.5584E-06	0.02	0.02	0.021	0.01	0.00	1	Agree		70700	7.07	1.3	28
H42832	0.42	2.27	7.24	18.33	-325.81	-332.8115	-323.89	-330.8927404	-330.54	0.02	3.00469E-06	0.02	0.02	0.021	0.01	0.01	2	Disagree	0.41	76300	7.63	128	60
H42834	0.83	0.23	6.99	16.61	-211.03	-215.624	-211.03	-215.624	-215.40	0.02	4.63768E-06	0.02	0.02	0.021	0.01	0.00	1	Agree		96400	9.64	26.2	27
H42841	0.83	0.23	7.74	18.04	-140.03	-143.124	-140.03	-143.124	-142.90	0.02	6.9869E-06	0.02	0.02	0.022	0.01	0.00	1	Agree		71000	7.1	10	41
H42847	0.83	0.23	9.99	18.04	-214.79	-219.6865	-214.79	-219.6865	-219.46	0.02	4.55192E-06	0.02	0.02	0.022	0.01	0.00	1	Agree		75800	7.58	27.1	27

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
H42818	0.42	2.27	5.99	22.91	-259.31	-265.3115	-255.18	-261.1760674	-263.04	0.02	3.76914E-06	0.02	0.02	0.023	0.01	0.01	2	Disagree	0.69	72600	7.26	315	100
H42814	0.83	1.14	9.24	23.48	-210.01	-215.3115	-210.01	-215.3115	-214.18	0.02	4.64441E-06	0.02	0.02	0.025	0.01	0.01	1	Agree		70000	7	665.8	19
H42815	0.42	2.27	5.74	20.90	-239.63	-245.624	-237.04	-243.0437742	-243.35	0.02	4.07125E-06	0.03	0.02	0.025	0.01	0.01	2	Disagree	0.4	73000	7.3	82.7	110
H42809	0.83	0.23	8.49	28.63	-218.68	-224.374	-218.68	-224.374	-224.15	0.03	4.45682E-06	0.03	0.03	0.025	0.01	0.00	1	Agree		70700	7.07	27.6	26
H42837	0.42	2.27	7.74	18.33	-266.75	-273.749	-265.76	-272.7604472	-271.48	0.03	3.65297E-06	0.03	0.03	0.026	0.01	0.01	2	Disagree	0.37	83300	8.33	40.1	70
H42810	0.42	2.27	8.49	24.91	-253.31	-260.3115	-251.68	-258.6760674	-258.04	0.03	3.84154E-06	0.03	0.03	0.027	0.01	0.01	2	Disagree	0.61	77100	7.71	83.8	100
H42696	0.83	0.23	5.99	43.24	-193.56	-199.0615	-193.56	-199.0615	-198.84	0.03	5.02355E-06	0.03	0.03	0.028	0.01	0.00	1	Agree		60800	6.08	54.3	22
H42819	0.83	0.23	9.49	21.19	-184.40	-189.999	-184.40	-189.999	-189.77	0.03	5.26316E-06	0.03	0.03	0.029	0.01	0.00	1	Agree		69600	6.96	58.3	30
H42843	0.83	0.23	7.99	18.33	-163.65	-168.749	-163.65	-168.749	-168.52	0.03	5.92593E-06	0.03	0.03	0.030	0.01	0.00	1	Agree		80300	8.03	4	40
H42835	0.83	0.23	12.74	30.93	-208.19	-214.6865	-208.19	-214.6865	-214.46	0.03	4.65793E-06	0.03	0.03	0.030	0.01	0.00	1	Agree		85200	8.52	59.8	20
H42838	0.83	0.23	10.49	22.91	-201.20	-207.499	-201.20	-207.499	-207.27	0.03	4.81928E-06	0.03	0.03	0.030	0.01	0.00	1	Agree		71200	7.12	28.8	22
H42844	0.42	2.27	7.24	15.75	-223.00	-229.999	-222.61	-229.6135674	-227.73	0.03	4.34783E-06	0.03	0.03	0.030	0.01	0.01	2	Disagree	0.46	83000	8.3	12.3	100
H42817	0.42	2.27	6.49	24.63	-187.75	-193.749	-186.73	-192.7312742	-191.48	0.03	5.16129E-06	0.03	0.03	0.031	0.01	0.01	2	Disagree	0.76	78800	7.88	193.5	110
H42821	0.42	2.27	6.99	23.77	-186.81	-192.8115	-184.23	-190.2312742	-190.54	0.03	5.18639E-06	0.04	0.03	0.032	0.01	0.01	2	Disagree	0.83	78000	7.8	452	110
H42848	0.42	2.27	8.99	19.76	-241.06	-249.0615	-240.07	-248.0656539	-246.79	0.03	4.01506E-06	0.03	0.03	0.032	0.01	0.01	2	Disagree	0.71	82300	8.23	19	80
14507	0.83	2.27	6.24	21.19	-164.63	-170.624	-163.85	-169.8531348	-168.35	0.04	5.86081E-06	0.04	0.04	0.035	0.01	0.01	2	Disagree	0.67	83800	8.38	9.9	200
H42846	0.42	2.27	8.99	16.32	-234.13	-243.124	-232.82	-241.8229472	-240.85	0.04	4.11311E-06	0.04	0.04	0.037	0.01	0.01	2	Disagree	0.33	74800	7.48	15.4	70
H42813	0.42	2.27	8.49	20.33	-219.75	-228.749	-219.07	-228.0656539	-226.48	0.04	4.37158E-06	0.04	0.04	0.039	0.01	0.01	2	Disagree	1.35	79500	7.95	452	80
H42682	6.67	8.19	10.99	38.94	-198.68	-206.874	-198.68	-206.874	-198.69	0.04	4.83384E-06	0.04	0.04	0.040	0.01	0.04	1	Agree		70300	7.03	3	34
H42842	0.42	2.27	7.49	15.18	-187.31	-195.3115	-192.00	-199.999	-193.04	0.04	0.00000512	0.04	0.04	0.040	0.01	0.01	2	Disagree	1.3	80100	8.01	29.2	100
H42812	0.83	0.23	6.49	16.89	-111.66	-116.5615	-111.66	-116.5615	-116.34	0.04	8.57909E-06	0.04	0.04	0.042	0.01	0.00	1	Agree		68100	6.81	100.1	44
H42835	0.42	2.27	8.49	23.77	-225.31	-235.3115	-224.32	-234.3229472	-233.04	0.04	4.24967E-06	0.05	0.04	0.043	0.01	0.01	2	Disagree	0.6	77400	7.74	190.5	70
H42675	0.83	2.27	10.49	43.24	-162.94	-170.9365	-162.94	-170.9365	-168.66	0.05	5.85009E-06	0.05	0.05	0.047	0.01	0.01	1	Agree		81400	8.14	6.5	36
H42673	1.67	2.50	12.24	35.51	-154.09	-162.1865	-154.09	-162.1865	-159.69	0.05	6.1657E-06	0.05	0.05	0.050	0.01	0.02	1	Agree		82200	8.22	223.2	40
H42686	2.50	2.27	13.24	37.80	-176.96	-186.5615	-176.96	-186.5615	-184.29	0.05	5.36013E-06	0.05	0.05	0.051	0.01	0.01	1	Agree		67900	6.79	5	24
H42671	0.83	2.27	9.99	33.50	-152.75	-161.249	-152.75	-161.249	-158.98	0.05	6.20155E-06	0.05	0.05	0.053	0.01	0.01	1	Agree		77800	7.78	5.7	35
H42839	0.42	2.27	9.24	17.18	-160.69	-169.6865	-160.29	-169.2937742	-167.41	0.05	5.89319E-06	0.06	0.05	0.053	0.01	0.01	2	Disagree	0.57	76700	7.67	19.1	110
H42668	3.33	6.82	9.99	38.66	-176.19	-187.1865	-174.85	-185.8489809	-180.36	0.06	5.34224E-06	0.06	0.06	0.059	0.01	0.04	2	Disagree	0.71	78500	7.85	17.6	120
3008	3.33	2.27	4.99	27.49	-158.44	-168.4365	-156.73	-166.7281348	-166.16	0.06	5.93692E-06	0.07	0.06	0.060	0.01	0.01	2	Disagree	0.82	82200	8.22	68.1	200
49313	2.50	2.27	1.25	23.19	-34.88	-36.874	-29.49	-31.48412685	-34.60	0.05	2.71186E-05	0.07	0.06	0.064	0.01	0.06	2	Disagree	0.32	78100	7.81	23.9	1820
H42676	0.83	2.27	9.99	37.80	-160.25	-171.249	-157.28	-168.2833416	-168.98	0.06	5.83942E-06	0.07	0.07	0.065	0.01	0.01	2	Disagree	1.04	92300	9.23	28.1	210
H42666	5.00	4.55	8.49	46.96	-144.94	-155.9365	-143.23	-154.2281348	-151.39	0.07	6.41283E-06	0.08	0.07	0.071	0.01	0.03	2	Disagree	1.26	84000	8.4	35.2	200
H46136	5.83	3.18	14.73	37.51	-186.54	-200.9365	-186.54	-200.9365	-197.75	0.07	4.97667E-06	0.07	0.07	0.072	0.01	0.02	1	Agree		57200	5.72	1.3	28
H42672	6.67	6.82	10.49	37.23	-169.50	-182.499	-167.83	-180.8271011	-175.68	0.07	5.47945E-06	0.08	0.07	0.072	0.01	0.04	2	Disagree	0.76	78700	7.87	24.1	150
H42689	0.83	0.23	8.24	38.66	-92.29	-99.6865	-92.29	-99.6865	-99.46	0.07	1.00313E-05	0.07	0.07	0.074	0.01	0.00	1	Agree		86300	8.63	5.4	31
H42663	26.67	0.23	9.74	53.55	-118.98	-129.374	-118.98	-129.374	-129.15	0.08	7.72947E-06	0.08	0.08	0.080	0.01	0.00	1	Agree		81700	8.17	2.9	29
3048	6.67	4.55	11.49	41.52	-108.44	-118.4365	-105.75	-115.7468753	-113.89	0.08	8.44327E-06	0.10	0.09	0.086	0.01	0.04	2	Disagree	7.53	77300	7.73	14.5	260
H42668	0.83	0.23	10.74	58.13	-117.89	-129.6865	-117.89	-129.6865	-129.46	0.09	7.71084E-06	0.09	0.09	0.091	0.01	0.00	1	Agree		83800	8.38	5.2	36
H42685	5.00	6.82	12.99	47.25	-133.75	-148.749	-132.85	-147.8468562	-141.93	0.10	6.72269E-06	0.11	0.10	0.101	0.01	0.05	2	Disagree	0.5	91500	9.15	14.4	380
H42688	24.17	25.70	13.98	28.35	-202.06	-217.0625	-202.06	-217.0625	-200.86	0.11	0.041931034	0.11	0.11	0.108	0.041931034	0.11	3	Disagree		28600	2.86	15.1	7
H42687	8.33	9.10	11.49	32.64	-138.94	-153.9375	-138.42	-153.4207887	-146.84	0.11	0.012825651	0.12	0.11	0.109	0.012868291	0.06	2	Disagree	0.58	80100	8.01	8.8	280
H42669	32.50	35.71	22.23	44.67	-256.36	-271.3625	-256.36	-271.3625	-253.36	0.11	0.061232432	0.11	0.11	0.113	0.061232432	0.12	3	Disagree		65000	6.5	55.2	12
H42701	15.00	15.24	11.99	45.53	-93.73	-108.124	-93.73	-108.124	-92.89	0.13	9.24855E-06	0.13	0.13	0.133	0.01	0.14	2	Disagree		67000	6.7	9.3	52
H42699	5.00	6.82	9.24	62.71	-86.94	-100.9365	-85.10	-99.09685615	-94.11	0.14	9.90712E-06	0.16	0.14	0.141	0.01	0.07	2	Disagree	0.28	78500	7.85	4.4	380
H42684	57.50	62.09	16.23	42.38	-100.54	-115.5375	-100.54	-115.5375	-56.35	0.15	0.024485488	0.15	0.15	0.151	0.024485488	0.52	1	Agree		87200	8.72	5.3	41
H42707	23.33	22.74	20.48	41.52	-164.38	-179.375	-165.00	-180	-171.63	0.15	0.077170418	0.15	0.15	0.154	0.076923077	0.12	3	Disagree	2.58	74400	7.44	17	80
H42703	16.67	4.09	13.98	42.09	-154.83	-169.825	-154.83	-169.825	-179.03	0.15	0.072627986	0.15	0.15	0.155	0.072627986	0.02	3	Disagree		67100	6.71	8	31
H42681	25.84	29.57	25.47	52.40	-159.56	-174.5625	-155.81	-170.8125	-162.00	0.17	0.088743883	0.17	0.17	0.170	0.090515807	0.15	3	Disagree	0.59	76600	7.66	18.5	160
H42693	9.17	9.10	7.99	42.95	-53.88	-66.874	-51.71	-64.71123247	-57.78	0.19	1.49533E-05	0.22	0.20	0.201	0.01	0.14	2	Disagree	0.78	78200	7.82	35.7	1680
H42694	12.50	10.92	14.48	38.94	-62.98	-77.975	-62.98	-77.975	-68.46	0.21	0.017637795	0.21	0.21	0.207	0.017637795	0.14	2	Disagree		79700	7.97	24.2	60

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
H42680	28.34	29.57	26.72	54.69	-141.66	-156.6625	-141.66	-156.6625	-149.50	0.21	0.125095986	0.21	0.21	0.209	0.125095986	0.17	3	Disagree		81100	8.11	18.8	29
H42697	19.17	22.74	17.23	53.55	-107.63	-122.625	-105.31	-120.3135146	-112.88	0.21	0.095852535	0.22	0.21	0.210	0.097514495	0.17	3	Disagree	0.78	80000	8	12.4	170
H42704	30.84	31.84	26.47	71.30	-132.75	-147.75	-132.32	-147.3208079	-136.91	0.21	0.124444444	0.22	0.21	0.214	0.124761759	0.19	3	Disagree	0.44	80900	8.09	12.4	160
H42710	36.67	40.03	27.47	55.26	-132.88	-147.875	-132.88	-147.875	-134.35	0.24	0.151971326	0.24	0.24	0.238	0.151971326	0.23	3	Disagree		80000	8	32.5	33
H42706	15.83	16.37	15.98	68.15	-83.83	-98.825	-83.83	-98.825	-96.75	0.26	0.12640884	0.26	0.26	0.259	0.12640884	0.14	2	Disagree		66100	6.61	4.6	47
H42664	16.67	18.19	21.73	63.00	-84.56	-99.5625	-83.31	-98.3125	-98.37	0.27	0.145844504	0.28	0.28	0.278	0.147425474	0.16	3	Disagree	0.33	73400	7.34	17.6	230
H42702	38.34	38.66	27.47	67.86	-98.19	-113.1875	-96.50	-111.5010146	-103.53	0.31	0.203956044	0.33	0.31	0.313	0.206404203	0.27	3	Disagree	0.42	79400	7.94	6.2	170
H42708	50.84	39.80	33.71	67.58	-114.39	-129.3875	-114.39	-129.3875	-127.39	0.32	0.226093458	0.32	0.32	0.316	0.226093458	0.24	3	Disagree		86600	8.66	6.5	38
H42674	45.00	45.49	34.96	68.44	-84.00	-99	-78.51	-93.51246178	-89.51	0.38	0.266666667	0.41	0.39	0.394	0.277965529	0.34	3	Disagree	3.07	81700	8.17	107.5	240
H42709	66.67	63.68	42.70	79.89	-96.25	-111.25	-97.81	-112.8125	-102.57	0.42	0.330827068	0.42	0.42	0.417	0.327746741	0.38	3	Disagree	2.04	75200	7.52	27.3	170
49852	81.67	79.60	55.19	107.95	-112.50	-127.5	-111.44	-126.4435876	-112.90	0.42	0.337662338	0.44	0.42	0.418	0.339525606	0.41	3	Disagree	1	75600	7.56	77.9	1020
H42678	65.00	61.40	61.93	102.80	-83.56	-98.5625	-81.24	-96.23642808	-90.16	0.45	0.349690722	0.47	0.46	0.456	0.355141172	0.41	3	Disagree	0.53	75700	7.57	14.6	190
H42670	41.67	43.21	37.96	74.16	-53.13	-68.125	-52.50	-67.5	-54.91	0.46	0.305732484	0.46	0.46	0.462	0.307692308	0.44	3	Disagree	0.57	80700	8.07	18.2	500
H42698	50.00	12.74	54.19	105.66	-45.28	-60.275	-45.28	-60.275	-101.64	0.60	0.473005464	0.60	0.60	0.604	0.473005464	0.11	4	Disagree		80600	8.06	3.4	48
H42690	45.84	47.76	52.94	96.50	-41.94	-56.9375	-37.98	-52.98328875	-53.18	0.58	0.435913313	0.66	0.61	0.608	0.453686409	0.47	3	Disagree	0.51	73600	7.36	4.5	280
H42691	62.50	69.36	126.86	185.27	-28.66	-43.6625	-28.66	-43.6625	-44.70	0.75	0.617205479	0.75	0.75	0.749	0.617205479	0.61	4	Disagree		100700	10.07	6.7	41
H42677	51.67	46.85	55.44	93.06	-1.71	-16.7125	-1.71	-16.7125	-20.96	0.97	0.753548387	0.97	0.97	0.975	0.753548387	0.69	4	Disagree		88500	8.85	3.8	99
H42665	46.67	50.94	53.44	107.95	5.93	-9.075	5.93	-9.075	-5.93	1.10	0.84043956	1.10	1.10	1.104	0.84043956	0.90	4	Disagree		87400	8.74	15.1	139
3027	38.34	38.66	31.96	65.29	22.31	7.3125	21.69	6.6875	28.97	3.30	1.75483871	3.10	3.10	3.103	1.648484848	3.99	3	Disagree	0.1	71600	7.16	16.1	580
H46138	220.01	215.37	241.98	314.98	250.03	235.025	250.03	235.025	206.00	27.67	26.06933333	27.67	27.67	27.669	26.06933333	22.97	4	Disagree		74600	7.46	1.8	1216
H46137	86.67	88.70	88.65	154.63	98.13	83.125	99.06	84.0625	86.82	53.33	45.33333333	106.67	106.67	100.000	90.66666667	47.30	4	Disagree	0.1	83000	8.3	3.2	2140
H46142	121.67	118.26	117.62	164.94	121.44	106.4375	122.06	107.0625	116.70	78.72	69.12	131.20	131.20	100.000	100	75.69	4	Disagree	0.07	78000	7.8	2.6	2830
H46144	110.01	104.62	110.38	168.09	126.13	111.125	127.38	112.375	102.74	68.27	60.26666667	204.80	204.80	100.000	100	55.80	4	Disagree	0.06	80000	8	2	2750
H46139	120.84	122.81	116.62	164.36	140.44	125.4375	141.38	126.375	121.25	90.88	81.28	227.20	227.20	100.000	100	78.60	4	Disagree	0.09	77700	7.77	3.1	2540
H46143	113.34	106.89	116.37	164.65	137.15	122.15	137.15	122.15	105.64	110.72	98.72	110.72	110.72	100.000	98.72	85.51	4	Disagree		80200	8.02	2.6	2613
H46141	148.34	150.56	159.32	212.18	173.93	158.925	173.93	158.925	148.68	93.76	85.76	93.76	93.76	93.760	85.76	80.30	4	Disagree		81000	8.1	2.5	2903
X66086	430.86	423.01	342.12	472.76	481.78	466.775	481.46	466.4625	422.39	771.84	747.84	514.56	514.56	100.000	100	676.82	4	Disagree	0.1	48600	4.86	15	619
X66087	94.17	78.69	90.15	163.50	169.56	154.5625	169.56	154.5625	77.75	181.87	165.8666667	181.87	181.87	100.000	100	83.94	4	Disagree	0.5	78800	7.88	37	1720
X66116	145.01	139.41	139.60	220.49	223.19	208.1875	222.88	207.875	139.10	715.20	667.2	357.60	357.60	100.000	100	446.12	4	Disagree	0.4	74500	7.45	6	1470
X66117	171.68	163.75	167.82	253.42	233.34	218.3375	234.63	219.6283746	157.18	36.56	34.27047619	63.97	45.51	45.508	42.66236331	24.95	4	Disagree	0.4	78000	7.8	15	913
X66217	141.68	137.82	130.86	200.73	253.54	238.5375	255.41	240.4125	133.76	63.41	59.71692308	117.76	117.76	100.000	100	33.92	4	Disagree	0.05	83400	8.34	3	2070
X63932	0.83	0.45	5.24	26.92	-209.14	-215.9365	-207.56	-214.3572255	-215.48	0.03	4.63097E-06	0.03	0.03	0.032	0.01	0.00	1	Agree	0.2	83600	8.36	1	23
X63953	4.17	3.41	10.99	93.64	-177.96	-192.9625	-176.69	-191.6928082	-193.15	0.09	0.018314785	0.11	0.10	0.095	0.018433859	0.02	1	Agree	1.1	66200	6.62	0.5	27
X63972	30.84	27.52	70.17	162.93	39.36	24.3625	41.40	26.40017198	4.08	2.68	2.039466667	3.86	2.93	2.935	2.233662811	1.17	2	Agree	0.05	79300	7.93	39	1080
X63980	2.50	2.05	10.24	37.23	-341.39	-354.6865	-340.12	-353.4204548	-352.64	0.04	2.81938E-06	0.04	0.04	0.038	0.01	0.01	1	Agree	1.2	60400	6.04	2	22
X67079	79.17	74.82	64.43	99.36	-235.04	-250.0375	-234.40	-249.4001015	-246.11	0.27	0.220915287	0.30	0.27	0.268	0.22135491	0.23	3	Disagree	0.4	68900	6.89	23	17
X66229	153.34	138.96	109.38	188.99	147.25	132.25	147.56	132.5625	62.71	2.93	2.73442623	2.94	2.94	2.943	2.745679012	1.82	4	Disagree	1.9	76100	7.61	20	106
X66249	72.50	64.82	54.94	157.49	9.26	-5.7375	9.60	-5.395826964	-68.62	1.07	0.957002342	1.19	1.07	1.072	0.959459082	0.49	3	Agree	1.3	85700	8.57	33	40
X66250	121.67	111.21	92.90	166.65	114.71	99.7125	115.08	100.0840754	39.02	2.59	2.381298701	2.72	2.60	2.602	2.393619534	1.54	4	Disagree	0.7	65600	6.56	35	81
X66286	110.84	106.89	99.89	192.71	134.93	119.925	135.41	120.405245	60.02	3.88	3.5584	4.85	3.92	3.919	3.595233984	2.28	3	Agree	0.4	74200	7.42	68	230
X66287	103.34	88.92	70.92	174.39	157.56	142.5625	157.94	142.9369927	22.99	3.39	3.162085308	3.78	3.41	3.409	3.180146985	1.35	4	Disagree	0.5	77200	7.72	100	85
X66304	85.84	81.19	83.16	188.13	165.48	150.475	167.77	152.7718989	15.57	3.52	3.292952381	7.47	3.65	3.649	3.412387174	1.24	4	Disagree	1	75900	7.59	75	150
X66305	103.34	96.66	103.89	206.46	163.25	148.25	163.71	148.7074616	60.41	5.50	5.089655172	6.79	5.57	5.574	5.154705652	2.67	3	Agree	0.4	77100	7.71	45	413
X66332	273.35	190.13	130.61	195.86	67.00	52	67.38	52.37959798	60.13	1.52	1.4	1.75	1.52	1.520	1.40409995	1.46	4	Disagree	1.1	66000	6.6	267	92
X66338	560.04	270.64	183.55	258.57	180.56	165.5625	180.91	165.9121956	172.20	2.83	2.681904762	3.04	2.84	2.844	2.691466097	2.75	4	Disagree	4.1	61800	6.18	317	51
X66340	126.68	96.66	99.89	209.03	228.85	213.85	229.69	214.6912613	70.41	9.72	9.146666667	11.50	10.04	10.040	9.44950486	3.68	4	Disagree	0.4	70500	7.05	47	725
X66346	115.01	83.47	98.64	173.24	174.29	159.2875	174.79	159.79473	45.65	5.61	5.212561983	7.46	5.69	5.686	5.283435828	2.21	4	Disagree	0.4	72300	7.23	44	267
X66347	110.84	92.11	113.87	227.36	212.24	197.2375	212.73	197.7272262	50.54	6.11	5.74556391	7.89	6.18	6.179	5.814070438	2.22	4	Disagree	0.4	74500	7.45	52	243
X66373	226.68	195.36	114.12	182.69	16.38	1.375	16.74	1.741470117	12.23	1.09	1.007508532	1.21	1.09	1.092	1.009528803	1.07	3	Agree	2.4	67800	6.78	363	74
X67132	0.83	0.68	9.49	28.63	-149.95	-161.249	-149.29	-160.5911803	-160.57	0.07	6.20155E-06	0.08	0.07	0.070	0.01	0.00	1	Agree	0.9	86000	8.6	626	45

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
X67133	5.00	1.82	9.99	43.52	-69.96	-84.9625	-66.50	-81.49728562	-84.74	0.19	0.018483755	0.21	0.20	0.200	0.01925454	0.02	1	Agree	0.6	65900	6.59	528	38
X67143	10.83	5.91	23.47	71.30	-1.98	-16.975	-0.26	-15.26444684	-25.96	0.94	0.46745098	1.18	0.99	0.991	0.493959	0.19	2	Disagree	0.3	87900	8.79	33	203
X67144	70.00	59.59	78.66	129.14	106.14	91.1375	107.18	92.18366956	20.52	3.72	3.33312	4.38	3.82	3.819	3.424843968	1.53	4	Disagree	0.1	80400	8.04	16	149
X67174	103.34	92.79	97.14	164.08	121.75	106.75	122.48	107.475647	41.54	3.38	3.082926829	4.36	3.42	3.424	3.127204814	1.81	4	Disagree	1.9	77600	7.76	25	138
X67175	68.34	58.90	66.18	101.08	-11.16	-26.1625	-10.18	-25.17540584	-40.16	0.89	0.735899054	0.96	0.90	0.896	0.743305616	0.59	3	Disagree	3.9	78400	7.84	51	68
X67268	84.17	74.14	83.16	117.97	-93.84	-108.8375	-92.87	-107.8715563	-109.30	0.49	0.406678024	0.58	0.49	0.491	0.408830842	0.40	3	Disagree	0.7	75100	7.51	31	39
X67292	92.51	78.92	91.90	154.34	114.68	99.675	115.39	100.3878999	38.29	3.82	3.453538462	4.56	3.89	3.891	3.5152247	1.94	4	Disagree	0.1	79000	7.9	26	549
X67297	75.00	69.36	74.67	132.86	121.85	106.85	123.41	108.4125	63.11	20.50	18.096	27.33	27.33	27.328	24.128	11.10	3	Agree	0.05	68900	6.89	10	1290
X67322	46.67	41.39	35.71	65.29	-154.30	-169.3	-153.96	-168.9641616	-161.11	0.24	0.163950617	0.26	0.24	0.238	0.164222975	0.20	2	Disagree	0.7	77900	7.79	48	32
X67347	110.01	98.48	101.39	164.65	163.36	148.3625	165.55	150.55	82.54	11.25	10.30901961	13.04	13.04	13.040	11.94909091	6.18	4	Disagree	0.1	76500	7.65	10	2240
X67354	99.17	83.69	92.65	172.95	241.46	226.4625	241.78	226.775	82.76	258.56	242.56	387.84	387.84	100.000	100	89.27	4	Disagree	0.05	66200	6.62	6	606
X67374	61.67	52.99	49.95	91.06	-82.06	-97.0625	-81.71	-96.71426303	-106.07	0.48	0.38978389	0.58	0.49	0.485	0.39063912	0.33	3	Disagree	0.3	84500	8.45	10	49
X67396	57.50	47.30	50.19	108.24	-35.71	-50.7125	-35.35	-50.35113516	-78.01	0.72	0.595311721	0.84	0.72	0.717	0.597033392	0.38	3	Disagree	0.2	72000	7.2	10	67
X67432	85.01	76.64	76.17	125.42	-82.00	-97	-80.72	-95.72228562	-103.36	0.54	0.461111111	0.61	0.55	0.548	0.464407669	0.43	3	Disagree	0.6	70300	7.03	7	38
X67438	74.17	63.22	78.16	133.15	18.03	3.025	20.90	5.90168068	-38.65	1.18	1.029693252	1.52	1.21	1.211	1.059613948	0.62	4	Disagree	0.2	76300	7.63	8	88
S156638	1.67	0.23	3.75	14.89	-180.38	-184.374	-179.74	-183.7351428	-184.15	0.02	5.42373E-06	0.02	0.02	0.022	0.01	0.00	1	Agree	0.3	74800	7.48	3	19
S156644	0.83	0.91	5.49	16.32	-167.60	-172.499	-166.95	-171.8535789	-171.59	0.03	5.7971E-06	0.03	0.03	0.029	0.01	0.01	1	Agree	0.2	77200	7.72	0.5	28
S156654	1.67	0.45	8.74	21.19	-225.74	-233.4365	-224.79	-232.4844135	-232.98	0.03	4.2838E-06	0.04	0.03	0.033	0.01	0.00	1	Agree	0.3	78500	7.85	12	20
S156683	13.33	10.92	13.73	73.02	-128.93	-143.925	-127.34	-142.3420789	-142.21	0.16	0.060081633	0.17	0.16	0.160	0.060709211	0.07	1	Agree	0.2	61900	6.19	8	28
S156689	2.50	1.82	7.49	17.18	-216.48	-224.374	-215.83	-223.7307669	-222.56	0.04	4.45682E-06	0.04	0.04	0.035	0.01	0.01	1	Agree	0.5	70400	7.04	5	25
S156694	0.83	0.23	8.49	16.89	-214.80	-222.499	-214.47	-222.1711842	-222.27	0.03	4.49438E-06	0.04	0.03	0.035	0.01	0.00	1	Agree	0.5	68500	6.85	2	21
S156698	149.18	132.36	137.10	183.55	191.09	176.0875	191.71	176.7125	129.55	68.94	63.60888889	88.64	88.64	88.640	81.78285714	47.06	4	Disagree	0.05	73300	7.33	3	3820
S156709	40.00	25.47	37.71	59.56	-129.39	-144.3875	-128.74	-143.7413495	-146.72	0.25	0.161451906	0.27	0.25	0.250	0.162060052	0.15	2	Disagree	1	73200	7.32	35	29
S156710	128.34	105.98	122.62	181.26	169.18	154.175	173.55	158.55	97.86	21.82	19.97538462	47.28	47.28	47.280	43.28	13.04	4	Disagree	0.05	78800	7.88	4	4560
S156717	10.00	2.27	10.99	29.49	-140.70	-154.999	-139.12	-153.4197255	-152.73	0.09	6.45161E-06	0.11	0.09	0.093	0.01	0.01	1	Agree	0.9	63800	6.38	33	23
S156723	74.17	63.68	34.21	72.45	-126.13	-141.125	-124.86	-139.8582255	-126.95	0.34	0.259672131	0.38	0.34	0.341	0.261409294	0.33	2	Agree	0.4	62000	6.2	56	23
S156734	36.67	26.61	19.73	42.67	-113.13	-128.125	-112.80	-127.7971842	-121.52	0.24	0.135021097	0.29	0.24	0.237	0.135320575	0.18	1	Agree	0.3	63300	6.33	48	21
S156743	40.84	29.79	39.46	65.00	-32.71	-47.7125	-32.36	-47.36499236	-68.02	0.67	0.512204473	0.80	0.67	0.668	0.514030718	0.30	3	Disagree	0.8	84900	8.49	54	48
S156752	94.17	73.00	77.41	119.12	63.06	48.0625	63.42	48.42459416	-0.43	1.86	1.654468085	2.07	1.87	1.868	1.6626661	0.99	4	Disagree	1.7	71900	7.19	54	68
S156759	43.34	31.61	39.46	61.56	101.18	86.175	100.86	85.8625	30.99	162.88	138.88	108.59	108.59	100.000	92.58666667	50.58	3	Agree	0.05	65800	6.58	3	984
S156769	0.83	0.91	7.74	17.18	-186.55	-193.749	-185.91	-193.1086842	-192.84	0.04	5.16129E-06	0.04	0.04	0.037	0.01	0.00	1	Agree	1.9	63200	6.32	73	21
S156780	35.84	27.97	31.22	45.53	34.38	19.375	35.31	20.3125	24.85	12.00	7.2	17.14	17.14	17.143	10.28571429	8.95	2	Disagree	0.05	62500	6.25	5	1360
S156784	74.17	61.18	74.92	95.35	-136.00	-151	-135.66	-150.6648909	-148.82	0.35	0.280952381	0.36	0.35	0.353	0.281401429	0.29	3	Disagree	0.8	64900	6.49	22	31
S156790	28.34	21.38	18.48	38.08	-172.09	-187.0875	-171.13	-186.1332255	-180.81	0.15	0.074683153	0.17	0.15	0.150	0.07503731	0.11	1	Agree	1.5	64500	6.45	122	23
S156800	145.84	123.04	96.39	159.78	157.83	142.825	159.12	144.12209	108.66	11.98	10.93565217	13.78	13.17	13.167	12.02026927	8.56	3	Agree	0.1	78800	7.88	8	1350
S156810	28.34	24.56	21.73	30.93	26.30	11.3	27.24	12.2375	22.06	11.52	5.52	18.43	18.43	18.432	8.832	9.82	2	Disagree	0.05	62100	6.21	3	1230
S156824	81.67	68.23	77.66	137.73	56.15	41.15	58.08	43.08115809	4.48	1.88	1.645490196	2.17	1.94	1.940	1.696893645	1.07	4	Disagree	0.2	73000	7.3	19	77
S156829	97.51	78.23	51.44	109.38	-62.36	-77.3625	-61.40	-76.39874427	-70.83	0.58	0.481006289	0.62	0.59	0.585	0.484136448	0.52	2	Agree	0.4	71700	7.17	38	36
S156835	0.83	1.36	113.63	136.01	-287.21	-292.8115	-179.70	-185.2976428	-291.45	0.02	3.41515E-06	0.03	0.03	0.030	0.01	0.00	1	Agree	1.4	54700	5.47	28	19
S156847	5.00	3.18	142.09	188.13	-233.78	-248.775	-102.20	-117.1971842	-246.19	0.06	0.002406015	0.15	0.13	0.132	0.01	0.01	1	Agree	1.3	64900	6.49	7	21
S154641	54.17	15.01	50.69	82.18	104.66	89.6625	107.79	92.7875	9.07	18.63	16.10105263	39.32	39.32	39.324	33.99111111	2.53	3	Agree	0.1	77300	7.73	25	3180
S154644	19.17	11.37	22.48	46.96	-21.39	-36.3875	-20.70	-35.69831932	-40.82	0.59	0.302754491	0.78	0.60	0.598	0.306806129	0.22	2	Disagree	14.3	70400	7.04	74	88
S154647	88.34	73.00	92.65	148.33	49.43	34.425	50.12	35.12001529	-3.87	1.64	1.447804878	2.11	1.66	1.658	1.461013683	0.95	3	Agree	4.3	71000	7.1	37	96
S154955	67.50	48.44	71.67	137.45	86.15	71.15	86.62	71.62441035	12.19	3.38	2.962758621	4.30	3.42	3.421	3.002046956	1.34	3	Agree	3.3	75200	7.52	45	222
S154956	91.67	66.18	90.15	138.31	49.39	34.3875	49.63	34.62616383	5.87	1.82	1.57015544	2.09	1.83	1.826	1.576393419	1.10	4	Disagree	1.9	74800	7.48	34	113
S154961	72.50	53.67	73.92	124.27	80.54	65.5375	81.11	66.10672272	27.11	4.03	3.467294118	5.04	4.12	4.120	3.54322385	2.02	4	Disagree	1.3	76500	7.65	18	352
S154962	75.84	71.41	79.41	116.83	84.25	69.25	84.93	69.9257043	50.16	4.96	4.258823529	6.62	5.13	5.128	4.398692491	3.36	3	Agree	2.3	79500	7.95	8	498
S154973	109.17	101.20	105.38	146.04	85.84	70.8375	86.33	71.33379013	64.64	3.35	2.937435897	4.21	3.39	3.394	2.977856569	2.77	4	Disagree	0.4	75000	7.5	18	252
S154974	47.50	43.89	49.20	99.93	50.19	35.1875	50.59	35.59043641	-6.42	2.00	1.699378882	2.66	2.01	2.014	1.71309853	0.87	3	Agree	0.6	85500	8.55	45	124
S154653	16.67	10.46	20.23	53.55	-28.74	-43.7375	-28.36	-43.36446595	-50.48	0.53	0.28225641	0.59	0.53	0.532	0.283994909	0.17	2	Disagree	0.5	74800	7.48	104	83

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
S154666	40.00	28.66	39.96	63.86	72.49	57.4875	71.86	56.8625	25.84	26.77	21.44	21.91	21.91	21.905	17.54181818	10.19	3	Disagree	0.05	65100	6.51	7	1540
S154696	17.50	11.60	29.97	76.17	-90.00	-105	-89.67	-104.6678082	-115.90	0.29	0.176470588	0.32	0.29	0.295	0.17693157	0.09	2	Disagree	1.3	80200	8.02	24	27
S154697	7.50	4.32	14.98	27.78	-194.01	-209.0125	-193.68	-208.6795789	-205.99	0.08	0.006181278	0.09	0.08	0.078	0.01	0.02	1	Agree	3.1	66300	6.63	38	28
S154739	50.00	40.71	56.69	101.65	-39.65	-54.65	-39.30	-54.29957505	-70.54	0.64	0.508764045	0.82	0.65	0.646	0.510371658	0.37	3	Disagree	0.8	81600	8.16	4	52
S154746	128.34	116.21	133.10	191.28	119.96	104.9625	120.35	105.3508499	67.78	3.48	3.166967742	4.49	3.50	3.505	3.192564274	2.40	4	Disagree	0.05	76200	7.62	18	104
S154766	45.84	41.16	85.16	150.90	110.46	95.4625	113.45	98.44566226	20.23	6.28	5.559402985	7.51	7.32	7.319	6.483112978	1.97	3	Agree	0.2	68100	6.81	44	234
S154788	15.83	11.60	15.48	36.65	-165.00	-180	-162.80	-177.7964548	-175.90	0.12	0.04	0.15	0.12	0.121	0.04047568	0.06	1	Agree	0.5	65100	6.51	12	22
S154798	70.00	57.31	94.65	154.05	100.34	85.3375	100.78	85.78419597	28.25	4.45	3.936344086	5.92	4.52	4.522	3.997790866	1.97	4	Disagree	0.1	83100	8.31	14	184
S154805	57.50	46.62	60.43	94.21	-100.18	-115.175	-99.84	-114.8391616	-137.75	0.46	0.375322034	0.60	0.46	0.458	0.376006929	0.25	3	Disagree	0.3	72200	7.22	4	32
S154841	53.34	44.35	46.20	86.48	-105.51	-120.5125	-103.31	-118.3053082	-128.46	0.39	0.302640145	0.44	0.39	0.394	0.306555526	0.26	3	Disagree	0.8	76800	7.68	25	27
S154857	9.17	4.32	12.24	24.63	-232.06	-244.0615	-222.99	-234.9866015	-239.74	0.05	4.09731E-06	0.06	0.05	0.051	0.01	0.02	1	Agree	3.2	44300	4.43	14	17
S154858	47.50	36.16	90.90	167.51	34.43	19.425	36.88	21.8772453	11.79	2.41	1.796923077	3.19	2.68	2.682	1.997924103	1.48	2	Agree	0.1	72200	7.22	37	363
S154871	70.84	63.45	112.13	212.47	177.23	162.225	179.91	164.9106619	51.58	15.92	14.66105263	20.87	20.58	20.578	18.94586945	5.34	3	Agree	0.2	83400	8.34	10	1540
S154872	41.67	33.20	54.94	91.06	-222.34	-237.3375	-212.01	-227.0140601	-262.73	0.25	0.198014784	0.35	0.26	0.258	0.205171972	0.11	3	Disagree	3.4	43600	4.36	7	15
S154884	40.00	33.20	51.94	85.04	-120.06	-135.0625	-119.73	-134.7281202	-143.36	0.32	0.235044248	0.49	0.32	0.321	0.235490227	0.19	3	Disagree	3.3	64800	6.48	0.5	30
S156852	0.83	0.23	3.75	11.45	-249.19	-252.1865	-247.61	-250.6116015	-251.96	0.01	3.9653E-06	0.01	0.01	0.012	0.01	0.00	1	Agree	0.8	84100	8.41	11	17
S156860	1.67	0.23	8.49	40.95	-235.95	-246.249	-234.69	-244.9866015	-246.02	0.04	4.06091E-06	0.05	0.04	0.042	0.01	0.00	1	Agree	0.7	59500	5.95	2	17
S156877	2.50	0.68	6.99	19.19	-227.25	-233.749	-226.61	-233.1101428	-233.07	0.03	4.27807E-06	0.03	0.03	0.028	0.01	0.00	1	Agree	0.7	72600	7.26	27	19
S156889	47.50	39.80	48.45	66.72	-144.70	-159.7	-144.06	-159.0582255	-165.20	0.29	0.22097561	0.38	0.30	0.295	0.22166957	0.19	3	Disagree	0.2	76800	7.68	0.5	23
S156900	5.00	2.05	12.24	26.06	-290.71	-302.8115	-286.95	-299.0454548	-300.77	0.04	3.30237E-06	0.04	0.04	0.040	0.01	0.01	1	Agree	0.4	66700	6.67	77	22
S156913	31.67	27.75	27.22	48.11	-239.99	-254.9875	-237.16	-252.1633308	-249.44	0.13	0.080090192	0.14	0.14	0.136	0.080914603	0.10	2	Disagree	0.4	65400	6.54	50	16
S156922	2.50	0.23	11.49	16.04	-199.50	-207.499	-198.24	-206.2344135	-207.27	0.04	4.81928E-06	0.04	0.04	0.039	0.01	0.00	1	Agree	1.4	67400	6.74	157	20
S156942	3.33	2.05	10.99	24.34	-197.39	-207.1865	-195.18	-204.9807669	-205.14	0.05	4.82655E-06	0.05	0.05	0.048	0.01	0.01	1	Agree	0.7	74100	7.41	251	25
S156970	3.33	0.23	9.24	22.05	-156.15	-168.749	-155.82	-168.4211842	-168.52	0.07	5.92593E-06	0.08	0.07	0.075	0.01	0.00	1	Agree	0.9	75200	7.52	139	21
S156983	0.83	0.45	5.49	13.74	-270.63	-275.624	-270.30	-275.3005601	-275.17	0.02	3.62812E-06	0.02	0.02	0.018	0.01	0.00	1	Agree	0.7	69100	6.91	26	15
S156999	117.51	100.07	98.39	154.05	137.03	122.025	137.47	122.465132	60.69	4.48	4.099047619	5.23	4.53	4.531	4.145384547	2.54	4	Disagree	0.05	81400	8.14	12	175
S157030	12.50	6.82	175.81	213.33	-274.71	-289.7125	-273.76	-288.7626015	-283.49	0.05	0.002066738	0.17	0.05	0.054	0.01	0.02	1	Agree	0.8	58200	5.82	122	17
S157047	2.50	0.23	7.24	20.04	-252.89	-259.6865	-251.31	-258.1116015	-259.46	0.03	3.85078E-06	0.03	0.03	0.026	0.01	0.00	1	Agree	0.5	72700	7.27	82	17
S157055	113.34	102.80	108.13	167.80	146.83	131.825	148.85	133.850622	85.92	9.70	8.811851852	12.78	11.02	11.024	10.01388742	6.09	3	Agree	0.05	73700	7.37	28	635
S157066	0.83	0.23	9.74	16.61	-229.69	-237.1865	-228.74	-236.2373308	-236.96	0.03	4.21607E-06	0.04	0.03	0.032	0.01	0.00	1	Agree	1	75500	7.55	197	16
S157078	28.34	9.55	23.72	40.66	-143.53	-158.525	-142.88	-157.8839548	-158.57	0.15	0.057100372	0.21	0.15	0.147	0.057318924	0.06	1	Agree	1.4	74000	7.4	47	22
S157082	29.17	22.52	31.96	57.56	69.15	54.15	71.43	56.43231237	-16.23	2.78	2.397419355	4.67	2.96	2.959	2.547460671	0.58	3	Agree	0.7	83100	8.31	24	130
S157109	68.34	54.81	18.98	46.96	-3.85	-18.85	-3.11	-18.11487179	21.06	0.89	0.441481481	1.37	0.91	0.906	0.451311763	1.62	1	Agree	0.7	80600	8.06	52	151
S157122	114.17	95.97	25.47	56.41	19.25	4.25	19.69	4.68721473	59.72	1.53	1.117241379	2.47	1.55	1.550	1.130881044	2.65	2	Agree	0.6	86100	8.61	73	171
S157132	28.34	19.79	13.24	34.08	-120.51	-135.5125	-120.12	-135.1219621	-120.53	0.14	0.034209354	0.22	0.14	0.142	0.034304836	0.14	1	Agree	1.3	83100	8.31	132	107
S157181	5.83	3.87	9.24	22.34	-290.51	-300.3115	-289.56	-299.3564962	-296.45	0.03	3.32986E-06	0.04	0.03	0.033	0.01	0.01	1	Agree	0.8	75200	7.52	123	24
S157212	19.17	14.10	19.23	42.95	-88.34	-103.3375	-87.97	-102.9673833	-96.84	0.20	0.068507042	0.28	0.20	0.204	0.068736365	0.13	1	Agree	0.9	83100	8.31	52	79
S157239	31.67	25.24	28.97	49.54	-73.69	-88.6875	-73.01	-88.00925921	-96.94	0.40	0.274168798	0.58	0.40	0.399	0.275699154	0.21	2	Disagree	1.6	68000	6.8	156	73
S157266	121.67	102.57	46.70	91.06	-19.79	-34.7875	-19.42	-34.41665393	0.38	0.81	0.659571865	1.05	0.81	0.809	0.661974219	1.00	2	Agree	0.2	81500	8.15	22	80
S157287	24.17	17.74	17.48	48.39	-178.28	-193.275	-177.94	-192.9406202	-186.64	0.13	0.054311927	0.16	0.13	0.128	0.054400932	0.09	1	Agree	0.2	74000	7.4	35	30
S157300	42.50	37.53	30.72	51.54	-188.61	-203.6125	-187.97	-202.9714548	-192.79	0.18	0.115929444	0.20	0.18	0.182	0.116253019	0.16	2	Disagree	7.7	73800	7.38	58	22
S154899	9.17	4.32	13.73	50.40	-11.45	-26.45	-9.89	-24.8875	-24.43	0.60	0.08	0.64	0.64	0.636	0.084597701	0.15	1	Agree	1	77300	7.73	1180	694
S154900	3.33	2.96	11.99	44.96	-115.70	-130.7	-115.04	-130.0370751	-129.54	0.13	0.013584906	0.16	0.13	0.127	0.013653216	0.02	1	Agree	0.9	81200	8.12	517	52
S154925	6.67	5.23	15.48	40.37	-104.76	-119.7625	-103.78	-118.7775938	-118.83	0.16	0.03465995	0.20	0.16	0.157	0.03493731	0.04	1	Agree	4.2	82100	8.21	9310	65
S154926	9.17	5.23	16.98	49.54	-100.23	-115.225	-98.31	-113.3098871	-115.39	0.17	0.044766839	0.24	0.17	0.172	0.04548905	0.04	1	Agree	2.6	84200	8.42	7200	55
S154942	69.17	60.72	65.68	118.83	86.65	71.65	88.30	73.30151006	36.97	4.65	4.016842105	5.61	5.00	4.996	4.317037059	2.56	4	Disagree	0.8	83600	8.36	47	979
S154943	55.00	42.98	85.16	172.38	63.04	48.0375	65.76	50.76073833	28.92	5.48	4.416	6.85	6.80	6.799	5.476547048	3.06	2	Agree	0.3	85400	8.54	43	2020
S155508	40.00	27.52	22.73	51.26	-29.95	-44.95	-28.59	-43.59497707	-33.73	0.51	0.266122449	0.61	0.52	0.523	0.272143021	0.45	2	Disagree	0.6	86300	8.63	337	144
S155509	33.34	24.33	28.97	51.54	49.91	34.9125	51.54	36.53778663	19.65	11.65	8.448	19.41	17.83	17.830	12.9318226	5.19	3	Disagree	0.1	69200	6.92	99	1800
S155017	75.84	62.77	70.67	113.68	10.55	-4.45	11.86	-3.137277972	-33.48	1.11	0.953766234	1.29	1.12	1.125	0.966954203	0.65	3	Agree	0.1	80200	8.02	25	86

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
S155048	29.17	17.97	31.47	78.75	-102.38	-117.375	-102.02	-117.0223871	-123.91	0.28	0.172687225	0.32	0.28	0.279	0.173117487	0.13	2	Disagree	1.1	77500	7.75	31	55
S155067	10.83	7.28	15.73	38.66	-82.33	-97.325	-81.96	-96.96290584	-100.85	0.24	0.099884393	0.26	0.24	0.239	0.100220015	0.07	2	Disagree	0.8	76400	7.64	25	68
S155075	17.50	12.05	16.23	34.93	-154.13	-169.125	-153.47	-168.4744736	-163.57	0.12	0.037010676	0.13	0.12	0.123	0.037148276	0.07	1	Agree	0.3	78300	7.83	19	35
S155098	8.33	4.55	12.49	29.49	-165.23	-180.225	-164.89	-179.8855149	-176.08	0.09	0.002214533	0.10	0.09	0.085	0.01	0.03	1	Agree	0.6	84100	8.41	41	37
S155112	15.00	13.42	79.41	142.31	-186.86	-201.8625	-123.98	-138.9847092	-195.64	0.11	0.034439462	0.19	0.15	0.152	0.049252757	0.06	1	Agree	2.6	70100	7.01	23	518
S155119	77.51	61.18	73.67	107.95	98.94	83.9375	99.88	84.875	59.61	64.32	54.72	160.80	160.80	100.000	100	39.15	3	Agree	0.05	84000	8.4	6	1630
S155125	17.50	1.59	100.64	141.17	-243.10	-254.999	-148.13	-160.0241456	-253.41	0.05	3.92157E-06	0.09	0.07	0.074	0.01	0.01	1	Agree	2	65300	6.53	3	394
S155147	13.33	10.92	62.18	81.90	-178.35	-193.35	-134.24	-149.2408231	-182.83	0.08	0.002064516	0.16	0.10	0.103	0.01	0.06	2	Disagree	3.8	50900	5.09	139	64
S157321	0.83	1.36	8.74	24.05	-270.39	-277.1865	-269.43	-276.2285789	-275.82	0.02	3.60767E-06	0.03	0.02	0.025	0.01	0.00	1	Agree	0.5	78200	7.82	32	28
S157345	138.34	119.85	113.38	175.24	244.58	229.575	247.94	232.9366824	99.23	12.86	12.13090909	16.01	15.36	15.362	14.49315861	5.81	4	Disagree	0.05	77000	7.7	11	753
S157360	36.67	27.75	32.96	71.30	23.18	8.175	23.97	8.969932937	-35.38	1.37	1.12950495	2.12	1.38	1.385	1.143910208	0.44	3	Disagree	4.3	79300	7.93	62	233
S157388	15.00	9.32	11.49	22.91	-164.85	-178.749	-162.96	-176.8543082	-169.43	0.08	5.59441E-06	0.08	0.08	0.079	0.01	0.05	1	Agree	0.3	83300	8.33	6	27
S157426	25.00	17.97	82.16	113.11	-229.74	-244.7375	-165.02	-180.016451	-235.47	0.09	0.03432799	0.15	0.13	0.126	0.046100909	0.07	1	Agree	1.2	78700	7.87	11	46
S157460	0.83	1.36	111.13	156.63	-188.26	-196.5615	-83.75	-92.05230403	-195.20	0.04	5.08744E-06	0.12	0.09	0.090	0.01	0.01	1	Agree	0.8	77100	7.71	5	184
S157484	96.67	79.83	112.63	162.93	-136.51	-151.5125	-66.08	-81.08403718	-137.99	0.37	0.304390244	0.58	0.55	0.552	0.449845189	0.37	2	Agree	0.2	73300	7.33	5	159
H42636	0.83	0.23	1.00	23.48	-134.28	-134.374	-134.28	-134.374	-134.15	0.00	7.44186E-06	0.00	0.00	0.010	0.01	0.00	1	Agree		88300	8.83	36.8	29
H42628	1.67	2.27	0.25	16.32	-36.63	-35.624	-35.51	-34.51233306	-33.35	-0.03	2.80702E-05	-0.04	0.01	0.010	0.01	0.06	2	Disagree	0.71	65400	6.54	114.5	1310
H42630	0.42	2.27	2.75	26.92	-58.63	-60.624	-56.49	-58.48422239	-58.35	0.03	1.64948E-05	0.04	0.03	0.034	0.01	0.04	2	Disagree	0.91	78900	7.89	29.6	1220
H42623	0.42	2.27	4.00	36.65	-135.31	-140.3115	-134.25	-139.2500146	-138.04	0.04	7.12695E-06	0.04	0.04	0.036	0.01	0.02	2	Disagree	0.39	78800	7.88	19.8	170
H42631	0.83	0.45	5.49	32.36	-59.54	-63.4365	-59.54	-63.4365	-62.98	0.06	1.57635E-05	0.06	0.06	0.061	0.01	0.01	1	Agree		94800	9.48	21.4	68
H42624	0.83	0.23	8.74	60.71	-96.76	-104.0615	-96.76	-104.0615	-103.84	0.07	9.60961E-06	0.07	0.07	0.070	0.01	0.00	1	Agree		88700	8.87	21.2	22
H42659	0.83	0.23	6.99	45.53	-79.84	-85.9365	-79.84	-85.9365	-85.71	0.07	1.16364E-05	0.07	0.07	0.071	0.01	0.00	1	Agree		89200	8.92	14.3	57
H42652	2.50	4.55	8.99	46.39	-135.81	-147.8115	-135.38	-147.3750146	-143.26	0.08	6.76533E-06	0.09	0.08	0.081	0.01	0.03	2	Disagree	0.54	78900	7.89	10.1	170
H42643	0.42	2.27	5.99	58.41	-70.13	-78.124	-68.36	-76.35617861	-75.85	0.10	0.0000128	0.11	0.10	0.105	0.01	0.03	2	Disagree	0.37	83100	8.31	11.6	710
H42641	0.83	2.27	6.49	54.12	-73.81	-82.8115	-72.69	-81.69055838	-80.54	0.11	1.20755E-05	0.12	0.11	0.110	0.01	0.03	2	Disagree	0.5	82300	8.23	24.3	680
H42657	5.00	1.82	11.74	45.24	-76.69	-87.1865	-76.69	-87.1865	-85.37	0.12	1.14695E-05	0.12	0.12	0.120	0.01	0.02	1	Agree		91500	9.15	11.7	46
H42637	0.42	2.27	5.74	45.24	-57.94	-65.9365	-56.90	-64.90196735	-63.66	0.12	1.51659E-05	0.14	0.12	0.123	0.01	0.03	2	Disagree	1.04	80500	8.05	16.4	990
H42639	4.17	4.55	10.24	63.28	-88.56	-101.5615	-87.94	-100.9365	-97.01	0.13	9.84615E-06	0.13	0.13	0.129	0.01	0.04	2	Disagree	0.53	76100	7.61	13.8	240
H42625	0.42	4.55	7.24	68.44	-75.88	-86.874	-71.39	-82.38849097	-82.33	0.13	1.15108E-05	0.14	0.13	0.134	0.01	0.05	2	Disagree	0.31	76400	7.64	7.4	580
H42648	2.50	4.55	7.49	49.25	-67.44	-78.4365	-66.24	-77.24262579	-73.89	0.14	1.2749E-05	0.16	0.14	0.142	0.01	0.06	2	Disagree	0.77	76200	7.62	11.2	780
H42632	0.83	4.55	8.24	56.70	-53.50	-62.499	-52.67	-61.66867861	-57.95	0.14	0.000016	0.17	0.15	0.146	0.01	0.07	2	Disagree	0.51	84600	8.46	12.6	710
H42653	10.00	7.28	18.73	61.28	-112.08	-127.075	-112.08	-127.075	-124.60	0.15	0.036398104	0.15	0.15	0.150	0.036398104	0.06	2	Disagree		90700	9.07	10.4	32
H42627	0.83	0.45	5.24	48.97	-22.81	-27.8115	-22.81	-27.8115	-27.36	0.18	3.59551E-05	0.18	0.18	0.180	0.01	0.02	1	Agree		66500	6.65	10.3	77
H42642	0.83	0.68	6.49	58.70	-25.78	-31.874	-25.78	-31.874	-31.19	0.19	3.13725E-05	0.19	0.19	0.191	0.01	0.02	1	Agree		88200	8.82	26.6	221
H42645	14.17	6.82	13.49	65.86	-60.00	-74.999	-58.87	-73.86965498	-68.18	0.20	1.33333E-05	0.24	0.20	0.203	0.01	0.09	2	Disagree	0.37	77500	7.75	12.8	1120
H42658	9.17	2.27	3.25	32.07	-20.94	-25.9365	-18.44	-23.4365	-23.66	0.19	3.85542E-05	0.21	0.21	0.213	0.01	0.09	2	Disagree	0.98	82300	8.23	25.9	2050
H42644	25.84	21.38	23.22	70.44	-138.21	-153.2125	-138.21	-153.2125	-156.43	0.22	0.138347979	0.22	0.22	0.223	0.138347979	0.12	3	Disagree		91200	9.12	9	27
H42656	1.67	4.55	7.74	49.82	-40.19	-52.1865	-38.64	-50.64254936	-47.64	0.23	1.91617E-05	0.24	0.24	0.237	0.01	0.09	2	Disagree	0.47	80400	8.04	8.6	1260
H42621	20.83	20.47	22.97	83.04	-83.44	-98.4375	-83.07	-98.06974549	-92.97	0.26	0.132231405	0.27	0.27	0.265	0.132661482	0.18	3	Disagree	0.17	80500	8.05	12	290
H42640	8.33	5.91	16.48	76.45	-54.63	-69.625	-54.63	-69.625	-69.71	0.28	0.079338843	0.28	0.28	0.278	0.079338843	0.08	2	Disagree		84900	8.49	17.6	84
H42649	5.00	3.41	15.23	70.44	-44.85	-59.85	-44.85	-59.85	-60.34	0.30	0.061176471	0.30	0.30	0.296	0.061176471	0.05	2	Disagree		92700	9.27	7.3	98
H42638	10.00	6.82	18.48	70.73	-48.83	-63.825	-48.83	-63.825	-63.80	0.31	0.096283186	0.31	0.31	0.309	0.096283186	0.10	2	Disagree		82000	8.2	5.3	114
H42633	0.42	2.27	4.99	48.68	-16.13	-23.124	-13.00	-19.999	-20.85	0.30	4.32432E-05	0.35	0.35	0.350	0.01	0.10	2	Disagree	0.45	86300	8.63	19.6	3140
H42654	32.50	31.84	38.96	81.32	-71.56	-86.5625	-70.66	-85.66035615	-79.72	0.36	0.224089636	0.38	0.36	0.361	0.225916497	0.29	3	Disagree	0.76	80700	8.07	11.8	380
H42661	21.67	25.02	26.22	63.00	-34.06	-49.0625	-32.29	-47.28627521	-39.05	0.47	0.234146341	0.48	0.48	0.482	0.240823519	0.39	2	Disagree	0.4	77000	7.7	19.4	1150
H42651	0.83	0.23	7.49	60.71	2.80	-2.499	2.80	-2.499	-2.27	2.12	0.0004	2.12	2.12	2.120	0.01	0.09	1	Agree		87800	8.78	6.2	1560
H42650	4.17	6.82	9.24	58.13	11.50	-2.499	12.44	-1.5615	4.32	5.60	0.0004	8.96	8.96	8.960	0.01	2.73	2	Disagree	0.1	76300	7.63	5.4	2680
58450	96.67	95.52	75.17	113.68	-187.63	-202.625	-186.50	-201.495655	-185.11	0.33	0.277951002	0.36	0.33	0.333	0.279074106	0.34	4	Disagree	1.49	60800	6.08	176.5	1120
58464	80.01	79.60	46.70	86.48	-192.25	-207.25	-190.73	-205.7279291	-191.65	0.29	0.2359447	0.33	0.29	0.293	0.237276133	0.29	3	Disagree	4.99	73100	7.31	126.5	1230
17086	62.50	54.58	34.21	63.28	-85.88	-100.875	-85.40	-100.3978466	-82.29	0.37	0.263013699	0.44	0.37	0.374	0.263933786	0.40	3	Disagree	2.25	84100	8.41	83.9	440

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
17062	94.17	93.24	67.93	100.22	-132.94	-147.9375	-131.71	-146.7133426	-127.69	0.40	0.330410184	0.44	0.40	0.401	0.332251101	0.42	3	Disagree	3.08	62000	6.2	116.5	1250
17109	125.01	118.26	70.92	195.00	-37.69	-52.6875	-36.76	-51.75816454	-61.43	0.79	0.706782609	0.95	0.79	0.794	0.71045706	0.66	4	Disagree	6.81	76300	7.63	68.6	1060
17148	113.34	70.50	76.67	166.08	2.38	-12.625	3.53	-11.47377521	-5.12	1.03	0.833057851	1.21	1.05	1.047	0.845935362	0.93	3	Disagree	2.07	81000	8.1	244	1150
58479	137.51	138.73	99.14	150.05	29.38	14.375	30.17	15.1688551	33.10	1.28	1.136094675	1.52	1.29	1.288	1.144697982	1.31	4	Disagree	1.5	73900	7.39	169.5	660
58493	99.17	97.79	90.90	125.99	110.75	95.75	111.06	96.0625	96.54	89.60	77.6	119.47	119.47	100.000	100	78.23	4	Disagree	0.05	70800	7.08	1.5	1990
G24857	0.83	2.27	4.00	14.89	-101.44	-108.4365	-100.80	-107.7958033	-106.16	0.06	9.2219E-06	0.07	0.06	0.065	0.01	0.02	1	Agree	0.32	62300	6.23	71.7	450
SG92-17_C11049	31.67	31.84	36.71	88.77	-16.94	-31.9375	-12.84	-27.8413864	-24.10	0.70	0.429050279	0.84	0.75	0.752	0.462950582	0.57	2	Disagree	0.24	80000	8	174.5	1760
9593	38.34	37.98	40.95	83.04	41.65	26.65	42.38	27.38439889	-0.77	2.07	1.687741935	2.86	2.11	2.115	1.720346334	0.98	4	Disagree		72700	7.27	66.4	150
S91-388_5219	62.50	59.13	149.34	235.09	37.50	22.5	38.77	23.77211864	26.63	2.15	1.692307692	2.77	2.24	2.242	1.761246604	1.82	3	Disagree	0.27	79500	7.95	39.4	1530
H44700	34.17	26.15	36.71	65.57	46.21	31.2076	46.52	31.5201	18.34	6.91	4.9945728	7.20	7.20	7.203	5.20268	3.35	4	Disagree		77600	7.76	3.5	1978
G24650	2.50	2.27	9.24	32.07	9.13	-1.874	9.75	-1.249	0.40	5.87	0.000533333	8.80	8.80	8.800	0.01	1.21	1	Agree	0.33	78800	7.88	3.5	2790
H42333	79.17	52.31	95.15	160.93	88.63	73.625	89.25	74.25	42.93	10.45	8.853333333	11.20	11.20	11.200	9.485714286	5.58	3	Disagree	0.57	73700	7.37	5.4	1720
MC-05-03 6.0-20	117.51	128.95	119.62	186.13	172.04	157.0417706	173.29	158.2856277	117.70	16.29	14.9592685	30.87	18.32	18.318	16.81884549	11.46	3	Agree	0.7	79900	7.99	7	1327
10335	127.51	120.54	139.10	200.44	145.81	130.8125	147.55	132.5533686	113.35	21.29	19.2	34.97	28.09	28.091	25.33676154	16.77	3	Agree	0.34	78800	7.88	3	1530
H45368	2.50	3.18	7.49	23.19	-159.55	-166.874	-159.21	-166.527951	-163.69	0.04	5.99251E-06	0.05	0.04	0.044	0.01	0.02	1	Agree		61400	6.14	92.2	46
H45505	3.33	3.87	7.99	20.33	-140.87	-149.0615	-139.62	-147.8115	-145.20	0.05	6.7086E-06	0.06	0.06	0.055	0.01	0.03	1	Agree		67600	6.76	107.3	38
G24888	4.17	4.55	9.49	21.48	-120.94	-130.9365	-120.31	-130.3115	-126.39	0.08	7.63723E-06	0.08	0.08	0.077	0.01	0.03	1	Agree	0.41	71400	7.14	66.7	440
S91-388_5274	0.42	2.27	5.99	15.46	-72.44	-78.4365	-71.79	-77.79160164	-76.16	0.08	1.2749E-05	0.08	0.08	0.077	0.01	0.03	2	Disagree	0.91	72600	7.26	265	670
H45279	4.17	4.78	8.99	20.04	-119.89	-130.3115	-119.27	-129.6865	-125.54	0.08	7.67386E-06	0.08	0.08	0.080	0.01	0.04	1	Agree		57500	5.75	107.6	57
G24806	3.33	4.55	9.74	25.20	-103.19	-112.1865	-102.62	-111.6145342	-107.64	0.08	8.91365E-06	0.08	0.08	0.081	0.01	0.04	1	Agree	0.41	77900	7.79	24.1	570
G24829	1.67	2.27	4.74	12.89	-67.06	-74.0615	-66.29	-73.29261624	-71.79	0.09	1.35021E-05	0.11	0.10	0.096	0.01	0.03	1	Agree	0.09	64500	6.45	47.1	840
G24902	10.00	11.37	16.73	32.64	-143.94	-158.9375	-143.37	-158.3697359	-149.57	0.11	0.012427184	0.12	0.11	0.106	0.012471181	0.07	2	Disagree	0.2	69800	6.98	92	350
G24874	15.00	15.92	20.73	34.93	-184.88	-199.875	-181.85	-196.8509955	-190.96	0.11	0.033836858	0.12	0.11	0.108	0.034338807	0.08	2	Disagree	0.51	72900	7.29	97.2	290
SG92-22_C9763	15.00	13.65	17.98	35.79	-111.81	-126.8125	-111.23	-126.2301494	-114.17	0.13	0.007823961	0.14	0.13	0.126	0.01	0.11	2	Disagree	0.14	82300	8.23	47.7	370
SG92-22_C9711	4.17	6.82	14.73	38.66	-89.50	-102.499	-88.83	-101.8291303	-95.68	0.13	9.7561E-06	0.16	0.13	0.128	0.01	0.07	1	Agree	0.22	77900	7.79	24.4	490
G24782	5.00	4.55	6.49	11.45	-31.56	-36.5615	-29.91	-34.91013189	-32.01	0.14	2.73504E-05	0.15	0.14	0.143	0.01	0.12	1	Agree	0.63	61900	6.19	42.8	2050
H44956	3.33	3.87	4.50	10.59	-36.80	-43.749	-36.49	-43.4365	-39.88	0.16	2.28571E-05	0.16	0.16	0.160	0.01	0.09	1	Agree		58600	5.86	21.6	119
H42509	5.83	6.60	10.49	28.63	-66.84	-81.249	-66.53	-80.9365	-74.65	0.18	1.23077E-05	0.18	0.18	0.178	0.01	0.08	2	Disagree		75500	7.55	22.8	100
S91-388_5261	20.83	4.55	5.99	11.17	-33.63	-40.624	-31.81	-38.80908863	-36.08	0.17	2.46154E-05	0.18	0.18	0.180	0.01	0.11	2	Disagree	0.54	65400	6.54	122	2060
H44939	12.50	6.82	13.49	38.08	-78.25	-93.25	-77.69	-92.68532749	-89.43	0.19	0.031168831	0.21	0.19	0.188	0.031352769	0.07	2	Disagree	2.28	67000	6.7	41.4	560
H44935	6.67	7.28	11.24	28.63	-55.14	-68.4365	-55.14	-68.4365	-61.16	0.19	1.46119E-05	0.19	0.19	0.194	0.01	0.11	1	Agree		68800	6.88	20.7	236
G21680	17.50	20.47	23.97	56.41	-88.50	-103.5	-87.92	-102.920741	-97.03	0.25	0.119148936	0.25	0.25	0.248	0.119739234	0.17	2	Disagree	0.95	79900	7.99	34.8	580
H42532	32.09	27.67	32.21	57.56	-103.90	-118.9004633	-103.35	-118.3468103	-113.68	0.26	0.158847127	0.32	0.27	0.266	0.159471743	0.20	3	Disagree		72800	7.28	45.2	45
H44942	22.50	15.92	19.98	31.50	-51.69	-66.6875	-50.85	-65.84988535	-53.77	0.26	0.043049327	0.28	0.26	0.261	0.043573057	0.23	2	Disagree	2.2	71500	7.15	80.3	720
SG92-02_C8906	11.67	13.65	13.49	42.67	-44.25	-59.25	-42.80	-57.80086172	-47.60	0.28	0.032653061	0.30	0.28	0.284	0.033444334	0.22	2	Disagree	0.65	67800	6.78	10.7	1130
H42460	25.00	25.02	27.22	53.55	-70.56	-85.5625	-69.57	-84.57283705	-76.55	0.31	0.157538462	0.32	0.31	0.308	0.159088681	0.25	2	Disagree	1.03	77900	7.79	30.3	500
SG92-02_C8897	45.84	43.21	31.47	54.41	-68.94	-83.9375	-65.50	-80.5	-67.73	0.38	0.243380282	0.39	0.39	0.391	0.251162791	0.39	2	Disagree	2.89	65700	6.57	40.9	340
SG92-02_C8901	11.67	13.65	19.23	80.18	-37.44	-52.4375	-35.59	-50.58834261	-49.79	0.41	0.173399015	0.44	0.42	0.422	0.178605228	0.22	2	Disagree	1.37	72100	7.21	15.8	1250
SG92-06_C12601	19.17	22.74	22.23	58.70	-34.94	-49.9375	-31.60	-46.59766507	-38.19	0.43	0.180512821	0.52	0.45	0.451	0.190979964	0.37	2	Disagree	0.91	81600	8.16	39.9	1580
SG92-22_C9736	79.17	81.87	77.91	102.80	-90.31	-105.3125	-88.62	-103.6187213	-88.44	0.47	0.381651376	0.53	0.47	0.474	0.385485072	0.48	2	Agree	0.46	64100	6.41	70.6	180
H44936	37.50	29.57	38.71	67.29	-42.06	-57.0625	-41.43	-56.43218816	-54.50	0.50	0.321189591	0.53	0.50	0.503	0.323616108	0.35	2	Disagree	0.38	71200	7.12	72	650
H45187	30.84	27.29	28.47	75.88	-29.63	-44.625	-28.60	-43.60085217	-38.33	0.55	0.32	0.56	0.56	0.557	0.325073111	0.42	2	Disagree	0.84	73700	7.37	13.7	1190
H45191	52.50	9.10	38.46	89.34	-40.25	-55.25	-39.77	-54.7728466	-87.15	0.58	0.425974026	0.60	0.58	0.585	0.428096287	0.09	2	Agree	1.58	71000	7.1	33.1	440
H44940	11.67	11.83	12.24	24.05	-8.78	-23.775	-8.78	-23.775	-15.05	0.67	0.115348837	0.67	0.67	0.673	0.115348837	0.44	2	Disagree		69400	6.94	15.6	483
G24756	23.33	22.74	21.23	52.69	-14.63	-29.625	-13.27	-28.27265551	-22.88	0.68	0.350684932	0.81	0.70	0.700	0.36139689	0.50	2	Disagree	1.44	79500	7.95	19.9	1640
H44937	16.67	16.37	17.98	54.12	-9.43	-24.425	-9.43	-24.425	-26.75	0.78	0.433623188	0.78	0.78	0.781	0.433623188	0.38	2	Disagree		84700	8.47	27.6	318
G24926	106.67	104.62	98.14	142.03	-11.13	-26.125	-10.43	-25.42904883	-48.51	0.93	0.829387755	1.06	0.93	0.932	0.833174523	0.68	3	Agree	0.54	66300	6.63	12.4	740
S91-388_5249	37.50	34.11	37.96	49.82	-0.25	-15.25	-0.88	-15.875	-2.14	0.99	0.579310345	0.98	0.98	0.976	0.569491525	0.94	3	Disagree	0.78	63900	6.39	35.3	1660
H45803	67.50	68.46	61.43	113.39	-0.62	-15.61553	0.06	-14.93874786	-26.86	0.99	0.836164931	1.32	1.00	1.001	0.842144719	0.72	4	Disagree		80200	8.02	3.9	71
H45188	50.84	52.54	36.46	92.20	1.73	-13.275	1.73	-13.275	-9.34	1.03	0.785454545	1.03	1.03	1.028	0.785454545	0.85	2	Agree		84500	8.45	10.5	237

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
H45189	33.34	29.57	28.22	88.19	3.44	-11.5625	4.18	-10.82278927	-7.00	1.09	0.683760684	1.13	1.12	1.117	0.697879772	0.81	2	Disagree	0.44	79500	7.95	6.5	800
G24852	50.84	50.03	33.71	85.04	8.50	-6.5	9.13	-5.875	7.53	1.20	0.847058824	1.22	1.22	1.218	0.859701493	1.18	2	Agree	0.23	74400	7.44	14.7	680
H44933	71.67	40.94	65.93	109.96	19.00	4	20.32	5.323171453	-14.06	1.35	1.072727273	1.44	1.38	1.379	1.099170752	0.74	2	Agree	0.57	73900	7.39	49.2	1600
X15955	18.33	20.01	22.73	55.84	14.53	-0.475	15.31	0.309373863	-9.36	1.49	0.983829787	1.78	1.54	1.535	1.010820815	0.68	3	Disagree		81000	8.1	4.2	647
H45591	43.61	38.17	33.21	93.64	75.71	60.70793333	76.31	61.30555995	-22.51	2.25	2.000508429	2.72	2.27	2.270	2.020408028	0.63	3	Agree		77100	7.71	11.9	141
X15979	46.67	51.40	41.95	83.33	33.95	18.95	34.58	19.575	7.65	1.78	1.433142857	1.80	1.80	1.802	1.453913043	1.17	4	Disagree		80900	8.09	4.9	224
G21668	45.00	40.94	44.20	97.64	24.63	9.625	26.50	11.5	16.56	2.01	1.394871795	2.18	2.18	2.178	1.511111111	1.68	2	Disagree	0.82	85000	8.5	41.8	4640
H45190	71.67	74.82	62.68	131.72	62.23	47.225	62.23	47.225	22.95	2.20	1.910361446	2.20	2.20	2.200	1.910361446	1.44	3	Agree		88500	8.85	12.8	231
H45814	25.70	21.98	27.97	80.75	57.84	42.842845	58.73	43.73147266	-10.31	2.79	2.326746168	3.41	2.87	2.870	2.392587279	0.68	3	Disagree		84100	8.41	3	540
H45186	54.17	53.22	42.20	114.25	52.25	37.25	52.25	37.25	14.47	2.35	1.961290323	2.35	2.35	2.348	1.961290323	1.37	2	Agree		89300	8.93	7.2	541
G24942	84.17	81.87	82.91	134.87	75.25	60.25	76.70	61.69715686	33.12	2.54	2.235897436	2.68	2.62	2.621	2.304301238	1.68	3	Agree	0.19	77400	7.74	14.3	1770
X15939	32.50	27.29	35.96	103.37	33.25	18.25	34.06	19.06264332	8.54	2.77	1.973333333	3.33	2.90	2.899	2.062734251	1.46	3	Disagree	0.08	80400	8.04	10.4	900
G24952	110.01	72.78	68.67	95.35	58.88	43.875	59.50	44.5	44.65	3.09	2.56	3.16	3.16	3.164	2.618181818	2.59	3	Disagree	0.16	63500	6.35	6	760
G21701	86.67	81.87	90.90	143.46	62.69	47.6875	63.94	48.9375	66.56	5.09	4.114285714	5.55	5.55	5.547	4.48	5.35	2	Agree	0.62	81100	8.11	17.9	3420
SG92-22_C9681	60.00	59.13	67.18	134.01	89.75	74.75	92.88	77.875	52.88	15.36	12.96	30.72	30.72	30.720	25.92	9.46	3	Disagree	0.38	71000	7.1	20.3	3980
SG92-06_C12669	39.17	34.11	44.45	70.73	-78.75	-93.75	-76.12	-91.11872134	-94.64	0.39	0.27184466	0.43	0.40	0.396	0.277516293	0.26	2	Agree	4.08	76000	7.6	32	180
H45390	25.14	19.86	38.46	71.59	-66.77	-81.76799167	-66.21	-81.21288002	-97.48	0.43	0.30317557	0.53	0.43	0.433	0.304616603	0.17	3	Disagree		68000	6.8	46.7	47
H45199	40.00	39.12	37.21	111.68	-114.89	-129.8875	-114.89	-129.8875	-155.57	0.41	0.332841091	0.41	0.41	0.410	0.332841091	0.20	2	Agree		84400	8.44	22.1	44
SG92-22_C9794	25.84	29.57	25.72	71.59	-50.00	-65	-48.86	-63.85717861	-55.43	0.41	0.235294118	0.46	0.42	0.417	0.23850075	0.35	2	Disagree	0.21	73800	7.38	17	710
H45195	22.50	15.92	22.97	79.03	-37.94	-52.9375	-37.23	-52.22696231	-55.02	0.47	0.253744493	0.48	0.47	0.470	0.256311813	0.22	2	Disagree	0.33	78300	7.83	11.2	760
H45198	38.34	38.66	40.21	85.33	-40.19	-55.1875	-39.55	-54.5498949	-48.53	0.54	0.36702509	0.56	0.54	0.543	0.36972893	0.44	2	Disagree	0.32	78300	7.83	14.9	660
H45200	33.34	31.84	34.21	75.31	-29.06	-44.0625	-28.24	-43.24256342	-37.22	0.58	0.36199095	0.61	0.59	0.586	0.366340283	0.46	2	Disagree	0.76	74900	7.49	14.1	910
S-10-29 115.5-129.5	80.84	83.24	58.44	106.81	18.77	3.766365337	-44.67	-59.67113466	-16.45	1.19	1.037781721	0.73	0.73	0.726	0.634199941	0.83	3	Agree	1.1	68500	6.85	32	63
H45202	12.50	13.65	22.97	57.84	-8.69	-23.6875	-7.29	-22.29139596	-21.04	0.75	0.317117117	0.81	0.78	0.781	0.330415703	0.39	2	Disagree	3.06	74700	7.47	27.8	1700
SG92-02_C8937	64.17	65.95	57.19	96.50	-1.38	-16.375	-0.51	-15.50821231	1.58	0.98	0.745631068	1.04	0.99	0.992	0.755807765	1.02	2	Agree	0.48	73600	7.36	205	760
H45206	55.00	52.31	58.69	115.11	3.56	-11.4375	4.63	-10.36959261	-6.13	1.06	0.804278075	1.11	1.08	1.081	0.819249325	0.90	2	Agree	0.4	74700	7.47	19.5	1250
H45614	62.50	62.54	67.18	119.98	9.92	-5.08207	10.23	-4.76957	-44.33	1.09	0.952448468	1.10	1.10	1.096	0.955241572	0.59	4	Disagree		85300	8.53	15.4	63
H45192	35.84	39.12	38.21	98.50	12.56	-2.4375	12.56	-2.4375	-31.82	1.18	0.965638767	1.18	1.18	1.177	0.965638767	0.55	3	Disagree		89800	8.98	8.6	172
H45211	55.84	47.76	59.68	114.54	8.50	-6.5	9.47	-5.534198242	-4.74	1.16	0.876190476	1.25	1.18	1.184	0.892611151	0.91	2	Agree	0.3	78800	7.88	23.7	1110
SG92-22_C9822	108.34	104.62	79.66	116.83	20.38	5.375	21.55	6.55428769	18.99	1.24	1.062773723	1.38	1.26	1.255	1.077615399	1.22	3	Agree	1.91	64600	6.46	63.3	760
H45197	25.84	28.43	29.72	74.45	11.73	-3.275	11.73	-3.275	-13.45	1.28	0.921791045	1.28	1.28	1.280	0.921791045	0.68	3	Disagree		86800	8.68	5.2	168
H45208	130.84	129.63	123.61	237.67	32.63	17.625	33.32	18.31674947	15.26	1.29	1.154098361	1.34	1.29	1.293	1.161120916	1.13	3	Agree	0.49	65300	6.53	35.3	520
H45207	53.34	48.90	58.94	130.86	28.79	13.7875	28.79	13.7875	-43.92	1.31	1.148552189	1.31	1.31	1.310	1.148552189	0.53	3	Agree		87100	8.71	69.1	81
H44977	29.17	29.79	31.22	66.43	14.66	-0.34407	14.88	-0.118534039	-14.89	1.33	0.992300531	1.57	1.33	1.335	0.997334035	0.67	3	Disagree		77200	7.72	6.3	95
H45210	93.34	88.70	99.14	186.98	44.91	29.9125	44.91	29.9125	-30.99	1.38	1.249921671	1.38	1.38	1.375	1.249921671	0.74	3	Agree		81000	8.1	50.3	64
G24977	50.00	50.03	49.70	83.33	25.75	10.75	26.94	11.94189279	-21.22	1.36	1.150877193	1.45	1.38	1.385	1.170456972	0.70	3	Disagree	0.27	77100	7.71	18.6	1420
H45224	55.84	57.31	63.93	114.54	31.20	16.19634	31.65	16.64814125	0.12	1.55	1.283214689	2.10	1.56	1.558	1.293433264	1.00	4	Disagree		84800	8.48	15	191
H44683	60.84	61.18	61.68	110.53	46.74	31.73995	47.05	32.05245	9.93	1.91	1.619316098	1.92	1.92	1.924	1.629250552	1.19	4	Disagree		80600	8.06	15.2	106
H45193	46.67	38.66	38.46	89.91	24.38	9.375	25.00	10	13.04	1.95	1.365853659	2.00	2.00	2.000	1.4	1.51	2	Agree	1.2	73800	7.38	16.1	2200
G24999	110.84	106.89	108.13	201.59	90.44	75.4375	90.13	75.125	20.33	2.04	1.871480144	2.04	2.04	2.037	1.864748201	1.23	3	Agree	0.24	74400	7.44	18.8	1020
H45194	179.18	175.80	97.14	187.27	86.48	71.475	86.48	71.475	100.17	2.14	1.945123967	2.14	2.14	2.143	1.945123967	2.32	2	Disagree		79800	7.98	39.6	124
H45204	140.01	129.63	105.38	181.26	81.63	66.625	81.63	66.625	60.26	2.18	1.96036036	2.18	2.18	2.177	1.96036036	1.87	3	Agree	0.22	70500	7.05	18.9	950
H45205	70.00	70.27	80.16	144.32	74.39	59.3875	74.39	59.3875	14.96	2.34	2.073672316	2.34	2.34	2.345	2.073672316	1.27	3	Agree		92400	9.24	16.2	166
H45203	59.17	62.09	65.43	121.70	65.35	50.35	65.35	50.35	28.34	2.94	2.491851852	2.94	2.94	2.936	2.491851852	1.84	3	Disagree		92200	9.22	9.4	429
H45201	143.34	140.32	86.65	154.91	118.40	103.4	118.40	103.4	105.32	4.38	3.954285714	4.38	4.38	4.383	3.954285714	4.01	3	Agree		78300	7.83	11.7	255
H45212	35.00	34.57	96.39	209.89	90.30	75.3	90.30	75.3	9.57	4.61	4.012	4.61	4.61	4.612	4.012	1.38	3	Agree		87900	8.79	14.4	298
X15937	35.00	27.29	33.46	60.13	-53.56	-68.5625	-53.10	-68.09993312	-64.27	0.42	0.251194539	0.43	0.42	0.417	0.252469999	0.30	2	Disagree	0.89	69300	6.93	17.5	420
H45086	33.34	31.84	43.95	82.18	-44.38	-59.375	-43.47	-58.46754431	-52.54	0.47	0.296296296	0.49	0.48	0.479	0.299517617	0.38	2	Disagree	1.21	89500	8.95	65.5	1030
H44866	22.50	20.24	20.23	43.24	-25.33	-40.3346	-24.96	-39.95864865	-34.13	0.53	0.258214253	0.73	0.54	0.538	0.260011988	0.37	3	Disagree		68900	6.89	7.7	87
H45087	99.17	99.84	110.13	172.38	-68.16	-83.1625	-68.16	-83.1625	-119.22	0.69	0.620370899	0.69	0.69	0.689	0.620370899	0.46	3	Agree		70600	7.06	63.7	52

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
H45085	59.17	58.45	66.68	107.09	-9.55	-24.55	-9.55	-24.55	-27.80	0.89	0.715362319	0.89	0.89	0.889	0.715362319	0.68	3	Disagree		86200	8.62	32.6	139
H45083	57.50	50.03	61.18	102.23	-4.25	-19.25	-3.30	-18.29878476	-16.22	0.94	0.709433962	0.98	0.95	0.949	0.719768372	0.76	2	Agree	1.34	82100	8.21	52.1	1090
X15934	59.17	61.40	52.19	100.79	4.63	-10.375	4.00	-11	7.03	1.09	0.809195402	1.07	1.07	1.073	0.8	1.13	3	Disagree	0.51	74500	7.45	25.2	1330
H45102	56.81	47.46	62.43	113.68	48.99	33.98907833	49.89	34.88950965	-27.39	1.65	1.454133823	2.05	1.67	1.675	1.471841273	0.63	3	Agree		77000	7.7	12.7	92
X15912	29.17	30.48	27.47	67.58	14.79	-0.2125	15.40	0.400482274	-12.34	1.35	0.995036496	2.12	1.36	1.365	1.00949021	0.71	4	Disagree		80400	8.04	3.7	412
H45082	204.18	186.49	132.60	219.06	52.38	37.375	52.83	37.83027362	45.86	1.37	1.265777778	1.48	1.38	1.377	1.269889045	1.33	3	Agree	1.08	69200	6.92	161.5	410
20856	127.51	129.63	69.67	111.68	21.81	6.8125	24.27	9.272070867	72.45	1.38	1.119125683	1.51	1.44	1.444	1.16942119	2.27	2	Agree	1.04	72800	7.28	93.5	1230
H45088	81.67	79.60	97.14	160.93	30.75	15.75	32.58	17.57616747	8.35	1.43	1.221052632	1.72	1.47	1.469	1.253171956	1.12	3	Agree	1	80200	8.02	42.5	790
H44554	95.01	94.15	75.92	121.12	47.47	32.47173	48.46	33.46028281	22.28	1.66	1.451780591	2.08	1.68	1.684	1.472026518	1.31	4	Disagree		73400	7.34	23.3	70
SG92-06_C12577	135.01	136.46	149.34	230.80	78.06	63.0625	79.05	64.05327309	45.52	1.86	1.69347079	2.01	1.88	1.879	1.712124557	1.50	3	Agree	0.34	71600	7.16	19.3	930
H45081	275.85	193.31	147.34	237.38	266.55	251.55	268.28	253.2828138	177.06	17.40	16.48	19.67	19.48	19.480	18.44710093	11.90	4	Disagree	6.8	63000	6.3	18	662
H45082	205.01	140.78	118.12	200.16	40.03	25.025	40.69	25.69084225	-8.60	1.27	1.167531381	1.41	1.27	1.274	1.172758979	0.94	4	Disagree	14.4	59200	5.92	143	56
H45083	77.51	50.72	70.67	111.39	47.25	32.25	47.25	32.25	-5.53	1.84	1.573333333	1.84	1.84	1.840	1.573333333	0.90	4	Disagree	1.3	70900	7.09	36	118
H45085	75.84	51.85	74.67	115.40	-1.55	-16.55	-1.18	-16.18498853	-41.90	0.98	0.823466667	1.05	0.99	0.987	0.826685329	0.55	4	Disagree	2.8	79600	7.96	50	72
H45086	30.00	17.97	40.46	79.03	0.80	-14.2	1.53	-13.47397221	-37.03	1.01	0.741818182	1.12	1.03	1.028	0.75174155	0.33	3	Disagree	1	94600	9.46	53	567
H45102	98.34	90.06	99.64	157.78	70.75	55.75	71.42	56.42240618	6.31	1.84	1.665671642	2.03	1.86	1.860	1.67915311	1.08	3	Agree	0.4	75800	7.58	11	65
H45103	39.17	22.52	31.96	69.01	-16.31	-31.3125	-25.38	-40.375	-40.30	0.74	0.501492537	0.65	0.65	0.647	0.43826087	0.36	2	Disagree	0.3	80900	8.09	17	104
H45104	21.67	19.33	25.72	69.58	-30.51	-45.5125	-30.13	-45.12925539	-45.98	0.53	0.303157895	0.55	0.54	0.536	0.304947283	0.30	2	Disagree	0.9	77000	7.7	19	97
X64717	84.17	73.23	95.15	140.02	73.75	58.75	74.13	59.13015305	24.48	2.51	2.205128205	3.53	2.53	2.533	2.222458965	1.50	4	Disagree	0.7	79500	7.95	18	307
X64718	127.51	110.98	132.10	186.13	116.88	101.875	117.20	102.1953483	62.86	3.43	3.116883117	4.33	3.45	3.452	3.137769961	2.31	4	Disagree	1.2	73700	7.37	21	225
X64719	96.67	82.78	109.13	153.20	76.30	61.3	76.63	61.62910024	27.78	2.39	2.114545455	3.36	2.40	2.402	2.1272743	1.51	4	Disagree	3.7	78200	7.82	23	237
X64724	89.17	75.28	109.38	154.34	40.00	25	41.00	25.99511675	-22.22	1.41	1.256410256	1.93	1.42	1.425	1.269365817	0.77	4	Disagree	54.4	73400	7.34	28	79
X64743	41.67	34.11	48.95	111.68	57.81	42.8125	58.04	43.03730664	-38.07	1.80	1.593073593	2.34	1.81	1.806	1.598050248	0.47	4	Disagree	0.9	79400	7.94	7	94
X64746	207.51	170.80	185.55	350.49	261.88	246.875	264.76	249.7648085	82.67	3.97	3.80141844	5.80	4.11	4.106	3.93030149	1.94	4	Disagree	0.6	50300	5.03	11	106
X62696	58.34	46.39	73.92	126.57	75.63	60.625	76.00	61.00168068	-17.98	2.17	1.941747573	2.75	2.19	2.188	1.953176292	0.72	4	Disagree	0.2	75200	7.52	21	88
X64747	177.51	142.14	159.82	308.97	207.50	192.5	209.09	194.0931317	42.14	3.08	2.925	4.17	3.12	3.125	2.972353506	1.42	4	Disagree	0.7	52200	5.22	13	42
H45104	43.34	40.94	47.45	102.23	23.13	8.125	24.49	9.487729308	14.06	1.86	1.302325581	2.11	1.96	1.960	1.371888862	1.52	2	Agree	0.55	77100	7.71	17.4	1440
X15938	54.17	45.94	56.44	115.40	69.98	54.975	69.98	54.975	-9.69	2.26	1.988314607	2.26	2.26	2.258	1.988314607	0.83	3	Agree		84000	8.4	3.1	145
H45103	40.84	39.34	35.21	77.60	51.94	36.9375	51.94	36.9375	2.78	2.42	2.01025641	2.42	2.42	2.421	2.01025641	1.08	3	Disagree		78700	7.87	8	137
H44876	45.84	44.35	47.45	93.92	43.83	28.82576	44.14	29.13826	18.10	2.67	2.09812419	2.70	2.70	2.702	2.123402795	1.69	4	Disagree		75600	7.56	5.6	244
X15932	230.85	152.38	61.68	109.96	109.31	94.3125	110.22	95.21575399	97.69	3.00	2.724571429	3.14	3.05	3.049	2.77032795	2.79	3	Agree	0.7	54700	5.47	34.7	810
H44843	159.18	159.20	114.62	191.57	128.09	113.09343	128.72	113.71843	102.95	3.28	3.010549867	3.31	3.31	3.314	3.04437627	2.83	4	Disagree		75000	7.5	82.7	98
H45089	128.34	125.99	143.59	210.75	119.58	104.575	119.58	104.575	82.87	3.77	3.424927536	3.77	3.77	3.773	3.424927536	2.92	3	Agree		82600	8.26	29.9	131
X15936	47.50	39.12	48.95	111.68	84.39	69.3875	84.39	69.3875	11.30	4.03	3.494831461	4.03	4.03	4.034	3.494831461	1.41	3	Agree		80000	8	6.9	218
S91-388_5235	99.17	100.07	114.87	172.38	107.75	92.75	108.38	93.38031184	78.82	6.07	5.364705882	7.12	6.26	6.256	5.528696609	4.71	4	Disagree	0.34	81400	8.14	11.9	650
X15933	63.34	57.31	43.70	104.23	90.06	75.0625	90.06	75.0625	43.87	7.70	6.586046512	7.70	7.70	7.702	6.586046512	4.27	3	Agree		84800	8.48	2.5	1064
H45078	6.67	8.19	10.99	38.94	-198.68	-206.874	-198.68	-206.874	-198.69	0.04	4.83384E-06	0.04	0.04	0.040	0.01	0.04	1	Agree		70300	7.03	3	34
H45071	0.83	2.27	10.49	43.24	-162.94	-170.9365	-162.94	-170.9365	-168.66	0.05	5.85009E-06	0.05	0.05	0.047	0.01	0.01	1	Agree		81400	8.14	6.5	36
H45068	1.67	2.50	12.24	35.51	-154.09	-162.1865	-154.09	-162.1865	-159.69	0.05	6.1657E-06	0.05	0.05	0.050	0.01	0.02	1	Agree		82200	8.22	223.2	40
H45065	0.83	2.27	9.99	33.50	-152.75	-161.249	-152.75	-161.249	-158.98	0.05	6.20155E-06	0.05	0.05	0.053	0.01	0.01	1	Agree		77800	7.78	5.7	35
H45080	57.50	62.09	16.23	42.38	-100.54	-115.5375	-100.54	-115.5375	-56.35	0.15	0.024485488	0.15	0.15	0.151	0.024485488	0.52	1	Agree		87200	8.72	5.3	41
H45075	28.34	29.57	26.72	54.69	-141.66	-156.6625	-141.66	-156.6625	-149.50	0.21	0.125095986	0.21	0.21	0.209	0.125095986	0.17	3	Disagree		81100	8.11	18.8	29
X15748	75.84	77.32	81.91	144.32	-41.88	-56.875	-41.10	-56.09882298	10.45	0.37	0.14953271	0.39	0.38	0.378	0.151288624	1.16	2	Disagree	1.27	70100	7.01	16.7	850
H45073	51.67	46.85	55.44	93.06	-1.71	-16.7125	-1.71	-16.7125	-20.96	0.97	0.753548387	0.97	0.97	0.975	0.753548387	0.69	4	Disagree		88500	8.85	3.8	99
S-11-70 122.4-136.9	70.00	72.78	77.17	136.59	10.43	-4.570504926	11.31	-3.685487728	-75.66	1.07	0.9692023	1.31	1.08	1.077	0.97502253	0.49	3	Agree	2.2	76400	7.64	20	108
9976	19.86	13.61	30.22	82.47	-20.79	-35.7875	-19.34	-34.34143827	-51.50	0.68	0.450304	0.82	0.70	0.696	0.460533136	0.21	2	Disagree		73500	7.35	9.3	126
S91-398_5495	9.17	9.10	13.73	44.10	-1.38	-16.375	3.57	-11.43175821	-10.28	0.93	0.15483871	1.34	1.25	1.247	0.20787488	0.47	3	Disagree	0.9	80400	8.04	10.9	3350
H44453	37.50	35.71	48.20	97.64	14.18	-0.825	14.18	-0.825	-17.42	1.27	0.984470588	1.27	1.27	1.267	0.984470588	0.67	3	Disagree		84400	8.44	38.6	183
S-11-70 85.4-103.4	74.17	77.78	84.41	146.32	36.68	21.67949507	37.26	22.25899797	-44.41	1.30	1.177428093	1.66	1.31	1.306	1.183038932	0.64	3	Agree	0.7	77800	7.78	10	149
H42341	6.67	6.82	22.97	83.04	3.06	-11.9375	5.25	-9.75	-9.11	1.19	0.250980392	1.38	1.38	1.382	0.290909091	0.43	2	Disagree	0.93	76900	7.69	24.1	3260

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
X15862	80.01	81.87	81.66	141.74	25.94	10.9375	27.81	12.8125	17.81	1.40	1.170731707	1.45	1.45	1.447	1.206030151	1.28	3	Disagree	1.74	72900	7.29	16.2	610
S-10-21 94-110	102.51	106.89	98.89	162.64	46.81	31.80720075	48.27	33.27304937	1.58	1.44	1.302026832	1.81	1.46	1.465	1.320405607	1.01	3	Agree	1.3	72600	7.26	27	96
E192812	51.67	45.26	61.18	119.98	30.25	15.25	30.61	15.61428214	-15.99	1.49	1.248979592	2.71	1.50	1.503	1.256452296	0.74	4	Disagree		65600	6.56	13.1	71
S-11-68 183.46-199.46	51.67	56.40	72.92	138.59	27.80	12.79710591	28.68	13.68090559	-0.16	1.49	1.226247176	2.15	1.52	1.515	1.245711655	1.00	3	Disagree	3	78300	7.83	21	312
S-11-68 41.46-57.46	108.34	114.40	112.13	180.97	55.69	40.68657635	56.39	41.38982033	7.52	1.52	1.380693112	1.84	1.53	1.531	1.389838333	1.07	3	Agree	4.4	71400	7.14	132	93
MC-05-02 90-106	50.84	49.58	64.18	119.12	41.89	26.89448254	43.18	28.18253443	-25.73	1.56	1.357105162	1.96	1.58	1.583	1.380719278	0.66	3	Agree	1.3	75000	7.5	9	195
E192834	95.01	89.15	94.90	146.61	45.28	30.275	45.64	30.63709416	16.03	1.62	1.414017094	1.89	1.63	1.627	1.421053747	1.22	4	Disagree		74900	7.49	26.4	68
E192868	60.84	50.49	63.68	116.26	64.56	49.5625	65.62	50.62471473	7.05	2.49	2.141007194	3.64	2.55	2.549	2.194675491	1.16	3	Agree	2	75500	7.55	23	171
E192869	63.34	49.12	67.93	133.15	82.79	67.7875	81.54	66.5375	21.31	3.98	3.437303371	3.81	3.81	3.806	3.289462366	1.77	3	Agree	0.5	76900	7.69	13	238
E192870	100.84	94.84	84.66	138.59	112.63	97.625	115.58	100.5804479	60.46	4.28	3.84	5.95	4.68	4.679	4.201205653	2.76	3	Agree	0.7	72800	7.28	18	196
H44450	56.67	31.84	53.94	77.60	74.55	59.55	74.86	59.8625	28.09	20.88	16.88	22.78	22.78	22.778	18.41454545	8.49	4	Disagree	0.2	71300	7.13	2	3100
H44451	50.84	39.57	50.19	72.73	64.18	49.175	64.80	49.8	36.45	21.54	16.736	26.92	26.92	26.920	20.92	12.66	3	Disagree	0.3	76600	7.66	2	3080
H44452	50.84	42.53	52.44	83.04	69.09	54.0875	68.78	53.775	42.22	222.08	174.08	111.04	111.04	100.000	87.04	136.09	4	Disagree	0.1	72800	7.28	3	1910
H44453	82.51	69.82	80.66	130.57	68.80	53.8	69.87	54.87461327	9.82	2.15	1.896666667	2.26	2.19	2.186	1.931255887	1.16	4	Disagree	0.6	70200	7.02	17	188
H44454	113.34	74.14	106.13	171.24	148.41	133.4125	149.35	134.3518395	39.45	5.28	4.846126126	5.86	5.43	5.425	4.981012219	2.14	4	Disagree	1.3	74000	7.4	24	431
H45078	59.17	39.34	57.94	96.79	69.78	54.775	71.15	56.15409069	-3.78	2.62	2.270144928	2.96	2.70	2.704	2.345139958	0.91	3	Agree	0.5	71000	7.1	7	177
H45079	62.50	42.07	60.68	108.81	98.00	83	102.52	87.51940653	2.07	3.45	3.075	4.17	3.89	3.889	3.46668384	1.05	3	Agree	0.6	74600	7.46	6	198
H45080	259.18	188.76	146.59	231.37	212.03	197.025	213.99	198.9926244	134.39	4.90	4.623448276	5.54	5.08	5.083	4.797034713	3.47	4	Disagree	34.9	59900	5.99	48	127
S157569	79.17	68.68	92.15	170.66	70.99	55.9875	71.37	56.37220326	-49.13	1.60	1.475225464	2.06	1.61	1.608	1.480058426	0.58	4	Disagree	1.4	79400	7.94	9	99
S157570	134.18	123.49	116.87	197.58	142.55	127.55	145.76	130.7632484	37.24	2.65	2.47884058	3.74	2.76	2.755	2.574763535	1.43	4	Disagree	0.4	73600	7.36	10	121
X62639	77.51	62.09	75.17	145.18	116.93	101.925	117.63	102.6287672	-4.79	2.75	2.52411215	3.90	2.78	2.778	2.550957461	0.93	4	Disagree	1.8	73500	7.35	2	108
X62640	65.00	57.77	66.93	120.27	99.06	84.0625	100.42	85.41752293	14.33	3.28	2.935251799	5.18	3.39	3.386	3.029764617	1.33	4	Disagree	1.3	75700	7.57	3	144
X63892	77.51	64.59	90.15	158.64	139.38	124.375	139.80	124.8041921	6.46	3.40	3.139784946	4.39	3.42	3.423	3.163141427	1.11	4	Disagree	0.5	83000	8.3	16	160
X63893	82.51	74.82	96.14	164.08	117.55	102.55	117.97	102.9697109	8.57	2.77	2.547924528	3.59	2.79	2.792	2.564169204	1.13	4	Disagree	0.8	88700	8.87	27	147
S-10-33 170-186	74.17	77.55	111.38	186.13	53.18	38.18467337	54.19	39.19438459	-6.20	1.64	1.455936398	1.97	1.65	1.655	1.473703744	0.93	3	Agree	2.6	74400	7.44	13	149
H44504	67.50	57.77	72.17	109.67	31.05	16.05	31.05	16.05	11.52	1.67	1.347027027	1.67	1.67	1.671	1.347027027	1.25	3	Disagree		78700	7.87	13.5	103
S-11-72 101.95-118.3	75.84	77.78	83.41	146.61	49.09	34.09020936	49.85	34.84818463	3.72	1.66	1.460289747	1.97	1.68	1.680	1.475389272	1.05	3	Agree	1.6	80500	8.05	28	368
S-11-70 156.4-172.4	86.67	88.24	102.64	182.12	67.76	52.76323892	70.14	55.13752551	-13.95	1.66	1.516337506	2.18	1.70	1.703	1.552407078	0.86	3	Agree	0.9	76700	7.67	19	99
X15753	60.84	61.40	67.43	115.97	28.50	13.5	28.19	13.1875	23.90	1.76	1.36	1.75	1.75	1.745	1.348760331	1.64	2	Agree	1.83	76900	7.69	50.7	1990
20847	113.34	111.44	99.39	151.48	64.76	49.7625	66.08	51.07886866	30.50	1.80	1.614826255	2.32	1.83	1.830	1.641524025	1.38	4	Disagree		71800	7.18	10.1	91
S91-398_5851	11.67	11.37	17.73	52.40	9.69	-5.3125	11.63	-3.374713365	-3.94	1.63	0.653061224	2.00	1.87	1.869	0.747679575	0.74	3	Disagree	1.44	76700	7.67	5.2	1800
H44544	121.67	94.84	116.12	181.83	70.44	55.43813	71.06	56.06313	15.15	1.88	1.69569418	1.90	1.90	1.899	1.709098877	1.19	4	Disagree		74900	7.49	9.1	84
X15861	67.50	57.08	73.67	136.01	53.21	38.2125	53.21	38.2125	2.40	1.97	1.698742857	1.97	1.97	1.973	1.698742857	1.04	3	Agree		84900	8.49	4.8	149
S-10-33 210-226	82.51	84.37	113.63	190.99	89.88	74.87609102	90.77	75.76910419	-0.31	2.06	1.884145724	2.52	2.08	2.083	1.90422541	1.00	3	Agree	2.3	81200	8.12	31	606
H44505	34.17	36.39	41.45	77.60	22.13	7.125	24.25	9.246228252	14.51	2.01	1.325714286	2.43	2.23	2.227	1.468074066	1.66	3	Disagree	0.67	78200	7.82	17.2	2480
X15860	70.84	72.78	76.67	152.62	48.00	33	50.19	35.1875	32.78	2.20	1.825	2.33	2.33	2.327	1.930578512	1.82	3	Disagree	0.86	75800	7.58	9.5	2320
S91-398_5865	30.84	22.74	27.97	73.30	19.56	4.5625	19.88	4.875	9.31	2.46	1.339534884	2.51	2.51	2.514	1.371428571	1.69	3	Disagree	0.78	74700	7.47	7.7	2150
20831	96.67	93.24	92.40	148.33	74.31	59.3125	75.25	60.25	43.56	2.50	2.193710692	2.54	2.54	2.544	2.235897436	1.88	3	Agree	1.49	74200	7.42	12.9	2130
H42381	145.84	145.10	104.14	165.79	91.14	76.13952	91.76	76.76452	91.04	2.69	2.408361064	2.72	2.72	2.717	2.436529029	2.68	4	Disagree		68800	6.88	34	138
S-09-11 130-146	119.17	120.76	98.14	160.93	111.12	96.11985661	112.32	97.31719159	54.83	2.69	2.457741901	4.29	2.73	2.735	2.503196533	1.83	3	Agree	3.2	72400	7.24	31	272
S-11-68 1.31-17.46	67.50	72.32	77.41	151.76	92.47	77.47075123	94.23	79.23009006	17.01	2.67	2.400601152	3.99	2.76	2.760	2.479466166	1.31	3	Agree	1	74800	7.48	9	427
MC-05-02 210-226.6	71.67	65.27	87.40	142.89	91.20	76.2040212	92.44	77.43920037	13.08	2.75	2.460196813	4.33	2.81	2.814	2.519836567	1.25	3	Agree	1.2	77500	7.75	13	471
H44831	162.51	163.29	147.09	215.62	116.80	101.79924	117.42	102.42424	100.17	2.85	2.612661228	2.88	2.88	2.879	2.63878784	2.59	4	Disagree		74500	7.45	7.3	107
S-10-21 44.9-61	100.84	107.12	95.89	153.77	95.26	80.26028678	96.26	81.26248796	56.49	2.88	2.585388381	4.35	2.94	2.940	2.637603881	2.12	3	Agree	1.3	74300	7.43	8	740
G24663	35.84	36.39	39.71	67.29	26.44	11.4375	28.40	13.40247825	19.83	2.60	1.690566038	3.28	2.95	2.946	1.91813381	2.20	2	Disagree	0.39	78600	7.86	8	2480
S-11-68 81.46-96.56	100.01	108.48	100.39	157.78	100.80	85.79741379	103.53	88.53024301	54.11	2.85	2.577883472	4.14	3.00	3.005	2.714301349	2.00	3	Agree	1.6	61600	6.16	30	105
X15779	72.92	63.15	75.92	107.09	67.03	52.025	68.12	53.12337983	31.27	3.10	2.632156863	3.92	3.21	3.213	2.726095313	1.98	4	Disagree		78000	7.8	5.5	292
H42394	140.01	141.00	122.86	188.13	125.57	110.56818	126.14	111.14032	84.75	3.23	2.965656533	4.01	3.27	3.266	2.996131318	2.51	4	Disagree		74200	7.42	18.2	356
X15747	71.67	57.99	76.67	127.14	69.46	54.4625	69.46	54.4625	27.06	3.25	2.76040404	3.25	3.25	3.245	2.76040404	1.87	3	Agree		75700	7.57	14.5	289
G24688	171.68	172.84	95.64	158.64	114.06	99.0625	115.64	100.6409355	121.91	3.24	2.944785276	3.85	3.34	3.343	3.03895549	3.39	3	Agree	0.93	73000	7.3	8.9	1950

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
E192869	72.50	65.04	73.92	133.15	87.23	72.225	87.71	72.7147262	28.17	3.37	2.958644068	5.23	3.41	3.411	2.998465824	1.76	4	Disagree		79100	7.91	16.9	243
S-11-72 62.3-77.5	96.67	97.79	104.14	172.09	114.46	99.45504926	116.34	101.3371246	50.92	3.44	3.121707718	4.90	3.59	3.586	3.252290228	2.09	3	Agree	0.8	84100	8.41	20	1258
S-11-72 142.3-158.3	102.51	106.89	111.63	183.55	112.95	97.94796798	113.94	98.93792144	62.20	3.53	3.19184264	4.95	3.61	3.607	3.264152779	2.39	3	Agree	0.8	81700	8.17	17	1016
S-09-11 90.7-104.7	93.34	95.52	96.39	167.23	109.93	94.92596633	111.90	96.90250142	50.83	3.46	3.124217428	5.80	3.62	3.620	3.268796821	2.14	3	Agree	0.9	75400	7.54	11	482
MC-05-02 150-166	44.17	44.80	64.68	127.14	85.64	70.63824813	86.90	71.89950445	10.74	3.51	3.073783431	5.22	3.65	3.649	3.19197495	1.32	3	Agree	1.7	84000	8.4	24	1348
10043	78.34	84.60	93.15	158.35	99.09	84.0875	100.57	85.56504968	46.79	3.62	3.223801653	4.02	3.77	3.768	3.354896565	2.24	4	Disagree		79500	7.95	10.3	312
S-09-11 49-65	115.01	122.81	110.63	180.68	142.94	127.9449813	145.76	130.7598281	68.75	3.64	3.366612371	6.10	3.84	3.844	3.551528115	2.27	3	Agree	1	72500	7.25	11	346
9817	99.17	95.52	112.63	196.72	100.88	85.875	103.08	88.0764541	57.39	3.65	3.252459016	4.59	3.87	3.869	3.451775066	2.51	3	Agree	1.41	76300	7.63	12.7	2590
S-11-68 163.46-175.46	56.67	60.27	69.17	119.98	64.90	49.90147783	66.88	51.88326516	35.27	3.60	2.996059113	5.04	3.91	3.906	3.254009288	2.41	3	Disagree	1.2	74900	7.49	7	2066
H42328	7.50	6.82	17.73	54.69	11.25	-3.749	11.25	-3.749	3.07	4.00	0.000266667	4.00	4.00	4.000	0.01	1.82	2	Disagree	0.59	63400	6.34	5.9	1290
X15752	25.84	21.61	32.46	89.05	52.01	37.0125	52.01	37.0125	4.42	4.03	3.153454545	4.03	4.03	4.026	3.153454545	1.26	3	Disagree		77000	7.7	13.2	612
H45036	92.51	86.65	107.88	189.28	103.56	88.56376	104.33	89.33354734	52.59	4.04	3.600036991	4.54	4.13	4.134	3.683276315	2.54	4	Disagree		82600	8.26	5.5	627
10032	77.51	75.73	98.14	182.98	124.21	109.2125	125.25	110.2524864	36.05	4.13	3.751811024	5.35	4.24	4.241	3.852770496	1.91	4	Disagree		89900	8.99	8.7	569
H45080	245.02	247.67	149.84	233.37	190.30	175.29987	191.02	176.0204117	189.23	4.26	3.999783872	4.74	4.31	4.310	4.049717394	4.24	4	Disagree		59600	5.96	40	131
S-11-68 121.46-137.46	95.01	97.57	100.14	174.39	129.84	114.8414409	121.20	106.1956076	71.00	5.89	5.32344248	4.44	4.44	4.442	4.016206605	3.67	3	Agree	1.8	79600	7.96	12	1163
S-11-71 24.7-40.2	47.17	41.12	48.70	87.34	77.94	62.93954433	79.49	64.48520719	17.68	4.33	3.685420558	5.22	4.63	4.631	3.945627942	1.75	4	Disagree	0.7	68700	6.87	7	1546
X15859	143.34	133.95	148.34	203.02	135.49	120.4875	135.49	120.4875	98.64	4.84	4.412035398	4.84	4.84	4.837	4.412035398	3.79	3	Agree		70900	7.09	23.2	260
H44503	149.18	143.28	150.09	222.21	124.25	109.25	126.89	111.8857192	109.53	4.68	4.237037037	5.27	5.08	5.078	4.595960326	4.25	3	Agree	0.5	67100	6.71	23.8	1900
MC-05-02 190-206	80.84	80.74	98.64	178.97	128.04	113.0353803	130.90	115.8994254	47.92	4.90	4.444887781	8.71	5.37	5.371	4.869963435	2.46	3	Agree	1.2	82000	8.2	13	1199
S-09-11 9.0-25	96.67	100.75	99.89	178.11	137.70	122.6995012	140.37	125.3717186	68.25	5.24	4.775369269	8.48	5.71	5.706	5.203186008	3.10	3	Agree	1	77900	7.79	9	2150
G24670	157.51	156.92	124.86	188.99	144.13	129.125	145.47	130.4700512	125.05	5.52	5.050980392	6.63	5.76	5.765	5.273510323	4.92	3	Agree	0.48	73400	7.34	9.5	1630
H42343	51.67	40.94	81.66	162.93	48.31	33.3125	48.31	33.3125	31.25	5.99	4.438709677	5.99	5.99	5.987	4.438709677	4.23	2	Agree	0.5	75600	7.56	9.8	1360
X15751	66.67	68.23	70.92	111.96	59.94	44.9375	61.65	46.65030574	54.17	5.26	4.195555556	6.07	5.99	5.992	4.777446208	4.85	2	Agree	0.6	67700	6.77	8.2	1920
E192892	217.51	210.14	107.63	191.57	187.76	172.7625	189.21	174.2076108	174.20	6.22	5.807304348	6.69	6.49	6.485	6.05061015	5.85	4	Disagree		78200	7.82	18.2	696
H45436	130.01	131.68	128.61	219.06	136.30	121.30366	136.93	121.92866	106.37	6.38	5.792243358	6.55	6.55	6.546	5.93888243	5.20	4	Disagree		75800	7.58	7.5	973
X15749	100.84	87.10	105.38	172.67	115.56	100.5625	115.56	100.5625	66.17	6.52	5.802985075	6.52	6.52	6.519	5.802985075	4.16	3	Agree		75600	7.56	13.4	473
H44462	81.67	81.87	90.15	179.83	89.81	74.8125	97.63	82.625	59.69	5.05	4.371830986	7.79	7.79	7.791	6.747826087	3.69	3	Agree	0.64	78900	7.89	6.4	7150
S-08-07 105.6-120.05	96.67	99.16	77.91	138.88	125.88	110.8821696	128.48	113.4825003	77.91	6.92	6.217984451	11.07	7.89	7.889	7.084960485	4.67	3	Agree	0.9	72600	7.26	40	1423
H44458	133.34	131.91	144.84	229.36	137.50	122.5	139.77	124.7659833	109.41	7.11	6.444444444	8.00	7.91	7.907	7.166150058	5.86	3	Agree	0.92	71200	7.12	11	2250
H44800	75.00	74.82	81.41	130.00	99.32	84.31533	100.29	85.2864113	61.07	8.22	7.132024	9.52	8.85	8.848	7.67399279	5.44	4	Disagree		71500	7.15	1.5	903
S-11-73 160.2-176.2	93.34	95.75	111.88	205.02	145.67	130.6681034	146.81	131.8102942	77.62	9.04	8.209274673	14.75	9.64	9.645	8.761395225	5.28	3	Agree	0.7	73700	7.37	10	1329
H44454	133.34	45.49	130.86	223.06	126.63	111.625	127.33	112.3282444	31.11	9.81	8.765217391	11.00	10.31	10.313	9.216080507	3.16	3	Agree	0.92	78000	7.8	8.2	750
9841	120.84	113.71	135.60	238.81	139.00	124	139.94	124.9375	98.71	10.27	9.266666667	10.95	10.95	10.951	9.884444444	7.58	3	Agree	0.73	78100	7.81	12.2	1880
X15864	130.01	110.07	134.35	214.76	174.48	159.475	174.48	159.475	91.95	10.63	9.79862069	10.63	10.63	10.626	9.79862069	6.07	3	Agree		79700	7.97	3.4	2540
H44459	116.67	117.35	125.36	230.51	150.18	135.175	150.18	135.175	104.23	12.44	11.29904762	12.44	12.44	12.442	11.29904762	8.94	3	Agree		79400	7.94	2.5	832
X15767	52.50	54.13	78.91	152.91	112.14	97.1375	113.08	98.075	45.06	13.37	11.71862069	14.92	14.92	14.917	13.07076923	5.97	4	Disagree		79800	7.98	6.1	1032
H42338	20.00	18.19	41.70	92.78	28.13	13.125	28.13	13.125	16.32	16.00	8	16.00	16.00	16.000	8	9.70	2	Disagree	0.61	79300	7.93	6.1	1030
9826	92.51	88.70	114.62	222.78	116.31	101.3125	118.50	103.5	79.01	13.01	11.45806452	16.80	16.80	16.800	14.8	9.16	3	Agree	0.52	80100	8.01	5	3330
H44471	132.51	133.95	136.35	199.87	153.95	138.95	153.95	138.95	122.70	14.68	13.35111111	14.68	14.68	14.684	13.35111111	11.91	3	Agree		72600	7.26	4.2	2880
9807	51.67	50.03	62.18	85.04	52.63	37.625	53.88	38.875	45.66	13.03	9.6	18.24	18.24	18.240	13.44	11.44	2	Agree	0.1	78600	7.86	5.5	4010
H44464	152.51	154.65	155.33	244.25	164.25	149.25	165.61	150.605436	145.90	19.77	18.05714286	29.14	23.40	23.396	21.36704761	17.67	3	Agree	0.35	75900	7.59	6.1	1430
H44461	159.18	157.61	171.06	245.97	174.24	159.2375	174.24	159.2375	148.54	20.23	18.57103448	20.23	20.23	20.226	18.57103448	17.39	3	Agree		82400	8.24	5.1	1900
H44463	98.34	98.25	109.63	201.87	123.48	108.475	123.48	108.475	92.62	22.95	20.28444444	22.95	22.95	22.951	20.28444444	17.47	3	Agree		84500	8.45	10.1	1481
H44456	155.84	141.00	150.33	242.54	157.38	142.375	158.63	143.625	135.38	28.98	26.31111111	37.26	37.26	37.257	33.82857143	25.07	3	Agree	0.53	72300	7.23	8.3	1690
H42335	70.84	52.31	93.90	162.64	88.50	73.5	89.13	74.125	49.81	36.40	30.4	48.53	48.53	48.533	40.53333333	20.92	3	Disagree	0.34	76900	7.69	5.8	2610
H44472	170.84	172.84	171.31	252.27	176.94	161.9375	177.56	162.5625	168.78	44.55	40.86153846	52.65	52.65	52.655	48.29090909	42.55	3	Agree	0.39	73100	7.31	1.9	2370
H44506	166.68	159.20	164.57	253.99	228.36	213.3625	228.36	213.3625	155.76	67.43	63.06909091	67.43	67.43	67.433	63.06909091	46.31	3	Agree		66400	6.64	4.1	996
H44455	194.18	200.36	226.00	338.18	242.16	227.1625	242.16	227.1625	196.92	71.45	67.08363636	71.45	71.45	71.447	67.08363636	58.29	3	Agree		79300	7.93	4	1538
H44457	157.51	161.70	173.31	287.78	213.85	198.85	213.85	198.85	157.95	58.03	54.02666667	58.03	58.03	58.027	54.02666667	43.12	3	Agree		75800	7.58	3.2	2440
H44460	137.51	129.63	140.60	270.02	176.50	161.5	177.44	162.4375	127.13	71.60	65.6	114.56	114.56	100.000	100	51.85	3	Agree	0.23	71400	7.14	3.4	1640

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
S-10-31 145-161	67.50	72.78	65.43	113.11	83.73	68.72584165	51.54	36.53834165	21.84	2.64	2.349218977	1.62	1.62	1.620	1.439558997	1.43	3	Agree	0.9	73600	7.36	11	150
9924	57.50	54.58	67.68	117.40	27.63	12.625	30.25	15.24946313	20.21	1.80	1.367272727	2.31	1.95	1.953	1.48028993	1.59	2	Agree	1.04	83600	8.36	5.3	3170
S-11-71 106.9-122.2	33.00	30.25	32.46	47.82	21.74	6.743969849	22.61	7.60766598	8.50	2.00	1.310067579	2.31	2.08	2.082	1.364241851	1.39	4	Disagree	0.4	47300	4.73	6	970
H42350	6.67	4.55	60.43	129.43	10.38	-4.625	11.00	-4	-6.08	1.98	0.564705882	2.10	2.10	2.100	0.6	0.43	2	Disagree	0.98	78600	7.86	8.6	1000
S-11-72 181.96-197.3	50.00	52.31	55.44	88.48	34.37	19.37038177	37.15	22.153744	23.87	2.21	1.681156282	3.48	2.45	2.448	1.863554417	1.84	3	Disagree	1.3	80200	8.02	10	2798
S-11-71 146.2-162.2	21.67	23.42	24.22	42.67	23.96	8.963567839	25.77	10.76579221	4.67	2.28	1.478056951	2.82	2.52	2.520	1.635233346	1.25	3	Disagree	0.2	68000	6.8	5	2194
10098	48.48	42.26	57.44	85.04	61.18	46.18125	62.25	47.24972747	10.96	2.95	2.475341098	3.31	3.06	3.059	2.562821441	1.35	4	Disagree		82900	8.29	23.9	251
H44488	58.34	51.17	64.68	103.08	49.41	34.4125	49.41	34.4125	23.98	2.82	2.265747126	2.82	2.82	2.817	2.265747126	1.88	3	Disagree		87800	8.78	9.4	571
S-06-02 60-76	53.84	51.72	49.70	80.18	63.02	48.01510599	65.88	50.88233728	23.15	3.21	2.681054039	3.76	3.56	3.564	2.980222034	1.81	4	Disagree	0.4	73900	7.39	15	275
H44742	44.17	38.89	42.70	83.04	43.14	28.13913	44.01	29.00918351	16.70	2.94	2.268242479	4.36	3.06	3.064	2.360818873	1.75	4	Disagree		77900	7.79	17.7	336
S-10-31 194-210	49.17	36.16	49.45	77.89	50.07	35.07380653	52.54	37.54397082	8.97	2.84	2.290071045	4.04	3.13	3.126	2.518932755	1.33	3	Disagree	0.6	72200	7.22	18	2340
20815	144.18	143.28	139.35	223.06	113.56	98.5625	115.10	100.1002675	89.84	3.13	2.844444444	3.28	3.22	3.218	2.928724152	2.68	3	Agree	1.19	71600	7.16	7	1680
S-10-31 95-111	78.34	77.55	74.92	129.72	89.98	74.98207606	91.27	76.27098899	35.36	3.13	2.777352914	4.38	3.23	3.232	2.864880781	1.84	3	Agree	0.8	71100	7.11	15	369
S91-398_5880	12.50	13.65	15.23	56.70	16.13	1.125	16.44	1.4375	6.77	3.35	1.163636364	3.50	3.50	3.505	1.219047619	1.98	3	Disagree	1.23	77000	7.7	3.1	1750
S-10-31 245-260	75.84	81.87	75.42	122.84	96.54	81.53834165	97.91	82.90576312	43.75	3.53	3.138710601	4.86	3.66	3.664	3.255474012	2.15	3	Agree	0.9	72300	7.23	7	161
X15886	258.35	229.70	136.60	233.37	184.35	169.35	184.35	169.35	160.95	3.68	3.463272727	3.68	3.68	3.681	3.463272727	3.34	3	Agree		70200	7.02	8.8	111
H44495	46.67	39.34	52.94	87.05	47.80	32.8	47.80	32.8	21.84	3.73	2.874285714	3.73	3.73	3.731	2.874285714	2.25	3	Disagree		80200	8.02	9.8	1364
H44481	87.51	84.15	95.64	142.89	69.50	54.5	72.83	57.82968898	56.65	3.53	2.981818182	4.14	4.01	4.013	3.392591842	3.06	3	Disagree	0.89	75300	7.53	18.1	3280
H44502	138.34	123.49	139.10	198.44	139.36	124.3625	139.36	124.3625	85.05	4.63	4.235447154	4.63	4.63	4.626	4.235447154	3.21	3	Agree		72600	7.26	58.4	228
H44497	52.50	54.58	58.19	93.06	55.13	40.125	56.69	41.6875	37.71	4.27	3.377777778	4.70	4.70	4.702	3.72244898	3.23	3	Disagree	0.35	72800	7.28	14.7	2960
H42345	32.50	4.55	76.92	151.76	31.25	16.25	32.19	17.1875	-4.20	4.57	2.857142857	5.12	5.12	5.120	3.2	0.52	2	Disagree	0.56	76800	7.68	14.5	800
H44491	55.00	54.58	58.44	92.20	53.38	38.375	55.56	40.5625	38.96	4.42	3.456	5.13	5.13	5.135	4.018604651	3.49	3	Disagree	0.76	74400	7.44	5.2	2950
9878	46.67	45.49	50.94	89.34	41.19	26.1875	43.99	28.98700135	32.67	4.21	3.043902439	6.17	5.39	5.393	3.894937106	3.55	2	Agree	0.17	77100	7.71	5	3410
H44480	58.34	34.80	60.68	84.47	64.36	49.3625	64.99	49.9875	33.86	69.65	53.65333333	208.96	208.96	100.000	100	37.12	3	Disagree	0.05	86900	8.69	5	2920
H44481	90.01	69.36	92.90	147.47	120.39	105.3875	121.48	106.4810757	41.55	5.33	4.789213483	6.77	5.55	5.547	4.985230645	2.49	3	Agree	0.6	84100	8.41	4	214
H44490	33.34	7.73	29.72	57.27	55.98	40.975	57.85	42.85	2.11	10.95	8.284444444	16.43	16.43	16.427	12.42666667	1.37	3	Disagree	0.4	69700	6.97	7	2870
H44491	59.17	40.71	58.94	97.07	83.26	68.2625	84.23	69.23285197	29.77	8.61	7.241142857	11.59	9.45	9.451	7.946104518	3.72	3	Disagree	0.7	60500	6.05	6	902
H44494	77.51	56.40	77.41	109.38	105.19	90.1875	107.06	92.0625	53.59	38.40	33.06666667	115.20	115.20	100.000	99.2	20.05	3	Agree	0.3	76900	7.69	4	2930
H44495	60.00	34.34	61.68	89.63	64.83	49.825	65.82	50.81685093	14.97	4.35	3.571612903	5.50	4.58	4.580	3.76431697	1.77	3	Disagree	0.2	66800	6.68	5	503
H44497	59.17	39.12	60.68	92.49	65.71	50.7125	66.22	51.21955576	19.43	4.34	3.575873016	5.94	4.45	4.452	3.670405082	1.99	3	Disagree	0.3	79400	7.94	11	481
H44501	41.67	25.47	44.45	74.45	51.55	36.55	52.28	37.27602779	9.22	4.17	3.249230769	5.56	4.37	4.367	3.40119135	1.57	3	Disagree	0.4	80100	8.01	5	567
H44502	80.01	41.85	81.16	121.12	84.20	69.2	85.35	70.35122479	29.35	7.74	6.536	9.67	8.52	8.521	7.199014741	3.35	3	Disagree	0.3	71300	7.13	10	1150
G21779	2.50	1.82	8.99	29.49	6.10	-2.499	7.04	-1.5615	-0.68	3.44	0.0004	5.50	5.50	5.504	0.01	0.73	1	Agree		83500	8.35	2.6	3110
H42352	54.17	36.39	80.91	136.30	60.19	45.1875	61.13	46.125	23.58	5.70	4.526829268	6.15	6.15	6.147	4.884210526	2.84	3	Disagree	1.01	72500	7.25	10.6	1000
H44499	67.50	72.78	74.42	114.83	68.00	53	69.88	54.875	57.78	5.53	4.533333333	6.32	6.32	6.324	5.180952381	4.85	3	Disagree	0.32	73800	7.38	7.9	3290
10377	65.84	59.13	61.93	89.91	62.19	47.1875	63.44	48.4375	46.32	5.85	4.682926829	6.49	6.49	6.486	5.189189189	4.62	3	Disagree	0.13	66600	6.66	3.2	2560
H44482	68.34	70.05	75.92	105.95	68.26	53.2625	68.26	53.2625	56.61	6.08	4.96372093	6.08	6.08	6.080	4.96372093	5.21	3	Disagree		85100	8.51	5.7	1250
S-10-31 294-310	75.00	79.14	76.67	118.83	106.56	91.55704489	109.12	94.11925825	58.52	6.17	5.439129449	7.45	7.04	7.041	6.210672094	3.84	3	Agree	0.3	77300	7.73	8	2779
X15842	30.00	27.52	56.19	85.33	44.79	29.7875	45.41	30.4125	19.71	6.73	4.8128	7.32	7.32	7.318	5.231304348	3.52	4	Disagree		84600	8.46	6.7	4110
H44487	54.17	56.86	62.68	90.77	57.44	42.4375	59.63	44.625	45.29	5.97	4.67027027	7.36	7.36	7.360	5.76	4.92	3	Disagree	0.13	76700	7.67	3.6	4060
9891	78.34	70.50	85.16	141.74	63.63	48.625	67.46	52.46299683	56.13	5.43	4.382608696	7.80	7.40	7.402	5.978929588	4.90	2	Agree	0.66	78400	7.84	2.5	3120
H44494	62.50	65.95	69.92	103.08	65.50	50.5	67.76	52.75670862	53.45	6.24	5.04	8.05	7.61	7.615	6.150366873	5.28	3	Disagree	0.35	74400	7.44	4.9	2880
S-11-71 65.7-81.2	33.34	35.02	34.71	50.40	52.83	37.82635468	53.67	38.67400564	26.27	7.04	5.323011963	8.21	7.79	7.792	5.893988541	4.00	3	Disagree	0.2	33300	3.33	6	948
S-10-31 44-60	81.67	83.92	74.92	134.58	107.49	92.48831047	113.84	98.83865762	61.73	5.84	5.168487233	8.60	8.19	8.188	7.240936015	3.78	3	Agree	1.1	73300	7.33	31	2180
MC-05-02 250-266	45.84	42.76	52.44	89.34	67.59	52.58951005	70.86	55.859074	29.94	6.28	5.104547126	8.69	8.43	8.425	6.853447379	3.34	3	Disagree	1	73300	7.33	12	3149
MC-05-01 230-255	77.51	80.51	81.16	132.86	121.21	106.2102556	124.36	109.3638015	60.82	7.16	6.394806634	9.11	8.52	8.522	7.614497687	4.09	3	Agree	0.3	75700	7.57	9	3297
H44500	51.67	45.03	59.68	97.64	74.23	59.225	74.23	59.225	33.16	7.25	5.987368421	7.25	7.25	7.251	5.987368421	3.79	3	Disagree		90100	9.01	10.8	2512
10362	123.34	118.26	120.87	174.39	125.44	110.4375	125.75	110.75	101.70	8.57	7.667924528	8.74	8.74	8.738	7.815384615	7.14	3	Agree	0.43	74200	7.42	10.3	2130
20809	127.51	120.54	123.61	188.70	129.56	114.5625	131.75	116.75	102.10	8.03	7.213559322	9.11	9.11	9.108	8.184615385	6.54	3	Agree	0.26	73500	7.35	4.2	1960
MC-05-01 279-295	58.34	63.68	68.18	133.15	110.61	95.61331047	115.60	100.5955874	44.62	6.80	6.015780222	12.11	9.21	9.210	8.14445975	3.34	3	Agree	0.6	77300	7.73	3	3832

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
MC-05-02 314-330	50.84	51.40	62.43	93.06	67.58	52.57694724	69.93	54.9311139	41.09	7.55	6.098370641	9.79	9.79	9.787	7.90233892	4.98	3	Disagree	0.3	80400	8.04	10	4078
MC-05-01 319-335	58.34	60.27	61.43	91.92	83.51	68.50997506	86.55	71.55164173	47.77	7.68	6.480798005	10.15	10.15	10.151	8.564931284	4.82	3	Disagree	0.2	75800	7.58	6	4234
H44501	85.84	77.32	84.66	122.84	83.00	68	84.88	69.875	67.32	9.30	7.8	11.45	11.45	11.446	9.6	7.73	3	Disagree	0.43	65700	6.57	23.8	2040
10353	108.34	104.62	101.64	131.43	108.00	93	108.63	93.625	94.62	11.80	10.3	12.59	12.59	12.587	10.98666667	10.46	3	Agree	0.16	62100	6.21	3.9	3020
MC-05-01 199-215	103.34	106.89	104.64	177.82	156.44	141.4448254	159.02	144.0189519	91.27	11.01	10.05246883	18.35	13.18	13.185	12.03519633	6.84	3	Agree	0.9	75600	7.56	6	2364
S-06-02 20-26	13.33	15.01	20.98	38.94	31.43	16.4258794	32.59	17.59254606	11.26	9.38	5.380234506	13.62	13.62	13.616	7.810017831	4.00	3	Disagree	0.2	71800	7.18	4	3168
X15887	235.85	231.97	123.11	199.58	190.69	175.6875	191.63	176.625	216.66	13.45	12.47346939	14.33	14.33	14.330	13.28695652	15.15	3	Agree	0.51	72600	7.26	10.4	2060
H44490	28.34	9.78	33.71	61.85	43.06	28.0625	43.06	28.0625	3.84	8.25	5.726315789	8.25	8.25	8.253	5.726315789	1.65	3	Disagree		69600	6.96	6.3	3538
H44465	112.51	101.43	128.61	190.42	141.76	126.7625	141.76	126.7625	90.49	13.96	12.58971429	13.96	13.96	13.961	12.58971429	9.27	3	Agree		83300	8.33	15.7	1479
H44486	59.17	55.04	66.18	100.22	73.21	58.2125	73.21	58.2125	47.85	11.19	9.099130435	11.19	11.19	11.186	9.099130435	7.66	3	Disagree		84100	8.41	4	2743
H44468	112.51	104.62	119.12	188.70	119.75	104.75	122.56	107.5625	93.37	11.64	10.31111111	15.53	15.53	15.526	13.74814815	9.30	3	Agree	0.44	73100	7.31	8.7	4890
MC-05-03 44-60	125.01	124.40	124.11	184.12	157.38	142.3823254	161.59	146.5906588	109.71	11.72	10.69411577	16.42	16.42	16.420	14.98877062	8.47	3	Agree	0.4	73000	7.3	7	4769
H44474	181.68	172.84	188.29	286.63	186.94	171.9375	188.81	173.8125	158.78	14.29	13.22666667	16.49	16.49	16.492	15.26153846	12.29	3	Agree	0.57	75200	7.52	7.7	1660
H44473	140.84	137.82	143.34	239.96	201.64	186.6375	201.64	186.6375	123.76	15.34	14.272	15.34	15.34	15.339	14.272	9.80	3	Agree		67400	6.74	7.6	3624
H44483	56.67	54.58	64.43	87.34	60.31	45.3125	61.56	46.5625	49.89	13.87	10.66666667	18.91	18.91	18.909	14.54545455	11.64	3	Disagree	0.16	75600	7.56	2.2	3430
H44485	71.67	72.78	75.42	103.08	79.00	64	79.63	64.625	67.78	16.80	13.8	19.20	19.20	19.200	15.77142857	14.56	3	Disagree	0.22	76200	7.62	2.8	3320
H44498	42.50	35.71	50.94	89.05	67.85	52.85	67.85	52.85	29.46	11.86	9.456	11.86	11.86	11.856	9.456	5.71	3	Disagree		89900	8.99	8.3	3534
10343	127.51	127.36	121.87	158.35	123.81	108.8125	129.88	114.881124	115.17	11.16	9.928205128	24.18	22.23	22.226	19.77487359	10.45	3	Agree	0.24	66500	6.65	5.1	5750
10383	91.67	86.42	95.15	189.85	126.13	111.125	127.38	112.375	79.55	19.35	17.16363636	23.64	23.64	23.644	20.97777778	12.57	3	Agree	0.57	75700	7.57	3.6	1740
H44492	62.50	52.99	66.68	103.37	78.26	63.2625	78.26	63.2625	47.05	14.18	11.65473684	14.18	14.18	14.181	11.65473684	8.92	3	Disagree		79000	7.9	4.7	3497
H44469	135.84	128.27	145.59	266.59	196.71	181.7125	196.71	181.7125	118.58	21.31	19.75741935	21.31	21.31	21.306	19.75741935	13.24	3	Agree		78000	7.8	5	2127
H44489	59.17	54.58	63.18	94.78	59.94	44.9375	61.50	46.5	50.52	15.75	12.06153846	25.60	25.60	25.600	19.6	13.44	3	Disagree	0.31	68400	6.84	2.4	3330
MC-05-03 84-100	67.50	68.23	72.92	119.12	116.57	101.5695137	118.74	103.7361804	62.60	21.72	19.05680244	35.33	35.33	35.333	30.99600397	12.13	3	Agree	0.2	72500	7.25	4	2959
H42347	22.50	18.19	67.93	167.80	34.06	19.0625	34.06	19.0625	17.26	37.33	21.33333333	37.33	37.33	37.333	21.33333333	19.41	2	Disagree	0.36	76300	7.63	12.2	790
H44470	180.85	186.49	167.57	266.02	191.13	176.125	193.00	178	179.61	28.80	26.61818182	39.60	39.60	39.600	36.6	27.13	3	Agree	0.57	68200	6.82	3.5	3410
H44787	63.34	61.86	66.93	95.93	84.18	69.18342	84.81	69.80842	59.36	34.67	28.673368	46.23	46.23	46.231	38.23115733	24.74	4	Disagree		75900	7.59	2.4	3673
H42358	53.34	52.76	71.67	116.83	84.31	69.30871	85.25	70.24621	49.95	30.98	25.64309689	46.46	46.46	46.465	38.46464533	18.76	4	Disagree		75300	7.53	5.3	1504
H44467	119.17	118.03	127.86	188.99	137.49	122.4875	137.49	122.4875	112.72	26.88	24.05647059	26.88	26.88	26.880	24.05647059	22.22	3	Agree		86100	8.61	3.2	4151
G21604	51.67	54.58	59.43	78.75	59.19	44.1875	61.06	46.0625	51.77	22.04	16.71111111	66.13	66.13	66.133	50.13333333	19.41	2	Agree	0.31	75300	7.53	3.7	4070
9861	128.34	115.99	137.85	235.09	147.56	132.5625	149.13	134.125	112.55	43.93	39.56363636	80.53	80.53	80.533	72.53333333	33.74	3	Agree	0.45	75600	7.56	1.9	3970
H44475	154.18	152.15	153.33	267.16	200.39	185.3875	200.39	185.3875	149.34	72.25	66.91555556	72.25	72.25	72.249	66.91555556	54.10	3	Agree		81900	8.19	2.5	961
H44466	215.01	204.68	212.27	316.99	228.88	213.875	230.13	215.125	201.56	74.24	69.44	123.73	123.73	100.000	100	65.50	3	Agree	0.14	74900	7.49	3.3	2630
G21756	50.00	50.49	62.18	90.77	78.16	63.1625	78.48	63.475	49.55	84.37	68.37333333	126.56	126.56	100.000	100	53.85	4	Disagree		79200	7.92	3.1	4561
H44480	38.34	41.62	49.45	75.60	54.51	39.5125	54.51	39.5125	39.43	25.92	19.06285714	25.92	25.92	25.920	19.06285714	19.03	3	Disagree		92500	9.25	4.8	3029
H44484	59.17	56.17	65.43	94.78	71.31	56.3125	71.31	56.3125	53.99	33.60	26.74285714	33.60	33.60	33.600	26.74285714	25.68	3	Disagree		88400	8.84	3.7	3574
SG92-06_C12632	15.00	15.92	20.23	48.11	-81.94	-96.9375	-79.78	-94.77695276	-90.02	0.23	0.084955752	0.26	0.23	0.231	0.086724458	0.15	2	Disagree	1.91	62800	6.28	289	820
SG92-06_C12700	15.00	18.19	22.48	44.10	-70.44	-85.4375	-69.61	-84.60828875	-75.24	0.25	0.085618729	0.28	0.25	0.248	0.086385356	0.19	2	Disagree	0.77	72000	7.2	44.9	280
10276	96.67	96.43	87.40	128.00	-138.88	-153.875	-137.93	-152.9251015	-137.95	0.41	0.343466667	0.53	0.41	0.409	0.344864368	0.41	4	Disagree		74900	7.49	401.5	17
X15896	33.34	36.39	39.96	71.87	-55.88	-70.875	-55.49	-70.49265897	-60.49	0.42	0.268387097	0.43	0.42	0.425	0.26945055	0.38	2	Disagree	0.32	81700	8.17	125.5	310
9756	5.83	6.82	8.99	39.52	-17.69	-29.6865	-13.87	-25.87371337	-22.86	0.40	3.36842E-05	0.51	0.46	0.464	0.01	0.23	1	Agree	17.1	63900	6.39	99.8	1800
10298	70.00	55.95	58.69	83.04	-44.29	-59.2875	-43.93	-58.92905247	-61.24	0.62	0.49408	0.71	0.62	0.624	0.495595905	0.48	4	Disagree		79200	7.92	79.3	63
SG92-02_C8856	50.00	50.03	61.18	102.51	-33.50	-48.5	-31.90	-46.89881342	-42.47	0.64	0.475675676	0.67	0.65	0.649	0.484054724	0.54	2	Agree	0.41	79700	7.97	36.9	910
H42421	42.50	38.66	46.20	87.62	-24.63	-39.625	-23.80	-38.80197186	-36.96	0.67	0.476033058	0.75	0.68	0.682	0.481270735	0.51	2	Agree	8.76	74100	7.41	125	700
G21749	57.50	59.13	63.18	106.52	-25.31	-40.3125	-24.79	-39.79158705	-31.18	0.72	0.553633218	0.73	0.72	0.724	0.556845041	0.65	2	Agree	0.46	74700	7.47	49.3	500
G21731	60.84	61.40	76.42	111.68	-24.25	-39.25	-23.71	-38.71450053	-29.85	0.73	0.569863014	0.77	0.74	0.739	0.573226989	0.67	2	Agree	0.4	77500	7.75	29.6	520
X15894	64.17	53.45	62.68	89.34	-21.48	-36.475	-21.48	-36.475	-63.43	0.82	0.687914439	0.82	0.82	0.816	0.687914439	0.46	3	Disagree		55900	5.59	85.1	66
H42450	79.17	72.78	74.67	121.70	-15.88	-30.875	-15.19	-30.19054379	-19.10	0.83	0.663945578	0.91	0.83	0.833	0.668929008	0.79	2	Agree	9.29	71400	7.14	1190	510
H44580	97.51	97.34	98.39	136.01	-11.03	-26.03172	-10.72	-25.71922	-19.85	0.91	0.777862656	0.91	0.91	0.908	0.779942503	0.83	4	Disagree		73500	7.35	19.7	61
S-11-70 47.4-63.4	82.51	82.78	87.40	139.16	-10.84	-25.83589901	-9.73	-24.72691871	-46.28	0.92	0.7998187	1.08	0.92	0.924	0.806750774	0.64	3	Agree	2	74800	7.48	25	138
S-11-73 4.65-20.2	57.50	57.54	81.16	146.32	-9.62	-24.62284483	-9.19	-24.19272203	-72.77	0.93	0.811047714	1.18	0.93	0.929	0.813733606	0.44	3	Agree	1.8	79000	7.9	29	117

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
H42415	67.50	63.68	70.17	120.84	-4.31	-19.3125	-2.57	-17.57163136	-31.63	0.95	0.797377049	1.06	0.97	0.973	0.81221198	0.67	3	Disagree	1.55	70800	7.08	111.5	1530
H42412	67.50	65.95	74.17	131.43	0.06	-14.9375	0.69	-14.31138986	-29.98	1.00	0.844299674	1.03	1.01	1.007	0.849845964	0.69	3	Disagree	0.82	74700	7.47	41.3	430
H42406	119.17	84.15	114.37	193.28	220.60	205.6	223.14	208.1423009	-0.85	3.60	3.418823529	4.18	3.71	3.706	3.52423125	0.99	4	Disagree	1.6	69800	6.98	14	58
H42407	123.34	75.73	104.14	183.83	206.61	191.6125	207.66	192.6579402	31.05	5.62	5.287832168	6.05	5.76	5.758	5.414501544	1.69	4	Disagree	0.5	73000	7.3	21	148
H42408	98.34	67.32	93.40	205.88	231.14	216.1375	231.45	216.45	33.26	7.79	7.345321101	7.86	7.86	7.858	7.413333333	1.98	4	Disagree	0.2	70600	7.06	17	859
H42409	75.00	50.49	73.42	179.83	245.51	230.5125	246.33	231.3333402	23.30	10.03	9.47862069	11.64	10.34	10.343	9.773706702	1.86	4	Disagree	0.6	73400	7.34	18	697
H42410	80.84	55.95	75.92	142.03	207.04	192.0375	205.79	190.7875	31.88	9.60	8.980779221	9.13	9.13	9.130	8.537283951	2.33	4	Disagree	0.4	76400	7.64	25	923
H42417	127.51	73.69	100.14	173.81	198.13	183.125	198.75	183.75	24.31	5.01	4.708860759	5.08	5.08	5.077	4.769230769	1.49	4	Disagree	1.4	73000	7.3	34	129
H42418	75.00	48.90	75.17	146.61	167.83	152.825	168.53	153.5302258	-7.98	3.95	3.687032967	4.04	4.00	4.000	3.733324607	0.86	4	Disagree	1.6	71000	7.1	37	110
H42420	109.17	75.96	99.14	159.78	150.13	135.125	150.75	135.75	24.09	3.89	3.604819277	3.94	3.94	3.941	3.648780488	1.46	4	Disagree	1.7	74100	7.41	54	157
H42421	70.00	44.80	65.68	131.72	138.61	123.6125	139.62	124.6185566	-22.38	3.06	2.839813953	3.45	3.11	3.110	2.882983361	0.67	4	Disagree	1.8	69500	6.95	105	94
H42445	85.01	62.09	82.16	150.90	195.85	180.85	195.23	180.225	50.84	18.41	17.07555556	17.44	17.44	17.440	16.17684211	5.52	4	Disagree	0.5	78200	7.82	29	2110
H42446	82.51	57.99	78.41	124.56	90.95	75.95	91.65	76.64939124	1.74	2.62	2.350222222	2.69	2.65	2.650	2.379811904	1.03	3	Agree	1	80600	8.06	168	102
H42447	86.67	57.54	81.91	126.28	146.39	131.3875	146.08	131.075	29.73	6.26	5.724044944	6.19	6.19	6.194	5.660444444	2.07	4	Disagree	0.7	81900	8.19	153	378
H42449	80.01	46.62	67.18	111.10	133.38	118.375	134.09	119.0857119	26.00	7.47	6.739393939	8.21	7.73	7.733	6.979913097	2.26	4	Disagree	0.5	76400	7.64	693	546
H42450	69.17	38.66	56.19	99.65	89.05	74.05	89.74	74.74209798	-25.09	2.40	2.161568627	2.61	2.42	2.423	2.185293129	0.61	4	Disagree	5.2	74100	7.41	752	92
S154096	87.51	76.64	96.14	154.34	125.05	110.05	125.29	110.2937691	30.39	3.70	3.379459459	5.17	3.72	3.723	3.3973659	1.66	4	Disagree	0.6	77100	7.71	40	120
S154097	86.67	75.51	91.40	144.32	131.93	116.925	132.32	117.3160929	41.13	4.84	4.401454545	6.34	4.89	4.893	4.45210728	2.20	4	Disagree	1.1	73400	7.34	89	322
S155917	70.00	51.40	135.35	216.48	99.38	84.375	99.89	84.88514732	20.77	4.24	3.755102041	5.47	4.32	4.317	3.818713683	1.68	4	Disagree	0.4	75000	7.5	39	271
S155918	55.00	44.12	127.61	212.47	81.56	66.5625	82.21	67.21469162	23.18	4.90	4.179104478	6.19	5.05	5.053	4.313466591	2.11	4	Disagree	0.4	75100	7.51	14	680
S156364	93.34	67.55	96.89	146.04	136.61	121.6125	137.02	122.0232847	35.36	5.24	4.778252427	7.02	5.31	5.312	4.840021971	2.10	4	Disagree	0.6	73300	7.33	75	349
S156365	88.34	64.82	92.40	144.03	136.93	121.925	137.23	122.2329498	25.44	4.48	4.096507937	5.88	4.51	4.513	4.128799055	1.65	4	Disagree	0.9	74100	7.41	105	208
H42406	10.00	9.10	106.88	180.68	3.75	-11.25	4.21	-10.78743312	-112.15	1.03	0.907216495	1.12	1.03	1.035	0.910690766	0.08	3	Agree	0.88	71400	7.14	38.2	420
E192902	168.34	162.61	97.64	157.20	5.45	-9.55	6.41	-8.586244267	-11.14	1.03	0.945035971	1.17	1.04	1.037	0.950307131	0.94	4	Disagree		67900	6.79	167.5	36
H42440	125.01	115.99	88.65	140.60	5.88	-9.125	6.43	-8.57182245	7.86	1.05	0.915606936	1.14	1.06	1.060	0.920315355	1.07	3	Agree	3.06	77600	7.76	542	330
S91-388_5285	30.84	29.57	35.96	84.76	2.31	-12.6875	2.94	-12.0625	-5.12	1.07	0.634234234	1.09	1.09	1.086	0.64587156	0.85	3	Disagree	0.43	85300	8.53	56.9	2200
G21649	66.67	63.68	62.18	95.93	4.13	-10.875	5.23	-9.770626319	6.80	1.07	0.808791209	1.16	1.09	1.094	0.824806947	1.12	2	Agree	0.32	75900	7.59	8.4	1300
S-11-70 7.25-23.4	98.34	103.93	100.39	164.94	16.92	1.919642857	19.33	4.326939301	-22.00	1.13	1.015242822	1.40	1.16	1.156	1.035027379	0.83	3	Agree	1.7	62800	6.28	59	30
G21640	56.67	52.31	54.44	96.79	9.75	-5.25	10.62	-4.37901061	1.06	1.19	0.897560976	1.34	1.21	1.211	0.91307867	1.02	2	Agree	0.23	75500	7.55	10.2	980
G23418	37.50	34.11	38.96	91.92	13.69	-1.3125	14.83	-0.168568465	-31.20	1.21	0.979904306	1.43	1.23	1.231	0.997373037	0.52	3	Disagree	0.31	80700	8.07	22.8	1140
G24731	65.84	38.66	58.94	97.36	11.63	-3.375	13.26	-1.738218406	-10.71	1.24	0.93164557	1.31	1.28	1.278	0.963588536	0.78	2	Agree	0.42	81600	8.16	2850	2030
S-11-73 42.45-57.35	82.51	84.37	119.12	200.16	54.31	39.30880542	55.04	40.04318087	-11.56	1.57	1.409733477	1.96	1.58	1.578	1.420607843	0.88	3	Agree	0.8	80300	8.03	34	657
SG92-17_C11112	35.84	31.84	38.46	85.62	15.81	0.8125	17.57	2.567955158	4.65	1.58	1.029885057	2.08	1.69	1.691	1.100973208	1.17	2	Disagree	0.4	83700	8.37	521	1550
H42417	73.34	72.78	78.41	153.48	51.19	36.1875	52.24	37.24280229	-0.04	1.70	1.496995708	1.85	1.73	1.728	1.519011381	1.00	3	Agree	0.98	72900	7.29	59.7	590
S-11-74 75.9-91.9	51.67	55.26	140.10	221.92	37.38	22.38300493	38.82	23.81960703	1.51	1.70	1.416427999	2.57	1.74	1.742	1.455325175	1.03	3	Disagree	0.7	77400	7.74	18	1557
X15897	55.00	42.30	57.44	124.56	80.78	65.775	80.78	65.775	-58.32	1.80	1.653664596	1.80	1.80	1.803	1.653664596	0.42	3	Agree		80300	8.03	41	60
SG92-17_C11169	35.84	29.57	34.21	102.80	17.94	2.9375	19.38	4.378234877	5.50	1.75	1.122077922	2.04	1.86	1.857	1.193540816	1.23	2	Disagree	1.29	76300	7.63	17.5	690
9926	30.84	29.11	104.39	192.14	41.41	26.4125	42.92	27.91887421	-20.58	1.83	1.531572327	2.04	1.89	1.891	1.57945666	0.59	4	Disagree		87800	8.78	26.8	780
SG92-17_C11087	50.00	45.49	59.93	108.81	28.00	13	30.78	15.78380469	10.49	1.80	1.371428571	2.29	1.96	1.956	1.489933853	1.30	2	Agree	0.96	85000	8.5	438	2960
S-11-69 1.76-16.9	13.67	9.92	91.65	169.52	25.97	10.971133	27.75	12.75030568	-18.08	1.93	1.391826179	2.12	2.06	2.058	1.486266338	0.35	2	Agree	0.4	88800	8.88	15	1346
SG92-15_C12893	93.34	65.95	68.42	123.99	40.94	25.9375	42.47	27.46797427	21.89	1.93	1.588652482	2.86	2.00	1.998	1.645818622	1.50	3	Disagree	0.73	73300	7.33	1420	1670
S-11-74 5.9-21.9	50.00	51.85	63.43	131.15	71.98	56.97506158	72.83	57.83309258	-15.33	2.07	1.848000916	2.49	2.10	2.098	1.871906461	0.77	3	Agree	3.1	80400	8.04	41	718
H42404	115.84	40.94	112.63	165.22	72.88	57.875	73.62	58.62200399	-22.19	2.15	1.916831683	2.40	2.18	2.180	1.939786587	0.65	3	Agree	0.72	69000	6.9	27.3	810
H42410	85.84	77.32	79.16	121.70	46.13	31.125	48.46	33.46280574	35.45	2.10	1.743283582	2.49	2.23	2.226	1.846362681	1.85	3	Disagree	0.35	60100	6.01	72.4	1920
S-08-07 55-70	123.34	131.91	120.12	185.27	99.57	84.56982544	95.40	80.40315877	59.41	2.37	2.166480351	2.24	2.24	2.244	2.048736854	1.82	3	Agree	3.4	73600	7.36	53	272
H42419	87.51	79.60	88.40	132.29	62.44	47.4375	63.92	48.92421471	28.04	2.21	1.92	2.48	2.28	2.277	1.977003444	1.54	3	Agree	5.19	69600	6.96	53	1610
G21714	101.67	97.79	105.63	156.92	73.13	58.125	74.14	59.14185457	40.92	2.29	2.021978022	2.40	2.33	2.327	2.058786577	1.72	3	Agree	0.34	79700	7.97	17.5	1180
S-11-69 42.1-56.9	64.17	70.05	95.40	182.69	66.39	51.3885468	67.22	52.21723529	20.67	2.34	2.040780695	3.16	2.38	2.385	2.075616945	1.42	3	Agree	0.9	83100	8.31	17	922
S-11-74 37.9-53.9	70.17	64.09	109.63	162.93	98.05	83.0462931	99.16	84.1580636	23.90	3.44	3.066470746	3.76	3.54	3.538	3.153717017	1.59	4	Disagree	1.3	81200	8.12	24	652
S-11-74 117.9-133.9	78.34	80.28	147.59	239.10	74.03	59.03479064	75.21	60.21428011	27.47	2.40	2.117818521	3.50	2.46	2.457	2.166197351	1.52	3	Agree	2.7	79900	7.99	28	1373

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
10264	189.18	184.67	108.38	173.24	114.44	99.4375	115.13	100.125222	105.61	2.45	2.25770751	2.93	2.47	2.469	2.277518414	2.34	4	Disagree		74800	7.48	41.4	86
10253	190.85	189.67	90.65	160.07	123.14	108.1375	124.26	109.2638954	128.11	3.00	2.756548223	4.38	3.06	3.056	2.80792419	3.08	4	Disagree		73900	7.39	6.9	259
S-11-69 125.1-140.9	122.51	129.63	140.85	227.93	127.74	112.7432266	129.52	114.5210481	65.26	2.98	2.751351093	3.35	3.07	3.069	2.829492174	2.01	3	Agree	1.2	82400	8.24	18	1365
H44593	81.67	81.65	88.65	121.70	68.93	53.93373	69.25	54.24623	51.33	3.27	2.779257072	3.31	3.31	3.308	2.808207667	2.69	4	Disagree		75900	7.59	10.4	263
S-11-69 82.9-98.9	58.34	60.95	109.13	186.70	82.58	67.58312808	83.99	68.98579606	24.08	3.24	2.832762795	4.44	3.37	3.368	2.944777581	1.65	3	Agree	0.2	78300	7.83	14	1709
9759	56.67	54.58	64.43	118.83	41.56	26.5625	42.64	27.6449939	36.14	3.25	2.440677966	4.57	3.46	3.457	2.592911794	2.96	2	Agree	0.76	76900	7.69	5.9	1270
H42447	85.84	75.05	77.66	120.84	57.00	42	58.53	43.52738271	50.05	3.28	2.68	3.98	3.49	3.493	2.854389826	3.00	2	Agree	0.54	73100	7.31	454	1880
S-11-73 118.2-134.2	81.67	84.37	91.90	162.93	112.07	97.0658867	112.93	97.9291845	42.50	3.68	3.317991324	5.47	3.75	3.754	3.38783516	2.01	3	Agree	0.8	75400	7.54	21	431
S-11-72 23.3-38.3	124.17	130.77	128.86	192.14	131.11	116.1083744	132.33	117.3295019	85.77	3.91	3.580186097	5.56	4.02	4.023	3.680048505	2.91	3	Agree	0.7	83900	8.39	16	1193
G21620	115.01	109.16	106.38	200.44	121.00	106	122.09	107.0897872	69.16	4.03	3.65	4.48	4.14	4.138	3.752228255	2.73	3	Agree	1.17	75000	7.5	21.7	1280
S-10-29 65.5-79.5	36.67	40.25	66.18	120.84	58.88	43.8848192	54.16	39.15565254	28.07	5.83	4.600805678	4.20	4.20	4.201	3.314619854	3.30	3	Disagree	1.9	81500	8.15	10	1644
H42408	54.17	52.31	62.68	180.11	67.25	52.25	66.94	51.9375	33.56	4.59	3.786666667	4.51	4.51	4.511	3.724590164	2.79	3	Disagree	0.37	76900	7.69	18.3	2380
MC-05-01 49-65	61.67	68.46	72.92	149.76	114.63	99.62905237	115.94	100.9447006	34.71	4.40	3.951971922	5.74	4.57	4.575	4.112277415	2.03	3	Agree	0.5	78300	7.83	10	1454
S-10-29 14.4-29.5	73.34	77.10	69.92	109.38	76.31	61.31312344	78.18	63.17613802	53.66	4.26	3.6160266	6.09	4.62	4.624	3.928280178	3.29	3	Disagree	0.6	79200	7.92	23	1269
S-10-33 129-146	123.34	130.77	136.60	214.76	152.64	137.6387157	153.25	138.253886	88.89	4.65	4.286894704	6.62	4.71	4.714	4.350810869	3.12	3	Agree	24.2	75700	7.57	76	415
9801	99.17	93.24	107.88	175.53	98.88	83.875	100.13	85.125	65.12	4.52	3.982222222	4.73	4.73	4.726	4.16744186	3.32	3	Agree	0.34	80500	8.05	10.1	2810
S-08-07 190-204.5	100.01	101.43	95.40	183.26	131.14	116.1385599	134.59	119.5850825	62.99	4.41	4.021490988	6.41	4.85	4.846	4.417597662	2.64	3	Agree	1.6	73500	7.35	19	1712
H42443	92.51	88.70	96.89	175.24	98.44	83.4375	99.69	84.6875	67.13	5.57	4.869565217	5.91	5.91	5.908	5.169230769	4.11	3	Agree	0.43	79600	7.96	32.1	2830
9770	56.67	52.31	77.17	151.19	46.25	31.25	49.88	34.88093288	38.56	4.36	3.272727273	8.73	5.93	5.929	4.447050254	3.80	2	Agree	0.36	77600	7.76	5.5	4550
MC-05-01 89-105	74.17	80.74	82.16	141.74	117.45	102.4540212	119.50	104.5040007	54.80	5.53	4.950034552	7.51	6.00	6.003	5.374836678	3.11	3	Agree	0.4	77900	7.79	3	2488
H45459	72.50	73.46	77.66	138.59	128.73	113.7279	129.24	114.2446113	48.15	6.09	5.492954074	6.85	6.21	6.212	5.60741993	2.90	4	Disagree		79400	7.94	70.2	280
S-11-73 79.2-94.2	81.67	83.92	129.86	212.76	105.93	90.92826355	107.05	92.05055166	64.23	6.38	5.618578466	9.22	6.77	6.766	5.958227908	4.26	3	Agree	0.7	72600	7.26	13	1286
X18487	134.18	128.50	130.86	211.32	167.01	152.0125	168.37	153.370124	98.81	6.63	6.120421053	11.24	6.94	6.943	6.413723808	4.33	4	Disagree		93200	9.32	116	1433
E216203	40.00	39.80	42.70	93.92	64.73	49.725	65.04	50.0375	30.42	7.90	6.304	8.18	8.18	8.177	6.52137931	4.25	4	Disagree		84600	8.46	6.6	1363
SG92-17_C11080	145.01	143.28	148.34	229.08	149.56	134.5625	152.11	137.1140305	119.84	7.38	6.741333333	10.65	8.28	8.283	7.564887054	6.11	3	Agree	0.51	80100	8.01	94.1	3070
X18455	70.84	63.45	112.13	240.24	110.61	95.6125	112.72	97.72351769	46.26	7.44	6.562909091	10.22	8.48	8.477	7.481851381	3.69	4	Disagree		78000	7.8	4.4	2466
X18478	145.01	125.99	151.33	236.81	204.61	189.6125	204.93	189.925	101.31	9.29	8.680506329	9.41	9.41	9.407	8.791794872	5.10	4	Disagree		88000	8.8	20.4	1370
9742	12.50	13.65	21.73	77.60	21.56	6.5625	22.37	7.370941618	10.21	7.27	2.909090909	20.00	9.51	9.509	3.803643185	3.97	2	Disagree	0.25	80100	8.01	3.7	680
S-08-07 155.1-170.5	77.51	79.60	104.88	197.58	131.21	116.2133728	128.17	113.1717062	71.16	16.55	14.77343678	12.17	12.17	12.166	10.85887821	9.43	3	Agree	0.5	72600	7.26	11	2953
X18433	116.67	108.48	143.09	264.58	157.59	142.5875	161.32	146.3183505	93.17	11.29	10.31183673	17.85	14.93	14.929	13.63363659	7.08	4	Disagree		81500	8.15	8.8	4687
H44569	81.67	75.96	99.64	207.32	140.74	125.74121	141.05	126.05371	68.46	19.77	17.76549467	20.62	20.62	20.625	18.53790748	10.13	4	Disagree		70800	7.08	21.4	1965
H45267	109.17	108.48	107.88	182.98	157.90	142.90404	158.22	143.21654	100.98	22.05	20.053872	23.01	23.01	23.013	20.92577948	14.46	4	Disagree		72500	7.25	66	4222
H45245	99.17	94.15	93.15	154.34	129.83	114.82639	132.88	117.8767795	85.09	15.33	13.67049821	23.39	23.10	23.102	20.60655558	10.39	4	Disagree		77400	7.74	14.7	3754
S-10-33 52-69	48.34	51.40	136.85	229.65	126.23	111.2320761	127.67	112.6743019	45.46	22.26	19.73382334	30.35	29.40	29.402	26.0650567	8.66	3	Agree	0.05	82000	8.2	11	1549
G24711	78.34	79.60	80.41	149.76	112.38	97.375	114.25	99.25	73.97	20.98	18.31111111	31.47	31.47	31.467	27.46666667	14.15	3	Agree	0.18	77600	7.76	14.2	3620
#N/A	39.17	40.94	52.44	104.23	71.94	56.9375	73.81	58.8125	36.87	18.71	15.01538462	34.74	34.74	34.743	27.88571429	10.08	3	Disagree	0.38	77900	7.79	19.7	3730
E192923	126.68	107.57	128.86	216.76	191.75	176.75	192.69	177.6875	103.82	52.13	48.13333333	69.51	69.51	69.511	64.17777778	28.69	4	Disagree		85500	8.55	12	2647
H45491	108.34	108.48	115.37	208.75	161.95	146.95391	161.95	146.95391	106.29	75.04	68.17893029	75.04	75.04	75.036	68.17893029	49.59	4	Disagree		81600	8.16	20.1	2379
S91-387_5160	0.83	2.27	5.49	42.38	-76.69	-84.6865	-76.00	-83.99475053	-82.41	0.09	1.18081E-05	0.11	0.10	0.095	0.01	0.03	2	Disagree	1.75	83600	8.36	7.7	520
X18179	2.50	4.55	7.49	27.78	-15.56	-26.5615	-12.93	-23.92974361	-22.01	0.41	3.76471E-05	0.50	0.46	0.460	0.01	0.17	2	Disagree	0.74	74800	7.48	9.1	3180
S91-395_5370	42.50	40.94	30.97	67.29	-37.94	-52.9375	-36.69	-51.68527972	-40.00	0.53	0.345945946	0.59	0.54	0.540	0.351382339	0.51	3	Disagree	1.94	66500	6.65	46.6	860
G37543	101.67	100.07	57.94	104.80	12.88	-2.125	15.35	0.349157385	36.94	1.20	0.966336634	1.29	1.25	1.253	1.005756843	1.59	3	Disagree	0.85	70800	7.08	7	1250
E192557	34.17	34.11	39.46	83.33	13.88	-1.125	18.21	3.211158732	5.99	1.49	0.96	1.82	1.77	1.766	1.134985925	1.21	3	Disagree	1	77600	7.76	4.2	4660
G33225	39.17	36.39	42.20	67.29	31.38	16.375	32.77	17.7741956	20.76	3.01	2.048	4.18	3.30	3.304	2.249433431	2.33	3	Disagree	1.74	60900	6.09	3.7	1490
G33213	94.17	93.24	103.89	165.22	107.19	92.1875	108.92	93.92218552	75.43	7.02	6.175438596	9.52	7.77	7.775	6.841725916	5.23	4	Disagree	4.33	73100	7.31	6.6	1950
G37849	33.34	31.84	36.96	66.15	-363.44	-378.4375	-362.85	-377.8478562	-366.60	0.09	0.050196078	0.12	0.09	0.088	0.050270473	0.08	3	Disagree	30	72000	7.2	196.5	380
X17096	6.67	9.10	11.24	29.49	-78.19	-92.1865	-77.03	-91.03020223	-83.09	0.15	1.08475E-05	0.17	0.15	0.154	0.01	0.10	3	Disagree	2.54	71100	7.11	14.8	300
H43066	15.83	4.55	7.49	42.95	-86.19	-101.1875	-85.79	-100.7905725	-97.64	0.16	0.009785933	0.17	0.16	0.157	0.01	0.04	2	Disagree	0.85	71800	7.18	9.9	330
H43070	13.33	13.65	21.23	40.95	-115.19	-130.1875	-114.92	-129.9218511	-123.54	0.16	0.051025057	0.19	0.16	0.161	0.051124053	0.10	3	Disagree	1.42	85200	8.52	12.5	150
H41606	27.50	27.29	45.20	70.73	-155.13	-170.125	-154.89	-169.8885242	-160.83	0.18	0.095681063	0.20	0.18	0.176	0.095801487	0.15	3	Disagree	10.65	72700	7.27	9.3	110

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
H43086	2.50	4.55	9.49	47.25	-57.38	-69.374	-56.26	-68.26233306	-64.83	0.17	1.44144E-05	0.20	0.18	0.176	0.01	0.07	2	Disagree	1.17	80200	8.02	7.7	1310
H43064	1.67	4.55	8.49	38.37	-76.44	-91.4375	-75.79	-90.78530838	-88.89	0.18	0.021404682	0.20	0.18	0.183	0.021555137	0.05	2	Disagree	0.84	72900	7.29	10.4	680
X17168	6.67	6.82	19.48	27.78	-80.06	-95.0625	-78.75	-93.75193365	-92.24	0.19	0.040378549	0.22	0.19	0.194	0.040919907	0.07	3	Disagree	0.82	77400	7.74	11.5	940
H40759	17.50	18.65	9.49	25.20	-62.45	-77.45	-62.10	-77.09592842	-60.10	0.21	0.016507937	0.28	0.21	0.208	0.016582494	0.24	3	Disagree		68700	6.87	15.6	57
X17119	0.42	4.55	7.24	39.52	-44.63	-55.624	-39.86	-50.86134713	-51.08	0.20	1.79775E-05	0.25	0.22	0.216	0.01	0.08	2	Disagree	1.42	75500	7.55	26.1	960
9265	15.00	15.92	22.73	30.35	-86.31	-101.3125	-85.76	-100.762414	-94.39	0.22	0.081586402	0.24	0.22	0.219	0.081995281	0.14	3	Disagree	5.63	54000	5.4	43.8	540
H43100	4.17	4.55	3.50	27.78	-35.88	-46.874	-35.07	-46.06864994	-42.33	0.23	2.13333E-05	0.28	0.24	0.239	0.01	0.10	2	Disagree	1.38	68300	6.83	47.6	890
H43084	9.17	11.37	12.74	48.97	-59.81	-74.8125	-56.72	-71.7155629	-66.44	0.23	0.038554217	0.27	0.24	0.241	0.040152277	0.15	2	Disagree	1.59	72600	7.26	8.8	390
H43060	5.83	4.55	6.99	87.05	-28.19	-37.1865	-25.99	-34.99233916	-32.64	0.24	2.68908E-05	0.33	0.26	0.257	0.01	0.12	2	Disagree	0.69	90400	9.04	6.5	2580
X17129	15.83	11.37	15.73	38.66	-40.63	-55.624	-38.35	-53.34676061	-44.25	0.27	1.79775E-05	0.33	0.28	0.281	0.01	0.20	3	Disagree	1.68	81300	8.13	60.4	980
X17105	15.00	13.65	13.49	24.05	-61.94	-76.9375	-60.96	-75.96242356	-72.29	0.28	0.104727273	0.34	0.28	0.282	0.105929182	0.16	3	Disagree	2.99	73000	7.3	9	480
X06508	41.67	39.80	43.20	79.32	-120.31	-135.3125	-119.66	-134.6634322	-128.01	0.28	0.193668529	0.48	0.28	0.284	0.194420511	0.24	4	Disagree		75100	7.51	39.1	33
X16763	0.00	18.19	25.47	71.01	-74.69	-89.6875	-74.03	-89.03221682	-86.49	0.29	0.143283582	0.33	0.29	0.288	0.144186104	0.17	3	Disagree	0.54	75800	7.58	7.4	470
G37888	22.50	22.74	27.47	77.89	-81.69	-96.6875	-81.02	-96.02492356	-91.94	0.29	0.156948229	0.30	0.29	0.289	0.157860224	0.20	3	Disagree	6.78	78100	7.81	29	480
X14984	0.00	45.49	45.45	65.57	-120.13	-135.125	-119.86	-134.8593511	-127.64	0.31	0.219494585	0.36	0.31	0.307	0.219831902	0.26	4	Disagree	4.44	73200	7.32	126	150
X17360	3.33	6.82	4.74	11.74	-21.94	-30.9365	-20.10	-29.09970885	-24.11	0.29	3.23232E-05	0.36	0.31	0.309	0.01	0.22	2	Disagree	1.58	79000	7.9	4.9	2090
H43113	33.34	29.57	39.21	55.26	-89.06	-104.0625	-88.57	-103.5676685	-99.50	0.31	0.1937046	0.37	0.31	0.311	0.194450131	0.23	3	Disagree	1.36	79700	7.97	5.6	250
G36677	21.67	22.74	22.97	72.45	-67.13	-82.125	-66.41	-81.41446231	-75.38	0.32	0.163057325	0.34	0.32	0.318	0.164246659	0.23	3	Disagree	1.53	72800	7.28	13.4	760
G33512	12.64	9.82	19.73	48.11	-76.78	-91.78125	-75.54	-90.54467906	-92.21	0.25	0.100459418	0.30	0.25	0.251	0.101691876	0.10	2	Disagree		76400	7.64	22.4	53
H41633	27.50	29.57	47.70	77.60	-94.06	-109.0625	-93.81	-108.8114376	-109.50	0.32	0.215730337	0.34	0.32	0.324	0.216120519	0.21	3	Disagree	13.4	74000	7.4	32	130
X17271	50.00	45.49	52.69	75.60	-115.31	-130.3125	-113.92	-128.9166348	-124.83	0.32	0.234862385	0.34	0.33	0.326	0.236803202	0.27	3	Disagree	1.46	77700	7.77	92.8	200
H43074	40.00	34.11	36.46	59.27	-87.06	-102.0625	-82.60	-97.59998089	-94.95	0.33	0.209200969	0.36	0.34	0.337	0.216693452	0.26	3	Disagree	1.01	84200	8.42	9.6	120
X17202	24.17	20.47	32.96	41.23	-57.56	-72.5625	-55.96	-70.96131342	-66.09	0.34	0.161732852	0.35	0.34	0.341	0.16478088	0.24	3	Disagree	1.77	67000	6.7	9.1	910
X17350	14.17	15.92	33.71	65.00	-61.13	-76.125	-60.51	-75.51347638	-77.21	0.34	0.182550336	0.35	0.35	0.346	0.183757012	0.17	3	Disagree	1.7	80600	8.06	10.3	410
X17069	25.00	22.97	30.72	63.57	-95.69	-110.6875	-94.72	-109.7215563	-124.22	0.35	0.247983015	0.46	0.35	0.352	0.249621198	0.16	4	Disagree		89700	8.97	17.1	39
X17270	0.00	52.31	47.20	76.17	-98.88	-113.875	-98.43	-113.4312213	-104.57	0.37	0.274103586	0.42	0.37	0.371	0.274881188	0.33	3	Disagree	1.11	70200	7.02	71.9	180
H43068	24.17	13.65	24.72	79.89	-57.06	-72.0625	-53.12	-68.115582	-75.42	0.36	0.190877193	0.47	0.38	0.376	0.199728412	0.15	3	Disagree	1.36	74300	7.43	34.7	270
X18147	39.17	40.94	34.46	51.54	-64.19	-79.1875	-62.42	-77.42078875	-61.25	0.37	0.225076453	0.43	0.38	0.378	0.229036241	0.40	3	Disagree	0.76	85600	8.56	26.7	280
X16787	25.00	27.29	36.71	82.47	-65.31	-80.3125	-64.13	-79.13432245	-78.02	0.38	0.237388724	0.40	0.38	0.384	0.240074544	0.26	3	Disagree	0.45	71600	7.16	3.2	330
67950	16.67	15.92	24.97	48.39	-49.06	-64.0625	-47.84	-62.83945276	-63.14	0.38	0.18972332	0.41	0.39	0.385	0.192704335	0.20	3	Disagree	0.68	84000	8.4	3	820
H41661	54.17	52.31	48.20	75.31	-93.19	-108.1875	-92.17	-107.1697742	-99.88	0.39	0.289117043	0.43	0.39	0.390	0.291063476	0.34	3	Disagree	0.71	73800	7.38	76.5	110
G37829	31.67	34.11	45.45	75.88	-57.88	-72.875	-57.42	-72.41663482	-62.76	0.40	0.247741935	0.42	0.40	0.404	0.248919702	0.35	3	Disagree	1.11	76500	7.65	17.4	200
X17354	0.00	6.82	7.24	12.60	-15.06	-24.0615	-13.24	-22.24040551	-17.24	0.37	4.15584E-05	0.44	0.40	0.405	0.01	0.28	3	Disagree	0.81	71700	7.17	3.9	1640
X17404	58.34	61.40	71.42	137.73	-109.75	-124.75	-108.73	-123.7322742	-122.35	0.40	0.321088435	0.47	0.40	0.405	0.322876735	0.33	3	Disagree	0.61	75800	7.58	13.6	110
H43134	38.34	36.39	46.20	80.18	-69.44	-84.4375	-68.89	-83.88741401	-82.05	0.41	0.28707124	0.44	0.42	0.416	0.288410771	0.31	3	Disagree	1.59	81600	8.16	5.1	540
X14912	0.00	31.84	29.22	56.12	-53.88	-68.875	-52.86	-67.86345727	-60.04	0.41	0.250340136	0.46	0.42	0.418	0.253127062	0.35	3	Disagree	0.59	70100	7.01	53.8	530
H43078	33.34	31.84	22.73	75.31	-52.25	-67.25	-51.38	-66.37901061	-59.41	0.43	0.263013699	0.47	0.43	0.432	0.265548382	0.35	3	Disagree	0.78	74300	7.43	10.5	980
H43082	13.33	13.65	14.48	34.36	-29.69	-44.6875	-26.17	-41.16755387	-36.04	0.40	0.100628931	0.47	0.43	0.433	0.108301168	0.27	2	Disagree	0.94	75600	7.56	12.1	970
H41615	34.17	34.11	46.95	71.87	-57.88	-72.875	-57.42	-72.41663482	-67.76	0.43	0.284662577	0.44	0.43	0.434	0.285949145	0.33	3	Disagree	3.59	66600	6.66	11.3	200
X14921	0.00	45.49	42.95	62.14	-61.38	-76.375	-60.58	-75.58225504	-63.89	0.44	0.301714286	0.52	0.44	0.442	0.303917063	0.42	3	Disagree	1.37	66100	6.61	157	230
X16837	39.17	40.94	40.95	89.91	-54.81	-69.8125	-54.24	-69.24473593	-56.88	0.44	0.286261981	0.48	0.44	0.442	0.287933323	0.42	3	Disagree	0.48	67500	6.75	2.5	350
X16765	25.84	27.29	37.71	74.74	-47.38	-62.375	-46.52	-61.52279883	-57.08	0.44	0.260740741	0.50	0.44	0.443	0.263401135	0.32	3	Disagree	0.51	75900	7.59	5.6	740
X17225	40.84	38.66	51.19	95.35	-66.94	-81.9375	-66.14	-81.13746178	-82.28	0.45	0.32248062	0.49	0.45	0.449	0.324628134	0.32	3	Disagree	7.06	69800	6.98	32.6	240
X17188	33.34	31.84	37.71	62.71	-52.00	-67	-50.81	-65.80612579	-63.16	0.45	0.294736842	0.48	0.46	0.458	0.298487969	0.34	3	Disagree	2.46	74300	7.43	11.3	780
H43091	5.83	4.55	3.25	16.89	-12.50	-22.499	-11.31	-21.31130891	-17.95	0.44	4.44444E-05	0.54	0.47	0.469	0.01	0.20	2	Disagree	0.47	68400	6.84	8.6	1200
X16185	21.67	25.02	17.23	29.49	-27.00	-42	-25.33	-40.33317409	-24.98	0.46	0.16	0.55	0.48	0.476	0.165517787	0.50	3	Disagree	2.92	64500	6.45	3	1000
X16775	21.67	25.02	36.46	85.04	-41.13	-56.125	-40.62	-55.61867356	-53.11	0.47	0.2816	0.50	0.48	0.477	0.283436949	0.32	3	Disagree	0.34	72600	7.26	2.2	480
H43093	2.50	4.55	2.25	8.88	-10.38	-19.374	-9.77	-18.76556794	-14.83	0.46	5.16129E-05	0.63	0.48	0.480	0.01	0.23	2	Disagree	3.79	55800	5.58	6.4	620
X14969	26.67	27.29	25.47	37.80	-31.63	-46.625	-30.87	-45.87490446	-33.33	0.48	0.230927835	0.55	0.48	0.484	0.233820832	0.45	3	Disagree	0.45	67800	6.78	75.4	600
X18198	15.00	18.19	10.74	20.90	-18.50	-32.499	-14.89	-28.88598406	-14.31	0.43	3.07692E-05	0.50	0.48	0.485	0.01	0.56	3	Disagree	1.8	81000	8.1	9.9	3240

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
X17394	44.17	45.49	60.18	101.65	-60.50	-75.5	-60.00	-74.99787526	-72.01	0.49	0.357446809	0.50	0.49	0.487	0.358980878	0.39	3	Disagree	3.15	69100	6.91	14.5	260
X14977	0.00	40.94	38.96	54.98	-47.13	-62.125	-46.61	-61.60828875	-52.19	0.49	0.332885906	0.57	0.50	0.497	0.334743255	0.44	4	Disagree	1.02	64600	6.46	62.7	280
H40884	50.00	47.76	55.44	128.86	-60.94	-75.9375	-60.58	-75.57703875	-73.18	0.50	0.372093023	0.56	0.50	0.498	0.373205384	0.39	3	Disagree	2.17	71200	7.12	15.2	280
X16754	31.67	34.11	41.95	75.88	-46.88	-61.875	-45.37	-60.36973593	-57.76	0.49	0.326530612	0.55	0.50	0.498	0.331969544	0.37	3	Disagree	0.74	71200	7.12	3.1	350
X14904	0.00	31.84	25.47	44.67	-33.88	-48.875	-32.85	-47.84776061	-35.04	0.49	0.269158879	0.56	0.50	0.501	0.273357816	0.48	3	Disagree	0.54	64200	6.42	13.3	980
X16756	0.00	40.94	45.20	91.63	-50.63	-65.625	-49.74	-64.74473593	-59.69	0.50	0.347826087	0.54	0.50	0.501	0.350895711	0.41	3	Disagree	0.39	75500	7.55	6.7	350
X17340	19.17	22.74	42.70	70.44	-38.44	-53.4375	-37.44	-52.44054379	-55.69	0.51	0.3187251	0.52	0.52	0.517	0.322828312	0.29	3	Disagree	2.04	71100	7.11	5.6	510
X16750	0.00	36.39	43.45	87.05	-42.75	-57.75	-42.16	-57.16035615	-52.36	0.52	0.349295775	0.60	0.52	0.522	0.351631973	0.41	3	Disagree	0.49	76900	7.69	4.1	380
G37869	65.00	63.68	46.45	100.51	-56.75	-71.75	-55.65	-70.6520483	-55.07	0.52	0.395789474	0.59	0.53	0.527	0.399483058	0.54	3	Disagree	4.24	75500	7.55	47	220
X17142	59.17	61.40	62.18	106.23	-54.81	-69.8125	-53.63	-68.63432245	-56.41	0.53	0.407427056	0.62	0.54	0.540	0.411542666	0.52	3	Disagree	1.07	69700	6.97	73.8	330
X17198	37.50	34.11	43.45	55.26	-34.94	-49.9375	-33.44	-48.43730891	-41.82	0.54	0.342386831	0.60	0.55	0.551	0.349287211	0.45	3	Disagree	1.92	65000	6.5	3.8	1200
X14956	48.34	45.49	41.20	54.12	-38.06	-53.0625	-37.31	-52.31240446	-38.58	0.55	0.368773234	0.60	0.55	0.552	0.37209345	0.54	3	Disagree	1.35	69100	6.91	85.1	600
H43123	45.00	43.21	53.69	105.38	-46.69	-61.6875	-46.13	-61.13012075	-61.48	0.55	0.410746269	0.58	0.56	0.557	0.412944878	0.41	3	Disagree	1.37	68200	6.82	24.9	550
X14946	23.33	27.29	24.97	35.22	-21.50	-36.5	-19.88	-34.88311676	-20.21	0.55	0.231578947	0.66	0.57	0.567	0.239739599	0.57	3	Disagree	0.4	64600	6.46	48.3	1360
X17261	16.67	15.92	14.48	24.63	-12.00	-24.999	-9.50	-22.499	-9.08	0.52	0.00004	0.58	0.58	0.578	0.01	0.64	3	Disagree	1.63	67400	6.74	12.4	3040
G36716	75.84	72.78	74.92	127.14	-54.69	-69.6875	-54.31	-69.30515897	-56.91	0.58	0.462650602	0.65	0.58	0.580	0.464018609	0.56	3	Disagree	6.7	72300	7.23	13.6	310
X16227	26.67	25.02	29.47	54.98	-23.63	-38.625	-22.60	-37.59776061	-30.61	0.58	0.305617978	0.66	0.59	0.586	0.311368082	0.45	3	Disagree	2.14	60400	6.04	6.2	980
X16743	36.67	43.21	48.70	98.22	-39.38	-54.375	-38.81	-53.81452919	-51.16	0.58	0.42384106	0.65	0.59	0.586	0.426373189	0.46	3	Disagree	0.41	75500	7.55	5.7	340
X18236	57.50	54.58	34.46	64.43	-41.25	-56.25	-40.84	-55.83848593	-46.67	0.59	0.444444444	0.63	0.60	0.595	0.446258188	0.54	3	Disagree	2.59	81600	8.16	35.7	350
G34684	68.34	68.23	29.97	59.85	-32.06	-47.0625	-31.43	-46.43218816	-10.83	0.59	0.404743083	0.65	0.60	0.599	0.407995757	0.86	3	Disagree	2.1	69200	6.92	7.3	650
H43140	52.50	50.03	56.44	75.60	-39.50	-54.5	-38.47	-53.46657749	-47.47	0.59	0.441025641	0.66	0.60	0.601	0.445750239	0.51	3	Disagree	1.84	60300	6.03	5.5	560
X14918	32.50	29.57	35.46	69.87	-30.50	-45.5	-29.33	-44.33418869	-47.93	0.61	0.412903226	0.78	0.62	0.616	0.419209276	0.38	3	Disagree	0.43	81800	8.18	57.7	1170
H43131	17.50	22.74	24.72	49.82	-51.19	-66.1875	-50.13	-65.13330785	-109.44	0.61	0.49929078	0.62	0.62	0.618	0.503304622	0.17	3	Disagree	2.6	71300	7.13	18.5	160
X17346	0.00	27.29	41.95	69.87	-30.19	-45.1875	-29.07	-44.06655838	-49.90	0.61	0.414574899	0.66	0.62	0.618	0.42068421	0.35	3	Disagree	1.66	76500	7.65	10.5	680
X16176	31.67	29.57	33.46	59.56	-24.50	-39.5	-22.96	-37.96334261	-32.93	0.61	0.368	0.68	0.62	0.623	0.377275901	0.47	3	Disagree	0.98	74100	7.41	3	1250
H40882	54.17	54.58	60.18	82.75	-34.88	-49.875	-34.38	-49.38326008	-37.29	0.62	0.457142857	0.65	0.62	0.624	0.459602776	0.59	3	Disagree	3.08	71300	7.13	24.5	460
H43120	25.84	22.74	36.96	108.81	-27.56	-42.5625	-26.49	-41.48729936	-48.82	0.61	0.405240175	0.74	0.62	0.624	0.411421636	0.32	3	Disagree	0.96	79700	7.97	17.1	1260
X17974	21.67	25.02	29.47	71.01	-21.31	-36.3125	-19.88	-34.8768381	-30.30	0.61	0.343502825	0.69	0.63	0.631	0.352656182	0.45	3	Disagree	2.64	84700	8.47	26.1	1540
H41608	48.34	45.49	58.44	83.90	-34.38	-49.375	-33.92	-48.92392808	-48.89	0.64	0.476821192	0.66	0.64	0.639	0.479111137	0.48	3	Disagree	2.26	64500	6.45	11.7	190
X14856	64.17	61.40	43.20	66.15	-36.38	-51.375	-35.30	-50.29781794	-37.97	0.63	0.483018868	0.81	0.64	0.641	0.488311959	0.62	3	Disagree	2.7	61900	6.19	71.4	620
H43102	5.00	6.82	4.99	15.75	-7.13	-18.124	-6.07	-17.07067913	-11.30	0.61	5.51724E-05	0.70	0.64	0.644	0.01	0.38	2	Disagree	0.42	61200	6.12	5.9	1230
H41619	40.84	38.66	54.19	93.06	-29.31	-44.3125	-27.81	-42.81452919	-41.65	0.64	0.448249027	0.66	0.65	0.647	0.456768573	0.48	3	Disagree	2.71	70900	7.09	14	340
H43143	38.34	36.39	53.44	107.95	-30.56	-45.5625	-29.72	-44.71759209	-50.17	0.65	0.473646209	0.73	0.65	0.653	0.478314883	0.42	3	Disagree	1.5	73700	7.37	6.6	730
X14902	56.67	54.58	50.19	71.30	-27.75	-42.75	-27.04	-42.03637075	-24.17	0.65	0.457142857	0.72	0.65	0.654	0.46132335	0.69	3	Disagree	2.21	65100	6.51	39.7	550
G36584	50.84	50.03	46.45	74.74	-31.56	-46.5625	-30.87	-45.86654883	-41.53	0.66	0.491467577	0.78	0.66	0.660	0.49523175	0.55	4	Disagree	1.32	74200	7.42	8.7	740
67916	54.17	54.58	60.93	117.69	-32.25	-47.25	-31.62	-46.62388986	-41.67	0.66	0.509090909	0.68	0.67	0.669	0.51242425	0.57	3	Disagree	0.96	79900	7.99	3.6	430
H44025	17.50	20.47	20.98	29.78	-12.69	-27.6875	-10.73	-25.72981501	-14.22	0.63	0.201801802	0.71	0.67	0.672	0.213872275	0.59	3	Disagree	0.83	72800	7.28	5.2	2470
H41621	42.50	45.49	57.19	94.49	-27.69	-42.6875	-27.28	-42.27598593	-39.20	0.67	0.495940959	0.72	0.68	0.676	0.498362606	0.54	3	Disagree	2.61	70700	7.07	41.6	350
X16798	49.17	52.31	63.43	115.97	-30.88	-45.875	-29.08	-44.07911571	-39.57	0.66	0.500680272	0.69	0.68	0.677	0.510662207	0.57	3	Disagree	0.37	76300	7.63	5.4	320
X17179	37.50	34.11	42.95	92.49	-27.56	-42.5625	-26.65	-41.65195276	-52.45	0.68	0.508303249	0.71	0.69	0.689	0.51370691	0.39	3	Disagree	1.41	74900	7.49	17.9	820
H40878	67.50	61.40	64.18	95.07	-29.25	-44.25	-29.56	-44.5625	-34.85	0.70	0.54025974	0.69	0.69	0.694	0.538511327	0.64	3	Disagree	2.64	77000	7.7	21.9	410
X16141	30.84	34.11	38.71	73.02	-20.13	-35.125	-18.92	-33.91542913	-29.01	0.68	0.443564356	0.79	0.69	0.694	0.452229766	0.54	3	Disagree	0.46	71200	7.12	2.6	1230
G36604	43.34	45.49	41.45	52.97	-17.69	-32.6875	-16.27	-31.26951618	-9.20	0.68	0.402285714	0.74	0.69	0.695	0.412994177	0.83	3	Disagree	1.69	69100	6.91	24.1	1730
X14897	0.00	56.86	53.44	101.08	-29.88	-44.875	-29.28	-44.2780629	-40.02	0.69	0.536774194	0.89	0.70	0.696	0.540102267	0.59	4	Disagree	7.29	70800	7.08	77.2	390
H41617	37.50	38.66	57.19	87.34	-23.88	-38.875	-22.86	-37.85616401	-38.21	0.69	0.494308943	0.71	0.70	0.699	0.500948084	0.50	3	Disagree	6.34	68500	6.85	11	540
G34743	102.51	104.62	53.44	90.49	-38.06	-53.0625	-37.66	-52.65827919	-24.45	0.71	0.588861985	0.90	0.71	0.707	0.590712082	0.81	3	Disagree	2.06	73700	7.37	46.5	340
X17040	53.34	51.17	60.43	107.09	-28.40	-43.4	-27.46	-42.4625	-43.83	0.70	0.543157895	0.71	0.71	0.708	0.548571429	0.54	4	Disagree		84100	8.41	9	57
H40799	95.01	89.38	87.90	121.70	-40.10	-55.1	-39.44	-54.43707505	-48.12	0.71	0.599272727	0.88	0.71	0.712	0.602175982	0.65	4	Disagree		71600	7.16	23	52
H43111	50.00	40.94	47.45	73.59	-20.88	-35.875	-19.66	-34.65813587	-30.94	0.71	0.500869565	0.94	0.72	0.722	0.509495468	0.57	3	Disagree	0.9	75400	7.54	6.6	1240
H41624	15.83	15.92	17.73	30.35	-9.75	-24.75	-7.24	-22.23937632	-12.83	0.66	0.139130435	0.77	0.72	0.724	0.152442648	0.55	3	Disagree	1	71300	7.13	16.9	1300

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
X16829	54.17	52.31	59.68	106.23	-25.00	-40	-24.11	-39.11244267	-37.69	0.72	0.555555556	0.81	0.73	0.729	0.561088873	0.58	3	Disagree	0.6	64800	6.48	7.5	360
X17338	0.00	31.84	48.45	81.32	-19.63	-34.625	-18.77	-33.77279883	-38.79	0.72	0.509734513	0.79	0.73	0.731	0.515960383	0.45	3	Disagree	1.95	74800	7.48	7.7	740
H43127	75.84	72.78	57.44	116.26	-28.31	-43.3125	-27.75	-42.74782749	-32.54	0.73	0.588724036	0.74	0.74	0.735	0.591897717	0.69	3	Disagree	1.6	67600	6.76	31.4	560
H43076	75.00	70.50	49.70	87.34	-23.63	-38.625	-23.11	-38.10828875	-20.12	0.74	0.573793103	0.94	0.74	0.744	0.577083426	0.78	3	Disagree	3.61	76200	7.62	8.2	280
X17383	38.34	40.94	58.69	89.05	-19.38	-34.375	-18.96	-33.95619267	-33.44	0.74	0.537815126	0.83	0.74	0.744	0.540860725	0.55	3	Disagree	1.65	74200	7.42	16	360
X18074	69.17	70.50	45.20	82.47	-25.00	-40	-24.02	-39.01763031	-24.50	0.74	0.578947368	0.77	0.74	0.745	0.584996663	0.74	3	Disagree	4.93	80400	8.04	27.4	490
X18250	40.84	43.21	38.96	50.11	-15.13	-30.125	-14.19	-29.19257298	-14.91	0.74	0.48172043	0.82	0.75	0.752	0.489574057	0.74	3	Disagree	0.63	68100	6.81	28.6	850
H43135	34.17	34.11	38.46	56.12	-15.06	-30.0625	-14.22	-29.22068365	-24.95	0.74	0.491005291	0.80	0.76	0.756	0.498104766	0.58	3	Disagree	1.56	61800	6.18	15	940
G34723	70.84	68.23	42.20	67.58	-19.25	-34.25	-18.65	-33.6530629	-13.02	0.76	0.578461538	0.84	0.77	0.769	0.582742903	0.84	3	Disagree	0.31	79000	7.9	14.1	390
X18095	65.84	65.95	63.43	90.49	-21.06	-36.0625	-19.52	-34.52076964	-23.11	0.76	0.595087719	0.86	0.78	0.777	0.605570543	0.74	3	Disagree	2.88	76100	7.61	28.9	400
X18289	54.17	56.86	61.43	97.64	-18.69	-33.6875	-18.09	-33.09365446	-27.83	0.78	0.602214022	0.84	0.78	0.785	0.606466687	0.67	3	Disagree	0.83	73900	7.39	41.2	600
X17371	45.00	47.76	61.93	97.93	-17.63	-32.625	-17.03	-32.0280629	-32.87	0.78	0.595348837	0.82	0.79	0.787	0.599789602	0.59	3	Disagree	1.42	74300	7.43	13.5	390
X16995	40.84	42.07	52.94	108.53	-20.59	-35.5875	-19.91	-34.90780056	-52.61	0.78	0.624158416	1.03	0.79	0.788	0.628671234	0.44	4	Disagree		82300	8.23	1.5	75
X16205	52.50	52.31	43.20	63.00	-16.44	-31.4375	-15.11	-30.10505387	-21.13	0.78	0.571914894	0.89	0.79	0.791	0.582483443	0.71	3	Disagree	1.31	65900	6.59	4.3	970
X17080	27.50	26.84	38.71	91.63	-18.76	-33.7625	-17.78	-32.78051112	-59.73	0.78	0.609963899	1.07	0.79	0.792	0.616962896	0.31	4	Disagree		82800	8.28	0.4	61
X16209	48.34	45.49	31.22	46.10	-10.69	-25.6875	-9.82	-24.82380387	-4.20	0.78	0.483018868	0.95	0.80	0.799	0.491563502	0.92	3	Disagree	0.69	65300	6.53	2.2	970
H41610	67.50	63.68	77.41	130.00	-17.69	-32.6875	-17.25	-32.25410615	-26.01	0.80	0.63554007	0.81	0.81	0.807	0.638626081	0.71	3	Disagree	4.04	75900	7.59	14.6	380
H41664	105.01	106.89	65.18	110.82	-23.69	-38.6875	-23.41	-38.4072646	-17.80	0.81	0.689724311	0.86	0.81	0.812	0.691277959	0.86	4	Disagree	0.4	77000	7.7	18.4	170
H40834	44.17	47.53	48.45	70.15	-11.91	-26.9125	-11.55	-26.54530056	-22.78	0.83	0.617244444	1.06	0.83	0.835	0.62048486	0.68	4	Disagree		73200	7.32	55.8	75
X16857	47.50	47.76	53.69	91.63	-12.06	-27.0625	-10.90	-25.89779883	-21.30	0.83	0.608144796	0.92	0.84	0.839	0.618576754	0.69	3	Disagree	0.95	68900	6.89	2.7	740
H44032	64.17	56.86	55.94	71.59	-12.31	-27.3125	-11.65	-26.65301512	-18.46	0.84	0.637344398	0.99	0.84	0.844	0.6429747	0.75	4	Disagree	0.61	57800	5.78	19.8	690
X17957	73.34	75.05	71.17	116.26	-16.75	-31.75	-16.09	-31.08742356	-28.70	0.84	0.693975904	0.90	0.84	0.844	0.698436313	0.72	3	Disagree	3.33	65800	6.58	22.6	480
G36725	34.17	36.39	32.96	50.11	-8.38	-23.375	-6.57	-21.57047345	-7.99	0.81	0.473239437	1.09	0.85	0.846	0.493299658	0.82	3	Disagree	0.68	78900	7.89	7.9	2260
H41797	61.67	63.68	72.92	120.27	-14.75	-29.75	-14.29	-29.29472638	-35.07	0.85	0.698734177	0.95	0.85	0.855	0.701970518	0.64	4	Disagree	2.3	74400	7.44	19.1	410
H44036	31.67	31.84	27.22	46.10	-6.13	-21.125	-5.25	-20.25401061	-6.29	0.84	0.445901639	0.91	0.86	0.859	0.456326707	0.84	4	Disagree	0.41	74000	7.4	12.3	980
X16439	0.00	29.57	39.71	85.33	-8.38	-23.375	-6.68	-21.67789092	-19.81	0.83	0.526582278	0.88	0.86	0.860	0.545326135	0.60	3	Disagree	2.02	68900	6.89	4.7	1470
H43116	57.50	56.86	59.18	95.35	-10.00	-25	-8.71	-23.71242356	-18.14	0.87	0.666666667	1.02	0.88	0.882	0.678311709	0.76	3	Disagree	0.6	59800	5.98	11.4	480
H41631	76.67	75.05	91.65	135.44	-15.06	-30.0625	-10.45	-25.44682245	-24.01	0.85	0.696529968	0.91	0.89	0.889	0.73056984	0.76	3	Disagree	6.39	66700	6.67	20.3	330
X16176	44.17	43.21	30.47	50.11	-5.31	-20.3125	-4.14	-19.13519373	-2.10	0.88	0.551724138	1.08	0.91	0.906	0.566441379	0.95	3	Disagree	1.18	69400	6.94	5.2	1400
H41814	50.84	50.03	66.18	104.80	-8.88	-23.875	-7.40	-22.39890897	-36.84	0.90	0.725179856	0.99	0.91	0.913	0.737714343	0.58	4	Disagree	2.19	71200	7.12	21.7	310
H43098	17.50	18.19	16.73	30.35	-2.81	-17.8125	-2.09	-17.08737579	-9.62	0.90	0.359550562	1.03	0.92	0.923	0.369175666	0.65	3	Disagree	0.44	61900	6.19	5.3	780
X17910	69.17	70.50	54.19	99.36	-5.88	-20.875	-5.26	-20.25927468	-1.37	0.92	0.709565217	1.01	0.93	0.926	0.715696311	0.98	3	Disagree	1.48	76000	7.6	7.3	630
H41613	67.50	70.50	81.16	136.01	-6.63	-21.625	-6.08	-21.07911571	-15.12	0.92	0.747445255	0.95	0.93	0.929	0.752241011	0.82	3	Disagree	3.72	68700	6.87	19.2	320
H44018	19.17	22.74	19.48	28.92	-3.88	-18.875	-1.69	-16.6875	-4.13	0.86	0.297674419	0.93	0.93	0.932	0.324050633	0.85	3	Disagree	0.74	74700	7.47	15.1	3180
X18152	70.00	72.78	45.70	73.59	-5.94	-20.9375	-5.33	-20.32906794	-8.16	0.93	0.741312741	0.99	0.93	0.934	0.746927626	0.90	3	Disagree	0.93	81600	8.16	12.9	620
H41800	42.50	38.66	52.94	105.66	-5.63	-20.625	-4.55	-19.5467078	-36.96	0.93	0.727272727	1.02	0.94	0.939	0.737792474	0.51	4	Disagree	1.02	74500	7.45	11.8	1050
X16447	0.00	38.66	48.45	99.93	-4.31	-19.3125	-2.64	-17.63727069	-16.65	0.92	0.650847458	0.98	0.95	0.951	0.67117509	0.70	3	Disagree	1.64	77600	7.76	4.3	1440
X16229	0.00	36.39	41.20	66.43	-3.00	-18	-1.92	-16.9217078	-13.61	0.94	0.64	1.02	0.96	0.961	0.654106356	0.73	3	Disagree	1.85	64900	6.49	6.8	1050
G36696	55.84	52.31	59.18	100.22	-3.75	-18.75	-2.43	-17.43412181	-11.44	0.94	0.705882353	1.08	0.96	0.961	0.720759718	0.82	3	Disagree	0.56	77700	7.77	12.8	1590
X17213	33.34	31.84	42.95	77.03	-4.06	-19.0625	-1.44	-16.44136729	-12.22	0.91	0.567375887	1.06	0.97	0.965	0.603261949	0.72	3	Disagree	1.01	79600	7.96	4.6	1880
X17234	78.34	79.60	86.16	134.30	-3.06	-18.0625	-1.93	-16.93315498	-9.46	0.97	0.797192982	1.19	0.98	0.978	0.807431509	0.89	3	Disagree	5.25	68500	6.85	39.9	1120
H43145	24.17	22.74	22.48	32.07	-2.31	-17.3125	-0.38	-15.37804379	-7.57	0.92	0.428865979	1.12	0.99	0.987	0.458100639	0.75	3	Disagree	0.53	60800	6.08	4.4	510
X16962	55.00	51.17	58.94	113.97	-0.54	-15.5375	-0.18	-15.17978179	-34.77	0.99	0.8192	1.08	1.00	0.998	0.822624205	0.60	4	Disagree		76900	7.69	3	62
H43088	50.84	50.03	49.20	75.31	-0.50	-15.5	0.42	-14.5779578	-7.47	0.99	0.730434783	1.14	1.01	1.007	0.742338565	0.87	3	Disagree	1.06	56700	5.67	4.5	1050
67933	27.50	27.29	37.21	76.17	-1.88	-16.875	0.33	-14.67465604	-14.58	0.96	0.597014925	1.02	1.01	1.008	0.630125186	0.65	3	Disagree	0.99	77800	7.78	1.6	2160
H41776	24.17	22.74	28.72	61.56	-0.75	-15.75	0.45	-14.54772239	-11.01	0.98	0.533333333	1.11	1.01	1.014	0.553034089	0.67	3	Disagree	2.14	73000	7.3	24.7	1220
X17245	119.17	106.89	118.37	164.08	1.31	-13.6875	1.82	-13.178082	-12.80	1.01	0.885639687	1.06	1.02	1.015	0.889425289	0.89	4	Disagree	1.34	72300	7.23	89.1	270
X16222	0.00	22.74	33.21	58.41	-0.56	-15.5625	0.86	-14.1352415	-23.82	0.99	0.665771812	1.07	1.02	1.019	0.686824729	0.49	4	Disagree	1.48	63700	6.37	7.2	1100
X17925	149.18	143.28	110.13	163.50	0.75	-14.25	2.96	-12.03617966	-7.97	1.00	0.905785124	1.10	1.02	1.020	0.919239881	0.95	4	Disagree	6.25	55100	5.51	23.2	1750
H44040	81.67	77.32	78.16	98.79	1.44	-13.5625	2.16	-12.83737579	-4.24	1.02	0.833716475	1.19	1.03	1.027	0.841195045	0.95	4	Disagree	0.75	64900	6.49	24.6	780

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
X16158	70.00	65.95	43.45	81.61	0.25	-14.75	1.74	-13.26439543	7.20	1.00	0.74893617	1.17	1.03	1.030	0.768365748	1.12	3	Disagree	1.11	64600	6.46	4.1	1180
G34713	58.34	61.40	37.96	55.55	1.88	-13.125	2.85	-12.15190498	13.28	1.04	0.727272727	1.19	1.06	1.060	0.742281781	1.28	3	Disagree	1.65	56400	5.64	27.1	1120
H44174	144.18	144.87	95.15	147.18	7.15	-7.85019	7.54	-7.46111078	34.56	1.06	0.928836805	1.33	1.07	1.069	0.932124467	1.31	4	Disagree		55800	5.58	37	105
H43080	25.00	22.74	26.72	46.10	-0.13	-15.125	1.89	-13.10587737	-5.38	1.00	0.462222222	1.38	1.07	1.073	0.497972154	0.81	3	Disagree	1.04	80100	8.01	5.5	2340
H44030	98.34	93.24	92.65	135.73	8.31	-6.6875	8.63	-6.3707983	-6.44	1.08	0.932915361	1.20	1.09	1.087	0.935888627	0.94	4	Disagree	2.52	67200	6.72	35.4	220
9042	45.84	45.49	58.94	112.82	3.56	-11.4375	4.67	-10.33312632	-7.95	1.07	0.785964912	1.20	1.09	1.089	0.802550945	0.85	3	Disagree	2.18	77800	7.78	9.3	1300
H44016	20.00	22.74	22.48	29.21	-0.06	-15.0625	2.08	-12.91519027	-1.32	1.00	0.374025974	1.10	1.10	1.095	0.410674053	0.95	3	Disagree	0.41	74100	7.41	4.3	2730
H44020	22.50	25.02	23.97	34.65	-0.19	-15.1875	2.39	-12.61408968	-2.17	0.99	0.44137931	1.15	1.10	1.097	0.487525647	0.92	3	Disagree	0.49	78300	7.83	39.5	3100
H40891	64.17	56.86	61.93	93.06	5.13	-9.875	6.21	-8.789414537	-5.02	1.08	0.84040404	1.16	1.10	1.102	0.855412088	0.92	3	Disagree	1.03	64000	6.4	13.1	1060
H44034	36.67	36.39	33.21	46.67	1.94	-13.0625	3.37	-11.62992966	2.33	1.06	0.616513761	1.27	1.10	1.103	0.643580915	1.07	4	Disagree	0.46	75500	7.55	15.8	1750
67974	49.17	50.03	35.21	59.27	4.19	-10.8125	5.49	-9.508116765	7.22	1.10	0.747445255	1.24	1.13	1.132	0.770933555	1.17	3	Disagree	1.54	79300	7.93	3.8	1360
G34694	98.34	93.24	35.46	62.42	5.25	-9.75	6.80	-8.200737515	44.49	1.11	0.8	1.18	1.14	1.144	0.826258276	1.91	3	Disagree	1.7	75500	7.55	4.9	1910
H43118	44.17	40.94	51.94	104.80	5.63	-9.375	7.13	-7.87369877	-8.44	1.11	0.810126582	1.49	1.15	1.149	0.835531848	0.83	3	Disagree	0.51	74600	7.46	16	1630
X17940	53.34	54.58	47.95	93.64	6.94	-8.0625	8.21	-6.79458306	0.52	1.13	0.850867052	1.44	1.16	1.155	0.871301511	1.01	3	Disagree	1.09	77900	7.79	13.4	1310
H41635	18.33	20.47	23.72	37.80	2.25	-12.75	3.50	-11.5	-3.28	1.09	0.463157895	1.16	1.16	1.156	0.488888889	0.86	3	Disagree	2.03	70200	7.02	14.1	2160
H41793	61.67	63.68	72.42	108.53	10.50	-4.5	11.96	-3.036275206	-8.82	1.14	0.937931034	1.26	1.17	1.168	0.957257398	0.88	4	Disagree	1.24	75100	7.51	14.8	1150
X14886	75.00	75.05	70.42	137.73	11.69	-3.3125	12.34	-2.657216823	4.74	1.17	0.952888889	1.53	1.18	1.177	0.961852957	1.07	3	Disagree	1.07	76200	7.62	17.3	470
X18104	100.01	102.34	85.66	125.42	14.38	-0.625	15.30	0.299023622	16.72	1.17	0.99270073	1.23	1.18	1.181	1.003530344	1.20	4	Disagree	1.9	74500	7.45	30	410
H41795	77.51	77.32	81.66	129.14	14.25	-0.75	14.96	-0.03946231	-1.43	1.18	0.99047619	1.36	1.19	1.192	0.999494329	0.98	4	Disagree	2.13	67800	6.78	8.8	760
X18206	43.34	45.49	56.44	107.67	8.63	-6.375	11.37	-3.632102169	-8.89	1.16	0.882758621	1.30	1.22	1.220	0.929654188	0.84	3	Disagree	2.57	87800	8.78	21.5	1190
H41789	46.67	45.49	51.94	87.05	9.06	-5.9375	10.37	-4.625823506	-0.45	1.20	0.870748299	1.52	1.23	1.232	0.896342002	0.99	3	Disagree	1.66	69700	6.97	9	1370
H43147	60.84	54.58	70.42	151.76	12.63	-2.375	13.62	-1.380025206	-4.79	1.21	0.96	1.39	1.23	1.233	0.976361346	0.92	3	Disagree	1.38	67000	6.7	6.9	1150
X16844	71.67	70.50	75.17	111.39	13.19	-1.8125	14.40	-0.595635874	7.69	1.21	0.971144279	1.36	1.23	1.234	0.990329901	1.12	3	Disagree	0.88	70100	7.01	3.8	1240
X18278	63.34	65.95	73.42	105.95	14.75	-0.25	15.45	0.453244431	4.70	1.24	0.995918367	1.41	1.26	1.255	1.007485858	1.08	3	Disagree	0.57	81500	8.15	31.2	750
X17892	50.00	50.03	37.96	67.58	9.63	-5.375	11.16	-3.840324034	5.66	1.22	0.878873239	1.37	1.26	1.260	0.91035726	1.13	3	Disagree	1.89	82100	8.21	22.9	1890
H41812	45.00	50.03	54.44	108.24	14.19	-0.8125	15.33	0.331431535	-7.78	1.25	0.985945946	1.38	1.27	1.271	1.005848596	0.87	4	Disagree	1.73	78400	7.84	35	1140
G36622	50.00	52.31	49.45	64.14	11.50	-3.5	12.89	-2.111189215	4.81	1.24	0.926315789	1.42	1.28	1.280	0.954215251	1.10	4	Disagree	1.49	55700	5.57	14.4	1690
X18223	51.67	52.31	58.44	84.76	14.25	-0.75	15.30	0.303320867	-1.44	1.27	0.986046512	1.43	1.29	1.290	1.005755977	0.97	3	Disagree	1.15	67900	6.79	9.3	1230
X18158	91.67	90.97	61.93	91.06	20.44	5.4375	21.31	6.310470809	19.41	1.29	1.075982533	1.46	1.30	1.301	1.089270234	1.27	3	Disagree	1.26	77400	7.74	19.6	340
H41818	113.34	104.62	80.91	125.13	26.13	11.125	26.73	11.72923036	17.74	1.30	1.128057554	1.39	1.31	1.310	1.135958337	1.20	4	Disagree	0.58	84600	8.46	11.9	400
H41629	66.67	65.95	90.65	150.33	24.31	9.3125	24.72	9.724014068	-13.73	1.31	1.116862745	1.32	1.31	1.312	1.122660273	0.83	4	Disagree	2.47	75700	7.57	45.3	350
H41604	109.17	109.16	99.64	148.04	27.75	12.75	28.56	13.55733148	17.91	1.30	1.139726027	1.39	1.32	1.316	1.149899729	1.20	4	Disagree	4.67	59900	5.99	12.5	250
H41782	17.50	18.19	25.22	50.40	5.06	-9.9375	6.31	-8.6875	-2.74	1.24	0.525373134	1.32	1.32	1.321	0.558730159	0.87	3	Disagree	5.9	71700	7.17	10.4	1850
X16237	0.00	31.84	36.21	60.71	8.69	-6.3125	10.11	-4.88722292	1.53	1.29	0.791752577	1.40	1.35	1.350	0.830817142	1.05	3	Disagree	1.78	65600	6.56	4.4	1740
X14888	0.00	93.24	91.90	143.46	28.19	13.1875	28.86	13.85736969	10.43	1.34	1.159245283	1.62	1.35	1.351	1.16869888	1.13	4	Disagree	1.17	72400	7.24	36.6	490
H41626	28.34	29.57	31.96	43.24	6.38	-8.625	8.56	-6.4375	3.94	1.25	0.663414634	1.37	1.37	1.365	0.725333333	1.15	3	Disagree	0.91	68400	6.84	10.5	2040
G36209	66.67	68.23	71.67	103.66	21.06	6.0625	22.13	7.130407385	7.29	1.35	1.099487179	1.80	1.37	1.370	1.11909898	1.12	4	Disagree	1.78	65100	6.51	9.3	1250
H44022	70.84	75.05	75.17	97.93	18.94	3.9375	19.79	4.793902872	20.99	1.35	1.07283237	1.54	1.37	1.372	1.09010063	1.39	4	Disagree	1.8	67400	6.74	5.1	960
H44028	70.00	72.78	71.17	99.08	22.38	7.375	23.14	8.143883763	12.15	1.37	1.121649485	1.54	1.39	1.387	1.136057671	1.20	4	Disagree	2.58	69300	6.93	8.8	840
X18188	1.67	4.55	6.24	29.49	1.38	-5.624	2.00	-4.999	-1.08	1.24	0.000177778	1.40	1.40	1.400	0.01	0.81	2	Disagree	1.07	83400	8.34	14.7	3230
H43151	80.01	77.32	94.65	179.83	22.50	7.5	24.35	9.348047245	14.82	1.36	1.12	1.58	1.40	1.401	1.154126072	1.24	3	Disagree	0.73	70600	7.06	5.5	820
9374	83.34	61.40	84.16	122.56	22.63	7.625	23.55	8.554335463	7.03	1.42	1.140229885	1.61	1.44	1.441	1.160056677	1.13	3	Disagree	3.04	72000	7.2	21.1	1060
H41605	12.50	10.69	30.47	81.61	12.10	-2.9	12.10	-2.9	-16.81	1.44	0.894545455	1.44	1.44	1.440	0.894545455	0.39	3	Disagree		91300	9.13	4.8	328
H40976	117.51	117.35	57.44	96.21	36.20	21.2	36.89	21.88772203	37.35	1.45	1.265	1.67	1.47	1.465	1.275968899	1.47	4	Disagree		67700	6.77	8.1	86
9051	44.17	43.21	45.20	58.99	15.19	0.1875	16.95	1.951358557	5.40	1.40	1.004958678	1.70	1.47	1.470	1.054131265	1.14	3	Disagree	0.56	52000	5.2	6.2	1990
H41807	55.84	52.31	67.18	111.96	23.69	8.6875	25.68	10.67522931	-3.00	1.43	1.157062147	1.61	1.48	1.481	1.20019269	0.95	4	Disagree	1.55	76200	7.62	9.9	1440
9352	47.50	45.49	52.69	91.92	16.31	1.3125	18.66	3.664020983	5.80	1.41	1.033070866	1.79	1.50	1.500	1.098136465	1.15	3	Disagree	1.61	79800	7.98	2	3010
X14882	0.00	100.07	91.65	152.34	37.94	22.9375	38.62	23.62195621	26.00	1.51	1.309704641	1.85	1.53	1.526	1.321921313	1.35	4	Disagree	1.43	70300	7.03	18.2	510
H40886	80.01	77.32	77.91	104.80	27.63	12.625	28.86	13.85645064	22.95	1.51	1.232183908	1.59	1.54	1.543	1.260736266	1.42	3	Disagree	0.69	62900	6.29	6.1	1260
H43106	49.17	45.49	54.94	95.35	19.25	4.25	21.51	6.509800175	6.74	1.50	1.109677419	1.97	1.59	1.589	1.178398589	1.17	3	Disagree	0.8	81300	8.13	4.8	2670

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
H41791	70.00	63.68	71.92	111.96	28.88	13.875	30.12	15.11992702	15.55	1.60	1.288311688	1.87	1.64	1.642	1.322523538	1.32	3	Disagree	1.63	66500	6.65	10.4	850
H43129	70.00	68.23	75.92	147.75	30.50	15.5	31.68	16.67730627	20.73	1.64	1.326315789	1.89	1.68	1.684	1.360024535	1.44	3	Disagree	0.82	71400	7.14	4.9	1400
X17203	58.34	54.58	65.93	106.52	25.56	10.5625	28.15	13.14827655	11.14	1.59	1.243165468	1.87	1.69	1.689	1.321853656	1.26	3	Disagree	1.69	74000	7.4	7.4	2260
H43136	94.17	90.97	100.64	160.35	53.25	38.25	53.89	38.8876051	12.22	1.68	1.485714286	1.81	1.69	1.690	1.49784167	1.16	4	Disagree	1.89	69100	6.91	5.2	660
X16819	78.34	75.05	66.18	102.23	30.63	15.625	33.00	17.9981619	25.68	1.62	1.316455696	1.75	1.70	1.702	1.382924639	1.52	3	Disagree	0.43	56500	5.65	2.5	1540
X16195	70.84	56.86	50.94	88.19	23.38	8.375	24.46	9.460585463	21.23	1.66	1.235087719	2.10	1.71	1.708	1.273906943	1.60	3	Disagree	1.27	65400	6.54	3.3	1060
X17863	60.00	63.68	71.92	99.65	28.50	13.5	29.90	14.9033973	21.18	1.67	1.317647059	1.88	1.73	1.728	1.362643049	1.50	3	Disagree	2.42	68300	6.83	32.5	1710
X16454	0.00	59.13	65.18	104.23	27.63	12.625	28.65	13.64914783	19.76	1.70	1.320634921	1.91	1.75	1.747	1.355902074	1.50	3	Disagree	1.75	74800	7.48	3.7	1190
G36562	98.34	95.52	99.39	154.63	49.63	34.625	50.63	35.63456131	31.14	1.77	1.537864078	2.10	1.80	1.799	1.56236589	1.48	4	Disagree	2.7	68600	6.86	55.8	1170
H43149	78.34	75.05	87.15	144.89	39.31	24.3125	40.34	25.33664783	25.36	1.79	1.489308176	2.05	1.83	1.829	1.520651511	1.51	3	Disagree	1.05	69000	6.9	9.8	1190
X18135	80.01	81.87	85.91	129.72	40.75	25.75	42.07	27.06587819	30.62	1.80	1.502439024	1.95	1.84	1.842	1.542031725	1.60	3	Disagree	2.03	76500	7.65	11.3	1590
H41644	18.33	18.19	22.97	36.37	10.31	-4.6875	11.56	-3.4375	3.51	1.70	0.680851064	1.86	1.86	1.860	0.744186047	1.24	3	Disagree	0.92	66500	6.65	10.7	2490
H43109	224.18	220.60	216.51	287.49	112.25	97.25	112.71	97.71256688	91.85	1.87	1.755339806	2.15	1.88	1.879	1.761669047	1.71	4	Disagree	0.74	65000	6.5	9.8	420
X14933	54.17	52.31	51.19	73.30	24.75	9.75	26.35	11.3461136	21.06	1.79	1.312	2.08	1.89	1.888	1.382618097	1.67	3	Disagree	0.2	84300	8.43	17.4	1760
G36652	85.84	77.32	45.45	70.15	29.44	14.4375	31.45	16.45353107	40.76	1.81	1.394871795	2.22	1.91	1.910	1.47627244	2.11	3	Disagree	0.62	64100	6.41	4	2550
G34782	46.67	47.76	53.19	96.21	23.88	8.875	25.43	10.43155574	19.63	1.85	1.315555556	2.34	1.96	1.957	1.392629529	1.70	3	Disagree	0.51	82300	8.23	8.8	1920
H41803	65.84	63.68	77.41	137.16	44.56	29.5625	46.78	31.77632034	15.24	1.92	1.610322581	2.17	2.01	2.012	1.687446793	1.31	4	Disagree	1.22	75300	7.53	12.6	1750
H43096	40.00	38.66	37.71	56.12	22.19	7.1875	22.97	7.970970281	15.85	1.97	1.315068493	2.36	2.04	2.043	1.361839372	1.69	3	Disagree	0.3	61000	6.1	14.3	860
H40994	135.01	132.36	114.62	146.61	51.80	36.8	52.20	37.20147776	82.36	2.04	1.736	2.38	2.05	2.052	1.75005214	2.65	4	Disagree		61800	6.18	14.9	122
H41810	74.17	75.05	83.91	146.32	47.50	32.5	48.75	33.75333042	27.55	2.00	1.684210526	2.16	2.05	2.054	1.729854295	1.58	4	Disagree	1.23	75600	7.56	40.8	1290
H43104	80.01	75.05	81.66	112.53	37.06	22.0625	40.10	25.09712819	34.11	1.91	1.538931298	2.60	2.06	2.058	1.662143183	1.83	3	Disagree	0.47	86200	8.62	6.4	1590
H41772	40.84	40.94	43.20	81.04	27.56	12.5625	28.79	13.79395064	12.50	1.97	1.441758242	2.19	2.06	2.058	1.507017776	1.44	4	Disagree	1.3	66300	6.63	7.2	1260
H40888	104.17	100.07	104.88	138.02	59.88	44.875	60.89	45.89494613	41.94	2.03	1.772043011	2.11	2.07	2.066	1.803693246	1.72	4	Disagree	0.65	70700	7.07	10.4	970
X18120	101.67	102.34	99.89	131.15	59.75	44.75	61.34	46.33882034	46.09	2.06	1.795555556	2.24	2.12	2.122	1.847746438	1.82	4	Disagree	1.65	72100	7.21	22.7	1750
H44014	40.00	40.94	42.95	51.83	21.56	6.5625	23.95	8.952468698	17.50	1.92	1.28	2.40	2.14	2.138	1.425345309	1.75	3	Disagree	0.3	70200	7.02	7.8	2420
H40855	47.50	46.85	49.45	67.86	29.65	14.65	29.95	14.95430316	20.60	2.13	1.558095238	2.32	2.15	2.154	1.576369301	1.78	4	Disagree		71100	7.11	31.8	203
G36639	90.01	93.24	90.65	131.43	58.38	43.375	59.65	44.6544119	42.62	2.15	1.856790123	2.44	2.21	2.209	1.904932206	1.84	4	Disagree	2.88	65700	6.57	17	1540
H44038	58.34	52.31	52.19	67.01	31.13	16.125	32.03	17.03245569	25.43	2.16	1.6	2.41	2.23	2.234	1.655913223	1.95	4	Disagree	0.82	69100	6.91	7.8	1030
X18142	100.01	102.34	78.41	109.10	55.63	40.625	56.32	41.32095117	57.97	2.25	1.915492958	2.67	2.29	2.289	1.946013072	2.31	4	Disagree	0.61	68600	6.86	27.3	740
H43153	98.34	90.97	104.88	182.98	80.19	65.1875	81.13	66.12722028	28.16	2.28	2.037810945	2.36	2.31	2.311	2.068761103	1.45	4	Disagree	0.73	72900	7.29	6.3	860
H41805	46.67	50.03	61.18	109.10	41.88	26.875	42.81	27.8125	16.91	2.26	1.811320755	2.33	2.33	2.330	1.86407767	1.51	4	Disagree	1.62	78200	7.82	5.5	1470
G34704	85.84	88.70	47.45	70.73	40.50	25.5	41.77	26.77211864	56.20	2.25	1.784615385	2.54	2.34	2.338	1.857314601	2.73	3	Disagree	2.33	55000	5.5	49.1	1530
H44230	165.01	162.38	140.10	204.17	98.67	83.67305	99.35	84.34837349	88.94	2.34	2.139377702	3.04	2.37	2.365	2.159233788	2.21	4	Disagree		54700	5.47	11.5	69
X17877	133.34	125.08	100.89	156.06	81.19	66.1875	82.52	67.52105627	67.27	2.40	2.144864865	2.54	2.46	2.461	2.195508482	2.16	4	Disagree	3	70900	7.09	24.3	1400
G36186	121.67	115.99	118.12	162.36	83.44	68.4375	84.71	69.7127102	64.42	2.62	2.327272727	4.15	2.68	2.685	2.386288871	2.25	4	Disagree	2.83	69900	6.99	10.5	1320
H41613	119.17	95.75	129.36	211.04	117.44	102.4375	117.44	102.4375	29.18	2.76	2.538967136	2.76	2.76	2.764	2.538967136	1.44	4	Disagree		79900	7.99	11	115
H41771	10.00	11.37	9.99	17.18	7.00	-4.999	7.69	-4.307250528	6.37	2.40	0.0002	2.95	2.79	2.785	0.01	2.27	3	Disagree	1.52	68200	6.82	4.1	520
X17306	13.33	13.65	39.71	94.78	14.00	-1	15.56	0.5625	3.65	2.40	0.9	2.84	2.84	2.844	1.066666667	1.36	3	Disagree	1.48	71800	7.18	3.5	3000
9399	82.51	79.60	84.91	128.57	52.75	37.75	54.58	39.58369959	48.35	2.69	2.208	3.20	2.86	2.856	2.34563827	2.55	3	Disagree	1.86	69200	6.92	3.8	2300
G34763	100.01	102.34	46.70	97.93	43.56	28.5625	44.34	29.33867702	78.90	2.86	2.218666667	3.30	2.96	2.957	2.294658615	4.37	3	Disagree	0.46	81400	8.14	11.4	850
H40880	95.01	93.24	91.90	120.55	67.63	52.625	69.04	54.03878212	58.87	2.97	2.530909091	3.40	3.09	3.095	2.639465578	2.71	4	Disagree	1.4	61700	6.17	7.9	1510
X17327	55.84	59.13	75.17	132.86	48.50	33.5	51.45	36.44932937	31.63	2.76	2.218181818	3.20	3.10	3.096	2.484657177	2.15	3	Disagree	2.03	70600	7.06	3.8	2330
X18084	94.17	93.24	69.92	105.95	56.75	41.75	59.60	44.60055416	61.99	2.82	2.336	3.27	3.10	3.099	2.570472692	2.98	4	Disagree	0.63	74100	7.41	11.5	3480
X18265	173.34	163.75	104.64	165.22	116.81	101.8125	118.76	103.7626529	106.56	3.04	2.780327869	3.22	3.15	3.150	2.87848726	2.86	4	Disagree	0.85	75900	7.59	28.7	960
H41780	35.00	38.66	51.69	98.79	45.88	30.875	47.39	32.38779619	15.54	2.98	2.335135135	3.35	3.19	3.193	2.498588319	1.67	4	Disagree	1.62	80400	8.04	5.5	1860
H41787	40.00	40.94	41.70	60.13	26.38	11.375	29.19	14.1875	25.31	2.69	1.728	3.28	3.28	3.278	2.107317073	2.62	4	Disagree	0.87	64100	6.41	4.6	4390
X17317	17.50	15.92	44.45	87.34	24.06	9.0625	25.48	10.47628212	4.98	3.20	1.828571429	4.15	3.68	3.675	2.100020208	1.46	3	Disagree	1.4	66900	6.69	3.8	1510
G36745	81.67	81.87	80.41	138.59	86.00	71	88.39	73.39107884	51.87	3.87	3.366666667	4.76	4.20	4.202	3.658237836	2.73	4	Disagree	3.24	71400	7.14	4.6	2850
X16193	110.84	106.89	99.14	133.44	86.25	71.25	87.58	72.57515287	83.14	4.63	4	5.50	4.91	4.905	4.236372246	4.50	4	Disagree	0.7	58400	5.84	2.5	960
H41621	17.50	9.32	68.67	140.88	40.93	25.925	40.93	25.925	-0.05	5.37	3.765333333	5.37	5.37	5.365	3.765333333	0.99	4	Disagree		83300	8.33	10.8	1131

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
9008	45.00	45.49	53.69	77.03	56.56	41.5625	58.56	43.55665129	32.05	5.21	4.093023256	6.59	6.12	6.117	4.806285414	3.38	4	Disagree	0.84	74000	7.4	2.1	2520
G34556	55.00	56.86	60.43	91.34	64.19	49.1875	66.49	51.48796817	44.04	6.01	4.83902439	7.47	7.32	7.325	5.89800345	4.44	4	Disagree	1.34	69000	6.9	5.1	2940
9027	110.84	104.62	111.13	148.90	112.44	97.4375	111.81	96.8125	88.05	7.79	6.883018868	7.51	7.51	7.505	6.632727273	6.32	4	Disagree	0.4	77400	7.74	7.1	3660
H44187	158.34	163.29	138.10	192.14	147.41	132.41049	148.01	133.0096151	141.10	7.64	6.967796732	8.90	7.86	7.856	7.16116848	7.36	4	Disagree		59700	5.97	5.6	393
H41619	34.17	25.24	73.67	160.93	108.13	93.125	108.13	93.125	10.87	8.52	7.47826087	8.52	8.52	8.522	7.47826087	1.76	4	Disagree		84900	8.49	13.1	962
G36155	89.17	88.70	87.15	116.26	88.50	73.5	90.22	75.2243007	76.20	8.08	6.88	12.43	9.37	9.373	7.980920553	7.10	4	Disagree	0.39	63400	6.34	4.4	2150
H41785	54.17	52.31	56.69	93.92	59.88	44.875	61.44	46.4375	44.18	8.37	6.523076923	10.36	10.36	10.362	8.076190476	6.44	4	Disagree	1.93	63900	6.39	3.5	3070
H41778	45.84	47.76	59.43	118.55	66.25	51.25	67.81	52.8125	39.01	8.57	6.857142857	10.43	10.43	10.435	8.347826087	5.46	4	Disagree	1.28	77900	7.79	8.1	2940
G36165	127.51	122.81	114.62	168.94	123.19	108.1875	125.65	110.6504013	110.00	10.61	9.443902439	13.60	13.14	13.141	11.69127455	9.59	4	Disagree	1.29	74100	7.41	8.7	2520
H41617	31.67	21.15	40.46	79.60	56.55	41.55	56.55	41.55	14.90	10.05	7.648	10.05	10.05	10.048	7.648	3.38	4	Disagree		85300	8.53	6	3968
G34753	171.68	168.29	74.92	115.97	119.50	104.5	120.67	105.670013	160.79	16.93	14.93333333	20.32	20.06	20.063	17.69355928	22.44	4	Disagree	0.56	52700	5.27	13.9	1390
H43984	130.01	132.36	100.64	141.74	143.57	128.57255	145.38	130.3848926	123.92	18.02	16.23822815	24.32	22.94	22.944	20.68027086	15.69	4	Disagree		65800	6.58	13	1628
H41615	33.34	22.06	63.68	121.70	80.09	65.0875	80.09	65.0875	19.25	29.48	24.14222222	29.48	29.48	29.476	24.14222222	7.84	4	Disagree		86400	8.64	4.6	1640
G33506	114.17	110.98	63.43	91.92	103.65	88.65	103.96	88.9625	109.73	83.92	71.92	111.89	111.89	100.000	95.89333333	88.79	4	Disagree		82600	8.26	3.9	4774
H41608	22.50	11.83	50.94	119.12	76.03	61.025	76.03	61.025	9.95	41.55	33.54666667	41.55	41.55	41.547	33.54666667	6.31	4	Disagree		86900	8.69	8.2	1716
H41610	65.00	47.08	92.40	163.50	120.65	105.65	120.65	105.65	45.83	97.52	85.52	97.52	97.52	97.520	85.52	37.66	4	Disagree		84300	8.43	5.3	1297
H41622	18.33	10.69	61.43	146.61	57.18	42.175	57.18	42.175	10.06	92.48	68.48	92.48	92.48	92.480	68.48	17.10	4	Disagree		76700	7.67	6.7	749
H41626	38.34	25.70	77.17	178.39	86.08	71.075	86.08	71.075	25.07	138.72	114.72	138.72	138.72	100.000	100	41.12	4	Disagree		84100	8.41	6.7	1461
X10676	0.83	0.45	3.00	7.45	-280.71	-280.3115	-277.27	-276.8674361	-279.86	0.00	3.56745E-06	0.00	0.01	0.010	0.01	0.00	1	Agree		35500	3.55	100.6	9
X13711	0.83	0.45	8.74	14.89	-166.56	-166.5615	-159.98	-159.9822255	-166.11	0.00	6.00375E-06	0.00	0.01	0.010	0.01	0.00	1	Agree		78000	7.8	17.8	23
X13701	0.83	0.45	7.49	16.61	-171.91	-172.8115	-165.33	-166.2336842	-172.36	0.01	5.78662E-06	0.01	0.01	0.010	0.01	0.00	1	Agree		61900	6.19	16.8	21
G33182	0.42	4.55	1.75	6.87	-160.25	-161.249	-159.87	-160.8708607	-156.70	0.01	6.20155E-06	0.01	0.01	0.010	0.01	0.03	2	Disagree	0.78	80000	8	64.4	90
S91-395_5431	0.42	2.27	1.50	6.01	-116.19	-117.1865	-111.46	-112.4603134	-114.91	0.01	8.53333E-06	0.01	0.01	0.010	0.01	0.02	2	Disagree	1.37	23100	2.31	10.2	910
G37665	0.83	4.55	2.50	6.01	-161.13	-163.124	-160.85	-162.8510579	-158.58	0.01	6.13027E-06	0.01	0.01	0.012	0.01	0.03	2	Disagree	0.99	43400	4.34	96.1	160
S91-387_5210	0.42	2.27	3.25	8.30	-156.13	-158.124	-154.51	-156.509337	-155.85	0.01	6.32411E-06	0.02	0.01	0.013	0.01	0.01	2	Disagree	1.6	37700	3.77	24.4	500
G21564	0.42	4.55	3.50	10.59	-152.38	-154.374	-152.16	-154.1594039	-149.83	0.01	6.47773E-06	0.01	0.01	0.013	0.01	0.03	2	Disagree	0.65	91800	9.18	92.2	80
G37342	0.83	0.68	8.24	25.77	-114.13	-115.624	-111.61	-113.1072255	-114.94	0.01	8.64865E-06	0.02	0.01	0.013	0.01	0.01	1	Agree		69600	6.96	3	23
S91-395_5417	0.83	2.27	3.00	5.73	-123.31	-125.3115	-120.52	-122.5197696	-123.04	0.02	7.98005E-06	0.02	0.02	0.016	0.01	0.02	2	Disagree	1.64	19100	1.91	39.6	400
G36847	1.67	4.55	1.25	5.15	-110.81	-112.8115	-109.41	-111.4083416	-108.26	0.02	8.86427E-06	0.02	0.02	0.018	0.01	0.04	2	Disagree	3.7	21100	2.11	33.4	210
S91-387_5199	0.42	2.27	0.50	2.58	-54.00	-54.999	-53.66	-54.66041852	-52.73	0.02	1.81818E-05	0.02	0.02	0.010	0.01	0.04	2	Disagree	1.18	14100	1.41	36.9	250
X13520	0.83	0.45	6.24	26.92	-177.64	-180.9365	-173.56	-176.8572255	-180.48	0.02	5.52677E-06	0.03	0.02	0.019	0.01	0.00	1	Agree		76700	7.67	4.9	23
S91-387_5179	0.42	2.27	3.00	4.30	-99.88	-101.874	-99.46	-101.4551927	-99.60	0.02	9.81595E-06	0.02	0.02	0.020	0.01	0.02	2	Disagree	1.93	25800	2.58	119.5	360
G37937	0.42	4.55	8.49	16.89	-219.38	-224.374	-218.99	-223.9885674	-219.83	0.02	4.45682E-06	0.03	0.02	0.022	0.01	0.02	2	Disagree	1.41	87300	8.73	10	100
S91-386_5101	3.33	2.27	10.99	19.19	-263.38	-269.374	-260.42	-266.4145247	-267.10	0.02	3.7123E-06	0.02	0.02	0.023	0.01	0.01	2	Disagree	3.65	64300	6.43	24.8	630
S91-386_5158	0.83	2.27	4.99	17.47	-171.00	-174.999	-169.39	-173.3916303	-172.73	0.02	5.71429E-06	0.03	0.02	0.023	0.01	0.01	2	Disagree	1.51	54300	5.43	19	490
G37330	0.83	0.68	4.74	15.18	-198.74	-203.4365	-195.29	-199.9873308	-202.76	0.02	4.91551E-06	0.05	0.02	0.024	0.01	0.00	1	Agree		78300	7.83	10.9	16
G22009	0.42	4.55	6.49	14.32	-165.38	-169.374	-164.67	-168.6687742	-164.83	0.02	5.90406E-06	0.03	0.02	0.024	0.01	0.03	2	Disagree	0.71	89300	8.93	111.5	110
G33396	0.42	4.55	5.99	16.61	-246.50	-252.499	-245.81	-251.8083607	-247.95	0.02	3.9604E-06	0.03	0.02	0.024	0.01	0.02	2	Disagree	0.32	75700	7.57	6.2	90
S91-386_5141	1.67	2.27	4.74	10.31	-158.50	-162.499	-157.98	-161.9822887	-160.23	0.02	6.15385E-06	0.03	0.02	0.025	0.01	0.01	2	Disagree	4.88	45900	4.59	33.3	280
G36855	1.67	4.55	1.75	9.74	-119.81	-122.8115	-118.03	-121.0302022	-118.26	0.02	8.14249E-06	0.03	0.02	0.025	0.01	0.04	2	Disagree	4.03	24400	2.44	37.1	300
X05423	0.83	4.55	1.00	8.59	-156.00	-159.999	-155.60	-159.6020725	-155.45	0.03	0.00000625	0.03	0.03	0.025	0.01	0.03	2	Disagree	1.8	19800	1.98	40.2	330
G21583	0.42	4.55	7.74	14.32	-185.31	-190.3115	-183.39	-188.3854472	-185.76	0.03	5.25452E-06	0.03	0.03	0.027	0.01	0.02	2	Disagree	0.42	94500	9.45	56.5	70
S91-386_5122	0.83	2.27	6.99	15.46	-183.75	-188.749	-182.87	-187.8676258	-186.48	0.03	5.29801E-06	0.03	0.03	0.027	0.01	0.01	2	Disagree	2.4	59300	5.93	14.1	780
G37684	0.83	4.55	4.99	15.18	-166.88	-171.874	-166.67	-171.6666972	-167.33	0.03	5.81818E-06	0.04	0.03	0.029	0.01	0.03	2	Disagree	1.4	51100	5.11	8.2	70
S91-395_5405	18.33	2.27	3.50	8.88	-134.13	-138.124	-132.04	-136.0363853	-135.85	0.03	7.23982E-06	0.03	0.03	0.029	0.01	0.02	2	Disagree	1.29	33500	3.35	17.7	720
G21535	1.67	4.55	6.74	16.89	-99.50	-102.499	-98.81	-101.8083607	-97.95	0.03	9.7561E-06	0.03	0.03	0.029	0.01	0.04	2	Disagree	1.17	66200	6.62	60.4	90
X05453	1.67	4.55	3.75	10.31	-131.94	-135.9365	-131.03	-135.033246	-131.39	0.03	7.35632E-06	0.03	0.03	0.030	0.01	0.03	2	Disagree	2.66	34900	3.49	80.2	810
G37785	4.17	4.55	5.99	28.92	-222.38	-229.374	-221.94	-228.9375146	-224.83	0.03	4.35967E-06	0.03	0.03	0.031	0.01	0.02	2	Disagree	3.51	76600	7.66	23.2	170
H44263	0.83	4.55	4.50	18.61	-147.44	-152.1865	-146.79	-151.5396202	-147.64	0.03	6.57084E-06	0.05	0.03	0.031	0.01	0.03	1	Agree		49000	4.9	57	30
X11530	0.83	4.55	4.00	10.31	-149.38	-154.374	-148.89	-153.8864618	-149.83	0.03	6.47773E-06	0.04	0.03	0.032	0.01	0.03	2	Disagree	1.65	45000	4.5	15.7	240

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
G21048	0.83	5.91	10.49	18.90	-192.35	-198.749	-189.85	-196.249	-192.84	0.03	5.03145E-06	0.03	0.03	0.033	0.01	0.03	1	Agree		52300	5.23	132	12
G21508	0.42	2.27	6.74	15.46	-146.88	-151.874	-146.19	-151.1906539	-149.60	0.03	6.58436E-06	0.04	0.03	0.033	0.01	0.01	2	Disagree	1.05	70400	7.04	43.2	80
X05339	1.67	1.36	8.74	36.94	-253.70	-262.499	-251.82	-260.6167067	-261.14	0.03	3.80952E-06	0.06	0.03	0.034	0.01	0.01	1	Agree		41500	4.15	5.9	10
G33162	0.42	4.55	4.50	12.31	-142.50	-147.499	-142.28	-147.2771107	-142.95	0.03	6.77966E-06	0.04	0.03	0.034	0.01	0.03	2	Disagree	0.89	68300	6.83	5.9	90
H43405	1.67	4.55	9.74	24.63	-266.56	-276.5615	-264.95	-274.9479472	-272.01	0.04	3.61582E-06	0.04	0.04	0.036	0.01	0.02	2	Disagree	1.16	73500	7.35	17.1	70
H43880	7.50	7.51	62.93	114.25	-261.80	-272.499	-261.80	-272.499	-264.99	0.04	3.66972E-06	0.04	0.04	0.039	0.01	0.03	1	Agree		66500	6.65	4.1	14
G37699	0.83	4.55	5.24	12.89	-168.94	-175.9365	-168.73	-175.7291972	-171.39	0.04	5.68384E-06	0.05	0.04	0.040	0.01	0.03	2	Disagree	1.18	55700	5.57	12.5	70
X05402	1.67	4.55	7.24	15.75	-169.25	-176.249	-168.35	-175.3530393	-171.70	0.04	5.67376E-06	0.05	0.04	0.040	0.01	0.03	2	Disagree	1.38	47500	4.75	16.3	800
X11553	0.83	4.55	7.24	20.90	-163.63	-170.624	-162.91	-169.9041876	-166.08	0.04	5.86081E-06	0.05	0.04	0.041	0.01	0.03	2	Disagree	1.31	60500	6.05	17	130
G37809	0.42	4.55	7.49	35.22	-177.63	-185.624	-177.37	-185.3656444	-181.08	0.04	5.38721E-06	0.06	0.04	0.043	0.01	0.02	2	Disagree	0.78	79400	7.94	9	140
X19143	6.67	5.91	9.74	17.75	-165.11	-172.8115	-161.99	-169.6865	-166.90	0.04	5.78662E-06	0.05	0.05	0.045	0.01	0.03	2	Disagree		10500	1.05	4	9
G33142	0.42	4.55	7.49	19.76	-159.81	-167.8115	-159.14	-167.1354472	-163.26	0.05	5.95903E-06	0.06	0.05	0.048	0.01	0.03	2	Disagree	0.78	71100	7.11	186.5	70
G21490	1.67	4.55	11.74	26.63	-176.31	-185.3115	-174.70	-183.6979472	-180.76	0.05	5.39629E-06	0.06	0.05	0.049	0.01	0.02	2	Disagree	1.33	86300	8.63	12	70
X06441	1.67	4.55	4.50	22.05	-131.13	-138.124	-130.71	-137.7093944	-133.58	0.05	7.23982E-06	0.06	0.05	0.051	0.01	0.03	2	Disagree	4.49	51900	5.19	12	140
G37719	0.42	4.55	11.24	20.62	-143.56	-151.5615	-143.18	-151.1833607	-147.01	0.05	6.59794E-06	0.06	0.05	0.053	0.01	0.03	2	Disagree	2.32	55600	5.56	87.9	90
H44434	0.83	0.45	8.49	26.92	-161.94	-170.9365	-160.67	-169.6675375	-170.48	0.05	5.85009E-06	0.07	0.05	0.053	0.01	0.00	1	Agree		66500	6.65	5.7	26
G36074	0.83	1.36	6.49	34.93	-111.30	-117.499	-110.05	-116.249	-116.14	0.05	8.51064E-06	0.05	0.05	0.053	0.01	0.01	1	Agree		50600	5.06	7.5	42
G21477	0.83	4.55	5.74	20.62	-106.19	-112.1865	-105.94	-111.9354376	-107.64	0.05	8.91365E-06	0.06	0.05	0.054	0.01	0.04	2	Disagree	0.69	36400	3.64	9.7	130
X14258	2.50	4.55	9.74	40.37	-176.88	-186.874	-176.51	-186.5104472	-182.33	0.05	5.35117E-06	0.07	0.05	0.054	0.01	0.02	2	Disagree	1.8	77500	7.75	5	70
H43397	1.67	4.55	12.74	27.49	-246.00	-259.999	-245.03	-259.0250337	-255.45	0.05	3.84615E-06	0.06	0.05	0.054	0.01	0.02	2	Disagree	1.17	72900	7.29	32.1	50
H43401	2.50	4.55	8.24	22.62	-151.94	-160.9365	-149.99	-158.9885674	-156.39	0.06	6.21359E-06	0.06	0.06	0.057	0.01	0.03	2	Disagree	0.74	76200	7.62	52.2	100
H43395	3.33	4.55	8.99	21.48	-174.31	-185.3115	-173.64	-184.6354472	-180.76	0.06	5.39629E-06	0.06	0.06	0.060	0.01	0.02	2	Disagree	2.24	69100	6.91	286	70
H43403	1.67	4.55	9.74	26.92	-188.94	-200.9365	-187.62	-199.6208607	-196.39	0.06	4.97667E-06	0.06	0.06	0.060	0.01	0.02	2	Disagree	0.66	80700	8.07	30.3	90
X14278	7.50	4.55	8.99	33.22	-141.00	-149.999	-140.33	-149.3302404	-145.45	0.06	6.66667E-06	0.08	0.06	0.060	0.01	0.03	2	Disagree	4.92	70700	7.07	18.7	60
E217257	35.84	4.55	13.24	79.89	-201.38	-214.374	-200.38	-213.3781539	-209.83	0.06	4.66472E-06	0.07	0.06	0.061	0.01	0.02	2	Disagree	1.11	85100	8.51	28.2	80
G22025	3.33	4.55	10.24	58.13	-157.19	-167.1865	-152.76	-162.7604472	-162.64	0.06	5.98131E-06	0.07	0.06	0.061	0.01	0.03	2	Disagree	0.25	88700	8.87	20.2	70
S91-395_5388	2.50	2.27	4.50	18.90	-90.25	-96.249	-88.97	-94.96871682	-93.98	0.06	1.03896E-05	0.07	0.06	0.063	0.01	0.02	2	Disagree	1.76	54100	5.41	11	470
H41708	3.33	6.82	13.73	41.52	-137.56	-146.5615	-133.11	-142.1062742	-139.74	0.06	6.82303E-06	0.07	0.06	0.063	0.01	0.05	2	Disagree	12.3	81100	8.11	82.9	110
G35241	7.50	5.23	8.74	14.32	-148.86	-159.0615	-146.68	-156.874	-153.83	0.06	6.28684E-06	0.07	0.07	0.065	0.01	0.03	2	Disagree		6800	0.68	2.2	16
X11486	4.17	6.82	3.00	12.60	-87.75	-93.749	-86.06	-92.0625146	-86.93	0.06	1.06667E-05	0.07	0.07	0.065	0.01	0.07	2	Disagree	1.36	44600	4.46	16.9	170
H41422	6.67	6.82	17.98	38.94	-212.50	-227.499	-210.90	-225.9000337	-220.68	0.07	4.3956E-06	0.07	0.07	0.066	0.01	0.03	2	Disagree	1.85	81400	8.14	18.8	50
G37917	1.67	4.55	13.24	64.43	-198.44	-213.4365	-198.03	-213.0291876	-208.89	0.07	4.68521E-06	0.09	0.07	0.070	0.01	0.02	2	Disagree	1.29	85100	8.51	9.3	130
H43399	0.83	4.55	8.49	24.63	-144.00	-154.999	-142.67	-153.6687742	-150.45	0.07	6.45161E-06	0.07	0.07	0.072	0.01	0.03	2	Disagree	0.72	83200	8.32	5.1	110
X05483	84.17	4.55	7.99	33.79	-137.44	-148.4365	-137.08	-148.083332	-143.89	0.07	6.73684E-06	0.08	0.07	0.074	0.01	0.03	2	Disagree	13.65	62200	6.22	14.2	270
G24020	3.33	6.82	12.99	54.41	-211.75	-226.75	-211.39	-226.3864472	-221.93	0.07	0.008743169	0.09	0.07	0.074	0.01	0.03	2	Disagree	3.58	90200	9.02	9.7	70
X14180	4.17	1.36	13.73	54.98	-132.01	-142.8115	-127.31	-138.1086842	-141.45	0.08	7.00219E-06	0.11	0.08	0.078	0.01	0.01	1	Agree		66400	6.64	6.9	21
H43407	14.17	4.55	7.24	24.34	-155.13	-168.124	-153.20	-166.1979472	-163.58	0.08	5.94796E-06	0.08	0.08	0.078	0.01	0.03	2	Disagree	1.02	70800	7.08	9.5	70
H42161	3.33	4.55	10.74	29.78	-140.81	-152.8115	-140.41	-152.4114809	-148.26	0.08	6.54397E-06	0.09	0.08	0.079	0.01	0.03	2	Disagree	12	90100	9.01	7.3	120
X11377	1.67	4.55	8.74	45.53	-113.13	-123.124	-111.12	-121.1177213	-118.58	0.08	8.12183E-06	0.09	0.08	0.083	0.01	0.04	2	Disagree	1.16	76300	7.63	6.2	180
X10664	10.00	8.87	14.73	30.64	-126.84	-138.4365	-121.82	-133.4226428	-129.57	0.08	7.22348E-06	0.11	0.09	0.087	0.01	0.06	2	Disagree		28400	2.84	1.3	19
G37739	0.83	4.55	9.74	34.93	-136.69	-149.6865	-136.32	-149.3156539	-145.14	0.09	6.68058E-06	0.09	0.09	0.087	0.01	0.03	2	Disagree	1.2	71500	7.15	7.2	80
H41706	9.17	11.37	17.48	53.26	-162.19	-177.1865	-155.54	-170.5437742	-165.82	0.08	5.64374E-06	0.10	0.09	0.088	0.01	0.06	2	Disagree	46.1	78100	7.81	576	110
G36943	4.17	4.55	9.24	40.09	-114.31	-125.3115	-113.90	-124.8968944	-120.76	0.09	7.98005E-06	0.09	0.09	0.088	0.01	0.04	2	Disagree	1.52	69200	6.92	17.1	140
G35228	10.00	9.78	12.24	32.64	-178.33	-193.325	-176.13	-191.1287481	-185.85	0.09	0.011757188	0.13	0.09	0.089	0.011890683	0.05	2	Disagree		22000	2.2	8.4	12
G32981	5.00	5.23	9.49	42.67	-98.75	-108.749	-96.88	-106.874	-103.52	0.09	9.1954E-06	0.09	0.09	0.094	0.01	0.05	1	Agree		66900	6.69	8.5	59
X15427	3.33	2.50	5.74	34.65	-79.61	-87.8115	-78.32	-86.5221164	-85.31	0.09	1.13879E-05	0.12	0.09	0.095	0.01	0.03	1	Agree		59700	5.97	14	54
H42163	6.67	6.82	11.49	37.51	-112.69	-124.6865	-112.29	-124.2937742	-117.86	0.10	8.02005E-06	0.11	0.10	0.097	0.01	0.05	2	Disagree	11.3	80100	8.01	5.1	110
G37966	0.83	4.55	11.99	45.24	-117.63	-130.624	-117.19	-130.1875146	-126.08	0.10	7.6555E-06	0.11	0.10	0.100	0.01	0.03	2	Disagree	3.21	85900	8.59	14.6	170
G21287	3.33	4.78	6.99	40.37	-88.43	-98.124	-87.18	-96.874	-93.35	0.10	1.01911E-05	0.10	0.10	0.100	0.01	0.05	1	Agree		49200	4.92	1.1	44
G36878	14.17	4.55	3.50	24.34	-78.50	-87.499	-77.71	-86.7135483	-82.95	0.10	1.14286E-05	0.11	0.10	0.104	0.01	0.05	2	Disagree	2.04	40500	4.05	21.7	220

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
X14630	0.42	4.55	4.74	23.77	-95.56	-106.5615	-94.83	-105.8332842	-102.01	0.10	9.38416E-06	0.11	0.10	0.104	0.01	0.04	2	Disagree	3.27	41000	4.1	35.9	570
H43874	7.50	7.73	137.10	202.73	-138.29	-153.2875	-138.29	-153.2875	-146.96	0.11	0.009050505	0.11	0.11	0.106	0.01	0.05	2	Disagree		79600	7.96	2.3	60
G33119	26.67	9.10	6.49	23.19	-109.19	-122.1865	-108.96	-121.9573174	-113.09	0.11	8.18414E-06	0.12	0.11	0.107	0.01	0.07	2	Disagree	2.16	61100	6.11	156	100
G33357	7.50	9.10	16.73	58.99	-158.19	-173.1875	-157.16	-172.1624809	-168.09	0.11	0.022574956	0.12	0.11	0.108	0.022706311	0.05	3	Disagree	6.15	82600	8.26	18.1	120
X14171	2.50	1.14	10.24	60.13	-84.08	-94.374	-82.80	-93.09774427	-93.24	0.11	1.0596E-05	0.12	0.11	0.111	0.01	0.01	1	Agree		73500	7.35	3.6	36
H42169	8.33	9.10	14.98	41.81	-144.81	-159.8125	-144.41	-159.4051876	-153.72	0.11	0.018426104	0.13	0.11	0.111	0.018472316	0.06	3	Disagree	11.65	97900	9.79	14.5	130
X13511	0.83	0.45	5.24	66.72	-87.44	-98.4365	-87.13	-98.124	-97.98	0.11	1.01587E-05	0.11	0.11	0.112	0.01	0.00	1	Agree		72800	7.28	5.5	30
H41839	13.33	15.92	20.48	45.82	-165.25	-180.25	-164.89	-179.8864472	-170.33	0.11	0.032214765	0.13	0.11	0.113	0.03227777	0.09	3	Disagree	1.67	81800	8.18	49.3	70
X06419	2.50	4.55	4.99	26.92	-94.56	-106.5615	-94.09	-106.0885483	-102.01	0.11	9.38416E-06	0.13	0.11	0.113	0.01	0.04	2	Disagree	2.5	62300	6.23	20.3	220
G24041	2.50	4.55	9.24	67.29	-106.00	-119.999	-105.59	-119.5843944	-115.45	0.12	8.33333E-06	0.13	0.12	0.117	0.01	0.04	2	Disagree	1.64	87300	8.73	3.8	140
G23998	0.83	4.55	9.24	38.37	-82.75	-93.749	-82.24	-93.239582	-89.20	0.12	1.06667E-05	0.13	0.12	0.118	0.01	0.05	2	Disagree	0.51	103000	10.3	5.2	270
X15009	5.83	6.82	10.74	44.67	-104.13	-118.124	-102.66	-116.6624955	-111.30	0.12	8.46561E-06	0.15	0.12	0.120	0.01	0.06	2	Disagree	2.24	69000	6.9	28.4	290
G32047	15.83	15.92	53.94	85.33	-179.63	-194.625	-144.27	-159.2687404	-184.71	0.10	0.029906542	0.15	0.13	0.127	0.036304506	0.08	3	Disagree	2.26	68200	6.82	11.7	60
G35583	8.33	9.10	11.99	57.56	-137.81	-152.8125	-136.98	-151.9759955	-148.72	0.13	0.031683168	0.15	0.13	0.127	0.031852004	0.06	2	Disagree	1.31	76400	7.64	6.1	290
X06463	18.33	18.19	19.48	44.67	-138.44	-153.4375	-133.92	-148.9228179	-140.24	0.13	0.031558185	0.18	0.13	0.130	0.032483813	0.11	3	Disagree	3.65	44900	4.49	8	620
G33796	15.00	18.19	21.98	43.24	-137.44	-152.4375	-137.16	-152.1572646	-140.24	0.13	0.037869822	0.15	0.13	0.133	0.037936923	0.11	3	Disagree	2.24	75100	7.51	15.6	170
X11008	26.67	25.02	35.71	54.12	-186.19	-201.1875	-164.45	-179.4499618	-187.17	0.12	0.051840943	0.19	0.14	0.137	0.057757953	0.12	3	Disagree	1.57	29400	2.94	11.4	240
H43862	27.50	22.52	97.89	147.18	-191.58	-206.575	-191.58	-206.575	-199.36	0.14	0.068957746	0.14	0.14	0.137	0.068957746	0.10	2	Disagree		69500	6.95	0.1	28
X11578	5.83	9.10	9.74	50.97	-75.81	-87.8115	-75.36	-87.36042808	-78.72	0.14	1.13879E-05	0.16	0.14	0.137	0.01	0.10	2	Disagree	1.01	63000	6.3	5	190
H43766	81.67	79.37	18.73	99.08	-143.70	-158.7	-143.70	-158.7	-88.13	0.14	0.052537313	0.14	0.14	0.142	0.052537313	0.47	1	Agree		63800	6.38	4	29
G33097	21.67	22.74	12.49	45.24	-145.00	-160	-144.63	-159.6291539	-147.26	0.15	0.058823529	0.16	0.15	0.147	0.05895213	0.13	2	Disagree	1.57	70000	7	44.6	80
G33415	14.17	18.19	14.98	34.36	-108.50	-123.5	-108.09	-123.0926876	-109.31	0.15	0.031372549	0.17	0.15	0.149	0.031473093	0.14	3	Disagree	4.02	47400	4.74	32.7	130
H43518	20.00	16.37	86.65	125.13	-175.50	-190.5	-110.17	-125.1714548	-178.63	0.10	0.023076923	0.16	0.15	0.150	0.034703089	0.08	2	Disagree		65800	6.58	35.4	22
X11031	20.83	22.74	22.73	36.65	-119.31	-134.3125	-117.54	-132.5384955	-117.57	0.15	0.042761693	0.18	0.15	0.152	0.043309262	0.16	3	Disagree	5.86	39400	3.94	63.1	290
X06146	5.83	2.73	10.74	41.23	-80.70	-94.999	-79.11	-93.40732696	-92.27	0.15	1.05263E-05	0.16	0.15	0.153	0.01	0.03	1	Agree		52400	5.24	6.6	40
X11599	15.00	18.19	17.48	59.56	-102.25	-117.25	-101.49	-116.4937213	-103.06	0.16	0.032989691	0.18	0.16	0.158	0.03319675	0.15	3	Disagree	1.16	62800	6.28	17.8	180
H42210	7.50	6.82	49.45	98.50	-119.94	-134.9375	-84.21	-99.21039437	-129.11	0.12	0.007356322	0.17	0.16	0.160	0.01	0.05	3	Disagree	0.85	78800	7.88	8.3	140
G37765	0.42	4.55	8.99	61.85	-62.69	-74.6865	-62.11	-74.11144267	-70.14	0.16	1.33891E-05	0.17	0.16	0.162	0.01	0.06	2	Disagree	0.93	79100	7.91	8	360
G33436	10.00	13.65	13.98	32.36	-90.19	-105.1875	-87.88	-102.8833079	-93.54	0.16	0.018658892	0.19	0.16	0.162	0.019068811	0.13	3	Disagree	5.26	50500	5.05	29.3	160
X19131	6.67	6.82	11.49	30.35	-134.23	-149.225	-132.34	-147.3397894	-153.80	0.16	0.070972763	0.18	0.17	0.166	0.071815643	0.04	3	Disagree		32900	3.29	7.5	14
X12874	19.17	15.69	12.99	42.67	-101.99	-116.9875	-101.03	-116.0259322	-106.50	0.17	0.042557545	0.27	0.17	0.167	0.042895112	0.13	2	Disagree		49900	4.99	19.1	33
G33072	23.33	25.02	8.99	37.51	-105.25	-120.25	-104.86	-119.8572742	-101.23	0.17	0.047524752	0.18	0.17	0.167	0.047673049	0.20	2	Disagree	1.91	73100	7.31	23.4	110
H41673	25.84	25.02	28.97	60.42	-144.13	-159.125	-143.72	-158.7249809	-148.11	0.17	0.080866426	0.18	0.17	0.168	0.081053707	0.14	3	Disagree	0.78	84600	8.46	61.5	120
X06396	12.50	13.65	13.73	43.52	-52.19	-62.1865	-49.21	-59.2051449	-48.54	0.16	1.60804E-05	0.20	0.17	0.169	0.01	0.22	3	Disagree	2.5	63300	6.33	8.3	660
H43905	43.34	45.94	109.88	157.20	-208.44	-223.4375	-208.44	-223.4375	-205.00	0.17	0.109589041	0.17	0.17	0.169	0.109589041	0.18	2	Disagree		71200	7.12	26.8	36
H41835	25.00	29.57	22.23	52.40	-159.19	-174.1875	-157.90	-172.9010337	-162.62	0.17	0.093658537	0.20	0.17	0.173	0.094289694	0.15	3	Disagree	0.63	82400	8.24	42.6	50
H43762	137.51	136.00	12.49	90.77	-113.10	-128.1	-113.10	-128.1	-1.50	0.18	0.068363636	0.18	0.18	0.177	0.068363636	0.99	1	Agree		62200	6.22	3	30
X05329	0.83	0.45	5.49	77.03	-54.76	-66.5615	-54.45	-66.249	-66.11	0.18	1.50235E-05	0.18	0.18	0.178	0.01	0.01	1	Agree		77500	7.75	3	52
G36231	10.83	13.65	14.73	30.93	-70.00	-84.999	-69.11	-84.10414941	-71.35	0.18	1.17647E-05	0.22	0.18	0.178	0.01	0.16	3	Disagree	2.95	34400	3.44	8.8	370
G35563	19.17	18.19	41.20	83.33	-147.56	-162.5625	-132.34	-147.3437022	-158.37	0.16	0.079292035	0.21	0.18	0.180	0.086771283	0.10	3	Disagree	1.74	78400	7.84	31.5	300
H41829	27.50	29.57	33.46	61.85	-155.38	-170.375	-154.39	-169.3937404	-159.81	0.18	0.100330033	0.20	0.18	0.180	0.100852608	0.16	3	Disagree	0.52	83800	8.38	121	60
H41561	23.33	22.74	37.46	72.73	-134.50	-149.5	-126.95	-141.9489472	-139.76	0.17	0.08	0.19	0.18	0.181	0.083898602	0.14	3	Disagree	3.64	72600	7.26	60	70
H43887	20.00	19.56	103.89	159.78	-180.45	-195.45	-180.45	-195.45	-201.69	0.18	0.116610169	0.18	0.18	0.184	0.116610169	0.09	4	Disagree		71200	7.12	6.4	17
G37602	27.50	27.29	36.71	79.03	-150.06	-165.0625	-146.54	-161.5447742	-156.77	0.18	0.103225806	0.22	0.19	0.188	0.105237053	0.15	3	Disagree	0.6	80500	8.05	14.2	110
G36814	35.00	34.11	38.71	65.00	-173.81	-188.8125	-165.54	-180.5416348	-178.70	0.18	0.11277533	0.21	0.19	0.191	0.117335524	0.16	3	Disagree	0.33	72500	7.25	9.4	200
G33116	22.50	25.02	14.48	36.94	-122.25	-137.25	-120.62	-135.6218607	-126.23	0.19	0.092561983	0.22	0.19	0.194	0.093569215	0.17	2	Disagree	1.35	56100	5.61	5	90
X11508	22.50	20.47	12.74	28.92	-75.13	-90.125	-74.67	-89.66663482	-72.66	0.19	0.032214765	0.23	0.19	0.194	0.032374112	0.22	3	Disagree	1.7	53600	5.36	7.5	200
H42245	22.50	22.74	75.42	128.28	-169.94	-184.9375	-126.43	-141.4343607	-178.19	0.15	0.07962675	0.23	0.20	0.197	0.101629657	0.11	3	Disagree	1.09	76200	7.62	9.2	90
G36794	29.17	27.29	34.21	74.16	-138.81	-153.8125	-137.13	-152.1333079	-145.52	0.20	0.10994575	0.21	0.20	0.199	0.111024559	0.16	3	Disagree	0.85	78200	7.82	25.6	160
G35060	20.00	18.19	22.23	54.12	-93.25	-108.25	-92.15	-107.1520483	-98.06	0.20	0.068817204	0.21	0.20	0.200	0.069473363	0.16	3	Disagree	4.4	70600	7.06	27.9	220

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
E217242	19.17	22.74	27.47	68.72	-120.00	-135	-119.60	-134.5999809	-127.26	0.20	0.1	0.23	0.20	0.201	0.100267392	0.15	3	Disagree	3.98	73400	7.34	18.8	120
H43780	35.84	36.84	21.73	75.02	-135.19	-150.1875	-135.19	-150.1875	-132.84	0.20	0.114917127	0.20	0.20	0.203	0.114917127	0.22	2	Disagree		66000	6.6	6.5	27
G32420	75.84	13.65	11.74	27.78	-55.38	-69.374	-54.34	-68.33946735	-55.73	0.20	1.44144E-05	0.25	0.20	0.205	0.01	0.20	3	Disagree	3.07	64600	6.46	63	990
H42249	27.50	29.57	67.18	113.68	-168.38	-183.375	-138.64	-153.6364472	-174.81	0.18	0.102752294	0.22	0.21	0.206	0.120249812	0.14	3	Disagree	1.29	71300	7.13	7.7	70
H41685	29.17	29.57	38.46	71.87	-132.13	-147.125	-131.75	-146.7541539	-138.56	0.21	0.124907063	0.24	0.21	0.215	0.125183189	0.18	3	Disagree	3.8	84700	8.47	72.8	80
9069	19.17	11.37	25.22	61.28	-110.00	-125	-109.73	-124.7343511	-128.63	0.21	0.107142857	0.22	0.21	0.215	0.107346546	0.08	3	Disagree	2.96	75100	7.51	9	150
H43765	79.17	13.65	14.48	95.07	-65.13	-80.125	-65.13	-80.125	-69.48	0.22	0.036090226	0.22	0.22	0.217	0.036090226	0.16	2	Disagree	1.85	79600	7.96	11	1110
X12852	10.00	10.69	10.49	44.38	-66.49	-81.4875	-65.83	-80.82530438	-74.00	0.21	0.037785978	0.29	0.22	0.217	0.038083766	0.13	1	Agree		56000	5.6	8.6	51
H43903	15.83	20.47	20.98	51.83	-76.50	-91.5	-75.88	-90.87698142	-77.03	0.22	0.061538462	0.24	0.22	0.217	0.061934217	0.21	3	Disagree	1.03	65500	6.55	9	640
G35079	14.17	13.65	17.73	56.70	-75.56	-90.5625	-74.73	-89.72599549	-82.92	0.22	0.062135922	0.24	0.22	0.219	0.062678899	0.14	3	Disagree	3.95	66900	6.69	23.2	290
E217224	24.17	25.02	30.97	69.58	-117.88	-132.875	-117.50	-132.4968607	-126.86	0.22	0.125102881	0.26	0.22	0.224	0.12541514	0.16	3	Disagree	0.7	81900	8.19	7.5	90
G36254	0.83	4.55	11.99	42.38	-43.00	-54.999	-41.24	-53.238233	-50.45	0.22	1.81818E-05	0.26	0.23	0.225	0.01	0.08	2	Disagree	1.63	83800	8.38	17.7	2200
H41441	20.83	18.19	28.22	73.30	-100.06	-115.0625	-99.61	-114.6114281	-110.87	0.22	0.108474576	0.26	0.23	0.225	0.108855023	0.14	3	Disagree	1.56	86000	8.6	13.2	190
H41563	33.34	29.57	62.18	99.93	-149.06	-164.0625	-119.64	-134.6437404	-154.50	0.19	0.108658744	0.24	0.23	0.226	0.129329515	0.16	3	Disagree	3.38	63400	6.34	29.1	60
G33049	61.67	61.40	12.49	77.60	-67.50	-82.5	-66.91	-81.91035615	-26.10	0.23	0.057142857	0.24	0.23	0.230	0.057530543	0.70	2	Disagree	2.32	80500	8.05	7.4	380
H42195	18.33	20.47	22.48	48.11	-81.63	-96.625	-79.96	-94.96039437	-85.16	0.23	0.085207101	0.23	0.23	0.231	0.08657143	0.19	3	Disagree	1.15	79000	7.9	7	140
G32137	16.67	15.92	16.98	60.13	-79.75	-94.75	-79.47	-94.4697646	-87.83	0.23	0.086746988	0.27	0.23	0.232	0.086981932	0.15	2	Disagree	1.64	66400	6.64	8.2	170
H41427	25.84	25.02	29.97	72.45	-105.56	-120.5625	-102.36	-117.3572742	-111.55	0.23	0.117162471	0.28	0.23	0.232	0.119978457	0.18	3	Disagree	2.74	83200	8.32	26.5	110
X12417	29.17	29.57	27.47	50.40	-98.44	-113.4375	-97.92	-112.9207887	-98.87	0.23	0.116788321	0.24	0.23	0.235	0.117260065	0.23	3	Disagree	2.35	52300	5.23	11.9	280
G33773	35.84	34.11	22.97	54.69	-117.75	-132.75	-117.43	-132.4332983	-119.64	0.23	0.136585366	0.26	0.23	0.235	0.136867292	0.22	3	Disagree	2.11	74500	7.45	47.7	220
X13902	25.84	25.02	45.95	87.62	-161.36	-176.3625	-145.72	-160.7214548	-181.55	0.22	0.146202723	0.39	0.24	0.237	0.158180232	0.12	3	Disagree		60100	6.01	22.8	22
X05383	5.00	4.55	8.24	41.81	-45.69	-59.6865	-44.75	-58.74677972	-55.14	0.23	1.67539E-05	0.28	0.24	0.238	0.01	0.08	2	Disagree	1.68	54500	5.45	5.6	860
H41559	31.67	27.29	53.94	92.20	-128.50	-143.5	-108.46	-123.4562404	-135.21	0.21	0.116923077	0.27	0.24	0.239	0.133374291	0.17	3	Disagree	3.58	68800	6.88	69.5	60
X17281	30.00	27.29	31.47	69.87	-128.56	-143.5625	-119.72	-134.7176876	-139.27	0.23	0.138086304	0.27	0.24	0.241	0.145830188	0.16	3	Disagree	0.83	78200	7.82	50.3	130
H42240	25.00	27.29	58.94	106.52	-125.75	-140.75	-103.18	-118.1770674	-131.46	0.21	0.113385827	0.25	0.24	0.242	0.132180846	0.17	3	Disagree	1.56	77600	7.76	10.6	100
X12432	31.67	31.84	26.47	52.69	-94.31	-109.3125	-93.77	-108.7666157	-93.47	0.25	0.127680798	0.25	0.25	0.248	0.128239433	0.25	3	Disagree	3.74	51200	5.12	5.8	320
H41699	10.83	13.65	19.23	74.74	-64.94	-79.9375	-63.04	-78.03951008	-72.29	0.24	0.069818182	0.26	0.25	0.250	0.07139499	0.16	3	Disagree	2.42	84400	8.44	19.6	460
G35113	40.00	36.39	52.44	81.32	-129.31	-144.3125	-107.30	-122.2989281	-128.92	0.22	0.127032136	0.31	0.25	0.251	0.146546805	0.22	3	Disagree	3.41	57700	5.77	26.4	190
X14288	74.17	34.11	125.11	176.39	-177.63	-192.625	-82.54	-97.53748089	-171.51	0.14	0.063221884	0.29	0.25	0.253	0.117607167	0.17	3	Disagree	1.97	65100	6.51	4.5	120
H42251	48.34	47.76	106.38	154.05	-204.38	-219.375	-147.33	-162.332255	-206.62	0.20	0.137592138	0.26	0.25	0.253	0.177365834	0.19	3	Disagree	1.3	67200	6.72	11.3	230
H41429	17.50	15.92	24.22	69.58	-83.63	-98.625	-79.45	-94.45310111	-94.71	0.24	0.108474576	0.30	0.25	0.254	0.112725697	0.14	3	Disagree	2.04	91100	9.11	17.4	150
G34623	15.83	18.19	21.73	35.22	-58.44	-73.4375	-57.99	-72.98951964	-60.24	0.25	0.06374502	0.31	0.26	0.256	0.064111178	0.23	3	Disagree	2.88	26300	2.63	6	400
G32259	25.00	29.57	39.46	84.76	-104.63	-119.625	-104.24	-119.2395674	-111.06	0.26	0.149333333	0.30	0.26	0.257	0.149743759	0.21	3	Disagree	0.76	85900	8.59	12.4	100
H43864	47.50	50.94	124.61	169.23	-130.69	-145.6875	-130.69	-145.6875	-126.24	0.26	0.177777778	0.26	0.26	0.262	0.177777778	0.29	4	Disagree		48000	4.8	4.7	21
X06946	25.70	22.44	20.73	67.29	-84.33	-99.32916667	-81.80	-96.7992643	-90.37	0.25	0.119519852	0.30	0.26	0.258	0.122261659	0.20	1	Agree		68600	6.86	21.4	41
G33259	25.84	29.57	34.21	66.72	-97.50	-112.5	-97.04	-112.0416348	-102.93	0.26	0.150943396	0.29	0.27	0.265	0.151467376	0.22	3	Disagree	2.22	83800	8.38	33.9	200
H42221	19.17	22.74	71.67	118.55	-121.38	-136.375	-75.67	-90.66977415	-126.63	0.19	0.087029289	0.32	0.27	0.270	0.12539817	0.15	3	Disagree	0.98	77600	7.76	9.7	110
H43878	34.17	35.93	165.32	225.64	-135.33	-150.325	-135.33	-150.325	-149.69	0.27	0.19016835	0.27	0.27	0.271	0.19016835	0.19	4	Disagree		71600	7.16	5.1	40
H41669	37.50	38.66	41.45	73.88	-118.44	-133.4375	-118.21	-133.2083174	-124.78	0.28	0.183556405	0.31	0.28	0.276	0.183814161	0.24	3	Disagree	2.02	82400	8.24	58.7	100
G36775	23.33	25.02	32.71	79.89	-83.63	-98.625	-83.14	-98.14475504	-90.61	0.28	0.147027027	0.29	0.28	0.278	0.147640246	0.22	3	Disagree	1.82	77500	7.75	42.6	230
H41702	17.50	20.47	26.22	87.05	-72.63	-87.625	-72.14	-87.13746178	-80.16	0.28	0.129192547	0.30	0.28	0.280	0.129821545	0.20	3	Disagree	2.03	85400	8.54	14.8	240
H43885	12.50	10.01	106.38	167.23	-90.76	-105.7625	-90.76	-105.7625	-116.56	0.28	0.164345679	0.28	0.28	0.283	0.164345679	0.08	3	Disagree		72700	7.27	5.4	35
X05177	15.00	14.33	14.48	47.53	-67.98	-82.975	-66.73	-81.725	-80.05	0.28	0.120794702	0.28	0.28	0.283	0.122416107	0.15	3	Disagree		49600	4.96	4.7	30
H40630	10.00	9.10	22.97	64.14	-63.75	-78.75	-63.18	-78.18223593	-79.65	0.28	0.112676056	0.33	0.28	0.284	0.113401525	0.10	3	Disagree	1.91	83800	8.38	12.2	350
H43882	32.50	32.52	115.87	163.50	-113.55	-128.55	-113.55	-128.55	-126.23	0.28	0.19023622	0.28	0.28	0.285	0.19023622	0.20	4	Disagree		67700	6.77	3.1	21
X13930	44.17	43.89	75.42	104.23	-155.06	-170.0625	-128.46	-143.4576991	-162.67	0.25	0.176701967	0.42	0.29	0.286	0.202825443	0.21	4	Disagree		52400	5.24	19.5	58
G32496	23.33	27.29	39.96	81.61	-89.00	-104	-88.61	-103.6145674	-97.71	0.29	0.168	0.33	0.29	0.289	0.168519624	0.22	3	Disagree	0.41	83200	8.32	16.2	100
H42193	32.50	34.11	28.22	74.74	-91.13	-106.125	-89.79	-104.7947742	-94.01	0.29	0.171707317	0.30	0.29	0.292	0.173508728	0.27	3	Disagree	1.24	82600	8.26	4.2	110
H43868	27.50	28.20	140.35	197.01	-115.74	-130.7375	-115.74	-130.7375	-135.24	0.29	0.200076482	0.29	0.29	0.292	0.200076482	0.17	4	Disagree		60400	6.04	4.4	27
H43890	39.17	44.12	131.86	195.00	-121.58	-136.575	-121.58	-136.575	-127.75	0.29	0.205381818	0.29	0.29	0.293	0.205381818	0.26	4	Disagree		70200	7.02	4.2	26

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
X17284	0.00	38.66	42.20	82.47	-110.88	-125.875	-110.43	-125.4312213	-118.21	0.29	0.197609562	0.33	0.29	0.294	0.198170159	0.25	3	Disagree	2.7	74800	7.48	69.1	180
H42242	25.00	27.29	65.93	118.83	-104.44	-119.4375	-78.81	-93.8125	-111.15	0.25	0.13724605	0.30	0.30	0.301	0.168421053	0.20	3	Disagree	1.17	76700	7.67	7.2	110
X11464	23.33	22.74	19.98	49.54	-63.06	-78.0625	-59.94	-74.94368312	-66.32	0.29	0.123508772	0.34	0.30	0.303	0.127990791	0.26	3	Disagree	2.36	61700	6.17	9.4	420
H43891	21.67	25.02	113.38	160.35	-167.69	-182.6875	-71.53	-86.53120223	-174.67	0.16	0.08513302	0.34	0.31	0.309	0.164201706	0.13	3	Disagree	1	65800	6.58	5.1	300
X06485	33.34	31.84	28.97	63.86	-81.81	-96.8125	-80.31	-95.31452919	-85.97	0.31	0.178249337	0.35	0.31	0.310	0.180544943	0.27	3	Disagree	8.69	58800	5.88	11.1	340
X12614	36.67	38.66	43.45	74.45	-100.31	-115.3125	-99.90	-114.8978944	-106.65	0.31	0.206451613	0.34	0.31	0.311	0.207042346	0.27	3	Disagree	1.02	75600	7.56	7.5	140
H42247	39.17	40.94	75.67	128.86	-125.50	-140.5	-99.18	-114.1843607	-131.56	0.27	0.185507246	0.34	0.32	0.322	0.218901665	0.24	3	Disagree	0.89	73400	7.34	7.6	90
G34338	15.83	14.33	14.73	63.00	-52.38	-67.375	-51.70	-66.69967651	-62.55	0.32	0.123577236	0.34	0.32	0.322	0.124672445	0.19	2	Disagree		59600	5.96	9.7	69
H41443	79.17	77.32	77.91	127.14	-175.81	-190.8125	-170.78	-185.783327	-180.49	0.32	0.259878788	0.36	0.32	0.324	0.265049126	0.30	3	Disagree	8.82	68300	6.83	15.2	40
X12393	16.67	18.19	21.98	54.98	-51.00	-66	-49.93	-64.93122134	-56.81	0.32	0.12	0.36	0.32	0.325	0.121734767	0.24	3	Disagree	2.73	69100	6.91	6.3	180
H42186	45.00	43.21	35.71	66.43	-96.25	-111.25	-92.67	-107.6666348	-98.04	0.32	0.212389381	0.36	0.33	0.327	0.217917726	0.31	3	Disagree	4.16	69200	6.92	13.6	200
H41679	46.67	47.76	53.69	97.93	-96.44	-111.4375	-96.04	-111.0447742	-95.68	0.33	0.223093682	0.33	0.33	0.329	0.22370618	0.33	4	Disagree	13.7	80300	8.03	57.6	110
H41681	51.67	50.03	48.70	88.48	-105.13	-120.125	-104.74	-119.7395674	-108.09	0.34	0.240316206	0.39	0.34	0.336	0.240903412	0.32	3	Disagree	1.37	73700	7.37	29.3	100
G32325	40.84	38.66	42.45	87.62	-93.25	-108.25	-92.84	-107.8426876	-102.59	0.34	0.233628319	0.36	0.34	0.341	0.234303964	0.27	3	Disagree	1.42	81500	8.15	2.5	130
G32992	20.00	20.24	22.73	65.00	-70.79	-85.7875	-70.13	-85.12676303	-86.95	0.34	0.199650146	0.37	0.34	0.342	0.200888485	0.19	4	Disagree		63200	6.32	13.8	49
G35021	20.83	20.47	22.23	79.03	-53.00	-68	-51.81	-66.80723593	-59.53	0.34	0.15	0.38	0.34	0.343	0.152270282	0.26	3	Disagree	9.4	78400	7.84	44.1	350
H43525	38.34	29.57	91.15	141.74	-134.19	-149.1875	-63.18	-78.17706741	-137.62	0.20	0.107663551	0.46	0.34	0.343	0.187154802	0.18	3	Disagree	1.71	75700	7.57	8.1	100
G37907	43.34	38.66	117.37	171.52	-162.81	-177.8125	-85.81	-100.8112943	-169.15	0.22	0.144360902	0.39	0.34	0.344	0.229337995	0.19	3	Disagree	2.46	72100	7.21	10.6	1030
X16510	0.00	45.49	40.95	76.74	-97.44	-112.4375	-96.53	-111.5280629	-102.95	0.34	0.242526316	0.38	0.35	0.346	0.24402137	0.31	3	Disagree	2.79	72500	7.25	51.6	390
X05538	40.00	38.66	38.21	78.75	-72.00	-87	-71.11	-86.11133253	-71.34	0.35	0.209090909	0.38	0.35	0.348	0.21079387	0.35	3	Disagree	1.06	62400	6.24	3.7	790
G35749	19.17	18.19	18.73	53.83	-80.11	-95.1125	-78.84	-93.84134955	-104.62	0.35	0.225547074	0.69	0.35	0.351	0.227905977	0.15	3	Disagree		52400	5.24	17.5	29
G32474	36.67	34.11	49.95	82.75	-75.88	-90.875	-74.85	-89.84998089	-82.76	0.35	0.222459893	0.39	0.35	0.354	0.224428177	0.29	3	Disagree	0.43	82400	8.24	10.2	120
H42238	35.84	36.39	70.17	116.83	-113.88	-128.875	-87.26	-102.2614472	-125.49	0.30	0.203861004	0.41	0.35	0.355	0.243971957	0.22	3	Disagree	1.29	71600	7.16	7.3	70
G32563	38.34	36.39	57.44	103.66	-78.50	-93.5	-78.09	-93.09268763	-86.11	0.36	0.236734694	0.42	0.36	0.360	0.237524462	0.30	3	Disagree	0.45	81400	8.14	12.4	130
H42197	33.34	31.84	34.71	71.01	-66.44	-81.4375	-65.38	-80.3760146	-71.60	0.36	0.212688822	0.38	0.36	0.361	0.214894085	0.31	3	Disagree	1.19	77500	7.75	6.4	170
G32537	21.67	20.47	30.97	68.44	-58.56	-73.5625	-58.10	-73.09684156	-71.09	0.36	0.196587031	0.41	0.36	0.362	0.197591922	0.22	3	Disagree	0.49	79000	7.9	12.1	210
X05559	34.17	31.84	36.71	71.01	-73.94	-88.9375	-73.46	-88.45725504	-84.10	0.36	0.232884097	0.40	0.36	0.364	0.233852779	0.27	3	Disagree	0.46	69600	6.96	2.7	230
H41683	46.67	47.76	48.45	90.77	-94.75	-109.75	-94.36	-109.3572742	-100.99	0.36	0.262184874	0.40	0.36	0.364	0.26287892	0.32	3	Disagree	23.5	81400	8.14	86.1	110
H41745	37.50	33.43	104.88	152.91	-150.07	-165.07381	-83.17	-98.17328359	-164.38	0.24	0.165503646	0.55	0.36	0.365	0.250081708	0.17	4	Disagree		71400	7.14	4.7	35
X10851	27.50	27.29	103.89	156.06	-132.00	-147	-48.75	-63.7510146	-132.71	0.18	0.08125	0.42	0.36	0.365	0.169378868	0.17	3	Disagree	1.12	62900	6.29	5.3	170
H43876	36.67	39.80	170.31	233.09	-106.89	-121.8875	-106.89	-121.8875	-129.89	0.37	0.281694291	0.37	0.37	0.370	0.281694291	0.23	4	Disagree		68900	6.89	3.2	22
X11052	35.00	34.11	44.20	68.44	-77.88	-92.875	-56.90	-71.89992356	-77.76	0.30	0.169832402	0.42	0.37	0.374	0.209021078	0.30	3	Disagree	1.95	40900	4.09	4	480
G36921	23.33	22.74	24.72	51.54	-45.81	-60.8125	-44.98	-59.97599549	-50.07	0.37	0.164806867	0.44	0.38	0.375	0.166722251	0.31	3	Disagree	1.62	42400	4.24	6.5	290
G32413	24.17	27.29	26.72	56.12	-53.63	-68.625	-52.93	-67.92595727	-58.33	0.37	0.198540146	0.40	0.38	0.377	0.20017437	0.32	3	Disagree	3.24	73800	7.38	43.4	530
H41731	17.50	13.65	24.72	53.26	-56.10	-71.1	-56.10	-71.1	-76.35	0.38	0.21	0.38	0.38	0.377	0.21	0.15	3	Disagree		88800	8.88	24.9	65
X17277	0.00	43.21	41.20	78.17	-81.63	-96.625	-80.24	-95.23642808	-87.41	0.38	0.260287081	0.38	0.38	0.379	0.263083718	0.33	3	Disagree	1.31	74900	7.49	64.1	190
H41687	48.34	47.76	47.95	92.20	-84.50	-99.5	-84.11	-99.10727415	-89.74	0.39	0.276363636	0.40	0.39	0.387	0.277155244	0.35	3	Disagree	2.72	77500	7.75	35.9	110
G34982	35.84	34.11	36.21	77.89	-64.69	-79.6875	-63.28	-78.2770483	-70.57	0.38	0.23880597	0.45	0.39	0.387	0.242067336	0.33	3	Disagree	2.68	75800	7.58	36.2	220
H41756	35.00	30.93	84.16	135.73	-138.49	-153.49246	-81.29	-96.28599753	-159.07	0.27	0.192144947	0.56	0.39	0.388	0.274919553	0.16	4	Disagree		66800	6.68	12.1	26
X05514	40.00	40.94	28.47	71.30	-71.25	-86.25	-70.75	-85.74787526	-75.31	0.39	0.258064516	0.42	0.39	0.389	0.259184023	0.35	3	Disagree	0.95	65100	6.51	4.2	260
H42182	47.50	45.49	36.96	85.04	-80.56	-95.5625	-80.15	-95.14789437	-86.08	0.39	0.273634204	0.42	0.39	0.389	0.27449926	0.35	3	Disagree	1.04	73100	7.31	8.2	140
X16527	0.00	40.94	45.70	81.04	-74.25	-89.25	-73.70	-88.69682245	-80.31	0.39	0.263917526	0.46	0.39	0.389	0.265127112	0.34	3	Disagree	2.44	73100	7.31	36.5	330
G33283	27.50	22.74	30.72	67.29	-58.00	-73	-57.74	-72.74164437	-72.26	0.39	0.231578947	0.43	0.39	0.391	0.232210451	0.24	3	Disagree	0.51	77400	7.74	8.4	140
H44275	30.00	30.70	31.47	61.85	-61.99	-76.98649	-61.65	-76.65065157	-71.49	0.39	0.246615388	0.79	0.39	0.395	0.24742856	0.30	4	Disagree		54700	5.47	3.4	32
G35686	15.83	18.19	82.16	122.56	-75.81	-90.8125	-41.20	-56.19682245	-84.62	0.26	0.116717325	0.62	0.40	0.396	0.175961278	0.18	3	Disagree	1.57	70200	7.02	6.9	330
H42176	44.17	40.94	27.72	94.78	-70.81	-85.8125	-70.04	-85.04163482	-76.88	0.40	0.271618037	0.42	0.40	0.402	0.273406981	0.35	3	Disagree	1.26	76500	7.65	3.6	200
H42203	36.67	36.39	42.70	85.04	-66.00	-81	-65.52	-80.51975504	-73.61	0.40	0.263636364	0.42	0.40	0.402	0.264792411	0.33	3	Disagree	1.24	78900	7.89	12.2	230
H43851	20.00	12.74	101.39	170.95	-84.99	-99.9875	-84.99	-99.9875	-129.45	0.40	0.296791209	0.40	0.40	0.402	0.296791209	0.09	4	Disagree		69900	6.99	1.8	56
H42165	52.50	52.31	40.46	98.22	-87.88	-102.875	-87.47	-102.4676876	-94.57	0.40	0.299574468	0.48	0.40	0.403	0.300407555	0.36	3	Disagree	7.49	78000	7.8	10.9	130
H41675	55.00	52.31	54.94	94.78	-81.88	-96.875	-81.47	-96.46768763	-84.57	0.40	0.292237443	0.43	0.40	0.403	0.293109678	0.38	4	Disagree	0.39	81300	8.13	15.1	130

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
H42215	35.84	38.66	135.35	198.72	-157.00	-172	-62.70	-77.69682245	-161.34	0.22	0.14	0.41	0.41	0.407	0.264908626	0.19	3	Disagree	1.14	73500	7.35	3.6	330
H42167	43.34	40.94	37.96	91.92	-74.31	-89.3125	-73.59	-88.58539437	-84.38	0.41	0.287281796	0.42	0.41	0.409	0.28895843	0.33	3	Disagree	2.13	81800	8.18	4.4	140
H41691	41.67	45.49	46.70	99.65	-73.50	-88.5	-70.61	-85.60727415	-77.01	0.40	0.27755102	0.43	0.41	0.410	0.284263647	0.37	3	Disagree	6.07	79300	7.93	27.7	110
G32428	42.50	43.21	41.70	69.30	-63.19	-78.1875	-62.81	-77.80515897	-63.98	0.41	0.270553936	0.45	0.41	0.412	0.271522465	0.40	3	Disagree	1.83	79600	7.96	14.1	310
H43849	16.67	18.19	51.44	125.71	-76.63	-91.625	-76.63	-91.625	-112.43	0.41	0.298564593	0.41	0.41	0.413	0.298564593	0.14	4	Disagree		68900	6.89	16.1	32
X17992	24.17	25.02	27.47	69.58	-49.44	-64.4375	-48.03	-63.03434156	-58.42	0.41	0.227715356	0.46	0.41	0.414	0.231610319	0.30	3	Disagree	0.6	62500	6.25	3.4	210
G35667	20.00	20.47	71.67	112.25	-87.06	-102.0625	-43.99	-58.99473593	-98.59	0.27	0.142782152	0.46	0.42	0.421	0.223699705	0.17	3	Disagree	2.1	63600	6.36	4.6	350
H43886	11.67	13.65	110.38	160.64	-130.25	-145.25	-28.82	-43.82496178	-137.60	0.14	0.039669421	0.44	0.42	0.421	0.120421568	0.09	3	Disagree	1.04	64900	6.49	6.8	240
X19627	15.00	14.10	79.66	115.11	-104.49	-119.4875	-47.59	-62.59499618	-125.59	0.25	0.144608501	0.56	0.43	0.425	0.243976097	0.10	3	Disagree		66700	6.67	6.1	24
X11073	21.67	20.47	38.71	70.15	-52.50	-67.5	-33.27	-48.2686449	-57.03	0.32	0.129032258	0.47	0.43	0.429	0.171618887	0.26	3	Disagree	2.19	60100	6.01	3.6	660
H43913	48.34	50.94	161.57	251.99	-112.39	-127.3875	-112.39	-127.3875	-146.24	0.43	0.353977813	0.43	0.43	0.430	0.353977813	0.26	3	Disagree		72000	7.2	2	17
G32353	10.83	13.65	78.16	124.56	-77.69	-92.6875	-29.10	-44.10413482	-86.04	0.22	0.070219436	0.44	0.43	0.430	0.136975218	0.14	3	Disagree	1.42	74200	7.42	6.2	200
H43893	38.34	45.49	111.63	171.24	-136.75	-151.75	-61.89	-76.89475504	-138.26	0.26	0.17414966	0.51	0.43	0.432	0.29386172	0.25	3	Disagree	1.14	67400	6.74	10.9	230
X14768	30.84	31.84	37.46	75.02	-53.19	-68.1875	-51.31	-66.30916958	-60.35	0.42	0.260338983	0.48	0.43	0.432	0.265753745	0.35	3	Disagree	1.75	64200	6.42	14.1	1290
H42190	33.34	36.39	22.48	75.60	-53.81	-68.8125	-51.19	-66.1885146	-56.42	0.42	0.258585859	0.48	0.43	0.432	0.266109272	0.39	3	Disagree	0.99	75300	7.53	3.8	170
X10310	14.17	55.84	19.23	47.82	-65.60	-80.6	-64.32	-79.31936831	-59.16	0.43	0.299130435	0.70	0.43	0.434	0.302499042	0.49	3	Disagree		39500	3.95	12.8	42
G36831	50.84	50.03	54.94	99.08	-73.38	-88.375	-72.63	-87.63330785	-79.34	0.43	0.316908213	0.46	0.44	0.435	0.318735487	0.39	3	Disagree	0.24	72400	7.24	7.2	160
H43844	17.50	13.19	110.88	166.94	-65.98	-80.975	-65.98	-80.975	-103.68	0.44	0.307165775	0.44	0.44	0.436	0.307165775	0.11	4	Disagree		77400	7.74	2.7	42
G32282	57.50	59.13	64.18	112.53	-79.19	-94.1875	-78.77	-93.77289437	-83.06	0.44	0.337582418	0.48	0.44	0.444	0.338569655	0.42	3	Disagree	0.34	82600	8.26	7	140
H41420	35.00	31.84	38.46	91.34	-51.56	-66.5625	-48.89	-63.89475504	-59.72	0.44	0.273037543	0.54	0.45	0.450	0.28123144	0.35	3	Disagree	1.01	83800	8.38	4.7	230
G36899	14.17	13.65	16.23	49.25	-24.75	-39.75	-23.15	-38.15499654	-30.10	0.43	0.091428571	0.49	0.45	0.451	0.094887921	0.31	3	Disagree	1.57	64200	6.42	9.7	1330
H41075	82.51	77.32	54.44	82.47	-92.13	-107.125	-91.72	-106.7249809	-90.80	0.45	0.362825279	0.46	0.45	0.453	0.363690606	0.46	3	Disagree	1.11	66800	6.68	10.3	120
X14248	45.84	43.21	49.45	116.54	-61.19	-76.1875	-60.74	-75.73642808	-68.98	0.45	0.320891365	0.53	0.46	0.456	0.32218678	0.39	3	Disagree	0.89	82600	8.26	7	190
X05493	34.17	31.84	23.97	107.67	-46.38	-61.375	-45.22	-60.21648195	-52.54	0.45	0.272592593	0.48	0.46	0.457	0.276387555	0.38	3	Disagree	1.04	72200	7.22	5.8	1160
X06348	56.67	52.31	34.46	65.86	-68.31	-83.3125	-67.72	-82.7155629	-73.00	0.45	0.335162095	0.52	0.46	0.457	0.336766311	0.42	3	Disagree	2.57	63300	6.33	50.8	390
H43532	65.84	59.13	70.42	111.96	-105.13	-120.125	-68.84	-83.8385337	-103.99	0.36	0.263601533	0.51	0.46	0.457	0.339013695	0.36	3	Disagree	4.16	48400	4.84	44.4	50
G32087	34.17	29.57	80.66	126.85	-97.19	-112.1875	-41.42	-56.42392808	-102.62	0.26	0.151300236	0.47	0.46	0.458	0.261698142	0.22	3	Disagree	1.88	63000	6.3	6.2	190
H41837	70.00	70.50	50.44	93.06	-83.13	-98.125	-82.44	-97.44165393	-82.62	0.46	0.359183673	0.52	0.46	0.459	0.360793776	0.46	3	Disagree	0.3	75800	7.58	16.3	80
H42219	42.50	43.21	58.19	96.50	-78.19	-93.1875	-69.48	-84.48014941	-93.98	0.43	0.320728929	0.51	0.46	0.459	0.342465355	0.31	4	Disagree	3.81	75900	7.59	17.9	370
H41671	63.34	61.40	61.43	92.78	-76.56	-91.5625	-76.32	-91.31873089	-80.16	0.46	0.353200883	0.51	0.46	0.460	0.35381014	0.43	3	Disagree	2.87	80100	8.01	80.4	120
X14539	35.84	36.39	39.71	76.74	-54.56	-69.5625	-53.34	-68.33945276	-65.17	0.46	0.315076923	0.52	0.47	0.468	0.318917426	0.36	3	Disagree	3.87	57300	5.73	8.7	820
G34616	14.17	15.92	21.23	55.84	-26.69	-41.6875	-25.89	-40.8936449	-33.77	0.46	0.161006289	0.53	0.47	0.470	0.163620446	0.32	3	Disagree	2.69	54700	5.47	5.3	660
X12194	6.67	6.37	9.74	34.65	-21.28	-36.275	-20.34	-35.3375	-33.01	0.46	0.078730159	0.47	0.47	0.471	0.080650407	0.16	2	Disagree		35200	3.52	13.7	59
H42234	41.67	43.21	85.16	138.88	-107.81	-122.8125	-72.77	-87.76874045	-129.60	0.38	0.289330922	0.58	0.47	0.472	0.362927031	0.25	4	Disagree	1.61	74300	7.43	8.4	60
H42236	34.17	36.39	83.66	121.41	-102.13	-117.125	-56.44	-71.44165393	-116.74	0.33	0.235102041	0.56	0.47	0.475	0.335065579	0.24	4	Disagree	1.02	73200	7.32	6.2	80
H42223	44.17	45.49	93.15	136.59	-99.94	-114.9375	-56.08	-71.07810111	-105.45	0.34	0.238509317	0.48	0.48	0.476	0.336203198	0.30	3	Disagree	1.17	73400	7.34	11.6	150
H43870	46.67	51.40	127.61	182.69	-66.29	-81.2875	-66.29	-81.2875	-75.79	0.48	0.360884521	0.48	0.48	0.479	0.360884521	0.40	4	Disagree		67200	6.72	3.3	43
H41677	42.50	40.94	45.70	87.34	-58.19	-73.1875	-57.79	-72.78748089	-71.25	0.48	0.347632312	0.52	0.48	0.483	0.348876276	0.36	4	Disagree	0.34	76400	7.64	15.6	120
H42199	47.50	47.76	54.19	90.49	-66.25	-81.25	-58.83	-73.83307855	-73.49	0.45	0.329896907	0.49	0.48	0.483	0.351391709	0.39	3	Disagree	5.25	66100	6.61	13.1	1600
G35099	51.67	50.03	78.91	117.12	-85.25	-100.25	-54.17	-69.16663482	-86.22	0.37	0.264220183	0.55	0.48	0.485	0.342313891	0.37	3	Disagree	4.94	56500	5.65	39.6	200
H42178	54.17	52.31	32.96	83.04	-65.19	-80.1875	-60.39	-75.39060111	-69.88	0.47	0.343734015	0.52	0.49	0.486	0.357779921	0.43	3	Disagree	1.2	83000	8.3	7.2	150
H43847	18.33	11.83	114.62	181.54	-57.54	-72.5375	-57.54	-72.5375	-101.61	0.49	0.360550964	0.49	0.49	0.493	0.360550964	0.10	4	Disagree		77600	7.76	4.1	50
H41697	36.67	38.66	42.95	90.20	-50.94	-65.9375	-46.10	-61.10413482	-57.28	0.47	0.312703583	0.51	0.49	0.494	0.329293506	0.40	3	Disagree	2.44	80500	8.05	6.5	200
H41704	45.00	47.76	53.44	111.10	-58.63	-73.625	-58.09	-73.09370223	-67.87	0.49	0.363243243	0.52	0.50	0.495	0.364920054	0.41	3	Disagree	0.93	82400	8.24	11.2	300
H42174	45.84	45.49	32.21	89.34	-50.63	-65.625	-49.83	-64.83225504	-55.14	0.50	0.347826087	0.53	0.50	0.501	0.350588094	0.45	3	Disagree	1.39	79900	7.99	3.9	230
G33025	21.67	6.82	15.23	79.89	-23.25	-38.25	-17.94	-32.9375	-34.43	0.44	0.072727273	0.50	0.50	0.501	0.083478261	0.17	2	Disagree	1.12	91300	9.13	5.3	3390
H43914	27.50	27.29	174.31	260.00	-189.44	-204.4375	-33.55	-48.54772239	-196.15	0.15	0.085034965	0.51	0.50	0.503	0.281282615	0.12	3	Disagree	1.57	71600	7.16	8.7	1220
H43779	14.17	1.82	18.98	87.62	-20.23	-35.225	-20.23	-35.225	-38.81	0.50	0.132923077	0.50	0.50	0.502	0.132923077	0.04	1	Agree		72600	7.26	1.6	154
X14681	11.67	13.65	19.48	63.00	-25.63	-40.625	-24.60	-39.59776061	-36.98	0.49	0.197530864	0.56	0.50	0.504	0.201622006	0.27	3	Disagree	6.47	58200	5.82	6.7	980
G35302	50.00	47.76	53.44	90.49	-53.81	-68.8125	-52.69	-67.68537526	-60.05	0.50	0.36173913	0.52	0.51	0.506	0.365560883	0.44	3	Disagree	3.75	69000	6.9	24.6	260

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
G35490	20.00	20.47	72.42	125.42	-34.44	-49.4375	-32.96	-47.96117011	-47.97	0.50	0.277625571	0.53	0.51	0.508	0.283746535	0.30	3	Disagree	1.05	79800	7.98	10.6	1810
H43854	21.67	22.06	116.37	160.35	-44.78	-59.775	-44.78	-59.775	-69.81	0.51	0.349387755	0.51	0.51	0.513	0.349387755	0.24	4	Disagree		65800	6.58	2.5	39
H41418	42.50	38.66	43.20	98.22	-45.75	-60.75	-44.88	-59.87901061	-55.09	0.51	0.352	0.64	0.52	0.517	0.355300942	0.41	3	Disagree	1.11	82500	8.25	14.9	980
X12487	48.34	47.76	33.96	91.63	-47.50	-62.5	-46.67	-61.67078875	-49.74	0.51	0.358974359	0.59	0.52	0.517	0.362053527	0.49	3	Disagree	36.1	64900	6.49	67.9	280
H42258	42.50	40.94	76.67	133.15	-78.44	-93.4375	-51.16	-66.15518763	-92.50	0.41	0.299765808	0.61	0.52	0.518	0.376806832	0.31	4	Disagree	1.27	78300	7.83	8.4	130
G32302	55.00	54.58	55.69	114.83	-56.56	-71.5625	-54.89	-69.89060111	-61.98	0.51	0.386058981	0.57	0.52	0.522	0.391676948	0.47	3	Disagree	0.56	78900	7.89	5.6	150
X14608	34.17	36.39	31.72	70.15	-43.13	-58.125	-36.33	-51.32578529	-46.74	0.48	0.30075188	0.58	0.52	0.524	0.327543305	0.44	3	Disagree	5.04	51300	5.13	50	1610
X06923	40.00	39.80	42.70	90.49	-52.50	-67.5	-51.85	-66.84582696	-70.20	0.52	0.386363636	0.83	0.53	0.526	0.388675098	0.36	4	Disagree		80000	8	19.5	40
H43540	73.34	71.64	59.18	109.38	-76.79	-91.7875	-64.58	-79.57520292	-78.05	0.49	0.386805846	0.60	0.53	0.530	0.421166863	0.48	3	Disagree		65500	6.55	12.2	34
H41833	64.17	65.95	44.70	80.75	-63.88	-78.875	-63.49	-78.48956741	-70.92	0.53	0.423744292	0.54	0.53	0.535	0.424940903	0.48	3	Disagree	0.31	78300	7.83	19.2	100
X11398	42.50	38.66	25.22	75.88	-38.19	-53.1875	-33.92	-48.91856846	-38.53	0.51	0.310931174	0.62	0.53	0.535	0.329134273	0.50	3	Disagree	1.82	69700	6.97	6.3	1140
G37625	34.17	34.11	41.70	83.04	-33.88	-48.875	-32.31	-47.3125	-37.76	0.53	0.32	0.54	0.54	0.540	0.327111111	0.47	3	Disagree	2.04	76200	7.62	9.5	370
X16518	0.00	47.76	49.70	93.06	-48.31	-63.3125	-47.75	-62.75202919	-57.55	0.54	0.398813056	0.56	0.54	0.544	0.400946887	0.45	3	Disagree	2.08	75200	7.52	26.1	340
H41694	45.00	47.76	51.94	104.23	-49.13	-64.125	-44.65	-59.64789437	-55.37	0.52	0.378181818	0.55	0.55	0.547	0.395345489	0.46	3	Disagree	2.74	77900	7.79	23.4	140
G35001	20.00	18.19	22.23	89.91	-25.13	-40.125	-23.14	-38.13505041	-34.93	0.53	0.244705882	0.57	0.55	0.548	0.254228751	0.34	3	Disagree	1.04	78900	7.89	6	2300
G33237	56.67	61.40	63.68	104.23	-56.00	-71	-55.65	-70.646832	-63.60	0.55	0.432	0.61	0.55	0.554	0.433224007	0.49	3	Disagree	2.52	67600	6.76	22.1	270
H42188	45.00	43.21	39.21	89.34	-38.56	-53.5625	-38.05	-53.053082	-43.35	0.55	0.381227437	0.60	0.56	0.558	0.383484231	0.50	3	Disagree	1.49	76100	7.61	11.8	270
X06531	39.17	37.98	44.95	93.64	-45.94	-60.9375	-45.58	-60.57832314	-65.46	0.56	0.410876133	0.91	0.56	0.558	0.412307833	0.37	4	Disagree		85800	8.58	12.1	64
G35642	20.00	20.47	92.15	136.01	-85.25	-100.25	-24.41	-39.40620223	-95.78	0.27	0.137634409	0.73	0.56	0.560	0.288776335	0.18	3	Disagree	1.72	70300	7.03	5.8	300
G32371	11.67	15.92	90.65	142.03	-66.38	-81.375	-17.76	-32.76246178	-73.46	0.26	0.08951049	0.65	0.56	0.564	0.196259	0.18	3	Disagree	1.26	77300	7.73	6.6	240
H42232	50.84	52.31	80.66	126.57	-68.50	-83.5	-48.70	-63.70310111	-80.19	0.48	0.369811321	0.69	0.57	0.568	0.434770645	0.39	4	Disagree	1.97	76100	7.61	12.1	150
H43884	35.84	40.94	159.08	211.90	-161.38	-176.375	-32.09	-47.09370223	-163.44	0.21	0.137003058	0.99	0.57	0.573	0.372867486	0.20	3	Disagree	1.09	64700	6.47	4.6	300
X12493	64.17	63.68	53.44	79.03	-46.75	-61.75	-46.01	-61.00830785	-45.07	0.57	0.432183908	0.71	0.57	0.574	0.435151711	0.59	3	Disagree	8.24	28600	2.86	17.9	160
H41446	50.84	47.76	53.44	99.65	-45.00	-60	-40.54	-55.53748089	-52.24	0.55	0.4	0.62	0.58	0.576	0.418683847	0.48	3	Disagree	2.25	74900	7.49	9	120
H42213	50.00	47.76	88.15	147.47	-74.50	-89.5	-38.14	-53.14060111	-79.74	0.42	0.298039216	0.61	0.58	0.582	0.41693822	0.37	3	Disagree	1.56	80000	8	5.6	150
X06326	49.17	45.49	36.21	75.88	-34.88	-49.875	-33.81	-48.8051112	-36.39	0.57	0.390839695	0.66	0.58	0.582	0.396014553	0.56	3	Disagree	1.39	70000	7	6.4	610
H43861	37.50	40.94	125.36	188.99	-128.75	-143.75	-32.35	-47.35302468	-132.81	0.26	0.172661871	0.61	0.58	0.582	0.387832281	0.24	3	Disagree	0.91	65400	6.54	6.7	630
H42184	76.67	72.78	62.18	110.82	-56.44	-71.4375	-55.32	-70.3227415	-60.66	0.58	0.464637002	0.64	0.58	0.582	0.468551356	0.55	3	Disagree	2.39	73500	7.35	12.5	1100
H41827	85.84	81.87	57.94	101.37	-66.31	-81.3125	-61.56	-76.55936067	-73.44	0.57	0.476458753	0.63	0.59	0.591	0.491500493	0.53	4	Disagree	0.95	79400	7.94	26.4	90
H43888	23.33	25.02	104.39	164.36	-109.88	-124.875	-21.87	-36.87287526	-116.86	0.23	0.119823789	0.60	0.59	0.594	0.315557689	0.18	3	Disagree	0.89	64900	6.49	3.5	260
X17292	77.51	70.50	74.42	119.41	-52.13	-67.125	-51.32	-66.32496178	-57.62	0.59	0.476097561	0.61	0.60	0.597	0.479089089	0.55	3	Disagree	1.05	76200	7.62	16.1	240
H43906	31.67	18.19	39.71	83.33	-28.94	-43.9375	-27.98	-42.97701008	-52.74	0.59	0.38061674	0.60	0.60	0.600	0.385841006	0.26	3	Disagree	0.72	69000	6.9	6	460
X14228	81.67	75.05	82.66	136.87	-50.13	-65.125	-49.70	-64.69580785	-53.07	0.61	0.491707317	0.70	0.61	0.611	0.493359971	0.59	3	Disagree	0.72	74400	7.44	5.3	160
H44123	41.67	40.94	45.95	91.34	-33.00	-48	-32.65	-47.65412526	-44.06	0.61	0.435294118	0.77	0.61	0.614	0.437072616	0.48	4	Disagree	0.75	75600	7.56	8.9	260
H42172	33.34	31.84	30.72	108.81	-29.06	-44.0625	-28.24	-43.23947186	-42.22	0.61	0.405063291	0.67	0.61	0.614	0.409615187	0.43	3	Disagree	1.87	78400	7.84	5.3	700
X14747	32.50	36.39	41.20	95.35	-31.94	-46.9375	-30.63	-45.63311676	-44.55	0.61	0.42007722	0.65	0.62	0.615	0.426958047	0.45	3	Disagree	1.49	61800	6.18	45.9	1360
X06302	38.34	36.39	27.22	62.42	-32.75	-47.75	-28.72	-43.72285615	-42.36	0.58	0.393650794	0.69	0.62	0.616	0.414866369	0.46	3	Disagree	2.81	63400	6.34	5.8	380
H41831	84.17	86.42	70.92	109.10	-52.94	-67.9375	-51.29	-66.28748089	-49.52	0.61	0.500229885	0.65	0.62	0.618	0.506376317	0.64	3	Disagree	0.41	74600	7.46	24.2	120
G32453	62.50	61.40	64.93	99.65	-41.75	-56.75	-41.33	-56.32810111	-47.35	0.62	0.47816092	0.68	0.62	0.618	0.480023184	0.56	3	Disagree	1.54	76000	7.6	14.8	150
X16501	0.00	77.32	54.19	93.92	-48.63	-63.625	-47.20	-62.19996178	-48.30	0.61	0.493532338	0.66	0.62	0.620	0.499195001	0.62	3	Disagree	0.69	70800	7.08	21.1	240
H42180	61.67	59.13	39.96	91.06	-41.44	-56.4375	-37.58	-52.57810111	-44.31	0.60	0.454380665	0.76	0.62	0.623	0.471991326	0.57	3	Disagree	0.65	81800	8.18	7.8	150
H44093	43.34	40.94	42.95	92.78	-29.44	-44.4375	-28.86	-43.86244267	-37.50	0.62	0.433466135	0.75	0.63	0.629	0.436667523	0.52	4	Disagree	0.88	58700	5.87	9.2	360
E217112	30.00	31.84	34.21	64.71	-19.81	-34.8125	-19.08	-34.07699097	-20.97	0.62	0.340828402	0.67	0.63	0.634	0.34564209	0.60	3	Disagree	1.39	80800	8.08	9.6	580
H42227	46.67	47.76	100.14	156.06	-82.81	-97.8125	-36.81	-51.80936067	-100.05	0.44	0.338266385	0.79	0.64	0.638	0.491113977	0.32	4	Disagree	1.35	69600	6.96	7.6	90
G35770	25.00	17.97	24.72	64.14	-27.59	-42.5875	-26.60	-41.60405247	-56.72	0.63	0.429790795	0.75	0.64	0.639	0.435525577	0.24	3	Disagree		59100	5.91	14.8	63
H41666	69.17	72.78	47.70	85.33	-42.44	-57.4375	-42.16	-57.16455785	-45.66	0.64	0.515039578	0.68	0.64	0.643	0.516229241	0.61	3	Disagree	0.63	79100	7.91	55.9	160
H43858	50.84	40.71	122.37	192.14	-51.14	-66.1375	-51.14	-66.1375	-102.73	0.64	0.538910675	0.64	0.64	0.643	0.538910675	0.28	4	Disagree		65600	6.56	3.3	46
H43527	31.67	27.29	88.15	150.62	-92.19	-107.1875	-19.31	-34.30936067	-99.90	0.28	0.157248157	0.81	0.64	0.644	0.368260642	0.21	3	Disagree	1.9	71800	7.18	22.4	90
H44104	55.84	47.76	56.19	100.51	-35.19	-50.1875	-34.74	-49.74372134	-54.43	0.66	0.508868502	0.81	0.66	0.659	0.511088049	0.47	4	Disagree	1.02	68300	6.83	6.9	180
H42255	45.84	47.76	104.39	160.93	-78.50	-93.5	-27.79	-42.79477415	-84.74	0.41	0.294339623	0.68	0.66	0.660	0.476803077	0.36	3	Disagree	0.8	71900	7.19	8.7	110

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
H41048	71.67	63.68	44.95	67.58	-31.81	-46.8125	-31.25	-46.25202919	-29.13	0.66	0.495622896	0.72	0.66	0.661	0.498634018	0.69	3	Disagree	0.64	80900	8.09	15.4	340
H43529	50.00	45.49	71.92	125.42	-69.44	-84.4375	-24.97	-39.97498089	-72.95	0.41	0.28707124	0.92	0.66	0.662	0.459614853	0.38	3	Disagree	1.24	72300	7.23	15.9	120
H43900	69.17	70.96	165.57	245.40	-43.61	-58.6125	-43.61	-58.6125	-64.36	0.68	0.566836028	0.68	0.68	0.678	0.566836028	0.52	4	Disagree		71000	7.1	2.5	28
H41043	32.50	31.84	23.47	36.65	-17.81	-32.8125	-16.44	-31.44358757	-20.97	0.66	0.378698225	0.70	0.68	0.680	0.388775374	0.60	3	Disagree	0.68	77800	7.78	10.1	1020
H44109	39.17	34.11	42.45	90.77	-25.88	-40.875	-21.58	-36.57911571	-37.76	0.64	0.431304348	0.89	0.68	0.681	0.458721599	0.47	3	Disagree	0.64	77900	7.79	16	320
H42260	51.67	50.03	86.16	128.00	-61.19	-76.1875	-28.21	-43.2145483	-72.15	0.50	0.376470588	0.77	0.68	0.684	0.515610972	0.41	4	Disagree	4.1	64300	6.43	39.3	220
H42262	53.34	54.58	89.15	139.45	-53.81	-68.8125	-26.84	-41.83539437	-58.23	0.52	0.390027701	0.76	0.69	0.687	0.51260905	0.48	3	Disagree	1.33	63400	6.34	50.1	140
H43780	14.17	15.92	15.73	82.18	-16.00	-31	-10.66	-25.65562896	-24.08	0.60	0.225	0.72	0.69	0.693	0.259698071	0.40	3	Disagree	1.52	79900	7.99	3.5	3900
H43776	55.84	56.86	35.71	101.37	-31.56	-46.5625	-30.98	-45.98324097	-44.71	0.69	0.541538462	0.73	0.69	0.693	0.544644829	0.56	3	Disagree	1.95	79400	7.94	9.1	580
H42206	56.67	59.13	92.15	137.16	-61.56	-76.5625	-28.28	-43.2770483	-67.43	0.51	0.395061728	0.72	0.70	0.697	0.536037545	0.47	3	Disagree	1.27	70000	7	13.6	220
H44091	51.67	40.94	50.44	104.80	-25.44	-40.4375	-24.91	-39.91349549	-42.50	0.70	0.515355805	0.86	0.70	0.700	0.518612799	0.49	4	Disagree	1.06	59500	5.95	11.2	290
G33372	57.50	54.58	58.94	117.69	-27.94	-42.9375	-27.05	-42.04994267	-36.36	0.69	0.527835052	0.80	0.70	0.700	0.533037541	0.60	3	Disagree	0.72	82300	8.23	15.2	360
X09587	22.50	31.84	18.98	64.43	-15.98	-30.975	-15.35	-30.35	-20.04	0.69	0.402891566	0.70	0.70	0.700	0.407804878	0.61	2	Disagree		63200	6.32	6.1	73
X12543	59.17	56.86	61.43	121.70	-26.13	-41.125	-25.22	-40.22174601	-31.27	0.70	0.533333333	0.76	0.71	0.711	0.538856445	0.65	3	Disagree	5.19	77400	7.74	30.8	810
X14656	37.50	38.66	29.72	73.02	-18.81	-33.8125	-17.65	-32.64668869	-24.15	0.70	0.461691542	0.74	0.71	0.714	0.470422672	0.62	3	Disagree	3.23	63000	6.3	7.7	1170
X12368	60.00	61.40	44.95	90.20	-23.06	-38.0625	-21.96	-36.96343816	-17.66	0.71	0.518577075	0.76	0.72	0.718	0.525887531	0.78	3	Disagree	1.87	64800	6.48	23.9	650
H43779	28.34	26.84	19.98	77.31	-13.88	-28.875	-13.88	-28.875	-22.54	0.72	0.415189873	0.72	0.72	0.719	0.415189873	0.54	2	Disagree		77800	7.78	1.6	88
X10897	36.67	34.11	31.22	83.04	-20.06	-35.0625	-17.03	-32.02898195	-29.95	0.69	0.452682927	0.84	0.72	0.721	0.47518407	0.53	3	Disagree	1.55	72700	7.27	3.3	1160
G33322	56.67	56.86	63.93	111.39	-23.88	-38.875	-23.34	-38.33640897	-30.02	0.73	0.552517986	0.81	0.73	0.730	0.55596475	0.65	3	Disagree	0.39	79100	7.91	7.1	310
G35349	63.34	61.40	66.43	107.95	-26.00	-41	-25.51	-40.51246178	-33.60	0.73	0.568421053	0.79	0.73	0.730	0.571353227	0.65	3	Disagree	1.53	66600	6.66	21.9	240
H40229	74.17	68.46	45.45	102.51	-30.11	-45.1125	-29.14	-44.14218033	-41.86	0.73	0.591048159	0.86	0.73	0.733	0.596293213	0.62	4	Disagree		71600	7.16	4	45
G36484	173.34	137.59	211.02	349.92	-61.05	-76.05	-60.40	-75.39655629	-91.16	0.73	0.667540984	0.81	0.74	0.735	0.669453334	0.60	4	Disagree		56900	5.69	194.8	39
E192667	47.50	45.49	58.19	106.52	-20.56	-35.5625	-19.47	-34.47073142	-31.08	0.73	0.535510204	0.84	0.74	0.742	0.543256958	0.59	3	Disagree	0.85	75100	7.51	5.5	640
G36294	43.34	45.49	48.45	95.07	-18.38	-33.375	-17.67	-32.66866401	-23.89	0.74	0.518918919	0.89	0.74	0.743	0.524256595	0.66	3	Disagree	0.71	74800	7.48	7.7	540
H42253	71.67	68.23	118.62	175.53	-68.06	-83.0625	-26.12	-41.12186067	-75.83	0.53	0.423427332	0.75	0.74	0.744	0.597325583	0.47	3	Disagree	1.15	68400	6.84	9.4	90
H43857	33.34	38.66	103.14	172.67	-94.50	-109.5	-14.50	-29.5	-98.84	0.31	0.203636364	0.75	0.75	0.748	0.486956522	0.28	3	Disagree	0.83	65700	6.57	4.8	240
H42225	38.34	40.94	104.64	160.93	-74.88	-89.875	-14.78	-29.78018763	-80.94	0.39	0.262564103	0.77	0.76	0.761	0.517965406	0.34	3	Disagree	0.87	75200	7.52	5.4	130
H41414	33.34	29.57	34.96	97.93	-15.88	-30.875	-12.60	-27.60302468	-27.31	0.72	0.457142857	0.91	0.76	0.765	0.485047255	0.52	3	Disagree	1.13	81300	8.13	7	630
G33813	38.34	40.94	49.20	102.51	-20.88	-35.875	-20.18	-35.17595727	-45.94	0.76	0.58705036	0.88	0.77	0.766	0.591812399	0.47	4	Disagree	0.46	74400	7.44	8.7	530
H41069	44.17	43.21	35.96	50.11	-15.69	-30.6875	-14.92	-29.91861624	-21.48	0.76	0.525603865	0.85	0.77	0.767	0.531926409	0.67	3	Disagree	1.29	76400	7.64	23.2	840
X12452	56.67	59.13	48.20	94.49	-17.38	-32.375	-16.72	-31.71971682	-15.24	0.77	0.564705882	0.83	0.77	0.773	0.569725466	0.80	3	Disagree	2.36	65200	6.52	12	470
X06183	28.34	27.97	21.98	63.86	-14.64	-29.6375	-13.97	-28.96874045	-35.46	0.77	0.532807882	0.98	0.78	0.777	0.538484599	0.44	3	Disagree		61800	6.18	2.3	60
X11420	87.51	81.87	46.45	85.33	-26.69	-41.6875	-23.12	-38.11650106	-27.81	0.76	0.61994302	0.97	0.78	0.782	0.640805146	0.75	3	Disagree	1.83	59700	5.97	11.1	1040
H41040	85.01	81.87	47.20	80.18	-20.88	-35.875	-20.56	-35.5625	-15.00	0.78	0.629677419	0.79	0.79	0.787	0.63171521	0.85	3	Disagree	1.16	76500	7.65	23.9	380
G32060	48.34	45.49	89.90	140.02	-69.56	-84.5625	-12.29	-27.28748089	-71.08	0.40	0.274530831	0.81	0.79	0.793	0.539742953	0.39	3	Disagree	1.84	68000	6.8	15	120
X14398	34.17	31.84	63.93	104.52	-31.19	-46.1875	-10.64	-25.64161571	-40.35	0.57	0.36017316	1.04	0.79	0.794	0.503469917	0.44	3	Disagree	3.15	67900	6.79	8	320
H43911	52.50	52.31	140.35	208.46	-115.44	-130.4375	-13.45	-28.45088083	-116.13	0.31	0.225602968	0.96	0.80	0.798	0.57185096	0.31	3	Disagree	0.85	71100	7.11	9.5	1010
X14583	56.67	59.13	53.19	82.18	-19.19	-34.1875	-17.03	-32.0280629	-28.06	0.78	0.607885305	0.87	0.80	0.800	0.62332362	0.68	3	Disagree	3.82	38000	3.8	5.3	390
H43904	34.17	38.66	129.11	199.58	-120.06	-135.0625	-9.54	-24.53627521	-120.40	0.25	0.150884086	0.84	0.80	0.804	0.494475522	0.24	3	Disagree	1.31	66100	6.61	3.7	1150
X06170	30.84	30.25	20.98	71.87	-13.39	-28.3875	-12.14	-27.1375	-34.44	0.79	0.56115942	0.81	0.81	0.809	0.572216749	0.47	3	Disagree		64300	6.43	4.1	57
H44106	55.00	52.31	56.94	105.95	-13.88	-28.875	-12.91	-27.91451008	-19.57	0.81	0.59826087	1.04	0.82	0.818	0.606363916	0.73	3	Disagree	0.62	70700	7.07	5.4	460
X06372	54.17	52.31	47.70	81.61	-14.69	-29.6875	-12.05	-27.05400106	-17.38	0.79	0.573991031	0.91	0.82	0.820	0.596534127	0.75	3	Disagree	3.17	57500	5.75	6.8	1040
X15026	39.17	36.39	40.71	75.88	-11.19	-26.1875	-8.75	-23.75091905	-20.80	0.80	0.542076503	0.93	0.84	0.840	0.566200541	0.64	3	Disagree	1.3	69200	6.92	4.9	770
H40217	62.50	57.99	46.95	107.95	-14.85	-29.85	-14.51	-29.51051494	-35.76	0.84	0.6816	1.02	0.84	0.845	0.684077162	0.62	4	Disagree		78200	7.82	3	37
H43534	94.17	86.42	100.89	159.78	-61.25	-76.25	-14.63	-29.62915393	-54.83	0.57	0.460176991	1.08	0.85	0.845	0.686891907	0.61	3	Disagree	2.82	61800	6.18	30.1	80
X11442	38.34	34.11	80.66	128.86	-67.19	-82.1875	-6.38	-21.38016852	-68.07	0.34	0.195718654	1.00	0.85	0.846	0.48332331	0.33	3	Disagree	0.92	63800	6.38	5.5	250
X14308	47.50	45.49	60.43	113.68	-11.69	-26.6875	-9.09	-24.09046735	-19.20	0.82	0.587439614	1.00	0.85	0.854	0.612010211	0.70	3	Disagree	2.26	79800	7.98	5.5	990
H43848	0.42	27.29	116.37	180.11	-102.31	-117.3125	-6.49	-21.490582	-113.02	0.27	0.163919822	1.19	0.85	0.854	0.516963343	0.19	3	Disagree	1.08	65800	6.58	6.3	270
G33828	81.67	81.87	85.16	121.98	-16.06	-31.0625	-15.50	-30.50202919	-27.19	0.85	0.715186246	1.06	0.86	0.857	0.718880565	0.75	4	Disagree	1.45	72500	7.25	28.4	340
G35041	38.34	38.66	42.95	76.74	-8.50	-23.5	-7.10	-22.10191454	-13.84	0.84	0.552380952	0.95	0.86	0.861	0.567493415	0.74	3	Disagree	1.84	77700	7.77	7.3	1060

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
G32407	11.67	13.65	100.14	147.75	-63.38	-78.375	-3.84	-18.8395483	-75.73	0.29	0.123076923	0.91	0.87	0.871	0.368638288	0.15	3	Disagree	1.53	73600	7.36	11.9	220
G36967	19.17	20.47	22.23	65.00	-4.38	-19.375	-3.44	-18.4375	-8.91	0.85	0.340425532	0.88	0.88	0.879	0.351648352	0.70	3	Disagree	2.03	66000	6.6	4.2	1790
G35387	33.34	34.11	35.71	67.01	-6.50	-21.5	-4.95	-19.94764596	-13.39	0.86	0.547368421	1.01	0.89	0.892	0.565861416	0.72	3	Disagree	0.55	71700	7.17	7.9	1700
H41431	59.17	52.31	57.94	118.26	-10.88	-25.875	-6.64	-21.64475504	-24.57	0.86	0.663414634	1.06	0.91	0.909	0.702046555	0.68	4	Disagree	1.07	78500	7.85	12.9	230
H43895	107.51	95.06	147.84	225.93	-11.01	-26.0125	-11.01	-26.0125	-30.25	0.91	0.792418953	0.91	0.91	0.912	0.792418953	0.76	4	Disagree		77000	7.7	3.1	50
H43903	57.50	61.86	130.36	207.03	-9.53	-24.525	-9.53	-24.525	-51.27	0.92	0.78320442	0.92	0.92	0.916	0.78320442	0.55	4	Disagree		62000	6.2	2	23
H42217	64.17	65.95	124.61	182.40	-57.50	-72.5	-7.11	-22.10727415	-71.55	0.58	0.472727273	0.97	0.92	0.918	0.746206337	0.48	4	Disagree	1.23	73900	7.39	7.5	110
G32516	35.00	34.11	79.66	126.85	-5.06	-20.0625	-3.90	-18.89668869	-14.95	0.90	0.591082803	1.14	0.92	0.919	0.605469831	0.70	3	Disagree	0.27	79100	7.91	9.4	1170
H42208	59.17	59.13	82.91	124.56	-30.44	-45.4375	-5.31	-20.3135146	-34.31	0.67	0.513712375	0.92	0.92	0.922	0.702642812	0.63	3	Disagree	0.65	70800	7.08	4.9	170
H43892	25.84	26.38	69.42	132.58	-4.46	-19.4625	-4.46	-19.4625	-32.68	0.92	0.67047619	0.92	0.92	0.924	0.67047619	0.45	4	Disagree		75600	7.56	3.6	71
G32390	9.17	11.37	93.40	142.31	-57.00	-72	-1.80	-16.803082	-68.63	0.29	0.1	0.94	0.93	0.927	0.322540562	0.14	3	Disagree	0.92	76500	7.65	5.8	270
H43869	13.33	15.92	103.89	162.07	-90.75	-105.75	-1.64	-16.64263031	-97.83	0.20	0.07032967	0.99	0.93	0.933	0.324640669	0.14	3	Disagree	0.43	72300	7.23	3.2	490
H43910	43.34	45.49	50.69	93.06	-6.38	-21.375	-3.48	-18.48116401	-13.89	0.89	0.64	0.96	0.94	0.938	0.672790667	0.77	3	Disagree	0.69	68600	6.86	5.9	540
X10300	10.00	34.17	12.74	34.08	-5.65	-20.65	-2.12	-17.12206359	-9.58	0.87	0.528	1.14	0.95	0.947	0.574311657	0.78	3	Disagree		47600	4.76	5	124
X14372	33.34	29.57	53.69	104.52	-15.50	-30.5	-2.32	-17.31554379	-27.93	0.73	0.469565217	1.04	0.95	0.948	0.609267036	0.51	3	Disagree	2.33	69900	6.99	5.8	510
H44112	69.17	68.23	69.92	111.96	-5.06	-20.0625	-3.38	-18.3760146	-15.83	0.94	0.76133829	1.07	0.96	0.959	0.77692518	0.81	4	Disagree	1.03	72000	7.2	8.4	170
H43929	68.34	70.50	76.67	124.27	-3.94	-18.9375	-2.35	-17.35201008	-10.44	0.95	0.766023166	1.07	0.97	0.970	0.781328664	0.87	4	Disagree	0.44	74400	7.44	5.2	460
X09201	58.34	56.86	59.18	117.40	-3.50	-18.5	-1.59	-16.5913864	-10.64	0.95	0.725925926	1.06	0.98	0.976	0.747049311	0.84	3	Disagree	6.18	77100	7.71	94	1760
G33307	53.34	50.03	59.18	102.23	-2.56	-17.5625	-1.32	-16.32486624	-11.53	0.96	0.714720812	1.06	0.98	0.978	0.729384129	0.81	3	Disagree	0.32	79100	7.91	6.9	840
G37985	31.67	27.29	106.13	160.07	-70.33	-85.325	-0.92	-15.92374427	-108.33	0.48	0.370875576	1.15	0.99	0.986	0.759546301	0.20	4	Disagree		69800	6.98	6.5	36
X11805	58.34	56.40	129.86	180.68	-97.76	-112.7625	-0.86	-15.86197359	-105.16	0.39	0.30205029	1.67	0.99	0.987	0.754693946	0.35	3	Disagree		62900	6.29	3.5	35
H43846	18.33	20.47	113.38	172.67	-97.50	-112.5	-0.31	-15.3125	-107.03	0.24	0.117647059	0.99	0.99	0.990	0.494845361	0.16	3	Disagree	0.99	71200	7.12	6.9	240
X16693	25.84	25.24	30.47	76.17	-0.95	-15.95	-0.23	-15.22799965	-28.51	0.98	0.703255814	1.84	1.00	0.996	0.712830962	0.47	4	Disagree		65800	6.58	12.3	133
H43854	30.84	31.84	100.89	182.12	-73.13	-88.125	-0.08	-15.07911571	-81.29	0.35	0.220994475	1.11	1.00	0.998	0.623766257	0.28	3	Disagree	1.33	67700	6.77	5.2	320
H43856	135.01	133.50	104.88	174.10	0.05	-14.95	0.05	-14.95	7.25	1.00	0.881584158	1.00	1.00	1.000	0.881584158	1.06	4	Disagree		52900	5.29	10	52
H40631	25.84	22.74	41.95	83.90	-1.19	-16.1875	0.08	-14.92267462	-14.44	0.97	0.564705882	1.13	1.00	1.002	0.584588988	0.61	3	Disagree	1.34	81200	8.12	6.6	1520
H41017	47.50	46.85	34.71	53.26	-0.11	-15.1125	0.51	-14.4875	-0.96	1.00	0.683921569	1.01	1.01	1.011	0.692980132	0.98	4	Disagree		74700	7.47	12.2	98
G36315	44.17	45.49	51.94	91.92	-1.50	-16.5	0.62	-14.37591905	-7.01	0.97	0.685714286	1.18	1.01	1.012	0.714627161	0.87	3	Disagree	0.69	72400	7.24	5.6	770
X06662	25.84	26.15	81.41	132.86	-53.39	-68.3875	0.67	-14.325	-81.03	0.50	0.361982507	1.01	1.01	1.013	0.730352941	0.24	4	Disagree		76000	7.6	8.9	44
G32335	56.67	54.58	113.87	166.94	-63.25	-78.25	0.90	-14.09998089	-66.67	0.48	0.354639175	1.09	1.02	1.016	0.753065051	0.45	3	Disagree	1.71	67300	6.73	2.7	120
G34513	39.17	35.25	42.45	82.47	1.00	-14	1.36	-13.64009382	-34.75	1.01	0.8	1.10	1.02	1.020	0.804134471	0.50	4	Disagree		67700	6.77	18.7	65
G37645	83.34	81.87	88.15	147.18	0.63	-14.375	1.78	-13.22488535	-2.50	1.01	0.82962963	1.07	1.02	1.021	0.84109458	0.97	3	Disagree	1.11	73400	7.34	16.1	720
H41699	66.67	61.40	73.42	118.26	2.53	-12.475	2.53	-12.475	-57.97	1.02	0.895497382	1.02	1.02	1.021	0.895497382	0.51	4	Disagree		77000	7.7	274.3	70
G36278	43.34	43.21	42.20	85.62	0.00	-15	1.09	-13.90712128	-1.79	1.00	0.666666667	1.31	1.02	1.025	0.683260463	0.96	3	Disagree	0.87	62000	6.2	7.2	1070
H41448	64.17	54.58	64.18	124.27	0.63	-14.375	2.27	-12.73116401	-19.79	1.01	0.806722689	1.28	1.03	1.031	0.824955861	0.73	4	Disagree	1.02	77400	7.74	9.3	540
G34662	41.67	40.94	42.95	85.62	0.44	-14.5625	1.60	-13.40398195	-5.63	1.01	0.687248322	1.19	1.04	1.035	0.704784	0.88	3	Disagree	1.53	67900	6.79	8.5	1160
E192683	84.17	79.60	82.91	134.30	2.00	-13	3.21	-11.78535615	-5.40	1.02	0.847058824	1.08	1.04	1.038	0.859338711	0.94	3	Disagree	0.45	68000	6.8	5.2	380
G36991	35.00	34.11	40.21	71.59	1.19	-13.8125	1.88	-13.12075053	-8.70	1.03	0.677372263	1.14	1.04	1.045	0.688496754	0.80	3	Disagree	2.35	56700	5.67	6.5	520
H43778	57.50	44.35	33.21	98.50	2.15	-12.85	2.15	-12.85	-4.40	1.04	0.736410256	1.04	1.04	1.044	0.736410256	0.91	2	Agree		83000	8.3	2.1	86
X14560	60.00	59.13	46.70	110.24	0.31	-14.6875	3.68	-11.31849203	-15.56	1.00	0.80334728	1.22	1.05	1.052	0.841296532	0.79	3	Disagree	3.47	60800	6.08	7.5	1620
H41036	103.34	100.07	86.41	109.96	4.31	-10.6875	4.88	-10.11973593	5.38	1.05	0.887128713	1.14	1.05	1.052	0.892480192	1.06	4	Disagree	2.1	63800	6.38	10.4	350
X10872	24.17	25.02	65.93	120.27	-44.81	-59.8125	1.45	-13.5540966	-47.80	0.38	0.178540773	1.18	1.05	1.054	0.489566646	0.34	3	Disagree	1.37	68600	6.86	2	440
H43877	24.17	27.29	127.11	189.56	-103.56	-118.5625	1.73	-13.27076964	-109.27	0.24	0.13180778	1.21	1.06	1.055	0.575617428	0.20	3	Disagree	0.69	66900	6.69	8.4	400
G37583	93.34	90.97	95.64	139.45	-8.19	-23.1875	4.94	-10.0625	-11.22	0.92	0.773088685	1.06	1.06	1.055	0.887017544	0.89	4	Disagree	0.88	69200	6.92	6.6	220
X14327	6.67	6.82	29.47	76.74	-2.13	-17.125	1.15	-13.84525369	-16.30	0.91	0.259459459	1.24	1.06	1.058	0.302339294	0.30	3	Disagree	1.02	87800	8.78	4.1	3640
H41691	74.17	67.77	77.66	142.60	9.40	-5.6	9.40	-5.6	-52.23	1.08	0.953333333	1.08	1.08	1.078	0.953333333	0.56	4	Disagree		74100	7.41	46.1	59
H43880	30.84	36.39	123.61	184.12	-91.19	-106.1875	3.42	-11.57911571	-95.80	0.31	0.196690307	1.26	1.09	1.091	0.691873651	0.28	3	Disagree	0.67	66500	6.65	7.9	320
H43881	33.34	36.39	116.12	177.82	-81.38	-96.375	4.25	-10.75	-87.99	0.35	0.225125628	1.11	1.11	1.110	0.722580645	0.29	3	Disagree	1.14	66600	6.66	6	330
H44127	114.17	109.16	113.63	160.35	13.44	-1.5625	13.71	-1.289557855	2.60	1.13	0.985337243	1.25	1.13	1.129	0.987867502	1.02	4	Disagree	2.37	70100	7.01	24.9	160
X14702	42.50	45.49	50.19	85.33	5.31	-9.6875	6.62	-8.375823506	-4.20	1.11	0.805031447	1.30	1.14	1.137	0.826859309	0.92	3	Disagree	1.75	67700	6.77	5.6	1370

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
G35450	81.67	79.60	111.13	178.97	9.81	-5.1875	10.64	-4.364471864	2.41	1.13	0.932793522	1.27	1.14	1.139	0.942846827	1.03	3	Disagree	1.86	75300	7.53	14.1	700
G36474	55.00	58.90	60.18	101.65	7.80	-7.2	8.11	-6.8875	6.40	1.15	0.862857143	1.16	1.16	1.155	0.868023952	1.12	4	Disagree		65200	6.52	0.1	65
G36085	52.50	48.44	60.18	106.81	7.22	-7.775	10.07	-4.927492356	-18.43	1.11	0.883738318	1.39	1.16	1.157	0.923040991	0.72	4	Disagree		56800	5.68	7	48
H41077	83.34	79.60	52.19	83.33	9.75	-5.25	10.49	-4.510289273	13.35	1.15	0.920754717	1.30	1.16	1.160	0.931151437	1.20	3	Disagree	2.65	71600	7.16	18.5	800
H43898	77.51	81.65	109.13	197.58	15.84	0.8375	15.84	0.8375	-14.92	1.16	1.008673139	1.16	1.16	1.164	1.008673139	0.85	4	Disagree		75000	7.5	68.3	63
H43899	54.17	56.86	138.35	224.21	-96.25	-111.25	7.84	-7.157216823	-94.39	0.36	0.26446281	1.57	1.17	1.166	0.848226479	0.38	3	Disagree	0.37	71600	7.16	3.7	470
X17305	103.34	102.34	99.64	156.35	13.06	-1.9375	17.02	2.024004513	6.40	1.14	0.97980456	1.31	1.19	1.185	1.022005791	1.07	4	Disagree	3.84	69600	6.96	15.8	290
H44125	71.67	68.23	74.67	126.57	12.06	-2.9375	12.53	-2.46763986	2.29	1.18	0.955450237	1.57	1.19	1.191	0.962307487	1.03	4	Disagree	1.26	72200	7.22	5.7	430
X14418	71.67	65.95	82.41	141.46	9.88	-5.125	11.98	-3.022798828	2.83	1.16	0.918811881	1.31	1.20	1.196	0.950464435	1.04	3	Disagree	2.39	71400	7.14	56.5	740
X05422	0.42	2.27	7.24	114.25	1.38	-10.624	2.00	-9.999	-8.35	1.13	9.41176E-05	1.20	1.20	1.200	0.01	0.21	2	Disagree	0.08	77500	7.75	17.6	940
H41071	81.67	79.60	67.93	87.05	13.31	-1.6875	13.97	-1.028015123	9.91	1.19	0.975784753	1.30	1.20	1.202	0.985107277	1.14	3	Disagree	1.18	66900	6.69	9.2	690
X15681	31.67	30.02	40.46	71.01	9.00	-6	10.00	-5.000507298	-14.98	1.20	0.866666667	1.50	1.23	1.227	0.886353417	0.67	3	Disagree		60100	6.01	10.1	85
H41711	50.00	31.16	48.45	92.78	12.49	-2.5125	12.49	-2.5125	-24.16	1.23	0.954576271	1.23	1.23	1.226	0.954576271	0.56	4	Disagree		82800	8.28	1080.3	134
X19614	31.67	26.84	88.65	126.28	-41.58	-56.575	11.26	-3.736973593	-75.04	0.59	0.444662577	1.45	1.23	1.230	0.923792736	0.26	4	Disagree		62300	6.23	4.8	35
H43901	65.00	70.50	146.59	215.62	-88.25	-103.25	12.86	-2.144755041	-85.75	0.44	0.3392	1.69	1.23	1.233	0.961106817	0.45	3	Disagree	0.83	69600	6.96	5.1	230
H41437	68.34	63.68	69.67	123.13	12.81	-2.1875	15.18	0.178368639	-3.51	1.19	0.96744186	1.46	1.23	1.234	1.002751684	0.95	4	Disagree	0.99	79600	7.96	7	1530
H42099	15.00	14.78	83.16	131.15	-37.59	-52.58637	8.66	-6.33637	-68.03	0.55	0.364994777	1.24	1.24	1.237	0.826697573	0.18	3	Disagree		74000	7.4	16.3	60
H43852	30.84	34.11	113.63	185.27	-81.19	-96.1875	8.13	-6.869735932	-88.07	0.34	0.212787724	1.27	1.25	1.247	0.791001183	0.28	3	Disagree	0.84	66600	6.66	4.1	350
H43863	34.17	38.66	141.84	197.58	-99.63	-114.625	8.19	-6.8125	-101.96	0.29	0.184888889	1.25	1.25	1.250	0.792380952	0.27	3	Disagree	0.46	69500	6.95	4	280
X15439	51.67	51.40	34.71	93.35	14.64	-0.3625	15.65	0.645015287	-10.16	1.24	0.994111675	2.08	1.26	1.258	1.010651729	0.83	4	Disagree		63400	6.34	7.4	96
H42229	85.01	81.87	128.61	189.28	-14.81	-29.8125	21.21	6.212519109	-30.94	0.87	0.735734072	1.58	1.28	1.276	1.080905364	0.73	4	Disagree	1.02	69000	6.9	5.3	120
H41079	90.01	86.42	56.19	102.23	17.25	2.25	17.87	2.873018581	22.67	1.27	1.035294118	1.33	1.28	1.283	1.045511737	1.36	3	Disagree	0.79	67100	6.71	12.7	640
H41689	56.67	56.40	66.68	112.82	32.53	17.525	32.53	17.525	-47.97	1.31	1.167904192	1.31	1.31	1.312	1.167904192	0.54	4	Disagree		79500	7.95	74	56
E217198	26.67	29.57	64.68	104.52	-12.56	-27.5625	9.31	-5.692572978	-22.00	0.76	0.465454545	1.45	1.31	1.313	0.808282934	0.57	3	Disagree	3.02	73300	7.33	10.8	850
H41689	113.34	118.26	72.67	130.00	28.00	13	28.00	13	38.26	1.35	1.1625	1.35	1.35	1.350	1.1625	1.48	4	Disagree	2.29	79000	7.9	13.4	380
H41045	114.17	109.16	82.66	108.81	22.88	7.875	23.65	8.646975322	41.04	1.34	1.11559633	1.36	1.35	1.351	1.128382881	1.60	3	Disagree	0.67	64600	6.46	19.2	630
H41364	42.50	43.21	92.90	141.46	-28.45	-43.45	17.53	2.525424947	-50.54	0.70	0.536533333	1.83	1.37	1.367	1.052861275	0.46	4	Disagree		67600	6.76	31.5	52
G33872	172.51	170.57	169.56	210.46	48.69	33.6875	49.16	34.1604517	40.26	1.37	1.258513189	1.65	1.38	1.379	1.263097432	1.31	4	Disagree	0.62	62800	6.28	9.1	220
G35359	34.17	34.11	38.96	79.89	10.88	-4.125	12.29	-2.707016179	0.99	1.33	0.875471698	1.66	1.39	1.388	0.914624064	1.03	3	Disagree	1.63	68200	6.82	17.8	1730
H43777	51.67	52.31	31.47	105.95	12.88	-2.125	14.54	-0.455953811	14.18	1.34	0.944262295	1.47	1.40	1.399	0.987493022	1.37	3	Disagree	1.31	80000	8	4.2	1860
H41694	71.67	65.27	72.92	138.02	36.30	21.3	36.30	21.3	-24.73	1.40	1.236666667	1.40	1.40	1.403	1.236666667	0.73	4	Disagree		73900	7.39	58.3	77
H41354	24.17	24.33	84.41	136.30	-24.36	-39.3625	16.95	1.945846073	-57.23	0.70	0.517394636	1.45	1.42	1.421	1.048339013	0.30	4	Disagree		72500	7.25	19.6	80
E217134	65.84	63.68	98.64	147.18	-12.13	-27.125	19.60	4.5979517	-14.45	0.84	0.6528	1.43	1.42	1.422	1.099089412	0.82	3	Disagree	1.94	69600	6.96	10.2	220
H41542	30.00	30.70	79.66	142.03	-33.15	-48.14856	17.16	2.16394	-60.24	0.64	0.470531299	1.42	1.42	1.422	1.053266215	0.34	4	Disagree		71800	7.18	16.2	61
X19380	57.50	53.22	56.44	106.81	23.21	8.2125	23.92	8.919913828	-3.97	1.41	1.143606557	2.47	1.42	1.424	1.157930245	0.93	4	Disagree		76200	7.62	4.3	113
H42087	17.50	12.51	70.92	118.83	-23.50	-38.49874	14.99	-0.006540557	-61.24	0.68	0.477983186	2.55	1.43	1.425	0.999814493	0.17	3	Disagree		80600	8.06	13.5	75
H44089	118.34	97.79	111.63	171.52	36.69	21.6875	37.20	22.196918	12.48	1.43	1.254212454	1.78	1.44	1.439	1.261746595	1.15	4	Disagree	1.47	57500	5.75	8.7	270
H41424	68.34	63.68	69.67	128.57	22.81	7.8125	24.94	9.943874208	6.49	1.40	1.136612022	1.75	1.45	1.453	1.180613403	1.11	4	Disagree	1.02	83600	8.36	5.4	780
E192620	52.50	47.76	53.69	99.36	14.94	-0.0625	17.03	2.029555216	8.70	1.38	0.9984	1.50	1.46	1.461	1.054896695	1.22	3	Disagree	1.17	70100	7.01	8.3	2440
H43778	64.17	70.50	40.46	105.38	20.50	5.5	20.50	5.5	28.00	1.48	1.129411765	1.48	1.48	1.482	1.129411765	1.66	3	Disagree	1.07	81600	8.16	6.1	2770
X12593	80.84	75.05	88.90	132.29	24.25	9.25	25.89	10.88987315	21.30	1.45	1.172093023	1.72	1.50	1.497	1.208978059	1.40	3	Disagree	4.77	73100	7.31	19.7	1820
H41450	69.17	65.95	71.17	121.12	19.44	4.4375	23.91	8.909532649	14.39	1.38	1.086060606	1.86	1.51	1.508	1.189200345	1.28	3	Disagree	1.43	84900	8.49	4.9	990
H41687	62.50	59.13	67.68	120.55	44.43	29.425	44.43	29.425	-27.74	1.51	1.338705036	1.51	1.51	1.511	1.338705036	0.68	4	Disagree		82900	8.29	42.9	74
X11797	70.84	69.14	136.60	194.14	-55.29	-70.2875	28.00	12.9950344	-68.05	0.60	0.487653759	2.43	1.52	1.519	1.241073049	0.50	3	Disagree		69200	692%	3.2	216
E192601	47.50	43.21	49.70	98.22	15.50	0.5	18.24	3.240045134	5.71	1.41	1.013333333	1.57	1.52	1.525	1.093212006	1.15	3	Disagree	1.75	70900	7.09	3.9	2900
H43775	55.00	46.62	39.46	103.94	26.65	11.65	26.65	11.65	-2.13	1.55	1.238974359	1.55	1.55	1.547	1.238974359	0.96	3	Disagree		87800	8.78	4.1	96
G34602	41.67	34.11	34.71	66.72	11.25	-3.75	12.77	-2.234112252	10.36	1.47	0.842105263	1.72	1.57	1.574	0.899518711	1.44	3	Disagree	1.75	68100	6.81	4.6	1650
E217155	45.84	43.21	68.67	101.08	-1.06	-16.0625	17.69	2.6875	-5.85	0.98	0.672611465	1.58	1.58	1.584	1.088659794	0.88	3	Disagree	1.96	75900	7.59	9	800
H43897	110.84	120.54	97.14	159.50	5.94	-9.0625	38.98	23.97720117	21.47	1.06	0.90851735	1.68	1.59	1.590	1.363165476	1.22	4	Disagree	0.92	67200	6.72	29.6	740
G34638	30.84	34.11	39.21	69.30	13.81	-1.1875	15.34	0.339882707	6.93	1.51	0.956321839	1.87	1.60	1.598	1.013245563	1.25	3	Disagree	2.43	55600	5.56	3.5	1880

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
H43843	25.00	27.29	93.90	153.20	-62.31	-77.3125	12.38	-2.625	-68.02	0.35	0.188852459	1.60	1.60	1.600	0.872727273	0.29	3	Disagree	1.24	63600	6.36	9.3	340
H43850	21.67	25.02	94.65	157.49	-63.69	-78.6875	12.29	-2.712423564	-69.67	0.33	0.168976898	1.98	1.66	1.657	0.855046913	0.26	3	Disagree	0.86	73000	7.3	2.8	480
H41439	85.01	81.87	82.66	140.60	29.63	14.625	37.34	22.33650451	17.50	1.46	1.227184466	1.97	1.66	1.659	1.394195669	1.27	4	Disagree	0.99	73700	7.37	7.5	290
H41033	115.01	111.44	79.16	110.82	43.19	28.1875	44.09	29.09075399	43.63	1.64	1.415668203	1.74	1.66	1.659	1.434779283	1.64	4	Disagree	2.16	71900	7.19	27.5	810
H43871	15.83	18.19	123.36	190.71	-95.38	-110.375	9.63	-5.375	-101.18	0.20	0.07539267	1.67	1.67	1.670	0.626086957	0.15	3	Disagree	0.37	73300	7.33	5.5	580
X09610	75.00	76.41	64.68	117.69	36.59	21.5875	36.90	21.9	21.10	1.66	1.390282486	1.67	1.67	1.671	1.398181818	1.38	4	Disagree		72800	7.28	10.8	91
G34490	30.14	25.02	42.20	74.45	25.88	10.88333333	30.27	15.27025642	-2.90	1.93	1.389850746	2.74	2.29	2.286	1.648976746	0.90	3	Disagree		73700	7.37	4.4	302
H43779	19.17	20.47	18.48	89.63	8.00	-7	12.38	-2.625	0.47	1.40	0.65	1.79	1.79	1.792	0.832	1.02	3	Disagree	1.02	82200	8.22	3.6	4630
H41039	138.34	131.91	100.39	141.46	59.50	44.5	60.25	45.25429724	59.41	1.82	1.613793103	1.84	1.84	1.840	1.63075969	1.82	4	Disagree	3.01	69200	6.92	29.6	820
E192642	45.84	43.21	48.20	91.63	20.94	5.9375	22.91	7.91175293	14.15	1.72	1.204301075	1.90	1.85	1.846	1.292073271	1.49	3	Disagree	1.88	71700	7.17	4.6	1850
X19391	118.34	116.44	112.38	164.08	60.05	45.05	60.72	45.71875955	45.19	1.84	1.632280702	3.65	1.86	1.860	1.647746615	1.63	4	Disagree		68700	6.87	4.1	60
9426	98.34	100.07	79.66	120.84	39.25	24.25	41.11	26.11485404	51.32	1.81	1.497435897	1.97	1.88	1.877	1.556996326	2.05	3	Disagree	0.61	72100	7.21	18.3	1700
G37020	60.00	54.81	61.43	108.53	39.49	24.4875	40.18	25.17886866	9.50	1.87	1.540413793	2.61	1.90	1.900	1.56428127	1.21	4	Disagree		73300	7.33	12.7	91
H41714	119.17	99.16	104.88	174.10	72.65	57.65	72.65	57.65	25.41	1.99	1.781694915	1.99	1.99	1.985	1.781694915	1.34	4	Disagree		78100	7.81	104.8	98
G35715	30.84	27.29	34.71	75.31	18.13	3.125	20.49	5.49197878	5.42	1.83	1.142857143	2.29	2.05	2.050	1.281524134	1.25	3	Disagree	1.75	61000	6.1	4.3	1960
H43875	20.83	22.74	123.11	186.41	-89.00	-104	16.09	1.088629249	-97.26	0.26	0.133333333	2.20	2.08	2.079	1.073006652	0.19	3	Disagree	0.36	68000	6.8	2.3	550
G35470	110.84	111.44	116.12	156.92	57.44	42.4375	58.82	43.82210908	59.88	2.11	1.823030303	2.25	2.17	2.172	1.873335014	2.16	4	Disagree	1.33	71600	7.16	5.5	1470
H40624	60.84	56.86	67.18	119.98	38.25	23.25	41.69	26.68972028	18.11	1.99	1.6	2.80	2.18	2.181	1.755862613	1.47	4	Disagree	1.67	76400	7.64	19.2	860
X15038	35.84	33.66	35.96	79.89	42.84	27.8375	43.87	28.87418832	-2.90	2.17	1.761367521	3.58	2.23	2.235	1.812766464	0.92	4	Disagree		67200	6.72	4.7	136
E192656	44.17	40.94	46.70	86.76	25.19	10.1875	27.59	12.59094508	18.12	2.10	1.446575342	2.40	2.35	2.352	1.616929354	1.79	3	Disagree	3.84	71000	7.1	9.6	2010
X14347	30.00	31.84	46.70	90.20	21.00	6	23.57	8.573410315	11.84	2.05	1.3	2.79	2.35	2.353	1.491972926	1.59	3	Disagree	1.13	81500	8.15	2.7	3100
H43776	65.00	59.81	36.46	119.69	51.75	36.75	51.75	36.75	21.06	2.34	1.948387097	2.34	2.34	2.335	1.948387097	1.54	3	Disagree		83000	830%	2.9	546
G37551	46.67	45.49	40.71	89.34	25.44	10.4375	27.31	12.3125	23.92	2.18	1.484057971	2.39	2.39	2.387	1.625396825	2.11	3	Disagree	1.75	70600	7.06	5.9	3900
G37010	58.34	56.86	64.68	99.08	34.63	19.625	37.36	22.35775187	27.48	2.18	1.668085106	2.50	2.40	2.402	1.839184132	1.94	3	Disagree	1.62	65100	6.51	3.5	2890
X09996	30.00	31.61	37.71	67.01	30.91	15.9125	31.79	16.79130542	9.42	2.39	1.717183099	4.59	2.49	2.492	1.788002538	1.42	4	Disagree		56200	5.62	4	348
H41705	15.83	13.19	23.97	68.72	28.01	13.0125	28.01	13.0125	-6.50	2.42	1.660952381	2.42	2.42	2.423	1.660952381	0.67	4	Disagree		78800	7.88	6.4	1515
X05908	69.17	250.02	70.67	127.42	70.63	55.625	71.32	56.31709798	208.14	2.69	2.328358209	3.75	2.73	2.732	2.367487361	5.97	4	Disagree		74100	7.41	15.8	92
G37010	55.00	52.31	60.93	96.50	54.20	39.2	55.14	40.1375	19.81	2.67	2.206153846	2.75	2.75	2.747	2.271683168	1.61	4	Disagree		64800	6.48	3.1	195
X09254	40.00	38.66	41.70	91.63	26.38	11.375	29.91	14.91001037	18.04	2.28	1.551515152	2.79	2.75	2.750	1.87244116	1.87	3	Disagree	1.25	68900	6.89	4.5	3990
H41433	90.01	79.60	86.65	148.61	59.06	44.0625	65.77	50.77308546	38.66	2.44	2.076335878	3.48	2.92	2.922	2.483425724	1.94	4	Disagree	0.39	76100	7.61	4.6	1060
H41719	85.84	61.40	82.41	125.71	77.43	62.425	77.43	62.425	22.03	2.97	2.585396825	2.97	2.97	2.966	2.585396825	1.56	4	Disagree		83700	8.37	92.8	232
X14726	70.00	72.78	74.42	111.39	53.19	38.1875	54.81	39.81278663	44.96	2.91	2.373033708	3.24	3.09	3.093	2.520313982	2.62	3	Disagree	1.73	47400	4.74	6.9	1800
H40627	43.34	36.39	51.19	100.79	29.56	14.5625	32.68	17.68290475	17.95	2.60	1.789830508	4.39	3.13	3.134	2.154455493	1.97	3	Disagree	1.41	80700	8.07	6.3	3850
X09311	39.17	40.94	45.95	88.19	29.25	14.25	32.74	17.7350677	22.19	2.56	1.76	3.27	3.14	3.144	2.161817645	2.18	3	Disagree	1.14	76600	7.66	4.9	4350
X16704	80.01	76.41	78.91	128.28	71.44	56.4375	72.29	57.28567373	42.35	3.10	2.656880734	4.69	3.18	3.176	2.724727856	2.24	4	Disagree		68300	6.83	5.1	306
H41681	93.34	76.87	100.14	180.11	153.89	138.8875	153.89	138.8875	9.06	3.27	3.048110599	3.27	3.27	3.269	3.048110599	1.13	4	Disagree		76200	7.62	25.6	79
X12513	67.50	63.68	67.68	109.96	45.50	30.5	48.00	32.99936758	41.18	3.02	2.355555556	3.89	3.40	3.400	2.649916208	2.83	3	Disagree	1	76600	7.66	3.4	2570
H41435	68.34	63.68	66.43	134.01	53.06	38.0625	55.87	40.87436758	37.74	3.05	2.46746988	3.66	3.42	3.416	2.767491883	2.46	4	Disagree	0.68	77000	7.7	5.5	2570
H41721	64.17	37.30	53.44	99.36	68.94	53.9375	68.94	53.9375	8.24	3.37	2.855913978	3.37	3.37	3.372	2.855913978	1.28	4	Disagree		83000	8.3	53.4	929
G37573	49.17	47.76	54.19	99.93	38.25	23.25	41.06	26.0625	29.01	3.04	2.24	3.58	3.58	3.576	2.635294118	2.55	3	Disagree	1.65	76900	7.69	5.3	4140
X15672	39.17	37.98	43.95	75.88	55.31	40.3125	56.40	41.40242911	15.79	3.49	2.816901408	4.28	3.67	3.673	2.962426354	1.71	4	Disagree		58000	5.8	4.1	209
G37041	44.17	42.76	51.69	99.93	57.30	42.3	58.25	43.24955003	20.26	3.55	2.88	5.94	3.70	3.703	3.006897772	1.90	4	Disagree		80200	8.02	5.9	445
H41697	105.01	91.65	100.64	169.52	107.03	92.025	107.03	92.025	52.28	3.72	3.337142857	3.72	3.72	3.718	3.337142857	2.33	4	Disagree		76300	7.63	54.4	179
H41083	200.01	181.94	126.61	201.02	143.44	128.4375	144.32	129.3157826	130.38	3.78	3.490909091	3.97	3.85	3.847	3.551401391	3.53	4	Disagree	1.13	66000	6.6	14.5	990
E192579	32.50	29.57	35.71	73.02	28.25	13.25	31.38	16.375	15.82	3.05	1.963636364	3.95	3.95	3.953	2.541176471	2.15	3	Disagree	0.77	75400	7.54	2.3	4500
G35331	27.50	27.29	31.47	51.83	23.88	8.875	24.19	9.1875	19.17	3.94	2.092307692	4.10	4.10	4.096	2.176	3.36	3	Disagree	1.39	71400	7.14	5	3020
G23392	84.87	76.76	84.91	128.86	87.64	72.6375	89.22	74.21788464	49.36	4.20	3.651406844	5.80	4.46	4.456	3.874940719	2.80	4	Disagree		67000	6.7	3	453
X09180	46.67	45.49	48.95	80.46	37.69	22.6875	40.50	25.5	30.17	3.46	2.481632653	4.24	4.24	4.240	3.04	2.97	3	Disagree	1.54	72300	7.23	4.4	4730
H44042	90.01	88.70	81.66	110.53	71.88	56.875	73.05	58.05230627	65.57	4.11	3.459459459	4.68	4.33	4.328	3.645029906	3.84	4	Disagree	3.69	64400	6.44	5	1400
X12204	45.00	195.01	41.70	82.75	96.54	81.5375	97.48	82.475	165.95	4.32	3.805591398	4.47	4.47	4.466	3.932444444	6.71	4	Disagree		35500	3.55	13.7	76

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
E192502	100.01	100.07	97.14	139.16	95.89	80.8875	96.86	81.85747115	72.25	4.45	3.908314607	9.90	4.61	4.608	4.049543939	3.60	4	Disagree		64700	6.47	2.6	473
X05897	85.01	305.85	83.66	136.01	96.85	81.85	97.29	82.29013203	279.60	4.69	4.118095238	6.35	4.77	4.769	4.188320535	11.65	4	Disagree		76000	7.6	5.9	175
H41081	175.01	168.29	104.39	190.13	136.50	121.5	137.56	122.5564124	130.79	4.64	4.24	5.20	4.77	4.775	4.362907457	4.49	4	Disagree	1.31	68400	6.84	9.7	1020
H41683	95.84	76.19	94.90	211.61	167.66	152.6625	167.66	152.6625	32.75	4.86	4.514532374	4.86	4.86	4.860	4.514532374	1.75	4	Disagree		79400	7.94	25.1	130
X05681	81.67	309.19	62.68	113.97	83.41	68.4125	83.95	68.95109103	287.00	4.76	4.083380282	8.66	4.88	4.878	4.184968403	13.94	4	Disagree		69900	6.99	6.7	310
X09224	41.67	40.94	44.95	84.47	38.75	23.75	41.96	26.95681371	29.69	4.44	3.111111111	6.40	6.22	6.216	4.35150931	3.64	3	Disagree	1.7	79500	7.95	3.6	3540
X12563	111.67	75.05	90.65	128.57	66.56	51.5625	68.67	53.66914173	61.61	5.95	4.837209302	9.85	7.06	7.060	5.736546912	5.59	3	Disagree	1.08	75700	7.57	5.9	2460
H41685	80.84	44.12	76.67	168.94	181.34	166.3375	181.34	166.3375	15.06	7.24	6.72344086	7.24	7.24	7.240	6.72344086	1.52	4	Disagree		81600	8.16	29.4	186
G35312	70.84	70.50	76.92	108.81	61.81	46.8125	64.00	49	58.31	6.07	4.841025641	7.40	7.40	7.400	5.9	5.78	3	Disagree	1.62	72600	7.26	3.9	2850
X09282	41.67	38.66	49.45	91.06	41.56	26.5625	43.44	28.4375	30.22	5.93	4.148148148	7.62	7.62	7.619	5.333333333	4.58	3	Disagree	1.59	74100	7.41	3.7	3800
H41717	142.51	120.08	134.60	210.75	184.80	169.8	184.80	169.8	92.58	7.72	7.174545455	7.72	7.72	7.720	7.174545455	4.37	4	Disagree		77300	7.73	50.4	544
G35426	70.84	70.50	88.65	154.91	71.63	56.625	71.94	56.9375	61.13	8.64	7.04	8.94	8.94	8.938	7.282758621	7.52	3	Disagree	0.56	70800	7.08	7.2	1320
H41094	258.35	264.95	212.02	294.08	235.41	220.4125	235.73	220.725	237.76	9.66	9.107126437	9.77	9.77	9.771	9.213023256	9.75	4	Disagree		65600	6.56	3.5	443
E192490	54.17	48.67	56.69	97.93	78.58	63.575	81.30	66.30045862	38.04	8.40	6.983529412	12.41	11.29	11.292	9.392950348	4.58	4	Disagree		71300	7.13	2.9	2880
X05690	55.00	204.18	58.19	101.94	80.03	65.025	80.65	65.65	197.31	12.64	10.45818182	13.90	13.90	13.904	11.504	29.70	4	Disagree		69900	6.99	4.2	1462
G35377	55.00	54.58	57.69	80.75	53.88	38.875	53.88	38.875	51.46	18.24	13.44	18.24	18.24	18.240	13.44	17.47	3	Disagree	1.63	70500	7.05	3.2	1260
X09983	37.50	34.11	159.57	235.95	71.61	56.6125	75.05	60.05	26.93	10.96	8.876521739	21.01	21.01	21.013	17.01333333	4.75	4	Disagree		74100	7.41	9.1	256
G22294	85.01	89.15	92.90	204.17	127.24	112.2375	128.49	113.4875	82.59	20.39	18.10285714	25.19	25.19	25.186	22.36235294	13.58	4	Disagree		77100	7.71	8.1	1836
X09301	139.18	136.46	163.82	325.86	161.63	146.625	161.94	146.9375	132.08	37.94	34.51428571	40.86	40.86	40.862	37.16923077	31.19	4	Disagree	0.16	80400	8.04	10.7	1100
G37569	129.18	127.36	139.60	310.69	157.81	142.8125	157.81	142.8125	125.17	73.14	66.28571429	73.14	73.14	73.143	66.28571429	58.22	4	Disagree	0.09	75200	7.52	8.8	840
H41679	217.51	184.67	208.52	297.80	234.04	219.0375	234.04	219.0375	180.61	58.61	54.91692308	58.61	58.61	58.609	54.91692308	45.46	4	Disagree		76600	7.66	8.1	1855
X16090	0.83	4.55	7.49	27.20	-128.44	-138.4365	-127.69	-137.6875146	-133.89	0.07	7.22348E-06	0.08	0.07	0.073	0.01	0.03	2	Disagree	0.27	74700	7.47	3.4	170
67907	3.33	4.55	11.74	61.85	-31.63	-45.624	-30.69	-44.6865	-41.08	0.31	2.19178E-05	0.31	0.31	0.313	0.01	0.10	2	Disagree	0.88	82000	8.2	4	2090
X16106	26.67	25.02	29.47	87.34	-65.19	-80.1875	-64.51	-79.51033705	-72.17	0.33	0.174919614	0.37	0.33	0.332	0.176146934	0.26	3	Disagree	0.47	72100	7.21	3.1	500
H40514	23.33	25.02	33.71	69.01	-27.56	-42.5625	-26.67	-41.66963083	-41.55	0.59	0.36056338	0.66	0.59	0.594	0.365465737	0.38	3	Disagree	0.9	75700	7.57	2.5	1010
X16124	40.00	36.39	42.45	98.22	-34.63	-49.625	-33.99	-48.9915966	-49.24	0.60	0.420437956	0.75	0.60	0.600	0.423571288	0.42	3	Disagree	0.44	69300	6.93	3	440
H40509	35.00	29.57	35.96	55.84	-27.69	-42.6875	-26.38	-41.37582351	-40.12	0.60	0.387443946	0.72	0.61	0.614	0.394876414	0.42	3	Disagree	2.75	75900	7.59	4.2	1370
H40505	23.33	22.74	30.72	46.67	-20.25	-35.25	-17.86	-32.86225158	-33.51	0.64	0.373333333	0.74	0.67	0.668	0.389883441	0.40	3	Disagree	1.3	77300	7.73	3	1560
H40503	23.33	13.65	32.71	67.29	-16.56	-31.5625	-15.13	-30.13413136	-42.92	0.71	0.44198895	0.78	0.73	0.726	0.453439628	0.24	3	Disagree	0.82	76000	7.6	2.2	1530
X16807	25.00	27.29	42.20	95.93	-17.50	-32.5	-15.90	-30.89881342	-35.21	0.72	0.48	0.81	0.74	0.739	0.492620436	0.44	3	Disagree	0.43	76600	7.66	2.9	910
67993	45.00	20.47	22.23	34.93	-8.31	-23.3125	-7.28	-22.28105891	-14.84	0.76	0.339823009	0.85	0.79	0.788	0.35004753	0.58	3	Disagree	0.88	66800	6.68	1.1	1200
X16946	0.00	65.95	44.70	90.49	-11.94	-26.9375	-11.09	-26.09259209	-9.98	0.84	0.64526749	0.91	0.85	0.852	0.652527748	0.87	3	Disagree	1	69900	6.99	4.6	730
X16243	40.84	43.21	51.19	79.32	-3.88	-18.875	-2.96	-17.96025106	-18.66	0.94	0.694949495	1.03	0.95	0.951	0.705377672	0.70	3	Disagree	1.98	60500	6.05	7	1040
H40512	50.84	47.76	48.95	79.32	-2.00	-17	-0.77	-15.76854936	-12.24	0.97	0.716666667	1.11	0.99	0.987	0.731683876	0.80	3	Disagree	0.88	66800	6.68	3.4	1260
9310	15.83	15.92	15.98	27.20	-1.69	-16.6875	2.05	-12.95025979	-8.77	0.93	0.324050633	1.19	1.10	1.098	0.38185684	0.64	3	Disagree	2.33	83400	8.34	46.2	4910
H40557	34.17	34.57	47.20	89.34	12.69	-2.3125	13.00	-2	-43.24	1.16	0.970281124	1.17	1.17	1.168	0.974193548	0.44	4	Disagree		72000	7.2	2.7	77
8317	35.00	34.11	34.71	50.97	9.44	-5.5625	10.38	-4.61548646	2.55	1.30	0.823762376	1.51	1.34	1.339	0.849243406	1.08	3	Disagree	0.84	66300	6.63	3.9	870
H40501	45.84	45.49	51.69	93.35	13.81	-1.1875	15.36	0.361762485	3.30	1.33	0.971851852	1.56	1.38	1.378	1.008902022	1.08	3	Disagree	1.15	73800	7.38	3.2	1910
X16263	54.17	54.58	48.70	70.15	20.50	5.5	23.05	8.050420397	17.08	1.55	1.146666667	1.86	1.66	1.660	1.230343841	1.46	3	Disagree	0.45	73600	7.36	3.9	2640
G36128	54.17	56.86	54.94	78.46	21.63	6.625	22.94	7.936676494	22.48	1.63	1.192727273	2.27	1.69	1.694	1.240044728	1.65	3	Disagree	1.1	65500	6.55	15.1	1370
X16310	70.00	72.78	75.42	114.83	35.63	20.625	37.66	22.657599	28.40	1.80	1.464788732	2.06	1.89	1.889	1.535104256	1.64	3	Disagree	1.03	66700	6.67	19.7	1930
X14842	43.34	34.11	31.47	58.41	18.44	3.4375	20.60	5.595194548	12.55	1.86	1.15942029	2.33	2.06	2.061	1.288340667	1.58	3	Disagree	1.25	80000	8	5.8	2530
8341	26.67	25.02	24.47	40.37	17.00	2	17.31	2.3125	10.02	2.13	1.133333333	2.18	2.18	2.179	1.157446809	1.67	3	Disagree	0.99	67500	6.75	4.1	1060
G34575	107.51	106.89	108.88	152.62	67.19	52.1875	68.40	53.40127257	54.08	2.27	1.98816568	2.76	2.33	2.326	2.034933907	2.02	4	Disagree	4.71	64200	6.42	21.4	1450
G33753	79.17	79.60	84.16	121.12	49.00	34	49.94	34.93662872	44.60	2.40	1.971428571	3.02	2.47	2.466	2.02563626	2.27	3	Disagree	1.23	64500	6.45	4.4	1070
X14825	90.01	88.70	77.66	130.29	77.19	62.1875	78.33	63.33143154	35.88	2.46	2.177514793	3.18	2.52	2.516	2.225724525	1.68	4	Disagree	2.88	66100	6.61	87.7	1140
X16307	74.17	72.78	75.92	108.53	55.81	40.8125	58.82	43.82128558	35.59	2.50	2.097478992	3.17	2.72	2.721	2.282122114	1.96	4	Disagree	0.89	77100	7.71	14.7	2840
X16295	80.01	81.87	73.42	100.79	54.25	39.25	56.55	41.54626647	48.12	2.61	2.162962963	2.93	2.80	2.798	2.320869156	2.43	4	Disagree	1.19	70500	7.05	8.9	2720
X14875	0.00	127.36	112.13	214.76	102.50	87.5	103.72	88.71575399	69.86	2.78	2.52173913	3.14	2.84	2.843	2.576209335	2.21	4	Disagree	1.25	71700	7.17	11.8	810
8394	99.17	93.24	97.64	132.29	71.13	56.125	72.92	57.91803159	56.37	2.93	2.522033898	3.11	3.08	3.079	2.650934489	2.53	4	Disagree	0.78	72800	7.28	8	2030

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
X16342	54.17	34.34	58.19	82.75	62.51	47.5125	62.83	47.825	32.15	29.58	22.72	34.51	34.51	34.507	26.50666667	15.70	3	Disagree	0.1	82900	8.29	3	5750
X16343	61.67	52.76	61.18	86.19	70.21	55.2125	71.15	56.15	43.08	8.25	6.699354839	9.13	9.13	9.131	7.417142857	5.45	3	Disagree	0.3	82700	8.27	3	5060
X16344	85.01	56.40	73.92	97.07	77.83	62.825	77.51	62.5125	39.53	5.61	4.722962963	5.51	5.51	5.510	4.637090909	3.34	4	Disagree	0.6	79400	7.94	4	1000
X16345	89.17	57.77	62.93	83.90	80.38	65.375	83.12	68.11789783	42.14	6.14	5.184	7.68	7.45	7.452	6.287793633	3.70	4	Disagree	0.8	73400	7.34	4	1190
X16346	83.34	56.17	75.17	99.93	100.04	85.0375	99.10	84.1	49.61	16.24	13.95809524	14.21	14.21	14.213	12.21333333	8.56	3	Agree	0.3	76500	7.65	3	5370
X16347	100.01	66.64	80.91	104.52	94.49	79.4875	96.99	81.9875	56.32	10.16	8.707878788	13.41	13.41	13.414	11.4944	6.46	4	Disagree	0.3	77000	7.7	3	5060
H47674	24.17	18.42	41.45	65.00	50.68	35.675	52.32	37.32216641	7.80	5.77	4.357647059	7.27	6.83	6.828	5.157146158	1.73	3	Disagree	0.2	82900	8.29	4	1830
H47708	44.17	36.62	54.19	83.33	20.36	5.3625	21.12	6.120966641	-6.82	1.47	1.123453237	1.94	1.49	1.495	1.143418587	0.84	3	Disagree	1	74600	7.46	11	183
X16283	62.50	61.40	63.68	91.63	50.25	35.25	53.99	38.99429461	32.65	2.75	2.226086957	3.61	3.16	3.159	2.559415901	2.14	4	Disagree	0.75	72400	7.24	5.8	3420
H41767	16.67	18.19	14.73	18.61	9.75	-5.25	11.31	-3.6875	11.94	2.56	0.16	3.41	3.41	3.413	0.01	2.91	3	Disagree	2.06	76300	7.63	5.4	1530
G36142	35.00	34.11	27.97	44.96	24.38	9.375	26.33	11.33466641	23.49	3.29	1.882352941	5.60	4.04	4.039	2.308047324	3.21	3	Disagree	0.56	65500	6.55	3.4	1830
X16326	67.50	70.50	62.68	85.90	56.19	41.1875	60.69	45.68918341	47.69	3.46	2.805479452	4.36	4.31	4.314	3.495201849	3.09	4	Disagree	0.53	75400	7.54	21.1	4030
X14812	3.33	4.55	4.99	26.34	5.13	-1.874	5.44	-1.5615	2.67	3.73	0.000533333	4.48	4.48	4.480	0.01	2.43	2	Disagree	1.11	77400	7.74	4.9	4290
H40363	3.33	0.45	14.98	25.20	5.79	-2.8115	6.73	-1.874	-2.36	3.06	0.000355556	4.59	4.59	4.587	0.01	0.16	1	Agree		75700	7.57	2.9	6112
X14802	1.67	4.55	6.24	37.80	7.94	-4.0615	9.50	-2.499	0.49	2.95	0.000246154	4.80	4.80	4.800	0.01	1.12	2	Disagree	1.16	65600	6.56	4.8	3730
H40491	53.34	53.22	65.68	111.68	70.14	55.1375	71.08	56.075	34.16	4.68	3.892459016	4.92	4.92	4.921	4.093793103	2.79	4	Disagree		73700	7.37	3.2	471
X16344	50.84	52.31	66.68	90.20	39.69	24.6875	44.38	29.375	37.00	3.59	2.612244898	5.18	5.18	5.176	3.764705882	3.42	4	Disagree	0.53	78100	7.81	6	4790
9289	24.17	22.74	24.22	32.64	23.81	8.8125	25.06	10.05742702	15.56	4.31	2.226086957	5.51	5.22	5.217	2.692436434	3.16	3	Disagree	1	62100	6.21	9.5	850
H40403	46.67	36.62	54.94	76.74	48.33	33.325	50.90	35.90129532	22.24	4.36	3.31826087	6.47	5.31	5.314	4.042816671	2.55	4	Disagree		83000	8.3	2.6	2247
H43974	60.84	60.72	59.43	103.08	73.26	58.26476	73.58	58.57726	43.54	5.26	4.389949673	5.36	5.36	5.360	4.471245037	3.53	4	Disagree		69000	6.9	7.6	546
X16272	66.67	68.23	72.67	103.37	64.75	49.75	67.13	52.12649232	51.98	4.98	4.061538462	5.89	5.84	5.838	4.757268423	4.20	4	Disagree	0.28	76800	7.68	2	2830
X16345	75.00	75.05	63.43	82.47	61.63	46.625	67.56	52.5625	55.68	4.18	3.406451613	6.03	6.03	6.028	4.911627907	3.87	3	Disagree	0.67	65100	6.51	3.5	4860
H44157	104.17	104.84	61.93	101.94	85.83	70.83072	86.63	71.63478566	87.03	5.82	4.976461474	6.14	6.09	6.094	5.211721328	5.89	4	Disagree		68500	6.85	7	674
X16296	75.00	77.32	77.17	108.24	67.75	52.75	70.45	55.45357884	61.07	5.17	4.246153846	6.40	6.20	6.201	5.093596248	4.76	3	Disagree	0.23	65900	6.59	8.8	2850
X16362	33.34	34.11	59.18	82.75	31.50	16.5	33.06	18.0625	26.61	5.20	3.2	6.57	6.57	6.568	4.042105263	4.55	3	Disagree	0.2	81500	8.15	3.1	5210
X14874	175.85	163.75	85.91	140.88	138.50	123.5	141.85	126.8493485	136.25	6.04	5.490909091	7.08	6.87	6.874	6.252419312	5.95	4	Disagree	0.82	68000	6.8	10.7	2450
H41769	40.00	36.39	48.20	108.53	34.13	19.125	35.06	20.0625	29.51	5.96	3.781818182	6.91	6.91	6.905	4.378947368	5.29	2	Disagree	5.45	62400	6.24	16.7	2440
X16279	78.34	77.32	86.16	120.55	72.63	57.625	74.58	59.58268499	62.95	6.05	5.008695652	7.33	7.01	7.006	5.798354955	5.38	3	Disagree	0.3	67200	6.72	1.4	2470
G33472	54.17	42.07	58.44	90.77	64.03	49.025	65.28	50.275	30.20	6.39	5.128421053	7.14	7.14	7.144	5.731764706	3.54	4	Disagree		80900	8.09	3.7	3641
X16327	55.84	56.86	64.68	90.20	51.06	36.0625	53.56	38.5625	45.92	5.67	4.297142857	7.35	7.35	7.348	5.57037037	5.20	3	Disagree	0.36	71000	7.1	2.4	3940
X16362	21.67	22.74	53.94	78.75	22.38	7.375	24.25	9.25	17.12	4.98	2.311111111	7.47	7.47	7.467	3.466666667	4.04	3	Disagree	0.22	81500	8.15	7.3	4870
8983	79.17	77.32	82.66	112.25	90.88	75.875	90.56	75.5625	64.20	7.92	6.780952381	7.74	7.74	7.740	6.623255814	5.89	4	Disagree	1.07	75500	7.55	4.3	3780
8961	50.00	47.76	55.69	79.03	61.25	46.25	61.25	46.25	39.01	8.00	6.285714286	8.00	8.00	8.000	6.285714286	5.46	4	Disagree	0.22	79500	7.95	1.7	4650
8366	75.00	75.05	78.91	101.65	75.81	60.8125	78.00	63	62.86	7.22	5.98974359	8.80	8.80	8.800	7.3	6.16	4	Disagree	0.3	73900	7.39	0.7	3820
X16384	20.83	22.74	54.94	77.31	21.81	6.8125	25.84	10.83615873	15.56	4.03	1.947826087	11.60	9.17	9.166	4.425000755	3.16	3	Disagree	0.3	77300	7.73	4.2	4660
H40457	36.67	28.43	49.70	69.58	42.78	27.775	43.40	28.4	22.80	8.60	5.937777778	9.68	9.68	9.680	6.68	5.05	3	Disagree		87700	8.77	2.6	5710
X16374	53.34	54.58	64.93	86.19	56.13	41.125	57.06	42.0625	47.71	9.16	6.981818182	10.61	10.61	10.611	8.084210526	7.94	3	Disagree	0.39	74300	7.43	4.6	5100
G33676	3.33	4.55	36.21	69.30	11.81	-2.1865	12.75	-1.249	2.36	6.40	0.000457143	11.20	11.20	11.200	0.01	2.08	2	Disagree	0.12	87300	8.73	2.6	4350
X16416	55.00	54.58	67.68	87.05	56.50	41.5	58.69	43.6875	47.08	8.53	6.533333333	12.05	12.05	12.047	9.223529412	7.28	3	Disagree	0.38	67400	6.74	2.2	3950
8416	54.17	52.31	66.68	96.21	69.06	54.0625	69.38	54.375	46.37	12.63	10.10526316	13.33	13.33	13.333	10.66666667	8.81	4	Disagree	0.11	76600	7.66	5	4580
G33738	71.67	72.78	78.16	102.80	81.13	66.125	83.31	68.3125	65.90	12.80	10.61818182	18.77	18.77	18.773	15.57333333	10.59	4	Disagree	0.26	76900	7.69	1.2	4290
8438	73.34	70.50	76.92	97.36	77.38	62.375	78.94	63.9375	64.88	14.76	12.08888889	20.43	20.43	20.431	16.73846154	12.53	4	Disagree	0.25	73500	7.35	1.2	3720
X16397	51.67	54.58	65.68	88.77	58.31	43.3125	60.50	45.5	49.89	13.44	10.24	25.20	25.20	25.200	19.2	11.64	3	Disagree	0.15	69000	6.9	2.8	4100
G36541	11.67	15.92	15.98	49.25	15.75	0.75	16.38	1.375	14.67	13.60	1.6	27.20	27.20	27.200	3.2	12.74	3	Disagree	0.12	82000	8.2	8.7	1550
9327	15.83	13.65	13.49	21.76	20.75	5.75	21.30	6.30008599	12.40	17.60	5.6	35.20	31.43	31.432	10.00122859	10.92	3	Disagree	0.87	65300	6.53	1.6	540
H43952	396.69	400.04	195.04	308.68	331.39	316.3875	331.70	316.7	389.73	33.13	31.68	34.17	34.17	34.170	32.67	38.79	4	Disagree		51800	5.18	12.3	978
G33716	62.50	61.40	62.18	95.35	69.88	54.875	71.13	56.125	58.28	23.36	18.56	38.93	38.93	38.933	30.93333333	19.65	4	Disagree	0.24	82400	8.24	1	3840
G33688	76.67	75.05	64.93	90.77	64.19	49.1875	65.75	50.75	72.24	23.82	18.48888889	53.60	53.60	53.600	41.6	26.68	3	Disagree	0.06	78100	7.81	1.9	3720
8374	8.33	9.10	56.19	87.05	18.06	3.0625	18.69	3.6875	8.16	20.27	4.266666667	60.80	60.80	60.800	12.8	9.70	3	Disagree	0.11	86900	8.69	2.7	3960
G33496	105.84	97.57	67.18	93.35	91.73	76.725	92.98	77.975	95.69	49.92	41.92	149.76	149.76	100.000	100	52.03	4	Disagree		80600	8.06	1.5	4771

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
G33706	83.34	84.15	86.65	111.10	90.75	75.75	91.69	76.6875	82.90	73.60	61.6	294.40	294.40	100.000	100	67.32	4	Disagree	0.01	78800	7.88	1.1	4370
X06968	0.83	0.45	9.49	18.33	-211.18	-206.874	-205.85	-201.5476428	-206.42	-0.02	4.83384E-06	-0.03	0.01	0.010	0.01	0.00	1	Agree		70700	7.07	152.2	19
X13074	0.83	0.45	4.74	14.03	-299.15	-296.249	-289.14	-286.2424361	-295.80	-0.01	3.37553E-06	-0.01	0.01	0.010	0.01	0.00	1	Agree		29400	2.94	74.4	9
H41951	0.42	4.55	5.74	14.32	-590.31	-595.3115	-588.52	-593.522909	-590.76	0.01	1.67979E-06	0.01	0.01	0.010	0.01	0.01	2	Disagree	1.35	49000	4.9	18.9	310
X06596	0.83	0.45	6.24	22.05	-162.78	-164.374	-160.26	-161.8616015	-163.92	0.01	6.08365E-06	0.01	0.01	0.010	0.01	0.00	1	Agree		63000	6.3	4.4	17
X10945	0.42	4.55	1.75	7.16	-124.25	-126.249	-123.07	-125.0708225	-121.70	0.02	7.92079E-06	0.02	0.02	0.016	0.01	0.04	2	Disagree	0.8	64100	6.41	4.4	330
H41947	0.83	4.55	6.24	13.17	-329.94	-335.9365	-329.54	-335.5437742	-331.39	0.02	2.97674E-06	0.02	0.02	0.018	0.01	0.01	2	Disagree	1.01	63400	6.34	3.7	110
X10920	3.33	4.55	5.99	13.74	-225.88	-231.874	-225.11	-231.1104281	-227.33	0.03	4.31267E-06	0.03	0.03	0.026	0.01	0.02	2	Disagree	8.21	60600	6.06	4.1	190
H41949	0.42	4.55	5.99	15.46	-222.44	-228.4365	-222.23	-228.2291972	-223.89	0.03	4.37756E-06	0.04	0.03	0.026	0.01	0.02	2	Disagree	1.42	70300	7.03	5.4	70
X06989	0.83	0.45	8.99	19.19	-168.76	-174.0615	-165.31	-170.6108721	-173.61	0.03	5.74506E-06	0.05	0.03	0.031	0.01	0.00	1	Agree		66700	6.67	7.5	18
X06607	0.83	0.45	6.74	22.05	-111.53	-115.624	-107.78	-111.874	-115.17	0.04	8.64865E-06	0.04	0.04	0.037	0.01	0.00	1	Agree		55400	5.54	0.3	17
E217280	0.42	4.55	6.74	23.19	-142.31	-150.3115	-141.95	-149.9479472	-145.76	0.05	6.65281E-06	0.06	0.05	0.053	0.01	0.03	2	Disagree	0.3	82600	8.26	4.8	70
G35602	0.42	4.55	7.99	23.48	-155.38	-164.374	-155.10	-164.1010579	-159.83	0.05	6.08365E-06	0.07	0.05	0.055	0.01	0.03	2	Disagree	1.09	81300	8.13	8.1	160
H41944	0.83	4.55	7.24	32.07	-155.38	-164.374	-154.97	-163.9666876	-159.83	0.05	6.08365E-06	0.07	0.05	0.055	0.01	0.03	2	Disagree	2.03	75200	7.52	2.9	130
X06618	0.83	0.45	8.74	37.51	-112.83	-120.624	-110.93	-118.7271202	-120.17	0.06	8.29016E-06	0.08	0.07	0.066	0.01	0.00	1	Agree		65500	6.55	2.3	30
X13084	7.50	6.82	145.34	172.67	-241.46	-251.5615	-113.28	-123.3766953	-244.74	0.04	3.97516E-06	0.12	0.08	0.082	0.01	0.03	2	Disagree		18700	1.87	62.1	82
E217300	19.17	4.55	9.49	34.36	-125.50	-137.499	-125.29	-137.2916972	-132.95	0.09	7.27273E-06	0.10	0.09	0.087	0.01	0.03	2	Disagree	0.84	79200	7.92	5.7	70
X17591	5.83	5.00	3.75	18.61	-54.95	-61.249	-53.97	-60.27284573	-56.25	0.10	1.63265E-05	0.17	0.10	0.105	0.01	0.08	1	Agree		42000	4.2	82.5	53
X10967	11.67	13.65	9.74	29.78	-154.19	-169.1875	-153.77	-168.7656011	-158.54	0.10	0.017422868	0.12	0.10	0.105	0.017465662	0.08	2	Disagree	2.25	52300	5.23	10.2	150
X06638	8.33	8.64	17.48	39.80	-152.55	-167.55	-151.29	-166.2854135	-162.61	0.11	0.021605839	0.16	0.11	0.110	0.021766574	0.05	1	Agree		64100	6.41	12.9	20
G35622	25.00	22.74	23.97	48.39	-211.94	-226.9375	-211.61	-226.6062118	-218.19	0.12	0.058106355	0.15	0.12	0.121	0.058186361	0.09	3	Disagree	4.65	72700	7.27	60.2	240
X17581	16.67	15.46	185.80	229.36	-250.96	-265.9625	-115.31	-130.3127029	-256.10	0.08	0.020621404	0.24	0.15	0.152	0.041202918	0.06	1	Agree		40300	4.03	83.7	34
X10985	20.83	20.47	12.74	27.49	-90.38	-105.375	-89.61	-104.6114281	-88.91	0.17	0.036571429	0.20	0.17	0.175	0.036828537	0.19	3	Disagree	2.44	43500	4.35	9.5	190
G32024	47.50	25.02	91.90	143.17	-69.25	-84.25	-34.18	-49.18436067	-101.23	0.45	0.332673267	0.63	0.63	0.625	0.460605302	0.20	3	Disagree	1.26	71800	7.18	5.5	90
X66542	0.83	4.17	4.99	25.20	-83.13	-86.874	-81.81	-85.56127797	-82.71	0.04	1.15108E-05	0.18	0.04	0.044	0.01	0.05	2	Disagree	0.773	77900	7.79	62	86
X29696	0.83	1.14	0.00	0.00	-65.66	-69.999	-64.89	-69.227125	-68.86	0.06	1.42857E-05	0.10	0.06	0.063	0.01	0.02	1	Agree					
X66799	0.83	2.27	0.00	0.00	-48.75	-53.749	-47.19	-52.1865	-51.48	0.09	1.86047E-05	0.10	0.10	0.096	0.01	0.04	2	Disagree					
X26526	12.50	10.92	0.00	0.00	-89.44	-104.4393844	-88.73	-103.7268844	-103.15	0.22	0.084367041	0.30	0.22	0.217	0.084897358	0.10	2	Disagree					
IC COMP 16	40.00	41.16	50.44	79.03	-121.56	-136.5625	-120.62	-135.6237315	-141.65	0.34	0.252991453	0.43	0.34	0.337	0.254297306	0.23	4	Disagree	8.8		7.22	8	116
IC COMP 19	10.83	10.01	9.49	16.61	-27.05	-40.9365	-26.81	-40.69709251	-30.93	0.34	2.44275E-05	0.46	0.34	0.341	0.01	0.24	1	Agree	4.1		5.24	10	204
X30431	12.50	15.92	0.00	0.00	-45.69	-60.6875	-45.38	-60.375	-53.77	0.34	0.129147982	0.38	0.35	0.346	0.12972973	0.23	3	Disagree					
IC COMP 12	36.67	36.16	51.69	67.86	-82.50	-97.5	-81.62	-96.61945385	-102.59	0.41	0.297297297	0.58	0.41	0.408	0.299196079	0.26	4	Disagree	3.8		7.56	20	159
IC COMP 9	40.84	41.62	44.20	65.00	-63.44	-78.4375	-62.42	-77.42330977	-74.32	0.45	0.323450135	0.61	0.46	0.457	0.32630456	0.36	4	Disagree	5.4		6.87	42	148
IC COMP 11	48.34	46.85	54.44	72.16	-60.94	-75.9375	-60.20	-75.20289979	-71.59	0.49	0.35883905	0.67	0.49	0.489	0.361078615	0.40	4	Disagree	4.9		6.81	16	106
X30422	40.84	27.29	0.00	0.00	-56.88	-71.875	-56.72	-71.71875	-84.58	0.49	0.357541899	0.51	0.49	0.492	0.358041958	0.24	3	Disagree					
IC COMP 10	40.84	42.76	61.68	89.91	-61.56	-76.5625	-60.54	-75.53862879	-90.06	0.54	0.423529412	0.71	0.54	0.541	0.426819829	0.32	4	Disagree	6.5		6.14	37	107
X26728	49.17	47.76	0.00	0.00	-38.98	-53.97959184	-38.63	-53.63271684	-42.24	0.57	0.400226757	0.89	0.57	0.569	0.401775266	0.53	4	Disagree					
IC COMP 20	35.00	30.48	31.72	49.82	-26.56	-41.5625	-26.07	-41.06799679	-36.09	0.60	0.375586854	0.81	0.61	0.605	0.378398033	0.46	4	Disagree	8		4.43	24	151
X30441	45.84	27.29	0.00	0.00	-24.63	-39.625	-24.47	-39.46875	-43.33	0.65	0.438938053	0.71	0.65	0.653	0.439911308	0.39	3	Disagree					
IC COMP 17	70.00	68.91	77.66	106.52	-10.00	-25	-7.79	-22.78960472	-28.59	0.90	0.743589744	1.20	0.92	0.918	0.760838501	0.71	4	Disagree	5.8		5.72	16	1174
IC COMP 18	55.84	56.63	71.67	101.37	15.31	0.3125	15.95	0.954507671	-13.06	1.22	1.004484305	1.55	1.23	1.231	1.01382433	0.81	4	Disagree	11.9		6.22	19	179
X30943	61.67	59.13	0.00	0.00	28.16	13.15797739	29.07	14.06526905	18.19	1.69	1.321416242	2.63	1.73	1.726	1.351366372	1.44	4	Disagree					
IC COMP 13	158.34	164.88	151.58	182.98	70.31	55.3125	72.73	57.73259172	65.20	1.71	1.554858934	2.29	1.75	1.748	1.593545081	1.65	4	Disagree	3.9		5.79	9	576
X26658	115.84	121.45	0.00	0.00	77.32	62.32142857	78.50	63.4985119	20.20	1.76	1.615520282	2.39	1.78	1.784	1.634522446	1.20	4	Disagree					
X30968	62.50	69.82	0.00	0.00	56.60	41.59722222	57.04	42.03680556	16.69	2.07	1.783006536	2.77	2.08	2.083	1.797883138	1.31	4	Disagree					
X30961	240.02	249.49	0.00	0.00	152.58	137.5829082	153.28	138.2756165	163.55	2.78	2.60096475	4.12	2.80	2.798	2.622100468	2.90	4	Disagree					
H47161	3.33	2.05	0.00	0.00	-224.28	-232.1865	-220.31	-228.21775	-230.14	0.03	4.30686E-06	0.05	0.03	0.035	0.01	0.01	1	Agree					
X25074	0.83	2.27	0.00	0.00	-92.25	-96.249	-92.09	-96.09275	-93.98	0.04	1.03896E-05	0.04	0.04	0.042	0.01	0.02	2	Disagree					
X30176	0.42	4.55	0.00	0.00	-138.63	-145.624	-138.31	-145.3115	-141.08	0.05	6.86695E-06	0.06	0.05	0.048	0.01	0.03	2	Disagree					
X25084	3.33	4.55	0.00	0.00	-149.13	-158.124	-148.97	-157.96775	-153.58	0.06	6.32411E-06	0.06	0.06	0.057	0.01	0.03	2	Disagree					

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
H47377	2.50	6.67	9.74	34.36	-138.59	-147.1865	-137.93	-146.5308683	-140.52	0.06	6.79406E-06	0.09	0.06	0.059	0.01	0.05	1	Agree	1359	77500	7.75	18.2	42
X25078	0.83	1.14	0.00	0.00	-61.60	-65.624	-61.37	-65.38441667	-64.49	0.06	1.52381E-05	0.11	0.06	0.061	0.01	0.02	1	Agree					
H47126	6.67	5.91	0.00	0.00	-201.65	-215.9365	-199.76	-214.0406667	-210.02	0.07	4.63097E-06	0.08	0.07	0.067	0.01	0.03	1	Agree					
X67984	1.67	1.59	0.00	0.00	-100.90	-108.4365	-100.21	-107.7479583	-106.85	0.07	9.2219E-06	0.12	0.07	0.070	0.01	0.01	1	Agree					
H47109	6.67	5.91	0.00	0.00	-145.45	-157.1865	-143.87	-155.6031667	-151.27	0.07	6.36183E-06	0.10	0.08	0.075	0.01	0.04	1	Agree					
X29624	11.67	13.65	0.00	0.00	-145.06	-159.0615	-144.91	-158.90525	-145.42	0.09	6.28684E-06	0.10	0.09	0.088	0.01	0.09	3	Disagree					
X67999	1.67	4.55	0.00	0.00	-77.88	-86.874	-77.72	-86.71775	-82.33	0.10	1.15108E-05	0.11	0.10	0.104	0.01	0.05	2	Disagree					
X30121	5.83	6.14	0.00	0.00	-85.13	-97.1865	-84.56	-96.614625	-91.05	0.12	1.02894E-05	0.17	0.12	0.125	0.01	0.06	2	Disagree					
X25461	10.00	9.10	0.00	0.00	-121.75	-136.75	-121.59	-136.59375	-134.65	0.15	0.048695652	0.16	0.15	0.153	0.04874864	0.06	3	Disagree					
X30187	3.33	4.55	0.00	0.00	-63.88	-76.874	-63.72	-76.71775	-72.33	0.17	1.30081E-05	0.17	0.17	0.169	0.01	0.06	2	Disagree					
X29626	23.33	24.11	0.00	0.00	-108.58	-123.5778061	-108.06	-123.0632228	-108.71	0.18	0.069531813	0.25	0.18	0.183	0.069802262	0.18	3	Disagree					
X28499	15.00	15.69	0.00	0.00	-138.40	-153.4029523	-137.61	-152.6144106	-154.62	0.19	0.099285418	0.25	0.19	0.188	0.099747245	0.09	2	Disagree					
H48498	5.83	6.82	0.00	0.00	-33.00	-39.999	-30.19	-37.1865	-33.18	0.18	0.000025	0.19	0.19	0.188	0.01	0.17	2	Disagree					
H47431	25.84	24.33	0.00	0.00	-139.35	-154.3465909	-138.87	-153.8736742	-149.10	0.20	0.11007371	0.24	0.20	0.197	0.110374672	0.14	4	Disagree					
H48481	15.83	15.92	0.00	0.00	-85.25	-100.25	-84.94	-99.9375	-90.33	0.20	0.056470588	0.20	0.20	0.198	0.056637168	0.15	3	Disagree					
X29743	21.67	22.74	0.00	0.00	-101.03	-116.0267857	-100.33	-115.3340774	-105.07	0.21	0.092210968	0.29	0.21	0.211	0.092713449	0.18	3	Disagree					
H47446	30.00	31.16	40.46	71.01	-142.03	-157.025	-141.69	-156.6942669	-154.47	0.23	0.154074074	0.36	0.24	0.235	0.154349082	0.17	4	Disagree	924	90500	9.05	10	25
H47430	28.34	94.17	30.47	58.99	-131.16	-146.1625	-130.52	-145.5170789	-77.39	0.24	0.148051002	0.26	0.24	0.236	0.148610076	0.55	4	Disagree	834	75900	7.59	14.8	28
X28009	0.42	2.27	0.00	0.00	-19.00	-24.999	-18.69	-24.6865	-22.73	0.24	0.00004	0.27	0.24	0.243	0.01	0.09	2	Disagree					
X30222	14.17	14.33	0.00	0.00	-91.24	-106.2372449	-90.79	-105.7851616	-108.80	0.26	0.137159432	0.39	0.26	0.260	0.137664902	0.12	2	Disagree					
X29781	45.00	47.30	0.00	0.00	-113.97	-128.9709596	-111.68	-126.6792929	-107.07	0.26	0.164560586	0.34	0.27	0.266	0.167040266	0.31	4	Disagree					
X28815	36.67	36.39	0.00	0.00	-118.88	-133.875	-118.72	-133.71875	-125.49	0.27	0.172972973	0.29	0.27	0.266	0.173140097	0.22	4	Disagree					
X28802	32.50	36.84	0.00	0.00	-105.17	-120.1721939	-104.86	-119.8565689	-106.59	0.27	0.162198213	0.40	0.27	0.267	0.162555906	0.26	4	Disagree					
X30583	34.17	37.53	0.00	0.00	-106.06	-121.0586735	-104.79	-119.7878401	-109.35	0.28	0.175770734	0.35	0.28	0.280	0.177304861	0.26	3	Disagree					
H47438	44.17	44.12	0.00	0.00	-140.10	-155.1020408	-139.46	-154.4624575	-153.38	0.29	0.214673211	0.38	0.29	0.292	0.215370667	0.22	4	Disagree					
X28837	47.50	45.49	0.00	0.00	-104.69	-119.6875	-104.53	-119.53125	-109.20	0.32	0.226262626	0.36	0.32	0.324	0.226491405	0.29	4	Disagree					
H47123	34.17	35.71	0.00	0.00	-86.35	-101.3456633	-85.36	-100.3644133	-92.73	0.33	0.210934009	0.47	0.33	0.330	0.212557931	0.28	3	Disagree					
X25501	17.50	13.65	0.00	0.00	-48.31	-63.3125	-48.16	-63.15625	-61.67	0.36	0.1593361	0.37	0.36	0.359	0.15966736	0.18	3	Disagree					
X29656	28.34	29.57	0.00	0.00	-61.56	-76.5625	-61.41	-76.40625	-67.00	0.36	0.207119741	0.36	0.36	0.363	0.207455429	0.31	3	Disagree					
X30218	24.17	27.29	0.00	0.00	-57.81	-72.8125	-57.19	-72.1875	-65.52	0.38	0.215488215	0.39	0.38	0.380	0.216949153	0.29	3	Disagree					
H46835	26.67	25.70	0.00	0.00	-77.49	-92.49362245	-76.95	-91.94674745	-98.99	0.38	0.258196512	0.60	0.38	0.380	0.259333941	0.21	3	Disagree					
H47391	35.00	36.62	0.00	0.00	-75.31	-90.30612245	-74.70	-89.69778912	-85.88	0.39	0.262807164	0.55	0.39	0.387	0.264118774	0.30	3	Disagree					
X30235	37.50	38.66	0.00	0.00	-69.75	-84.75	-69.59	-84.59375	-75.09	0.39	0.254945055	0.39	0.39	0.387	0.255295736	0.34	3	Disagree					
X30331	16.67	11.37	0.00	0.00	-52.88	-67.875	-52.72	-67.71875	-75.50	0.39	0.218705036	0.43	0.39	0.392	0.219099099	0.13	3	Disagree					
X30742	51.67	51.63	0.00	0.00	-88.85	-103.8520408	-88.16	-103.1634991	-94.62	0.39	0.289900576	0.59	0.39	0.394	0.291271877	0.35	3	Disagree					
X25471	25.00	22.74	0.00	0.00	-60.06	-75.0625	-59.75	-74.75	-76.32	0.39	0.242271293	0.41	0.39	0.395	0.243037975	0.23	4	Disagree					
X25463	10.00	10.92	0.00	0.00	-72.81	-87.80612245	-72.27	-87.26966412	-109.08	0.39	0.268282313	0.63	0.40	0.395	0.269487051	0.09	3	Disagree					
X28805	40.00	38.66	0.00	0.00	-65.88	-80.875	-65.72	-80.71875	-73.21	0.41	0.277094972	0.44	0.41	0.412	0.277482517	0.35	4	Disagree					
X29833	59.17	60.27	0.00	0.00	-64.39	-79.39413265	-62.82	-77.82121599	-50.04	0.42	0.280279817	0.65	0.42	0.422	0.284334061	0.55	4	Disagree					
X30361	35.00	38.66	0.00	0.00	-70.36	-85.36352041	-69.86	-84.86352041	-91.65	0.46	0.344932217	0.63	0.46	0.462	0.346260796	0.30	3	Disagree					
X25482	39.17	36.39	0.00	0.00	-50.06	-65.0625	-49.91	-64.90625	-57.67	0.47	0.308305648	0.49	0.47	0.469	0.308818636	0.39	4	Disagree					
X25489	31.67	27.29	0.00	0.00	-40.69	-55.6875	-40.53	-55.53125	-52.40	0.49	0.301176471	0.52	0.49	0.490	0.301768173	0.34	3	Disagree					
X30224	33.34	25.02	0.00	0.00	-42.44	-57.4375	-42.28	-57.28125	-58.42	0.49	0.311610487	0.52	0.49	0.492	0.312195122	0.30	3	Disagree					
X30139	43.34	43.21	0.00	0.00	-49.19	-64.1875	-49.03	-64.03125	-53.98	0.49	0.339549839	0.54	0.49	0.495	0.340096618	0.44	3	Disagree					
X29646	30.84	31.84	0.00	0.00	-38.88	-53.875	-38.72	-53.71875	-45.04	0.49	0.299186992	0.52	0.50	0.495	0.299796334	0.41	3	Disagree					
X29685	37.50	36.39	0.00	0.00	-45.06	-60.0625	-44.75	-59.75	-52.67	0.49	0.325614035	0.50	0.50	0.496	0.326760563	0.41	3	Disagree					
X25896	40.84	38.66	0.00	0.00	-54.69	-69.6875	-54.38	-69.375	-71.03	0.50	0.364672365	0.51	0.50	0.503	0.365714286	0.35	4	Disagree					
X28827	35.00	34.11	0.00	0.00	-45.63	-60.625	-45.47	-60.46875	-61.51	0.52	0.366013072	0.56	0.52	0.524	0.366612111	0.36	4	Disagree					
X25886	33.34	31.84	0.00	0.00	-39.69	-54.6875	-40.31	-55.3125	-57.85	0.56	0.390243902	0.55	0.55	0.554	0.387543253	0.36	4	Disagree					
H46817	19.17	73.34	32.96	71.01	-37.31	-52.3125	-36.96	-51.96280438	-11.97	0.56	0.386813187	0.86	0.56	0.565	0.388405259	0.86	4	Disagree	667	98100	9.81	78.8	51

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
X29681	30.84	31.38	0.00	0.00	-48.62	-63.62244898	-48.00	-62.99744898	-86.12	0.59	0.458532349	0.66	0.59	0.589	0.460984394	0.27	3	Disagree					
X24855	9.17	9.32	0.00	0.00	-15.82	-30.81815327	-15.47	-30.47440327	-30.36	0.60	0.223479603	0.84	0.61	0.607	0.225432165	0.23	1	Agree					
X25877	60.84	67.55	0.00	0.00	-50.24	-65.24183417	-49.56	-64.55745917	-59.33	0.60	0.485778647	0.85	0.61	0.607	0.488413191	0.53	4	Disagree					
X25875	68.34	65.95	0.00	0.00	-45.56	-60.5625	-44.94	-59.9375	-50.61	0.61	0.480428954	0.62	0.61	0.612	0.483018868	0.57	4	Disagree					
X30227	33.34	36.62	0.00	0.00	-28.02	-43.01658163	-27.74	-42.73741497	-37.45	0.62	0.419185396	0.89	0.62	0.624	0.420771426	0.49	2	Disagree					
H46831	29.17	28.88	0.00	0.00	-38.36	-53.36096939	-38.12	-53.12034439	-75.80	0.63	0.490283277	0.91	0.64	0.635	0.491412793	0.28	3	Disagree					
X29789	36.67	38.43	0.00	0.00	-35.91	-50.9119898	-35.48	-50.47657313	-61.25	0.64	0.489284115	0.91	0.64	0.643	0.491430593	0.39	3	Disagree					
H47403	50.84	176.68	60.68	91.92	-36.80	-51.8	-36.45	-51.44592842	74.18	0.64	0.494634146	0.66	0.64	0.643	0.496348712	1.72	4	Disagree	469	90700	9.07	19.2	57
X30208	31.67	22.74	0.00	0.00	-20.25	-35.25	-19.94	-34.9375	-38.51	0.67	0.424489796	0.73	0.67	0.673	0.426666667	0.37	3	Disagree					
X29686	45.00	48.21	0.00	0.00	-30.93	-45.93118687	-30.53	-45.53118687	-45.85	0.67	0.511695023	1.02	0.67	0.674	0.513880295	0.51	4	Disagree					
X29636	39.17	38.66	0.00	0.00	-21.56	-36.5625	-21.41	-36.40625	-27.90	0.68	0.450704225	0.70	0.68	0.678	0.451764706	0.58	3	Disagree					
H46789	41.67	160.84	52.19	76.17	-28.51	-43.5125	-28.16	-43.15624045	73.03	0.68	0.504483986	0.90	0.68	0.678	0.506539039	1.83	4	Disagree	856	97400	9.74	45.3	60
X29871	31.67	32.75	0.00	0.00	-20.78	-35.78282828	-20.02	-35.01824495	-34.75	0.69	0.469884025	0.85	0.70	0.700	0.475267456	0.49	4	Disagree					
X28535	46.67	45.49	0.00	0.00	-19.38	-34.375	-19.22	-34.21875	-28.89	0.74	0.537815126	0.79	0.74	0.741	0.538947368	0.61	4	Disagree					
X29442	8.33	11.37	0.00	0.00	-7.44	-22.4375	-6.81	-21.8125	-17.07	0.74	0.210989011	0.84	0.76	0.755	0.215730337	0.40	3	Disagree					
X29503	31.67	31.84	0.00	0.00	-11.88	-26.875	-11.25	-26.25	-20.04	0.77	0.481927711	0.81	0.78	0.780	0.487804878	0.61	3	Disagree					
H46842	13.33	43.34	31.72	73.88	-12.91	-27.9125	-12.53	-27.53363134	-19.48	0.79	0.555621891	1.34	0.80	0.799	0.558993594	0.69	3	Disagree	406	106100	10.61	30.6	91
X28545	54.17	54.58	0.00	0.00	-13.13	-28.125	-12.97	-27.96875	-13.54	0.81	0.587155963	0.88	0.81	0.809	0.588505747	0.80	4	Disagree					
H46829	13.33	47.50	29.72	69.01	-10.20	-25.2	-9.82	-24.82040202	-10.00	0.82	0.56173913	1.78	0.83	0.828	0.565472211	0.83	3	Disagree	553	103400	10.34	50.9	92
X29431	26.67	27.29	0.00	0.00	-6.88	-21.875	-6.56	-21.5625	-14.58	0.84	0.47761194	0.97	0.84	0.842	0.481203008	0.65	3	Disagree					
H46801	60.00	211.68	64.93	96.79	-13.89	-28.8875	-13.21	-28.20780056	119.49	0.85	0.686644068	1.02	0.86	0.856	0.691744306	2.30	4	Disagree	1067	88400	8.84	109	75
X26345	23.33	25.02	0.00	0.00	-4.69	-19.6875	-4.53	-19.53125	-14.67	0.88	0.503937008	0.95	0.89	0.885	0.505928854	0.63	3	Disagree					
X29666	28.34	29.57	0.00	0.00	-4.50	-19.5	-4.34	-19.34375	-12.93	0.89	0.541176471	0.96	0.90	0.897	0.543173432	0.70	3	Disagree					
X29422	49.17	52.08	0.00	0.00	-4.71	-19.7130102	-4.19	-19.19009354	-13.86	0.93	0.701034916	1.30	0.94	0.936	0.706638909	0.79	4	Disagree					
X29421	37.50	36.39	0.00	0.00	-1.88	-16.875	-1.72	-16.71875	-10.49	0.96	0.64	1.04	0.96	0.963	0.642140468	0.78	3	Disagree					
X30596	44.17	48.21	0.00	0.00	0.34	-14.65561224	0.73	-14.27019558	0.09	1.01	0.695467798	1.44	1.02	1.015	0.701082528	1.00	4	Disagree					
X30198	76.67	72.78	0.00	0.00	1.50	-13.5	1.66	-13.34375	10.28	1.02	0.784	1.09	1.03	1.027	0.785964912	1.16	3	Disagree					
H46808	45.00	47.30	0.00	0.00	10.37	-4.630681818	10.81	-4.192140152	-10.51	1.18	0.91990172	1.30	1.19	1.188	0.92693305	0.82	4	Disagree					
X29407	38.34	38.66	0.00	0.00	6.25	-8.75	7.19	-7.8125	-0.09	1.16	0.774193548	1.38	1.19	1.190	0.79338843	1.00	3	Disagree					
H46881	57.50	216.68	66.68	109.38	16.70	1.7	17.07	2.07303405	129.18	1.19	1.019428571	2.10	1.20	1.196	1.023793254	2.48	4	Disagree	611	73300	7.33	17.3	83
X30711	38.34	40.94	0.00	0.00	14.53	-0.471938776	15.18	0.182227891	-14.69	1.26	0.991515707	2.20	1.28	1.276	1.003314992	0.74	3	Disagree					
H46870	49.17	180.85	58.44	105.38	68.94	53.9375	69.37	54.36523349	134.28	2.48	2.158389262	2.80	2.50	2.504	2.178400534	3.88	4	Disagree	338	74000	7.4	8.6	158
H46841	62.50	54.81	0.00	0.00	96.98	81.97704082	97.15	82.15099915	21.68	3.93	3.474778591	5.00	3.95	3.948	3.493122979	1.65	4	Disagree					
H47142	85.84	85.06	0.00	0.00	137.42	122.4234694	139.48	124.4755527	38.81	3.97	3.646993933	5.22	4.16	4.156	3.816321721	1.84	4	Disagree					
X66971	39.17	38.66	0.00	0.00	34.50	19.5	34.66	19.65625	31.16	5.60	3.6	6.11	5.72	5.719	3.676595745	5.15	3	Disagree					
X67793	18.33	20.47	0.00	0.00	-44.00	-59	-43.84	-58.84375	-44.53	0.32	0.092307692	0.35	0.32	0.324	0.09253012	0.31	3	Disagree					
X67816	20.83	18.19	0.00	0.00	-37.81	-52.8125	-37.50	-52.5	-44.62	0.40	0.15920398	0.42	0.40	0.400	0.16	0.29	3	Disagree					
X28131	41.67	36.39	0.00	0.00	-4.44	-19.4375	-4.28	-19.28125	-12.05	0.91	0.598709677	1.00	0.91	0.911	0.600647249	0.75	3	Disagree					
X28077	41.67	31.84	0.00	0.00	-3.19	-18.1875	-3.03	-18.03125	-15.35	0.93	0.614569536	0.96	0.94	0.936	0.616611296	0.67	3	Disagree					
X28151	50.84	50.03	0.00	0.00	-1.19	-16.1875	-2.13	-17.125	-7.15	0.98	0.716939891	0.96	0.96	0.963	0.705376344	0.87	3	Disagree					
X67772	57.50	56.86	0.00	0.00	-0.06	-15.0625	0.25	-14.75	-2.21	1.00	0.744973545	1.04	1.00	1.004	0.74893617	0.96	3	Disagree					
X28121	48.34	43.21	0.00	0.00	5.56	-9.4375	5.72	-9.28125	-0.23	1.13	0.782733813	1.23	1.13	1.132	0.785559567	0.99	3	Disagree					
X25232	32.50	29.57	0.00	0.00	5.19	-9.8125	5.34	-9.65625	1.75	1.19	0.647191011	1.26	1.19	1.193	0.650847458	1.06	3	Disagree					
X25276	55.00	50.03	0.00	0.00	14.25	-0.75	14.41	-0.59375	11.28	1.37	0.980645161	1.49	1.37	1.373	0.984615385	1.29	3	Disagree					
X28087	50.00	40.94	0.00	0.00	13.81	-1.1875	13.97	-1.03125	3.75	1.37	0.968067227	1.50	1.38	1.377	0.972151899	1.10	3	Disagree					
H47484	30.84	121.67	42.20	65.57	14.28	-0.725	14.68	-0.324251565	83.55	1.37	0.980983607	1.66	1.39	1.389	0.991404692	3.19	4	Disagree	347	91000	9.1	6	121
X25254	38.34	34.11	0.00	0.00	11.44	-3.5625	11.59	-3.40625	7.55	1.43	0.865882353	1.47	1.44	1.439	0.871005917	1.28	3	Disagree					
X67805	38.34	36.39	0.00	0.00	13.81	-1.1875	14.13	-0.875	9.20	1.51	0.956321839	1.68	1.53	1.526	0.96744186	1.34	3	Disagree					
X28141	55.84	47.76	0.00	0.00	22.63	7.625	22.78	7.78125	13.38	1.66	1.221818182	1.70	1.67	1.666	1.22739726	1.39	3	Disagree					
X28112	71.67	65.95	0.00	0.00	40.88	25.875	41.03	26.03125	37.83	2.45	1.92	2.63	2.47	2.467	1.930726257	2.35	3	Disagree					

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
X25264	56.67	50.03	0.00	0.00	37.50	22.5	37.19	22.1875	27.53	2.67	2	2.63	2.63	2.630	1.97260274	2.22	3	Disagree					
X25243	42.50	38.66	0.00	0.00	30.31	15.3125	30.31	15.3125	23.97	3.06	2.042553191	3.06	3.06	3.064	2.042553191	2.63	3	Disagree					
X67806	28.34	28.88	0.00	0.00	38.69	23.69318182	38.84	23.84214015	10.76	3.13	2.307210031	3.84	3.16	3.161	2.32632871	1.59	4	Disagree					
X67782	34.17	29.57	0.00	0.00	27.31	12.3125	27.47	12.46875	19.88	3.82	2.270967742	4.39	3.88	3.882	2.308196721	3.05	3	Disagree					
X28099	72.50	65.95	0.00	0.00	54.19	39.1875	53.88	38.875	48.14	4.04	3.2	3.97	3.97	3.972	3.144827586	3.70	3	Disagree					
H47469	26.67	90.84	34.21	75.31	55.80	40.8	57.39	42.39392562	70.84	3.79	3.04	4.26	4.12	4.118	3.303257324	4.54	4	Disagree	1295	80000	8	5.4	1757
X28066	62.50	45.49	0.00	0.00	47.88	32.875	47.88	32.875	32.36	4.65	3.504761905	4.65	4.65	4.648	3.504761905	3.47	3	Disagree					
X25251	45.00	45.71	0.00	0.00	59.89	44.89158163	60.00	45.00408163	32.90	5.67	4.503733201	8.79	5.72	5.725	4.543628475	3.57	4	Disagree					
X67761	60.00	56.86	0.00	0.00	54.50	39.5	54.19	39.1875	49.36	8.27	6.266666667	7.94	7.94	7.936	6.016	7.58	3	Disagree					
X25221	57.50	52.31	0.00	0.00	54.00	39	54.00	39	47.31	11.80	8.8	11.80	11.80	11.800	8.8	10.46	3	Disagree					
X25211	69.17	61.40	0.00	0.00	63.25	48.25	62.94	47.9375	57.65	17.87	13.86666667	16.49	16.49	16.492	12.8	16.37	3	Disagree					
X27667	0.83	0.68	0.00	0.00	-375.65	-370.624	-369.67	-364.6448333	-369.94	-0.01	2.69815E-06	-0.02	0.01	0.010	0.01	0.00	1	Agree					
H48695	0.83	0.83	1.00	21.76	-130.54	-130.9365	-129.91	-130.3115	-130.10	0.00	7.63723E-06	0.00	0.00	0.010	0.01	0.01	1	Agree	2381	61100	6.11	32.5	37
X67731	0.83	0.23	0.00	0.00	-123.87	-124.374	-122.72	-123.21775	-124.15	0.00	8.0402E-06	0.01	0.00	0.010	0.01	0.00	1	Agree					
H47241	0.83	0.83	0.75	15.46	-96.39	-97.1865	-96.03	-96.82878179	-96.35	0.01	1.02894E-05	0.01	0.01	0.010	0.01	0.01	1	Agree	2203	57600	5.76	15.2	62
H47325	0.83	0.68	0.00	0.00	-128.43	-129.6865	-127.24	-128.499	-129.01	0.01	7.71084E-06	0.01	0.01	0.010	0.01	0.01	1	Agree					
X28273	0.83	2.27	0.00	0.00	-192.69	-194.6865	-185.19	-187.1865	-192.41	0.01	5.13644E-06	0.01	0.01	0.011	0.01	0.01	2	Disagree					
X24881	0.83	0.68	0.00	0.00	-138.30	-140.3115	-136.96	-138.96775	-139.63	0.01	7.12695E-06	0.02	0.01	0.014	0.01	0.00	1	Agree					
H47307	0.83	0.83	1.00	10.31	-53.48	-54.374	-53.07	-53.96449965	-53.54	0.02	1.83908E-05	0.02	0.02	0.010	0.01	0.02	1	Agree	7329	52500	5.25	18	133
X28256	0.83	2.27	0.00	0.00	-176.06	-179.0615	-173.25	-176.249	-176.79	0.02	5.58464E-06	0.02	0.02	0.017	0.01	0.01	2	Disagree					
X67618	0.83	0.23	0.00	0.00	-103.87	-105.624	-101.56	-103.3219167	-105.40	0.02	9.46746E-06	0.03	0.02	0.017	0.01	0.00	1	Agree					
X26088	0.83	0.45	0.00	0.00	-80.66	-82.1865	-80.15	-81.67920833	-81.73	0.02	1.21673E-05	0.03	0.02	0.019	0.01	0.01	1	Agree					
X28851	0.42	2.27	0.00	0.00	-256.25	-261.249	-255.63	-260.624	-258.98	0.02	3.82775E-06	0.02	0.02	0.019	0.01	0.01	2	Disagree					
X28211	0.83	2.27	0.00	0.00	-148.88	-151.874	-148.72	-151.71775	-149.60	0.02	6.58436E-06	0.02	0.02	0.020	0.01	0.01	2	Disagree					
X24925	1.67	2.27	0.00	0.00	-188.19	-192.1865	-187.88	-191.874	-189.91	0.02	5.20325E-06	0.02	0.02	0.021	0.01	0.01	2	Disagree					
X27364	0.83	0.45	0.00	0.00	-109.18	-111.5615	-108.41	-110.795875	-111.11	0.02	8.96359E-06	0.03	0.02	0.022	0.01	0.00	1	Agree					
X28751	0.83	2.27	0.00	0.00	-77.38	-79.374	-77.22	-79.21775	-77.10	0.03	1.25984E-05	0.03	0.03	0.025	0.01	0.03	2	Disagree					
X25998	5.00	2.50	0.00	0.00	-135.55	-139.374	-134.29	-138.1135833	-136.87	0.03	7.17489E-06	0.04	0.03	0.028	0.01	0.02	1	Agree					
X67849	3.33	2.27	0.00	0.00	-175.63	-180.624	-170.63	-175.624	-178.35	0.03	5.53633E-06	0.03	0.03	0.028	0.01	0.01	2	Disagree					
H48761	1.67	2.50	7.74	22.34	-191.29	-197.1865	-190.65	-196.5461842	-194.69	0.03	5.07132E-06	0.06	0.03	0.030	0.01	0.01	1	Agree	1515	54900	5.49	34.4	21
X28301	0.83	2.27	0.00	0.00	-157.19	-162.1865	-157.03	-162.03025	-159.91	0.03	6.1657E-06	0.03	0.03	0.031	0.01	0.01	2	Disagree					
X27427	1.67	1.36	0.00	0.00	-141.41	-145.9365	-138.97	-143.4885833	-144.57	0.03	6.85225E-06	0.05	0.03	0.032	0.01	0.01	1	Agree					
X27368	4.17	1.82	0.00	0.00	-174.66	-180.3115	-173.54	-179.1969167	-178.49	0.03	5.54593E-06	0.04	0.03	0.032	0.01	0.01	1	Agree					
X67459	0.83	2.27	0.00	0.00	-120.06	-124.0615	-119.44	-123.4365	-121.79	0.03	8.06045E-06	0.03	0.03	0.032	0.01	0.02	2	Disagree					
X25974	0.42	4.55	0.00	0.00	-148.75	-153.749	-148.44	-153.4365	-149.20	0.03	6.50407E-06	0.04	0.03	0.033	0.01	0.03	2	Disagree					
X27532	1.67	0.68	0.00	0.00	-236.02	-244.0615	-232.54	-240.5823333	-243.38	0.03	4.09731E-06	0.05	0.03	0.033	0.01	0.00	1	Agree					
H47353	0.83	0.91	0.00	0.00	-98.62	-102.1865	-97.86	-101.433375	-101.28	0.03	9.78593E-06	0.05	0.04	0.035	0.01	0.01	1	Agree					
X27669	2.50	1.36	0.00	0.00	-189.34	-196.249	-187.97	-194.874	-194.89	0.04	5.09554E-06	0.05	0.04	0.035	0.01	0.01	1	Agree					
H46781	2.50	2.05	0.00	0.00	-162.72	-168.749	-161.68	-167.708375	-166.70	0.04	5.92593E-06	0.04	0.04	0.036	0.01	0.01	1	Agree					
X26107	0.83	0.68	0.00	0.00	-135.21	-140.3115	-134.32	-139.424	-139.63	0.04	7.12695E-06	0.05	0.04	0.037	0.01	0.00	1	Agree					
H46949	0.83	0.83	7.74	23.77	-101.41	-105.3115	-101.06	-104.9596164	-104.48	0.04	9.49555E-06	0.06	0.04	0.037	0.01	0.01	1	Agree	1076	62800	6.28	20.5	54
X28314	0.83	2.27	0.00	0.00	-155.25	-161.249	-155.09	-161.09275	-158.98	0.04	6.20155E-06	0.04	0.04	0.037	0.01	0.01	2	Disagree					
IC COMP 14	1.67	1.59	4.25	9.74	-130.57	-135.624	-129.54	-134.5911692	-134.03	0.04	7.37327E-06	0.05	0.04	0.038	0.01	0.01	1	Agree	2.4		6.86	59	115
X26159	0.42	4.55	0.00	0.00	-200.75	-208.749	-200.59	-208.59275	-204.20	0.04	4.79042E-06	0.04	0.04	0.038	0.01	0.02	2	Disagree					
X66869	0.83	2.27	0.00	0.00	-149.94	-155.9365	-147.75	-153.749	-153.66	0.04	6.41283E-06	0.05	0.04	0.039	0.01	0.01	2	Disagree					
X24935	8.33	6.82	0.00	0.00	-195.44	-203.4365	-195.28	-203.28025	-196.61	0.04	4.91551E-06	0.05	0.04	0.039	0.01	0.03	2	Disagree					
H48859	9.17	8.19	0.00	0.00	-203.46	-211.874	-202.76	-211.1812917	-203.69	0.04	4.71976E-06	0.06	0.04	0.040	0.01	0.04	2	Disagree					
H46744	3.33	12.50	6.24	18.61	-81.29	-84.6865	-80.92	-84.32148853	-72.19	0.04	1.18081E-05	0.04	0.04	0.040	0.01	0.15	1	Agree	983	60300	6.03	30.4	72
X28374	0.42	2.27	0.00	0.00	-68.88	-71.874	-68.56	-71.5615	-69.60	0.04	1.3913E-05	0.04	0.04	0.042	0.01	0.03	2	Disagree					
X27531	3.33	2.50	0.00	0.00	-159.84	-166.874	-158.86	-165.8948333	-164.37	0.04	5.99251E-06	0.06	0.04	0.042	0.01	0.01	1	Agree					

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
X67741	2.50	4.55	0.00	0.00	-119.69	-124.6865	-112.81	-117.8115	-120.14	0.04	8.02005E-06	0.05	0.04	0.042	0.01	0.04	2	Disagree					
H48926	7.50	6.37	0.00	0.00	-202.32	-211.249	-201.41	-210.3385833	-204.88	0.04	4.73373E-06	0.05	0.04	0.042	0.01	0.03	1	Agree					
X66721	0.83	0.45	0.00	0.00	-119.10	-124.374	-118.06	-123.3375417	-123.92	0.04	8.0402E-06	0.06	0.04	0.043	0.01	0.00	1	Agree					
X28375	0.83	1.14	0.00	0.00	-77.73	-81.249	-77.29	-80.80941667	-80.11	0.04	1.23077E-05	0.07	0.04	0.044	0.01	0.01	1	Agree					
H48900	0.83	1.67	5.49	15.46	-112.30	-117.499	-111.94	-117.1434698	-115.83	0.04	8.51064E-06	0.07	0.04	0.044	0.01	0.01	1	Agree	3426	50300	5.03	74.6	59
X24946	0.83	2.27	0.00	0.00	-64.50	-67.499	-64.34	-67.34275	-65.23	0.04	1.48148E-05	0.05	0.04	0.045	0.01	0.03	2	Disagree					
X28325	0.42	2.27	0.00	0.00	-126.19	-132.1865	-126.03	-132.03025	-129.91	0.05	7.56501E-06	0.05	0.05	0.045	0.01	0.02	2	Disagree					
H48432	4.17	3.41	0.00	0.00	-142.49	-149.374	-140.83	-147.71775	-145.96	0.05	6.69456E-06	0.07	0.05	0.047	0.01	0.02	1	Agree					
X25373	0.42	2.27	0.00	0.00	-80.38	-84.374	-80.22	-84.21775	-82.10	0.05	1.18519E-05	0.05	0.05	0.047	0.01	0.03	2	Disagree					
X26085	0.83	1.14	0.00	0.00	-65.12	-68.4365	-64.80	-68.1115	-67.30	0.05	1.46119E-05	0.07	0.05	0.049	0.01	0.02	1	Agree					
X26169	0.42	2.27	0.00	0.00	-117.75	-123.749	-116.50	-122.499	-121.48	0.05	8.08081E-06	0.05	0.05	0.049	0.01	0.02	2	Disagree					
X29259	0.83	0.68	0.00	0.00	-155.40	-163.4365	-154.14	-162.1760833	-162.76	0.05	6.11855E-06	0.06	0.05	0.050	0.01	0.00	1	Agree					
X25718	0.83	2.27	0.00	0.00	-38.00	-39.999	-37.84	-39.84275	-37.73	0.05	0.000025	0.06	0.05	0.050	0.01	0.06	2	Disagree					
H48749	2.50	2.50	6.74	29.21	-146.26	-154.0615	-145.61	-153.4117029	-151.56	0.05	6.49087E-06	0.07	0.05	0.051	0.01	0.02	2	Disagree	2135	63700	6.37	16	34
X29374	0.83	0.23	0.00	0.00	-116.43	-122.8115	-115.62	-121.999	-122.59	0.05	8.14249E-06	0.08	0.05	0.052	0.01	0.00	1	Agree					
X27359	4.17	3.87	0.00	0.00	-142.40	-150.3115	-141.72	-149.6354583	-146.45	0.05	6.65281E-06	0.07	0.05	0.053	0.01	0.03	1	Agree					
H47552	0.83	0.83	6.49	25.77	-88.23	-93.124	-87.56	-92.45596977	-92.29	0.05	1.07383E-05	0.09	0.05	0.053	0.01	0.01	1	Agree	802	66500	6.65	59.2	59
X28931	37.50	4.55	0.00	0.00	-88.44	-93.4365	-87.81	-92.8115	-88.89	0.05	1.07023E-05	0.06	0.05	0.054	0.01	0.05	2	Disagree					
X67553	1.67	2.27	0.00	0.00	-87.19	-92.1865	-86.88	-91.874	-89.91	0.05	1.08475E-05	0.06	0.05	0.054	0.01	0.02	2	Disagree					
X27334	0.83	0.91	0.00	0.00	-113.78	-120.3115	-112.98	-119.5156667	-119.40	0.05	8.31169E-06	0.07	0.05	0.055	0.01	0.01	1	Agree					
HCT-6	2.50	2.50	9.74	30.07	-129.71	-137.499	-129.38	-137.1689962	-135.00	0.06	7.27273E-06	0.11	0.06	0.057	0.01	0.02	1	Agree	1184	100300	10.03	31.8	24
HCT-3	0.83	0.91	0.00	0.00	-65.04	-69.0615	-64.72	-68.739625	-68.15	0.06	1.44796E-05	0.07	0.06	0.058	0.01	0.01	1	Agree					
HCT-5	2.50	2.73	0.00	0.00	-115.65	-122.8115	-114.87	-122.0323333	-120.08	0.06	8.14249E-06	0.09	0.06	0.059	0.01	0.02	1	Agree					
HCT-2	0.83	2.27	0.00	0.00	-48.25	-51.249	-48.09	-51.09275	-48.98	0.06	1.95122E-05	0.06	0.06	0.059	0.01	0.04	2	Disagree					
HCT-4	1.67	2.27	0.00	0.00	-143.81	-152.8115	-143.50	-152.499	-150.54	0.06	6.54397E-06	0.07	0.06	0.059	0.01	0.01	2	Disagree					
HCT-1	0.83	2.27	0.00	0.00	-94.63	-100.624	-94.31	-100.3115	-98.35	0.06	9.93789E-06	0.07	0.06	0.060	0.01	0.02	2	Disagree					
X27447	1.67	1.82	0.00	0.00	-81.60	-86.874	-81.18	-86.45941667	-85.06	0.06	1.15108E-05	0.10	0.06	0.061	0.01	0.02	1	Agree					
X26179	0.42	2.27	0.00	0.00	-106.75	-113.749	-106.59	-113.59275	-111.48	0.06	8.79121E-06	0.07	0.06	0.062	0.01	0.02	2	Disagree					
H48559A	0.83	0.83	6.74	16.89	-64.24	-68.4365	-63.85	-68.04596213	-67.60	0.06	1.46119E-05	0.11	0.06	0.062	0.01	0.01	1	Agree	1041	81000	8.1	280.6	107
H48504	0.83	0.83	23.22	42.67	-137.05	-146.249	-136.09	-145.2888909	-145.42	0.06	6.83761E-06	0.08	0.06	0.063	0.01	0.01	1	Agree	1287	54200	5.42	49.1	31
X25438	0.83	2.27	0.00	0.00	-58.19	-62.1865	-58.03	-62.03025	-59.91	0.06	1.60804E-05	0.07	0.06	0.064	0.01	0.04	2	Disagree					
X29384	1.67	1.36	0.00	0.00	-112.09	-119.999	-111.15	-119.0562917	-118.64	0.07	8.33333E-06	0.10	0.07	0.066	0.01	0.01	1	Agree					
H47085	5.00	4.55	0.00	0.00	-124.25	-133.4365	-122.93	-132.1135833	-128.89	0.07	7.49415E-06	0.10	0.07	0.070	0.01	0.03	1	Agree					
HCT-3	0.83	1.59	12.49	30.93	-104.90	-112.8115	-104.27	-112.1865	-111.22	0.07	8.86427E-06	0.07	0.07	0.071	0.01	0.01	1	Agree	1020	91500	9.15	246.1	25
IC COMP 22	5.83	4.32	8.74	19.47	-140.33	-150.9365	-139.53	-150.1358626	-146.62	0.07	6.62526E-06	0.09	0.07	0.071	0.01	0.03	1	Agree	2.4		6.05	51	78
X28362	0.83	2.27	0.00	0.00	-65.31	-70.3115	-65.16	-70.15525	-68.04	0.07	1.42222E-05	0.08	0.07	0.071	0.01	0.03	2	Disagree					
X29355	2.50	2.27	0.00	0.00	-119.99	-129.6865	-119.02	-128.7167083	-127.41	0.07	7.71084E-06	0.11	0.08	0.075	0.01	0.02	1	Agree					
X26055	0.42	4.55	0.00	0.00	-36.38	-39.374	-36.22	-39.21775	-34.83	0.08	2.53968E-05	0.09	0.08	0.076	0.01	0.12	2	Disagree					
X27273	5.83	5.91	0.00	0.00	-92.09	-99.999	-91.09	-99.00525	-94.09	0.08	0.00001	0.10	0.08	0.080	0.01	0.06	1	Agree					
H48517	3.33	8.33	6.24	27.49	-76.23	-83.124	-75.24	-82.13544719	-74.79	0.08	1.20301E-05	0.15	0.08	0.084	0.01	0.10	1	Agree	556	72300	7.23	5.7	70
X66829	0.83	2.27	0.00	0.00	-84.50	-92.499	-84.34	-92.34275	-90.23	0.09	1.08108E-05	0.09	0.09	0.087	0.01	0.02	2	Disagree					
X67543	9.17	9.10	0.00	0.00	-142.37	-155.9365	-141.51	-155.0812917	-146.84	0.09	6.41283E-06	0.13	0.09	0.087	0.01	0.06	2	Disagree					
H46962	0.83	0.83	7.99	25.48	-64.64	-70.9365	-63.86	-70.15980021	-70.10	0.09	1.40969E-05	0.13	0.09	0.090	0.01	0.01	1	Agree	1254	64500	6.45	18.8	208
IC COMP 23	10.83	9.78	11.99	25.20	-131.56	-144.6865	-130.63	-143.7602347	-134.91	0.09	6.91145E-06	0.12	0.09	0.091	0.01	0.07	1	Agree	25.2		6.84	98	96
H48907	11.67	12.05	0.00	0.00	-114.57	-126.5615	-114.06	-126.049	-114.51	0.09	7.90123E-06	0.14	0.10	0.095	0.01	0.10	2	Disagree					
H48909	7.50	8.19	0.00	0.00	-104.57	-115.624	-104.00	-115.0500417	-107.44	0.10	8.64865E-06	0.11	0.10	0.096	0.01	0.07	2	Disagree					
X66552	0.83	3.33	11.24	22.62	-67.44	-74.6865	-65.51	-72.76263516	-71.35	0.10	1.33891E-05	0.36	0.10	0.100	0.01	0.04	2	Disagree	1.927	78400	7.84	89.7	67
H48556	0.83	0.68	0.00	0.00	-35.73	-39.6865	-35.27	-39.22504167	-39.01	0.10	2.51969E-05	0.13	0.10	0.101	0.01	0.02	1	Agree					
X28877	0.42	2.27	0.00	0.00	-61.75	-68.749	-61.59	-68.59275	-66.48	0.10	1.45455E-05	0.10	0.10	0.102	0.01	0.03	2	Disagree					
X28785	2.50	1.82	0.00	0.00	-36.35	-40.624	-36.05	-40.324	-38.81	0.11	2.46154E-05	0.15	0.11	0.106	0.01	0.04	1	Agree					

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
X25843	7.50	9.10	0.00	0.00	-92.44	-103.4365	-92.28	-103.28025	-94.34	0.11	9.66767E-06	0.11	0.11	0.107	0.01	0.09	2	Disagree					
X25045	4.17	4.55	0.00	0.00	-58.00	-64.999	-57.84	-64.84275	-60.45	0.11	1.53846E-05	0.11	0.11	0.108	0.01	0.07	2	Disagree					
H48852	7.50	6.82	0.00	0.00	-88.97	-99.6865	-88.49	-99.20316667	-92.86	0.11	1.00313E-05	0.17	0.11	0.108	0.01	0.07	1	Agree					
IC COMP 25	12.50	11.60	12.24	22.34	-125.79	-140.7859848	-124.93	-139.9334766	-129.34	0.11	0.001075052	0.12	0.11	0.108	0.01	0.08	1	Agree	2.2		6.03	131	52
X28887	0.42	2.27	0.00	0.00	-56.75	-63.749	-56.13	-63.124	-61.48	0.11	1.56863E-05	0.12	0.11	0.111	0.01	0.04	2	Disagree					
X67563	18.33	18.19	0.00	0.00	-159.06	-174.0625	-158.75	-173.75	-160.87	0.11	0.027923211	0.13	0.11	0.112	0.027972028	0.10	3	Disagree					
X27659	10.00	7.51	0.00	0.00	-106.06	-119.999	-105.64	-119.5885833	-112.49	0.12	8.33333E-06	0.15	0.12	0.117	0.01	0.06	2	Disagree					
X28291	14.17	13.65	0.00	0.00	-104.75	-118.749	-104.59	-118.59275	-105.10	0.12	8.42105E-06	0.13	0.12	0.118	0.01	0.11	3	Disagree					
X29942	10.83	10.46	0.00	0.00	-101.91	-115.9365	-101.42	-115.4531667	-105.48	0.12	8.62534E-06	0.17	0.12	0.122	0.01	0.09	2	Disagree					
X28922	0.42	4.55	0.00	0.00	-50.81	-57.8115	-50.19	-57.1865	-53.26	0.12	1.72973E-05	0.13	0.12	0.122	0.01	0.08	2	Disagree					
X28897	0.42	4.55	0.00	0.00	-49.56	-56.5615	-49.25	-56.249	-52.01	0.12	1.76796E-05	0.13	0.12	0.124	0.01	0.08	2	Disagree					
X26039	10.00	11.37	0.00	0.00	-84.25	-96.249	-83.63	-95.624	-84.88	0.12	1.03896E-05	0.14	0.13	0.125	0.01	0.12	3	Disagree					
X28867	0.83	2.27	0.00	0.00	-69.69	-79.6865	-68.75	-78.749	-77.41	0.13	1.2549E-05	0.13	0.13	0.127	0.01	0.03	2	Disagree					
X25308	3.33	3.18	0.00	0.00	-78.38	-89.6865	-76.09	-87.39483333	-86.50	0.13	1.11498E-05	0.22	0.13	0.129	0.01	0.04	1	Agree					
H48532	0.83	2.50	3.00	18.04	-27.04	-30.9365	-26.10	-29.99716053	-28.44	0.13	3.23232E-05	0.17	0.13	0.130	0.01	0.08	1	Agree	397	69300	6.93	6.1	431
H46895	5.00	14.17	10.99	36.08	-100.84	-115.8375	-100.18	-115.1804097	-101.77	0.13	0.000862534	0.19	0.13	0.131	0.01	0.12	2	Disagree	907	65300	6.53	130.9	44
X25832	20.83	22.29	0.00	0.00	-189.73	-204.7257653	-188.91	-203.914307	-196.77	0.13	0.065445865	0.19	0.13	0.134	0.065689193	0.10	3	Disagree					
X66819	0.83	4.55	0.00	0.00	-53.25	-61.249	-50.75	-58.749	-56.70	0.13	1.63265E-05	0.15	0.14	0.136	0.01	0.07	2	Disagree					
X25301	12.50	13.65	0.00	0.00	-118.50	-133.5	-118.34	-133.34375	-123.85	0.14	0.029090909	0.15	0.14	0.138	0.029124005	0.10	3	Disagree					
H48305	21.67	60.84	23.72	42.67	-152.90	-167.9	-152.59	-167.5875	-116.66	0.14	0.054084507	0.14	0.14	0.139	0.054179894	0.34	4	Disagree	7714	66900	6.69	28	29
H47578	11.67	41.67	22.48	40.37	-111.28	-126.275	-110.92	-125.9238457	-87.71	0.14	0.023961353	0.19	0.14	0.140	0.024026566	0.32	2	Disagree	763	88200	8.82	94.4	53
H48210	9.17	26.67	13.73	43.24	-90.73	-105.624	-90.38	-105.275763	-78.96	0.14	9.46746E-06	0.20	0.14	0.142	0.01	0.25	2	Disagree	1612	66000	6.6	78	49
X29099	5.83	6.82	0.00	0.00	-66.81	-77.8115	-66.19	-77.1865	-70.99	0.14	1.28514E-05	0.15	0.14	0.143	0.01	0.09	2	Disagree					
X29231	0.83	0.68	0.00	0.00	-50.52	-59.0615	-49.35	-57.89483333	-58.38	0.14	1.69312E-05	0.22	0.15	0.148	0.01	0.01	1	Agree					
X25329	9.17	11.37	0.00	0.00	-63.69	-74.6865	-63.53	-74.53025	-63.32	0.15	1.33891E-05	0.16	0.15	0.148	0.01	0.15	3	Disagree					
X24966	7.50	7.28	0.00	0.00	-62.01	-72.8115	-61.85	-72.65525	-65.53	0.15	1.37339E-05	0.33	0.15	0.149	0.01	0.10	2	Disagree					
H48913	12.50	42.50	19.23	36.94	-99.16	-114.1625	-98.82	-113.8200976	-74.06	0.15	0.020589812	0.24	0.15	0.150	0.020650473	0.36	2	Disagree	1080	83300	8.33	54.4	41
X28384	11.67	13.65	0.00	0.00	-92.06	-107.0625	-91.91	-106.90625	-95.42	0.16	0.018338109	0.17	0.16	0.156	0.018364419	0.13	3	Disagree					
H48312	15.00	14.33	0.00	0.00	-89.98	-104.9808673	-89.62	-104.6173257	-92.23	0.16	0.014842301	0.24	0.16	0.156	0.014893109	0.13	3	Disagree					
X27515	39.17	41.39	0.00	0.00	-160.11	-175.1125	-159.15	-174.153125	-148.92	0.16	0.079868637	0.25	0.16	0.159	0.080273299	0.22	1	Agree					
X67506	21.67	20.47	0.00	0.00	-128.13	-143.125	-127.50	-142.5	-132.66	0.16	0.065306122	0.18	0.16	0.164	0.06557377	0.13	3	Disagree					
X25831	23.33	22.74	0.00	0.00	-140.75	-155.75	-140.59	-155.59375	-146.01	0.17	0.077037037	0.18	0.17	0.166	0.077108434	0.13	3	Disagree					
H47015	3.33	2.27	0.00	0.00	-56.28	-67.499	-55.66	-66.883375	-65.23	0.17	1.48148E-05	0.22	0.17	0.168	0.01	0.03	1	Agree					
X67573	28.34	27.29	0.00	0.00	-139.75	-154.75	-138.19	-153.1875	-141.46	0.17	0.082962963	0.20	0.17	0.173	0.083738318	0.16	3	Disagree					
X24984	6.67	6.82	0.00	0.00	-37.63	-45.624	-37.47	-45.46775	-38.80	0.18	2.19178E-05	0.19	0.18	0.176	0.01	0.15	2	Disagree					
X67495	29.17	27.29	0.00	0.00	-143.69	-158.6875	-143.38	-158.375	-147.40	0.18	0.091592129	0.21	0.18	0.178	0.091756272	0.16	3	Disagree					
X66846	0.42	2.27	0.00	0.00	-35.44	-43.4365	-35.13	-43.124	-41.16	0.18	2.30216E-05	0.20	0.19	0.186	0.01	0.05	2	Disagree					
H48238	16.67	59.17	25.72	40.09	-91.08	-106.075	-90.72	-105.7201991	-52.70	0.19	0.051843575	0.23	0.19	0.187	0.052008515	0.53	3	Disagree	1148	80600	8.06	9.1	58
H48929	17.50	66.67	19.23	42.95	-90.38	-105.375	-90.03	-105.0304097	-45.20	0.19	0.058100559	0.28	0.19	0.193	0.058280069	0.60	3	Disagree	537	74500	7.45	52.6	44
X26126	20.00	21.61	0.00	0.00	-106.36	-121.3647959	-105.75	-120.7481293	-110.27	0.19	0.07969823	0.34	0.19	0.194	0.080072661	0.16	2	Disagree					
H48872	25.84	93.34	29.97	40.37	-138.74	-153.7375	-138.09	-153.0891616	-80.10	0.20	0.113585586	0.23	0.20	0.201	0.114011781	0.54	4	Disagree	1171	74300	7.43	41.6	32
X29899	24.17	23.88	0.00	0.00	-90.79	-105.7908163	-89.98	-104.982483	-89.87	0.20	0.069970845	0.32	0.20	0.203	0.070471633	0.21	3	Disagree					
X26416	14.17	13.65	0.00	0.00	-73.50	-88.5	-74.44	-89.4375	-78.85	0.21	0.043243243	0.20	0.20	0.203	0.042809365	0.15	3	Disagree					
X67502	24.17	24.79	0.00	0.00	-119.97	-134.9717337	-119.09	-134.089442	-125.84	0.20	0.1039221	0.24	0.20	0.205	0.104534414	0.16	2	Disagree					
HCT-5	30.84	32.52	33.46	53.55	-129.83	-144.830402	-129.21	-144.205402	-131.23	0.21	0.11553953	0.21	0.21	0.208	0.11598221	0.20	2	Disagree	2750	79500	7.95	63.4	32
IC COMP 15	15.83	15.24	16.23	26.92	-92.81	-107.8125	-92.25	-107.2466546	-102.57	0.21	0.084880637	0.27	0.21	0.213	0.08529028	0.13	3	Disagree	1.8		7.11	156	76
X66938	21.67	21.38	0.00	0.00	-121.81	-136.8112245	-121.22	-136.2195578	-134.87	0.22	0.124408163	0.30	0.22	0.221	0.124881046	0.14	3	Disagree					
X67914	9.17	11.37	0.00	0.00	-48.50	-62.499	-48.34	-62.34275	-51.13	0.22	0.000016	0.24	0.22	0.225	0.01	0.18	2	Disagree					
X24989	14.17	14.33	0.00	0.00	-70.84	-85.84183673	-70.45	-85.4522534	-76.92	0.22	0.059267543	0.30	0.22	0.225	0.059521665	0.16	3	Disagree					
H46894	15.83	60.00	28.97	58.70	-102.51	-117.5125	-101.86	-116.8612443	-72.81	0.23	0.1152	0.26	0.23	0.229	0.115767675	0.45	4	Disagree	1101	105100	10.51	146	36

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
X25865	30.84	32.29	0.00	0.00	-113.35	-128.3482143	-112.56	-127.5638393	-116.77	0.24	0.138963762	0.35	0.24	0.241	0.139698865	0.22	3	Disagree					
H48278	35.00	33.20	0.00	0.00	-159.92	-174.9170918	-159.20	-174.2035502	-177.73	0.24	0.170763416	0.32	0.24	0.243	0.171343021	0.16	3	Disagree					
X67556	35.00	36.16	0.00	0.00	-117.05	-132.0471939	-116.19	-131.1930272	-119.15	0.25	0.14979674	0.36	0.25	0.248	0.150625127	0.23	3	Disagree					
X66926	14.17	15.92	0.00	0.00	-59.06	-74.0625	-58.75	-73.75	-63.14	0.25	0.063241107	0.28	0.25	0.254	0.063492063	0.20	3	Disagree					
H48251	25.84	95.84	32.96	49.54	-98.06	-113.0625	-97.72	-112.7171803	-35.72	0.25	0.140617577	0.36	0.26	0.255	0.140987636	0.73	4	Disagree	2338	76000	7.6	39.9	45
X26408	38.34	38.66	0.00	0.00	-109.81	-124.8125	-110.44	-125.4375	-109.15	0.26	0.155602537	0.26	0.26	0.256	0.154947368	0.26	3	Disagree					
H48885	20.00	73.34	27.47	46.10	-81.58	-96.575	-81.23	-96.23405629	-38.54	0.27	0.136759777	0.37	0.27	0.272	0.137177832	0.66	4	Disagree	3292	80900	8.09	63.8	39
X27628	13.33	13.19	0.00	0.00	-61.63	-76.63316583	-61.15	-76.15399916	-71.81	0.27	0.098433343	0.45	0.28	0.276	0.098991383	0.16	1	Agree					
H48878	48.34	52.54	0.00	0.00	-132.42	-147.4170918	-131.86	-146.8566752	-130.90	0.28	0.196363384	0.33	0.28	0.279	0.196965128	0.29	4	Disagree					
X29958	18.33	18.65	0.00	0.00	-59.54	-74.54081633	-59.19	-74.19185799	-63.85	0.28	0.096474954	0.40	0.28	0.279	0.096884757	0.23	3	Disagree					
X25626	15.00	15.01	0.00	0.00	-87.75	-102.7487245	-86.86	-101.8622662	-107.18	0.28	0.159089723	0.40	0.28	0.284	0.160252338	0.12	3	Disagree					
X25665	31.67	29.57	0.00	0.00	-103.38	-118.375	-103.22	-118.21875	-114.81	0.28	0.18008658	0.32	0.28	0.284	0.18028169	0.20	4	Disagree					
H48248	25.00	23.42	0.00	0.00	-83.71	-98.71173469	-83.07	-98.07110969	-93.45	0.28	0.155407618	0.41	0.29	0.285	0.156264146	0.20	3	Disagree					
HCT-2	30.00	31.84	34.46	62.14	-90.76	-105.7553392	-90.11	-105.1135647	-95.35	0.29	0.16850839	0.32	0.29	0.288	0.169362977	0.25	2	Disagree	752	96000	9.6	112.5	23
X67517	32.50	29.57	0.00	0.00	-76.19	-91.1875	-76.03	-91.03125	-77.62	0.29	0.149271137	0.31	0.29	0.290	0.149489051	0.28	3	Disagree					
X26407	30.84	32.75	0.00	0.00	-80.90	-95.89923469	-80.35	-95.35027636	-81.31	0.29	0.159239586	0.39	0.29	0.292	0.160009678	0.29	3	Disagree					
X25655	20.00	20.47	0.00	0.00	-79.50	-94.5	-78.88	-93.875	-92.03	0.29	0.16	0.31	0.29	0.295	0.160893855	0.18	3	Disagree					
HCT-4	0.83	1.14	8.24	19.76	-14.97	-21.249	-14.43	-20.70822099	-20.11	0.30	4.70588E-05	0.36	0.30	0.303	0.01	0.05	1	Agree	707	101800	10.18	32	313
H48265	22.50	81.67	20.23	37.51	-71.84	-86.8375	-71.48	-86.47686449	-21.77	0.31	0.160483384	0.38	0.31	0.307	0.161044868	0.79	4	Disagree	1282	68800	6.88	23.6	66
X25451	38.34	38.66	0.00	0.00	-96.31	-111.3125	-96.16	-111.15625	-101.65	0.31	0.206681514	0.36	0.31	0.314	0.206911929	0.28	4	Disagree					
H47546	25.84	27.75	0.00	0.00	-60.69	-75.68877551	-60.10	-75.10023384	-61.00	0.32	0.147168727	0.59	0.32	0.318	0.148151185	0.31	3	Disagree					
X67751	30.84	29.57	0.00	0.00	-74.31	-89.3125	-74.16	-89.15625	-80.75	0.33	0.190368272	0.35	0.33	0.327	0.190638298	0.27	3	Disagree					
X25652	12.50	11.60	0.00	0.00	-87.10	-102.102701	-84.83	-99.83186767	-117.46	0.33	0.208889484	0.50	0.33	0.331	0.212630685	0.09	2	Disagree					
X25854	32.50	31.84	0.00	0.00	-80.94	-95.9375	-80.78	-95.78125	-89.10	0.33	0.206718346	0.35	0.33	0.331	0.20698577	0.26	4	Disagree					
IC COMP 24	34.17	32.29	36.96	61.28	-77.81	-92.8125	-77.30	-92.30049137	-84.27	0.33	0.203753351	0.44	0.33	0.334	0.2046523	0.28	4	Disagree	4		8.48	71	185
H48336	43.34	157.51	45.95	70.15	-102.91	-117.9125	-102.56	-117.5613457	2.20	0.34	0.240804829	0.63	0.34	0.338	0.241350511	1.01	4	Disagree	1062	72300	7.23	82.1	53
X26501	40.00	43.21	0.00	0.00	-131.52	-146.5183081	-130.89	-145.8880997	-155.23	0.34	0.261640022	0.41	0.34	0.338	0.2624736	0.22	4	Disagree					
IC COMP 21	34.17	33.20	24.47	50.11	-99.06	-114.0625	-98.20	-113.1994704	-117.11	0.34	0.241164241	0.42	0.34	0.343	0.242556898	0.22	3	Disagree	4.2		6.94	60	55
X26837	46.67	43.67	0.00	0.00	-98.64	-113.6415816	-97.93	-112.931165	-107.27	0.35	0.247095111	0.47	0.35	0.348	0.248263612	0.29	4	Disagree					
X25432	39.17	44.35	0.00	0.00	-84.71	-99.70663265	-84.13	-99.12954932	-86.28	0.35	0.236695635	0.55	0.35	0.353	0.237745964	0.34	3	Disagree					
X29979	48.34	48.21	0.00	0.00	-80.31	-95.30612245	-79.90	-94.90195578	-79.29	0.37	0.252501	0.52	0.37	0.371	0.253303957	0.38	4	Disagree					
X67523	15.00	16.83	0.00	0.00	-61.50	-76.50282663	-61.16	-76.16428497	-81.61	0.38	0.222828428	0.52	0.38	0.377	0.223597414	0.17	2	Disagree					
H47103	40.00	42.30	0.00	0.00	-80.26	-95.25510204	-79.89	-94.88635204	-87.70	0.38	0.267268446	0.53	0.38	0.384	0.26802872	0.33	4	Disagree					
X25662	37.50	41.16	0.00	0.00	-92.58	-107.5765306	-90.69	-105.6911139	-110.09	0.39	0.288750211	0.56	0.39	0.393	0.292395081	0.27	3	Disagree					
X67498	24.17	25.47	0.00	0.00	-48.90	-63.89918342	-48.67	-63.67314175	-56.09	0.40	0.216561736	0.71	0.40	0.402	0.217163581	0.31	2	Disagree					
X67485	50.84	47.76	0.00	0.00	-64.13	-79.125	-61.94	-76.9375	-60.37	0.41	0.268208092	0.43	0.42	0.415	0.273746313	0.44	3	Disagree					
X67528	45.00	40.94	0.00	0.00	-58.94	-73.9375	-58.78	-73.78125	-60.00	0.42	0.26749226	0.43	0.42	0.417	0.267906977	0.41	3	Disagree					
IC COMP 2	33.34	34.57	39.21	55.26	-57.19	-72.1875	-56.38	-71.37706263	-63.87	0.42	0.266666667	0.56	0.42	0.423	0.268880363	0.35	4	Disagree	1.5		6.73	10	130
X29077	24.17	23.65	0.00	0.00	-35.66	-50.66326531	-35.43	-50.43201531	-41.35	0.45	0.220565149	0.66	0.45	0.453	0.221352654	0.36	3	Disagree					
H48545	0.83	0.83	6.74	15.18	-8.83	-15.624	-7.98	-14.77763344	-14.79	0.44	0.000064	0.54	0.46	0.460	0.01	0.05	1	Agree	1040	67800	6.78	30.2	732
X29093	15.83	16.37	0.00	0.00	-24.65	-39.64923469	-24.23	-39.23256803	-28.94	0.46	0.124982407	0.61	0.46	0.460	0.126142336	0.36	2	Disagree					
X25864	50.00	47.76	0.00	0.00	-55.88	-70.875	-55.72	-70.71875	-64.12	0.50	0.366480447	0.51	0.50	0.501	0.366993007	0.43	4	Disagree					
HCT-1	34.17	34.57	36.71	65.00	-36.92	-51.91896985	-36.61	-51.60646985	-43.56	0.53	0.335437186	0.53	0.53	0.530	0.336784323	0.44	2	Disagree	625	99400	9.94	61.3	54
X25435	45.84	52.31	0.00	0.00	-54.38	-69.37971106	-53.94	-68.94325272	-63.63	0.53	0.401576616	0.86	0.53	0.533	0.403094104	0.45	4	Disagree					
X29089	17.50	20.47	0.00	0.00	-19.81	-34.8125	-19.50	-34.5	-22.34	0.54	0.186861314	0.60	0.54	0.541	0.188235294	0.48	3	Disagree					
X25132	6.67	6.82	0.00	0.00	-12.13	-27.125	-11.97	-26.96875	-21.30	0.57	0.035555556	0.59	0.57	0.572	0.01	0.24	2	Disagree					
H47057	20.00	72.50	33.71	57.84	-26.16	-41.1625	-25.85	-40.85	5.94	0.61	0.381596244	0.61	0.61	0.610	0.383396226	1.09	4	Disagree	1599	93100	9.31	27.1	84
X25728	50.84	50.03	0.00	0.00	-28.63	-43.625	-28.31	-43.3125	-30.59	0.64	0.458914729	0.66	0.65	0.647	0.460700389	0.62	4	Disagree					
X25727	85.01	91.43	0.00	0.00	-44.84	-59.83511307	-44.30	-59.30386307	-48.89	0.68	0.573558214	0.89	0.68	0.683	0.575738069	0.65	4	Disagree					
X26791	15.83	15.24	0.00	0.00	-18.98	-33.97959184	-18.47	-33.4681335	-54.76	0.73	0.514577259	1.38	0.73	0.734	0.518364716	0.22	3	Disagree					

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm	Ba ppm
X30399	14.17	13.87	0.00	0.00	-5.01	-20.00637755	-4.59	-19.59283588	-6.44	0.75	0.015070644	1.11	0.77	0.769	0.01	0.68	2	Disagree					
X25188	47.50	43.21	0.00	0.00	-13.50	-28.5	-13.34	-28.34375	-19.29	0.78	0.544	0.79	0.79	0.786	0.545363409	0.69	3	Disagree					
X67591	70.00	68.23	0.00	0.00	-17.13	-32.125	-16.97	-31.96875	-14.90	0.79	0.613533835	0.87	0.80	0.795	0.614689266	0.82	3	Disagree					
X29971	51.67	56.17	0.00	0.00	-10.74	-25.74179293	-10.38	-25.38137626	-36.64	0.88	0.722647349	1.13	0.89	0.888	0.725464529	0.61	4	Disagree					
IC COMP 1	45.84	47.76	39.21	78.17	-8.13	-23.125	-6.79	-21.79372771	-30.37	0.90	0.704	1.24	0.91	0.912	0.716204326	0.61	4	Disagree	2.3		7.86	17	140
X25611	14.17	14.78	0.00	0.00	-2.37	-17.37280151	-1.79	-16.79467651	-25.53	0.94	0.569046784	1.37	0.95	0.955	0.57732627	0.37	2	Disagree					
X28052	45.84	47.53	0.00	0.00	12.79	-2.213010204	13.05	-1.945301871	-0.91	1.26	0.954312047	1.78	1.27	1.271	0.95961573	0.98	4	Disagree					
X25175	61.67	52.31	0.00	0.00	16.69	1.6875	16.84	1.84375	7.00	1.37	1.037241379	1.44	1.37	1.373	1.04083045	1.15	3	Disagree					
X30379	52.50	52.99	0.00	0.00	27.04	12.04081633	27.91	12.90644133	-22.01	1.36	1.160544218	1.95	1.38	1.376	1.174095234	0.71	4	Disagree					
X28196	20.83	20.47	0.00	0.00	7.81	-7.1875	7.97	-7.03125	3.28	1.45	0.581818182	1.48	1.47	1.468	0.587155963	1.19	3	Disagree					
IC COMP 5	43.34	43.44	43.20	87.05	39.69	24.6875	40.01	25.01044533	-10.62	1.73	1.456647399	2.32	1.74	1.745	1.465401053	0.80	4	Disagree	0.8		7.06	18	180
X26469	35.00	37.30	0.00	0.00	50.61	35.60586735	50.82	35.82045068	-20.51	1.88	1.615885273	2.33	1.88	1.882	1.621905318	0.65	4	Disagree					
IC COMP 6	90.01	94.61	83.91	132.29	67.50	52.5	67.97	52.9739854	27.11	2.00	1.777777778	2.45	2.01	2.014	1.790349624	1.40	4	Disagree	1.1		7.02	30	170
X25155	91.67	84.15	0.00	0.00	44.56	29.5625	44.88	29.875	40.71	2.03	1.68057554	2.17	2.04	2.041	1.692753623	1.94	3	Disagree					
X27062	77.51	78.69	0.00	0.00	58.47	43.46938776	58.65	43.65063776	26.19	2.11	1.827988338	3.19	2.12	2.121	1.834321113	1.50	3	Agree					
X30386	58.34	58.90	0.00	0.00	52.93	37.93367347	53.46	38.46492347	27.65	2.69	2.213877551	4.46	2.74	2.740	2.252164345	1.88	4	Disagree					
IC COMP 4	25.84	26.84	37.46	83.04	54.06	39.0625	55.06	40.06228207	2.15	3.19	2.582278481	3.44	3.32	3.325	2.691268115	1.09	4	Disagree	0.8		10.33	11	1248
IC COMP 8	129.18	132.13	113.63	190.13	145.63	130.625	146.20	131.1999591	80.26	3.81	3.518072289	5.07	3.85	3.850	3.557502034	2.55	4	Disagree	1.3		6.63	46	397
X27058	31.67	32.07	0.00	0.00	67.39	52.38520408	67.71	52.70603741	11.44	4.27	3.539888683	6.45	4.33	4.335	3.595823718	1.55	4	Disagree					
IC COMP 3	80.01	80.05	64.43	108.53	98.13	83.125	98.91	83.91467092	51.93	4.49	3.955555556	5.56	4.62	4.619	4.069824792	2.85	4	Disagree	1.3		7.04	10	550
X27066	30.00	30.48	0.00	0.00	69.83	54.83418367	69.92	54.91543367	14.85	5.47	4.509387755	7.71	5.50	5.498	4.532959143	1.95	4	Disagree					
IC COMP 7	175.85	175.80	154.08	260.29	226.25	211.25	226.96	211.9595816	144.55	8.24	7.76	13.72	8.43	8.431	7.940297232	5.63	4	Disagree	1.2		5.7	15	643
X28031	124.17	90.97	0.00	0.00	135.81	120.8125	135.97	120.96875	73.78	8.90	8.029090909	9.42	8.98	8.983	8.102752294	5.29	4	Disagree					
X25165	175.85	156.92	0.00	0.00	171.13	156.125	171.75	156.75	135.05	8.82	8.137142857	9.36	9.08	9.082	8.376470588	7.17	4	Disagree					
X28019	140.84	100.07	0.00	0.00	141.75	126.75	141.91	126.90625	83.82	9.72	8.8	10.76	9.82	9.817	8.885436893	6.16	4	Disagree					
X25111	107.51	97.79	0.00	0.00	136.81	121.8125	137.13	122.125	90.61	20.03	17.94782609	20.95	20.95	20.945	18.76363636	13.61	4	Disagree					
X25091	105.84	106.89	0.00	0.00	121.31	106.3125	121.63	106.625	102.20	26.88	23.68	31.02	28.80	28.800	25.37142857	22.80	4	Disagree					
X25101	138.34	125.08	0.00	0.00	161.31	146.3125	161.00	146	120.40	35.41	32.21333333	33.20	33.20	33.200	30.2	26.68	4	Disagree					
X25122	145.01	129.63	0.00	0.00	173.69	158.6875	174.00	159	124.32	33.69	30.87058824	35.80	35.80	35.800	32.8	24.40	4	Disagree					
X25143	139.18	122.81	0.00	0.00	167.56	152.5625	167.25	152.25	119.37	49.75	45.38181818	45.60	45.60	45.600	41.6	35.73	4	Disagree					

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
H42801	0.5	0.71	1100	0.11	0.1	2.34	28.4	80	3.5	406.05	0.040605	71200	7.12	14.85		0.59			32200	3.22	0.8	7.2	1400	0.14
H42619	0.5	1.43	1200	0.12	0.03	10.84	9.4	82	3.4	168.4	0.01684	39300	3.93	15.24		0.31			38000	3.8	4.3	4	5500	0.55
H46054	0.5	0.21	3100	0.31	0.07	1.08	22	79	3.3	1701.94	0.170194	66100	6.61	16.75		0.29			43400	4.34	0.3	8.1	4200	0.42
H46211	0.87	0.29	5000	0.50	0.09	3.59	31.9	145	3.3	5060	0.506	84600	8.46	15.15	0.29	0.4	0.33	0.31	28100	2.81	1.4	2.2	2300	0.23
14541	0.5	0.53	1400	0.14	1.28	2.05	27	64	3.83	5040	0.504	69100	6.91	13.2	0.21	0.1	1.33	0.338	21900	2.19	0.9	3.2	1500	0.15
H46155	1	0.16	300.0	0.03	0.01	1.29	7.5	87	3.4	768.9	0.07689	30200	3.02	19.34		0.34			43600	4.36	0.5	4.4	2700	0.27
H46222	0.74	0.22	3800	0.38	0.06	1.3	23.1	38	3.38	2740	0.274	91700	9.17	14.7	0.31	0.3	0.13	0.141	30700	3.07	0.25	3.4	3100	0.31
H46210	2	0.45	5500	0.55	0.12	0.86	34.8	75	3.8	2490.72	0.249072	102300	10.23	15.76		0.03			33300	3.33	0.2	2.8	2400	0.24
H46213	0.73	0.11	5600	0.56	0.06	4.99	19.4	223	3.65	3910	0.391	74600	7.46	17.5	0.23	0.4	0.15	0.265	22100	2.21	2.1	29.8	19900	1.99
H46198	0.5	1.31	4400	0.44	0.31	1.17	29.5	150	3.6	6261.94	0.626194	84800	8.48	22.97		0.12			32400	3.24	0.4	5.5	2900	0.29
H46209	1.16	1.07	4400	0.44	0.18	6.64	30.4	75	4.28	3510	0.351	81600	8.16	18.95	0.24	0.3	0.7	0.256	35300	3.53	2.5	2.1	2000	0.2
H46131	1	0.19	3100	0.31	0.02	1.85	19.9	31	3.9	1212.62	0.121262	56900	5.69	17.87		0.48			37200	3.72	0.8	3.9	4100	0.41
H46175	0.5	0.77	3600	0.36	0.24	2.82	14.7	86	3.1	2015.24	0.201524	59000	5.9	15.07		0.3			41100	4.11	1	2.5	1600	0.16
H46132	0.6	1.04	5300	0.53	0.56	2.85	26.7	23	3.23	2020	0.202	84800	8.48	14.15	0.25	0.4	2.64	0.199	32200	3.22	1.3	6.4	6300	0.63
H42885	0.5	0.49	43400	4.34	0.17	5.08	11.2	21	3.5	1400.16	0.140016	44300	4.43	14.44		0.32			27700	2.77	2.2	10	7300	0.73
H46123	0.5	0.3	5400	0.54	1.42	1.15	15.2	80	3	1188.44	0.118844	71200	7.12	13.98		0.22			35700	3.57	0.3	4.9	2700	0.27
H46212	0.5	0.24	3800	0.38	0.08	2.09	30.5	206	4.1	4151.57	0.415157	62600	6.26	17.41		0.27			30700	3.07	0.6	6.1	5100	0.51
H46216	0.87	0.87	8000	0.80	0.09	4.12	20.7	50	3.81	4390	0.439	90700	9.07	16.6	0.26	0.4	0.15	0.296	26400	2.64	1.5	13.1	10000	1
H46219	1.01	0.25	9100	0.91	0.07	8.6	28.4	104	3.8	2210	0.221	78100	7.81	17	0.23	0.8	0.22	0.242	25800	2.58	3.6	16.5	12100	1.21
H42884	0.47	0.66	36900	3.69	2.02	7.4	14	3	3.67	2840	0.284	43100	4.31	15.5	0.18	0.4	3.24	0.142	36000	3.6	3.7	2.6	2500	0.25
H42882	0.5	0.21	34100	3.41	0.09	3.29	15.8	24	2.8	3086.09	0.308609	46300	4.63	16.48		0.18			32600	3.26	1.5	11.8	8000	0.8
H42862	0.5	0.28	3700	0.37	1.11	1.96	23.1	182	2.9	6096.37	0.609637	62800	6.28	14.7		0.54			36300	3.63	0.6	17.7	10400	1.04
H42881	0.37	0.18	74300	7.43	0.15	9.48	14	4	2.38	3040	0.304	47100	4.71	12.25	0.19	0.3	0.09	0.144	28800	2.88	5	3.7	3100	0.31
H42887	0.5	0.18	34300	3.43	0.08	3.63	19.6	24	2.5	2814.78	0.281478	57900	5.79	13.49		0.25			27800	2.78	1.7	24.3	18100	1.81
H46135	0.43	0.25	5300	0.53	0.17	2.44	9.9	7	2.14	6090	0.609	67500	6.75	12.05	0.21	0.2	0.59	0.292	20700	2.07	1.1	5	5700	0.57
H46134	0.5	0.13	6000	0.60	0.29	2.25	6.5	59	2.3	6872.76	0.687276	68500	6.85	11.27		0.14			27400	2.74	0.7	4.2	5000	0.5
H42772	0.5	0.33	5200	0.52	0.28	10.39	21.1	83	1.7	7389.87	0.738987	58600	5.86	11.43		0.25			42700	4.27	4.8	3.8	5800	0.58
H46076	0.5	0.38	4800	0.48	0.21	1.54	20.6	61	3.2	4119.11	0.411911	66700	6.67	17.79		0.24			39300	3.93	0.4	14.7	8900	0.89
H42886	0.41	0.14	38700	3.87	0.06	5.81	11.6	8	2.55	2710	0.271	58300	5.83	14.05	0.18	0.3	0.06	0.159	22800	2.28	3.3	27.3	17400	1.74
H46215	0.5	0.28	9900	0.99	0.11	1.37	27	121	2.4	4283.49	0.428349	83900	8.39	12.66		0.11			23300	2.33	0.3	16.5	11300	1.13
H42880	0.5	0.34	55400	5.54	0.34	2.5	9.9	26	1.8	1372.19	0.137219	91400	9.14	10.32		0.2			25500	2.55	0.9	9.3	12300	1.23
H42895	0.5	0.27	43400	4.34	0.18	2.62	14.3	50	1.9	2065.96	0.206596	45500	4.55	13.82		0.26			28100	2.81	1.1	9.6	11400	1.14
H42879	0.52	0.13	41300	4.13	0.13	5.76	11.1	4	2.67	2720	0.272	43700	4.37	13.6	0.16	0.5	0.08	0.133	29600	2.96	3.2	19.5	13500	1.35
H42731	0.5	1.02	14300	1.43	3.46	8.38	17.6	83	4	6366.79	0.636679	66800	6.68	17.33		0.29			40600	4.06	3.9	9.8	9800	0.98
H42752	0.5	0.17	7600	0.76	0.1	12.32	11.8	59	2.1	3235.91	0.323591	51000	5.1	15.44		0.42			43100	4.31	5.2	12.2	12800	1.28
H46220	0.5	0.02	7400	0.74	0.04	14.54	39.4	259	1.2	152.7	0.01527	90700	9.07	17.86		0.45			8300	0.83	5.7	116	56900	5.69
H46221	0.5	0.02	7500	0.75	0.1	15.66	44.5	257	1.3	63.22	0.006322	89100	8.91	19.16		1.49			11500	1.15	5	128.8	60300	6.03
H46221	0.39	0.02	42800	4.28	0.13	23	23.6	74	1.25	61.3	0.00613	62600	6.26	15.35	0.14	1.2	0.04	0.077	6800	0.68	10.3	68.9	40300	4.03
H42695	0.94	0.11	21400	2.14	1.23	16.2	20.4	10	2.8	416	0.0416	50700	5.07	19.9	0.17	1.1	0.01	0.111	25200	2.52	7.6	18	14800	1.48
H42683	0.8	0.1	33000	3.3	0.21	16.25	18.4	11	2.72	156	0.0156	50300	5.03	17.3	0.17	0.5	0.02	0.083	24800	2.48	7.3	19.7	15200	1.52
58437	0.71	0.24	3000	0.3	0.07	4.29	25.3	83	4.18	878	0.0878	108000	10.8	13.9	0.37	0.5	1.97	0.029	36400	3.64	1.8	3.7	2200	0.22
H42831	0.5	0.26	600.0	0.06	0.1	1.52	25.2	63	3.7	302.88	0.030288	77200	7.72	16.95		0.33			36000	3.6	0.5	5.5	2500	0.25
14523	0.43	1.35	1400	0.14	2.08	3.39	27.9	58	4.55	10000	1	85200	8.52	15.65	0.36	0.3	29	2.39	17000	1.7	1.4	4.8	2300	0.23
H42816	0.5	0.75	3500	0.35	0.08	3.71	44.6	90	4.1	358.04	0.035804	76700	7.67	15.41		0.67			37500	3.75	1.3	9.2	5600	0.56
H42828	0.5	0.7	3300	0.33	0.06	0.98	34.2	92	2.9	341.85	0.034185	102500	10.25	14.24		0.2			30200	3.02	0.3	14	7600	0.76
H42845	0.5	0.53	2700	0.27	0.03	1.64	28.3	67	3.9	1926.05	0.192605	66600	6.66	18.1		0.33			28300	2.83	0.6	6.4	3000	0.3
H42832	0.3	0.46	2900	0.29	0.17	10.95	29.9	69	3.47	386	0.0386	101000	10.1	15.7	0.35	0.5	0.64	0.145	31400	3.14	4.8	7.2	3500	0.35
H42834	0.5	0.61	2800	0.28	0.06	1.97	22.6	40	4.2	551.73	0.055173	64000	6.4	21.95		0.46			39900	3.99	0.8	8	3000	0.3
H42841	0.5	1.02	3100	0.31	0.17	2.75	15.6	27	3.8	1594.15	0.159415	47000	4.7	18.31		0.31			34000	3.4	1.1	6.3	3200	0.32
H42847	0.5	0.59	4000	0.4	0.33	1.89	32.4	62	4.2	1986.93	0.198693	65000	6.5	16.64		0.36			36800	3.68	0.6	4.9	2300	0.23

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
H42818	0.6	1.21	2400	0.24	0.17	11.85	25.1	58	4.25	1020	0.102	74000	7.4	17.3	0.3	0.7	3.53	0.207	30600	3.06	5.3	9.5	5600	0.56
H42814	0.5	6.33	3700	0.37	0.7	2.22	23.2	44	3.9	2424.67	0.242467	68400	6.84	17.6		0.3			33400	3.34	0.7	7.5	4500	0.45
H42815	0.68	1.14	2300	0.23	0.08	9.89	28.5	41	3.83	609	0.0609	69200	6.92	15.3	0.3	1	0.97	0.251	31300	3.13	4.8	7.9	5000	0.5
H42809	0.5	2.68	3400	0.34	0.14	2.72	24.4	43	4.9	835.14	0.083514	67000	6.7	19.17		0.37			35600	3.56	1	14.2	6600	0.66
H42837	0.39	0.3	3100	0.31	0.07	15.7	18.7	16	3.99	459	0.0459	79300	7.93	16.65	0.31	0.5	0.69	0.077	36600	3.66	7.8	7.3	3300	0.33
H42810	0.68	1.54	3400	0.34	0.12	10.55	25.5	50	4.32	747	0.0747	74600	7.46	16.65	0.28	0.9	1.96	0.313	33400	3.34	5.2	9.4	5300	0.53
H42696	0.5	0.39	2400	0.24	0.15	6.82	15.6	27	3	1990.83	0.199083	92100	9.21	15.76		0.52			31300	3.13	2.8	19.9	12700	1.27
H42819	0.5	0.81	3800	0.38	0.05	2.29	16.5	38	3.9	262.95	0.026295	53900	5.39	17.09		0.45			34600	3.46	0.8	6.8	3600	0.36
H42843	0.5	0.4	3200	0.32	0.07	1.96	23.5	28	4.1	678.03	0.067803	51500	5.15	16.43		0.25			32300	3.23	0.8	6.5	3200	0.32
H42835	0.5	0.69	5100	0.51	0.17	0.92	14.6	29	3.9	501.33	0.050133	64400	6.44	17.52		0.35			33200	3.32	0.3	14.3	5700	0.57
H42838	0.5	0.59	4200	0.42	0.18	1.82	19.8	31	3.9	1401.76	0.140176	68800	6.88	18.59		0.27			32200	3.22	0.6	7.3	3800	0.38
H42844	0.46	0.61	2900	0.29	0.03	4.78	24	31	4.38	1140	0.114	67100	6.71	17.4	0.27	0.5	0.44	0.079	36600	3.66	2.2	6.7	2600	0.26
H42817	0.76	1.48	2600	0.26	0.14	14.75	28.5	30	4.5	1090	0.109	56000	5.6	20.4	0.25	0.7	2.01	0.264	34000	3.4	7	10.5	6000	0.6
H42821	0.72	2.78	2800	0.28	0.15	12.4	14.2	33	4.73	1250	0.125	52800	5.28	19.9	0.26	0.9	4.63	0.234	32500	3.25	6	9.3	5500	0.55
H42848	0.56	0.34	3600	0.36	0.14	6.12	32.4	69	4.76	3760	0.376	78800	7.88	17.6	0.32	0.4	0.19	0.186	37200	3.72	2.5	8.6	3300	0.33
14507	1.36	0.47	2500	0.25	0.14	15.45	20.2	80	4.36	2070	0.207	52900	5.29	23.1	0.2	1	0.73	0.278	38300	3.83	5.5	9.2	4900	0.49
H42846	0.33	0.41	3600	0.36	0.04	6.17	24.8	32	3.98	478	0.0478	70900	7.09	13.05	0.29	0.5	0.52	0.047	33700	3.37	2.8	5	2100	0.21
H42813	0.69	3.43	3400	0.34	0.24	11.65	22.2	42	5.07	1800	0.18	62300	6.23	20.4	0.26	0.8	10.9	0.383	35900	3.59	5.4	7.1	3700	0.37
H42682	0.5	0.68	4400	0.44	0.93	10.63	18.3	28	3.1	620.6	0.06206	67500	6.75	17.47		0.43			41700	4.17	4.5	9.6	9200	0.92
H42842	0.43	0.46	3000	0.3	0.29	4.3	22.8	7	4.56	384	0.0384	60200	6.02	16.5	0.23	0.6	0.56	0.065	37600	3.76	2	5.6	2300	0.23
H42812	0.5	1.14	2600	0.26	0.09	6.52	14.9	29	3	465.15	0.046515	39500	3.95	21.05		0.47			36500	3.65	2.7	5	3300	0.33
H42835	0.39	0.37	3400	0.34	0.21	6.15	19.5	17	3.58	569	0.0569	67400	6.74	15.25	0.24	0.6	2.18	0.159	32400	3.24	3.1	10.2	4900	0.49
H42675	0.5	0.13	4200	0.42	0.69	10.34	51	48	2.7	2262.39	0.226239	64200	6.42	20.71		0.32			50100	5.01	3.5	11.3	10900	1.09
H42673	1	0.65	4900	0.49	4.08	12.77	15.9	28	4	2494.91	0.249491	50200	5.02	20.58		0.59			46100	4.61	5	5.9	7500	0.75
H42686	0.5	0.49	5300	0.53	0.11	13.89	18.1	32	3.2	944.66	0.094466	57500	5.75	16.22		0.36			39200	3.92	5.4	6.4	7900	0.79
H42671	0.5	0.15	4000	0.4	0.09	11.89	29.6	35	3.6	2533.21	0.253321	54700	5.47	16.92		0.38			36100	3.61	4.6	7.5	7700	0.77
H42839	0.38	0.45	3700	0.37	0.06	6.48	20.8	29	4.25	838	0.0838	51200	5.12	15.9	0.22	0.5	0.93	0.067	34800	3.48	2.8	5.9	2300	0.23
H42668	0.84	0.17	4000	0.4	0.32	13.05	29.9	37	3.6	1080	0.108	66700	6.67	18.2	0.26	0.5	0.06	0.054	41000	4.1	5.4	8.6	9500	0.95
3008	0.87	0.65	2000	0.2	0.37	14.75	13.5	10	3.41	629	0.0629	52900	5.29	21	0.18	0.8	0.35	0.164	42200	4.22	7.8	5.3	7600	0.76
49313	0.98	0.15	500.0	0.05	0.01	17.35	5.5	12	4.46	209	0.0209	48500	4.85	18.55	0.17	0.8	0.11	0.038	43000	4.3	10.6	5.4	7600	0.76
H42676	1	0.23	4000	0.4	0.35	17.95	34.3	28	3.88	3580	0.358	59500	5.95	21.5	0.25	0.6	0.12	0.069	44500	4.45	8.3	10.3	9200	0.92
H42666	1.19	0.23	3400	0.34	1.04	15.4	40.6	24	4.28	2590	0.259	69900	6.99	21.4	0.3	0.7	0.18	0.157	41200	4.12	6.5	14.9	13000	1.3
H46136	0.5	0.16	5900	0.59	0.12	1.17	11.9	66	2.7	5297.22	0.529722	58300	5.83	14.85		0.22			33000	3.3	0.3	11.7	7200	0.72
H42672	0.84	0.21	4200	0.42	0.33	14.55	26.4	24	3.64	1600	0.16	54900	5.49	17.15	0.23	0.7	0.18	0.064	41900	4.19	6.7	7.7	8800	0.88
H42689	0.5	0.13	3300	0.33	0.07	8.7	16.1	25	4.1	1819.37	0.181937	46300	4.63	18.63		0.52			46200	4.62	2.5	11.8	10200	1.02
H42663	0.5	0.07	3900	0.39	0.05	14.88	22.7	38	3.3	1160.19	0.116019	56100	5.61	16.31		0.35			41800	4.18	5	13.5	14800	1.48
3048	0.47	0.46	4600	0.46	1.8	11.15	20.4	7	3.77	7500	0.75	53500	5.35	18.8	0.19	0.4	0.11	0.436	45500	4.55	5.4	4.3	9900	0.99
H42668	0.5	0.07	4300	0.43	0.03	8.02	31.7	38	3.5	894.84	0.089484	58000	5.8	16.49		0.36			42500	4.25	2.5	15.1	16000	1.6
H42685	1.21	0.29	5200	0.52	0.1	18.8	19.2	12	5.01	784	0.0784	54300	5.43	20.9	0.19	0.8	0.02	0.153	43500	4.35	9.3	12	11300	1.13
H42688	0.5	0.33	5600	0.56	9.56	8.89	13.8	89	1.2	4424.27	0.442427	74000	7.4	7.1		0.11			12800	1.28	4.5	6.5	4300	0.43
H42687	1.01	0.27	4600	0.46	0.19	14.35	16.3	9	3.55	720	0.072	51000	5.1	20.9	0.2	0.7	0.02	0.056	38000	3.8	7.2	6	6800	0.68
H42669	0.5	0.13	8900	0.89	0.73	13.77	34.3	60	2.8	4231.13	0.423113	90000	9	14.24		0.29			35500	3.55	4.6	4.1	6700	0.67
H42701	0.5	0.27	4800	0.48	0.65	10.94	20.8	25	3	578.76	0.057876	52100	5.21	16.45		0.36			31700	3.17	4.7	13.2	11100	1.11
H42699	0.7	0.18	3700	0.37	0.87	16.6	16.9	9	3.26	891	0.0891	48100	4.81	17.95	0.16	0.8	0.01	0.029	30400	3.04	9.2	22.1	18200	1.82
H42684	0.5	0.16	6500	0.65	1.35	11.16	39.1	20	3.8	570.45	0.057045	63700	6.37	17.67		0.41			38600	3.86	3.4	6.9	8300	0.83
H42707	0.74	1.55	8200	0.82	1.38	12.7	14.3	11	3.49	436	0.0436	60700	6.07	15.4	0.2	0.8	0.08	0.336	37300	3.73	6.2	4.5	6300	0.63
H42703	1	2.99	5600	0.56	0.09	7.52	15.5	30	3.3	1924.55	0.192455	61300	6.13	23.88		0.46			34300	3.43	2.9	14.9	9100	0.91
H42681	0.85	0.39	10200	1.02	1.04	18.25	21.3	7	3.82	572	0.0572	62100	6.21	18.65	0.27	1.1	0.19	0.129	39200	3.92	9.3	6.4	8100	0.81
H42693	1.02	0.15	3200	0.32	1.63	25.2	17.4	9	4.5	884	0.0884	46500	4.65	19.55	0.18	1.5	0.01	0.028	37900	3.79	15	15.9	11800	1.18
H42694	1	0.29	5800	0.58	0.32	11.44	12.7	23	3.9	485.32	0.048532	46800	4.68	18.38		0.47			40900	4.09	5	7.1	7800	0.78

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
H42680	0.5	0.67	10700	1.07	0.16	13.86	31.8	36	3	1074.44	0.107444	64900	6.49	17.73		0.3			42200	4.22	5.4	6.6	8400	0.84
H42697	0.85	0.18	6900	0.69	0.31	15.6	18.9	9	4.62	819	0.0819	51400	5.14	17.15	0.18	0.7	0.02	0.045	38100	3.81	8.1	13.8	11800	1.18
H42704	0.76	0.95	10600	1.06	2.45	15.4	14.7	10	4.16	264	0.0264	60400	6.04	17.45	0.17	0.8	0.12	0.45	35900	3.59	8.3	17.3	14300	1.43
H42710	0.5	0.9	11000	1.1	1.58	16.34	12.7	31	3.7	220.99	0.022099	55200	5.52	16.46		0.41			26400	2.64	8.4	3.8	8300	0.83
H42706	0.5	0.52	6400	0.64	0.02	13.77	12.6	18	3.3	497.51	0.049751	47700	4.77	16.14		0.32			35800	3.58	6.1	21.8	17400	1.74
H42664	0.92	0.12	8700	0.87	0.98	13	47.3	20	3.27	1920	0.192	72100	7.21	16.8	0.25	0.5	0.04	0.036	34600	3.46	5.5	14.1	13300	1.33
H42702	0.8	0.2	11000	1.1	0.66	15.1	17.4	9	3.98	785	0.0785	51900	5.19	18.35	0.19	0.8	0.05	0.033	39500	3.95	8	11.2	12700	1.27
H42708	0.5	1.18	13500	1.35	0.53	11.41	17.6	23	3.1	333.99	0.033399	55900	5.59	16.6		0.41			25600	2.56	5.5	4.3	10100	1.01
H42674	0.95	0.23	14000	1.4	2.36	15.2	15.6	12	4.3	873	0.0873	42600	4.26	16.55	0.19	0.8	1.42	0.072	44100	4.41	7.7	5.2	9900	0.99
H42709	0.7	0.77	17100	1.71	1.95	15	13.1	9	3.55	243	0.0243	52000	5.2	16.75	0.19	0.7	0.21	0.322	36700	3.67	8.2	4.3	10800	1.08
49852	0.99	0.99	22100	2.21	2.16	14.95	17.8	6	3.33	382	0.0382	59400	5.94	17.2	0.19	0.7	0.52	0.161	33400	3.34	8.3	11.9	15600	1.56
H42678	0.84	0.15	24800	2.48	0.11	17.15	19	10	3.07	1360	0.136	51100	5.11	16.05	0.23	0.7	0.05	0.047	38500	3.85	8.3	10.1	11100	1.11
H42670	1.01	0.08	15200	1.52	0.22	12	20.3	11	5.28	1150	0.115	46500	4.65	18.15	0.16	1	0.05	0.034	42400	4.24	5.5	10.9	10700	1.07
H42698	0.5	0.2	21700	2.17	0.14	13.15	15.4	24	3.4	223.91	0.022391	53400	5.34	16.57		0.36			31200	3.12	6.2	17.4	15200	1.52
H42690	0.74	0.11	21200	2.12	0.25	12.6	15.1	8	3.58	639	0.0639	47100	4.71	18.45	0.19	0.7	0.01	0.03	35500	3.55	5.8	14.2	12500	1.25
H42691	0.5	0.28	50800	5.08	0.5	8.19	28.6	31	2.5	470.51	0.047051	103400	10.34	31.95		0.76			44900	4.49	3	22.5	13900	1.39
H42677	0.5	0.12	22200	2.22	0.11	15.32	14.8	33	2.9	2629.91	0.262991	30100	3.01	15.24		0.44			48400	4.84	7	10.6	10300	1.03
H42665	0.5	0.08	21400	2.14	0.4	22.18	23.4	38	3.9	2134.26	0.213426	42600	4.26	15.99		0.42			37500	3.75	9.9	16.6	16300	1.63
3027	1.58	0.12	12800	1.28	0.37	79.1	21.5	0.5	2.07	456	0.0456	69200	6.92	25.3	0.18	2.5	0.04	0.143	19000	1.9	39.1	14.1	10000	1
H46138	0.5	0.02	96900	9.69	0.44	23.21	10.8	22	2.9	113.44	0.011344	36500	3.65	14.47		0.95			27000	2.7	11.3	22.2	13100	1.31
H46137	0.76	0.06	35500	3.55	0.13	26.5	8.4	2	2.92	15.2	0.00152	39400	3.94	18.65	0.13	1.3	0.25	0.054	30400	3.04	13	25.8	18500	1.85
H46142	0.87	0.04	47100	4.71	0.25	22.5	8.3	2	4.11	3.7	0.00037	37000	3.7	18.05	0.13	1.3	0.005	0.048	33300	3.33	10.6	14.8	10500	1.05
H46144	0.86	0.04	44200	4.42	0.28	23.3	7.9	2	3.39	6.5	0.00065	36900	3.69	18.15	0.12	1.6	0.02	0.05	30900	3.09	11.2	22.3	14500	1.45
H46139	0.76	0.08	46700	4.67	0.16	22.2	7.9	2	3.63	17.1	0.00171	37400	3.74	17.55	0.13	1.2	0.01	0.048	32100	3.21	10.5	15.5	10700	1.07
H46143	0.5	0.02	46600	4.66	0.33	30.76	10.9	10	4.6	19.61	0.001961	40400	4.04	17.96		0.96			34900	3.49	14.9	17.3	10900	1.09
H46141	1	0.02	63800	6.38	0.29	30.68	9.4	9	3.6	15.95	0.001595	38100	3.81	17.23		0.83			34700	3.47	15.9	17.4	10300	1.03
X66086	1	0.05	137000.0	13.7	0.2	16	19.6	31		16.6	0.00166	71300	7.13			0.4			11400	1.14	8.4	35.8	28100	2.81
X66087	1	0.05	36100.0	3.61	0.3	14	28	63		131	0.0131	62100	6.21			0.5			32000	3.2	6.7	28.1	21000	2.1
X66116	0.5	0.05	55900	5.59	0.1	17	25	39		109	0.0109	57100	5.71			0.7			29300	2.93	8.4	19.8	21100	2.11
X66117	0.5	0.05	67200	6.72	0.05	17	25.7	37		97.8	0.00978	52500	5.25			0.6			38800	3.88	8.4	21.9	21300	2.13
X66217	0.5	0.05	52400	5.24	0.05	20	16.3	14		32.8	0.00328	50200	5.02			0.6			27800	2.78	7.5	23.6	17700	1.77
X63932	0.5	0.2	2100	0.21	0.05	3	16.9	113		977	0.0977	68400	6.84			0.6			40600	4.06	0.9	9.5	7300	0.73
X63953	1	0.1	4400	0.44	0.2	12	38.2	208		5870	0.587	76100	7.61			0.6			26200	2.62	4.2	25.8	28300	2.83
X63972	2	0.05	28100	2.81	0.05	108	30.3	120		257	0.0257	61300	6.13			4.2			30900	3.09	51.2	19.6	28800	2.88
X63980	0.5	0.4	4100	0.41	0.1	9	39.7	186		4820	0.482	114000	11.4			0.4			31400	3.14	2.7	11.7	8900	0.89
X67079	0.5	0.2	25800	2.58	0.4	6	23.3	143		368	0.0368	86800	8.68			0.2			32500	3.25	2.2	9.2	8900	0.89
X66229	0.5	0.2	43800	4.38	3.8	10	25.4	59		108	0.0108	54600	5.46			0.3			36600	3.66	4.8	22.1	22200	2.22
X66249	0.5	1.2	22000	2.2	1.6	9	35.2	90		140	0.014	72100	7.21			0.4			28900	2.89	3.4	38.2	33000	3.3
X66250	0.5	0.9	37200	3.72	1.2	17	17.7	143		76.3	0.00763	41800	4.18			0.8			32700	3.27	8.4	24.2	21000	2.1
X66286	0.5	0.05	40000	4	0.05	11	28	91		94.9	0.00949	58400	5.84			0.4			27900	2.79	5.5	26	27300	2.73
X66287	0.5	0.05	28400	2.84	0.6	11	30.8	95		106	0.0106	61500	6.15			0.4			28300	2.83	4.5	33	32500	3.25
X66304	1	0.05	33300	3.33	0.9	9	30.3	82		99	0.0099	60100	6.01			0.6			25800	2.58	3.6	32.7	32400	3.24
X66305	0.5	0.05	41600	4.16	0.2	12	28.6	86		94.8	0.00948	59300	5.93			0.5			24000	2.4	6	28.1	30500	3.05
X66332	2	0.05	52300	5.23	0.9	22	20.3	150		95	0.0095	50000	5			1.2			38500	3.85	10.9	11.6	16100	1.61
X66338	1	0.05	73500	7.35	0.9	18	17.4	165		90.6	0.00906	41600	4.16			1			35000	3.5	9.5	8.6	16800	1.68
X66340	0.5	0.05	40000	4	0.05	11	31.1	170		85	0.0085	59900	5.99			0.5			26400	2.64	5.3	28	33000	3.3
X66346	1	0.05	39500	3.95	0.05	21	18.5	126		81.6	0.00816	43300	4.33			1.5			38000	3.8	10.4	24.3	21000	2.1
X66347	2	0.05	45600	4.56	0.6	12	32.3	157		119	0.0119	62300	6.23			0.6			27600	2.76	5.8	31.6	33800	3.38
X66373	0.5	0.05	45700	4.57	2	8	29.1	102		83	0.0083	61300	6.13			0.5			37500	3.75	3.4	6.9	18100	1.81
X67132	1	0.05	3800	0.38	2	11	38.5	87		686	0.0686	56500	5.65			0.4			45100	4.51	5	14.5	6200	0.62

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
X67133	0.5	0.05	4000	0.4	0.5	12	21.9	107		204	0.0204	104000	10.4			0.3			19000	1.9	6.2	27.9	11200	1.12
X67143	1	0.05	9400	0.94	0.3	13	17.1	47		266	0.0266	47200	4.72			1			31100	3.11	6.1	23	15500	1.55
X67144	1	0.05	31500	3.15	0.05	13	14.1	43		54.8	0.00548	40800	4.08			1.1			28500	2.85	6.1	17.8	13600	1.36
X67174	1	0.05	38900	3.89	0.2	14	20.9	69		1110	0.111	54700	5.47			0.7			36900	3.69	6.9	24.4	18400	1.84
X67175	1	0.7	26500	2.65	0.2	14	19.2	82		478	0.0478	46500	4.65			0.7			42100	4.21	7.2	11	8800	0.88
X67268	1	0.3	33300	3.33	0.6	13	21.3	66		2970	0.297	59800	5.98			0.2			44700	4.47	5.4	9.3	7900	0.79
X67292	0.5	0.05	36800	3.68	0.05	13	16.2	31		71.7	0.00717	48200	4.82			0.9			33000	3.3	6.7	18	17100	1.71
X67297	2	0.05	29900	2.99	0.2	40	16.8	21		15.6	0.00156	65400	6.54			1.3			35500	3.55	17.8	18.1	16500	1.65
X67322	0.5	0.3	14300	1.43	0.3	12	22.8	73		685	0.0685	56000	5.6			0.3			41100	4.11	5.1	12.6	8500	0.85
X67347	0.5	0.05	40600	4.06	0.2	11	12.9	21		43.6	0.00436	40000	4			0.7			17600	1.76	5.7	23.8	16900	1.69
X67354	0.5	0.05	37100	3.71	0.2	16	27	39		2.7	0.00027	80200	8.02			0.6			3000	0.3	7.6	45.1	23300	2.33
X67374	1	0.2	20000	2	0.05	12	24.7	62		1650	0.165	48000	4.8			0.7			41900	4.19	5.4	8.3	11800	1.18
X67396	0.5	0.5	20100	2.01	0.05	12	14.8	51		224	0.0224	47800	4.78			0.7			34100	3.41	6.3	19.5	17700	1.77
X67432	1	0.4	30500	3.05	0.5	10	17.4	67		1270	0.127	56700	5.67			0.7			39800	3.98	4.2	8.7	13300	1.33
X67438	0.5	0.2	31300	3.13	0.2	10	14.6	43		197	0.0197	42600	4.26			0.5			36500	3.65	4.3	14.6	15200	1.52
S156638	0.5	0.1	1500	0.15	0.05	0.5	14.9	82		228	0.0228	58500	5.85			0.5			39000	3.9	0.2	5.5	3700	0.37
S156644	0.5	0.05	2200	0.22	0.05	0.5	18	61		423	0.0423	50900	5.09			0.6			44100	4.41	0.3	4.8	3500	0.35
S156654	1	0.3	3500	0.35	0.2	1	17.2	118		504	0.0504	69700	6.97			0.5			40600	4.06	0.3	6.6	3900	0.39
S156683	0.5	0.05	5500	0.55	0.1	2	12.4	73		316	0.0316	55000	5.5			0.4			31100	3.11	0.7	36.6	20000	2
S156689	0.5	0.05	3000	0.3	0.1	5	20.9	117		1480	0.148	68900	6.89			0.3			39000	3.9	1.4	5	3000	0.3
S156694	0.5	0.1	3400	0.34	0.05	6	21.2	75		1060	0.106	66500	6.65			0.3			39300	3.93	2.2	4.1	2500	0.25
S156698	1	0.05	54900	5.49	0.2	21	8.7	25		5.5	0.00055	34100	3.41			1			31500	3.15	9.9	22.7	9200	0.92
S156709	1	1.8	15100	1.51	6.4	15	18.4	160		324	0.0324	50600	5.06			0.5			39500	3.95	5.9	5	5700	0.57
S156710	1.000	0.05	49100	4.9	0.10	25.00	9	15		32	0.003	35600	3.56			1.1			37900	3.79	12.70	25.20	14200	1.42
S156717	0.5	0.05	4400	0.44	2.8	5	12	76		304	0.0304	42500	4.25			0.7			34000	3.4	1.5	10.1	5900	0.59
S156723	0.5	0.7	13700	1.37	1.2	6	15.6	106		254	0.0254	52700	5.27			0.6			29900	2.99	2	9.9	11600	1.16
S156734	1	0.2	7900	0.79	1.9	4	12.5	55		455	0.0455	42200	4.22			0.5			34600	3.46	1.1	7.2	7000	0.7
S156743	1	0.1	15800	1.58	0.4	12	23	66		1230	0.123	45700	4.57			0.6			39100	3.91	5.5	15.5	6900	0.69
S156752	1	0.2	31000	3.1	4.3	11	13.1	89		159	0.0159	48700	4.87			0.6			29100	2.91	5.3	23.4	10600	1.06
S156759	1	0.05	15800	1.58	0.2	86	3.8	61		18.3	0.00183	37600	3.76			1.7			15600	1.56	41.5	23.3	5700	0.57
S156769	0.5	0.1	3100	0.31	1.4	5	18.8	88		4990	0.499	57900	5.79			0.2			36600	3.66	1.6	3.8	2900	0.29
S156780	1	0.05	12500	1.25	0.1	92	1.3	50		19.9	0.00199	17300	1.73			2			23800	2.38	45.9	7.4	3400	0.34
S156784	1	0.4	30000	3	0.2	7	15.1	61		1620	0.162	63700	6.37			0.4			38000	3.8	3.1	3.2	3300	0.33
S156790	1	0.7	7400	0.74	1.7	6	15.6	81		526	0.0526	55800	5.58			0.4			36800	3.68	2.5	4.7	5900	0.59
S156800	1	0.05	38600	3.86	0.2	10	12.6	30		62.2	0.00622	44300	4.43			0.7			36700	3.67	6.1	23	17200	1.72
S156810	2	0.05	8700	0.87	0.2	95	0.9	45		5.8	0.00058	16200	1.62			2.3			28400	2.84	47.5	3.7	2100	0.21
S156824	0.5	0.3	31100	3.11	0.4	7	13.7	36		102	0.0102	44800	4.48			0.5			28500	2.85	3.2	24.4	17000	1.7
S156829	0.5	0.6	20600	2.06	0.4	7	14.2	35		180	0.018	46900	4.69			0.6			37400	3.74	3	12.8	17600	1.76
S156835	0.5	1	45500	4.55	0.5	4	8.5	81		1400	0.14	54100	5.41			0.2			34500	3.45	1.5	2.4	2000	0.2
S156847	0.5	0.4	56900	5.69	0.3	6	15.6	50		3250	0.325	44200	4.42			0.2			29400	2.94	3.1	11.8	8800	0.88
S154641	1	0.05	20300	2.03	0.2	21	8.7	48		34.8	0.00348	29700	2.97			1.5			28200	2.82	10.2	13.3	8400	0.84
S154644	1	0.1	9000	0.9	1.2	12	18.3	124		196.00	0.0196	36100	3.61			0.7			40700	4.07	5.9	12.5	7400	0.74
S154647	1	0.4	37100	3.71	0.4	17	16.7	83		679	0.0679	48500	4.85			1.5			33100	3.31	9.4	22.4	14700	1.47
S154955	1	0.05	28700	2.87	0.3	12	14.7	40		106	0.0106	46400	4.64			1			30400	3.04	6.1	29.4	19300	1.93
S154956	2	0.2	36100	3.61	1.7	11	10.4	33		86.1	0.00861	37400	3.74			1			39000	3.9	5.9	18	12200	1.22
S154961	1	0.05	29600	2.96	2.5	10	13.1	38		115	0.0115	39800	3.98			0.8			34600	3.46	4.9	17.7	13800	1.38
S154962	1	0.05	31800	3.18	1.9	9	7.1	33		82.3	0.00823	25400	2.54			1			41700	4.17	4.8	10.6	9000	0.9
S154973	1	0.05	42200	4.22	0.05	10	7.8	24		247	0.0247	30500	3.05			1			38800	3.88	5.6	12.5	8800	0.88
S154974	1	0.4	19700	1.97	0.2	10	13.1	64		84	0.0084	50500	5.05			0.9			42600	4.26	5.5	22.5	15200	1.52
S154653	0.5	0.3	8100	0.81	1.1	17	12.2	93		166	0.0166	36200	3.62			0.6			41400	4.14	8.5	14.8	10600	1.06

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
S154666	2	0.05	16000	1.6	0.6	87	3.2	44		12.4	0.00124	29500	2.95			3.2			15600	1.56	47.6	14.1	6300	0.63
S154696	1	0.6	12000	1.2	0.2	10	27.6	40		1360	0.136	71000	7.1			0.5			39400	3.94	4.6	16.8	14600	1.46
S154697	0.5	0.8	6000	0.6	1.3	8	20.2	65		5630	0.563	67300	6.73			0.3			52400	5.24	3.1	5.1	3700	0.37
S154739	1	0.3	22700	2.27	0.05	13	17.4	54		736	0.0736	46400	4.64			0.3			47500	4.75	6.8	12.1	12800	1.28
S154746	0.5	0.2	53300	5.33	0.05	13	13.6	41		26.2	0.00262	41600	4.16			0.7			35700	3.57	6.9	13.4	13500	1.35
S154766	1	0.05	34100	3.41	0.3	25	31.7	47		11.8	0.00118	106000	10.6			1.5			6200	0.62	13.2	23.9	18600	1.86
S154788	0.5	0.1	6200	0.62	0.05	11	21.8	47		948	0.0948	68000	6.8			0.4			47000	4.7	4.8	6.8	6600	0.66
S154798	1	0.1	37900	3.79	0.05	12	16.6	37		53	0.0053	46400	4.64			0.9			21900	2.19	6.2	14.3	15900	1.59
S154805	1	0.1	24200	2.42	0.2	11	25.4	54		419	0.0419	69600	6.96			0.4			39700	3.97	5	9	8700	0.87
S154841	2	1.1	18500	1.85	2.3	12	16.1	55		430	0.043	62400	6.24			0.4			39900	3.99	5.4	10.9	11700	1.17
S154857	0.5	0.5	4900	0.49	0.6	3	12.6	131		10000	1	77500	7.75			0.2			31700	3.17	1	2.7	3700	0.37
S154858	0.5	0.05	36400	3.64	0.3	25	33.7	51		149	0.0149	113000	11.3			1			10400	1.04	13.8	41.1	22100	2.21
S154871	2	0.05	44900	4.49	0.05	123	27.1	104		214	0.0214	57900	5.79			4.5			29200	2.92	71.4	26.3	29300	2.93
S154872	1	2	22000	2.2	0.5	23	13.2	124		10000	1	105000	10.5			0.8			21400	2.14	10	11.6	9800	0.98
S154884	1	0.4	20800	2.08	0.05	5	9.1	94		10000	1	62700	6.27			0.2			38700	3.87	2.1	7.5	8900	0.89
S156852	2	0.6	1500	0.15	0.05	2	20.8	169		2880	0.288	77700	7.77			0.7			38100	3.81	0.6	3.2	2500	0.25
S156860	1	0.3	3400	0.34	0.05	2	11.2	88		3200	0.32	77900	7.79			0.4			30700	3.07	0.5	17.8	10900	1.09
S156877	0.5	0.3	2800	0.28	0.4	0.5	23.3	123		964	0.0964	70800	7.08			0.3			37400	3.74	0.2	5	3900	0.39
S156889	0.5	0.3	19400	1.94	0.05	2	18.5	61		418	0.0418	65900	6.59			0.3			37300	3.73	0.7	6.6	3900	0.39
S156900	2	0.8	4900	0.49	0.2	2	29.1	199		437	0.0437	93400	9.34			0.7			34600	3.46	0.4	8	4200	0.42
S156913	0.5	0.7	10900	1.09	0.05	5	23.2	167		165	0.0165	84600	8.46			0.5			34000	3.4	1.2	8.3	5900	0.59
S156922	0.5	1.2	4600	0.46	0.3	7	15.5	106		428	0.0428	61000	6.1			0.3			27700	2.77	2.6	9.3	1000	0.1
S156942	0.5	2.6	4400	0.44	0.3	5	21.1	66		870	0.087	58400	5.84			0.5			38500	3.85	1.9	6.9	4100	0.41
S156970	0.5	0.4	3700	0.37	0.4	2	19.8	98		1330	0.133	55700	5.57			0.5			34500	3.45	0.8	8.5	4000	0.4
S156983	0.5	1	2200	0.22	0.1	2	17.8	86		679	0.0679	79800	7.98			0.5			32100	3.21	0.6	2.5	2600	0.26
S156999	0.5	0.05	39400	3.94	0.1	11	15.3	36		55.3	0.00553	45000	4.5			0.5			33600	3.36	6.8	26.6	14400	1.44
S157030	0.5	0.3	70400	7.04	0.5	6	10.6	45		3030	0.303	32800	3.28			0.1			30800	3.08	3	4.9	4100	0.41
S157047	0.5	1.4	2900	0.29	0.05	11	30.2	163		866	0.0866	79700	7.97			0.7			39100	3.91	3.9	7	4100	0.41
S157055	0.5	0.05	43300	4.33	0.05	13	15.4	43		55.4	0.00554	45300	4.53			0.6			17900	1.79	6.2	41.9	15300	1.53
S157066	0.5	1.4	3900	0.39	0.5	3	26.1	122		671	0.0671	72900	7.29			0.4			37400	3.74	1	2	1900	0.19
S157078	0.5	0.5	9500	0.95	0.6	9	22.3	110		10000	1	74800	7.48			0.4			38100	3.81	3.7	7.2	4700	0.47
S157082	0.5	0.2	12800	1.28	0.3	13	20.5	49		3660	0.366	79000	7.9			0.2			37400	3.74	7.4	15.1	7300	0.73
S157109	0.5	0.1	7600	0.76	0.2	12	19.1	49		1870	0.187	63300	6.33			0.4			39300	3.93	7	16.6	8800	0.88
S157122	1.000	0.1	10200	1.0	0.20	12.00	19	65		1680	0.168	73500	7.35			0.3			40600	4.06	6.80	8.60	9500	0.95
S157132	1	0.2	5300	0.53	1.3	10	27.5	50		4060	0.406	60300	6.03			0.4			42000	4.2	5	7.2	6600	0.66
S157181	0.5	1.4	3700	0.37	0.6	12	33	118		1090	0.109	81100	8.11			0.8			37400	3.74	4.7	6.3	4100	0.41
S157212	1	0.1	7700	0.77	0.4	13	26.7	68		4090	0.409	57300	5.73			0.4			44600	4.46	7	7.5	7300	0.73
S157239	0.5	0.3	11600	1.16	0.7	9	18	77		6790	0.679	79700	7.97			0.3			30700	3.07	4.9	10.9	5700	0.57
S157266	0.5	0.4	18700	1.87	0.4	13	15.9	56		185	0.0185	48100	4.81			0.5			47700	4.77	7.2	2.8	13100	1.31
S157287	1	0.3	7000	0.7	0.2	8	24.1	61		803	0.0803	62900	6.29			0.4			40100	4.01	3.7	7.6	9900	0.99
S157300	0.5	0.2	12300	1.23	2.7	8	26.7	56		1970	0.197	71400	7.14			0.4			40000	4	3.9	2.1	5700	0.57
S154899	0.5	0.1	5500	0.55	1.2	13	21	89		667	0.0667	62400	6.24			0.6			39700	3.97	8.2	25.9	12100	1.21
S154900	1	0.3	4800	0.48	0.5	9	32.1	89		891	0.0891	78700	7.87			0.5			41000	4.1	4.6	20.3	10900	1.09
S154925	1	0.1	6200	0.62	1.3	11	21.7	55		2300	0.23	57900	5.79			0.4			48400	4.84	5.4	13.3	7900	0.79
S154926	1	0.2	6800	0.68	1.3	14	24.6	60		2300	0.23	63900	6.39			0.4			44900	4.49	7.2	18.8	10500	1.05
S154942	0.5	0.1	26300	2.63	0.05	17	12.8	49		89.5	0.00895	45700	4.57			0.9			38500	3.85	10	20.8	15200	1.52
S154943	3	0.05	34100	3.41	0.4	115	24.3	92		60.5	0.00605	49100	4.91			4.6			37800	3.78	65.8	37.5	26100	2.61
S155508	1	0.1	9100	0.91	1.6	21	15.9	86		183	0.0183	45600	4.56			1.4			45200	4.52	11.9	15.6	8800	0.88
S155509	1	0.05	11600	1.16	0.4	103	4.5	55		22.1	0.00221	35100	3.51			3.4			23700	2.37	57.5	15	6400	0.64
S155017	1	0.4	28300	2.83	0.05	11	14.7	43		70.1	0.00701	44500	4.45			1			37200	3.72	5.4	15.9	11400	1.14

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
S155048	1	0.3	12600	1.26	1.2	11	24.2	61		3100	0.31	50100	5.01			0.3			50500	5.05	4.9	21.2	14900	1.49
S155067	0.5	0.05	6300	0.63	0.4	11	21	59		2590	0.259	43500	4.35			0.3			42800	4.28	5.1	8.7	7200	0.72
S155075	0.5	0.5	6500	0.65	0.05	10	16.3	69		619	0.0619	53600	5.36			0.5			43900	4.39	4.8	5.1	5700	0.57
S155098	1	0.2	5000	0.5	0.05	11	23.5	57		796	0.0796	57900	5.79			0.6			43600	4.36	5	6	5300	0.53
S155112	0.5	0.5	31800	3.18	1.2	8	13.7	45		3870	0.387	50800	5.08			0.3			36700	3.67	5.2	19.3	17900	1.79
S155119	1	0.05	29500	2.95	0.05	29	7.6	37		14.7	0.00147	31400	3.14			1.6			28500	2.85	16.5	7.5	8200	0.82
S155125	0.5	0.4	40300	4.03	0.2	7	12.8	57		7060	0.706	55500	5.55			0.2			37200	3.72	4.2	7.6	9000	0.9
S155147	0.5	0.7	24900	2.49	0.5	6	9.8	104		10000	1	45300	4.53			0.1			29200	2.92	3.1	2.8	3700	0.37
S157321	0.5	0.8	3500	0.35	0.05	7	28.8	145		535	0.0535	77600	7.76			0.8			36800	3.68	2.3	9.5	4900	0.49
S157345	0.5	0.05	45400	4.54	0.05	15	14.6	34		58	0.0058	42600	4.26			0.7			18300	1.83	7.8	38.1	15800	1.58
S157360	0.5	0.3	13200	1.32	0.4	13	25.6	35		3370	0.337	56200	5.62			0.6			30700	3.07	7.9	35.9	11700	1.17
S157388	0.5	0.05	4600	0.46	0.1	8	16.8	85		680	0.068	64400	6.44			0.5			43300	4.33	3.2	4.4	3400	0.34
S157426	0.5	0.5	32900	3.29	1.8	9	14.9	87		1650	0.165	54300	5.43			0.3			39800	3.98	4.6	9	6600	0.66
S157460	0.5	0.3	44500	4.45	0.05	9	12.9	58		4070	0.407	31700	3.17			0.3			39300	3.93	4.9	12.2	10200	1.02
S157484	0.5	0.05	45100	4.51	0.5	9	14.7	53		562	0.0562	44800	4.48			0.5			40900	4.09	5.1	3.4	11800	1.18
H42636	1	0.35	400	0.04	0.07	5.14	13	34	3.9	888.84	0.088884	50200	5.02	18.77		0.59			50700	5.07	1.6	4.1	7800	0.78
H42628	0.75	0.15	100	0.01	0.08	16.2	4.6	46	3.51	577	0.0577	157500	15.75	12.85	0.37	0.3	0.11	0.089	33600	3.36	10.5	2.6	5600	0.56
H42630	0.75	0.11	1100	0.11	0.1	13.1	9.4	37	5.7	667	0.0667	51100	5.11	16.1	0.18	0.6	0.08	0.045	42800	4.28	6.4	4.8	8300	0.83
H42623	0.95	0.17	1600	0.16	0.11	13.1	25.8	56	4.67	348	0.0348	59200	5.92	15.8	0.21	0.7	0.11	0.036	40200	4.02	5.4	8.6	11200	1.12
H42631	1	0.02	2200	0.22	0.07	10.08	18.4	32	5	1540.69	0.154069	48100	4.81	14.3		0.56			47500	4.75	3.7	5.5	9100	0.91
H42624	0.5	0.17	3500	0.35	0.01	3.04	30.2	52	3	297.72	0.029772	54600	5.46	17		0.37			45500	4.55	0.6	16.6	17700	1.77
H42659	0.5	0.07	2800	0.28	0.08	9.7	18.5	30	5.6	1472.76	0.147276	48400	4.84	17.45		0.82			44800	4.48	3.7	10.7	13100	1.31
H42652	0.96	0.3	3600	0.36	0.2	12.3	16.5	12	4.7	1400	0.14	58900	5.89	16.9	0.2	0.9	0.05	0.07	41800	4.18	5.6	9	12600	1.26
H42643	0.83	0.2	2400	0.24	0.06	14.85	15.4	18	4.34	778	0.0778	55800	5.58	17.05	0.18	0.8	0.05	0.081	40100	4.01	7.5	12	18000	1.8
H42641	1.01	0.31	2600	0.26	1.21	13.8	21.4	12	4.72	630	0.063	56800	5.68	19.85	0.21	0.8	0.06	0.1	39000	3.9	7	17.8	16300	1.63
H42657	0.5	0.09	4700	0.47	3.49	11.78	24.1	34	3.6	3416.22	0.341622	43200	4.32	18.03		0.58			39700	3.97	4.1	7.8	11100	1.11
H42637	0.88	0.1	2300	0.23	0.13	20.4	15.7	22	4.37	1410	0.141	50200	5.02	15.95	0.18	1	0.02	0.038	40700	4.07	11	8.9	13500	1.35
H42639	0.8	0.08	4100	0.41	0.26	17.25	25.8	25	3.4	1360	0.136	65200	6.52	16.3	0.21	1	0.02	0.053	35000	3.5	8.8	12.9	18000	1.8
H42625	0.77	0.11	2900	0.29	0.11	11	23	49	3.05	963	0.0963	52300	5.23	14.8	0.19	0.7	0.01	0.026	35500	3.55	4.7	17.9	21000	2.1
H42648	0.89	0.06	3000	0.3	0.27	13.75	28.3	32	4.51	3200	0.32	53500	5.35	18.8	0.17	0.7	0.04	0.062	37700	3.77	6.4	10.8	14200	1.42
H42632	0.92	0.11	3300	0.33	0.18	17.15	17.2	15	4.22	1120	0.112	55000	5.5	15.1	0.17	0.9	0.02	0.021	38500	3.85	9.1	11	16500	1.65
H42653	0.5	0.05	7500	0.75	0.5	13.46	38.2	44	4.5	2212.17	0.221217	62600	6.26	17.06		0.33			45300	4.53	4.5	10.3	13900	1.39
H42627	0.5	0.09	2100	0.21	0.01	10.32	10	67	2.5	1226.97	0.122697	39000	3.9	13.23		0.23			33700	3.37	4.1	13.6	15000	1.5
H42642	1	0.11	2600	0.26	0.03	10.82	11.7	21	4.9	314.43	0.031443	56600	5.66	16.98		0.48			46700	4.67	4.7	16.2	17900	1.79
H42645	0.84	0.17	5400	0.54	0.19	11.85	15.3	10	4.15	1160	0.116	44700	4.47	16.3	0.16	0.8	0.01	0.105	40500	4.05	5.3	14.4	17600	1.76
H42658	0.9	0.17	1300	0.13	0.07	20	27.5	14	5.29	847	0.0847	59100	5.91	18.75	0.2	1.1	0.19	0.084	36200	3.62	10.8	7.2	9900	0.99
H42644	1	1.71	9300	0.93	0.63	8.22	24.3	34	4.7	1805.15	0.180515	73300	7.33	18.82		0.44			50900	5.09	2.5	10.5	15300	1.53
H42656	0.8	0.12	3100	0.31	0.27	15.45	10.2	13	4.07	1710	0.171	40500	4.05	18.35	0.15	1.1	0.03	0.039	39300	3.93	8.5	11.2	14300	1.43
H42621	0.9	0.16	9200	0.92	0.58	12.6	21.5	47	4.64	352	0.0352	55100	5.51	16.15	0.18	0.6	0.04	0.038	37000	3.7	4.7	16.2	19800	1.98
H42640	0.500	0.14	6600	0.7	1.38	12.45	17	30	4	188	0.019	57300	5.73	15.89		0.42			35700	3.57	5.40	19.20	20100	2.01
H42649	0.5	0.04	6100	0.61	0.11	12.55	20.6	24	3.6	1289.6	0.12896	48900	4.89	17.83		0.48			35300	3.53	5.1	14.6	18500	1.85
H42638	0.5	0.08	7400	0.74	0.69	14.16	21.9	46	3.3	1473.01	0.147301	46100	4.61	15.18		0.52			39300	3.93	6.3	15.7	17300	1.73
H42633	0.94	0.11	2000	0.2	0.05	17.3	10.2	12	5.18	500	0.05	51500	5.15	16.9	0.17	1.2	0.02	0.052	40500	4.05	9.3	10.8	15000	1.5
H42654	0.800	0.09	15600	1.6	0.21	13.70	26	24	5	3190	0.319	52300	5.23	18.15	0.22	0.6	0.02	0.063	42300	4.23	6.40	10.20	12800	1.28
H42661	0.73	0.08	10500	1.05	0.16	16.7	15.7	14	3.9	1080	0.108	38800	3.88	14.35	0.17	0.7	0.05	0.029	40700	4.07	9.1	7.8	11500	1.15
H42651	0.5	0.02	3000	0.3	0.22	13.37	23	24	2.7	529.6	0.05296	49900	4.99	17.99		0.68			34100	3.41	5.4	17.5	18200	1.82
H42650	0.770	0.02	3700	0.4	0.24	17.05	21	20	2	661	0.066	48200	4.82	18	0.14	1.5	0.01	0.042	21800	2.18	8.80	16.20	16600	1.66
58450	0.87	1.25	30100	3.01	0.68	12.7	25.2	182	3.45	431	0.0431	78500	7.85	14.65	0.24	0.7	2.49	0.191	28300	2.83	6	8.2	9600	0.96
58464	1.050	2.51	18700	1.9	7.13	8.52	26	61	4	166	0.017	72600	7.26	18.2	0.22	0.4	2.33	1.435	36100	3.61	3.70	5.20	11500	1.15
17086	1.330	1.23	13700	1.4	2.87	13.45	23	21	6	211	0.021	51100	5.11	22.8	0.15	0.9	0.62	0.662	40700	4.07	6.60	10.30	8400	0.84

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
17062	1.160	1.47	27200	2.7	12.10	16.70	27	19	4	233	0.023	63400	6.34	16.7	0.21	0.6	3.28	0.681	29400	2.94	8.20	6.90	7800	0.78
17109	1.16	1.28	28400	2.84	18.65	13.15	35.9	92	4.09	202	0.0202	80000	8	20.3	0.27	0.5	4.14	0.832	27700	2.77	5.9	51.4	39700	3.97
17148	2.260	0.17	30700	3.1	0.84	25.30	26	88	2	122	0.012	52900	5.29	18.8	0.13	1.7	0.11	0.061	26500	2.65	13.30	31.10	27300	2.73
58479	0.87	0.67	39700	3.97	2.16	9.85	14.6	2	4.58	92.1	0.00921	42800	4.28	16.9	0.18	0.8	0.27	0.337	41200	4.12	5.3	8.6	12700	1.27
58493	1.170	0.04	36400	3.6	0.14	26.50	7	1	2	8	0.001	31200	3.12	17	0.12	1.6	0.08	0.042	22200	2.22	13.10	11.70	7600	0.76
G24857	0.980	0.51	1600	0.2	1.06	33.80	31	20	4	1245	0.125	36700	3.67	16.8	0.12	1	0.21	0.063	48100	4.81	20.90	12.10	3600	0.36
SG92-17_C11049	1.26	2.14	14700	1.47	0.08	29	9.8	30	3.59	72.5	0.00725	70900	7.09	25.3	0.19	1.1	0.01	1.12	41900	4.19	13.4	27.6	16300	1.63
9593	0.5	0.19	16400	1.64	0.41	16.79	11.6	166	2.5	1036.05	0.103605	49600	4.96	15.03		0.4			47400	4.74	8	14.1	12600	1.26
S91-388_5219	1.02	0.16	59800	5.98	0.11	15.95	12.5	17	1.37	196	0.0196	56900	5.69	16.8	0.13	0.6	0.07	0.177	22200	2.22	9.4	13.5	22300	2.23
H44700	1	0.38	14700	1.47	0.03	29.88	6.1	62	3.5	289.95	0.028995	39600	3.96	18.73		0.96			46700	4.67	13.8	8.7	8200	0.82
G24650	1.16	0.05	3700	0.37	0.07	19.05	5.5	4	3.05	243	0.0243	17200	1.72	22.7	0.05	1	0.01	0.026	49200	4.92	8.2	10.9	7500	0.75
H42333	1.120	0.16	38100	3.8	0.04	17.20	14	6	3	1250	0.125	47100	4.71	18.25	0.1	0.4	0.02	0.07	33800	3.38	7.60	19.90	18100	1.81
MC-05-03 6.0-20	1	0.05	47900	4.79	0.05	21	11.7	73		1171.7	0.11717	38500	3.85			0.8			30200	3.02	12.4	16.7	17100	1.71
10335	1.65	0.06	55700	5.57	0.04	15.5	12.2	59	1.82	1295	0.1295	33600	3.36	19.15	0.2	0.9	0.06	0.105	31900	3.19	7.7	24.5	14300	1.43
H45368	2	0.5	3000	0.3	0.08	28.44	42.9	55	3.2	19.21	0.001921	51200	5.12	14.54		0.7			50000	5	11.8	9.3	5100	0.51
H45505	0.5	0.34	3200	0.32	6.93	15.4	20.2	113	5.8	6814.33	0.681433	45800	4.58	14.66		0.41			54200	5.42	5.8	10.5	3900	0.39
G24888	0.97	1.41	3800	0.38	0.94	30.2	15.3	27	3.07	86.4	0.00864	42500	4.25	18.85	0.15	0.9	0.27	0.099	48300	4.83	15.8	10.9	3700	0.37
S91-388_5274	0.590	0.17	2400	0.2	1.60	25.30	11	8	4	2330	0.233	25000	2.5	14	0.17	1.1	0.45	0.081	70000	7	15.90	4.80	3000	0.30
H45279	1.000	0.33	3600	0.4	2.72	10.88	16	82	6	3014	0.301	39300	3.93	15.04		0.57			49500	4.95	4.20	9.00	3400	0.34
G24806	1.270	0.54	3900	0.4	1.29	39.90	35	62	5	3720	0.372	34400	3.44	17.45	0.15	0.9	0.07	0.109	48300	4.83	23.40	17.40	4900	0.49
G24829	0.96	0.22	1900	0.19	0.08	19.45	23.3	16	2.99	26.3	0.00263	25300	2.53	12.25	0.08	0.6	0.16	0.02	47500	4.75	11.2	6.9	2600	0.26
G24902	1.140	0.47	6700	0.7	0.11	19.05	18	27	4	104	0.010	50100	5.01	16.3	0.14	0.8	0.11	0.055	48500	4.85	9.50	7.70	4700	0.47
G24874	1.17	0.77	8300	0.83	0.08	25.7	31.9	15	3.41	485	0.0485	57000	5.7	18.4	0.2	0.8	0.28	0.074	45900	4.59	13.5	15	3900	0.39
SG92-22_C9763	1.630	0.39	7200	0.7	0.21	30.40	22	23	6	299	0.030	42500	4.25	20.6	0.16	0.6	0.07	0.041	49600	4.96	15.20	9.70	5300	0.53
SG92-22_C9711	1.31	0.21	5900	0.59	0.14	33	23	14	4.79	2130	0.213	34500	3.45	21.2	0.18	0.9	0.07	0.055	49100	4.91	19.5	30.8	7600	0.76
G24782	0.43	0.18	2600	0.26	1.04	18.5	7.9	128	2.99	4910	0.491	12600	1.26	12.8	0.07	0.5	0.36	0.147	47700	4.77	11.6	4.5	1400	0.14
H44956	0.5	0.11	1800	0.18	1.53	11.21	8.6	90	2.1	9111.49	0.911149	15400	1.54	10.24		0.22			43800	4.38	5.6	3.6	1900	0.19
H42509	1	0.23	4200	0.42	0.63	21.65	24.2	63	3.9	176.53	0.017653	32000	3.2	17.06		0.39			38800	3.88	8.9	8.7	5800	0.58
S91-388_5261	0.25	0.12	2400	0.24	0.13	14.45	11.2	20	2.59	5800	0.58	15200	1.52	13.15	0.15	0.4	0.06	0.225	60400	6.04	9	2.6	1500	0.15
H44939	0.900	0.58	5400	0.5	1.35	21.40	13	65	6	10000	1.000	32600	3.26	18.05	0.18	0.5	0.2	0.664	46200	4.62	13.30	19.60	7900	0.79
H44935	0.500	0.83	4500	0.5	1.33	24.43	12	77	4	10000	1.000	24700	2.47	15.2		0.53			32100	3.21	12.40	19.50	5500	0.55
G21680	1.360	0.28	9600	1.0	0.05	16.90	33	29	10	1035	0.104	53900	5.39	20.1	0.13	0.7	0.04	0.085	52800	5.28	9.20	16.00	10100	1.01
H42532	1.000	0.39	12900	1.3	0.19	19.51	34	108	6	35	0.004	46800	4.68	14.98		0.4			43100	4.31	8.00	14.30	7200	0.72
H44942	1.12	0.24	8000	0.8	2.55	28.1	57.8	23	3.37	6270	0.627	24800	2.48	13.55	0.17	0.5	1.58	0.252	49100	4.91	18.1	6.1	3000	0.3
SG92-02_C8906	0.690	0.22	5400	0.5	0.16	20.20	39	19	8	3640	0.364	29400	2.94	16.1	0.2	0.9	0.06	0.159	63200	6.32	11.90	18.70	9500	0.95
H42460	1.29	0.25	10900	1.09	1.87	12.2	26.5	23	10.25	5290	0.529	42400	4.24	18.45	0.14	0.7	0.12	0.176	40100	4.01	6	21.5	7800	0.78
SG92-02_C8897	0.400	0.48	12600	1.3	0.64	29.70	40	18	4	10000	1.000	42000	4.2	12.9	0.27	0.7	0.3	0.579	66500	6.65	16.60	10.10	6400	0.64
SG92-02_C8901	1.04	0.16	7700	0.77	0.31	17.95	22.1	25	10.9	10000	1	43500	4.35	21.3	0.22	0.7	0.07	0.55	67600	6.76	8.6	29.2	20300	2.03
SG92-06_C12601	1.72	0.15	8900	0.89	1.43	19.3	13.3	33	13.1	4580	0.458	37500	3.75	22.9	0.15	0.6	0.19	0.201	50400	5.04	11.3	31.6	11600	1.16
SG92-22_C9736	1.32	0.54	31200	3.12	0.33	26.3	16.6	10	2.74	81.7	0.00817	53500	5.35	17.7	0.18	1	0.27	0.053	39700	3.97	13.7	12	4700	0.47
H44936	0.92	0.13	15500	1.55	0.42	24	18.8	52	5.77	1770	0.177	39400	3.94	16.3	0.18	0.8	0.12	0.07	45100	4.51	12.7	17.8	8000	0.8
H45187	1.2	0.41	11400	1.14	7	37.9	23.8	85	7.24	2110	0.211	32200	3.22	17.4	0.16	0.6	0.22	0.116	47100	4.71	22.8	29.8	15100	1.51
H45191	1.130	0.17	15400	1.5	23.00	22.70	33	66	7	4880	0.488	46900	4.69	17.9	0.18	0.7	1.22	0.173	47000	4.7	10.90	25.40	15800	1.58
H44940	0.500	0.2	4900	0.5	0.40	13.74	14	48	4	4389	0.439	11600	1.16	14.7		0.39			36800	3.68	6.90	8.50	3500	0.35
G24756	1.21	0.29	8500	0.85	1.38	29.4	18	128	9.74	6530	0.653	27900	2.79	21	0.12	0.9	0.23	0.274	53400	5.34	17.9	22	9900	0.99
H44937	1	0.38	7200	0.72	1.03	26.94	20.6	57	6.4	8438.47	0.843847	32100	3.21	19.92		0.91			34400	3.44	12.1	25.2	11700	1.17
G24926	0.570	0.6	39300	3.9	0.31	15.10	31	44	3	552	0.055	60800	6.08	14	0.14	0.8	0.07	0.075	51100	5.11	8.10	12.20	10300	1.03
S91-388_5249	0.410	0.12	15200	1.5	0.36	18.50	12	26	3	6310	0.631	15600	1.56	14.45	0.16	0.7	0.16	0.26	63200	6.32	10.10	3.80	2200	0.22
H45803	1	0.29	24600	2.46	3.75	17.47	34.2	74	6.6	4358.34	0.435834	51400	5.14	12.97		0.34			46100	4.61	7.6	22.2	15000	1.5
H45188	1	0.28	14600	1.46	26.4	20.97	22.8	99	7.2	2620.71	0.262071	35700	3.57	19.23		0.63			31000	3.1	9	42	17600	1.76

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
H45189	1.65	0.17	11300	1.13	4.8	25.2	19.4	132	9.5	1900	0.19	33000	3.3	21.7	0.16	0.8	0.17	0.071	41800	4.18	12.1	35.1	19500	1.95
G24852	1.92	0.18	13500	1.35	0.71	42	17.8	40	6.45	170.5	0.01705	42200	4.22	21.4	0.13	1.2	0.52	0.054	27500	2.75	21.5	20.2	16200	1.62
H44933	1.81	0.33	26400	2.64	0.79	38.2	16.7	36	8.47	5200	0.52	21700	2.17	20.7	0.09	2.2	0.27	0.228	52100	5.21	22.9	32	12000	1.2
X15955	2	0.24	9100	0.91	1.29	13.08	16.6	83	16.7	3048.68	0.304868	37600	3.76	17.26		0.59			40100	4.01	6.2	21.2	10400	1.04
H45591	0.5	0.3	13300	1.33	0.25	23.94	35.6	155	3.3	987.14	0.098714	69600	6.96	16.95		0.58			27100	2.71	10.9	25.8	19400	1.94
X15979	1.000	0.21	16800	1.7	2.89	15.94	19	89	9	4592	0.459	32900	3.29	15.65		0.46			50800	5.08	7.70	25.40	12300	1.23
G21668	1.33	0.08	17700	1.77	0.05	12.9	20.7	41	7.55	1115	0.1115	47800	4.78	18.4	0.09	0.8	0.04	0.085	52200	5.22	7.3	20.4	16400	1.64
H45190	1	0.15	25100	2.51	11.25	32.9	19.3	77	6.3	2243.84	0.224384	44100	4.41	18.87		0.46			31900	3.19	14.1	30.6	20900	2.09
H45814	2.000	0.12	11200	1.1	0.44	21.22	30	130	7	1732	0.173	44400	4.44	18.98		0.71			39700	3.97	8.80	31.00	17000	1.70
H45186	1	0.12	16900	1.69	4.76	25.76	16.2	130	9.6	1967.75	0.196775	39900	3.99	19.76		0.71			31000	3.1	10.6	38.1	23000	2.3
G24942	0.87	0.44	33200	3.32	0.1	11.85	22.4	62	2.89	186	0.0186	48500	4.85	16	0.1	0.9	0.03	0.187	41000	4.1	6.1	16.5	13900	1.39
X15939	2.4	0.13	14400	1.44	0.13	32.4	13.9	37	12.1	126.5	0.01265	48900	4.89	22.2	0.15	0.9	0.03	0.044	42800	4.28	15.6	32.3	21700	2.17
G24952	1.22	0.23	27500	2.75	0.08	16.05	10.5	23	6.19	334	0.0334	19500	1.95	16	0.07	0.7	0.01	0.048	26000	2.6	7.2	13.2	5800	0.58
G21701	1.46	0.07	36400	3.64	0.04	19.75	16.9	10	7.73	442	0.0442	42800	4.28	18.5	0.1	1	0.04	0.086	50600	5.06	10.6	16.8	13700	1.37
SG92-22_C9681	0.97	0.11	26900	2.69	0.05	18.75	20.6	19	1.42	102	0.0102	55900	5.59	19.05	0.13	1.1	0.01	0.073	30300	3.03	9.1	23.5	19900	1.99
SG92-06_C12669	1.31	0.31	17800	1.78	6.62	9.17	20.2	17	11.45	1100	0.11	49900	4.99	18.45	0.14	0.6	0.55	0.099	42000	4.2	4.1	15.8	6900	0.69
H45390	0.5	0.45	15400	1.54	0.45	13.19	12.6	149	3.3	210.95	0.021095	54300	5.43	12.56		0.54			40000	4	4.6	8.7	9600	0.96
H45199	2	0.42	14900	1.49	3.73	44.33	44.1	55	11	2772.39	0.277239	102600	10.26	24.63		0.97			38900	3.89	21.5	45.2	24100	2.41
SG92-22_C9794	1.32	0.37	10300	1.03	0.6	29.2	21.6	41	5.12	672	0.0672	50700	5.07	24.2	0.16	0.8	0.03	0.097	27300	2.73	15.1	23.6	14700	1.47
H45195	2	0.09	9200	0.92	1.1	36	24.1	56	10.75	1320	0.132	50100	5.01	24.5	0.19	1.3	0.08	0.054	43500	4.35	16.5	33.1	18400	1.84
H45198	1.13	0.14	16100	1.61	2.51	26	24.1	38	5.86	1160	0.116	46100	4.61	21.3	0.16	0.8	0.16	0.042	31500	3.15	12.9	24.7	13700	1.37
H45200	1.33	0.31	13700	1.37	3.52	44.3	34.1	39	7.31	3200	0.32	37600	3.76	19.35	0.18	0.8	0.15	0.188	43700	4.37	24.3	24.4	12600	1.26
S-10-29 115.5-129.5	1	1.3	23400	2.34	0.9	13	12.7	61		764.2	0.07642	52700	5.27			0.6			30000	3	5.4	20.3	13900	1.39
H45202	2.17	0.22	9200	0.92	0.38	48.7	7.6	23	6.75	2180	0.218	25400	2.54	18.4	0.14	0.7	0.04	0.098	52700	5.27	27.7	31.8	11000	1.1
SG92-02_C8937	1.63	0.3	22900	2.29	0.13	9.23	18.2	12	11.75	581	0.0581	47400	4.74	17.85	0.13	0.7	0.02	0.077	44200	4.42	4.5	21.6	10800	1.08
H45206	1.69	0.18	23500	2.35	0.1	34	24.4	25	13.05	1200	0.12	52100	5.21	19.85	0.2	1.4	0.02	0.086	45200	4.52	19.3	23.9	16700	1.67
H45614	1	0.34	26900	2.69	0.12	33.56	23.6	48	3.5	347.14	0.034714	72700	7.27	18.84		1.21			25000	2.5	14	17.7	15000	1.5
H45192	1	0.11	15300	1.53	6.18	37.45	30.1	61	7.5	3337.29	0.333729	45200	4.52	20.56		0.79			28500	2.85	16.1	29.9	19100	1.91
H45211	1.320	0.18	23900	2.4	0.06	35.30	23	33	7	799	0.080	50400	5.04	21.4	0.2	1.7	0.03	0.037	34000	3.4	17.70	17.70	16100	1.61
SG92-22_C9822	1.04	0.32	31900	3.19	9.63	32.1	29.4	44	5.88	3900	0.39	39500	3.95	15.5	0.18	0.5	0.63	0.148	46700	4.67	18.3	16.2	8900	0.89
H45197	1.000	0.1	11900	1.2	4.42	29.97	19	51	6	1315	0.131	33900	3.39	21.27		0.6			46700	4.67	13.70	28.60	14100	1.41
H45208	1.65	0.25	49500	4.95	0.09	24.3	22.6	22	16.2	1170	0.117	82000	8.2	20.6	0.24	1.7	0.02	0.328	29300	2.93	16.1	55.5	33500	3.35
H45207	1.000	0.3	23600	2.4	2.15	24.15	25	41	9	685	0.069	67600	6.76	17.91		1.04			31200	3.12	10.80	34.90	22100	2.21
H44977	0.500	0.17	12500	1.3	0.08	16.46	12	66	3	1527	0.153	43500	4.35	12.7		0.47			41800	4.18	6.60	13.30	10700	1.07
H45210	1	0.18	39700	3.97	0.16	32.82	26.4	26	13	1281.16	0.128116	81000	8.1	18.72		1.29			31700	3.17	17.4	36.8	25600	2.56
G24977	0.85	0.44	19900	1.99	0.03	30.4	17.8	40	2.71	495	0.0495	40900	4.09	20	0.13	1.2	0.02	0.103	32100	3.21	14.6	12.9	9200	0.92
H45224	0.500	0.16	25600	2.6	0.07	23.81	17	54	2	1275	0.127	39700	3.97	17.47		1.1			30000	3	9.80	12.60	14400	1.44
H44683	0.5	0.3	24700	2.47	0.06	26.39	14.6	84	5.3	605.57	0.060557	34900	3.49	18.34		0.77			29800	2.98	11.1	23.6	13900	1.39
H45193	1.150	0.1	15400	1.5	4.12	26.60	15	57	6	4620	0.462	30000	3	19.6	0.13	0.9	0.23	0.139	48400	4.84	12.50	24.40	16000	1.60
G24999	1.15	1.02	43300	4.33	0.03	37.9	14.4	26	12.2	243	0.0243	78200	7.82	19.95	0.18	1.1	0.02	0.572	32200	3.22	22.1	18.9	27100	2.71
H45194	1.000	0.12	38900	3.9	17.71	38.26	38	49	8	2437	0.244	60600	6.06	19.44		0.59			30400	3.04	17.60	29.00	26500	2.65
H45204	1.64	0.19	42200	4.22	0.17	19.45	20.9	21	7.93	448	0.0448	57700	5.77	17.6	0.19	1.2	0.03	0.129	41500	4.15	9.9	23	21100	2.11
H45205	2.000	0.16	32100	3.2	0.08	26.38	19	31	11	357	0.036	53700	5.37	22.08		0.96			32600	3.26	11.60	28.00	18300	1.83
H45203	2	0.16	26200	2.62	0.15	43.92	14.3	36	7.9	933.8	0.09338	44900	4.49	23.4		1.41			32600	3.26	21.4	30.8	16300	1.63
H45201	0.5	0.3	34700	3.47	4.31	29.61	13.2	47	4.8	1816.58	0.181658	37800	3.78	16.34		0.48			40500	4.05	14.5	24.9	19400	1.94
H45212	1	0.18	38600	3.86	0.17	24.8	30.4	112	4.5	1515.58	0.151558	86800	8.68	18.65		1.49			32500	3.25	11.9	32.4	34700	3.47
X15937	1.05	1.63	13400	1.34	1.67	24.7	15.2	43	5.58	3100	0.31	37900	3.79	16.15	0.14	1.1	0.78	0.179	49100	4.91	12.5	15.1	7600	0.76
H45086	2.07	0.26	17600	1.76	0.09	36.4	27.9	32	7.02	878	0.0878	41200	4.12	24.3	0.17	1.6	0.05	0.019	36800	3.68	17.6	9.3	11100	1.11
H44866	1	0.21	8100	0.81	6.72	16.95	17.1	88	4.4	807.83	0.080783	29800	2.98	14.39		0.59			36900	3.69	6.9	14.5	7000	0.7
H45087	1	16.28	44100	4.41	10.64	25.43	15.7	30	3.3	1961.5	0.19615	92900	9.29	16.72		0.74			17000	1.7	11.5	13.4	16100	1.61

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
H45085	2	0.59	26700	2.67	1.77	25.07	28	62	9.4	462.33	0.046233	40300	4.03	20.77		1.24			43600	4.36	9.2	10.4	10700	1.07
H45083	2.05	0.46	24500	2.45	2.02	21.6	25.7	32	6.56	651	0.0651	38600	3.86	19.2	0.14	1.1	0.52	0.077	40500	4.05	10.3	11.1	11200	1.12
X15934	1.57	0.15	20900	2.09	2.75	26.2	20.4	29	8.26	2150	0.215	34600	3.46	18.8	0.16	0.9	0.33	0.094	47400	4.74	12.6	30.2	14300	1.43
H45102	1	0.39	25000	2.5	3.56	19.93	20.5	62	5.5	1530.39	0.153039	55400	5.54	17.05		0.75			37100	3.71	7.9	17.7	14700	1.47
X15912	1	0.18	11000	1.1	0.22	18.09	24.7	162	7.7	1020.89	0.102089	36800	3.68	16.9		0.62			46700	4.67	8.2	21.7	12600	1.26
H45082	2.23	1.52	53100	5.31	1.41	13.95	32.2	108	5.3	87.7	0.00877	54500	5.45	14.85	0.17	0.9	0.45	0.299	38500	3.85	7.9	11.6	23400	2.34
20856	1.560	0.35	27900	2.8	2.90	14.55	14	3	6	1165	0.117	40100	4.01	16.05	0.18	0.5	3.9	0.076	36500	3.65	7.20	10.70	11100	1.11
H45088	1.57	0.73	38900	3.89	1.04	21.9	21.1	28	5.06	652	0.0652	51400	5.14	22.3	0.18	1.3	0.09	0.251	23400	2.34	10.2	12.7	17300	1.73
H44554	1	0.57	30400	3.04	1.14	17.22	14.8	51	2.8	1054.02	0.105402	44000	4.4	17.42		0.52			30700	3.07	7	13.1	11900	1.19
SG92-06_C12577	1.7	0.67	59800	5.98	0.14	28.3	20.7	29	7.15	533	0.0533	49400	4.94	23.5	0.18	1.3	0.09	0.157	22300	2.23	14.5	25.4	20800	2.08
H45081	0.5	1	59000	5.9	9.8	11	6.6	216		85.8	0.00858	27000	2.7			0.6			15900	1.59	5	10	23900	2.39
H45082	2.000	5.4	47300	4.7	7.40	12.00	32	140		800	0.080	57400	5.74			0.5			31400	3.14	6.30	12.20	22600	2.26
H45083	1.000	3.5	28300	2.8	1.40	25.00	21	87		373	0.037	31900	3.19			0.8			34200	3.42	12.00	11.40	10600	1.06
H45085	1.000	0.9	29900	3.0	2.30	29.00	24	56		705	0.071	37500	3.75			0.9			43900	4.39	14.30	9.80	10400	1.04
H45086	2.000	0.3	16200	1.6	0.05	36.00	23	60		702	0.070	33400	3.34			1.1			39600	3.96	16.20	8.40	11400	1.14
H45102	1	0.5	39900	3.99	0.6	24	19	56		755	0.0755	56700	5.67			0.7			33900	3.39	13.2	18.6	15200	1.52
H45103	1	0.4	12800	1.28	1.4	19	17.6	65		608	0.0608	45800	4.58			0.8			46700	4.67	10.9	19.4	11300	1.13
H45104	2	0.4	10300	1.03	6.4	27	19.7	63		2830	0.283	50000	5			0.9			49300	4.93	15.4	21.5	14000	1.4
X64717	1.000	0.3	38100	3.8	0.05	23.00	15	47		513	0.051	30100	3.01			0.7			35100	3.51	10.10	11.10	10800	1.08
X64718	2.000	0.9	52900	5.3	0.05	36.00	5	42		261	0.026	31700	3.17			0.6			38400	3.84	18.60	13.00	12100	1.21
X64719	2.000	2.3	43700	4.4	2.30	46.00	7	44		405	0.041	30300	3.03			0.8			33000	3.3	22.70	10.90	9800	0.98
X64724	1	4.4	43800	4.38	5.5	19	12.8	48		842	0.0842	41800	4.18			0.7			28200	2.82	8.9	11.4	10100	1.01
X64743	0.5	0.2	19600	1.96	0.1	29	18.1	69		1060	0.106	45200	4.52			0.9			31300	3.13	12.3	27.3	19400	1.94
X64746	2.000	0.6	74300	7.4	5.20	22.00	12	44		1050	0.105	59700	5.97			1			9400	0.94	9.70	37.60	48100	4.81
X62696	2.000	0.8	29600	3.0	0.20	26.00	13	82		449	0.045	38300	3.83			1.5			35900	3.59	11.70	16.80	14600	1.46
X64747	0.5	0.4	64000	6.4	19.2	21	13.4	42		1250	0.125	54700	5.47			0.8			15700	1.57	9	23.1	43900	4.39
H45104	1.58	0.14	19000	1.9	1.24	31	14.9	40	6.27	2420	0.242	36600	3.66	22.6	0.15	1.6	0.17	0.101	33800	3.38	13.5	24.3	16700	1.67
X15938	1	0.2	22600	2.26	1.42	28.94	16.7	46	7.4	4613.38	0.461338	60300	6.03	20.27		0.73			43700	4.37	12.3	31.7	17700	1.77
H45103	1	0.31	14100	1.41	9.27	23.99	12	28	10.2	1824.96	0.182496	49700	4.97	16.85		0.58			44600	4.46	12.2	20	13000	1.3
H44876	1	0.14	19000	1.9	1.71	24.55	11.5	90	7.8	2093.91	0.209391	35300	3.53	18.23		0.76			40600	4.06	10.4	26.8	13800	1.38
X15932	0.630	0.57	24700	2.5	7.31	43.10	16	27	4	2420	0.242	99800	9.98	13.9	0.25	0.6	1.83	0.109	43700	4.37	24.50	15.30	13700	1.37
H44843	1	2.18	45900	4.59	2.51	20.82	24.5	129	3.5	617.21	0.061721	45700	4.57	14.71		0.81			40000	4	8.9	17.7	21000	2.1
H45089	1	0.91	57500	5.75	0.57	36.34	8.9	36	5.3	678.57	0.067857	37100	3.71	19.88		1.1			28400	2.84	18.2	13.2	16100	1.61
X15936	1	0.16	19600	1.96	0.74	25.88	9.9	53	5.7	294.47	0.029447	57100	5.71	17.48		0.58			36800	3.68	10.6	30.9	19400	1.94
S91-388_5235	1.4	0.13	46000	4.6	0.12	31.2	7.4	25	1.5	1130	0.113	21500	2.15	20.5	0.15	1.3	0.04	0.078	16200	1.62	14.6	10.5	14200	1.42
X15933	1	0.07	17500	1.75	3.13	21.79	9.2	40	9.4	2714.69	0.271469	42400	4.24	20.57		0.62			44600	4.46	9.5	48.6	18900	1.89
H45078	0.5	0.68	4400	0.44	0.93	10.63	18.3	28	3.1	620.6	0.06206	67500	6.75	17.47		0.43			41700	4.17	4.5	9.6	9200	0.92
H45071	0.5	0.13	4200	0.42	0.69	10.34	51	48	2.7	2262.39	0.226239	64200	6.42	20.71		0.32			50100	5.01	3.5	11.3	10900	1.09
H45068	1	0.65	4900	0.49	4.08	12.77	15.9	28	4	2494.91	0.249491	50200	5.02	20.58		0.59			46100	4.61	5	5.9	7500	0.75
H45065	0.5	0.15	4000	0.4	0.09	11.89	29.6	35	3.6	2533.21	0.253321	54700	5.47	16.92		0.38			36100	3.61	4.6	7.5	7700	0.77
H45080	0.5	0.16	6500	0.65	1.35	11.16	39.1	20	3.8	570.45	0.057045	63700	6.37	17.67		0.41			38600	3.86	3.4	6.9	8300	0.83
H45075	0.500	0.67	10700	1.1	0.16	13.86	32	36	3	1074	0.107	64900	6.49	17.73		0.3			42200	4.22	5.40	6.60	8400	0.84
X15748	1.25	0.61	32800	3.28	0.02	21	16.8	3	6.2	1420	0.142	50800	5.08	17.65	0.15	0.6	0.06	0.079	40600	4.06	10.5	21.5	17600	1.76
H45073	0.5	0.12	22200	2.22	0.11	15.32	14.8	33	2.9	2629.91	0.262991	30100	3.01	15.24		0.44			48400	4.84	7	10.6	10300	1.03
S-11-70 122.4-136.9	2	1.4	30900	3.09	0.1	18	33.2	66		927	0.0927	82900	8.29			0.6			24700	2.47	9.1	17.3	16800	1.68
9976	0.5	0.57	12100	1.21	0.19	8.92	23.8	127	2	1534.66	0.153466	47900	4.79	14.42		1.08			39500	3.95	3.1	16.3	16700	1.67
S91-398_5495	0.93	0.84	5500	0.55	0.1	23.1	10.5	8	3.22	1515	0.1515	33100	3.31	22.3	0.17	2.2	0.04	0.122	65600	6.56	13	8.8	9900	0.99
H44453	2	5.82	19300	1.93	0.05	19.44	13.3	52	7	167.99	0.016799	54300	5.43	19.49		0.85			30700	3.07	9.9	20	14800	1.48
S-11-70 85.4-103.4	1	0.4	33800	3.38	0.05	19	24.2	29		1038.2	0.10382	68900	6.89			1			24800	2.48	8.3	15.8	17300	1.73
H42341	1.24	0.41	9200	0.92	0.05	13.6	9.7	5	3.6	792	0.0792	39200	3.92	21.1	0.11	1	0.05	0.065	43400	4.34	6.3	23.1	19800	1.98

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
X15862	1.78	0.21	32700	3.27	0.11	12.05	32.2	41	7.88	4230	0.423	41800	4.18	18.05	0.15	0.8	0.1	0.155	44200	4.42	5.8	28.8	16800	1.68
S-10-21 94-110	0.5	0.4	39600	3.96	0.1	15	41	98		1936.6	0.19366	53400	5.34			0.6			32000	3.2	8.2	22.4	17200	1.72
E192812	1	0.92	24500	2.45	0.11	14.98	11.9	99	3.2	1899.57	0.189957	46700	4.67	14.9		0.81			35800	3.58	5.5	17.8	17400	1.74
S-11-68 183.46-199.46	2	1.4	29200	2.92	0.3	19	16.9	20		1178.6	0.11786	53500	5.35			0.5			35300	3.53	10.2	19.2	19200	1.92
S-11-68 41.46-57.46	2	8.2	44900	4.49	0.2	18	23.9	126		2394.2	0.23942	64300	6.43			0.8			43900	4.39	10.1	20.8	18300	1.83
MC-05-02 90-106	1	0.7	25700	2.57	0.05	21	26.2	153		2112.6	0.21126	51200	5.12			1.3			34400	3.44	10.7	14.2	15900	1.59
E192834	2	0.74	38000	3.8	0.09	17.16	7.2	68	6.2	691.5	0.06915	39100	3.91	16.88		0.99			44500	4.45	8	16.1	13200	1.32
E192868	2	0.4	25500	2.55	0.2	15	24.2	57		1690	0.169	47200	4.72			0.8			49800	4.98	8.8	19.7	15100	1.51
E192869	1	0.2	27200	2.72	0.1	23	18.2	199		699	0.0699	42800	4.28			0.9			47700	4.77	11.7	20.5	19300	1.93
E192870	0.5	0.2	33900	3.39	0.05	19	16.2	129		741	0.0741	33700	3.37			0.9			42200	4.22	9.9	14.2	14500	1.45
H44450	0.5	0.1	21600	2.16	0.1	20	4	72		246	0.0246	23700	2.37			1			34400	3.44	10	6.8	5500	0.55
H44451	2	0.2	20100	2.01	0.05	20	4.1	64		154	0.0154	24100	2.41			1			40400	4.04	9.8	5.3	5300	0.53
H44452	0.5	0.05	21000	2.1	0.05	17	3.9	56		84.9	0.00849	23700	2.37			1			33600	3.36	8.5	11	8000	0.8
H44453	3	3.3	32300	3.23	0.1	16	9.3	81		201	0.0201	44600	4.46			0.8			35900	3.59	7.7	15.9	13300	1.33
H44454	3	2.2	42500	4.25	0.05	18	10.8	67		391	0.0391	43600	4.36			0.7			35600	3.56	10	19	17300	1.73
H45078	0.5	0.1	23200	2.32	0.1	21	19.8	65		1150	0.115	33000	3.3			1.1			41700	4.17	10.5	13.9	10600	1.06
H45079	1	0.2	24300	2.43	0.05	21	23	74		1030	0.103	38000	3.8			0.8			39900	3.99	11.1	17.9	13700	1.37
H45080	0.500	1.1	58700	5.9	11.30	13.00	23	177		915	0.092	39800	3.98			0.5			19500	1.95	6.50	15.00	22100	2.21
S157569	2.000	3	36900	3.7	0.05	19.00	36	129		1390	0.139	70200	7.02			0.8			32000	3.2	8.70	18.40	22700	2.27
S157570	0.5	0.1	46800	4.68	0.05	16	26.6	131		949	0.0949	61500	6.15			0.7			18200	1.82	7.1	15.4	22200	2.22
X62639	0.5	0.1	30100	3.01	0.2	13	34.7	74		3530	0.353	50900	5.09			0.9			50700	5.07	5.5	19.6	20600	2.06
X62640	0.5	0.1	26800	2.68	0.2	11	36.9	74		2170	0.217	37400	3.74			0.7			51000	5.1	4.3	17.3	15200	1.52
X63892	0.5	0.6	36100	3.61	0.05	15	30.1	31		489	0.0489	56600	5.66			0.7			40000	4	6.3	19.3	19300	1.93
X63893	2	0.8	38500	3.85	0.05	18	25.5	17		896	0.0896	57400	5.74			0.9			45600	4.56	7.6	19.1	18800	1.88
S-10-33 170-186	2	1.3	44600	4.46	0.3	37	19.3	92		901.3	0.09013	59700	5.97			1.2			28600	2.86	17.9	14.2	20400	2.04
H44504	2	0.58	28900	2.89	0.08	20.44	9.6	30	6	452.53	0.045253	28300	2.83	18.52		1.31			55900	5.59	9.8	16.4	9400	0.94
S-11-72 101.95-118.3	2.000	1	33400	3.3	0.05	18.00	17	80		1439	0.144	62700	6.27			0.6			24800	2.48	8.50	18.50	17800	1.78
S-11-70 156.4-172.4	1	1.1	41100	4.11	0.05	19	29.8	112		1263.3	0.12633	68600	6.86			0.9			24900	2.49	9.4	20.3	22500	2.25
X15753	2.17	0.19	27000	2.7	0.07	17.45	15.8	13	8.93	970	0.097	33700	3.37	18.9	0.15	1.1	0.08	0.055	47700	4.77	8.9	16.2	13500	1.35
20847	1	0.35	39800	3.98	0.13	13.03	38.5	116	3.4	1651.43	0.165143	48800	4.88	14.73		0.77			41700	4.17	5.2	17.9	13100	1.31
S91-398_5851	0.720	0.19	7100	0.7	0.07	25.30	12	26	1	3880	0.388	55300	5.53	18.15	0.22	1.4	0.02	0.189	61300	6.13	15.10	7.50	11200	1.12
H44544	1	0.44	46500	4.65	0.11	20.68	41.9	66	5	1788.07	0.178807	54400	5.44	15.86		0.95			38400	3.84	9.6	27.4	17000	1.7
X15861	0.5	0.11	29500	2.95	0.14	16.44	41.9	21	3.9	4200.92	0.420092	44200	4.42	16.06		0.56			37200	3.72	6.3	22.9	18000	1.8
S-10-33 210-226	2.000	1.7	45500	4.6	0.20	23.00	25	30		1303	0.130	65700	6.57			0.9			29100	2.91	13.70	18.20	21200	2.12
H44505	2.35	0.57	16600	1.66	0.07	22.4	7	7	7.56	456	0.0456	28800	2.88	21.7	0.13	1.5	0.05	0.068	50500	5.05	12.4	16	10500	1.05
X15860	1.13	0.09	30700	3.07	0.02	13.6	32.3	23	2.61	1750	0.175	39500	3.95	17.65	0.14	0.8	0.04	0.066	32900	3.29	6.3	24.9	22600	2.26
S91-398_5865	0.97	0.11	11200	1.12	0.09	25.5	15.6	15	1.09	2590	0.259	60200	6.02	20.4	0.18	1.5	0.01	0.18	42700	4.27	15	12.4	14400	1.44
20831	1.26	1.89	37000	3.7	0.14	17.1	37.5	16	5.24	1575	0.1575	53200	5.32	17.25	0.21	1.1	0.08	0.11	37200	3.72	9.5	16	14800	1.48
H42381	1.000	0.21	41700	4.2	0.45	11.98	29	73	6	2664	0.266	38300	3.83	12.97		0.58			34800	3.48	4.40	17.80	16200	1.62
S-09-11 130-146	1	1.2	39300	3.93	2.2	17	28.1	118		1398.4	0.13984	44800	4.48			0.8			26800	2.68	10.1	16.9	16900	1.69
S-11-68 1.31-17.46	1.000	0.2	31000	3.1	0.10	18.00	25	130		2053	0.205	57800	5.78			0.9			34700	3.47	9.90	19.40	22000	2.20
MC-05-02 210-226.6	0.5	0.8	35000	3.5	0.05	17	19.2	84		2185.8	0.21858	47200	4.72			0.8			32900	3.29	8.9	14.1	14900	1.49
H44831	0.5	0.25	58900	5.89	0.12	22.42	32.9	76	3.5	2691.83	0.269183	44800	4.48	15.07		0.82			32000	3.2	10.7	19.9	16400	1.64
S-10-21 44.9-61	2.000	0.5	38400	3.8	0.05	24.00	33	65		2825	0.283	45800	4.58			0.9			37800	3.78	14.50	15.30	15300	1.53
G24663	1.14	0.22	15900	1.59	0.04	19.65	10.1	4	2.14	248	0.0248	21100	2.11	22.9	0.07	1.1	0.03	0.025	45700	4.57	9.6	9.2	7600	0.76
S-11-68 81.46-96.56	1	1.4	40200	4.02	0.1	19	11.7	123		889	0.0889	49500	4.95			0.7			32500	3.25	10.6	16.2	14900	1.49
X15779	1.000	0.61	30400	3.0	0.04	24.64	10	96	4	472	0.047	35700	3.57	18.39		0.8			46200	4.62	12.00	6.90	7000	0.70
H42394	1.000	1.59	49200	4.9	0.06	20.11	19	77	2	282	0.028	50400	5.04	15.03		1.09			38100	3.81	9.60	14.10	16500	1.65
X15747	1.000	1.26	30700	3.1	0.16	15.54	16	24	5	2698	0.270	34100	3.41	15.13		0.47			32700	3.27	6.90	20.70	13700	1.37
G24688	0.82	0.18	38300	3.83	0.19	21.3	31.2	6	5.19	2720	0.272	38000	3.8	16.65	0.1	0.9	0.01	0.098	31800	3.18	11	10.9	17100	1.71

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
E192869	0.5	0.28	29600	2.96	0.26	19.27	20.7	183	2.4	806.08	0.080608	40700	4.07	17.23		1			45200	4.52	8.3	18.4	16900	1.69
S-11-72 62.3-77.5	1.000	0.5	41700	4.2	0.20	19.00	16	19		907	0.091	51400	5.14			0.7			25000	2.5	8.40	16.90	18400	1.84
S-11-72 142.3-158.3	2	0.5	44700	4.47	0.05	21	22.5	20		924.6	0.09246	60800	6.08			0.6			25600	2.56	10.7	20	19400	1.94
S-09-11 90.7-104.7	0.500	0.2	38600	3.9	0.05	18.00	30	70		1663	0.166	43500	4.35			0.8			18500	1.85	10.40	19.70	19800	1.98
MC-05-02 150-166	0.5	0.3	25900	2.59	0.1	22	25.2	39		2469.6	0.24696	53200	5.32			0.7			35000	3.5	11.6	15.3	18500	1.85
10043	1	0.23	37300	3.73	0.08	14.52	24.9	63	4.4	2647.73	0.264773	49300	4.93	16.91		0.82			37500	3.75	5.8	18.8	18000	1.8
S-09-11 49-65	1.000	0.05	44300	4.4	0.05	16.00	22	45		1772	0.177	44700	4.47			0.6			30700	3.07	7.10	18.80	18800	1.88
9817	1.670	0.17	45100	4.5	0.11	14.60	29	106	4	6360	0.636	53100	5.31	14.95	0.22	0.6	0.06	0.18	43500	4.35	8.90	54.20	23600	2.36
S-11-68 163.46-175.46	1	0.5	27700	2.77	0.05	19	12	18		1118.1	0.11181	35800	3.58			0.7			35800	3.58	10.4	13.9	14200	1.42
H42328	0.900	0.22	7100	0.7	0.11	14.50	12	9	3	1460	0.146	26600	2.66	15.65	0.11	0.6	0.09	0.052	32800	3.28	7.60	13.80	12000	1.20
X15752	1	0.14	13000	1.3	0.1	17.77	9.7	25	5.8	1018.36	0.101836	36200	3.62	17.82		1			36000	3.6	7.4	20.8	18100	1.81
H45036	0.500	0.09	43200	4.3	0.07	20.41	27	34	1	1485	0.148	47800	4.78	16.25		0.7			26900	2.69	8.10	18.10	22900	2.29
10032	1.000	0.5	39300	3.9	0.21	17.92	28	24	4	3997	0.400	57000	5.7	18.3		0.47			39700	3.97	8.40	26.40	24600	2.46
H45080	0.500	0.82	60000	6.0	7.88	13.53	25	157	6	814	0.081	41000	4.1	11.37		0.55			20400	2.04	5.80	15.20	21500	2.15
S-11-68 121.46-137.46	1	0.3	40100	4.01	0.1	17	14.6	38		1405.6	0.14056	39000	3.9			0.5			43900	4.39	9	25.4	20800	2.08
S-11-71 24.7-40.2	1.000	0.3	19500	2.0	0.05	8.00	8	31		929	0.093	30300	3.03			0.5			23300	2.33	3.70	11.70	11000	1.10
X15859	1	0.38	59400	5.94	1.49	15.23	18.7	63	4.7	1418.9	0.14189	27000	2.7	12.28		0.49			33700	3.37	7.3	23.5	11500	1.15
H44503	1.26	0.17	60100	6.01	0.09	24.5	8.5	3	3.59	313	0.0313	35600	3.56	17	0.15	1.1	0.08	0.039	38900	3.89	14.5	20.5	17500	1.75
MC-05-02 190-206	1.000	0.3	39500	4.0	0.10	20.00	24	45		2524	0.252	55200	5.52			0.7			41100	4.11	11.00	20.90	23000	2.30
S-09-11 9.0-25	1	0.7	40000	4	0.1	20	21.6	52		1667.9	0.16679	48500	4.85			0.6			31400	3.14	11.5	21.6	22200	2.22
G24670	1.100	0.81	50000	5.0	0.11	18.80	11	14	6	564	0.056	39700	3.97	19.5	0.1	0.8	0.05	0.156	39800	3.98	9.90	17.00	16000	1.60
H42343	1.12	0.19	32700	3.27	0.06	17.55	19.4	7	2.19	619	0.0619	51500	5.15	17.15	0.13	0.4	0.02	0.063	27500	2.75	8.2	19	24200	2.42
X15751	1.42	0.11	28400	2.84	0.03	16.25	7.1	4	6.26	1380	0.138	25400	2.54	19.15	0.11	1	0.03	0.034	45100	4.51	7.3	11.6	10700	1.07
E192892	0.5	0.82	43100	4.31	0.22	14.49	24.3	108	5	1979.42	0.197942	46200	4.62	16.94		0.41			32200	3.22	5.8	16.2	23800	2.38
H45436	0.5	0.16	51500	5.15	0.11	11.9	27.4	171	3.6	2037.01	0.203701	55400	5.54	13.59		0.44			26500	2.65	6.6	27.2	25000	2.5
X15749	1	0.2	42200	4.22	0.08	18.56	13.1	22	6.1	1491.84	0.149184	35300	3.53	16.58		0.48			35800	3.58	8.6	23.5	18100	1.81
H44462	1.19	0.06	36100	3.61	0.04	11.75	14.6	100	4.62	1105	0.1105	55100	5.51	18.85	0.16	0.8	0.02	0.096	24400	2.44	5.9	30.6	26700	2.67
S-08-07 105.6-120.05	1.000	0.2	31200	3.1	0.05	13.00	10	73		1236	0.124	24900	2.49			1.2			31200	3.12	5.50	22.80	17300	1.73
H44458	1.2	0.12	58000	5.8	0.1	15.35	16.2	63	3.35	1220	0.122	40100	4.01	14.65	0.13	0.8	0.03	0.113	23000	2.3	8	24.1	22100	2.21
H44800	1	0.14	32600	3.26	0.01	16.51	11.1	79	2.4	1960.39	0.196039	34600	3.46	18.28		0.56			42400	4.24	6.6	14.7	12800	1.28
S-11-73 160.2-176.2	1	0.1	44800	4.48	0.2	18	18.2	149		1268.3	0.12683	42600	4.26			0.8			25600	2.56	8.2	19.8	26800	2.68
H44454	2.8	0.12	52400	5.24	0.06	12.65	15.3	73	10.35	790	0.079	46700	4.67	19.5	0.14	0.8	0.03	0.097	37600	3.76	6.2	32.6	25500	2.55
9841	2.330	0.32	54300	5.4	0.05	13.70	27	138	8	2730	0.273	56700	5.67	15.55	0.17	0.6	0.03	0.174	28300	2.83	8.20	61.10	29100	2.91
X15864	0.5	0.02	53800	5.38	0.25	19.46	13.7	23	2.2	1270.2	0.12702	32400	3.24	14.17		0.45			32800	3.28	9.7	25.7	21200	2.12
H44459	0.5	0.02	50200	5.02	0.04	15.96	22.9	182	2.2	1802.1	0.18021	44400	4.44	13.22		0.64			33900	3.39	8.4	28.1	30300	3.03
X15767	1	0.14	31600	3.16	0.03	17.69	17.5	37	1.8	1045.17	0.104517	50500	5.05	16.12		0.58			24000	2.4	7.9	17	21800	2.18
H42338	1.25	0.09	16700	1.67	0.09	16.2	13.2	3	2.75	1150	0.115	34900	3.49	21.4	0.1	0.7	0.03	0.058	32500	3.25	6.9	19.2	15700	1.57
9826	1.53	0.2	45900	4.59	0.05	11.75	21.3	123	3.35	1490	0.149	47800	4.78	16.15	0.18	0.5	0.03	0.116	34100	3.41	7.1	53.5	31900	3.19
H44471	0.5	0.09	54600	5.46	0.06	13.69	11.5	48	2.8	1933.21	0.193321	33800	3.38	15.6		0.97			42900	4.29	7.3	18.7	15200	1.52
9807	1.51	0.05	24900	2.49	0.05	15.6	6.4	3	1.84	369	0.0369	25000	2.5	21.4	0.19	1.3	0.01	0.039	60800	6.08	7.4	14.1	4800	0.48
H44464	1.24	0.07	62200	6.22	0.05	14.6	12.5	118	4.12	379	0.0379	48000	4.8	16.25	0.17	0.7	0.02	0.118	25900	2.59	8.1	28.6	23100	2.31
H44461	1	0.02	68500	6.85	0.07	16.05	11	69	3.7	639.8	0.06398	33600	3.36	14.73		0.6			36300	3.63	8.5	20.9	17400	1.74
H44463	1	0.02	43900	4.39	0.01	14.45	15.1	147	4.3	133.98	0.013398	49500	4.95	16.45		0.59			25900	2.59	7.1	33.5	26600	2.66
H44456	1.25	0.09	60200	6.02	0.05	12.6	16.2	120	3.22	440	0.044	42700	4.27	15.2	0.12	0.6	0.02	0.077	19300	1.93	6.9	25.7	24500	2.45
H42335	1.36	0.06	37600	3.76	0.05	15.4	16.8	4	3.71	766	0.0766	51400	5.14	18.75	0.12	0.5	0.01	0.076	34200	3.42	7	22.2	19200	1.92
H44472	0.73	0.05	68600	6.86	0.06	16.95	14.6	66	2.86	1005	0.1005	50900	5.09	15.55	0.14	0.7	0.02	0.132	27000	2.7	9.4	20.5	19500	1.95
H44506	0.5	0.02	65900	6.59	0.09	21.33	20.4	52	2.1	330.18	0.033018	84600	8.46	11.95		0.49			23100	2.31	13.6	18	22800	2.28
H44455	2	1.25	90500	9.05	0.1	20.35	17	115	4.1	217.97	0.021797	46500	4.65	14.65		0.6			19200	1.92	11.9	31.4	27600	2.76
H44457	0.5	0.02	69400	6.94	0.06	18.37	14.4	49	2.2	220.61	0.022061	47800	4.78	14.43		0.66			14900	1.49	10.5	30.9	31100	3.11
H44460	1.14	0.02	56300	5.63	0.04	12.1	14.9	129	1.79	343	0.0343	39800	3.98	13.5	0.12	0.6	0.02	0.071	13300	1.33	6.7	39.8	38000	3.8

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
S-10-31 145-161	0.5	0.9	26200	2.62	0.05	19	10.3	64		647.8	0.06478	43700	4.37			0.8			32300	3.23	9.2	12.2	13300	1.33
9924	1.6	0.12	27100	2.71	0.03	13.65	30.1	23	1.73	2820	0.282	50800	5.08	17.7	0.19	0.9	0.02	0.105	42600	4.26	7.3	18.8	13900	1.39
S-11-71 106.9-122.2	0.5	0.4	13000	1.3	0.05	5	3.7	11		57.2	0.00572	11700	1.17			0.3			29400	2.94	2.6	4.9	3700	0.37
H42350	1.26	0.17	24200	2.42	0.13	14.5	21.7	10	1.16	2420	0.242	46600	4.66	21.2	0.13	0.6	0.03	0.097	28300	2.83	5.9	14.7	21000	2.1
S-11-72 181.96-197.3	0.5	0.4	22200	2.22	0.05	19	10.3	8		1425.8	0.14258	29200	2.92			1			23900	2.39	9.9	9	8700	0.87
S-11-71 146.2-162.2	0.5	0.2	9700	0.97	0.05	9	5	9		85.4	0.00854	16800	1.68			0.5			24900	2.49	4.2	6.1	5200	0.52
10098	1	0.67	23000	2.3	0.05	21.2	7.3	67	3.4	150.61	0.015061	39000	3.9	18.62		1.12			48300	4.83	9.5	8.2	6700	0.67
H44488	2	0.1	25900	2.59	0.07	24.14	9.5	22	4.5	562.02	0.056202	30200	3.02	20.45		1.62			41600	4.16	11.8	15.7	10100	1.01
S-06-02 60-76	1	0.9	19900	1.99	0.1	19	6.4	49		146	0.0146	27600	2.76			0.9			30900	3.09	9.3	13.7	8100	0.81
H44742	0.5	0.49	17100	1.71	0.06	23.23	7.4	48	3	817.91	0.081791	32900	3.29	19.8		0.88			34400	3.44	10.3	12.6	11900	1.19
S-10-31 194-210	1	0.5	19800	1.98	0.05	24	6.7	57		478.8	0.04788	33500	3.35			1.2			22600	2.26	12.4	6.6	7400	0.74
20815	2.13	0.16	55800	5.58	0.09	12.95	31.5	67	7.87	1380	0.138	40500	4.05	14.5	0.21	0.5	0.07	0.069	41100	4.11	6.6	28	22100	2.21
S-10-31 95-111	1	1.1	30000	3	0.05	20	7.6	79		767.6	0.07676	43600	4.36			1			33800	3.38	12.8	15.3	15300	1.53
S91-398_5880	0.68	0.09	6100	0.61	0.09	26.7	9.1	13	0.98	2520	0.252	40400	4.04	19.75	0.18	1.7	0.03	0.164	48500	4.85	15.1	12.6	13700	1.37
S-10-31 245-260	1	0.5	30200	3.02	0.05	20	9.1	51		736.5	0.07365	39000	3.9			1			31700	3.17	10.1	13.1	12700	1.27
X15886	1	0.22	54700	5.47	0.49	19.14	41.3	86	4.8	2232	0.2232	47900	4.79	13.22		0.39			33200	3.32	9.6	16.8	26800	2.68
H44495	1	0.12	21200	2.12	0.06	21.62	10.4	34	3.2	924.36	0.092436	26300	2.63	20.02		1.33			43500	4.35	11.2	13.2	9200	0.92
H44481	1.57	0.07	38300	3.83	0.11	18.7	15.8	29	6	1260	0.126	31600	3.16	19.15	0.15	1.5	0.05	0.083	48600	4.86	9.9	18.1	11600	1.16
H44502	1	0.11	55700	5.57	0.07	24.86	13.8	25	3.1	194.65	0.019465	35800	3.58	16.34		1.12			48100	4.81	12.8	13.6	13600	1.36
H44497	1.65	0.09	23300	2.33	0.02	21.1	7.5	4	4.33	352	0.0352	24800	2.48	21.2	0.15	1.7	0.05	0.045	50400	5.04	10.6	14.4	9200	0.92
H42345	1.14	0.32	30800	3.08	0.09	14.5	18	8	1.96	1250	0.125	47000	4.7	20.9	0.13	0.7	0.02	0.122	33500	3.35	6.3	18.3	22200	2.22
H44491	1.11	0.15	23400	2.34	0.07	17.5	8.4	5	3.13	1150	0.115	25300	2.53	20.6	0.13	1.6	0.03	0.066	46400	4.64	9	13.3	8800	0.88
9878	1.25	0.25	20400	2.04	0.01	17.8	5.6	5	1.49	432	0.0432	23300	2.33	21.3	0.18	1.2	0.005	0.057	53800	5.38	8.7	19.7	10800	1.08
H44480	2	0.05	24300	2.43	0.05	36	5.8	46		40.4	0.00404	27900	2.79			1.5			46700	4.67	25	7	5200	0.52
H44481	1	0.05	37200	3.72	0.1	21	31	42		1290	0.129	46900	4.69			1.1			40700	4.07	12.9	16.2	14300	1.43
H44490	1	0.1	11900	1.19	0.05	24	7.4	89		417	0.0417	23300	2.33			1.1			45100	4.51	14.6	10.7	8100	0.81
H44491	1	0.6	23600	2.36	0.05	16	8.1	80		574	0.0574	23400	2.34			1			41000	4.1	8.7	14.4	10300	1.03
H44494	0.5	0.05	31000	3.1	0.05	34	5.8	61		408	0.0408	27300	2.73			1.4			43300	4.33	23.6	8.9	7200	0.72
H44495	0.5	0.05	24700	2.47	0.05	31	5.6	78		357	0.0357	23200	2.32			1.2			41600	4.16	22.5	7.9	6600	0.66
H44497	1	0.05	24300	2.43	0.05	35	8.5	51		420	0.042	22100	2.21			1.3			46200	4.62	23.2	10.2	8000	0.8
H44501	1	0.3	17800	1.78	0.1	22	7.6	67		550	0.055	21600	2.16			1.4			59900	5.99	12.7	10.9	8200	0.82
H44502	1	0.05	32500	3.25	0.05	28	8.2	57		272	0.0272	22100	2.21			1.2			48700	4.87	19.1	12.8	9800	0.98
G21779	1	0.36	3600	0.36	0.05	20.91	4.3	64	2.8	401.92	0.040192	25100	2.51	19.01		0.98			30800	3.08	11.8	10.2	6700	0.67
H42352	1.08	2.52	32400	3.24	0.08	11.85	14.2	12	1.63	885	0.0885	50300	5.03	19.7	0.12	0.7	0.02	0.108	31800	3.18	4.6	13.6	15200	1.52
H44499	1.42	0.05	29800	2.98	0.04	20.4	9.7	4	4.43	326	0.0326	26600	2.66	21.5	0.14	1.6	0.02	0.042	51500	5.15	9.9	14.6	10300	1.03
10377	1.14	0.05	24800	2.48	0.02	17.15	5.1	3	2.85	94.7	0.00947	21100	2.11	18	0.19	1.4	0.02	0.024	42500	4.25	8	9.1	6600	0.66
H44482	1	0.07	30400	3.04	0.09	23.85	9.7	20	3.9	675.22	0.067522	28900	2.89	19.89		1.49			42200	4.22	12.6	10.5	6600	0.66
S-10-31 294-310	1	0.5	30700	3.07	0.05	19	11.3	77		198	0.0198	39300	3.93			1.1			28900	2.89	11.1	10.6	10800	1.08
X15842	2	0.16	22500	2.25	0.04	28.47	8.2	79	1.5	119.47	0.011947	30000	3	18.38		1.01			30700	3.07	15.2	6.7	7300	0.73
H44487	1.57	0.03	25100	2.51	0.03	17.85	6.3	5	5.86	143	0.0143	26700	2.67	23	0.12	1.9	0.03	0.036	47800	4.78	8.6	10.2	6600	0.66
9891	1.71	0.26	34100	3.41	0.04	16.6	12.2	11	0.65	1500	0.15	32800	3.28	19.05	0.18	1	0.03	0.153	12700	1.27	8.2	22.8	15400	1.54
H44494	1.12	0.07	28000	2.8	0.03	21.2	6.4	5	3.1	611	0.0611	28800	2.88	22.1	0.13	1.7	0.02	0.053	45300	4.53	10.6	11.6	8000	0.8
S-11-71 65.7-81.2	0.5	0.05	13900	1.39	0.05	2	1.7	19		45.4	0.00454	9100	0.91			0.4			26200	2.62	1.1	5.3	3700	0.37
S-10-31 44-60	1	1.5	30000	3	0.05	41	8.5	63		635.6	0.06356	45400	4.54			1.7			35100	3.51	20.9	13.4	17000	1.7
MC-05-02 250-266	0.5	0.4	21000	2.1	0.05	17	6.6	118		283	0.0283	25700	2.57			0.7			32000	3.2	9	12.4	10200	1.02
MC-05-01 230-255	2	0.5	32500	3.25	0.05	24	8.9	81		234	0.0234	37400	3.74			1.1			32700	3.27	13.3	16.4	13900	1.39
H44500	2	0.05	23900.0	2.39	0.04	25.62	8.6	20	4.1	127.17	0.012717	26300	2.63	21.99		1.45			50200	5.02	13.3	13.2	10200	1.02
10362	1.35	0.1	48400	4.84	0.03	19.1	8.1	20	3.96	413	0.0413	32500	3.25	19.1	0.26	0.9	0.04	0.066	33800	3.38	9.1	13.9	12500	1.25
20809	1.92	0.09	49500	4.95	0.04	17.1	10.1	55	6.47	298	0.0298	29200	2.92	16.35	0.23	0.9	0.02	0.07	42600	4.26	8.7	22.6	16400	1.64
MC-05-01 279-295	1	0.3	27300	2.73	0.05	20	12.2	77		1142.6	0.11426	36400	3.64			0.9			21700	2.17	11.3	18.3	19200	1.92

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
MC-05-02 314-330	1	0.2	25000	2.5	0.05	28	9	76		211.9	0.02119	33600	3.36			1.2			38500	3.85	16.6	8.2	7500	0.75
MC-05-01 319-335	2	0.2	24600	2.46	0.05	22	6.4	81		154.2	0.01542	28000	2.8			1.2			34100	3.41	12.3	7.9	7500	0.75
H44501	1.49	0.07	33900	3.39	0.06	17.75	8.1	4	3.58	349	0.0349	18300	1.83	18.25	0.13	1.4	0.04	0.041	41800	4.18	10	14.3	9000	0.9
10353	1.17	0.07	40700	4.07	0.03	17	4.2	3	3.1	97.3	0.00973	16600	1.66	18.05	0.24	1.2	0.02	0.028	36800	3.68	7.8	8.7	5200	0.52
MC-05-01 199-215	0.5	0.2	41900	4.19	0.1	14	17.9	157		1717.2	0.17172	35600	3.56			0.6			37400	3.74	8.7	25.8	20200	2.02
S-06-02 20-26	2	0.2	8400	0.84	0.05	22	4.5	58		181.9	0.01819	23700	2.37			1			32500	3.25	12.2	6.2	5200	0.52
X15887	0.89	0.03	49300	4.93	0.14	16.25	14.8	46	4.28	2080	0.208	30700	3.07	14.7	0.11	0.7	0.08	0.064	30800	3.08	9	10.8	20400	2.04
H44490	1	0.22	13500	1.35	0.03	21.32	5.4	34	2.5	430.63	0.043063	21500	2.15	16.78		1.1			38200	3.82	11.1	11.1	8100	0.81
H44465	1	0.02	51500	5.15	0.06	16.44	12.1	66	2.8	613.82	0.061382	37600	3.76	14.81		0.61			28500	2.85	8.8	17.7	15000	1.5
H44486	2	0.07	26500	2.65	0.04	24.16	7.8	19	4.3	521.93	0.052193	27700	2.77	20.53		1.47			47000	4.7	13	10.6	8500	0.85
H44468	1.13	0.04	47700	4.77	0.06	13.2	10.8	102	3.48	654	0.0654	49200	4.92	15.95	0.15	0.8	0.08	0.078	31000	3.1	6.8	24.3	18200	1.82
MC-05-03 44-60	2	0.6	49700	4.97	0.05	18	9	90		224	0.0224	35700	3.57			0.9			33000	3.3	10.4	13.6	14600	1.46
H44474	1.14	0.16	75400	7.54	0.07	16.8	12.2	81	4.22	846	0.0846	41100	4.11	15.65	0.14	0.7	0.03	0.116	20700	2.07	9.3	28.2	24700	2.47
H44473	0.5	0.06	57400	5.74	0.09	11.56	19.5	120	2.1	845.38	0.084538	66400	6.64	14.15		0.53			20700	2.07	6.8	33.5	26400	2.64
H44483	1.27	0.04	25800	2.58	0.03	19	5.2	7	4.19	223	0.0223	28500	2.85	21.7	0.12	1.6	0.01	0.047	47600	4.76	9.9	7.4	4700	0.47
H44485	1.34	0.04	30200	3.02	0.04	21.1	6.3	5	5.03	225	0.0225	28300	2.83	22.5	0.14	1.7	0.01	0.038	49300	4.93	10.5	9	5800	0.58
H44498	1	0.15	20400	2.04	0.06	22.88	8	22	4.1	221.2	0.02212	25300	2.53	21.21		1.43			58500	5.85	11.5	16.7	10700	1.07
10343	1.06	0.11	48800	4.88	0.04	19.35	3.2	2	2.97	145	0.0145	18100	1.81	17.45	0.24	1.1	0.01	0.034	37100	3.71	9.7	9.1	6500	0.65
10383	0.81	0.1	38100	3.81	0.12	15	15.1	137	2.58	1285	0.1285	51500	5.15	16	0.21	0.6	0.06	0.118	26400	2.64	7.8	28.8	28200	2.82
H44492	1	0.09	26700	2.67	0.07	23.33	6.6	27	3.4	602.18	0.060218	25200	2.52	18.9		1.3			47400	4.74	12.1	13.6	9400	0.94
H44469	0.5	0.07	58300	5.83	0.06	11.33	24.8	212	3.3	1066.04	0.106604	56500	5.65	15.55		0.49			16300	1.63	6.3	38.2	34800	3.48
H44489	0.9	0.29	25300	2.53	0.03	18.25	4.4	4	3.09	217	0.0217	24200	2.42	19.35	0.13	1.4	0.02	0.04	47900	4.79	9.5	12.9	7800	0.78
MC-05-03 84-100	1	0.05	29200	2.92	0.05	18	8.4	95		348.6	0.03486	30400	3.04			1.1			36300	3.63	10	11	12400	1.24
H42347	1.36	0.06	27200	2.72	0.04	14.5	21.8	6	1.6	1150	0.115	50500	5.05	20.4	0.12	0.4	0.02	0.062	27800	2.78	6.5	22.2	31400	3.14
H44470	1.02	0.04	67100	6.71	0.06	13.55	15.5	131	2.57	1235	0.1235	45200	4.52	14.5	0.15	0.5	0.05	0.109	20100	2.01	7.8	31.2	25800	2.58
H44787	1	0.05	26800	2.68	0.02	22.03	4.5	58	2.6	120.24	0.012024	22600	2.26	18.76		0.92			44800	4.48	9	8.3	6700	0.67
H42358	0.5	0.12	28700	2.87	0.07	13.83	9.2	38	1.8	585.92	0.058592	27700	2.77	15.22		0.59			41000	4.1	5.5	9.5	12100	1.21
H44467	0.5	0.02	51200	5.12	0.04	14.23	12.4	52	2.6	827.52	0.082752	35300	3.53	14.57		0.56			36900	3.69	7	18.9	14800	1.48
G21604	1.53	0.08	23800	2.38	0.03	25.2	4.8	3	2.98	468	0.0468	22900	2.29	21.7	0.07	1.6	0.01	0.034	50300	5.03	12.2	5.6	3700	0.37
9861	1.82	0.1	55200	5.52	0.04	15.75	20	135	1.47	1165	0.1165	51200	5.12	17.15	0.17	0.6	0.01	0.11	19700	1.97	9.1	38.5	26900	2.69
H44475	2	0.02	61400	6.14	0.05	12.85	16.2	133	6.9	505.58	0.050558	42700	4.27	15.82		0.73			27000	2.7	6.9	42	31900	3.19
H44466	1.35	0.02	85000	8.5	0.04	14.15	12.7	78	4.89	274	0.0274	48500	4.85	14.85	0.14	0.5	0.01	0.081	21300	2.13	7.5	31.7	25700	2.57
G21756	2	0.14	24900	2.49	0.1	19.91	5.9	48	2.6	459.38	0.045938	27500	2.75	18.46		1.28			37300	3.73	8.7	8.4	6800	0.68
H44480	2	0.04	19800	1.98	0.03	21.88	6.4	19	5.8	137	0.0137	29100	2.91	22.36		1.53			49400	4.94	11.4	11.2	6600	0.66
H44484	2	0.05	26200	2.62	0.04	25.84	5.6	21	3.9	149.91	0.014991	31900	3.19	22.19		1.75			44300	4.43	13.6	10.1	6900	0.69
SG92-06_C12632	1.38	0.14	8100	0.81	0.42	10.05	12.5	16	7.42	283	0.0283	54300	5.43	14.9	0.14	0.5	0.05	0.061	37000	3.7	5.7	16.5	8700	0.87
SG92-06_C12700	1.36	0.42	9000	0.9	1.78	10.75	10.3	11	8.05	180	0.018	32900	3.29	16.95	0.13	0.7	0.18	0.106	42800	4.28	5.7	15.5	6400	0.64
10276	0.5	10.72	35000	3.5	0.14	48.52	53.4	82	4.6	98.63	0.009863	75100	7.51	16.87		0.71			46500	4.65	22.3	13.7	9700	0.97
X15896	1.65	0.67	16000	1.6	0.8	19	14.9	14	5.41	72.3	0.00723	53200	5.32	18.85	0.18	0.8	0.11	0.19	43900	4.39	9.5	13.1	9100	0.91
9756	2.19	42.7	3600	0.36	0.12	6.86	6.4	146	6.33	1985	0.1985	110500	11.05	17.45	0.24	0.8	0.05	1.75	39400	3.94	4.5	16.2	10200	1.02
10298	0.5	2.18	23500	2.35	0.09	18.84	20.7	118	4	228.92	0.022892	44000	4.4	17.11		0.78			40100	4.01	7.1	9.4	5500	0.55
SG92-02_C8856	1.32	5.23	24500	2.45	0.03	30.2	17	18	2.12	206	0.0206	45100	4.51	20.1	0.18	2	0.07	0.292	20100	2.01	13.4	5.7	11300	1.13
H42421	1.07	1.8	18500	1.85	73.6	24.1	16.8	86	3.06	227	0.0227	54600	5.46	20.3	0.16	1.1	6.75	0.213	42700	4.27	10.9	27.8	12100	1.21
G21749	0.98	1	25300	2.53	0.07	14.1	17.1	8	5.2	332	0.0332	47800	4.78	18.65	0.12	0.9	0.03	0.259	45800	4.58	6.5	17.2	11900	1.19
G21731	0.89	0.75	30600	3.06	0.08	16.15	19.8	1	3.39	551	0.0551	49500	4.95	17	0.09	0.8	0.03	0.18	37800	3.78	8.3	11.7	8400	0.84
X15894	0.5	0.66	25100	2.51	1.37	5.63	17.1	49	2.6	65.77	0.006577	51500	5.15	11.62		0.42			24400	2.44	2.3	9.4	6100	0.61
H42450	0.98	0.34	29900	2.99	36.9	19.45	12.3	34	2.13	213	0.0213	55300	5.53	18.6	0.12	0.9	2.39	1.025	35300	3.53	9.4	19.2	12600	1.26
H44580	1	0.94	39400	3.94	0.26	20.56	12.5	56	7.8	1881.84	0.188184	43000	4.3	16.51		0.42			42800	4.28	11	14.1	8100	0.81
S-11-70 47.4-63.4	2	1.1	35000	3.5	0.1	21	19.8	28		951.6	0.09516	52300	5.23			0.9			24500	2.45	9.4	14.5	13600	1.36
S-11-73 4.65-20.2	1	3.2	32500	3.25	0.05	20	34.7	55		1068.2	0.10682	68400	6.84			0.8			24700	2.47	9.5	19.7	18600	1.86

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
H42415	0.68	1.97	28100	2.81	0.06	19.9	19.1	58	1.81	195.5	0.01955	62500	6.25	16.4	0.15	1.8	0.02	0.202	48600	4.86	10.3	22.8	14100	1.41
H42412	0.79	1.42	29700	2.97	0.06	20.9	23.7	80	1.8	208	0.0208	77800	7.78	18.65	0.16	1.4	0.04	0.204	47400	4.74	10.2	24.5	16200	1.62
H42406	0.5	3	45800	4.58	0.2	22	13.4	163		878	0.0878	104000	10.4			0.8			38800	3.88	10.3	16.5	21700	2.17
H42407	0.5	1.5	41700	4.17	0.05	21	30.6	146		152	0.0152	62300	6.23			0.8			45300	4.53	10.6	18.6	22500	2.25
H42408	0.5	1	37400	3.74	0.05	22	15.2	151		38.9	0.00389	65500	6.55			0.6			37400	3.74	11.4	25.9	34500	3.45
H42409	0.5	1.2	29400	2.94	0.05	23	15.6	139		329	0.0329	63600	6.36			0.8			37600	3.76	12.4	26.6	33400	3.34
H42410	0.5	0.6	30400	3.04	0.3	26	15.5	94		65.7	0.00657	63800	6.38			0.8			36400	3.64	13.6	24.3	19200	1.92
H42417	1	1.5	40100	4.01	2.5	23	15.9	87		155	0.0155	59800	5.98			1			43800	4.38	12.6	24.1	20600	2.06
H42418	0.5	1.6	30100	3.01	3	20	17.5	76		143	0.0143	62200	6.22			1			44100	4.41	10.1	23	21100	2.11
H42420	0.5	1.4	39700	3.97	0.6	20	18.2	37		216	0.0216	44700	4.47			1			37100	3.71	9.7	18.1	16100	1.61
H42421	0.5	1.5	26300	2.63	3.1	18	24.7	109		165	0.0165	56800	5.68			0.7			35000	3.5	8.5	25.7	19700	1.97
H42445	1	0.2	32900	3.29	0.2	15	17.3	54		87	0.0087	48500	4.85			0.6			35100	3.51	7	25.5	19800	1.98
H42446	0.5	0.3	31400	3.14	1.7	22	13.8	62		79	0.0079	49000	4.9			0.7			48500	4.85	9.7	17.8	12100	1.21
H42447	1	0.3	32800	3.28	0.2	23	12.8	64		78.6	0.00786	41100	4.11			0.7			45100	4.51	10.9	20.3	11300	1.13
H42449	1	0.3	26900	2.69	0.1	22	11.1	76		60.3	0.00603	38900	3.89			0.8			40900	4.09	10.8	16.8	11900	1.19
H42450	1	0.4	22500	2.25	19.4	23	15	80		145	0.0145	49800	4.98			0.9			40800	4.08	10.6	16	12300	1.23
S154096	0.5	0.1	38500	3.85	0.3	12	13.7	41		53.9	0.00539	44300	4.43			0.9			28900	2.89	5.5	24	15400	1.54
S154097	0.5	0.2	36600	3.66	2.3	13	14.2	32		52.6	0.00526	42600	4.26			0.7			34700	3.47	6.5	23.6	13800	1.38
S155917	1	0.8	54200	5.42	0.05	26	14.7	152		124	0.0124	38100	3.81			1.4			43900	4.39	13.3	11.5	21400	2.14
S155918	1	0.5	51100	5.11	0.1	31	12.9	141		231	0.0231	37400	3.74			1.4			42400	4.24	16.1	8.6	23100	2.31
S156364	2	0.1	38800	3.88	0.2	11	14.1	32		43.4	0.00434	43000	4.3			0.7			32200	3.22	5.5	21	12200	1.22
S156365	1	0.5	37000	3.7	0.3	11	15.7	39		47.6	0.00476	47100	4.71			0.8			32700	3.27	5.4	20.7	13300	1.33
H42406	0.94	2.44	42800	4.28	0.07	22.4	29.4	133	1.84	247	0.0247	86800	8.68	19.45	0.17	1	0.02	0.548	49900	4.99	11.2	21.2	20300	2.03
E192902	0.5	4.11	39100	3.91	0.81	17.96	47.3	55	2.3	220.01	0.022001	77400	7.74	13.47		0.48			41700	4.17	7.9	8.7	15800	1.58
H42440	1	1.26	35500	3.55	4.01	18.75	15.3	15	3.1	128	0.0128	60000	6	17.75	0.15	0.8	0.15	0.113	35000	3.5	8.8	15.6	13600	1.36
S91-388_5285	1.45	0.1	14400	1.44	0.14	12.95	20.3	22	7.91	274	0.0274	58500	5.85	19.5	0.17	0.9	0.03	0.102	49600	4.96	6.4	11.6	15200	1.52
G21649	1.01	0.65	24900	2.49	0.05	14	12.3	25	6.12	752	0.0752	36100	3.61	17.55	0.09	0.8	0.07	0.052	47400	4.74	7.7	11.9	8600	0.86
S-11-70 7.25-23.4	0.5	2.1	40200	4.02	1.1	21	19.3	105		190.6	0.01906	63800	6.38			1			27100	2.71	8.4	14.2	17400	1.74
G21640	0.88	0.33	21800	2.18	0.23	10.3	15.4	6	4.73	703	0.0703	37600	3.76	16.35	0.08	0.7	0.04	0.046	38200	3.82	5.6	14.9	12000	1.2
G23418	1.66	1.65	15600	1.56	0.05	49.2	39.1	41	4.76	187	0.0187	51400	5.14	24.5	0.16	1.8	0.01	0.241	29900	2.99	25.1	20.7	16500	1.65
G24731	1.24	1.56	23600	2.36	0.07	28.3	19.3	26	3.02	95.2	0.00952	48800	4.88	21.4	0.75	1.5	0.12	0.235	39600	3.96	12.9	14.5	10400	1.04
S-11-73 42.45-57.35	1	1	47700	4.77	0.05	25	65.2	59		253.6	0.02536	57100	5.71			1.3			22500	2.25	13.6	21	22200	2.22
SG92-17_C11112	1.45	0.5	15400	1.54	6.2	25.7	13.4	33	2.79	91.8	0.00918	32500	3.25	24.7	0.14	1.4	0.25	0.106	39700	3.97	12	19.2	14500	1.45
H42417	0.89	1.3	31400	3.14	0.23	19.15	19.2	48	1.58	199	0.0199	69800	6.98	18.3	0.14	1.5	0.03	0.131	44300	4.43	10	32.2	22200	2.22
S-11-74 75.9-91.9	1	1	56100	5.61	0.05	35	26	123		388.7	0.03887	52900	5.29			1.5			25100	2.51	19.2	9.2	21400	2.14
X15897	2	1.63	23000	2.3	24.61	17.96	28.9	25	6.3	225.88	0.022588	123300	12.33	19.56		0.54			29100	2.91	8.1	33.3	20500	2.05
SG92-17_C11169	1.91	0.12	13700	1.37	0.6	25.6	41.3	55	8.22	780	0.078	44900	4.49	23.6	0.17	0.8	0.02	0.062	26300	2.63	11.9	33.2	22200	2.22
9926	0.5	0.89	41800	4.18	0.21	21.36	30.7	35	2.9	1242.93	0.124293	68500	6.85	15.81		0.85			30500	3.05	10.2	21.1	25300	2.53
SG92-17_C11087	1.46	0.46	24000	2.4	0.16	24.2	10.9	28	3.79	70.6	0.00706	41800	4.18	23.2	0.15	1.1	0.01	0.106	44400	4.44	10.9	25.8	14000	1.4
S-11-69 1.76-16.9	0.5	1.4	36700	3.67	0.05	19	19	7		273.1	0.02731	63000	6.3			0.9			26400	2.64	10.3	15.6	22500	2.25
SG92-15_C12893	1.2	0.39	27400	2.74	2.85	18.95	13	42	3.76	98.5	0.00985	40500	4.05	17.15	0.16	1.7	0.15	0.075	37700	3.77	9.9	22.3	15900	1.59
S-11-74 5.9-21.9	0.5	0.8	25400	2.54	0.3	27	13.7	45		606.1	0.06061	74000	7.4			1.1			24600	2.46	14.2	13.7	20400	2.04
H42404	0.7	1.31	45100	4.51	0.06	19.95	29.5	89	1.81	514	0.0514	61200	6.12	15	0.14	0.8	0.04	0.289	43400	4.34	10.3	16.6	12600	1.26
H42410	1.41	0.56	31700	3.17	1.01	18.45	10.1	77	3.62	34.5	0.00345	38200	3.82	12.8	0.11	1.1	0.05	0.135	43200	4.32	10.1	16.3	10800	1.08
S-08-07 55-70	2	1.2	48100	4.81	0.5	21	24.2	134		969.3	0.09693	37500	3.75			1.5			28900	2.89	9.8	19	16600	1.66
H42419	1.03	2.21	35400	3.54	3.02	15.05	18.5	14	2.06	121	0.0121	36000	3.6	16.15	0.13	1.1	0.1	0.138	39100	3.91	6.9	15.6	10800	1.08
G21714	1.07	0.28	42300	4.23	0.06	18.35	20.3	8	6.57	259	0.0259	45800	4.58	17.05	0.11	1	0.03	0.094	47800	4.78	10.1	15	12500	1.25
S-11-69 42.1-56.9	0.5	1.2	38200	3.82	0.05	23	21.5	25		624.9	0.06249	61200	6.12			1.3			23900	2.39	14.1	21.8	25600	2.56
S-11-74 37.9-53.9	1	0.8	43900	4.39	0.3	33	10	52		412.6	0.04126	56300	5.63			1.4			25100	2.51	18.8	10	13000	1.3
S-11-74 117.9-133.9	2	2.6	59100	5.91	2.5	26	16.9	153		432.4	0.04324	44800	4.48			1.2			25000	2.5	15.1	18.2	24400	2.44

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
10264	0.5	1.8	43400	4.34	0.16	11.33	25.3	66	4.4	100.75	0.010075	52900	5.29	13.83		0.53			39400	3.94	5.2	10.3	17100	1.71
10253	1	0.62	36300	3.63	0.19	13.44	24.5	145	3.2	900.57	0.090057	44300	4.43	13.16		0.65			30800	3.08	6	7.1	19600	1.96
S-11-69 125.1-140.9	3	0.5	56400	5.64	0.3	22	25	36		1968.6	0.19686	61300	6.13			1			26300	2.63	12	22	23200	2.32
H44593	1	0.45	35500	3.55	0.06	12.93	8.2	31	6.4	140.36	0.014036	34400	3.44	16.1		0.52			40800	4.08	5.3	11.6	7000	0.7
S-11-69 82.9-98.9	1	0.4	43700	4.37	0.1	24	22.5	26		494.5	0.04945	57000	5.7			1			36700	3.67	14.1	15.5	21500	2.15
9759	1.87	0.21	25800	2.58	0.16	13.95	17.3	41	4.57	2540	0.254	35000	3.5	18.55	0.16	0.9	0.01	0.14	33300	3.33	7.9	23.8	15700	1.57
H42447	0.96	0.24	31100	3.11	0.3	17.05	13.6	31	1.51	73.6	0.00736	39800	3.98	18.45	0.1	1	0.04	0.091	35100	3.51	7.7	21.1	11100	1.11
S-11-73 118.2-134.2	0.5	0.5	36800	3.68	0.05	16	16.5	109		668.9	0.06689	41200	4.12			0.8			26200	2.62	7.2	16.7	20100	2.01
S-11-72 23.3-38.3	2	0.4	51600	5.16	0.2	20	16.6	17		457.4	0.04574	45000	4.5			0.9			26600	2.66	11.3	17.8	15500	1.55
G21620	1.05	0.52	42600	4.26	0.23	14	30.9	91	3.41	483	0.0483	56500	5.65	15.25	0.1	0.6	0.09	0.168	24200	2.42	7.6	23	27400	2.74
S-10-29 65.5-79.5	1	0.05	26500	2.65	0.6	17	14.8	41		592.3	0.05923	49200	4.92			0.5			27900	2.79	8.4	22.9	15700	1.57
H42408	1.03	0.78	25100	2.51	0.05	22.2	12.7	138	1.77	249	0.0249	67900	6.79	19.25	0.15	1.6	0.005	0.18	41800	4.18	11.7	29.5	37800	3.78
MC-05-01 49-65	1	0.1	29200	2.92	0.2	13	34.5	165		1288.3	0.12883	56100	5.61			0.5			31200	3.12	8.6	18.6	23100	2.31
S-10-29 14.4-29.5	1	0.05	28000	2.8	1.5	14	10.6	39		274.3	0.02743	39700	3.97			0.3			32900	3.29	7.1	15.8	10200	1.02
S-10-33 129-146	2	1	54700	5.47	1.6	22	18.9	35		2455	0.2455	41700	4.17			1.2			18800	1.88	11.2	15.7	20300	2.03
9801	1.88	0.28	43200	4.32	0.03	8.31	26	103	5.45	686	0.0686	46100	4.61	17	0.18	0.5	0.02	0.053	51000	5.1	4.3	40.2	18100	1.81
S-08-07 190-204.5	1	3.9	38200	3.82	0.2	19	17.9	151		1094.1	0.10941	48000	4.8			0.8			30400	3.04	10.1	18.1	25800	2.58
H42443	0.92	0.47	38800	3.88	0.11	14.45	12.1	25	1.72	63.6	0.00636	61400	6.14	17.2	0.13	0.6	0.01	0.219	28300	2.83	6.4	29.5	22400	2.24
9770	1.77	0.09	30900	3.09	0.11	10.95	22.2	135	2.68	1035	0.1035	53000	5.3	15.85	0.18	0.6	0.03	0.084	48400	4.84	6.1	24.4	21900	2.19
MC-05-01 89-105	0.5	0.05	32900	3.29	0.05	11	24.7	140		883.7	0.08837	39200	3.92			0.5			27700	2.77	6.2	15.1	16600	1.66
H45459	0.5	0.34	31100	3.11	0.04	11.94	19.6	29	3.1	57.44	0.005744	51900	5.19	15.56		0.65			32000	3.2	4.5	21.4	17300	1.73
S-11-73 79.2-94.2	2	0.7	52000	5.2	0.1	24	15.4	143		530.5	0.05305	41600	4.16			1.3			26800	2.68	10	13.6	22300	2.23
X18487	1	0.34	52400	5.24	0.08	23	31.7	22	6	255.8	0.02558	58200	5.82	17.81		0.91			27000	2.7	11.9	30.8	21400	2.14
E216203	1	0.23	17100	1.71	0.06	22.9	10.4	88	2.3	53.28	0.005328	36900	3.69	17.73		0.71			26800	2.68	10.8	12.2	15700	1.57
SG92-17_C11080	1.45	0.2	59400	5.94	0.3	19.3	24.6	15	3.39	44.1	0.00441	45300	4.53	17.55	0.15	0.8	0.02	0.11	32800	3.28	9.6	35.4	20600	2.06
X18455	1	0.29	44900	4.49	0.05	20.55	24.1	246	1.1	333.13	0.033313	50500	5.05	14.48		1.17			25300	2.53	10.1	23	39000	3.9
X18478	1	0.39	60600	6.06	0.06	26.18	30.7	23	2.8	276.02	0.027602	53900	5.39	15.03		1.02			26400	2.64	14.4	31.7	22100	2.21
9742	2.42	0.08	8700	0.87	0.49	19	19	35	3.17	1130	0.113	58000	5.8	20.8	0.17	1.2	0.01	0.053	19200	1.92	11.2	28.6	18400	1.84
S-08-07 155.1-170.5	0.5	0.1	42000	4.2	0.05	17	14.9	151		735.6	0.07356	34600	3.46			1.3			24000	2.4	9.1	19.2	27000	2.7
X18433	1	0.85	57300	5.73	0.06	23.28	17.5	211	1.8	409.58	0.040958	54000	5.4	16.18		1.58			23600	2.36	10.9	30.2	35100	3.51
H44569	1	0.07	39900	3.99	0.13	20.94	29.1	40	1.3	25.84	0.002584	77800	7.78	16.25		1.19			18500	1.85	9.3	33.2	32500	3.25
H45267	1	0.15	43200	4.32	0.05	13.4	19.2	23	1.7	120.9	0.01209	57800	5.78	14.07		0.82			28600	2.86	5	22.5	20700	2.07
H45245	0.5	0.18	37300	3.73	0.04	14.96	19.2	38	1.2	104.17	0.010417	44800	4.48	16.66		0.79			24800	2.48	6	20.2	16600	1.66
S-10-33 52-69	1	0.1	54800	5.48	0.05	20	21.2	89		95.8	0.00958	56400	5.64			1			28000	2.8	10.6	11.9	25400	2.54
G24711	1.16	0.11	32200	3.22	0.03	18	20.1	21	2.7	95.7	0.00957	44900	4.49	17.95	0.09	0.9	0.02	0.071	30400	3.04	8.5	21.1	20100	2.01
#N/A	1.33	0.11	21000	2.1	0.13	15.15	14.5	12	3.03	136.5	0.01365	44000	4.4	20.3	0.12	1.1	0.01	0.068	29300	2.93	6.8	20.4	15400	1.54
E192923	1	0.11	51600	5.16	0.05	15.8	18.2	67	1.8	24.71	0.002471	52300	5.23	13.94		0.64			29400	2.94	7.4	26.9	24100	2.41
H45491	0.5	0.02	46200	4.62	1.12	14.5	30.7	54	1.9	93.47	0.009347	57300	5.73	13.18		0.75			20700	2.07	5.9	19.2	26700	2.67
S91-387_5160	1.6	0.38	2200	0.22	0.39	36.1	8.4	3	5.76	1075	0.1075	41500	4.15	22.2	0.15	0.9	0.03	0.109	33600	3.36	19	21.3	12600	1.26
X18179	1.34	0.36	3000	0.3	0.04	12.1	8.2	10	2.35	918	0.0918	25200	2.52	24.6	0.14	1.2	0.05	0.051	62300	6.23	8	9.5	6700	0.67
S91-395_5370	0.96	0.26	12400	1.24	1.11	19.8	7.7	3	4.9	2610	0.261	48100	4.81	15.3	0.15	0.5	0.04	0.098	28300	2.83	9.4	8.9	11100	1.11
G37543	2.12	0.03	23200	2.32	0.32	20.4	13.5	3	4.95	660	0.066	44700	4.47	15.3	0.15	0.6	0.02	0.025	41400	4.14	9.8	14.9	13400	1.34
E192557	0.8	0.09	15800	1.58	0.28	27.7	14.5	5	3.64	798	0.0798	41400	4.14	18	0.17	0.6	0.01	0.026	38000	3.8	15.6	14.1	13300	1.33
G33225	1.01	2.03	16900	1.69	0.12	11.6	8.4	5	1.28	1090	0.109	21900	2.19	13.2	0.13	0.3	0.03	0.011	45900	4.59	7	9.9	6600	0.66
G33213	1.19	3.53	41600	4.16	0.17	24.2	18	117	5.86	1920	0.192	45400	4.54	16.95	0.18	0.9	0.02	0.081	52200	5.22	13.8	42.8	16100	1.61
G37849	1.14	15.2	14800	1.48	4.08	13.7	11.7	4	3.56	1105	0.1105	108500	10.85	14.5	0.22	0.4	1.19	0.443	40000	4	6	7.9	8300	0.83
X17096	2.8	0.73	4500	0.45	0.1	9	7	2	6.03	617	0.0617	40100	4.01	17.2	0.2	0.8	0.04	0.074	53000	5.3	5.3	12.9	5800	0.58
H43066	1.74	0.9	3000	0.3	0.02	14	19.5	14	5.98	487	0.0487	47000	4.7	16.25	0.2	0.6	0.03	0.039	40800	4.08	7.4	30.6	12000	1.2
H43070	1.42	0.81	8500	0.85	0.11	18.7	16.5	13	3.7	1980	0.198	49900	4.99	27.5	0.16	0.6	0.02	0.109	50900	5.09	10.9	20.4	5800	0.58
H41606	2.19	20.1	18100	1.81	5.6	18.4	19	15	3.19	2560	0.256	53700	5.37	17.2	0.21	1	0.54	0.233	42100	4.21	9.2	43.4	6600	0.66

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
H43086	1.97	0.77	3800	0.38	0.11	25.2	23	13	6.94	1790	0.179	42200	4.22	18.6	0.2	0.7	0.05	0.08	44600	4.46	11.1	37.6	12700	1.27
H43064	1.25	0.78	3400	0.34	0.03	16.8	15.6	10	4.23	770	0.077	41900	4.19	18.35	0.2	0.7	0.02	0.068	47300	4.73	9.8	29.2	10000	1
X17168	1.12	0.9	7800	0.78	0.03	12.3	14.7	19	1.57	777	0.0777	38600	3.86	13.35	0.22	0.5	0.02	0.035	57000	5.7	7.2	13.3	1900	0.19
H40759	1	1.21	3800	0.38	0.24	16.06	10.2	96	1.9	313.26	0.031326	31700	3.17	16.01		0.48			41400	4.14	9	44	5000	0.5
X17119	1.66	0.47	2900	0.29	0.05	10.2	11.6	9	4.29	1270	0.127	41500	4.15	19.2	0.23	0.5	0.02	0.081	60100	6.01	7.5	18.7	10900	1.09
9265	1.32	17.5	9100	0.91	1.68	12.7	12.7	27	1.82	1020	0.102	34700	3.47	12.95	0.17	0.9	0.41	0.117	48000	4.8	8	16.3	1500	0.15
H43100	3.97	0.45	1400	0.14	0.6	6.38	4.8	6	6.41	1030	0.103	29500	2.95	34.9	0.15	2.9	0.07	0.069	45900	4.59	5.6	25.9	8300	0.83
H43084	1.94	1.2	5100	0.51	0.23	16.3	16.6	15	6.37	1490	0.149	46000	4.6	16.75	0.21	0.6	0.05	0.095	39600	3.96	10.5	33.4	12000	1.2
H43060	2.24	0.55	2800	0.28	0.02	10.8	10.6	23	11.65	550	0.055	57700	5.77	20	0.15	0.5	0.01	0.049	52900	5.29	5.9	62.4	27600	2.76
X17129	2.45	0.8	6300	0.63	0.29	12.85	10.6	1	6.17	1110	0.111	31300	3.13	21	0.19	0.9	0.03	0.17	52600	5.26	8.5	12.7	7200	0.72
X17105	1.41	0.81	5400	0.54	0.83	9.6	12.7	10	1.65	1460	0.146	34900	3.49	23.1	0.19	0.5	0.03	0.061	51700	5.17	5.8	7.7	3000	0.3
X06508	2	0.52	17300	1.73	0.81	11.49	13.4	79	4.3	78.6	0.00786	48900	4.89	16.29		0.56			30300	3.03	4.3	12.3	10400	1.04
X16763	1.35	0.36	10200	1.02	0.01	9.67	13.8	13	4.31	633	0.0633	39400	3.94	17.35	0.14	0.5	0.03	0.068	53200	5.32	5.3	17.8	14600	1.46
G37888	1.47	1.55	11000	1.1	1.01	20.8	11.4	8	5.56	915	0.0915	48400	4.84	17.8	0.14	0.6	0.04	0.169	44800	4.48	11.7	18.9	16200	1.62
X14984	0.75	29.4	18200	1.82	0.23	19.8	16.3	34	3.83	18.5	0.00185	49300	4.93	15.3	0.19	0.8	0.02	0.038	50300	5.03	8.9	11.8	4700	0.47
X17360	3.88	3.69	1900	0.19	0.67	13.35	0.9	1	2.11	139	0.0139	13000	1.3	43.4	0.12	4	0.05	0.014	78900	7.89	11.3	7	2200	0.22
H43113	0.96	2.21	15700	1.57	0.04	13.6	19.4	30	1.54	1405	0.1405	50200	5.02	12.95	0.15	0.5	0.03	0.045	51700	5.17	7.7	16.7	3600	0.36
G36677	1.56	1.23	9200	0.92	0.13	30	17.1	29	7.03	1425	0.1425	43700	4.37	20.3	0.24	1.1	0.04	0.06	48400	4.84	15.7	94	16100	1.61
G33512	0.5	3.88	7900	0.79	0.1	28.13	17.6	118	3.6	1462.32	0.146232	36000	3.6	18.4		0.88			40700	4.07	13.5	40	8900	0.89
H41633	2.04	6.99	19100	1.91	13.5	26.2	15.6	6	3.3	1580	0.158	57800	5.78	18.2	0.18	1.1	0.45	0.051	48500	4.85	17.1	14.2	8000	0.8
X17271	2.12	1.77	21100	2.11	0.38	19.8	14.6	3	2.58	311	0.0311	53900	5.39	16.8	0.27	0.8	0.03	0.093	51100	5.11	11.6	13.3	5300	0.53
H43074	1.77	0.64	14600	1.46	0.04	15.6	15.4	15	5.19	648	0.0648	44400	4.44	20.3	0.17	0.6	0.07	0.043	50700	5.07	8.2	18	6100	0.61
X17202	1.36	1.31	13200	1.32	0.47	12.6	17.2	24	0.71	1210	0.121	42700	4.27	5.74	0.2	0.4	0.05	0.043	50100	5.01	6.9	13.1	1200	0.12
X17350	3.16	5.07	13500	1.35	0.34	60.8	11.2	4	1.88	1080	0.108	46000	4.6	19.6	0.21	1.1	0.01	0.149	59500	5.95	48	13.6	9200.0	0.92
X17069	2	0.35	12300	1.23	0.25	8.38	20.5	116	6.8	1015.69	0.101569	53100	5.31	15.26		0.47			43400	4.34	3.5	11.7	9900	0.99
X17270	1.25	1.34	18900	1.89	1.02	15.3	10.9	12	2.74	292	0.0292	44600	4.46	15.7	0.16	0.7	0.05	0.076	45200	4.52	8.4	13.8	7700	0.77
H43068	2.56	0.43	9900	0.99	0.05	16.75	17.5	9	11.8	924	0.0924	45100	4.51	18.55	0.2	0.7	0.04	0.048	51000	5.1	9	45.4	18000	1.8
X18147	1.04	1.69	13800	1.38	0.29	10.3	11.7	7	1.54	104.5	0.01045	36900	3.69	15.6	0.17	0.6	0.04	0.026	55700	5.57	5.6	7.2	4200	0.42
X16787	1.46	0.33	14700	1.47	0.01	13.05	16.5	11	4.95	775	0.0775	42500	4.25	16.75	0.15	0.5	0.02	0.045	44900	4.49	7.3	17.3	14100	1.41
67950	1.08	0.34	10000	1	0.27	14.8	15.6	7	3.91	1340	0.134	37600	3.76	16.8	0.15	0.4	0.05	0.083	56100	5.61	8.8	14.6	6900	0.69
H41661	1.17	1.21	19300	1.93	0.12	22.8	13.5	4	3.2	174	0.0174	46700	4.67	16.15	0.2	0.8	0.02	0.05	45300	4.53	13	11.4	7000	0.7
G37829	2.22	2	18200	1.82	0.23	22.1	7.6	5	4.66	352	0.0352	37700	3.77	16.5	0.12	1.1	0.06	0.039	45600	4.56	14.1	31.2	8300	0.83
X17354	3.02	2.2	2900	0.29	0.42	11.3	0.6	1	1.26	79.3	0.00793	10500	1.05	38	0.06	3.3	0.04	0.012	53600	5.36	9.1	3.8	1500	0.15
X17404	1.37	0.63	28600	2.86	0.16	16	19.8	42	3.23	382	0.0382	65700	6.57	18.4	0.2	0.7	0.01	0.079	38000	3.8	8.5	15.5	19500	1.95
H43134	1.78	1.6	18500	1.85	0.06	13.95	41.2	93	3.96	1795	0.1795	64500	6.45	16.25	0.27	0.4	0.02	0.141	53600	5.36	7.4	26.2	9500	0.95
X14912	1.41	1.58	11700	1.17	0.04	29.2	17.6	43	5.06	316	0.0316	28300	2.83	20.8	0.12	0.9	0.02	0.04	33600	3.36	15.6	32	7900	0.79
H43078	2.36	0.69	9100	0.91	2.83	14.4	18	19	11.55	1140	0.114	51500	5.15	16.65	0.2	0.7	0.03	0.084	40100	4.01	9	52	17200	1.72
H43082	1.84	0.79	5800	0.58	0.18	14.85	10.1	1	4.77	1085	0.1085	31700	3.17	18.95	0.2	1	0.02	0.129	47100	4.71	9.4	15.5	6200	0.62
H41615	2.18	3.56	18800	1.88	1.29	21.1	10.3	23	3.42	663	0.0663	34000	3.4	19.1	0.15	2.4	0.06	0.042	54300	5.43	11.3	27.8	6300	0.63
X14921	1.33	4.38	17200	1.72	0.08	18.5	27.2	23	3.28	171.5	0.01715	34500	3.45	17.45	0.12	0.7	0.02	0.098	46300	4.63	10.3	20.6	4500	0.45
X16837	1.3	0.26	16400	1.64	0.05	8.92	14.1	10	5.36	751	0.0751	41500	4.15	15.35	0.14	0.4	0.02	0.059	51200	5.12	4.9	19.2	15000	1.5
X16765	1.42	0.57	15100	1.51	0.01	13.45	10	10	4.09	607	0.0607	31400	3.14	16.15	0.14	0.5	0.02	0.062	48900	4.89	8.1	16.4	11000	1.1
X17225	3.23	6.92	20500	2.05	2.41	38.1	17.5	4	3.83	1850	0.185	51800	5.18	17.8	0.29	0.9	0.08	0.046	66800	6.68	22.1	42.1	12800	1.28
X17188	1.84	2.77	15100	1.51	0.04	10.85	12.8	16	1.4	947	0.0947	43500	4.35	14.25	0.2	0.5	0.03	0.066	59600	5.96	5.8	16.8	6800	0.68
H43091	1.91	0.32	1300	0.13	0.1	7.59	3.8	9	1.44	442	0.0442	21200	2.12	33.3	0.12	2.9	0.02	0.04	54000	5.4	6.1	8.5	4600	0.46
X16185	1.96	1.65	6900	0.69	0.08	6.94	9.6	4	1.21	2930	0.293	50600	5.06	28.9	0.18	1.1	0.02	0.127	46400	4.64	4.3	8.5	3400	0.34
X16775	0.97	0.12	14600	1.46	0.01	14.1	15.7	13	2.97	803	0.0803	37600	3.76	16.15	0.14	0.5	0.005	0.025	36100	3.61	8.4	14.2	15100	1.51
H43093	1.69	4.71	900	0.09	0.19	5.97	2.8	5	1.1	2120	0.212	17500	1.75	27	0.11	1.6	0.04	0.111	44200	4.42	4.6	4	2200	0.22
X14969	1.06	1.22	10200	1.02	0.03	9.18	9.2	31	2.49	14.2	0.00142	20800	2.08	14.15	0.16	0.5	0.02	0.018	46900	4.69	4.6	9.8	3000	0.3
X18198	1.85	2.43	4300	0.43	0.54	13.2	2.3	1	1.71	153	0.0153	15100	1.51	35.7	0.14	3.2	0.05	0.011	52900	5.29	10.7	9	3000	0.3

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
X17394	2.38	11.1	24100	2.41	1.06	25.6	19.3	33	9.22	1520	0.152	52800	5.28	17.95	0.21	1.2	0.02	0.057	58700	5.87	14.7	48.2	11400	1.14
X14977	0.77	4.73	15600	1.56	0.11	15.5	8.4	39	2.96	60.9	0.00609	30800	3.08	14.5	0.11	0.5	0.02	0.068	59400	5.94	8.8	9.8	3600	0.36
H40884	1.62	3.8	22200	2.22	0.13	85.7	28.6	25	8.34	670	0.067	73500	7.35	23.9	0.37	1.4	0.02	0.213	24200	2.42	74.5	25.3	22800	2.28
X16754	1.05	0.34	16800	1.68	0.02	13.15	19.6	10	2.55	1285	0.1285	36300	3.63	15.4	0.15	0.4	0.01	0.051	46300	4.63	7.5	12.8	9700	0.97
X14904	1.43	0.82	10200	1.02	0.19	13.85	8.1	25	2.9	63.6	0.00636	20300	2.03	16.35	0.09	0.5	0.05	0.016	46600	4.66	7.5	24.4	5400	0.54
X16756	1.49	0.49	18100	1.81	0.02	9.57	16.1	16	4.99	818	0.0818	40800	4.08	17.55	0.11	0.5	0.03	0.051	50200	5.02	5.4	17.4	13900	1.39
X17340	2.91	2.68	17100	1.71	0.3	31.4	9.4	4	1.4	1040	0.104	44600	4.46	18.4	0.17	1.2	0.02	0.084	59100	5.91	21.1	7.5	7500	0.75
X16750	1.19	0.38	17400	1.74	0.04	11.25	18.9	11	3.66	1085	0.1085	38300	3.83	17.2	0.12	0.5	0.02	0.051	52300	5.23	6.4	16.5	13000	1.3
G37869	1.16	0.76	18600	1.86	1.35	15.95	12.2	4	4.58	539	0.0539	44700	4.47	15.75	0.13	0.7	0.17	0.078	43600	4.36	7.9	22.1	16500	1.65
X17142	2.36	0.83	24900	2.49	0.1	11.55	16.5	15	5.88	650	0.065	51000	5.1	15.9	0.22	0.5	0.02	0.063	46400	4.64	6.4	23.1	12200	1.22
X17198	1.52	1.03	17400	1.74	0.32	9.15	19.6	23	0.82	1780	0.178	62100	6.21	6.36	0.2	0.4	0.03	0.084	54200	5.42	5.3	10.4	1900	0.19
X14956	0.87	1.26	16500	1.65	0.04	11.9	6.8	25	2	27	0.0027	29000	2.9	14.95	0.18	0.5	0.07	0.042	39700	3.97	5.3	5.2	2400	0.24
H43123	1.35	1.96	21500	2.15	0.04	15.5	23.5	62	6.24	892	0.0892	52200	5.22	16.55	0.22	0.5	0.07	0.104	35700	3.57	8.5	35	15300	1.53
X14946	0.67	1.3	10000	1	0.01	11.65	7.5	17	1.85	33.3	0.00333	15900	1.59	13.05	0.14	0.4	0.01	0.015	31600	3.16	5.8	5.1	2300	0.23
X17261	1.96	0.87	5800	0.58	0.74	13.55	0.9	1	2.2	211	0.0211	11200	1.12	27.5	0.13	2	0.04	0.009	67500	6.75	10.5	7.3	2800	0.28
G36716	2.09	1.75	30000	3	1.74	34.6	18.6	31	7.4	1375	0.1375	54800	5.48	19.75	0.25	1.3	0.16	0.112	48900	4.89	22	38.8	14400	1.44
X16227	1.56	2	11800	1.18	0.1	9.48	9.5	5	2.75	1065	0.1065	32400	3.24	14.3	0.025	0.3	0.05	0.033	44900	4.49	6.1	21.2	7400	0.74
X16743	1.19	0.38	19500	1.95	0.07	10.85	18.6	15	4.45	906	0.0906	40000	4	16.65	0.12	0.5	0.04	0.033	46700	4.67	6	18.4	14800	1.48
X18236	1.86	0.44	13800	1.38	0.26	29.6	18.2	31	2.85	132	0.0132	43000	4.3	21.2	0.19	0.8	0.02	0.051	44500	4.45	13.6	9.2	8700	0.87
G34684	0.73	0.25	12000	1.2	0.21	17	29.5	24	2.33	2790	0.279	55800	5.58	19.55	0.2	0.6	0.02	0.059	47400	4.74	10.1	7.5	8900	0.89
H43140	1.95	2.2	22600.0	2.26	0.05	10.6	23.7	11	1.55	1750	0.175	48400	4.84	18.65	0.18	1.6	0.02	0.123	39900	3.99	5.7	9	3800	0.38
X14918	1.43	1.87	14200.0	1.42	0.04	32.7	25.1	58	6.63	81.8	0.00818	28300	2.83	23.6	0.18	0.8	0.01	0.025	32600	3.26	16.4	33.1	10200	1.02
H43131	1.34	0.3	9900	0.99	0.3	16.35	14.9	6	4.07	873	0.0873	42000	4.2	16	0.15	0.4	0.01	0.034	35200	3.52	8.1	7.7	7500	0.75
X17346	2.42	4.09	16800	1.68	0.23	24.9	10.2	9	1.56	766	0.0766	36500	3.65	20.3	0.13	1.2	0.01	0.084	56800	5.68	16.1	13	7600	0.76
X16176	1.54	0.39	13400	1.34	0.04	11.6	13.3	10	2.88	1735	0.1735	37100	3.71	15.85	0.05	0.3	0.02	0.049	46600	4.66	7.5	22.9	7400	0.74
H40882	1.49	2.41	24100	2.41	60.1	33.8	10.4	35	4.84	399	0.0399	28500	2.85	18.75	0.22	1.3	2.58	0.218	42800	4.28	22.2	22.3	4800	0.48
H43120	1.34	1.14	14800	1.48	0.11	15.25	23	79	7.33	754	0.0754	53100	5.31	16.7	0.15	0.6	0.04	0.074	47400	4.74	8.8	44.7	23200.0	2.32
X17974	2.11	9.36	11800.0	1.18	0.03	44.4	13.7	34	9.24	340	0.034	25300	2.53	23.6	0.17	1.3	0.01	0.013	45200	4.52	27.4	42.6	13000	1.3
H41608	2.05	3.75	23400.0	2.34	1.33	20.2	9.6	23	3.44	523	0.0523	30100	3.01	15.05	0.14	1.3	0.12	0.035	44700	4.47	11	34.4	5900.0	0.59
X14856	2.47	0.57	17300	1.73	0.3	5.73	9.6	3	2.97	1040	0.104	37800	3.78	28.1	0.15	1.4	0.03	0.066	51300	5.13	3.1	7.9	5800	0.58
H43102	1.66	0.32	2000	0.2	0.1	5.75	2.4	5	1.24	327	0.0327	21200	2.12	29.4	0.11	1.7	0.02	0.062	45100	4.51	4.2	4.8	3500.0	0.35
H41619	2.31	1.73	21700	2.17	0.59	24.5	13.3	37	4.19	1010	0.101	36800	3.68	17.8	0.18	1.4	0.02	0.031	58900	5.89	13.9	33.6	10800	1.08
H43143	2.93	1.35	21400	2.14	0.08	10.5	18.8	12	8.11	1505	0.1505	56400	5.64	16.3	0.19	0.7	0.02	0.107	42700	4.27	5.5	30.8	16300	1.63
X14902	2.38	1.22	20100	2.01	0.18	17.25	6.5	23	2.6	136.5	0.01365	24400	2.44	18.1	0.19	2.8	0.4	0.029	41000	4.1	8.9	10.5	4800	0.48
G36584	1.33	1.65	18600	1.86	0.07	25.6	10.2	39	2.77	628	0.0628	35600	3.56	19.8	0.18	1.1	0.09	0.139	38200	3.82	14.6	27.4	7500	0.75
67916	1.48	0.27	24400	2.44	0.21	15.8	19.4	13	8.99	1075	0.1075	45300	4.53	17.45	0.2	0.5	0.06	0.025	45400	4.54	8.9	23.3	16700	1.67
H44025	2.61	0.66	8400	0.84	0.03	12.45	1.8	3	1.8	231	0.0231	13400	1.34	34.4	0.06	2.5	0.05	0.039	41700	4.17	9.8	8.1	2000	0.2
H41621	2.14	2.27	22900	2.29	0.52	46.5	10.1	40	4.3	1040	0.104	35600	3.56	18.65	0.19	1.3	0.03	0.05	62900	6.29	31	32.8	10100	1.01
X16798	1.4	0.26	25400.0	2.54	0.74	9.31	14.8	12	5.34	760	0.076	38300	3.83	17.15	0.13	0.4	0.01	0.055	38100	3.81	5	20.3	15100	1.51
X17179	1.66	1.17	17200.0	1.72	0.07	10.45	17.5	21	1.56	956	0.0956	55400	5.54	17.15	0.24	0.6	0.02	0.109	48200	4.82	6	17.9	15100	1.51
H40878	2.58	2.27	25700	2.57	0.43	24.9	12.4	7	5.09	606	0.0606	33400	3.34	18.1	0.24	0.9	0.04	0.066	51600	5.16	18.8	26.5	7500	0.75
X16141	1.12	0.21	15500	1.55	0.04	13.1	12.2	8	3.35	709	0.0709	29500	2.95	13.45	0.025	0.4	0.01	0.026	46100	4.61	8.9	14	10000	1
G36604	1.44	1.77	16600	1.66	1.4	6.28	3.2	84	1.87	229	0.0229	17200	1.72	28.4	0.13	2.8	0.24	0.045	45400	4.54	4.2	6.3	1900	0.19
X14897	2.06	4.7	21400	2.14	0.52	22.1	10.9	27	6.05	786	0.0786	35900	3.59	20.9	0.12	1.3	0.51	0.059	35900	3.59	10.9	24.3	13900	1.39
H41617	2.44	9.77	22900	2.29	2.73	42.3	9.3	39	3.13	839	0.0839	32400	3.24	18.25	0.18	1.7	0.08	0.088	62700	6.27	24.9	22.1	7600	0.76
G34743	1.21	5.43	21400	2.14	0.24	62.7	25.7	50	1.38	114.5	0.01145	45700	4.57	22.7	0.21	1.3	0.02	0.124	27900	2.79	45.1	11.8	10200	1.02
X17040	1	0.38	24200	2.42	0.06	12.1	16.8	103	8.9	1001.94	0.100194	41300	4.13	14.56		0.38			46900	4.69	6	16	13200	1.32
H40799	2	16.44	35200	3.52	0.23	64.02	14	88	4.6	2221.38	0.222138	49100	4.91	17.99		1.11			36400	3.64	51.3	24	7300	0.73
H43111	1.24	0.84	19000	1.9	0.12	13.55	13.5	39	2.08	852	0.0852	38400	3.84	11.2	0.13	0.6	0.04	0.053	48500	4.85	7.8	38	6700	0.67
H41624	2.6	0.72	7100	0.71	0.61	10.5	1.2	2	2.99	152	0.0152	13100	1.31	35	0.09	2.8	0.03	0.013	51900	5.19	8.3	11.6	3500	0.35

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
X16829	1.27	0.26	23900	2.39	0.06	11.65	13.7	10	7.11	1015	0.1015	35600	3.56	15.55	0.13	0.5	0.01	0.042	47600	4.76	6.7	18.3	13200	1.32
X17338	3.49	3.14	19400	1.94	0.27	28.1	11.5	11	1.97	779	0.0779	38400	3.84	19.05	0.13	1.4	0.02	0.061	63800	6.38	19.2	14.4	9000	0.9
H43127	1.45	1.12	23000	2.3	0.1	12	18.1	60	6.8	843	0.0843	49600	4.96	16.2	0.22	0.7	0.05	0.118	36700	3.67	7	40	17600	1.76
H43076	2.23	1.02	19900	1.99	0.5	14.7	14.7	11	3.84	814	0.0814	38100	3.81	16.15	0.14	0.5	0.03	0.087	47400	4.74	8.4	22.5	10600	1.06
X17383	2.42	6.99	23500	2.35	0.2	20.4	12.9	4	3.2	580	0.058	36900	3.69	19.3	0.17	1	0.03	0.065	52700	5.27	11.3	19.3	7600	0.76
X18074	2.07	5.75	18100	1.81	0.5	18.45	12.9	5	3.12	475	0.0475	38200	3.82	18.35	0.19	0.6	0.07	0.045	48300	4.83	12.6	25.4	10700	1.07
X18250	0.64	0.14	15600	1.56	1.22	11.3	5.3	14	1.28	18.1	0.00181	20600	2.06	13.4	0.14	0.4	0.03	0.014	41400	4.14	5.6	1.6	1900	0.19
H43135	1.07	0.81	15400	1.54	0.07	10.9	13	21	1.91	1740	0.174	34600	3.46	9.43	0.14	0.5	0.04	0.098	32900	3.29	6.3	10.8	4200	0.42
G34723	1.62	0.95	16900	1.69	0.15	16.8	12.3	8	2.15	85.9	0.00859	34000	3.4	18.8	0.19	0.8	0.04	0.037	49900	4.99	10.9	10.8	6700	0.67
X18095	2.2	1.85	25400	2.54	1.71	16.25	12.2	6	2.81	1070	0.107	34000	3.4	17.05	0.15	0.9	0.11	0.093	54300	5.43	11	22.1	6200	0.62
X18289	1.08	6.04	24600	2.46	0.05	22.8	7.6	41	1.88	58.5	0.00585	34800	3.48	18.85	0.16	0.8	0.01	0.081	14400	1.44	11.1	11.3	9500	0.95
X17371	3.15	9.55	24800	2.48	0.18	19.55	8.8	4	2.75	419	0.0419	36500	3.65	19.6	0.19	1.3	0.01	0.072	52400	5.24	10.3	23.3	9400	0.94
X16995	0.5	0.19	21200	2.12	0.05	11.19	17.9	96	4.8	1181.53	0.118153	40200	4.02	14.62		0.46			42100	4.21	5.8	16.4	16700	1.67
X16205	1.77	1.03	17300	1.73	0.04	7.37	10.9	3	1.93	1600	0.16	32800	3.28	25.9	0.17	0.8	0.03	0.079	49500	4.95	4.1	8.6	4700	0.47
X17080	1	0.22	15500	1.55	0.04	10.38	16.7	99	4.8	840.27	0.084027	45400	4.54	14.83		0.37			45700	4.57	5	15.7	16500	1.65
X16209	1.66	0.46	12500	1.25	0.05	6.29	3.8	1	1.59	938	0.0938	23400	2.34	24.8	0.025	0.7	0.02	0.033	46700	4.67	3.9	5.6	3600	0.36
H41610	2.92	8.24	31000	3.1	0.17	26	22.5	57	6.13	402	0.0402	43400	4.34	18.1	0.2	1.1	0.02	0.03	48000	4.8	14.4	42.7	14400	1.44
H41664	1.11	0.93	26100	2.61	0.09	19.9	15.1	15	2.97	105	0.0105	47300	4.73	16.3	0.16	0.7	0.02	0.069	42800	4.28	10.7	12.2	12600	1.26
H40834	1	1.49	19400	1.94	1.03	22.42	9.7	101	4	275.93	0.027593	23800	2.38	14.16		0.59			46900	4.69	15.9	46.1	5100	0.51
X16857	1.4	1.5	21500	2.15	0.04	10.25	19.3	8	5.7	1335	0.1335	34600	3.46	16.85	0.12	0.5	0.01	0.09	45200	4.52	5.7	18	10500	1.05
H44032	2.26	1.77	22400	2.24	0.04	6.96	3.9	1	3.13	48.1	0.00481	24800	2.48	30	0.08	2.5	0.05	0.029	39800	3.98	4.5	12.5	2600	0.26
X17957	2.89	4.34	28500	2.85	0.55	41.8	9.8	10	5.83	1525	0.1525	35300	3.53	15.1	0.14	0.8	0.08	0.049	42300	4.23	39.9	37.6	12100	1.21
G36725	1.87	0.76	13200	1.32	0.08	15.4	3.7	5	2.27	209	0.0209	17500	1.75	35.8	0.13	3.2	0.02	0.017	41600	4.16	13.3	16.9	4300	0.43
H41797	2.42	2.36	29200	2.92	0.72	18.65	18.9	25	5.68	1130	0.113	40300	4.03	16.3	0.18	1.1	0.02	0.068	41100	4.11	10.3	49.6	12800	1.28
H44036	2.98	1.13	10900	1.09	0.03	7.05	1.8	2	3.41	38.3	0.00383	15200	1.52	35.6	0.06	2.8	0.01	0.012	41800	4.18	5.3	15.8	5200	0.52
X16439	1.81	1.24	15900	1.59	0.38	8.58	23.5	29	4.81	2350	0.235	51900	5.19	17.15	0.13	0.4	0.05	0.087	43900	4.39	5	43.1	13900	1.39
H43116	2.16	0.69	23700	2.37	0.07	9.13	9.6	8	4.51	367	0.0367	32000	3.2	20.5	0.17	1.3	0.02	0.049	36600	3.66	4.8	23.4	9600	0.96
H41631	1.63	5.56	36700	3.67	23.7	44.1	11.1	43	3.36	1325	0.1325	44100	4.41	16.6	0.19	1.3	1.1	0.064	52300	5.23	30	17.6	10600	1.06
X16176	1.65	0.58	12200	1.22	0.08	8.09	9.3	7	2.04	2100	0.21	29100	2.91	24.5	0.14	0.6	0.02	0.078	44400	4.44	5.1	14.8	5300	0.53
H41814	1.32	2.75	26500	2.65	0.43	24	10.6	5	4.92	1010	0.101	39100	3.91	16.8	0.18	1.1	0.04	0.037	41400	4.14	15.8	34.6	10100	1.01
H43098	1.55	0.31	6700	0.67	0.06	7.45	3.5	5	1.15	288	0.0288	21100	2.11	27.9	0.12	1.9	0.04	0.042	48800	4.88	5.4	5.7	3900	0.39
X17910	2.45	1.1	21700	2.17	0.14	19.65	11.1	11	7	1010	0.101	29400	2.94	18.9	0.19	1	0.04	0.031	65000	6.5	11.9	57	13000	1.3
H41613	1.62	6.51	32500	3.25	0.29	25.1	9.1	12	4.38	744	0.0744	41400	4.14	16	0.17	1.1	0.02	0.071	46200	4.62	17.9	42.3	15000	1.5
H44018	2.42	0.53	7800	0.78	0.73	10.2	0.9	4	1.64	43.2	0.00432	10400	1.04	31.6	0.06	3	0.15	0.019	41700	4.17	7	5.5	2300	0.23
X18152	1.28	1.53	18300	1.83	0.1	21.7	11.7	6	2.02	280	0.028	38600	3.86	17.65	0.16	0.5	0.03	0.095	56500	5.65	15.5	9.5	7400	0.74
H41800	1.69	0.49	21200	2.12	0.12	22.4	13.7	61	6.27	570	0.057	34800	3.48	16.75	0.16	1.2	0.02	0.035	43000	4.3	12.5	42.8	15700	1.57
X16447	1.13	0.73	19400	1.94	0.15	9.06	28	29	4.94	2300	0.23	57100	5.71	18.55	0.15	0.4	0.04	0.072	51600	5.16	5	37.2	15500	1.55
X16229	1.52	0.99	16500	1.65	0.09	9.91	10.9	16	2.74	1800	0.18	36200	3.62	14.85	0.11	0.4	0.05	0.1	45500	4.55	5.8	17.4	6700	0.67
G36696	1.89	0.71	23700	2.37	0.08	30.2	10.9	26	4.97	642	0.0642	27300	2.73	22.6	0.18	1.8	0.03	0.096	40500	4.05	15.9	37.2	11300	1.13
X17213	1.69	0.43	17200	1.72	0.12	16.1	15.8	6	3.26	568	0.0568	39500	3.95	17.5	0.2	0.5	0.01	0.039	64200	6.42	10.4	26.1	9700	0.97
X17234	3.87	6.61	34500	3.45	0.99	111	15.4	4	3.66	1720	0.172	47300	4.73	16.45	0.35	0.8	0.05	0.075	69800	6.98	59.3	29.8	12400	1.24
H43145	1.8	0.65	9000	0.9	0.03	2.86	3.8	4	1.17	504	0.0504	17600	1.76	27.9	0.11	1.2	0.02	0.036	47000	4.7	1.8	4	2200	0.22
X16962	2	0.37	23600	2.36	0.2	10.01	19	92	6.9	1228.02	0.122802	42000	4.2	14.93		0.33			32600	3.26	4.4	20.3	16200	1.62
H43088	1.46	0.63	19700	1.97	0.08	7.4	15.6	12	1.95	1095	0.1095	34800	3.48	18.15	0.17	1.9	0.02	0.056	43300	4.33	4.9	12.1	6600	0.66
67933	0.87	0.26	14900	1.49	0.02	14.05	15	11	2.73	2130	0.213	46000	4.6	16.5	0.17	0.5	0.03	0.076	46800	4.68	8.5	12.4	11700	1.17
H41776	2.38	1.84	11500	1.15	0.26	17.25	12.7	59	4.05	1250	0.125	25400	2.54	36.1	0.12	1.6	0.03	0.076	43400	4.34	10.4	41.5	10000	1
X17245	2.5	2.08	47400	4.74	2.18	26.1	13.4	3	5.22	105.5	0.01055	43200	4.32	16.7	0.24	0.8	0.07	0.023	56300	5.63	16.7	39.5	9900	0.99
X16222	1.45	1.09	13300	1.33	0.06	10.05	10.6	10	2.35	1900	0.19	35700	3.57	15	0.12	0.4	0.03	0.061	51500	5.15	6.4	15.2	7100	0.71
X17925	1.81	3.39	44100	4.41	4.48	34.9	19.4	24	3.5	5620	0.562	54600	5.46	14.5	0.23	1.4	0.16	0.061	52400	5.24	23.5	31.1	13000	1.3
H44040	1.71	4.85	31300	3.13	0.07	5.97	5.3	2	3.69	52.3	0.00523	29400	2.94	30.6	0.11	2.5	0.005	0.03	42400	4.24	4.3	21.5	3200	0.32

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
X16158	1.69	0.34	17400	1.74	0.14	10.3	12	5	3.44	1310	0.131	34600	3.46	16.35	0.05	0.7	0.05	0.041	46000	4.6	6.1	18.4	11100	1.11
G34713	0.95	0.47	15200	1.52	0.71	5.02	6.7	7	1.61	1340	0.134	22200	2.22	27	0.15	1.7	0.1	0.033	51800	5.18	3.2	5.2	4200	0.42
H44174	3	3.77	38100	3.81	0.72	31.61	16.4	55	3.8	4134.49	0.413449	49600	4.96	13.58		1.08			39600	3.96	20.3	46.6	13300	1.33
H43080	1.6	0.53	10700	1.07	0.54	15.95	6.2	3	4.42	467	0.0467	34500	3.45	18.15	0.11	0.9	0.04	0.149	49700	4.97	10.3	14.3	5400	0.54
H44030	3.15	3.92	37100	3.71	0.51	22.7	7.8	2	6.15	1290	0.129	30800	3.08	16.45	0.15	1.2	0.2	0.102	44200	4.42	15	65.5	10300	1.03
9042	1.44	1.21	23600	2.36	0.23	16.1	21.4	73	4.83	1880	0.188	64800	6.48	19.95	0.25	1.3	0.04	0.099	49500	4.95	8.4	32.2	15800	1.58
H44016	2.45	0.38	9000	0.9	0.63	8.71	0.7	3	1.42	58.3	0.00583	10100	1.01	35.5	0.07	3.3	0.12	0.021	39600	3.96	5.5	5.7	1200	0.12
H44020	2.55	0.74	9600	0.96	0.22	11.7	1.3	3	1.85	74.9	0.00749	10800	1.08	31.8	0.07	2.9	0.19	0.019	45800	4.58	8	6	2500	0.25
H40891	1.15	1.24	24800	2.48	0.11	25.9	11.8	24	3.62	519	0.0519	27100	2.71	17.05	0.22	0.9	0.02	0.032	36500	3.65	15.1	19.6	7700	0.77
H44034	2.14	1.13	13300	1.33	0.07	7.05	1.9	2	3.32	50.2	0.00502	13400	1.34	35.2	0.06	3.1	0.01	0.012	42500	4.25	5.1	10.7	3000	0.3
67974	1.4	0.33	14100	1.41	0.13	12.95	14.7	11	1.93	2990	0.299	49600	4.96	19.3	0.17	0.5	0.05	0.077	59500	5.95	8.3	12	6600	0.66
G34694	0.71	0.39	14200	1.42	0.27	15.55	20.5	6	1.82	3050	0.305	57500	5.75	18.3	0.2	0.5	0.01	0.149	54200	5.42	8.6	8.2	7600	0.76
H43118	1.72	0.46	20800	2.08	0.05	12.75	14.4	8	6.03	429	0.0429	33500	3.35	15.85	0.11	0.9	0.01	0.036	42400	4.24	7.5	33.8	15800	1.58
X17940	3.2	1.56	19200	1.92	0.18	47.4	8.8	26	8.24	604	0.0604	30100	3.01	19.45	0.17	1.6	0.02	0.035	72700	7.27	29.8	24.1	13500	1.35
H41635	2.89	0.78	9500	0.95	1.12	16.7	3.8	3	2.56	399	0.0399	15600	1.56	35.6	0.1	3.1	0.07	0.019	37800	3.78	13.1	7.5	3700	0.37
H41793	2.5	1.27	29000	2.9	0.2	24.8	12.7	55	3.42	648	0.0648	29100	2.91	18.85	0.14	1.3	0.02	0.05	42600	4.26	14.1	32.4	8900	0.89
X14886	1.74	0.23	28200	2.82	0.11	37.2	8.4	27	3.96	634	0.0634	43300	4.33	18.3	0.27	1.4	0.01	0.051	16600	1.66	17.7	20.2	19900	1.99
X18104	1.58	1.91	34300	3.43	20.2	20.5	11	17	3.24	227	0.0227	32900	3.29	19.1	0.19	0.8	0.57	0.027	64500	6.45	11.3	28.4	9500	0.95
H41795	2.39	0.8	32700	3.27	0.25	23.6	11	45	3.52	1570	0.157	38000	3.8	16.8	0.17	1.1	0.03	0.062	39100	3.91	14.6	33.5	12400	1.24
X18206	1.94	4.56	22600	2.26	2.41	22	16.9	14	3.66	750	0.075	42900	4.29	19.7	0.2	0.6	0.11	0.097	45000	4.5	14.1	26.3	15000	1.5
H41789	2.6	2.57	20800	2.08	0.21	23.1	10.9	89	3.14	653	0.0653	27900	2.79	17.9	0.11	1.1	0.01	0.056	40500	4.05	12.6	57.9	9600	0.96
H43147	1.71	1.35	28200	2.82	0.12	12.55	32.3	50	9.93	1425	0.1425	56400	5.64	13.65	0.18	0.7	0.02	0.14	41500	4.15	7.1	63	24800	2.48
X16844	1.6	0.99	30100	3.01	0.09	18.35	12.4	4	7.15	1420	0.142	37200	3.72	20.1	0.14	1.3	0.01	0.115	47700	4.77	9.5	11.4	8800	0.88
X18278	1.59	0.99	29400	2.94	0.08	10.15	10.1	12	3.58	73.3	0.00733	31900	3.19	18.6	0.15	0.7	0.02	0.075	44700	4.47	5.2	11.3	7600	0.76
X17892	1.72	0.58	15200	1.52	0.17	32.1	11.1	46	4.51	1340	0.134	24900	2.49	22.8	0.14	1.6	0.02	0.009	72300	7.23	20.5	14.9	8400	0.84
H41812	2.01	0.39	21800	2.18	0.2	27.2	15.7	81	6.9	1160	0.116	31700	3.17	17.9	0.16	1.1	0.02	0.045	41100	4.11	15.5	42.6	16000	1.6
G36622	1.36	3.42	19800	1.98	0.06	4.42	3.5	3	2.97	259	0.0259	17800	1.78	31	0.14	2.6	0.01	0.024	53000	5.3	2.9	12.1	2600	0.26
X18223	1.1	1.86	23400	2.34	0.41	22	5.2	25	2.45	433	0.0433	22500	2.25	17.15	0.17	0.6	0.03	0.037	55600	5.56	14.6	23.4	6200	0.62
X18158	1.14	1.1	24800	2.48	0.62	10.65	13.5	7	1.68	427	0.0427	34800	3.48	17.45	0.17	0.6	0.04	0.075	52400	5.24	5.7	5.9	7000	0.7
H41818	1.45	1.5	32400	3.24	0.09	24.5	13.5	5	3.52	114	0.0114	43300	4.33	18.95	0.18	0.9	0.01	0.101	44500	4.45	14.7	15.4	11300	1.13
H41629	2.37	1.71	36300	3.63	0.27	33.9	16.5	63	3.89	555	0.0555	54200	5.42	18.9	0.18	1.6	0.02	0.096	57200	5.72	22.5	20.3	16200	1.62
H41604	2.2	8.55	39900	3.99	5.15	25.3	9.5	14	3.78	749	0.0749	30900	3.09	14.7	0.17	1	0.54	0.067	44500	4.45	16	59.3	11800	1.18
H41782	3.08	3.33	10100	1.01	1.19	16.7	6.7	26	3.05	3280	0.328	21900	2.19	19	0.1	1	0.05	0.027	39900	3.99	9.1	38.7	7500	0.75
X16237	1.4	0.73	14500	1.45	0.11	11.5	7.6	13	2.64	1445	0.1445	30900	3.09	15.05	0.1	0.5	0.04	0.07	49900	4.99	7.2	16.1	6700	0.67
X14888	1.57	0.25	36800	3.68	0.16	16.8	13.7	10	5.45	566	0.0566	37200	3.72	18.8	0.09	0.8	0.03	0.058	38200	3.82	8.3	16.8	13300	1.33
H41626	1.63	0.68	12800	1.28	0.17	19.9	1.5	3	2.14	51	0.0051	11900	1.19	28.9	0.09	2.4	0.02	0.005	42200	4.22	13.5	7.1	2300	0.23
G36209	1.43	2.39	28700	2.87	0.21	26.9	11.2	34	4.29	1060	0.106	29700	2.97	18.95	0.17	1.3	0.04	0.129	45100	4.51	16.9	36.8	7500	0.75
H44022	1.23	2.86	30100	3.01	0.09	18.05	8	3	3.94	824	0.0824	20100	2.01	15.45	0.1	1	0.02	0.108	40900	4.09	9.8	24.5	4100	0.41
H44028	1.87	7.65	28500	2.85	0.49	19.95	7.8	4	5.13	596	0.0596	24700	2.47	16.55	0.11	1.1	0.06	0.145	42700	4.27	10.8	24.9	6100	0.61
X18188	1.59	0.39	2500	0.25	0.16	18.25	6.5	14	2.13	1540	0.154	43900	4.39	21.5	0.17	0.6	0.09	0.055	69600	6.96	13.5	15	7800	0.78
H43151	2.67	1.04	37900	3.79	0.06	12.65	29.4	62	6.88	675	0.0675	67300	6.73	13.95	0.2	0.7	0.02	0.112	32200	3.22	7.1	51.6	24900	2.49
9374	1.99	6.61	33700	3.37	1.02	44.1	13.1	30	3.12	1290	0.129	36400	3.64	15.45	0.23	1.4	0.03	0.064	52100	5.21	29	21.2	9100	0.91
H41605	1	0.18	12200	1.22	0.24	19.74	24.3	18	4.3	5583.23	0.558323	50100	5.01	17.75		0.59			36700	3.67	9.2	20.6	16300	1.63
H40976	0.5	0.44	23000	2.3	0.24	11.34	13.9	97	1.9	1248.47	0.124847	43800	4.38	13.94		0.39			50500	5.05	5.3	11.1	10600	1.06
9051	0.81	0.46	18100	1.81	0.16	12.35	3	1	1.22	109.5	0.01095	17700	1.77	27.8	0.14	2.2	0.02	0.006	50900	5.09	8.9	3.5	2500	0.25
H41807	2	0.44	26900	2.69	0.17	26.2	12.4	38	6.09	959	0.0959	29400	2.94	16.8	0.14	0.9	0.02	0.047	42300	4.23	15.8	31.1	12200	1.22
9352	2.55	1.68	21100	2.11	0.15	20.9	13	9	5.85	664	0.0664	35500	3.55	16.3	0.18	0.6	0.01	0.042	57800	5.78	13	55.3	11000	1.1
X14882	1.63	0.27	36700	3.67	0.13	25.6	11.7	18	5.11	693	0.0693	38700	3.87	18.25	0.13	1.4	0.01	0.056	20700	2.07	12.1	22.6	16500	1.65
H40886	1.12	0.88	31200	3.12	0.15	29.2	13.4	32	2.61	266	0.0266	24400	2.44	16.9	0.2	0.8	0.02	0.047	33700	3.37	15.9	11.6	5400	0.54
H43106	1.55	0.62	22000	2.2	0.13	10.4	10.3	14	3.72	762	0.0762	38800	3.88	18.4	0.12	0.6	0.03	0.093	46500	4.65	5.5	19.4	11300	1.13

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
H41791	1.84	1.59	28800	2.88	0.11	17.95	11.4	50	3.52	421	0.0421	24300	2.43	15.9	0.12	1.2	0.01	0.053	33200	3.32	8.8	45.6	10300	1.03
H43129	1.26	0.93	30400	3.04	0.08	13.4	13.9	37	9.34	645	0.0645	46200	4.62	16.2	0.23	0.6	0.05	0.083	44500	4.45	7.8	44.4	21200	2.12
X17203	1.76	1.39	26400	2.64	0.25	17.6	14.2	13	2.63	829	0.0829	35800	3.58	17.35	0.2	0.7	0.02	0.05	48100	4.81	11.3	27.2	10800	1.08
H43136	1.28	1.36	40300	4.03	0.08	12.85	18.7	10	3.32	2090	0.209	52700	5.27	15	0.21	0.8	0.03	0.078	29700	2.97	7.6	35.2	15700	1.57
X16819	1.83	0.59	26500	2.65	0.13	20.2	15.4	1	4.31	492	0.0492	30500	3.05	20.6	0.13	1.6	0.005	0.088	36900	3.69	9.8	9.6	9200	0.92
X16195	1.91	0.53	20400	2.04	0.07	7.65	6.4	5	2.16	1720	0.172	29700	2.97	26.5	0.16	0.8	0.01	0.078	46700	4.67	4.1	18.2	10400	1.04
X17863	1.6	2.05	28800	2.88	0.54	17.55	5.3	4	3.03	1380	0.138	18600	1.86	18.8	0.15	1.2	0.04	0.02	55700	5.57	12.2	17.6	6000	0.6
X16454	1.15	0.87	26100	2.61	0.11	10.4	19.6	18	3.52	2290	0.229	49300	4.93	17.45	0.16	0.7	0.04	0.088	51800	5.18	6.1	25.6	10300	1.03
G36562	2.15	4.44	39800	3.98	0.14	26.5	14.3	27	7.02	1860	0.186	36000	3.6	18.1	0.18	1.4	0.06	0.141	45900	4.59	14.6	48.9	14200	1.42
H43149	1.63	1.07	34900	3.49	0.06	9.04	32.3	35	1.83	1120	0.112	55900	5.59	16	0.21	1.2	0.02	0.094	33500	3.35	5.1	19	15700	1.57
X18135	1.53	3.25	34400	3.44	0.85	34	12.3	36	3.89	346	0.0346	26400	2.64	20.1	0.16	1.1	0.06	0.053	42000	4.2	21.7	23.5	10900	1.09
H41644	1.72	0.36	9200	0.92	0.68	19.35	1.8	4	1.66	116.5	0.01165	12700	1.27	29.5	0.08	2.7	0.03	0.009	34600	3.46	14.3	5.3	3500	0.35
H43109	1.03	0.87	86700	8.67	0.07	15.45	10.1	7	2.97	462	0.0462	62600	6.26	13.9	0.15	0.5	0.06	0.115	29100	2.91	8.3	17.3	13700	1.37
X14933	1.24	1.13	20500	2.05	0.07	18.35	10.1	37	3.25	24.3	0.00243	13300	1.33	19.35	0.15	1.3	0.07	0.037	40500	4.05	7.6	17	5100	0.51
G36652	1.6	0.24	18200	1.82	0.5	17.85	15.2	90	1.12	1385	0.1385	35600	3.56	13.85	0.15	0.6	0.01	0.14	46300	4.63	10.6	18.2	6300	0.63
G34782	1.14	0.39	21300	2.13	0.05	40.9	28.6	34	3.46	1390	0.139	35400	3.54	23.5	0.23	1.2	0.02	0.078	36700	3.67	20	17.3	12300	1.23
H41803	2.17	0.43	31000	3.1	0.12	19.05	15.8	49	6.86	853	0.0853	34300	3.43	17.4	0.15	0.9	0.02	0.036	42100	4.21	11.3	47.7	16900	1.69
H43096	1.61	0.46	15100	1.51	0.07	5.68	2.9	7	1.26	308	0.0308	22700	2.27	28.7	0.11	2.1	0.03	0.032	42500	4.25	4.5	6.6	4500	0.45
H40994	2	1.37	45900	4.59	0.47	17.76	5.4	54	1.9	521.14	0.052114	22800	2.28	15.14		1.05			43400	4.34	10.3	19.3	5300	0.53
H41810	1.83	0.33	33600	3.36	0.19	30	15.7	96	6.81	701	0.0701	31400	3.14	19.15	0.17	1.4	0.02	0.052	40000	4	17.5	45.5	17500	1.75
H43104	1.66	0.51	32700	3.27	0.12	14.2	9.5	1	4.55	412	0.0412	33700	3.37	19.55	0.12	1.1	0.01	0.194	52000	5.2	7.5	16.5	6600	0.66
H41772	2.32	0.76	17300	1.73	0.24	9.29	13.8	62	5.53	789	0.0789	26900	2.69	24.8	0.11	0.7	0.03	0.037	31100	3.11	5.5	47.6	11000	1.1
H40888	1.35	1.06	42000	4.2	0.07	37.8	16.8	44	3.62	236	0.0236	25700	2.57	18.8	0.23	1.1	0.03	0.02	33400	3.34	23.2	16.1	6200	0.62
X18120	2.05	5.65	40000	4	1.15	37.4	7.7	33	2.53	1130	0.113	23800	2.38	22.6	0.18	1.3	0.1	0.068	57000	5.7	23.9	16.4	5800	0.58
H44014	1.9	0.23	17200	1.72	0.2	6.32	1.1	4	1.23	27.9	0.00279	9300	0.93	32.1	0.06	3.1	0.04	0.018	46400	4.64	3.6	4.5	900	0.09
H40855	2	2.15	19800	1.98	0.08	34.21	7	74	2.8	96.21	0.009621	9900	0.99	16.02		0.92			17500	1.75	18.4	28.4	3900	0.39
G36639	2.61	6.22	36300	3.63	0.13	26.8	8.3	4	5.24	1505	0.1505	30500	3.05	16.05	0.15	1.3	0.01	0.079	49100	4.91	23.4	18.6	9600	0.96
H44038	2.31	1.92	20900	2.09	0.05	7.73	0.6	1	2.34	396	0.0396	11500	1.15	34.3	0.07	3	0.01	0.03	48100	4.81	6	8.3	2500	0.25
X18142	1.1	1.36	31400	3.14	0.08	24.7	8.6	29	1.01	72.8	0.00728	19400	1.94	20.1	0.15	0.9	0.08	0.021	19000	1.9	13.9	12	6700	0.67
H43153	1.56	1.35	42000	4.2	0.03	14.65	20.5	40	6	492	0.0492	53400	5.34	15.25	0.23	0.6	0.02	0.119	45600	4.56	8.3	43.9	21900	2.19
H41805	1.44	0.43	24500	2.45	0.15	29.5	16.8	96	4.68	1340	0.134	23400	2.34	19.5	0.14	1.1	0.03	0.036	29200	2.92	16.8	42.5	13600	1.36
G34704	0.99	0.26	19000	1.9	0.6	6.93	6.8	9	1.69	1220	0.122	24600	2.46	25.6	0.14	2.4	0.03	0.1	51300	5.13	4.4	5.4	5700	0.57
H44230	4	7.39	56100	5.61	1.59	30.04	14.7	73	6.1	1427.89	0.142789	47700	4.77	13.22		0.63			40700	4.07	19	45.2	15200	1.52
X17877	1.87	1.65	40400	4.04	0.7	29.6	9.1	15	4.62	2210	0.221	34600	3.46	18	0.18	1.1	0.03	0.052	78900	7.89	19.4	16.5	14100	1.41
G36186	1.79	4.45	47300	4.73	0.75	18.2	12.7	12	6.91	1560	0.156	33100	3.31	15.75	0.17	0.9	0.05	0.099	52400	5.24	13.8	34.6	9400	0.94
H41613	1	1.77	51800	5.18	0.09	23.02	20.8	15	3.6	1304.56	0.130456	66100	6.61	17.37		0.44			35600	3.56	10.8	24.4	21900	2.19
H41771	4.27	1.07	4000	0.4	0.15	5.23	2.1	6	1.62	639	0.0639	8800	0.88	34.2	0.07	0.6	0.02	0.01	36800	3.68	3.6	8.9	2000	0.2
X17306	2.84	1.19	15900	1.59	0.32	16.4	17.8	105	9.02	865	0.0865	43300	4.33	16.1	0.22	1.2	0.08	0.052	62500	6.25	9.2	89.2	17200	1.72
9399	4.58	1.51	34000	3.4	0.21	29.9	8.3	30	4.55	1275	0.1275	28700	2.87	15.35	0.22	1.3	0.01	0.108	51900	5.19	18.2	33.8	10900	1.09
G34763	1.68	0.49	18700	1.87	0.51	47	15.1	37	4.7	515	0.0515	43200	4.32	26.4	0.22	1.2	0.03	0.085	39200	3.92	22.9	30	15500	1.55
H40880	1.67	2.1	36800	3.68	0.1	26	9.3	35	3.25	201	0.0201	18100	1.81	16.9	0.19	0.8	0.02	0.039	40600	4.06	13.8	19.1	5300	0.53
X17327	4.3	3.81	30100	3.01	0.41	20.7	14.4	76	6.99	1310	0.131	34000	3.4	17.7	0.16	2.2	0.02	0.057	53600	5.36	11.3	71.7	16300	1.63
X18084	1.91	0.85	28000	2.8	0.27	18.8	6.1	2	2.23	376	0.0376	30000	3	18.5	0.13	1	0.07	0.035	43000	4.3	11.3	23	9000	0.9
X18265	1.37	2.11	41900	4.19	1.03	29.9	16	78	2.23	56.4	0.00564	36900	3.69	19.45	0.16	1.2	0.04	0.115	23000	2.3	15.2	9.4	15800	1.58
H41780	3.32	0.78	20700	2.07	0.21	26	24.9	35	5.63	1150	0.115	44300	4.43	17.65	0.17	1.1	0.01	0.062	45800	4.58	15.4	57.1	13800	1.38
H41787	1.57	1.28	16700	1.67	0.07	14.7	4.3	54	1.57	426	0.0426	10500	1.05	16.75	0.09	0.9	0.01	0.021	41500	4.15	7.5	22	4300	0.43
X17317	2.17	0.83	17800	1.78	0.37	19.2	14.6	105	4.88	1170	0.117	36400	3.64	17.7	0.16	1	0.03	0.033	47600	4.76	11.7	62	12700	1.27
G36745	1.33	5.28	32200	3.22	0.23	33.8	10.5	26	6.6	2180	0.218	36100	3.61	19.1	0.21	1.2	0.02	0.072	42800	4.28	22.4	41.4	16200	1.62
X16193	1.18	0.58	39700	3.97	0.01	4.91	4.4	2	1.42	1430	0.143	18600	1.86	22.1	0.025	0.8	0.02	0.064	52300	5.23	3.1	9.7	6900	0.69
H41621	1	0.26	27500	2.75	0.13	12.42	23.3	16	1.3	2356.12	0.235612	51100	5.11	19.12		0.5			38300	3.83	5	14.6	21700	2.17

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
9008	1.14	0.55	21500	2.15	0.07	19.85	10.4	4	1.38	1225	0.1225	37200	3.72	17.5	0.19	1.4	0.02	0.049	56700	5.67	10.4	12	5400	0.54
G34556	1.03	0.42	24200	2.42	0.36	16.15	13.2	12	2.91	1425	0.1425	33400	3.34	17.6	0.16	1	0.01	0.071	54300	5.43	9.9	16.7	7700	0.77
9027	1.98	0.3	44500	4.45	0.07	34.6	8.8	3	1.56	327	0.0327	34500	3.45	21.3	0.23	1.6	0.03	0.046	46500	4.65	18.4	16.5	7500	0.75
H44187	3	4.16	55300	5.53	0.63	31.34	13.8	64	4.1	3987.72	0.398772	48000	4.8	14.49		0.69			42900	4.29	22.6	52.4	11800	1.18
H41619	1	0.19	29500	2.95	0.11	15.41	34.2	19	1.6	3017.22	0.301722	60700	6.07	21.16		0.4			30000	3	6.5	26.1	26700	2.67
G36155	0.77	0.19	34900	3.49	0.06	17.05	7.3	14	3.24	604	0.0604	14000	1.4	17	0.13	1.1	0.01	0.033	48700	4.87	9	23	5700	0.57
H41785	3.12	1.16	22700	2.27	0.41	16.55	11.2	30	3.66	1220	0.122	30900	3.09	15.7	0.09	0.9	0.01	0.056	37600	3.76	10.1	42	10100	1.01
H41778	1.72	0.93	23800	2.38	0.67	15.95	11.5	69	5.63	780	0.078	34700	3.47	25.4	0.14	1.2	0.02	0.075	45400	4.54	9	39.6	17600	1.76
G36165	1.32	0.38	45900	4.59	0.12	22.7	16	13	7.3	1535	0.1535	37900	3.79	18	0.18	1.3	0.02	0.094	46400	4.64	12.4	16.8	13100	1.31
H41617	1	0.11	16200	1.62	0.06	15.87	6.2	18	3.4	688.18	0.068818	28200	2.82	18.81		1.06			32500	3.25	6.9	13.4	11600	1.16
G34753	0.95	0.2	30000	3	0.65	7.41	9	8	1.6	488	0.0488	39000	3.9	23.7	0.14	1	0.04	0.094	47800	4.78	4.1	11.2	10500	1.05
H43984	1	0.2	40300	4.03	0.56	17.65	6.1	65	3.5	206.31	0.020631	21300	2.13	13.73		1.05			43600	4.36	8	17.8	9200	0.92
H41615	1	0.09	25500	2.55	0.09	16.79	16.1	10	1.7	1242.32	0.124232	41400	4.14	17.72		0.53			40100	4.01	6.8	17	17000	1.7
G33506	0.5	0.1	25400	2.54	0.15	22.62	7	76	1.9	91.06	0.009106	27900	2.79	19.85		1.1			41400	4.14	11.9	7.9	6700	0.67
H41608	2	0.1	20400	2.04	0.19	15.88	13.6	13	3	884.87	0.088487	41700	4.17	19.08		0.64			31400	3.14	6.5	23	21200	2.12
H41610	1	0.04	37000	3.7	0.07	20.45	14.5	8	2.7	717.52	0.071752	51600	5.16	15.63		0.51			29700	2.97	8.2	21.9	20100	2.01
H41622	1	0.18	24600	2.46	0.06	11.71	13.6	15	1.6	436.54	0.043654	39700	3.97	17.08		0.42			35500	3.55	4.4	15.8	26600	2.66
H41626	2	0.13	30900	3.09	0.05	14.96	12.7	10	1.4	245.71	0.024571	46100	4.61	17.1		0.35			28300	2.83	5.8	22.4	31400	3.14
X10676	0.5	1.72	1200	0.12	0.84	5.27	15	231	0.9	3125.32	0.312532	84300	8.43	5.24		0.08			18100	1.81	1.8	2.8	1400	0.14
X13711	0.5	0.35	3500	0.35	0.51	7.82	13.2	107	2	91.88	0.009188	49400	4.94	17.29		0.68			29600	2.96	2.8	2.9	1700	0.17
X13701	0.5	0.28	3000	0.3	2.86	5.64	13.9	98	1.6	158.67	0.015867	49100	4.91	17.97		0.4			26900	2.69	1.7	4.2	2800	0.28
G33182	0.59	0.21	700	0.07	0.58	27.5	16	28	2.65	459	0.0459	46400	4.64	18.3	0.22	0.6	0.1	0.042	28800	2.88	13.2	2.6	1700	0.17
S91-395_5431	0.31	0.12	600	0.06	0.75	6.21	6	4	1.88	1435	0.1435	36500	3.65	6.22	0.13	0.1	0.03	0.028	10200	1.02	2.8	2.1	1500	0.15
G37665	0.36	0.28	1000	0.1	1.09	13.15	7.9	17	1.61	1360	0.136	47200	4.72	10.3	0.18	0.2	0.13	0.033	18700	1.87	5.9	1.2	1100	0.11
S91-387_5210	0.41	0.39	1300	0.13	0.34	14	9.7	20	3.05	1880	0.188	46500	4.65	11.75	0.14	0.2	0.03	0.08	16000	1.6	5.8	1.7	1600	0.16
G21564	0.79	0.68	1400	0.14	1.38	35.7	15.7	2	2.92	352	0.0352	46400	4.64	20.2	0.25	0.7	0.16	0.074	28600	2.86	17.4	3.9	2300	0.23
G37342	1	0.29	3300	0.33	0.24	9.79	12.1	123	2.8	542.66	0.054266	41700	4.17	15.9		0.44			26700	2.67	3.5	10.5	5700	0.57
S91-395_5417	0.2	0.19	1200	0.12	0.99	2.66	5.7	6	1.25	1605	0.1605	40500	4.05	6.03	0.12	0.1	0.07	0.032	8400	0.84	1.1	2	800	0.08
G36847	0.28	0.54	500	0.05	1.07	3.38	5.5	5	1.29	1705	0.1705	39600	3.96	6.98	0.13	0.1	0.06	0.087	11000	1.1	1.7	2.8	1300	0.13
S91-387_5199	0.11	0.25	200	0.02	0.48	3.67	4.3	6	0.64	1215	0.1215	21900	2.19	4.1	0.1	0.1	0.06	0.023	6000	0.6	1.8	1.5	700	0.07
X13520	0.5	0.28	2500	0.25	0.18	4.08	16.7	169	3.7	597.96	0.059796	61300	6.13	16.35		0.57			30900	3.09	1.2	13.1	6900	0.69
S91-387_5179	0.05	0.3	1200	0.12	1.85	6.9	8.4	5	1.13	1475	0.1475	33100	3.31	6.27	0.11	0.1	0.29	0.063	2300	0.23	3.4	5.1	300	0.03
G37937	1.39	1.74	3400	0.34	2.51	19.75	12.3	6	3.55	814	0.0814	61800	6.18	19.35	0.18	0.8	0.07	0.219	27900	2.79	10.4	4.1	2500	0.25
S91-386_5101	0.7	0.45	4400	0.44	1.59	22.1	19.4	5	3.75	1585	0.1585	82800	8.28	16.4	0.25	0.4	0.07	0.118	14400	1.44	9.5	3.2	2300	0.23
S91-386_5158	1.09	0.58	2000	0.2	4.96	16.15	11.1	20	3.61	1545	0.1545	49400	4.94	16.15	0.15	0.3	0.1	0.173	22700	2.27	6.3	6.4	4100	0.41
G37330	0.5	0.13	1900	0.19	0.21	9.76	14.4	116	3.9	939.32	0.093932	62000	6.2	14.81		0.54			33900	3.39	3.1	5.8	3400	0.34
G22009	0.81	5.46	2600	0.26	1.45	28.4	19.4	30	2.39	201	0.0201	48300	4.83	23.8	0.23	1.5	0.13	0.18	25700	2.57	12.2	3.4	2400	0.24
G33396	0.74	0.4	2400	0.24	0.05	17.75	12.7	2	1.73	53	0.0053	77500	7.75	12.2	0.31	0.9	0.03	0.013	35400	3.54	7.6	5.4	3400	0.34
S91-386_5141	0.58	0.21	1900	0.19	1.05	9.57	10.2	9	4.1	1660	0.166	50900	5.09	12.9	0.13	0.2	0.04	0.082	17700	1.77	4	3.3	1700	0.17
G36855	0.42	0.64	700	0.07	2.67	5.87	7.2	311	1.77	1570	0.157	47600	4.76	8.15	0.14	0.1	0.08	0.048	11600	1.16	2.6	5.2	2700	0.27
X05423	0.36	0.44	400	0.04	47.6	5.63	9	10	1.25	1565	0.1565	50600	5.06	6.63	0.11	0.1	0.33	0.099	6300	0.63	2.5	9.7	2600	0.26
G21583	0.64	1	3100	0.31	1.88	32.4	14.3	2	2.82	151	0.0151	55800	5.58	20.1	0.25	0.9	0.15	0.079	24900	2.49	15.3	2.7	1900	0.19
S91-386_5122	0.85	0.31	2800	0.28	1.51	8.09	13.1	5	4.56	1900	0.19	57200	5.72	16.3	0.15	0.4	0.05	0.075	23400	2.34	3.2	5.1	2600	0.26
G37684	0.92	0.38	2000	0.2	1.05	22.1	10.8	20	3.23	1380	0.138	49000	4.9	14.45	0.21	0.5	0.05	0.07	23200	2.32	9	4.6	3300	0.33
S91-395_5405	0.42	0.53	1400	0.14	0.85	8.03	8.1	4	2.56	1970	0.197	44800	4.48	9.39	0.14	0.1	0.03	0.091	14200	1.42	3.5	2.6	1700	0.17
G21535	0.52	0.57	2700	0.27	1.54	18.75	10.4	23	2.64	658	0.0658	33200	3.32	14.7	0.22	0.4	0.16	0.087	21000	2.1	8.1	4.9	3200	0.32
X05453	0.54	0.4	1500	0.15	0.87	7.17	8.5	18	1.87	1470	0.147	44600	4.46	9.13	0.11	0.1	0.06	0.042	15300	1.53	3.2	3.5	2100	0.21
G37785	1.08	0.53	2400	0.24	0.01	11.8	16.2	39	3.1	2800	0.28	88200	8.82	17.2	0.15	0.3	0.01	0.076	25600	2.56	4.9	21	7700	0.77
H44263	1	0.41	1800	0.18	2.07	20.9	12.3	179	3.7	1564.82	0.156482	46700	4.67	12.97		0.18			28200	2.82	8.3	7.5	4700	0.47
X11530	0.86	0.7	1600	0.16	2.21	7.02	7.5	17	3.21	1645	0.1645	46300	4.63	10.25	0.025	0.1	0.01	0.209	19700	1.97	3.1	4.6	2000	0.2

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
G21048	0.5	0.53	4200	0.42	40.91	3.28	14.5	111	2.2	1253.74	0.125374	56200	5.62	15.99		0.36			22000	2.2	0.8	5.8	2400	0.24
G21508	0.99	0.46	2700	0.27	2.01	22.6	10.5	4	3.56	776	0.0776	44200	4.42	15.6	0.23	0.8	0.15	0.071	26600	2.66	11	3.4	2700	0.27
X05339	0.5	0.59	3500	0.35	0.24	10.21	17.9	142	1.5	991.2	0.09912	94800	9.48	12.82		0.58			20900	2.09	3.1	19.5	9400	0.94
G33162	0.98	0.16	1800	0.18	0.02	18.35	13.4	63	3.18	559	0.0559	43800	4.38	13.6	0.23	0.3	0.01	0.025	25200	2.52	8.7	3.3	2500	0.25
H43405	0.83	0.63	3900	0.39	1.57	22.1	17.9	2	3.34	836	0.0836	78400	7.84	17.5	0.26	0.6	0.11	0.046	27100	2.71	10.1	7.3	4700	0.47
H43880	1	0.33	25200	2.52	1.21	11.35	25.3	33	5	464.29	0.046429	72700	7.27	13.77		0.37			39600	3.96	3.9	14.9	14700	1.47
G37699	0.97	0.33	2100	0.21	0.29	14.6	12.2	25	2.78	1590	0.159	51400	5.14	13.45	0.2	0.4	0.02	0.054	24800	2.48	6.3	3.3	2400	0.24
X05402	0.74	0.55	2900	0.29	3.04	11.1	9.4	4	3.2	1560	0.156	56100	5.61	12.8	0.13	0.2	0.07	0.088	18800	1.88	4.4	6.9	2600	0.26
X11553	1.3	0.52	2900	0.29	1.88	5.98	12.5	4	3.21	1280	0.128	50600	5.06	14.65	0.15	0.3	0.01	0.08	25500	2.55	2.5	7.1	4400	0.44
G37809	1.03	0.6	3000	0.3	0.06	12.55	21.3	31	3.74	573	0.0573	65200	6.52	18.75	0.14	1	0.005	0.037	26300	2.63	6.3	22.5	9300	0.93
X19143	0.5	0.85	3900	0.39	0.3	3.41	9.6	193	0.6	2676.5	0.26765	54100	5.41	5.15		0.01			5400	0.54	2.1	4.7	2300	0.23
G33142	1.06	0.75	3000	0.3	3.45	25.1	11.4	4	3.03	604	0.0604	45600	4.56	15.25	0.23	0.7	0.14	0.042	26800	2.68	12.4	4.5	3900	0.39
G21490	1.62	0.33	4700	0.47	0.36	20.5	19.4	7	5	668	0.0668	60500	6.05	19.15	0.26	0.5	0.02	0.026	36500	3.65	9.3	7	4600	0.46
X06441	0.85	2.59	1800	0.18	0.83	7.97	7.8	2	2.9	3910	0.391	49900	4.99	16.45	0.05	0.3	0.01	0.618	30300	3.03	3.2	7.8	5900	0.59
G37719	1.24	0.27	4500	0.45	0.75	7.15	10.4	20	3.07	1395	0.1395	44100	4.41	11.6	0.2	0.3	0.08	0.052	24100	2.41	2.9	3.5	2700	0.27
H44434	1	0.08	3400	0.34	0.23	8.99	15	80	3.7	734.97	0.073497	60100	6.01	17.5		0.36			33000	3.3	2.9	14.9	6000	0.6
G36074	0.5	0.96	2600	0.26	0.22	13.22	11	149	2.5	2419.99	0.241999	48000	4.8	13.65		0.15			32800	3.28	5.4	12.3	9600	0.96
G21477	0.44	0.71	2300	0.23	0.13	7.84	10.7	8	1.49	157	0.0157	41000	4.1	7.05	0.16	0.1	0.02	0.025	11300	1.13	4.2	8.1	4900	0.49
X14258	1.64	0.42	3900	0.39	0.32	16	14.5	4	3	706	0.0706	59700	5.97	13.3	0.19	0.6	0.01	0.035	38400	3.84	8.3	19.8	10200	1.02
H43397	1	0.87	5100	0.51	0.33	23.6	17.8	2	4.78	1070	0.107	73500	7.35	17.9	0.25	0.8	0.08	0.102	30000	3	11	7.7	4500	0.45
H43401	1	0.47	3300	0.33	0.18	23.9	15.3	4	3.8	757	0.0757	49100	4.91	17.2	0.21	0.6	0.12	0.056	30400	3.04	10.9	6.5	4600	0.46
H43395	0.97	0.44	3600	0.36	1.32	18.8	11.2	3	4.53	771	0.0771	53800	5.38	16.1	0.22	0.7	0.42	0.074	29500	2.95	8.7	6.9	3900	0.39
H43403	1.11	0.82	3900	0.39	0.12	30.2	16.2	3	3.95	700	0.07	56200	5.62	18.9	0.19	0.5	0.11	0.12	31200	3.12	14	7.5	5500	0.55
X14278	1.68	0.61	3600	0.36	0.87	13.05	17.8	24	2.57	1235	0.1235	45000	4.5	14.95	0.17	0.4	0.04	0.063	35700	3.57	7.1	15.5	8000	0.8
E217257	1.24	0.35	5300	0.53	1.99	10.55	24.1	9	5.15	655	0.0655	78600	7.86	21.3	0.23	0.5	0.07	0.103	26700	2.67	4.5	29.2	22600	2.26
G22025	1.38	2.46	4100	0.41	0.13	5.23	18.5	21	4.21	96	0.0096	59900	5.99	19.8	0.21	1.3	0.01	0.31	26100	2.61	2.3	23.9	16200	1.62
S91-395_5388	0.71	0.51	1800	0.18	0.8	14.1	5.4	4	4.76	3350	0.335	38800	3.88	14.1	0.14	0.3	0.02	0.094	25000	2.5	6	4.8	4800	0.48
H41708	1.34	1.18	5500	0.55	3.21	21.1	12.6	5	4.64	1380	0.138	50100	5.01	19	0.18	0.6	0.26	0.094	40100	4.01	10.7	7.8	9000	0.9
G35241	0.5	3.11	3500	0.35	0.57	3.55	6.6	288	0.3	4793.81	0.479381	48100	4.81	5.44		0.04			3700	0.37	1.8	2.5	1500	0.15
X11486	0.47	0.85	1200	0.12	1.04	17.35	5.2	14	4.3	2010	0.201	28600	2.86	12.45	0.54	0.1	0.04	0.132	21300	2.13	9	5.2	3200	0.32
H41422	1.44	0.26	7200	0.72	1.18	16.75	13.1	8	6.14	380	0.038	69700	6.97	15.7	0.21	0.6	0.01	0.021	40600	4.06	7.8	5.5	6400	0.64
G37917	1.22	0.81	5300	0.53	0.5	14.4	22.6	7	4.31	1215	0.1215	82300	8.23	19.05	0.19	0.6	0.01	0.074	31900	3.19	6.4	31.5	17200	1.72
H43399	1.06	0.52	3400	0.34	0.01	28.1	10.7	3	4.67	466	0.0466	47600	4.76	18.05	0.18	0.7	0.02	0.086	34100	3.41	12.8	7.1	5200	0.52
X05483	1.52	0.31	3200	0.32	0.69	25.1	14.3	38	3.78	1220	0.122	53500	5.35	16.4	0.17	0.3	0.02	0.045	26100	2.61	12.1	16.7	8600	0.86
G24020	1.68	1.15	5200	0.52	0.52	17.45	28.6	13	4.69	729	0.0729	74200	7.42	19.15	0.27	0.6	0.02	0.044	37300	3.73	8.3	23.6	13800	1.38
X14180	2	0.18	5500	0.55	3.59	12.34	17.3	127	3.3	763.92	0.076392	55400	5.54	14.72		0.41			27100	2.71	3.9	23.7	13700	1.37
H43407	0.82	0.69	2900	0.29	27.1	19.05	12.8	4	3.51	439	0.0439	49700	4.97	16.65	0.25	0.7	0.96	0.278	27400	2.74	7.9	12.4	5600	0.56
H42161	1.31	0.65	4300	0.43	0.18	21.1	14.4	6	5.24	401	0.0401	44900	4.49	23.3	0.19	0.8	0.03	0.053	38000	3.8	10.2	8.7	6100	0.61
X11377	1.46	0.67	3500	0.35	0.31	14	10.7	3	3.51	576	0.0576	50500	5.05	20.1	0.14	0.9	0.01	0.114	28100	2.81	6.3	17.8	12400	1.24
X10664	0.5	0.93	5900	0.59	0.71	6.05	9.6	239	1.6	5066.42	0.506642	48100	4.81	8.81		0.06			12600	1.26	2	6.7	4800	0.48
G37739	1.15	0.14	3900	0.39	0.22	11	14.3	2	3.59	997	0.0997	61000	6.1	17.3	0.21	0.6	0.01	0.038	27700	2.77	4.7	19.5	8300	0.83
H41706	1.29	4.42	7000	0.7	10.55	17.1	14.4	6	5.74	2680	0.268	52900	5.29	17.95	0.16	0.5	1.06	0.594	40800	4.08	7.5	10.8	11600	1.16
G36943	1.32	0.38	3700	0.37	1.81	22.7	10.6	3	6.71	994	0.0994	59700	5.97	17.85	0.21	0.4	0.02	0.045	34500	3.45	10.7	13.2	10300	1.03
G35228	0.5	2	4900	0.49	2.14	5.86	8.1	269	0.8	2133.24	0.213324	93200	9.32	12.47		0.07			10600	1.06	2.8	8	6500	0.65
G32981	1	0.9	3800	0.38	0.19	15.68	8.1	122	2.8	1634.99	0.163499	51400	5.14	17.09		0.45			45200	4.52	5.6	11.5	11100	1.11
X15427	0.5	0.44	2300	0.23	0.33	8.69	11.6	232	3.2	1996.04	0.199604	41600	4.16	14.25		0.29			38100	3.81	3.1	11.7	9800	0.98
H42163	1.24	0.65	4600	0.46	0.14	17.35	17.1	8	5.07	831	0.0831	42500	4.25	18.4	0.19	0.7	0.03	0.06	35200	3.52	9.4	11.5	8500	0.85
G37966	0.9	1.53	4800	0.48	0.5	16.65	17.5	11	3.74	1080	0.108	71500	7.15	18.95	0.14	0.4	0.02	0.2	24800	2.48	8.4	16.6	11000	1.1
G21287	1	0.23	2800	0.28	0.48	14.33	11.4	113	2.6	1493.57	0.149357	43200	4.32	11.76		0.34			25500	2.55	5.7	15.3	11300	1.13
G36878	0.71	0.58	1400	0.14	0.28	9.86	7.3	245	3.08	2300	0.23	50400	5.04	12.05	0.15	0.2	0.03	0.095	19400	1.94	4.3	10.5	7100	0.71

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
X14630	0.58	0.48	1900	0.19	0.28	9.11	8.7	3	2.21	1865	0.1865	56100	5.61	11.1	0.14	0.2	0.02	0.102	23200	2.32	4.1	9.6	6400	0.64
H43874	1	0.02	54900	5.49	0.11	20.8	3.8	21	3	288.14	0.028814	31300	3.13	12.99		0.43			16300	1.63	11	14.8	15900	1.59
G33119	1.31	0.16	2600	0.26	1.31	20	12.4	7	4.33	953	0.0953	36500	3.65	13.3	0.21	0.7	0.15	0.043	27600	2.76	9.3	6.9	5500	0.55
G33357	1.24	0.35	6700	0.67	0.81	21.2	14.9	4	5.07	110	0.011	50800	5.08	16.15	0.22	0.6	0.59	0.016	47200	4.72	10	19.7	13900	1.39
X14171	1	0.21	4100	0.41	0.37	11.41	12.9	130	3.1	817.36	0.081736	43700	4.37	15.8		0.43			30400	3.04	4.1	25.9	16900	1.69
H42169	1.54	3.26	6000	0.6	19.95	22.9	18.3	18	6.82	780	0.078	48100	4.81	21.9	0.26	0.7	0.18	0.397	42500	4.25	12.1	11.4	8600	0.86
X13511	1	0.35	2100	0.21	0.73	5.96	15.3	114	3.2	415.99	0.041599	61900	6.19	18.73		0.79			18300	1.83	1.3	44.1	21200	2.12
H41839	1.35	0.33	8200	0.82	0.46	21.1	14.8	5	3.62	93.1	0.00931	52600	5.26	18	0.21	0.7	0.09	0.027	39600	3.96	9.8	8.3	7800	0.78
X06419	1	0.45	2000	0.2	2.24	18.45	9	2	3.4	1770	0.177	53700	5.37	16.6	0.07	0.4	0.04	0.076	29900	2.99	8.8	13.5	7400	0.74
G24041	1.84	0.36	3700	0.37	0.2	18.15	16	5	4.32	684	0.0684	58200	5.82	18.7	0.22	0.4	0.01	0.035	38600	3.86	8.5	26.8	19800	1.98
G23998	1.79	0.28	3700	0.37	0.26	30.3	11.3	1	6.13	360	0.036	47800	4.78	23.4	0.22	0.8	0.01	0.023	46000	4.6	13.3	20.3	9700	0.97
X15009	1.01	0.73	4300	0.43	0.24	23.1	10.7	2	2.91	1355	0.1355	59300	5.93	18.2	0.08	0.4	0.04	0.145	39100	3.91	11	12.5	11300	1.13
G32047	1.28	1.26	21600	2.16	0.42	21.2	11.9	4	3.62	1160	0.116	57700	5.77	15.1	0.25	0.5	0.02	0.099	30700	3.07	10	6.4	8200	0.82
G35583	1.65	0.51	4800	0.48	0.66	18.8	15.2	8	4.42	1050	0.105	57300	5.73	16.45	0.14	0.5	0.01	0.063	29300	2.93	9.5	29.2	15300	1.53
X06463	0.62	3.42	7800	0.78	2.28	11	9.3	1	2.17	2270	0.227	64600	6.46	11.85	0.07	0.1	0.06	0.161	25500	2.55	4.9	9.3	7800	0.78
G33796	2.05	2.27	8800	0.88	1.34	24.1	9.7	2	2.72	179	0.0179	51300	5.13	20.6	0.21	0.9	0.09	0.131	43900	4.39	12.1	7.7	6300	0.63
X11008	0.48	0.4	14300	1.43	1.4	5.55	10.3	2	1.61	1760	0.176	51300	5.13	8.49	0.15	0.1	0.07	0.048	14700	1.47	2.5	4.2	4600	0.46
H43862	1	0.2	39200	3.92	0.51	10.38	20.3	36	3.7	804.34	0.080434	48600	4.86	13.25		0.37			26100	2.61	3.6	11.5	12200	1.22
X11578	1.12	0.26	3900	0.39	0.96	14.05	11.2	3	3.43	1125	0.1125	39600	3.96	13.6	0.025	0.4	0.005	0.04	22700	2.27	6.8	23.6	13900	1.39
H43766	0.5	0.26	7500	0.75	1.33	5.67	40.8	28	5	1210.47	0.121047	99300	9.93	15		0.28			30800	3.08	1.8	39.1	27100	2.71
G33097	1.42	0.43	5000	0.5	2.16	15.65	16.5	11	4.36	937	0.0937	49400	4.94	15.75	0.23	0.5	0.07	0.084	28900	2.89	7.7	15.9	10800	1.08
G33415	0.83	1.06	6000	0.6	6.58	12.3	10.9	10	2.42	426	0.0426	38400	3.84	11.6	0.17	0.2	0.19	0.123	24100	2.41	6.5	6.7	6000	0.6
H43518	1	0.86	34700	3.47	0.63	13.26	7.8	47	4.8	1402.1	0.14021	40200	4.02	15.9		0.32			39000	3.9	5.2	7.9	9000	0.9
X11031	0.72	0.68	9100	0.91	1.19	6.76	8.8	2	1.61	3240	0.324	40800	4.08	12.25	0.11	0.1	0.17	0.182	20600	2.06	3.3	5.3	3700	0.37
X06146	0.5	0.72	4300	0.43	0.26	13.07	9.6	258	2	2275.86	0.227586	52300	5.23	14.51		0.31			38300	3.83	4.6	10.7	10100	1.01
X11599	0.99	0.75	7000	0.7	1.03	15.85	10.2	2	2.89	1060	0.106	43200	4.32	13.1	0.025	0.3	0.01	0.083	24600	2.46	7.5	17.6	13800	1.38
H42210	1.15	0.17	19800	1.98	0.11	24.9	12.9	5	5.03	443	0.0443	41000	4.1	16.55	0.14	0.4	0.005	0.025	35300	3.53	13.3	15.3	14600	1.46
G37765	1.76	0.13	3600	0.36	0.24	15.05	8.5	2	4.61	601	0.0601	45400	4.54	17.9	0.19	0.5	0.005	0.027	24100	2.41	6.3	35.6	18000	1.8
G33436	0.79	0.53	5600	0.56	3.14	10.5	9.4	5	2.68	608	0.0608	33700	3.37	10.55	0.16	0.2	0.12	0.048	27600	2.76	5.7	5.6	5700	0.57
X19131	0.5	0.69	4600	0.46	0.28	4.4	12.9	194	0.9	1935.73	0.193573	70000	7	10.03		0.1			30200	3.02	1.7	7.8	6000	0.6
X12874	1	1.48	5200	0.52	3.08	12.98	8.5	164	2.7	2558.85	0.255885	43900	4.39	14.06		0.24			34600	3.46	4.7	8.8	9700	0.97
G33072	1.5	0.45	3600	0.36	1.48	16.9	13.6	8	5.98	1170	0.117	47200	4.72	16.95	0.21	0.4	0.03	0.105	29400	2.94	8.5	15.6	9500	0.95
H41673	1.73	0.92	11600	1.16	0.8	23.5	13.4	5	5.35	62.3	0.00623	50100	5.01	18.7	0.17	0.8	0.08	0.032	51800	5.18	11.9	10.5	9500	0.95
X06396	0.75	0.55	5500	0.55	0.45	18.35	9.1	2	3.8	2090	0.209	48100	4.81	14.95	0.05	0.4	0.01	0.125	29600	2.96	9.2	11.7	9700	0.97
H43905	0.5	0.2	44000	4.4	1.19	18.77	16	21	5.5	589.96	0.058996	58100	5.81	14.53		0.43			37600	3.76	6.7	8.4	10900	1.09
H41835	1.29	0.67	8900	0.89	1.3	21.6	13.7	5	3.47	105	0.0105	53500	5.35	20	0.19	0.8	0.04	0.038	39100	3.91	9.5	8.3	9400	0.94
H43762	0.5	0.11	5000	0.5	1.09	3.07	35.5	27	5.7	1440.93	0.144093	104900	10.49	15.87		0.24			31100	3.11	1	27.9	26700	2.67
X05329	1	0.19	2200	0.22	0.19	12.24	12.9	108	4.1	327.57	0.032757	46300	4.63	19.05		0.66			21900	2.19	4.7	42.7	24700	2.47
G36231	0.54	0.25	5900	0.59	0.73	8.02	5.5	254	2.64	2170	0.217	36000	3.6	9.17	0.13	0.2	0.02	0.046	18100	1.81	3.9	5.9	4900	0.49
G35563	1.43	0.76	16500	1.65	0.6	18.8	14.9	4	5.85	1020	0.102	58800	5.88	16.95	0.16	0.4	0.01	0.111	39100	3.91	9.4	15	12600	1.26
H41829	1.24	1.1	13400	1.34	0.23	20.1	29.1	4	4.9	44	0.0044	54300	5.43	19.6	0.21	0.8	0.04	0.02	38200	3.82	9.4	11	8200	0.82
H41561	1.2	0.89	15000	1.5	0.76	20.3	14.7	4	6.15	1305	0.1305	54000	5.4	16.5	0.18	0.4	0.03	0.21	41500	4.15	10.4	11.4	10400	1.04
H43887	0.5	0.27	41600	4.16	0.53	15.06	19.5	29	3.5	1083.4	0.10834	55300	5.53	13.82		0.48			24800	2.48	5.8	16.7	14200	1.42
G37602	1.56	0.77	14700	1.47	1.82	22.6	15.3	4	5.24	258	0.0258	55800	5.58	18.4	0.17	0.7	0.07	0.053	46200	4.62	10.8	12.4	12900	1.29
G36814	1.11	0.57	15500	1.55	0.69	20.5	13.2	5	3.53	25.4	0.00254	57700	5.77	16.15	0.24	0.8	0.05	0.026	40700	4.07	8.2	6.6	7200	0.72
G33116	1.1	0.18	5800	0.58	0.68	13.9	12.5	12	3.76	820	0.082	39900	3.99	12.75	0.21	0.5	0.01	0.039	25100	2.51	6.5	10.3	7100	0.71
X11508	1.2	0.46	5100	0.51	1.72	12.1	11.2	17	3.79	1565	0.1565	41200	4.12	10.85	0.025	0.1	0.02	0.089	24900	2.49	5.5	6.3	5000	0.5
H42245	1.02	0.62	30200	3.02	0.17	21.1	15.3	4	4.5	782	0.0782	45200	4.52	18.1	0.15	0.3	0.005	0.322	31000	3.1	11.2	14.5	14600	1.46
G36794	1.42	0.71	13700	1.37	0.75	22.5	12.7	5	5.07	96.1	0.00961	51200	5.12	17.85	0.21	0.7	0.06	0.026	42100	4.21	9.9	11.8	12200	1.22
G35060	0.96	1	8900	0.89	0.4	18.2	9.6	133	4.12	1500	0.15	63900	6.39	17.7	0.2	0.4	0.01	0.098	42200	4.22	9.4	11	10000	1

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
E217242	1.36	0.37	11000	1.1	0.43	19.5	18.1	13	5.07	740	0.074	55900	5.59	16.65	0.23	0.5	0.02	0.046	43300	4.33	9.8	11.9	13000	1.3
H43780	1	0.79	8700	0.87	0.91	11.38	25	51	4.3	995.98	0.099598	75900	7.59	16.56		0.3			36800	3.68	3.4	17	17500	1.75
G32420	1.16	2.44	4700	0.47	0.66	10.75	5.1	131	3.33	531	0.0531	21800	2.18	15.5	0.08	0.6	0.27	0.046	50900	5.09	8.7	26.5	5000	0.5
H42249	0.93	0.48	26900	2.69	0.02	18.5	19.9	4	3.63	1120	0.112	58400	5.84	16.1	0.14	0.4	0.005	0.062	28300	2.83	9	13.4	12800	1.28
H41685	1.25	0.34	15400	1.54	1.23	21.2	12.1	4	6.03	179	0.0179	50300	5.03	18.3	0.17	0.7	0.12	0.045	40700	4.07	10.3	8.5	9700	0.97
9069	1.92	18.35	10100	1.01	0.17	37.8	15.2	5	5.2	1075	0.1075	45200	4.52	17.25	0.25	1.4	0.04	0.04	49900	4.99	24.4	88.4	11300	1.13
H43765	1.09	0.09	5800	0.58	0.78	6.77	22.3	4	6.92	1015	0.1015	80900	8.09	17.95	0.2	0.5	0.02	0.04	30700	3.07	2.7	39.7	27400	2.74
X12852	0.5	0.56	4200	0.42	0.17	10.55	9.4	198	3	1695.81	0.169581	40200	4.02	13.24		0.23			34900	3.49	3.8	11.6	11300	1.13
H43903	1.4	0.11	8400	0.84	0.48	17.25	9.9	24	6.47	1290	0.129	32500	3.25	13.9	0.13	0.3	0.02	0.018	36400	3.64	8.4	12.3	9700	0.97
G35079	0.97	2.09	7100	0.71	0.67	16.4	10.6	157	4	1895	0.1895	54800	5.48	16.2	0.18	0.4	0.01	0.339	40500	4.05	8.5	12.4	12700	1.27
E217224	1.2	0.16	12400	1.24	0.21	18.1	16.8	3	4.03	206	0.0206	53800	5.38	16.6	0.26	0.6	0.01	0.013	40100	4.01	8.8	13.2	11900	1.19
G36254	1.45	0.14	4800	0.48	0.91	38.6	15.5	31	6.97	885	0.0885	41600	4.16	22.7	0.18	1.5	0.03	0.109	46400	4.64	19.6	11.7	10000	1
H41441	1.21	0.35	11300	1.13	0.21	24.5	18	4	6.86	756	0.0756	55900	5.59	18.5	0.19	0.6	0.01	0.066	39600	3.96	13	15.1	14300	1.43
H41563	1.04	1.47	24900	2.49	0.32	12.7	7.6	3	4.7	1610	0.161	54400	5.44	14.15	0.18	0.3	0.01	0.159	34800	3.48	6.3	11	10000	1
G33049	1.71	0.18	5000	0.5	0.68	10.1	17.9	40	6.62	868	0.0868	64300	6.43	18.7	0.21	0.3	0.01	0.037	28000	2.8	4.7	36.9	22100	2.21
H42195	1.39	0.33	9000	0.9	0.13	19.45	12.3	9	4.41	489	0.0489	34200	3.42	17.45	0.13	0.5	0.01	0.042	38600	3.86	10.9	7.3	7800	0.78
G32137	0.94	0.58	6800	0.68	0.28	17.1	14.6	7	3.2	1875	0.1875	53300	5.33	14.55	0.21	0.3	0.02	0.113	33300	3.33	8.6	14.9	14200	1.42
H41427	1.25	0.29	12000	1.2	0.47	18.6	14.1	9	6.02	923	0.0923	55000	5.5	17.6	0.17	0.5	0.01	0.053	39100	3.91	9.2	14	13300	1.33
X12417	1.18	0.81	11000	1.1	1.96	9.49	10.1	207	3.12	2690	0.269	56200	5.62	14.95	0.16	0.2	0.03	0.15	29700	2.97	4	13	6600	0.66
G33773	2.02	3.96	9200	0.92	0.37	31	15.9	32	2.99	702	0.0702	46800	4.68	20.9	0.24	1	0.07	0.041	49300	4.93	17	56.3	9900	0.99
X13902	1	2.37	18400	1.84	8.89	9.06	13	156	2.7	1709.12	0.170912	69800	6.98	14.26		0.17			42900	4.29	3	16.1	12200	1.22
X05383	1.02	0.47	3300	0.33	0.18	13	6.8	9	3.38	1150	0.115	36900	3.69	13.1	0.13	0.4	0.01	0.073	18900	1.89	6.2	28	11300	1.13
H41559	1.16	1.3	21600	2.16	0.78	21.5	16.9	5	6.05	1040	0.104	53400	5.34	16.7	0.18	0.4	0.03	0.229	38900	3.89	11.5	12	10600	1.06
X17281	1.36	0.72	12600	1.26	5.41	18.35	12.8	3	2.15	67.4	0.00674	49300	4.93	17.1	0.24	0.7	0.35	0.058	34900	3.49	7.1	10.8	11800	1.18
H42240	1.18	0.45	23600	2.36	0.3	20.4	15.9	7	5.31	883	0.0883	50300	5.03	17.2	0.14	0.4	0.005	0.062	35800	3.58	10.4	13.5	13600	1.36
X12432	0.97	0.84	10600	1.06	0.95	8.42	12.7	177	2.15	4190	0.419	53700	5.37	13.2	0.16	0.2	0.02	0.124	31800	3.18	3.6	13.9	7800	0.78
H41699	1.14	0.48	7700	0.77	0.47	22.8	13.3	4	5.76	544	0.0544	41400	4.14	19.4	0.16	0.7	0.01	0.104	40900	4.09	11.9	14.9	18400	1.84
G35113	0.56	0.71	21000	2.1	0.53	12.85	9.4	182	2.89	1970	0.197	64800	6.48	15.5	0.22	0.2	0.04	0.103	36700	3.67	6.4	9.7	7400	0.74
X14288	1.49	0.48	50100	5.01	5.28	15.6	13.6	4	2.97	932	0.0932	37500	3.75	12.8	0.18	0.3	0.07	0.078	31700	3.17	8.5	20.5	11500	1.15
H42251	1.04	0.44	42600	4.26	0.16	18.6	21.5	4	4.84	910	0.091	62900	6.29	15.65	0.16	0.3	0.005	0.041	36700	3.67	9.7	12	11200	1.12
H41429	1.31	0.24	9700	0.97	0.21	23.6	15.7	6	6.42	619	0.0619	50100	5.01	19	0.17	0.7	0.01	0.032	44300	4.43	11.9	15.8	14600	1.46
G34623	0.37	0.42	8700	0.87	1.23	9.22	13.5	235	2.53	2380	0.238	32800	3.28	7.45	0.13	0.1	0.02	0.071	15400	1.54	5.1	5.9	3600	0.36
G32259	1.23	1.4	15800	1.58	0.1	18	12	44	5.16	109.5	0.01095	46000	4.6	19.4	0.18	0.7	0.02	0.039	46800	4.68	8.2	15.9	13800	1.38
H43864	0.5	0.19	49900	4.99	1.18	10.61	15	45	3	674.77	0.067477	36700	3.67	9.38		0.26			22800	2.28	3.8	9.2	9200	0.92
X06946	1	0.61	8300	0.83	1.55	11.79	14.8	86	4.6	643.29	0.064329	46300	4.63	16.38		0.47			36100	3.61	4.6	13	15200	1.52
G33259	1.77	1.31	13700	1.37	4.21	22	10.2	4	5.62	110.5	0.01105	42900	4.29	17.5	0.19	0.7	0.24	0.057	54100	5.41	11.7	13.7	9600	0.96
H42221	1.01	0.23	28700	2.87	0.25	20.1	16.7	5	5.31	614	0.0614	44400	4.44	17.15	0.2	0.5	0.005	0.023	35700	3.57	9.9	13.5	12700	1.27
H43878	0.5	0.14	66200	6.62	1.56	17.47	13.6	28	2.7	484.7	0.04847	33000	3.3	12.73		0.3			15400	1.54	8.5	13.4	12600	1.26
H41669	1.88	1.09	16600	1.66	0.13	20.6	15.8	4	4.09	70.1	0.00701	50100	5.01	18.35	0.17	0.8	0.04	0.108	44900	4.49	10	12.8	9200	0.92
G36775	1.54	2.11	13100	1.31	0.14	31.1	16.3	42	4.27	171.5	0.01715	43800	4.38	22.7	0.21	1.1	0.01	0.21	37500	3.75	14.5	10.4	14800	1.48
H41702	1.06	0.43	10500	1.05	0.38	19.55	13.6	5	5.8	527	0.0527	46700	4.67	20	0.16	0.6	0.01	0.1	43800	4.38	9.6	16.6	19900	1.99
H43885	1	0.05	42600	4.26	0.28	19.89	7.7	32	3.8	487.6	0.04876	31300	3.13	15.36		0.57			21600	2.16	10	16.9	15800	1.58
X05177	0.5	1.48	5800	0.58	0.57	9.23	4.6	160	2.2	2017.29	0.201729	50900	5.09	13.81		0.14			31600	3.16	3.3	12.4	10800	1.08
H40630	1.81	0.87	9200	0.92	0.92	25	12.9	5	4.29	901	0.0901	47200	4.72	18.2	0.16	0.7	0.01	0.153	43700	4.37	13	24.6	13200	1.32
H43882	0.5	0.14	46400	4.64	0.75	18.56	10.8	34	2.7	637.77	0.063777	35300	3.53	13.64		0.44			17400	1.74	9.2	11.2	10700	1.07
X13930	0.5	1.63	30200	3.02	1.48	8.72	9.3	150	2.6	2493.75	0.249375	60500	6.05	12.3		0.16			32200	3.22	3.1	11.1	6200	0.62
G32496	1.17	1.38	16000	1.6	0.09	20.2	17.6	4	2.88	87.4	0.00874	44200	4.42	18.3	0.17	0.9	0.01	0.059	35300	3.53	9.9	14.4	12500	1.25
H42193	1.43	0.28	11300	1.13	0.23	22.9	14.8	3	5.57	596	0.0596	42500	4.25	17.7	0.16	0.4	0.005	0.038	39900	3.99	11.2	14.8	14800	1.48
H43868	0.5	0.28	56200	5.62	0.48	14.96	9.6	41	2.6	456.3	0.04563	33800	3.38	11.76		0.48			15800	1.58	6.3	13.2	12600	1.26
H43890	1	0.4	52800	5.28	0.52	13.11	11	31	3.1	413.24	0.041324	37300	3.73	12.32		0.4			21800	2.18	6.2	17	15300	1.53

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
X17284	1.14	3.12	16900	1.69	11.85	15.85	12.4	8	4.09	191	0.0191	45800	4.58	16.45	0.14	0.5	0.56	0.443	37000	3.7	7.8	12.5	11900	1.19
H42242	1.02	0.36	26400	2.64	0.13	24.2	14.5	5	4.51	613	0.0613	42900	4.29	16.75	0.12	0.4	0.01	0.052	31000	3.1	12.6	15.3	15100	1.51
X11464	1.06	1.06	8000	0.8	0.72	16.45	11.9	6	4.49	2120	0.212	51500	5.15	14.25	0.025	0.2	0.02	0.175	27000	2.7	8.3	14.7	9300	0.93
H43891	0.92	0.22	45400	4.54	0.5	14.9	14.9	15	3.12	727	0.0727	40500	4.05	12.25	0.12	0.7	0.01	0.038	19600	1.96	7.8	12.6	10600	1.06
X06485	0.82	0.57	11600	1.16	0.35	13.8	8.8	2	3.18	2210	0.221	52800	5.28	15.6	0.06	0.2	0.01	0.126	38800	3.88	6.4	10.9	10700	1.07
X12614	1.55	0.42	17400	1.74	0.63	26.5	12.5	79	6.77	723	0.0723	47900	4.79	17.45	0.17	0.6	0.01	0.051	34700	3.47	11.9	16.2	8600	0.86
H42247	0.93	0.4	30300	3.03	0.09	22.5	15.2	4	3.16	834	0.0834	48000	4.8	17.05	0.12	0.4	0.005	0.066	23400	2.34	11.9	15.6	14700	1.47
G34338	0.5	0.27	5900	0.59	0.33	13.38	12.2	174	2.1	1337.79	0.133779	46800	4.68	13.91		0.24			34300	3.43	5.8	15.1	16100	1.61
H41443	0.98	0.78	31200	3.12	0.87	19.05	19.7	3	5.05	1175	0.1175	85000	8.5	14.65	0.27	0.4	0.005	0.062	32500	3.25	10.1	14.2	13200	1.32
X12393	1.2	0.37	8800	0.88	0.73	17	9.3	164	3.04	2550	0.255	47600	4.76	16.45	0.16	0.4	0.01	0.098	37600	3.76	8.1	24.6	10400	1.04
H42186	1.15	0.4	14300	1.43	0.59	25.5	11	7	4.9	1850	0.185	43700	4.37	14.75	0.16	0.3	0.01	0.071	31600	3.16	13	7.8	8900	0.89
H41679	1.41	1.7	21500	2.15	2.21	24.7	11	4	5.02	270	0.027	48100	4.81	19	0.17	0.5	0.3	0.11	42500	4.25	13	12.4	12700	1.27
H41681	0.89	0.55	19500	1.95	0.49	18.75	13.1	4	3.58	92.2	0.00922	42900	4.29	14.9	0.17	0.6	0.13	0.04	31500	3.15	10.2	9.8	11400	1.14
G32325	1.6	0.5	17000	1.7	0.65	22.1	17.3	4	4.78	316	0.0316	45200	4.52	16.1	0.18	0.4	0.01	0.038	40200	4.02	11.6	15.8	13600	1.36
G32992	1	1.3	9100	0.91	6.77	15.47	9.2	104	3.8	2628.19	0.262819	50700	5.07	15.44		0.34			35200	3.52	5.9	13.7	13600	1.36
G35021	1.42	0.89	8900	0.89	4.68	24.2	14.3	122	5.34	1405	0.1405	48900	4.89	18.65	0.18	0.5	0.06	0.063	40100	4.01	12.5	19.2	18700	1.87
H43525	1.23	0.36	36500	3.65	0.25	19.15	10.7	14	4.85	1215	0.1215	39000	3.9	17.4	0.13	0.4	0.005	0.039	40700	4.07	10.4	9.8	13000	1.3
G37907	1.07	0.81	47000	4.7	0.67	16.75	14.5	5	4.23	745	0.0745	54800	5.48	15.45	0.15	0.5	0.01	0.066	33200	3.32	8.4	16.7	12900	1.29
X16510	1.3	0.89	16400	1.64	3.5	18.85	11.3	7	4.67	121.5	0.01215	45000	4.5	15.2	0.16	0.6	0.38	0.18	41600	4.16	9.7	11.2	10400	1.04
X05538	1.28	0.19	15300	1.53	0.37	25.2	14.7	25	3.45	1045	0.1045	40700	4.07	13.4	0.15	0.4	0.01	0.022	26300	2.63	13.1	16.9	12200	1.22
G35749	1	0.65	7500	0.75	0.62	10.27	11.5	199	2.8	2957.26	0.295726	57900	5.79	12.32		0.16			31800	3.18	4	10.9	11300	1.13
G32474	1.21	1.47	20000	2	0.08	21.1	13.4	3	4.33	107	0.0107	43900	4.39	18.6	0.2	0.8	0.01	0.133	40800	4.08	10.8	13.3	8900	0.89
H42238	0.86	0.39	28100	2.81	0.44	14.95	14.7	7	3.53	809	0.0809	46000	4.6	19.15	0.17	0.4	0.005	0.049	24900	2.49	7.3	13.3	12700	1.27
G32563	1.36	0.93	23000	2.3	0.08	20.4	14.1	4	3.73	61.2	0.00612	49900	4.99	17.8	0.2	0.6	0.02	0.075	40900	4.09	9.9	11.3	13200	1.32
H42197	1.34	0.26	13900	1.39	0.23	28.1	11.4	5	5.07	671	0.0671	32300	3.23	15.85	0.13	0.4	0.01	0.039	36700	3.67	15.1	11.2	10900	1.09
G32537	1.41	1.25	12400	1.24	0.06	23.7	16.1	4	2.68	47.2	0.00472	40500	4.05	18.4	0.21	0.8	0.02	0.06	35000	3.5	12.6	11.8	11500	1.15
X05559	0.8	0.13	14700	1.47	0.36	18.95	13.6	4	2.58	683	0.0683	44600	4.46	15.3	0.17	0.5	0.005	0.012	20700	2.07	10.7	14.9	10100	1.01
H41683	1.41	3.68	19400	1.94	45.7	18.35	12.8	6	5.17	413	0.0413	45600	4.56	19.85	0.14	0.6	1.56	2.47	42900	4.29	9	10	12300	1.23
H41745	0.5	1.36	42000	4.2	1.61	13.22	11.5	86	3.3	716.01	0.071601	47700	4.77	17.35		0.38			31600	3.16	5.4	9.9	11400	1.14
X10851	1	0.36	41600	4.16	0.63	13.75	11.9	3	3.89	739	0.0739	41400	4.14	16.1	0.13	0.6	0.01	0.04	25000	2.5	6.8	14.1	12900	1.29
H43876	1	0.17	68200	6.82	0.49	18.06	10.3	24	2.9	492.96	0.049296	32000	3.2	12.78		0.41			18300	1.83	8.5	14.9	13200	1.32
X11052	0.63	0.69	17700	1.77	0.9	10.65	6.4	3	1.78	2090	0.209	33900	3.39	11	0.11	0.2	0.01	0.076	23500	2.35	4.9	5.8	6200	0.62
G36921	0.63	0.31	9900	0.99	0.38	14.4	8.3	4	2.78	1745	0.1745	42400	4.24	11.7	0.17	0.2	0.01	0.065	19300	1.93	7.3	11.4	8100	0.81
G32413	1.55	2.44	10700	1.07	1.46	17.1	9	34	4.47	1420	0.142	28900	2.89	17.65	0.17	1	0.14	0.094	50300	5.03	11	109.5	8900	0.89
H41731	1	0.28	9900	0.99	0.34	7.95	19.8	33	13.1	4402.1	0.44021	46200	4.62	18.19		0.62			25700	2.57	3.4	18.4	8700	0.87
X17277	1.18	1.17	16500	1.65	5.09	16.15	10.9	7	3.09	160	0.016	42900	4.29	16.4	0.13	0.7	0.39	0.432	38100	3.81	7.8	12.6	10800	1.08
H41687	1.16	0.2	19200	1.92	0.75	21.6	15.6	4	5.46	401	0.0401	47800	4.78	16.35	0.17	0.7	0.06	0.046	40300	4.03	11	11.5	13000	1.3
G34982	1.03	0.15	14500	1.45	0.54	21.6	12.4	114	5.47	631	0.0631	45000	4.5	16.85	0.18	0.7	0.005	0.031	36900	3.69	10.8	13.8	12700	1.27
H41756	1	1.74	33700	3.37	7.67	9.12	12	53	3.3	731.95	0.073195	51500	5.15	17.28		0.4			28000	2.8	3.6	13	13700	1.37
X05514	1.34	0.31	11400	1.14	0.41	19.6	13.3	32	3.45	1055	0.1055	41600	4.16	15.55	0.18	0.4	0.005	0.031	28300	2.83	9.8	13.7	13500	1.35
H42182	1.21	0.33	14800	1.48	0.57	26.4	15.4	4	5.02	637	0.0637	43000	4.3	14.95	0.13	0.4	0.01	0.03	33400	3.34	14.6	14.7	14900	1.49
X16527	1.01	0.23	18300	1.83	0.55	16.2	12.3	6	4.45	151	0.0151	42400	4.24	15	0.14	0.6	0.08	0.02	39900	3.99	8.2	11.1	10000	1
G33283	0.84	0.56	12300	1.23	0.16	20.5	10.9	4	2.65	157.5	0.01575	42100	4.21	16.6	0.17	0.6	0.01	0.046	32900	3.29	9.9	11.1	11200	1.12
H44275	0.5	0.21	12600	1.26	0.32	17.56	10.4	158	4.8	1463.21	0.146321	37800	3.78	12.17		0.15			28900	2.89	7.4	13.9	9000	0.9
G35686	1.11	0.67	32900	3.29	0.4	22.3	8.4	4	2.03	1245	0.1245	40900	4.09	16.65	0.15	0.6	0.01	0.119	23600	2.36	11.7	10.1	9900	0.99
H42176	1.43	0.23	11100	1.11	0.45	22.4	15.5	4	5.21	808	0.0808	45300	4.53	18.25	0.13	0.4	0.01	0.029	34500	3.45	11.8	23	22000	2.2
H42203	1.23	0.24	17100	1.71	0.43	19.9	16.6	6	4.76	421	0.0421	41800	4.18	16.85	0.16	0.4	0.005	0.029	36600	3.66	10.4	13.9	12600	1.26
H43851	0.5	0.06	40600	4.06	0.51	18.33	14.2	24	3.9	494.2	0.04942	44100	4.41	14.7		0.35			28500	2.85	7.9	21.4	19100	1.91
H42165	1.31	2.67	16200	1.62	43.1	27.5	15.5	8	5.34	1260	0.126	53600	5.36	17.4	0.15	0.8	0.69	0.613	31300	3.13	15.4	21.2	18100	1.81
H41675	1.17	0.61	22000	2.2	0.09	20.1	12.9	4	3.78	102.5	0.01025	44200	4.42	18.35	0.17	0.8	0.01	0.07	41200	4.12	10	11.2	11100	1.11

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
H42215	1.02	0.22	54200	5.42	0.24	21.1	15.8	4	4.49	510	0.051	46000	4.6	13.6	0.15	0.4	0.005	0.018	33600	3.36	11.9	16.9	15200	1.52
H42167	1.2	0.45	15200	1.52	0.45	24.9	17.8	6	5.33	422	0.0422	50000	5	16.45	0.15	0.5	0.01	0.06	33900	3.39	13.8	21.2	16900	1.69
H41691	0.83	0.58	18700	1.87	0.31	26	21	4	4.76	1060	0.106	53200	5.32	16.9	0.18	0.5	0.04	0.056	37100	3.71	13	12.7	16100	1.61
G32428	1.33	1.04	16700	1.67	0.21	26.4	11.1	4	4.3	527	0.0527	40100	4.01	17.05	0.22	0.7	0.02	0.037	54600	5.46	16.6	14.7	7500	0.75
H43849	0.5	0.37	20600	2.06	0.9	10.71	30.7	23	4.2	1262.89	0.126289	69400	6.94	15.34		0.34			28500	2.85	3.7	25.1	23300	2.33
X17992	0.87	0.15	11000	1.1	0.23	24.3	11.9	127	4.44	1105	0.1105	39300	3.93	16.55	0.13	0.4	0.01	0.021	23800	2.38	11.2	15.3	13300	1.33
G35667	0.89	0.71	28700	2.87	0.37	17.55	8.2	5	1.84	2090	0.209	46000	4.6	15.4	0.15	0.4	0.02	0.126	20400	2.04	9.2	9	10500	1.05
H43886	0.98	0.16	44200	4.42	0.48	40.5	8.5	12	2.93	794	0.0794	25300	2.53	15	0.12	0.7	0.01	0.036	17300	1.73	22.5	13.5	11900	1.19
X19627	0.5	0.88	31900	3.19	0.76	18.36	8.2	127	1.6	1210.92	0.121092	42100	4.21	13.13		0.43			23300	2.33	7.8	6.4	8300	0.83
X11073	0.8	0.45	15500	1.55	0.42	15.65	6.8	3	2.22	1630	0.163	46600	4.66	16.65	0.12	0.3	0.01	0.091	33400	3.34	7.7	9.3	9000	0.9
H43913	0.5	0.06	64700	6.47	0.49	16.78	22.4	18	4.3	2573.28	0.257328	58300	5.83	14.51		0.28			25400	2.54	6.5	22.4	23300	2.33
G32353	0.99	0.38	31300	3.13	4.05	21.7	13.6	3	2.79	880	0.088	41500	4.15	16.4	0.19	0.3	0.04	0.179	26600	2.66	11.5	13	12200	1.22
H43893	0.9	0.23	44700	4.47	0.55	10.7	17.1	5	3.48	814	0.0814	49400	4.94	14.85	0.15	0.5	0.01	0.042	21500	2.15	5.4	17.2	15100	1.51
X14768	1.1	0.72	15000	1.5	0.24	22.4	9.7	2	3.79	863	0.0863	51000	5.1	16.35	0.18	0.4	0.005	0.103	39000	3.9	10.8	13.4	11200	1.12
H42190	1.61	0.27	9000	0.9	0.22	14.75	11.2	8	5.65	533	0.0533	32900	3.29	17.95	0.11	0.5	0.005	0.023	37500	3.75	7.8	16.9	17400	1.74
X10310	0.5	0.75	7700	0.77	2.41	10.41	11.8	206	1.1	2701.48	0.270148	68200	6.82	10.81		0.07			30600	3.06	3.9	8.6	9000	0.9
G36831	1.56	0.27	22000	2.2	0.09	31.7	13.1	3	4.7	58.3	0.00583	38700	3.87	18.9	0.2	1.2	0.01	0.019	34300	3.43	14.5	10.8	12600	1.26
H43844	0.5	0.07	44400	4.44	0.31	21.38	15.3	23	3.9	794.66	0.079466	35100	3.51	14.55		0.41			26300	2.63	9.5	18.4	13900	1.39
G32282	1.76	0.58	25700	2.57	0.24	33.9	14.4	3	4.41	78.2	0.00782	46200	4.62	18.8	0.22	0.7	0.02	0.045	39300	3.93	15.9	12.8	13600	1.36
H41420	1.03	0.06	15400	1.54	0.46	23.2	16.6	5	4.68	571	0.0571	53300	5.33	17.95	0.17	0.7	0.005	0.019	33600	3.36	12.2	19.3	16500	1.65
G36899	1.05	0.18	6500	0.65	0.39	23.2	5.9	222	5.43	1245	0.1245	40600	4.06	17.15	0.17	0.4	0.02	0.061	33800	3.38	11.8	14.1	10700	1.07
H41075	1.13	1.6	21800	2.18	0.2	15.7	14.1	26	1.7	116.5	0.01165	49400	4.94	17.05	0.27	1.2	0.06	0.005	41800	4.18	8.7	17.3	7000	0.7
X14248	2.13	0.18	19800	1.98	0.39	17.15	15.2	11	3.73	470	0.047	48100	4.81	17.4	0.19	0.4	0.02	0.025	36500	3.65	9.5	42.2	20900	2.09
X05493	1.75	0.19	9600	0.96	0.56	21.4	15.5	29	3.39	837	0.0837	42700	4.27	18.4	0.14	0.5	0.005	0.076	25000	2.5	10.5	43.3	28000	2.8
X06348	1.07	0.47	13800	1.38	4.63	23.3	8.1	3	4.81	1970	0.197	45200	4.52	15.6	0.06	0.4	0.13	0.23	36000	3.6	11.6	6.3	9200	0.92
H43532	0.73	0.38	28200	2.82	0.83	9.47	15.1	10	3	2130	0.213	45400	4.54	11	0.14	0.2	0.08	0.074	26300	2.63	4.8	6.7	10900	1.09
G32087	1.01	0.77	32300	3.23	0.56	17.1	12.6	3	3.8	1710	0.171	44000	4.4	14	0.2	0.2	0.02	0.111	28700	2.87	8.9	15	12000	1.2
H41837	1.11	0.39	20200	2.02	0.24	17.7	11.7	4	4.58	158	0.0158	46600	4.66	17.3	0.2	0.7	0.02	0.026	38600	3.86	8.5	9.6	12300	1.23
H42219	1.06	0.67	23300	2.33	13.95	20.2	15	4	5.58	1650	0.165	45200	4.52	16.5	0.2	0.4	0.03	0.089	36700	3.67	10.7	11	10400	1.04
H41671	1.48	1.52	24600	2.46	0.92	23	17.4	4	4.11	187	0.0187	45400	4.54	18.6	0.19	0.8	0.08	0.154	50100	5.01	11.7	10.2	7800	0.78
X14539	0.98	1.36	15900	1.59	0.95	11.95	10.2	5	3.69	2710	0.271	47600	4.76	14.85	0.13	0.2	0.01	0.264	31700	3.17	6.2	10.5	10900	1.09
G34616	0.76	0.41	8500	0.85	0.48	17.75	6.3	165	3.47	1885	0.1885	38800	3.88	14.45	0.15	0.3	0.02	0.08	29900	2.99	9.3	15.4	11000	1.1
X12194	0.5	0.51	3900	0.39	0.24	5.64	10.2	238	1.4	1478.66	0.147866	57100	5.71	9.85		0.07			21400	2.14	2.5	8.4	8200	0.82
H42234	1.01	0.45	34100	3.41	0.42	18.45	19.3	4	3.69	930	0.093	51000	5.1	18.1	0.19	0.6	0.005	0.048	29500	2.95	8.1	14.5	14400	1.44
H42236	0.87	0.28	33500	3.35	0.42	16.05	11.9	7	2.95	614	0.0614	33400	3.34	17.9	0.17	0.4	0.005	0.031	21400	2.14	8.9	8.9	8900	0.89
H42223	1.07	0.3	37300	3.73	0.52	20.5	16.2	4	5.06	688	0.0688	43300	4.33	15.15	0.16	0.3	0.005	0.087	36200	3.62	11	10.8	10400	1.04
H43870	0.5	0.08	51100	5.11	0.88	13.89	11.6	36	2.9	523.46	0.052346	28400	2.84	12.8		0.41			16800	1.68	6.4	13.6	12700	1.27
H41677	0.97	0.4	18300	1.83	0.11	18.85	9.8	4	3.06	34.3	0.00343	37400	3.74	17.05	0.13	0.7	0.01	0.03	32600	3.26	9.1	12.1	12200	1.22
H42199	1.13	1.28	21700	2.17	48.4	23.9	10.4	11	4.63	491	0.0491	38500	3.85	13.4	0.15	0.3	0.16	0.395	28600	2.86	12.7	10.2	9900	0.99
G35099	0.68	0.59	31600	3.16	0.84	13.25	10.7	173	3.12	3250	0.325	55400	5.54	14.2	0.2	0.3	0.01	0.184	38700	3.87	6.8	12.4	9300	0.93
H42178	1.49	0.29	13200	1.32	0.39	19.15	11.6	8	5.59	962	0.0962	37200	3.72	18.7	0.13	0.5	0.01	0.035	39500	3.95	10.1	14.5	15800	1.58
H43847	0.5	0.04	45900	4.59	0.47	28.92	8.9	21	2.9	364.68	0.036468	34300	3.43	15.86		0.43			20800	2.08	14	20.8	17500	1.75
H41697	0.79	0.33	17200	1.72	0.43	21.4	15.1	4	4.02	652	0.0652	45900	4.59	17.55	0.15	0.5	0.02	0.041	27800	2.78	10.6	10.7	14300	1.43
H41704	1.25	0.39	21400	2.14	0.31	24.4	14.2	4	5.88	671	0.0671	49000	4.9	18.45	0.18	0.5	0.01	0.064	45800	4.58	12.9	15.1	17400	1.74
H42174	1.49	0.44	12900	1.29	1.13	19.3	11.3	7	5.63	644	0.0644	39000	3.9	17.9	0.13	0.6	0.01	0.035	36400	3.64	10.7	20.8	18300	1.83
G33025	1.52	0.07	6100	0.61	0.48	8.13	16.6	9	7.34	649	0.0649	59400	5.94	21.6	0.22	0.4	0.01	0.049	33100	3.31	3.2	46.4	21800	2.18
H43914	0.8	0.07	69800	6.98	0.56	18.95	22.5	8	4.48	1450	0.145	53200	5.32	15.35	0.15	0.5	0.02	0.07	25000	2.5	10.2	20	21000	2.1
H43779	0.5	0.08	7600	0.76	0.35	21.35	18.8	28	4.1	710.1	0.07101	57200	5.72	17.59		0.32			32900	3.29	8.6	29.1	23000	2.3
X14681	0.51	0.42	7800	0.78	0.42	15.25	8	3	1.93	2960	0.296	70500	7.05	16.65	0.18	0.2	0.01	0.109	45300	4.53	7.5	14.9	14200	1.42
G35302	1.12	0.79	21400	2.14	0.31	14.9	8.1	9	2.81	1210	0.121	50000	5	17.2	0.16	0.8	0.03	0.081	42000	4.2	7.1	12.3	10200	1.02

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
G35490	1.73	0.23	29000	2.9	0.19	26.3	22.9	29	1.8	598	0.0598	45300	4.53	18.85	0.21	1.6	0.02	0.077	42100	4.21	12.4	13.5	14800	1.48
H43854	0.5	0.12	46600	4.66	0.55	11.78	9.2	38	3.4	491.85	0.049185	29700	2.97	11.59		0.4			25700	2.57	4.5	10.4	9400	0.94
H41418	1.42	0.06	17300	1.73	0.58	19.75	10.2	5	5.96	319	0.0319	48100	4.81	18.6	0.14	0.7	0.01	0.019	40100	4.01	10.3	19.4	17000	1.7
X12487	1.85	12.35	13600	1.36	16.65	17.05	8.3	5	3.45	1865	0.1865	48700	4.87	16.7	0.16	0.4	0.25	0.737	33000	3.3	9	21.7	18400	1.84
H42258	1.14	0.25	30700	3.07	0.22	21.1	19.2	4	5.81	930	0.093	46400	4.64	18.95	0.19	0.6	0.005	0.05	43900	4.39	10.4	16.1	15800	1.58
G32302	1.84	0.4	22300	2.23	0.3	19.25	12.1	4	5.06	173	0.0173	38300	3.83	18.05	0.16	0.4	0.01	0.029	42300	4.23	9	21	17800	1.78
X14608	0.82	0.43	12700	1.27	0.74	13.95	10	4	2.78	1495	0.1495	50900	5.09	12.95	0.15	0.2	0.02	0.136	32200	3.22	6.9	13.1	11800	1.18
X06923	1	0.25	17100	1.71	0.42	16.03	15.4	103	4	355.34	0.035534	45600	4.56	15.42		0.45			38300	3.83	6.7	18.2	14500	1.45
H43540	1	1.2	23700	2.37	1.49	10.42	13.9	127	4.1	2020.13	0.202013	55000	5.5	14.93		0.29			36100	3.61	3.6	9.7	14500	1.45
H41833	0.82	0.59	17900	1.79	0.14	17.75	9	5	2.44	89.2	0.00892	44300	4.43	17.95	0.18	0.7	0.02	0.066	33200	3.32	8.5	7.1	10300	1.03
X11398	1.39	0.26	10100	1.01	1.53	17.15	11.4	4	4.12	804	0.0804	53200	5.32	17.8	0.13	0.5	0.01	0.052	24900	2.49	8.8	19.5	16400	1.64
G37625	1.71	1.55	16700	1.67	0.22	24.2	12.7	36	3.78	685	0.0685	33700	3.37	18.35	0.15	0.9	0.01	0.188	32500	3.25	11.2	11.4	12300	1.23
X16518	1.11	0.73	19900	1.99	1.82	18.6	12.2	11	4.84	128	0.0128	42200	4.22	16.45	0.13	0.7	0.12	0.067	38600	3.86	9.7	13.6	12600	1.26
H41694	0.86	0.2	20800	2.08	0.29	19.4	17.7	4	4.08	581	0.0581	47600	4.76	16.55	0.15	0.6	0.02	0.051	29800	2.98	9.3	11.9	15600	1.56
G35001	1.07	0.08	8900	0.89	0.13	23.2	14.1	93	6.01	532	0.0532	48000	4.8	19.75	0.18	0.6	0.005	0.025	35300	3.53	12.6	26.5	22500	2.25
G33237	3.27	2.85	25500	2.55	1.83	23.3	12.7	26	4.7	723	0.0723	40700	4.07	14.9	0.18	0.8	0.12	0.047	50600	5.06	15.4	43.2	10900	1.09
H42188	1.29	0.25	15700	1.57	0.56	17.9	10	8	5.39	491	0.0491	34600	3.46	16.5	0.12	0.3	0.005	0.023	33500	3.35	10.2	17.5	15500	1.55
X06531	1	4.71	18000	1.8	6.19	15.75	14.1	59	5.5	921.03	0.092103	43900	4.39	18.46		0.51			40000	4	6.8	16.2	14700	1.47
G35642	1.11	0.44	36900	3.69	0.58	24.5	8.6	3	2.77	1110	0.111	39700	3.97	16.75	0.14	0.7	0.02	0.083	21300	2.13	13.3	15	10600	1.06
G32371	1.13	0.12	36300	3.63	0.44	23.3	17.9	4	3.02	1115	0.1115	42800	4.28	17.2	0.19	0.4	0.01	0.041	31600	3.16	12.1	16.2	13300	1.33
H42232	1.3	0.49	32300	3.23	0.56	26.4	14.5	4	6.46	650	0.065	42300	4.23	18.8	0.19	0.5	0.005	0.049	41500	4.15	14.2	11.8	11900	1.19
H43884	0.77	0.12	63700	6.37	0.73	19.9	8	8	3.05	489	0.0489	27700	2.77	13.8	0.12	0.6	0.01	0.025	19700	1.97	11.1	11.2	10300	1.03
X12493	1.12	1.51	21400	2.14	18.35	10.1	9.6	2	1.28	2550	0.255	38300	3.83	8.92	0.14	0.2	0.4	0.864	17100	1.71	5.2	8.7	6200	0.62
H41446	1.12	0.29	21400	2.14	1.09	19.7	11.4	5	5.54	1685	0.1685	49200	4.92	16	0.16	0.6	0.01	0.046	33800	3.38	10	14.8	13400	1.34
H42213	1.2	0.14	35300	3.53	0.18	24.5	15.2	4	5.47	1110	0.111	42100	4.21	15.3	0.15	0.3	0.005	0.026	35800	3.58	13.9	18	16200	1.62
X06326	1.02	0.52	14500	1.45	0.56	26.9	8.3	4	5.48	970	0.097	48500	4.85	17.25	0.07	0.7	0.01	0.159	38800	3.88	13.9	12.3	12000	1.2
H43861	0.74	0.08	50200	5.02	0.57	14.05	18.1	9	3.71	685	0.0685	41400	4.14	12.25	0.15	0.5	0.01	0.032	24200	2.42	7	14.1	15800	1.58
H42184	1.69	0.47	24900	2.49	0.47	23.3	12	6	4.95	1085	0.1085	44900	4.49	15.8	0.19	0.5	0.02	0.027	32800	3.28	14.4	11.9	13800	1.38
H41827	1.67	1.7	23200	2.32	8.72	24.2	10.6	4	3.63	82.8	0.00828	47800	4.78	17.7	0.2	0.9	0.18	0.255	38800	3.88	14.2	13.6	12200	1.22
H43888	1.11	0.2	41800	4.18	0.39	12.85	11.7	11	3.2	611	0.0611	35300	3.53	14.3	0.12	0.6	0.01	0.04	18900	1.89	6.7	17.1	15600	1.56
X17292	1.47	0.47	29800	2.98	9.67	15	16.7	3	3.45	94.2	0.00942	48000	4.8	15.45	0.21	0.4	0.21	0.072	39500	3.95	7.3	9.4	11900	1.19
H43906	0.72	0.09	15900	1.59	0.18	18.85	10.4	5	3.2	915	0.0915	44700	4.47	14.65	0.14	0.4	0.01	0.027	19900	1.99	10.1	16.4	13200	1.32
X14228	1.98	0.37	33100	3.31	0.51	16	13	3	4.06	129	0.0129	44800	4.48	17.05	0.18	0.5	0.01	0.025	39000	3.9	8.1	18.9	14700	1.47
H44123	1.17	0.17	18400	1.84	0.32	21.6	12.2	4	4.93	793	0.0793	44100	4.41	17.95	0.14	0.5	0.01	0.04	35200	3.52	10.9	17.2	13500	1.35
H42172	1.07	0.23	12300	1.23	0.45	20.4	16.8	15	4.59	671	0.0671	42800	4.28	18.1	0.11	0.7	0.01	0.055	24500	2.45	11.2	34	25700	2.57
X14747	1.01	0.55	16500	1.65	0.16	19.45	8.2	4	3.68	736	0.0736	66200	6.62	16.55	0.16	0.2	0.01	0.112	36300	3.63	9.4	21.1	16800	1.68
X06302	0.8	0.35	10900	1.09	0.67	18.6	10.2	2	4.44	1975	0.1975	49000	4.9	15.55	0.07	0.4	0.01	0.128	33100	3.31	8.5	10.8	10900	1.09
H41831	1.13	0.9	28400	2.84	0.16	19.6	8.2	4	4.37	131.5	0.01315	40300	4.03	17.55	0.2	0.8	0.04	0.062	40700	4.07	9.5	11.2	9700	0.97
G32453	1.35	3.82	26000	2.6	0.16	24.8	16.2	4	4.65	416	0.0416	41100	4.11	17.95	0.19	0.8	0.02	0.099	40200	4.02	15.7	23.8	8800	0.88
X16501	1.81	0.55	21700	2.17	0.22	17.9	12.1	10	4.43	238	0.0238	42100	4.21	16.05	0.13	0.7	0.03	0.038	37200	3.72	9.3	14.6	11100	1.11
H42180	1.44	0.2	16000	1.6	0.31	21	13.9	8	6.01	559	0.0559	36900	3.69	17.9	0.13	0.6	0.005	0.025	38500	3.85	11.9	14.2	15800	1.58
H44093	1.25	0.13	17200	1.72	0.28	24.5	10.1	26	6.11	1075	0.1075	31100	3.11	16.1	0.11	0.5	0.02	0.055	29000	2.9	12	21.8	15200	1.52
E217112	1.07	0.22	13700	1.37	0.4	14.8	9.2	46	4.28	1155	0.1155	23000	2.3	17.5	0.16	0.5	0.01	0.031	42300	4.23	8.4	7.5	8900	0.89
H42227	0.97	0.25	40100	4.01	0.42	18.6	15.1	4	4.42	600	0.06	42500	4.25	17.55	0.18	0.5	0.005	0.03	32800	3.28	8.9	15.5	14400	1.44
G35770	1	0.69	9900	0.99	0.38	14.69	10.8	197	2.6	2467.49	0.246749	54400	5.44	13.88		0.23			33100	3.31	6.6	13.6	12500	1.25
H41666	1.13	1.3	19100	1.91	0.29	18.95	13.2	5	2.59	131	0.0131	40100	4.01	18.4	0.14	0.8	0.03	0.105	42300	4.23	9.4	12	10700	1.07
H43858	0.5	0.07	49000	4.9	0.53	12.24	18.9	32	3.6	743.69	0.074369	44900	4.49	11.37		0.35			21900	2.19	5.2	16.5	18100	1.81
H43527	1.01	0.14	35300	3.53	0.2	19.15	7.6	16	4.34	1260	0.126	34200	3.42	16.1	0.12	0.4	0.005	0.043	35500	3.55	10.6	14.3	17300	1.73
H44104	1.03	0.13	22500	2.25	0.39	20.4	14.1	5	4.65	1285	0.1285	44500	4.45	16.75	0.16	0.4	0.01	0.028	37000	3.7	10.7	17.3	12600	1.26
H42255	0.85	0.22	41800	4.18	0.2	21.2	13.1	4	3.55	561	0.0561	35900	3.59	15.45	0.1	0.5	0.005	0.042	27100	2.71	10.3	15.1	14400	1.44

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
H41048	1.2	1.01	18000	1.8	0.14	14.2	10.6	8	1.59	373	0.0373	30800	3.08	16.7	0.22	0.5	0.08	0.049	44600	4.46	8	10.3	5600	0.56
H43529	1.18	0.37	28800	2.88	0.17	16.25	7	14	4.77	1335	0.1335	34300	3.43	16.45	0.13	0.4	0.01	0.055	38400	3.84	8.9	10.1	15000	1.5
H43900	0.5	0.02	66300	6.63	0.68	22.33	16.7	21	3.4	323.61	0.032361	45600	4.56	14		0.49			17500	1.75	11.7	21.2	19400	1.94
H41043	0.83	0.81	9400	0.94	0.34	12.05	9.8	8	1.96	219	0.0219	17600	1.76	15.85	0.15	0.8	0.06	0.011	40800	4.08	7.2	8.3	3400	0.34
H44109	0.91	0.04	17000	1.7	0.47	24.4	9.6	5	4.46	512	0.0512	40400	4.04	18.55	0.13	0.5	0.01	0.034	39200	3.92	13.1	18.7	14700	1.47
H42260	0.92	0.24	34500	3.45	1.26	16.35	12.5	4	4.53	1330	0.133	35200	3.52	14	0.17	0.3	0.02	0.06	33600	3.36	8.6	9.8	10200	1.02
H42262	1.1	0.19	35700	3.57	0.27	16.15	13.1	5	5.33	559	0.0559	43700	4.37	19.3	0.17	0.5	0.005	0.038	41600	4.16	7.4	14	13000	1.3
H43780	1.04	0.13	6300	0.63	0.39	24.1	20.7	4	4.54	932	0.0932	56900	5.69	18.5	0.16	0.5	0.1	0.064	30000	3	12.7	31.1	22400	2.24
H43776	1.02	0.06	14300	1.43	1.11	23.8	17.3	4	4.84	625	0.0625	57800	5.78	18.05	0.18	0.5	0.01	0.038	26300	2.63	12.1	25.8	21100	2.11
H42206	0.94	0.15	36900	3.69	0.12	25.2	12.2	6	4.49	564	0.0564	38000	3.8	14.2	0.12	0.3	0.005	0.019	31400	3.14	14.2	10.8	11000	1.1
H44091	1.41	0.13	20200	2.02	0.33	31.6	11.8	21	6.02	991	0.0991	34600	3.46	16.35	0.14	0.7	0.02	0.04	29000	2.9	15.4	21	16400	1.64
G33372	1.79	0.27	23600	2.36	0.36	18.2	14.4	4	5.34	141	0.0141	36400	3.64	19.85	0.17	0.7	0.02	0.05	47600	4.76	8.5	16.8	17500	1.75
X09587	0.5	0.12	7600	0.76	0.58	12.06	10.8	153	2.1	1308.54	0.130854	43900	4.39	13.91		0.27			36800	3.68	4.8	15.1	14900	1.49
X12543	2.57	0.73	24600	2.46	0.53	21.2	8	2	4.38	852	0.0852	42000	4.2	19.25	0.16	0.7	0.01	0.128	45600	4.56	10.5	32.3	17900	1.79
X14656	1.02	0.62	11900	1.19	0.72	20.3	8.6	2	4.23	2060	0.206	49500	4.95	17	0.14	0.4	0.01	0.117	39700	3.97	10	12.9	13600	1.36
X12368	1.88	0.29	18000	1.8	0.42	14.65	10.3	4	4.31	2320	0.232	57400	5.74	15.35	0.14	0.3	0.01	0.197	33900	3.39	7.4	21.9	13500	1.35
H43779	1	0.13	8000	0.8	0.6	24.78	13.4	47	4.2	521.03	0.052103	46400	4.64	17.56		0.35			33900	3.39	10.2	23	19000	1.9
X10897	1.03	0.26	12500	1.25	0.46	16.95	9.4	14	2.93	1350	0.135	39800	3.98	19.9	0.09	0.5	0.01	0.062	16600	1.66	9.1	20.7	16500	1.65
G33322	1.12	0.38	25600	2.56	0.21	20.4	15.2	4	2.69	88.4	0.00884	42300	4.23	18.6	0.18	0.7	0.005	0.067	30400	3.04	10.4	14	13300	1.33
G35349	1.6	0.52	26600	2.66	1.34	22.3	7.1	17	3.93	1120	0.112	38500	3.85	18.6	0.17	1	0.09	0.108	45500	4.55	10.9	16.4	11100	1.11
H40229	1	0.16	18200	1.82	1.86	16.38	12.8	89	3.2	894.88	0.089488	44300	4.43	14.67		0.25			34900	3.49	7	14.6	17600	1.76
G36484	2	0.99	84500	8.45	9.31	27.6	25.6	79	2.6	1269.49	0.126949	82500	8.25	13.1		0.9			14800	1.48	13.1	49.7	37700	3.77
E192667	0.88	0.07	23300	2.33	0.23	25.6	16.5	4	4.33	673	0.0673	43100	4.31	17.65	0.19	0.4	0.01	0.009	31800	3.18	13.6	16.6	13900	1.39
G36294	0.78	0.09	19400	1.94	0.44	19.55	14.1	5	3.71	843	0.0843	43500	4.35	16.6	0.15	0.6	0.01	0.032	32300	3.23	10.5	13.2	13800	1.38
H42253	1.22	0.31	47500	4.75	0.23	19	15.4	3	5.69	770	0.077	42200	4.22	16.2	0.14	0.4	0.005	0.043	40100	4.01	9.4	15.1	13800	1.38
H43857	0.84	0.05	41300	4.13	0.34	17.8	14.1	12	4.46	648	0.0648	38400	3.84	14	0.13	0.6	0.01	0.032	25000	2.5	9.7	17.5	19000	1.9
H42225	0.8	0.16	41900	4.19	0.21	24	13.8	5	3.7	568	0.0568	39600	3.96	15.4	0.12	0.4	0.005	0.019	24900	2.49	13.1	14.5	14300	1.43
H41414	1.15	0.08	14000	1.4	0.31	23	9.5	4	5.28	506	0.0506	45500	4.55	20.4	0.13	0.6	0.005	0.034	34600	3.46	11.8	26.8	20200	2.02
G33813	1.51	0.49	19700	1.97	0.11	26.4	12.5	3	4.79	118.5	0.01185	46700	4.67	19.55	0.17	0.4	0.01	0.028	42800	4.28	12.6	16.7	16100	1.61
H41069	0.73	0.63	14400	1.44	0.18	13.4	9.7	9	1.33	469	0.0469	21300	2.13	14.45	0.15	0.7	0.49	0.011	45800	4.58	8.4	6.3	3100	0.31
X12452	1.43	0.23	19300	1.93	1.01	16.8	9.7	237	3.03	2320	0.232	54100	5.41	15.3	0.15	0.4	0.01	0.133	36900	3.69	8.9	16.8	13700	1.37
X06183	0.5	0.53	8800	0.88	0.58	16.43	12.5	130	2.5	1673.83	0.167383	45300	4.53	13.87		0.23			28100	2.81	7.2	16.5	13500	1.35
X11420	1.33	0.19	18600	1.86	3.45	8.47	11.2	4	4.22	1250	0.125	43200	4.32	13.55	0.13	0.3	0.04	0.061	28300	2.83	4.5	5.7	11200	1.12
H41040	1.69	1.97	18900	1.89	0.15	17.55	12.6	6	2.62	177.5	0.01775	37400	3.74	17.55	0.23	0.7	0.04	0.077	43900	4.39	12.5	14.8	9100	0.91
G32060	0.92	0.46	36000	3.6	0.38	17.65	13.7	4	3.53	1445	0.1445	46300	4.63	15.2	0.2	0.3	0.02	0.081	30300	3.03	9	10.5	12900	1.29
X14398	0.88	0.2	25600	2.56	0.55	13.75	14.2	4	1.17	3070	0.307	50400	5.04	14.55	0.17	0.2	0.005	0.134	44800	4.48	7.3	15.6	10900	1.09
H43911	0.8	0.08	56200	5.62	0.56	17.7	14.8	7	3.59	546	0.0546	44800	4.48	13.1	0.12	0.7	0.01	0.036	23300	2.33	10.5	14.2	16600	1.66
X14583	0.47	0.52	21300	2.13	0.76	9.47	14.9	4	2.19	2560	0.256	48800	4.88	9.93	0.15	0.1	0.01	0.137	26400	2.64	4.8	9.7	7400	0.74
H43904	0.69	0.08	51700	5.17	0.03	20.1	20.1	6	3.52	735	0.0735	47300	4.73	13.6	0.14	0.6	0.01	0.054	20600	2.06	11.8	17.4	18000	1.8
X06170	1	0.55	8400	0.84	0.44	19.01	13.4	156	2.8	1632.32	0.163232	47400	4.74	16.19		0.24			30300	3.03	7.2	22.8	16700	1.67
H44106	1.04	0.05	22800	2.28	0.24	20	10	4	4.56	737	0.0737	38200	3.82	17.3	0.14	0.4	0.01	0.013	39800	3.98	10.2	18.9	14200	1.42
X06372	0.89	0.55	19100	1.91	0.49	17.05	7.5	3	3.56	2340	0.234	43000	4.3	14.6	0.025	0.4	0.01	0.162	29400	2.94	8.3	11	9400	0.94
X15026	0.99	0.84	16300	1.63	0.2	22.2	9.7	2	2.26	966	0.0966	46000	4.6	17.7	0.06	0.4	0.01	0.124	33700	3.37	11	11.2	10200	1.02
H40217	1	0.14	18800	1.88	0.5	13.82	12.1	80	3.6	834.73	0.083473	42600	4.26	15.06		0.29			36100	3.61	5.6	16.2	18900	1.89
H43534	1.09	0.42	40400	4.04	0.68	13.6	10.7	12	3.74	1140	0.114	39100	3.91	14.25	0.12	0.3	0.01	0.056	32300	3.23	7.5	8.8	15400	1.54
X11442	0.96	0.26	32300	3.23	0.49	16.55	9.4	4	4.08	710	0.071	40500	4.05	15.05	0.05	0.4	0.01	0.071	29500	2.95	8.2	12.8	12700	1.27
X14308	1.56	0.47	24200	2.42	0.87	17.6	14.9	4	3	1440	0.144	51700	5.17	18.55	0.17	0.4	0.01	0.123	29100	2.91	10.1	27.2	15500	1.55
H43848	0.85	0.07	46600	4.66	0.84	20.8	12.1	8	3.05	609	0.0609	32800	3.28	14.55	0.13	0.5	0.01	0.034	17200	1.72	12.1	18.5	16300	1.63
G33828	1.13	1.36	34100	3.41	0.15	26.8	10.5	4	4.12	476	0.0476	42900	4.29	16.25	0.18	0.9	0.03	0.065	49200	4.92	18.2	16.7	8500	0.85
G35041	0.85	0.56	17200	1.72	0.34	22.5	9.8	99	5.13	1045	0.1045	51000	5.1	18	0.19	0.5	0.01	0.097	38700	3.87	12.3	11.9	9600	0.96

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
G32407	0.97	0.14	40100	4.01	0.4	22.1	12.6	3	2.34	939	0.0939	40200	4.02	15.75	0.18	0.3	0.005	0.045	31200	3.12	11.8	14.2	11500.0	1.15
G36967	1.12	0.24	8900	0.89	0.64	22.9	4.2	3	5.12	1430	0.143	44400	4.44	16.55	0.17	0.5	0.01	0.081	31300	3.13	11.9	16.1	13800	1.38
G35387	1.43	0.07	14300	1.43	0.11	25.2	6.3	17	2.12	745	0.0745	35300	3.53	19.55	0.18	1.3	0.01	0.076	44100	4.41	12.6	10.4	9100	0.91
H41431	1.13	0.13	23200	2.32	0.24	20	13.7	7	6.5	603	0.0603	42500	4.25	17.7	0.16	0.7	0.005	0.042	35800	3.58	10.1	21.9	18100	1.81
H43895	1	0.15	59200	5.92	0.96	18.73	14.5	24	6.3	195.08	0.019508	44100	4.41	16.19		0.45			31500	3.15	9.3	20	19700	1.97
H43903	0.5	0.02	52200	5.22	0.52	19.48	18	30	2.4	601.22	0.060122	47200	4.72	14.36		0.37			13100	1.31	10.1	20.7	20100	2.01
H42217	0.93	0.2	49900	4.99	0.51	24	14	4	4.79	676	0.0676	43200	4.32	16.65	0.2	0.4	0.01	0.021	33800	3.38	12.7	16.8	13800	1.38
G32516	1.01	0.49	31900	3.19	0.08	24.6	9.8	4	1.96	53.9	0.00539	37300	3.73	18	0.21	0.8	0.02	0.084	29400	2.94	13.6	11.4	12400	1.24
H42208	1.13	0.16	33200	3.32	0.36	13.75	8.7	6	4.62	301	0.0301	29100	2.91	16.7	0.11	0.4	0.01	0.042	36500	3.65	7.6	11.3	10300	1.03
H43892	0.5	0.04	27800	2.78	0.34	20.52	8.3	29	3.7	434.88	0.043488	37200	3.72	14.71		0.47			20800	2.08	10.2	20.7	18500	1.85
G32390	1.2	0.12	37400	3.74	0.36	24	13.3	4	2.46	784	0.0784	37300	3.73	15.85	0.21	0.3	0.005	0.044	32700	3.27	12.8	14.3	12300	1.23
H43869	1.02	0.03	41600	4.16	0.26	15.2	9.4	12	3.71	357	0.0357	30900	3.09	16.4	0.11	0.8	0.01	0.02	22500	2.25	7.4	16	15000	1.5
H43910	0.82	0.07	20300	2.03	0.21	19.6	11.4	5	3.32	810	0.081	42700	4.27	15.1	0.13	0.4	0.01	0.026	25400	2.54	10.3	15.3	12200	1.22
X10300	0.5	0.39	5100	0.51	0.47	10.85	8	177	0.9	3281.19	0.328119	60800	6.08	11.96		0.1			44800	4.48	4.3	8.1	6800	0.68
X14372	1.34	0.14	21500	2.15	0.41	16.45	14.4	6	3.12	2310	0.231	44400	4.44	14.9	0.18	0.4	0.01	0.09	40300	4.03	9.5	25.7	15000	1.5
H44112	0.67	0.28	28000	2.8	0.67	21.9	13.5	3	2.78	1110	0.111	39400	3.94	15.3	0.12	0.4	0.01	0.079	27900	2.79	11.8	14.8	11100	1.11
H43929	0.82	0.13	30700	3.07	0.18	12.4	9.7	4	3.03	830	0.083	42300	4.23	11.7	0.1	0.4	0.01	0.053	38100	3.81	5.9	9.9	12700	1.27
X09201	1.23	0.13	23700	2.37	0.6	17.75	12.6	4	5.89	1015	0.1015	47700	4.77	15.65	0.14	0.4	0.01	0.065	45800	4.58	9.9	25	17300	1.73
G33307	1.08	0.27	23700	2.37	0.19	19.25	10.2	3	3.33	127.5	0.01275	37600	3.76	18.1	0.18	0.6	0.005	0.046	37000	3.7	9.7	11.9	12000	1.2
G37985	0.5	0.47	42500	4.25	0.97	15.01	13	117	3	588.45	0.058845	40100	4.01	13.97		0.37			18700	1.87	7.4	14.2	13400	1.34
X11805	0.5	0.46	52000	5.2	0.87	12.94	13.1	96	3.7	840.67	0.084067	34900	3.49	12.74		0.3			28500	2.85	5.6	9.2	11100	1.11
H43846	1.01	0.06	45400	4.54	0.57	18.95	11	8	3.77	399	0.0399	36500	3.65	15.4	0.12	0.5	0.01	0.025	23500	2.35	10	19	14900	1.49
X16693	0.5	0.1	12200	1.22	0.33	14.14	9.2	163	4.8	1426.06	0.142606	38800	3.88	13.61		0.24			36100	3.61	6.3	18.6	14400	1.44
H43854	0.92	0.09	40400	4.04	2.27	10.8	15.4	26	4.27	652	0.0652	38800	3.88	16.15	0.14	0.4	0.05	0.037	27000	2.7	5.2	24.1	23200	2.32
H43856	0.5	0.16	42000	4.2	2.09	8.25	16.7	46	5.6	689.49	0.068949	45100	4.51	9.88		0.3			30300	3.03	3.2	9.1	18800	1.88
H40631	1.21	0.11	16800	1.68	0.34	25.8	19.3	5	2.97	1015	0.1015	49000	4.9	16.2	0.14	0.7	0.005	0.039	36200	3.62	14.9	18.1	12500	1.25
H41017	3	2.07	13900	1.39	0.86	7.79	5.7	101	1.2	257.87	0.025787	20600	2.06	31.45		2.53			26100	2.61	5.4	15.1	4700	0.47
G36315	0.79	0.07	20800	2.08	0.28	20.4	13.3	6	2.67	717	0.0717	39000	3.9	17.2	0.16	0.6	0.005	0.04	36900	3.69	10.9	9.6	11300	1.13
X06662	0.5	0.68	32600	3.26	0.57	13.86	10.3	95	3.2	938.52	0.093852	42900	4.29	16.57		0.29			27600	2.76	6.3	12.7	13800	1.38
G32335	0.87	0.25	45600	4.56	1.75	20.5	13.4	4	3.41	1075	0.1075	35200	3.52	13.9	0.18	0.3	0.03	0.068	27500	2.75	11.2	15.3	12700	1.27
G34513	1	0.79	17000	1.7	3.79	21.95	8	163	4.8	1963.31	0.196331	43800	4.38	14.8		0.34			36100	3.61	9.7	11.4	11800	1.18
G37645	1.32	0.12	35300	3.53	3.86	33.2	11.3	29	2.52	419	0.0419	38800	3.88	17.5	0.17	1	0.14	0.055	19700	1.97	15.5	17.5	16100	1.61
H41699	1	3.92	29400	2.94	28.74	24.61	15	20	3.3	167.87	0.016787	65000	6.5	15.6		1.32			24600	2.46	9.8	19.8	11900	1.19
G36278	0.91	0.1	16900	1.69	0.43	19.9	10.3	29	5.04	858	0.0858	31400	3.14	16.65	0.16	0.4	0.01	0.031	31700	3.17	9.9	13.2	13000	1.3
H41448	0.92	0.24	25700	2.57	0.62	19.95	17.2	4	4.41	701	0.0701	49800	4.98	17.55	0.16	0.6	0.005	0.031	28100	2.81	10.3	21.2	17700	1.77
G34662	0.65	0.1	17200	1.72	0.63	19.55	9.5	152	3.45	1340	0.134	50300	5.03	16.4	0.16	0.4	0.08	0.066	37800	3.78	11.5	14.1	12700	1.27
E192683	0.99	0.21	33200	3.32	0.05	21.8	7.3	23	0.95	23.8	0.00238	33100	3.31	16.35	0.16	0.6	0.01	0.072	11400	1.14	9.7	10.5	13700	1.37
G36991	0.42	0.13	16100	1.61	65.1	16.45	8.9	5	1.71	1400	0.14	42600	4.26	13.25	0.17	0.3	0.73	0.06	28700	2.87	9.2	10	8900	0.89
H43778	1	0.12	13300	1.33	0.95	26.43	15.1	64	5.2	500.14	0.050014	48300	4.83	17.54		0.38			34100	3.41	12.1	25.8	21100	2.11
X14560	0.97	0.56	18700	1.87	0.52	12.7	9.6	3	4.29	2190	0.219	52400	5.24	16.15	0.16	0.2	0.01	0.172	34100	3.41	6.2	18.5	19800	1.98
H41036	1.66	1.08	34600	3.46	0.22	24	10.6	17	2.06	374	0.0374	32000	3.2	16.55	0.21	0.6	0.02	0.074	42200	4.22	15.3	9.6	3800	0.38
X10872	0.84	0.2	26400	2.64	0.6	13.65	8.1	11	2.87	821	0.0821	33500	3.35	19.05	0.08	0.5	0.01	0.051	16900	1.69	7	18.2	15600	1.56
H43877	0.9	0.06	50900	5.09	0.43	15.5	11.1	9	2.92	446	0.0446	35800	3.58	14.8	0.11	0.6	0.01	0.032	17900	1.79	7.6	16.6	15300	1.53
G37583	1.28	0.26	38300	3.83	0.52	20.9	12.5	5	3.91	420.00	0.042	40700	4.07	14.85	0.15	0.6	0.01	0.033	32600	3.26	10.2	13.2	10400	1.04
X14327	1.67	0.11	11800	1.18	0.33	19.9	13.4	4	1.91	840	0.084	44500	4.45	18.55	0.19	0.5	0.005	0.048	35900	3.59	11.8	20.4	15000	1.5
H41691	0.5	2.03	31100	3.11	1.21	29.82	16.7	46	1.7	266.13	0.026613	80000	8	16.43		1.06			34500	3.45	13.2	28.5	18700	1.87
H43880	0.83	0.07	49500.0	4.95	0.56	18.6	12	10	3.49	474	0.0474	38300	3.83	15.2	0.12	0.5	0.01	0.027	19900	1.99	9.6	16.3	14800	1.48
H43881	0.74	0.07	46500	4.65	0.59	19.75	10.8	9	3.37	704	0.0704	42900	4.29	15.65	0.13	0.6	0.01	0.039	20500	2.05	10.4	16.7	15600	1.56
H44127	1.3	0.1	45500	4.55	0.56	20.9	12.7	4	7.46	808	0.0808	42800	4.28	16.3	0.15	0.5	0.01	0.041	37500	3.75	11.1	13.7	10500	1.05
X14702	1.02	0.82	20100	2.01	0.22	25.8	8.1	2	3.69	722	0.0722	51300	5.13	17.55	0.16	0.6	0.005	0.123	45800	4.58	13.3	12.8	9700	0.97

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
G35450	1.33	0.39	44500	4.45	6.27	34.8	12.8	28	1.52	1310	0.131	39800	3.98	19.4	0.21	1.2	0.36	0.103	42600	4.26	19.9	12.4	18000	1.8
G36474	0.5	0.17	24100	2.41	0.73	18.92	11.2	169	3.5	957.99	0.095799	37300	3.73	12.43		0.19			22500	2.25	8.7	16.4	11400	1.14
G36085	0.5	0.45	24100	2.41	0.39	13.14	9.9	155	2.3	2465.22	0.246522	46500	4.65	12.49		0.11			24200	2.42	5.6	15.3	13200	1.32
H41077	1.35	5.43	20900	2.09	0.58	39.2	4.7	10	2.11	412	0.0412	23900	2.39	17.5	0.18	1.3	0.13	0.031	45000	4.5	29.6	44.3	8200	0.82
H43898	1	0.13	43700	4.37	0.57	33.75	11.1	23	5.4	348.21	0.034821	45000	4.5	16.14		0.53			35000	3.5	14.1	23.5	25300	2.53
H43899	0.66	0.05	55400	5.54	0.43	19.25	10.5	7	2.72	425	0.0425	45800	4.58	11.7	0.1	0.4	0.01	0.021	20700	2.07	10.3	15.6	22900	2.29
X17305	1.18	0.35	39900	3.99	4.78	21.5	13	3	3.36	549	0.0549	41800	4.18	15.7	0.21	0.5	0.11	0.122	30300	3.03	10.3	12.2	14700	1.47
H44125	1.18	0.08	29900	2.99	0.29	20.9	14.3	3	6.13	882	0.0882	40600	4.06	17.05	0.13	0.4	0.05	0.031	38200	3.82	10.9	18.8	14300	1.43
X14418	2.07	0.28	33000	3.3	0.51	15.8	13.3	4	5.19	1535	0.1535	44700	4.47	18.5	0.19	0.4	0.01	0.106	48700	4.87	8.1	39	16400	1.64
X05422	0.8	0.02	2900	0.29	0.04	11.5	26.4	9	1.04	23	0.0023	86800	8.68	19.35	0.15	0.7	0.01	0.074	8600	0.86	5.2	122.5	37000	3.7
H41071	0.92	0.65	27200	2.72	0.16	11.7	10.9	9	1.52	375	0.0375	21700	2.17	16.05	0.19	0.6	0.06	0.016	40600	4.06	6.6	12.7	3200	0.32
X15681	0.5	0.13	16200	1.62	0.47	15.04	8.5	207	2.3	2121.89	0.212189	34200	3.42	13		0.25			38500	3.85	6.5	12.8	8600	0.86
H41711	0.5	0.63	19400	1.94	0.71	15.87	17.1	33	2.5	98.23	0.009823	48700	4.87	14.99		0.56			29000	2.9	6.3	16.7	13000	1.3
X19614	0.5	0.43	35500	3.55	0.7	18.2	7.3	122	1.3	1551.73	0.155173	33200	3.32	15.33		0.36			16300	1.63	6.7	7.5	8600	0.86
H43901	0.89	0.08	58700	5.87	0.49	22.7	14.1	6	3.57	429	0.0429	37400	3.74	16.25	0.13	0.5	0.01	0.034	18800	1.88	12.1	15.6	16600	1.66
H41437	1.18	0.1	27900	2.79	0.4	23.9	13.1	2	7.1	705	0.0705	45100	4.51	18.1	0.18	0.6	0.01	0.029	38800	3.88	12.8	18.3	15100	1.51
H42099	0.5	0.39	33300	3.33	0.46	19.26	12.5	50	2.9	543.52	0.054352	42300	4.23	16.15		0.44			24900	2.49	8.1	17.3	12500	1.25
H43852	0.92	0.07	45500	4.55	0.54	15.7	11.7	10	4.53	448	0.0448	37000	3.7	15.7	0.13	0.6	0.01	0.032	28000	2.8	7.5	21.3	19200	1.92
H43863	0.75	0.05	56800	5.68	0.34	16.25	11.3	10	3.14	413	0.0413	31200	3.12	13.25	0.1	0.6	0.01	0.02	19000	1.9	8.3	12.1	12200	1.22
X15439	0.5	0.24	13900	1.39	0.46	16.07	12.4	196	2.4	1615.3	0.16153	44900	4.49	13.54		0.33			34500	3.45	7.1	15.1	18700	1.87
H42229	0.89	0.11	51500	5.15	0.43	17.9	12.5	4	4.89	513	0.0513	40200	4.02	15.7	0.18	0.5	0.005	0.026	34500	3.45	9.1	15.1	14600	1.46
H41079	1.76	2.42	22500	2.25	1.4	54.8	4.4	33	7.64	420	0.042	24100	2.41	19.55	0.21	1.6	0.26	0.029	22200	2.22	40.8	103.5	13200	1.32
H41689	1	1.24	26700	2.67	0.08	17.94	15.2	52	2	167.8	0.01678	68500	6.85	17.13		1.48			37900	3.79	7	19.7	12700	1.27
E217198	1.08	0.41	25900	2.59	0.63	21.7	12.7	3	1.57	1725	0.1725	45800	4.58	15.5	0.2	0.4	0.01	0.154	40400	4.04	12	9.4	10600	1.06
H41689	0.99	0.31	29100	2.91	0.54	21.8	12.5	4	5.56	571	0.0571	42000	4.2	17.65	0.15	0.7	0.03	0.06	41000	4.1	11.1	9.2	16300	1.63
H41045	1.02	0.8	33100	3.31	0.14	11.95	11.9	9	1.5	569	0.0569	24400	2.44	15.8	0.21	0.7	0.08	0.055	43700	4.37	6.9	9.9	4900	0.49
H41364	0.5	0.27	37200	3.72	0.64	17.94	11.3	63	3.1	777.42	0.077742	40300	4.03	13.83		0.39			27200	2.72	7.7	15.1	12200	1.22
G33872	0.94	0.99	67900	6.79	0.18	32.4	14.5	3	2.56	50.6	0.00506	42500	4.25	14.45	0.19	0.8	0.01	0.025	47600	4.76	22.2	8.8	5600	0.56
G35359	1.38	0.14	15600	1.56	1.39	25.8	10.7	29	2.21	1575	0.1575	45900	4.59	17.4	0.19	1	0.09	0.119	41800	4.18	13.3	12.5	12300	1.23
H43777	1.14	0.09	12600	1.26	1.08	27.2	17.5	4	5.14	616	0.0616	46500	4.65	19.4	0.16	0.5	0.01	0.035	28100	2.81	15	33.9	24400	2.44
H41694	0.5	3.57	29200	2.92	1.78	26.62	28.8	52	1.5	147.69	0.014769	70200	7.02	15.11		0.91			28400	2.84	12	26.5	19000	1.9
H41354	1	0.38	33800	3.38	0.3	22.31	13.6	29	3.2	419.38	0.041938	44000	4.4	17.28		0.33			29100	2.91	9.7	17.5	13800	1.38
E217134	0.84	0.33	39500	3.95	0.41	18.5	14.9	3	1.54	1020	0.102	42700	4.27	14.65	0.19	0.4	0.01	0.058	14100	1.41	9.8	15	11900	1.19
H41542	1	0.14	31900	3.19	0.2	16.51	10.1	54	4.2	729.38	0.072938	42900	4.29	16.33		0.35			39100	3.91	7.3	20.2	17700	1.77
X19380	1	0.09	22600	2.26	0.2	18.8	11.9	71	3.6	891.67	0.089167	44000	4.4	15.54		0.29			38900	3.89	8.4	18.2	14700	1.47
H42087	0.5	0.3	28400	2.84	0.33	17.31	12.8	76	2.7	536.7	0.05367	41700	4.17	16.29		0.44			28000	2.8	7.7	17.1	13100	1.31
H44089	0.95	0.3	44700	4.47	0.61	27.7	13.6	18	3.83	955	0.0955	36400	3.64	14.7	0.14	0.7	0.05	0.104	25300	2.53	13.1	18	15200	1.52
H41424	0.88	0.12	27900	2.79	0.62	24	15.8	6	4.15	505	0.0505	49200	4.92	17.85	0.17	0.6	0.005	0.022	28300	2.83	13.1	20.3	17000	1.7
E192620	1.01	0.81	21500	2.15	1.3	27	12.2	4	4.97	768	0.0768	36000	3.6	16.45	0.19	0.5	0.02	0.104	41400	4.14	15.6	17.1	13200	1.32
H43778	1.06	0.08	16200	1.62	1.34	24.6	15.5	4	4.68	572	0.0572	43900	4.39	16.7	0.15	0.5	0.01	0.032	28200	2.82	13.5	23.5	20600	2.06
X12593	1.99	0.37	35600	3.56	1.14	19.65	8.4	3	5.86	1230	0.123	34700	3.47	17.75	0.17	0.5	0.02	0.091	39400	3.94	10.9	23.4	10600	1.06
H41450	1.16	0.15	28500	2.85	0.48	21.9	14.6	4	5.9	1070	0.107	45800	4.58	19.75	0.18	0.7	0.01	0.039	38600	3.86	11.8	15.7	13800	1.38
H41687	1	0.77	27100	2.71	0.06	13.55	19	61	2.7	149.4	0.01494	64900	6.49	15.12		0.67			43100	4.31	5	18.6	15000	1.5
X11797	0.5	0.3	54700	5.47	0.7	15.21	9.6	96	3.9	751.08	0.075108	36300	3.63	13.7		0.35			31400	3.14	6.3	10.5	13100	1.31
E192601	0.7	0.08	19900	1.99	0.38	24.4	13.7	4	3.86	1140	0.114	40200	4.02	17.6	0.16	0.6	0.01	0.032	31400	3.14	13.3	14.6	14400	1.44
H43775	1	0.05	15800	1.58	0.94	26.07	11.9	35	5.7	400.47	0.040047	45500	4.55	17.96		0.3			33000	3.3	11.8	24.2	20500	2.05
G34602	0.81	0.15	13900	1.39	0.34	15.5	6.3	155	4.78	1785	0.1785	30900	3.09	16	0.13	0.4	0.02	0.059	35300	3.53	8.9	10.9	9400	0.94
E217155	1.17	0.36	27500	2.75	0.57	11.95	9.6	2	4.62	1215	0.1215	29300	2.93	19.4	0.16	0.3	0.01	0.098	45900	4.59	6.4	10.9	7800	0.78
H43897	1.71	0.24	38900	3.89	0.64	13.7	15.5	7	7.58	432	0.0432	40000	4	14.95	0.12	0.6	0.02	0.039	38000	3.8	6.9	12.1	16800	1.68
G34638	0.48	0.12	15700	1.57	1.66	16.35	9.4	143	2.07	2540	0.254	37000	3.7	12.95	0.15	0.3	0.03	0.092	30100	3.01	9.5	9.5	8500	0.85

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
H43843	0.91	0.08	37600	3.76	0.34	14.7	12.7	10	3.54	456	0.0456	37800	3.78	14.25	0.11	0.5	0.02	0.035	20800	2.08	7.5	18.9	15900	1.59
H43850	0.74	0.04	37900	3.79	0.5	20.3	10.9	10	3.32	450	0.045	39100	3.91	15.95	0.14	0.6	0.01	0.036	17800	1.78	11.2	19.6	17100	1.71
H41439	0.9	0.08	33100	3.31	0.48	21	12.3	3	4.72	623	0.0623	39300	3.93	16.4	0.16	0.6	0.005	0.023	28600	2.86	11.4	18.2	16000	1.6
H41033	1.19	2.05	31700	3.17	0.35	15.7	8.7	6	2.41	919	0.0919	32100	3.21	16.45	0.16	0.6	0.05	0.107	45800	4.58	10.3	13.3	7000	0.7
H43871	1.04	0.05	49400	4.94	0.38	15.3	7.5	10	3.56	287	0.0287	27400	2.74	17.2	0.1	0.6	0.01	0.023	20000	2	7.3	18.8	17200	1.72
X09610	1	0.2	25900	2.59	0.65	17.79	11.7	117	3.5	1467.22	0.146722	43500	4.35	14.91		0.32			38900	3.89	8.5	16.9	15200	1.52
G34490	0.5	0.13	16900	1.69	0.68	24.4	9.9	87	3.4	1244.89	0.124489	41900	4.19	15.1		0.38			37500	3.75	11.5	11.3	9100	0.91
H43779	0.92	0.04	7400	0.74	0.53	25.6	13.7	6	4.48	547	0.0547	54500	5.45	18.1	0.15	0.5	0.01	0.042	28500	2.85	13.9	31.9	23900	2.39
H41039	2.63	1.5	40200	4.02	1.69	33.7	13.7	27	4.19	893	0.0893	31800	3.18	19.5	0.24	1.1	0.18	0.048	44800	4.48	20.4	21.2	9200	0.92
E192642	1.14	0.06	19300	1.93	0.31	29	12.1	3	6.22	1330	0.133	36000	3.6	19.2	0.17	0.8	0.01	0.03	41900	4.19	15.2	16.4	12700	1.27
X19391	0.5	0.24	45000	4.5	0.39	18.64	13	81	2.8	993.76	0.099376	41300	4.13	13.01		0.27			27400	2.74	9	16.9	12300	1.23
9426	1.67	0.48	31900	3.19	0.18	25.5	13.6	8	3.38	334	0.0334	37900	3.79	18.5	0.09	1.5	0.02	0.056	43600	4.36	14.3	15.6	10300	1.03
G37020	0.5	0.19	24600	2.46	0.92	20.41	11.7	143	3.6	1532.75	0.153275	41500	4.15	14.94		0.32			37200	3.72	10.2	15.9	13300	1.33
H41714	1	1.2	42000	4.2	0.48	20.24	27.8	30	2.9	89.05	0.008905	60800	6.08	14.9		0.55			27000	2.7	8.2	28.4	18800	1.88
G35715	0.59	0.1	13900	1.39	0.3	15.9	8.7	8	1.84	1585	0.1585	51000	5.1	12.65	0.12	0.2	0.01	0.118	17600	1.76	9.4	18.6	12400	1.24
H43875	0.89	0.02	49300	4.93	0.23	18.3	9.2	11	2.94	401	0.0401	34400	3.44	15.1	0.1	0.6	0.01	0.02	16200	1.62	8	16.7	15800	1.58
G35470	1.22	0.21	46500	4.65	0.25	24.3	17.2	35	1.42	449	0.0449	19400	1.94	16.6	0.19	1	0.04	0.086	39600	3.96	13.3	9.1	8300	0.83
H40624	1.16	0.1	26900	2.69	0.36	22.3	14	5	5.17	1045	0.1045	39600	3.96	17.1	0.13	0.6	0.005	0.036	47900	4.79	12.3	23.9	15000	1.5
X15038	0.5	0.6	14400	1.44	0.24	18.45	8.5	127	2.9	1341.55	0.134155	47700	4.77	15.99		0.29			37600	3.76	8	15.4	13500	1.35
E192656	1.54	0.05	18700	1.87	0.03	29.3	8.7	4	6.83	918	0.0918	28800	2.88	18.3	0.18	0.8	0.01	0.031	43000	4.3	15.5	18.6	11600	1.16
X14347	1.38	0.14	18700	1.87	0.22	16.5	10.8	5	2.27	905	0.0905	41600	4.16	17.4	0.18	0.5	0.005	0.07	30100	3.01	9.3	18.3	12800	1.28
H43776	1	0.02	14600	1.46	1.11	21.44	13.4	21	4	464.28	0.046428	47600	4.76	18.33		0.28			25700	2.57	9.6	32.5	27200	2.72
G37551	1.13	0.25	16300	1.63	0.6	21.8	10.9	4	3.99	1355	0.1355	45400	4.54	15.2	0.13	0.5	0.02	0.065	37800	3.78	12.1	15.3	14900	1.49
G37010	0.62	0.08	25900	2.59	0.62	21.2	9.3	4	2.03	1065	0.1065	41000	4.1	15.4	0.16	0.4	0.01	0.077	33300	3.33	12.1	9.9	8700	0.87
X09996	0.5	0.14	15100	1.51	0.46	15.67	6.9	143	2.5	1819.92	0.181992	34200	3.42	12.42		0.24			30500	3.05	7.1	9.7	8300	0.83
H41705	1	0.12	9600	0.96	0.45	21.81	12.9	61	6.6	2235.92	0.223592	33900	3.39	18.86		0.54			28500	2.85	8.9	27	14400	1.44
X05908	1	0.25	28300	2.83	0.62	14.54	11.1	114	4.1	1448.4	0.14484	51600	5.16	12.94		0.28			43900	4.39	6.7	17.4	16200	1.62
G37010	0.5	0.09	24400	2.44	0.61	17.03	10.3	153	2.1	1028.39	0.102839	40800	4.08	13.67		0.28			34300	3.43	8.1	9.7	9300	0.93
X09254	1.06	0.07	16700	1.67	0.55	18.05	12.4	6	5.42	1100	0.11	40000	4	14.7	0.16	0.3	0.01	0.052	40400	4.04	10.7	23.4	15300	1.53
H41433	0.8	0.07	34700	3.47	0.38	22.3	7.1	5	6.01	161.5	0.01615	35900	3.59	17.75	0.16	0.7	0.005	0.028	32400	3.24	11.6	14.7	17200	1.72
H41719	1	0.4	33000	3.3	0.75	23.23	13.7	41	2.6	111.31	0.011131	41900	4.19	17.08		0.88			30900	3.09	9.3	16.5	10900	1.09
X14726	0.54	0.16	29800	2.98	0.28	16.25	9.6	3	1.94	930	0.093	52000	5.2	12.1	0.15	0.2	0.005	0.074	33200	3.32	8.4	11.4	9100	0.91
H40627	0.92	0.06	20500	2.05	0.2	22.5	11.4	4	2.98	933	0.0933	42800	4.28	17.15	0.13	0.7	0.005	0.043	31400	3.14	12.3	19.4	14700	1.47
X09311	0.98	0.05	18400	1.84	0.66	19.85	13.4	6	3.23	1265	0.1265	41300	4.13	16.45	0.16	0.3	0.01	0.03	40000	4	11.5	16.1	12400	1.24
X16704	1	0.12	31600	3.16	0.2	17.03	11.7	111	5	770.32	0.077032	42300	4.23	15.95		0.3			39800	3.98	7.7	18.6	13200	1.32
H41681	0.5	3.78	40100	4.01	0.16	22.02	18.3	158	2	1539.52	0.153952	118400	11.84	17.86		0.74			36600	3.66	9.9	22.3	22800	2.28
X12513	1.71	0.21	27100	2.71	0.34	23.1	8.3	2	3.17	870	0.087	38200	3.82	18.05	0.16	0.5	0.01	0.072	34200	3.42	12.3	23.4	11300	1.13
H41435	0.9	0.08	26600	2.66	0.27	21.6	9.2	2	4.89	357	0.0357	41300	4.13	16.75	0.15	0.7	0.005	0.021	29400	2.94	11.2	24.4	20200	2.02
H41721	0.5	0.24	21400	2.14	0.1	20.46	11.8	46	1.4	23	0.0023	45700	4.57	17.98		0.84			25900	2.59	8.4	18.8	13300	1.33
G37573	0.85	0.005	21700	2.17	0.44	24.8	13.6	4	2.9	1180	0.118	46700	4.67	16.35	0.14	0.5	0.01	0.049	36000	3.6	13	11.7	13200	1.32
X15672	0.5	0.1	17600	1.76	0.65	17.04	11.9	165	1.5	1557.54	0.155754	47100	4.71	13.28		0.3			32700	3.27	8.2	9	8900	0.89
G37041	0.5	0.02	20700	2.07	0.68	23.94	12.3	89	3.2	1147.68	0.114768	43400	4.34	16.04		0.43			44100	4.41	11.8	17.2	14200	1.42
H41697	1	1.25	40300	4.03	0.36	19.61	17.3	18	2.8	60.38	0.006038	47500	4.75	15.35		1.07			31900	3.19	9.3	26.9	18900	1.89
H41083	1.79	3.08	50700	5.07	0.22	52.7	6.7	19	5.53	440	0.044	31400	3.14	16.55	0.2	1.4	0.09	0.039	29000	2.9	48.4	43.6	19500	1.95
E192579	0.57	0.04	14300	1.43	0.61	21.3	10.4	4	1.98	726	0.0726	40300	4.03	15	0.13	0.6	0.01	0.02	37300	3.73	12.7	10.9	11200	1.12
G35331	1.06	0.08	12600	1.26	0.12	14.5	4.9	2	1.87	1320	0.132	37100	3.71	18.45	0.17	1.1	0.01	0.031	43500	4.35	8.5	6.5	5500	0.55
G23392	0.5	0.14	34000	3.4	0.9	24.37	10.3	58	3.2	2888.91	0.288891	42600	4.26	14.6		0.33			34300	3.43	11.3	12.5	11000	1.1
X09180	0.66	0.16	19600	1.96	0.27	16.3	10.2	5	2.64	1335	0.1335	42800	4.28	14.05	0.13	0.3	0.01	0.073	41300	4.13	9.7	12.6	8500	0.85
H44042	1.77	2.59	32700	3.27	0.13	11.55	3.2	2	3.81	929	0.0929	18900	1.89	24.4	0.08	2	0.01	0.041	40700	4.07	7.6	35.3	5900	0.59
X12204	0.5	0.52	16700	1.67	0.35	10.03	8.7	240	1.2	799.19	0.079919	52800	5.28	9.21		0.11			22000	2.2	4.8	11	12200	1.22

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
E192502	0.5	0.07	38900	3.89	1.08	18.94	9.5	98	2.2	1203.8	0.12038	37500	3.75	13.17		0.25			32300	3.23	9.4	9.6	9700	0.97
X05897	0.5	0.35	33500	3.35	0.43	16.75	10	78	3.7	1338.88	0.133888	51800	5.18	13.44		0.24			43000	4.3	8.1	14.9	14000	1.4
H41081	2.46	3.18	41800	4.18	0.91	68.2	6	21	7.52	598	0.0598	32000	3.2	19.25	0.25	1.5	0.13	0.086	24500	2.45	57.7	62.4	24600	2.46
H41683	0.5	1.72	38000	3.8	0.07	19.16	24.3	145	1.8	75.68	0.007568	77200	7.72	17.32		0.64			39400	3.94	8.5	34.4	35900	3.59
X05681	0.5	0.15	25100	2.51	0.68	21.61	8.8	134	4.3	1400.32	0.140032	47500	4.75	14.99		0.27			46400	4.64	10.5	14.1	14700	1.47
X09224	0.69	0.06	18000	1.8	0.51	17.05	10.3	5	2.66	1425	0.1425	44100	4.41	16.4	0.15	0.4	0.01	0.058	49800	4.98	9.1	12.8	11500	1.15
X12563	1.53	0.12	36300	3.63	0.39	20.5	9.1	3	3.04	1130	0.113	35900	3.59	17	0.16	0.5	0.005	0.054	37200	3.72	11	18.7	8600	0.86
H41685	0.5	0.72	30700	3.07	0.07	20.7	9.5	115	2.4	91.75	0.009175	79600	7.96	18.01		0.85			40600	4.06	9.4	33.1	28300	2.83
G35312	0.91	0.14	30800	3.08	0.2	20.1	6.5	8	2.1	1395	0.1395	37700	3.77	16.95	0.18	1	0.02	0.053	45800	4.58	8.8	8.6	7200	0.72
X09282	0.76	0.06	19800	1.98	0.5	18.25	12.1	5	2.54	1555	0.1555	47700	4.77	15.45	0.16	0.3	0.005	0.048	40800	4.08	10	17.4	12000	1.2
H41717	0.5	0.35	53900	5.39	46.9	17.25	23	28	2	100.43	0.010043	54600	5.46	14.41		0.48			29900	2.99	7.7	27.9	19700	1.97
G35426	1.88	0.04	35500	3.55	0.11	23.8	11.4	31	3.17	993	0.0993	24500	2.45	16.6	0.17	1	0.01	0.083	36000	3.6	13.3	18.1	18600	1.86
H41094	2	3.91	84900	8.49	0.44	47.83	5.9	38	3.4	299.96	0.029996	25900	2.59	14.53		0.97			27000	2.7	35.2	28.6	17800	1.78
E192490	0.5	0.06	22700	2.27	0.5	21.95	11.1	118	2.9	1220.29	0.122029	45900	4.59	14.12		0.28			37100	3.71	11.1	11.4	11500	1.15
X05690	0.5	0.06	23300	2.33	0.58	19.06	11.4	114	3.7	1730.26	0.173026	55100	5.51	14.73		0.22			44400	4.44	8.9	13.4	12300	1.23
G35377	0.92	0.04	23100	2.31	0.17	21.3	6.3	30	0.8	584	0.0584	34700	3.47	15.35	0.17	1	0.01	0.102	49300	4.93	10.9	4.5	5100	0.51
X09983	0.5	0.04	63900	6.39	0.21	18.64	15.9	202	0.5	467.02	0.046702	53800	5.38	16.4		0.49			6200	0.62	9	13.9	18500	1.85
G22294	0.5	0.06	37200	3.72	0.18	15.88	32.8	36	1.9	150.18	0.015018	72900	7.29	16.61		0.39			23200	2.32	7.1	26.1	34100	3.41
X09301	1.09	0.04	65600	6.56	0.09	9.55	36.5	134	2.26	94	0.0094	59300	5.93	14.9	0.13	0.8	0.005	0.055	17900	1.79	3.8	32	48200	4.82
G37569	0.88	0.005	55900	5.59	0.25	10	39.4	134	2.3	44.3	0.00443	61600	6.16	15.3	0.18	1	0.005	0.057	18000	1.8	3.2	36	52600	5.26
H41679	0.5	0.43	83500	8.35	0.12	20.16	16.7	26	2.9	121.57	0.012157	41900	4.19	12.26		0.65			32500	3.25	9.6	24.2	20500	2.05
X16090	0.88	0.22	3000	0.3	0.03	11	18.4	6	2.21	556	0.0556	41900	4.19	17.15	0.07	0.4	0.01	0.019	41100	4.11	6.5	11.6	6500	0.65
67907	1.19	0.27	4700	0.47	0.06	11.85	15.2	15	9.5	1245	0.1245	42300	4.23	17.95	0.16	0.6	0.04	0.045	47100	4.71	6.9	21.1	16900	1.69
X16106	1.25	0.16	11800	1.18	0.06	12.8	14.6	13	5.85	429	0.0429	35000	3.5	14.85	0.025	0.3	0.02	0.022	45700	4.57	8	21.4	18700	1.87
H40514	1.46	0.5	13500	1.35	0.14	11.8	13.1	12	3.58	722	0.0722	42800	4.28	15.1	0.17	0.5	0.04	0.033	44600	4.46	6.6	46	10600	1.06
X16124	1.35	0.23	17000	1.7	0.06	10.65	12.4	5	5.46	294	0.0294	34800	3.48	15.9	0.025	0.4	0.01	0.035	37400	3.74	6.5	27.6	17300	1.73
H40509	1.3	1.17	14400	1.44	0.19	12.25	19.7	23	1.15	2370	0.237	51200	5.12	15.1	0.2	0.5	0.03	0.04	41300	4.13	6.6	20.8	5100	0.51
H40505	1.19	0.89	12300	1.23	0.16	9.78	14	8	1.5	1200	0.12	38700	3.87	15.9	0.17	0.6	0.03	0.041	41100	4.11	5.4	13.4	4000	0.4
H40503	1.35	0.59	13100	1.31	0.07	11.45	11.9	6	3.09	657	0.0657	33300	3.33	16.35	0.17	0.5	0.09	0.041	42900	4.29	6.3	32.8	10400	1.04
X16807	1.26	0.23	16900	1.69	0.01	11.05	14.2	8	2.99	790	0.079	37200	3.72	17.7	0.13	0.5	0.01	0.034	45300	4.53	6	16.1	16600	1.66
67993	1.75	0.65	8900	0.89	0.03	5.66	5.5	3	2.14	1225	0.1225	21100	2.11	25.9	0.12	1	0.03	0.055	52300	5.23	3.5	7.1	3300	0.33
X16946	1.28	0.38	17900	1.79	0.06	11.45	17.4	13	2.43	2270	0.227	47700	4.77	17.3	0.13	0.3	0.02	0.062	50000	5	6.8	16.2	13700	1.37
X16243	1.76	0.95	20500	2.05	0.04	10.85	14.1	6	2.3	2090	0.209	43600	4.36	14.7	0.07	0.4	0.08	0.107	42300	4.23	6.3	17.5	7200	0.72
H40512	1.3	0.7	19600	1.96	0.11	10.5	15	14	1.67	610	0.061	32600	3.26	15.3	0.17	0.4	0.04	0.044	41800	4.18	5.3	34.9	8100	0.81
9310	2.38	3.58	6400	0.64	1.3	10.25	2	1	3.61	552	0.0552	13300	1.33	35.4	0.13	1.2	0.13	0.028	52100	5.21	5.8	18.8	3100	0.31
H40557	1	2.24	18900	1.89	0.07	7.09	15.7	92	3.2	1173.93	0.117393	48700	4.87	16.47		0.3			48200	4.82	3.1	40.1	12300	1.23
8317	1.7	0.82	13900	1.39	0.03	6.31	4.1	2	1.98	844	0.0844	21300	2.13	26.5	0.11	1.1	0.02	0.057	60300	6.03	3.1	8	3900	0.39
H40501	1.51	0.4	20700	2.07	0.15	8.39	21.7	33	4.63	1005	0.1005	50100	5.01	15.8	0.19	0.4	0.03	0.042	40400	4.04	4.2	52.3	11900	1.19
X16263	1.44	1.06	19500	1.95	0.13	18.4	5.1	2	1.6	288	0.0288	27200	2.72	21.1	0.025	1	0.02	0.044	50500	5.05	9.3	14.4	5000	0.5
G36128	1.39	0.56	22000	2.2	0.15	12	10.4	13	3.35	1050	0.105	25500	2.55	20.5	0.13	1.1	0.02	0.088	52400	5.24	6.9	9.5	5400	0.54
X16310	1.63	0.28	30200	3.02	0.02	23.2	7.9	1	2.38	452	0.0452	32600	3.26	20.2	0.025	1.1	0.02	0.05	42600	4.26	11.9	19.6	9900	0.99
X14842	1.13	0.26	12600	1.26	0.06	14.85	8.2	12	2.79	2760	0.276	33400	3.34	17.3	0.15	0.4	0.02	0.076	77400	7.74	8.9	10.8	7800	0.78
8341	1.79	0.5	9800	0.98	0.1	6.33	3.8	2	1.42	1075	0.1075	19300	1.93	26.5	0.11	1.3	0.02	0.07	50900	5.09	3.2	8.1	4300	0.43
G34575	2.82	1.84	43600	4.36	0.3	25.6	9.9	6	6.3	1770	0.177	32700	3.27	16.4	0.19	1.3	0.01	0.049	53700	5.37	18.3	36.3	9700	0.97
G33753	2.15	1.02	33700	3.37	0.57	18.95	12.3	50	4.46	746	0.0746	27800	2.78	21.1	0.18	2.3	0.04	0.054	38300	3.83	11.5	37.7	8600	0.86
X14825	1.85	0.26	31100	3.11	0.41	12.9	13.8	8	6.23	986	0.0986	35600	3.56	17.2	0.17	0.5	0.03	0.057	49600	4.96	8.1	22.8	14400	1.44
X16307	1.81	0.48	30400	3.04	0.06	25.2	10.1	3	2.46	671	0.0671	36000	3.6	25.7	0.16	1.3	0.02	0.08	50400	5.04	13.1	16.2	7500	0.75
X16295	1.79	0.25	29400	2.94	0.3	21.6	7.8	4	2.98	242	0.0242	32200	3.22	24.2	0.16	1.1	0.07	0.053	50000	5	10.7	15.2	5800	0.58
X14875	1.59	0.69	44900	4.49	0.21	30.1	10.8	21	4.9	623	0.0623	39500	3.95	19.1	0.13	1.5	0.01	0.08	15400	1.54	15.2	28	30100	3.01
8394	2.35	0.11	39100	3.91	0.26	27.4	7.3	2	4.42	143.5	0.01435	28500	2.85	19.75	0.2	1.3	0.1	0.037	44200	4.42	14.3	16	7100	0.71

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
X16342	2	0.1	23300	2.33	0.1	30	5.9	62		51.1	0.00511	28000	2.8			1			44400	4.44	17	6.1	5600	0.56
X16343	2	0.3	24500	2.45	0.3	30	6.8	60		241	0.0241	28500	2.85			0.9			29700	2.97	16.1	8.5	5600	0.56
X16344	2	1.5	29600	2.96	0.1	27	8.3	63		490	0.049	29300	2.93			0.8			47900	4.79	13.7	5.7	4300	0.43
X16345	2	0.6	25200	2.52	0.1	26	6.6	64		360	0.036	28700	2.87			0.9			44500	4.45	14	5.4	4100	0.41
X16346	1	0.2	30100	3.01	0.05	26	5.6	55		228	0.0228	27600	2.76			0.9			40000	4	14.3	6	4800	0.48
X16347	2	0.2	32400	3.24	0.05	28	6.4	57		309	0.0309	27500	2.75			0.8			36500	3.65	14.8	6.4	4100	0.41
H47674	2	0.8	16600	1.66	0.05	26	7.8	62		169	0.0169	30300	3.03			1.2			51500	5.15	14.5	6.7	6100	0.61
H47708	2	3.1	21700	2.17	0.05	19	9	58		153	0.0153	38700	3.87			1			57900	5.79	8.4	10.4	7400	0.74
X16283	1.93	0.44	25500	2.55	0.17	22.1	6.7	3	2.81	848	0.0848	32300	3.23	23.8	0.16	1.1	0.05	0.078	48000	4.8	11.3	13.2	6500	0.65
H41767	2.11	1.94	5900	0.59	0.2	3.94	1.1	1	0.85	1050	0.105	6900	0.69	39	0.07	0.6	0.03	0.009	49800	4.98	2.3	3.7	600	0.06
G36142	0.7	0.18	11200	1.12	0.04	10.9	4.4	11	2.17	782	0.0782	12400	1.24	20.2	0.12	0.6	0.02	0.024	53600	5.36	6.6	18.1	4500	0.45
X16326	1.92	0.27	25100	2.51	0.1	21.7	7	4	1.56	464	0.0464	29100	2.91	25.4	0.15	1.2	0.02	0.07	49900	4.99	11	9.5	4900	0.49
X14812	1.61	0.84	2000	0.2	0.24	19.85	7	4	2.29	1100	0.11	40600	4.06	18.55	0.16	0.7	0.03	0.12	63900	6.39	13.3	24.4	7200	0.72
H40363	0.5	0.53	6000	0.6	0.09	23.17	2.9	68	0.8	210.65	0.021065	20400	2.04	19.58		0.89			32800	3.28	9.7	3.6	2800	0.28
X14802	4.48	0.35	2500	0.25	0.22	18.3	13.7	9	2.91	1320	0.132	80700	8.07	17.2	0.19	1.3	0.01	0.268	51000	5.1	12.8	40.8	10700	1.07
H40491	2	0.57	26300	2.63	0.25	15.51	14.9	88	1.6	821.39	0.082139	48500	4.85	16.69		0.66			57800	5.78	7.6	22.8	12700	1.27
X16344	2.2	0.48	26700	2.67	0.11	25.2	8.2	3	1.16	466	0.0466	27900	2.79	25	0.14	1.1	0.01	0.07	47200	4.72	13.2	7.2	4800	0.48
9289	3.49	1.35	9700	0.97	0.17	8.8	2.5	5	0.84	428	0.0428	17200	1.72	29.1	0.12	1.5	0.03	0.021	52300	5.23	5.2	2.8	1700	0.17
H40403	2	0.47	22000	2.2	0.07	26.82	5.4	48	1	219.98	0.021998	28900	2.89	21.22		0.84			46100	4.61	12.6	7.5	4800	0.48
H43974	1	0.29	23800	2.38	0.28	20.24	13	133	5	1553.1	0.15531	36800	3.68	15.31		1.34			46100	4.61	9.5	47.1	12200	1.22
X16272	2.11	0.34	29100	2.91	0.05	22.2	6.4	3	4.23	231	0.0231	33200	3.32	26.4	0.17	1.2	0.01	0.058	52400	5.24	11.3	15.6	7000	0.7
X16345	1.75	0.58	25400	2.54	0.13	17.5	6.9	1	1.08	365	0.0365	28900	2.89	20.2	0.025	1	0.02	0.059	45900	4.59	8.8	5.6	3400	0.34
H44157	2	1.41	24800	2.48	0.25	21.02	7.9	67	3	321.31	0.032131	19500	1.95	14.51		0.73			44400	4.44	9.7	53	10800	1.08
X16296	1.49	0.26	30900	3.09	0.04	17.7	6.7	2	2.38	195.5	0.01955	32000	3.2	20.3	0.025	1	0.01	0.046	45500	4.55	9.3	13.1	6900	0.69
X16362	1.98	0.24	23700	2.37	0.06	27.1	7.6	2	1.33	123	0.0123	33100	3.31	23.6	0.025	1.1	0.01	0.038	50600	5.06	14	7.4	5200	0.52
X14874	1.83	0.3	34400	3.44	0.2	17.05	12.7	23	2.28	1270	0.127	32000	3.2	18.1	0.19	0.9	0.05	0.107	36700	3.67	7.7	25.8	14800	1.48
H41769	3.02	2.39	19300	1.93	1.05	18.1	20.2	90	7.91	2430	0.243	50600	5.06	18.9	0.13	1.1	0.08	0.101	38000	3.8	10.7	86.1	18600	1.86
X16279	1.64	0.2	34500	3.45	0.04	20.1	6.3	2	3.41	330	0.033	33600	3.36	23	0.05	1.1	0.005	0.057	49900	4.99	10.2	13.3	7600	0.76
G33472	2	0.36	23400	2.34	0.07	23.01	7.6	45	1	175.14	0.017514	29300	2.93	20.42		0.79			35300	3.53	10.8	7	8300	0.83
X16327	1.44	0.23	25900	2.59	0.04	20.7	9.2	2	1.15	365	0.0365	32700	3.27	22.5	0.025	1.3	0.005	0.057	47900	4.79	11.4	8.5	5600	0.56
X16362	2.25	0.18	21600	2.16	0.1	30.2	6.8	3	1.2	231	0.0231	27900	2.79	25.5	0.14	1	0.01	0.056	45100	4.51	16.3	8.1	5900	0.59
8983	1.33	0.3	33100	3.31	0.12	33	10.5	3	1.88	2550	0.255	37100	3.71	21.5	0.22	1	0.03	0.077	53800	5.38	17	13.7	6100	0.61
8961	1.32	0.68	22300	2.23	0.06	31.6	6.3	2	1.64	98	0.0098	32100	3.21	21.9	0.2	0.9	0.01	0.032	52800	5.28	15.5	11.4	5300	0.53
8366	1.41	0.19	31600	3.16	0.09	20.8	6.1	3	1.17	151	0.0151	26800	2.68	21.5	0.2	1.4	0.02	0.039	47500	4.75	10.3	7	3900	0.39
X16384	2.11	0.13	22000	2.2	0.06	30.6	6.5	1	0.78	175.5	0.01755	28600	2.86	23.8	0.15	1.5	0.01	0.039	42700	4.27	15.8	3.5	5000	0.5
H40457	2	0.38	19900	1.99	0.11	33.99	5.8	36	1.2	235.82	0.023582	31200	3.12	20.35		0.87			39900	3.99	18.3	8.3	4400	0.44
X16374	1.63	0.12	26000	2.6	0.06	25.4	6	2	1.11	160.5	0.01605	28800	2.88	24	0.13	1.1	0.005	0.039	47200	4.72	12.4	7.4	4100	0.41
G33676	2.09	0.25	14500	1.45	0.05	28.6	9.9	3	1.44	285	0.0285	35900	3.59	24	0.19	1	0.005	0.048	49500	4.95	16.4	7	9700	0.97
X16416	1.52	0.52	27100	2.71	0.08	22.1	7	2	0.85	209	0.0209	26600	2.66	23	0.13	1.2	0.01	0.043	47500	4.75	10.4	6.1	3300	0.33
8416	1.77	0.2	26700	2.67	0.03	25.4	7.6	3	1.41	74.7	0.00747	30000	3	22.4	0.21	2	0.01	0.04	45400	4.54	13	11	6900	0.69
G33738	1.86	0.66	31300	3.13	0.08	20	5.4	2	1.6	294	0.0294	28600	2.86	22.5	0.17	1	0.005	0.046	47400	4.74	9.9	6.7	4600	0.46
8438	1.32	0.44	30800	3.08	0.06	26.2	5.9	2	1.57	153.5	0.01535	28000	2.8	21.9	0.19	1.1	0.01	0.035	55300	5.53	12	8.6	3200	0.32
X16397	1.67	0.13	26300	2.63	0.04	24.9	7	2	0.88	66.3	0.00663	27900	2.79	22.2	0.14	1.2	0.005	0.034	43600	4.36	12.5	7.5	4700	0.47
G36541	2.57	0.23	6400	0.64	0.18	35.9	14.4	3	8.42	92.9	0.00929	43700	4.37	18.5	0.18	2.7	0.01	0.054	52100	5.21	19.2	17.8	10800	1.08
9327	3.2	1.19	5400	0.54	0.16	7.96	1.6	6	1.04	310	0.031	13400	1.34	32.5	0.12	1.3	0.01	0.015	52100	5.21	5.7	3.6	2200	0.22
H43952	0.5	0.14	78100	7.81	0.34	16.57	11.4	109	3.7	951.16	0.095116	34900	3.49	13.49		0.73			35400	3.54	9.3	25.3	29700	2.97
G33716	1.92	0.27	24900	2.49	0.04	26.2	7	2	1.45	377	0.0377	29700	2.97	21.7	0.19	0.9	0.01	0.046	42800	4.28	13.6	8.1	8400	0.84
G33688	2.19	0.09	26000	2.6	0.07	21.1	7.6	3	1.7	106	0.0106	30000	3	23.5	0.18	0.9	0.005	0.035	46500	4.65	10.8	7.5	5700	0.57
8374	1.99	0.12	22500	2.25	0.12	34.9	9.8	3	1.2	110.5	0.01105	35100	3.51	24	0.21	1.7	0.01	0.042	44500	4.45	19.2	5.4	7900	0.79
G33496	2	0.07	26900	2.69	0.07	24.27	6.8	63	1.7	65.53	0.006553	27500	2.75	18.93		0.79			45400	4.54	11.8	5.6	5700	0.57

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
G33706	1.6	0.11	34700	3.47	0.05	20.7	5.5	2	1.16	58.4	0.00584	25500	2.55	23	0.17	1.1	0.005	0.03	46500	4.65	10.2	5.6	4100	0.41
X06968	0.5	3.52	3800	0.38	1	8.28	11.6	127	2.3	785.83	0.078583	58700	5.87	16.38		0.78			32000	3.2	2.8	2	2600	0.26
X13074	0.5	5.9	1900	0.19	4.44	12.3	17.2	245	0.7	10000	1	85800	8.58	7.46		0.1			16600	1.66	3.9	3	3000	0.3
H41951	0.38	0.95	2300	0.23	0.05	6.63	31.9	5	1.75	71.7	0.00717	162500	16.25	6.23	0.31	0.3	0.01	0.038	19100	1.91	3	4.6	2700	0.27
X06596	1	1.19	2500	0.25	0.37	2.28	10.4	99	2.6	988.66	0.098866	58800	5.88	14.94		0.5			33300	3.33	0.5	7.2	5200	0.52
X10945	0.53	0.22	700	0.07	0.36	21.3	4.8	3	2.21	192.5	0.01925	36400	3.64	14.2	0.14	0.5	0.03	0.016	28900	2.89	11.3	3.2	1800	0.18
H41947	0.72	0.6	2500	0.25	0.18	9.62	16.7	5	1.96	117.5	0.01175	85000	8.5	9.82	0.24	0.5	0.01	0.033	26600	2.66	4.2	3	2100	0.21
X10920	0.49	1	2400	0.24	1.29	17.25	15.7	3	2.14	1160	0.116	63400	6.34	13.6	0.19	0.4	0.02	0.078	26600	2.66	8.5	3	2400	0.24
H41949	0.66	1.04	2400	0.24	0.01	24.9	11.1	5	2.42	194	0.0194	63500	6.35	10.1	0.16	0.6	0.005	0.043	30800	3.08	12.9	3.4	3000	0.3
X06989	1	1.14	3600	0.36	0.64	15.69	11	94	2	664.35	0.066435	55100	5.51	16.66		0.68			30800	3.08	5.3	2.8	3100	0.31
X06607	1	0.99	2700	0.27	0.24	3.38	11.1	123	2.2	419.58	0.041958	58600	5.86	13.5		0.82			30900	3.09	0.9	7.4	5000	0.5
E217280	1.13	1.02	2700	0.27	0.04	15.65	11.5	3	4.18	661	0.0661	41900	4.19	18.5	0.18	0.8	0.01	0.105	33300	3.33	6.2	6.9	5400	0.54
G35602	1.1	0.77	3200	0.32	4.18	23.1	7.9	4	3.27	665	0.0665	55500	5.55	17.25	0.13	0.6	0.09	0.117	30800	3.08	11.9	8.9	5000	0.5
H41944	1.78	0.64	2900	0.29	0.23	28.3	10.5	4	4.09	1180	0.118	47100	4.71	20.3	0.18	0.8	0.01	0.112	32500	3.25	13.9	11.2	8300	0.83
X06618	1	1.11	3500	0.35	0.36	13.17	10.1	136	2.9	675.25	0.067525	52000	5.2	15.73		0.47			34700	3.47	4.3	17.1	9600	0.96
X13084	0.5	3.15	58200	5.82	1.54	26.19	15.6	245	0.6	1021.12	0.102112	32100	3.21	5		0.04			9400	0.94	13.5	4.5	2100	0.21
E217300	1.21	0.75	3800	0.38	0.24	21.2	10.6	2	3.75	693	0.0693	55400	5.54	18	0.21	0.7	0.01	0.065	31300	3.13	9.5	12.9	8200	0.82
X17591	0.5	3.09	1500	0.15	2.14	22.5	2.9	236	1.3	578.64	0.057864	20200	2.02	8.96		0.1			25700	2.57	9.8	5.5	5000	0.5
X10967	0.84	1.15	3900	0.39	0.85	13.05	13.4	2	2.42	2000	0.2	48300	4.83	13.1	0.16	0.3	0.09	0.155	22500	2.25	6.2	7.2	6500	0.65
X06638	1	1.99	7000	0.7	1.14	18.59	12.2	98	2.5	1065.48	0.106548	71700	7.17	16.14		0.43			33300	3.33	6.8	10.8	6900	0.69
G35622	1.52	2.44	9600	0.96	2.07	22.3	9.9	4	4.7	1370	0.137	72800	7.28	18.4	0.19	0.6	0.43	0.135	32200	3.22	11.1	10.4	7300	0.73
X17581	0.5	0.32	74400	7.44	0.64	36.18	6.4	154	1.4	5056.45	0.505645	29600	2.96	7.45		0.14			23000	2.3	15.6	5.1	5700	0.57
X10985	0.85	0.6	5100	0.51	1.13	9.63	5.9	3	2.57	1010	0.101	32400	3.24	12.1	0.14	0.3	0.08	0.08	19500	1.95	4.6	6.5	4500	0.45
G32024	1.16	0.73	36800	3.68	0.69	26.7	8.9	5	2.73	639	0.0639	44900	4.49	16.85	0.2	0.6	0.01	0.08	17800	1.78	13.2	13.7	13200	1.32
X66542	3	0.96	2000	0.2	3.37	25.71	27.8	19	4	655.52	0.065552	26700	2.67	21.59		1				4.8	13.1	12		0.68
X29696																								
X66799																								
X26526																								
IC COMP 16	2	11.4		2.02	0.3	35	15.2	85		1650.8	0.16508		5.49			0.7				5.84	23	135.3		0.74
IC COMP 19	2	8.5		0.38	0.2	41	4.2	96		1329.2	0.13292		1.41			1.7				5.74	30.7	14.7		0.2
X30431																								
IC COMP 12	2	4.2		2.07	3.2	24	18.6	75		2163.9	0.21639		4.11			0.6				8.07	15.5	13.6		0.3
IC COMP 9	2	4.1		1.77	5.1	19	13.2	83		2103.2	0.21032		3.6			0.6				5.86	12.4	57.7		0.5
IC COMP 11	2	2.5		2.18	0.9	26	16.5	92		1639.5	0.16395		3.41			0.7				5.78	17.8	22		0.34
X30422																								
IC COMP 10	2	5.4		2.47	6.6	27	16	86		1991.2	0.19912		4.07			0.8				5.66	19.2	112.3		0.67
X26728																								
IC COMP 20	2	13.5		1.27	1.6	128	8.8	151		3476.6	0.34766		2.07			1.1				4.07	78.6	52.6		0.47
X30441																								
IC COMP 17	3	5.3		3.11	0.5	38	13.6	115		2524	0.2524		3.06			1.1				4.42	27.5	56.4		0.61
IC COMP 18	2	2.4		2.87	0.2	80	12.3	107		2208.3	0.22083		3.1			1.2				5.48	63.9	30.5		0.67
X30943																								
IC COMP 13	2	3.6		6.07	4.4	28	15.1	79		2348.2	0.23482		3.11			1.2				4.57	20.3	12		0.32
X26658																								
X30968																								
X30961																								
H47161																								
X25074																								
X30176																								
X25084																								

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
H47377	2	3.17	3900	0.39	1.91	9.73	15.4	33	6.1	1094.1	0.10941	47200	4.72	20.57		0.86				4.47	3.5	10.9		0.81
X25078																								
H47126																								
X67984																								
H47109																								
X29624																								
X67999																								
X30121																								
X25461																								
X30187																								
X29626																								
X28499																								
H48498												0												
H47431																								
H48481																								
X29743																								
H47446	1	2.05	16200	1.62	1.33	11.44	19.4	34	4.1	272.93	0.027293	53900	5.39	17.12		0.96				4.09	4.2	11.3		0.86
H47430	0.5	1.59	12200	1.22	1.7	11.57	16	49	2.8	154.65	0.015465	49800	4.98	15.33		0.88				3.71	4.3	9.2		0.84
X28009																								
X30222																								
X29781																								
X28815																								
X28802																								
X30583																								
H47438																								
X28837																								
H47123																								
X25501																								
X29656																								
X30218																								
H46835																								
H47391																								
X30235																								
X30331																								
X30742																								
X25471																								
X25463																								
X28805																								
X29833																								
X30361																								
X25482																								
X25489																								
X30224																								
X30139																								
X29646																								
X29685																								
X25896																								
X28827																								
X25886																								
H46817	2	0.41	13200	1.32	0.14	12.77	14.2	25	10.4	394.32	0.039432	47600	4.76	19.04		0.69				4.9	5.5	12.4		1.16

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
X29681																								
X24855																								
X25877																								
X25875																								
X30227																								
H46831																								
X29789																								
H47403	2	1.08	24300	2.43	0.04	11.19	12.6	20	8.9	572.39	0.057239	45200	4.52	18.3		0.65				4.04	4.9	9.3		0.78
X30208																								
X29686																								
X29636																								
H46789	1	0.7	20900	2.09	0.19	11.97	11.5	26	5	840.94	0.084094	42500	4.25	19.05		0.76				4.7	4.8	7.9		0.57
X29871																								
X28535																								
X29442																								
X29503																								
H46842	1	0.67	12700	1.27	0.08	11.98	15.9	29	7.5	371.72	0.037172	50000	5	19.51		0.76				4.47	5.3	13		1.31
X28545																								
H46829	1	0.41	11900	1.19	0.13	9.79	15.4	20	6.2	269.87	0.026987	48400	4.84	19.37		0.8				4.41	4.3	12.6		1.22
X29431																								
H46801	1	0.46	26000	2.6	0.43	12.15	11.6	21	7.5	289.28	0.028928	42200	4.22	17.89		0.74				3.51	5.6	9.3		0.78
X26345																								
X29666																								
X29422																								
X29421																								
X30596																								
X30198																								
H46808																								
X29407																								
H46881	1	0.83	26700	2.67	0.13	9.3	30.9	12	6.9	522.62	0.052262	51900	5.19	16.59		0.58				4.2	4.1	13.3		1.15
X30711																								
H46870	1	0.48	23400	2.34	0.08	9.16	15.3	13	5.2	426.62	0.042662	49400	4.94	17.25		0.69				4.03	4.2	15.4		1.34
H46841																								
H47142																								
X66971																								
X67793																								
X67816																								
X28131																								
X28077																								
X28151																								
X67772																								
X28121																								
X25232																								
X25276																								
X28087																								
H47484	2	0.12	16900	1.69	0.07	26.27	6.8	36	3	383.94	0.038394	27000	2.7	21.96		1.02				4.87	13.2	15.7		0.6
X25254																								
X67805																								
X28141																								
X28112																								

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
X25264																								
X25243																								
X67806																								
X67782																								
X28099																								
H47469	1	0.34	13700	1.37	0.18	20.19	15.4	29	3.4	4014.6	0.40146	38200	3.82	18.42		0.85				3.78	11.8	22.5		1.26
X28066																								
X25251																								
X67761																								
X25221																								
X25211																								
X27667																								
H48695	2	1.92	400	0.04	0.56	12.42	29	26	5.4	1058.95	0.105895	36800	3.68	21.29		1.3				4.69	4.9	10.7		0.72
X67731																								
H47241	1	2.18	300	0.03	0.98	10.05	6.7	59	4.4	593.68	0.059368	28400	2.84	15.88		0.34				5.42	5.2	8.4		0.51
H47325																								
X28273																								
X24881																								
H47307	0.5	1.68	400	0.04	6.35	11.1	4.8	56	2.6	1056.74	0.105674	18700	1.87	14.22		0.21				6.56	6.1	5.7		0.32
X28256																								
X67618																								
X26088																								
X28851																								
X28211																								
X24925																								
X27364																								
X28751																								
X25998																								
X67849																								
H48761	2	1.6	3100	0.31	4.18	4.84	20.3	45	4.3	656.55	0.065655	54800	5.48	15.54		0.96				4.51	1.4	8.6		0.47
X28301																								
X27427																								
X27368																								
X67459																								
X25974																								
X27532																								
H47353																								
X27669																								
H46781																								
X26107																								
H46949	1	1.62	3100	0.31	0.89	13.33	23.8	25	3.9	1269.24	0.126924	31500	3.15	12.89		0.5				6.75	6.2	7.1		0.52
X28314																								
IC COMP 14	1	0.8		0.17	7.1	10	12.2	83		567.3	0.05673		3.84			1				6.84	3.7	3.2		0.17
X26159																								
X66869																								
X24935																								
H48859																								
H46744	1	0.73	2500	0.25	0.21	18.35	10.4	60	3.8	642.67	0.064267	26900	2.69	15.84		0.59				6.45	8.6	6.6		0.4
X28374																								
X27531																								

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
X67741																								
H48926																								
X66721																								
X28375																								
H48900	2	0.64	2200	0.22	0.45	14.57	10.5	73	2.8	283.89	0.028389	34700	3.47	16.73		0.52				4.82	6.6	4.2		0.32
X24946																								
X28325																								
H48432																								
X25373																								
X26085																								
X26169																								
X29259																								
X25718																								
H48749	2	1.09	2700	0.27	2.97	8.68	17.7	46	5.6	612.2	0.06122	44700	4.47	18.47		0.96				6.35	3.1	12.4		0.75
X29374																								
X27359																								
H47552	2	0.41	2600	0.26	0.76	13.54	11.7	32	4.1	802.91	0.080291	26500	2.65	20.63		1.59				6.57	5.6	14.1		0.64
X28931																								
X67553																								
X27334																								
HCT-6	1	2.06	3900	0.39	2.34	13.12	15.1	37	5.8	897.63	0.089763	43100	4.31	18.33		0.85			64600	6.46	4.5	10.6	6600	0.66
HCT-3																								
HCT-5																								
HCT-2																								
HCT-4																								
HCT-1																								
X27447																								
X26179																								
H48559A	2	0.86	2700	0.27	0.53	21.8	5.2	32	3	499.33	0.049933	21200	2.12	13.71		0.94				4.24	11.8	8.1		0.32
H48504	1	0.67	9300	0.93	1.12	15.83	53	44	3	291.23	0.029123	41200	4.12	17.2		0.99				4.24	6.3	12.4		0.56
X25438																								
X29384																								
H47085																								
HCT-3	2	0.86	5000	0.5	0.63	30.08	40.6	29	4.3	810.8	0.08108	38500	3.85	17.3		1.01			55500	5.55	13.3	13.7	5800	0.58
IC COMP 22	2	1.6		0.35	1.2	16	9.3	104		165.1	0.01651		4.32			1.3				2.53	6.6	4.9		0.33
X28362																								
X29355																								
X26055																								
X27273																								
H48517	2	0.82	2500	0.25	0.41	42.63	48	23	5.1	1417.89	0.141789	26000	2.6	20.53		1.19				6.2	22.3	14.3		0.71
X66829																								
X67543																								
H46962	2	0.95	3200	0.32	0.57	17.67	12.5	27	4.7	1821.92	0.182192	20500	2.05	16.16		0.75				4.31	10.7	11		0.57
IC COMP 23	2	8.9		0.48	14.6	18	7.9	93		445.7	0.04457		4.45			1.2				4.92	8.3	5.7		0.4
H48907																								
H48909																								
X66552	2	1.6	4500	0.45	0.59	19.94	9.8	17	3.5	450.28	0.045028	21000	2.1	18.34		1.21				4.29	9.2	11.1		0.34
H48556																								
X28877																								
X28785																								

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

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X25843																								
X25045																								
H48852																								
IC COMP 25	0.5	0.7		0.49	1.3	12	11.8	75		211.1	0.02111		4.69			0.9				6.7	4.8	3.4		0.29
X28887																								
X67563																								
X27659																								
X28291																								
X29942																								
X28922																								
X28897																								
X26039																								
X28867																								
X25308																								
H48532	2	0.44	1200	0.12	0.17	22.89	16	18	3.1	960.06	0.096006	9900	0.99	20.1		0.99				3.71	12.4	14.7		0.51
H46895	2	1.14	4400	0.44	0.79	21.5	33.7	24	4.5	1103.71	0.110371	51600	5.16	22.03		1.14				5.77	8.9	18.8		0.82
X25832																								
X66819																								
X25301																								
H48305	2	1.14	9500	0.95	14.17	16.45	17.5	62	3.8	735.01	0.073501	52100	5.21	14.73		0.48				4.85	7.4	6.6		0.54
H47578	2	0.27	9000	0.9	1.43	15.09	7.9	38	5.1	1066.85	0.106685	42800	4.28	21.68		0.86				8.41	6	10.3		0.51
H48210	3	0.86	5500	0.55	1.08	24.09	20.5	67	7.4	2076.64	0.207664	36900	3.69	18.94		0.97				5.16	12.4	18.2		0.96
X29099																								
X29231																								
X25329																								
X24966																								
H48913	2	0.72	7700	0.77	1.61	19.96	5.1	57	3.4	167.6	0.01676	36600	3.66	20.27		0.91				5.86	7.9	5.9		0.52
X28384																								
H48312																								
X27515																								
X67506																								
X25831																								
H47015																								
X67573																								
X24984																								
X67495																								
X66846																								
H48238	2	1.23	10300	1.03	0.5	13	25.3	68	3.3	1165.66	0.116566	36700	3.67	15.14		0.47				5.14	7.2	5.5		0.37
H48929	2	0.53	7700	0.77	0.18	17.17	5.2	80	5.2	57.59	0.005759	37700	3.77	19.33		0.75				4.03	8.3	9.2		0.73
X26126																								
H48872	1	0.81	12000	1.2	0.34	13.76	12.7	38	2.6	179.74	0.017974	52200	5.22	17.75		1.3				7.69	4.4	2.6		0.21
X29899																								
X26416																								
X67502																								
HCT-5	1	0.88	13400	1.34	6.42	28.2	18.9	56	4.1	1447.15	0.144715	52700	5.27	16.25		0.55		68800		6.88	13.6	6.4	5300	0.53
IC COMP 15	1	1.1		0.65	3.3	17	8.3	74		97.7	0.00977		3.66			1.2				4.27	7	4.1		0.29
X66938																								
X67914																								
X24989																								
H46894	2	1.46	11600	1.16	0.44	20.75	41.5	25	5.7	1209.66	0.120966	59200	5.92	26.27		1.29				6.23	8.8	21.7		0.89

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

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X25865																								
H48278																								
X67556																								
X66926																								
H48251	1	1.14	13200	1.32	0.58	25.92	26.7	83	4	2633.88	0.263388	42400	4.24	16.82		0.54				7.54	13.6	6.5		0.41
X26408			0																					
H48885	2	2.17	11000	1.1	1.87	13.05	13.8	46	4.2	256.49	0.025649	35700	3.57	17.27		0.97				5.49	5.3	5.8		0.51
X27628																								
H48878																								
X29958																								
X25626																								
X25665																								
H48248																								
HCT-2	2	1.36	13800	1.38	0.47	24.4	27	30	6.4	930.3	0.09303	54800	5.48	19.34		0.93			53300	5.33	10.9	15.9	7900	0.79
X67517																								
X26407																								
X25655																								
HCT-4	1	0.73	3300	0.33	0.55	41.87	7	21	3.2	449.52	0.044952	8400	0.84	13.63		0.68			72000	7.2	23.6	9.8	3600	0.36
H48265	2	0.57	8100	0.81	0.15	8.76	18.2	58	4	752.65	0.075265	29400	2.94	14.14		0.31				3.03	4.1	9.1		0.5
X25451																								
H47546																								
X67751																								
X25652																								
X25854																								
IC COMP 24	2	1.1		1.48	2.8	28	12	119		635.3	0.06353		3.6			0.9				5.39	13.9	8.4		0.66
H48336	2	0.11	18400	1.84	0.68	20.17	9.2	48	4.5	663.36	0.066336	50300	5.03	19.46		0.86				6.62	9.6	7.8		0.61
X26501																								
IC COMP 21	1	1.6		0.98	2	18	20.9	94		2016.3	0.20163		4.44			0.6				5.35	7.9	14.7		0.77
X26837																								
X25432																								
X29979																								
X67523																								
H47103																								
X25662																								
X67498																								
X67485																								
X67528																								
IC COMP 2	0.5	0.5		1.57	0.05	37	12.6	96		1840.5	0.18405		3.13			0.5				5.92	25.2	13.7		0.36
X29077																								
H48545	2	0.7	2700	0.27	0.84	32.44	2.5	23	2.9	407.67	0.040767	5400	0.54	7.86		0.73				6.87	19.4	11.1		0.26
X29093																								
X25864																								
HCT-1	1	0.62	14700	1.47	0.22	14.33	11.1	30	7.4	525.6	0.05256	41000	4.1	16.66		0.65			47100	4.71	6.4	9.1	8000	0.8
X25435																								
X29089																								
X25132																								
H47057	2	0.68	13500	1.35	2.55	25.03	19.2	34	9.2	617.76	0.061776	43000	4.3	23.16		1.1			59400	5.94	12.5	10.1	6700	0.67
X25728																								
X25727																								
X26791																								

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X30399																								
X25188																								
X67591																								
X29971																								
IC COMP 1	1	0.4		1.57	1.2	21	13.3	70		2349.6	0.23496	37100	3.71			0.4			50200	5.02	12.2	26	11600	1.16
X25611																								
X28052																								
X25175																								
X30379																								
X28196																								
IC COMP 5	2	0.2		1.73	0.1	22	12.6	93		972.7	0.09727	34900	3.49			0.6			45900	4.59	11.4	32.1	13100	1.31
X26469																								
IC COMP 6	2	0.3		3.36	6.3	23	16.2	81		1467.7	0.14677	38700	3.87			0.6			50400	5.04	11.5	27	12600	1.26
X25155																								
X27062																								
X30386																								
IC COMP 4	2	0.3		1.5	0.05	35	15.1	67		948.3	0.09483	35200	3.52			1.9			39300	3.93	18.2	35.9	14000	1.4
IC COMP 8	2	0.2		4.55	0.4	19	16.5	54		1561.7	0.15617	45200	4.52			0.6			38300	3.83	10.3	33.3	20900	2.09
X27058																								
IC COMP 3	2	0.4		2.58	0.3	13	11.7	36		884.5	0.08845	31500	3.15			0.9			39900	3.99	6	17.9	12100	1.21
X27066																								
IC COMP 7	2	0.05		6.17	0.3	18	26	53		2546.6	0.25466	47400	4.74			0.7			33900	3.39	10.3	35.8	29200	2.92
X28031																								
X25165																								
X28019																								
X25111																								
X25091																								
X25101																								
X25122																								
X25143																								

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PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
H42801	16	13.01			1.36		0.057		74.8		82100	8.21		18.9		2.7		0.05		0.8	560.00	0.056		0.9
H42619	108	8.79	630.00	0.063	2.45	14.2	0.025	245.77	105.9		31900	3.19	28.89	26.3		2.9	26	0.05		0.7	1740.0	0.174		0.4
H46054	46	34.94			1.26		0.155		95.9		67700	6.77		24.6		2.5		0.05		0.6	840.00	0.084		0.6
H46211	72	15.05	1300	0.13	2.3	81.8	1290	7.3	69	0.114	94400	9.44	1.5	18.8	31	1.5	95	0.14	0.54	1.3	880.00	0.088	1.9	0.6
14541	38	5.21	1700	0.17	1.2	30.9	630	91.3	62.9	0.084	77600	7.76	58.8	25.7	21	1.5	95	0.08	4.19	0.5	1210.0	0.121	1.8	0.2
H46155	21	11.43			2.93		0.053		91.3		23200	2.32		23.9		2.9		0.1		0.9	1490.0	0.149		0.5
H46222	71	21.1	1200	0.12	2.3	19.7	1040	5.6	78.3	0.129	99400	9.94	0.54	21	32	1.8	109.5	0.15	0.75	0.8	1200	0.12	2.16	0.5
H46210	66	9.55	1780.0	0.178	0.51	29.7	0.22	7.45	62.6		100000	10.00	2.06	36.1		1.2	49	0.1		0.2	1030.0	0.103		0.2
H46213	346	26.8	900.0	0.09	2.6	84.5	1550	4.5	53.3	0.182	67100	6.71	0.72	18.6	21	1.9	67.4	0.15	0.34	1.7	1660.0	0.166	1.58	0.7
H46198	50	10.83			1.08		0.177		62.9		100000	10		32		1.9		0.05		0.3	840.00	0.084		0.4
H46209	57	20	1900	0.19	2.2	41.3	1650	11.2	82.3	0.169	92300	9.23	11.65	35.2	15	1.6	112	0.13	0.28	1	2200	0.22	2.38	0.6
H46131	68	5.5	1590.0	0.159	2.34	3.9	0.12	6.42	77.4		62400	6.24	0.75	27.2		1.6	27	0.05		1.3	1150.0	0.115		0.8
H46175	28	4.01			1.48		0.169		79.2		68000	6.8		24.6		1.7		0.05		0.6	530.00	0.053		0.5
H46132	195	33.1	1200	0.12	3	13.9	1590	31	82.6	0.143	92600	9.26	24.2	23.2	32	2	67.6	0.18	1.05	1.3	1110.0	0.111	1.83	0.7
H42885	99	146.29	1610.0	0.161	2.18	2.1	0.171	100.44	49.6		72200	7.22	2.57	21.5		1.4	481	0.1		1	1050.0	0.105		0.6
H46123	49	3.69			1.59		0.275		82.3		80400	8.04		23.4		1.3		0.05		0.4	640.00	0.064		0.4
H46212	117	14.82	1330.0	0.133	1.5	111.4	0.126	5.52	61.8		67400	6.74	0.65	17.6		2.1	45	0.2		1	1110.0	0.111		0.7
H46216	259	14.4	1200	0.12	2.7	44.5	2220	9	63.3	0.13	95400	9.54	0.78	17.4	19	2.4	90.4	0.16	0.32	1.8	1980.0	0.198	1.84	0.8
H46219	204	21.9	1300	0.13	3.1	50	1830	7.2	64.2	0.168	78400	7.84	0.8	22.4	23	2	120.5	0.2	0.33	2.3	1730.0	0.173	1.82	1.1
H42884	34	12.5	1500	0.15	4.4	1.8	1440	56.6	69	0.059	74200	7.42	51.2	24.5	15	1.8	340	0.26	2.05	1.2	1450.0	0.145	1.9	0.5
H42882	131	16.51	1230.0	0.123	2.69	1.9	0.128	31.98	60.2		63500	6.35	1.16	23.6		1.5	318	0.1		1	1160.0	0.116		0.4
H42862	89	91.65			0.86		0.209		68.1		56700	5.67		22.8		2.1		0.05		0.9	840.00	0.084		0.8
H42881	106	132	1100	0.11	3.2	2.2	1100	6.2	57.7	0.42	100000	10.0	0.48	17.1	18	2	603	0.2	0.85	1.2	1000	0.1	1.36	0.3
H42887	386	10.11	820.00	0.082	2.51	2.3	0.155	6.16	59.1		54900	5.49	0.79	22.3		1.2	284	0.2		1.1	1160.0	0.116		0.5
H46135	262	4.82	700.0	0.07	3.4	3.2	1200	14.9	52.7	0.026	68700	6.87	2.39	12.3	25	1.6	51.7	0.2	0.47	0.8	1040.0	0.104	1.13	0.3
H46134	390	6.7	940.00	0.094	1.95	3.2	0.106	30	54.7		74900	7.49	6.05	14.5		1.4	57	0.1		0.6	740.00	0.074		0.4
H42772	310	296.04			2.6		0.143		70		57000	5.7		19.9		1.5		0.1		0.9	1170.0	0.117		0.5
H46076	380	17.37			2.78		0.181		78.3		66600	6.66		21.1		2.4		0.1		0.6	1080.0	0.108		0.5
H42886	367	18.35	800.0	0.08	3.1	2.2	1280	3.7	50.5	0.085	59000	5.9	0.64	20	9	1.2	404	0.19	0.65	1.2	1100	0.11	1.21	0.3
H46215	646	12.02	910.00	0.091	0.88	50.3	0.134	5.07	55.2		85200	8.52	0.57	14.2		1.3	134	0.2		0.9	640.00	0.064		0.4
H42880	1264	19.84	820.00	0.082	2.07	2.2	0.134	11.4	55.2		100000	10.00	0.52	17		1.3	329	0.05		0.7	760.00	0.076		0.4
H42895	261	13.59			2.64		0.146		39		61000	6.1		21.1		1.3		0.1		0.9	1070.0	0.107		0.5
H42879	397	14.1	1000	0.1	4	1.8	1420	5.1	63	0.082	52300	5.23	0.56	21.5	10	1.5	382	0.23	0.32	1.4	1250.0	0.125	1.41	0.5
H42731	2228	3.75			4.05		0.154		97.7		59200	5.92		21.1		0.9		0.2		1.1	1610.0	0.161		0.7
H42752	390	11.5			6.93		0.168		76.6		34700	3.47		20.1		1.8		0.3		1.2	2590.0	0.259		0.5
H46220	1282	1.15	330.00	0.033	2.54	62.4	0.058	1.76	24.3		5200	0.52	0.55	43.2		0.6	210	0.2		0.7	5490.0	0.549		0.4
H46221	1797	1.83	470.00	0.047	4.26	57.4	0.096	2.94	26.2		1500	0.15	0.73	40.8		1	54	0.4		1.3	5940.0	0.594		0.7
H46221	2570	1.81	400.0	0.04	6.3	21.8	860	2.9	19.2	0.002	8500	0.85	0.47	22.8	2	1.4	260	0.38	0.025	1.8	4960.0	0.496	0.49	0.7
H42695	2820	0.34	17400	1.74	6	6.9	1450	12.4	60.8	0.001	10700	1.07	2.66	21.7	2	0.9	252	0.4	0.25	1.5	2870.0	0.287	1.48	0.8
H42683	3200	0.49	13100	1.31	5.2	5.4	1540	5.7	52.2	0.001	11600	1.16	3.22	21.7	2	0.8	177	0.36	0.54	1	3060.0	0.306	1.32	0.5
58437	30	93.2	1500	0.15	1.4	25.9	2420	42.3	87	0.426	92400	9.24	47.8	37.4	36	1.9	36.8	0.08	0.86	0.9	1170.0	0.117	2.25	0.6
H42831	19	6.85	2610.0	0.261	0.84	17.1	0.048	22.07	75.2		87500	8.75	5.96	30.7		4.1	92	0.05		0.6	850.00	0.085		0.6
14523	55	10.85	1400	0.14	1.7	41.8	600	184.5	49	0.082	99500	9.95	43.7	14.8	55	4.5	138.5	0.1	2.4	0.8	800.0	0.08	1.53	0.5
H42816	48	15.25	1770.0	0.177	0.48	51.8	0.103	35.29	86.5		86800	8.68	4.14	15.2		3.1	1801	0.2		0.9	540.00	0.054		1.4
H42828	49	3.86	1890.0	0.189	0.29	29.6	0.149	30.79	69.3		100000	10.00	3.98	47.3		2.2	149	0.1		0.2	480.00	0.048		0.3
H42845	27	39.92	2160.0	0.216	1.12	19.4	0.118	9.41	56.7		71100	7.11	2.16	29.3		3.8	152	0.2		0.9	850.00	0.085		0.6
H42832	27	6.46	1900	0.19	1.6	23.4	1520	47.3	79.5	0.019	100000	10.0	10.6	40.6	32	4	285	0.11	1.89	0.8	1130.0	0.113	2.28	0.4
H42834	21	7.31	2810.0	0.281	2.42	10.2	0.159	8.92	98.9		72200	7.22	4.84	30.5		3.1	81	0.2		0.8	1290.0	0.129		0.9
H42841	27	17.03	2470.0	0.247	1.09	4.1	0.144	6.51	70.6		49100	4.91	16.41	25.9		4	85	0.2		1.2	700.0	0.07		0.7
H42847	19	19.47	2240.0	0.224	0.71	16.1	0.212	12.31	81.1		71000	7.1	39.27	29.3		3	70	0.2		0.8	620.00	0.062		0.6

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
H42818	36	23	1700	0.17	1.9	30.6	1090	12.3	67.3	0.054	81700	8.17	13.75	12.9	30	2.9	1215	0.13	1.36	2.2	740.00	0.074	1.94	1
H42814	36	7.29	1860.0	0.186	0.84	13.8	0.15	23.9	76.8		78900	7.89	102.17	24.7		1.8	374	0.1		0.7	600.0	0.06		0.6
H42815	39	57.9	1500	0.15	1.6	22.1	1020	28.1	72.1	0.169	75400	7.54	7.78	13	35	5	755	0.1	1.31	2.5	850.00	0.085	1.91	1.3
H42809	76	10.7	1860.0	0.186	1.63	13.8	0.142	13.26	73.6		75600	7.56	5.84	38.1		3	84	0.05		0.6	1380.0	0.138		0.7
H42837	26	14.5	2100	0.21	2	9.9	1580	20.2	90	0.042	85300	8.53	20.6	26.6	31	3.8	246	0.14	0.62	1.4	830.00	0.083	2.57	0.8
H42810	53	22.1	1600	0.16	3.1	20.4	1740	41.7	80.6	0.043	80900	8.09	15.15	19.4	29	2.7	901	0.22	5.95	1.7	1110.0	0.111	2.28	1
H42696	791	2.47	1520.0	0.152	3.25	9.4	0.179	32.36	77.7		71900	7.19	5.92	14.7		1	38	0.2		0.8	1930.0	0.193		0.8
H42819	28	8.87	2300	0.23	1.28	8.3	0.168	4.59	69.9		61800	6.18	4.65	22.5		2.5	269	0.2		0.9	750.00	0.075		0.8
H42843	33	4.33	2150.0	0.215	1.55	6.5	0.139	4.27	70.9		52900	5.29	2.21	29.8		4.5	81	0.2		1.2	880.00	0.088		0.6
H42835	45	3.54	2810.0	0.281	1.18	3.8	0.227	13.59	83.7		72700	7.27	38.51	29.2		2.5	1334	0.2		0.6	770.00	0.077		0.6
H42838	34	8.98	2620.0	0.262	1.06	6	0.213	14.54	72.5		77100	7.71	36.55	28.1		5.5	97	0.2		0.8	720.00	0.072		0.5
H42844	26	13.1	2100	0.21	2.2	15.8	1420	6.7	92	0.074	69300	6.93	5.47	32.2	25	4.6	131	0.15	1.19	1.4	1140.0	0.114	2.78	0.6
H42817	38	23	1800	0.18	3.2	21.1	1200	12.2	78.3	0.039	61700	6.17	12.25	20.4	28	3.6	541	0.22	1.84	2.1	1160.0	0.116	2.16	1
H42821	33	9.2	2000	0.2	3.8	19.7	1230	4.6	75.9	0.027	58800	5.88	24.3	15.1	19	3.3	1010	0.26	1.12	2.2	1110.0	0.111	2.24	1
H42848	41	108	1900	0.19	1.4	24.4	2160	11.4	95.6	0.443	81200	8.12	3.42	48	26	3.2	75.6	0.09	0.76	0.6	1700	0.17	2.58	0.6
14507	118	12.9	1400	0.14	3	50.7	1440	15.7	103.5	0.076	55500	5.55	1.34	21.5	18	2.3	68.5	0.19	0.91	3.3	1850.0	0.185	3.05	1.7
H42846	20	12.15	1900	0.19	2	11.3	1820	11.8	81	0.123	75200	7.52	6.16	25.7	24	3.2	435	0.12	0.89	1	1020.0	0.102	2.29	0.5
H42813	50	71	1900	0.19	2.1	24.2	1610	28.2	81.5	0.213	68700	6.87	55.9	22.1	27	3.1	373	0.14	6.7	2	860.00	0.086	2.4	1.2
H42682	1080	5.01	710.00	0.071	3.18	6.9	0.184	46.19	100.4		69200	6.92	2.82	24.4		1.6	18	0.2		1	1540.0	0.154		0.7
H42842	21	13.3	2100	0.21	3.1	5.1	1490	4.1	92.6	0.048	63400	6.34	40.2	27.5	23	3.5	63.8	0.18	0.89	1.6	1110.0	0.111	2.59	0.6
H42812	57	13.84	1430.0	0.143	2.71	11.3	0.108	12.28	78.6		44200	4.42	19.7	11.1		2.9	479	0.1		1.8	950.00	0.095		1
H42835	36	9.27	2000	0.2	1.9	6.9	1700	30.4	79.2	0.035	73000	7.3	30.5	27.7	22	2.9	237	0.13	1.81	1.3	840.00	0.084	2.26	0.5
H42675	232	39.7	930.00	0.093	2.52	18.8	0.195	11.3	125.5		62800	6.28	5.14	42		5.5	18	0.3		0.7	2230.0	0.223		0.5
H42673	146	14.54	740.00	0.074	6.97	8	0.209	45.21	110.5		51100	5.11	500.61	25.9		2.2	19	0.2		1.1	2510.0	0.251		0.9
H42686	373	12.52	830.00	0.083	1.9	7.1	0.197	4.27	116.7		59700	5.97	1.4	24.4		1.3	35	0.2		1.2	1220.0	0.122		0.6
H42671	119	30.19	850.00	0.085	1.74	15.3	0.18	22.02	89.1		52300	5.23	3.81	25		2.4	20	0.2		0.8	1510.0	0.151		0.5
H42839	25	43.4	2100	0.21	1.9	11.7	1990	8	89.6	0.142	53100	5.31	12.35	24.1	23	4.3	156.5	0.13	1.89	1.3	840.00	0.084	2.54	0.7
H42668	559	11.15	700.0	0.07	2.2	19.6	1700	23.3	99.5	0.042	60800	6.08	4.26	27.4	24	2.1	29.3	0.17	0.4	1.1	1790.0	0.179	1.94	0.4
3008	350	4.74	800.0	0.08	5.3	7.5	1300	21.5	131.5	0.009	54300	5.43	14.2	23.9	14	2.9	22.8	0.34	0.4	2.4	1750.0	0.175	2.44	1
49313	112	14.15	1400	0.14	5	2.8	1440	10.2	107	0.014	11800	1.18	5	26.3	16	2.3	44.2	0.29	0.33	1.9	1820.0	0.182	1.76	0.8
H42676	176	29.5	700.0	0.07	5	18.7	2220	34	116.5	0.155	55700	5.57	14.2	29.3	26	3.7	41.1	0.33	0.75	1.5	2830.0	0.283	2.3	0.7
H42666	741	59.3	700.0	0.07	3.2	16.9	1740	52.1	96.8	0.172	51000	5.1	5.97	28.5	27	3.4	29.6	0.22	1.24	1.2	2570.0	0.257	2.13	0.6
H46136	206	11.6	1060.0	0.106	2.22	3	0.186	21.44	61.7		61100	6.11	1.15	17.4		1.7	112	0.1		0.8	910.00	0.091		0.5
H42672	421	23.3	600.0	0.06	3.9	13.4	1740	25.9	108.5	0.053	53400	5.34	18.45	23.6	22	2.3	21.3	0.29	0.5	1.5	2060.0	0.206	1.99	0.6
H42689	357	3.72	700.0	0.07	4.21	9.1	0.175	8.35	109.2		32600	3.26	3.56	18.7		1.6	42	0.2		0.9	1590.0	0.159		0.8
H42663	290	7.4	650.00	0.065	2.87	14.6	0.178	13.01	85		42000	4.2	3.91	23.2		1.5	18	0.3		1	2050.0	0.205		0.5
3048	1095	31.6	900.0	0.09	8.6	5.7	1500	37.9	112	0.119	41000	4.1	4.22	19.6	16	1.7	65	0.48	2.21	1.6	2130.0	0.213	1.69	0.6
H42668	354	5.66	500.0	0.05	5.43	17.8	0.195	7.43	82.9		39800	3.98	4.27	23.5		1.8	18	0.2		0.8	3190.0	0.319		0.5
H42685	596	3.88	1700	0.17	6.5	8.4	2100	6.8	115.5	0.011	46100	4.61	2.69	24.1	11	1.7	30.8	0.45	0.47	2.1	2460.0	0.246	2.55	0.9
H42688	3673	11.74	220.00	0.022	1.31	7.4	0.057	11.6	35.2		73200	7.32	3.05	11.7		2.1	12	0.2		0.5	540.00	0.054		0.3
H42687	1290	3.03	700.0	0.07	5.4	6.1	1780	5	105.5	0.009	49300	4.93	1.82	21.5	12	2.2	15.8	0.38	0.39	1.9	1810.0	0.181	2.61	0.8
H42669	4233	186.16	430.00	0.043	1.76	18.3	0.144	52.41	85.7		93600	9.36	25.53	16.5		2.6	20	0.3		0.8	1330.0	0.133		0.5
H42701	1826	3.1	2890.0	0.289	5.11	8.8	0.178	12.5	79.2		39200	3.92	2.51	19.8		1.3	31	0.3		1.4	2190.0	0.219		0.8
H42699	1130	3.03	9800	0.98	7.3	8.1	1850	12	85.1	0.009	28200	2.82	2.86	23	6	1.5	52.7	0.45	0.1	2	2290.0	0.229	1.72	0.8
H42684	8165	2.69	2120.0	0.212	6.28	8.4	0.2	28.2	101.9		40400	4.04	3.76	23.8		2.2	65	0.6		0.8	2500	0.25		1
H42707	703	4.31	900.0	0.09	5.5	6.6	1460	195.5	92.7	0.014	62900	6.29	3.95	18.1	15	2.9	23.3	0.35	2.22	1.9	1870.0	0.187	2.43	0.7
H42703	578	2.79	760.00	0.076	5.06	6.1	0.165	15.42	76.7		60300	6.03	3.18	21.5		2.5	21	0.2		1.1	2430.0	0.243		0.9
H42681	2110	5.68	700.0	0.07	6.8	6.1	1740	22.5	113	0.014	60800	6.08	8.45	23.1	25	2.9	32.8	0.47	1.01	2	2170.0	0.217	2.17	0.9
H42693	2010	3.3	700.0	0.07	7.6	6.7	1680	34.9	125.5	0.014	19900	1.99	4.31	24.3	8	1.2	26.2	0.52	0.38	3	2320.0	0.232	2.22	1.2
H42694	1403	3.1	620.00	0.062	4.62	5.8	0.152	27.55	117.6		30000	3	5.26	22.6		1.2	20	0.2		1.6	2090.0	0.209		0.9

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
H42680	1967	40.07	680.00	0.068	2.34	13.4	0.195	22.83	100.5		66300	6.63	4.2	26.5		4.8	29	0.3		1	1650.0	0.165		0.6
H42697	2220	3.02	700.0	0.07	4.7	9.6	1720	10	116	0.01	40200	4.02	3.49	22	9	1.3	64.2	0.3	0.29	1.9	1510.0	0.151	2.24	0.7
H42704	1310	2.36	800.0	0.08	7	6.6	1530	16.9	94.1	0.01	53000	5.3	2.62	21	8	1.5	28.8	0.43	1.32	1.9	2170.0	0.217	2.2	0.7
H42710	1298	2.91	750.00	0.075	5.93	5.8	0.152	9.48	65.4		58500	5.85	39.77	19.7		1.3	27	0.2		1.6	2440.0	0.244		0.6
H42706	814	1.72	770.00	0.077	7.01	5.3	0.167	4.2	91.4		34500	3.45	2.21	22.8		1	20	0.2		1.4	2680.0	0.268		0.6
H42664	4870	17.4	500.0	0.05	3.8	16.6	1560	18.9	76.4	0.046	37300	3.73	4.03	21.7	19	1.9	48.4	0.27	0.21	1.2	1850.0	0.185	1.62	0.4
H42702	1300	3.18	900.0	0.09	4.1	7.8	1660	11.5	104.5	0.013	45400	4.54	2.59	21.4	11	1.4	50.4	0.26	0.55	1.9	1330.0	0.133	2.19	0.9
H42708	1725	2.68	860.00	0.086	6.05	7	0.165	56.96	65.5		56300	5.63	2.17	23.3		2.1	32	0.2		1.5	2490.0	0.249		0.7
H42674	2250	8.11	700.0	0.07	7.2	7.2	1790	46.1	107.5	0.031	41000	4.1	201	22	13	2	61.4	0.49	1.09	1.7	2280.0	0.228	2.37	0.8
H42709	2010	2.65	700.0	0.07	7.4	5.4	1410	80.9	97.9	0.007	52400	5.24	21.4	19.4	11	1.7	37.2	0.45	1.13	1.8	2200	0.22	2.23	0.6
49852	2210	4.06	3000	0.3	6.5	5.9	1500	98.5	89.7	0.011	61000	6.1	31.4	23.2	13	2.2	57.3	0.37	1.04	1.7	2110.0	0.211	1.92	0.8
H42678	1890	13	700.0	0.07	6.7	7.4	1770	17.5	92.4	0.04	49200	4.92	4.84	21.7	20	2.9	81.5	0.45	0.4	1.8	2140.0	0.214	1.97	0.7
H42670	3190	10.75	800.0	0.08	8.2	9.1	1940	22.7	79.7	0.029	33900	3.39	5.3	21.4	9	1.5	41	0.54	0.27	1.6	2410.0	0.241	2.23	0.9
H42698	2145	3.52	1400	0.14	3.23	6.7	0.177	17.8	72.6		45100	4.51	2.6	20.8		1	96	0.2		1.6	1650.0	0.165		0.6
H42690	1550	3.2	4400	0.44	5.2	5.8	1670	8.7	74.5	0.013	29600	2.96	2.89	19.7	10	1.7	229	0.38	0.17	1.5	1790.0	0.179	2.11	0.7
H42691	3538	9.35	3640.0	0.364	6.98	12.4	0.288	29.26	35.3		69800	6.98	5.57	21.5		2.9	191	0.3		1.1	3360.0	0.336		1.3
H42677	1613	51.16	1080.0	0.108	2.84	6.9	0.181	15.29	113.7		23200	2.32	2.98	25.6		3.5	67	0.2		1.2	1650.0	0.165		0.7
H42665	2558	21.36	680.00	0.068	3.55	14.2	0.178	15.64	77.7		20100	2.01	4.19	25.1		2.9	69	0.4		1.3	2330.0	0.233		0.6
3027	2050	3.61	18200	1.82	15.6	2.6	1650	13.2	56.2	0.001	4400	0.44	3.87	15.1	2	3.3	56.1	0.92	0.07	4.4	4540.0	0.454	0.82	1.6
H46138	3189	2.34	720.00	0.072	4.78	1.3	0.098	7.78	76.5		3200	0.32	1.13	9.5		0.7	993	0.4		2.6	2290.0	0.229		1.3
H46137	1760	0.44	1000	0.1	7.5	1.1	1170	3.8	71.2	0.001	700.0	0.07	1.24	12.1	2	1	210	0.46	0.025	3	3280.0	0.328	1.8	1.7
H46142	1310	0.14	1500	0.15	7.2	1.1	1090	5.3	77.7	0.001	500.0	0.05	1.8	10.8	1	0.9	408	0.42	0.025	2.7	3100	0.31	2.09	1.7
H46144	1740	1.22	1100	0.11	7.2	1.2	1160	4.3	67.5	0.001	600.0	0.06	1.3	11.7	1	1	379	0.43	0.025	2.8	3150.0	0.315	1.82	1.7
H46139	1380	0.55	1200	0.12	7	1.2	1090	4.9	70.3	0.002	600.0	0.06	1.64	10.8	1	0.9	411	0.41	0.025	2.8	3020.0	0.302	1.99	1.7
H46143	1395	0.63	1520.0	0.152	6.19	1.6	0.121	5.94	69.6		400.0	0.02	1.82	12.3		1	326	0.3		3.1	3100	0.31		1.7
H46141	1845	0.52	930.00	0.093	5.75	1.3	0.112	5.34	95.8		700.0	0.07	1.54	12.4		0.9	404	0.3		3.2	2900	0.29		1.6
X66086	2370	1.6		0.022	4.5	3.5	0.106	6.5	44.1		500	0.05	3.5	24		0.6	403	0.2		1.1	5920.0	0.592		0.5
X66087	1250	0.8		0.962	4.9	17.6	0.155	12.6	93.2		500	0.05	8.5	32		0.9	148	0.3		0.9	4810.00	0.481		0.4
X66116	1540	0.7		2.31	4.2	18.6	0.14	6.3	85.3		500	0.05	4.2	34		0.6	237	0.2		1.3	4430	0.443		0.6
X66117	1850	0.7		0.91	4.3	19.5	0.146	14.1	146		2000	0.2	6	35		0.4	195	0.2		1.3	4640	0.464		0.5
X66217	1650	1.3		1.26	5.1	7.1	0.112	3.4	72.3		1000	0.1	4.2	12		0.8	265	0.3		1.6	4710.0	0.471		0.5
X63932	88	24.5		0.084	3	4.4	0.099	53.7	88.2		67000	6.7	0.8	28		2	95	0.2		0.9	1100.0	0.11		0.9
X63953	655	63.4		0.036	2.4	63	0.185	11.8	38.6		62000	6.2	0.6	26		2.1	79	0.1		0.9	2080.0	0.208		0.8
X63972	1310	6.4		3.08	33.3	73.4	0.41	10.2	54.3		6000	0.6	3.8	14		2.2	881	1.7		4.7	11300.0	1.13		1.5
X63980	92	85.5		0.054	0.9	61.2	0.268	29.8	62.3		100000	10	1.5	21		2.2	384	0.05		0.7	780.0	0.078		0.6
X67079	560	2.3		0.262	0.6	23.4	0.15	8.9	74		95000	9.5	10	35		2.2	106	0.05		0.5	670.0	0.067		0.5
X66229	6400	0.9		0.066	3.7	19.8	0.133	461	107		25000	2.5	6.5	29		0.7	331	0.2		0.6	3410.0	0.341		0.2
X66249	4870	0.6		1.77	3.3	28.3	0.167	192	76.3		44000	4.4	6.7	35		1.2	191	0.2		0.3	4860.0	0.486		0.2
X66250	4680	1.8		0.36	5.3	64.9	0.139	66	88.4		22000	2.2	6	15		0.8	266	0.3		1.8	3430.0	0.343		1
X66286	3370	0.8		2.09	2.9	27.1	0.144	13.5	48.9		13000	1.3	2.9	32		0.4	401	0.2		0.6	3780.0	0.378		0.2
X66287	4480	0.6		1.65	3.1	27.1	0.152	34	56.6		19000	1.9	5.2	33		0.3	314	0.2		0.6	3940.0	0.394		0.2
X66304	3650	0.4		1.82	2.9	26.8	0.144	48.7	54.6		16000	1.6	4.9	31		0.3	258	0.2		0.6	3880.0	0.388		0.2
X66305	3110	0.5		2.15	3.2	26.7	0.145	17.2	49.3		11000	1.1	3.8	32		0.3	259	0.2		0.7	4010.0	0.401		0.2
X66332	6740	2.1		0.045	6.4	72.1	0.148	173	120		38000	3.8	13.9	18		1.1	324	0.4		2.2	3880.0	0.388		1.7
X66338	6090	2.2		0.019	5.5	74.3	0.129	82.3	111		30000	3	15.6	15		1.3	543	0.3		2.2	3400.0	0.34		1.4
X66340	2110	0.7		1.42	2.9	42	0.133	7.7	55.3		7000	0.7	3	36		0.5	405	0.2		0.7	3500.0	0.35		0.3
X66346	2150	2		1.45	7.7	50.5	0.145	13.2	86		11000	1.1	3.4	20		0.7	291	0.4		3	4070.0	0.407		2
X66347	2230	0.8		1.68	3.3	42	0.141	31	53.6		12000	1.2	3.4	39		0.5	322	0.2		0.8	3940.0	0.394		0.3
X66373	9880	0.8		0.044	2.6	29.3	0.133	185	116		54000	5.4	12.7	35		0.5	164	0.1		0.4	3370.0	0.337		0.2
X67132	535	33.8		0.052	3.2	12	0.174	30.7	110		51000	5.1	25.6	27		5.9	191	0.2		1.3	1200.0	0.12		0.9

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
X67133	2340	5.6		0.032	3.3	16.6	0.147	19.1	52.9		28000	2.8	19.5	38		1	85	0.2		1.3	1750.0	0.175		0.6
X67143	1570	1.7		2.79	6.8	9.5	0.138	8.8	79		9000	0.9	5.9	19		0.7	248	0.4		1.8	2960.0	0.296		0.9
X67144	1550	0.7		2.8	6.2	6	0.13	4.7	68.1		11000	1.1	4.4	18		0.7	446	0.3		1.5	2710.0	0.271		0.7
X67174	3430	3		0.403	5.2	13	0.158	8.7	98.5		15000	1.5	9.5	26		0.9	247	0.3		1.6	2900.0	0.29		0.9
X67175	3430	10.3		0.04	4.3	15.6	0.141	21.8	124		31000	3.1	10.8	21		0.7	119	0.2		1.5	2130.0	0.213		1.1
X67268	1620	17.8		0.111	2.5	18.7	0.167	44.1	107		58000	5.8	3.4	31		1.6	210	0.2		0.7	2090.0	0.209		0.3
X67292	1450	0.2		1.98	5.7	7.2	0.144	6.4	74.1		12000.0	1.2	2.5	23		0.7	173	0.4		1.4	3010.0	0.301		0.7
X67297	1360	1.9		0.242	9.9	5.6	0.134	9.2	91.8		2000.0	0.2	5.2	22		2.2	136	0.6		2.6	6880.0	0.688		1.1
X67322	539	4.5		0.088	2.1	15.9	0.16	12.3	102		60000	6	34.9	29		2	63	0.1		0.8	1290.0	0.129		0.4
X67347	2060	0.3		2.23	7.7	4.4	0.18	5	41.4		4000	0.4	1.7	23		0.5	280	0.4		1.2	2560.0	0.256		0.5
X67354	1920	1.6		1.98	3.9	1.8	0.102	11.6	10.8		500	0.05	4.1	34		0.6	300	0.3		0.9	6390.0	0.639		0.6
X67374	1320	19.5		0.213	3.5	5.9	0.176	13.3	99.1		46000	4.6	1.8	23		1.9	52	0.2		1.5	1430.0	0.143		0.9
X67396	988	2.5		0.332	8.5	5.8	0.181	6	63.1		39000	3.9	1.3	20		2	66	0.5		1.3	2670.0	0.267		0.8
X67432	1820	10.2		0.19	4.3	7.1	0.18	50	60.3		58000	5.8	7.7	19		1.9	130	0.2		1	1520.0	0.152		0.8
X67438	1140	0.9		0.673	5.6	4.7	0.188	8.9	66.4		30000	3	2.8	22		1.9	293	0.3		1	2120.0	0.212		0.6
S156638	63	2		0.166	1.7	3.7	0.119	14.6	85.8		63000.0	6.3	0.3	23		0.9	33	0.1		0.6	570.0	0.057		0.6
S156644	55	1.6		0.182	2.2	3.4	0.155	13	96.2		56000	5.6	0.3	23		1.1	30	0.1		0.6	750.0	0.075		0.7
S156654	75	2.6		0.205	3.2	6.4	0.181	3.9	87.1		78000	7.8	0.4	23		1.1	71	0.2		0.5	1120.0	0.112		0.7
S156683	700	2.8		0.159	2.9	3.8	0.155	19	55.1		48000	4.8	0.6	19		1.1	210	0.2		0.5	980.0	0.098		0.5
S156689	92	26.8		0.165	2	14.4	0.14	7.5	90.6		78000	7.8	1	21		3.3	24	0.05		0.8	920.0	0.092		0.6
S156694	72	23.3		0.142	1.6	5.7	0.162	7.2	89.3		73000	7.3	5.5	20		2.7	28	0.05		0.8	740.0	0.074		0.6
S156698	1580	0.4		0.432	6.9	1.9	0.095	4.3	55.2		500.0	0.05	2.8	9		0.9	374	0.4		2.3	2940.0	0.294		1.2
S156709	804	1.8		0.053	2.8	55.3	0.137	10.6	90.6		56000	5.6	2.7	18		2.3	87	0.2		1.2	1510.0	0.151		0.8
S156710	1840.00	1.40		0.06	7.00	2.20	0.11	2.90	78.80		2000.00	0.20	1.90	11.00		0.90	543.00	0.40		2.6	2960	0.296		1.4
S156717	398	0.9		0.237	8.7	3.5	0.174	26.1	76.6		48000	4.8	8	17		0.6	45	0.5		0.6	2420.0	0.242		0.7
S156723	2440	1.3		0.18	7.2	18.1	0.143	24.8	69.6		56000	5.6	11.4	17		1.1	84	0.4		0.9	2610.0	0.261		0.7
S156734	1320	0.4		0.239	8.6	3.4	0.188	75.5	76.9		47000	4.7	12.4	18		0.6	63	0.5		0.5	2360.0	0.236		0.6
S156743	911	31.9		0.158	6.4	6.3	0.203	23.5	97.1		31000	3.1	3.8	28		3.6	102	0.4		1.6	2320.0	0.232		0.9
S156752	2400	2.8		0.141	4.7	7.9	0.117	187	63.5		24000	2.4	5.9	23		1.1	189	0.3		0.9	2510.0	0.251		0.4
S156759	745	2		1.6	14.8	1.2	0.055	5.6	46.6		500	0.05	2	8		3.3	221	0.8		5	2200.0	0.22		1
S156769	56	53.3		0.135	1.7	5.8	0.137	9.5	91.4		63000	6.3	79.9	18		2.8	79	0.05		0.7	760	0.076		0.4
S156780	637	2.1		1.31	15.4	1.5	0.013	3.2	59.8		500	0.05	1.3	3		2.9	83	0.8		7.6	1050.00	0.105		1.9
S156784	1070	18.3		0.112	2.6	3.3	0.158	18	77.4		69000	6.9	1.8	21		2	64	0.1		0.8	1090.0	0.109		0.5
S156790	1120	1.5		0.127	6.4	3.3	0.173	43.2	84.1		64000	6.4	39.4	22		1.1	60	0.3		0.7	2130.0	0.213		0.6
S156800	2960	0.6		0.069	8.1	3.1	0.171	17.7	66.8		4000	0.4	2.9	25		0.5	114	0.4		1.3	2470.0	0.247		0.6
S156810	366	2.1		1.15	15.4	1.1	0.007	5.9	72.7		500	0.05	1.3	3		3	48	0.9		7.7	840.0	0.084		2
S156824	2160	0.3		0.997	7.7	2.7	0.166	44.8	47.9		20000	2	1.7	23		1	195	0.4		1	2320.0	0.232		0.5
S156829	2750	0.2		0.135	7.4	2.5	0.164	14.7	77		47000	4.7	12.2	23		0.9	112	0.4		0.8	2320.00	0.232		0.5
S156835	57	29.6		0.166	3	2.1	0.167	114	52.6		96000	9.6	9.7	8		2	376	0.2		0.5	1110.0	0.111		0.4
S156847	380	16.8		0.646	3	2.9	0.149	19.9	66.9		79000	7.9	1.1	17		1.8	339	0.1		1	1230.00	0.123		0.5
S154641	1160	0.3		3.9	7.1	3.5	0.111	13.7	54.3		2000	0.2	8.4	9		0.7	383	0.4		2.9	2460.0	0.246		1.9
S154644	734	2.7		0.192	5.3	20.5	0.135	332	118		16000	1.6	13.4	29		0.8	61	0.3		1.4	3460.0	0.346		0.8
S154647	2180	9.2		0.699	6.9	37.5	0.137	14.8	85.8		24000	2.4	13.6	20		1.5	187	0.4		2	3470.0	0.347		3.2
S154955	2370	3		1.28	5.7	13.7	0.148	10.4	67.2		10000	1	10.1	21		1.1	193	0.3		1.3	3350.0	0.335		0.9
S154956	2880	1.5		0.275	5.8	5.1	0.084	19.2	106		17000	1.7	10.4	12		0.5	137	0.3		1.3	1840.0	0.184		1.3
S154961	1850	0.5		1.16	5	6.1	0.108	58.1	75.6		7000	0.7	7.1	16		0.6	224	0.3		1.1	2140.0	0.214		0.9
S154962	1460	0.3		0.914	6.1	2.8	0.073	686	107		5000	0.5	8.2	9		0.5	246	0.3		1.6	1320.0	0.132		1.6
S154973	3910	0.1		0.171	6.6	2.7	0.075	9.6	105		11000	1.1	12.1	9		0.4	218	0.4		1.5	1410.0	0.141		1.7
S154974	2850	1.6		0.312	5.3	9.9	0.117	13.6	121		14000	1.4	26.6	19		1.1	130	0.3		1.2	2620.0	0.262		0.9
S154653	649	3.3		0.154	3.5	20.1	0.141	60.5	111		17000	1.7	9.1	22		0.8	55	0.2		1.3	2410.0	0.241		0.9

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
S154666	619	2.1		2.09	13.2	1	0.039	15.3	51.2		500	0.05	3.8	6		3.2	205	0.8		7	1690.0	0.169		2.3
S154696	1060	5.8		1.03	6.7	8.2	0.177	12.1	103		41000	4.1	6.6	21		1.5	105	0.3		1.1	2790.0	0.279		0.7
S154697	370	27.8		0.322	6.8	7.2	0.192	49.7	91		65000	6.5	28.2	20		2.3	57	0.3		0.7	2240.0	0.224		0.6
S154739	1190	6.6		0.287	6.7	8.3	0.189	13.5	130		34000	3.4	6.7	22		1.6	130	0.4		1.4	2250.0	0.225		0.8
S154746	1930	0.7		1.29	5.3	5.4	0.119	13.5	83.6		13000	1.3	4.7	15		0.9	274	0.3		1.1	2600.0	0.26		0.6
S154766	1970	3.6		2.5	7.3	2	0.159	7.5	10.1		6000	0.6	18.5	35		1	386	0.4		1.7	10200.0	1.02		1.3
S154788	326	18.7		0.152	2.2	12.5	0.154	6.3	101		60000	6	2.5	25		3.6	25	0.1		1	1470.0	0.147		0.6
S154798	1540	0.4		2.91	6.6	6.4	0.15	7.3	58.3		8000	0.8	5.3	21		0.8	528	0.3		1.5	3140.0	0.314		0.9
S154805	1270	5.6		0.221	2.4	12.5	0.141	11.2	96.3		55000	5.5	2.5	24		1.2	35	0.1		0.9	1590.0	0.159		0.5
S154841	927	2.9		0.087	6.8	8	0.17	94.4	99.2		57000	5.7	6.6	23		2.9	58	0.4		1.1	2530.0	0.253		0.6
S154857	134	5.4		0.048	2.4	4.1	0.11	28.3	58.4		75000	7.5	17.1	17		1.5	24	0.1		0.4	970.0	0.097		0.6
S154858	1830	4		1.06	7.6	1.8	0.159	28.5	26.3		7000	0.7	10.5	40		1	122	0.4		1.6	10500.0	1.05		0.9
S154871	957	2.1		2.72	33	75	0.418	17.5	52.9		3000	0.3	3.2	13		2.6	1040	1.8		5.7	11600.0	1.16		2.1
S154872	747	2.1		0.729	8.6	20.2	0.163	31.2	40.7		90000	9	6	11		1.9	327	0.4		1.1	3020.0	0.302		0.7
S154884	744	6.5		0.043	3.4	2.7	0.122	7	75.2		54000	5.4	3.6	21		1.4	187	0.2		0.8	1370.0	0.137		0.4
S156852	44	24.2		0.243	0.9	54	0.076	7.3	78.5		81000	8.1	1.2	22		2	167	0.05		0.6	510.0	0.051		1.2
S156860	134	11.1		0.115	1.2	13.6	0.167	6.2	65.1		80000	8	0.2	18		1.9	111	0.05		0.3	610.0	0.061		0.9
S156877	53	23.3		0.152	1	22.9	0.134	23.3	86.6		75000	7.5	3.7	22		2.4	35	0.05		0.5	550.0	0.055		0.8
S156889	574	13.6		0.158	1.5	3.2	0.161	6.6	81.6		67000	6.7	0.4	21		2.6	77	0.05		0.7	830.0	0.083		0.6
S156900	136	3.4		0.152	1.1	66.8	0.209	15.6	77.9		97000	9.7	13.7	25		2.4	210	0.05		0.3	890.0	0.089		1.3
S156913	455	4		0.122	1.7	63.4	0.141	24.4	75.4		90000	9	6.5	17		2.4	135	0.1		0.4	880.0	0.088		1
S156922	42	2.3		0.466	1	21.4	0.203	60	60.6		68000	6.8	23.1	10		0.8	352	0.05		1	510.0	0.051		0.5
S156942	76	6.1		0.198	2.4	5.1	0.172	37.7	96.4		64000	6.4	69.6	23		3	944	0.1		0.8	910.0	0.091		0.9
S156970	135	14.7		0.125	1.8	11.4	0.174	30.9	74.8		53000	5.3	2.6	23		2.3	37	0.1		0.7	810.0	0.081		0.8
S156983	47	13.4		0.099	0.9	21.6	0.1	34.5	74.8		83000	8.3	2.4	11		4.6	28	0.05		0.5	590.0	0.059		0.7
S156999	2450	0.4		0.112	7.8	2.9	0.174	8.9	80.5		11000	1.1	1.1	24		0.6	146	0.4		1.4	2670.0	0.267		0.6
S157030	201	55.2		0.122	1.9	3.5	0.121	30.7	57.1		86000	8.6	19.2	15		1.7	451	0.1		0.9	880.0	0.088		0.3
S157047	67	101		0.221	0.9	76.7	0.129	50	92.5		85000	8.5	20.9	14		3.7	136	0.05		1.1	670.0	0.067		1.3
S157055	2440	0.4		1.61	5.1	5.9	0.14	7.5	50.2		4000	0.4	1.3	17		0.7	376	0.3		0.9	2800.0	0.28		0.4
S157066	48	7.8		0.128	1.4	27.3	0.162	96.7	79.9		79000	7.9	99.6	13		3.2	69	0.1		0.7	790	0.079		0.7
S157078	876	4.6		0.042	5.6	9.7	0.294	23.2	79.8		55000	5.5	6.9	25		1	44	0.3		1	2110.0	0.211		0.5
S157082	1300	1.7		0.023	7.1	6.8	0.243	19.4	81.4		11000	1.1	4	27		0.6	106	0.4		2.1	2540.0	0.254		0.4
S157109	1510	0.7		0.043	6.8	6.7	0.201	39.9	89.7		9000	0.9	6.4	26		0.9	31	0.4		1.9	2570	0.257		0.5
S157122	2280.00	1.40		0.06	6.40	8.30	0.38	8.60	90.90		10000.00	1.00	4.30	28.00		0.80	48.00	0.40		1.9	2380	0.238		0.5
S157132	1840	51.7		0.063	5.2	12.9	0.278	95.8	93.6		46000	4.6	9.8	27		2.4	29	0.3		1.7	2090.0	0.209		0.7
S157181	144	38.6		0.167	1.2	66.9	0.139	58.6	82.4		95000	9.5	36.4	20		3.5	271	0.05		1.5	880.0	0.088		1.2
S157212	977	31.3		0.027	6.7	11.3	0.22	42.1	104		37000	3.7	8.5	26		3.2	72	0.4		1.7	2700.0	0.27		0.8
S157239	2070	2.2		0.018	5.2	7.2	0.179	29.9	63.8		42000	4.2	5.9	23		0.8	128	0.3		1.6	1970.0	0.197		0.4
S157266	1540	0.4		0.034	8.2	4.2	0.185	25.2	104		33000	3.3	2.8	26		1	81	0.4		1.8	2830.0	0.283		0.8
S157287	1040	28.3		0.051	2.7	10.5	0.178	11.1	86.6		68000	6.8	4.4	23		1.2	15	0.1		1.1	1520.0	0.152		0.6
S157300	1110	51.1		0.054	2.4	4.1	0.147	182	87.6		80000	8	170	22		3.2	42	0.1		1	1060	0.106		0.6
S154899	1180	4.7		0.088	5	15.7	0.169	42.3	98.6		10000	1	42.7	31		1.6	42	0.3		1.4	3020.0	0.302		0.8
S154900	682	7.4		0.042	2.8	27.4	0.182	25.1	110		48000	4.8	21.8	40		1.5	23	0.2		0.9	2600.0	0.26		0.6
S154925	860	50.1		0.047	3	10.9	0.21	89.3	132		42000	4.2	200	28		0.9	36	0.2		1.6	1210.0	0.121		0.6
S154926	998	22.9		0.075	3.6	11.6	0.178	83.8	126		42000	4.2	201	26		1.3	34	0.2		1.8	1580	0.158		0.7
S154942	1680	2.2		1.12	6.5	6.7	0.105	11.6	106		7000	0.7	9.9	18		0.8	202	0.4		2.3	2710.0	0.271		1.2
S154943	989	3.6		2.55	31.6	67.4	0.391	21.2	82.2		5000	0.5	8	16		2.1	787	1.6		6.7	10000.0	1		2.5
S155508	1070	9.3		0.709	6.8	31	0.146	64.8	129		20000	2	22	23		1	94	0.4		2.7	3720.0	0.372		3.6
S155509	904	2		1.83	16	2.2	0.056	8	60.8		1000	0.1	6.6	7		3.8	155	0.9		7.4	2230.0	0.223		2.2
S155017	1820	1		1.4	6	5.4	0.115	8	80.5		32000	3.2	6.4	16		0.8	274	0.3		1.2	2630.0	0.263		0.8

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
S155048	1170	32.3		0.098	2.5	19.4	0.171	164	102		50000	5	4.5	25		1.5	110	0.1		1.2	1720.0	0.172		0.4
S155067	502	42.3		0.052	2.7	13.4	0.175	28.8	106		37000	3.7	4.9	21		2.6	23	0.1		1.4	1500.0	0.15		0.6
S155075	319	6.1		0.087	3.2	8.3	0.182	9.2	102		61000	6.1	1.6	24		1.9	28	0.2		1.4	1400.0	0.14		0.6
S155098	393	33.7		0.09	4.1	12.4	0.19	12.4	101		64000	6.4	2	27		2.1	17	0.2		1.4	2080.0	0.208		0.7
S155112	4980	15.4		0.04	5.4	3	0.132	67.4	80.9		71000	7.1	7	20		2.2	306	0.3		1.3	1880.0	0.188		0.5
S155119	1020	0.7		3.33	7.6	1.4	0.092	12.1	72.4		500	0.05	2	7		0.9	344	0.4		5.6	3050.0	0.305		2.7
S155125	148	6.2		0.053	3	2.4	0.129	11.7	71.7		85000	8.5	1.1	22		1.7	372	0.2		1.3	1090.0	0.109		0.3
S155147	227	12.9		0.027	3	4.4	0.099	72	54.7		62000	6.2	53.5	14		1.7	328	0.1		0.7	870.0	0.087		0.3
S157321	127	11.3		0.2	1.5	50.2	0.153	10.9	93.7		91000	9.1	0.9	33		2.2	85	0.05		1.2	1390.0	0.139		1
S157345	2220	0.7		1.42	5.1	5.9	0.127	8	50.8		6000	0.6	1.4	19		0.7	751	0.3		1.2	2810.0	0.281		0.6
S157360	2410	5.6		0.096	6.7	8	0.19	55.9	78.4		20000	2	4.1	25		2.1	50	0.4		2	2380.0	0.238		0.8
S157388	506	11.3		0.133	2.3	5.5	0.159	4.7	118		61000	6.1	1	23		5.1	199	0.1		1.2	940.0	0.094		0.8
S157426	383	12.8		0.233	3	4.4	0.145	50.4	82.6		83000	8.3	3	24		1.8	269	0.2		1	1060	0.106		0.6
S157460	290	25.4		0.079	3.3	3	0.128	6.5	84.5		63000	6.3	1.9	22		2.1	512	0.2		1.3	1320.0	0.132		0.5
S157484	1390	33		0.031	4.8	2.5	0.143	7.7	97.6		70000	7	0.8	19		1.2	651	0.3		1.2	1700.0	0.17		0.7
H42636	114	3.26	340	0.034	6.83	5.6	0.018	34.15	115.5		44500	4.45	12.21	22.7		1.4	14	0.05		0.8	2420.0	0.242		0.7
H42628	192	28.5	300	0.03	1.1	3.8	5800	58.4	95.8	0.015	9800	0.98	16.7	21.9	13	1.1	287	0.09	1.24	1.5	850.0	0.085	1.92	0.5
H42630	142	30.1	400	0.04	4.1	8.1	1620	11.7	118	0.031	19700	1.97	7.69	26.6	11	1.9	52.5	0.3	0.79	1.4	2200.0	0.22	2.25	0.6
H42623	271	7.42	500	0.05	3	19.7	1750	12.2	104.5	0.018	46600	4.66	3.99	29.6	15	2.3	36	0.22	0.42	1.1	2200.0	0.22	2.65	0.6
H42631	456	15.65	540	0.054	5.15	10.9	0.179	17.71	119.7		21500	2.15	8.16	24.5		1	44	0.2		1.2	2280	0.228		0.9
H42624	517	3.37	600	0.06	1.67	22.6	0.191	5.64	99.3		38200	3.82	3.1	27.3		1.3	190	0.2		0.4	1420.0	0.142		0.4
H42659	202	13.92	1140	0.114	7.05	6.3	0.176	10.3	92.2		28300	2.83	5.37	23.1		1.3	15	0.2		1.3	2390.0	0.239		0.9
H42652	496	18.85	1800.0	0.18	5.9	5.9	1840	26.2	87.9	0.06	45500	4.55	6.16	24.7	11	2	34.5	0.4	0.82	1.4	2050.0	0.205	1.95	1
H42643	675	7.84	5300.0	0.53	7.1	7.6	1850	15.4	88.7	0.028	26800	2.68	6.3	21.2	11	1.2	31.1	0.46	0.36	1.6	2380.0	0.238	1.84	0.9
H42641	796	10.2	6400	0.64	7.7	6.6	1820	28.1	98.6	0.015	26100	2.61	6.64	27.3	10	1.4	41.7	0.51	0.71	1.7	2340.0	0.234	1.93	1.1
H42657	810	100.2	4280	0.428	4.2	9	0.206	11.78	87.3		30400	3.04	4.24	24.3		2.2	25	0.3		1.6	1690.0	0.169		0.8
H42637	568	10.1	3700	0.37	5	9.3	1760	22.1	110	0.022	20200	2.02	5.82	24.5	8	1.1	48.5	0.34	0.45	2	2040	0.204	1.83	0.8
H42639	816	6.54	8800	0.88	4.4	13.4	1880	16.4	84.6	0.01	34400	3.44	4.34	22.4	9	1.1	88.8	0.31	0.17	1.7	1860.0	0.186	1.5	0.8
H42625	523	18.5	400	0.04	1.9	23.4	1580	45.6	90.1	0.082	27200	2.72	3.72	26.5	11	1.8	197.5	0.16	0.16	1.1	1520.0	0.152	1.98	0.4
H42648	658	56.1	10900	1.09	5.3	12.3	1750	12.1	81.6	0.18	24000	2.4	5.5	22	9	1.9	78.7	0.38	0.18	1.4	2690.0	0.269	1.66	0.7
H42632	1420	8.03	9000	0.9	6.5	7.9	1850	20.6	95.2	0.016	19600	1.96	4.99	21.2	6	0.9	158.5	0.45	0.09	1.8	2250	0.225	1.83	0.9
H42653	602	25.03	5110.00	0.511	4.46	19.1	0.191	6.92	104.8		45300	4.53	4.55	23.5		1.9	44	0.3		1.3	2540.0	0.254		0.5
H42627	384	99.24	410.00	0.041	1.81	11.8	0.176	30.48	84.4		7300	0.73	3.87	23		1.8	416	0.1		0.8	1470.0	0.147		0.5
H42642	617	3.94	4960.00	0.496	6.87	4.6	0.235	15.11	86.4		12800	1.28	5.66	15.1		1.2	50	0.2		1.2	2080.0	0.208		0.8
H42645	596	13.25	4500.00	0.45	6.3	5.9	2100	7.8	72.9	0.068	23200	2.32	6.12	21	10	1.1	36.2	0.41	0.33	1.4	1980.0	0.198	1.71	1
H42658	1400	29.7	800.0	0.08	6.5	5	1600	25	102.5	0.03	8900	0.89	5.8	25.8	10	2.5	24	0.42	1.15	2.2	2320	0.232	2.03	1.5
H42644	2522	31.13	1240.00	0.124	5.76	9.4	0.201	34.74	100.4		62900	6.29	8.37	27.2		1.2	35	0.3		1.1	2330.0	0.233		0.9
H42656	767	31.9	6800	0.68	7.1	5.5	1690	11.3	99.2	0.109	17700	1.77	4.06	22.9	6	2.4	39.6	0.48	0.28	2.1	2340.0	0.234	1.65	1.1
H42621	2780	3.34	700.0	0.07	3.6	26.7	1780	9	92.9	0.016	38800	3.88	2.92	28.2	8	1.5	32.1	0.28	0.19	1.1	2540.0	0.254	2.56	0.4
H42640	1509.00	8.58	15300	1.53	9.88	7.90	0.20	38.55	73.90		26700.00	2.67	4.56	20.40		0.90	70.00	0.20		1.3	2830	0.283		0.7
H42649	345	8.22	23070	2.307	8.07	6.7	0.197	7.77	73.2		23300	2.33	4.21	21.6		1.5	62	0.2		1.6	2420.0	0.242		0.8
H42638	1091	12.98	12500	1.25	4.08	15.6	0.179	11.3	74.7		24800	2.48	4.58	30.1		0.9	58	0.3		1.1	1880	0.188		0.7
H42633	469	6.67	3100.00	0.31	6.8	5.2	1830	14.2	111.5	0.01	8400	0.84	5.72	26.3	5	1	52	0.46	0.13	2.2	2210.0	0.221	2.1	1.1
H42654	672.00	55.80	5800	0.58	5.70	14.10	1800.00	8.60	84.80	0.20	37500.00	3.75	5.12	24.60	18.00	2.50	84.80	0.41	0.30	1.4	2780	0.278	1.86	0.5
H42661	916	25.7	2200	0.22	5.5	6.9	1600	22.6	98.2	0.065	21200	2.12	4.35	19.1	11	1.9	54	0.37	0.36	1.8	2030.0	0.203	1.9	0.6
H42651	1944	2.33	19680	1.968	6.19	9.1	0.139	4.55	78.7		900	0.09	4.63	20.7		0.5	62	0.3		1.3	2510	0.251		0.9
H42650	1470.00	2.76	25400	2.54	5.90	10.30	1270.00	6.10	56.60	0.00	800.00	0.08	3.44	18.50	1.00	0.70	126.00	0.43	0.05	1.9	2520	0.252	0.93	1.2
58450	868	2.87	800	0.08	1.9	93.6	1430	49.8	72.1	0.006	89600	8.96	47.6	18.3	21	2.1	111.5	0.11	2.49	1.1	1350.0	0.135	1.53	0.8
58464	1680.00	2.16	600	0.06	3.70	26.10	1480.00	82.50	82.60	0.00	82200.00	8.22	6.80	28.10	16.00	2.40	62.50	0.22	4.88	0.7	2590	0.259	1.9	0.3
17086	3740.00	0.85	1100	0.11	7.20	18.80	1880.00	62.70	116.00	0.00	45400.00	4.54	2.86	32.10	10.00	0.90	63.40	0.45	1.27	1.6	2440	0.244	3.97	0.8

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
17062	3650.00	1.99	800	0.08	4.50	19.50	2200.00	100.50	75.80	0.00	68500.00	6.85	2.11	36.00	11.00	1.60	107.00	0.29	1.81	1.4	3560	0.356	2.55	0.6
17109	9670	3.26	500	0.05	6.4	93.3	1840	393	44.4	0.03	62400	6.24	17.2	27.7	30	1.6	158.5	0.41	1.16	0.8	4050.0	0.405	2.74	0.6
17148	2910.00	1.81	14500	1.45	14.40	50.50	2850.00	62.70	81.80	0.00	25600.00	2.56	6.00	23.30	4.00	1.10	331.00	0.94	6.86	3.2	5170	0.517	1.89	1.9
58479	4010	0.72	500.0	0.05	8	2.7	1650	162.5	92.6	0.001	33600	3.36	5.52	26.4	3	0.7	232	0.45	1.66	1.2	2290	0.229	2.14	0.6
58493	1305.00	1.25	31800	3.18	7.10	0.50	960.00	8.00	62.60	0.00	700.00	0.07	1.77	8.90	1.00	0.80	654.00	0.43	0.03	3.9	2980	0.298	0.89	2.2
G24857	78.00	32.60	1100	0.11	3.00	11.70	430.00	35.90	134.00	0.04	38900.00	3.89	79.50	18.40	7.00	4.90	49.60	0.18	0.56	2.9	1960	0.196	3.44	2.5
SG92-17_C11049	1525	4.34	14400	1.44	5.3	30.3	1640	11.7	100.5	0.007	17700	1.77	8.05	21.3	3	1.3	198	0.34	0.07	2.6	3530	0.353	1.67	2.4
9593	1124	8.23			4.66		0.108		109.1		12100	1.21		14.9		1.3		0.2		2.3	2640.0	0.264		1.1
S91-388_5219	1475	4.21	15200	1.52	5.6	5.4	1670	15.3	49	0.013	12300	1.23	29.9	28.3	2	1.1	1420	0.31	0.09	1.6	2910.0	0.291	0.63	1
H44700	1167	3.2			7.89		0.112		120.1		2200	0.22		9.8		1.2		0.4		4.1	2530.0	0.253		2.6
G24650	398	3.89	21700	2.17	8	4.6	970	8	97.6	0.002	700	0.07	3.1	11.7	1	1.1	277	0.44	0.025	3.9	2520.0	0.252	0.64	2.1
H42333	1160.00	15.45	23900	2.39	11.30	9.00	2540.00	3.10	76.10	0.01	3300.00	0.33	2.90	24.60	3.00	1.60	349.00	0.57	0.14	1	4410	0.441	0.53	0.6
MC-05-03 6.0-20	1496	4.3	34910	3.491	8.7	18.9	0.18	8.2	82.2			0.4	1.9	22		2.3	319	0.4		2.5		0.411		1.9
10335	1200	3.04	34000	3.4	8.9	17.2	1830	7.6	68.3	0.005	2700	0.27	1.64	26.1	5	2.3	329	0.5	0.025	1.7	3720.0	0.372	0.39	1.2
H45368	128	19.07			1.52		0.116		151.3		56900	5.69		13.1		2.6		0.05		2.6	1030.0	0.103		4.4
H45505	133	483.73			2.64		0.098		154.1		48000	4.8		12.5		3.4		0.1		1.1	1580.0	0.158		1.8
G24888	172	2.48	3300	0.33	2.2	16.3	910	16.7	142	0.002	44600	4.46	24.7	13.8	11	2.6	99.9	0.15	1.31	3.3	1650.0	0.165	2.9	3.5
S91-388_5274	62.00	47.30	2600	0.26	3.50	4.60	1240.00	98.50	167.50	0.04	25500.00	2.55	140.00	10.20	8.00	6.20	106.50	0.21	0.86	2.9	1220	0.122	3.52	2.6
H45279	115.00	169.85			3.77		0.12		129.80		41800.00	4.18		16.70		2.70		0.20		0.7	1750	0.175		1.4
G24806	118.00	155.50	2900	0.29	2.00	17.90	1420.00	58.70	155.00	0.07	36800.00	3.68	51.50	12.40	14.00	5.20	101.00	0.13	0.21	2.9	1400	0.14	2.63	3.2
G24829	74	6.08	1700	0.17	1.3	9.2	680	10.3	142	0.001	25900	2.59	8.06	6.7	5	1.8	70.9	0.09	0.1	1.6	820.0	0.082	2.28	1.7
G24902	386.00	4.46	2500	0.25	1.80	15.80	830.00	12.90	162.50	0.00	51700.00	5.17	9.33	12.00	6.00	2.20	107.00	0.11	0.68	2.3	1340	0.134	2.43	2.6
G24874	315	32.1	1800	0.18	3.2	8.8	1290	21	175.5	0.031	63400	6.34	33.7	30.1	17	5.7	97.5	0.18	1.17	2.3	1950.0	0.195	2.82	3
SG92-22_C9763	260.00	4.90	8900	0.89	4.50	20.00	700.00	22.90	164.00	0.01	41400.00	4.14	6.64	19.60	7.00	3.10	118.00	0.30	0.30	2.9	1960	0.196	2.91	3
SG92-22_C9711	155	93.8	4000	0.4	4.1	8	2100	10.7	139.5	0.143	32600	3.26	15.1	24.8	14	7.2	129.5	0.26	0.23	3.6	1770.0	0.177	3.08	3.3
G24782	102	275	5000	0.5	1.9	9	450	61.3	106	0.336	12600	1.26	9.28	7.6	9	4.3	112	0.13	0.58	1.9	1080.0	0.108	2.48	1.5
H44956	69	995.1			0.95		0.044		107		13400	1.34		4.4		4		0.05		1	550.0	0.055		1
H42509	199	5.85			3.28		0.123		119.8		28200	2.82		15.8		2.9		0.2		1.8	2150.0	0.215		2.5
S91-388_5261	80	168	5700	0.57	1.2	8.1	440	13.8	117	0.1	14600	1.46	7.42	5	9	4.4	118.5	0.08	0.08	1.7	750.0	0.075	3.39	1.4
H44939	260.00	104.50	6400	0.64	3.70	25.70	850.00	26.40	123.50	0.16	28800.00	2.88	13.95	12.00	23.00	9.20	109.00	0.21	0.11	4.2	2140	0.214	2.42	9.7
H44935	176.00	164.97	6750	0.68	2.04	26.60	0.13	42.41	71.20		20800.00	2.08	38.73	9.30		5.40	111.00	0.30		2.4	1590	0.159		1.8
G21680	517.00	17.55	8600	0.86	5.80	3.90	2170.00	28.10	183.00	0.02	38600.00	3.86	15.90	37.80	12.00	2.00	144.00	0.30	0.10	1.8	3150	0.315	1.98	2
H42532	444.00	14.59			1.31		0.10		157.90		45200.00	4.52		12.60		2.60		0.05		1.8	1120	0.112		3.3
H44942	323	290	3600	0.36	1.9	11.8	440	77.8	138.5	0.404	24200	2.42	238	7.3	18	4.5	123.5	0.12	0.14	2	1040.0	0.104	2.19	2.8
SG92-02_C8906	220.00	143.50	4000	0.40	2.50	17.70	650.00	9.20	175.00	0.09	21100.00	2.11	6.10	8.20	8.00	4.10	105.00	0.18	0.11	2.9	1360	0.136	1.83	1.8
H42460	730	84.5	3700	0.37	3.9	19.5	1280	56.6	105.5	0.189	31600	3.16	10.55	22.9	10	2.6	133.5	0.23	0.25	1.8	1990.0	0.199	2.25	1.6
SG92-02_C8897	413.00	372.00	7900	0.79	2.50	23.30	1020.00	34.80	138.00	0.46	40200.00	4.02	57.50	8.60	26.00	7.50	166.50	0.16	0.48	2.3	1170	0.117	2.16	1.4
SG92-02_C8901	235	66.7	3300	0.33	6.4	41.9	2370	8.7	148.5	0.12	21000	2.1	8	14.5	16	9.6	116.5	0.36	0.1	3.3	2740.0	0.274	1.98	1.4
SG92-06_C12601	606	19.4	4900.0	0.49	6.2	12.9	1660	198.5	174	0.033	19300	1.93	57.7	35.7	8	3.1	81.5	0.36	0.12	2	3060	0.306	2.87	1.4
SG92-22_C9736	1040	3.15	2100	0.21	3.7	5.5	330	20.4	146.5	0.002	56700	5.67	13.65	13.8	12	4.5	158	0.23	0.88	4.6	1280.0	0.128	2.58	1.8
H44936	637	88.2	5000	0.5	3.4	39	970	13.7	116	0.103	27000	2.7	8.19	12.2	11	2.9	168	0.2	0.06	2.7	1790.0	0.179	2.16	2.2
H45187	358	104.5	8700	0.87	3.9	52.9	1130	329	141	0.137	21600	2.16	14.1	16	7	2.3	182	0.25	0.42	2.6	2590.0	0.259	1.56	1.2
H45191	706.00	129.00	7300	0.73	3.60	49.50	1060.00	111.00	106.00	0.14	32000.00	3.20	8.95	14.20	10.00	2.10	198.50	0.23	0.16	2.2	2380	0.238	2.38	1.2
H44940	190.00	160.20	5360	0.54	1.22	9.40	0.04	47.48	93.20		8200.00	0.82	6.55	7.00		3.60	95.00	0.10		1.6	1140	0.114		2.2
G24756	404	311	3300	0.33	3.1	36.6	910	31.9	158	0.549	14900	1.49	8.89	14.2	11	4.7	136	0.19	0.76	2.9	2030.0	0.203	1.86	1.8
H44937	616	145.68	4720	0.472	2.13	27.7	0.067	25.15	94.9		14700	1.47	8.27	14.2		4.9	110	0.3		2.6	2020.0	0.202		3.9
G24926	1910.00	5.13	9900	0.99	4.00	20.50	1190.00	14.30	104.00	0.01	48500.00	4.85	5.93	27.00	8.00	1.50	251.00	0.23	0.14	1.2	2120	0.212	1.11	1.6
S91-388_5249	557.00	167.00	6000	0.60	2.30	9.10	610.00	22.70	120.50	0.39	14400.00	1.44	17.50	7.00	8.00	5.30	228.00	0.14	0.09	2.3	1190	0.119	3.5	1.7
H45803	804	292.78			3.47		0.166		107.3		31300	3.13		24.8		2.3		0.2		1.2	2670.0	0.267		0.9
H45188	542	45.93	5900	0.59	2.67	55.6	0.172	361.71	88.8		20900	2.09	9.44	18		2.5	177	0.5		1.9	2480	0.248		1.2

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
H45189	504	51.9	20500	2.05	5.3	81.2	1000	95.4	166	0.078	12200	1.22	8.15	16	5	2.3	153.5	0.34	0.06	2.5	3290.0	0.329	1.37	1.2
G24852	1865	2.36	24000	2.4	5.8	34.3	940	45.8	145.5	0.002	15200	1.52	8.76	18	2	2.3	138	0.36	0.025	5	3290.0	0.329	1.45	2
H44933	1040	735	5700	0.57	4.8	29.8	1250	31.5	120	2.23	18100	1.81	45.7	18	11	4.8	266	0.3	0.025	4.3	2440.0	0.244	2.88	2.9
X15955	639	15.02			5.1		0.149		122.7		9800	0.98		19.3		2		0.2		1.8	2380.0	0.238		1.5
H45591	1709	9.98			3.19		0.088		85.3		19800	1.98		14.7		2.1		0.2		1.8	2890	0.289		2.1
X15979	517.00	46.57			4.22		0.17		149.70		14500.00	1.45		24.10		1.80		0.20		1.9	2170	0.217		1.3
G21668	897	5.83	8400	0.84	5.7	6.4	1820	11.2	130	0.019	8500	0.85	8.41	38.2	3	1.4	198.5	0.32	0.05	1.4	3380.0	0.338	1.52	0.9
H45190	1305	27.66	22350	2.235	5.5	63.5	0.146	112.42	109.9		18900	1.89	5.81	21.2		2.5	259	0.5		2.5	3370.0	0.337		1.1
H45814	600.00	22.30			6.03		0.12		135.90		10400.00	1.04		16.00		2.10		0.30		2.3	3910	0.391		1.6
H45186	976	158.01	19650	1.965	4.89	72.4	0.106	71.63	106.9		13300	1.33	8.92	18.7		2.2	184	0.4		1.9	3480	0.348		1.3
G24942	1845	5.66	20600	2.06	4.6	19.1	1360	7.4	110	0.002	17200	1.72	3.07	31.3	4	1.4	294	0.27	0.19	1.3	2480.0	0.248	1.02	1
X15939	1530	28.7	7800	0.78	7.3	40.2	1440	21	184	0.019	5600	0.56	11.05	16.7	2	1.8	146.5	0.48	0.07	4	3430.0	0.343	1.77	1.6
G24952	1010	1.92	27600	2.76	2.8	15.1	460	5.8	101	0.006	10100	1.01	5.36	6.8	5	1.3	168	0.2	0.05	2.4	1830.0	0.183	0.9	1.5
G21701	2350	5.48	17000	1.7	6.5	2.9	2160	18.8	145.5	0.008	5400	0.54	7.71	38.6	3	1.3	394	0.32	0.025	2.1	3250.0	0.325	1.78	1.1
SG92-22_C9681	1230	1.6	26000	2.6	5.1	14.9	1460	4	68.3	0.001	2100.0	0.21	2.91	25.3	2	0.9	370	0.32	0.06	1.5	3940.0	0.394	0.82	0.9
SG92-06_C12669	1165	42.3	6300	0.63	6	6.9	1730	669	122	0.015	43200	4.32	33.7	33.9	6	2	157	0.35	0.25	1.1	3320.0	0.332	3.96	1
H45390	791	12.47			1.67		0.08		99.9		37600	3.76		8.1		1		0.05		1.2	1670.0	0.167		1.8
H45199	1292	31.15	14770	1.477	5.32	76.6	0.171	154.24	192.2		71700	7.17	16.21	20.2		2.1	131	0.5		4.2	3490.0	0.349		2.3
SG92-22_C9794	1095	7.27	25700	2.57	3.8	31.4	1010	20	95.8	0.003	29000	2.9	6.49	14.1	9	4	186	0.24	0.18	3.3	2800.0	0.28	1.21	2
H45195	632	28.5	15300	1.53	6.5	46.7	1550	32.6	161	0.031	23300	2.33	9.43	17.4	5	1.9	107.5	0.43	0.07	5	3720.0	0.372	1.61	2.6
H45198	896	49.7	28300	2.83	4.2	31	1040	60.4	127	0.068	29600	2.96	7.61	14.4	7	1.4	175.5	0.29	0.05	3.8	3160.0	0.316	1.18	1.6
H45200	688	121.5	15500	1.55	3.5	28.7	1290	184	164.5	0.247	22300	2.23	8.83	13.4	8	1.8	137	0.22	0.09	3.5	2500.0	0.25	1.49	1.9
S-10-29 115.5-129.5	1568	5.4	15140	1.514	4.8	11.1	0.094	23.5	81.8			3	11.5	15		1.7	193	0.3		1.7		0.251		1.6
H45202	237	66.6	4100	0.41	3.8	9.5	2140	23.6	208	0.129	11800	1.18	9.77	12.6	5	3.1	101.5	0.22	0.19	4	1810	0.181	1.83	2
SG92-02_C8937	1340	9.77	5500	0.55	6	8.2	1490	13.1	110.5	0.028	21400	2.14	13.4	25.2	8	1.6	154	0.4	0.19	1.1	2990.0	0.299	2	0.8
H45206	729	31.3	11900	1.19	6.4	15.3	1570	6.4	174.5	0.068	19300	1.93	13.95	28.8	9	1.8	190	0.39	0.12	3.2	3240.0	0.324	2.71	2.3
H45614	1617	34.93			7.68		0.156		74.3		36400	3.64		15.5		1.3		0.4		2.8	4080.0	0.408		3.3
H45192	678	45.06	28510	2.851	5.54	59.1	0.174	104.29	97.8		23200.0	2.32	6.21	18.4		2.5	185	0.5		3.7	3650.0	0.365		1.6
H45211	745.00	27.00	28800	2.88	5.50	23.10	930.00	3.80	110.00	0.07	18200.00	1.82	9.13	15.40	8.00	2.20	186.00	0.39	0.20	4.2	3310	0.331	2.49	3.8
SG92-22_C9822	3460	237	4700	0.47	2.5	29.9	690	165.5	152	0.759	28300	2.83	20.4	10.9	9	1.9	154.5	0.16	0.56	2.5	1500.0	0.15	2.11	1.8
H45197	740.00	73.24	18590	1.86	3.28	34.10	0.11	86.47	139.40		15900.00	1.59	6.32	16.20		1.80	137.00	0.30		3.3	3080	0.308		1.4
H45208	1550	50.4	300	0.03	4.2	22.8	760	7.1	167	0.073	38500	3.85	16.15	16.6	15	6	294	0.3	0.15	3.4	2880.0	0.288	3.32	6.1
H45207	920.00	19.84	10870	1.09	6.30	29.70	0.15	60.21	105.20		32700.00	3.27	58.99	24.30		2.30	184.00	0.40		1.8	3830	0.383		2.2
H44977	490.00	5.81			2.01		0.06		99.40		15200.00	1.52		7.90		1.10		0.10		2	1700	0.17		1.3
H45210	1318	38.17	11770	1.177	4.53	24.9	0.107	6.26	135.9		43000	4.3	14.27	18.1		2.7	237	0.5		3	2860.0	0.286		4.4
G24977	760	3.55	35200	3.52	5.4	45.5	1150	5.2	92.4	0.007	23600	2.36	3.19	18.1	6	1.8	175.5	0.32	0.11	3.5	3180.0	0.318	0.92	1.9
H45224	911.00	16.42			6.31		0.12		71.20		18900.00	1.89		15.20		1.70		0.30		3.1	3740	0.374		2
H44683	929	31.06			3.12		0.104		117.3		17400	1.74		12.3		1.4		0.2		3.1	2690.0	0.269		1.9
H45193	616.00	45.00	5900	0.59	5.60	42.50	1250.00	79.80	110.50	0.08	8900.00	0.89	5.32	18.90	5.00	2.30	232.00	0.34	0.09	3.5	3430	0.343	1.6	1.3
G24999	1625	3.04	18500	1.85	5.4	39	1080	4.2	114	0.004	29900	2.99	3.7	15	6	2.8	353	0.33	0.39	3.2	2860.0	0.286	1.49	1.8
H45194	2456.00	50.44	20670	2.07	4.48	68.70	0.15	77.44	119.30		29600.00	2.96	10.90	16.90		1.90	304.00	0.60		3.8	3430	0.343		1.6
H45204	1360	13.7	11700	1.17	5.8	11.6	1520	8.9	119.5	0.017	22300	2.23	11	29.6	8	2	356	0.35	0.18	2.1	3130.0	0.313	1.54	2.1
H45205	1061.00	11.95	23370	2.34	6.87	17.30	0.15	6.63	128.40		19000.00	1.90	10.68	24.00		2.00	277.00	0.40		3	4160	0.416		2
H45203	1049	30.11	14870.0	1.487	6.17	24.4	0.098	7.3	120.7		10600	1.06	7.25	15.4		2.9	316	0.6		3.4	3840.0	0.384		3
H45201	1981	100.29	26530	2.653	3.1	24.9	0.106	105.74	143.8		11700	1.17	19.12	13		2.8	278	0.5		2.9	2360.0	0.236		2.8
H45212	1304	13.69	10320	1.032	6.19	37.8	0.172	7.74	98.6		9600	0.96	12.14	26.1		2.4	495	0.5		1.9	4290.0	0.429		1.5
X15937	1820	42.7	10000	1	1.9	16.7	710	99.1	127	0.11	29100	2.91	11.4	11.4	7	1.8	160	0.15	0.11	2.9	1840.0	0.184	1.67	3.5
H45086	878	13.05	25300	2.53	6.2	42.1	1470	14.9	160.5	0.027	26900	2.69	10.5	17.5	5	0.3	178	0.43	0.39	4.5	3540.0	0.354	1.61	3.6
H44866	857	39.9			2.68		0.07		121.2		17500	1.75		8.3		2		0.1		2	2040.0	0.204		2.1
H45087	2272	5.48	23980	2.398	4.32	16.9	0.075	566.91	86.9		73000	7.3	9.84	10.9		2.9	196	0.4		2	3060.0	0.306		1.5

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
H45085	1310	8.07	8050	0.805	7.33	48	0.127	82.28	169.6		31300	3.13	27.95	18.3		1.4	197	0.4		3.4	3640	0.364		2.1
H45083	1080	15.4	16600	1.66	8.4	22.9	1320	75	146	0.03	23400.0	2.34	45.6	17.8	6	0.9	253	0.53	0.26	3.1	3200.0	0.32	1.39	1.8
X15934	2340	59.1	8700	0.87	3.5	31.2	1010	101	151.5	0.113	18600	1.86	27.9	13.1	8	2.6	190.5	0.24	0.14	3.3	2240.0	0.224	1.81	1.9
H45102	2261	57.06			5.56		0.142		107.2		23900	2.39		18.6		2.9		0.3		1.7	3290.0	0.329		1.7
X15912	904	34.41			3.31		0.105		153.1		14300	1.43		15.9		2.2		0.2		2.9	2960.0	0.296		2.6
H45082	2040	3.88	1600	0.16	3.9	52.3	1380	88.9	156	0.004	45900	4.59	25	29.9	8	1.4	276	0.23	0.91	1.4	2890	0.289	1.68	1.1
20856	1930.00	6.82	15400	1.54	5.50	4.20	1100.00	132.00	125.00	0.01	19000.00	1.90	624.00	15.00	5.00	1.20	301.00	0.35	0.34	1	2670	0.267	1.24	1.2
H45088	2200	5.79	24600	2.46	4.9	14.9	1090	61.9	94.8	0.027	23100	2.31	11.7	14	7	2.3	221	0.34	0.25	2.7	3740	0.374	1.08	2.1
H44554	1004	6.52			6.14		0.117		90.8		22400	2.24		14		1.7		0.3		1.7	3000.0	0.3		1.5
SG92-06_C12577	1685	28.3	22400	2.24	5.5	47.1	1510	13.7	85.1	0.048	30800	3.08	6.19	15.4	17	5	380	0.36	0.17	2.8	2790.0	0.279	0.98	2.9
H45081	1680	16.2	27400	2.74	5.3	47.4	0.134	630	55.3		6000	0.6	45.5	19		1.7	639	0.3		1.4	2770.0	0.277		1
H45082	1990.00	1.60	2880	0.29	3.40	58.30	0.15	5310.00	130.00		49000.00	4.90	211.00	29.00		1.40	254.00	0.20		1.1	2590	0.259		0.8
H45083	1130.00	7.30	10500	1.05	6.20	29.50	0.14	96.60	150.00		19000.00	1.90	29.00	18.00		0.80	257.00	0.40		2.9	2790	0.279		1.8
H45085	1490.00	8.10	3020	0.30	6.40	30.70	0.13	120.00	175.00		32000.00	3.20	44.80	15.00		0.90	186.00	0.40		3.5	3180	0.318		2.4
H45086	901.00	10.70	25600	2.56	5.80	39.60	0.15	25.00	165.00		19000.00	1.90	11.60	18.00		0.40	163.00	0.30		3.9	3740	0.374		3.2
H45102	2010	14.9	23100	2.31	5.5	30.9	0.146	47.9	136		28000	2.8	8.4	21		3	265	0.4		2.3	3660.0	0.366		1.5
H45103	2060	17.3	8290	0.829	6.1	19.1	0.129	62.7	202		22000	2.2	13.9	16		2	188	0.4		2.6	2600	0.26		1.5
H45104	2010	97.6	7870	0.787	5.3	24.8	0.132	414	199		21000	2.1	11.5	15		3.1	112	0.3		3.9	2810.0	0.281		3.8
X64717	911.00	2.80	25000	2.50	5.00	21.20	0.12	5.90	140.00		14000.00	1.40	14.00	10.00		2.10	163.00	0.30		2.3	4460	0.446		1.1
X64718	1610.00	5.00	9880	0.99	4.90	9.20	0.13	17.30	161.00		15000.00	1.50	13.50	19.00		2.40	116.00	0.30		2.1	3410	0.341		1.3
X64719	1650.00	1.80	26000	2.60	5.30	15.20	0.18	227.00	138.00		16000.00	1.60	9.60	15.00		2.90	133.00	0.30		3.4	4030	0.403		1.6
X64724	2690	10.6	24200	2.42	7.7	18.7	0.111	3130	118		28000	2.8	24.3	13		2	341	0.4		2.5	2660.0	0.266		1.8
X64743	595	20.6	34900	3.49	5.7	23.4	0.102	25.8	106		22000	2.2	5.5	12		2	162	0.3		4.4	3560	0.356		3.5
X64746	2250.00	25.10	12900	1.29	3.50	17.30	0.09	12.20	52.20		24000.00	2.40	7.00	8.00		2.40	397.00	0.30		1.9	1950	0.195		4.3
X62696	1120.00	29.80	32800	3.28	6.80	45.70	0.11	14.00	74.20		19000.00	1.90	6.10	15.00		1.60	443.00	0.40		3.2	3120	0.312		4
X64747	1780	28.1	13800	1.38	3.8	17.4	0.081	3.6	60.7		28000	2.8	3.5	8		1.5	315	0.2		2.5	2170.0	0.217		5.4
H45104	2100	22.9	23300	2.33	6.6	32.5	1370	118	126	0.05	8800	0.88	8.22	16.1	5	2.4	196	0.43	0.09	4.2	3550.0	0.355	1.24	2.9
X15938	4309	12.7	5580	0.558	5.47	27.7	0.138	50.14	116.5		18100	1.81	8.05	18		3.4	207	0.5		2.9	3450.0	0.345		1.8
H45103	3089	119.11	5580	0.558	5.99	8.6	0.132	429.47	188.3		13700	1.37	12.5	17.4		2.6	129	0.3		1.5	1940.0	0.194		1.6
H44876	3566	37.69			4.11		0.132		109		8200	0.82		14.1		2.4		0.2		2.7	2910	0.291		2.2
X15932	24800.00	58.00	1400	0.14	1.70	32.00	800.00	187.00	96.40	0.12	17600.00	1.76	5.55	10.20	8.00	3.10	217.00	0.11	0.36	3.2	1110	0.111	1.27	3.5
H44843	1503	30.9			7.24		0.173		99.7		17500	1.75		21.3		2.1		0.3		1.8	4000.0	0.4		1.4
H45089	2150	11.41	22480	2.248	5.38	15.8	0.098	50.67	140.1		15300	1.53	15.77	11.5		2.8	235	0.5		2.9	3860.0	0.386		2.5
X15936	2471	8.51	11670	1.167	4.2	32.7	0.131	42.25	98.8		9900	0.99	5.99	13.6		1.9	188	0.4		2.6	2680.0	0.268		1.5
S91-388_5235	723	6.86	49900	4.99	7.1	18.4	1230	7.5	43.4	0.021	9200	0.92	4.69	9.9	6	2.1	378	0.44	0.06	3.8	3840.0	0.384	0.51	2
X15933	6908	82	10980	1.098	3.7	41.7	0.118	118.66	137.9		5000	0.5	9.47	17.9		3.8	175	0.4		3.5	3000.0	0.3		2.5
H45078	1080	5.01	710	0.071	3.18	6.9	0.184	46.19	100.4		69200	6.92	2.82	24.4		1.6	18	0.2		1	1540.0	0.154		0.7
H45071	232	39.7	930	0.093	2.52	18.8	0.195	11.3	125.5		62800	6.28	5.14	42		5.5	18	0.3		0.7	2230.0	0.223		0.5
H45068	146	14.54	740	0.074	6.97	8	0.209	45.21	110.5		51100	5.11	500.61	25.9		2.2	19	0.2		1.1	2510.0	0.251		0.9
H45065	119	30.19	850	0.085	1.74	15.3	0.18	22.02	89.1		52300	5.23	3.81	25		2.4	20	0.2		0.8	1510.0	0.151		0.5
H45080	8165	2.69	2120	0.212	6.28	8.4	0.2	28.2	101.9		40400	4.04	3.76	23.8		2.2	65	0.6		0.8	2500.0	0.25		1
H45075	1967.00	40.07	680	0.07	2.34	13.40	0.20	22.83	100.50		66300.00	6.63	4.20	26.50		4.80	29.00	0.30		1	1650	0.165		0.6
X15748	842	8.75	7500	0.75	10.7	5.7	1720	8.9	117	0.017	23300.0	2.33	8.02	16.3	5	2.6	170.5	0.67	0.35	1.6	3510.0	0.351	0.77	1.4
H45073	1613	51.16	1080	0.108	2.84	6.9	0.181	15.29	113.7		23200	2.32	2.98	25.6		3.5	67	0.2		1.2	1650.0	0.165		0.7
S-11-70 122.4-136.9	1744	11	6850	0.685	6	39	0.172	17	83.3			4.7	8.6	22		3	220	0.3		1.6		0.327		1.6
9976	982	45.86			5		0.121		83.1		20100	2.01		14.8		1.5		0.2		1	3590.0	0.359		1.1
S91-398_5495	413	15.2	16600	1.66	8.7	10.4	830	10.5	177.5	0.01	7800	0.78	4.13	10.4	4	1.9	266	0.58	0.22	5.1	2200.0	0.22	1.08	8.3
H44453	1611	9.06	880	0.088	6.99	19.2	0.188	42.4	110.7		22000	2.2	11.22	20		2.4	135	0.4		2.9	3660.0	0.366		2.5
S-11-70 85.4-103.4	694	14.3	20940	2.094	6.9	18.7	0.197	7.5	68.8			3.8	2.6	22		2.5	279	0.3		1.4		0.405		1.7
H42341	921	10.7	17600	1.76	9.4	6.5	1680	12.7	89.8	0.006	5600.0	0.56	3.88	19.4	3	1.5	223	0.53	0.15	2.5	3340.0	0.334	0.75	1.9

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
X15862	606	113.5	14700	1.47	4.8	26.2	1320	8.5	108	0.138	20600	2.06	8.77	25.7	6	1.8	410	0.3	0.34	1.2	3400	0.34	0.76	3.1
S-10-21 94-110	1423	85.1	9050	0.905	3.8	25.2	0.12	35.8	95.1			3.2	7.2	19		1.9	268	0.2		1.9		0.313		2.7
E192812	1129	47.52			6.61		0.145		118.4		17000.0	1.7		15.8		1.9		0.3		1.7	3460.0	0.346		2
S-11-68 183.46-199.46	784	47.7	22740	2.274	9.4	11.2	0.196	19.5	102.6			1.8	21.1	20		2	355	0.5		1.7		0.432		2.6
S-11-68 41.46-57.46	1185	24.4	5330	0.533	6.6	48	0.17	20.4	139.6			3.4	14.1	24		2.6	223	0.4		1.7		0.402		1.9
MC-05-02 90-106	617	84.6	17930	1.793	6.4	31.5	0.154	10.3	77			2.3	4.1	18		1.8	321	0.4		2.8		0.389		2.2
E192834	1392	22.08			7.91		0.106		123.5		24300	2.43		10.2		1.9		0.4		3	2750.0	0.275		2.7
E192868	725	25.2	4350	0.435	6.1	15.1	0.122	17.7	163		14000	1.4	8	14		1.6	202	0.3		2.6	3090.0	0.309		2.8
E192869	756	16.7	22300.0	2.23	7.6	56.8	0.162	6.6	99		9000	0.9	3.9	20		2.3	242	0.4		3.6	4730.0	0.473		2.6
E192870	836	41.7	23200	2.32	6.1	27.8	0.143	5.8	97.5		10000	1	3.9	16		1.7	418	0.3		2.6	3760.0	0.376		2.4
H44450	555	4.7	25200	2.52	6.4	6	0.068	6.7	91		2000	0.2	1.7	6		1.2	308	0.3		6.1	1670.0	0.167		1.9
H44451	529	2	25600	2.56	6.6	7.9	0.065	11	99.6		1000	0.1	1.9	7		1.4	342	0.3		5.3	1830.0	0.183		1.5
H44452	661	1.4	17000	1.7	7	6.2	0.076	3.9	103		500	0.05	4.2	8		1.1	207	0.3		4.7	1980.0	0.198		1.1
H44453	1380	6.2	3380	0.338	5.7	13.6	0.135	12.8	123		20000	2	7.6	17		2.3	148	0.3		2.4	3100	0.31		1.9
H44454	2020	3.1	2710	0.271	5.5	18.7	0.12	23.2	147		12000	1.2	8.9	16		1.6	211	0.3		2.5	2990.0	0.299		2
H45078	666	22.5	26600	2.66	7.3	10.8	0.09	12.5	101		14000	1.4	4.7	11		1.8	336	0.4		4.7	1970.0	0.197		4.9
H45079	671	26.6	28500	2.85	6.1	18.6	0.109	7.3	88.3		12000	1.2	4.5	17		1.6	358	0.3		3.6	2270.0	0.227		3.5
H45080	1710.00	27.30	14300	1.43	4.80	89.50	0.12	1030.00	72.70		17000.00	1.70	159.00	18.00		1.40	802.00	0.30		1.5	2350	0.235		1.3
S157569	1070.00	29.20	22500	2.25	6.00	59.20	0.19	9.30	123.00		35000.00	3.50	4.10	26.00		2.50	226.00	0.40		1.6	4070	0.407		1.4
S157570	913	11.1	26900	2.69	5.9	53.8	0.177	3.1	88		22000	2.2	3.4	25		2.3	888	0.4		1.4	3670.0	0.367		1.4
X62639	933	74.9	12200	1.22	3.8	22.2	0.12	6.7	125		19000	1.9	4.2	16		2.3	201	0.2		1.6	3330.0	0.333		2.1
X62640	635	16.6	16700	1.67	3.3	19.8	0.1	7.9	141		12000	1.2	4.1	17		1.9	271	0.2		1.2	2980.0	0.298		1.5
X63892	1070	6.9	23900	2.39	10.1	9.9	0.206	8.8	137		17000	1.7	4.9	24		1.7	262	0.5		1	4820	0.482		0.7
X63893	1260	7.6	19500	1.95	10.2	7.3	0.227	10.1	175		20000	2	6.9	25		2.3	291	0.6		1.1	5020.0	0.502		0.9
S-10-33 170-186	1295	30.5	22560	2.256	18	32.7	0.153	52.8	79.4			2.6	4.7	18		1.8	572	1		2.3		0.465		2.3
H44504	746	26.53	4460	0.446	9.32	6.2	0.095	11.86	167.4		15800	1.58	8.76	10.1		2	180	0.3		4.8	2200.0	0.22		4.9
S-11-72 101.95-118.3	1286.00	15.90	11420	1.14	8.50	21.90	0.15	15.80	80.30			2.40	7.20	19.00		1.90	278.00	0.40		1.6		0.376		1.1
S-11-70 156.4-172.4	974	19.4	23810	2.381	6.2	53.3	0.172	6.1	92.3			3.2	4.2	25		2.3	688	0.4		1.5		0.375		1.5
X15753	705	12.05	7800	0.78	7.8	10	1330	7.9	141.5	0.026	12700	1.27	10.6	14.4	5	1.4	159	0.47	0.36	2.4	3200.0	0.32	1.01	2.3
20847	1115	81.56			4.25		0.103		88.6		26700	2.67		15.4		1.7		0.2		1.8	2370.0	0.237		2.4
S91-398_5851	631.00	177.50	15500	1.55	6.50	11.80	740.00	7.10	152.00	0.09	6600.00	0.66	2.20	12.70	6.00	3.00	154.00	0.36	0.10	3.2	2590	0.259	0.75	7.6
H44544	1236	85.4			4.27		0.127		137.7		24600	2.46		18.8		3		0.2		1.8	3120.0	0.312		3
X15861	567	59.38	26990	2.699	3.74	16	0.136	4.6	84.5		15900	1.59	5.85	22		2	249	0.2		1	2960.0	0.296		2
S-10-33 210-226	2017.00	172.20	27420	2.74	7.90	7.40	0.23	49.00	114.00			2.60	7.60	25.00		1.80	482.00	0.40		1.7		0.495		1.6
H44505	586	19.5	7000.0	0.7	9.5	4.5	1020	7.7	163	0.021	7800	0.78	8.58	10.7	3	2.1	165.5	0.52	0.15	5.2	2080.0	0.208	1.14	4.2
X15860	625	287	27200	2.72	4.7	19.9	1260	6.5	76.1	0.734	13400	1.34	5.7	22.6	6	1.7	444	0.28	0.11	1.4	3280.0	0.328	0.47	1.8
S91-398_5865	647	25.2	24900	2.49	6.4	14.2	1150	6.1	110.5	0.012	5600	0.56	1.72	12.6	4	2.7	155.5	0.34	0.07	3.1	2310.0	0.231	0.6	7.3
20831	1145	18.7	20700	2.07	4.2	14.6	1050	22.5	133.5	0.033	18100	1.81	4.87	17.2	8	2.7	258	0.26	0.24	1.7	2920.0	0.292	0.68	4.7
H42381	849.00	79.46			3.57		0.11		89.30		16900.00	1.69		14.50		1.30		0.20		0.9	2660	0.266		1.4
S-09-11 130-146	1158	44.1	17790	1.779	5.1	32.9	0.121	434.8	64.8			2	39	21		1.6	344	0.3		2.4		0.269		2.7
S-11-68 1.31-17.46	933.00	38.30	17560	1.76	5.90	41.70	0.16	5.40	77.40			1.70	3.40	22.00		2.00	459.00	0.30		1.9		0.366		1.4
MC-05-02 210-226.6	853	46.6	22870	2.287	8.4	11.7	0.17	7.7	89.1			1.6	7	18		2.3	415	0.4		1.6		0.404		1.3
H44831	1207	166.79			4.17		0.129		94.8		19600	1.96		17.2		2.4		0.2		1.9	2920.0	0.292		3.2
S-10-21 44.9-61	1093.00	38.70	12860	1.29	4.70	18.20	0.10	12.80	99.90			1.60	6.00	12.00		2.00	241.00	0.30		2.7		0.296		2.9
G24663	368	1.72	24200	2.42	7.8	4	1030	8.6	87.1	0.003	6000	0.6	2.88	12.1	3	1.2	353	0.46	0.06	3.8	2550	0.255	0.62	1.8
S-11-68 81.46-96.56	1318	27.3	7660	0.766	6.3	20.5	0.149	19.1	84.9			1.6	10.4	16		1.9	290	0.3		2		0.306		2
X15779	801.00	7.47			7.93		0.09		124.40		10600.00	1.06		8.90		1.10		0.30		3.9	2530	0.253		4
H42394	1510.00	3.47			8.53		0.17		87.40		18700.00	1.87		18.10		1.80		0.30		3	4460	0.446		1.8
X15747	592.00	32.40	8680	0.87	10.66	7.00	0.17	15.33	107.90		10300.00	1.03	10.91	15.40		1.50	176.00	0.30		1.3	3960	0.396		1.1
G24688	733	17.35	26500	2.65	4.5	11.4	1160	5	90.2	0.039	16900	1.69	3.91	24.1	7	1.4	509	0.27	0.12	2.2	2930.0	0.293	0.71	1.9

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
E192869	840	35.23			8.36		0.169		86.5		11100	1.11		19		1.8		0.3		2.8	4620	0.462		2.3
S-11-72 62.3-77.5	1136.00	3.70	25130	2.51	6.60	13.10	0.15	5.10	89.60			1.40	3.60	20.00		2.10	347.00	0.30		1.3		0.423		1.2
S-11-72 142.3-158.3	1188	12.6	17790	1.779	9.5	17	0.173	8.4	94.8			1.4	5.7	22		1.4	321	0.5		1.7		0.388		1
S-09-11 90.7-104.7	986.00	111.00	24710	2.47	4.20	21.80	0.12	9.70	45.70			1.30	5.30	21.00		2.20	350.00	0.20		1.8		0.357		2.3
MC-05-02 150-166	799	25.8	25800	2.58	12.6	8.2	0.221	11	92.4			1.1	9	19		1.7	430	0.7		2.1		0.492		1.3
10043	869	34.64			10.89		0.206		90.3		11200	1.12		23.1		1.7		0.5		1.2	4860.0	0.486		0.8
S-09-11 49-65	1114.00	22.10	21690	2.17	8.50	8.70	0.17	5.40	77.70			1.50	2.40	22.00		1.70	470.00	0.50		1.2		0.403		1.1
9817	1345.00	6.62	15600	1.56	3.80	93.90	1290.00	8.10	109.50	0.01	13000.00	1.30	4.91	35.50	10.00	1.80	246.00	0.22	0.17	1.3	3080	0.308	0.68	1.3
S-11-68 163.46-175.46	775	23.9	22280	2.228	7.8	8.7	0.14	7.2	80.7			0.8	4.8	15		1.5	311	0.4		2.3		0.351		1.8
H42328	594.00	5.19	19300	1.93	7.30	8.90	1420.00	5.20	88.50	0.00	1400.00	0.14	2.72	16.60	2.00	1.90	191.00	0.38	0.10	1.5	3250	0.325	0.39	1.5
X15752	635	52.72	5280	0.528	7.62	4.8	0.113	6.15	76.9		6000	0.6	9.41	10.4		4	97	0.3		2.1	2500.0	0.25		1.6
H45036	872.00	14.37			11.22		0.21		51.00		11200.00	1.12		25.60		2.60		0.50		1.4	5550	0.555		1.5
10032	1146.00	51.70			8.81		0.30		151.00		11000.00	1.10		26.20		2.20		0.40		1.2	5310	0.531		0.9
H45080	1747.00	27.46			4.68		0.12		69.80		17700.00	1.77		18.20		1.20		0.20		1.4	2460	0.246		1.3
S-11-68 121.46-137.46	920	13.1	15680	1.568	8.8	12.2	0.187	6	118.9			0.9	6.9	20		1.8	245	0.5		1.5		0.39		1.2
S-11-71 24.7-40.2	643.00	22.40	6980	0.70	4.70	11.90	0.09	7.80	52.20			0.70	3.50	12.00		0.70	177.00	0.30		2		0.243		0.8
X15859	1210	43.77	14830	1.483	3.19	23.7	0.101	15.8	105.1		12900	1.29	90.18	17.8		1.3	339	0.3		1.2	2190.0	0.219		4.7
H44503	1590	37.5	9900	0.99	7.6	6.5	790	7.2	97.5	0.08	12100	1.21	5.66	7.7	3	1.3	342	0.41	0.11	4.5	1590	0.159	0.88	4.3
MC-05-02 190-206	1177.00	30.00	24160	2.42	8.10	10.60	0.24	3.80	118.00			1.00	5.90	25.00		1.70	436.00	0.40		1.6		0.498		1.2
S-09-11 9.0-25	1246	8.8	27530	2.753	9.1	12.2	0.191	8.9	88			0.9	2.8	24		1.9	355	0.5		2.1		0.442		1.6
G24670	1165.00	3.74	11500	1.15	7.30	8.90	1570.00	7.90	139.00	0.01	10800.00	1.08	6.25	20.40	4.00	2.20	291.00	0.39	0.14	1.8	3310	0.331	0.83	1.3
H42343	886	1.35	22800	2.28	9.9	10.4	2260	7.8	86.3	0.001	3500	0.35	3.39	30.5	3	1.4	418	0.5	0.025	1.4	4000.0	0.4	0.49	0.5
X15751	628	5.08	9800	0.98	7.4	3.6	920	4.9	100.5	0.012	4400	0.44	7.5	8.9	3	1	194	0.45	0.08	2.7	2310.0	0.231	0.77	1.5
E192892	1062	54.01			4.12		0.129		107.8		10800	1.08		26.3		1.4		0.2		1	3380.0	0.338		0.7
H45436	609	19.93			3.22		0.134		63.5		8500	0.85		35		1.6		0.1		0.8	3360.0	0.336		1.2
X15749	1096	4.91	8320	0.832	10.76	6.3	0.167	3.95	105.6		7200	0.72	8.39	15.7		1.1	197	0.4		1.4	3480.0	0.348		0.9
H44462	1050	7.09	26700	2.67	4	38	1580	4.2	82.6	0.017	6800	0.68	2.39	32.5	4	2	538	0.23	0.05	1.4	3100.0	0.31	0.37	2.4
S-08-07 105.6-120.05	970.00	93.70	28910	2.89	5.20	31.30	0.10	6.30	88.00			0.60	11.30	13.00		2.60	251.00	0.30		1.9		0.31		1.2
H44458	1190	27.8	23700	2.37	3.9	25.3	1300	9.6	80.1	0.055	8300	0.83	3.25	25.7	4	2	304	0.25	0.14	1.6	2990.0	0.299	0.39	2.6
H44800	791	7.93			9.27		0.235		94.5		4400	0.44		18.8		2.4		0.4		1.4	4070	0.407		0.9
S-11-73 160.2-176.2	1039	15.1	22610	2.261	3.9	93	0.116	4.6	58.7			0.5	4.4	18		1.5	320	0.3		2		0.367		1
H44454	1770	3.99	3100	0.31	4.3	29.5	1600	5.1	107.5	0.01	5000	0.5	10.2	24.2	2	1.7	169	0.26	0.07	1.4	3400.0	0.34	0.89	2.1
9841	1575.00	3.03	21500	2.15	3.50	70.20	1370.00	8.20	115.50	0.01	6000.00	0.60	4.53	42.30	5.00	1.80	234.00	0.21	0.12	1.4	3070	0.307	0.47	1.7
X15864	1690	7.77	25340	2.534	3.81	19.1	0.124	3.33	62.6		2600	0.26	4.25	26		1.2	1045	0.4		1.1	2630.0	0.263		2.2
H44459	1200	4.84	21720	2.172	4.01	63.9	0.145	5.44	77.9		3800	0.38	2.2	33.8		1.9	278	0.3		1.6	3640	0.364		1.3
X15767	781	23.53			11.44		0.227		72.9		2900	0.29		26.3		1.7		0.5		1.7	4510	0.451		1.1
H42338	641	1.5	32800	3.28	11.1	9.5	2420	6.4	76.5	0.001	600.0	0.06	2.67	27.2	2	2.2	350	0.6	0.05	1.2	4910.0	0.491	0.49	1.2
9826	1285	5.69	23700	2.37	3.9	48.4	1320	4.7	97	0.01	4100	0.41	3.04	44.9	4	1.2	336	0.21	0.11	1.3	3060.0	0.306	0.48	1
H44471	1264	7.59	20850	2.085	5.54	25.6	0.112	7.91	84.2		4000	0.4	2.81	19.2		1.9	370	0.2		2.8	2640.0	0.264		4.2
9807	674	3.79	22200.0	2.22	10.9	4.2	990	6.5	110	0.008	2200	0.22	2.75	12.4	3	1.4	469	0.57	0.025	4.6	2230.0	0.223	0.72	1.6
H44464	1880	3.98	23100	2.31	3.7	42.7	1350	7.9	77.7	0.012	3100	0.31	2.83	33	3	1.5	294	0.22	0.025	1.5	2770.0	0.277	0.4	1.2
H44461	1798	3.86	25690	2.569	4.39	27.6	0.139	4.48	98.2		2700	0.27	2.56	26.3		1.8	344	0.3		1.7	2890.0	0.289		1.7
H44463	1431	1.23	29930	2.993	4.08	52	0.154	3.92	73		1300	0.13	2.61	35		1.9	277	0.3		1.5	3760.0	0.376		1.3
H44456	1180	3.16	23600	2.36	3.5	42.5	1260	7.2	80.3	0.005	2000	0.2	2.75	32.3	2	1.3	313	0.2	0.14	1.5	2790.0	0.279	0.37	1.2
H42335	1000	1.32	24300	2.43	12	9.3	2650	3.7	89.4	0.001	900	0.1	3.24	27.1	2	1.6	420	0.61	0.025	1	4670	0.467	0.65	0.6
H44472	1190	2.85	24900	2.49	3.9	34.3	1330	3.6	68.8	0.007	1500	0.15	1.99	28.8	3	1.8	429	0.21	0.05	1.4	2900.0	0.29	0.34	1.9
H44506	1500	32.74	16370	1.637	3.09	24.9	0.137	3.85	69.6		1000	0.1	2.62	34.7		3	345	0.3		1.6	2420.0	0.242		2.2
H44455	1813	3.19	19920	1.992	3.75	39.2	0.143	9.15	92.6		1200	0.12	4.24	33.1		2.7	336	0.4		1.4	3410.0	0.341		1.1
H44457	1873	2.26	24970	2.497	5.29	31.6	0.15	5.74	51.5		1500	0.15	2.92	22.7		2.4	289	0.3		2	3140.0	0.314		1.3
H44460	1240	1.39	25600	2.56	3.4	52.1	1470	3.9	40	0.004	900	0.09	1.61	33.3	2	1.3	306	0.2	0.025	1.3	2710.0	0.271	0.21	1.5

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
S-10-31 145-161	1175	18.2	19470	1.947	4.8	13.1	0.085	7.2	75.5			1.6	3	14		2.4	221	0.3		2.7		0.283		3.1
9924	962	13.6	28400	2.84	6.1	22.3	1020	8	87.2	0.041	11900	1.19	2.26	17.5	5	1.1	416	0.36	0.09	2.3	2790.0	0.279	0.46	1.7
S-11-71 106.9-122.2	402	12	1850	0.185	2.5	2	0.024	5.7	56.2			0.7	3.1	3		0.7	142	0.1		1.5		0.092		1
H42350	591	2.05	32700	3.27	10.7	12.6	2210	6	54.5	0.004	3500	0.35	3.11	26.2	5	1.9	670	0.59	0.08	1.1	4630.0	0.463	0.43	0.9
S-11-72 181.96-197.3	652	72.5	24080	2.408	7.4	3.3	0.087	7.8	60.8			0.9	4.1	10		0.8	421	0.4		3.6		0.239		3
S-11-71 146.2-162.2	366	3.8	10720	1.072	3.9	3.1	0.04	5.7	42.6			0.6	1.9	6		0.6	234	0.2		2.8		0.14		1.4
10098	849	12.72			8.8		0.107		109.7		9800	0.98		10		1.2		0.4		3.5	2360.0	0.236		3.1
H44488	884	4.95	14570	1.457	9.99	4.8	0.095	16.26	91.3		8500	0.85	5.44	9		2.2	317	0.3		4.8	2250.0	0.225		5.6
S-06-02 60-76	992	4.4	23420	2.342	6.4	5.6	0.077	19.1	94.7			0.9	4.2	5		0.9	1005	0.3		4.5		0.18		2.1
H44742	876	143.14			8.23		0.096		83.4		6400	0.64		9		1.1		0.3		3.4	2370.0	0.237		2.6
S-10-31 194-210	709	16	31830	3.183	8.1	5	0.098	12.2	42.9			0.8	1.8	11		1.7	372	0.4		4.8		0.218		5.4
20815	1300	26.5	3500	0.35	4.2	33.3	1190	9	135	0.077	18200	1.82	8.33	25.8	6	1.4	275	0.24	0.07	1.2	2520.0	0.252	0.78	1.9
S-10-31 95-111	1745	33.5	10550	1.055	5.4	6.3	0.069	9.4	71.4			1.3	3.2	7		1.6	247	0.3		5.1		0.151		3.9
S91-398_5880	718	63.9	25900	2.59	7.1	10.5	990	4.6	110.5	0.077	2900	0.29	1.6	11.8	3	3.5	119	0.41	0.1	3.7	2290.0	0.229	0.61	5.9
S-10-31 245-260	1146	21.8	21720	2.172	5.7	10.2	0.089	8.8	77.8			1.2	3	13		1.8	239	0.3		3		0.237		4.4
X15886	1824	323.2	8760	0.876	1.83	40	0.127	11.77	113.5		23700	2.37	7.7	26.9		1.6	480	0.05		1.2	1420.0	0.142		3.9
H44495	717	6.76	23810	2.381	8.93	8.4	0.092	7.42	108.6		6000	0.6	4.48	10.7		2.3	276	0.2		5.5	2340	0.234		6.1
H44481	886	48.5	15600	1.56	7.7	12.6	1160	14.2	115	0.063	9900	0.99	5.64	17.7	4	1.7	385	0.42	0.16	3.9	2480.0	0.248	0.87	5.1
H44502	1728	3.85	14470	1.447	8.37	8.4	0.082	12.93	107.2		13100	1.31	5.39	7.5		2.3	322	0.3		4.5	1790.0	0.179		4.5
H44497	724	9.64	15200	1.52	10	5.4	950	6.3	103.5	0.025	5800	0.58	4.73	8.4	2	1.5	316	0.53	0.025	4.3	2020.0	0.202	0.94	4.4
H42345	1080	2.14	25300	2.53	10	9.3	1910	8.3	91.6	0.002	2600	0.26	2.99	29.1	4	2.2	461	0.53	0.08	1.1	4370.0	0.437	0.6	0.8
H44491	770	16.6	21600	2.16	10	4.7	970	15.8	92.4	0.034	5400	0.54	3.34	7.8	3	1.8	319	0.53	0.06	4	1990.0	0.199	0.74	2.2
9878	711	29.3	23000	2.3	9.2	2.9	960	3.2	93	0.042	4900	0.49	1.64	13.3	3	2.1	261	0.52	0.05	3.7	2200	0.22	0.6	2.7
H44480	449	0.9	23200	2.32	10.3	3.2	0.094	6.3	149		500	0.05	4	9		1.1	366	0.5		7.7	2330.0	0.233		3
H44481	807	14.2	28900	2.89	5.3	16.7	0.128	6.9	141		10000	1	4.6	19		2	341	0.3		2.9	3610.0	0.361		2.4
H44490	499	10.8	23800	2.38	8.1	5.4	0.077	25.4	101		2000	0.2	3	7		1.5	240	0.4		5.2	1860.0	0.186		5.7
H44491	824	12	11700	1.17	6.9	5.3	0.074	71.7	90.5		3000	0.3	3.9	7		1.3	217	0.4		3.7	1640.0	0.164		1.8
H44494	838	18.7	26700	2.67	9	4.1	0.086	3.5	116		1000	0.1	2.8	9		1.5	336	0.5		7.1	2130.0	0.213		3.9
H44495	641	4.7	21700	2.17	7.9	4.6	0.079	4.1	114		5000	0.5	2.6	8		1.2	292	0.4		7.4	1840.0	0.184		4.2
H44497	705	4.3	26900	2.69	9.4	7.2	0.094	9	124		6000	0.6	3.4	8		1.5	318	0.5		7.1	2150.0	0.215		6.6
H44501	584	21	18700	1.87	9.6	6.1	0.091	6	130		5000	0.5	6.4	9		1.8	247	0.5		5.4	2130.0	0.213		6.6
H44502	880	1.3	18100	1.81	8.4	5.6	0.081	6.2	133		4000	0.4	4.3	8		1.3	289	0.5		6.8	1920.00	0.192		4.1
G21779	543	1.42			7.16		0.082		96.5		800	0.08		5.7		0.9		0.3		6.3	2080.0	0.208		2.4
H42352	928	2.73	26900	2.69	9.4	12.3	1940	10.1	81.1	0.003	4500	0.45	3.9	22.6	3	2.5	466	0.51	0.12	1.1	3920.0	0.392	0.51	0.8
H44499	957	6.26	16700	1.67	9.9	3.9	950	5.7	94.6	0.011	5600	0.56	4.55	8.3	3	1.4	347	0.53	0.025	3.9	2030.0	0.203	0.83	3.7
10377	655	2.64	23100	2.31	8.2	3.2	700	4.6	95.5	0.009	4200	0.42	2.46	7.4	2	1	300	0.48	0.025	4.5	1790.0	0.179	0.49	2.6
H44482	733	14.87	23670	2.367	9.63	3.9	0.097	6.4	97.1		5000	0.5	3.68	8.9		2	391	0.3		5.4	2200.0	0.22		4.2
S-10-31 294-310	1335	7.2	26870	2.687	7.3	12.3	0.101	9.9	59.8			0.7	2.7	14		1.3	354	0.4		4.8		0.225		3.5
X15842	754	0.91			9.04		0.084		83		2900	0.29		8		1		0.4		5.6	2600.0	0.26		3.7
H44487	691	12.7	17900	1.79	10.6	2.8	990	4.5	92.1	0.023	4000	0.4	4.68	8.1	2	1.3	384	0.57	0.025	3.7	2180.0	0.218	0.89	2.5
9891	764	7	47800	4.78	4.9	10	1130	7.1	26.9	0.017	5200	0.52	1.47	23.9	6	2.8	472	0.26	0.1	1.7	3390.0	0.339	0.17	8
H44494	803	18.3	24500	2.45	10	4	960	4.4	84.5	0.038	4400	0.44	2.84	8.3	3	1.6	353	0.55	0.025	3.9	2030.0	0.203	0.71	2.9
S-11-71 65.7-81.2	412	38.5	620	0.062	1.5	3	0.014	3.8	52.1			0.3	1.9	3		0.2	95	0.1		0.6		0.074		0.4
S-10-31 44-60	1887	15.7	10300	1.03	7.8	7.1	0.078	19.3	77.2			0.7	3.8	10		2.4	260	0.4		5.8		0.215		2.8
MC-05-02 250-266	626	8.5	19440	1.944	8.4	7.1	0.125	6.3	59.6			0.4	3.6	11		1.4	329	0.5		3.1		0.309		1.8
MC-05-01 230-255	1135	14.7	24200	2.42	8.3	8	0.105	8.2	72.4			0.7	3.2	13		1.9	318	0.4		4.6		0.241		3
H44500	804	3.69	21890	2.189	10.93	5.9	0.11	9.9	107		3900	0.39	5.04	9.8		2.7	331	0.2		5.3	2330.00	0.233		6.7
10362	1395	2.42	24500	2.45	8.9	16.9	1470	6.7	112.5	0.005	6600	0.66	4.16	17.4	3	1.8	299	0.51	0.025	2.8	3100.0	0.31	0.58	1.6
20809	1115	5.47	12200	1.22	6.3	14.3	1150	6.7	135.5	0.016	6400	0.64	6.66	25.2	2	1.6	298	0.35	0.05	2.7	2470.00	0.247	0.82	2
MC-05-01 279-295	705	10.5	44240	4.424	5.3	13	0.14	6.1	53.5			0.4	1.8	23		2.4	890	0.3		2.5		0.309		5.6

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
MC-05-02 314-330	715	6.8	31610	3.161	8.2	3.7	0.107	9.4	72			0.3	2.7	11		1.1	732	0.5		5		0.241		3.8
MC-05-01 319-335	826	5.9	31620	3.162	9	5.1	0.089	6.1	66.8			0.4	2	9		1.4	552	0.5		5.6		0.215		3.4
H44501	862	28	13100	1.31	7.9	4.6	790	7.9	104.5	0.062	3700	0.37	5.73	7.6	2	1.3	266	0.43	0.025	4.3	1630.0	0.163	0.77	7.4
10353	763	3.11	26100	2.61	7.5	2.8	600	6.3	87.4	0.005	4200	0.42	2.27	7	3	1	364	0.4	0.025	4.7	1700.0	0.17	0.47	2.4
MC-05-01 199-215	950	8.8	24600	2.46	4.1	36.1	0.119	6.4	106.2			0.5	4.2	29		1.3	277	0.2		1.8		0.286		1.5
S-06-02 20-26	474	1.6	27330	2.733	8	3	0.073	9.4	88.4			0.05	2.8	6		1.1	372	0.4		5.8		0.204		2.2
X15887	923	29.9	26700	2.67	4.2	22.8	1000	3.2	81.3	0.065	5000	0.5	7.4	19.5	2	1.2	615	0.24	0.06	1.8	2190.0	0.219	0.75	2
H44490	527	11.36	17280	1.728	7.41	3.3	0.083	34.13	86.7		2000	0.2	5.04	8.5		4.5	249	0.2		4.1	1690.0	0.169		3.6
H44465	1201	4.69	34540	3.454	5.47	22.5	0.18	24.37	74.5		3900	0.39	2.4	34.5		17.8	341	0.3		2	3560.0	0.356		1.8
H44486	814	25.51	22390	2.239	10.11	3.9	0.091	7.09	125.2		2700	0.27	4.48	9.2		2.1	332	0.3		5.4	2280.0	0.228		6.3
H44468	1180	11.15	22300	2.23	4.5	34.8	1190	3.8	84.4	0.023	4100	0.41	2.77	25.7	3	1.5	364	0.24	0.025	2.4	2600.0	0.26	0.51	1.3
MC-05-03 44-60	1331	2.8	26550	2.655	5.7	19.2	0.102	10.3	84.7			0.5	2.6	17		1.3	1002	0.3		3.8		0.257		2.2
H44474	1790	30.6	25300	2.53	3.8	26.7	1390	4.6	78.1	0.15	5100	0.51	2.63	30.1	3	1.8	393	0.2	0.025	1.5	2640.0	0.264	0.32	1.9
H44473	1436	3.19	21600	2.16	2.91	49.4	0.126	6.39	60.2		4500	0.45	2.36	31		2	471	0.3		1.2	2790.00	0.279		1.4
H44483	494	9.57	25800	2.58	9.7	3.2	910	4.5	99.1	0.02	1700	0.17	2.77	8.2	2	1.3	439	0.54	0.025	4.1	2040.0	0.204	0.69	2
H44485	697	2.88	22100	2.21	10.3	3.2	960	3.8	104	0.005	1700	0.17	3.58	8	2	1.2	373	0.56	0.025	3.9	2070.0	0.207	0.8	1.9
H44498	724	4.5	17900	1.79	10.6	4.9	0.101	15.56	133.2		2000	0.2	4.34	10		1.7	292	0.2		5.2	2380.0	0.238		2.8
10343	1325	8.25	23300	2.33	6.8	3.3	590	5.7	97.6	0.007	4600	0.46	2.56	7	2	0.9	362	0.39	0.025	5	1610.0	0.161	0.45	1.8
10383	861	6.33	23400	2.34	3.9	49.4	1420	16.9	74.3	0.009	2200	0.22	3.47	34.7	4	1.8	318	0.21	0.05	1.3	2980.0	0.298	0.36	1.3
H44492	879	23.33	18390	1.839	8.86	3.6	0.086	6.81	116.2		2600	0.26	4.1	8.9		2.3	325	0.2		4.7	2050.0	0.205		2.7
H44469	1398	2.26	25500	2.55	3.48	74.8	0.146	5.61	65.4		2700	0.27	2.07	38.9		1.8	372	0.2		1.3	3730	0.373		1.5
H44489	780	6.26	14900	1.49	8.5	3.1	770	39	94.1	0.007	1300	0.13	3.07	7.3	3	1.4	284	0.45	0.07	4.4	1730	0.173	0.74	1.9
MC-05-03 84-100	610	9.4	26590	2.659	6.7	13.6	0.087	5.9	68			0.2	2	13		1.2	373	0.3		4.7		0.229		2.6
H42347	767	1.25	26300	2.63	10.3	9.2	2130	4	49.6	0.001	300	0.03	5.26	26.9	2	1.2	607	0.54	0.06	0.9	4350.0	0.435	0.52	0.6
H44470	1280	1.97	21500	2.15	3	47.9	1380	3.5	74.5	0.005	2300	0.23	2.02	32.7	3	1.4	431	0.18	0.06	1.4	2710.0	0.271	0.31	0.9
H44787	601	0.87			8.56		0.118		83.8		700	0.07		9.2		1.1		0.4		3.4	2790.0	0.279		1.8
H42358	544	1.24			9.75		0.185		84.2		1100	0.11		16.7		2		0.4		1.1	4270.0	0.427		0.9
H44467	1208	4.9	32850	3.285	4.6	29	0.143	5.34	88.9		2100	0.21	2.08	25.8		2	384	0.3		1.7	2980.0	0.298		1.1
G21604	820	1.93	28300	2.83	9.2	2.6	810	7.7	104.5	0.002	1000	0.1	1.84	6.8	2	1.2	531	0.48	0.025	5.1	1850.0	0.185	0.85	2
9861	1230	5.8	28500	2.85	4.7	38.9	1280	3.5	54.7	0.007	1900	0.19	1.76	40.7	3	1.6	423	0.26	0.025	1.7	3080.00	0.308	0.26	2.4
H44475	1393	13.18	22860	2.286	4.01	45.7	0.147	4.99	84		900	0.09	3.85	38		2.4	339	0.3		1.4	4030.0	0.403		5.7
H44466	1760	1.31	23600	2.36	3	37.7	1350	2.5	88.3	0.003	1100	0.11	2.37	32.4	2	1.3	394	0.18	0.025	1.1	2900.0	0.29	0.41	0.7
G21756	825	0.73			7.96		0.086		76.9		400	0.02		6.1		1.1		0.3		3.6	2350.0	0.235		1.8
H44480	400	6.72	21510	2.151	10.55	4.6	0.106	6.72	106.1		800	0.08	4.95	10.9		1.3	331	0.2		5.8	2450.0	0.245		3.9
H44484	624	15.06	23830	2.383	10.85	3.9	0.094	6.19	96.5		800	0.08	3.54	9.3		1.4	397	0.2		5.9	2270.0	0.227		3.7
SG92-06_C12632	601	32.3	1100	0.11	4.6	9.6	1130	39.8	158	0.09	35000	3.5	25.6	25.2	5	1.2	64	0.29	0.08	1.1	2290.00	0.229	3.04	1.3
SG92-06_C12700	390	2.11	9000	0.9	5.6	3.7	1070	91.5	152	0.002	29900	2.99	23.1	21.2	6	1.5	108.5	0.36	0.33	1.9	1790.0	0.179	2.84	1.4
10276	1516	4.29			3.37		0.163		150.4		77100	7.71		14.7		1.3		0.2		2.7	2320.0	0.232		2.9
X15896	1460	1.98	18000	1.8	5.5	7.1	1340	65.1	144.5	0.002	31800	3.18	8.37	20.8	6	1.5	233	0.38	0.6	1.3	2860.0	0.286	1.52	0.8
9756	557	136.5	800	0.08	3.7	13.5	800	63.6	170	0.007	10300	1.03	7.25	15.1	20	3	59.2	0.23	14.7	2	2120.0	0.212	1.11	2.5
10298	957	16.2			3.75		0.094		106.6		38200	3.82		11.5		1		0.2		2.2	2650.0	0.265		1.4
SG92-02_C8856	868	9.87	44800	4.48	7.5	25.2	1420	25.1	58	0.005	31500	3.15	4.93	12.1	5	2	313	0.47	1.32	3.1	3580.00	0.358	0.68	2.1
H42421	3090	2.48	1200	0.12	8.4	46.2	1900	5520	87	0.008	22500	2.25	11.9	25.9	9	1.2	430	0.45	0.74	2.5	4310.0	0.431	2.03	1.8
G21749	1350	2.06	22200.0	2.22	5.8	7.7	1700	13.8	118.5	0.003	31700	3.17	9.94	26.1	4	1.4	283	0.3	0.43	1.5	3080.0	0.308	2.02	1
G21731	1040	20.1	30400	3.04	6.6	1.6	1580	13.6	92.3	0.035	30300	3.03	6.67	23.1	4	0.9	319	0.35	0.4	2	2400.0	0.24	1.07	1
X15894	1631	6.79	18940	1.894	4.34	6.8	0.111	40.46	47.4		40800	4.08	5.78	12.1		1	227	0.2		0.6	2660.0	0.266		0.4
H42450	1430	2.06	21300	2.13	3.8	16.5	820	4160	95.8	0.001	30100	3.01	17.9	13.7	6	1	316	0.24	0.2	1.9	3110.0	0.311	1.24	1
H44580	1008	3.21			5.63		0.113		130.1		38500	3.85		12.4		1.4		0.3		1.1	2520.0	0.252		1.4
S-11-70 47.4-63.4	1037	3.5	18140	1.814	8	17.1	0.155	13.4	82.4			4.1	5.7	17		2.3	272	0.4		2		0.329		1.8
S-11-73 4.65-20.2	804	12.9	15450	1.545	9.6	19.7	0.157	4.9	60			4	3.5	18		1.7	417	0.5		1.8		0.37		1.2

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
H42415	1280	41.7	1700	0.17	9	39	1810	25.4	109	0.009	28600	2.86	5.17	18.6	5	1.3	535	0.46	0.88	3.2	3850.0	0.385	1.62	9.3
H42412	1470	2.64	13800	1.38	8.9	46.7	1900	10.5	114.5	0.004	30800	3.08	4.28	23.7	3	1.3	525	0.46	0.63	2.9	3940	0.394	1.13	2.3
H42406	1140	4.4	650	0.065	5.6	48.8	0.189	17.1	97.3		26000	2.6	2.6	23		3.9	430	0.3		1.8	3660.0	0.366		3.9
H42407	1350	8.7	960	0.096	6.1	45.2	0.184	12.4	118		15000	1.5	2.6	23		1.7	471	0.3		2	3660.0	0.366		1.6
H42408	1420	1.7	5510	0.551	5.6	55.8	0.18	7.8	83		12000	1.2	1.8	22		1.3	356	0.3		2	3560	0.356		1.1
H42409	1360	3.5	8440	0.844	5.9	57.7	0.182	6.7	90.1		8000	0.8	2.1	22		1.2	398	0.3		2.2	3630.0	0.363		1.2
H42410	1360	1.4	4950	0.495	6.7	42	0.171	7.8	127		8000	0.8	3.9	19		1.4	449	0.4		2.4	3900.0	0.39		1.9
H42417	1780	8.3	9040	0.904	7.6	40	0.182	33.1	105		17000	1.7	3.5	18		0.8	392	0.4		2.6	3660.0	0.366		2.2
H42418	1850	5.2	8310	0.831	7.3	33.5	0.169	29.7	97.5		19000	1.9	3.6	17		1.2	359	0.4		2.7	3700.0	0.37		2.1
H42420	1830	1.8	4840	0.484	8.1	15.4	0.167	34.8	113		17000	1.7	4.7	19		1.3	478	0.4		3.5	3960.0	0.396		3.2
H42421	2010	2.6	5000	0.5	6.8	49.5	0.157	174	89.6		21000	2.1	9.3	19		1.1	309	0.4		2.2	3800.0	0.38		1.3
H42445	1610	0.9	24300	2.43	3.7	14.1	0.111	15.5	94.9		3000	0.3	4.1	19		0.8	382	0.3		1	3530.0	0.353		0.6
H42446	1450	1.5	25700	2.57	4.2	16.3	0.106	168	125		20000	2	6.8	12		0.9	330	0.2		2.2	3450.0	0.345		1.1
H42447	1480	1	32200	3.22	4.2	16.2	0.102	29.7	107		11000	1.1	4.8	11		0.9	371	0.3		2.4	3770.0	0.377		1.1
H42449	1430	1.2	34000	3.4	4.2	16.1	0.099	15.1	88.4		7000	0.7	4.8	11		0.9	387	0.2		2.4	3680.00	0.368		1.1
H42450	1460	1.7	28000	2.8	3.5	18.8	0.086	2290	95.8		22000	2.2	12	12		0.9	308	0.2		2.4	3410.0	0.341		1.4
S154096	1710	0.5	27800	2.78	5.8	8.4	0.136	28.1	67.2		13000	1.3	6.8	20		0.9	324	0.3		1.1	2860.0	0.286		0.4
S154097	1710	0.5	18800	1.88	5.7	7.2	0.137	67	71.2		11000	1.1	9.3	19		1	258	0.3		1	2770.0	0.277		0.5
S155917	852	12.8	18900	1.89	14.1	62.8	0.12	7.4	117		10000	1	9.8	14		1.2	478	0.7		3.1	3810.0	0.381		2
S155918	823	16.7	26000	2.6	15.8	50	0.122	5.8	101		7000	0.7	8.6	13		1.3	607	0.9		2.9	3900.00	0.39		1.7
S156364	1560	0.4	23700	2.37	5.8	6.9	0.135	25.2	76.5		9000	0.9	9.2	18		0.8	279	0.3		1	2810.0	0.281		0.4
S156365	1520	0.4	22900	2.29	5.6	6.6	0.135	18.4	74.9		12000	1.2	7.8	18		0.7	242	0.3		1	2690.00	0.269		0.4
H42406	1220	9.18	1000	0.1	6.1	73.6	1790	12.9	97.7	0.004	38300	3.83	3.11	28.1	4	2.2	476	0.33	1.33	2.1	3620.0	0.362	1.27	1.9
E192902	1280	3.2			6.05		0.147		112.5		57200	5.72		17.9		1		0.2		1.8	3800.00	0.38		0.9
H42440	1840	4.45	20900	2.09	5.5	17.9	1120	174.5	106	0.003	33200	3.32	11.5	15.4	4	0.8	464	0.34	0.22	1.8	2910.0	0.291	1.43	1.3
S91-388_5285	1135	8.42	10500	1.05	6.7	6.3	1600	16.3	153.5	0.013	13700	1.37	18.4	33.5	3	1.5	135.5	0.41	0.05	1.2	5110.0	0.511	1.83	1
G21649	820	49.6	22400	2.24	6.4	2.3	1160	14.2	129.5	0.165	18900	1.89	3.67	17.3	7	0.9	304	0.34	0.5	2.1	1860.0	0.186	1.25	1.5
S-11-70 7.25-23.4	1339	4.3	7870	0.787	5.8	61.4	0.157	92.5	56.2			3.9	3.4	19		1.1	573	0.3		2.2		0.352		2.1
G21640	796	45.7	25500	2.55	5.3	2.9	1310	20.7	107.5	0.119	16300	1.63	4.08	21.5	6	0.9	367	0.3	0.18	1.4	2000.0	0.2	1.05	1.1
G23418	790	12	36000	3.6	6.5	60.8	1600	16.6	112.5	0.008	22800	2.28	4.37	24.7	7	1.4	221	0.39	0.36	5.2	3980.00	0.398	1.08	4.1
G24731	1595	3.31	25200	2.52	4.7	22.1	1160	19.8	108.5	0.003	17300	1.73	9.96	17.3	2	3.4	354	0.29	0.19	3.3	3590.0	0.359	1.55	2.1
S-11-73 42.45-57.35	1203	37.1	30750	3.075	11.1	34.8	0.161	16.2	78.7			3	6.5	25		1.8	480	0.7		2.3		0.516		2.2
SG92-17_C11112	956	2.24	31700	3.17	5.9	19.6	1050	160	103.5	0.002	9400	0.94	7.97	14.2	3	1	345	0.37	0.69	2.9	4190.00	0.419	1.6	2
H42417	1700	4.73	12300	1.23	8.4	42.9	1760	29.9	104	0.003	22800	2.28	3.87	22.3	4	1.2	397	0.47	0.46	3	3820.0	0.382	1.27	2.3
S-11-74 75.9-91.9	938	21.8	23550	2.355	14.7	65.8	0.123	7.7	65			1.6	9.3	14		1.2	673	0.8		3.1		0.402		2.2
X15897	5737	2.24	1540	0.154	4.23	17.9	0.174	189.48	107.9		35200	3.52	10.22	21.1		2.3	132	0.3		0.9	2320.0	0.232		6.2
SG92-17_C11169	1410	17.25	25500	2.55	5.8	83.5	1180	282	114	0.032	8300	0.83	10.85	17.6	7	2.3	126.5	0.38	0.05	3.3	3610	0.361	1.72	1.6
9926	1415	28.43			9.83		0.185		129.9		17100	1.71		29.3		1.7		0.5		1.1	6050.0	0.605		0.9
SG92-17_C11087	1450	2.21	26800	2.68	5.8	17.1	1300	13.7	108.5	0.003	12300	1.23	9.66	15	2	1.1	332	0.37	0.09	2.8	4030.0	0.403	1.76	1.4
S-11-69 1.76-16.9	930	2	30260	3.026	11.7	6.1	0.219	6.3	68.1			0.9	6.9	24		1.3	885	0.6		1.7		0.457		1
SG92-15_C12893	982	30.9	13600	1.36	6.4	35.9	1050	9.7	122	0.045	14000	1.4	9.14	17.5	7	1.1	232	0.41	0.11	3.1	3090.00	0.309	1.6	5.1
S-11-74 5.9-21.9	1671	5.2	30900	3.09	4.5	17.4	0.096	42	70			2.1	18.4	9		1.3	316	0.3		2.4		0.351		1.7
H42404	898	4.83	3900	0.39	5.7	48.9	1600	6	85.1	0.003	19400	1.94	2.54	22.6	3	1.7	550	0.32	0.79	2	3230.0	0.323	1.38	1.7
H42410	906	5.22	5500	0.55	4.6	35.3	1210	13.3	153.5	0.023	13600	1.36	8.82	16.7	2	0.7	381	0.27	0.2	1.9	2660.0	0.266	1.51	2
S-08-07 55-70	1642	95.9	16370	1.637	10.7	59.2	0.107	97.9	127			2.2	15.4	13		1.9	220	0.5		2.2		0.34		1.8
H42419	1600	1.39	21800	2.18	5.6	13.3	2060	156	90	0.002	15600	1.56	3.08	18.6	7	1	501	0.33	2.84	1.8	3100.0	0.31	1.2	1.2
G21714	1655	2.36	17300	1.73	6.2	3.9	2090	9.3	133	0.006	19900	1.99	6.84	36	5	1.3	372	0.32	0.19	2	3160.0	0.316	1.67	1
S-11-69 42.1-56.9	1156	31.7	32260	3.226	13.2	13.3	0.209	8.5	73.5			1.6	5.5	26		1.5	477	0.7		2.5		0.434		1.7
S-11-74 37.9-53.9	1348	1.9	28770	2.877	6.2	15.7	0.106	33.1	62.1			1.4	8.5	9		2	590	0.4		3.4		0.37		2.4
S-11-74 117.9-133.9	1372	45	31140	3.114	10.6	81.6	0.101	217.6	82.2			1.6	9	13		1.2	650	0.6		2.5		0.322		2

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
10264	1803	0.62			5.43		0.151		130.3		26400	2.64		31.9		0.5		0.3		1.3	3370.00	0.337		0.7
10253	985	37.3			2.85		0.114		107.8		20600	2.06		23.2		1.6		0.1		1.5	2200.0	0.22		1.1
S-11-69 125.1-140.9	1504	17.5	16470	1.647	8.3	31.6	0.23	13.6	135.5			2.2	6.9	24		2.4	400	0.4		1.7		0.487		1.9
H44593	3465	1.04			6.29		0.109		131.2		9300	0.93		11.2		1.3		0.3		0.9	2790.0	0.279		0.5
S-11-69 82.9-98.9	891	9.5	25090	2.509	9.4	13.7	0.199	6.4	96.9			1.2	5.5	20		1.4	788	0.5		2.3		0.446		1.5
9759	1190	11.35	22800	2.28	4.6	19.4	830	4.5	103.5	0.022	6000	0.6	2.73	15.6	5	1.7	169	0.3	0.09	2.7	2750.00	0.275	0.55	1.8
H42447	1460	1.15	28900	2.89	4.2	15.7	920	34	80.5	0.002	8100	0.81	4.1	13.3	1	0.8	409	0.27	0.05	1.9	3460.00	0.346	1.22	1
S-11-73 118.2-134.2	855	13.8	19090	1.909	3.7	41.7	0.099	8.6	62.6			1.2	3.6	17		1.5	258	0.2		1.3		0.325		1
S-11-72 23.3-38.3	1426	24.4	16560	1.656	6.6	11.7	0.161	11.2	120.3			1.4	6.8	20		1.6	281	0.4		1.4		0.364		1.1
G21620	2050	3.22	17300	1.73	3.9	43	1290	24.5	88.4	0.01	13900	1.39	8.69	33.5	3	1.3	304	0.22	0.35	1.4	2810.0	0.281	0.85	0.8
S-10-29 65.5-79.5	1280	11.7	26360	2.636	9.3	9.3	0.133	18.5	72.5			0.4	4.4	15		0.9	561	0.5		1.9		0.283		1.4
H42408	1300	3.58	10000	1	6.9	56.7	2120	5.7	99.7	0.001	6200	0.62	2.06	26.4	2	1.2	389	0.39	0.2	2.7	3890	0.389	0.81	1.8
MC-05-01 49-65	1825	10	18410	1.841	4.8	57	0.118	12.1	78			1.2	3.8	26		1.6	226	0.2		1.7		0.332		1.4
S-10-29 14.4-29.5	1595	2	10410	1.041	6.2	5.5	0.113	18.6	98.3			0.7	6.4	16		0.4	154	0.3		1.5		0.264		0.8
S-10-33 129-146	1750	5.5	31180	3.118	8.5	17.3	0.186	78.8	76.3			1.4	540.9	22		1.4	506	0.5		2		0.401		1.5
9801	1340	9.4	19500	1.95	5	46.5	1280	4.4	101.5	0.012	11900	1.19	3.73	31	4	1	240	0.28	0.19	0.9	3340.0	0.334	0.67	0.7
S-08-07 190-204.5	895	24.3	23910	2.391	5.3	67.2	0.138	9.3	91.2			1.2	17.1	17		1.9	779	0.3		2		0.377		1.4
H42443	1840	1.04	25700	2.57	3.9	18.7	1210	20.7	60.6	0.001	8100	0.81	4.03	27.8	2	0.9	426	0.24	0.025	0.9	3650.0	0.365	0.96	0.5
9770	1275	3.61	17800	1.78	4.7	42.8	1410	5.7	98.9	0.005	4600	0.46	3.14	35.4	4	1.5	313	0.26	0.07	2.3	3400.0	0.34	0.65	1.3
MC-05-01 89-105	1301	6.1	19560	1.956	4.9	50.4	0.107	7.2	65.3			0.9	2.6	23		1	274	0.3		1.2		0.316		0.8
H45459	1611	1.19			4.67		0.117		63.1		7800	0.78		14.9		0.7		0.2		0.7	4050.0	0.405		0.3
S-11-73 79.2-94.2	915	12.4	26010	2.601	5.8	62.8	0.117	3.4	65.8			0.6	4.6	14		1.7	531	0.3		3.1		0.422		1.8
X18487	2036	0.74			11.48		0.248		111.8		10400	1.04		25.3		1.1		0.6		1.7	5830.0	0.583		0.9
E216203	764	0.98			5.08		0.081		109.9		3200	0.32		12.5		1.2		0.2		3.2	3660.0	0.366		1.4
SG92-17_C11080	2360	1.55	21900	2.19	4.2	13.8	1020	25.1	93.3	0.001	8400	0.84	6.12	19.5	2	0.7	418	0.27	0.11	1.3	3270	0.327	1.24	0.8
X18455	925	4.65			4.56		0.133		69.5		5800	0.58		17.6		2.1		0.2		1.8	4770.00	0.477		1.2
X18478	1735	2.89			11.76		0.214		87.8		8600	0.86		20.3		1.1		0.5		1.7	4760.0	0.476		0.9
9742	685	6.75	37100	3.71	5	18.4	1230	5.6	68.2	0.011	1300	0.13	1.64	17.2	3	2.4	154	0.31	0.025	2.5	3690.0	0.369	0.5	2.4
S-08-07 155.1-170.5	839	28.7	30280	3.028	3.9	78.8	0.106	9.2	64.9			0.2	2.5	14		1.5	367	0.2		2.1		0.323		1.5
X18433	1529	4.22			5.25		0.139		70.2		5000	0.5		17.2		2.5		0.3		2.3	4790.0	0.479		1.7
H44569	1750	2.06			5.44		0.119		43.6		2300	0.23		32.8		0.8		0.3		1.3	7000.0	0.7		0.8
H45267	1662	0.93			4.39		0.141		39.3		2400	0.24		19.8		0.8		0.2		0.8	4040.0	0.404		0.6
H45245	1245	0.75			4.28		0.124		41.3		3000	0.3		16		0.8		0.2		1.2	2870.0	0.287		0.6
S-10-33 52-69	1167	1.1	23730	2.373	8.7	27.5	0.205	3.8	75.5			0.2	5.8	28		0.8	785	0.5		1.8		0.434		1.2
G24711	1310	0.9	29300	2.93	3.8	15.5	1150	5.5	95.5	0.001	1900	0.19	3.92	25.2	2	0.8	461	0.23	0.025	1.6	3010.00	0.301	0.81	0.8
#N/A	1000	1.69	31300	3.13	5.6	10.4	1280	19.6	60.4	0.003	1400	0.14	3.24	17.6	2	0.9	320	0.35	0.06	1.4	3200.0	0.32	0.76	0.8
E192923	1804	1.04			3.88		0.123		73.5		1200	0.12		18.9		0.7		0.2		1.2	3700.0	0.37		0.6
H45491	1583	1.28			3.76		0.129		36.5		600	0.06		19.7		0.5		0.2		0.8	3910.0	0.391		0.6
S91-387_5160	474	75.4	1500	0.15	5.1	2	1190	20.1	131.5	0.518	29600	2.96	1.83	14.7	3	1.2	37.3	0.33	0.09	4.5	2120.0	0.212	2.47	1.7
X18179	276	5.15	14600	1.46	11.1	5.8	1110	35.2	122.5	0.006	9900	0.99	2.8	14.3	4	1.4	131.5	0.58	0.16	5.6	1870.0	0.187	0.93	5.2
S91-395_5370	1055	9.22	900	0.09	1.9	2	910	34.8	108.5	0.02	28500	2.85	5.32	9.8	6	0.9	58	0.12	0.16	3.4	1120	0.112	2.14	1.1
G37543	767	40.1	15600	1.56	5.7	3.8	1410	7.6	124.5	0.182	21200	2.12	5.28	20	6	1.4	200	0.43	0.13	3.7	2380.0	0.238	1.77	1.8
E192557	631	37.2	25500	2.55	7.9	4	1480	8.5	106	0.13	9300	0.93	1.59	21	5	0.9	264	0.44	0.06	4.3	2680.0	0.268	0.85	1.8
G33225	716	4.99	14200	1.42	7.2	4.8	1060	23.5	103.5	0.016	4900	0.49	2.52	13.3	4	1.7	162	0.36	0.38	1.4	1660.00	0.166	0.7	1.4
G33213	1335	10.9	15500	1.55	9.4	50.8	1780	28.5	144.5	0.039	6300	0.63	3.49	20.8	6	2.1	329	0.51	1.51	2.4	3680.0	0.368	0.89	3.3
G37849	503	4.02	4600	0.46	3.3	2.5	1310	117.5	142.5	0.007	100000	10	475	16.5	29	5.8	128.5	0.19	3.42	2.5	1500.0	0.15	2.24	1.7
X17096	226	7.73	6100	0.61	6.7	2.4	730	17	171	0.008	32200	3.22	4.88	8.2	9	1.3	86.7	0.36	1.47	2.4	1420.0	0.142	1.41	2.7
H43066	279	28.3	16800	1.68	7.4	8.1	1560	8.2	154.5	0.033	32000	3.2	3.38	23	10	1.3	83.1	0.39	0.37	1.6	2120.0	0.212	0.99	2.2
H43070	209	10.05	19000	1.9	4.9	10	1530	9.6	148.5	0.021	44200	4.42	2.39	41.4	15	1.1	89.5	0.29	1	1.7	1770.0	0.177	1.05	1.9
H41606	1380	2.9	1900	0.19	11.9	12.1	1530	299	89.3	0.003	60200	6.02	4.06	21.3	21	2	181.5	0.36	1.33	1.7	3010.0	0.301	1.97	13.7

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
H43086	987	28.9	19700	1.97	5.9	11.3	1650	8.5	207	0.021	21200	2.12	4.04	31.8	9	1.2	67.3	0.36	0.79	1.9	2250.0	0.225	1.09	1.9
H43064	298	12.6	24500	2.45	7	8.2	1630	10.9	141.5	0.016	30600	3.06	1.91	23.1	11	1.1	81.4	0.4	0.44	2.1	2090	0.209	0.84	1.8
X17168	157	15.1	19400	1.94	8.4	9.9	1620	11	93.4	0.016	34300	3.43	1.32	19.1	12	1.3	99.5	0.38	0.37	1.4	2550	0.255	0.76	2.6
H40759	240	87.44			1.4		0.039		119.2		27300	2.73		5.9		1		0.05		1.6	1030.0	0.103		1.7
X17119	313	9	8500	0.85	7	6.7	1290	12.2	94.4	0.011	17800	1.78	2.56	20.5	9	1.3	221	0.31	0.25	1.3	1910.0	0.191	1.19	2.1
9265	330	36.7	2600	0.26	9.2	13.8	1140	42.2	100.5	0.017	36900	3.69	87	11.2	10	2.7	103	0.42	2.26	28	1950.0	0.195	1.13	7
H43100	891	21.9	3600	0.36	14.3	7.9	260	167.5	142.5	0.008	15700	1.57	6.37	4.7	5	2.6	29.8	0.57	0.44	14.4	840.0	0.084	1.28	7.9
H43084	405	57.3	23700	2.37	6.4	9.3	1560	9.5	169.5	0.054	22600	2.26	3.19	23.2	11	1.4	171	0.36	1.43	1.7	2190.0	0.219	0.92	2.4
H43060	682	23.1	18100	1.81	6.9	8.7	1680	10.3	197	0.006	12600	1.26	3.73	29.4	9	1.2	76.3	0.4	0.23	1.5	3020.0	0.302	1.4	2.9
X17129	359	18.4	8800	0.88	8.6	2.9	780	17.6	113	0.024	18600	1.86	4.84	7.8	7	1.2	125	0.43	0.62	2.8	1570.0	0.157	1.68	2.7
X17105	106	21.8	15300	1.53	6.3	6.6	1390	188.5	83.6	0.031	29700	2.97	4.11	21.9	15	1.2	102	0.29	0.27	1.2	1870.00	0.187	0.92	1.8
X06508	566	1.86			2.63		0.142		80.3		51500	5.15		16.3		1.5		0.1		1.9	1630	0.163		1.7
X16763	386	93.8	16100	1.61	6.4	7.4	1570	4.6	146	0.138	32400	3.24	1.69	22.3	11	1.7	156	0.37	0.32	1.4	2280.0	0.228	1.11	0.9
G37888	994	68	3300	0.33	4.9	4.4	1410	77.1	158	0.326	39000	3.9	13.95	19.9	8	2.1	67.2	0.28	0.57	3.7	2030.0	0.203	3.47	2.1
X14984	786	32.2	20400	2.04	3.9	26.8	940	55.8	109.5	0.035	50900	5.09	4.89	11.1	15	1.2	209	0.25	4.62	2.5	2530	0.253	1.79	1.7
X17360	412	11.95	11600	1.16	20.9	1	50	125.5	174.5	0.004	11100	1.11	1.81	1	5	1.7	143	0.68	0.52	19	420.0	0.042	2.25	26.4
H43113	411	6.68	23300	2.33	6.8	14.1	1530	18.8	106	0.02	40900	4.09	1.22	33.3	11	1.8	157	0.32	0.48	1.4	2450.00	0.245	0.67	1.8
G36677	522	37.8	29100	2.91	5.2	28.5	1070	42.6	156	0.069	31100	3.11	2.48	12.3	20	1.4	182.5	0.29	0.62	3	2900	0.29	1.16	6.8
G33512	502	40.97			4.6		0.131		144.6		30200	3.02		11.7		1		0.2		3.5	2940.0	0.294		3.8
H41633	2210	3.52	1100	0.11	13.6	9.1	1690	647	147.5	0.004	43500	4.35	4.06	20.7	13	1.9	217	0.6	0.29	5.2	2710.0	0.271	2.05	12.1
X17271	664	32.3	20700	2.07	7.3	3.6	1440	21.7	115.5	0.104	59000	5.9	6.67	18.9	13	1.4	261	0.41	0.64	2.9	2590.0	0.259	1.81	2.3
H43074	384	26.6	18000	1.8	4.3	9.4	1610	11.9	156.5	0.044	41700	4.17	3.48	24.2	18	0.9	251	0.25	1.23	1.6	1520	0.152	0.93	1.7
X17202	398	4.37	21900	2.19	7.7	12.9	1680	25.3	90	0.009	31500	3.15	1.5	6.6	8	1.7	112	0.29	0.44	1.2	2590.0	0.259	0.44	1.4
X17350	978	4.29	20300	2.03	10.1	4.4	1250	73.2	150	0.009	33600	3.36	1.69	12.7	16	3	224	0.52	0.22	2.9	2500.00	0.25	1.44	9.4
X17069	362	70.54			4.25		0.171		126		52700	5.27		23.6		1.1		0.2		1.2	2250.0	0.225		1.1
X17270	647	24.8	21300	2.13	6.6	5.3	1320	39.6	111.5	0.065	46900	4.69	6.06	17.8	11	1.6	215	0.37	0.58	2.1	2220.0	0.222	1.9	2.2
H43068	636	18.35	12300	1.23	8.9	7.5	1860	6.6	231	0.018	25800	2.58	4.5	27	9	1	255	0.48	0.54	1.6	2640.00	0.264	1.46	2.4
X18147	629	71.2	24200	2.42	5.5	4.4	1280	53.6	141	0.179	35700	3.57	4.49	15.8	13	0.9	197.5	0.33	0.61	1.6	1780	0.178	1.79	1.7
X16787	494	71	15200	1.52	6	6.8	1360	3.3	110.5	0.134	32100	3.21	1.68	21.9	9	1	210	0.33	0.16	1.5	2250.0	0.225	1.2	0.8
67950	257	33.2	21000	2.1	6.5	5.5	1510	16.4	136.5	0.065	27400	2.74	2.5	21.6	8	2.3	166	0.32	0.16	1.7	2020.0	0.202	0.94	1
H41661	567	20.2	16800.0	1.68	6.8	3.7	1290	14.6	151.5	0.062	45300	4.53	2.74	16.5	11	1.3	260	0.37	0.55	3.3	2150.00	0.215	1.79	2.1
G37829	813	45.5	27100	2.71	8.5	3.8	1290	75.8	127.5	0.116	32800	3.28	3.09	12.4	6	0.9	302	0.47	0.28	3.5	2580.0	0.258	1.38	2.1
X17354	407	4.56	14500	1.45	17.6	0.6	40	81	103.5	0.005	8700	0.87	1.35	0.7	4	1.4	123	0.51	0.31	13.9	350.0	0.035	1.32	17.5
X17404	705	2.13	18900	1.89	6.9	8.4	1660	9.7	123.5	0.002	65800	6.58	4.08	31.5	8	1.4	225	0.35	0.36	2.3	2540.0	0.254	1.75	1.3
H43134	632	18.7	19400	1.94	5.4	11.9	1850	16.6	177.5	0.014	38100	3.81	2.02	27.2	13	2.4	198.5	0.29	0.54	1	2270	0.227	0.8	3.6
X14912	496	18.7	37300	3.73	5.5	44.1	1110	17	116	0.074	28500	2.85	4.35	14	12	1	213	0.36	1	2.6	3150.00	0.315	1.19	1.3
H43078	588	67.9	14800	1.48	6.6	12.7	1680	6.3	189.5	0.077	27400	2.74	9.21	26.3	10	1.1	78.8	0.4	0.54	1.5	2740.0	0.274	1.17	1.6
H43082	327	31	15700	1.57	9	3.6	720	13.9	173.5	0.042	14700	1.47	3.34	6.1	10	1.2	202	0.44	0.97	2.8	1430.0	0.143	1.11	3.3
H41615	1540	38.2	1900	0.19	15.2	12.7	1180	180.5	119.5	0.053	33900	3.39	3.24	12.5	10	1.9	170.5	0.54	0.43	13.3	2730.0	0.273	1.81	14.5
X14921	767	54.1	20500	2.05	3.4	20.6	510	54.1	138	0.142	36300	3.63	6.35	8.3	17	1.1	207	0.24	1.94	1.9	1970.0	0.197	1.35	1.9
X16837	547	55	14100	1.41	6.5	5.9	1370	6.9	118.5	0.086	27800	2.78	1.54	20.4	8	1	168.5	0.35	0.2	1.3	2440.0	0.244	1.18	0.7
X16765	436	106.5	19400	1.94	6.5	5.4	1360	4.7	122	0.105	25900	2.59	1.81	21	9	1.9	180.5	0.33	0.21	1.5	2140.0	0.214	1.2	1.2
X17225	1680	4.5	7600	0.76	18.3	5.2	1770	1100	95.8	0.008	43000	4.3	3.38	23.9	17	1.4	198	0.66	2.64	2.4	3190.0	0.319	1.81	21.9
X17188	570	55.8	18200	1.82	7.3	8.1	1530	26.3	96.2	0.045	32900	3.29	2.24	10.9	10	1.8	125	0.32	0.75	1.3	2550.0	0.255	0.68	2.2
H43091	367	10.2	18800	1.88	12.6	4.5	290	9.5	87.1	0.004	7400	0.74	1.41	5.3	4	2	61.7	0.58	0.12	19.3	820.0	0.082	0.74	6
X16185	223	89.1	17600	1.76	11.4	3.1	360	14.9	97.5	0.163	16900	1.69	1.95	9.4	10	2.5	120.5	0.46	0.49	10.4	970.0	0.097	0.53	8.4
X16775	364	74.9	28700	2.87	6.6	7.4	1430	2.5	98	0.141	24200	2.42	0.8	22.4	8	1.1	207	0.36	0.09	1.6	2400.0	0.24	0.69	0.9
H43093	174	2.64	15800	1.58	10.2	3.3	170	17.3	83	0.001	6000	0.6	1.54	2.7	5	1.8	42.6	0.41	0.31	8.7	710.00	0.071	0.56	3.9
X14969	497	9.96	23400	2.34	2	14.7	470	10.2	124.5	0.022	21500	2.15	3.05	6.1	7	0.6	177.5	0.14	0.86	2.3	1250.0	0.125	1.37	1.1
X18198	442	8.71	14500	1.45	9.8	1.6	220	195.5	90.4	0.005	11700	1.17	3.23	1.1	4	1.8	111.5	0.5	0.5	12.9	570.0	0.057	1.83	11

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
X17394	1435	38.8	12700	1.27	10.6	21	1460	902	127	0.069	41700	4.17	3.82	14.9	20	2.1	173.5	0.56	1.69	2.3	3180	0.318	2.75	5.4
X14977	819	11.55	11100	1.11	2.5	17.5	570	20.7	154	0.009	31600	3.16	4.46	8.2	9	1	175	0.18	2.75	1.5	1480.0	0.148	1.67	1.2
H40884	1980	10.55	28600	2.86	6.7	35	1350	320	112	0.036	36500	3.65	2.63	16.7	29	2.9	191.5	0.48	0.72	5.8	3190.0	0.319	1.08	6.6
X16754	320	41.5	20000	2	5.9	7.8	1470	4.3	106.5	0.06	26800	2.68	1.47	21.5	11	1.4	307	0.32	0.16	1.4	2090.0	0.209	0.92	1.1
X14904	555	30.5	16600	1.66	3.2	10.1	450	31	125	0.152	20500	2.05	5.17	6.8	12	1.6	140.5	0.23	0.41	2.1	1710.0	0.171	1.64	1.3
X16756	463	66.1	15400	1.54	7	7.4	1500	5	146.5	0.101	33200	3.32	1.93	22.8	10	1.4	191.5	0.39	0.21	1.4	2390.0	0.239	1.03	0.9
X17340	1095	24.9	5500	0.55	10.3	5.8	1090	120	81.9	0.146	28700	2.87	1.81	11.2	11	2	196.5	0.51	0.16	3.1	2380.0	0.238	1.44	24.7
X16750	394	45.9	19200	1.92	6.7	8.1	1550	4.9	143	0.079	29100	2.91	1.65	23.5	11	1.2	250	0.38	0.15	1.5	2320.0	0.232	0.97	0.9
G37869	1015	174.5	9100	0.91	5.1	2.6	1400	46.3	125	0.767	36700	3.67	53.2	18.1	9	1.2	201	0.3	0.53	2.9	2260.0	0.226	2.63	1.5
X17142	749	13.55	9700	0.97	5.9	11	1440	7.2	167.5	0.019	41200	4.12	5.15	24.9	8	1.1	145	0.31	0.34	1.3	2120.00	0.212	1.54	1.4
X17198	564	1.74	15800	1.58	6.8	12.1	1420	15.5	86.8	0.004	26000	2.6	1.23	6.8	6	1.6	121.5	0.21	0.35	0.9	2620.0	0.262	0.4	1.4
X14956	649	17.25	29900	2.99	2.9	11.1	350	6	90.8	0.007	30000	3	2.15	7.4	9	0.9	262	0.21	3.56	1.6	1770.0	0.177	1.06	1.3
H43123	754	2.78	26100	2.61	5.5	26.5	1780	9.7	156.5	0.006	33000.0	3.3	2.26	40.1	10	1.7	142.5	0.28	0.96	1.2	3040.0	0.304	0.81	1.4
X14946	430	15.85	32500	3.25	1.9	6.5	380	9.8	85.1	0.035	16300.0	1.63	2.23	4.5	7	0.5	213	0.14	0.98	1.5	1220.0	0.122	0.81	0.7
X17261	537	5.17	2400	0.24	14.1	1	60	188	95.2	0.015	8800.0	0.88	1.37	1.4	4	0.8	141.5	0.48	0.31	10.3	350.0	0.035	2.07	27
G36716	2650	7.03	7900	0.79	6.2	20.6	1100	375	177.5	0.009	43200.0	4.32	6.4	12.5	14	1.3	149	0.33	3.36	3.9	3210.0	0.321	2.21	14.1
X16227	436	11.75	12700	1.27	9.5	4.2	1350	18.5	116	0.024	17300.0	1.73	3.05	16.3	5	2.2	115	0.33	0.34	1.2	1760.0	0.176	0.67	3.8
X16743	411	42.8	16900	1.69	7.2	8.3	1650	6.2	135.5	0.093	29800	2.98	2.53	23.9	10	1	228	0.4	0.17	1.4	2580.00	0.258	0.9	0.8
X18236	992	4.85	30000	3	5.5	21.2	1050	23.3	149	0.013	36900	3.69	4.13	14.4	10	1.1	271	0.36	2.57	3.4	3380.00	0.338	1.84	1.5
G34684	517	21.1	8700	0.87	8.8	18.1	1870	7.2	99.3	0.027	26800	2.68	5.65	24.5	13	1.2	170.5	0.39	0.41	1.9	3020.0	0.302	1.02	3
H43140	602	11.75	20200	2.02	11.5	9	990	13.4	114.5	0.015	30300	3.03	1.74	25.7	10	3.2	157	0.44	0.83	4.8	2160.00	0.216	0.52	5
X14918	483	12.85	43700.0	4.37	6.9	67.8	1800	16.9	132.5	0.047	26100	2.61	4.3	21.6	10	0.9	251	0.42	1.3	3.4	3900.00	0.39	1.41	1.3
H43131	339	153	1000.0	0.1	2.5	3.7	1260	65	110	0.588	40700	4.07	4.53	15.4	12	2	86.8	0.17	0.13	2.7	1000.00	0.1	2.16	1.2
X17346	1090	9.75	21700.0	2.17	11.2	4.6	1180	86	124.5	0.016	25800	2.58	1.49	11.9	12	2.2	228	0.52	0.2	2.7	2300.00	0.23	1.19	9.2
X16176	366	126	19900	1.99	10.9	5.8	1280	12.2	94.5	0.233	20100	2.01	2.5	14.5	11	2.4	151.5	0.4	0.14	1.3	2240.00	0.224	0.74	3.6
H40882	854	257	26200	2.62	5.8	18.3	860	1535	121.5	0.339	30500	3.05	4.74	9.4	14	0.8	218	0.37	1.11	3.9	3210.00	0.321	1.44	5.8
H43120	700	7.09	20900.0	2.09	7.3	40	1780	7.5	121.5	0.008	22600	2.26	1.6	30.6	8	1.6	145	0.33	0.51	1.3	2980.00	0.298	1.03	1.6
X17974	1345	89.5	34300.0	3.43	5.8	21.1	770	109.5	179.5	0.33	20200	2.02	3.43	12.6	7	1	187	0.39	1.61	4.1	3550.0	0.355	1.83	6.2
H41608	1640	9.44	2100.0	0.21	9.9	15	1070	122	105	0.006	31500	3.15	3.34	9.7	9	1.6	190.5	0.46	0.54	2.2	2390.0	0.239	1.68	9.8
X14856	992	6.87	1200	0.12	6.9	9.4	470	72.4	83	0.011	33300	3.33	5.46	11	4	1	102	0.3	0.53	7.1	1010.00	0.101	2	3.5
H43102	275	2.47	3300	0.33	11.9	3.5	280	7.3	79.6	0.004	6200	0.62	1.26	3.1	3	1.9	85.4	0.47	0.1	8.4	750.00	0.075	0.77	3.1
H41619	2340	4.58	1400	0.14	9.8	28.1	1170	131	153.5	0.01	27400	2.74	2.91	12.6	9	1.3	224	0.45	0.12	1.5	2820.00	0.282	2.24	10
H43143	1020	11.15	18200	1.82	9.4	9.2	1610	10.3	171.5	0.01	26400	2.64	3.61	21.7	12	2.5	220	0.46	0.55	1.4	2570.0	0.257	0.91	1.7
X14902	1545	8.26	15800	1.58	13.3	8.1	420	28.1	111.5	0.033	26100	2.61	38.3	7.7	10	1.7	165.5	0.51	0.43	8.2	2010.0	0.201	1.45	8.6
G36584	1635	33.4	32700	3.27	4	13.6	440	22.5	114.5	0.042	30400	3.04	2.51	10.2	14	1.9	175	0.27	1.78	2.2	2560.00	0.256	0.91	3.3
67916	606	46.8	11900	1.19	5.6	8.4	1790	9.4	182	0.085	34100	3.41	13.75	27.1	10	1	177.5	0.33	0.15	1.7	2340.00	0.234	1.11	1.1
H44025	329	3.61	25800	2.58	9.8	1.2	230	10.8	99.9	0.001	11300	1.13	1.99	1.5	5	2.3	166.5	0.43	0.9	10.1	630.0	0.063	1.11	8
H41621	2200	2.75	1300	0.13	11.5	25.1	1130	92	187	0.007	28200	2.82	3.32	14.1	9	1.5	225	0.46	0.25	4.8	2920.00	0.292	2.14	9.3
X16798	636	76.4	17900.0	1.79	6.8	8.7	1630	7.7	95.8	0.143	30500	3.05	2.25	24.1	6	1	281	0.41	0.09	1.3	2470.00	0.247	1.21	0.7
X17179	839	9.64	20200.0	2.02	7.2	12.1	1610	27	105.5	0.01	30400	3.04	1.7	23.4	11	1.5	135	0.34	0.42	1.4	2680.00	0.268	0.66	1.7
H40878	1150	74.2	11800	1.18	6.4	5.7	1200	106	163	0.208	30900	3.09	5.99	19.6	14	1.2	167	0.4	1.43	2	1880.00	0.188	2.08	4.5
X16141	408	30.1	19600	1.96	5.2	5.2	1270	7.6	123.5	0.046	19800	1.98	1.66	16.4	10	1.1	118	0.26	0.08	1.4	1710.0	0.171	0.88	1.9
G36604	972	24	2300	0.23	8.5	3.6	300	35	80.1	0.025	18500	1.85	6.68	5.5	5	1	122	0.38	2.62	5.2	740.0	0.074	2.72	5.4
X14897	1245	18.65	19900.0	1.99	6.6	18.8	780	72.3	127.5	0.047	32000	3.2	88.6	12.1	14	1.4	167.5	0.37	0.87	3.9	2480.00	0.248	1.58	3.1
H41617	1860	3.57	900	0.09	12	17.5	1000	218	146	0.004	26300	2.63	2.43	11.2	10	1.8	144.5	0.4	0.2	7.5	2740.00	0.274	1.83	15.2
G34743	632	11.15	39000.0	3.9	5.6	35.7	980	18.8	91.9	0.028	42500	4.25	6.7	15.4	17	1.8	332	0.36	3.59	3.6	3210.00	0.321	0.81	2.4
X17040	688	77.82			4.59		0.16		161.7		34800	3.48		22.6		1.1		0.2		1.4	2330.0	0.233		1.2
H40799	1951	17.33			4.7		0.106		129.9		43400	4.34		8.8		1.7		0.2		2.7	2360.0	0.236		7.1
H43111	684	7.28	15800	1.58	7.3	10.3	1310	12.3	116.5	0.017	22500	2.25	1.45	11.6	9	1.6	171	0.3	0.36	2.5	2130.00	0.213	0.63	2.1
H41624	642	3.68	1500	0.15	11.7	2.1	20	144	140	0.002	9400	0.94	2.34	1.3	4	1	200	0.42	0.24	11.9	320.00	0.032	2.06	19.2

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
X16829	553	57	7600	0.76	6.4	6	1310	3.7	110	0.091	26700	2.67	2.37	19.9	8	1	180	0.34	0.12	1.3	2210.00	0.221	1.4	0.8
X17338	1165	23.1	11100	1.11	10.9	8.6	1130	124.5	135	0.063	23000	2.3	1.77	12.6	10	1.5	226	0.55	0.14	3.5	2570.00	0.257	1.34	19.1
H43127	1020	6.58	22500	2.25	5.9	24	1450	9.6	159.5	0.013	32000	3.2	3.02	24.7	9	2.1	130	0.31	0.77	2.5	2700.00	0.27	0.83	1.7
H43076	686	49.4	13300	1.33	4.4	7.8	1510	21.8	144	0.032	29200	2.92	5.91	20.6	11	1.2	173	0.26	0.98	1.5	1730.00	0.173	0.99	1.5
X17383	1280	9.91	30000.0	3	9.7	4.7	1300	187.5	91.3	0.009	27000	2.7	2.2	11.5	10	1.4	320	0.56	2.28	2.8	2580.0	0.258	1.23	3.3
X18074	1235	92.8	18600	1.86	5.6	4.4	1350	290	117	0.106	32300	3.23	29.2	17.7	13	0.8	248	0.33	1.48	2.1	2000.00	0.2	1.68	1.7
X18250	612	4.02	28500	2.85	1.9	10.1	400	41.8	102	0.004	20800	2.08	1.87	4.1	6	0.4	231	0.15	0.83	1.4	1070.0	0.107	1.55	1
H43135	370	5.19	24700	2.47	6.6	10	1270	8.4	104.5	0.018	18500	1.85	2.54	9.2	7	1.8	122.5	0.33	0.56	1.1	2110.0	0.211	0.55	1.2
G34723	745	24.7	24100	2.41	5.8	4.5	1200	13.9	124.5	0.075	25500	2.55	3.23	21.6	14	0.7	262	0.35	0.44	1.8	1880.00	0.188	1.52	1.8
X18095	1630	20.6	6700	0.67	6.5	6.1	1230	185.5	112.5	0.035	30600	3.06	19.3	16.7	13	0.8	203	0.42	1.41	1.5	1970.00	0.197	2.36	2.5
X18289	1275	5.52	45400	4.54	4.7	28.3	700	10.1	61.7	0.012	30400	3.04	3.72	11.2	13	1.7	268	0.32	2.76	2.6	3190.00	0.319	0.61	1.1
X17371	1415	4.86	28600	2.86	9.6	4.7	1300	89.3	113	0.006	28400	2.84	1.64	11.5	9	1.5	356	0.54	3.22	2.7	2540.0	0.254	1.38	5.6
X16995	294	115.73			6.71		0.157		115.3		30800	3.08		21.6		1		0.3		1.3	2690.0	0.269		0.8
X16205	427	35.9	16400	1.64	12	2.8	650	11.7	101.5	0.084	24100	2.41	1.91	9	9	2.2	169.5	0.46	0.55	5.7	1150.00	0.115	0.64	3.9
X17080	464	36.89			7.1		0.154		141.3		29000	2.9		22.5		1.1		0.3		1.4	2870.0	0.287		0.9
X16209	312	13.65	23100	2.31	10.5	1.2	380	10.3	88.2	0.024	15400	1.54	1.69	6.1	5	1.6	122.5	0.4	0.14	6.3	780.0	0.078	0.52	4.2
H41610	2840	4.26	1600.0	0.16	9.4	40.8	1310	81.1	138	0.006	30200	3.02	4.7	19	12	1.2	263	0.42	0.32	4.7	3570.00	0.357	2.09	6.5
H41664	758	25.5	24800	2.48	7.4	4.8	1400	7.1	123.5	0.081	40200	4.02	2.07	21.3	11	1.1	304	0.4	0.35	3.1	2420.0	0.242	1.68	1.8
H40834	1048	178.21			2.65		0.069		160.7		24700	2.47		6.1		0.7		0.1		2.9	1530.0	0.153		6.9
X16857	615	52.6	13300	1.33	6.1	5.5	1330	7.9	105.5	0.079	19700	1.97	2.03	17	9	1.4	226	0.33	0.22	1.2	2380.0	0.238	1.23	1.4
H44032	1100	3.72	2600	0.26	7.9	1.8	180	13.1	85	0.002	23000	2.3	3.91	0.9	4	1.2	137.5	0.34	1.34	3	490.00	0.049	1.79	9
X17957	2250	160	1100	0.11	4.6	6.7	930	201	86.7	0.107	32100	3.21	6.38	15.8	13	1.3	210	0.29	1.86	18.3	1620.0	0.162	2.67	19.9
G36725	901	27.3	38200.0	3.82	10	3.2	210	19.1	100.5	0.021	14600	1.46	2.15	3.8	4	1.6	199	0.49	0.4	10	810.0	0.081	1.18	6.3
H41797	1280	4.28	19700	1.97	9.7	19.2	1450	166	102	0.006	32700	3.27	3.08	16.7	10	1	277	0.55	1.67	2.1	2620.0	0.262	1.14	3.1
H44036	659	4.81	8700	0.87	8.8	0.7	70	11.9	141.5	0.002	12700	1.27	5.13	0.5	4	1	86.7	0.4	0.58	11.6	490.0	0.049	1.77	11.5
X16439	578	6.79	25000.0	2.5	8.9	21.8	1380	14.2	130	0.021	15900	1.59	1.53	22.7	13	1.8	257	0.37	0.18	1	2250	0.225	0.58	1.4
H43116	748	9.96	20500	2.05	11.7	5.9	980	6.1	132	0.012	22100	2.21	2.18	15	4	1.5	168.5	0.53	0.36	10.4	1890.0	0.189	0.7	4.6
H41631	3150	60.3	1300	0.13	11.3	26	990	563	160	0.111	30600	3.06	3.52	13.1	11	2.1	424	0.44	0.14	5.8	2510.00	0.251	1.91	30.7
X16176	376	83.8	15200.0	1.52	12.7	4.2	850	11.9	101.5	0.136	14700	1.47	2.67	11.6	9	2.2	168	0.5	0.2	4.9	1460.00	0.146	0.75	5.7
H41814	1630	4.9	2500.0	0.25	15.5	3.3	1510	161.5	85.6	0.031	28200	2.82	2.53	18.5	8	1.2	216	0.58	0.63	4.8	2590.00	0.259	2.03	17.7
H43098	251	7.84	11600	1.16	14.2	3	320	7.4	77.6	0.011	8800	0.88	1	3.7	3	2.2	74.2	0.5	0.08	13.6	780.0	0.078	0.73	3.9
X17910	1565	139	10500	1.05	5.6	11.8	1160	35.1	161	0.178	23300	2.33	4.18	15.8	9	1	153.5	0.36	0.57	2.6	2020.0	0.202	2.33	13.2
H41613	3290	1.14	3300	0.33	8.9	9.6	1380	139	124	0.002	29000	2.9	2.02	16.9	11	1.6	261	0.35	0.28	1.4	3060.0	0.306	1.81	9.7
H44018	327	4.97	15500	1.55	10.9	1.9	60	57.9	108.5	0.003	9000	0.9	7.34	0.5	3	1.5	183.5	0.47	0.4	10.9	480.0	0.048	1.56	6.3
X18152	864	5.99	22100	2.21	5.7	4.3	1290	13.8	131.5	0.014	27700	2.77	4.26	16.6	13	1	261	0.36	0.49	1.8	1750.00	0.175	1.69	1.2
H41800	994	2.9	27600	2.76	9.1	35.2	1430	21.3	133.5	0.002	24000	2.4	2.33	17.3	5	1.1	231	0.5	0.9	2.2	3110.0	0.311	0.89	3.4
X16447	723	16.9	26900	2.69	9.7	18.9	1680	15.4	138.5	0.043	18400	1.84	1.42	22.4	12	1.7	248	0.43	0.2	1.1	2960.0	0.296	0.62	1.3
X16229	478	18.7	18600	1.86	10.1	6.1	1340	17.6	113.5	0.024	16400	1.64	2.26	17.2	7	2.6	148.5	0.35	0.33	1.4	2100.0	0.21	0.62	2.6
G36696	1065	28	33400	3.34	7.1	18.2	1220	18.9	135	0.083	21100	2.11	4.38	16.6	11	1.9	258	0.45	0.71	4.8	3330.00	0.333	1.33	3.5
X17213	838	5.56	19700	1.97	8.1	5.6	1640	22.3	118.5	0.005	15400	1.54	1.89	21.1	4	1.1	201	0.39	0.34	1.4	2480.0	0.248	0.9	1.3
X17234	2180	9.3	1600.0	0.16	31.8	4.9	1540	269	136	0.014	31200	3.12	3.8	23	12	1.5	349	0.61	1.5	12.5	2860.0	0.286	1.48	103
H43145	277	16.95	4400.0	0.44	7	1.9	130	4.2	108	0.013	9500	0.95	1.2	2.8	4	0.9	50.2	0.26	0.17	7.6	410.0	0.041	0.62	3.3
X16962	506	43.74			5		0.169		98.2		27500	2.75		21.6		0.9		0.2		1.2	2350.00	0.235		0.9
H43088	518	33	9300	0.93	8.7	4.8	610	7.5	107	0.038	18100	1.81	1.52	9.4	12	1.2	127	0.41	0.31	14.3	1320.0	0.132	0.68	7.5
67933	487	113	24900	2.49	7.8	7.4	1580	5.2	122	0.279	15800	1.58	1.37	22.3	7	2.3	185	0.41	0.2	1.6	2470.0	0.247	0.65	1.2
H41776	692	0.69	30300	3.03	16.5	27.2	1200	14.7	128	0.002	10100	1.01	2.28	12.4	6	2	143	0.62	0.61	5.5	2140	0.214	0.62	4.1
X17245	2440	1.8	1700	0.17	13.4	5.4	2030	131.5	98.9	0.003	41900	4.19	4.73	23.8	9	1	379	0.65	1.07	1.8	3290.0	0.329	2.2	6.6
X16222	439	23	13300	1.33	10	5.3	1540	14.7	97.1	0.047	16300	1.63	2.53	15.7	6	2.5	123.5	0.33	0.27	2.1	1840.00	0.184	0.61	3.6
X17925	4230	40.1	4200.0	0.42	6.5	16.5	550	293	170.5	0.044	55200	5.52	5.52	11.7	19	2.6	183	0.35	0.77	11.7	2750.0	0.275	1.71	25.6
H44040	1420	3.03	5500.0	0.55	7.9	1.2	80	23.1	87.4	0.001	27200	2.72	3.92	1.4	7	1.4	178.5	0.38	2.5	7.9	550.0	0.055	1.99	8.6

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
X16158	539	44	16400	1.64	8.5	4.4	1160	12.3	110	0.123	18600	1.86	3.02	15.7	10	1.6	127.5	0.39	0.13	3.6	1850.0	0.185	0.82	3
G34713	797	2.67	700	0.07	6.8	9.4	170	40.5	98.9	0.005	16400	1.64	11.55	6.9	4	0.6	111	0.36	0.54	14.8	490.0	0.049	1.66	5.6
H44174	3569	8.65			7.3		0.116		138.9		34400	3.44		11.5		2.1		0.2		7.7	2160.0	0.216		36.6
H43080	443	5.87	15500	1.55	8.4	3.2	840	9.8	141	0.005	8500	0.85	2.87	22.6	5	1.3	154	0.4	1.01	3.1	1690.0	0.169	0.96	1.9
H44030	2300	4.61	11600	1.16	8.5	4.5	860	62.5	137.5	0.002	32400	3.24	18	9.7	11	2	186	0.41	2.65	4.7	1630.0	0.163	1.53	4.7
9042	1040	13.95	24500	2.45	14	33.5	1760	21.9	146.5	0.027	18500	1.85	2.33	18.4	15	3.6	201	0.54	0.59	2.8	3320.00	0.332	0.7	3.2
H44016	356	4.71	30900	3.09	11.4	1.1	70	98.3	93.9	0.001	8600	0.86	1.11	0.5	3	1.4	213	0.47	0.36	9.2	490.0	0.049	1.22	6.4
H44020	371	3.13	14100.0	1.41	12.1	1	140	35.8	102.5	0.001	9100	0.91	15	1.1	4	1.5	198.5	0.5	0.44	10.4	580.0	0.058	1.6	9.6
H40891	1260	80.1	28500	2.85	3.4	13.7	410	45.3	112.5	0.141	19000	1.9	2.53	10.5	8	1	195.5	0.25	0.48	1.9	1910.0	0.191	1.06	2.5
H44034	776	2.86	3500	0.35	9.3	1.1	60	16.1	94	0.001	11800	1.18	3.57	0.7	2	1.4	142.5	0.41	0.31	10	530.0	0.053	2.1	11.3
67974	421	127.5	19300	1.93	9.3	7.3	1430	9.4	103	0.324	14900	1.49	4.72	15.7	9	2.3	141.5	0.39	0.15	1.4	2380.0	0.238	0.68	2.7
G34694	481	18.6	19200	1.92	12.5	8.1	1810	8	101.5	0.028	17300	1.73	6.33	18.7	9	1.5	205	0.51	0.26	1.5	3070.0	0.307	1.01	1.6
H43118	624	5.53	19800	1.98	7.8	6.1	1430	5	149.5	0.007	16200	1.62	2.49	18.7	5	1.1	137.5	0.41	0.23	2.5	2100.0	0.21	0.91	1.9
X17940	1660	22.1	5000.0	0.5	7.6	17.4	1070	127	154.5	0.07	17600	1.76	3.89	13.1	8	1.6	194.5	0.39	0.57	7.9	3230.0	0.323	2.34	31.3
H41635	1130	3.59	1400.0	0.14	18.2	2.4	280	120	110.5	0.013	8100	0.81	1.98	3.6	4	1.2	135	0.52	0.08	13.7	600.0	0.06	1.92	19.8
H41793	1640	4.85	20800.0	2.08	9.3	24.6	1580	36.3	84.9	0.006	23900	2.39	3.99	16.4	5	1.2	266	0.5	0.92	2.5	3320.00	0.332	0.99	3.5
X14886	1375	53.2	33900	3.39	4.7	17.8	810	22.9	84.3	0.108	23700	2.37	4.88	17.7	13	1.4	185.5	0.31	0.06	3.8	3290.00	0.329	0.77	2.4
X18104	1660	34.4	18800	1.88	5.7	13.7	1170	98.2	144.5	0.059	31800	3.18	15.55	13	11	1	261	0.34	1.17	1.7	2540.0	0.254	2.1	3.7
H41795	1300	3.07	17800.0	1.78	9.1	26.2	1220	29.4	88.1	0.008	25200	2.52	2.73	14.5	5	1.3	283	0.44	0.76	2	2820.00	0.282	0.81	4.5
X18206	1495	5.23	31900	3.19	7.8	5.3	1740	746	106	0.005	19000	1.9	2.9	24.9	11	1.1	310	0.41	1.4	2.5	2130.00	0.213	1	5
H41789	943	2.05	28300.0	2.83	9.7	41.2	1260	55.8	114	0.004	14600	1.46	2.25	17.4	4	1.6	181.5	0.45	0.75	1.9	3110.00	0.311	0.72	3.8
H43147	1380	50.7	20500	2.05	5.5	22.7	1410	10.6	209	0.03	18900	1.89	2.28	39.3	7	1.9	257	0.24	0.43	1.7	3270.00	0.327	0.85	1.8
X16844	748	52.9	20400.0	2.04	8.8	3.5	1360	13.2	120	0.085	19400	1.94	2.32	15.4	7	1.7	247	0.47	0.28	2.3	3020.0	0.302	1.28	3.4
X18278	1455	2.8	29400	2.94	6.4	7	1270	9.7	143	0.011	21900	2.19	5.22	16.3	4	0.9	281	0.4	0.6	1.6	2050.0	0.205	1.47	0.9
X17892	1180	21.3	13800	1.38	7.1	34.3	860	30.8	157.5	0.068	15800	1.58	3.9	11.7	7	1.4	128	0.4	0.26	2.8	3520.0	0.352	2.05	8.3
H41812	1280	3.57	16300.0	1.63	10.9	47	1470	31.9	97.6	0.01	19300	1.93	3.24	18.6	7	1.2	266	0.53	0.76	1.8	3300.0	0.33	1.42	5.1
G36622	1360	2.66	2600	0.26	8.4	1.8	120	19.1	101.5	0.003	16200	1.62	2.66	1.9	4	1.1	143.5	0.41	1.24	7.8	510.0	0.051	2.54	5
X18223	1105	47.1	15800.0	1.58	3.4	9.5	500	33.6	148.5	0.183	19600	1.96	3.46	6.6	6	1.2	214	0.25	0.78	1.6	2020.00	0.202	1.55	2.5
X18158	1250	3.17	29400	2.94	6	4.3	1210	13.7	133.5	0.009	24600	2.46	18.5	16.9	11	0.8	284	0.37	0.39	1.4	1960.00	0.196	1.51	0.9
H41818	1260	26.3	24600	2.46	8.2	1.9	1450	8.4	134	0.066	29600	2.96	1.68	19.2	10	1	314	0.46	0.47	3.2	2700	0.27	1.62	2.3
H41629	3410	3.2	2100	0.21	11.2	43.7	1320	75.7	168	0.02	31100	3.11	2.59	14.6	9	2.2	258	0.43	0.12	4.3	3060.00	0.306	2.04	12.7
H41604	3880	8.63	1400	0.14	14.9	13.1	710	392	126.5	0.015	29100	2.91	3.03	9.1	12	1.5	238	0.42	0.49	3	2070	0.207	1.7	19.5
H41782	608	12.4	25200	2.52	11.2	15.7	1210	183	99.8	0.002	6900	0.69	2.63	11.8	4	0.9	143	0.66	0.57	1.7	2610.0	0.261	0.65	2.6
X16237	464	7.61	16300.00	1.63	8.9	4.2	1100	12.8	128	0.013	10200	1.02	1.98	13.6	5	1.8	157	0.37	0.35	1.8	1610.0	0.161	0.62	2.6
X14888	1450	24	17700	1.77	6	7.6	1220	42.3	132	0.055	26200	2.62	6.71	15.2	9	1.2	220	0.34	0.6	2	2350.0	0.235	1.36	1.6
H41626	943	6.47	2700.0	0.27	11.4	1.9	60	144	109.5	0.012	9300	0.93	1.82	1.3	3	0.7	126.5	0.37	0.18	11.5	310.00	0.031	1.92	36.1
G36209	1135	40.2	11400	1.14	6.5	23.1	830	74.2	103.5	0.079	20200	2.02	2.79	10.7	11	1.7	187	0.31	0.31	2.8	3010.0	0.301	1.61	5.6
H44022	1120	3.77	24000.0	2.4	9.3	3	950	29.8	103.5	0.003	16700	1.67	2.03	7.8	6	1.9	256	0.43	0.41	1.8	1540.0	0.154	1.33	2.7
H44028	1170	5.56	21900	2.19	9.1	3.7	860	96.8	123	0.005	19000	1.9	3.24	9.4	7	2.6	224	0.45	0.71	2.6	1730.0	0.173	1.44	3.3
X18188	270	10.4	13000	1.3	9.7	9.7	1930	11.6	107	0.006	2400	0.24	3.8	24	5	1.1	114.5	0.51	0.21	2.3	2810.0	0.281	1.27	3.4
H43151	1620	5.31	23600.0	2.36	5.5	27.1	1350	7.6	150.5	0.006	19300	1.93	2.63	40.7	6	2	313	0.22	0.25	1.2	3630.0	0.363	0.63	1.4
9374	1235	6.81	4100	0.41	10.3	18.8	1200	392	98.5	0.014	19500	1.95	3.03	13.8	8	1.8	289	0.49	0.29	1.6	3500.0	0.35	1.19	7.1
H41605	749	3.53	29590	2.959	10.91	13.4	0.238	4.89	121.4		8800	0.88	3.22	28.8		2.2	268	0.5		1.5	5460.0	0.546		1.1
H40976	840	8.84			10.37		0.196		117.1		24400	2.44		19.3		2.1		0.3		1.3	2370.0	0.237		1.8
9051	1235	3.29	1500	0.15	9.2	2.1	140	35.2	59.8	0.014	12800	1.28	1.79	1.6	4	0.5	128	0.5	0.08	16.2	410.00	0.041	1.29	28.2
H41807	1140	3.36	22100	2.21	10.9	17.7	1470	18.8	91.7	0.008	18400	1.84	2.32	17.9	3	1.3	289	0.49	0.94	1.5	2740.00	0.274	1.04	3.5
9352	898	2.28	26200	2.62	9.6	6.1	1510	73.4	111.5	0.003	13800	1.38	2.02	18.6	5	1.3	325	0.55	0.79	2.1	2770.0	0.277	0.84	1.8
X14882	1715	59.5	28100	2.81	4.5	15.9	760	24	95.8	0.124	24900	2.49	6.3	12.8	16	1.6	211	0.32	0.09	3	2650.0	0.265	0.91	2.9
H40886	1650	22.9	31400	3.14	4.3	14.4	550	45.1	98.8	0.027	18000	1.8	2.52	9.6	7	1.1	258	0.32	0.47	3.1	2640.0	0.264	0.91	8.6
H43106	941	2.59	25200.0	2.52	8	7.9	1120	11.4	124	0.003	12800	1.28	2.23	15.9	7	1.5	178.5	0.38	0.24	1.5	2810	0.281	0.63	1.4

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
H41791	1340	1.85	33100.0	3.31	7.8	28.7	1250	96.8	100.5	0.007	14600	1.46	1.71	15.2	6	1.3	215	0.42	0.88	2.2	2880.0	0.288	0.57	3
H43129	1100	4.72	18600	1.86	6.2	13.8	1530	10.3	191.5	0.008	17000	1.7	2.11	29.8	6	1.7	174.5	0.31	0.46	1.1	3130.0	0.313	0.83	1
X17203	986	4.23	25200	2.52	9.8	9.7	1450	70	95.7	0.007	15100	1.51	1.74	18.2	5	0.9	177	0.48	0.66	2	2600.0	0.26	0.73	2.1
H43136	1100	9.99	26900.0	2.69	8.2	8.1	1410	14.7	107	0.022	25600	2.56	1.84	19.1	9	2.4	167.5	0.4	0.36	1.5	2400.0	0.24	0.44	1.6
X16819	673	35.3	22700	2.27	9.1	1.7	1150	11	109.5	0.057	13500	1.35	1.09	11.3	4	1.2	326	0.48	0.2	2.6	3180	0.318	0.99	2.1
X16195	613	28.6	11400	1.14	13.2	2.8	700	9.2	101	0.089	11500	1.15	2.03	11.7	5	2.4	152	0.48	0.18	7.3	1160.0	0.116	0.66	4.7
X17863	1240	14.6	2400	0.24	7.3	4.4	1000	61.4	87.2	0.007	15300	1.53	4.05	10.3	5	1.1	158	0.32	0.3	2.7	1410.0	0.141	2.53	7.9
X16454	910	16	24500.0	2.45	8.3	13.7	1420	16.5	154.5	0.043	13300	1.33	1.7	22.6	10	2	227	0.43	0.19	1.3	2690.0	0.269	0.64	1.4
G36562	2240	7.72	12800	1.28	7.1	24.9	860	34.4	161	0.018	21900	2.19	6.58	14.6	9	1.9	157.5	0.3	1.07	2.9	2750.0	0.275	1.64	7.6
H43149	1400	3.91	27000	2.7	6.2	17.8	1330	6.9	103	0.006	15100	1.51	1.9	37.3	7	2.1	172	0.3	0.28	3.7	3530.0	0.353	0.4	2.2
X18135	2050	12.1	30900.0	3.09	5.9	18	850	135	127	0.054	19700	1.97	5.09	12	7	1.1	295	0.39	0.82	2.9	3570.0	0.357	1.25	4.5
H41644	1280	2.52	1300.0	0.13	17.2	3	110	86	94.4	0.008	5000	0.5	1.23	2.1	3	0.7	118.5	0.61	0.09	12.4	460.0	0.046	1.68	22
H43109	2650	1.02	20100.0	2.01	5.7	5.4	940	10.1	88.2	0.002	40900	4.09	2.51	16.4	5	1.5	269	0.27	0.25	1.5	2100.0	0.21	0.46	1.8
X14933	825	4.97	49000	4.9	5.6	17.7	1060	5.7	95	0.007	11500	1.15	2.79	14.4	4	0.6	320	0.37	0.83	2.9	3880.0	0.388	1.12	1.8
G36652	1135	5.25	14400	1.44	6.4	9.6	1000	30.2	102	0.007	11600	1.16	1.36	18	11	1.9	132	0.26	0.14	1.3	1730.00	0.173	0.92	2.9
G34782	733	19.45	35000	3.5	6.5	41.1	1180	16.7	101.5	0.158	9900	0.99	3.16	17.4	17	1.4	345	0.4	0.29	4.6	3700.0	0.37	0.79	2.2
H41803	1250	1.87	23600	2.36	8.7	27	1470	23.2	120.5	0.007	16000	1.6	2.15	14	5	0.9	329	0.55	0.53	1.9	2850.0	0.285	0.98	2.6
H43096	542	3.72	13600.0	1.36	13.1	3.7	380	7.1	74.6	0.003	7900	0.79	1.13	3.1	2	2.1	106	0.51	0.07	11.7	790.0	0.079	0.7	4.1
H40994	2718	1.71			8.97		0.096		117.3		15900	1.59		10.1		1.2		0.4		1.9	1800	0.18		3
H41810	1710	1.28	29200	2.92	9	50.3	1300	15.6	127	0.003	17000	1.7	2.84	17.9	6	1.4	270	0.43	0.65	2.1	3180.0	0.318	0.95	5
H43104	775	1.2	26000	2.6	8.4	1.3	1170	11.1	143	0.003	12400	1.24	2.22	14.4	5	1.4	363	0.43	0.31	3.8	2110.0	0.211	0.77	2
H41772	845	0.66	17400.0	1.74	10.1	29.4	1180	10.3	88.9	0.001	9400	0.94	5.02	13.9	5	1.8	173	0.41	0.2	6.4	2190.0	0.219	0.7	2
H40888	1740	41.1	31800	3.18	4.9	16	580	28.9	119	0.073	19100	1.91	2.94	12.6	10	1.1	282	0.36	0.35	3	3300.0	0.33	0.99	2.6
X18120	1550	30.8	19900	1.99	7.9	23	1290	93.4	128	0.048	20900	2.09	5.6	14.3	9	1.6	370	0.43	0.58	3.1	3760.0	0.376	1.49	3.6
H44014	668	3.41	29400.0	2.94	10	1.8	70	55.2	101	0.001	7900	0.79	0.75	0.7	3	1.3	244	0.43	0.25	4.2	450.0	0.045	1.12	4.9
H40855	613	58.72			5.1		0.116		76		8800	0.88		11		1		0.3		3.2	3260.0	0.326		3.6
G36639	2860	3.37	5600	0.56	8.1	5	860	23.5	99.9	0.009	16600	1.66	4.95	11	6	1.3	179	0.42	1.98	3.2	1710.0	0.171	1.84	5.7
H44038	911	2.65	14500.0	1.45	9	0.5	70	9.3	122	0.001	8900	0.89	2.99	0.3	2	1.2	129.5	0.4	1.31	10.3	440.0	0.044	1.58	6.5
X18142	1270	108	46800	4.68	4.2	16.2	840	45.6	58.6	0.08	16100	1.61	26	8.4	8	1.1	286	0.3	0.62	2.2	2600.0	0.26	0.62	2.2
H43153	1690	10.3	18800	1.88	6.5	19.8	1430	11.3	161.5	0.024	19900	1.99	2.26	28.6	6	2	308	0.34	0.41	1.4	2850.0	0.285	0.67	1.3
H41805	973	3.06	42100.0	4.21	9.2	49.6	1270	10.5	94	0.005	12200	1.22	1.95	15	3	1.1	253	0.46	0.45	1.4	3190.0	0.319	0.65	2.6
G34704	979	31.3	700	0.07	12.1	7.6	290	14.8	96.9	0.012	11000	1.1	67.6	6.2	5	1.4	132.5	0.46	1.32	18.4	710.0	0.071	1.18	8.3
H44230	3937	10.74			3.06		0.065		124.4		22300	2.23		11.1		2.1		0.1		8.4	1870.00	0.187		46.4
X17877	2270	6.05	1800	0.18	8.2	10.9	1070	53.5	201	0.005	21600	2.16	5.44	14.9	8	1.6	158.5	0.36	0.39	7.4	2520.0	0.252	2.04	7.6
G36186	1965	13.35	9200	0.92	6	5.8	820	374	144.5	0.031	17200	1.72	5.44	17.3	11	1.5	175	0.31	0.53	1.6	1790.0	0.179	1.26	3
H41613	2126	4.59	13880	1.388	8.32	13.7	0.206	18.59	108.3		21500	2.15	4.05	26.2		2.6	280	0.5		1.3	3600.0	0.36		1
H41771	248	1.04	13400	1.34	10.2	4.4	300	11.2	90.4	0.001	1500	0.15	2.16	3.3	2	1.2	118.5	0.32	0.15	4.9	490.0	0.049	0.53	1.6
X17306	1020	1.86	20300	2.03	7.7	48.8	1370	81.4	148.5	0.003	3800	0.38	2.01	18.3	4	1.4	212	0.35	0.23	3	3160.0	0.316	0.76	2.5
9399	1275	5.02	8800	0.88	10.8	16	1350	40.8	116	0.014	11000	1.1	2.3	11.7	7	2.2	386	0.56	0.86	7.7	3220.0	0.322	1.25	7.9
G34763	777	10.3	24400	2.44	7.6	40.2	1520	8.9	169.5	0.05	8000	0.8	6.67	22.5	8	1.6	191	0.46	0.86	6.6	4120.0	0.412	1.43	2.3
H40880	1390	103.5	24300	2.43	4.5	18.2	510	139	132	0.125	10900	1.09	3.72	12.1	7	1	212	0.32	0.26	2.6	2850.0	0.285	1.2	1.6
X17327	1220	4.68	23600	2.36	16.5	39.3	1480	75.2	148.5	0.007	10000	1	2.09	16.2	7	1.6	261	0.85	0.61	8.2	3260.00	0.326	1.07	5.5
X18084	1645	10.45	28400	2.84	9.4	2.8	960	18.9	113.5	0.024	11500	1.15	3.95	10.3	3	0.8	252	0.57	0.22	2.5	2040.0	0.204	1.28	2.7
X18265	2440	14.5	35300	3.53	5.8	54.6	1110	59.7	87.8	0.061	21700	2.17	5.04	14	8	1.3	326	0.38	1.18	3.2	3380.0	0.338	0.74	2.1
H41780	609	5.63	30100	3.01	12.9	20.3	1810	22.5	136	0.012	8300	0.83	3.21	17.1	5	1	206	0.74	0.21	2.5	3310.0	0.331	0.77	3.1
H41787	482	12.25	24300	2.43	9.2	14.8	750	46.5	98.8	0.007	5000	0.5	1.63	10	2	0.8	235	0.45	0.15	1.4	2440.0	0.244	0.57	3.5
X17317	566	4.06	26600	2.66	8.9	65.1	1480	43.6	146	0.007	3700	0.37	2.06	19	6	1.1	166.5	0.44	0.45	3.3	3080.0	0.308	0.55	2.5
G36745	1870	128	17700	1.77	5.8	23.8	900	327	143.5	0.109	10000	1	3.46	16.8	18	1.4	214	0.31	0.32	3.6	2880.0	0.288	1.57	5.4
X16193	1095	47.7	7400	0.74	8.6	0.9	290	7.1	80.5	0.088	7800	0.78	1.6	5.1	5	1.4	183.5	0.31	0.15	6.7	580.0	0.058	0.6	4.3
H41621	962	7.62	26050	2.605	10.2	11.7	0.241	6.16	74.7		3400	0.34	2.89	24.8		1.5	585	0.4		1	4810.0	0.481		0.9

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
9008	697	6.02	22800	2.28	13.6	2.8	1320	16.3	84.1	0.011	4300	0.43	1.24	12.1	4	2	322	0.65	0.2	5.8	2650.0	0.265	0.45	3.3
G34556	732	2.21	17000	1.7	11.8	6.7	1530	38.3	93.3	0.002	4300	0.43	1.79	22.6	5	1.3	245	0.58	0.17	2.7	2400.0	0.24	0.91	2.2
9027	1640	2.42	30500	3.05	12.6	2.2	1200	12.6	113	0.004	7100	0.71	1.61	15.6	4	1.8	534	0.66	0.22	4.8	2560.0	0.256	0.44	3.2
H44187	2117	11.97			4.99		0.096		139.4		6500	0.65		12.5		1.9		0.2		16.8	2310	0.231		18.5
H41619	1364	2.3	27350	2.735	12.82	19	0.32	7.91	54.4		4500	0.45	3.9	28.8		1.4	574	0.4		1.1	5860.0	0.586		0.8
G36155	1235	8.01	16100	1.61	12.1	6	1680	8.6	95.3	0.01	4200	0.42	2.12	16	4	0.9	210	0.52	0.2	2.6	2270.0	0.227	0.81	2.8
H41785	799	2.03	15200	1.52	8.3	21.3	840	58.2	94.2	0.002	2700	0.27	2.52	16.1	3	1.3	243	0.34	0.15	1.7	2330.0	0.233	0.71	4
H41778	1330	1.81	20100.0	2.01	11.8	37	1490	18.9	107	0.004	3100	0.31	5.68	13.9	3	1.8	243	0.45	0.25	5	2650.0	0.265	0.8	2.9
G36165	1770	2.47	11500	1.15	8.4	13.5	1220	26.1	115	0.005	4300	0.43	5.22	13.4	6	1.3	197	0.44	0.11	3.6	2520	0.252	1.08	2.3
H41617	828	2.24	19230	1.923	8.49	4.1	0.133	3.55	66.8		2100	0.21	2.81	11.2		1	281	0.3		2.7	2850.00	0.285		1.9
G34753	1035	4.31	3100	0.31	5.3	11.2	270	6.7	93.8	0.009	2700	0.27	10.6	9.2	3	1.3	233	0.22	0.16	5	950.0	0.095	1.06	3.1
H43984	2278	4.37			11.95		0.177		101.6		2500	0.25		13.3		1.7		0.6		2.4	3410.0	0.341		2.2
H41615	704	1.6	32580	3.258	12.48	9	0.269	4.19	72		1100	0.11	2.01	23		2	490	0.5		1.3	5250.0	0.525		1
G33506	890	1.56			9.02		0.095		96.2		600	0.06		9.4		0.8		0.4		5.6	1830.0	0.183		3.6
H41608	1092	2.29	33760.0	3.376	11.05	12	0.28	3.7	67.7		800	0.08	2.69	24.3		1.8	428	0.5		1.3	5180.0	0.518		1.1
H41610	1299	1.7	33300	3.33	13.65	9.5	0.317	2.69	69.4		400	0.02	2.4	29.2		1.6	361	0.5		1.2	5710.0	0.571		0.8
H41622	984	1.47	25640.0	2.564	9.49	9.2	0.195	3.72	61.5		400	0.02	3.17	21.7		1.2	353	0.4		0.8	4350.0	0.435		0.6
H41626	1189	0.81	31990	3.199	11.8	7.6	0.252	3.75	46.5		400	0.02	2.75	21		1.1	410	0.4		0.9	4990.0	0.499		0.5
X10676	65	84.01			0.97		0.046		32.1		97700	9.77		4.4		1.7		0.05		0.9	610.0	0.061		0.3
X13711	20	9.63			0.93		0.167		85		53400	5.34		12.2		4.2		0.05		1.2	620.0	0.062		1
X13701	46	42.38			0.89		0.182		67.1		52100	5.21		10.9		2.4		0.05		0.8	600.0	0.06		0.8
G33182	28	174.5	2300	0.23	0.9	18	380	14.8	109	1.325	50500	5.05	2.47	14.1	24	2.3	180.5	0.06	0.36	3.1	650.0	0.065	3.08	1.4
S91-395_5431	74	37.8	500	0.05	1.3	2.1	300	46.8	39.4	0.14	36700	3.67	1.42	3.1	7	0.6	99.6	0.08	0.07	0.7	570.0	0.057	0.88	0.3
G37665	49	66.4	800	0.08	1.5	8.5	290	34	47.4	0.311	50900	5.09	74.7	6	13	0.8	12.8	0.06	0.26	1.7	650.0	0.065	1.08	0.4
S91-387_5210	78	78.5	800	0.08	1.7	11.5	590	25.6	66.9	0.412	49700	4.97	2.13	5.6	6	1.5	12.4	0.09	0.18	1.6	880.0	0.088	1.64	0.4
G21564	36	63	2800	0.28	1.7	2.7	1120	48.5	95.5	0.528	51800	5.18	1.59	16.2	24	2.8	500	0.11	0.44	3.8	910.0	0.091	3.52	1.4
G37342	208	322.7			0.85		0.13		85		35800	3.58		11.3		1.4		0.05		2	590.0	0.059		1.1
S91-395_5417	165	16.6	400	0.04	1.1	2.3	520	69.6	33.2	0.061	40900	4.09	6.66	3.6	5	0.7	43.4	0.06	0.1	0.5	480.0	0.048	0.73	0.2
G36847	83	14.7	400	0.04	1.7	2.5	190	19.8	39.5	0.05	35200	3.52	3.05	5.1	7	0.9	24.7	0.1	0.07	0.7	700.0	0.07	0.8	0.4
S91-387_5199	57	89.8	300	0.03	0.7	2.1	150	38.5	21.6	0.572	20000	2	35	4.3	5	0.8	4.8	0.025	0.11	0.5	300.0	0.03	0.49	0.1
X13520	272	109.42			0.57		0.104		107.6		57300	5.73		11.8		1.5		0.05		1.7	470.0	0.047		1.2
S91-387_5179	46	124	2000.0	0.2	1.5	2.5	530	88.1	8.3	0.919	34400	3.44	29.9	2.3	8	0.9	95.5	0.08	0.29	1.2	550.0	0.055	0.27	0.3
G37937	55	57.9	4400	0.44	1.6	3.1	1530	70	98.8	0.326	65900	6.59	0.62	20.5	21	2.6	89.9	0.1	0.44	4.1	830.0	0.083	2.78	2
S91-386_5101	240	118	3200.0	0.32	3.1	5	2090	93.8	53	1.04	92600	9.26	3	24.3	22	2.4	125	0.15	0.28	2.8	1450.0	0.145	2.11	1.1
S91-386_5158	136	87.5	1200	0.12	2.1	15.6	690	58.6	76.3	0.337	53500	5.35	1.76	9	11	1.4	51.1	0.11	0.22	2.1	1210.0	0.121	2.23	0.7
G37330	147	192.86			0.57		0.075		115.7		63300	6.33		10.4		1.8		0.05		1.7	490.0	0.049		1.3
G22009	20	4.35	2400	0.24	1	26.3	1080	104	86.4	0.045	55700	5.57	12.9	18	22	4.4	119	0.08	0.57	3.8	710.0	0.071	2.99	2.6
G33396	63	19.45	3300	0.33	2.3	2	910	7.9	98.4	0.017	88200	8.82	1.97	12.6	43	4.8	79.7	0.15	0.18	2.9	1140.0	0.114	1.33	1.6
S91-386_5141	148	98.7	1400	0.14	2.4	5.9	820	44.5	68.1	0.493	54700	5.47	6.11	8.8	8	1.3	65.4	0.12	0.16	1.5	920.0	0.092	1.95	0.8
G36855	197	29.6	200	0.02	1.7	6.8	380	33.7	44.2	0.091	39100	3.91	2.62	5.7	6	1	9	0.12	0.18	1.1	790.0	0.079	0.94	0.5
X05423	161	97	600	0.06	1.5	3.4	120	21.7	25.8	0.518	47800	4.78	4.4	16.9	6	1	24	0.06	0.29	0.5	780.0	0.078	0.73	0.2
G21583	29	11.75	2500	0.25	1.5	2.7	1800	51.4	79.2	0.039	63200	6.32	2.16	15.1	27	3.4	1080	0.1	0.77	3.2	730	0.073	3.48	1.5
S91-386_5122	217	91	2100	0.21	2.3	6.8	1260	57.3	79.3	0.346	61500	6.15	1.23	10	13	1.7	109	0.12	0.29	1.5	1030.00	0.103	2.61	0.9
G37684	126	73.2	1000	0.1	3.5	13.5	770	36.8	72.5	0.373	52500	5.25	0.66	10.7	13	1.9	59.1	0.12	0.22	2.6	1270.0	0.127	2.04	1.5
S91-395_5405	134	21.4	700	0.07	1.6	2.1	550	27.6	52.8	0.074	47000	4.7	1.37	5.2	4	0.7	27.1	0.09	0.3	1.3	750.0	0.075	1.32	0.3
G21535	89	165	2100.0	0.21	1.1	12.4	1160	64.3	74.9	0.704	34400	3.44	6.99	10.7	18	3.1	484	0.07	0.6	2	690.0	0.069	2.31	1
X05453	88	101.5	700	0.07	0.9	8.6	580	36.9	54.9	0.39	45100	4.51	10.4	5.5	10	2.1	30.3	0.05	0.49	1	650.0	0.065	1.25	0.3
G37785	335	483	2800	0.28	1.3	20.5	980	14.8	89.8	3.95	75200	7.52	1.04	12.4	21	2.9	64.6	0.08	0.27	2.8	1170.0	0.117	2.18	0.6
H44263	121	68.11			1.3		0.09		101		49000	4.9		9.2		1.6		0.05		1.9	1120.0	0.112		0.8
X11530	102	99.5	1100.0	0.11	1.5	7.1	630	54.8	65.1	0.54	46300	4.63	1.05	4.5	9	1.2	18.8	0.07	0.59	1.4	750.0	0.075	1.74	0.5

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
G21048	101	284.54			0.96		0.19		70.7		63700	6.37		9.5		1.4		0.05		1.3	590.0	0.059		2.1
G21508	79	136	2300	0.23	1.7	2.9	1670	107.5	92	0.798	48500	4.85	3.52	14	22	2.5	560	0.11	0.67	3.2	780.0	0.078	3.03	1.8
X05339	330	72.61			0.69		0.107		54.1		95300	9.53		7.7		2.4		0.05		1.5	560.0	0.056		1.1
G33162	61	368	2600	0.26	1	31.2	810	16.4	104	3.04	45800	4.58	0.26	11.9	19	1.7	94.1	0.05	0.42	2.1	570.0	0.057	2.56	0.9
H43405	293	121	2300	0.23	1.5	2.5	1750	97.4	87	1.005	83400	8.34	0.29	22.6	25	2.7	95.9	0.1	0.43	2.4	970.0	0.097	3.26	1.3
H43880	418	138.37	1350	0.135	1.01	6.6	0.104	358.47	145.1		88600	8.86	3.35	11.6		1.8	298	0.1		2.5	700.0	0.07		1.6
G37699	79	65.4	1100	0.11	1.7	16.9	900	16	69.9	0.192	54500	5.45	0.89	9.2	15	1.2	23.9	0.08	0.4	2.1	980.0	0.098	1.97	0.7
X05402	210	94.5	1400	0.14	2.9	1.8	1050	108.5	69.2	0.442	57100	5.71	2.34	8.8	7	1.3	134.5	0.15	0.46	1.8	1240.0	0.124	1.84	0.6
X11553	193	85	1800	0.18	2.3	5.6	1280	58.6	84.2	0.442	51000	5.1	0.96	9.8	10	2.6	36.1	0.13	0.29	1.9	1140.0	0.114	2.3	1.1
G37809	205	41.5	4500	0.45	1.3	19.1	1220	10.2	101	0.203	58600	5.86	0.77	14.9	16	3.3	87.2	0.1	0.24	3.4	990.0	0.099	2.74	2.1
X19143	211	46.04			0.39		0.017		16.6		57500	5.75		2.2		1.1		0.05		0.2	270.0	0.027		1.3
G33142	128	232	2400	0.24	2	5.8	1490	65.4	104	1.845	49900	4.99	0.59	15	19	2.7	197	0.13	0.25	3.9	890.0	0.089	3.08	1.8
G21490	212	176	2400.0	0.24	2.7	4.9	1990	45.8	151	1.17	62500	6.25	0.59	28.2	27	2.7	69.8	0.17	0.14	2.9	1410.0	0.141	4.87	1.3
X06441	163	27.7	200	0.02	3	1.4	680	23.2	96.5	0.056	41800	4.18	2.2	8.8	8	2.2	16.6	0.18	0.45	2.5	1320.0	0.132	1.8	0.8
G37719	78	103.5	1100	0.11	1.6	10	1990	24.6	70	0.417	46400	4.64	12	6.2	15	1.6	75.4	0.07	1.19	1.2	770.00	0.077	1.92	0.5
H44434	314	160.87			1.51		0.194		107.5		54300	5.43		21.4		1.8		0.05		1.4	1460.0	0.146		1.5
G36074	226	54.53			2.23		0.104		84.9		39300	3.93		13.6		2.6		0.1		1.6	1220.0	0.122		0.7
G21477	163	152	900	0.09	1.3	4.4	800	81.2	47.5	0.966	37200	3.72	0.52	12.8	14	1.5	32.5	0.07	0.17	1.1	590.0	0.059	1.39	0.5
X14258	294	145	1100	0.11	2.5	2.5	1230	25	97.8	0.553	58200	5.82	1.79	17.3	18	2.6	23.4	0.15	0.41	2.6	1460.0	0.146	1.83	1.5
H43397	169	133.5	1700.0	0.17	2.3	2.7	2390	104	125.5	0.77	80400	8.04	1.5	18.1	20	2.4	145	0.16	0.18	2.4	1080.0	0.108	3.81	1.3
H43401	255	256	2000	0.2	1.9	2.1	1430	88.4	97.6	2.23	51400	5.14	1.01	17.2	19	2.7	151	0.12	0.26	2.8	1010.0	0.101	3.67	1.3
H43395	130	112	1700	0.17	1.9	2.7	1450	130	119	0.562	58000	5.8	15.9	17.4	14	3	167.5	0.14	0.58	2.6	890.0	0.089	3.64	1.3
H43403	188	84.2	2300.0	0.23	2.4	2.9	1730	82.9	98.7	0.476	59200	5.92	0.44	20	18	2.7	119	0.15	0.36	3.3	1190.0	0.119	3.66	1.6
X14278	272	81.1	900.0	0.09	4.1	4.5	1090	68.4	97.1	0.252	47400	4.74	22.9	20.7	15	2.6	46.5	0.2	0.41	2	1040.0	0.104	1.69	0.9
E217257	961	123.5	2600	0.26	3.7	5.8	2540	57.2	66.3	0.608	67900	6.79	2.46	50.4	7	3	36.1	0.18	0.46	2.2	2140.00	0.214	2.58	1.7
G22025	541	1.68	2400	0.24	3.5	10.8	1290	39.8	84	0.013	56200	5.62	0.77	21.8	17	1.3	211	0.25	0.55	3.9	1360.0	0.136	3.21	3
S91-395_5388	184	13.85	900	0.09	2.1	2.2	730	34.2	90.8	0.027	33400	3.34	1.62	8.6	5	1	35.2	0.12	0.24	2.7	1000.0	0.1	1.82	0.7
H41708	270	147	1500.0	0.15	3.9	3.3	1360	42.1	113	0.702	47900	4.79	114	18.8	10	1.8	174	0.24	0.55	3.5	1670.0	0.167	2.84	1.9
G35241	233	36.8			0.44		0.007		11		50000	5		1.4		1.9		0.05		0.2	260.0	0.026		0.6
X11486	100	93.7	600.0	0.06	1.3	5.8	250	35	81.1	0.466	28800	2.88	8.64	2.2	5	2	30	0.07	0.26	2.6	460.0	0.046	1.59	0.3
H41422	191	80.1	900	0.09	2.5	3.5	2100	133.5	152	0.402	70500	7.05	4.88	14.1	17	2.2	149	0.14	0.14	2.7	990.0	0.099	3.55	1.3
G37917	559	71.4	1800	0.18	2.1	4.7	2430	43.6	108	0.484	64700	6.47	1.75	36.4	16	2.3	35.8	0.11	0.23	2.5	1230.00	0.123	3.2	1.5
H43399	158	282	2200	0.22	2	1.9	1580	54.3	109.5	2.39	49700	4.97	0.12	18.5	17	2.9	99.6	0.14	0.33	3.2	1050.0	0.105	4.12	1.4
X05483	311	82.3	1100	0.11	2.9	21.3	870	39.8	96.9	0.356	46300	4.63	3.34	13.6	15	2	43.6	0.09	0.2	3.2	1140.0	0.114	2.29	1
G24020	352	61.5	3100	0.31	3.5	6.4	1750	48.4	118.5	0.25	74000	7.4	1.47	23.9	28	4.5	62.8	0.2	0.26	3.3	1370.0	0.137	2.55	1.9
X14180	318	134.14			1.33		0.138		65.4		47700	4.77		15.5		1.6		0.05		1.5	830.0	0.083		1.4
H43407	879	112	2200	0.22	4.3	3.3	1360	149	107.5	1.22	49800	4.98	0.27	20.6	18	3.2	247	0.21	0.23	3.1	1180	0.118	3.37	1.8
H42161	157	40.8	2000.0	0.2	5.1	2.8	1570	58	117.5	0.17	44400	4.44	2.16	20.3	14	4.7	41.7	0.3	0.28	4.2	1530.0	0.153	3.06	1.8
X11377	606	110.5	2300	0.23	2.2	1.7	1610	16.7	104.5	1.34	36600	3.66	0.78	14.9	8	2.1	87.9	0.13	0.51	2.8	1160.0	0.116	2.69	1.7
X10664	277	31.32			0.87		0.037		50.2		47400	4.74		4.9		1.5		0.05		0.6	670.0	0.067		0.6
G37739	440	109	1800	0.18	4.1	2.7	1750	17.1	86	0.509	46300	4.63	0.97	24.9	13	1.9	42.9	0.23	0.11	3.3	2530	0.253	2.13	1.6
H41706	469	47.5	800	0.08	6	3.2	1390	59.5	120	0.217	54900	5.49	790	17.6	10	2.1	262	0.36	3.49	3	2260	0.226	3.14	3.2
G36943	408	69.6	400.0	0.04	5.4	2.3	1010	31.1	110	0.219	45500	4.55	4.15	13.1	8	1.5	21.3	0.35	0.32	3.7	2290.0	0.229	1.56	1.4
G35228	605	20.36			0.84		0.033		29		63400	6.34		3.7		2.5		0.05		0.9	710.0	0.071		2.4
G32981	446	23.44			3.13		0.104		93.9		35300	3.53		11.9		1.5		0.2		2.7	1670	0.167		1.6
X15427	270	82.98			3.35		0.093		91.1		27800	2.78		11.3		1.7		0.2		1.3	1680.0	0.168		1.2
H42163	322	49	2500.0	0.25	5.2	3.4	1010	59.2	121.5	0.152	38000	3.8	2.28	13.5	12	3	65.5	0.28	0.16	3.6	1000.0	0.1	2.57	1.4
G37966	649	119.5	4200	0.42	2.1	3.9	2240	41	91.3	0.771	44100	4.41	1.03	27	7	2.8	49.6	0.11	0.71	2.8	1020.0	0.102	2.93	1.1
G21287	544	84.04			2.39		0.066		72.6		32700	3.27		7.9		1.1		0.1		2.3	980	0.098		1.3
G36878	324	19.1	300	0.03	2.6	6	560	9.7	69.9	0.042	29200	2.92	3.08	7.1	6	0.9	13	0.17	0.2	2.3	1190.0	0.119	1.28	0.6

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
X14630	334	12.05	200	0.02	2.8	2.5	700	11	64.3	0.018	32700	3.27	2.5	10.3	4	1.3	19.1	0.15	0.15	1.7	1090.00	0.109	1.21	0.6
H43874	559	26.33	36420.0	3.642	2.11	2.9	0.14	7.28	99.6		45900	4.59	0.84	16.6		1.3	672	0.3		3.9	1670.0	0.167		2.3
G33119	474	267	1300.0	0.13	2	5.9	290	47.9	118.5	2.31	39000	3.9	13.9	12.2	19	2	112	0.13	0.26	3.8	800.0	0.08	2.88	1.3
G33357	326	4.59	2200	0.22	3.5	3.8	1530	20.7	146	0.007	57200	5.72	51.2	20.5	15	3.8	78.7	0.22	0.13	3.7	1390.0	0.139	2.21	1.9
X14171	378	219.27			1.91		0.151		65.7		33900	3.39		16.6		2.6		0.05		1.7	1080.0	0.108		1.4
H42169	317	424	1700	0.17	6.7	5.4	1790	828	140	1.455	47600	4.76	6.19	21.7	24	6	44.4	0.35	0.87	3.6	1960.0	0.196	3.4	1.8
X13511	895	83.26			1.17		0.089		35.7		34000	3.4		11.5		1.7		0.05		1.8	880.0	0.088		2
H41839	241	2.82	2600	0.26	4.5	2.9	1440	19.1	110.5	0.001	56700	5.67	29.3	19.1	15	2.2	62.5	0.26	0.42	3.2	1790.00	0.179	2.56	2
X06419	465	16.3	400	0.04	2.9	1.5	840	38.9	96.1	0.041	30900	3.09	2.2	11	6	1	14.5	0.16	0.18	3.1	1360.0	0.136	2.01	1.2
G24041	709	50.5	1100	0.11	4.2	4	1660	18.5	95.6	0.19	40300	4.03	1.52	22	13	1.9	36.9	0.27	0.08	3.4	1810.0	0.181	2.36	1.7
G23998	197	29.2	1900	0.19	2.5	1.1	1780	14	153.5	0.106	32200	3.22	0.93	17.2	15	1.7	49.1	0.17	0.07	4.3	1790.0	0.179	2.94	2.4
X15009	464	22.4	10900	1.09	4.6	1.8	990	13.1	99.8	0.046	35600	3.56	3.42	14.4	7	1.6	91.5	0.29	0.25	4.2	2210.0	0.221	1.49	1.6
G32047	386	96.3	10800	1.08	3	2.7	1010	62.3	99.5	0.514	66100	6.61	2.12	13.1	18	2.1	235	0.19	0.58	3.2	1340.0	0.134	1.76	2.2
G35583	727	103	2000	0.2	3.3	3.3	1260	24.8	112.5	0.814	48100	4.81	0.87	21.9	9	2.1	66.9	0.18	0.42	3.3	1530.0	0.153	2.63	1.6
X06463	448	11.5	600	0.06	1.9	1.2	600	124.5	63.3	0.015	47500	4.75	1.54	8.4	9	1.8	50.8	0.12	0.42	2.3	1160.0	0.116	1.1	0.6
G33796	514	49.8	600	0.06	6.6	2.1	1020	63.4	146	0.295	53100	5.31	12.15	12.4	17	2	62	0.4	0.84	3.1	2910.0	0.291	2.27	2.3
X11008	403	14.65	500	0.05	1.2	0.9	360	41.5	52.6	0.03	62900	6.29	15.25	5.7	15	1.2	106	0.07	0.33	1.2	490.0	0.049	1.14	0.3
H43862	771	80.87	20740	2.074	1.27	8.5	0.129	134.6	73.3		67900	6.79	1.38	16.8		2.3	470	0.2		2.2	860.0	0.086		1.3
X11578	989	64.6	1600	0.16	2.6	3.6	1140	68.8	76.6	0.289	25900	2.59	0.44	14.4	9	1.7	39.1	0.16	0.21	3.2	1210.0	0.121	2.01	1.6
H43766	2270	90.55	1060.0	0.106	1.2	5.2	0.177	133.96	111.8		54100	5.41	1.17	22.3		2.6	34	0.2		1.9	720.0	0.072		0.8
G33097	1135	243	1600	0.16	2.8	5.8	1200	77	117.5	1.92	49500	4.95	5.72	21.5	18	2.4	105	0.15	0.35	3	960.0	0.096	3.21	1.9
G33415	593	111.5	600.0	0.06	4.7	4.5	680	162.5	86	0.239	42300	4.23	87.3	11.2	18	2.1	60	0.19	0.75	1.4	860.00	0.086	1.44	0.8
H43518	528	36.11			2.34		0.105		97.2		61500	6.15		16		2.6		0.1		1.9	910	0.091		1.6
X11031	439	11.8	300.0	0.03	1.5	0.9	470	19.8	62.7	0.034	43200	4.32	29.5	6.9	11	1.6	40.6	0.09	0.29	2.5	800.0	0.08	1.28	0.5
X06146	316	12.57			4.16		0.087		72.4		30700	3.07		10		1.7		0.2		2.1	2310.0	0.231		1.3
X11599	529	87.5	1400	0.14	2.7	2	1180	45.7	74	0.488	35600	3.56	2.03	13.7	12	2.5	36.9	0.14	0.35	2.5	1430.0	0.143	1.86	1.3
H42210	409	52.5	900	0.09	3.7	3.7	1360	8.7	104	0.21	40600	4.06	2.2	17.9	9	1.3	195	0.23	0.08	3.8	1560.0	0.156	2.45	2.5
G37765	862	69.6	2300	0.23	5.1	2.1	1550	26.4	75.8	0.259	22300	2.23	1.11	14.3	9	1.6	98	0.28	0.07	3	2620.0	0.262	1.83	1.7
G33436	526	350	800	0.08	4	1.9	510	157.5	90.3	0.532	36600	3.66	49.7	6.3	15	1.5	234	0.21	0.7	1.7	580.0	0.058	1.56	0.6
X19131	455	16.15			0.8		0.054		46.9		54600	5.46		6.4		1.4		0.05		0.5	670.0	0.067		0.8
X12874	774	88.7			2.69		0.068		81.3		37400	3.74		7.2		1.3		0.2		1.8	1500.0	0.15		1.3
G33072	793	160.5	2900	0.29	3.2	3.3	1220	64.8	118.5	0.921	39700	3.97	2.31	17.5	12	2.1	37.9	0.17	0.43	3.5	960.0	0.096	3.22	1.3
H41673	354	2.4	6800	0.68	5.7	3.8	1490	31.1	189	0.001	53400	5.34	15.65	17.9	9	1.9	128.5	0.33	0.55	3.6	1900	0.19	2.73	1.9
X06396	456	13.45	10600	1.06	3.3	1.5	790	15.9	79.7	0.036	18700	1.87	1.85	10.7	5	1.2	274	0.19	0.12	3.5	1470.0	0.147	1.42	1.1
H43905	985	115.71	860.0	0.086	1.13	5.3	0.177	24.58	161.5		79600	7.96	4.74	25.5		2.1	426	0.2		2.3	1070.0	0.107		2
H41835	233	3.57	21000	2.1	6.5	3.4	1510	16.9	115	0.001	57700	5.77	19.15	20	10	2.3	172.5	0.38	0.47	3.4	2170.0	0.217	2	2.3
H43762	2715	88.02	1380	0.138	0.69	4.6	0.193	45.06	119.8		45000	4.5	0.75	30.1		2.3	23	0.2		1.1	620.0	0.062		1.1
X05329	795	66.84			1.3		0.092		33.3		30500	3.05		10.7		1.9		0.05		1.7	1260.0	0.126		1.5
G36231	512	59.7	200	0.02	2.5	5.7	420	20	76.2	0.179	27200	2.72	2.95	6.4	8	0.9	39.2	0.16	0.05	1.6	1150.0	0.115	0.97	0.4
G35563	636	108	1600	0.16	4.1	2.5	1470	49.6	148.5	0.587	54600	5.46	7.44	25.8	15	2.1	168.5	0.23	0.41	2.7	2210.0	0.221	3.21	1.2
H41829	340	11.2	10100.0	1.01	6.5	2.8	1510	22.7	120	0.014	59700	5.97	9.36	19.4	15	1.7	138	0.38	0.72	3.2	2040.0	0.204	2.35	1.8
H41561	728	57.1	500	0.05	6.4	3.3	1280	61	137.5	0.209	51900	5.19	14.7	16.5	9	1.8	138	0.34	0.47	3.1	2180.0	0.218	3.21	1.6
H43887	617	283.03	22040	2.204	2.36	4.8	0.104	44.53	112		69100	6.91	1.28	12.5		2	505	0.2		2.2	1020.0	0.102		1.7
G37602	519	10.7	2800	0.28	5.6	3.5	1500	49.3	122.5	0.027	56300	5.63	10.5	20.2	14	2	259	0.39	0.35	4.1	2320.0	0.232	2.35	2.4
G36814	531	3.56	1100	0.11	4.1	4.5	1210	37.3	105	0.003	65100	6.51	2.25	17.9	17	3.2	403	0.26	0.32	3.1	1570.0	0.157	2.08	1.7
G33116	757	276	1100	0.11	1.6	8.3	660	66.4	111.5	1.935	41100	4.11	0.44	11.6	21	2	96.4	0.1	0.17	2.9	630.0	0.063	2.65	1.7
X11508	376	126	1000	0.1	0.9	9.3	580	60.9	92.8	0.778	36600	3.66	1.08	5.8	10	1.2	29.9	0.05	0.17	1.7	590.0	0.059	1.96	0.6
H42245	397	46.6	17200	1.72	6.1	3.7	1390	31.9	90.9	0.173	56500	5.65	3.37	19.7	12	1.4	300	0.35	0.28	3.8	2380	0.238	1.8	1.7
G36794	522	5.46	6600	0.66	4.5	4.5	1440	49.5	109.5	0.005	56900	5.69	7.58	17.6	13	1.8	215	0.28	0.28	3.5	1750.0	0.175	2.17	1.9
G35060	583	18.35	2500	0.25	4.2	5.3	1230	25.5	95.1	0.077	37200	3.72	3.82	18.3	6	2	79.2	0.24	1.34	3.1	1630.0	0.163	1.97	1.4

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
E217242	648	116.5	600	0.06	4.1	5.7	1220	39.2	146.5	0.727	47000	4.7	6.8	19.5	15	1.4	96.2	0.25	0.39	3.6	1400.0	0.14	3.04	3.2
H43780	1174	116.26	4710	0.471	1.4	3.9	0.18	119.16	120.9		55700	5.57	2.25	24.9		2.9	240	0.2		1.3	1040.0	0.104		1.6
G32420	354	134.5	2400	0.24	2.9	11.9	380	37.6	152.5	0.309	23400	2.34	72.5	4.7	9	0.7	97.7	0.17	0.67	1.8	1570.0	0.157	2.29	11.9
H42249	425	90.3	18900	1.89	6.2	4.1	1350	29.7	99.2	0.438	65500	6.55	1.94	18.5	12	1	261	0.35	0.31	3.4	2290.0	0.229	1.71	1.6
H41685	450	4.37	400	0.04	5	2.3	1550	28.4	116.5	0.002	51800	5.18	62.2	18.6	12	1.5	78.2	0.31	0.41	3.4	2130.0	0.213	3.55	2.1
9069	565	23.9	21400.0	2.14	10.8	6.7	1200	289	127	0.034	49400	4.94	3.79	13.5	21	1.7	224	0.52	1.42	3.4	2600.0	0.26	1.97	8.7
H43765	1830	101	1200	0.12	2.2	4.3	2150	63.7	71.6	0.489	27400	2.74	1.07	27.5	17	3.1	37.1	0.12	0.11	1.3	1450.0	0.145	3.25	1
X12852	571	91.69			3.55		0.08		85.1		27300	2.73		7.9		1		0.2		1.4	1840.0	0.184		1.1
H43903	411	103.5	500.0	0.05	2.7	10.6	430	31.5	105.5	0.616	29600	2.96	4.56	7.9	7	1.5	52.9	0.16	0.08	2	1560.0	0.156	1.7	0.9
G35079	796	19.95	2200.0	0.22	5.4	5.6	1140	23.9	101	0.034	30400	3.04	4.21	15.7	5	2	60.4	0.29	0.58	2.9	1820.0	0.182	1.65	1.5
E217224	482	11.5	20900	2.09	4.3	3.8	1490	20.2	125.5	0.028	47300	4.73	2.7	20.6	12	1	136.5	0.27	0.12	3.5	1930.0	0.193	2.55	2
G36254	603	57.4	500	0.05	7.9	26.1	2110	25.3	111.5	0.347	17900	1.79	5.35	21.4	7	3.7	24.5	0.35	0.05	4.5	3650.0	0.365	2.41	3.5
H41441	655	193.5	800.0	0.08	5.8	3.9	1580	21.9	142	1.25	42800	4.28	3.1	19.3	9	1.4	32	0.32	0.47	3.9	2130.0	0.213	2.96	2
H41563	896	61.1	500.0	0.05	5.3	2.9	1060	77.8	116.5	0.246	59500	5.95	5.84	13.9	10	2	288	0.28	0.6	2.5	1850.0	0.185	2.41	1
G33049	1575	124	2600.0	0.26	3.1	3.7	1570	82.3	95.4	0.686	28000	2.8	0.56	26.3	16	2.4	36.2	0.18	0.46	2.7	1360.0	0.136	2.81	1.3
H42195	502	278	1200	0.12	5.1	3.7	1010	38.5	120.5	1.52	33500	3.35	3.73	12.6	10	3.2	164	0.29	0.13	3.1	980.0	0.098	2.63	1.1
G32137	553	73.2	8800	0.88	3.3	5.2	1280	17.3	93.5	0.312	32900	3.29	2.66	19.9	9	1.7	169	0.19	0.26	2.9	1520.0	0.152	1.53	1.3
H41427	533	192	1200	0.12	3.4	4.2	1480	28.5	142	1.415	41800	4.18	4.85	18	7	1.4	222	0.2	0.2	3.4	1510.0	0.151	3.77	1.7
X12417	628	13.8	300	0.03	2.3	3.4	670	19.6	78.4	0.02	43200	4.32	2.47	10.9	7	1.4	82.2	0.15	0.35	2.3	1220.0	0.122	1.36	0.8
G33773	383	120	11400	1.14	3.5	25.6	990	58.8	121	0.21	50100	5.01	6.21	16.2	22	0.5	197	0.23	1.21	3.8	2100.0	0.21	2.05	3.1
X13902	1488	17.95			5.75		0.109		83.7		67300	6.73		13.4		1.8		0.3		1.3	1990.0	0.199		0.9
X05383	443	15.45	1100	0.11	2.8	4.2	670	71.1	78.9	0.048	18400	1.84	0.83	11.6	5	0.8	23.9	0.17	0.13	2.8	1310.0	0.131	1.46	1.4
H41559	861	58.9	800	0.08	6.5	3.7	1220	63.7	130	0.252	54100	5.41	14.25	16.4	11	1.5	248	0.34	0.55	3	2210.0	0.221	3.13	1.6
X17281	650	2.62	27700.0	2.77	6.6	3.3	1520	192	94.5	0.001	55000	5.5	12.85	19.6	9	1.3	247	0.38	0.6	3.1	2350.0	0.235	1.72	1.9
H42240	341	44.5	12500	1.25	7.1	5.1	1380	20.1	103	0.162	51000	5.1	3.13	18.9	10	1.1	263	0.42	0.28	3.7	2390.0	0.239	2.2	1.6
X12432	585	17.45	900	0.09	2.2	3.6	610	22.6	71	0.035	42500	4.25	1.87	9.9	11	1.3	90.9	0.14	0.32	2.2	1170.0	0.117	1.16	0.5
H41699	787	48.8	8600	0.86	8.1	3	1560	25.6	132	0.197	27800	2.78	6	19.1	6	1.1	131	0.47	0.22	3.9	2790.0	0.279	2.95	2.2
G35113	500	15.65	4200	0.42	3.6	5.4	980	18.1	90.1	0.025	50500	5.05	8.65	13.1	7	1.2	200	0.18	0.56	2.5	1340.0	0.134	1.75	1
X14288	847	135	500	0.05	4.7	0.3	1120	409	78.3	0.316	67000	6.7	2.96	18	10	1.3	423	0.26	0.32	2.4	1650.0	0.165	1.53	1
H42251	479	93.1	3400.0	0.34	6.2	3.9	1210	31.1	112.5	0.368	80700	8.07	4.2	15.7	12	1	384	0.36	0.32	2.9	2050.0	0.205	2.19	1.6
H41429	558	99.7	2500	0.25	4.2	3.8	1660	21	152	0.445	34900	3.49	4.08	20.7	7	1.6	312	0.25	0.13	4.1	1830.0	0.183	4.39	2.1
G34623	391	37.9	200.0	0.02	2.1	5.2	470	26.2	50.2	0.124	25200	2.52	1.61	6.1	8	0.7	35.1	0.13	0.09	1.2	1060.00	0.106	0.63	0.5
G32259	428	2.46	20200	2.02	7.7	4.3	1580	14.8	115	0.003	46900	4.69	3.46	20.7	11	1.3	184	0.48	0.9	3.6	2690.0	0.269	2.06	2.2
H43864	1104	242.23	6940	0.694	1.09	5.4	0.102	134.02	97.5		57700	5.77	1.4	10.5		1.9	446	0.2		1	720.0	0.072		0.8
X06946	1112	111.5			3.12		0.138		91.1		38000	3.8		15.8		1.1		0.2		1.8	1660.0	0.166		1.4
G33259	487	11.55	2000	0.2	6.6	4.2	1440	214	181	0.04	42800	4.28	9.76	19.5	14	1.9	112	0.39	0.81	3.4	2410.0	0.241	2.78	2.1
H42221	326	55.1	5600	0.56	4.8	1.3	1410	32.5	107.5	0.257	46800	4.68	2.66	19.5	14	1.8	284	0.32	0.14	3.2	2080.0	0.208	2.23	1.5
H43878	1123	44.14	28690	2.869	1.87	4.5	0.174	162.99	76.5		58200	5.82	0.94	14.7		1.8	631	0.3		3	1350	0.135		1.2
H41669	548	5.1	10900	1.09	8.2	3.9	1520	16.3	149.5	0.006	51200	5.12	3.95	18.7	9	1.1	162	0.45	1.49	3.2	2640.0	0.264	2.6	2.2
G36775	1195	1.79	12300	1.23	5.6	28.2	820	21.2	130.5	0.003	38500	3.85	3.53	15.2	11	1.6	147.5	0.36	1.56	3.4	3620.0	0.362	2.12	1.5
H41702	1100	36.8	4700	0.47	7.6	3.7	1520	25.7	124	0.169	32000	3.2	5.18	19.5	6	1.1	92.1	0.45	0.3	3.5	2710.0	0.271	3.14	2
H43885	589	25.72	29680	2.968	4.14	4	0.132	9.48	113.1		39200	3.92	1.07	17.7		1.9	556	0.2		5.5	1590.0	0.159		3.1
X05177	667	13.65			1.24		0.076		48.1		32100	3.21		7.9		1.4		0.05		1.6	910.0	0.091		0.6
H40630	414	143	16500.0	1.65	7.6	4	1510	59.7	123.5	0.421	28900	2.89	5.02	20.6	8	1.4	182.5	0.46	0.2	3.6	2570.0	0.257	1.61	1.9
H43882	770	49.04	27460	2.746	2.58	4	0.097	30.37	90.1		49800	4.98	0.91	15		1.7	556	0.2		3.4	1190.0	0.119		2.2
X13930	1167	18.49			3.75		0.091		86.4		68000	6.8		10.4		1.9		0.2		1.3	1430.0	0.143		0.7
G32496	469	2.97	34700	3.47	8.3	3.4	1460	11.8	95.8	0.004	39600	3.96	2.57	19.6	8	1.6	238	0.49	0.84	3.7	2720.0	0.272	1.29	2.3
H42193	1000	62.6	1200	0.12	2.3	3.9	1540	32.9	123	0.243	40300	4.03	1.15	20.4	12	1.9	158	0.15	0.15	4	1150.0	0.115	2.83	1.7
H43868	832	124.45	21090	2.109	1.75	4.7	0.111	38.74	73.6		53800	5.38	0.95	13.9		1.9	520	0.2		2.3	1120.0	0.112		1.4
H43890	1130	44.79	21450	2.145	2.63	4.5	0.11	39.39	91.8		55800	5.58	1.08	17.4		2.5	475	0.2		3.2	1130.0	0.113		1.3

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
X17284	520	2.06	16000.0	1.6	4.7	3.6	1450	183	102	0.001	47400	4.74	39.2	19.2	9	1.7	155	0.29	0.9	2.4	2050.0	0.205	2.21	1.6
H42242	408	57.4	17000	1.7	6.3	3.7	1430	12.8	89.1	0.238	45800	4.58	2.27	19.7	8	1	252	0.38	0.22	3.8	2490.0	0.249	1.82	1.8
X11464	593	119.5	1500	0.15	2.3	4.2	1110	29.9	101	0.525	26700	2.67	2.32	14.8	6	1.5	142.5	0.12	0.32	2.4	1020.0	0.102	1.89	0.9
H43891	539	67	23600.0	2.36	3.9	4.9	920	30.1	91.1	0.388	60000	6	1.23	18.9	9	2.1	647	0.25	0.1	3.9	1130.0	0.113	1.57	1.6
X06485	822	25.7	500	0.05	2.8	1.5	800	18	100	0.062	34500	3.45	4.62	11.1	6	1.1	68.9	0.18	0.13	2.8	1500.0	0.15	1.72	0.7
X12614	551	93.1	1200.0	0.12	2.8	4.5	1550	37.1	118.5	0.827	45600	4.56	1.36	12.2	13	1.6	58.1	0.19	0.14	2.8	1650.0	0.165	2.59	1.4
H42247	516	76	24900	2.49	6.5	4.7	1350	24.4	90.4	0.372	53800	5.38	1.85	19.4	9	1.1	304	0.37	0.29	3.8	2330	0.233	1.42	1.7
G34338	524	146.74			2.78		0.13		79.8		25300	2.53		17.2		1.3		0.1		1.8	1530.0	0.153		1.1
H41443	998	215	500	0.05	3.3	3.6	1280	94.5	119.5	1.09	81100	8.11	2.63	15.3	28	2	220	0.17	4	2.8	1280.0	0.128	2.38	1.2
X12393	615	15	12900	1.29	3.7	3.2	910	20.7	81.1	0.03	25400	2.54	2.42	14.7	7	1.3	161.5	0.22	0.12	3	1600	0.16	1.32	1.2
H42186	1210	310	1000	0.1	3.3	5.6	940	37.4	104.5	1.525	42600	4.26	3.99	14.7	13	2	290	0.2	0.65	3	990.0	0.099	2.51	1
H41679	671	0.73	11700	1.17	5.8	3.5	1440	51.9	156.5	0.001	46900	4.69	68.5	18.2	9	1.5	165.5	0.32	1.74	3.6	2080.0	0.208	2.49	2.2
H41681	580	1.41	18000	1.8	4.6	3.3	1360	22	123	0.001	45000	4.5	31.5	16.7	7	1.3	179	0.26	0.3	3.1	1770.00	0.177	1.82	1.7
G32325	1410	12	2200	0.22	3.3	3.8	1460	61.4	133	0.036	45200	4.52	2.35	19	17	1.6	62.5	0.22	0.18	3.6	1650.0	0.165	2.63	2
G32992	849	161.66			3.12		0.095		76.3		35700	3.57		10.8		1.4		0.2		2.6	1620.0	0.162		1.1
G35021	960	118.5	600	0.06	4.7	6.1	1510	55	107	0.484	27000	2.7	22	21.2	7	1.6	110.5	0.26	0.9	3.8	1880.0	0.188	2.64	1.7
H43525	652	28.1	1200.0	0.12	3.9	3.8	1030	7.7	119.5	0.111	50600	5.06	2.86	16	7	1.2	459	0.25	0.15	3.4	1180.0	0.118	2.81	1.7
G37907	952	79.7	700	0.07	3.5	1.6	1490	55.8	109.5	0.406	67300	6.73	2.99	24.9	9	2.2	676	0.19	0.71	2.9	1880	0.188	2.64	1.3
X16510	504	3.05	7400	0.74	5.9	3.4	1390	35.5	143.5	0.002	45300	4.53	40	18.8	9	1.4	230	0.34	0.72	2.9	2160.0	0.216	3	1.6
X05538	554	75.4	1200	0.12	1.3	14.2	570	24.1	95.4	0.488	35200	3.52	1.31	8.2	16	1.9	38	0.09	0.09	2.4	1050.0	0.105	1.7	1
G35749	580	39.3			1.87		0.112		81.5		40900	4.09		14.2		1.5		0.05		1.7	1050	0.105		0.7
G32474	639	8.89	27500	2.75	8.2	3.6	1440	8	124	0.026	37400	3.74	4.95	20	10	1.9	256	0.49	1.01	3.6	2720.0	0.272	1.66	1.9
H42238	383	54.5	23700	2.37	7.5	1.4	1260	24.3	73.6	0.225	48500	4.85	1.72	16.4	12	1.2	309	0.45	0.23	3	2050.0	0.205	1.44	1.3
G32563	710	6.87	19700.0	1.97	7.6	3.9	1430	10.6	118.5	0.009	39300	3.93	7.2	19.8	8	1.6	297	0.45	0.6	3.6	2530.00	0.253	1.72	2.1
H42197	771	137.5	1100	0.11	2.7	3.5	1330	70.1	114.5	0.625	30000	3	2.34	17.5	10	1.6	149.5	0.16	0.11	3.6	1110.0	0.111	2.58	1.4
G32537	385	2.37	31300	3.13	8.1	3.7	1430	13.8	114	0.003	28900	2.89	3.32	19.8	7	1.9	152.5	0.47	0.48	3.8	2680.0	0.268	1.45	2.3
X05559	282	61.8	17800	1.78	2.8	3.4	1200	11.4	71.2	0.373	36200	3.62	0.82	16.1	15	1.3	186.5	0.17	0.07	3.3	1260.0	0.126	1.27	1.3
H41683	735	1.26	6700	0.67	6.3	3.9	1510	171.5	121.5	0.001	47000	4.7	137	19.1	9	1.6	121	0.4	1.74	3	2410.0	0.241	2.89	2.1
H41745	1040	95.93			2.33		0.11		101.8		60500	6.05		14.8		2		0.1		2.6	1050.0	0.105		1.5
X10851	841	107.5	11700	1.17	4.1	1.8	1170	32	91.5	0.482	47800	4.78	2.59	18.9	8	1.5	379	0.21	0.15	2.2	1750.0	0.175	1.75	0.8
H43876	949	42.2	23710	2.371	2.06	3.5	0.13	37.29	90.8		54600	5.46	0.96	16		1.8	636	0.2		3.3	1410	0.141		1.8
X11052	674	10.65	2200	0.22	1.9	0.6	520	30.7	64.2	0.036	33100	3.31	1.48	7.6	8	0.9	132.5	0.1	0.14	1.9	900.0	0.09	1.22	0.7
G36921	658	58.8	200	0.02	3.1	2.2	560	10	59.5	0.147	23300	2.33	1.7	7.2	6	0.8	34.8	0.21	0.14	2.4	1520.0	0.152	0.85	0.7
G32413	727	223	19900	1.99	4.9	22.5	630	100.5	141	0.424	29300	2.93	8.31	6.5	10	1.1	149	0.28	1.07	2.9	2410.0	0.241	2.11	29.5
H41731	626	60.18	2930	0.293	5.43	13.1	0.164	31.91	104.9		30200	3.02	16.31	24.7		2.5	111	0.3		1.3	2440.0	0.244		1.2
X17277	578	7.16	21800	2.18	6.3	3.4	1410	56.1	107.5	0.012	45200	4.52	27.1	18	8	1.7	198.5	0.37	0.64	2.6	2220.0	0.222	1.98	1.8
H41687	692	37.8	3500	0.35	4.9	2.3	1420	40.7	125.5	0.079	44500	4.45	31.1	17.7	10	1.3	110	0.3	0.21	3.1	2110.0	0.211	3.06	1.7
G34982	615	127	3900	0.39	3.9	5.1	1420	25	123.5	0.535	32700	3.27	5.5	19.2	9	1.6	428	0.23	1.28	3.5	1570	0.157	2.96	1.7
H41756	932	75.57			3.38		0.113		73.1		57200	5.72		13.4		2.2		0.2		2.5	1370.0	0.137		1.6
X05514	971	53.3	1000	0.1	1.2	13.5	660	37.8	99.4	0.18	37900	3.79	1.02	9.4	19	1.9	30.7	0.08	0.13	2.3	1070.0	0.107	2.03	1
H42182	802	46	1100	0.11	2.9	4.4	1340	31.9	102	0.176	39200	3.92	2.52	18	11	1.9	60.4	0.18	0.1	3.4	1270.0	0.127	2.54	1.4
X16527	503	6.15	10300	1.03	4.9	3.4	1380	15.1	122.5	0.007	38800	3.88	25.5	17.7	10	1.2	188.5	0.3	0.45	2.6	2070.0	0.207	2.83	1.5
G33283	564	2.95	30100	3.01	6.9	3.4	1420	13.1	99.9	0.012	28400	2.84	1.66	17.8	7	1.3	316	0.41	0.29	3.7	2300.0	0.23	1.32	2.1
H44275	633	48.63			0.86		0.048		96.6		34000	3.4		6.2		1.1		0.05		1.8	820	0.082		0.7
G35686	849	25.7	21700	2.17	5.9	0.6	930	12.5	64.9	0.084	32600	3.26	1.66	14.7	4	1.8	410	0.37	0.21	3.9	2550.0	0.255	1	1.8
H42176	1050	8.55	1100	0.11	3	3.4	1420	10.7	92.3	0.029	35000	3.5	0.96	18.3	10	1	67.9	0.2	0.1	3.5	1490.0	0.149	2.8	1.8
H42203	586	42.8	900	0.09	3.4	5.1	1390	23	113	0.188	33500	3.35	2.02	19.1	13	1.8	79.6	0.21	0.1	3.9	1420.0	0.142	2.64	1.4
H43851	743	6.16	12320	1.232	2.97	3.6	0.135	42.59	75.5		41200	4.12	1.72	17.2		2.5	592	0.1		2.6	1250.0	0.125		1.3
H42165	1300	16.05	4100	0.41	4.8	4.6	1330	261	94.3	0.059	44300	4.43	2.29	18.4	11	2.6	72.2	0.29	0.73	3.6	1670.0	0.167	2.49	1.8
H41675	638	1.86	24700	2.47	7.5	3.5	1490	10	131	0.001	44400	4.44	3.63	17.7	9	1.7	206	0.41	0.3	3.2	2380.0	0.238	2.05	2

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
H42215	645	53.2	700	0.07	3.2	4.3	1340	13.6	98	0.152	64900	6.49	1.79	17.7	15	1.9	494	0.2	0.09	3.2	1520.00	0.152	2.22	1.3
H42167	903	82	4000	0.4	4.2	6.6	1530	39.8	103	0.288	39400	3.94	1.25	19.4	12	2.6	78.5	0.28	0.13	4.1	1690.0	0.169	2.69	1.7
H41691	1370	206	11100	1.11	7.4	3.4	1390	19.9	120.5	0.661	39000	3.9	5.27	17.7	9	1.2	184.5	0.41	0.18	3.3	2480.0	0.248	2.58	1.7
G32428	950	114.5	12700.00	1.27	6.5	3.8	1380	28.2	134.5	0.38	34200	3.42	3.87	18.4	16	1	218	0.4	0.37	3.8	2250.0	0.225	2.42	2.7
H43849	982	68.76	13680	1.368	2.22	5.4	0.15	70	113.1		40900	4.09	1.65	18.7		2.7	423	0.2		2.2	1170.0	0.117		1.4
X17992	364	58.5	12900	1.29	3.2	20	720	12.6	96.9	0.212	26200	2.62	1.82	10.8	9	1.4	220	0.19	0.09	2.6	2090.0	0.209	1.44	1.4
G35667	537	24.6	19200	1.92	3.4	0.9	810	14.2	58.1	0.098	39700	3.97	0.98	13	6	1.3	435	0.2	0.23	3.5	1630.0	0.163	0.93	1.3
H43886	416	74.2	26400	2.64	4.7	3.7	1090	50.4	82.5	0.404	47800	4.78	1.27	17.2	7	2.1	541	0.28	0.12	3.9	1380	0.138	1.36	2.2
X19627	440	19.59			5.74		0.088		52.9		48000	4.8		10.4		1.9		0.3		2.8	2510.0	0.251		1.5
X11073	639	13.6	7500	0.75	3	1	840	18.4	80.1	0.037	23700	2.37	1.94	11.1	5	1.4	255	0.16	0.14	2.8	1420.0	0.142	1.51	1.2
H43913	1211	76.06	11320	1.132	2.32	5.7	0.181	16.7	108.3		60500	6.05	2.42	24.9		2.2	557	0.2		2.1	1690.0	0.169		1.4
G32353	632	55.7	22300	2.23	6.9	3.6	1300	29.3	75	0.151	29100	2.91	1.87	18.7	7	1.1	447	0.41	0.17	3.5	2330.0	0.233	0.85	1.8
H43893	802	464	18000	1.8	3.8	3.1	1180	23.4	87.4	3.17	55400	5.54	1.75	22.1	10	2.3	449	0.23	0.16	3.3	1610.0	0.161	1.8	1.3
X14768	772	8.8	900	0.09	4.9	1.7	890	16.6	96.8	0.009	28100	2.81	3.34	11.9	5	1.4	86.9	0.32	0.2	3.4	2050.0	0.205	1.37	1.2
H42190	1220	40	1100.0	0.11	6.9	3.2	1030	26.4	116	0.148	27200	2.72	1.13	11.8	7	1	234	0.37	0.12	3.4	1130	0.113	2.77	1.7
X10310	674	13.31			1.06		0.067		50.2		30000	3		8.2		1.3		0.05		1.3	830.0	0.083		0.7
G36831	726	2.97	13700	1.37	6.6	4.8	1220	12.2	107	0.003	40700	4.07	1.93	13	9	1.4	223	0.4	0.17	3.5	2840.0	0.284	1.73	2.2
H43844	734	138.74	30570	3.057	3.42	3.8	0.174	27.92	129		38400	3.84	1.14	16.4		1.7	615	0.3		3.1	1580.0	0.158		2.2
G32282	817	5.62	16400	1.64	6.8	5	1400	30	125.5	0.008	48200	4.82	2.8	14.1	9	1.9	246	0.44	0.18	3	3310.0	0.331	1.88	1.7
H41420	760	30.8	7100	0.71	4.4	4.7	1500	10.6	127	0.169	28600	2.86	1.72	19	8	1.3	193	0.25	0.05	3.7	1770.0	0.177	3.11	1.6
G36899	560	29.8	600	0.06	5.1	5.4	790	18.3	102	0.073	14500	1.45	3.54	10.5	5	1.1	45.6	0.34	0.09	3.8	2090.0	0.209	1.55	1.5
H41075	873	97	13600.0	1.36	4.6	20.5	950	49	106	0.075	52800	5.28	8.49	15.1	23	1.6	201	0.3	0.43	1.9	2010.0	0.201	1.54	5
X14248	1205	20.7	4900	0.49	4	3.9	1540	9.8	87.3	0.059	36100	3.61	2.75	25.5	13	1.4	86.6	0.24	0.08	2.6	1970.0	0.197	2.13	1.2
X05493	1170	49.2	900	0.09	3.8	19	960	48	79.8	0.195	27400	2.74	1.42	11.9	11	2.4	29.7	0.24	0.09	2.9	2680.0	0.268	1.91	1.1
X06348	990	11.95	400	0.04	4.5	1.5	830	102	108	0.021	37200	3.72	12.8	11.1	5	1.4	24.1	0.26	0.46	3.5	1910.0	0.191	2.42	1.6
H43532	1360	31.6	1200	0.12	2.6	4.4	590	52.1	78.9	0.198	52600	5.26	18	10.4	11	1.1	332	0.17	0.14	2	790.0	0.079	1.96	0.9
G32087	625	83.6	6200	0.62	3.6	3.8	1160	26.8	89.1	0.439	43600	4.36	1.68	16.4	7	1.6	400	0.19	0.52	2.9	1360.0	0.136	1.7	1.1
H41837	525	3.83	13100	1.31	5.5	2.2	1390	12.5	122.5	0.003	46700	4.67	8.3	17.7	13	1.9	185	0.32	0.23	2.8	1990.0	0.199	2.28	1.8
H42219	479	130.5	800	0.08	5	2	1280	2170	122	0.594	41300	4.13	7.68	18	14	1.6	224	0.32	0.78	3.3	1960.0	0.196	2.29	1.4
H41671	748	3.63	13100	1.31	7.7	3.9	1420	45.7	161	0.002	47400	4.74	29.9	18.4	11	1.5	204	0.43	0.74	3.6	2510.0	0.251	2.37	1.9
X14539	885	18.35	300	0.03	4.2	3.1	970	21.7	83.3	0.041	30100	3.01	4.78	15	6	1.7	77.1	0.23	0.61	2.5	1630.0	0.163	1.37	1
G34616	651	49.2	2500	0.25	4.2	4.4	680	12	104	0.133	16500	1.65	2.95	10.2	5	0.9	49.2	0.28	0.08	2.8	1950.0	0.195	1.32	0.8
X12194	575	9.27			1.3		0.058		46.7		14100	1.41		6.9		1		0.05		1.2	840	0.084		0.6
H42234	458	23.2	19800	1.98	5.7	1.7	1470	17.5	78.8	0.071	52700	5.27	1.84	22.1	13	1.4	405	0.39	0.19	3.4	2420.0	0.242	1.64	1.8
H42236	280	39.2	32300	3.23	8.8	0.1	920	29.2	67.8	0.152	44900	4.49	1.48	11.4	11	0.9	478	0.51	0.14	3.1	1280	0.128	1.2	1
H42223	418	70.8	3400	0.34	3.4	3.8	1350	24.9	113.5	0.344	48400	4.84	3.61	18.7	12	1.6	289	0.22	0.2	3.4	1640.0	0.164	2.48	1.3
H43870	1117	28	27750	2.775	2.05	5.5	0.122	165.39	82.5		42000	4.2	0.9	15.9		2	474	0.2		2.8	1450.0	0.145		1.4
H41677	504	1.15	28900	2.89	6.6	3.2	1430	17	96.9	0.001	33900	3.39	1.83	17.7	5	1.4	240	0.38	0.18	3.1	2200.0	0.22	1.68	2
H42199	1060	14.7	800	0.08	4.3	3.9	1060	1515	89.3	0.063	37900	3.79	5.17	14.6	15	1.3	428	0.24	1.43	2.5	1460.0	0.146	1.93	1.2
G35099	654	21.7	3800	0.38	4.3	5.9	980	21.7	97.1	0.062	44400	4.44	5.4	13.4	7	1.7	286	0.22	0.19	2.4	1420.0	0.142	1.76	0.9
H42178	1100	49.6	1300	0.13	6.3	2.8	1130	23.4	122	0.255	35000	3.5	1.31	13.5	11	1.8	271	0.34	0.14	3.7	1180.0	0.118	2.72	1.6
H43847	890	22.49	32400	3.24	4.39	3.4	0.141	39.79	49.9		36500	3.65	1.09	20.2		1.9	561	0.3		3.2	1600.0	0.16		2
H41697	835	59.9	24800	2.48	7	2.5	1400	17.7	94.5	0.184	28800	2.88	2.43	18.6	7	1.1	362	0.4	0.12	3.3	2400.0	0.24	1.93	1.8
H41704	1720	138.5	600	0.06	6.5	2.2	1440	21.7	140	1.2	38500	3.85	5.97	18.6	9	1.3	64	0.37	0.19	3.4	2380.0	0.238	3.13	1.9
H42174	1010	11.5	1300	0.13	5.7	3.3	1220	46.7	111.5	0.048	31000	3.1	1.25	15.7	11	1.5	55.9	0.32	0.1	3.5	1360.0	0.136	2.88	1.5
G33025	842	88.8	1800	0.18	4.4	5.8	2260	30.2	101.5	0.61	12200	1.22	0.75	40.7	9	3.2	222	0.25	0.06	2.5	2500.0	0.25	3.34	1.7
H43914	828	75.8	9900	0.99	4	5.2	1220	20.9	99	0.415	73600	7.36	3.38	23.3	11	2.3	831	0.22	0.1	3	1660.0	0.166	1.97	1.5
H43779	789	54.23	8460.0	0.846	1.59	3.2	0.195	40.62	116.6		12000	1.2	0.74	26.9		2.2	298	0.3		2.7	1160.0	0.116		1.4
X14681	763	9.23	2000	0.2	2.7	2	990	7.4	70.6	0.013	15700	1.57	1.32	13.6	5	1.2	93.4	0.16	0.1	2.5	1310.0	0.131	1.23	0.6
G35302	1850	1.6	9000	0.9	7.3	5	1370	97.4	66.3	0.003	35700	3.57	3.62	17.5	4	1.5	229	0.39	1.33	2.3	2700.0	0.27	2	1

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
G35490	910	17.55	23600	2.36	6.5	45.4	1390	16.6	78.9	0.02	22000	2.2	4.74	16.1	7	1.3	870	0.39	0.18	3.2	3180.0	0.318	0.97	3.3
H43854	709	56.12	20840	2.084	2.15	4.3	0.115	27.41	86.5		44400	4.44	1.37	19.7		1.6	615	0.2		2.3	980.0	0.098		1.8
H41418	872	33.2	900	0.09	4.8	4	1590	19.3	124	0.161	29100	2.91	4.46	18.5	5	1.3	76.6	0.3	0.09	3.7	2010.0	0.201	3.75	2
X12487	1345	13.5	300	0.03	4.8	2.2	900	348	81.3	0.028	32700	3.27	11.95	15	7	1.5	38.9	0.3	1.8	3.1	2140.0	0.214	1.23	1.2
H42258	502	38.6	1200	0.12	7.4	1.8	1520	8.3	109	0.139	42100	4.21	3.66	20.1	10	1	254	0.48	0.14	3.1	2740.0	0.274	2.48	1.8
G32302	1045	9.7	1200	0.12	4.7	3.9	1570	27.6	114.5	0.018	36900	3.69	5.39	19.8	12	1.2	171	0.29	0.13	3.4	1930.0	0.193	2.6	2
X14608	1285	16.1	1600	0.16	3.8	2.4	880	19	78.2	0.028	23700	2.37	5.07	13	4	1.5	221	0.19	0.17	2.2	1280.0	0.128	1.57	1
X06923	769	37.04			3.44		0.166		107.1		38500	3.85		17.7		1.1		0.2		2.4	1940.0	0.194		1.5
H43540	1220	44.31			2.01		0.123		117.7		47600	4.76		19.3		2		0.05		1.5	920.0	0.092		1.5
H41833	439	3.12	33700	3.37	8.2	2.6	1450	9.3	86.7	0.001	44700	4.47	2.2	19.8	8	1.5	250	0.45	0.28	3	2580.0	0.258	1.49	1.9
X11398	2110	148.5	1000	0.1	2.7	2.5	1120	65.9	107.5	0.886	22300	2.23	1.17	17.1	8	1.5	211	0.15	0.22	3	1310.0	0.131	2.26	1.5
G37625	951	2.11	17900	1.79	4.1	29.7	750	22.5	108.5	0.003	24900	2.49	3.35	12.1	8	1.6	249	0.34	1.08	3.5	2660.0	0.266	1.83	2.5
X16518	669	2.46	14800	1.48	6.7	3.3	1390	56.7	121	0.001	34000	3.4	17.95	18.7	8	1.2	231	0.4	0.38	2.8	2490.0	0.249	2.9	1.6
H41694	1160	48.4	21100	2.11	7.5	2.7	1420	11.2	92.9	0.201	31900	3.19	2.92	17.9	6	0.9	342	0.43	0.22	3.1	2520	0.252	2.07	1.8
G35001	692	80.8	4300	0.43	4.7	5.3	1570	5.8	96.2	0.467	18200	1.82	1.98	21.1	6	1.2	169.5	0.27	0.11	3.9	1890.0	0.189	2.42	1.8
G33237	1950	58.2	4000	0.4	8.2	20.2	1290	202	111.5	0.064	40100	4.01	4.67	15.5	13	1.1	238	0.43	2.14	1.8	2480.0	0.248	1.73	5.1
H42188	1320	39.4	1000	0.1	5.9	3	1030	31.1	105	0.154	26500	2.65	2.18	12.6	8	1.1	124	0.33	0.34	3.1	1130.0	0.113	2.56	1.2
X06531	761	27.97			5.85		0.154		112.1		36900	3.69		19		1.5		0.3		2.6	2720.0	0.272		1.9
G35642	678	44.9	19600	1.96	4.2	0.5	1040	24.1	76.8	0.182	37600	3.76	1.22	15.2	6	1.4	481	0.24	0.16	4.2	1820.0	0.182	1.23	2.1
G32371	379	54.2	23600	2.36	7.7	3.6	1440	9.5	95.5	0.158	29800	2.98	1.36	20.2	8	1.1	414	0.44	0.025	3.7	2620.0	0.262	0.88	1.8
H42232	590	16.6	800	0.08	5.9	1.1	1500	65	108	0.062	42200	4.22	4.8	20.2	11	1.4	146	0.41	0.5	3.3	2450.0	0.245	2.44	1.7
H43884	867	74.1	20700	2.07	4.2	3.7	950	29	91.4	0.428	56700	5.67	1.17	15	8	1.8	638	0.24	0.06	3.8	1240.0	0.124	1.55	1.8
X12493	1245	21.9	200	0.02	1.9	0.4	440	222	44	0.047	36800	3.68	5.32	6.4	10	1.8	151.5	0.11	0.7	1.2	830.0	0.083	0.58	0.4
H41446	635	168	6400	0.64	3.6	3.4	1340	48.8	120	0.776	31700	3.17	3.04	16.6	10	1.7	261	0.21	0.17	3	1500	0.15	2.46	1.6
H42213	690	178	800	0.08	2.8	4.9	1390	11.6	106.5	0.682	39600	3.96	2.23	18.5	13	2.9	289	0.17	0.06	3.8	1280.0	0.128	2.47	1.1
X06326	945	9.53	400	0.04	4.6	1.5	990	32.4	106.5	0.02	23800	2.38	3.61	12.5	5	1.3	44.9	0.29	0.41	3.8	2090.0	0.209	2.16	1.8
H43861	925	157	14800	1.48	3.3	7.8	900	18.4	94.5	0.576	54300	5.43	1.59	15.5	8	2	600	0.2	0.14	2.8	1570.0	0.157	1.86	1.2
H42184	1490	836	1100	0.11	5.6	4.8	1310	105.5	134.5	4.37	42100	4.21	4.86	15.2	12	1.8	61.2	0.3	0.36	3.5	1710.0	0.171	2.34	1.3
H41827	1200	62.6	23500	2.35	7.6	1.9	1430	80.9	125	0.222	47900	4.79	3.79	18	12	1.4	306	0.42	0.61	3.1	2340	0.234	1.69	2.6
H43888	709	59.5	21500	2.15	5.2	4.9	990	25.4	85.6	0.36	46400	4.64	1.34	18.5	6	2.1	489	0.33	0.07	4	1460.0	0.146	1.54	2
X17292	756	2.28	13800	1.38	4.4	3.1	1450	58.8	96.1	0.002	45800	4.58	7.84	17.9	7	1.1	215	0.28	0.21	2.6	2130.0	0.213	2.23	1.4
H43906	530	18.65	22200	2.22	6.1	2.9	1140	7.1	72.4	0.075	23700	2.37	1.29	17.2	10	2	187	0.32	0.05	3.3	1980.0	0.198	0.96	1.7
X14228	771	3.72	10000	1	4.9	1.6	1450	15.9	96.6	0.009	42000	4.2	3.58	20.7	8	1.1	183.5	0.3	0.15	2.5	2140.0	0.214	1.82	1.5
H44123	665	24.3	12400	1.24	7.2	2.5	1370	14	108	0.107	26500	2.65	3.13	17.2	10	1.4	137	0.39	0.11	3.3	2400.0	0.24	1.29	1.9
H42172	840	18.1	13200.00	1.32	6.9	8.3	1430	10.7	78.2	0.076	23300	2.33	1.18	21.3	8	1.6	76.7	0.41	0.1	3.3	2090	0.209	2	1.6
X14747	1100	9.31	800	0.08	3.7	2.3	1090	8.7	87.9	0.008	26200	2.62	3.45	15.1	4	1.2	98.1	0.25	0.13	2.4	1780.0	0.178	1.31	0.8
X06302	847	16.1	3100	0.31	3.4	1.4	880	28.9	92.5	0.049	23000	2.3	2.88	11.2	7	1	177.5	0.21	0.19	3.3	1620.0	0.162	1.88	1.1
H41831	792	4.28	18200	1.82	7.1	2	1420	9.4	117.5	0.006	42100	4.21	4.72	17.8	10	1.7	220	0.39	0.42	2.7	2290.0	0.229	2	1.8
G32453	920	48	28900	2.89	7.9	3.6	1380	16.6	115	0.209	34100	3.41	2.97	19.2	15	1	305	0.46	1.83	3.3	2590.0	0.259	1.62	2.4
X16501	674	6.59	19200	1.92	6.4	5.2	1350	16.4	122	0.01	39600	3.96	6.65	17	7	1.4	234	0.38	0.31	2.6	2240.0	0.224	1.95	1.6
H42180	1140	23.5	1200	0.12	6.4	2.9	1170	7.9	119	0.086	30100	3.01	0.92	14.9	10	1	328	0.35	0.11	3.7	1450.0	0.145	2.91	1.7
H44093	750	45.1	900.0	0.09	4.4	13.2	740	14.5	107	0.223	25700	2.57	3.55	9.6	8	2.1	82.1	0.24	0.08	3.3	2210.0	0.221	1.37	1.8
E217112	383	89.1	14200	1.42	6.9	1.8	870	22.4	118.5	0.316	17600	1.76	7.46	7.9	8	1	236	0.37	0.12	3.5	1020.0	0.102	2.02	1.7
H42227	471	48.2	9100	0.91	5.6	0.4	1430	26.7	84.8	0.221	46600	4.66	2.31	18.9	14	1.1	262	0.37	0.15	3	2320.0	0.232	1.92	1.3
G35770	821	35.29			1.98		0.117		84.7		24600	2.46		15.9		1.6		0.05		2	1140.0	0.114		0.8
H41666	558	11.05	29800	2.98	8.4	4.1	1500	20.9	102	0.023	38800	3.88	1.95	17.7	7	1.3	287	0.46	0.5	3.1	2590.0	0.259	1.86	1.9
H43858	1284	38.37	14840	1.484	2	8.9	0.091	20.61	70.9		44500	4.45	1.69	17.2		1.8	477	0.2		2.4	1190.0	0.119		1.1
H43527	762	44.1	1600	0.16	4.4	5.2	940	7	104.5	0.268	40500	4.05	2.5	15.3	5	1.1	439	0.27	0.07	3.6	1210.00	0.121	2.5	1.6
H44104	597	33.7	5500	0.55	5.9	2.9	1210	27	145	0.169	30600	3.06	2.97	15.4	12	1.5	131	0.31	0.08	3	2100.00	0.21	1.51	1.7
H42255	489	52.5	21500	2.15	6.7	3.5	1420	12.8	91.1	0.162	41700	4.17	1.81	18.9	9	1	414	0.39	0.11	3.4	2450.0	0.245	1.61	1.7

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
H41048	771	13.3	29700	2.97	5.6	4.2	1210	15.3	131	0.014	28300	2.83	47.5	19.7	12	1.4	230	0.38	0.4	1.6	1580.0	0.158	1.39	1.6
H43529	1190	47.5	1100	0.11	4.7	4.4	990	11.1	115.5	0.217	36500	3.65	3.09	15.4	5	1.2	417	0.3	0.24	3.2	1290.0	0.129	2.76	1.7
H43900	1467	40.11	21770	2.177	2.58	3.4	0.173	12.13	86.6		44300	4.43	1.4	26		2.2	496	0.2		2.9	1650.0	0.165		2.3
H41043	364	60.8	16200	1.62	5.5	3.5	1230	15.5	95.5	0.088	15900	1.59	16.35	19.6	6	1.4	178	0.36	0.31	1.7	1520	0.152	1.76	2.7
H44109	706	19.25	10900	1.09	7.1	2.8	1400	10.8	111	0.074	20700	2.07	3.3	18.2	7	1.5	235	0.39	0.07	3.5	2420.0	0.242	1.59	1.9
H42260	539	232	1200	0.12	5.7	0.4	1090	17	114	0.819	37400	3.74	25.2	15.4	11	1.1	227	0.33	0.17	2.8	1960.0	0.196	1.92	1.2
H42262	816	37.5	700.0	0.07	7.6	1.6	1480	8.9	87.9	0.135	38200	3.82	5.87	18.8	8	1	153	0.48	0.1	2.8	2720.0	0.272	2.54	1.5
H43780	800	115	8200	0.82	3	3.2	1650	50.4	91.5	0.722	12200	1.22	0.9	25.6	11	2.5	307	0.17	0.11	2.9	1550.0	0.155	2.62	1.5
H43776	1210	131	17600	1.76	3.6	3.3	1640	42.2	96.1	0.657	31400	3.14	1.01	27.4	10	2.3	140.5	0.19	0.33	3.1	1730.0	0.173	2.56	1.3
H42206	605	358	800	0.08	3.8	3.3	1190	14.8	93	1.635	39200	3.92	1.92	16.1	10	1	202	0.23	0.11	3.4	1710.0	0.171	2.16	1.5
H44091	764	50.8	300	0.03	4.5	14.4	770	12.7	105.5	0.309	26600	2.66	5.51	11.7	11	2.4	79.8	0.24	0.09	3.3	2460	0.246	1.41	2.3
G33372	832	1.52	7700	0.77	7.5	4.1	1610	8.4	112	0.005	31000	3.1	4.59	20.9	8	1.3	156	0.45	0.1	3.4	2710.0	0.271	2.6	2
X09587	914	218.58			3.99		0.116		54.2		17200	1.72		13.5		1.1		0.2		1.9	1620.0	0.162		1.3
X12543	1805	15.95	400	0.04	7.4	0.2	1140	25.2	77.5	0.032	29000	2.9	5.15	14.6	3	1.2	63.2	0.48	0.3	2.9	3040.0	0.304	1.54	1.7
X14656	1120	16.95	500	0.05	3.9	1.4	850	11.2	99.7	0.026	19600	1.96	3.4	11.6	5	1.4	75.5	0.23	0.17	4	1660.0	0.166	1.61	1.4
X12368	1310	16.05	800	0.08	3.8	1.7	1050	12.7	84.7	0.052	27500	2.75	2.83	17.2	6	1.3	55.6	0.25	0.33	2.5	1590.0	0.159	1.67	0.9
H43779	913	287	17300	1.73	1.93	3.2	0.205	42.56	122.1		15600	1.56	0.95	28.4		2.2	213	0.3		2.9	1250.0	0.125		1.4
X10897	771	89.9	26100	2.61	6.5	4.3	1160	22	59	0.352	19700	1.97	0.81	17.9	6	1.3	134.5	0.37	0.13	3.9	1690.0	0.169	1.35	1.3
G33322	854	1.81	33100	3.31	7.9	3.7	1480	13.3	69.9	0.004	27900.0	2.79	1.2	19.7	6	1.3	389	0.45	0.15	3.4	2620.0	0.262	1.11	1.8
G35349	2020	1.41	7100	0.71	7.2	11.6	940	25.6	85.3	0.003	29900	2.99	4.93	12.3	4	1.9	307	0.36	0.48	3.7	2230.0	0.223	1.81	1.4
H40229	1285	150.79			3.21		0.13		80.7		33200	3.32		15.9		1.7		0.2		2.3	1640.0	0.164		1.3
G36484	5503	62.74			3.1		0.362		57.3		85700	8.57		10.3		12.8		0.1		2.6	2120.0	0.212		6.8
E192667	609	73.3	27300	2.73	8.1	3.9	1460	10.3	113.5	0.195	23900	2.39	1.56	22.8	11	1	288	0.45	0.025	4.1	2820.0	0.282	0.95	2.1
G36294	758	133.5	23100	2.31	7.3	3.7	1370	13.4	83.9	0.564	22200	2.22	1	20.9	8	1.5	245	0.39	0.05	3.5	2510.0	0.251	0.97	1.9
H42253	684	70.3	800	0.08	6.8	3.3	1320	19.4	98.6	0.259	46800	4.68	3.8	17.5	11	1	366	0.4	0.16	3	2430.0	0.243	2.45	1.6
H43857	1000	67.1	12000	1.2	4.6	5.1	990	13.2	99.8	0.309	43500	4.35	1.94	17.1	7	2.2	503	0.26	0.07	2.9	1520.0	0.152	2.01	1.3
H42225	381	100.5	18400	1.84	5.2	3.5	1400	9.3	95.5	0.419	39900	3.99	1.29	19.3	9	1	545	0.31	0.1	3.6	2240.0	0.224	1.62	1.5
H41414	895	79.8	1300	0.13	4.2	2.6	1510	8.6	121.5	0.352	16500	1.65	1.91	18.6	6	1.4	290	0.25	0.16	3.4	1720.0	0.172	3.08	1.8
G33813	1080	11.6	11200	1.12	8.1	2.2	1820	7.2	138.5	0.058	27000	2.7	4.44	25.3	7	1.4	165.5	0.47	0.13	3.1	3860.0	0.386	2.66	1.5
H41069	486	9.05	30700	3.07	4.9	3.9	1100	17.9	114	0.017	19500	1.95	178.5	21.1	8	1.2	199	0.32	0.26	1.7	1470.00	0.147	1.16	2
X12452	1135	18.3	300	0.03	4.2	4.6	890	44	74.7	0.05	25000	2.5	2.43	14.1	5	1.1	90.6	0.27	0.11	2.9	2010.0	0.201	1.13	1.1
X06183	642	97.29			2.15		0.11		71.5		21000	2.1		13		1.4		0.05		2.2	1080.0	0.108		1.1
X11420	1855	104.5	800	0.08	2.7	2.1	950	65	106	0.549	31700	3.17	2.87	11.5	12	1.2	120.5	0.14	0.22	2.1	790.0	0.079	2.27	0.9
H41040	1080	12.3	15200	1.52	5.6	3.8	1190	81.5	126	0.019	30200	3.02	10.3	18	16	0.7	252	0.38	0.58	1.7	1740.00	0.174	1.47	1.4
G32060	807	102.5	10700	1.07	4.5	2.9	1200	18.5	107.5	0.541	39000	3.9	2.24	18.7	7	1.5	375	0.23	0.2	3.7	1510.0	0.151	1.73	1.9
X14398	832	70.1	17200	1.72	5.3	1.8	1140	15	69.2	0.211	23300	2.33	1.14	19	6	1.1	338	0.33	0.11	2.5	2190.00	0.219	0.69	0.9
H43911	1200	89.1	15600	1.56	3.6	4	1370	22.5	87.5	0.373	53400	5.34	2.55	24.2	6	1.9	606	0.22	0.08	3	1770.0	0.177	1.81	1.6
X14583	591	10.55	4100	0.41	2.4	2.8	670	14.9	55.5	0.018	25400	2.54	2.29	10.2	7	1.1	298	0.13	0.21	1.6	1020.0	0.102	1.02	0.5
H43904	1080	323	11500	1.15	3.3	4.3	1330	9.7	82.5	1.78	49100	4.91	2.19	27	6	1.9	547	0.2	0.08	2.7	1700.0	0.17	1.77	1.6
X06170	699	88.05			1.65		0.086		69.3		22700	2.27		10.2		2.1		0.05		2.2	1350.0	0.135		1
H44106	793	25.4	6600	0.66	7	2.4	1340	10.4	98.9	0.107	22100	2.21	3.07	16.3	11	1.5	129	0.38	0.05	3.1	2390.0	0.239	1.58	1.7
X06372	935	10	2800	0.28	3.5	1.3	730	17.9	92.6	0.018	21100	2.11	2.61	9.8	5	1.4	143.5	0.21	0.24	2.9	1590.00	0.159	1.81	1.1
X15026	766	20.9	20000	2	5.7	1.6	1010	11.1	69.9	0.041	16900	1.69	1.22	14	4	1.4	253	0.35	0.26	3.3	2420.0	0.242	1.11	1.5
H40217	988	38.73			3.81		0.136		92.5		29700	2.97		16.3		1.6		0.2		2.6	1840.0	0.184		1.8
H43534	2100	38.7	600	0.06	4.1	4.5	830	21.8	97.1	0.182	43200	4.32	3.92	13.8	6	1.1	429	0.26	0.2	2.9	1150.0	0.115	2.36	1.3
X11442	758	104.5	9800	0.98	4.6	3.3	1160	18.7	76.9	0.424	30500	3.05	1.46	17.2	5	1.4	451	0.25	0.1	3	1550.0	0.155	1.53	1.6
X14308	1145	94.6	21800	2.18	7.2	2	1460	23.7	80.3	0.323	21300	2.13	2.81	23.5	7	1	232	0.42	0.32	2.9	2680	0.268	0.92	1.9
H43848	898	81.4	24400	2.44	5.3	3.7	1130	42.5	75.7	0.397	40700	4.07	1.32	16.2	6	2	554	0.29	0.06	2.9	1570.0	0.157	1.34	1.4
G33828	1295	69.9	11900	1.19	6.9	3	1380	25	112	0.228	35000	3.5	4.49	20.3	12	1	305	0.4	0.42	3.8	2590.0	0.259	2.41	2.3
G35041	512	16.4	18700	1.87	5.1	5.4	1490	15.4	106.5	0.05	17300	1.73	2.45	20	4	1.4	251	0.29	0.18	3.9	2020.0	0.202	1.73	1.7

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
G32407	483	108.5	22100	2.21	7.5	3	1360	25.9	82.8	0.4	29100	2.91	3.56	18.6	6	0.8	559	0.44	0.08	3.4	2520.00	0.252	0.97	1.6
G36967	883	158	300	0.03	6	1.8	860	23.3	83.8	0.44	10400	1.04	2.85	11.2	4	1	46.6	0.36	0.13	3.4	2360.0	0.236	1.13	1.6
G35387	804	1.54	17600	1.76	7.4	7.9	760	7.2	80.2	0.004	15200	1.52	2.91	10.8	3	1.9	240	0.39	0.13	4.7	2130.0	0.213	1.45	2.2
H41431	1300	120	1300	0.13	6.2	3.3	1470	12.7	122	0.702	23600.0	2.36	2.85	18.2	6	1.1	341	0.35	0.1	3.5	2170.0	0.217	3.17	1.8
H43895	2001	34.05	1530	0.153	2.13	3.2	0.184	67.59	152.3		42900	4.29	2.79	30.1		2.5	346	0.2		3.3	1640.0	0.164		2.2
H43903	1215	312.59	20010	2.001	2.25	4.9	0.164	27.14	64		37900	3.79	2.77	22.8		1.9	416	0.2		2.4	1480.0	0.148		1.8
H42217	811	207	900	0.09	5.2	0.1	1330	14.3	102.5	0.593	46700	4.67	2.18	18.6	11	1.9	309	0.34	0.13	3.3	2070.0	0.207	2.09	1.4
G32516	702	3.84	29100	2.91	7.7	3.4	1390	13.5	81	0.008	14600	1.46	7.32	19.5	5	1.1	444	0.46	0.33	4.1	2500.0	0.25	0.99	2.3
H42208	729	19.5	900	0.09	7.1	1.9	870	20.3	85.3	0.1	28600	2.86	1.7	9.7	7	0.7	270	0.37	0.1	2.8	1080.00	0.108	2.58	1.2
H43892	763	159.12	27570	2.757	2.78	3.1	0.157	6.88	97.5		21100	2.11	1.52	21.9		1.8	292	0.2		3.2	1610.0	0.161		2.5
G32390	459	49.5	27100	2.71	8	3.6	1420	10.6	85.1	0.139	26300	2.63	1.56	20.2	6	1.1	493	0.44	0.025	3.9	2700.0	0.27	0.88	1.8
H43869	635	37.6	27400	2.74	4.1	6.4	1190	9.8	89.5	0.151	37400	3.74	1.23	17	4	1.5	463	0.26	0.025	3.1	1930.0	0.193	1.87	1.8
H43910	532	157	20700	2.07	7.3	2.9	1160	7.9	74.9	0.62	19000	1.9	1.24	17.8	6	1.4	190.5	0.38	0.06	3.2	2180.0	0.218	1.08	1.6
X10300	614	10.75			1.15		0.08		53.3		15200	1.52		9.3		1		0.05		1.5	820.0	0.082		0.5
X14372	650	98	14400	1.44	6.1	2.7	1210	15.3	85.1	0.32	18700	1.87	2.71	20.7	6	1	318	0.34	0.06	2.5	2330	0.233	0.8	1
H44112	790	82.2	20900	2.09	6.2	2.6	1180	14.1	81.3	0.26	25800	2.58	1.71	15.4	9	1.3	216	0.34	0.08	3.1	2090.0	0.209	1.04	1.6
H43929	954	39.5	12800	1.28	5.8	2.2	1330	8.2	68.2	0.111	26300	2.63	1.83	13.3	5	1.2	171	0.31	0.07	2.2	2480.0	0.248	0.96	1.3
X09201	1300	57.4	500	0.05	6.8	2.6	1330	15.3	135.5	0.156	24100	2.41	9.23	20.3	3	1.5	112	0.36	0.27	3.4	2510.0	0.251	1.82	1.5
G33307	852	1.37	26900	2.69	7.9	3.3	1450	7.5	95.5	0.002	18900	1.89	1.83	19.4	6	1.1	379	0.47	0.12	3.4	2600.0	0.26	1.49	1.9
G37985	1292	42.78			3.19		0.109		73.4		42300	4.23		16		1.3		0.1		3	1370.0	0.137		1.5
X11805	959	172.93			2.01		0.107		82.1		50300	5.03		14		2		0.05		2.5	1030.0	0.103		1.5
H43846	722	46.2	23000	2.3	5.5	3.6	1230	30.8	98.5	0.181	40100	4.01	1.47	16.7	5	1.6	547	0.31	0.11	3.2	1700.0	0.17	1.8	1.3
X16693	756	178.58			5.14		0.113		108.6		10700	1.07		13.2		1.1		0.3		2.3	2050	0.205		1.3
H43854	944	109	13100	1.31	6.1	6.1	1060	95	102.5	0.655	35800	3.58	2.49	20.9	9	2.6	423	0.32	0.06	2.8	1920.0	0.192	2.13	1
H43856	3053	221.99	1430	0.143	1.12	5.8	0.089	193.22	133.7		42000	4.2	3.88	11.4		1.3	342	0.2		1.3	760.0	0.076		1
H40631	456	56.3	24100	2.41	7.2	3.9	1370	8.6	85.9	0.167	11300	1.13	1.68	19	7	0.9	352	0.43	0.05	3.5	2530.0	0.253	1.04	1.6
H41017	1278	5.29			6.85		0.014		66.2		16900	1.69		1.5		1.4		0.3		9.7	500	0.05		5.9
G36315	763	34	23900	2.39	7.3	4.2	1310	29	96.5	0.182	15600	1.56	0.97	20.3	6	1.7	413	0.41	0.09	3.8	2510.0	0.251	0.87	2
X06662	708	73.87			2.78		0.109		83.3		36100.0	3.61		14.7		1.2		0.1		2.9	1130.0	0.113		1.6
G32335	757	124	14100	1.41	7	3.1	1200	26.9	87.8	0.375	36400	3.64	2.04	17.1	8	1.1	521	0.4	0.13	3.2	2310.0	0.231	1.28	1.4
G34513	1053	11.76			5.48		0.092		99.6		22700	2.27		9.5		1		0.3		3.1	2270.0	0.227		1.3
G37645	1960	2.32	34700	3.47	5.4	18.4	960	59.3	59.5	0.001	29000	2.9	2.84	12.9	4	1.2	542	0.43	0.61	4.4	3300.0	0.33	0.85	1.7
H41699	2025	2.09	6600	0.66	8.21	16	0.192	852.67	74.1		37200	3.72	14.62	24.1		1.2	310	0.4		2.6	4170.0	0.417		9.5
G36278	679	19.75	3200	0.32	4.6	14	740	18.4	105	0.092	14400	1.44	1.81	10.6	7	1.4	97.3	0.24	0.05	2.6	2530.0	0.253	1.24	1.4
H41448	993	106	14800.0	1.48	6.1	3.5	1420	31.3	100.5	0.467	23300.0	2.33	1.86	18.7	8	1.4	188	0.34	0.14	3.6	2170.0	0.217	2.09	1.9
G34662	964	78.2	10400	1.04	6.3	5.2	1170	17.4	106.5	0.184	14500.0	1.45	2.58	17.8	3	1.2	132	0.36	0.025	3.3	2150.00	0.215	1.55	1.4
E192683	1290	9.44	45700	4.57	3.6	13.8	600	8.1	35.2	0.018	27100	2.71	1.74	9.4	10	0.9	291	0.32	0.54	2	2360.0	0.236	0.4	0.7
G36991	717	36	16800	1.68	5.8	2.9	950	2140	55.5	0.117	14100.0	1.41	1	12.8	11	1.1	177	0.32	0.18	2.9	1770.0	0.177	0.64	1.3
H43778	1166	147.09	16980	1.698	2.23	10.5	0.193	36.99	142.2		16000.0	1.6	0.72	29.8		2.4	149	0.3		3	1600.0	0.16		1.4
X14560	1770	20.9	1900	0.19	5	2.9	1060	11.8	91.8	0.056	22100.0	2.21	3.55	16.4	5	1.3	136.5	0.26	0.26	2.8	1610.0	0.161	1.49	0.9
H41036	1840	21	17200	1.72	3.6	12.1	380	29.1	138.5	0.048	29600.0	2.96	3.33	7.5	7	1.1	256	0.28	0.72	2.8	1880.0	0.188	1.15	1.9
X10872	543	83.6	21800	2.18	6.3	3.6	1010	10.8	57.1	0.347	22000.0	2.2	0.8	17.4	4	1.1	381	0.34	0.07	2.9	1670.0	0.167	1.32	1.2
H43877	851	41.6	26500	2.65	4.4	4.7	1110	16.4	67.2	0.145	43200	4.32	1.23	16.6	3	2	496	0.24	0.06	2.7	1970.00	0.197	1.47	1.1
G37583	879	44.1	17800	1.78	6.5	3.4	1230	30.4	104.5	0.174	31000	3.1	4.89	16.5	10	1.2	1345	0.44	0.17	3.4	2370.00	0.237	1.27	1.7
X14327	700	99.5	31100	3.11	7.9	2.8	1540	12.9	84.4	0.358	8000	0.8	0.88	24.7	5	1	268	0.45	0.07	3.6	2900.00	0.29	0.69	1.6
H41691	1849	1.71	6000	0.6	9.78	60	0.178	39.25	84.7		39600	3.96	4.69	18		1.1	376	0.3		2.8	4140.00	0.414		2.8
H43880	993	64.2	24300	2.43	4	5.8	1170	14	80.2	0.359	42100	4.21	1.36	18	5	1.7	461	0.23	0.1	2.6	1960.0	0.196	1.67	1.2
H43881	1000	101.5	20500	2.05	4.9	4.7	990	18.1	87.1	0.511	41000	4.1	1.21	17.2	7	1.9	534	0.29	0.09	3.4	1580.00	0.158	1.74	1.7
H44127	1120	70.5	1600	0.16	6.8	2.6	1220	16.4	115.5	0.272	33500	3.35	5.17	15	9	1.3	166.5	0.38	0.12	3.2	2220.00	0.222	1.37	1.8
X14702	863	10.2	8500	0.85	6.6	1.6	870	9.7	99.2	0.012	15800	1.58	2.58	11.9	3	1.5	125.5	0.39	0.25	3.9	2270.0	0.227	1.46	1.7

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
G35450	2060	3.45	24400	2.44	6.1	21	1050	198.5	86.1	0.004	25700	2.57	4.4	12.8	10	1.4	799	0.36	0.91	4.3	3670.00	0.367	0.94	1.9
G36474	764	52.92			0.84		0.054		81.6		32700	3.27		6.7		1		0.05		1.6	830.00	0.083		0.8
G36085	672	47.35			2.2		0.103		71.1		21100	2.11		13.1		0.9		0.1		1.8	1170.0	0.117		0.7
H41077	908	12.8	19500	1.95	10.1	9.3	980	174.5	101.5	0.034	20200	2.02	17.6	10.7	10	1.3	260	0.59	0.53	2.8	2120	0.212	1.79	4.4
H43898	1975	44.09	780	0.078	2.14	5.2	0.184	12.87	148.5		30000	3	4.27	27.3		1.9	405	0.3		2.3	1580.00	0.158		2.9
H43899	1440	33	16000	1.6	3.1	3.2	1500	14.8	66.7	0.167	45700	4.57	1.63	22.4	4	1.6	494	0.18	0.025	2.3	2090.00	0.209	1.34	1.2
X17305	1955	45.3	15600	1.56	6.4	3.1	1330	149.5	90.8	0.194	33000	3.3	5.23	17.5	6	0.9	229	0.36	0.29	2.5	2350.00	0.235	1.92	1.1
H44125	681	17.95	2500	0.25	6.6	3	1330	6.6	116	0.067	20500	2.05	3.69	15.9	8	1.5	140	0.37	0.06	3.1	2330.0	0.233	1.4	1.8
X14418	1280	59.9	5000	0.5	7.3	1.7	1370	28	115.5	0.146	20900	2.09	5.22	20.1	5	0.8	224	0.44	0.13	2.3	2600.00	0.26	1.33	1.2
X05422	1900	2.46	800	0.08	5.8	2.2	1250	7.4	16	0.007	3400	0.34	1.3	39	2	0.8	37	0.32	0.025	0.9	7650.00	0.765	0.95	0.7
H41071	864	9.24	29100	2.91	5.2	3.2	1070	15.4	101	0.015	21300	2.13	48.3	21.3	7	1.3	287	0.32	0.28	1.4	1470.00	0.147	1.25	1.7
X15681	664	553.85			5.46		0.086		77.2		15500	1.55		9.5		1		0.2		2.4	1990.0	0.199		1
H41711	1157	3.02	29210	2.921	5.17	14.9	0.123	48.73	71.3		18400	1.84	5.67	16.2		0.7	348	0.3		1.4	2980.00	0.298		1.1
X19614	722	21.14			3.33		0.087		35		32400	3.24		9.8		1.1		0.2		2.7	1690.00	0.169		1
H43901	1320	32	26400	2.64	4.5	4.5	1550	50.5	76.5	0.154	47100	4.71	2.45	32.2	5	2.3	489	0.27	0.07	2.8	2270.0	0.227	1.64	1.5
H41437	827	136.5	900	0.09	5.9	3.3	1490	8.1	122.5	0.74	21900	2.19	2.65	18.5	7	1.3	166	0.33	0.09	3.5	2200	0.22	3.14	1.6
H42099	479	99.57			8.16		0.164		57.8		25700	2.57		18		1		0.4		2.9	3040	0.304		1.8
H43852	913	67.9	14300	1.43	6.4	4.5	1360	29.6	102.5	0.297	37300	3.73	2.01	18.7	6	2.2	526	0.36	0.08	2.9	1970	0.197	2.29	1.3
H43863	669	80.2	23800	2.38	4.2	5.1	1050	11.4	88.5	0.401	46300	4.63	1.19	17.2	5	1.6	576	0.23	0.08	3.1	1750	0.175	1.46	1.4
X15439	1221	36.69			3.9		0.097		89.3		20200	2.02		11.8		1.2		0.2		2.3	1770	0.177		1.3
H42229	778	63.3	1300	0.13	5.6	0.1	1280	8.9	85	0.254	36500	3.65	3.14	17.3	10	1.1	284	0.38	0.11	2.9	2270	0.227	1.95	1.4
H41079	1040	18	44500	4.45	6.3	18.5	960	42.3	92.5	0.082	21600	2.16	16.25	12.4	7	2.1	227	0.4	0.53	2.1	3580	0.358	1.04	8.6
H41689	1180	2.8	7110	0.711	9.51	18.4	0.211	27.76	81.8		35800	3.58	9.15	18.2		1.5	426	0.3		2.8	4580	0.458		6
E217198	929	28.3	21200	2.12	7.9	2.9	1290	12	82.2	0.046	16000	1.6	1.7	18.8	5	1.4	391	0.45	0.19	3.5	2390	0.239	0.89	1.6
H41689	1380	37.1	10100	1.01	7.1	1.7	1430	27.7	122	0.148	26500	2.65	5.89	18	6	1.1	193	0.41	0.19	3.1	2530	0.253	2.68	1.6
H41045	1140	14.95	30500	3.05	5.1	3.3	1110	19.8	116	0.027	21300	2.13	68.5	20.1	9	1.3	342	0.34	0.32	1.5	1480	0.148	1.11	1.9
H41364	722	79.36			7.49		0.139		80.4		28900	2.89		16.4		1.1		0.3		2.5	2680	0.268		1.5
G33872	2040	26.4	15500	1.55	6.7	2.7	1310	30.9	93.6	0.081	42800	4.28	2.41	16.8	12	1.4	249	0.39	0.31	3.1	2280	0.228	1.78	2.6
G35359	1275	2.68	14600	1.46	5.7	16.5	960	18.1	77.8	0.023	11200	1.12	3.17	12.6	3	1.5	210	0.32	0.11	4.1	2710	0.271	1.4	1.4
H43777	1080	61.2	15600	1.56	3.6	3.2	1790	27.9	108.5	0.265	12300	1.23	0.98	28.6	8	2.8	130.5	0.22	0.09	3.2	1820	0.182	2.83	1.4
H41694	1853	5.39	14220	1.422	7.53	35.5	0.169	198.26	58		30800	3.08	4.37	19.3		1.1	354	0.4		2.3	3820	0.382		1.8
H41354	935	11.29			10.37		0.218		64.4		25100	2.51		22		1.2		0.4		2.4	3370	0.337		1.3
E217134	781	88.5	33300	3.33	7.2	3.1	1260	86.4	40.1	0.274	25000	2.5	2.88	18.1	4	1.1	558	0.4	0.19	3.1	2370	0.237	0.59	1.3
H41542	1360	27.93			5.64		0.157		84.8		29400	2.94		16.5		1.3		0.3		2.3	2400	0.24		1.6
X19380	767	34.57			5.98		0.137		96.4		17100	1.71		16.1		1.3		0.3		2.9	2390	0.239		1.7
H42087	468	87.02			8.29		0.146		69.5		23400	2.34		17.4		1		0.4		2.9	3000	0.3		1.7
H44089	1930	91.2	5900	0.59	3.8	14.7	780	32.8	87.4	0.225	26600	2.66	2.51	10.1	9	2.1	346	0.21	0.12	2.5	2170	0.217	1.22	2.2
H41424	1040	10.8	13700	1.37	4.5	3.7	1470	6.7	108	0.067	17900	1.79	1.45	19.3	6	1.4	357	0.26	0.06	3.8	1920	0.192	2.71	2.5
E192620	726	162.5	12200	1.22	7.4	3.2	1370	41.4	113.5	0.599	12300	1.23	1.64	20.2	7	1.1	175.5	0.4	0.11	3.7	2460	0.246	1	2
H43778	1460	94.2	16300	1.63	3.9	2.7	1740	34.3	110	0.475	13700	1.37	0.92	26.7	10	2.3	221	0.22	0.11	3	2030	0.203	2.55	1.2
X12593	1170	78.9	1100	0.11	6.7	0.1	980	34.9	94.4	0.175	18200	1.82	4.57	15.5	4	1.1	85.6	0.44	0.12	3.5	2860	0.286	1.08	1.7
H41450	729	116.5	9100	0.91	4.9	3.1	1510	16.7	143.5	0.692	16300	1.63	2.08	19.9	7	1.6	416	0.27	0.07	4	1950	0.195	2.6	2.1
H41687	1296	2.2	10620	1.062	7.43	26.9	0.218	10.28	103.1		30400	3.04	6.1	25.1		1	312	0.3		1.3	4440	0.444		0.8
X11797	942	256.72			2.4		0.118		100.6		45900	4.59		15.9		1.4		0.1		2.6	1150	0.115		1.8
E192601	795	55.8	23100	2.31	7	3.2	1300	27.5	98.1	0.175	11800	1.18	1.55	19.4	6	0.7	250	0.4	0.08	4	2390	0.239	0.69	1.6
H43775	1285	161.63	22570	2.257	2.07	2.6	0.199	30.58	131.7		16900	1.69	0.79	27.5		2.2	149	0.3		3.5	1340	0.134		1.4
G34602	813	36.4	5900	0.59	4.6	4.2	560	12.7	109	0.104	7500	0.75	2.67	9.1	4	0.8	64	0.33	0.025	3.9	1910	0.191	1.35	1.4
E217155	631	50.3	18000	1.8	9.8	1.5	800	19.4	89	0.14	16300	1.63	4.34	8	4	0.8	421	0.57	0.16	3	1270	0.127	1.21	1.5
H43897	1950	68.8	800	0.08	3.8	3.8	1480	77.6	163.5	0.348	31000	3.1	4.38	31.2	5	2.2	206	0.23	0.12	3.1	1990	0.199	3.44	1.8
G34638	784	84.5	13000	1.3	4.6	4.3	900	17.3	68.6	0.24	8700	0.87	1.05	13.1	4	1	182	0.27	0.025	2.6	1730	0.173	1.01	1.1

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
H43843	840	65.6	19800	1.98	5	3.7	1180	30.1	87.9	0.282	30200	3.02	1.37	18.3	4	1.8	428	0.27	0.05	2.4	1790	0.179	1.66	1.1
H43850	862	85.3	29200	2.92	6.3	4.1	1200	28.1	84.1	0.498	28300	2.83	1.17	18.7	4	1.9	579	0.34	0.05	3.3	1810	0.181	1.42	1.9
H41439	987	139	9400	0.94	5.8	3.3	1320	12.1	108	0.684	18700	1.87	1.98	16.9	6	1.1	572	0.32	0.1	3.5	2070	0.207	2.26	1.6
H41033	1740	54.6	3800	0.38	4.8	3.6	1100	130	92.9	0.075	22100	2.21	6.64	13.6	11	0.8	235	0.28	0.44	1.4	1520	0.152	1.76	3.7
H43871	695	17.75	28100	2.81	4.8	5	1220	31.5	81.4	0.077	39700	3.97	1.37	16.2	2	1.7	475	0.28	0.025	3	2270	0.227	1.59	1.2
X09610	1433	69.02			6.11		0.124		78.6		21400	2.14		15.1		1.2		0.3		2.5	2390	0.239		1.5
G34490	756	8.12			6.73		0.094		75.5		7600	0.76		11.4		0.9		0.3		4.2	2760	0.276		1.6
H43779	1000	66.3	9200	0.92	2.7	3	1620	26.4	100	0.374	6500	0.65	0.85	25.8	6	2.2	326	0.15	0.06	3.1	1440	0.144	2.41	1.3
H41039	2140	34.2	6500	0.65	5.7	18.6	730	109.5	143	0.047	23500	2.35	113	14.2	8	1.3	259	0.38	0.47	3.5	3090	0.309	1.4	3.9
E192642	658	200	11300	1.13	7.6	2.4	1090	18.4	116	0.992	9500	0.95	1.61	17.5	6	0.7	139	0.47	0.08	4.9	3060	0.306	1.06	2.5
X19391	1163	50.78			6.19		0.114		76		23200	2.32		14		1		0.3		2.9	2270	0.227		1.4
9426	1285	65	23000	2.3	7.9	5.4	1210	25.8	137.5	0.24	17200	1.72	3.22	20.5	4	1.2	328	0.46	0.23	4.1	2480	0.248	1.52	2.7
G37020	1544	56.24			7.32		0.13		112.7		16000	1.6		14.8		1.3		0.3		2.9	2530	0.253		1.6
H41714	1649	3.02	20580	2.058	3.96	16.6	0.107	64.82	58.7		23600	2.36	6.58	16.7		0.7	336	0.3		1.3	3080	0.308		0.8
G35715	623	29.5	19800	1.98	3.8	3.3	1120	8	52.5	0.063	7200	0.72	2.02	17.3	3	1.7	267	0.18	0.06	2.7	1600	0.16	0.89	1
H43875	765	44.7	29200	2.92	4.5	5.6	1170	5.6	69	0.151	39400	3.94	1.28	19	2	1.7	499	0.24	0.025	2.8	2090	0.209	1.41	1.3
G35470	1195	8.93	31700	3.17	5	16.3	900	38.4	104.5	0.032	17000	1.7	1.47	11.9	9	1.3	421	0.3	0.92	2.9	3180	0.318	1.03	1.5
H40624	696	77.8	3700	0.37	6.4	3.3	1290	8.5	125.5	0.288	11700	1.17	4.76	17.2	5	0.9	284	0.38	0.025	3.1	2090	0.209	1.6	1.5
X15038	868	22.43			3.26		0.098		70.4		12100	1.21		12.1		1.1		0.2		3.2	1790	0.179		1.2
E192656	631	350	2600	0.26	7.1	2.7	1020	6.8	122	1.31	7300	0.73	3.8	15.5	4	0.9	87.8	0.42	0.07	4	2740	0.274	1.22	2.1
X14347	692	61	32300	3.23	7.6	2.2	1450	6.1	60.9	0.203	6600	0.66	0.85	23.2	4	1.1	234	0.43	0.05	3	2710	0.271	0.61	1.4
H43776	1331	26.96	18130	1.813	1.99	3	0.183	29.84	63.3		12800	1.28	0.72	27.6		2.4	130	0.3		2.6	1140	0.114		1.1
G37551	962	45.8	11600	1.16	5.2	3.3	1170	15.7	102	0.15	7300	0.73	4.05	15.3	4	1.1	183.5	0.37	0.21	3.6	1960	0.196	1.09	1.3
G37010	1265	32.2	20600	2.06	7.4	2.5	1130	11.8	72.2	0.091	9900	0.99	1.38	15.5	4	1.3	315	0.37	0.09	3.6	2080	0.208	0.74	1.7
X09996	684	26.91			4.68		0.067		59		7000	0.7		8.2		0.7		0.3		2.6	2300	0.23		1
H41705	1243	13.36	15860	1.586	4.52	29.7	0.144	55.9	109.4		6700	0.67	6.22	14.6		1.8	144	0.4		2.9	2770	0.277		1.4
X05908	1635	20.86			4.18		0.114		94.9		14700	1.47		14.1		1		0.2		2.4	1740	0.174		1.1
G37010	1345	31.12			6.24		0.121		70.7		10000	1		13.7		1.3		0.3		2.6	1970	0.197		1.4
X09254	872	95.5	7500	0.75	5.9	3.1	1220	11.2	117.5	0.487	6900	0.69	1.54	20.3	5	0.8	185.5	0.33	0.025	3.2	2220	0.222	0.96	1.4
H41433	1320	32.5	7200	0.72	5.8	3.6	1440	7.5	99.6	0.141	11700	1.17	2.11	20.1	4	1	518	0.38	0.05	4.2	2100	0.21	2.8	2.1
H41719	1505	2.1	26360	2.636	5.04	14.8	0.107	44.85	85.5		13200	1.32	5.71	12		0.9	363	0.3		2.3	3990	0.399		1.3
X14726	1290	8.92	3700	0.37	3.2	2	830	7.4	63	0.006	8700	0.87	1.87	11.2	3	1	174	0.2	0.09	2.1	1360	0.136	0.99	0.7
H40627	686	219	27700	2.77	7	3.9	1480	6.8	78.2	1.325	6000	0.6	2.2	19	4	0.8	267	0.43	0.025	3.2	2470	0.247	0.98	1.4
X09311	813	74.1	23300	2.33	6.8	3.4	1390	14.7	93.7	0.234	6400	0.64	0.92	22.1	4	0.7	296	0.38	0.025	3.4	2540	0.254	0.75	1.4
X16704	1153	47.77			6.55		0.137		84.6		10300	1.03		15.8		1.2		0.3		2.6	2430	0.243		1.5
H41681	1107	4.45	930	0.093	6.66	57.2	0.212	7.13	95.3		24800	2.48	2.87	22.5		4.7	400	0.4		1.8	4000	0.4		4.4
X12513	904	36.7	19800	1.98	6.3	0.1	1000	9.9	79.5	0.103	7700	0.77	2.66	16.2	4	1	275	0.43	0.06	3.7	2620	0.262	1.1	1.6
H41435	1010	323	8300	0.83	6.1	3	1380	6.7	91.3	1.985	8900	0.89	1.99	17.9	4	1.2	166	0.34	0.025	3.6	2240	0.224	2.49	1.7
H41721	1588	2.13	29190	2.919	4.43	16.6	0.097	13.77	53.8		9300	0.93	3.92	11.2		0.9	373	0.3		2.1	3640	0.364		1.3
G37573	973	47.2	26600	2.66	6.6	3.9	1370	10.5	81	0.134	6500	0.65	2.07	19.2	4	1.1	258	0.46	0.11	4.5	2350	0.235	0.99	1.5
X15672	867	100.32			5.09		0.096		59.5		7700	0.77		12.6		1		0.2		2.5	2110	0.211		1.2
G37041	1383	52.79			6.42		0.148		115.9		6700	0.67		19.6		1		0.3		3.5	2480	0.248		1.7
H41697	1971	2.33	4710	0.471	8.69	10.4	0.192	17.02	91.4		12500	1.25	4.51	19		1.3	479	0.3		3.3	4240	0.424		2.8
H41083	2450	16.05	25100	2.51	5.2	21.6	580	67.7	117.5	0.019	17700	1.77	5.64	14.8	5	2.1	324	0.33	0.35	3.2	2920	0.292	0.9	4.2
E192579	563	41.6	29100	2.91	6.5	3	1380	25.9	68.9	0.112	4500	0.45	1.04	17	3	0.8	282	0.35	0.025	3.6	2360	0.236	0.56	1.2
G35331	742	1.11	20800	2.08	7.5	2.1	700	6.6	64.9	0.004	2800	0.28	2.19	6.8	3	0.6	245	0.47	0.07	4.3	1480	0.148	1.31	1.5
G23392	1374	7.92			3.22		0.097		72.4		8900	0.89		12.2		1		0.2		3.4	1610	0.161		1.6
X09180	731	26.8	22500	2.25	6.1	2.3	1220	8.2	75.8	0.071	5300	0.53	0.8	17.6	3	1.1	317	0.32	0.05	3.4	2070	0.207	0.78	1.2
H44042	1970	5.35	25400	2.54	8.5	2.5	340	24.2	93.9	0.004	7800	0.78	1.9	3.2	4	1.3	276	0.39	0.95	4	980	0.098	1.33	5.8
X12204	1406	14.99			1.25		0.062		40.8		11200	1.12		7.2		1		0.05		1.2	720	0.072		0.6

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
E192502	1363	37.67			7.07		0.118		68.4		4500	0.45		14.1		0.8		0.3		2.7	2270	0.227		1.4
X05897	1578	19.93			4.46		0.112		94.7		8700	0.87		14.2		1.2		0.2		2.3	1830	0.183		1.1
H41081	2190	12.6	27200	2.72	4.8	22.1	790	130.5	138.5	0.026	12400	1.24	5.46	14.1	5	1.9	238	0.31	0.2	4.2	2750	0.275	0.98	14.4
H41683	1554	3.1	2400	0.24	6.1	76.3	0.211	8.29	103.5		18200	1.82	2.36	25.5		1.3	421	0.4		1.7	3890	0.389		1.1
X05681	1425	11.18			3.93		0.11		112		6700	0.67		13.7		1.2		0.2		2.8	1700	0.17		1.1
X09224	876	44.2	24200	2.42	6.6	2.7	1430	7.4	87.1	0.107	3500	0.35	0.79	20.4	3	1.1	266	0.35	0.025	3.2	2330	0.233	0.83	1.2
X12563	1105	124	20400	2.04	6.8	0.1	980	15.7	73.7	0.16	4600	0.46	2.06	13.9	3	0.7	325	0.43	0.025	3.6	2780	0.278	0.8	1.4
H41685	1547	3.08	4560	0.456	8.32	34.9	0.222	6.48	101.6		9700	0.97	2.84	22.9		1.7	352	0.4		2.3	4360	0.436		1.7
G35312	1350	0.79	27600	2.76	8.9	3.7	1450	9	68.9	0.002	4000	0.4	2.42	16.7	3	1	336	0.44	0.08	3.3	2960	0.296	1.32	0.7
X09282	874	27.3	21300	2.13	6.9	3.1	1290	11.7	89	0.061	3100	0.31	0.74	20.7	3	0.8	213	0.4	0.025	3.6	2560	0.256	0.75	1.2
H41717	2014	1.39	16360	1.636	3.69	15.2	0.105	1060.55	76.5		8200	0.82	4.63	21.5		0.8	470	0.4		0.9	3550	0.355		0.5
G35426	1210	5.85	29000	2.9	5.2	21.1	960	12.3	100	0.028	3400	0.34	3.02	12.2	3	1.2	407	0.3	0.06	2.9	3000	0.3	1.25	1.7
H41094	3426	19.94			4		0.08		109.9		8900	0.89		12.1		1.4		0.2		3.2	2670	0.267		8.7
E192490	1005	38.15			5.25		0.128		79.4		2900	0.29		16.6		0.9		0.3		3.3	2060	0.206		1.4
X05690	1240	17.5			3.65		0.127		72.3		2300	0.23		16.8		1.1		0.2		2.6	1570	0.157		0.9
G35377	1015	6.97	27700	2.77	4	10.8	450	13.3	64.5	0.057	1200	0.12	1.78	8	2	1.4	302	0.25	0.025	2.3	2490	0.249	1.06	1.5
X09983	1110	43.69			4.69		0.073		14.3		2000	0.2		16.7		0.7		0.3		2.7	3920	0.392		1.1
G22294	1838	1.89			4.41		0.094		60.5		2500	0.25		36.5		0.7		0.2		0.7	6010	0.601		0.4
X09301	1900	3.36	16200	1.62	1.7	93.9	550	6.8	41.5	0.008	1800	0.18	2.51	31.6	2	0.7	453	0.12	0.025	0.2	5850	0.585	0.44	0.1
G37569	1665	0.64	14800	1.48	1.5	105	520	7.2	31.2	0.001	800	0.08	3.8	38.7	2	0.8	283	0.17	0.025	0.1	6160	0.616	0.53	0.1
H41679	1997	1.87	16300	1.63	3.44	14.8	0.124	4.48	100		2300	0.23	3.98	12.9		0.6	911	0.5		1	2590	0.259		0.5
X16090	69	15.3	19600	1.96	4.1	5.9	1470	3.5	135	0.025	41500	4.15	1.25	23.3	13	1.1	84.7	0.24	0.14	1.7	1550	0.155	0.83	1
67907	290	65.1	15200	1.52	6.4	7.5	1750	8.1	178	0.07	17500	1.75	6.59	26.8	8	1.2	91.2	0.4	0.12	2	2730	0.273	1.14	1.2
X16106	337	36.2	17500	1.75	4.2	8	1470	6	128	0.061	29100	2.91	3.14	20.2	14	1.1	98.9	0.23	0.26	1.4	1860	0.186	1.27	0.9
H40514	397	6.65	30700	3.07	7.8	7.6	1530	24.1	129.5	0.04	20400	2.04	0.93	20.8	9	1.8	267	0.43	0.13	1.4	2480	0.248	0.63	1.2
X16124	468	19.95	22100	2.21	4.7	4	1480	5.9	127.5	0.033	25500	2.55	2.53	19.7	9	2.5	124	0.27	0.2	1.3	1790	0.179	1.18	0.9
H40509	402	9.87	23700	2.37	8.5	13.3	1650	24.1	102.5	0.06	20800	2.08	3.07	18.9	11	1.9	179	0.44	0.33	1.3	2930	0.293	0.61	1.7
H40505	389	6.14	26200	2.62	8.2	6.9	1290	14.2	102	0.024	18400	1.84	1.14	15.8	8	1.7	125.5	0.42	0.21	1.3	2370	0.237	0.63	1.2
H40503	438	8.34	34200	3.42	8.1	4.9	1580	16.7	142	0.032	17800	1.78	0.84	19.4	8	1.5	157.5	0.45	0.11	1.7	2310	0.231	0.56	1.3
X16807	513	81.5	24800	2.48	7.6	5.5	1560	3.2	99.8	0.115	19700	1.97	1.3	23.2	7	1	240	0.39	0.1	1.4	2630	0.263	0.87	0.7
67993	299	31.8	12200	1.22	12.3	1.8	300	10.7	98.4	0.044	13400	1.34	2.08	5.3	6	1.8	162.5	0.46	0.2	6.2	720	0.072	0.63	4.7
X16946	680	51.2	16000	1.6	6.4	5.4	1450	6	121.5	0.114	23800	2.38	1.19	21.6	9	1.4	184.5	0.33	0.22	1.3	2130	0.213	0.69	1.1
X16243	618	7.85	17300	1.73	9.8	5.4	1230	18.5	104.5	0.011	19400	1.94	2.41	15.3	8	3.4	149	0.3	0.26	1.8	1960	0.196	0.56	3.9
H40512	613	6.21	28000	2.8	7.1	7.4	1350	17	118	0.026	17900	1.79	1.92	17.1	7	1.8	172	0.4	0.12	1.2	2250	0.225	0.57	1.1
9310	317	1.38	11000	1.1	19.8	1.6	290	76.8	94.5	0.001	9000	0.9	4.68	1.9	4	1.8	426	0.81	0.49	18.2	710	0.071	1.67	4.7
H40557	981	5.67			6.74		0.16		136.2		25300	2.53		17		1.8		0.3		1.1	2090	0.209		1.4
8317	438	5.68	11600	1.16	13.5	1.7	400	9.4	96.3	0.009	11000	1.1	2.02	6.2	3	1.9	123.5	0.52	0.27	9.3	810	0.081	0.67	3.4
H40501	667	3.27	25800	2.58	7.4	15.1	1590	16.4	119.5	0.017	13600	1.36	1.32	29.2	8	2.1	188	0.35	0.13	1	3020	0.302	0.68	1.3
X16263	513	5.89	30600	3.06	9.4	1.9	920	20.2	82.1	0.008	11900	1.19	2.42	9.6	2	1.8	403	0.48	0.43	4.2	1980	0.198	0.6	2.3
G36128	879	2.62	6500	0.65	9.6	8	1060	17.5	118	0.008	11800	1.18	4.13	17.7	4	1.9	137	0.43	0.35	2.2	1820	0.182	1.4	1.9
X16310	1065	37.5	21200	2.12	9.2	1.6	970	12.8	94.4	0.057	14600	1.46	3.38	11.2	4	1.5	359	0.45	0.56	3.8	1960	0.196	0.7	5
X14842	484	4.23	7300	0.73	8.2	8.6	1680	15.6	96.2	0.014	7300	0.73	2.76	19.8	6	0.9	132.5	0.46	0.16	2.1	2680	0.268	1.5	1
8341	334	3.93	12600	1.26	13.5	1.6	430	14.8	85.6	0.007	6300	0.63	1.88	6.5	3	2.2	141	0.57	0.17	12	880	0.088	0.7	4.5
G34575	2480	14.75	1000	0.1	8.3	7.5	830	33.9	120	0.019	17500	1.75	5.49	13.7	7	1.6	175	0.36	1.37	7.8	1940	0.194	1.83	5.9
G33753	1030	2.29	25900	2.59	24.1	29.2	1070	26.2	121	0.002	11600	1.16	2.42	14.9	7	2.2	237	0.99	0.5	23.6	2690	0.269	0.5	14.3
X14825	1530	3.31	2900	0.29	8.2	11.6	1390	23.7	145.5	0.008	17700	1.77	9.32	21.2	7	1.1	130	0.4	1.77	2.2	2060	0.206	1.53	1.9
X16307	880	24.5	28000	2.8	11.4	2.5	1130	12.3	103	0.033	12600	1.26	2.51	13.5	4	2	465	0.6	0.44	4.2	2240	0.224	0.66	4.1
X16295	764	14.9	24100	2.41	10.9	2.6	1040	20.2	93.8	0.028	11700	1.17	5.58	12.2	3	1.8	503	0.58	0.13	3.7	2100	0.21	0.77	4.2
X14875	1990	34.1	30700	3.07	5.3	22.1	800	23.1	70.3	0.073	19200	1.92	3.72	14.2	13	1.6	315	0.38	0.12	3.7	2880	0.288	0.64	3.6
8394	987	2.83	17700	1.77	11.1	1.8	910	81.7	126.5	0.006	13700	1.37	5.51	10.7	3	1.4	381	0.53	0.025	4.9	1940	0.194	0.81	3.2

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
X16342	738	5.4	39200	3.92	10	2.6	0.083	12.9	99.6		1000	0.1	2	8		1.3	874	0.5		6.9	1870	0.187		4.5
X16343	714	15.5	35900	3.59	9.4	2.6	0.089	12.3	74.9		4000	0.4	2	8		1.4	666	0.5		6.8	1890	0.189		5.5
X16344	924	35.2	39800	3.98	8.9	2.6	0.086	16.2	97.6		6000	0.6	1.8	8		1.5	618	0.4		5.4	1700	0.17		6.5
X16345	718	37.3	35900	3.59	8.9	2.3	0.083	12.6	97.5		5000	0.5	2	8		1.3	670	0.4		5.4	1590	0.159		5.7
X16346	998	10.1	39800	3.98	8.7	2.6	0.084	11.1	89		3000	0.3	1.5	7		1.3	596	0.4		5.9	1720	0.172		4.5
X16347	1170	12.1	38000	3.8	8.4	2.3	0.09	12.2	86.7		3000	0.3	1.9	8		1.2	663	0.4		5.9	1680	0.168		4.3
H47674	830	1.6	38100	3.81	11.1	3.7	1110	10.5	110		3000	0.3	1.2	11		1.5	916	0.5		4.9	2320	0.232		2.7
H47708	704	2.3	23900	2.39	9.5	3.2	990	29.5	120		13000	1.3	2.1	13		1.7	550	0.4		4.3	2340	0.234		2
X16283	617	45.2	24000	2.4	10.7	2.2	910	36.9	104.5	0.083	9900	0.99	4.12	11.1	4	1.8	488	0.56	0.18	4.4	1930	0.193	0.64	4.6
H41767	215	0.87	32000	3.2	8.1	1.2	100	14.9	98	0.001	1900	0.19	2.46	1	3	0.8	341	0.28	0.33	5.2	420	0.042	0.48	3.4
G36142	441	11.4	7200	0.72	7.2	3.9	1230	9.3	93.8	0.017	3400	0.34	2.09	9.2	3	0.6	123	0.34	0.18	1.5	1270	0.127	1.04	1.6
X16326	696	18.6	32200	3.22	11.3	2.7	1030	10.6	94.6	0.028	7700	0.77	2.16	10.2	3	1.8	527	0.58	0.2	4.3	1910	0.191	0.56	5.5
X14812	720	5.11	18400	1.84	10.4	8.4	930	38.7	125	0.002	800	0.08	2.19	14.1	4	2.1	100.5	0.55	0.19	3.6	2030	0.203	0.96	2.8
H40363	428	2.65			10.86		0.08		62		1000	0.1		6.3		1.5		0.5		3.7	2070	0.207		1.8
X14802	939	3.97	15800	1.58	9.8	21.6	800	46.8	148.5	0.002	1500	0.15	3.41	28.9	3	3.5	135.5	0.47	0.08	3	1990	0.199	0.74	2.9
H40491	1022	3.3			8.67		0.152		127.4		6000	0.6		31.7		3.4		0.3		2.2	3220	0.322		2.8
X16344	748	22.3	34500	3.45	11.9	2.3	940	15.4	90.6	0.027	4900	0.49	2.02	10	3	1.5	896	0.62	0.11	4.9	1920	0.192	0.46	4.4
9289	433	0.8	21500	2.15	14.3	2.8	240	10	92.2	0.001	2600	0.26	3.19	3	2	1.8	119	0.65	0.17	11.9	880	0.088	0.54	5.5
H40403	689	5.75			9.86		0.096		92		3900	0.39		9.1		1.2		0.4		5.8	1860	0.186		2.9
H43974	1547	35.93			9.59		0.116		133.5		5300	0.53		16		1.8		0.5		2.6	2820	0.282		1.9
X16272	710	12.15	23700	2.37	11.9	2.1	1110	7.8	119.5	0.017	5700	0.57	2.56	13.3	3	1.8	398	0.64	0.14	4.4	2320	0.232	0.66	3.1
X16345	703	35.5	29900	2.99	10.1	1.2	820	12.9	75.6	0.036	6200	0.62	2.07	8.2	3	1.3	728	0.5	0.18	4.1	1670	0.167	0.5	4.7
H44157	1492	5.04			6.58		0.106		100.8		5300	0.53		9.3		1		0.2		2.3	2710	0.271		2.9
X16296	787	17.1	25200	2.52	9.4	1.3	980	6.3	88.1	0.03	5200	0.52	3.15	11	2	1.5	521	0.48	0.09	3.5	2000	0.2	0.58	3.4
X16362	657	41.1	34100	3.41	12.2	1.3	1040	12.9	76.3	0.047	2400	0.24	1.18	9.6	2	1.5	976	0.6	0.06	4.7	2020	0.202	0.44	4.1
X14874	1600	12.7	27200	2.72	5.9	18.8	830	16.4	87.1	0.026	10000	1	3.07	13.2	7	1.8	266	0.3	0.23	2	2490	0.249	0.96	3.3
H41769	1050	0.64	26400	2.64	12.7	47	1750	70.2	133	0.001	2200	0.22	10.25	18.6	7	2.9	243	0.51	0.32	2.6	3240	0.324	0.64	2.2
X16279	836	10.45	21700	2.17	10.3	1.6	1060	5.3	80.3	0.017	4700	0.47	1.92	11.8	2	1.8	328	0.51	0.14	3.9	2150	0.215	0.62	4.5
G33472	798	1.53			10.26		0.107		66.9		4700	0.47		11		1.1		0.4		4.6	2360	0.236		2.1
X16327	734	38	30800	3.08	10.2	1.5	1120	9	67.7	0.043	3600	0.36	1.09	11.1	3	2	473	0.5	0.1	4.2	2070	0.207	0.45	3.9
X16362	586	17.75	35700	3.57	12.7	2.8	1010	21.5	90.6	0.017	1900	0.19	1.88	9.9	3	1.5	1120	0.67	0.05	5.4	2040	0.204	0.42	3.8
8983	1015	5.8	26000	2.6	11.5	3.7	1180	16.8	105	0.008	5800	0.58	1.47	12.6	8	1.9	547	0.63	0.16	5.4	2200	0.22	0.55	4.8
8961	640	16.75	30100	3.01	11.2	1.7	1040	12	105.5	0.017	4000	0.4	1.37	9.8	2	1.6	548	0.63	0.24	4.7	1970	0.197	0.59	1.4
8366	1015	42.1	32900	3.29	11	1.6	990	26.6	95.6	0.026	4500	0.45	1.77	10.8	2	1.7	558	0.59	0.06	4.2	2230	0.223	0.44	2.6
X16384	576	7.88	34300	3.43	12.7	1.4	1000	10.1	92.2	0.01	2100	0.21	1.86	9	2	1.3	1160	0.62	0.07	6	1870	0.187	0.33	3.4
H40457	612	2.31			11.12		0.098		92.5		2400	0.24		10		1.5		0.5		5.4	2100	0.21		3.4
X16374	740	8.07	33200	3.32	11.1	1.4	1000	11.9	93.6	0.011	2200	0.22	1.09	9	2	1.3	701	0.57	0.09	4.5	1760	0.176	0.47	2.9
G33676	705	1.46	30700	3.07	12.1	3.5	1250	8.4	114	0.001	800	0.08	1.74	14.3	3	1.3	1000	0.62	0.07	6.3	2430	0.243	0.52	3.4
X16416	831	12.75	32500	3.25	11	1.9	880	14.1	87.5	0.028	2400	0.24	1.05	9.8	2	1.6	758	0.56	0.09	3.9	2030	0.203	0.41	2.3
8416	834	1.15	28900	2.89	11.1	2	1020	7.9	105	0.001	2700	0.27	2.06	11.7	2	1.4	906	0.61	0.06	5.3	2190	0.219	0.49	3.2
G33738	853	0.83	30000	3	9.7	1.5	950	8.9	94	0.001	2300	0.23	1.43	10.4	2	1.2	676	0.51	0.09	4.3	1840	0.184	0.6	2.3
8438	819	2.15	28700	2.87	11.1	1.5	960	13.8	95.8	0.002	2000	0.2	1.7	10.2	2	1.5	569	0.59	0.23	3.8	2110	0.211	0.55	2.1
X16397	796	7.46	31800	3.18	10.5	2	990	7.8	89.8	0.014	1400	0.14	1.11	10.2	2	1.2	566	0.56	0.05	4.2	2030	0.203	0.4	2.1
G36541	857	4.25	700	0.07	8.5	7.5	960	9.6	170	0.005	300	0.03	7.84	17.5	2	1.3	29.5	0.56	0.025	8.6	3430	0.343	1.66	3.5
9327	373	0.71	22200	2.22	9.9	3.2	170	24.3	102.5	0.001	400	0.04	1.79	2.2	2	1.9	63.3	0.37	0.2	7.5	590	0.059	0.49	5.1
H43952	4199	6.8			5.6		0.067		104.5		3600	0.36		9.8		1.5		0.2		3	1770	0.177		2.4
G33716	694	6.34	32400	3.24	9.7	1.4	1050	7.3	98.2	0.02	900	0.09	1.45	11.1	3	1	507	0.52	0.06	4.4	1910	0.191	0.5	2.1
G33688	751	2.4	28800	2.88	9.8	2.3	1040	7.8	109	0.001	900	0.09	2.67	12.8	2	1.1	482	0.55	0.025	4.3	1990	0.199	0.56	2.4
8374	811	1.59	35300	3.53	11.7	2.9	1250	15.7	111	0.001	300	0.03	2.07	14.5	2	1.3	1140	0.64	0.05	5.4	2580	0.258	0.35	2.9
G33496	857	1.04			8.15		0.096		119.4		700	0.07		9.5		0.8		0.4		5.6	1770	0.177		2.7

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
G33706	808	1.53	37300	3.73	10.3	1.6	1070	5.6	83.9	0.002	400	0.04	1.03	10.8	2	1	683	0.56	0.025	4.5	2030	0.203	0.48	1.7
X06968	31	27.08			1.06		0.172		86.8		67000	6.7		11.5		3.5		0.05		1.4	640	0.064		1.5
X13074	90	49.38			0.92		0.061		40.5		97200	9.72		5.5		9.9		0.05		0.7	490	0.049		0.6
H41951	69	59.7	1500	0.15	1.1	6.1	1000	35	69.9	0.443	100000	10	1.22	8.2	44	2.2	15.7	0.1	0.37	1.8	540	0.054	1.36	0.9
X06596	61	32.38			0.71		0.118		93.9		61800	6.18		13.7		2.2		0.05		1.2	540	0.054		1.4
X10945	25	33.2	1600	0.16	1.9	1.3	300	6	104	0.127	38900	3.89	6.81	10.9	11	3.1	21.6	0.11	0.16	2.9	900	0.09	1.67	0.7
H41947	76	62.9	1800	0.18	1.3	2.3	1050	35.3	91.1	0.3	94200	9.42	0.42	7.1	26	2.2	15.6	0.08	0.35	2.9	760	0.076	1.62	1.2
X10920	104	60.3	1500	0.15	1.5	1.6	770	27.5	96.4	0.362	69500	6.95	1.32	10.1	21	2.6	17.9	0.08	1.47	2.8	770	0.077	1.67	0.9
H41949	43	92.1	1900	0.19	1.6	4.7	1090	13.8	91.6	0.49	67500	6.75	0.87	12.7	16	2	18.1	0.13	0.67	3.9	900	0.09	2.01	1.4
X06989	95	66.49			1.16		0.163		93.2		55600	5.56		12.6		2.5		0.05		2.1	730	0.073		2.3
X06607	75	31.14			1.03		0.15		85.3		60300	6.03		13.9		2.6		0.05		1.6	650	0.065		1.8
E217280	108	35	3400	0.34	2.7	1.8	1180	5.3	110.5	0.289	43500	4.35	0.3	15	13	1.7	65.1	0.17	0.17	4.5	1110	0.111	2.54	2
G35602	128	38.5	3900	0.39	1.9	1.7	1340	61.2	103.5	0.211	49600	4.96	0.85	14.8	9	1.7	58.9	0.12	0.33	3.9	1000	0.1	2.29	2.1
H41944	109	57.4	2300	0.23	1.9	1.8	1190	12.6	104	0.328	47900	4.79	0.48	16.4	15	1.1	34.9	0.12	0.11	4.4	850	0.085	2.41	1.9
X06618	287	117.35			0.97		0.178		108		41800	4.18		14.3		2.2		0.05		2.4	750	0.075		2.1
X13084	140	38.62			0.5		0.064		27.1		79900	7.99		7.3		2.5		0.05		1.1	340	0.034		0.3
E217300	314	81.7	2500	0.25	2.1	1.8	1810	17.7	118	0.598	45500	4.55	0.72	14.4	11	2.1	43	0.14	0.17	4.2	1040	0.104	2.57	3.6
X17591	185	22.49			1.33		0.02		64.5		20600	2.06		6.7		1.9		0.05		1.8	690	0.069		0.4
X10967	304	18.65	1100	0.11	1.6	1.8	700	22.9	70.7	0.134	51400	5.14	26.7	9.6	17	1.3	17.5	0.09	0.4	2.4	750	0.075	1.39	1
X06638	1282	65.92			1.01		0.348		106.9		57800	5.78		12.6		2.7		0.05		2.2	740	0.074		1.8
G35622	512	82.1	1600	0.16	2.1	1.7	1000	66	123.5	0.446	74800	7.48	28	15.4	17	3.7	109.5	0.12	1.09	3.7	1060	0.106	2.56	1.6
X17581	474	44.27			0.92		0.186		60.5		87000	8.7		8.3		2.4		0.05		1.9	530	0.053		1.2
X10985	501	10.4	1300	0.13	1.7	1.2	570	43.6	67.2	0.024	32900	3.29	9.35	7.8	11	1.3	31.5	0.1	0.23	2.1	730	0.073	1.5	0.8
G32024	1155	46.9	23700	2.37	3.9	2.9	1090	19.5	69.6	0.3	43400	4.34	0.87	14.1	9	1.5	424	0.24	0.35	3.8	1830	0.183	1.31	2.1
X66542	92	129.54		0.045	6.03	2	0.108	157.56	167.6			2.85	88.48	15.5		6.6	52	0.2		2.1		0.203		7.4
X29696																								
X66799																								
X26526																								
IC COMP 16	688	178.8		0.122	1.6	21.4	0.173	60.5	162			5.6	20.1	12		1	266	0.05		2.3		0.112		7.8
IC COMP 19	191	31.3		0.23	9.5	5.5	0.045	92.1	146.6			1.3	16	3		1	129	0.3		8		0.049		22.6
X30431																								
IC COMP 12	597	276		0.14	4.2	5.2	0.355	347.7	224.2			4	6.7	17		1.1	421	0.2		1.4		0.193		4.6
IC COMP 9	865	269.9		0.22	3.5	4.6	0.139	226	187.7			3.6	61	13		1.1	435	0.1		1.3		0.154		4.8
IC COMP 11	691	220.4		0.122	3.8	7.7	0.179	72.7	141.5			3.5	31.4	12		1	401	0.2		1.6		0.175		5.2
X30422																								
IC COMP 10	779	258.1		0.199	4.1	10.9	0.484	288	157.8			4.1	20.2	10		1	390	0.2		1.5		0.178		7.2
X26728																								
IC COMP 20	478	52.4		0.11	10.5	10.3	0.053	116.3	110.2			2	95.7	5		1.3	194	0.1		4.7		0.076		94.7
X30441																								
IC COMP 17	990	122.8		0.136	3.2	12.9	0.22	51.9	120.1			2.9	34.6	7		1.8	218	0.1		2.9		0.142		14.6
IC COMP 18	885	67.4		0.163	5.3	10.9	0.378	101.1	148.2			2.2	8.7	11		1.4	282	0.2		4.4		0.171		29.5
X30943																								
IC COMP 13	2021	111.3		0.131	5.4	13.1	0.226	359.2	141.1			3	6.1	8		1.1	385	0.2		3.9		0.17		8.5
X26658																								
X30968																								
X30961																								
H47161																								
X25074																								
X30176																								
X25084																								

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

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H47377	282	24.82		0.226	4.33	5.8	0.153	234.01	129.3			5.32	4.68	12.1	9	2.3	67	1.2		1.1		0.186		2
X25078																								
H47126																								
X67984																								
H47109																								
X29624																								
X67999																								
X30121																								
X25461																								
X30187																								
X29626																								
X28499																								
H48498																								
H47431																								
H48481																								
X29743																								
H47446	1200	5.6		3.517	5.43	6.8	0.13	91.14	109.6			6.07	2.03	15.4		2.1	167	0.3		1.6		0.166		2
H47430	715	4.78		3.377	6.42	6.2	0.116	82.5	93.1			5.71	2.56	15.1		3.4	193	0.2		1.7		0.184		1.8
X28009																								
X30222																								
X29781																								
X28815																								
X28802																								
X30583																								
H47438																								
X28837																								
H47123																								
X25501																								
X29656																								
X30218																								
H46835																								
H47391																								
X30235																								
X30331																								
X30742																								
X25471																								
X25463																								
X28805																								
X29833																								
X30361																								
X25482																								
X25489																								
X30224																								
X30139																								
X29646																								
X29685																								
X25896																								
X28827																								
X25886																								
H46817	975	2.9		1.468	7.22	2	0.16	22.7	181.6			2.89	5.64	17.6		1.5	118	0.05		1.6		0.279		1.7

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X29681																								
X24855																								
X25877																								
X25875																								
X30227																								
H46831																								
X29789																								
H47403	926	25.93		2.119	6.45	1.9	0.161	7.16	134.4			3.74	2.72	17.5	2.8	1.7	189	5.769230769		1.3		0.271		1.3
X30208																								
X29686																								
X29636																								
H46789	861	6.62		3.623	7.3	1.9	0.146	59.67	141			2.95	1.99	13.5		1.4	326	0.6		1.6		0.244		1.2
X29871																								
X28535																								
X29442																								
X29503																								
H46842	901	2.86		3.041	7.86	2	0.194	33.3	126.8			2.2	4.78	20.1		2.1	190	0.3		1.5		0.335		1.9
X28545																								
H46829	1282	2.52		2.843	7.45	2	0.177	29.4	132			2.07	3.46	18.8		1.2	214	0.4		1.7		0.307		1.5
X29431																								
H46801	1552	2.97		1.087	6.26	1.8	0.145	28.86	131.1			2.86	5.23	14.6		1.2	199	1.1		1.5		0.252		1.3
X26345																								
X29666																								
X29422																								
X29421																								
X30596																								
X30198																								
H46808																								
X29407																								
H46881	1325	16.46		2.254	6.2	1.8	0.171	21.24	114.6			2.8	3.53	19.8		1.6	248	0.3		1.1		0.281		1.2
X30711																								
H46870	1021	1.97		2.61	6.24	2	0.177	24.65	97.8			1.53	2.17	19.7		1.6	224	0.5		1.2		0.284		1.1
H46841																								
H47142																								
X66971																								
X67793																								
X67816																								
X28131																								
X28077																								
X28151																								
X67772																								
X28121																								
X25232																								
X25276																								
X28087																								
H47484	323	7.64		3.138	10.61	4.5	0.1	8.85	117.4			1.36	6.27	9		1.3	416	0.4		5.9		0.212		3
X25254																								
X67805																								
X28141																								
X28112																								

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X25264																								
X25243																								
X67806																								
X67782																								
X28099																								
H47469	744	35.07		1.116	8.07	5.9	0.147	25.64	95.1			0.68	5.94	15.3	7.5	1.6	284	1.2		3.1		0.264		2.3
X28066																								
X25251																								
X67761																								
X25221																								
X25211																								
X27667																								
H48695	51	38.47		0.027	3.95	4.9	0.023	35.74	166.2			4.13	11.37	24.1	7.5	3.7	45	0.2		2.4		0.195		52.5
X67731																								
H47241	102	16.48		0.07	1.48	7.8	0.009	45.47	160.2			3.21	10.86	6.7		2.3	46	0.1		1.4		0.086		3.9
H47325																								
X28273																								
X24881																								
H47307	84	25.5		0.2	1.22	10.7	0.013	481.46	129.4			1.93	37.41	4.5		1.7	84	0.3		0.5		0.079		2.1
X28256																								
X67618																								
X26088																								
X28851																								
X28211																								
X24925																								
X27364																								
X28751																								
X25998																								
X67849																								
H48761	152	28.42		2.44	7.51	7.4	0.123	69.88	153.2			6.35	2.71	19.3		2.4	107	0.2		0.7		0.191		3.7
X28301																								
X27427																								
X27368																								
X67459																								
X25974																								
X27532																								
H47353																								
X27669																								
H46781																								
X26107																								
H46949	181	11.06		0.126	5.46	2.3	0.16	56.56	184.2			3.45	6.82	6.1		2.5	122	0.1		0.7		0.168		2.4
X28314																								
IC COMP 14	101	13.1		0.111	5.9	3.4	0.076	269.7	142			4	3.3	9		1.9	114	0.3		1.9		0.163		3.7
X26159																								
X66869																								
X24935																								
H48859																								
H46744	93	10.84		0.18	2.1	11.2	0.077	28.16	168.8			2.76	2.37	6.2		1.7	89	0.4		3.3		0.131		4.2
X28374																								
X27531																								

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X67741																								
H48926																								
X66721																								
X28375																								
H48900	104	9.52		0.052	5.12	10	0.094	33.72	155.8			3.74	5.9	10	3.1	1.4	58	0.2		1.5		0.207		2.2
X24946																								
X28325																								
H48432																								
X25373																								
X26085																								
X26169																								
X29259																								
X25718																								
H48749	159	22.68		0.073	7.2	5.5	0.095	127	222.3			5.1	5.97	15.3		4.5	56	0.4		1.2		0.176		4.3
X29374																								
X27359																								
H47552	184	20.59		0.071	7.7	2.3	0.086	62.95	190.9			2.93	131.78	11.1		3.1	91	0.2		3.2		0.175		6.8
X28931																								
X67553																								
X27334																								
HCT-6	133	23.28	10120	1.012	4.69	5.4	0.135	102.06	236.3		43400	4.34	34.38	16	10	5	102	0.2		2	1610	0.161		4.1
HCT-3																								
HCT-5																								
HCT-2																								
HCT-4																								
HCT-1																								
X27447																								
X26179																								
H48559A	124	41.01		1.625	5.15	1.2	0.144	37.66	103.3			2.27	104.33	5.2	2.6	3.9	170	5.769230769		1.5		0.145		8.2
H48504	88	17.23		0.044	3.43	3.1	0.046	81.23	129.5			4.74	61.47	10	15.6	4.3	67	0.2		1.2		0.113		4.2
X25438																								
X29384																								
H47085																								
HCT-3	87	41.94	5810	0.581	3.52	2.1	0.088	77.76	197.6		38900	3.89	66.48	12	8	7.1	99	0.2		2.6	1330	0.133		7.1
IC COMP 22	211	9		0.184	7.5	2.5	0.125	77.9	81.4			4.5	5.2	10		2.7	119	0.4		2.4		0.225		2.9
X28362																								
X29355																								
X26055																								
X27273																								
H48517	161	33.67		0.085	5.55	2.3	0.082	49.05	191.3			2.63	1.39	15.8		3.9	85	0.2		2.7		0.198		4.8
X66829																								
X67543																								
H46962	164	24.65		0.155	6.53	3	0.166	66.34	79.5			2.22	18.21	10.6		2.5	187	0.2		1.3		0.236		4.9
IC COMP 23	428	3		0.251	7.3	3.1	0.102	511.4	153.8			4.3	18.4	11		2.2	117	0.4		2.9		0.195		3.1
H48907																								
H48909																								
X66552	63	52.16		0.042	5.16	1.7	0.25	219.56	116.4			2.32	95.46	13.5		3.1	120	0.2		2		0.173		6.1
H48556																								
X28877																								
X28785																								

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm
X25843																								
X25045																								
H48852																								
IC COMP 25	320	14.5		0.177	5.1	4.9	0.105	65.7	194.5			4.7	6.5	10		2.1	109	0.3		1.6		0.168		2.9
X28887																								
X67563																								
X27659																								
X28291																								
X29942																								
X28922																								
X28897																								
X26039																								
X28867																								
X25308																								
H48532	75	86.07		0.478	4.7	1.8	0.09	65.46	118.3			0.72	1.79	11.4	3.2	5.6	139	1.04		1.9		0.135		6.9
H46895	377	19.72		1.735	8.82	3.5	0.127	33.51	183.6			3.81	2.47	17.1		3.2	206	0.2		2.1		0.239		10.2
X25832																								
X66819																								
X25301																								
H48305	689	12.97		0.382	1.45	19.1	0.06	286.04	155.1			5.87	3.63	6.6		1	85	0.3		1		0.109		2.9
H47578	280	7.27		0.253	8.7	2.9	0.136	25.84	210.7			4.5	2.73	13.6		2.1	242	0.4		1.4		0.223		2.8
H48210	389	19.46		1.14	3.43	20.5	0.09	61.72	205.3			3.69	3.75	11.1		2	61	0.4		2.8		0.249		2.1
X29099																								
X29231																								
X25329																								
X24966																								
H48913	331	7.5		0.381	5.6	12.8	0.116	74.06	202.9			3.99	2.59	12.4		1.5	92	0.3		2.2		0.249		2
X28384																								
H48312																								
X27515																								
X67506																								
X25831																								
H47015																								
X67573																								
X24984																								
X67495																								
X66846																								
H48238	452	23.64		1.638	1.67	13.1	0.052	41.15	145.7			3.92	1.92	3.9	8.9	1.8	123	0.4		0.9		0.114		1.7
H48929	530	7.81		1.21	3.8	19.3	0.076	14.49	153.9			4.04	3.53	10.9		1.3	84	0.3		2.7		0.261		1.4
X26126																								
H48872	685	14.61		0.121	8.15	3.1	0.104	45.63	178.5			5.64	3.14	12.3		3.1	149	0.4		1.4		0.198		3.6
X29899																								
X26416																								
X67502																								
HCT-5	592	19.58	3010	0.301	2.66	20.2	0.096	126.87	218.8		52800	5.28	4.91	11.2	8	3.6	145	0.2		2.2	1830	0.183		3.3
IC COMP 15	471	2.1		0.4	7	3.7	0.105	105.3	126.7			3.5	3.1	10		2.3	140	0.4		2.8		0.2		2.6
X66938																								
X67914																								
X24989																								
H46894	601	19.28		1.274	7.98	3.7	0.082	27.64	223			4.83	2.97	22.9		4.5	228	0.4		2.7		0.279		10.3

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

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X25865																								
H48278																								
X67556																								
X66926																								
H48251	692	34.39		0.407	2.7	23.8	0.079	40.46	132.1			4.51	2.41	10.9		1.6	171	0.4		2.6		0.185		2.1
X26408																								
H48885	509	23.47		0.064	7.3	5.1	0.122	83.59	197.2			3.85	16.74	14.7		1.7	93	0.1		1.5		0.214		2.8
X27628																								
H48878																								
X29958																								
X25626																								
X25665																								
H48248																								
HCT-2	608	22.23	15730	1.573	6.15	3.3	0.122	27.96	211.1		40200	4.02	2.69	19.1	3	15.1	216	0.3		2.8	2300	0.23		6.9
X67517																								
X26407																								
X25655																								
HCT-4	106	103.69	8700	0.87	5.42	1.7	0.147	61.05	209.8		6000	0.6	47.46	8.8	2	8.4	217	0.3		1.8	1570	0.157		4.8
H48265	723	16.82		2.316	1.84	12.6	0.049	9.18	114.2			3.03	2.24	5.3	8.3	1.4	137	1.1		1		0.125		2.2
X25451																								
H47546																								
X67751																								
X25652																								
X25854																								
IC COMP 24	965	20		0.707	3.7	15.7	0.095	145.9	194.6			3.6	5.6	11		2.5	128	0.2		3		0.235		4.1
H48336	1077	14.81		0.254	5.68	17.7	0.118	46.85	118.5			5.11	8.6	14		1.7	158	0.3		2.4		0.301		3.1
X26501																								
IC COMP 21	1072	8		0.109	4	27.1	0.097	95.8	129.5			4.4	6.4	11		2.4	180	0.3		2.3		0.249		1.9
X26837																								
X25432																								
X29979																								
X67523																								
H47103																								
X25662																								
X67498																								
X67485																								
X67528																								
IC COMP 2	499	357.1		0.176	3.7	5.1	0.171	47	137.8			2.9	2.8	13		0.8	209	0.1		1.2		0.142		17.8
X29077																								
H48545	140	205.83		0.327	7.29	0.8	0.152	48.65	176.1			0.28	63.88	1.6		4.8	190	0.2		1.1		0.177		3.3
X29093																								
X25864																								
HCT-1	846	5.54	21620	2.162	5.61	2.2	0.136	34.8	183.5		24200	2.42	3.85	14.6	3	4.1	197	0.4		1.9	2310	0.231		1.4
X25435																								
X29089																								
X25132																								
H47057	1300	12.57	16080	1.608	10.9	3.2	0.17	133.03	143.8			2.58	3.11	13.9		2.9	347	0.1		4.3		0.246		4.4
X25728																								
X25727																								
X26791																								

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

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X30399																								
X25188																								
X67591																								
X29971																								
IC COMP 1	1504	67.1	3320	0.332	5.1	2.5	0.17	67.5	134.7			2.5	4.5	13		0.7	352	0.2		1.7		0.193		1.8
X25611																								
X28052																								
X25175																								
X30379																								
X28196																								
IC COMP 5	538	49.9	14040	1.404	3.9	17.8	0.074	9.8	129.2			1.7	10.4	9		2.3	199	0.2		2.5		0.259		1.7
X26469																								
IC COMP 6	1461	43.2	6720	0.672	4.3	16.2	0.127	253.7	119.2			2.1	7.3	10		1.3	298	0.2		2.3		0.313		2
X25155																								
X27062																								
X30386																								
IC COMP 4	432	26.6	34490	3.449	5.8	21.9	0.114	6.7	137.1			0.9	7.2	14		1.1	309	0.3		4.9		0.38		2.5
IC COMP 8	2314	10	7510	0.751	4.8	10.6	0.118	22.7	118.1			1.6	7.3	12		1.5	329	0.2		2.5		0.226		2.7
X27058																								
IC COMP 3	682	14.6	24820	2.482	3.6	7.1	0.089	4.8	69.4			0.9	3.5	9		1.2	264	0.2		1.4		0.218		1.2
X27066																								
IC COMP 7	1736	21	7930	0.793	4.3	16.7	0.07	10.6	113.4			1	3.5	10		1.9	403	0.2		4.8		0.202		5.9
X28031																								
X25165																								
X28019																								
X25111																								
X25091																								
X25101																								
X25122																								
X25143																								

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H42801	197	3.3	2.5	15.2	20.4														
H42619	214	2.6	2.3	23.6	11.3														
H46054	224	1.9	4.2	23.9	10.5														
H46211	186	0.9	6.2	10	13.9	13.03	0.21	0.66	0.02	12.18	3.53	0.45	0.01	0.22	0.277	59.88	0.02	0.51	8.3
14541	192	0.8	5.1	331	4.9	10.78	0.17	0.2	0.01	9.48	2.68	0.34	0.005	0.27	0.135	67.84	0.01	0.43	6.64
H46155	233	2	2.4	18.2	12														
H46222	177	1	8	15	8.5	14.8	0.3	0.51	0.01	13.38	4.02	0.62	0.01	0.23	0.236	56.31	0.02	0.51	8.92
H46210	284	0.3	3.8	17.9	1.2														
H46213	218	0.8	7.5	82	13.6	14.37	0.15	0.78	0.04	11.11	2.91	3.61	0.05	0.17	0.345	57.31	0.01	0.67	7.89
H46198	240	0.7	4.2	81.3	4.5														
H46209	270	0.9	9.9	10	10.7	17.35	0.27	0.63	0.01	12.08	4.6	0.42	0.01	0.31	0.367	54.43	0.01	0.84	8.48
H46131	219	1.3	2.2	25.6	14.5														
H46175	209	0.6	2.9	70.6	10.4														
H46132	198	7.1	5.6	74	12	15.02	0.15	0.7	0.005	11.7	4.08	1.16	0.02	0.23	0.343	57.68	0.01	0.45	8.21
H42885	191	1.1	3.5	71.6	10.6														
H46123	180	0.6	4.3	82.9	8.2														
H46212	230	0.4	4.7	19.5	10.7														
H46216	226	1.5	8.8	44	13.1	14.5	0.2	1.11	0.01	13.39	3.45	1.85	0.03	0.21	0.485	54.09	0.02	0.74	9.3
H46219	240	1.4	8.8	67	25.6	14.63	0.18	1.24	0.02	11.31	3.24	2.12	0.03	0.23	0.387	55.8	0.02	0.63	8.73
H42884	206	1.8	4.3	112	12.4	16.09	0.16	5.36	0.005	6.52	4.58	0.59	0.01	0.3	0.329	53.22	0.05	0.4	10.75
H42882	221	1.6	2.6	99.1	6.7														
H42862	310	2.2	4	166	19.3														
H42881	161	2.4	4.3	26	9.3	12.25	0.1	10.46	0.005	6.77	3.46	0.65	0.02	0.22	0.249	45.76	0.07	0.34	11.6
H42887	198	0.8	3.6	110.1	8														
H46135	116	2.3	3.8	28	5	9.83	0.1	0.7	0.005	9.46	2.65	1.04	0.03	0.14	0.26	67.78	0.01	0.23	6.31
H46134	132	3.2	2.6	28.8	3.7														
H42772	225	1.8	6.1	30.4	7.6														
H46076	209	0.6	3	96.3	7.4														
H42886	180	1	3.6	145	9.1	13.51	0.24	5.61	0.005	8.66	2.88	3.19	0.05	0.16	0.292	53.32	0.05	0.35	9.8
H46215	184	0.5	3.6	43.9	5.4														
H42880	151	1.1	2.7	71.6	7.2														
H42895	188	1.6	2.8	103.8	8.3														
H42879	174	1.8	4.5	112	13.7	14.68	0.3	5.78	0.005	6.25	3.59	2.43	0.05	0.21	0.308	55.24	0.04	0.36	9.09
H42731	199	2.1	5.5	752.7	10.5														
H42752	258	2.4	4.9	77.5	16.1														
H46220	301	0.4	5.8	397.9	14.8														
H46221	303	0.7	12.1	354	53.8														
H46221	148	1.4	16.3	246	42.2	12.3	0.15	6.22	0.01	9.15	0.85	7.09	0.35	0.1	0.194	51.59	0.03	0.93	9.44
H42695	185	1	10.8	311	36.5	17.4	0.56	2.98	0.005	7.19	3.11	2.73	0.37	2.45	0.307	55.86	0.03	0.52	5.37
H42683	178	2.2	9.3	171	14.9	16.93	0.28	4.89	0.005	7.56	3.25	2.99	0.44	1.97	0.355	53.45	0.03	0.59	6.09
58437	228	3.7	7.3	28	13.6	15.75	0.12	0.39	0.02	14.6	4.37	0.47	0.005	0.24	0.484	53.1	0.01	0.51	9.59
H42831	270	1.7	2.6	19	12.3														
14523	157	1.1	5.2	837	9.8	8.52	0.19	0.2	0.01	11.68	2.05	0.51	0.005	0.27	0.125	66.15	0.02	0.38	7.78
H42816	233	1.9	5.9	13.6	27														
H42828	291	0.7	3.6	26.9	7.4														
H42845	271	4	4	24.8	11														
H42832	249	3.3	8.7	38	16.5	15.42	0.25	0.4	0.01	14.43	3.87	0.68	0.005	0.35	0.328	53.75	0.04	0.58	9.7
H42834	271	1.7	4.2	12.6	14.7														
H42841	206	3.1	4.3	23	11.4														
H42847	253	2.6	3.2	29.5	11.8														

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H42818	167	3.1	10.8	25	25.3	15.23	0.22	0.34	0.01	10.65	3.83	1.09	0.01	0.31	0.255	58.92	0.15	0.64	7.95
H42814	229	1.1	4.4	101.5	11.6														
H42815	192	7.4	9.9	15	37	15.78	0.19	0.32	0.01	10.31	4.12	1	0.01	0.31	0.236	59.25	0.1	0.63	7.62
H42809	395	3.5	6.1	21.2	11.3														
H42837	208	3.9	8.3	18	16.7	17.86	0.2	0.46	0.01	11.44	4.71	0.66	0.005	0.38	0.36	55.06	0.03	0.49	8.16
H42810	204	5.4	13.3	16	31.7	16.07	0.22	0.46	0.01	10.75	4.2	1.02	0.01	0.31	0.381	57.75	0.11	0.65	7.85
H42696	195	1.7	3.4	165.7	18														
H42819	219	2	4.1	7.2	16.9														
H42843	242	4.4	4.9	27.1	10.8														
H42835	222	1.3	4.5	33.1	11.1														
H42838	261	3.2	4.3	29.8	8.8														
H42844	253	7.7	8.3	13	15.4	17.6	0.18	0.4	0.01	9.73	4.67	0.54	0.01	0.36	0.319	58.45	0.02	0.55	7.05
H42817	206	3.9	12.6	22	25.5	17.28	0.17	0.38	0.01	8.28	4.39	1.18	0.01	0.34	0.278	59.75	0.07	0.77	6.85
H42821	183	4.4	9.7	21	29.8	16.51	0.18	0.39	0.01	7.47	4.09	1.05	0.005	0.36	0.277	62.15	0.13	0.74	6.46
H42848	325	7.5	8.3	46	9.5	17.34	0.2	0.51	0.01	11.09	4.69	0.66	0.01	0.33	0.466	55.71	0.01	0.7	7.75
14507	286	3	10.6	74	36.4	17.73	0.26	0.36	0.02	7.82	4.84	0.96	0.01	0.24	0.306	60.27	0.01	0.84	6.16
H42846	197	7.2	6.2	11	14.5	16.38	0.19	0.52	0.01	10.53	4.39	0.47	0.005	0.36	0.417	58.45	0.06	0.54	7.5
H42813	213	3.1	9.9	34	29.7	17.29	0.16	0.5	0.01	9.1	4.63	0.75	0.01	0.32	0.361	58.97	0.05	0.62	7.17
H42682	251	2.1	5.9	151.2	12.5														
H42842	211	7	9.1	21	20.1	17.62	0.14	0.47	0.005	8.82	4.73	0.49	0.005	0.39	0.335	59.71	0.02	0.44	6.74
H42812	139	2.6	4	14	17.1														
H42835	223	2.3	6.9	47	15.6	16.31	0.23	0.5	0.005	9.6	4.01	0.95	0.01	0.36	0.371	59.75	0.03	0.46	7.23
H42675	324	5.2	5.6	72.6	10.5														
H42673	266	5.3	6.1	326.5	18.7														
H42686	235	1	5.3	76.2	11.9														
H42671	251	3.1	5.2	50.8	13.3														
H42839	211	6.6	7.6	15	16.6	17.17	0.17	0.57	0.01	7.62	4.58	0.5	0.005	0.38	0.452	61.71	0.02	0.52	6.04
H42668	240	3.3	9.6	106	16.8	17.27	0.23	0.61	0.01	9.78	5.23	1.82	0.08	0.17	0.387	56.45	0.005	0.67	7.05
3008	248	4.7	6.7	79	26.9	17.1	0.2	0.29	0.005	7.46	5.18	1.4	0.04	0.15	0.267	60.87	0.01	0.52	6.34
49313	218	4	3.2	28	23.7	17.7	0.23	0.06	0.005	7.22	5.74	1.5	0.01	0.26	0.327	61.03	0.01	0.53	5.18
H42676	262	10.4	8.5	84	20.9	19.44	0.2	0.58	0.01	8.41	5.84	1.71	0.02	0.18	0.474	55.19	0.01	0.69	6.94
H42666	266	4.6	10.7	227	22.3	17.51	0.23	0.48	0.005	9.37	5.2	2.33	0.09	0.16	0.358	56.95	0.01	0.75	6.57
H46136	165	1.8	2.9	48.5	6.6														
H42672	223	5.2	7.7	63	19.5	17.46	0.22	0.63	0.005	8.07	5.46	1.71	0.06	0.15	0.394	58.34	0.01	0.61	6.63
H42689	254	2.2	4.8	100.1	16.2														
H42663	282	1.5	5.4	77.7	11.2														
3048	249	3.8	12.9	283	12.2	15.7	0.24	0.64	0.005	7.51	5.42	1.72	0.14	0.19	0.299	62.02	0.01	0.4	5.5
H42668	272	2.3	4.8	103.4	10.6														
H42685	255	3.2	8.1	138	22.5	20.5	0.2	0.81	0.005	8	5.97	2.17	0.08	0.31	0.467	53.92	0.005	0.6	6.81
H42688	98	2.1	5.8	646.8	4.7														
H42687	233	3.7	7.8	69	22.3	17.95	0.18	0.74	0.005	7.52	5.55	1.34	0.18	0.19	0.397	59.25	0.01	0.5	6.19
H42669	208	2.8	10.8	141.4	9.7														
H42701	231	1.5	10.3	181.1	13.4														
H42699	227	2	9.8	133	23.2	18.04	0.29	0.56	0.005	7.24	4.02	3.41	0.16	1.49	0.413	58.26	0.01	0.52	5.56
H42684	247	1.9	23.3	648.8	13.1														
H42707	213	3.3	6.1	166	22.1	16.39	0.18	1.21	0.005	8.85	4.72	1.23	0.1	0.22	0.33	58.54	0.01	0.47	7.36
H42703	278	1.9	5	99.9	15.8														
H42681	219	6	9.3	211	33.3	16.6	0.19	1.45	0.005	9.1	5.24	1.62	0.28	0.19	0.386	56.13	0.005	0.49	7.62
H42693	232	2.9	13.8	228	50.3	18.01	0.25	0.51	0.005	7.04	4.95	2.31	0.28	0.19	0.371	60.55	0.01	0.5	4.8
H42694	263	3.2	7.6	91.7	13.8														

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
H42680	238	5.6	6.8	76.7	10.4														
H42697	216	2.3	8.6	158	23.3	17.98	0.43	1.05	0.005	7.89	5.11	2.3	0.32	0.19	0.399	56.98	0.01	0.51	6.83
H42704	224	2.7	6.5	332	21.9	17.13	0.19	1.5	0.005	8.81	4.59	2.67	0.18	0.21	0.344	56.61	0.01	0.45	7.3
H42710	241	2	4.5	306.9	13														
H42706	247	1.9	4	212.5	10.6														
H42664	201	1.9	10.4	158	14.9	15.95	0.27	1.25	0.005	10.68	4.56	2.59	0.68	0.14	0.353	55.53	0.01	0.5	6.9
H42702	219	2.8	7.9	135	26.3	17.24	0.25	1.58	0.01	7.55	4.98	2.37	0.18	0.22	0.367	57.28	0.01	0.49	7.17
H42708	262	2.4	5.4	111.1	14.9														
H42674	207	5.9	6.8	239	21.4	17.6	0.27	1.98	0.005	6.27	5.61	1.93	0.3	0.2	0.399	58.16	0.01	0.47	6.66
H42709	218	2.2	6.2	344	20	16.57	0.18	2.49	0.005	7.94	4.89	2.12	0.28	0.2	0.332	55.88	0.01	0.45	8.3
49852	215	3.8	6.8	414	21.8	16.49	0.2	3.28	0.005	9.01	4.39	2.93	0.32	0.47	0.34	53.02	0.01	0.43	8.83
H42678	219	6.4	7.5	62	24	16.34	0.18	3.52	0.005	7.52	4.95	2.17	0.25	0.18	0.39	55.56	0.02	0.5	7.29
H42670	211	3.4	9.1	181	27.7	17.82	0.2	2.04	0.005	6.57	5.28	2.1	0.41	0.2	0.406	57.22	0.01	0.44	6.38
H42698	233	1	4.9	65.2	13.1														
H42690	221	2.1	6.7	118	21	17.18	0.62	3.07	0.005	7.04	4.64	2.56	0.21	0.69	0.372	56.05	0.03	0.48	6.2
H42691	466	3.2	6.8	134.3	22.7														
H42677	238	3.7	5.5	58.8	14.1														
H42665	240	2.5	8.4	130.8	13.5														
3027	16	6.1	33.9	368	89.1	14.09	0.07	1.81	0.005	10.19	2.33	1.75	0.26	2.39	0.337	61.2	0.01	0.85	4.28
H46138	99	1.4	11.5	83.6	34.4														
H46137	113	1.4	10.6	129	42.2	17.47	0.26	5.1	0.005	5.82	3.87	3.51	0.24	0.2	0.26	55.49	0.03	0.59	6.14
H46142	107	1.4	9.7	72	45.8	17.08	0.35	6.98	0.005	5.59	4.34	2.11	0.18	0.26	0.247	54.3	0.05	0.57	7.1
H46144	110	0.8	9.6	130	51	17.06	0.33	6.38	0.005	5.47	3.98	2.78	0.24	0.21	0.26	53.88	0.05	0.58	6.99
H46139	105	0.8	9.6	69	41.8	17.01	0.32	6.94	0.005	5.69	4.22	2.17	0.19	0.23	0.247	54.12	0.05	0.58	7.45
H46143	123	0.5	9.5	75.4	36.3														
H46141	118	1.3	8.8	68.6	30.9														
X66086	210	13.9	15.6	67	9.1														
X66087	277	2.3	10.6	72	14.4														
X66116	283	1.6	17.2	76	21.4														
X66117	295	7.6	16.9	95	20.6														
X66217	171	0.5	7.7	73	25.7														
X63932	209	1.9	4.7	60	19.9														
X63953	286	0.6	4.6	127	17.8														
X63972	151	0.9	15	130	179														
X63980	244	1.3	4.2	74	13.3														
X67079	198	3.1	4.2	40	6														
X66229	212	3.5	7.6	628	22.4														
X66249	276	2	7.3	364	7.6														
X66250	201	1.2	8.7	294	27														
X66286	229	5.1	11.4	82	12.9														
X66287	246	2.2	9.9	146	17.8														
X66304	234	2	9.9	208	14.5														
X66305	239	0.9	14.8	103	14.2														
X66332	249	2.7	11.8	184	47														
X66338	237	2.1	9.8	139	32.4														
X66340	234	1.1	11.1	55	17.7														
X66346	256	1.1	15.2	43	50.9														
X66347	257	0.6	14.1	136	19.1														
X66373	241	7.8	8.7	331	13.5														
X67132	228	1.7	22.9	1140	15.6														

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

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X67133	250	7.1	11.8	202	12.4														
X67143	168	8	12.3	101	38														
X67144	154	7.5	12.2	50	35.7														
X67174	219	10	10.9	81	21.9														
X67175	234	9.6	10.2	63	25.4														
X67268	270	4.3	7.3	105	5.6														
X67292	204	1.8	8.3	66	31														
X67297	146	1.9	23.8	99	44.4														
X67322	242	2.2	7	34	12														
X67347	211	0.8	5.1	182	19.6														
X67354	318	0.9	16.5	142	23														
X67374	227	2.3	5.4	58	27.7														
X67396	211	2.7	5	170	25.7														
X67432	211	3.6	5.8	99	24.7														
X67438	217	1.3	5.7	51	18.3														
S156638	176	1.6	2.6	26	14.6														
S156644	194	2	3.4	27	15.1														
S156654	198	2.1	4.4	60	13														
S156683	194	1.3	3.1	237	12.2														
S156689	195	2.6	3.8	24	10.5														
S156694	163	3.3	4	28	11.3														
S156698	99	1.9	10	67	38														
S156709	213	2.6	5.6	2060	17.2														
S156710	110	2.5	10.1	250	38.2														
S156717	169	2.4	4.2	514	19														
S156723	168	1.7	4.7	253	17.8														
S156734	164	2	4.6	389	14.7														
S156743	241	3.7	7	100	20.7														
S156752	180	3.7	6	883	18.5														
S156759	6	3.5	19.9	166	68.9														
S156769	207	3.4	2.8	227	6.8														
S156780	2	1.4	17.4	104	64.5														
S156784	196	1	3.8	58	13.5														
S156790	211	0.8	4.2	509	15.5														
S156800	202	0.7	5.3	328	17.7														
S156810	2	0.9	19.4	83	72.3														
S156824	197	0.8	4	378	17.4														
S156829	197	0.7	4.8	176	15.6														
S156835	116	5.5	2	20	8.5														
S156847	152	1.9	3.9	52	7.6														
S154641	121	5.5	8.4	77	47.1														
S154644	225	4.2	9	114	23.3														
S154647	404	4.2	17.8	88	51														
S154955	194	3.6	13	127	31.6														
S154956	119	3.2	9.9	186	28.4														
S154961	133	2.4	7.7	305	25.7														
S154962	89	1.6	6.6	293	28.4														
S154973	92	3.9	7.9	49	28.1														
S154974	158	7	8.4	92	27.6														
S154653	189	2.7	10.3	132	22.7														

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S154666	5	2.4	35.7	140	114														
S154696	178	6.9	12.1	122	17.3														
S154697	226	5.7	11.2	118	9.4														
S154739	214	4.4	8.7	66	9.1														
S154746	136	4.9	8.8	56	25.8														
S154766	295	2.2	39.2	154	40.8														
S154788	236	2.3	8.7	33	13.5														
S154798	193	5.2	13.1	58	24.3														
S154805	215	2.4	11.7	30	12														
S154841	213	2.9	5.4	285	12.6														
S154857	196	4.2	3.8	31	5.1														
S154858	343	3.4	39.1	163	26.4														
S154871	152	1	17.6	85	202														
S154872	143	2.9	5.8	48	36.1														
S154884	198	4	4.5	39	5.5														
S156852	248	0.7	5	33	25.2														
S156860	192	0.7	4.2	98	12.1														
S156877	177	2.7	4	148	11														
S156889	156	2.2	4.6	24	9														
S156900	267	1.5	7.1	90	25.2														
S156913	231	1.8	6.3	45	18														
S156922	158	0.8	4.3	56	12.7														
S156942	194	4.4	7	49	18.5														
S156970	201	2	5.3	190	13.9														
S156983	108	2.8	5.8	30	17.1														
S156999	201	1.1	5.7	144	16.4														
S157030	139	1.7	2.4	70	4.3														
S157047	172	3.1	6.3	37	28.4														
S157055	147	1.2	8.1	97	19.8														
S157066	173	4.2	5.4	83	16.5														
S157078	231	3.1	9.3	694	12.4														
S157082	235	4.6	9.1	208	5.8														
S157109	218	2.3	8.4	179	13.6														
S157122	237	2.7	9.8	158	10.1														
S157132	262	4.1	8.5	365	14.5														
S157181	205	3.5	7.1	164	29.1														
S157212	257	2.9	10.7	382	13.9														
S157239	243	5.7	7.4	350	9.2														
S157266	246	1.5	6.8	123	18.6														
S157287	239	1.3	4.8	75	15.5														
S157300	187	4.3	4.4	355	10.7														
S154899	255	7.6	10.8	159	18.8														
S154900	290	5.6	11.2	72	13.2														
S154925	283	5.2	11.6	211	11														
S154926	231	5.2	14.5	183	11.3														
S154942	155	5.8	8.5	62	27.5														
S154943	200	1.7	20.8	137	217														
S155508	351	4.8	15	209	50.5														
S155509	7	2.8	31.8	154	128														
S155017	142	2.5	11.5	91	33.4														

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S155048	245	2.3	8.9	177	11.6														
S155067	245	2.4	10.2	60	10.5														
S155075	243	1.6	5.9	54	17.3														
S155098	264	2.6	6.9	56	19														
S155112	198	2.4	4.3	364	10.6														
S155119	94	0.9	10.7	62	46.7														
S155125	184	2.2	3.7	65	4.6														
S155147	173	3.8	2.7	94	3.7														
S157321	262	3.7	10.8	50	25.1														
S157345	160	1.9	8.7	109	24														
S157360	225	5.3	7.7	380	18.3														
S157388	168	7.9	11.7	109	17.3														
S157426	196	4.9	5.1	263	11.7														
S157460	232	3.2	3.8	76	9.1														
S157484	151	2.7	5.7	146	15.7														
H42636	246	2.4	1.8	35.9	17.4														
H42628	181	1	3.1	37	10	13.11	1.11	0.01	0.01	23.02	4.24	1.06	0.02	0.12	1.254	46.85	0.03	0.43	8.51
H42630	235	5.1	4.6	54	18.8	17.47	0.32	0.16	0.01	7.63	5.79	1.64	0.02	0.14	0.372	60.55	0.01	0.55	5.07
H42623	232	4.6	5.6	60	23.7	16.9	0.24	0.22	0.01	8.46	5.1	2.12	0.04	0.15	0.38	59.34	0.005	0.56	6.36
H42631	250	6.5	5.2	81	17.2														
H42624	255	0.8	3.3	58.5	13														
H42659	240	2.2	4.4	125.3	25.7														
H42652	206	6.3	7.4	70	25.9	17.24	0.26	0.54	0.005	8.48	5.64	2.38	0.07	0.32	0.4	58	0.01	0.49	6.17
H42643	212	6.9	6.1	101	22.6	17.85	0.23	0.35	0.01	7.89	5.11	3.23	0.09	0.79	0.393	57.81	0.01	0.49	5.33
H42641	253	8.1	6.5	175	24.5	17.99	0.24	0.39	0.005	8.29	5.01	3.03	0.11	0.97	0.406	57.55	0.01	0.47	5.27
H42657	236	3.3	7.9	108.3	20.2														
H42637	219	4	7.6	81	29.9	17.23	0.34	0.32	0.005	7.31	5.22	2.5	0.08	0.58	0.391	60.33	0.01	0.53	4.82
H42639	211	5.4	7.8	108	28.6	16.84	0.39	0.61	0.01	9.33	4.4	3.31	0.11	1.27	0.407	56.92	0.01	0.53	5.52
H42625	211	2	6.7	62	20.8	16.24	0.69	0.4	0.01	7.55	4.45	3.87	0.07	0.13	0.351	60.12	0.03	0.52	5.34
H42648	234	4.4	5.6	83	21.4	17.37	0.26	0.47	0.005	7.77	4.82	2.67	0.09	1.58	0.381	58.51	0.01	0.62	4.76
H42632	212	7.8	8.9	82	26.5	18.19	1.1	0.48	0.005	7.69	4.77	2.93	0.18	1.23	0.39	56.55	0.02	0.51	5.04
H42653	253	3.7	7.1	83.1	10.9														
H42627	201	2	2.8	57.4	9.6														
H42642	156	4.2	4.4	118.1	16.8														
H42645	211	5.2	6.4	90	23.5	17.85	0.19	0.75	0.005	6.45	5.21	3.39	0.08	0.68	0.449	59.4	0.01	0.49	4.83
H42658	229	6.4	5.5	89	32.2	17.38	0.22	0.16	0.01	8.5	5.52	1.87	0.19	0.22	0.358	59.92	0.01	0.55	5.01
H42644	279	4	9.3	108	12.1														
H42656	226	5.3	7.4	124	31.4	17.31	0.22	0.45	0.005	5.78	5	2.59	0.1	0.99	0.364	61.56	0.005	0.51	4.26
H42621	227	2.8	9.9	179	19.2	16.97	0.17	1.27	0.01	7.88	4.65	3.65	0.37	0.18	0.388	57.33	0.01	0.56	6.35
H42640	250	4.6	7.4	320.7	13.6														
H42649	234	2.6	5.1	92.9	18														
H42638	277	2.9	6.9	102.6	16.1														
H42633	243	10.6	6.3	95	32.6	18.75	0.35	0.29	0.005	7.4	5.53	2.78	0.06	0.51	0.393	58.51	0.01	0.53	4.65
H42654	248	3.5	7.1	88	19.4	17.61	0.2	2.13	0.005	7.49	5.35	2.45	0.09	0.82	0.382	56.32	0.01	0.57	6.07
H42661	205	3.9	6.5	106	21.4	17.32	0.21	1.55	0.005	5.86	5.4	2.27	0.13	0.41	0.364	60.4	0.02	0.53	5.09
H42651	189	2.2	6.8	113.4	27.6														
H42650	156	8.5	10.8	129	51.7	17.79	0.3	0.58	0.005	7.11	2.79	3.11	0.2	3.6	0.277	60.05	0.02	0.46	3.44
58450	179	2.4	6.8	168	21.9	12.83	0.22	4.37	0.04	11.69	3.6	1.81	0.12	0.16	0.32	52.96	0.01	0.55	11.05
58464	215	4.2	6.3	2170	9.3	15.27	0.22	2.65	0.02	10.82	4.61	2.11	0.23	0.19	0.325	51.41	0.01	0.6	10.7
17086	233	8.4	9.6	667	30.5	17.49	0.29	1.96	0.01	7.43	4.96	1.56	0.5	0.21	0.385	57	0.01	0.51	7.65

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
17062	300	10.1	7.6	2090	15.9	13.09	0.22	3.91	0.01	9.39	3.76	1.46	0.52	0.21	0.475	54.88	0.01	0.73	9.69
17109	258	6.5	10	4560	14.3	14.89	0.23	3.88	0.03	11.22	3.3	6.52	1.23	0.22	0.355	44.79	0.02	0.7	11.2
17148	265	2.2	12.6	218	56.3	16.15	0.23	4.38	0.02	7.8	3.29	4.73	0.39	1.93	0.586	50.77	0.03	0.95	8.03
58479	203	2.2	6.1	472	24.1	16.47	0.37	5.57	0.02	6.21	5.16	2.43	0.57	0.12	0.355	51.53	0.03	0.4	9.84
58493	93	1.2	14.1	76	47.5	16.61	0.26	5.42	0.005	4.81	2.91	1.43	0.18	4.47	0.223	56.87	0.08	0.6	5.72
G24857	150	29.5	11.4	373	25.7	13.1	0.13	0.2	0.005	5.19	6.18	0.75	0.01	0.18	0.102	69.24	0.01	0.5	4.19
SG92-17_C11049	195	5	10.7	73	31.5	17.72	0.31	2.1	0.01	10.81	5.45	3.03	0.21	1.93	0.356	51.79	0.02	0.67	4.98
9593	154	5.3	10.2	91	11.4														
S91-388_5219	295	2.8	12.4	85	11.6	15.27	0.19	8.34	0.005	8.36	2.66	3.82	0.19	1.93	0.337	52.48	0.13	0.47	5.69
H44700	146	7.9	10.8	45.2	19.3														
G24650	193	6.8	9.7	33	24.3	16.64	0.33	0.53	0.005	2.54	6.49	1.49	0.05	2.98	0.215	66.31	0.03	0.45	1.72
H42333	357	7	13.9	38	10.1	17.64	0.22	5.74	0.005	7.33	4.46	3.67	0.17	3.4	0.589	49.9	0.04	0.83	5.91
MC-05-03 6.0-20	297	16.9	15.3	37	24.2														
10335	269	16.5	13.7	30	26.3	16.1	0.16	7.45	0.01	4.83	3.8	2.53	0.15	4.37	0.388	51.08	0.04	0.64	6.97
H45368	87	10.3	9.3	33.5	21.3														
H45505	177	9.6	6.1	589	14.2														
G24888	106	15.9	13.8	404	23.8	15.3	0.2	0.54	0.005	6.21	7.1	0.78	0.03	0.51	0.207	63.56	0.01	0.54	4.74
S91-388_5274	118	18.5	11.2	150	35.8	14.88	0.36	0.32	0.005	3.57	8.72	0.61	0.005	0.4	0.26	67.41	0.01	0.36	2.82
H45279	187	9.1	6.7	388.3	17.3														
G24806	103	16	11.4	137	21.3	16.71	0.25	0.58	0.01	5.11	8.08	1.01	0.02	0.43	0.318	62.13	0.01	0.56	4.29
G24829	60	11.1	6.5	21	15	13.87	0.16	0.25	0.01	3.69	6.34	0.57	0.01	0.27	0.158	70.65	0.01	0.28	3.46
G24902	98	19.5	8.8	50	20.1	14.93	0.18	0.97	0.01	7.39	6.33	0.99	0.05	0.39	0.193	62.08	0.02	0.49	5.69
G24874	191	34	12.4	34	21.5	15.14	0.14	1.17	0.005	8.69	5.87	0.82	0.04	0.29	0.286	60.22	0.02	0.54	6.72
SG92-22_C9763	157	17	9.9	63	21.4	17.71	0.19	0.95	0.005	6.09	6.97	1.01	0.03	1.21	0.151	60.13	0.01	0.53	4.94
SG92-22_C9711	232	26.5	11	33	30.7	17.08	0.42	0.79	0.005	5.08	9.2	1.42	0.02	0.59	0.449	60.53	0.02	0.5	3.72
G24782	75	13.3	4.7	151	11.3	12.99	0.24	0.34	0.03	1.85	8.5	0.32	0.02	0.68	0.109	72.59	0.01	0.33	1.56
H44956	70	4.3	2.6	140.8	6.1														
H42509	183	12.1	7.6	104.5	13.8														
S91-388_5261	66	9.5	3.7	28	12.2	13.36	0.26	0.32	0.005	2.14	8.69	0.33	0.01	0.8	0.095	71.04	0.01	0.26	1.63
H44939	508	17.7	7.3	99	13.8	14.19	0.21	0.77	0.02	4.78	7.71	1.49	0.04	0.91	0.199	64.25	0.01	0.7	3.24
H44935	187	9.8	6.8	122	15.2														
G21680	274	7.8	11.2	46	18.5	18.25	0.37	1.53	0.01	8.48	6.99	2.08	0.07	1.28	0.485	54.37	0.02	0.6	5.24
H42532	132	7.3	7.9	65.9	11.4														
H44942	83	10.1	7.9	249	14	13.9	0.19	1.05	0.005	3.37	7.67	0.6	0.04	0.55	0.105	68.37	0.02	0.35	3.09
SG92-02_C8906	108	7	7.3	43	25.1	14.45	0.18	0.74	0.005	4.32	8.11	1.74	0.03	0.59	0.144	65.91	0.01	0.37	3.14
H42460	176	8.9	8.9	189	22.4	17.33	0.34	1.59	0.005	6.11	8.69	1.53	0.1	0.55	0.285	57.29	0.02	0.47	4.48
SG92-02_C8897	110	16.2	10.3	61	21.7	13.5	0.19	1.7	0.005	6.11	8.4	1.19	0.05	1.05	0.214	60.63	0.02	0.31	4.78
SG92-02_C8901	181	4.5	9.1	78	20.5	18.05	0.19	1.16	0.005	6.91	9.18	4.05	0.03	0.5	0.501	53.46	0.01	0.57	3.73
SG92-06_C12601	334	8.9	12.7	260	17.7	17.38	0.23	1.22	0.01	5.46	6.63	2.14	0.08	0.7	0.358	59.04	0.01	0.59	4.63
SG92-22_C9736	103	23.7	11.4	66	34.5	13.02	0.17	4.26	0.005	7.53	4.93	0.95	0.14	0.33	0.079	59.77	0.02	0.34	7.58
H44936	139	14.6	10.4	71	24.9	15.1	0.18	2.19	0.01	5.86	7.97	1.54	0.09	0.76	0.222	60.44	0.03	0.49	4.27
H45187	192	9.3	15.2	264	17.3	15.61	0.17	1.58	0.02	4.76	7.22	2.8	0.05	1.27	0.256	60.43	0.02	0.56	4.34
H45191	183	6.8	12	1820	19.2	15.46	0.23	2.16	0.01	6.83	7.68	2.95	0.1	1.05	0.237	56.34	0.03	0.54	5.59
H44940	98	9.3	3.3	36	11.4														
G24756	128	8.2	9.7	124	22	15.84	0.19	1.18	0.02	4.05	7.87	1.88	0.05	0.39	0.199	62.17	0.02	0.49	3.8
H44937	195	7.9	6.8	114.2	29.3														
G24926	163	12.9	8.2	142	23.5	13.68	0.35	5.86	0.01	9.55	6.53	2.04	0.26	1.38	0.27	51.12	0.03	0.39	6.71
S91-388_5249	134	15.3	8.1	60	19.9	13.08	0.27	1.9	0.005	2.14	7.7	0.47	0.06	0.79	0.127	68.78	0.02	0.3	3.17
H45803	283	3.7	11.7	223.8	9.8														
H45188	194	4.1	14.5	1161.1	20.3														

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
H45189	131	3.5	15	268	21.6	17.52	0.09	1.64	0.02	4.89	5.35	3.65	0.07	2.98	0.233	58.5	0.02	0.63	4.23
G24852	105	5.6	12.9	315	27.9	16.25	0.08	2.07	0.01	6.47	3.46	3.12	0.25	3.39	0.211	58.55	0.01	0.6	5.14
H44933	176	12	23.4	110	24	16.42	0.2	3.78	0.01	3.24	9.51	2.37	0.15	0.84	0.285	56.12	0.04	0.58	5.02
X15955	236	4.5	7.3	251.7	16.5														
H45591	169	2.4	8.4	251.5	14.2														
X15979	227	3.8	10.7	161.5	16.3														
G21668	256	12.1	9	60	17.6	17.36	0.58	2.54	0.01	7.02	6.53	3.05	0.12	1.01	0.39	55.42	0.02	0.61	4.13
H45190	189	4.2	16.9	739.8	15.2														
H45814	512	3.4	11.7	173.3	20.2														
H45186	189	3.7	11.9	453	22.9														
G24942	184	12.6	7.6	118	26.9	15.36	0.35	4.76	0.01	7.14	4.98	2.65	0.24	2.73	0.298	54.41	0.03	0.45	6.37
X15939	172	3.7	18.2	242	27.5	17.08	0.11	2	0.01	7.33	5.46	4.08	0.21	1.15	0.325	56.21	0.01	0.64	4.76
G24952	70	6.6	5.8	23	16.3	14.31	0.09	3.99	0.01	2.99	3.19	1.22	0.13	3.8	0.108	64.26	0.03	0.32	5.15
G21701	253	15.6	17.6	73	23.6	17.64	0.42	5.21	0.005	6.44	6.31	2.7	0.31	2.24	0.474	52.04	0.05	0.58	5.42
SG92-22_C9681	221	16.8	11.4	70	33.6	16.92	0.48	4.04	0.005	8.49	3.79	3.46	0.17	3.41	0.306	52.38	0.04	0.73	5.15
SG92-06_C12669	268	23.2	6.2	859	14.8	16.7	0.4	2.43	0.005	7.3	7.36	1.42	0.16	0.88	0.374	55.15	0.02	0.62	6.21
H45390	144	5.4	6.8	91	17.4														
H45199	207	4.2	15.4	647.7	29.6														
SG92-22_C9794	145	10.6	11.9	95	21.7	15.93	0.09	1.5	0.01	7.32	3.42	2.51	0.14	3.39	0.214	59.97	0.02	0.61	4.46
H45195	153	4.5	16.8	237	35.6	18.31	0.09	1.35	0.01	7.63	5.67	3.6	0.09	2.25	0.351	54.6	0.01	0.73	5.05
H45198	172	5.8	13	263	22.2	16.15	0.07	2.28	0.01	6.67	3.87	2.49	0.12	3.92	0.231	58.05	0.02	0.63	5.31
H45200	136	5.5	16.7	245	21.3	16.05	0.11	1.95	0.01	5.63	5.65	2.4	0.1	2.3	0.296	60.05	0.02	0.56	4.57
S-10-29 115.5-129.5	135	14.1	6.9	151	17.7														
H45202	157	14.3	17.7	52	19.1	15.31	0.2	1.25	0.005	3.64	6.48	2.01	0.03	0.63	0.461	65.9	0.01	0.57	3.34
SG92-02_C8937	217	17.2	6.8	66	22.3	17.39	0.41	3.23	0.005	7.3	6.85	2.22	0.19	0.77	0.331	55.01	0.02	0.53	5.71
H45206	237	89.1	12.8	43	36.7	15.76	0.23	3.24	0.01	7.43	5.43	3.04	0.1	1.6	0.343	55.96	0.02	0.56	4.93
H45614	236	10.8	10.3	150.9	44.8														
H45192	207	4.9	16	489.4	25.2														
H45211	142	42.1	19	38	46.2	16.95	0.13	3.34	0.01	7.27	4.16	2.96	0.1	3.92	0.207	55.1	0.02	0.67	4.99
SG92-22_C9822	98	10.7	10.8	1255	16.3	12.7	0.16	4.28	0.01	5.64	5.73	1.63	0.47	0.66	0.145	59.76	0.02	0.38	6.76
H45197	184	4.5	10.8	323.9	17.4														
H45208	265	99.5	17.1	74	60.5	13.03	0.08	7.23	0.005	12.68	3.47	6.05	0.22	0.09	0.178	46.55	0.03	0.51	8.25
H45207	239	58.6	12.6	88.3	34.8														
H44977	113	6.2	6.9	29.6	13.8														
H45210	217	65.7	19.6	49.6	38.9														
G24977	123	16	9.8	32	30.8	16.54	0.2	2.88	0.01	6.14	3.96	1.87	0.1	4.8	0.257	57.41	0.02	0.59	4.94
H45224	143	10.8	13.9	31.2	35.4														
H44683	126	16.1	13.2	27.7	21.9														
H45193	191	5.3	13.5	315	25	15.89	0.27	2.22	0.01	4.45	8.39	3.02	0.09	0.85	0.28	59.03	0.03	0.66	3.8
G24999	111	10.7	19.3	60	25.2	13.94	0.23	6.38	0.01	12.11	3.79	4.96	0.21	2.41	0.237	46.87	0.04	0.53	6.85
H45194	158	4.7	18.9	1267.4	16.5														
H45204	252	39.9	12.9	78	32	15.55	0.28	6.21	0.005	8.85	5.21	4.1	0.2	1.66	0.348	47.81	0.04	0.58	7.58
H45205	236	84.6	13	44.5	27.3														
H45203	182	58.7	17	80.8	45.6														
H45201	113	6.7	17	272.7	14.6														
H45212	256	166.7	18.2	118.3	54.3														
X15937	135	7	10.4	716	30.7	14.61	0.24	1.86	0.01	5.6	6.66	1.48	0.26	1.47	0.169	62.17	0.02	0.63	4.3
H45086	170	4.6	26.6	69	50	19.59	0.12	2.6	0.01	6.15	4.72	2.1	0.12	3.64	0.339	54.59	0.02	0.65	5.08
H44866	109	6.6	7.8	325.6	17.7														
H45087	132	6.2	14.6	1161.6	16.9														

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H45085	168	21	11.9	266.3	38.9														
H45083	167	24.5	11.1	416	32.3	17.21	0.12	3.34	0.005	5.45	4.89	2.09	0.14	2.3	0.285	58.25	0.03	0.59	5.03
X15934	131	7.9	13.2	318	26.7	16.06	0.17	2.99	0.01	5.14	5.9	2.67	0.32	1.23	0.229	58.73	0.02	0.53	5.17
H45102	181	8.5	10.6	1040.3	21														
X15912	157	5.4	9.9	76.2	20														
H45082	204	14	10.8	237	24.4	13.22	0.06	7.42	0.02	7.76	4.49	4.11	0.28	0.29	0.299	48.77	0.03	0.52	11
20856	128	12.9	8.8	366	10.5	15.92	0.33	4.04	0.005	6.07	4.6	2.17	0.26	2.12	0.246	55.01	0.04	0.47	8.59
H45088	187	5	15.3	293	29.1	16.13	0.09	5.46	0.005	7.39	2.87	3.18	0.29	3.41	0.237	52.11	0.02	0.67	7.14
H44554	154	9.9	9.7	133.6	14.7														
SG92-06_C12577	206	6.5	19.3	94	31.6	15.28	0.2	8.56	0.01	7.22	2.78	3.8	0.23	2.97	0.325	48.47	0.04	0.5	8.26
H45081	175	9.8	11.6	690	16.4														
H45082	197	11.1	8.5	1120	13.5														
H45083	167	18.9	12.2	261	21.8														
H45085	163	16.1	11	372	30.6														
H45086	189	4.7	19.5	75	38.4														
H45102	198	7.5	14.1	224	19.1														
H45103	161	4.4	11.4	625	22.2														
H45104	165	5.5	14.7	1290	29.2														
X64717	163	>200	12.9	33	16.1														
X64718	211	76.4	15.3	56	14.4														
X64719	248	34.2	15.1	205	23.3														
X64724	143	9.3	12.3	654	23.3														
X64743	129	8.9	16.2	57	23.1														
X64746	97	8.5	14.1	1660	31.4														
X62696	283	5.7	19.5	84	40.7														
X64747	104	5.4	11.4	4160	26.6														
H45104	156	5.1	19	310	48.2	17.33	0.17	2.79	0.01	5.49	4.22	3.11	0.3	3.25	0.31	58.02	0.03	0.67	4.14
X15938	163	3.7	14.2	507.9	22.6														
H45103	156	3	11.2	3373.5	18.8														
H44876	165	5.2	14.1	389.8	24.1														
X15932	104	7	14.1	4060	17.5	10.62	0.27	3.49	0.005	15	5.29	2.5	3.4	0.35	0.185	47.02	0.02	0.41	9.82
H44843	249	19.9	15.3	201	24.9														
H45089	157	6.4	15.6	213.5	24.5														
X15936	118	3.3	14	405	15.3														
S91-388_5235	107	4.5	19.8	41	29.8	16.98	0.08	6.28	0.005	3.05	1.96	2.38	0.09	6.25	0.247	55.94	0.04	0.69	5.49
X15933	193	4.5	12.3	942.9	18														
H45078	251	2.1	5.9	151.2	12.5														
H45071	324	5.2	5.6	72.6	10.5														
H45068	266	5.3	6.1	326.5	18.7														
H45065	251	3.1	5.2	50.8	13.3														
H45080	247	1.9	23.3	648.8	13.1														
H45075	238	5.6	6.8	76.7	10.4														
X15748	286	16	14.5	33	14.4	14.55	0.1	4.7	0.005	7.51	5.01	3.28	0.12	1.05	0.384	55.83	0.02	0.64	5.66
H45073	238	3.7	5.5	58.8	14.1														
S-11-70 122.4-136.9	248	26.1	13.4	64	19.2														
9976	211	7.3	10.5	55.5	36														
S91-398_5495	151	9.8	11.9	37	60.8	17.39	0.41	0.79	<0.01	4.81	8.37	1.75	0.05	2.26	0.177	60.78	0.03	0.38	2.59
H44453	273	20.2	12.5	62	23.7														
S-11-70 85.4-103.4	252	15.6	16.6	34	20.4														
H42341	259	7	12.5	37	29.5	17.19	0.38	1.3	0.005	5.72	6.08	3.69	0.13	2.48	0.364	58.98	0.03	0.61	3.04

Note: values in blue are calculated

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
X15862	229	13.4	7.4	34	21.3	16.56	0.54	4.7	0.005	6.29	5.51	3.23	0.09	2.03	0.293	51.83	0.05	0.61	6.5
S-10-21 94-110	198	10.6	12.1	71	19.1														
E192812	244	10.8	13.3	47.7	23.2														
S-11-68 183.46-199.46	382	15.6	16.1	51	11.1														
S-11-68 41.46-57.46	334	27.7	15.5	52	19.5														
MC-05-02 90-106	249	7.7	17	42	45.1														
E192834	191	19.3	9.7	34.3	25.7														
E192868	592	22.3	13	46	26														
E192869	337	7	18.9	38	31.9														
E192870	309	32.8	12.4	28	28.8														
H44450	123	4.3	8.9	26	24.8														
H44451	125	5.5	8.3	21	23.8														
H44452	139	10.5	8.2	22	24.3														
H44453	231	20.6	10.5	34	19.3														
H44454	226	16.8	11.3	67	18.6														
H45078	142	5.8	8.3	44	32.6														
H45079	173	5.9	8.3	44	21.1														
H45080	162	8.4	11.1	724	15.1														
S157569	291	15.9	15	47	22.6														
S157570	270	5.8	14.3	31	20.3														
X62639	190	11.5	10	48	29														
X62640	177	10	8.8	35	25.2														
X63892	332	11.8	13.1	41	15.9														
X63893	337	17.9	15.9	45	18.5														
S-10-33 170-186	261	13.7	14.8	69	42.3														
H44504	189	5.5	9.6	18.3	37.6														
S-11-72 101.95-118.3	349	16.6	13.2	47	21.3														
S-11-70 156.4-172.4	262	22.2	15.3	33	20.6														
X15753	246	22.6	13.2	27	31	15.9	0.24	3.8	0.005	4.91	5.85	2.5	0.1	1.1	0.292	59.15	0.02	0.55	4.51
20847	178	7.8	9.7	52.8	21														
S91-398_5851	153	11.7	16.6	39	40.8	15.55	0.22	0.95	<0.01	8.35	7.47	1.96	0.08	2.05	0.157	58.99	0.02	0.46	2.63
H44544	215	12.2	12.6	61.4	26.4														
X15861	227	5	7.6	33.3	15.5														
S-10-33 210-226	362	21.2	19.2	89	23.9														
H44505	181	9.6	10.2	19	42.1	16.2	0.28	2.25	0.01	3.98	6.23	1.87	0.08	1.02	0.201	63.04	0.02	0.36	4.28
X15860	200	7.6	9.2	28	21.9	16.89	0.51	4.51	0.005	6.03	4.22	4.33	0.09	3.89	0.292	52.71	0.05	0.62	5.76
S91-398_5865	189	7.5	17	41	49.5	15.92	0.27	1.64	<0.01	9.31	5.37	2.54	0.08	3.28	0.242	56.9	0.02	0.43	2.91
20831	167	10.3	11.5	52	29.7	15.99	0.27	5.42	0.005	8.12	4.66	2.83	0.16	2.83	0.235	51.75	0.03	0.51	7.03
H42381	166	11	7.4	50.4	17.8														
S-09-11 130-146	192	10.6	10.4	237	21.9														
S-11-68 1.31-17.46	282	6.3	15.1	46	23.2														
MC-05-02 210-226.6	273	12.6	15.7	50	23.7														
H44831	173	11.3	13.3	37.2	25.5														
S-10-21 44.9-61	155	10.3	11.8	51	25.6														
G24663	193	8.7	12	24	25.8	16.46	0.3	2.31	0.005	3.13	5.98	1.53	0.05	3.34	0.23	62.55	0.04	0.46	3.31
S-11-68 81.46-96.56	403	22	13.2	50	15.6														
X15779	147	10.2	13.2	20.3	18														
H42394	257	7.8	10.5	70.8	37.3														
X15747	539	17	11.8	32.1	11.5														
G24688	167	11.3	11.5	38	21.5	15.44	0.26	5.43	0.005	5.62	3.84	3.2	0.1	3.53	0.256	51.03	0.05	0.56	8.9

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
E192869	339	6.9	14.3	37.6	31.9														
S-11-72 62.3-77.5	238	24.4	16	36	22.9														
S-11-72 142.3-158.3	313	9.1	15.3	42	21.6														
S-09-11 90.7-104.7	210	8.2	14.5	57	25.2														
MC-05-02 150-166	322	9.7	18.6	62	15.4														
10043	341	17.5	12.2	37.4	21.1														
S-09-11 49-65	279	11.3	14.7	34	15.7														
9817	211	8.9	11.7	56	18.9	14.72	0.29	5.95	0.02	7.54	5.28	4.03	0.17	1.89	0.274	50.84	0.03	0.52	6.8
S-11-68 163.46-175.46	293	9.1	15.3	33	15.3														
H42328	224	9.8	14	29	16.8	12.94	0.15	0.98	0.005	3.76	4.03	2.13	0.08	2.69	0.303	70.1	0.03	0.58	2.04
X15752	204	6.6	8.2	38.8	27.3														
H45036	314	5.8	16.8	32.7	19														
10032	403	7.7	14.6	56.7	10.6														
H45080	169	8.5	10.8	551.2	16.5														
S-11-68 121.46-137.46	379	14.2	16.4	34	12.6														
S-11-71 24.7-40.2	319	8.1	7.7	27	17.6														
X15859	204	8.3	11.3	54.7	13.6														
H44503	118	10	11.9	36	25.3	12.59	0.22	8.22	0.005	4.91	4.69	3.04	0.21	1.33	0.161	55.32	0.04	0.28	7.66
MC-05-02 190-206	358	10.8	17.4	51	16.4														
S-09-11 9.0-25	315	14.4	15.4	47	16.9														
G24670	262	18.7	13.4	48	19.3	14.46	0.2	7.28	0.005	5.97	4.75	3.05	0.16	1.54	0.349	52.31	0.03	0.6	8.8
H42343	319	2.7	14.9	48	10.8	15.59	0.16	4.76	0.005	7.61	3.52	4.47	0.12	3.23	0.499	54.53	0.05	0.76	4.56
X15751	177	7.6	11	16	27.7	15.52	0.24	4.12	0.005	3.86	5.71	2.17	0.09	1.39	0.214	60.85	0.02	0.42	4.84
E192892	251	7	8.7	61.2	13														
H45436	281	8.8	8.1	29.9	12.5														
X15749	350	9.9	13.6	33.8	11.6														
H44462	303	19.6	8.1	46	20.8	16.35	1.19	5.25	0.03	8.18	3.13	4.83	0.15	3.69	0.324	49.22	0.06	0.57	6.89
S-08-07 105.6-120.05	152	9.6	9.5	31	35.3														
H44458	196	12	11.4	50	24.3	13.27	0.25	7.8	0.01	5.39	2.7	3.77	0.15	3.07	0.249	52.99	0.03	0.55	7.96
H44800	336	11.1	11.7	27.8	14.6														
S-11-73 160.2-176.2	217	9.6	15.4	28	25.7														
H44454	280	18.7	10.5	55	22.7	16.71	0.09	7.55	0.02	6.99	4.58	4.76	0.24	0.47	0.357	47.2	0.02	0.61	8.66
9841	252	6.5	12.3	56	16.6	14.75	0.2	7.26	0.03	8.15	3.33	4.98	0.2	2.66	0.289	49.45	0.03	0.52	7.92
X15864	196	5.2	15.8	37.2	10.7														
H44459	252	7.1	12.7	36.2	20.1														
X15767	352	3.4	15.1	30	15														
H42338	413	6.9	16.3	34	17	18.8	0.13	2.57	0.005	5.46	4.31	3.09	0.09	4.77	0.549	56.01	0.05	0.93	3.13
9826	237	3.5	10.4	48	14.1	15.24	0.37	6.05	0.03	6.8	4.05	5.4	0.16	3.05	0.278	51.26	0.04	0.5	6.54
H44471	182	9.8	8.2	30.2	22														
9807	148	9	8.7	19	32.8	17.1	0.45	3.3	0.005	3.72	8.04	0.97	0.09	2.95	0.22	59.44	0.05	0.37	3.1
H44464	258	7.5	13.3	65	17.3	14.7	0.17	8.72	0.03	6.78	3.1	4.08	0.25	3.11	0.272	49.59	0.03	0.48	8.29
H44461	223	16.2	11.4	36.9	16.1														
H44463	321	7.9	12.6	51.8	16														
H44456	264	14	10.5	47	16.1	14.47	0.21	8.97	0.03	6.51	2.37	4.55	0.17	3.24	0.291	49.56	0.04	0.5	8.84
H42335	368	3	13.1	36	10.3	18.21	0.33	5.59	0.005	7.83	4.36	3.82	0.14	3.36	0.601	49.13	0.05	0.85	5.31
H44472	233	11.5	13.9	42	18.5	14.57	0.29	9.91	0.01	7.42	3.4	3.56	0.16	3.45	0.281	47.12	0.05	0.52	9.19
H44506	264	14.8	11.6	43.7	14														
H44455	280	13.5	15.8	45.9	14.6														
H44457	261	24.2	10	49.8	19.7														
H44460	211	12.2	8.9	34	16.2	14.21	0.2	8.15	0.03	5.84	1.65	6.69	0.17	3.48	0.304	49.03	0.04	0.48	9.21

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S-10-31 145-161	165	18.4	10.5	35	24.4														
9924	171	5.9	9.9	46	25.5	16.75	0.38	3.62	0.005	7.34	5.33	2.46	0.12	3.72	0.223	54.69	0.04	0.48	4.09
S-11-71 106.9-122.2	79	10.9	2.8	8	10.7														
H42350	363	2.4	14	48	14.9	18.05	0.11	3.55	0.005	6.89	3.65	4.05	0.08	4.53	0.493	54.87	0.07	0.89	2.67
S-11-72 181.96-197.3	149	9.5	11.8	26	21.5														
S-11-71 146.2-162.2	187	11.5	4.1	14	16.1														
10098	176	9.9	9.9	26.1	25.2														
H44488	160	8.7	9.3	20.9	49.1														
S-06-02 60-76	109	6	8.1	70	26.1														
H44742	143	10.3	9	30.8	20.8														
S-10-31 194-210	175	11	10.8	34	29.1														
20815	203	11.4	11.7	27	12.4	14.78	0.21	8.14	0.02	6.11	5.07	4.14	0.18	0.45	0.262	49.57	0.03	0.45	9.45
S-10-31 95-111	133	6.8	11.7	43	27.5														
S91-398_5880	163	12.1	12.2	49	49.1	16.74	0.22	0.89	<0.01	5.86	6.01	2.38	0.09	3.43	0.204	60.57	0.01	0.44	2.51
S-10-31 245-260	172	8.2	11	41	32.1														
X15886	192	3.8	11.8	34.6	11.7														
H44495	165	9.9	7	28.9	36.2														
H44481	171	9.4	9.5	24	43	15.6	0.38	5.21	0.005	4.35	5.94	2.13	0.11	2.09	0.229	56.26	0.04	0.47	6.15
H44502	142	12.6	12.5	34.1	32.9														
H44497	151	10	7.7	24	47.2	16.52	0.36	3.34	0.005	3.68	6.87	1.84	0.1	2.23	0.199	60.2	0.04	0.36	4.09
H42345	362	3.9	14.5	52	16.4	17.17	0.09	4.49	0.005	7.06	4.28	4.21	0.15	3.55	0.432	54.04	0.06	0.82	3.67
H44491	134	10.4	7.4	22	49	15.91	0.34	3.17	0.005	3.54	5.8	1.67	0.1	3.02	0.193	61.33	0.04	0.36	4.01
9878	125	4.9	7.8	28	30.8	16.84	0.39	2.78	0.005	3.47	7.35	2.06	0.09	3.05	0.216	59.6	0.03	0.38	3.58
H44480	163	4.8	11.9	21	42.3														
H44481	225	9.3	13.8	41	32.1														
H44490	136	8.4	7.5	25	32														
H44491	135	4.6	8.5	29	31.7														
H44494	169	4.9	12.2	22	37.9														
H44495	145	5.7	10.3	21	33.4														
H44497	153	10.2	10.4	28	35.8														
H44501	141	12.5	7.6	25	36.5														
H44502	135	6.6	12.6	26	36.6														
G21779	112	3.4	8.1	48.2	28.8														
H42352	387	7.8	13.7	43	16.7	16.31	0.12	4.73	0.005	7.54	4.04	2.92	0.13	3.76	0.434	55.14	0.06	0.73	3.95
H44499	144	8.7	9	25	43.7	16.81	0.4	4.28	0.005	3.87	6.61	2.01	0.13	2.43	0.202	57.5	0.05	0.36	5.22
10377	101	9.3	8.9	15	32.2	15.19	0.31	3.57	0.005	3.2	5.34	1.38	0.09	3.16	0.158	63.01	0.04	0.3	4.12
H44482	146	9.6	9	18	43.6														
S-10-31 294-310	168	9.9	10.8	36	29.4														
X15842	132	2.9	13.3	21.9	20.4														
H44487	156	8.8	7.1	19	55.9	17.54	0.48	3.45	0.005	3.81	6.86	1.39	0.09	2.53	0.205	59	0.04	0.38	4.2
9891	175	6.2	12.6	28	34.1	16.52	0.35	4.64	0.005	4.84	1.59	2.75	0.1	6.33	0.244	57.33	0.06	0.59	4.58
H44494	145	6.2	7.9	29	47.4	16.69	0.35	3.93	0.005	4.15	5.78	1.61	0.11	3.49	0.204	58.7	0.05	0.36	4.47
S-11-71 65.7-81.2	78	7.2	2	12	6.8														
S-10-31 44-60	143	8.7	15.5	57	48.7														
MC-05-02 250-266	283	11.9	11.3	25	16.2														
MC-05-01 230-255	183	6.6	11	35	28.1														
H44500	169	13.2	8.5	27.5	42.5														
10362	197	13.9	12.8	32	23.3	15.65	0.25	7.1	0.01	4.94	4.19	2.39	0.19	3.32	0.327	53.89	0.04	0.53	6.94
20809	179	8.8	11.3	29	18.6	15.87	0.24	7.17	0.01	4.39	5.18	3.1	0.15	1.59	0.252	53.3	0.04	0.43	8.27
MC-05-01 279-295	221	6.6	13.1	34	25.3														

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MC-05-02 314-330	178	5.5	12.9	27	26.3														
MC-05-01 319-335	146	6.2	10.2	28	32.5														
H44501	114	8.4	7.6	20	39.3	13.66	0.24	4.83	0.005	2.65	5.34	1.73	0.12	1.88	0.166	63.4	0.04	0.3	5.41
10353	86	5.8	11.2	13	28.2	14.59	0.37	6	0.005	2.55	4.62	1.11	0.11	3.52	0.141	59.77	0.04	0.3	5.52
MC-05-01 199-215	200	5.2	10.2	39	14.3														
S-06-02 20-26	109	2.3	9.4	34	27.9														
X15887	153	8.3	12.7	26	18.1	14.81	0.25	7.14	0.01	4.54	3.72	3.78	0.13	3.63	0.227	50.62	0.07	0.44	9.78
H44490	136	6	8	24.9	33.2														
H44465	322	6.2	11.9	28.5	17.8														
H44486	143	10.9	9.3	24.4	41.3														
H44468	258	16.6	9.3	36	20	14.62	0.58	6.65	0.02	6.98	3.81	3.26	0.16	3.04	0.242	52.89	0.04	0.45	6.99
MC-05-03 44-60	183	7.5	13.3	34	22.3														
H44474	218	11.6	13.1	41	17	14.25	0.19	10.48	0.02	5.77	2.5	4.3	0.23	3.37	0.276	48.09	0.04	0.47	9.85
H44473	296	10.4	10.1	52.6	14.5														
H44483	140	7.2	7.7	15	44.6	17.15	0.41	3.59	0.005	4.08	6.07	0.99	0.07	3.67	0.195	59.19	0.05	0.38	3.92
H44485	143	8.4	7.6	21	46.1	16.55	0.38	4.09	0.005	3.91	6	1.18	0.09	3.02	0.197	58.99	0.04	0.36	4.6
H44498	168	7.2	7.8	36.8	43.5														
10343	93	5.5	12.9	17	25	14.16	0.71	7.14	0.005	2.76	4.6	1.32	0.18	3.16	0.137	58.56	0.05	0.28	6.42
10383	262	12.4	11.5	41	14.7	14.64	0.2	5.39	0.03	7.55	3.12	5.03	0.12	3.05	0.304	52.58	0.03	0.52	6.95
H44492	151	6.6	8.7	24	35.4														
H44469	318	10.1	9.7	48	13.8														
H44489	135	6.3	7.7	24	38.8	14.33	0.39	3.48	0.005	3.41	5.97	1.52	0.1	2.11	0.162	64.01	0.04	0.3	4.1
MC-05-03 84-100	163	6.4	10	31	28.7														
H42347	325	2.6	12.4	50	10.6	17.65	0.1	3.95	0.005	7.52	3.63	5.98	0.11	3.63	0.469	52.01	0.07	0.82	4.02
H44470	253	13.8	11.7	35	13.8	13.9	0.44	10.24	0.03	6.93	2.56	4.89	0.19	3.15	0.299	46.49	0.06	0.49	10.25
H44787	164	9.7	11.9	19	21.5														
H42358	286	5.8	13	28.6	15.1														
H44467	230	10.3	10.2	29.6	16.2														
G21604	99	12.3	10.9	24	44.1	16.97	0.51	3.45	0.005	3.5	6.25	0.88	0.11	3.76	0.186	59.79	0.06	0.34	3.86
9861	255	2.4	12.4	46	16.3	14.29	0.45	7.48	0.03	7.38	2.39	4.65	0.16	3.67	0.276	51	0.04	0.53	7.61
H44475	285	5.9	11	46.2	18.8														
H44466	240	4.6	14.7	34	12.2	14.21	0.31	12.22	0.02	6.85	2.54	4.48	0.24	3.1	0.272	43.02	0.04	0.51	11.25
G21756	117	2.9	10.8	46.5	33.8														
H44480	163	6.3	7.8	17.5	44.1														
H44484	159	5.6	8.7	24.4	52.7														
SG92-06_C12632	173	5.3	6.5	80	15.7	12.37	0.19	1.09	0.005	7.92	4.64	1.62	0.08	0.18	0.243	65.93	0.01	0.39	4.86
SG92-06_C12700	138	7.4	5.5	258	20	15.18	0.41	1.25	0.005	4.79	5.55	1.21	0.05	1.24	0.23	64.91	0.01	0.32	4.65
10276	129	7.9	10.5	36	21.7														
X15896	169	5	7.9	191	20.7	16.66	0.44	2.23	0.005	7.6	5.39	1.68	0.2	2.53	0.291	57.2	0.03	0.51	4.87
9756	243	22.1	5.6	73	23.8	12.01	0.19	0.44	0.02	15.15	4.76	1.75	0.07	0.1	0.172	59.06	0.01	0.39	5.42
10298	157	8.8	6.3	35.3	25.4														
SG92-02_C8856	136	3.4	22.1	99	41.1	18.47	0.13	3.68	0.005	7.07	2.64	2.08	0.12	6.08	0.305	53.28	0.04	0.65	5.17
H42421	326	24.8	10.5	10000	30.9	16.39	0.58	2.63	0.02	8.02	8.85	2.39	0.44	0.55	0.426	53.54	0.06	0.82	3.63
G21749	190	7.3	11.8	45	23.1	16.86	0.37	3.63	0.005	7.17	5.66	2.44	0.18	3.01	0.373	53.24	0.04	0.55	6.34
G21731	169	7.7	12.2	39	18.8	17.07	0.41	4.42	0.01	7.4	4.71	1.76	0.14	4.14	0.346	53.24	0.04	0.43	5.72
X15894	127	6.5	5.8	143	12.5														
H42450	151	8.8	8	5490	24.4	15.22	0.2	4.24	0.01	8.03	4.43	2.4	0.2	3.14	0.189	54.1	0.04	0.62	6.79
H44580	119	13.8	15.3	36.9	9.9														
S-11-70 47.4-63.4	208	17.6	13.3	29	24.4														
S-11-73 4.65-20.2	203	7.2	13.1	29	22.6														

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
H42415	239	10.7	11	75	62.5	14.44	0.53	4.09	0.01	9.27	8.27	2.69	0.18	0.3	0.406	53.55	0.06	0.72	4.12
H42412	261	12.8	11.4	53	44.2	15.1	0.37	4.13	0.02	11.21	5.81	3	0.19	1.95	0.401	50.61	0.06	0.71	4.74
H42406	249	48.7	12.1	69	19.1														
H42407	246	24.4	13.3	77	21.9														
H42408	258	19.4	10.7	89	18.8														
H42409	246	11.8	12.3	93	20.8														
H42410	267	15.6	11.5	89	21														
H42417	238	9.4	11.2	513	34.1														
H42418	248	10.7	10.2	455	33.8														
H42420	253	21.3	11.4	137	37.8														
H42421	258	16.6	10.4	462	21.6														
H42445	187	6.5	10.1	83	18.5														
H42446	156	9.9	9.7	311	18.2														
H42447	147	7.9	9.6	76	19.8														
H42449	137	11.3	8.8	67	18.8														
H42450	157	8.6	8.4	3030	23														
S154096	160	1.4	13.5	103	21.6														
S154097	165	2.1	13.5	359	19.8														
S155917	184	27.4	16.2	38	39.9														
S155918	178	19.1	16.3	34	45.8														
S156364	164	2.8	13.2	98	20.3														
S156365	161	4.1	11.8	85	19.8														
H42406	261	51.4	11.4	71	29.3	13.94	0.36	6.05	0.02	12.72	7.43	3.68	0.17	0.21	0.401	47.02	0.05	0.64	5.82
E192902	210	7.4	10.7	110.3	15.7														
H42440	145	11.2	11.9	391	26.7	15.88	0.37	5.01	0.005	8.71	4.41	2.56	0.25	2.96	0.243	50.2	0.06	0.56	8.13
S91-388_5285	325	20.2	10.2	109	24.2	17.29	0.27	1.9	0.01	8.25	5.86	2.66	0.14	1.31	0.317	56.21	0.01	0.86	4.74
G21649	137	10.6	7.7	47	20.8	17.24	0.59	3.73	0.01	5.65	6.04	1.84	0.11	3.04	0.273	55.51	0.04	0.33	4.91
S-11-70 7.25-23.4	232	9.1	13.3	257	35.6														
G21640	153	11.1	8.5	90	14.9	17.1	0.66	3.2	0.005	5.78	4.84	2.49	0.11	3.57	0.3	55.53	0.04	0.37	5.74
G23418	165	8.3	12.2	82	47.4	18.58	0.14	2.45	0.01	7.94	3.77	3.24	0.11	5.01	0.354	52.42	0.02	0.74	5.04
G24731	143	8.9	12.6	62	37.2	17.64	0.27	3.42	0.01	7.3	5.01	2.18	0.21	3.41	0.257	53.79	0.04	0.64	5.02
S-11-73 42.45-57.35	236	10	20.1	44	34.2														
SG92-17_C11112	157	10.6	8.8	897	42.5	18.39	0.18	2.18	0.005	4.7	4.85	2.47	0.12	4.16	0.216	57.92	0.04	0.76	3.73
H42417	248	9.9	10.3	130	52.3	14.77	0.33	4.42	0.01	10.1	5.53	4.03	0.23	1.73	0.384	50.74	0.04	0.7	5.92
S-11-74 75.9-91.9	179	22.8	15.9	39	47.3														
X15897	194	5.7	11.1	6449.4	16.2														
SG92-17_C11169	136	8.2	16.4	172	23.4	17.01	0.08	2.03	0.01	6.75	3.37	4.02	0.19	3.43	0.258	57.5	0.02	0.68	4.4
9926	335	6.4	19	48.4	21.4														
SG92-17_C11087	140	10.6	12	59	28	18.23	0.35	3.23	0.005	5.95	5.46	2.49	0.19	3.42	0.269	53.07	0.04	0.69	5.29
S-11-69 1.76-16.9	308	13.1	17.3	30	18.5														
SG92-15_C12893	334	8	13.9	344	59.9	15.7	0.33	3.92	0.02	6.04	4.79	2.93	0.14	1.81	0.232	57.42	0.03	0.56	5.85
S-11-74 5.9-21.9	134	6.4	10.9	94	32.4														
H42404	205	40.4	11.6	37	21.9	14.25	0.42	6.67	0.02	9.24	7.88	2.42	0.13	0.61	0.371	50.66	0.06	0.61	4.94
H42410	193	14.7	14.2	94	43.5	11.8	0.26	4.43	0.01	5.37	5.37	2	0.12	0.8	0.265	63.28	0.05	0.48	4.14
S-08-07 55-70	198	24.6	13.2	101	44.8														
H42419	191	15.6	9.2	459	38.3	16	0.44	5.22	0.005	5.43	5.69	2.17	0.23	3.16	0.471	54.45	0.07	0.59	5.87
G21714	236	22.5	17.7	42	22.9	16.57	0.45	5.99	0.005	6.76	5.82	2.41	0.22	2.3	0.45	51.04	0.05	0.55	7.26
S-11-69 42.1-56.9	288	19	15.4	65	28.3														
S-11-74 37.9-53.9	130	8.7	11.9	81	43.5														
S-11-74 117.9-133.9	152	22.2	13.6	395	50.6														

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10264	245	7.5	8	51.4	13.1														
10253	168	4.1	6.2	80.6	17.4														
S-11-69 125.1-140.9	307	20.8	17.7	55	26.8														
H44593	107	6.1	15.6	112.7	8.3														
S-11-69 82.9-98.9	258	9.9	18.7	33	24.3														
9759	147	17.2	10.5	50	26.6	14.9	0.14	3.31	0.01	4.89	3.98	2.69	0.15	2.95	0.181	61.66	0.02	0.47	4.44
H42447	140	9.7	8.1	96	27.4	16.69	0.23	4.62	0.005	6.03	4.56	2.23	0.21	4.13	0.219	55.02	0.05	0.68	4.9
S-11-73 118.2-134.2	262	11.8	13.2	29	20.5														
S-11-72 23.3-38.3	225	19.6	14.9	54	25.9														
G21620	197	19.8	8.3	159	16.2	14.77	0.16	6.26	0.02	8.77	2.94	5.09	0.28	2.25	0.283	49.62	0.03	0.51	8.97
S-10-29 65.5-79.5	184	2.5	11.9	127	14.6														
H42408	262	14.5	11.7	102	54.2	14.86	0.28	3.49	0.02	9.75	5.08	6.53	0.17	1.35	0.444	50.71	0.04	0.7	5.24
MC-05-01 49-65	217	11.9	11.7	71	16														
S-10-29 14.4-29.5	154	3.3	11.5	273	9														
S-10-33 129-146	255	11	16.7	251	31.6														
9801	231	30.4	8.6	45	11.8	17.59	0.32	5.81	0.02	6.77	6.27	3.33	0.17	2.48	0.279	49.68	0.03	0.58	6.51
S-08-07 190-204.5	224	42.7	14.3	39	28.1														
H42443	211	3.9	9.3	86	12.9	16.6	0.34	5.48	0.01	8.85	3.51	4.12	0.25	3.5	0.266	50.94	0.05	0.68	5.34
9770	265	8	10.6	46	18.1	16.04	0.52	4.16	0.02	7.67	5.99	3.91	0.16	2.24	0.302	53.69	0.03	0.58	4.47
MC-05-01 89-105	186	15.7	9.7	45	13.2														
H45459	171	11.3	8.2	55.8	20														
S-11-73 79.2-94.2	160	9.7	16.9	30	54.7														
X18487	322	7.9	14	35.5	21.8														
E216203	152	5	5.4	53.1	22.3														
SG92-17_C11080	161	11.3	19.4	96	25.3	15.5	0.35	8.03	0.005	6.38	3.87	3.52	0.31	2.74	0.211	49.07	0.04	0.54	7.79
X18455	199	5	16.6	28.7	30.7														
X18478	259	10.4	14.7	35.7	21.1														
9742	218	7.1	15.2	69	35.4	16.5	0.07	1.23	0.005	8.4	2.3	3.16	0.09	4.92	0.258	59.2	0.02	0.64	3
S-08-07 155.1-170.5	158	2.7	14.2	26	38.1														
X18433	245	7.9	17.5	41.6	41.3														
H44569	309	5.2	27.4	121.8	33.8														
H45267	219	5.5	9.2	56.2	25.6														
H45245	195	8.7	10.2	62.6	22.5														
S-10-33 52-69	305	3.4	14	39	25.2														
G24711	183	10.5	11.6	74	22.4	17.34	0.45	4.73	0.005	6.88	3.77	3.86	0.18	3.88	0.259	52.19	0.05	0.57	5.74
#N/A	181	7.6	12.4	73	36.3	17.67	0.45	3.02	0.005	6.6	3.71	2.76	0.13	4.11	0.273	55.77	0.04	0.59	3.91
E192923	181	12.1	11.1	60.6	16.6														
H45491	207	1.6	10.7	190	20.2														
S91-387_5160	124	0.3	8.1	246	27.5	16.65	0.19	0.3	0.01	5.68	3.98	2.16	0.06	0.25	0.238	65.03	0.01	0.56	4.79
X18179	245	7.6	7.2	38	39.9	15.27	0.35	0.38	<0.01	3.34	8.77	1.21	0.03	1.92	0.229	65.61	0.01	0.31	1.68
S91-395_5370	100	0.6	6.8	122	14	13.27	0.23	1.71	0.005	6.69	3.49	1.96	0.13	0.16	0.19	65.9	0.01	0.43	5.23
G37543	169	7	9.5	79	17.2	16.11	0.31	3.31	<0.01	6.59	5.32	2.61	0.1	2.07	0.318	55.26	0.02	0.48	7.4
E192557	179	2.8	17.2	61	18.1	16.78	0.53	2.25	<0.01	6.09	4.58	2.4	0.08	3.34	0.319	59.19	0.04	0.49	3.41
G33225	869	4.4	6.5	57	11.1	12.2	0.17	2.39	0.01	3.22	5.77	1.26	0.1	1.94	0.234	69.37	0.02	0.29	2.84
G33213	1000	9.4	14.8	75	31.4	13.66	0.22	5.66	0.03	6.55	6.66	2.82	0.17	1.94	0.366	55.63	0.04	0.63	5.47
G37849	145	3.3	8.8	362	14	14.51	0.5	1.95	<0.01	15.48	4.87	1.56	0.06	0.59	0.28	48.7	0.02	0.4	10.85
X17096	393	12.8	4.7	32	24.7	14.2	0.33	0.59	0.01	5.38	6.56	1.09	0.03	0.83	0.161	65.13	0.01	0.24	4.16
H43066	299	12.1	8.8	38	17.5	15.88	0.34	0.45	<0.01	7.21	6.24	2.17	0.04	2.36	0.348	60.01	0.01	0.46	4.4
H43070	315	5.9	12.2	24	18.3	16.5	0.27	1.15	<0.01	7.28	6.82	1.01	0.03	2.43	0.33	58.64	0.01	0.47	4.82
H41606	319	16.3	20.6	492	30.4	15.65	0.45	2.59	<0.01	7.85	10.63	1.35	0.18	0.34	0.344	53.79	0.02	0.62	6.07

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H43086	337	12.3	14.4	52	19.5	17.37	0.22	0.58	0.02	6.51	5.87	2.3	0.14	2.81	0.367	59.17	0.01	0.52	3.92
H43064	339	10.9	11.2	36	19.7	16.4	0.19	0.53	<0.01	6.52	6.24	1.81	0.04	3.43	0.363	60.02	0.01	0.47	3.82
X17168	350	27.3	6.6	14	14.2	16.35	0.16	1.12	0.01	5.4	8.18	0.4	0.02	2.75	0.355	61.08	0.01	0.51	3.03
H40759	101	8.2	5.1	26.9	15.5														
X17119	598	7.5	11.2	55	12.8	15.43	0.82	0.39	<0.01	5.81	8.27	2.01	0.04	1.14	0.281	60.39	0.03	0.43	3.13
9265	439	12.8	5.9	92	22.4	10.58	0.11	1.22	0.01	4.95	7.55	0.32	0.05	0.36	0.248	69.68	0.01	0.35	3.62
H43100	424	10.8	6.4	98	82.9	14.08	0.1	0.18	<0.01	4.38	7.53	1.54	0.12	0.5	0.063	68.15	<0.01	0.11	3.13
H43084	323	13.1	13.8	59	18.3	15.74	0.62	0.78	<0.01	6.94	5.15	2.12	0.05	3.26	0.342	60.37	0.02	0.47	4.05
H43060	450	5.6	7.7	84	16.1	18.19	0.3	0.37	0.01	8.57	6.71	4.59	0.09	2.33	0.358	53.56	0.01	0.58	4.04
X17129	440	8.3	8	75	25.8	16.96	0.65	0.89	<0.01	4.35	8.14	1.35	0.05	1.16	0.166	60.9	0.02	0.27	3.37
X17105	296	12.7	7.6	46	12.3	15.21	0.25	0.78	<0.01	4.91	7.65	0.62	0.01	2.12	0.303	64.25	0.02	0.41	3.24
X06508	177	3.5	4.9	61.8	17.3														
X16763	252	12.2	8.4	18	15.6	17.11	0.31	1.53	<0.01	6.08	6.84	2.85	0.05	2.28	0.356	57.52	0.02	0.47	4.4
G37888	161	3	8.4	169	23.7	17.12	0.18	1.55	<0.01	6.99	5.7	3.01	0.14	0.44	0.315	57.24	0.01	0.49	5.98
X14984	107	23.6	9.4	40	24.4	15.82	0.29	2.58	0.01	7.37	7.33	1	0.11	2.82	0.217	56.02	0.03	0.59	5.68
X17360	85	2.1	4.8	73	126.5	15.69	0.22	0.23	<0.01	1.73	10.53	0.45	0.05	1.51	0.019	68.02	0.02	0.05	1.31
H43113	404	8.6	9.3	30	13.9	15.85	0.18	2.17	0.01	7.46	6.94	0.66	0.05	3.08	0.339	57.61	0.02	0.51	4.91
G36677	198	8.3	14.3	55	29.9	16.35	0.18	1.39	0.01	6.56	6.66	2.98	0.07	3.97	0.241	56.23	0.03	0.68	3.77
G33512	248	16.8	9.7	44.7	26.8														
H41633	433	8.3	12.2	1120	31.3	15.14	0.56	2.64	<0.01	8.46	9.3	1.55	0.29	0.25	0.366	54.49	0.03	0.58	5.48
X17271	193	12.6	9	43	23.1	16	0.58	2.92	0.01	7.31	6.27	1.04	0.09	2.8	0.309	54.6	0.04	0.45	6.57
H43074	235	6.8	11.7	16	18.7	16.07	0.94	1.96	<0.01	6.38	6.17	1.05	0.05	2.28	0.337	57.78	0.03	0.44	6.23
X17202	492	5.9	5.1	48	11.2	13.46	0.1	1.83	0.01	5.86	6.14	0.28	0.05	3.01	0.354	64.22	0.02	0.48	3.01
X17350	381	5.6	16.6	83	37.4	15.92	0.43	1.87	<0.01	6.21	7.71	1.67	0.13	2.75	0.265	58.05	0.02	0.42	3.78
X17069	299	29	9.2	26.7	13.4														
X17270	174	14.6	7.8	89	20.7	15.77	0.55	2.75	0.02	6.7	5.89	1.54	0.09	2.94	0.303	55.1	0.03	0.45	6.33
H43068	370	9.8	13.8	63	19	17.14	1.1	1.56	<0.01	6.97	6.61	3.23	0.09	1.72	0.4	55.01	0.03	0.49	5.58
X18147	162	30.7	7	31	19.9	17.32	0.59	1.9	<0.01	4.96	7.46	0.81	0.08	3.28	0.27	57.7	0.02	0.34	4.8
X16787	250	9.1	9.2	24	16.6	16.15	0.38	2.12	<0.01	6.27	6.6	2.72	0.07	2.14	0.317	56.25	0.03	0.45	4.93
67950	321	11.4	12.4	29	12	16.69	0.21	1.36	<0.01	5.32	7.44	1.27	0.04	2.8	0.319	60.37	0.02	0.45	3.59
H41661	146	9.5	7.5	21	23.3	15.74	0.66	2.83	<0.01	6.86	6	1.42	0.08	2.5	0.292	56.15	0.03	0.45	6.72
G37829	191	5	12.5	78	38.4	16.61	0.94	2.56	<0.01	5.43	5.69	1.61	0.11	3.64	0.285	57.5	0.04	0.45	5.01
X17354	72	1.9	5.5	63	100.5	15.14	0.19	0.39	<0.01	1.5	9.31	0.35	0.06	2.09	0.017	68.68	0.02	0.05	1.11
X17404	248	16.4	7.2	33	20.7	15.76	0.47	4.06	0.01	9.25	4.57	3.45	0.09	2.52	0.342	49.09	0.03	0.44	8.81
H43134	601	15.8	7.7	52	9.7	17.63	0.27	2.76	0.02	9.97	6.98	1.84	0.09	2.69	0.417	50.45	0.02	0.42	6.12
X14912	135	15.7	9	27	22.6	16.71	0.16	1.82	0.01	4.43	4.36	1.59	0.07	5.31	0.258	59.66	0.03	0.65	3.76
H43078	338	15.2	10	202	20.9	17.27	0.23	1.5	<0.01	8.05	6.23	3.12	0.08	2.08	0.379	54.5	0.01	0.52	5.78
H43082	379	6.6	9.6	77	29.8	16.46	0.85	0.87	<0.01	4.93	7	1.19	0.04	2.26	0.167	62.21	0.03	0.25	3.39
H41615	361	9.5	16	141	68.8	14.45	0.47	2.68	<0.01	5	9.95	1.28	0.21	0.35	0.261	59.88	0.03	0.52	4.51
X14921	116	12.7	7.1	17	18.8	14.24	0.2	2.46	<0.01	5.04	5.85	0.93	0.1	2.85	0.12	62.78	0.02	0.39	4.93
X16837	229	6.9	8	52	13.8	16.01	0.32	2.52	<0.01	6.26	6.43	3.01	0.08	2.12	0.321	55.63	0.02	0.48	5.25
X16765	272	17.6	8.1	13	15.9	16.51	0.29	2.15	<0.01	4.63	7.06	2.15	0.06	2.72	0.313	58.53	0.03	0.45	4.34
X17225	431	6	25.5	300	24.6	14.92	0.36	2.95	<0.01	7.48	8.55	2.47	0.22	1.01	0.377	55.27	0.03	0.55	5.45
X17188	430	19.1	6.5	64	14.7	15.58	0.18	2.17	0.01	6.16	7.45	1.32	0.08	2.55	0.328	58.3	0.02	0.46	4.31
H43091	335	6.9	5.9	38	85.7	13.83	0.13	0.16	<0.01	3.09	7.08	0.84	0.05	2.58	0.067	70.41	0.01	0.11	1.43
X16185	1045	12.5	4	21	31.1	12.76	0.12	0.88	0.01	7.11	6.51	0.62	0.03	2.38	0.082	66.35	0.01	0.16	2.47
X16775	223	3.6	10.6	17	14	16.44	0.31	2.19	<0.01	5.64	4.7	2.87	0.05	3.95	0.333	57.69	0.03	0.46	4.23
H43093	263	6.2	4.3	26	42.5	11.12	0.07	0.12	<0.01	2.58	5.69	0.44	0.02	2.22	0.043	76.4	0.01	0.09	1.01
X14969	67	16.4	5.3	13	12.1	13.78	0.22	1.45	0.01	2.83	5.75	0.59	0.07	3.17	0.104	68.07	0.03	0.31	2.91
X18198	250	5.7	3.1	62	109	16.78	0.38	0.59	<0.01	2.02	9.17	0.58	0.06	1.91	0.052	65.32	0.02	0.08	2.28

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
X17394	519	6.1	14.8	149	45.5	14.36	0.37	3.38	0.01	7.22	7.85	2.13	0.19	1.67	0.304	54.85	0.02	0.54	5.6
X14977	75	21.9	6.8	20	14.2	13.04	0.26	2.13	0.01	4.36	7.36	0.72	0.11	1.48	0.133	64.8	0.03	0.33	3.82
H40884	193	6.6	24.8	174	41.1	15.39	0.17	3.3	0.01	11.51	3.12	3.96	0.28	3.82	0.299	50.54	0.02	0.57	6.69
X16754	221	9.8	9.4	15	13.2	15.66	0.5	2.46	<0.01	5.33	6.52	1.94	0.05	2.83	0.342	57.66	0.04	0.45	4.58
X14904	83	25	6.6	31	14.5	14.59	0.25	1.52	0.01	3.1	6.31	1.08	0.08	2.37	0.109	65.58	0.02	0.37	3.37
X16756	253	13.2	8.6	23	14.7	16.4	0.36	2.62	0.01	6.12	6.2	2.69	0.07	2.1	0.338	56.14	0.02	0.45	5.04
X17340	364	3.5	15.1	91	43	14.66	0.41	2.33	<0.01	6	9.92	1.46	0.14	0.7	0.224	59.09	0.03	0.39	3.71
X16750	237	10.5	9.8	20	14.8	16.21	0.49	2.49	<0.01	5.69	6.55	2.46	0.05	2.67	0.339	57.55	0.03	0.44	4.74
G37869	164	3.8	8.6	112	26.2	16.49	0.55	2.54	<0.01	6.47	5.39	3.04	0.14	1.21	0.307	56.42	0.02	0.46	6.6
X17142	408	13.4	8.7	63	14.7	13.88	0.33	3.53	0.01	7.13	5.66	2.22	0.1	1.28	0.307	57.29	0.02	0.41	6.09
X17198	840	7.3	6	51	11.1	12.97	0.14	2.45	0.01	8.95	6.83	0.41	0.08	2.19	0.308	60.68	0.02	0.5	3.14
X14956	86	10.6	5.5	16	11.5	14.58	0.2	2.38	<0.01	4.06	4.93	0.54	0.09	4.11	0.083	63.95	0.03	0.37	4.1
H43123	508	9.9	11.6	61	13.8	15.01	0.15	3.18	0.02	7.95	4.64	2.76	0.11	3.56	0.391	55.3	0.02	0.57	6.02
X14946	51	7.1	4.1	11	10	13.48	0.15	1.46	0.01	2.27	3.95	0.47	0.06	4.44	0.089	70.63	0.03	0.23	2.45
X17261	82	1.5	5.8	88	61.2	14.53	0.35	0.82	<0.01	1.56	11.07	0.58	0.07	0.27	0.021	67.66	0.03	0.05	1.64
G36716	414	12.5	14.8	381	35	14.99	0.18	4.17	0.01	7.92	6.02	2.67	0.36	1.02	0.244	53.31	0.02	0.59	7.18
X16227	1015	24.2	7.4	34	10.7	12.54	0.12	1.64	0.01	4.69	6.41	1.43	0.06	1.75	0.31	66.83	0.02	0.34	2.83
X16743	248	8.2	10	34	15.5	16.07	0.44	2.86	<0.01	6.03	5.9	2.84	0.06	2.35	0.371	55.2	0.03	0.49	5.63
X18236	120	39.4	8	84	25	16.34	0.2	1.93	0.01	5.85	5.38	1.59	0.13	4.03	0.219	57.7	0.03	0.62	5.73
G34684	419	10.9	9.2	39	19.3	14.1	0.21	1.64	0.01	7.97	6.36	1.62	0.07	1.12	0.403	58.49	0.02	0.64	6.1
H43140	934	28.7	10.4	26	46.7	12.83	0.14	3.27	0.01	7.29	5.75	0.75	0.08	2.72	0.221	61.67	0.02	0.37	4.21
X14918	135	10.5	15.1	34	27.3	17.64	0.15	2.15	0.01	4.09	4.17	1.99	0.07	6.07	0.392	58.08	0.03	0.69	3.53
H43131	144	1.4	6.1	54	10.8	15.61	0.43	1.47	<0.01	6.22	4.48	1.45	0.05	0.23	0.288	63.29	0.01	0.39	5.29
X17346	305	8.1	14.5	76	38.5	15.93	0.41	2.35	<0.01	5.28	7.6	1.47	0.15	2.93	0.258	58.21	0.03	0.42	3.69
X16176	562	19.3	9.8	21	11.6	15.53	0.16	1.84	0.01	5.31	7.43	1.42	0.05	2.75	0.289	60.29	0.02	0.46	3.27
H40882	169	8.2	12.7	6420	42	15.9	0.26	3.52	0.01	4.4	6.63	0.98	0.12	3.77	0.194	58.74	0.02	0.63	4.43
H43120	540	9.9	11.1	83	17.5	15.41	0.21	2.01	0.03	7.8	6.36	3.79	0.09	2.61	0.371	56	0.02	0.5	4.79
X17974	205	20.2	16.5	53	36.8	17.42	0.17	1.72	0.01	3.47	5.53	2.33	0.18	4.64	0.167	59.5	0.02	0.65	3.39
H41608	346	12.9	18.8	126	42.7	12.99	0.3	3.26	<0.01	4.35	8.84	1.14	0.22	0.38	0.236	62.97	0.02	0.44	4.32
X14856	531	5.4	4.7	48	35.7	12.81	0.18	2.52	<0.01	5.41	7.93	1.17	0.14	0.16	0.114	62.48	0.02	0.2	5.24
H43102	380	6.4	3.4	20	44.5	12.42	0.14	0.27	<0.01	3.15	9.5	0.73	0.03	0.47	0.065	71.62	0.01	0.1	1.26
H41619	415	5.5	17.2	149	43.3	15.43	0.43	3.13	0.01	5.45	10.02	2.15	0.31	0.26	0.257	57.49	0.03	0.55	4.42
H43143	459	28.9	9	61	17.8	16.63	0.27	3.17	<0.01	8.7	6.24	3.06	0.14	2.49	0.36	52.3	0.03	0.45	5.75
X14902	147	10	9	43	83.4	14.13	0.32	2.93	0.01	3.45	5.2	0.99	0.21	2.2	0.099	64.25	0.03	0.42	4.64
G36584	237	4.9	7.1	46	32.3	15.27	0.13	2.47	0.01	5.07	4.54	1.41	0.21	4.3	0.099	61.01	0.02	0.52	4.79
67916	261	11.1	11.4	31	14.3	16.49	0.25	3.44	0.01	6.64	5.63	3.06	0.08	1.56	0.381	54.88	0.02	0.49	6.86
H44025	208	9.2	2.5	21	78.6	16.18	0.4	1.23	<0.01	1.98	7.22	0.42	0.05	3.73	0.058	65.5	0.02	0.12	2.18
H41621	427	7.7	19.8	130	41.1	14.68	0.38	3.25	0.01	5.16	9.84	1.95	0.29	0.26	0.243	57.27	0.03	0.54	4.87
X16798	236	10.1	9.7	72	14.1	16.59	0.4	3.63	<0.01	5.56	5.9	2.86	0.09	2.42	0.36	54.43	0.04	0.48	6.16
X17179	522	20.7	6.9	77	14.9	14.95	0.26	2.4	0.01	7.66	5.87	2.66	0.11	2.67	0.336	56.98	0.02	0.46	4.56
H40878	156	7	13	62	26.3	16.63	0.52	3.71	<0.01	5.05	7.39	1.47	0.16	1.61	0.263	56.2	0.02	0.33	6.42
X16141	277	12.1	9.1	19	13	15.43	0.19	2.18	<0.01	4.29	5.88	1.92	0.06	2.94	0.287	61.78	0.02	0.4	4.04
G36604	160	4	3.2	164	81.2	16	0.28	2.22	0.01	2.43	11.2	0.5	0.13	0.31	0.076	62.88	0.02	0.14	3.34
X14897	142	14.1	9.3	78	36.9	15.28	0.19	3.09	<0.01	5.25	4.47	2.63	0.17	2.69	0.175	58.11	0.02	0.51	5.96
H41617	411	5.7	21.1	208	57.2	13.94	0.29	3.24	0.01	4.7	9.78	1.46	0.25	0.22	0.224	60.6	0.02	0.55	4.12
G34743	136	19.1	7.9	41	35.5	16.25	0.11	3.05	0.01	6.65	3.44	1.97	0.09	5.15	0.219	54.14	0.03	0.66	6.99
X17040	288	12.6	10.5	17.3	11.9														
H40799	405	13.6	9.3	60.3	34.4														
H43111	368	12.4	7.2	38	19.4	14.79	0.18	2.59	0.01	5.62	6.39	1.19	0.09	2	0.277	61.26	0.02	0.5	4.84
H41624	76	2.1	4.9	68	80.8	15.27	0.69	0.98	<0.01	1.77	10.81	0.7	0.08	0.3	0.015	67.07	0.03	0.06	2.03

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
X16829	223	10.1	8.9	15	13.6	14.43	0.28	3.43	0.01	5.23	6.16	2.56	0.08	1.03	0.3	59.73	0.02	0.41	4.95
X17338	338	3.5	16.8	79	42.1	15.26	0.48	2.7	<0.01	5.56	9.04	1.73	0.16	1.47	0.248	57.64	0.03	0.46	3.78
H43127	370	22	7.8	67	18.2	14.47	0.16	3.5	0.01	7.82	4.92	3.18	0.15	3.21	0.328	54.39	0.02	0.5	7.03
H43076	260	10.8	10.7	83	16.1	14.41	0.3	2.64	<0.01	5.45	6.1	1.78	0.09	1.66	0.316	60.14	0.02	0.4	6.66
X17383	310	3.4	11.9	98	37.3	15.9	0.45	3.22	<0.01	4.99	6.26	1.5	0.16	3.95	0.274	59.23	0.04	0.42	3.64
X18074	248	7.4	6.9	69	17.9	16.81	0.72	2.52	<0.01	5.25	6.92	2.02	0.16	2.51	0.287	54.59	0.04	0.36	6.42
X18250	38	8.6	4	83	11.5	13.72	0.23	2.11	<0.01	2.79	5.06	0.4	0.08	3.86	0.091	66.7	0.03	0.2	3.06
H43135	383	13.2	8	29	13.4	12.96	0.14	2.18	<0.01	5.17	4.26	0.8	0.05	3.39	0.283	66.5	0.02	0.43	3.57
G34723	188	11	6.5	49	20.8	18.08	0.62	2.37	<0.01	5.13	6.93	1.39	0.1	3.28	0.272	55.51	0.03	0.37	5.73
X18095	237	12.1	6.5	167	23.6	16.83	0.53	3.52	<0.01	4.73	8.05	1.31	0.21	0.87	0.265	56	0.02	0.33	6.38
X18289	143	7.9	10.6	28	22.4	15.37	0.06	3.49	0.01	4.79	1.76	1.7	0.17	6.06	0.148	60.26	0.03	0.58	5.25
X17371	289	10.5	11.3	87	44.1	16.18	0.54	3.52	<0.01	5.06	6.34	1.85	0.19	3.81	0.279	56.06	0.05	0.43	4.16
X16995	257	11	9.6	11.6	12.8														
X16205	520	13.3	4.7	21	22.3	14.04	0.12	2.31	<0.01	4.76	7.14	0.9	0.05	2.2	0.142	63.06	0.02	0.22	4.39
X17080	257	10.3	9.7	25.6	11.8														
X16209	404	13.4	3.6	14	22.1	13.78	0.11	1.72	<0.01	3.39	5.97	0.74	0.04	3.21	0.094	66.31	0.02	0.14	3.33
H41610	354	11.2	20.8	93	36	15.2	0.36	4.29	0.01	6.22	9.42	2.64	0.37	0.28	0.283	54.06	0.03	0.67	6.16
H41664	177	13.3	8.6	29	18.9	16.42	0.46	3.84	<0.01	7.14	5.26	2.45	0.11	3.63	0.314	51.32	0.04	0.47	8.19
H40834	123	18.4	7.2	110.8	17.9														
X16857	216	17	8.5	44	14.5	15.78	0.44	3.13	0.01	5.2	7.45	2.13	0.09	1.83	0.306	57.41	0.03	0.43	4.79
H44032	251	9.1	2	19	74.7	14.73	0.21	3.28	<0.01	3.72	9.59	0.69	0.15	0.46	0.051	61.42	0.02	0.1	3.71
X17957	592	13.7	10.4	123	26	14.19	0.79	4.3	<0.01	5.33	8.64	2.37	0.32	0.18	0.217	56.28	0.03	0.3	6.74
G36725	178	4.9	4.4	37	93.8	17.18	0.29	1.87	<0.01	2.56	5.09	0.85	0.12	5.14	0.055	63.5	0.03	0.15	3.09
H41797	523	3.7	13.4	119	35.2	14.82	0.27	4.08	0.01	5.66	7.25	2.37	0.17	2.76	0.311	56	0.03	0.46	5.51
H44036	130	6.7	3.1	18	86.6	16.04	0.11	1.61	<0.01	2.25	8.02	1.02	0.09	1.33	0.024	66.02	0.02	0.1	3.22
X16439	561	5.1	8	83	12.3	14.21	0.2	2.25	0.01	7.7	5.47	2.62	0.08	3.44	0.311	60.09	0.04	0.42	2.82
H43116	304	8.2	7.7	33	34.8	13.01	0.27	3.53	<0.01	4.99	4.71	1.81	0.11	2.84	0.221	62.67	0.02	0.33	5.3
H41631	448	9	21.8	1990	42.5	13.15	1.11	5.12	0.01	6.28	8.24	1.96	0.43	0.31	0.216	54.93	0.05	0.51	6.13
X16176	563	13.8	6.2	27	18.4	14.7	0.17	1.63	0.01	4.24	8.29	1	0.05	2.05	0.189	64.11	0.02	0.25	3.26
H41814	367	6.3	14.7	134	33.5	13.56	0.64	3.58	<0.01	5.43	8.97	1.84	0.21	0.4	0.317	59.13	0.02	0.44	5.16
H43098	356	8.2	3.3	25	50.8	12.74	0.09	0.99	<0.01	3.26	7.88	0.78	0.03	1.69	0.079	70.02	0.01	0.11	2.01
X17910	348	7.6	7.8	56	31.6	16.46	0.58	3.07	<0.01	4.2	8.12	2.5	0.21	1.37	0.251	55.43	0.02	0.38	6.13
H41613	422	4.7	14	146	34.5	13.6	0.33	4.52	<0.01	5.85	9.1	2.71	0.43	0.5	0.3	55.28	0.03	0.54	5.89
H44018	70	1.9	2.8	56	94.2	16.68	0.44	1.14	<0.01	1.53	8.44	0.49	0.05	2.36	0.025	65.69	0.03	0.09	2.09
X18152	145	19.9	6	39	12.1	17.28	0.47	2.57	<0.01	5.3	7.07	1.46	0.11	3.06	0.283	55.25	0.03	0.35	5.92
H41800	462	3.2	15	76	38.1	15.04	0.21	3.09	0.01	5.15	5.62	2.96	0.14	4.03	0.323	58.29	0.03	0.58	4.37
X16447	523	7.6	8.9	75	11.7	16	0.17	2.77	0.01	8.5	6.31	2.91	0.1	3.63	0.374	55.37	0.03	0.56	3.11
X16229	829	10	8.8	47	10.3	14.43	0.13	2.45	0.02	5.63	6.3	1.35	0.07	2.64	0.313	62.21	0.02	0.42	3.35
G36696	133	13.2	17.4	48	49.3	16.99	0.2	3.34	0.01	4.07	5.02	2.17	0.14	4.53	0.273	58	0.03	0.63	4.57
X17213	398	4.8	11.1	74	11.7	15.94	0.41	2.38	<0.01	5.39	7.9	1.8	0.11	2.64	0.343	58.46	0.02	0.44	3.25
X17234	462	5.5	50.5	198	22	13.27	0.46	4.84	<0.01	6.53	8.53	2.23	0.29	0.18	0.327	56.31	0.04	0.49	5.13
H43145	336	10.4	1.5	11	33.7	12.35	0.06	1.28	<0.01	2.59	9.56	0.49	0.03	0.6	0.033	70.76	0.01	0.03	2.05
X16962	251	8.7	8.7	31.8	9.2														
H43088	440	8.1	5.7	35	62.6	11.12	0.16	2.85	<0.01	5.22	5.79	1.25	0.07	1.28	0.138	67.2	0.02	0.22	4.47
67933	275	17.9	9.1	31	14.4	15.81	0.28	2.06	0.01	6.73	5.8	2.17	0.07	3.36	0.341	58.97	0.02	0.45	3.49
H41776	502	4.6	7.8	65	52.2	15.6	0.14	1.62	0.01	3.72	5.85	1.87	0.1	4.38	0.268	63.5	0.02	0.44	2.34
X17245	347	5.2	15.5	293	20.6	15.6	0.63	6.86	<0.01	6.17	10.2	1.97	0.33	0.26	0.444	50.25	0.05	0.58	4.89
X16222	1150	16.9	7	44	11.5	12.21	0.11	1.74	0.01	4.73	6.22	1.28	0.05	1.69	0.312	67.43	0.02	0.34	2.65
X17925	917	15.9	13.6	358	41.1	10.06	0.33	6.13	0.01	7.48	6.21	2.28	0.57	0.48	0.122	55.8	0.02	0.51	8.3
H44040	302	13.6	2.4	30	75.3	14.18	0.13	4.3	<0.01	4.14	9.49	0.68	0.18	0.78	0.028	61.25	0.02	0.11	2.92

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
X16158	368	14.3	8	32	22.2	14.14	0.14	2.51	<0.01	5.05	5.82	2.18	0.07	2.24	0.271	60.87	0.02	0.35	5.31
G34713	354	2.1	3.2	70	51.2	11.49	0.12	2.04	0.01	3.17	7.95	0.84	0.11	0.09	0.045	69.92	0.02	0.09	3.64
H44174	979	12.6	13.2	122.5	32.9														
H43080	626	5.9	9.5	93	30.1	15.5	0.54	1.45	<0.01	5.04	6.6	0.95	0.06	1.97	0.184	64.04	0.02	0.31	3.18
H44030	507	5.4	10.4	110	40.1	13.75	0.3	5.44	<0.01	4.58	6.07	1.98	0.32	1.66	0.194	58.38	0.03	0.34	5.47
9042	684	4.3	11.5	97	33.5	15.49	0.15	3.32	0.02	9.45	6.09	2.89	0.14	3.25	0.376	53.71	0.02	0.58	4.26
H44016	76	2.7	2.4	96	104	16.64	0.32	1.23	<0.01	1.45	6.93	0.25	0.04	4.43	0.026	66.53	0.03	0.09	1.87
H44020	92	2.1	4.4	36	98.4	16.83	0.4	1.42	<0.01	1.48	8.71	0.51	0.05	2.02	0.038	65.75	0.03	0.1	2.42
H40891	162	5.2	14	58	27.9	14.06	0.13	3.58	<0.01	4.16	4.57	1.43	0.17	3.79	0.095	62.68	0.02	0.38	4.71
H44034	182	5.2	2	21	97.5	15.87	0.2	1.85	<0.01	1.89	10.8	0.62	0.1	0.54	0.024	64.29	0.02	0.09	2.56
67974	888	20.1	8.8	22	13	15.61	0.15	1.89	0.01	7.22	7.62	1.23	0.06	2.54	0.308	58.32	0.02	0.44	3.84
G34694	547	10.6	9.7	64	14.3	15.29	0.22	1.92	0.01	8.27	6.89	1.44	0.06	2.59	0.397	55.92	0.02	0.59	6.09
H43118	325	8.8	10.5	48	27.3	14.43	0.22	2.85	<0.01	4.92	5.15	2.64	0.08	2.49	0.303	61.46	0.02	0.36	4.9
X17940	382	9.2	12.3	92	45.6	15.8	0.6	2.73	0.01	4.23	9.65	2.5	0.22	0.66	0.235	57.28	0.02	0.62	4.78
H41635	116	3.1	7.5	118	91.7	14.74	0.29	1.31	<0.01	2.27	10.73	0.77	0.15	0.27	0.07	66.33	0.02	0.13	2.09
H41793	477	9.9	15	61	41.6	15.2	0.23	4.09	0.01	4.19	7.16	1.7	0.22	2.96	0.342	58.09	0.03	0.61	4.94
X14886	142	18.1	11.5	68	35.6	15.44	0.05	4.14	0.01	6.28	2.08	3.65	0.19	4.61	0.18	54.78	0.02	0.64	6.41
X18104	217	22.4	9.1	1230	27.1	15.73	0.38	4.55	<0.01	4.37	7.31	1.78	0.21	2.37	0.238	54.34	0.03	0.48	6.26
H41795	612	4.6	14.6	66	37.1	13.32	0.2	4.67	0.02	5.54	6.15	2.3	0.18	2.54	0.265	58.44	0.03	0.49	5.75
X18206	334	7	10.4	376	18.9	17.36	0.6	3.15	<0.01	5.91	5.46	2.67	0.2	4.28	0.364	54.76	0.03	0.38	4.63
H41789	525	5.9	16.2	74	39.6	14.73	0.16	3.01	0.02	4.14	5.39	1.84	0.13	4.11	0.285	61.71	0.02	0.58	3.72
H43147	530	18	12.3	67	17.9	13.42	0.27	4.21	0.01	8.66	5.32	4.37	0.2	2.79	0.312	54.31	0.03	0.58	5.44
X16844	197	15.5	13.5	33	43.3	16.79	0.28	4.33	<0.01	5.51	6.3	1.85	0.1	2.76	0.307	54.27	0.03	0.55	5.3
X18278	137	5.9	7	41	21.2	17.09	0.49	4.1	<0.01	4.36	5.31	1.46	0.19	3.85	0.262	55.63	0.04	0.33	5.15
X17892	405	12.6	8.7	75	45.5	16.65	0.22	2.19	0.02	3.46	8.81	1.57	0.16	1.84	0.182	59.21	0.01	0.67	4.33
H41812	550	6.7	15.1	94	35.2	15.36	0.32	3.05	0.02	4.62	7.69	2.92	0.17	2.31	0.316	58.01	0.03	0.59	4.57
G36622	191	9	1.8	22	73.6	15.07	0.21	2.74	<0.01	2.6	10.73	0.73	0.18	0.34	0.034	64.02	0.02	0.12	3
X18223	172	11.3	9.2	57	17.8	13.41	0.27	3.2	<0.01	3.02	6.51	1.15	0.14	2.05	0.109	64.56	0.03	0.38	4
X18158	148	17.7	6	66	19.3	16.68	0.51	3.34	<0.01	4.74	6.19	1.35	0.15	3.8	0.245	55.4	0.03	0.31	5.62
H41818	186	15.6	9.6	61	30.4	16.76	0.4	4.39	<0.01	6.02	5.3	2.06	0.16	3.37	0.305	53.11	0.03	0.5	7.44
H41629	553	5.3	18.4	154	47.7	13.31	0.31	4.55	0.01	6.86	8.35	2.63	0.41	0.33	0.254	56.39	0.02	0.52	5.93
H41604	467	11.8	24.6	538	32.3	11.85	0.33	5.91	<0.01	4.64	8.21	2.25	0.55	0.28	0.166	58.41	0.03	0.38	5.32
H41782	345	4.2	12.6	114	33.1	14.87	0.21	1.4	0.01	3.16	6.6	1.41	0.08	3.57	0.266	65.84	0.02	0.51	1.81
X16237	796	9	7.5	42	15.6	13.54	0.21	2.03	0.01	4.63	6.3	1.31	0.06	2.27	0.254	65.27	0.02	0.31	2.55
X14888	145	12.6	9.9	55	21.2	16.04	0.31	5.45	<0.01	5.76	4.92	2.64	0.2	2.52	0.284	53.83	0.02	0.45	6.34
H41626	70	1.7	8.8	34	66.9	14.5	0.28	1.75	<0.01	1.58	11.08	0.49	0.12	0.46	0.021	67.54	0.01	0.06	2
G36209	359	7.2	16.2	84	39.1	14.66	0.27	4.04	0.01	4.43	8.18	1.54	0.15	1.51	0.188	59.72	0.03	0.58	4.58
H44022	265	8.1	8.1	43	31.5	15.88	0.42	4.57	<0.01	3.12	6.8	0.91	0.16	3.63	0.23	59.94	0.03	0.35	2.93
H44028	485	7.5	8.6	137	37.9	15.11	0.39	4.18	<0.01	3.68	6.39	1.24	0.16	3.21	0.198	59.83	0.03	0.35	3.82
X18188	306	8.8	14.7	64	20.7	15.91	0.34	0.3	<0.01	5.52	8.22	1.36	0.03	1.61	0.374	62.08	0.02	0.46	2.62
H43151	642	11.9	13.2	70	17.6	13.58	0.27	5.49	0.02	10.02	4	4.2	0.22	3.08	0.294	51.4	0.03	0.64	6.26
9374	420	3.7	19.1	144	36.5	13.85	0.35	4.7	<0.01	5.22	9.04	1.69	0.17	0.54	0.265	58.87	0.03	0.63	4.61
H41605	393	4	17.7	62.1	13.5														
H40976	691	13.2	9	38.6	13.5														
9051	108	1.2	4.3	39	44.8	14.21	0.25	2.62	<0.01	2.72	11.05	0.73	0.17	0.22	0.04	65.07	0.02	0.06	2.66
H41807	552	4.2	15.3	68	28.3	14.92	0.25	3.72	0.01	4.22	6.9	2.22	0.15	3.08	0.316	59.05	0.04	0.49	4.49
9352	330	4.1	12.9	71	16.4	16.06	0.36	2.89	0.02	5.06	7.13	2.04	0.12	3.39	0.317	57.21	0.03	0.46	3.73
X14882	168	17.5	11	57	39.8	14.07	0.05	5.08	0.01	5.57	2.51	3.02	0.23	3.67	0.167	57.39	0.03	0.52	6.14
H40886	133	4.8	16.9	53	25	14.74	0.16	4.63	0.01	3.84	4.35	1.08	0.23	4.33	0.128	61.27	0.03	0.53	4.45
H43106	573	8.7	9.6	68	16.4	16.23	0.32	3.01	<0.01	5.72	5.7	1.91	0.13	3.21	0.25	58.01	0.02	0.48	4.87

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
H41791	462	4.1	13.8	56	38.3	14.25	0.1	4.24	0.01	3.69	4.32	2.01	0.19	4.79	0.287	60.25	0.03	0.56	4.1
H43129	365	18.5	11.9	71	16.1	14.53	0.17	4.38	0.01	6.91	5.52	3.6	0.15	2.46	0.327	55.01	0.02	0.52	6.25
X17203	418	3.2	11.6	90	21.7	15.06	0.33	3.83	<0.01	5.13	6.05	2.04	0.14	3.5	0.312	57.81	0.03	0.45	3.99
H43136	581	14.5	10.5	68	21.1	13.71	0.18	5.81	0.01	7.85	3.71	2.7	0.15	3.54	0.303	54.69	0.02	0.41	6.89
X16819	149	8.3	12.8	43	56.5	17.05	0.32	4.41	<0.01	5.03	4.79	2.09	0.11	3.55	0.294	54.7	0.05	0.6	5.63
X16195	681	14.3	5.4	40	22.1	13.87	0.13	2.75	<0.01	4.33	7.25	1.95	0.08	1.53	0.154	63.37	0.02	0.2	4.17
X17863	319	6	6.6	96	38.2	15.34	0.55	3.98	0.01	2.6	11	1.3	0.16	0.3	0.216	58.28	0.02	0.28	4.71
X16454	732	10.1	9.4	55	27.1	15.03	0.14	3.71	0.01	7.29	6.39	1.94	0.12	3.33	0.316	56.46	0.03	0.52	3.18
G36562	542	9.7	17.4	78	39.6	14.23	0.18	5.69	0.01	5.34	5.94	2.66	0.31	1.7	0.196	56.26	0.02	0.55	6.69
H43149	649	26.9	8.5	58	30.9	14.95	0.15	5.37	0.01	8.9	4.37	2.9	0.21	3.8	0.312	52.15	0.02	0.66	5.83
X18135	236	8.3	12	125	33.4	15.15	0.18	4.61	0.01	3.51	4.82	1.94	0.26	3.93	0.175	58.47	0.04	0.59	5.11
H41644	118	4.3	12	93	80.9	14.06	0.29	1.29	<0.01	1.82	10.68	0.71	0.17	0.25	0.034	68.55	0.02	0.09	1.93
H43109	521	15	19.5	72	13.6	12.12	0.32	12.28	0.01	9.3	3.45	2.31	0.37	2.47	0.201	42.92	0.03	0.37	7.16
X14933	118	16.9	9.5	24	36.4	18.16	0.19	2.87	0.02	1.82	4.67	1.04	0.11	6.15	0.219	59.8	0.04	0.66	2.95
G36652	582	7.1	7.8	69	24.7	13.57	0.39	2.51	0.02	5.13	7.48	1.24	0.15	1.91	0.229	61.93	0.01	0.36	5.01
G34782	135	5.8	19.3	34	35.1	17.08	0.21	2.95	0.01	5.06	4.49	2.3	0.1	4.57	0.26	57.99	0.03	0.69	4.03
H41803	445	2.4	13	75	29.4	14.46	0.26	4.34	0.02	4.94	6.02	3.07	0.17	3.24	0.315	57.11	0.04	0.5	4.7
H43096	339	6.3	5.9	33	53	12.59	0.1	2.15	<0.01	3.38	7.13	0.89	0.07	1.87	0.084	68.24	0.01	0.11	3.14
H40994	467	5.6	8.6	53.3	31.3														
H41810	585	5.1	17.2	77	44.8	14.15	0.16	4.62	0.02	4.43	4.79	3.1	0.22	3.88	0.274	58.13	0.03	0.57	5.33
H43104	327	11.4	10.9	55	32.1	17.3	0.89	4.58	<0.01	5	6.53	1.18	0.1	3.36	0.252	55.59	0.04	0.35	4.61
H41772	775	9.9	6.3	63	23.1	14.25	0.15	2.46	0.02	3.9	7.62	2.11	0.12	2.52	0.27	63.01	0.03	0.45	3.04
H40888	174	7.2	18.3	44	30.4	14.49	0.11	6.01	0.01	3.85	4.17	1.1	0.24	4.23	0.131	59.01	0.03	0.64	4.3
X18120	348	14.1	13.3	113	33.9	15.82	0.24	5.48	0.01	3.28	7.42	1.19	0.2	2.55	0.272	56.9	0.04	0.64	4.64
H44014	71	2.1	2.4	31	98.8	16.02	0.28	2.49	<0.01	1.35	6.67	0.25	0.09	4.18	0.025	66	0.03	0.08	2.35
H40855	145	11.6	12.2	19.9	27.8														
G36639	574	11.9	8.4	48	37.3	13.58	0.26	5.03	<0.01	4.44	7.45	1.85	0.39	0.73	0.193	58.38	0.02	0.3	5.66
H44038	195	6.4	1.8	14	97.4	15.98	0.12	3.13	<0.01	1.8	7.81	0.59	0.13	2.18	0.023	64.55	0.02	0.09	3.42
X18142	126	17.3	10.2	42	30.3	16.26	0.08	4.47	<0.01	2.78	2.39	1.37	0.17	6.33	0.185	59.13	0.04	0.49	4.77
H43153	403	29.1	11.3	65	14.6	14.28	0.56	5.99	0.01	7.95	5.61	3.72	0.23	2.45	0.306	50.99	0.03	0.47	6.27
H41805	437	2.3	16.9	78	34.5	15.01	0.17	3.39	0.02	3.3	3.53	2.42	0.13	5.72	0.271	61.55	0.03	0.57	3.7
G34704	493	3.4	4.2	69	76.1	10.86	0.17	2.59	<0.01	3.47	7.19	1.08	0.13	0.1	0.07	68.88	0.02	0.15	4.72
H44230	1004	8.6	15.8	227.9	22.1														
X17877	659	12.9	11.2	114	35.9	13.82	0.21	5.43	0.01	4.62	9.12	2.5	0.28	0.19	0.217	53.21	0.02	0.45	8.18
G36186	598	6.4	12	179	29.5	13.8	0.36	6.47	<0.01	4.71	6.76	1.72	0.26	1.15	0.178	56.56	0.02	0.31	6.16
H41613	396	15.2	18.4	60	10.9														
H41771	510	3	1.7	33	17.8	14.75	0.05	0.56	<0.01	1.22	9.74	0.41	0.04	1.99	0.071	70.01	0.02	0.12	0.89
X17306	633	67.3	12.1	94	34.2	14.74	0.36	2.35	0.02	6.24	7.9	3.22	0.14	2.83	0.303	59.7	0.03	0.55	1.42
9399	420	2.8	15.7	76	33.5	13.73	0.28	4.77	0.01	4.19	7.97	2.03	0.17	1.13	0.291	59.45	0.04	0.55	5.17
G34763	188	14.9	11.9	96	36.4	17.78	0.09	2.63	0.01	6.29	4.76	2.8	0.1	3.18	0.328	54.39	0.03	0.76	6.37
H40880	187	3.8	15.3	47	24.1	14.45	0.18	5.35	0.01	2.78	5.11	1.07	0.19	3.25	0.12	61.92	0.02	0.52	5.02
X17327	481	4.2	13.2	115	60.1	13.74	0.27	4.1	0.02	4.62	6.19	2.85	0.16	2.99	0.301	58.93	0.03	0.52	4.05
X18084	190	9.1	7.3	127	36	16.38	0.43	3.9	0.01	4.17	5.25	1.75	0.21	3.71	0.206	57.26	0.03	0.34	6.02
X18265	131	14.6	9.8	121	37.5	14.42	0.1	5.56	0.01	4.84	2.56	2.7	0.31	4.35	0.223	54.04	0.04	0.57	8.57
H41780	435	4.7	16.6	62	34.7	14.97	0.21	2.78	0.01	6.08	5.83	2.39	0.08	4.01	0.368	59.38	0.02	0.59	2.95
H41787	226	4.4	10	40	32	13.92	0.55	2.44	0.01	1.55	6.12	0.87	0.07	3.64	0.177	67.41	0.03	0.51	2.44
X17317	488	3.9	15.3	83	38.7	13.85	0.18	2.63	0.02	5.23	5.91	2.32	0.08	3.64	0.323	63.25	0.02	0.54	1.5
G36745	338	9.3	18	112	32	14.89	0.33	4.63	0.01	5.38	5.25	2.98	0.25	2.34	0.203	56.8	0.02	0.56	6.12
X16193	262	7.4	2.9	19	24.5	11.76	0.11	5.64	0.02	2.66	7.47	1.32	0.15	0.99	0.072	62.43	0.03	0.1	5.41
H41621	447	2.3	13.5	50.9	11.8														

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When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
9008	509	21.6	9	30	34.6	15.51	0.3	3.04	<0.01	5.55	7.12	1.1	0.09	3.13	0.285	60.26	0.04	0.46	2.89
G34556	646	3.4	11.1	102	27.5	14.7	0.33	3.43	0.01	4.95	7.67	1.51	0.1	2.28	0.339	60.85	0.03	0.44	3.25
9027	310	5.5	18.1	41	41.5	16.44	0.45	6.5	<0.01	5.2	5.71	1.52	0.22	4.09	0.264	53.22	0.06	0.43	5.1
H44187	1252	9.2	15.3	116.1	23.3														
H41619	439	4.6	15.9	61.7	8.8														
G36155	172	6.6	15.5	27	32.3	14.94	0.25	5.01	0.01	2.12	8.6	1.24	0.17	2.13	0.373	59.9	0.03	0.48	4.06
H41785	686	4.1	10.2	91	32	13.58	0.38	3.27	0.01	4.6	7.24	1.96	0.11	2.23	0.195	62.5	0.04	0.48	3.18
H41778	652	4	11.1	133	37.5	14.79	0.34	3.21	0.02	4.83	6.28	3.07	0.17	2.72	0.306	59.64	0.03	0.44	3.92
G36165	260	4.6	11.6	78	39.6	15.12	0.28	6.4	0.01	5.46	5.95	2.43	0.24	1.43	0.268	54.02	0.03	0.45	6.96
H41617	194	35	11.6	23.8	26.9														
G34753	549	7.4	4.2	68	30.3	10.22	0.15	4.19	<0.01	5.53	5.89	1.91	0.14	0.39	0.067	63.2	0.02	0.21	7.95
H43984	303	4.6	13.7	72.1	37.1														
H41615	372	2.8	16.2	36.1	12.7														
G33506	148	6.9	6.6	42.8	25.2														
H41608	364	3.2	16	45.3	14.7														
H41610	398	3.6	19.5	38.2	10.7														
H41622	320	2.2	12.6	45.8	11.6														
H41626	323	3.2	15	45	10.5														
X10676	80	2.7	2.1	25.5	2.1														
X13711	151	0.7	10	89.4	25.2														
X13701	148	0.5	3.3	159.5	17.8														
G33182	115	0.7	24.8	48	20.2	16.68	0.26	0.08	<0.01	6.74	3.53	0.37	<0.01	0.32	0.095	65.46	0.03	0.56	5.86
S91-395_5431	48	0.8	2.7	71	4.3	4.63	0.52	0.09	0.005	5.22	1.31	0.34	0.01	0.11	0.072	84.05	0.01	0.13	3.32
G37665	74	0.7	3.1	170	6.2	8.9	0.02	0.13	<0.01	6.79	2.45	0.25	0.01	0.1	0.075	76.08	0.01	0.33	4.53
S91-387_5210	69	1.1	5.2	36	5.2	7.19	0.12	0.18	0.005	6.36	1.96	0.36	0.01	0.15	0.128	79	0.005	0.24	4.28
G21564	159	0.8	13.9	213	25.5	19.14	0.29	0.19	<0.01	6.51	3.38	0.47	<0.01	0.38	0.234	62.27	0.06	0.69	6.21
G37342	117	0.5	5.8	81.1	15.9														
S91-395_5417	56	1.1	2.9	93	2.4	3.68	0.28	0.17	0.005	5.55	1.04	0.22	0.02	0.09	0.114	84.64	0.01	0.12	3.35
G36847	78	1.7	1.9	77	4	4.21	0.19	0.06	<0.01	5.51	1.36	0.29	0.01	0.03	0.052	84.74	0.01	0.14	3.11
S91-387_5199	32	0.4	6.3	42	3.1	2.7	0.03	0.04	0.005	2.94	0.7	0.19	0.005	0.08	0.041	91.23	0.005	0.05	1.75
X13520	110	0.6	6.1	80.4	18.6														
S91-387_5179	42	0.7	2.9	290	3.3	4.9	0.05	0.16	0.005	4.38	0.27	0.12	0.005	0.3	0.114	85.75	0.01	0.12	3.21
G37937	164	0.4	7.1	302	27.2	19.52	0.41	0.49	<0.01	8.88	3.56	0.52	0.01	0.59	0.339	57.7	0.01	0.61	7.28
S91-386_5101	242	0.6	11.7	247	11.2	12.54	0.29	0.59	0.01	11.57	1.75	0.47	0.03	0.45	0.412	63.06	0.01	0.53	8.15
S91-386_5158	88	0.8	5.5	531	8.2	10.83	0.22	0.27	0.005	7.07	2.8	0.78	0.02	0.22	0.148	71.87	0.01	0.39	5.16
G37330	109	0.4	4.1	74.2	17														
G22009	143	0.5	17.7	130	45.3	18.85	0.11	0.36	0.01	6.8	3.02	0.5	<0.01	0.33	0.235	62.26	0.02	0.74	6.54
G33396	109	17.9	7.3	7	34.5	14.58	0.34	0.32	<0.01	10.86	4.21	0.64	0.01	0.44	0.192	60.2	0.02	0.43	7.62
S91-386_5141	74	1	7.1	144	6.2	8.31	0.11	0.25	0.005	6.78	2.07	0.36	0.01	0.21	0.165	76.48	0.01	0.24	4.69
G36855	84	1.8	2.7	188	4.9	4.78	0.12	0.08	0.05	6.55	1.41	0.52	0.02	0.02	0.086	81.37	0.01	0.15	3.72
X05423	73	1.3	22.9	1525	3.3	4.03	0.07	0.04	<0.01	7.16	0.83	0.55	0.02	0.08	0.035	82.84	<0.01	0.17	3.99
G21583	159	0.8	27.7	310	35.7	19.5	0.3	0.4	<0.01	7.7	2.93	0.38	<0.01	0.34	0.364	60	0.13	0.68	7.11
S91-386_5122	111	0.9	6.9	195	9.8	11.34	0.21	0.36	0.01	7.89	2.77	0.51	0.02	0.31	0.248	70.11	0.01	0.4	5.53
G37684	84	0.8	9.2	169	14.9	10.56	0.18	0.28	<0.01	7.03	2.93	0.63	0.02	0.13	0.176	72.48	0.01	0.4	5.08
S91-395_5405	64	0.7	5.4	89	4.4	6.3	0.21	0.19	0.005	6.23	1.73	0.37	0.01	0.15	0.116	80.26	0.005	0.2	4.02
G21535	92	1.4	6.7	201	13.5	13.36	0.3	0.36	<0.01	4.5	2.51	0.63	0.01	0.27	0.243	72.55	0.06	0.38	4.45
X05453	55	0.7	4.4	72	4.6	6.87	0.2	0.2	<0.01	6.06	1.95	0.43	0.01	0.1	0.135	79.47	0.01	0.23	3.95
G37785	128	0.8	7.2	128	9.9	15.7	0.15	0.32	0.01	12.61	3.21	1.42	0.04	0.37	0.226	57.97	0.01	0.63	7.31
H44263	97	1	5	136.2	5.2														
X11530	59	0.7	4.1	204	4.5	8.94	0.09	0.2	<0.01	6.26	2.45	0.42	0.01	0.14	0.146	74.89	0.01	0.28	4.39

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
G21048	128	0.4	4	3321	12.2														
G21508	99	1	11.6	329	25	14.64	0.37	0.36	<0.01	6.35	3.24	0.55	0.01	0.29	0.361	67.45	0.07	0.5	5.6
X05339	119	1.1	4.6	76.6	19														
G33162	94	0.4	5.7	35	10.5	14.37	0.22	0.24	0.01	6.42	3.19	0.52	0.01	0.37	0.189	68.53	0.02	0.42	5.25
H43405	171	0.8	10.7	190	17.5	14.16	0.25	0.52	<0.01	11.21	3.33	0.88	0.04	0.33	0.376	60.05	0.01	0.66	7.78
H43880	161	0.3	3.1	145.2	13.6														
G37699	84	0.8	7.7	41	11.1	11.36	0.1	0.28	0.01	7.19	3.09	0.46	0.01	0.13	0.201	71.53	0.01	0.38	5.06
X05402	73	0.9	6.5	358	6.4	9.16	0.31	0.38	<0.01	7.56	2.35	0.51	0.03	0.19	0.229	73.58	0.02	0.34	5.07
X11553	103	0.7	8.2	124	7.8	12.8	0.16	0.4	<0.01	7.27	3.24	0.85	0.03	0.25	0.295	67.45	0.01	0.48	5.37
G37809	124	0.8	10.1	61	37.1	17.01	0.14	0.41	0.01	9.33	3.34	1.7	0.03	0.6	0.275	59.85	0.01	0.67	6.49
X19143	247	1.9	1.2	30.8	0.6														
G33142	101	0.9	9	276	25.1	15.28	0.35	0.43	<0.01	6.7	3.41	0.78	0.02	0.34	0.335	65.69	0.03	0.55	5.75
G21490	245	0.8	9.2	130	18.1	17.37	0.45	0.64	<0.01	8.36	4.2	0.85	0.03	0.3	0.414	59.48	0.01	0.58	6.55
X06441	84	2.2	5	85	8.1	11.06	0.2	0.24	<0.01	7.32	3.98	1.16	0.02	0.01	0.166	69.36	0.01	0.39	4.63
G37719	63	1	6.1	70	8.3	11.55	0.28	0.64	<0.01	6.27	3.02	0.54	0.01	0.16	0.443	72	0.01	0.26	4.78
H44434	165	0.4	6.7	108.8	11.3														
G36074	137	0.6	4.5	48.4	4.9														
G21477	97	1	3.5	166	6.4	6.88	0.16	0.3	<0.01	5.69	1.35	0.91	0.02	0.14	0.171	79.93	0.01	0.24	3.8
X14258	141	6.3	6.4	66	19.6	15.73	0.38	0.51	<0.01	8.33	4.64	1.8	0.04	0.14	0.26	61.34	0.01	0.5	6.16
H43397	126	0.9	12.7	70	23.4	15.18	0.28	0.72	<0.01	10.98	3.86	0.93	0.02	0.27	0.523	58.4	0.02	0.57	8.1
H43401	119	1	8.6	56	19.2	14.84	0.34	0.42	<0.01	6.96	3.71	0.87	0.03	0.27	0.303	65.75	0.02	0.57	5.77
H43395	128	0.7	7.5	139	20.5	14.75	0.35	0.53	<0.01	8.01	3.75	0.82	0.02	0.26	0.324	63.94	0.02	0.54	6.33
H43403	137	0.9	10.6	66	17.4	16.43	0.31	0.53	<0.01	8.37	3.95	1.05	0.02	0.33	0.388	61	0.02	0.68	6.9
X14278	153	7.1	4.9	74	13.5	14.48	0.42	0.46	0.01	6.41	4.49	1.44	0.04	0.12	0.238	66.05	0.01	0.3	5.31
E217257	424	0.5	10.1	472	15.3	18.11	0.25	0.78	<0.01	11.5	3.33	4.21	0.13	0.35	0.551	50.74	<0.01	0.78	8.52
G22025	198	0.4	8.4	289	41.9	18.17	0.45	0.6	<0.01	8.34	3.06	2.82	0.07	0.3	0.272	57.24	0.04	0.51	7.65
S91-395_5388	91	0.9	5.2	81	7.2	10.88	0.22	0.25	0.005	5.37	3.07	0.91	0.02	0.16	0.153	74.67	0.01	0.35	3.84
H41708	165	2	7.5	111	21.7	16.1	0.3	0.74	<0.01	7.16	5.76	1.63	0.04	0.28	0.288	60.45	0.03	0.47	6.09
G35241	214	2.2	0.9	19	1.8														
X11486	48	0.7	2.6	83	3.3	8.9	0.15	0.18	<0.01	4.23	2.67	0.64	0.01	0.09	0.065	78.64	<0.01	0.19	3.39
H41422	140	1.4	7	21	19.9	16.52	0.4	0.99	<0.01	10.04	5.12	1.22	0.02	0.22	0.464	57.01	0.02	0.46	7.41
G37917	309	0.4	8	189	21.8	18.36	0.26	0.78	<0.01	11.93	4.02	3.14	0.08	0.22	0.537	52.35	0.01	0.67	7.43
H43399	129	1	8.9	56	23.3	16.89	0.24	0.46	<0.01	7.08	4.23	1.01	0.02	0.31	0.345	62.5	0.01	0.65	6.1
X05483	98	45.2	9.6	111	8.9	13.15	0.26	0.44	0.01	7.57	3.39	1.61	0.04	0.15	0.2	66.04	0.01	0.55	6.45
G24020	207	3.2	9.6	46	22.6	18.07	0.54	0.72	<0.01	10.29	4.3	2.43	0.05	0.4	0.358	54.02	0.01	0.49	7.8
X14180	171	0.5	6.8	88.3	13.9														
H43407	191	1.2	7.6	1740	21.7	15.59	0.56	0.42	<0.01	7.71	3.61	1.14	0.13	0.39	0.305	63.02	0.03	0.47	6.5
H42161	191	4	8	32	24.3	20.03	0.54	0.66	<0.01	6.64	5.7	1.21	0.02	0.36	0.344	57.48	0.01	0.51	5.99
X11377	115	0.3	6.8	181	26.3	16.89	0.43	0.52	<0.01	7.75	3.8	2.42	0.09	0.32	0.36	60	0.01	0.59	5.44
X10664	73	0.7	2.2	50.7	1.9														
G37739	157	0.5	8.7	141	19.5	15.79	0.25	0.56	<0.01	8.97	3.54	1.58	0.06	0.23	0.394	62.08	0.01	0.71	5.65
H41706	161	2.5	8.2	403	16.2	15.87	0.95	0.97	0.01	7.89	5.73	2.15	0.06	0.18	0.307	58	0.03	0.45	6.82
G36943	101	1.5	8.9	112	10.8	14.08	0.24	0.49	<0.01	8.45	4.25	1.86	0.05	0.05	0.222	63.98	0.01	0.5	5.53
G35228	417	3.1	2.6	218.9	2.9														
G32981	113	0.8	4.7	53.3	11.7														
X15427	121	0.6	3.7	73.7	7.5														
H42163	123	2.5	6.2	50	21.9	16.37	0.55	0.64	<0.01	6.06	4.46	1.58	0.04	0.43	0.219	64.06	0.02	0.27	5.21
G37966	218	0.4	9.3	277	13.2	18.7	0.38	0.7	<0.01	10.1	3.1	2.04	0.09	0.56	0.491	57.06	0.01	0.48	6.03
G21287	78	0.3	2.6	51.7	10.7														
G36878	77	1.5	4.7	67	5.6	7.94	0.16	0.16	0.04	7.01	2.38	1.28	0.04	0.03	0.125	75.84	0.01	0.28	3.85

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
X14630	102	2.2	3.6	68	3.8	8.43	0.23	0.25	<0.01	8.33	3.09	1.25	0.05	0.02	0.169	72.68	<0.01	0.25	3.77
H43874	150	0.8	7.2	228.3	15.7														
G33119	73	0.5	7.5	104	23.7	13	0.28	0.36	<0.01	5.27	3.47	1.08	0.06	0.17	0.074	70.24	0.02	0.41	5.01
G33357	167	14.8	7.9	47	20.5	17.45	0.48	0.94	<0.01	7.71	5.59	2.54	0.05	0.3	0.331	56.62	0.01	0.5	6.89
X14171	181	0.7	4.9	85.2	14.3														
H42169	200	3.2	10.2	982	22.6	21.33	0.53	0.92	<0.01	7.05	6.03	1.66	0.04	0.37	0.392	54.4	0.01	0.48	6.53
X13511	128	0.4	3.7	207.7	25.9														
H41839	166	6.8	8.9	28	20.9	16.97	0.56	1.2	<0.01	7.66	5.56	1.5	0.03	0.46	0.319	58.42	0.01	0.49	6.58
X06419	92	1.5	5.9	163	12.2	13.62	0.23	0.28	<0.01	8	3.9	1.45	0.07	0.06	0.205	66.21	<0.01	0.46	4.34
G24041	198	0.9	8.8	98	15.4	18.68	0.41	0.55	<0.01	8.31	4.65	3.59	0.09	0.14	0.352	56.5	0.01	0.52	6.01
G23998	176	3.8	12.9	110	26.8	21.4	0.44	0.51	<0.01	6.82	5.55	1.8	0.03	0.25	0.369	56.51	0.01	0.9	5.16
X15009	113	1.8	11.4	60	10	14.95	0.23	0.59	<0.01	8.86	5.1	2.14	0.06	1.55	0.226	60.76	0.02	0.57	4.45
G32047	109	0.4	6.2	59	16.2	13.78	0.22	3.04	<0.01	8.35	3.67	1.53	0.05	1.4	0.219	58.01	0.03	0.46	9.19
G35583	179	0.5	9.9	142	21	16.31	0.4	0.68	<0.01	8.31	3.74	2.84	0.1	0.26	0.288	59.11	0.01	0.51	6.62
X06463	79	1.2	4.2	195	4	8.97	0.15	1.07	<0.01	9.53	3.33	1.49	0.06	0.09	0.143	67.82	0.01	0.33	5.26
G33796	127	5.1	12.6	109	25.2	16.02	0.24	1.28	<0.01	7.51	5.54	1.23	0.07	0.1	0.233	61.02	0.01	0.6	6.04
X11008	61	1.9	2.3	102	2.8	5.78	0.06	2.03	<0.01	7.64	1.9	0.91	0.06	0.07	0.082	72.27	0.02	0.2	7.45
H43862	173	0.3	4.3	142.3	13.4														
X11578	131	0.6	5.4	107	12.2	13.76	0.34	0.55	<0.01	5.63	2.93	2.58	0.13	0.22	0.259	68.68	0.01	0.44	4.38
H43766	227	0.1	4	333.6	9														
G33097	171	0.4	4.9	254	17.8	15.68	0.4	0.79	<0.01	7.78	3.88	2.21	0.17	0.25	0.286	60.62	0.02	0.44	7.25
G33415	114	6.2	4.6	430	9.3	9.03	0.28	0.8	<0.01	5.53	2.85	1.11	0.08	0.09	0.144	74.62	0.01	0.18	4.86
H43518	156	0.8	3.4	70.6	8														
X11031	87	1.9	3	74	3.5	7.77	0.07	1.28	<0.01	5.8	2.69	0.76	0.06	0.05	0.11	74.94	0.01	0.26	4.67
X06146	106	1.6	7.9	48.4	7.6														
X11599	126	0.6	5.5	120	10	13.35	0.37	0.98	<0.01	6.18	3.06	2.48	0.07	0.18	0.266	66.19	0.01	0.46	5.25
H42210	161	1.3	6.7	68	12.2	16.64	0.39	2.8	<0.01	6.03	4.51	2.72	0.06	0.21	0.303	56.86	0.02	0.49	8.23
G37765	152	0.8	8.5	169	17.9	17.69	0.34	0.53	<0.01	6.83	3.15	3.39	0.12	0.31	0.364	61.27	0.01	0.65	5.18
G33436	72	5.8	3.6	228	12.5	9.26	0.49	0.71	<0.01	4.7	3.12	1.02	0.07	0.12	0.109	75.75	0.03	0.12	4.35
X19131	258	1.5	3.3	68.1	2														
X12874	85	0.7	4.1	185.1	6.7														
G33072	144	0.6	6.2	132	13.5	15.9	0.33	0.53	<0.01	7.19	3.72	1.84	0.11	0.4	0.281	62.77	0.01	0.42	6.26
H41673	169	20.9	10.2	49	22.4	17.85	0.68	1.66	<0.01	7.25	6.54	1.8	0.05	1.01	0.33	54.87	0.02	0.52	6.85
X06396	80	1	5.8	61	12.7	12.8	0.3	0.76	<0.01	7.16	3.85	1.82	0.06	1.46	0.181	66.29	0.04	0.44	3.66
H43905	236	0.5	5.2	122.6	14.1														
H41835	190	24.1	9.7	41	21.4	17.59	0.82	1.32	0.01	7.8	5.3	1.76	0.03	3.07	0.333	54.55	0.02	0.51	6.76
H43762	265	0.1	3.6	280.9	6.9														
X05329	130	0.4	3.3	111.9	21.4														
G36231	64	1.4	3.5	78	6.5	6.82	0.18	0.78	0.04	5.06	2.22	0.93	0.07	0.01	0.101	79.98	0.01	0.24	3.32
G35563	228	0.8	7.2	129	16.2	15.9	0.37	2.26	<0.01	8.44	4.8	2.32	0.08	0.2	0.325	56.36	0.02	0.56	7.82
H41829	176	22	9.5	20	25.3	17.65	0.63	1.91	<0.01	7.92	6.45	1.6	0.05	1.48	0.332	54	0.02	0.5	7.11
H41561	149	1	12.8	78	13	14.57	0.32	2.05	<0.01	7.93	5.08	1.92	0.1	0.15	0.284	60.26	0.02	0.43	6.88
H43887	155	0.2	3.9	148.4	15.5														
G37602	177	6.4	14	115	23	17.22	0.56	2.03	<0.01	8.04	5.71	2.4	0.07	0.37	0.321	55.32	0.03	0.48	7
G36814	166	13.1	15.3	51	26.7	15.87	1.34	2.18	<0.01	8.5	4.98	1.41	0.07	0.16	0.264	56.85	0.06	0.46	7.26
G33116	96	0.5	4.6	76	16.5	13.79	0.38	0.95	<0.01	6.88	3.66	1.62	0.12	0.18	0.184	65.25	0.02	0.42	6.28
X11508	60	0.3	3.2	122	4.6	11.17	0.12	0.72	<0.01	5.83	3.23	0.98	0.06	0.14	0.136	71.46	0.02	0.35	4.81
H42245	172	1.9	14.6	69	11.5	16.16	0.35	4.35	<0.01	6.63	3.9	2.74	0.06	2.43	0.314	51.86	0.04	0.49	9.23
G36794	164	6.1	16.1	62	24.6	17.2	0.88	2	<0.01	7.62	5.22	2.25	0.07	0.87	0.319	56.1	0.03	0.49	6.84
G35060	145	1.8	6.6	91	11	14.19	0.45	1.21	0.03	9.12	5.25	1.81	0.08	0.32	0.275	61.55	0.01	0.46	5.13

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
E217242	172	1.1	5.3	120	17.4	15.63	0.31	1.55	0.01	8.26	5.36	2.45	0.09	0.08	0.273	58.8	0.02	0.41	6.6
H43780	242	0.4	4.1	251.3	10.2														
G32420	157	17.5	5.5	74	16.8	13.11	0.2	0.65	0.02	3.09	8.67	0.98	0.05	0.32	0.09	69.3	0.01	0.33	2.81
H42249	164	1.8	13.4	79	12.9	15.6	0.4	3.87	<0.01	8.78	3.58	2.43	0.06	2.63	0.302	52.27	0.03	0.48	9.33
H41685	168	4.4	8	71	23.5	17.22	0.5	2.13	<0.01	7.45	6.04	1.88	0.06	0.17	0.337	56.72	0.01	0.5	6.57
9069	405	6.8	13.5	35	45.5	15.54	0.53	1.44	<0.01	6.57	7.66	2.07	0.08	2.82	0.259	57.98	0.03	0.45	4.56
H43765	281	0.4	4.9	308	14.7	17.26	0.16	0.84	<0.01	12.56	3.88	5.07	0.26	0.24	0.486	50.06	<0.01	0.69	8.5
X12852	82	0.6	5.4	58.8	6.6														
H43903	81	1.2	4.7	53	7.9	13.59	0.19	1.21	<0.01	4.83	4.64	1.85	0.06	0.15	0.106	67.01	0.01	0.41	4.82
G35079	134	2.3	5.9	136	12	13.59	0.28	0.97	0.03	7.87	5.02	2.3	0.11	0.29	0.252	63.79	0.01	0.39	4.63
E217224	170	9.2	9.6	53	21.1	16.71	0.56	1.71	0.01	7.89	4.87	2.18	0.06	2.85	0.315	56.06	0.02	0.48	6.1
G36254	168	9	11.7	146	33.2	18.33	0.31	0.71	0.01	6.01	5.74	1.85	0.08	0.06	0.453	60.75	<0.01	0.68	4.17
H41441	176	0.8	8.7	142	21.1	16.51	0.26	1.47	<0.01	7.67	4.71	2.46	0.08	0.18	0.332	59.51	0.01	0.49	6.09
H41563	130	1.1	9.7	68	8.8	12.47	0.52	3.56	<0.01	7.86	4.34	1.85	0.12	0.14	0.237	58.75	0.04	0.36	8.36
G33049	230	0.4	5.9	270	10.6	17.2	0.31	0.74	0.01	9.84	3.54	4.16	0.21	0.35	0.352	54.18	<0.01	0.55	7.65
H42195	124	2.5	5.2	44	16.9	17.02	0.61	1.31	<0.01	4.85	4.93	1.49	0.07	0.24	0.227	63.74	0.02	0.3	5.06
G32137	162	0.7	6.8	68	10.7	13.72	0.43	0.96	<0.01	8.01	4.13	2.66	0.08	1.19	0.282	62.33	0.02	0.43	5.23
H41427	164	2.1	8.4	127	18.9	16.88	0.53	1.67	<0.01	8.12	4.84	2.43	0.07	0.23	0.329	57.87	0.02	0.48	6.25
X12417	80	1.3	4.9	127	5.1	10.16	0.29	1.41	0.03	7.84	3.67	1.19	0.08	0.02	0.153	69.55	0.02	0.35	5.19
G33773	152	12.5	9.3	44	31.3	15.68	0.22	1.29	0.01	6.83	8.11	1.84	0.05	1.54	0.22	57.54	0.03	0.61	5.88
X13902	140	1.6	10.6	492.2	4.4														
X05383	77	1	5.2	260	13.7	11.27	0.12	0.44	<0.01	5.37	2.49	2.11	0.06	0.15	0.16	73.75	0.01	0.4	3.48
H41559	146	1.3	13.5	108	13.6	13.71	0.47	3	<0.01	7.55	4.67	1.95	0.12	0.19	0.261	59.56	0.03	0.41	7.53
X17281	176	12.5	8.1	436	18.3	16.71	1.75	1.86	<0.01	6.74	4.28	2.1	0.08	3.75	0.314	55.25	0.03	0.47	6.53
H42240	169	1.1	12.4	37	11.9	16.97	0.48	3.39	<0.01	7.4	4.55	2.59	0.05	1.78	0.31	54.17	0.04	0.48	7.15
X12432	75	1.2	4.1	55	6.4	9.76	0.27	1.37	0.03	7.48	3.87	1.38	0.08	0.1	0.133	70.03	0.01	0.32	4.77
H41699	173	3.2	7.1	121	22.3	17.62	0.45	1.11	<0.01	6.01	5.46	3.33	0.1	1.24	0.334	58.34	0.02	0.5	5.01
G35113	122	2.2	5.4	78	7.5	11.16	0.24	2.8	0.03	9.22	4.37	1.34	0.06	0.51	0.215	60.77	0.03	0.34	7.84
X14288	133	7.8	7.8	506	10.7	12.87	0.33	6.63	<0.01	5.35	3.94	2.07	0.11	0.08	0.242	53.76	0.05	0.37	12.45
H42251	150	2.3	13.3	56	12	14.25	0.6	6.14	<0.01	9.18	4.63	2.14	0.07	0.53	0.273	49.84	0.05	0.42	10.35
H41429	190	3.2	8.9	104	22.5	18.4	0.69	1.33	<0.01	7.11	5.3	2.59	0.07	0.41	0.35	56.38	0.04	0.55	5.88
G34623	68	0.9	5.5	55	4.2	5.08	0.08	1.13	0.04	4.52	1.83	0.68	0.05	0.02	0.111	83.05	0.01	0.19	3.09
G32259	177	4.4	14.5	38	25.1	17.37	0.58	2.21	0.01	6.61	5.47	2.49	0.06	2.59	0.328	56.06	0.03	0.49	5.56
H43864	129	0.3	3.8	118.3	8.6														
X06946	178	1.1	4.7	197	16.9														
G33259	179	12.8	9	280	24.3	16.52	0.58	1.83	<0.01	6.25	6.37	1.78	0.06	0.27	0.301	58.81	0.02	0.47	6.1
H42221	172	1.8	6.9	51	15.1	16.08	0.41	4.07	<0.01	6.37	4.47	2.4	0.04	0.83	0.307	52.62	0.03	0.5	10.45
H43878	155	0.6	6.5	176.2	10.6														
H41669	180	16.4	7.8	23	21.5	18.25	0.55	2.41	<0.01	7.5	6.91	1.85	0.08	1.57	0.338	52.75	0.03	0.52	7.05
G36775	130	5.4	15.6	94	30.6	16.52	0.24	1.87	0.01	6.32	4.59	2.64	0.16	1.64	0.183	58.94	0.01	0.65	5.31
H41702	175	2.4	8	124	21.3	17.47	0.43	1.46	0.01	6.76	5.62	3.61	0.14	0.72	0.324	57.01	0.01	0.5	5.83
H43885	181	0.6	5.9	164.7	19.3														
X05177	96	0.5	3	100.7	3.9														
H40630	180	3.6	15.7	105	25.7	16.86	0.41	1.32	<0.01	7.02	5.36	2.25	0.06	2.11	0.323	58.71	0.02	0.5	5.03
H43882	173	0.4	4.5	162.6	15.1														
X13930	135	2.3	6.6	109	3.6														
G32496	169	13.1	12.7	37	30.3	17.29	0.54	2.29	<0.01	6.64	4.35	2.36	0.06	4.72	0.317	55.7	0.03	0.48	5.14
H42193	172	1.5	7.2	68	15.1	18.21	0.56	1.64	<0.01	6.21	5.05	2.71	0.14	0.24	0.334	58.02	0.03	0.54	6.15
H43868	137	0.3	5.1	246.1	20.9														
H43890	161	0.3	4.1	162	13.6														

Note: values in blue are calculated

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
X17284	172	7.5	8.5	865	14.4	16.9	0.46	2.46	<0.01	6.95	4.73	2.3	0.07	2.22	0.326	55.28	0.02	0.5	6.41
H42242	172	1.4	15.2	55	12	16.76	0.35	3.87	<0.01	6.37	4.02	2.88	0.06	2.47	0.331	53.85	0.03	0.53	6.85
X11464	137	0.6	5.1	156	7.5	12.17	0.3	1.08	<0.01	7.5	3.42	1.71	0.08	0.2	0.248	67.75	0.02	0.39	4.66
H43891	164	0.5	5.1	137	22.6	13.78	0.47	6.73	<0.01	6.08	2.41	1.98	0.08	3.37	0.216	53.34	0.09	0.41	9.23
X06485	101	1.3	5.4	76	5.5	12.17	0.2	1.62	<0.01	7.86	4.92	2.01	0.11	0.05	0.192	63.6	0.01	0.44	5.08
X12614	142	0.9	10.2	53	20.9	16.16	0.27	2.61	0.02	7.26	4.45	1.68	0.08	0.18	0.345	59.49	0.01	0.6	5.99
H42247	165	1.6	13.8	61	12.8	15.72	0.42	4.35	<0.01	7.15	2.97	2.74	0.07	3.53	0.306	53.01	0.04	0.47	8.36
G34338	172	0.3	5	67.1	7.1														
H41443	144	1.2	7.7	47	14.7	13.18	0.82	4.3	<0.01	12.17	3.88	2.35	0.13	0.13	0.273	51.42	0.03	0.38	10.05
X12393	92	1.6	6.8	81	12.1	12.9	0.31	1.1	0.03	6.44	4.41	1.75	0.08	1.68	0.188	66.78	0.02	0.43	3.67
H42186	125	1.3	6.1	44	10.6	14.24	0.66	1.95	<0.01	6.38	4	1.67	0.17	0.21	0.214	63.36	0.03	0.36	5.89
H41679	162	6.1	10.2	97	14.2	16.53	0.4	3.02	<0.01	7.06	5.14	2.38	0.09	1.67	0.312	56.75	0.02	0.48	5.93
H41681	153	10.5	10.4	51	14.7	16.21	0.52	2.95	<0.01	6.58	4.08	2.27	0.08	2.76	0.314	55.43	0.02	0.47	6.78
G32325	168	4	7.6	121	16	17.02	0.39	2.43	<0.01	6.73	4.92	2.51	0.19	0.3	0.312	57.2	0.01	0.48	6.88
G32992	108	1.2	4.6	443.8	9.8														
G35021	173	0.7	8.3	173	17.7	16.66	0.47	1.25	0.02	7.01	4.82	3.29	0.13	0.07	0.328	59.62	0.02	0.49	5.22
H43525	150	1	4.8	43	11.8	15.16	0.5	5.23	0.01	5.88	4.98	2.3	0.09	0.19	0.228	55.48	0.06	0.33	8.54
G37907	223	0.9	5.8	110	19.2	14.09	0.41	6.33	<0.01	7.64	3.91	2.35	0.13	0.1	0.317	49.53	0.08	0.52	12.75
X16510	161	6.3	8	240	16.1	16.65	0.5	2.47	<0.01	6.93	5.39	2.04	0.07	1.05	0.322	56.01	0.03	0.55	6.51
X05538	93	0.9	4.8	39	10.9	12.83	0.13	2.16	<0.01	5.94	3.38	2.28	0.08	0.18	0.138	66.4	<0.01	0.48	5.26
G35749	134	0.4	4.5	96.7	5														
G32474	173	27.6	12.8	38	23.4	17.28	0.53	2.86	<0.01	6.65	5.07	1.74	0.09	3.81	0.319	55.56	0.03	0.48	5.41
H42238	151	1.3	9.8	39	14.7	16.2	0.47	4.17	<0.01	6.95	3.22	2.45	0.05	3.43	0.28	53.65	0.04	0.39	8.56
G32563	167	15.9	13.2	36	22	16.62	0.58	3.22	<0.01	7.33	4.94	2.43	0.09	2.62	0.311	54.6	0.04	0.46	5.83
H42197	154	2	7	81	12.7	16.92	0.53	2	<0.01	4.82	4.78	2.08	0.11	0.24	0.3	62.54	0.02	0.49	5.06
G32537	169	16	10	46	25.8	16.74	0.46	1.83	0.01	6.17	4.31	2.17	0.05	4.31	0.317	57.78	0.02	0.48	4.35
X05559	140	0.6	8.7	26	16.3	14.86	0.38	2.11	<0.01	6.53	2.67	1.92	0.04	2.46	0.276	62.28	0.02	0.45	5.56
H41683	175	4.6	8.9	3450	16.2	17.08	0.38	2.75	<0.01	6.67	5.55	2.34	0.1	1.09	0.328	55.98	0.01	0.53	6.46
H41745	163	0.8	4.6	175.4	12.8														
X10851	169	0.7	5	116	20.5	14.04	0.35	6.2	<0.01	6.3	3.31	2.59	0.12	1.67	0.262	50.31	0.05	0.43	13.2
H43876	162	0.5	5.8	167.6	14.7														
X11052	64	1.3	3.8	87	4.6	8.1	0.1	2.6	<0.01	5.02	3.1	1.23	0.1	0.3	0.122	71.65	0.02	0.3	5.81
G36921	83	1.1	6	82	6.5	8.19	0.13	1.32	<0.01	5.92	2.35	1.45	0.09	0.09	0.126	75.88	0.01	0.31	3.62
G32413	216	21.1	8.4	188	37.1	14.81	0.19	1.43	0.01	4.13	7.1	1.62	0.09	2.66	0.138	63.28	0.02	0.47	3.87
H41731	234	7.3	8.9	113.8	19.6														
X17277	169	12.5	8.4	377	17.2	16.74	0.67	2.42	0.02	6.4	4.79	2.09	0.08	2.99	0.315	55.06	0.03	0.47	6.42
H41687	159	4	9.2	82	23.1	15.91	0.37	2.69	<0.01	6.87	5.36	2.39	0.09	0.56	0.304	57.34	0.02	0.46	6.01
G34982	160	1.3	7.7	51	23.2	16.1	0.82	2.05	0.02	6.58	4.48	2.3	0.08	0.51	0.313	60.53	0.05	0.5	5.36
H41756	178	1.1	4.2	639.5	13.6														
X05514	100	1.5	5.6	59	11.8	13.16	0.18	1.54	0.01	5.92	3.54	2.44	0.13	0.14	0.152	65.76	0.01	0.5	5.92
H42182	149	2.1	7	40	14	15.97	0.3	2.17	<0.01	6.27	4.31	2.79	0.11	0.23	0.305	60.13	0.02	0.46	6.02
X16527	156	4.4	10.8	51	16.7	15.93	0.56	2.61	<0.01	6.38	5.01	1.92	0.07	1.43	0.306	58.17	0.02	0.47	5.58
G33283	152	18.2	9	58	21.6	16.76	0.96	1.82	0.01	6.57	4.22	2.18	0.08	4.25	0.324	57.08	0.04	0.47	4.92
H44275	81	0.4	3.7	45	4.4														
G35686	100	0.7	15	114	19.9	14.45	0.23	4.56	<0.01	5.85	2.97	1.83	0.12	2.87	0.205	58.65	0.05	0.48	7.42
H42176	167	1.2	7.3	92	15.9	17.94	0.38	1.68	<0.01	6.79	4.54	4.23	0.15	0.23	0.33	55.27	0.01	0.54	6.43
H42203	163	2	6.9	53	13.9	16.87	0.36	2.46	<0.01	6.3	4.7	2.41	0.09	0.22	0.316	58.87	0.01	0.47	5.65
H43851	220	0.4	5.1	174	11.4														
H42165	164	1.4	8	2750	181.5	16.22	0.47	2.28	<0.01	7.61	3.91	3.26	0.17	0.67	0.292	56.65	0.01	0.46	7.21
H41675	170	16.4	8.6	30	20.8	17.17	0.44	3.06	<0.01	6.3	4.84	2.1	0.08	3.42	0.32	55.02	0.02	0.48	6.67

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
H42215	160	2.1	7.1	54	12.5	15.08	0.56	7.63	<0.01	6.81	4.05	2.84	0.09	0.19	0.293	46.79	0.06	0.45	13.35
H42167	167	2	8.2	52	18.2	17.46	0.5	2.2	<0.01	7.17	4.28	3.1	0.12	0.61	0.338	56.95	0.02	0.52	6.49
H41691	155	6.2	9.4	81	17.4	15.84	0.65	2.6	<0.01	7.6	4.54	2.93	0.18	1.51	0.297	56.6	0.03	0.46	5.98
G32428	210	15.7	10.6	56	23.1	16.66	0.6	2.3	0.01	5.98	7.6	1.46	0.13	1.76	0.299	57.1	0.03	0.47	5.44
H43849	192	0.3	5.2	370	11.3														
X17992	110	0.8	6.1	42	11.5	12.93	0.27	1.6	0.02	5.68	3.07	2.39	0.05	1.77	0.164	65.9	0.02	0.51	4.01
G35667	90	0.4	8	66	15	12.77	0.22	3.96	<0.01	6.49	2.56	1.93	0.07	2.55	0.181	59.13	0.06	0.47	9.34
H43886	154	0.5	5.5	120	22.5	14.07	0.27	6.76	<0.01	3.95	2.19	2.25	0.06	3.82	0.255	55.88	0.08	0.36	8.47
X19627	93	1.3	11.1	62.2	11.4														
X11073	92	1.2	6.8	122	9.9	12.34	0.3	2.25	<0.01	7.19	4.43	1.79	0.09	1.05	0.189	63.52	0.03	0.44	4.55
H43913	242	0.8	6.3	327.9	7.9														
G32353	158	1.8	13.4	306	13	16.12	0.45	4.76	<0.01	6.5	3.46	2.41	0.09	3.21	0.307	53.57	0.05	0.47	8.03
H43893	201	0.8	5	198	16.2	14.07	0.2	6.68	<0.01	7.51	2.65	2.76	0.12	2.56	0.277	51.67	0.06	0.45	9.54
X14768	185	2.3	8.7	58	9.8	13.4	0.28	2.09	<0.01	7.67	5.07	2.13	0.11	0.14	0.213	61.66	0.01	0.46	4.91
H42190	121	0.9	5.2	95	18.7	18.14	0.77	1.38	<0.01	4.82	4.89	3.28	0.17	0.24	0.236	59.42	0.04	0.34	5.78
X10310	180	1.4	4.2	168.6	2.3														
G36831	132	5.3	21.7	45	38.5	16.89	0.36	3.3	<0.01	5.88	4.36	2.43	0.1	1.85	0.274	57.34	0.03	0.62	6.18
H43844	163	0.3	11.1	145.2	14.2														
G32282	152	6.9	18.9	64	24.1	16.75	0.26	3.61	<0.01	6.77	4.71	2.48	0.11	2.13	0.299	53.91	0.03	0.69	7.71
H41420	171	0.9	7.6	86	23.9	17.06	0.48	2.15	<0.01	7.83	4.12	2.95	0.1	1.02	0.324	57.45	0.02	0.5	5.49
G36899	91	1.3	7	107	11.4	12.78	0.2	0.87	0.04	5.82	4.17	1.93	0.07	0.08	0.177	69.58	0.01	0.44	3.55
H41075	202	26.6	10.2	28	36.4	14.68	0.35	3.18	0.01	7.56	7.46	1.4	0.12	1.86	0.211	54.16	0.02	0.46	7.95
X14248	197	3.7	6.8	54	13.5	17.19	0.4	2.62	<0.01	6.88	4.51	3.63	0.15	0.6	0.319	56.22	0.01	0.48	5.89
X05493	99	0.6	6.6	142	13.7	14.56	0.2	1.32	0.01	6.16	3.13	4.93	0.16	0.12	0.215	62.49	<0.01	0.58	5.72
X06348	87	1.3	7	402	12.3	13.53	0.11	1.96	<0.01	6.46	4.61	1.76	0.14	0.05	0.198	63.16	0.01	0.48	6.14
H43532	93	0.6	3.6	56	6	9.25	0.45	3.92	<0.01	6.62	3.1	1.88	0.19	0.18	0.13	65.1	0.04	0.18	8.79
G32087	133	0.5	5.6	108	7.7	12.45	0.23	4.61	<0.01	6.57	3.49	2.21	0.08	0.8	0.262	58.54	0.05	0.39	9.64
H41837	167	11.5	7.8	35	20.8	16.07	0.65	2.87	<0.01	6.75	4.86	2.32	0.07	1.9	0.306	55.38	0.02	0.46	7.85
H42219	157	2.9	7.3	609	12.7	15.3	0.54	3.31	<0.01	6.62	4.64	1.97	0.06	0.19	0.285	59.01	0.03	0.44	7.12
H41671	171	20	9.4	60	21.3	16.54	0.58	3.42	<0.01	6.45	6.21	1.51	0.1	1.88	0.304	54.93	0.03	0.46	7.24
X14539	131	1.5	5.4	67	5.7	11.48	0.17	2.2	<0.01	7.15	4	2.07	0.12	0.03	0.226	65.77	0.01	0.34	5.11
G34616	89	2.1	9.9	107	8.6	10.49	0.19	1.09	0.03	5.35	3.58	1.9	0.08	0.31	0.149	72.37	0.01	0.37	3.28
X12194	207	1.3	3	88.5	2.2														
H42234	183	1.9	12.9	43	18.1	16.94	0.73	4.94	<0.01	7.63	3.73	2.75	0.06	2.76	0.319	49.59	0.06	0.5	9.79
H42236	122	1.2	7.9	30	13.1	16.8	0.63	4.96	<0.01	5.11	2.77	1.73	0.04	4.68	0.209	53.9	0.07	0.27	8.45
H42223	173	1.4	6.9	61	12.3	15.65	0.52	5.4	<0.01	6.52	4.58	2.04	0.06	0.56	0.307	53.48	0.03	0.47	8.44
H43870	155	0.3	5.7	189.8	14.1														
H41677	163	11.6	8.2	33	17.7	17.1	0.57	2.74	<0.01	5.67	4.06	2.42	0.07	4.24	0.319	56.5	0.03	0.5	5.75
H42199	135	1.4	6.3	1870	4.5	12.65	1.12	2.98	<0.01	5.39	3.52	1.8	0.14	0.24	0.229	64.25	0.05	0.33	5.62
G35099	113	1.8	5.7	90	8.4	11.04	0.35	4.33	0.03	7.82	4.63	1.68	0.09	0.47	0.215	59.47	0.04	0.3	7.9
H42178	136	1.3	5.6	69	17	18.76	0.83	1.99	<0.01	5.56	5.18	2.98	0.16	0.27	0.259	55.89	0.04	0.34	6.39
H43847	194	0.4	9.3	203.9	14.9														
H41697	162	3.6	8.3	77	17.4	16.93	0.86	2.52	0.01	6.89	3.6	2.68	0.11	3.6	0.313	56.17	0.05	0.5	4.88
H41704	163	1.6	9	137	14.9	16.11	0.19	2.89	0.01	6.97	5.6	3.17	0.22	0.16	0.304	56.66	0.01	0.47	6.8
H42174	143	1.4	6.3	83	22.1	18.48	0.42	1.96	<0.01	5.85	4.85	3.54	0.15	0.26	0.278	57.91	0.01	0.42	5.86
G33025	336	1.1	6.3	272	13.2	19.63	0.84	0.91	<0.01	9.08	4.29	4.15	0.11	0.23	0.502	52.96	0.03	0.76	5.86
H43914	211	1.2	5.6	294	15.3	13.18	0.53	9.81	<0.01	7.61	2.84	3.6	0.12	1.35	0.269	41.49	0.1	0.42	8.42
H43779	270	0.4	5.3	333.1	10.8														
X14681	155	1.9	8.8	69	4.1	11.24	0.31	1.04	0.01	10.28	5.6	2.57	0.1	0.25	0.223	63.75	0.01	0.34	3.08
G35302	201	7.2	11.1	128	24.5	15.2	0.37	3.09	<0.01	7.41	7.88	2.01	0.26	1.18	0.314	55.92	0.03	0.48	5.63

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
G35490	244	4.8	17.6	61	46.9	17.9	0.25	4.26	0.01	6.96	5.31	2.92	0.13	3.2	0.315	53.35	0.1	0.59	4.11
H43854	185	0.3	4.4	98.6	13														
H41418	188	1.5	7.3	100	25	18.03	0.2	2.53	<0.01	7.15	4.88	3.1	0.12	0.22	0.343	56.26	0.01	0.52	5.93
X12487	99	1.5	7.5	1730	9.2	12.4	0.19	1.71	<0.01	6.75	4.04	3.1	0.17	0.03	0.189	64.19	0.01	0.44	5.69
H42258	176	1.9	13.1	54	18.1	16.84	0.51	4.4	<0.01	6.85	5.52	3.1	0.07	0.25	0.33	52.5	0.03	0.49	8.19
G32302	177	3.4	8.3	99	15.6	17.6	0.68	3.21	<0.01	5.83	5.21	3.3	0.14	0.16	0.338	55.07	0.02	0.52	6.83
X14608	119	1.6	5.8	78	5.1	10.47	1.09	1.8	<0.01	7.72	4.22	2.25	0.18	0.21	0.212	65.61	0.03	0.3	4.57
X06923	178	2.2	6.2	55.7	14.9														
H43540	166	0.5	5.3	104.8	7.1														
H41833	204	21	8.6	34	20.3	16.89	0.43	2.61	<0.01	6.53	4.26	2.02	0.06	4.88	0.322	54.65	0.03	0.49	6.69
X11398	135	0.4	5.2	267	15.8	14.15	0.56	1.48	<0.01	8.17	3.28	3.18	0.29	0.13	0.253	60.78	0.03	0.5	5.7
G37625	127	9.8	12.6	85	24.2	15.8	0.32	2.23	0.01	4.74	3.96	2.21	0.12	2.35	0.168	62.63	0.03	0.51	4.2
X16518	162	6.6	9.8	148	18	16.65	0.54	2.87	<0.01	6.43	4.8	2.41	0.1	2.04	0.31	56.14	0.04	0.5	5.66
H41694	162	10.2	7.3	82	18.7	16.38	0.94	2.97	<0.01	6.98	3.78	2.92	0.15	3	0.314	55.64	0.04	0.49	6.09
G35001	180	0.6	8.1	89	20.8	17.79	0.4	1.26	0.02	7.02	4.32	4.05	0.1	0.54	0.337	58.12	0.02	0.54	5.05
G33237	324	4.5	11.9	227	27.3	14.44	0.38	3.74	0.01	6.31	8.35	2.17	0.27	0.57	0.3	56.1	0.03	0.46	6.78
H42188	121	1	5.5	92	11.4	16.3	0.36	2.25	<0.01	4.97	4.26	2.85	0.17	0.23	0.226	61.67	0.02	0.31	4.99
X06531	193	3.7	6.6	460.7	17.1														
G35642	98	0.3	7.6	112	26.3	14.35	0.29	5.13	<0.01	5.65	2.65	1.97	0.09	2.61	0.235	57	0.06	0.5	9.34
G32371	170	1.3	13.9	49	16.3	15.84	0.41	5.02	<0.01	6.24	3.74	2.4	0.05	3.09	0.304	53.61	0.05	0.47	7.8
H42232	177	1.7	13.1	51	17.5	16.59	0.29	4.65	<0.01	6.23	5.3	2.37	0.08	0.19	0.329	54.41	0.02	0.49	8.15
H43884	156	0.8	5.1	143	21.4	13.24	0.23	9.62	<0.01	4.22	2.43	1.97	0.13	3.02	0.222	50.75	0.08	0.36	7.13
X12493	39	1.3	8	1330	4.5	5.45	0.08	2.75	<0.01	5.28	2.07	1.09	0.16	0.02	0.098	76.26	0.03	0.17	4.93
H41446	161	1	7.1	48	20.9	15.38	0.72	3.02	<0.01	7.1	4.13	2.44	0.09	0.89	0.29	58.69	0.04	0.45	5.77
H42213	169	1.5	6.6	67	11.8	16.62	0.46	4.97	<0.01	6.2	4.47	3.01	0.09	0.19	0.314	53.41	0.04	0.52	8.31
X06326	106	1.4	7.2	154	19.4	15.32	0.25	2.09	<0.01	7.27	4.96	2.27	0.13	0.06	0.232	59.7	0.01	0.55	5.37
H43861	145	0.9	4.8	255	19.5	13.56	0.4	7.51	<0.01	6.2	2.95	2.89	0.13	2.12	0.213	50.03	0.08	0.48	9.25
H42184	122	1.8	7.3	60	15.7	14.62	0.23	3.39	<0.01	6.22	4.02	2.45	0.19	0.22	0.283	59.81	0.01	0.4	6.58
H41827	157	8.7	9.4	562	29.5	15.93	0.89	3.17	<0.01	6.77	4.79	2.22	0.15	3.27	0.304	53.27	0.04	0.44	8.32
H43888	157	0.5	5	177	21.2	13.65	0.28	6.29	<0.01	5.35	2.3	2.85	0.1	3.01	0.229	55.21	0.06	0.36	8.79
X17292	170	6	7.2	407	11	15.95	0.41	4.19	<0.01	6.55	4.77	2.19	0.1	1.87	0.306	54.99	0.03	0.46	6.51
H43906	136	3.2	9.3	55	11.7	13.91	0.32	2.32	<0.01	6.62	2.5	2.42	0.08	3.23	0.261	62.35	0.03	0.39	4.36
X14228	173	3.5	5.8	51	15	16.66	0.34	4.58	<0.01	6.47	4.77	2.65	0.1	1.29	0.312	53.9	0.02	0.48	6.92
H44123	154	1.8	13.7	55	14.2	15.56	0.44	2.6	<0.01	6.45	4.5	2.45	0.09	1.74	0.292	59.93	0.02	0.45	4.99
H42172	186	1.5	7.4	89	25.8	17.47	0.31	1.75	<0.01	6.25	3.13	4.69	0.11	1.91	0.318	57.91	0.01	0.47	5.66
X14747	250	1.4	10.5	115	4	12.42	0.26	2.34	<0.01	9.66	4.6	3.04	0.15	0.11	0.245	60.5	0.01	0.39	4.98
X06302	91	2.4	6.1	91	11.6	13.46	0.37	1.56	0.01	7.37	4.26	2.06	0.12	0.43	0.206	63.25	0.02	0.47	4.88
H41831	165	17.7	9.4	26	22.5	16.66	0.48	4.13	<0.01	6.04	5.46	1.94	0.11	2.66	0.316	53.77	0.03	0.47	7.95
G32453	161	6.1	10.7	48	29	16.29	0.53	3.7	0.01	6.26	5.02	1.75	0.13	4.03	0.309	55.4	0.04	0.48	5.84
X16501	185	8.8	8	47	17.5	16.56	0.45	3.3	<0.01	6.51	4.78	2.21	0.1	2.76	0.313	55	0.03	0.5	7.46
H42180	141	1.3	6.1	55	20	18.36	0.85	2.42	<0.01	5.52	5.03	3.01	0.17	0.25	0.274	56.39	0.04	0.37	5.87
H44093	92	6.5	7	62	15.2	11.36	0.12	2.38	<0.01	4.46	3.67	2.71	0.1	0.18	0.162	68.92	0.01	0.44	4.94
E217112	100	2	4.2	66	15.9	17.42	0.55	1.96	0.01	3.35	5.13	1.67	0.05	1.89	0.186	62.02	0.03	0.22	3.7
H42227	163	1.1	10.3	52	16.8	15.95	0.33	5.84	<0.01	6.29	4.15	2.82	0.07	1.3	0.314	51.38	0.04	0.51	10.8
G35770	148	0.4	5.1	82.4	6														
H41666	175	12.8	7.8	52	23.7	16.96	0.53	2.68	<0.01	5.73	5.4	2.04	0.07	4.07	0.314	54.15	0.03	0.49	6.55
H43858	150	0.3	6.9	306.8	12														
H43527	133	0.7	4.5	115	11.4	14.35	0.44	5.11	<0.01	5.18	4.41	3.03	0.1	0.24	0.209	56.46	0.05	0.31	9.9
H44104	141	1.3	12.4	52	10.6	14.61	0.46	3.25	<0.01	6.67	4.82	2.4	0.09	0.84	0.275	59.82	0.02	0.47	5.63
H42255	164	1.8	13.2	52	15.6	16.06	0.55	6.01	<0.01	5.29	3.42	2.75	0.07	3.01	0.32	52.86	0.05	0.52	7.55

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
H41048	164	17.2	8.7	28	13.9	17.39	0.54	2.61	<0.01	4.63	6.44	1.08	0.11	4.02	0.269	57.01	0.03	0.33	5.32
H43529	136	0.6	4.7	104	10.8	14.25	0.56	4.09	<0.01	5.16	4.7	2.63	0.17	0.18	0.216	59.08	0.05	0.3	7.66
H43900	235	0.3	7.2	280.4	16.8														
H41043	136	23.2	7.7	32	23.7	18.13	0.76	1.49	<0.01	2.77	9.66	0.72	0.05	2.35	0.284	60	0.02	0.34	3.4
H44109	158	6.5	11.8	104	13.5	15.75	1.03	2.4	<0.01	5.86	5.01	2.65	0.09	1.55	0.293	58.82	0.03	0.47	5.08
H42260	122	1.6	10.9	46	12.1	12.99	0.39	5.12	<0.01	5.35	4.36	1.99	0.08	0.26	0.247	60.5	0.02	0.38	8.19
H42262	174	1.8	12.8	53	17.1	15.93	0.27	5.01	<0.01	6.44	5.21	2.78	0.11	0.18	0.319	55.05	0.02	0.48	7.87
H43780	246	0.7	5.7	319	16.8	17.4	0.56	0.92	<0.01	8.74	3.89	4.13	0.12	1.23	0.378	57.04	0.04	0.62	4.99
H43776	271	0.8	6.1	335	15.2	17.7	0.22	2.23	0.01	8.76	3.34	3.84	0.17	2.63	0.377	53.13	0.02	0.64	6.84
H42206	142	1.1	6.2	39	10.6	14.43	0.33	5.32	<0.01	5.67	3.97	2.11	0.09	0.19	0.277	57.5	0.02	0.45	7.98
H44091	95	3	9.5	63	18.6	11.44	0.11	2.79	<0.01	5	3.62	2.9	0.1	0.12	0.163	67.24	0.01	0.5	4.97
G33372	185	5.9	6.8	63	21.3	17.92	0.43	3.29	<0.01	5.43	5.5	3.18	0.11	0.98	0.337	54.38	0.02	0.52	6.5
X09587	153	1.4	4.6	113.6	7.2														
X12543	109	2	7.2	152	20.4	16.42	0.22	3.17	<0.01	6.02	5.62	3.24	0.23	0.06	0.243	57.03	0.01	0.57	6.03
X14656	94	2.2	6.8	79	10.9	13	0.26	1.64	<0.01	7.42	5.11	2.52	0.16	0.06	0.196	62.59	0.01	0.44	4.8
X12368	132	0.8	6.4	70	7.9	12.07	0.3	2.27	<0.01	7.83	4.06	2.25	0.16	0.08	0.221	64.85	0.01	0.34	5.41
H43779	270	0.4	6.2	266.5	11.2														
X10897	174	0.6	5.4	83	17.4	15.74	0.13	1.91	<0.01	5.77	2.11	3.07	0.1	3.52	0.246	60.91	0.02	0.39	4.63
G33322	172	5.3	13.1	63	22	17.13	0.46	3.64	<0.01	6.45	3.71	2.54	0.12	4.48	0.322	53.87	0.05	0.49	5.95
G35349	138	5.1	11.8	240	30.6	13.89	0.44	3.72	0.01	5.56	7.16	2.08	0.27	0.92	0.213	59.01	0.04	0.38	6.04
H40229	153	0.6	5	148.7	8.6														
G36484	151	1.2	15	868.5	34.6														
E192667	166	6	16.3	51	13.3	16.61	0.41	3.35	<0.01	6.27	3.88	2.58	0.08	3.61	0.322	56.68	0.04	0.51	5.41
G36294	158	1.8	13.4	72	15.1	16.14	0.48	2.75	<0.01	6.43	4.01	2.61	0.1	3.11	0.305	58.54	0.03	0.46	4.76
H42253	159	2	14.3	56	13.1	15.72	0.57	6.96	<0.01	6.48	5.15	2.82	0.1	0.2	0.306	52.12	0.05	0.47	7.74
H43857	167	0.8	4.8	257	18.2	13.83	0.37	6.2	<0.01	5.89	3.13	3.51	0.14	1.76	0.23	53.55	0.07	0.38	9.41
H42225	170	0.9	9.3	41	14.4	15.59	0.61	6.01	<0.01	5.8	3.13	2.68	0.05	2.61	0.316	52.25	0.07	0.48	8.87
H41414	169	0.7	7.9	104	20.8	18.26	0.65	2.11	<0.01	6.89	4.63	3.84	0.12	0.27	0.34	56.4	0.03	0.59	5.52
G33813	179	8.4	17.9	59	10.8	17.41	0.39	2.98	0.01	7.33	5.55	3.14	0.15	1.52	0.413	54.56	0.02	0.76	5.21
H41069	144	20.7	7.2	34	21.5	16.1	0.55	2.06	<0.01	3.29	6.23	0.6	0.07	4.3	0.243	62.23	0.02	0.31	3.75
X12452	98	0.8	6.8	100	10	12.29	0.23	2.44	0.04	7.48	4.5	2.34	0.14	0.03	0.19	64.26	0.02	0.45	5.26
X06183	125	0.2	4.6	91.8	7.9														
X11420	110	0.5	5	193	9.2	11.77	0.48	2.63	<0.01	6.31	3.58	2.09	0.24	0.11	0.206	63.9	0.01	0.29	6.89
H41040	213	7.5	7.4	39	17.9	16.85	0.5	2.79	<0.01	5.74	6.86	1.78	0.15	2.14	0.267	55.2	0.03	0.34	7.06
G32060	163	1.6	6.2	98	13.3	13.28	0.39	5.06	<0.01	6.8	3.57	2.35	0.11	1.35	0.252	55.9	0.05	0.4	9.09
X14398	156	1.6	10.5	99	7.4	13.49	0.47	3.48	<0.01	7.33	5.56	1.95	0.11	2.23	0.247	58.37	0.04	0.4	5.65
H43911	213	1	6	203	21.1	13.5	0.48	8.07	<0.01	6.64	2.73	2.95	0.17	2.19	0.303	49.61	0.07	0.47	8.02
X14583	97	1.2	4.7	42	3.5	7.74	0.34	3.13	<0.01	7.61	3.47	1.44	0.08	0.56	0.16	69.12	0.04	0.26	4.96
H43904	221	1.6	6.3	375	18.4	13.15	0.35	7.83	<0.01	7.19	2.58	3.34	0.16	1.69	0.312	48.82	0.06	0.52	9.02
X06170	115	0.3	4.6	97.7	7.7														
H44106	152	1.5	12.1	81	12.9	15.41	0.44	3.21	<0.01	5.62	5.05	2.6	0.1	0.96	0.284	59.8	0.02	0.44	5.12
X06372	81	1.5	6.6	65	11.5	11.53	0.26	2.69	<0.01	6.32	3.71	1.76	0.13	0.36	0.167	65.56	0.02	0.41	5.41
X15026	113	1.4	12.1	53	9.7	14.91	0.41	2.33	<0.01	6.91	4.36	2	0.11	2.78	0.233	59.99	0.03	0.57	3.63
H40217	155	0.4	5.7	118.1	9.7														
H43534	127	0.6	4.7	62	9.2	11.79	0.59	5.69	<0.01	5.81	3.84	2.64	0.29	0.12	0.18	58.8	0.05	0.26	8.33
X11442	172	0.6	5.1	162	12.6	14.12	0.31	4.68	<0.01	5.98	3.74	2.43	0.11	1.29	0.271	54.49	0.05	0.41	11.3
X14308	183	2.3	12.5	198	11.2	15.92	0.38	3.16	<0.01	7.37	3.5	2.68	0.14	2.82	0.306	57.53	0.03	0.47	4.65
H43848	153	0.5	7.2	167	16.4	14.2	0.34	7.14	<0.01	5.06	2.18	3.07	0.13	3.56	0.265	53.53	0.08	0.39	8.23
G33828	190	8.6	19	46	25.5	15.79	0.67	4.85	<0.01	6.37	6.95	1.68	0.17	1.62	0.308	54.69	0.04	0.45	5.77
G35041	165	1.7	6.9	90	14.7	16.08	0.43	2.39	0.01	7.48	4.71	1.71	0.07	2.43	0.326	58.45	0.03	0.49	4.14

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
G32407	163	1.2	13.2	77	13.6	15.33	0.38	5.75	<0.01	6.05	3.81	2.17	0.07	3	0.296	54.6	0.07	0.48	7.84
G36967	99	1.4	7.4	153	11.6	12.86	0.21	1.18	<0.01	6.19	3.76	2.42	0.12	0.04	0.187	68.49	0.01	0.46	3.81
G35387	144	3.5	9.2	106	41.3	15.14	0.22	2.03	<0.01	5.16	6.31	1.73	0.11	2.46	0.179	62.7	0.03	0.39	3.39
H41431	165	1.7	8.8	168	24.5	16.58	0.7	3.41	<0.01	6.4	4.46	3.36	0.18	0.27	0.324	56.72	0.05	0.5	6.22
H43895	283	0.7	6.2	140	14.2														
H43903	218	0.5	7.4	341.4	12.4														
H42217	160	1.8	7.8	54	14	14.66	0.43	6.91	<0.01	6.17	4.08	2.54	0.11	0.2	0.287	52.9	0.03	0.43	10.1
G32516	159	9.7	14.1	48	26.8	17.24	0.45	4.88	<0.01	6	3.78	2.41	0.1	4.17	0.321	56.09	0.05	0.48	3.91
H42208	108	0.9	4.3	45	14.5	16.6	0.65	4.83	<0.01	4.44	4.67	2.18	0.1	0.22	0.206	58.39	0.04	0.24	6.06
H43892	189	0.4	6.5	263.3	14.7														
G32390	160	1.6	13.9	63	14.2	16.14	0.45	5.3	0.01	5.62	3.97	2.24	0.06	3.7	0.308	54.46	0.06	0.48	6.35
H43869	172	0.7	6.5	181	28.9	16.32	0.12	6.14	<0.01	4.61	2.75	2.8	0.09	3.84	0.274	52.35	0.06	0.52	8.36
H43910	142	2.1	12	50	10.9	14.56	0.45	3.06	<0.01	6.5	3.22	2.31	0.08	3.07	0.274	61.63	0.02	0.43	4.33
X10300	158	1	4.7	65.3	3.6														
X14372	156	2	11.8	65	12.3	13.84	0.57	2.84	<0.01	6.37	5.06	2.63	0.08	1.83	0.265	60.54	0.04	0.41	5.15
H44112	137	3.9	10.4	48	12.6	14.12	0.57	3.96	<0.01	5.68	3.54	2.05	0.11	2.93	0.255	59.37	0.03	0.4	6
H43929	163	2	8.4	71	11.5	15.95	0.48	4.45	<0.01	6.14	4.66	2.39	0.13	1.83	0.302	56.89	0.02	0.53	4.56
X09201	160	2.7	8.1	99	12.5	15.44	0.38	3.34	<0.01	6.91	5.7	3.18	0.17	0.1	0.303	57.78	0.02	0.46	6.06
G33307	167	7.2	12.7	42	21.6	17.29	0.54	3.4	<0.01	5.75	4.6	2.36	0.12	3.68	0.324	55.77	0.05	0.49	5.43
G37985	169	0.4	5	228.8	12.7														
X11805	149	0.3	4.1	100.4	10.3														
H43846	165	0.7	8.9	163	15.4	15.33	0.24	6.81	<0.01	5.63	2.93	2.79	0.11	3.31	0.289	52.12	0.07	0.41	8.26
X16693	133	5.4	10.2	68	6.6														
H43854	189	0.5	5.6	262	14.1	15.16	0.21	6.21	<0.01	6.07	3.37	4.32	0.14	1.94	0.253	51.71	0.05	0.43	8.64
H43856	120	0.3	5	104.1	10														
H40631	163	1.8	13.9	44	25.6	16.08	0.57	2.36	<0.01	7.36	4.48	2.12	0.06	3.17	0.297	58.75	0.04	0.46	4.18
H41017	242	4.5	2.4	88.1	82.7														
G36315	158	1.5	14.4	70	17.6	15.61	0.78	2.93	<0.01	5.77	4.53	2.17	0.1	3.18	0.286	59.64	0.05	0.44	4.23
X06662	168	0.3	4.1	142.5	9.8														
G32335	142	2.3	12.4	155	14	14.56	0.54	6.87	<0.01	5.57	3.51	2.46	0.11	1.96	0.28	51.25	0.07	0.43	10.65
G34513	104	1.5	11.3	201.6	9.2														
G37645	112	8.2	16.2	260	26	15.36	0.14	5.06	<0.01	5.74	2.45	2.99	0.27	4.66	0.216	56.63	0.06	0.57	4.96
H41699	254	19	11.7	4028.5	45.5														
G36278	97	1.6	7.9	93	11	13.17	0.19	2.38	0.01	4.69	3.91	2.4	0.09	0.43	0.165	66.62	0.01	0.47	4.23
H41448	162	0.7	8.3	103	21.4	16.32	0.36	3.71	<0.01	7.27	3.43	3.21	0.14	2.06	0.309	55.79	0.02	0.47	6.02
G34662	143	3.1	12.2	140	11.1	14.18	0.4	2.43	0.03	7.46	4.76	2.36	0.13	1.36	0.266	61.1	0.02	0.41	4.14
E192683	113	5.6	9.9	54	13.7	14.83	0.04	4.76	<0.01	4.92	1.44	2.55	0.17	6.08	0.139	58.93	0.03	0.51	3.81
G36991	117	1.3	9.5	3100	8.7	10.99	0.39	2.12	<0.01	5.95	3.46	1.58	0.09	2.18	0.206	67.89	0.03	0.32	3.55
H43778	286	0.4	6.8	205.9	11.6														
X14560	137	1.2	7.7	103	6.3	12.56	0.43	2.72	<0.01	7.97	4.43	3.65	0.25	0.26	0.253	60.2	0.02	0.37	5.69
H41036	205	8.2	8.9	48	16.5	13.9	0.21	5	<0.01	4.88	5.31	0.77	0.25	2.32	0.088	60.56	0.03	0.33	5.14
X10872	165	0.5	4.4	135	16.6	15.54	0.37	3.98	<0.01	5.09	2.22	3.06	0.08	3.06	0.227	56.11	0.06	0.35	8.91
H43877	167	1	6.4	225	20.7	15.15	0.08	7.53	<0.01	5.5	2.21	2.85	0.12	3.75	0.255	49.02	0.06	0.49	7.42
G37583	145	4	10.4	78	18.9	14.52	2.27	5.3	<0.01	5.84	4	1.92	0.12	2.32	0.27	54.31	0.18	0.41	6.92
X14327	187	1.3	13.6	97	15.9	17.27	0.4	1.55	<0.01	6.21	4.35	2.55	0.09	4.03	0.321	59.82	0.03	0.5	2.69
H41691	281	7.4	10.4	327.7	31.2														
H43880	174	1	6.7	211	17.9	15.37	0.09	7.5	<0.01	5.96	2.47	2.82	0.14	3.46	0.27	49.14	0.06	0.55	7.59
H43881	183	0.6	6.9	232	21.7	14.76	0.38	7.04	<0.01	6.61	2.54	2.89	0.14	2.91	0.231	49.77	0.07	0.39	7.74
H44127	143	1.2	14.3	48	13.2	13.96	0.4	6.47	<0.01	6.14	4.67	1.99	0.15	0.29	0.265	56.9	0.02	0.41	6.8
X14702	94	3.5	9.1	55	13.6	13.86	0.18	2.87	<0.01	7.59	5.86	1.84	0.12	1.15	0.201	60.52	0.02	0.46	3.87

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
G35450	136	2	17.2	450	29.4	16	0.24	6.35	<0.01	5.93	5.16	3.29	0.29	3.31	0.232	52.35	0.09	0.64	5.39
G36474	79	0.5	3.9	56.7	6.6														
G36085	130	0.4	6.5	49.5	4.6														
H41077	195	13.1	8.6	67	46.3	16.17	0.56	2.91	<0.01	3.5	8.22	1.58	0.12	2.54	0.209	58.23	0.03	0.34	5.53
H43898	251	0.9	7.3	359.3	17.2														
H43899	256	0.8	5.4	341	13.6	14.26	0.12	8.23	<0.01	6.87	2.52	4.19	0.2	2.28	0.343	46.48	0.06	0.56	8.47
X17305	151	3	10.5	396	15.2	14.67	0.63	5.65	<0.01	5.69	3.7	2.74	0.25	2.08	0.286	56.44	0.04	0.56	5.51
H44125	148	1.1	12.9	48	13	15.02	0.44	4.28	<0.01	5.96	4.86	2.66	0.09	0.4	0.285	59.56	0.02	0.43	5.78
X14418	182	2.8	11.3	99	10.4	15.39	0.5	4.46	<0.01	6.51	5.99	2.99	0.17	0.65	0.296	56.54	0.03	0.44	5.79
X05422	333	3.6	10.4	297	28.1	15.74	0.11	0.4	<0.01	13.03	1.1	6.49	0.26	0.09	0.283	56	0.01	1.38	5.01
H41071	154	18.5	7.6	30	17.9	16.33	0.54	4.01	<0.01	3.38	6.38	0.73	0.12	3.93	0.247	59.04	0.03	0.32	3.94
X15681	94	2.9	9.9	53.9	7.1														
H41711	166	14.6	8.6	135.6	17.8														
X19614	89	0.5	10	102.2	11.4														
H43901	270	1.1	8.3	246	15.2	15.01	0.22	8.74	<0.01	5.75	2.32	3.11	0.19	3.7	0.357	46.29	0.06	0.58	7.51
H41437	171	1.2	8.7	74	21.2	17.27	0.3	4.03	<0.01	6.68	4.84	2.86	0.11	0.21	0.337	56.63	0.02	0.57	6.16
H42099	184	0.9	13.2	54.9	13.9														
H43852	184	0.7	7.6	191	20.1	15.53	0.36	7.13	<0.01	5.89	3.56	3.67	0.13	2.14	0.325	50.64	0.07	0.46	8.78
H43863	138	0.7	7.5	183	20.8	14.19	0.19	8.43	<0.01	4.71	2.35	2.28	0.1	3.46	0.249	50.8	0.08	0.45	7.27
X15439	118	0.5	6.3	62.7	8														
H42229	153	1.3	11.1	50	16	14.41	0.42	7.24	<0.01	5.84	4.16	2.8	0.11	0.28	0.279	53.48	0.03	0.43	9.28
H41079	226	17.1	10.9	186	46.1	15.69	0.08	3.32	0.01	3.75	2.83	2.38	0.14	5.97	0.215	59.14	0.03	0.67	5.65
H41689	304	14.3	9.6	48.8	46.2														
E217198	153	1.7	13.9	74	11.9	15.02	0.44	3.79	<0.01	7.17	5.07	2.04	0.13	2.98	0.291	56.9	0.05	0.43	5.6
H41689	164	3.6	9.4	119	22.3	16.32	0.41	4.07	<0.01	6.11	5.03	3	0.18	1.42	0.313	54.25	0.03	0.48	8.26
H41045	136	15.9	8.9	46	21.6	16.32	0.49	4.9	<0.01	3.86	5.6	1.02	0.16	4.13	0.256	56.8	0.04	0.31	4.79
H41364	155	1.5	12.2	55.6	12.9														
G33872	159	30.5	37.1	26	24	14.67	0.6	9.71	<0.01	6.33	6.78	1.17	0.28	2.06	0.299	46.65	0.03	0.42	3.37
G35359	132	8.9	12.5	295	28.6	14.31	0.21	2.21	0.01	6.78	6	2.31	0.18	2.03	0.218	62	0.02	0.52	3.17
H43777	278	0.5	6.8	269	16.6	18.59	0.23	2.06	<0.01	7.27	3.67	4.52	0.16	2.34	0.405	53.75	0.02	0.65	6.17
H41694	240	10.6	10.2	301.9	28.4														
H41354	250	1.3	12.8	74.3	7.5														
E217134	151	1.7	12.2	87	13.9	14.19	0.43	5.71	<0.01	6.55	1.68	2.21	0.11	4.46	0.277	55.27	0.07	0.41	7.09
H41542	167	0.4	12.7	105.8	11.5														
X19380	159	1.1	7.9	64.4	9														
H42087	178	0.9	11.3	64.1	15.6														
H44089	92	4.7	8.2	114	17.7	10.97	0.36	6.39	<0.01	5.21	3.16	2.75	0.26	0.84	0.171	61.44	0.05	0.42	6.46
H41424	169	1.5	8.9	87	22.4	16.86	0.63	3.98	<0.01	7.13	3.44	3.07	0.14	1.85	0.319	55.52	0.04	0.48	5.61
E192620	157	2.7	14.9	124	15.6	14.78	0.37	3.03	<0.01	5.24	5.01	2.41	0.1	1.56	0.301	61.25	0.03	0.45	3.86
H43778	251	0.6	6.4	207	14.5	17.14	0.36	2.4	<0.01	6.63	3.56	3.71	0.2	2.4	0.396	56.3	0.03	0.6	6.31
X12593	109	1.7	13	126	13.8	14.26	0.24	4.64	<0.01	4.89	4.73	1.89	0.15	0.15	0.212	62.81	0.01	0.49	5.16
H41450	177	0.9	8.7	59	23.7	17.11	0.65	3.99	<0.01	6.49	4.61	2.48	0.1	1.23	0.324	55.55	0.05	0.53	5.53
H41687	285	21.7	8.7	54.2	18.6														
X11797	163	0.3	5.4	106.9	10.6														
E192601	156	2.2	15.1	111	17.9	15.48	0.46	2.82	<0.01	5.89	3.84	2.65	0.1	3.02	0.281	59.8	0.03	0.46	4.07
H43775	262	0.4	7.3	383.4	10.3														
G34602	78	2.1	6.5	89	9.7	13.29	0.18	1.86	0.03	4.45	4.31	1.71	0.11	0.74	0.128	67.55	0.01	0.35	3.51
E217155	98	1.7	6.3	65	10.5	16.43	0.64	3.89	<0.01	4.37	5.34	1.52	0.08	2.37	0.178	58.51	0.05	0.21	6.09
H43897	236	1.2	7.8	103	18.6	13.88	0.15	5.81	<0.01	6.17	4.69	3.13	0.28	0.2	0.346	54.88	0.03	0.53	8.38
G34638	115	3.3	9.3	175	8.6	11	0.4	2.12	0.02	5.26	3.76	1.54	0.1	1.71	0.198	70.46	0.02	0.32	2.83

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
H43843	177	0.5	8.2	191	15.2	14.4	0.2	5.84	<0.01	6.02	2.64	3.01	0.12	2.91	0.28	54.33	0.06	0.43	8.84
H43850	178	0.7	10.7	226	20.9	15.84	0.31	5.76	<0.01	6.05	2.23	3.17	0.12	4.14	0.285	52.23	0.07	0.42	7.54
H41439	152	0.7	8.3	83	22.7	15.21	1.25	4.77	<0.01	5.82	3.52	2.93	0.13	1.3	0.287	56.55	0.07	0.45	6.39
H41033	241	7.5	8.2	78	17.1	15.18	0.48	4.53	0.01	4.78	8.94	1.41	0.25	0.54	0.241	55.68	0.03	0.29	6.44
H43871	190	1.1	6.5	191	22.5	15.9	0.06	7.25	<0.01	4.12	2.44	3.16	0.1	3.93	0.272	52.22	0.06	0.51	8.44
X09610	158	1.6	6.8	122.3	7.8														
G34490	109	4.2	13.1	84.3	9.3														
H43779	265	0.7	6.1	337	16.2	17.21	0.57	1.08	<0.01	8.2	3.7	4.36	0.14	1.35	0.371	57.06	0.04	0.64	5.11
H41039	188	11.7	12	158	34.3	15.35	0.3	5.91	<0.01	4.91	6.42	1.83	0.3	0.89	0.168	54.1	0.03	0.55	8.68
E192642	119	2.9	17.4	99	24.1	16.03	0.21	2.85	<0.01	5.43	5.18	2.38	0.09	1.5	0.244	61.19	0.02	0.62	4.09
X19391	136	1.8	12.5	80	8.2														
9426	173	13.4	12.2	67	39.5	15.87	0.46	4.57	<0.01	5.66	5.37	2.06	0.17	3.04	0.269	54.85	0.03	0.44	6.59
G37020	150	2.7	11.3	162.4	9.4														
H41714	168	6.3	10.9	87.3	16.9														
G35715	127	1.1	6.1	204	8.3	12.34	0.23	1.92	<0.01	7.64	2.21	2.28	0.09	2.73	0.252	66.11	0.03	0.37	3.63
H43875	183	0.9	7.5	262	21.3	15.44	0.07	7.37	<0.01	5.26	1.97	2.9	0.11	4.08	0.267	51.54	0.06	0.54	8.61
G35470	125	5.8	13.5	45	28.3	15.55	0.18	6.61	0.01	2.9	4.93	1.59	0.17	4.3	0.205	57.09	0.05	0.59	4.37
H40624	156	2.4	14.2	67	20	14.47	0.7	3.72	<0.01	5.78	5.74	2.55	0.09	0.49	0.275	59.82	0.03	0.42	5.88
X15038	111	0.6	7.2	52.1	6.6														
E192656	103	2.9	16.1	53	24.1	14.74	0.22	2.57	<0.01	4.19	5.22	2.14	0.08	0.33	0.227	64.84	0.01	0.54	4.15
X14347	172	1.6	11.6	63	15.7	16.65	0.35	2.51	<0.01	6.02	3.72	2.28	0.09	4.32	0.312	59.21	0.03	0.49	3.27
H43776	281	0.4	5.8	367.9	9.4														
G37551	171	3.5	9	98	13.4	13.99	0.45	2.18	<0.01	6.46	4.65	2.66	0.13	1.52	0.255	62.23	0.02	0.39	3.62
G37010	132	2.2	12.2	78	11.3	12.95	0.44	3.5	<0.01	5.78	3.98	1.58	0.16	2.65	0.24	63.14	0.04	0.36	4.43
X09996	91	1.2	9.2	66.5	6.9														
H41705	178	5.7	12.8	193.1	17.4														
X05908	162	1.5	7.2	91.9	7														
G37010	136	2.1	10	72	8.1														
X09254	149	1.2	11.6	95	9.8	13.9	0.48	2.35	<0.01	5.8	4.97	2.8	0.12	0.97	0.272	63.12	0.02	0.41	3.84
H41433	160	1	9.2	83	26	17.12	0.97	5.15	<0.01	5.53	4.14	3.26	0.18	1.05	0.324	55.03	0.07	0.5	5.66
H41719	148	11.5	9.5	139.7	21.7														
X14726	135	3.8	8.1	79	3.7	9.52	0.36	4.33	<0.01	8.03	4.2	1.76	0.18	0.53	0.198	64.82	0.02	0.29	4.1
H40627	174	2.1	14	90	25.8	16.13	0.45	2.85	<0.01	6.41	3.8	2.5	0.09	3.53	0.317	58.67	0.03	0.46	4.64
X09311	169	1.2	14.3	112	9.2	15.96	0.52	2.57	<0.01	6	4.93	2.33	0.11	3.11	0.311	59.76	0.03	0.48	3.66
X16704	155	1.7	10.9	81.9	8.2														
H41681	265	40.8	13	59.8	18.8														
X12513	106	1.5	7.3	68	13.2	14.99	0.28	3.62	<0.01	5.42	4.16	1.98	0.11	2.5	0.219	60.38	0.04	0.51	4.2
H41435	166	1	7.7	84	26.8	16.78	0.31	3.94	<0.01	6.21	3.72	3.73	0.14	1.18	0.31	55.62	0.02	0.51	5.69
H41721	164	10.4	7.5	71.5	19.9														
G37573	165	3.9	14	79	15.3	16.11	0.48	3.03	<0.01	6.74	4.34	2.41	0.13	3.44	0.301	58.65	0.03	0.45	3.87
X15672	132	1.6	9.9	90.5	7.7														
G37041	179	2	13.8	130.9	12.6														
H41697	252	16.3	11.1	98.1	34.5														
H41083	374	3.5	15.5	140	36.9	12.62	0.18	7.23	<0.01	4.66	3.5	3.28	0.34	3.22	0.127	53.8	0.03	0.49	9.21
E192579	150	2.6	11.6	91	18.1	15.97	0.49	2.02	<0.01	5.77	4.47	2.04	0.07	3.79	0.292	61.22	0.04	0.45	2.98
G35331	99	2.9	8.4	51	41.2	15.09	0.36	1.75	<0.01	5.43	6.47	1.04	0.1	2.84	0.158	64.3	0.03	0.25	2.06
G23392	103	1.2	14.7	71.1	7.4														
X09180	140	2.2	11	62	10.5	15.14	0.58	2.78	<0.01	6.32	5.27	1.65	0.1	3.08	0.281	60.38	0.04	0.43	3.61
H44042	329	4.6	4.7	55	64.9	14.53	0.16	4.82	<0.01	2.84	5.46	1.22	0.27	3.71	0.085	62.29	0.03	0.26	4.22
X12204	201	0.8	5.5	98.2	2.9														

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E192502	138	1.8	11.2	112.4	7														
X05897	166	2.8	9.6	85.9	5.7														
H41081	311	5.6	16.8	245	46	13.73	0.12	6.24	<0.01	4.98	3.09	4.27	0.31	3.67	0.18	53.94	0.03	0.48	8.74
H41683	276	17.2	13.6	95.4	17.6														
X05681	131	1.2	6.7	85.4	6.6														
X09224	162	3.8	8.9	92	12.7	16.55	0.42	2.46	<0.01	6.34	6.02	2.15	0.11	3.17	0.315	58.19	0.03	0.47	3.49
X12563	99	2.2	13.1	94	13.1	14.54	0.26	4.75	<0.01	4.99	4.44	1.51	0.14	2.51	0.209	60.49	0.04	0.48	5.16
H41685	321	14.2	12.5	80.6	22.8														
G35312	181	27.1	11.2	72	30.9	16.25	0.36	4.57	<0.01	5.75	5.72	1.48	0.19	3.69	0.335	55.62	0.04	0.53	4.11
X09282	160	1.4	13.3	111	8.5	14.88	0.44	2.71	<0.01	6.73	4.91	2.21	0.12	2.74	0.286	60.16	0.03	0.45	3.62
H41717	203	3.7	12.7	7105.4	10.1														
G35426	132	5.3	14.6	72	29.7	14.96	0.16	5.05	<0.01	3.62	4.44	3.43	0.17	3.84	0.216	58.49	0.05	0.54	4.48
H41094	217	6.5	19.1	129.5	36														
E192490	154	1.5	11.4	104.1	7.4														
X05690	173	1.8	7.3	107.4	5.3														
G35377	142	12.9	9	74	29.3	14.98	0.14	3.2	0.01	5.03	6.08	0.99	0.14	3.73	0.106	61.92	0.04	0.43	2.84
X09983	155	1.2	14.2	82.6	10.8														
G22294	310	5.1	16.2	99.7	11.7														
X09301	215	2.5	18.5	98	21.9	16.28	0.13	9.45	0.03	8.72	2.17	8.51	0.26	2.06	0.127	40.94	0.04	1.07	9.85
G37569	231	2.6	19.8	95	25.4	16.19	0.09	7.69	0.03	8.86	2.19	9.16	0.21	1.81	0.118	41.89	0.03	1.09	10.5
H41679	148	16.8	17.4	42.2	15														
X16090	293	11.2	9.1	4	14.3	17.35	0.26	0.45	<0.01	6.22	5.35	1.28	0.01	2.77	0.343	60.28	0.01	0.5	4.33
67907	291	12.8	9.4	26	16.5	17.96	0.28	0.72	<0.01	6.27	5.88	3.1	0.04	2.07	0.376	58.45	0.02	0.51	4.2
X16106	282	8.1	9.2	7	12	16.16	0.2	1.75	<0.01	5.16	6.09	3.46	0.05	2.39	0.339	58.71	0.02	0.47	3.87
H40514	434	3.5	10.8	55	13.7	16.02	0.37	1.96	<0.01	6.62	5.94	1.9	0.05	4.24	0.34	58.55	0.03	0.43	3.38
X16124	243	8.1	9.1	19	13.2	15.79	0.24	2.51	<0.01	5.15	4.8	3.34	0.07	3.06	0.336	58.02	0.01	0.43	4.72
H40509	699	16.6	9.2	49	12.2	15.7	0.21	2.05	0.01	7.73	7.22	0.97	0.06	3.25	0.37	58.05	0.02	0.53	3.46
H40505	580	8.8	7.4	30	14.4	15.7	0.22	1.71	<0.01	5.64	7.51	0.72	0.05	3.5	0.279	61.48	0.02	0.4	2.7
H40503	302	6.4	10.7	45	13.2	16.61	0.28	1.98	<0.01	5.19	5.6	1.86	0.06	4.79	0.354	59.39	0.02	0.42	3.11
X16807	246	8	10.2	29	15.1	16.54	0.37	2.41	<0.01	5.3	5.68	3.1	0.07	3.29	0.35	57.56	0.03	0.47	4.19
67993	577	13.5	3.4	16	24.9	13.51	0.13	1.22	<0.01	3.04	8.05	0.65	0.04	1.69	0.073	69	0.02	0.11	2.42
X16946	337	10.4	8.6	43	9.8	14.6	0.28	2.56	<0.01	7.06	6.19	2.56	0.09	2.17	0.32	56.48	0.02	0.42	5.45
X16243	1090	14.5	9.8	47	13.7	12.75	0.13	2.95	0.01	6.46	5.55	1.38	0.09	2.37	0.282	62.25	0.02	0.38	3.94
H40512	374	11.3	8.4	53	11.1	15.76	0.17	3.05	0.01	5.29	5.61	1.63	0.09	4.05	0.32	59.05	0.02	0.43	4.39
9310	348	4.8	2.9	99	37.9	18.52	0.61	0.92	<0.01	1.97	11.27	0.64	0.05	1.52	0.074	61.68	0.05	0.14	2.44
H40557	427	7.9	8.6	64.1	9.3														
8317	478	11.8	4.5	18	25.2	13.65	0.1	1.92	<0.01	3.14	8.28	0.8	0.06	1.57	0.093	67.04	0.01	0.13	2.92
H40501	752	8.6	8.4	78	11.8	15.78	0.23	3	0.01	7.58	7.28	2.16	0.09	3.46	0.348	56.04	0.02	0.52	3.25
X16263	230	23.9	7	27	29.4	16.88	0.34	2.88	<0.01	4.07	6.57	1.07	0.07	4.33	0.22	58.45	0.05	0.37	3.64
G36128	703	5.7	7.7	38	28.8	13.55	0.15	3	0.01	3.66	8.11	1.06	0.12	0.82	0.233	64	0.01	0.33	3.39
X16310	359	10.8	8.2	60	28.4	15.61	0.26	4.45	<0.01	4.91	5.47	2.05	0.15	2.95	0.229	57.12	0.04	0.37	5.71
X14842	283	8.1	8.6	41	12.3	16	0.3	1.81	0.01	4.68	9.92	1.46	0.07	0.91	0.355	59.82	0.02	0.49	2.85
8341	528	5.7	3.8	32	29.9	14.21	0.12	1.38	<0.01	2.83	8.43	0.83	0.05	1.75	0.1	67.75	0.02	0.14	2.27
G34575	827	10.4	11.3	82	41.5	12.85	0.23	6.1	0.01	4.73	7.58	1.82	0.33	0.12	0.181	58.48	0.02	0.37	5.61
G33753	484	4.9	11.7	89	73.7	12.48	0.12	4.66	0.01	4.08	4.59	1.58	0.14	3.42	0.228	63.09	0.03	0.46	3.86
X14825	467	9.1	10.1	73	21.9	13.29	0.14	4.66	0.01	5.26	6.21	2.75	0.22	0.38	0.314	60.11	0.02	0.4	5.62
X16307	218	10.8	11	37	31.2	17.21	0.39	4.05	<0.01	5.26	6.18	1.42	0.11	3.63	0.239	56.36	0.05	0.38	4.48
X16295	206	10	9.9	48	27.4	16.42	0.37	4.02	<0.01	4.87	6.21	1.17	0.1	3.15	0.223	57.19	0.06	0.36	4.51
X14875	146	20	14.3	89	41.1	14.6	0.09	6.67	0.01	6.07	1.89	5.57	0.28	4.12	0.186	51.94	0.03	0.55	6.77
8394	205	6.1	14.1	64	28.6	14.28	0.25	5.38	<0.01	4.07	5.3	1.33	0.13	2.31	0.192	59.12	0.05	0.31	5.98

Note: values in blue are calculated

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
X16342	163	4	11.2	23	24.6														
X16343	178	11.7	9.9	26	23.2														
X16344	167	8.5	7.9	30	19.7														
X16345	192	11.2	7.5	31	21.2														
X16346	165	10.8	8.8	27	21.8														
X16347	164	6.5	10.2	24	21.3														
H47674	193	8.4	12.1	33	28														
H47708	350	11.2	10.3	39	23.5														
X16283	195	12.4	9.8	36	27.3	15.75	0.46	3.4	<0.01	4.65	5.89	1.2	0.08	3.08	0.195	59.63	0.05	0.32	4.39
H41767	201	2.3	1.4	21	18.1	17.75	0.17	0.87	<0.01	1	8.24	0.16	0.03	4.63	0.031	64.69	0.04	0.09	1.1
G36142	143	4.6	7	24	15.9	15.39	0.21	1.68	<0.01	1.86	11.07	0.97	0.06	0.96	0.276	65.06	0.02	0.26	2.02
X16326	181	8.5	8.5	29	30.7	17.72	0.49	3.43	<0.01	4.41	6.24	0.99	0.09	4.24	0.218	57.7	0.06	0.35	3.58
X14812	588	5.3	16.2	82	28.7	15.91	0.5	0.26	<0.01	5.68	8.09	1.36	0.1	2.52	0.206	61.72	0.01	0.38	1.49
H40363	120	5.1	10.5	18.3	18.4														
X14802	1315	2.7	16.3	114	47.4	12.61	0.42	0.32	0.01	11.41	6.24	1.92	0.12	2.06	0.174	62.03	0.02	0.34	1.1
H40491	834	19.6	11.9	91.4	17.6														
X16344	160	10	10.5	23	26.2	17.7	0.58	3.69	<0.01	4.29	5.89	0.94	0.1	4.56	0.208	58.7	0.1	0.34	2.71
9289	376	4.9	2.8	48	34.6	13.04	0.09	1.37	<0.01	2.43	6.5	0.37	0.06	2.97	0.06	71.1	0.01	0.14	1.63
H40403	171	5.4	11.1	15.9	18.8														
H43974	269	3.7	18	78.3	47.7														
X16272	217	15.1	9.7	31	26.9	17.6	0.34	4.01	<0.01	5.02	6.6	1.38	0.09	3.15	0.247	56.4	0.05	0.4	4.5
X16345	182	13.1	6.1	28	25.9	16.12	0.6	3.71	<0.01	4.34	5.86	0.83	0.1	4.19	0.201	57.9	0.08	0.34	4.09
H44157	313	3.3	9.5	92.7	19.8														
X16296	193	9.3	8.7	22	25.4	16.24	0.36	4.62	<0.01	4.9	5.89	1.52	0.11	3.53	0.235	56.26	0.06	0.39	4.69
X16362	175	4.3	11.7	20	28.2	17.68	0.63	3.35	0.01	4.75	6.22	1.09	0.09	4.55	0.235	57.98	0.11	0.36	2.16
X14874	332	7.8	7.8	56	24.1	13.9	0.3	4.95	<0.01	4.54	4.33	2.74	0.22	3.48	0.184	55.71	0.03	0.46	7.64
H41769	1080	4	9.9	196	35.2	13.14	0.29	2.75	0.02	7.39	5.24	3.43	0.14	3.58	0.393	59.12	0.02	0.63	2.55
X16279	231	12.5	9.6	38	27	16.55	0.3	5.04	<0.01	5.02	6.24	1.65	0.12	2.95	0.25	54.98	0.05	0.4	5.13
G33472	155	1.3	10.7	34.5	17.4														
X16327	194	7.8	9.7	21	38.6	16.94	0.5	3.82	<0.01	4.89	5.97	1.27	0.1	4.2	0.262	57.19	0.05	0.39	3.43
X16362	158	60.6	12.3	29	22.5	17.99	0.59	3.07	<0.01	4.21	5.65	1.08	0.08	4.78	0.216	60	0.13	0.34	1.81
8983	310	10.7	10.8	31	17.9	16.16	0.44	4.66	<0.01	5.46	6.48	1.26	0.13	3.46	0.258	56.29	0.06	0.37	4.28
8961	207	21.2	10.5	20	15.6	17.04	0.54	3.13	<0.01	4.65	6.43	1.08	0.08	4.04	0.228	59.06	0.06	0.37	3.18
8366	227	19.8	10.6	33	27.9	16.8	0.46	4.47	0.01	4.01	5.87	0.88	0.13	4.44	0.221	58.34	0.06	0.37	3.81
X16384	150	6.8	12.3	16	37.6	17.78	0.6	3.37	<0.01	4.38	5.69	1.05	0.08	4.88	0.243	58.62	0.14	0.36	1.77
H40457	185	6.6	12.1	21.1	20.5														
X16374	159	6.5	10.5	20	23.8	17.6	0.64	3.84	<0.01	4.33	6.06	0.95	0.1	4.61	0.24	56.9	0.08	0.35	3.2
G33676	208	1.1	12.9	38	22.6	17.77	0.51	2.04	<0.01	5.37	6.01	1.81	0.09	4.17	0.268	59.82	0.11	0.41	1.38
X16416	164	6.9	10.2	20	28.6	16.88	0.5	4.01	<0.01	4.15	6.11	0.84	0.12	4.53	0.216	57.73	0.08	0.38	2.8
8416	215	3.5	11.5	32	53.4	16.39	0.54	3.78	<0.01	4.47	5.62	1.38	0.11	3.88	0.226	59.51	0.1	0.37	3.38
G33738	165	4.7	10.4	24	22.9	17.32	0.5	4.42	<0.01	4.32	6.09	1.01	0.11	3.93	0.217	57.04	0.07	0.35	3.78
8438	190	8.4	11.6	23	21.7	16.61	0.44	4.34	<0.01	4.17	6.7	0.76	0.11	3.83	0.213	58.03	0.06	0.36	3.36
X16397	160	12.6	11.3	21	28	16.91	0.54	4.03	<0.01	4.35	5.84	1.08	0.11	4.59	0.247	57.51	0.07	0.4	3.14
G36541	152	2.8	17.7	99	93.1	17.64	0.17	0.88	<0.01	6.35	7.06	2.06	0.12	0.11	0.216	60.28	<0.01	0.65	4.02
9327	377	3.6	2.4	42	32.5	13.58	0.05	0.77	<0.01	1.98	6.59	0.46	0.05	3.17	0.044	71.69	0.01	0.09	1.12
H43952	272	3	15.5	83.9	23.5														
G33716	152	5.9	8.5	30	21.4	17.91	0.48	3.7	0.01	4.71	5.34	1.71	0.1	4.46	0.24	56.78	0.06	0.37	4.02
G33688	185	4.4	9.4	32	21.3	17.44	0.46	3.8	<0.01	4.63	5.89	1.22	0.1	3.95	0.238	57.38	0.05	0.37	4.24
8374	193	2.5	14.9	35	41.9	17.72	0.47	3.19	<0.01	5.11	5.49	1.49	0.11	4.75	0.267	59.29	0.12	0.42	1.19
G33496	143	4.6	6.4	33.4	20.8														

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
G33706	153	2.5	7.3	21	27	18.08	0.52	4.88	<0.01	3.92	5.68	0.92	0.1	4.94	0.236	55.56	0.07	0.37	4.47
X06968	109	0.9	6.7	76.6	24.1														
X13074	107	3.7	2.6	162.2	3.6														
H41951	69	2.1	5.7	25	10.4	9.52	0.11	0.29	<0.01	23.23	2.4	0.53	0.01	0.28	0.229	49.65	<0.01	0.36	13.05
X06596	102	0.6	2.2	18.3	15.1														
X10945	94	14.6	4.7	18	14.9	13.96	0.12	0.08	<0.01	5.26	3.84	0.39	<0.01	0.24	0.077	71	0.01	0.49	4.41
H41947	79	2.2	5.7	19	15.1	13.14	0.16	0.35	<0.01	12.61	3.53	0.45	0.01	0.33	0.247	60.08	0.01	0.48	8.13
X10920	83	4	3.9	67	12.2	12.45	0.11	0.32	<0.01	9.47	3.48	0.5	0.01	0.21	0.173	65.51	0.01	0.43	6.5
H41949	94	2.3	5.9	18	18.5	14.73	0.17	0.32	<0.01	9.01	3.93	0.59	<0.01	0.35	0.251	63.63	0.01	0.54	6.43
X06989	111	0.2	6	43.4	20.7														
X06607	114	1.4	4	32.7	26.4														
E217280	96	1.1	8.6	20	24.8	17.02	0.36	0.37	<0.01	5.98	4	1.02	0.02	0.47	0.257	63.72	0.01	0.61	5.43
G35602	108	0.4	9.1	390	21.6	17.68	0.27	0.45	<0.01	7.76	3.87	0.97	0.02	0.53	0.298	61.61	0.01	0.65	5.87
H41944	109	0.9	8.4	90	26.7	16.49	0.33	0.41	<0.01	6.92	4.21	1.59	0.02	0.38	0.272	61.95	0.01	0.58	5.81
X06618	116	0.5	5	60.6	14.3														
X13084	114	5	4.6	36.3	1														
E217300	109	0.5	8.9	79	21.8	16.59	0.29	0.55	<0.01	7.91	3.86	1.54	0.04	0.34	0.389	62.19	0.01	0.59	5.61
X17591	88	3.4	1.7	65.2	3.1														
X10967	81	2.2	4.2	33	8.9	10.97	0.14	0.55	<0.01	7.34	2.94	1.3	0.04	0.14	0.164	68.93	0.01	0.4	5.59
X06638	108	0.2	6	72.8	12.4														
G35622	103	2.3	8.8	53	21.2	14.15	0.24	1.25	<0.01	9.69	3.87	1.32	0.07	0.2	0.219	60.05	0.01	0.55	7.82
X17581	92	3.4	7.1	47.3	4.1														
X10985	71	3.3	3.3	75	7.4	8.94	0.14	0.71	<0.01	4.6	2.6	0.9	0.07	0.18	0.132	76.19	0.01	0.3	4.1
G32024	116	0.5	7.8	124	20.1	14.79	0.4	5.2	<0.01	6.65	2.15	2.4	0.15	3.15	0.231	54.14	0.05	0.54	9.84
X66542	244	12.8	9.4	309.9	34.4														
X29696																			
X66799																			
X26526																			
IC COMP 16	226	7.2	11.2	64	22.9														
IC COMP 19	90	4.2	7.7	29	59.2														
X30431																			
IC COMP 12	256	4.5	11	291	19.8														
IC COMP 9	141	6.8	7.8	485	20.8														
IC COMP 11	182	5.1	9.7	105	25.6														
X30422																			
IC COMP 10	147	6.1	10.6	670	28.3														
X26728																			
IC COMP 20	192	6.1	26.9	54	44														
X30441																			
IC COMP 17	242	7	14.6	58	41.2														
IC COMP 18	255	5.2	26.4	50	44.1														
X30943																			
IC COMP 13	259	5.4	15.7	364	39.1														
X26658																			
X30968																			
X30961																			
H47161																			
X25074																			
X30176																			
X25084																			

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

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H47377	170	6.6	8	231.9	26.9														
X25078																			
H47126																			
X67984																			
H47109																			
X29624																			
X67999																			
X30121																			
X25461																			
X30187																			
X29626																			
X28499																			
H48498																			
H47431																			
H48481																			
X29743																			
H47446	148	4.9	8.5	122.4	33.9														
H47430	154	11	6.5	218.5	31.2														
X28009																			
X30222																			
X29781																			
X28815																			
X28802																			
X30583																			
H47438																			
X28837																			
H47123																			
X25501																			
X29656																			
X30218																			
H46835																			
H47391																			
X30235																			
X30331																			
X30742																			
X25471																			
X25463																			
X28805																			
X29833																			
X30361																			
X25482																			
X25489																			
X30224																			
X30139																			
X29646																			
X29685																			
X25896																			
X28827																			
X25886																			
H46817	164	3.9	6.3	80.1	17.8														

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X29681																			
X24855																			
X25877																			
X25875																			
X30227																			
H46831																			
X29789																			
H47403	183	6.1	8.7	40.2	19.2														
X30208																			
X29686																			
X29636																			
H46789	147	3.6	7.4	79.1	23.3														
X29871																			
X28535																			
X29442																			
X29503																			
H46842	191	5.3	6.3	88.6	21.1														
X28545																			
H46829	176	4.7	5.5	88.7	20.1														
X29431																			
H46801	147	3.7	7.1	76.9	23.3														
X26345																			
X29666																			
X29422																			
X29421																			
X30596																			
X30198																			
H46808																			
X29407																			
H46881	191	6.3	8.1	62.8	16.6														
X30711																			
H46870	199	4.4	7.1	74.9	21.8														
H46841																			
H47142																			
X66971																			
X67793																			
X67816																			
X28131																			
X28077																			
X28151																			
X67772																			
X28121																			
X25232																			
X25276																			
X28087																			
H47484	142	1.6	11.1	26.9	28														
X25254																			
X67805																			
X28141																			
X28112																			

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X25264																			
X25243																			
X67806																			
X67782																			
X28099																			
H47469	229	3.9	9.2	76.6	22.6														
X28066																			
X25251																			
X67761																			
X25221																			
X25211																			
X27667																			
H48695	216	15.3	3.5	72.3	43.5														
X67731																			
H47241	100	2.7	2.5	74.1	10.9														
H47325																			
X28273																			
X24881																			
H47307	118	4.4	3.5	524.9	6.8														
X28256																			
X67618																			
X26088																			
X28851																			
X28211																			
X24925																			
X27364																			
X28751																			
X25998																			
X67849																			
H48761	185	6.6	5.8	319.8	26.8														
X28301																			
X27427																			
X27368																			
X67459																			
X25974																			
X27532																			
H47353																			
X27669																			
H46781																			
X26107																			
H46949	180	2.4	5.8	84.2	16.2														
X28314																			
IC COMP 14	270	5.4	4.9	570	35.4														
X26159																			
X66869																			
X24935																			
H48859																			
H46744	128	5.5	5.7	37.6	15.9														
X28374																			
X27531																			

Note: values in blue are calculated

When reported as below DL half DL was used

highlighted cells are material analyzed in 2011 and might have had too much time to oxidize in storage

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
X67741																			
H48926																			
X66721																			
X28375																			
H48900	344	8.7	7.1	58.3	17.7														
X24946																			
X28325																			
H48432																			
X25373																			
X26085																			
X26169																			
X29259																			
X25718																			
H48749	166	11.6	5.2	266.3	27														
X29374																			
X27359																			
H47552	168	4.4	7.1	81.9	54.3														
X28931																			
X67553																			
X27334																			
HCT-6	164	5	11	209.8	29.3														
HCT-3																			
HCT-5																			
HCT-2																			
HCT-4																			
HCT-1																			
X27447																			
X26179																			
H48559A	125	10.4	6.4	67.5	33.1														
H48504	144	12.1	9.8	103.4	35.9														
X25438																			
X29384																			
H47085																			
HCT-3	176	9.4	11.9	89.1	32.4														
IC COMP 22	157	9	6.7	165	46.9														
X28362																			
X29355																			
X26055																			
X27273																			
H48517	236	12	8.7	79.4	42.5														
X66829																			
X67543																			
H46962	246	12.4	7.3	58.7	26.6														
IC COMP 23	239	7.4	6.3	1223	42.7														
H48907																			
H48909																			
X66552	179	6.7	5.3	55.9	38.2														
H48556																			
X28877																			
X28785																			

Note: values in blue are calculated

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
X25843																			
X25045																			
H48852																			
IC COMP 25	230	9.7	6.6	152	36.5														
X28887																			
X67563																			
X27659																			
X28291																			
X29942																			
X28922																			
X28897																			
X26039																			
X28867																			
X25308																			
H48532	221	15.9	6	53	33.8														
H46895	279	4.7	10.8	146.3	38														
X25832																			
X66819																			
X25301																			
H48305	158	7.8	7.1	1143.8	15.1														
H47578	246	7.1	8.2	137.6	29.8														
H48210	170	9.5	8.2	144.4	30.8														
X29099																			
X29231																			
X25329																			
X24966																			
H48913	129	9.3	5.9	209.5	28.5														
X28384																			
H48312																			
X27515																			
X67506																			
X25831																			
H47015																			
X67573																			
X24984																			
X67495																			
X66846																			
H48238	71	6.2	4.9	44.7	14.4														
H48929	135	5	5.1	36.8	22.1														
X26126																			
H48872	159	14.8	8.4	81.6	47.4														
X29899																			
X26416																			
X67502																			
HCT-5	191	6.1	11.1	562.5	18.5														
IC COMP 15	211	12.7	6.6	395	42.6														
X66938																			
X67914																			
X24989																			
H46894	285	5.6	11.4	130.7	43.5														

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
X25865																			
H48278																			
X67556																			
X66926																			
H48251	116	6.4	9.4	58.2	18.9														
X26408																			
H48885	141	10.7	8.4	207	35														
X27628																			
H48878																			
X29958																			
X25626																			
X25665																			
H48248																			
HCT-2	236	4.2	13.6	113.9	28.5														
X67517																			
X26407																			
X25655																			
HCT-4	136	12.1	10.8	81.1	23.1														
H48265	85	5.9	5.5	18.6	9.8														
X25451																			
H47546																			
X67751																			
X25652																			
X25854																			
IC COMP 24	126	11.8	10.2	290	23.6														
H48336	258	8.4	8.4	106.7	28														
X26501																			
IC COMP 21	138	8.2	8.9	224	19.7														
X26837																			
X25432																			
X29979																			
X67523																			
H47103																			
X25662																			
X67498																			
X67485																			
X67528																			
IC COMP 2	271	5.7	10.7	25	17.4														
X29077																			
H48545	53	15.5	7.5	107.1	28.2														
X29093																			
X25864																			
HCT-1	152	2.9	7	73	16.8														
X25435																			
X29089																			
X25132																			
H47057	171	6.1	11.3	263.8	25.7														
X25728																			
X25727																			
X26791																			

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

PFS Sample#	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %
X30399																			
X25188																			
X67591																			
X29971																			
IC COMP 1	146	5.5	10.2	118	13.7														
X25611																			
X28052																			
X25175																			
X30379																			
X28196																			
IC COMP 5	142	5.3	9.2	33	17.4														
X26469																			
IC COMP 6	159	7.4	12.1	530	17.8														
X25155																			
X27062																			
X30386																			
IC COMP 4	166	8.7	16	34	34.7														
IC COMP 8	212	4.8	13	71	20.5														
X27058																			
IC COMP 3	142	9.5	6.1	49	30.3														
X27066																			
IC COMP 7	166	2	11.6	73	25.5														
X28031																			
X25165																			
X28019																			
X25111																			
X25091																			
X25101																			
X25122																			
X25143																			

Note: values in blue are calculated

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Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2C O3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %	CANP_TTL kg $CaCO_3$ / t
ALL																						
Count	2030	433	2030	1839	2030	2030	1142	1839	1749	2030	2030	2030	2030	2030	2030	2030	2030	2001	1332	1980	2030	2030
Minimum	2.00	5.10	0.01	0.01	-0.05	0.01	0.01	0.00	0.00	-2.06	0.00	0.31	0.31	0.31	-5.03	0.00	-5.03	0.01	0.00	0.01	0.00	0.00
10 Percentile	6.60	7.20	0.44	0.39	0.41	0.38	0.01	0.01	0.00	-0.02	0.00	13.72	11.24	11.88	7.20	0.00	7.20	0.01	0.03	0.10	0.00	0.83
25 Percentile	8.00	8.00	1.22	0.97	1.17	1.14	0.01	0.01	0.00	0.01	0.01	38.20	30.05	35.59	21.00	6.00	15.00	0.17	0.16	0.60	0.00	12.50
Median-25Percentile	0.50	0.50	1.34	1.08	1.24	1.25	0.02	0.01	0.01	0.16	0.16	41.80	35.89	39.17	27.90	27.90	0.00	0.29	0.28	1.04	0.03	25.84
Mean	8.22	8.27	2.93	2.35	2.79	2.78	0.20	0.15	0.02	0.34	0.35	91.59	76.15	86.96	62.54	49.08	13.46	0.57	0.53	1.98	0.24	46.66
Standard Deviation	1.13	0.81	2.18	1.77	2.12	2.12	0.62	0.56	0.03	0.50	0.49	68.22	59.22	66.35	55.60	54.11	3.47	0.55	0.50	1.83	0.46	45.55
Median	8.50	8.50	2.56	2.05	2.41	2.39	0.03	0.02	0.01	0.17	0.17	80.00	65.94	74.76	48.90	33.90	15.00	0.46	0.44	1.64	0.03	38.34
75Percentile-Median	0.45	0.40	1.59	1.27	1.56	1.58	0.03	0.02	0.02	0.30	0.30	49.69	41.56	49.42	35.10	35.10	0.00	0.35	0.30	1.11	0.23	29.17
75 Percentile	8.95	8.90	4.15	3.32	3.97	3.97	0.06	0.04	0.03	0.47	0.47	129.69	107.50	124.19	84.00	69.00	15.00	0.81	0.74	2.75	0.26	67.50
90 Percentile	9.20	9.10	5.80	4.66	5.54	5.54	0.19	0.12	0.06	0.94	0.94	181.09	154.38	173.01	142.71	127.71	15.00	1.22	1.12	4.29	0.84	100.84
Maximum	10.00	9.50	19.05	16.35	19.00	18.99	5.99	5.87	0.17	6.34	6.34	595.31	510.94	593.52	482.40	467.40	15.00	6.72	5.08	18.60	4.76	560.04
Interquartile Range (IQR) 1	0.95	0.90	2.93	2.35	2.80	2.84	0.05	0.03	0.03	0.46	0.46	91.48	77.45	88.60	63.00	63.00	0.00	0.64	0.58	2.15	0.26	55.00
Variance	1.28	0.65	4.77	3.13	4.48	4.51	0.38	0.31	0.00	0.25	0.24	4653.74	3507.36	4402.19	3091.55	2928.03	12.07	0.30	0.25	3.35	0.21	2074.59
Skewness	-1.81	-1.27	1.12	1.28	1.22	1.21	4.58	5.08	1.93	2.95	3.17	1.12	1.32	1.21	1.57	1.70	-2.24	2.42	2.20	2.00	3.09	2.41
Coefficient of Variation (CoV) 2	0.14	0.10	0.74	0.75	0.76	0.76	3.07	3.59	1.32	1.47	1.41	0.74	0.78	0.76	0.89	1.10	0.26	0.96	0.94	0.92	1.89	0.98
NPR < 1.0 or NPR = 1.0																						
1.0 < NPR < 2.0																						
NPR > 2.0 or NPR =2.0																						
Sum Check																						
% NPR < 1.0 or NPR = 1.0 of Total																						
% 1.0 < NPR < 2.0 of Total																						
% NPR > 2.0 or NPR =2.0 of Total																						
Sum Check																						
% Samples NPR = 0.01																						
KERR - All																						
Count	305	71	305	239	305	305	88	239	305	305	305	305	305	305	305	305	305	305	227	305	305	305
Minimum	3.30	5.10	0.01	0.02	-0.05	0.02	0.01	0.01	0.00	-0.16	0.00	0.31	0.63	0.63	-1.00	0.00	-1.00	0.01	0.00	0.01	0.00	0.42
10 Percentile	5.27	5.90	0.45	0.32	0.43	0.39	0.02	0.01	0.00	-0.02	0.00	14.19	11.75	12.03	5.10	0.00	5.10	0.01	0.02	0.01	0.00	0.83
25 Percentile	6.40	6.40	2.00	1.21	1.98	1.97	0.03	0.01	0.00	0.00	0.00	62.50	53.75	61.67	8.00	0.00	8.00	0.01	0.03	0.10	0.01	0.83
Median-25Percentile	1.30	0.80	2.73	2.37	2.48	2.48	0.02	0.02	0.00	0.22	0.22	85.31	66.25	77.58	11.80	4.80	7.00	0.17	0.23	0.38	0.04	14.17
Mean	7.41	7.15	4.53	3.64	4.37	4.37	0.24	0.21	0.01	0.44	0.45	141.63	122.43	136.44	53.46	41.63	11.83	0.47	0.48	1.49	0.12	39.47
Standard Deviation	1.38	0.92	2.98	2.57	2.91	2.91	0.82	0.73	0.02	0.69	0.69	93.08	84.19	90.89	68.57	66.47	4.37	0.71	0.62	2.14	0.30	59.39
Median	7.70	7.20	4.73	3.57	4.46	4.46	0.05	0.03	0.00	0.22	0.22	147.81	120.00	139.25	19.80	4.80	15.00	0.18	0.26	0.48	0.04	15.00
75Percentile-Median	0.88	0.65	1.91	1.90	1.98	1.98	0.03	0.03	0.01	0.41	0.41	59.69	64.38	61.98	58.20	58.20	0.00	0.57	0.51	1.92	0.09	47.50
75 Percentile	8.58	7.85	6.64	5.47	6.44	6.44	0.08	0.06	0.01	0.64	0.64	207.50	184.38	201.23	78.00	63.00	15.00	0.75	0.77	2.40	0.13	62.50
90 Percentile	9.08	8.30	8.43	6.93	8.24	8.24	0.21	0.13	0.03	1.12	1.12	263.31	227.13	257.49	151.26	136.26	15.00	1.32	1.21	4.25	0.23	110.01
Maximum	9.59	8.90	13.81	10.30	13.81	13.81	5.99	5.87	0.11	6.34	6.34	431.56	431.56	431.56	482.40	467.40	15.00	6.72	5.08	18.60	3.47	560.04
Interquartile Range (IQR) 1	2.18	1.45	4.64	4.26	4.46	4.47	0.05	0.05	0.01	0.64	0.64	145.00	130.63	139.56	70.00	63.00	7.00	0.74	0.75	2.30	0.12	61.67
Variance	1.92	0.84	8.87	6.61	8.44	8.46	0.68	0.53	0.00	0.48	0.47	8664.33	7088.60	8260.32	4702.20	4418.05	19.09	0.51	0.38	4.58	0.09	3527.48
Skewness	-0.54	-0.14	0.19	0.32	0.25	0.25	5.31	4.84	2.65	3.59	3.65	0.19	0.39	0.25	2.08	2.20	-1.07	3.86	2.79	2.94	7.31	3.86
Coefficient of Variation (CoV) 2	0.19	0.13	0.66	0.71	0.67	0.67	3.37	3.49	1.79	1.57	1.53	0.66	0.69	0.67	1.28	1.60	0.37	1.50	1.28	1.44	2.55	1.50
NPR < 1.0 or NPR = 1.0																						
1.0 < NPR < 2.0																						
NPR > 2.0 or NPR =2.0																						
Sum Check																						
% NPR < 1.0 or NPR = 1.0 of Total																						
% 1.0 < NPR < 2.0 of Total																						
% NPR > 2.0 or NPR =2.0 of Total																						
Sum Check																						
% Samples NPR = 0.01																						

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2C O3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %	CANP_TTL kg $CaCO_3$ / t
SULPHURETS - All																						
Count	433	79	433	369	433	433	166	369	433	433	433	433	433	433	433	433	433	433	166	433	433	433
Minimum	6.24	8.00	0.01	0.01	0.00	0.01	0.01	0.01	0.00	-2.06	0.00	0.31	0.31	0.31	5.00	0.00	5.00	0.01	0.03	0.08	0.00	0.42
10 Percentile	8.27	8.40	0.20	0.18	0.19	0.18	0.01	0.01	0.00	-0.06	0.00	6.25	5.63	5.63	29.23	14.23	15.00	0.23	0.11	0.70	0.00	19.31
25 Percentile	8.60	8.60	0.52	0.45	0.49	0.46	0.01	0.01	0.01	-0.02	0.00	16.25	13.44	14.38	61.60	46.60	15.00	0.52	0.35	1.70	0.04	43.61
Median-25Percentile	0.20	0.10	0.72	0.58	0.73	0.75	0.01	0.00	0.01	0.06	0.04	22.50	19.48	23.44	40.90	40.90	0.00	0.29	0.29	0.95	0.51	23.89
Mean	8.73	8.71	1.57	1.35	1.55	1.54	0.03	0.02	0.03	0.12	0.15	49.03	43.68	48.27	108.94	94.23	14.71	0.90	0.76	3.04	0.61	75.15
Standard Deviation	0.45	0.23	1.34	1.15	1.34	1.36	0.03	0.03	0.03	0.26	0.22	42.01	39.58	42.48	62.22	61.77	1.40	0.58	0.57	2.00	0.62	48.20
Median	8.80	8.70	1.24	1.03	1.22	1.21	0.02	0.01	0.02	0.04	0.04	38.75	32.92	37.81	102.50	87.50	15.00	0.81	0.64	2.65	0.55	67.50
75Percentile-Median	0.20	0.20	0.91	0.90	0.92	0.96	0.02	0.02	0.03	0.17	0.17	28.44	28.96	30.00	50.50	50.50	0.00	0.37	0.37	1.45	0.42	30.84
75 Percentile	9.00	8.90	2.15	1.93	2.14	2.17	0.04	0.03	0.04	0.21	0.21	67.19	61.88	67.81	153.00	138.00	15.00	1.18	1.01	4.10	0.97	98.34
90 Percentile	9.18	8.92	3.39	2.94	3.34	3.38	0.06	0.05	0.07	0.46	0.46	105.81	95.42	105.71	183.70	168.70	15.00	1.62	1.56	5.75	1.43	134.84
Maximum	9.58	9.20	7.50	5.82	7.47	7.47	0.26	0.22	0.17	1.65	1.65	234.38	219.06	233.43	350.00	335.00	15.00	3.31	2.79	10.89	3.31	275.85
Interquartile Range (IQR) 1	0.40	0.30	1.63	1.48	1.65	1.71	0.03	0.02	0.04	0.23	0.21	50.94	48.44	53.44	91.40	91.40	0.00	0.66	0.65	2.40	0.93	54.73
Variance	0.20	0.05	1.81	1.32	1.81	1.85	0.00	0.00	0.00	0.07	0.05	1764.66	1566.30	1804.72	3871.92	3814.98	1.96	0.33	0.32	4.01	0.39	2323.02
Skewness	-1.72	-0.63	1.41	1.24	1.41	1.40	3.40	3.25	1.25	-0.22	2.11	1.41	1.51	1.40	0.48	0.51	-4.97	1.09	1.01	0.98	1.19	1.09
Coefficient of Variation (CoV) 2	0.05	0.03	0.86	0.85	0.87	0.88	0.95	1.14	1.00	2.12	1.50	0.86	0.91	0.88	0.57	0.66	0.10	0.64	0.75	0.66	1.01	0.64
NPR < 1.0 or NPR = 1.0																						
1.0 < NPR < 2.0																						
NPR > 2.0 or NPR =2.0																						
Sum Check																						
% NPR < 1.0 or NPR = 1.0 of Total																						
% 1.0 < NPR < 2.0 of Total																						
% NPR > 2.0 or NPR =2.0 of Total																						
Sum Check																						
% Samples NPR = 0.01																						
SULPHURETS - Overburden																						
Count	9	1	9	9	9	9	6	9	9	9	9	9	9	9	9	9	9	9	6	9	9	9
Minimum	7.30	8.90	0.06	0.04	0.06	0.04	0.01	0.01	0.00	-0.05	0.00	1.88	1.25	1.25	7.00	0.00	7.00	0.01	0.03	0.10	0.00	0.83
10 Percentile	8.11	8.90	0.20	0.12	0.18	0.15	0.01	0.01	0.01	-0.05	0.00	6.13	3.75	4.61	10.20	0.00	10.20	0.03	0.03	0.10	0.00	2.17
25 Percentile	8.40	8.90	0.25	0.19	0.24	0.24	0.01	0.01	0.03	-0.03	0.00	7.81	5.94	7.50	39.00	24.00	15.00	0.38	0.11	1.15	0.01	31.67
Median-25Percentile	0.30	0.00	0.11	0.09	0.11	0.08	0.00	0.01	0.00	0.06	0.04	3.44	2.81	2.51	31.00	31.00	0.00	0.08	0.39	0.52	0.09	6.67
Mean	8.60	8.90	0.97	0.83	0.95	0.93	0.01	0.02	0.03	0.08	0.10	30.35	26.04	29.09	77.30	63.63	13.67	0.66	0.54	2.25	0.30	54.91
Standard Deviation	0.57	#DIV/0!	1.10	1.08	1.09	1.10	0.01	0.03	0.02	0.13	0.11	34.44	33.62	34.23	60.00	58.32	2.83	0.55	0.53	2.02	0.45	45.76
Median	8.70	8.90	0.36	0.28	0.35	0.32	0.01	0.01	0.04	0.04	0.04	11.25	8.75	10.01	70.00	55.00	15.00	0.46	0.51	1.67	0.09	38.34
75Percentile-Median	0.30	0.00	0.88	0.62	0.87	0.90	0.01	0.01	0.01	0.13	0.13	27.50	19.38	28.01	28.00	28.00	0.00	0.49	0.19	0.93	0.32	40.84
75 Percentile	9.00	8.90	1.24	0.90	1.22	1.22	0.02	0.02	0.04	0.17	0.17	38.75	28.13	38.02	98.00	83.00	15.00	0.95	0.70	2.60	0.41	79.17
90 Percentile	9.04	8.90	2.13	1.87	2.05	2.02	0.02	0.03	0.05	0.21	0.21	66.44	58.56	63.03	159.06	144.06	15.00	1.43	1.08	5.37	0.65	119.51
Maximum	9.20	8.90	3.47	3.41	3.46	3.45	0.02	0.09	0.07	0.32	0.32	108.44	106.56	107.80	183.29	168.29	15.00	1.53	1.44	5.67	1.41	127.51
Interquartile Range (IQR) 1	0.60	0.00	0.99	0.71	0.98	0.98	0.01	0.02	0.01	0.19	0.17	30.94	22.19	30.52	59.00	59.00	0.00	0.57	0.58	1.45	0.41	47.50
Variance	0.32	#DIV/0!	1.21	1.16	1.20	1.20	0.00	0.00	0.00	0.02	0.01	1185.95	1130.08	1171.84	3600.34	3401.41	8.00	0.30	0.28	4.08	0.21	2093.93
Skewness	-1.60	#DIV/0!	1.69	2.05	1.74	1.76	0.49	2.74	-0.30	0.67	0.99	1.69	2.05	1.76	0.69	0.79	-2.12	0.53	0.95	0.90	2.14	0.53
Coefficient of Variation (CoV) 2	0.07	#DIV/0!	1.13	1.29	1.15	1.18	0.49	1.41	0.54	1.49	1.14	1.13	1.29	1.18	0.78	0.92	0.21	0.83	0.99	0.90	1.50	0.83
NPR < 1.0 or NPR = 1.0																						
1.0 < NPR < 2.0																						
NPR > 2.0 or NPR =2.0																						
Sum Check																						
% NPR < 1.0 or NPR = 1.0 of Total																						
% 1.0 < NPR < 2.0 of Total																						
% NPR > 2.0 or NPR =2.0 of Total																						
Sum Check																						
% Samples NPR = 0.01																						

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2C O3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %	CANP_TTL kg $CaCO_3$ / t
SULPHURETS - Au, Leach, Raewn zones																						
Count	51	9	51	45	51	51	34	45	51	51	51	51	51	51	51	51	51	51	34	51	51	51
Minimum	6.69	8.00	0.20	0.10	0.17	0.10	0.01	0.01	0.00	-0.06	0.00	6.25	3.13	3.13	5.00	0.00	5.00	0.01	0.03	0.10	0.00	0.42
10 Percentile	7.60	8.16	0.90	0.81	0.88	0.88	0.01	0.01	0.00	-0.01	0.00	28.13	26.46	27.50	7.32	0.00	7.32	0.04	0.06	0.20	0.00	3.33
25 Percentile	7.90	8.30	1.33	1.23	1.32	1.29	0.01	0.01	0.01	0.00	0.00	41.56	38.59	40.34	15.21	0.50	14.70	0.13	0.11	0.31	0.00	10.83
Median-25Percentile	0.59	0.30	0.70	0.82	0.68	0.69	0.02	0.01	0.01	0.04	0.03	21.88	23.28	21.53	18.49	18.20	0.30	0.15	0.17	0.66	0.04	12.50
Mean	8.36	8.57	2.47	2.38	2.46	2.44	0.03	0.02	0.02	0.16	0.16	77.34	71.37	76.40	44.20	30.72	13.48	0.39	0.36	1.29	0.15	32.39
Standard Deviation	0.60	0.38	1.51	1.42	1.50	1.51	0.02	0.02	0.02	0.25	0.24	47.19	42.76	47.14	36.96	35.53	3.00	0.34	0.33	1.15	0.23	28.52
Median	8.49	8.60	2.03	2.05	2.00	1.98	0.03	0.01	0.01	0.03	0.03	63.44	61.88	61.88	33.70	18.70	15.00	0.28	0.28	0.97	0.04	23.33
75Percentile-Median	0.33	0.20	1.39	1.50	1.36	1.37	0.02	0.01	0.01	0.16	0.16	43.28	40.63	42.79	35.10	35.10	0.00	0.31	0.22	0.88	0.16	25.42
75 Percentile	8.82	8.80	3.42	3.55	3.36	3.35	0.04	0.02	0.02	0.19	0.19	106.72	102.50	104.67	68.80	53.80	15.00	0.59	0.50	1.85	0.20	48.75
90 Percentile	9.10	8.96	4.77	4.33	4.73	4.73	0.06	0.04	0.04	0.61	0.61	149.06	133.44	147.81	94.70	79.70	15.00	0.86	0.95	3.20	0.53	71.67
Maximum	9.30	9.20	6.62	5.67	6.53	6.52	0.09	0.11	0.11	0.85	0.85	206.88	177.19	203.85	142.00	127.00	15.00	1.32	1.25	4.60	0.86	110.01
Interquartile Range (IQR) 1	0.92	0.50	2.09	2.32	2.03	2.06	0.03	0.02	0.02	0.20	0.19	65.16	63.91	64.32	53.59	53.30	0.30	0.46	0.39	1.54	0.20	37.92
Variance	0.36	0.14	2.28	2.02	2.26	2.28	0.00	0.00	0.00	0.06	0.06	2226.81	1828.83	2221.79	1366.35	1262.19	9.02	0.12	0.11	1.32	0.05	813.37
Skewness	-0.65	0.15	0.79	0.53	0.78	0.77	1.06	2.83	2.32	1.65	1.70	0.79	0.69	0.77	1.05	1.17	-1.74	1.03	1.21	1.09	1.70	1.03
Coefficient of Variation (CoV) 2	0.07	0.04	0.61	0.60	0.61	0.62	0.76	1.29	1.12	1.58	1.51	0.61	0.60	0.62	0.84	1.16	0.22	0.88	0.90	0.89	1.53	0.88
NPR < 1.0 or NPR = 1.0																						
1.0 < NPR < 2.0																						
NPR > 2.0 or NPR =2.0																						
Sum Check																						
% NPR < 1.0 or NPR = 1.0 of Total																						
% 1.0 < NPR < 2.0 of Total																						
% NPR > 2.0 or NPR =2.0 of Total																						
Sum Check																						
% Samples NPR = 0.01																						
SULPHURETS - Lower Au zone																						
Count	31	9	31	21	31	31	15	21	31	31	31	31	31	31	31	31	31	31	15	31	31	31
Minimum	8.35	8.60	0.80	0.80	0.80	0.80	0.01	0.01	0.00	-2.06	0.00	25.00	25.00	25.00	26.00	11.00	15.00	0.15	0.15	0.60	0.00	12.50
10 Percentile	8.60	8.60	1.11	1.21	1.11	1.08	0.01	0.01	0.00	-0.03	0.00	34.69	33.75	33.75	40.00	25.00	15.00	0.31	0.25	1.25	0.00	25.84
25 Percentile	8.70	8.80	1.66	1.63	1.65	1.64	0.02	0.01	0.00	0.00	0.00	51.88	45.47	51.24	52.09	37.09	15.00	0.43	0.40	1.51	0.03	35.42
Median-25Percentile	0.13	0.00	0.61	0.56	0.61	0.60	0.01	0.01	0.00	0.00	0.00	19.06	22.97	18.82	36.30	36.30	0.00	0.24	0.18	0.69	0.27	19.58
Mean	8.84	8.81	2.40	2.34	2.39	2.45	0.03	0.01	0.01	0.02	0.09	75.02	73.66	76.56	91.59	76.59	15.00	0.77	0.71	2.74	0.43	63.96
Standard Deviation	0.20	0.14	1.16	1.04	1.15	1.25	0.01	0.02	0.01	0.42	0.16	36.12	38.79	39.21	44.23	44.23	0.00	0.49	0.47	1.76	0.53	41.01
Median	8.83	8.80	2.27	2.19	2.27	2.24	0.03	0.01	0.01	0.00	0.00	70.94	68.44	70.06	88.38	73.38	15.00	0.66	0.57	2.20	0.30	55.00
75Percentile-Median	0.17	0.10	0.61	0.59	0.61	0.63	0.00	0.00	0.01	0.10	0.10	19.06	21.41	19.79	31.64	31.64	0.00	0.25	0.46	1.18	0.39	20.42
75 Percentile	9.00	8.90	2.88	2.78	2.88	2.88	0.03	0.01	0.02	0.10	0.10	90.00	89.84	89.84	120.03	105.03	15.00	0.91	1.03	3.38	0.69	75.42
90 Percentile	9.10	8.92	3.76	3.51	3.74	3.83	0.04	0.02	0.03	0.27	0.27	117.34	116.88	119.69	153.40	138.40	15.00	1.57	1.44	5.70	0.97	130.84
Maximum	9.18	9.00	6.23	5.22	6.23	6.23	0.06	0.08	0.05	0.68	0.68	194.69	194.69	194.69	177.00	162.00	15.00	2.15	1.56	7.73	2.15	179.18
Interquartile Range (IQR) 1	0.30	0.10	1.22	1.15	1.23	1.24	0.01	0.01	0.02	0.11	0.10	38.13	44.38	38.61	67.94	67.94	0.00	0.48	0.63	1.87	0.66	40.00
Variance	0.04	0.02	1.34	1.08	1.33	1.57	0.00	0.00	0.00	0.17	0.02	1304.99	1504.46	1537.66	1955.96	1955.96	0.00	0.24	0.22	3.09	0.28	1681.44
Skewness	-0.52	-0.63	1.21	0.99	1.22	1.19	0.91	3.55	1.26	-4.19	2.39	1.21	1.34	1.19	0.35	0.35	#DIV/0!	1.26	0.85	1.23	1.74	1.26
Coefficient of Variation (CoV) 2	0.02	0.02	0.48	0.44	0.48	0.51	0.50	1.24	0.99	19.54	1.69	0.48	0.53	0.51	0.48	0.58	0.00	0.64	0.67	0.64	1.23	0.64
NPR < 1.0 or NPR = 1.0																						
1.0 < NPR < 2.0																						
NPR > 2.0 or NPR =2.0																						
Sum Check																						
% NPR < 1.0 or NPR = 1.0 of Total																						
% 1.0 < NPR < 2.0 of Total																						
% NPR > 2.0 or NPR =2.0 of Total																						
Sum Check																						
% Samples NPR = 0.01																						

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2C O3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %	CANP_TTL kg $CaCO_3$ / t
SULPHURETS - LP Hazelton																						
Count	40	8	40	33	40	40	11	33	40	40	40	40	40	40	40	40	40	40	11	40	40	24
Minimum	7.29	8.30	0.43	0.46	0.43	0.43	0.01	0.01	0.00	-0.32	0.00	13.44	13.44	13.44	29.04	14.04	15.00	0.26	0.33	0.79	0.00	22.50
10 Percentile	8.53	8.44	0.86	0.84	0.85	0.83	0.02	0.01	0.00	-0.01	0.00	26.81	25.72	25.89	45.85	30.85	15.00	0.40	0.38	1.18	0.02	33.84
25 Percentile	8.66	8.50	1.56	1.28	1.55	1.54	0.02	0.01	0.00	0.00	0.00	48.59	38.83	48.23	68.06	53.06	15.00	0.54	0.54	1.78	0.25	45.21
Median-25Percentile	0.22	0.10	0.37	0.52	0.33	0.38	0.00	0.01	0.00	0.08	0.08	11.41	16.80	11.90	52.87	52.87	0.00	0.38	0.41	0.85	0.42	13.96
Mean	8.84	8.65	2.18	1.89	2.16	2.17	0.03	0.02	0.01	0.21	0.22	68.11	60.86	67.69	123.32	108.32	15.00	1.11	1.09	3.50	0.82	83.62
Standard Deviation	0.36	0.23	1.22	0.87	1.22	1.22	0.02	0.02	0.01	0.26	0.25	38.26	37.07	38.24	72.08	72.08	0.00	0.76	0.65	2.21	0.78	55.49
Median	8.88	8.60	1.92	1.80	1.88	1.92	0.02	0.01	0.00	0.08	0.08	60.00	55.63	60.12	120.92	105.92	15.00	0.92	0.95	2.64	0.67	59.17
75Percentile-Median	0.20	0.30	0.80	0.50	0.82	0.76	0.03	0.02	0.01	0.35	0.35	24.84	16.72	23.79	35.63	35.63	0.00	0.61	0.64	2.41	0.48	47.09
75 Percentile	9.07	8.90	2.72	2.30	2.70	2.69	0.05	0.03	0.02	0.43	0.43	84.84	72.34	83.91	156.55	141.55	15.00	1.53	1.59	5.05	1.15	106.26
90 Percentile	9.17	8.90	3.13	2.79	3.10	3.09	0.05	0.04	0.02	0.50	0.50	97.75	88.16	96.70	189.76	174.76	15.00	2.45	1.82	6.73	1.93	151.93
Maximum	9.51	8.90	7.01	4.30	7.01	7.01	0.08	0.09	0.03	0.81	0.81	219.06	219.06	219.06	350.00	335.00	15.00	3.31	2.25	8.50	3.31	230.85
Interquartile Range (IQR) 1	0.41	0.40	1.16	1.02	1.15	1.14	0.03	0.02	0.01	0.43	0.43	36.25	33.52	35.68	88.49	88.49	0.00	0.99	1.05	3.26	0.90	61.05
Variance	0.13	0.05	1.50	0.75	1.49	1.50	0.00	0.00	0.00	0.07	0.06	1463.56	1374.22	1462.37	5195.02	5195.02	0.00	0.58	0.42	4.90	0.61	3078.71
Skewness	-1.98	-0.09	1.82	0.93	1.84	1.82	1.17	2.16	1.17	0.71	1.00	1.82	2.25	1.82	1.30	1.30	#DIV/0!	1.22	0.48	0.75	1.34	1.31
Coefficient of Variation (CoV) 2	0.04	0.03	0.56	0.46	0.57	0.56	0.65	0.99	1.04	1.26	1.13	0.56	0.61	0.56	0.58	0.67	0.00	0.68	0.60	0.63	0.96	0.66
NPR < 1.0 or NPR = 1.0																						
1.0 < NPR < 2.0																						
NPR > 2.0 or NPR =2.0																						
Sum Check																						
% NPR < 1.0 or NPR = 1.0 of Total																						
% 1.0 < NPR < 2.0 of Total																						
% NPR > 2.0 or NPR =2.0 of Total																						
Sum Check																						
% Samples NPR = 0.01																						
SULPHURETS - UP Hazelton																						
Count	114	19	114	92	114	114	30	92	114	114	114	114	114	114	114	114	114	114	30	114	114	97
Minimum	6.24	8.40	0.01	0.02	0.00	0.02	0.01	0.01	0.00	-0.32	0.00	0.31	0.63	0.63	8.00	0.00	8.00	0.01	0.07	0.10	0.00	0.83
10 Percentile	8.17	8.40	0.15	0.15	0.14	0.13	0.01	0.01	0.00	-0.06	0.00	4.75	3.94	3.94	34.32	19.32	15.00	0.35	0.14	1.09	0.00	23.50
25 Percentile	8.49	8.60	0.54	0.44	0.51	0.46	0.01	0.01	0.00	-0.01	0.00	16.72	13.33	14.39	88.48	73.48	15.00	0.68	0.46	2.19	0.09	52.50
Median-25Percentile	0.21	0.10	0.67	0.55	0.66	0.70	0.01	0.01	0.01	0.06	0.04	20.94	17.77	21.74	50.02	50.02	0.00	0.27	0.45	1.22	0.73	29.17
Mean	8.63	8.66	1.50	1.10	1.47	1.46	0.04	0.03	0.02	0.17	0.19	46.76	39.96	45.75	126.74	111.98	14.76	1.06	0.95	3.67	0.81	88.33
Standard Deviation	0.49	0.16	1.31	0.79	1.31	1.31	0.05	0.03	0.03	0.26	0.25	40.96	38.72	41.09	59.04	58.57	1.26	0.59	0.63	2.13	0.67	49.71
Median	8.70	8.70	1.21	0.99	1.17	1.16	0.02	0.02	0.01	0.04	0.04	37.66	31.09	36.13	138.50	123.50	15.00	0.96	0.90	3.41	0.83	81.67
75Percentile-Median	0.20	0.00	0.75	0.56	0.77	0.78	0.03	0.02	0.03	0.32	0.32	23.28	21.88	24.27	25.37	25.37	0.00	0.42	0.61	1.42	0.35	37.50
75 Percentile	8.90	8.70	1.95	1.55	1.94	1.93	0.05	0.04	0.04	0.36	0.36	60.94	52.97	60.40	163.87	148.87	15.00	1.38	1.51	4.82	1.18	119.17
90 Percentile	9.05	8.82	3.12	2.05	3.05	3.04	0.06	0.08	0.06	0.56	0.56	97.41	78.72	95.01	183.80	168.80	15.00	1.86	1.85	6.67	1.60	156.51
Maximum	9.48	9.00	6.62	3.88	6.62	6.62	0.26	0.22	0.17	0.87	0.87	206.88	206.88	206.88	266.40	251.40	15.00	3.11	2.07	10.89	3.11	245.02
Interquartile Range (IQR) 1	0.41	0.10	1.42	1.11	1.43	1.47	0.04	0.03	0.04	0.38	0.36	44.22	39.64	46.01	75.40	75.40	0.00	0.69	1.06	2.64	1.08	66.67
Variance	0.24	0.02	1.72	0.63	1.72	1.73	0.00	0.00	0.00	0.07	0.06	1677.91	1499.05	1688.67	3485.49	3429.99	1.58	0.35	0.40	4.54	0.45	2471.42
Skewness	-2.26	0.02	1.64	0.95	1.67	1.67	3.34	2.98	1.88	1.00	1.18	1.64	2.13	1.67	-0.29	-0.26	-5.13	0.77	0.31	0.68	0.80	0.46
Coefficient of Variation (CoV) 2	0.06	0.02	0.88	0.72	0.89	0.90	1.33	1.09	1.08	1.55	1.33	0.88	0.97	0.90	0.47	0.52	0.09	0.56	0.66	0.58	0.83	0.56
NPR < 1.0 or NPR = 1.0																						
1.0 < NPR < 2.0																						
NPR > 2.0 or NPR =2.0																						
Sum Check																						
% NPR < 1.0 or NPR = 1.0 of Total																						
% 1.0 < NPR < 2.0 of Total																						
% NPR > 2.0 or NPR =2.0 of Total																						
Sum Check																						
% Samples NPR = 0.01																						

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2C O3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %	CANP_TTL kg $CaCO_3$ / t
SULPHURETS - Monzonite																						
Count	85	19	85	68	85	85	32	68	85	85	85	85	85	85	85	85	85	85	32	85	85	85
Minimum	7.76	8.70	0.03	0.01	0.00	0.01	0.01	0.01	0.00	-1.05	0.00	0.94	0.31	0.31	8.60	0.00	8.60	0.03	0.05	0.08	0.00	2.50
10 Percentile	8.70	8.70	0.09	0.06	0.07	0.06	0.01	0.01	0.01	-0.08	0.00	2.81	1.88	1.88	50.44	35.44	15.00	0.39	0.23	1.07	0.00	32.70
25 Percentile	8.82	8.80	0.19	0.18	0.19	0.18	0.01	0.01	0.03	-0.06	0.00	5.94	5.63	5.63	65.33	50.33	15.00	0.60	0.65	1.79	0.06	50.00
Median-25Percentile	0.18	0.10	0.21	0.14	0.19	0.15	0.02	0.01	0.04	0.03	0.00	6.56	4.06	4.62	18.87	18.87	0.00	0.11	0.21	0.68	0.45	9.17
Mean	8.99	8.88	0.48	0.40	0.46	0.44	0.04	0.03	0.06	-0.01	0.03	14.93	12.87	13.88	102.20	87.27	14.92	0.92	1.02	3.12	0.54	76.50
Standard Deviation	0.30	0.11	0.40	0.40	0.40	0.45	0.03	0.03	0.03	0.15	0.07	12.49	13.28	13.97	51.99	51.85	0.69	0.58	0.67	2.12	0.55	48.52
Median	9.00	8.90	0.40	0.32	0.38	0.33	0.03	0.02	0.06	-0.03	0.00	12.50	9.69	10.24	84.20	69.20	15.00	0.71	0.86	2.47	0.51	59.17
75Percentile-Median	0.17	0.00	0.21	0.18	0.18	0.20	0.02	0.01	0.01	0.06	0.03	6.56	5.63	6.29	50.46	50.46	0.00	0.37	0.54	1.23	0.24	30.84
75 Percentile	9.17	8.90	0.61	0.49	0.56	0.53	0.05	0.03	0.08	0.03	0.03	19.06	15.31	16.53	134.66	119.66	15.00	1.08	1.40	3.70	0.75	90.01
90 Percentile	9.34	9.00	0.91	0.76	0.88	0.86	0.08	0.05	0.09	0.11	0.11	28.51	25.87	27.00	175.51	160.51	15.00	1.65	2.03	5.62	1.18	137.34
Maximum	9.58	9.10	2.20	2.66	2.20	2.66	0.13	0.15	0.13	0.34	0.34	68.75	83.13	83.13	253.10	238.10	15.00	3.10	2.79	10.20	3.10	258.35
Interquartile Range (IQR) 1	0.35	0.10	0.42	0.32	0.37	0.35	0.04	0.02	0.05	0.09	0.03	13.13	9.69	10.91	69.34	69.34	0.00	0.48	0.75	1.91	0.69	40.00
Variance	0.09	0.01	0.16	0.16	0.16	0.20	0.00	0.00	0.00	0.02	0.00	155.93	176.37	195.25	2702.50	2688.71	0.48	0.34	0.45	4.50	0.30	2353.77
Skewness	-0.99	-0.12	1.83	3.36	1.89	2.60	1.42	2.91	-0.07	-4.05	2.69	1.83	3.05	2.60	0.86	0.88	-9.22	1.57	0.94	1.38	1.69	1.57
Coefficient of Variation (CoV) 2	0.03	0.01	0.84	1.00	0.87	1.01	0.86	1.04	0.56	-12.55	2.11	0.84	1.03	1.01	0.51	0.59	0.05	0.63	0.66	0.68	1.02	0.63
NPR < 1.0 or NPR = 1.0																						
1.0 < NPR < 2.0																						
NPR > 2.0 or NPR =2.0																						
Sum Check																						
% NPR < 1.0 or NPR = 1.0 of Total																						
% 1.0 < NPR < 2.0 of Total																						
% NPR > 2.0 or NPR =2.0 of Total																						
Sum Check																						
% Samples NPR = 0.01																						
SULPHURETS - Undefined																						
Count	103	14	103	101	103	103	38	101	103	103	103	103	103	103	103	103	103	103	38	103	103	103
Minimum	7.70	8.30	0.07	0.04	0.07	0.07	0.01	0.01	0.00	-0.23	0.00	2.19	1.25	2.19	12.00	0.00	12.00	0.07	0.07	0.30	0.00	5.83
10 Percentile	8.32	8.33	0.31	0.29	0.30	0.33	0.01	0.01	0.00	-0.04	0.00	9.75	9.19	10.39	59.20	44.20	15.00	0.43	0.20	1.52	0.00	36.00
25 Percentile	8.55	8.43	0.78	0.65	0.76	0.76	0.01	0.01	0.01	0.00	0.00	24.38	20.47	23.68	83.50	68.50	15.00	0.68	0.45	2.21	0.06	56.67
Median-25Percentile	0.22	0.17	0.56	0.41	0.56	0.55	0.02	0.00	0.01	0.12	0.12	17.50	13.28	17.33	43.50	43.50	0.00	0.26	0.20	0.69	0.77	21.67
Mean	8.75	8.60	1.67	1.41	1.65	1.64	0.03	0.02	0.03	0.17	0.18	52.07	45.38	51.13	129.26	114.29	14.97	0.95	0.69	3.13	0.70	79.10
Standard Deviation	0.33	0.22	1.28	1.11	1.28	1.28	0.02	0.02	0.03	0.25	0.24	39.94	35.58	39.99	60.27	60.22	0.30	0.43	0.37	1.53	0.58	35.73
Median	8.76	8.60	1.34	1.06	1.32	1.31	0.03	0.01	0.02	0.12	0.12	41.88	33.75	41.01	127.00	112.00	15.00	0.94	0.65	2.90	0.83	78.34
75Percentile-Median	0.24	0.10	0.90	0.81	0.90	0.90	0.01	0.01	0.02	0.15	0.15	27.97	29.06	28.03	43.44	43.44	0.00	0.24	0.25	0.81	0.22	20.00
75 Percentile	9.00	8.70	2.24	1.87	2.22	2.21	0.03	0.02	0.04	0.27	0.27	69.84	62.81	69.04	170.44	155.44	15.00	1.18	0.90	3.71	1.05	98.34
90 Percentile	9.20	8.87	3.36	3.01	3.32	3.30	0.06	0.03	0.06	0.41	0.41	104.88	98.75	103.15	200.94	185.94	15.00	1.48	1.13	5.04	1.48	123.34
Maximum	9.40	9.00	7.50	5.82	7.47	7.47	0.08	0.08	0.11	1.65	1.65	234.38	181.88	233.43	305.60	290.60	15.00	2.29	1.72	8.34	2.29	190.85
Interquartile Range (IQR) 1	0.46	0.27	1.46	1.22	1.46	1.45	0.02	0.01	0.03	0.27	0.27	45.47	42.34	45.36	86.94	86.94	0.00	0.50	0.45	1.50	0.98	41.67
Variance	0.11	0.05	1.63	1.24	1.63	1.64	0.00	0.00	0.00	0.06	0.06	1594.91	1265.58	1599.22	3632.74	3625.93	0.09	0.18	0.14	2.35	0.34	1276.29
Skewness	-0.45	0.26	1.52	1.31	1.52	1.52	1.02	2.46	1.25	2.52	2.97	1.52	1.22	1.52	0.38	0.38	-10.15	0.53	0.59	0.93	0.40	0.53
Coefficient of Variation (CoV) 2	0.04	0.03	0.77	0.79	0.77	0.78	0.73	0.93	0.92	1.46	1.28	0.77	0.78	0.78	0.47	0.53	0.02	0.45	0.54	0.49	0.84	0.45
NPR < 1.0 or NPR = 1.0																						
1.0 < NPR < 2.0																						
NPR > 2.0 or NPR =2.0																						
Sum Check																						
% NPR < 1.0 or NPR = 1.0 of Total																						
% 1.0 < NPR < 2.0 of Total																						
% NPR > 2.0 or NPR =2.0 of Total																						
Sum Check																						
% Samples NPR = 0.01																						

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2C O3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %	CANP_TTL kg $CaCO_3$ / t
MITCHELL - All																						
Count	936	283	936	875	936	936	739	875	936	936	936	936	936	936	936	936	936	907	746	929	936	936
Minimum	2.00	6.10	0.02	0.01	0.02	0.01	0.01	0.01	0.00	-0.21	0.00	0.63	0.31	0.31	-4.30	0.00	-4.30	0.01	0.03	0.02	0.00	0.00
10 Percentile	7.32	7.70	0.62	0.50	0.58	0.55	0.01	0.01	0.00	-0.01	0.00	19.22	14.69	17.04	11.00	0.00	11.00	0.04	0.05	0.20	0.00	1.67
25 Percentile	8.11	8.10	1.52	1.15	1.35	1.32	0.02	0.01	0.00	0.04	0.04	47.50	35.94	41.33	28.00	13.00	15.00	0.23	0.25	0.81	0.00	17.50
Median-25Percentile	0.49	0.40	1.25	1.04	1.15	1.16	0.02	0.01	0.01	0.14	0.14	39.06	32.66	36.40	20.00	20.00	0.00	0.24	0.21	0.86	0.01	20.00
Mean	8.37	8.43	2.95	2.35	2.71	2.70	0.27	0.25	0.02	0.29	0.30	92.09	75.05	84.33	53.46	39.46	14.00	0.53	0.52	1.89	0.14	43.04
Standard Deviation	1.10	0.62	1.95	1.60	1.87	1.87	0.70	0.69	0.03	0.40	0.40	61.01	51.79	58.57	38.15	36.99	2.89	0.44	0.42	1.53	0.35	36.82
Median	8.60	8.50	2.77	2.19	2.50	2.49	0.04	0.02	0.01	0.18	0.18	86.56	68.59	77.73	48.00	33.00	15.00	0.47	0.46	1.67	0.01	37.50
75Percentile-Median	0.50	0.40	1.33	1.10	1.26	1.26	0.04	0.03	0.02	0.22	0.22	41.56	37.34	39.40	23.00	23.00	0.00	0.26	0.24	0.83	0.05	21.67
75 Percentile	9.10	8.90	4.10	3.29	3.75	3.75	0.08	0.05	0.03	0.40	0.40	128.13	105.94	117.13	71.00	56.00	15.00	0.73	0.70	2.50	0.06	59.17
90 Percentile	9.30	9.20	5.39	4.36	5.10	5.10	0.87	0.86	0.05	0.69	0.69	168.28	139.22	159.30	97.70	82.70	15.00	1.02	0.97	3.60	0.46	85.01
Maximum	10.00	9.50	19.05	16.35	19.00	18.99	5.05	4.96	0.14	3.56	3.56	595.31	510.94	593.52	341.70	326.70	15.00	4.76	3.71	17.59	4.76	396.69
Interquartile Range (IQR) 1	0.99	0.80	2.58	2.14	2.40	2.43	0.06	0.04	0.02	0.37	0.37	80.63	70.00	75.80	43.00	43.00	0.00	0.50	0.45	1.69	0.06	41.67
Variance	1.22	0.38	3.81	2.57	3.48	3.51	0.49	0.48	0.00	0.16	0.16	3721.93	2682.50	3430.12	1455.46	1368.07	8.38	0.19	0.18	2.34	0.12	1355.76
Skewness	-2.26	-0.68	1.25	1.49	1.51	1.49	3.54	3.52	2.09	3.14	3.24	1.25	1.39	1.49	1.78	1.98	-3.20	2.21	2.35	2.43	5.27	2.16
Coefficient of Variation (CoV) 2	0.13	0.07	0.66	0.68	0.69	0.69	2.62	2.76	1.31	1.38	1.34	0.66	0.69	0.69	0.71	0.94	0.21	0.82	0.81	0.81	2.59	0.86
NPR < 1.0 or NPR = 1.0																						
1.0 < NPR < 2.0																						
NPR > 2.0 or NPR =2.0																						
Sum Check																						
% NPR < 1.0 or NPR = 1.0 of Total																						
% 1.0 < NPR < 2.0 of Total																						
% NPR > 2.0 or NPR =2.0 of Total																						
Sum Check																						
% Samples NPR = 0.01																						
MITCHELL - Overburden																						
Count	7	0	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Minimum	6.00	0.00	0.50	0.36	0.49	0.46	0.01	0.01	0.01	0.02	0.02	15.63	11.25	14.23	8.00	0.00	8.00	0.01	0.03	0.10	0.00	0.83
10 Percentile	7.32	#NUM!	0.54	0.40	0.53	0.49	0.01	0.01	0.02	0.04	0.04	16.94	12.38	15.34	9.80	0.00	9.80	0.02	0.05	0.16	0.00	1.83
25 Percentile	8.25	#NUM!	0.71	0.57	0.70	0.64	0.01	0.01	0.02	0.05	0.05	22.19	17.66	19.93	26.50	13.50	13.00	0.22	0.23	0.85	0.00	18.33
Median-25Percentile	0.25	#NUM!	0.19	0.18	0.17	0.13	0.01	0.00	0.01	0.04	0.04	5.94	5.47	4.00	16.50	14.50	2.00	0.25	0.22	0.75	0.01	20.83
Mean	8.27	#DIV/0!	1.45	1.25	1.43	1.38	0.02	0.02	0.05	0.14	0.14	45.27	38.93	43.19	50.29	36.86	13.43	0.54	0.53	1.96	0.01	45.00
Standard Deviation	1.07	#DIV/0!	0.96	0.88	0.96	0.98	0.02	0.02	0.03	0.14	0.14	30.06	27.51	30.61	40.22	38.40	2.82	0.48	0.46	1.71	0.01	39.88
Median	8.50	#NUM!	0.90	0.74	0.87	0.77	0.02	0.01	0.03	0.09	0.09	28.13	23.13	23.93	43.00	28.00	15.00	0.47	0.45	1.60	0.01	39.17
75Percentile-Median	0.35	#NUM!	1.41	1.34	1.40	1.48	0.02	0.02	0.03	0.06	0.06	43.91	41.88	46.24	18.50	18.50	0.00	0.35	0.36	1.35	0.01	29.17
75 Percentile	8.85	#NUM!	2.31	2.08	2.27	2.25	0.04	0.03	0.06	0.16	0.16	72.03	65.00	70.17	61.50	46.50	15.00	0.82	0.81	2.95	0.02	68.34
90 Percentile	9.14	#NUM!	2.64	2.29	2.62	2.61	0.05	0.04	0.09	0.30	0.30	82.44	71.69	81.41	95.60	80.60	15.00	1.17	1.14	4.22	0.02	97.17
Maximum	9.20	0.00	2.71	2.33	2.70	2.69	0.05	0.05	0.11	0.42	0.42	84.69	72.81	84.00	125.00	110.00	15.00	1.22	1.19	4.40	0.03	101.67
Interquartile Range (IQR) 1	0.60	#NUM!	1.60	1.52	1.57	1.61	0.03	0.02	0.04	0.10	0.10	49.84	47.34	50.23	35.00	33.00	2.00	0.60	0.58	2.10	0.01	50.00
Variance	1.15	#DIV/0!	0.93	0.77	0.92	0.96	0.00	0.00	0.00	0.02	0.02	903.56	756.67	937.20	1617.90	1474.78	7.96	0.23	0.21	2.91	0.00	1590.72
Skewness	-1.96	#DIV/0!	0.46	0.37	0.49	0.51	0.52	1.57	1.18	1.72	1.72	0.46	0.37	0.51	1.06	1.25	-1.61	0.50	0.56	0.58	0.25	0.50
Coefficient of Variation (CoV) 2	0.13	#DIV/0!	0.66	0.71	0.67	0.71	0.81	0.76	0.73	1.02	1.02	0.66	0.71	0.71	0.80	1.04	0.21	0.89	0.86	0.87	0.87	0.89
NPR < 1.0 or NPR = 1.0																						
1.0 < NPR < 2.0																						
NPR > 2.0 or NPR =2.0																						
Sum Check																						
% NPR < 1.0 or NPR = 1.0 of Total																						
% 1.0 < NPR < 2.0 of Total																						
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Sum Check																						
% Samples NPR = 0.01																						

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2C O3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %	CANP_TTL kg $CaCO_3$ / t
MITCHELL - UP Hazelton																						
Count	273	100	273	263	273	273	245	263	273	273	273	273	273	273	273	273	273	252	245	273	273	273
Minimum	6.80	7.10	0.02	0.03	0.02	0.02	0.01	0.01	0.00	-0.12	0.00	0.63	0.63	0.63	7.00	0.00	7.00	0.01	0.03	0.20	0.00	0.00
10 Percentile	8.30	8.30	0.71	0.66	0.70	0.68	0.01	0.01	0.00	0.00	0.00	22.25	18.81	21.10	24.00	9.00	15.00	0.19	0.20	0.70	0.00	4.33
25 Percentile	8.80	8.60	1.22	1.15	1.22	1.17	0.01	0.01	0.01	0.06	0.06	38.13	31.25	36.49	39.60	24.60	15.00	0.33	0.34	1.20	0.00	22.50
Median-25Percentile	0.30	0.40	0.79	0.65	0.79	0.80	0.02	0.01	0.01	0.10	0.10	24.69	23.44	25.11	18.40	18.40	0.00	0.25	0.22	0.80	0.01	22.50
Mean	9.01	8.85	2.17	1.97	2.15	2.13	0.04	0.02	0.02	0.22	0.22	67.69	59.64	66.53	62.56	47.77	14.78	0.65	0.61	2.29	0.10	49.97
Standard Deviation	0.49	0.46	1.35	1.14	1.35	1.36	0.03	0.02	0.02	0.30	0.30	42.32	36.26	42.52	34.76	34.45	1.04	0.43	0.38	1.49	0.30	37.04
Median	9.10	9.00	2.01	1.79	2.00	1.97	0.03	0.01	0.02	0.16	0.16	62.81	54.69	61.60	58.00	43.00	15.00	0.58	0.56	2.00	0.01	45.00
75Percentile-Median	0.20	0.10	0.92	0.88	0.90	0.92	0.02	0.01	0.01	0.10	0.10	28.75	28.13	28.78	20.00	20.00	0.00	0.26	0.25	1.00	0.03	24.17
75 Percentile	9.30	9.10	2.93	2.67	2.90	2.89	0.05	0.02	0.03	0.26	0.26	91.56	82.81	90.38	78.00	63.00	15.00	0.84	0.81	3.00	0.04	69.17
90 Percentile	9.60	9.31	3.64	3.25	3.63	3.62	0.08	0.04	0.05	0.49	0.49	113.81	101.31	113.20	109.80	94.80	15.00	1.20	1.12	4.21	0.17	98.34
Maximum	10.00	9.50	12.75	9.17	12.74	12.73	0.23	0.14	0.11	3.56	3.56	398.44	286.56	397.85	241.00	226.00	15.00	2.69	2.64	9.70	1.98	224.18
Interquartile Range (IQR) 1	0.50	0.50	1.71	1.52	1.69	1.72	0.04	0.02	0.02	0.20	0.20	53.44	51.56	53.89	38.40	38.40	0.00	0.51	0.47	1.80	0.04	46.67
Variance	0.24	0.21	1.83	1.29	1.83	1.85	0.00	0.00	0.00	0.09	0.09	1791.27	1314.71	1807.95	1208.48	1186.68	1.07	0.18	0.14	2.22	0.09	1371.94
Skewness	-1.15	-1.35	2.05	1.31	2.07	2.04	2.21	3.68	1.36	6.16	6.34	2.05	1.22	2.04	1.26	1.32	-5.20	1.27	1.33	1.33	4.49	1.13
Coefficient of Variation (CoV) 2	0.05	0.05	0.63	0.58	0.63	0.64	0.95	1.22	0.81	1.41	1.37	0.63	0.61	0.64	0.56	0.72	0.07	0.66	0.62	0.65	3.02	0.74
NPR < 1.0 or NPR = 1.0																						
1.0 < NPR < 2.0																						
NPR > 2.0 or NPR =2.0																						
Sum Check																						
% NPR < 1.0 or NPR = 1.0 of Total																						
% 1.0 < NPR < 2.0 of Total																						
% NPR > 2.0 or NPR =2.0 of Total																						
Sum Check																						
% Samples NPR = 0.01																						
MITCHELL - LP Hazelton																						
Count	553	171	553	502	553	553	412	502	553	553	553	553	553	553	553	553	553	547	419	546	553	553
Minimum	2.00	6.10	0.07	0.07	0.05	0.07	0.01	0.01	0.00	-0.17	0.00	2.19	2.19	2.19	-0.40	0.00	-0.40	0.01	0.03	0.02	0.00	0.00
10 Percentile	6.72	7.60	1.20	0.82	0.93	0.93	0.01	0.01	0.00	0.00	0.00	37.50	26.88	29.06	9.76	0.00	9.76	0.02	0.03	0.20	0.00	1.67
25 Percentile	8.00	7.95	2.23	1.54	1.76	1.74	0.03	0.01	0.00	0.05	0.05	69.69	48.75	54.31	24.00	9.00	15.00	0.20	0.21	0.70	0.00	15.83
Median-25Percentile	0.30	0.25	1.26	1.07	1.24	1.25	0.03	0.02	0.00	0.19	0.19	39.38	34.69	38.97	20.00	20.00	0.00	0.22	0.21	0.80	0.01	18.33
Mean	8.05	8.19	3.51	2.72	3.15	3.14	0.45	0.40	0.01	0.34	0.34	109.78	87.47	98.08	48.79	35.02	13.77	0.48	0.48	1.68	0.15	39.38
Standard Deviation	1.11	0.53	1.78	1.53	1.75	1.76	0.89	0.84	0.02	0.41	0.41	55.49	49.91	54.88	37.18	35.87	3.17	0.40	0.45	1.37	0.33	33.61
Median	8.30	8.20	3.49	2.62	2.99	2.98	0.06	0.03	0.00	0.24	0.24	109.06	83.44	93.28	44.00	29.00	15.00	0.41	0.42	1.50	0.01	34.17
75Percentile-Median	0.40	0.30	1.24	1.11	1.31	1.31	0.10	0.10	0.01	0.24	0.24	38.75	37.19	41.01	18.80	18.80	0.00	0.25	0.20	0.79	0.07	20.83
75 Percentile	8.70	8.50	4.73	3.72	4.30	4.30	0.16	0.13	0.01	0.49	0.49	147.81	120.63	134.29	62.80	47.80	15.00	0.66	0.62	2.29	0.08	55.00
90 Percentile	8.96	8.80	5.67	4.61	5.43	5.43	1.69	1.61	0.03	0.77	0.77	177.19	148.88	169.66	88.80	73.80	15.00	0.98	0.90	3.33	0.52	81.51
Maximum	9.40	9.20	8.97	8.69	8.86	8.86	5.05	4.96	0.11	3.38	3.38	280.31	272.50	276.87	262.60	247.60	15.00	3.10	3.71	11.65	3.10	258.35
Interquartile Range (IQR) 1	0.70	0.55	2.50	2.18	2.55	2.56	0.13	0.12	0.01	0.44	0.44	78.13	71.88	79.98	38.80	38.80	0.00	0.47	0.41	1.59	0.08	39.17
Variance	1.23	0.28	3.15	2.33	3.06	3.08	0.80	0.71	0.00	0.17	0.17	3079.16	2490.67	3012.14	1382.57	1286.55	10.05	0.16	0.20	1.89	0.11	1129.34
Skewness	-2.26	-0.79	0.31	0.58	0.55	0.54	2.44	2.47	3.02	2.71	2.76	0.31	0.64	0.54	1.88	2.11	-2.70	1.79	3.10	1.91	3.92	1.78
Coefficient of Variation (CoV) 2	0.14	0.06	0.51	0.56	0.56	0.56	1.99	2.09	1.58	1.23	1.21	0.51	0.57	0.56	0.76	1.02	0.23	0.84	0.93	0.82	2.26	0.85
NPR < 1.0 or NPR = 1.0																						
1.0 < NPR < 2.0																						
NPR > 2.0 or NPR =2.0																						
Sum Check																						
% NPR < 1.0 or NPR = 1.0 of Total																						
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Sum Check																						
% Samples NPR = 0.01																						

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2C O3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %	CANP_TTL kg $CaCO_3$ / t
MITCHELL - Monzonite																						
Count	80	8	80	80	80	80	62	80	80	80	80	80	80	80	80	80	80	78	62	80	80	80
Minimum	7.60	8.90	0.03	0.01	0.02	0.01	0.01	0.01	0.00	-0.21	0.00	0.94	0.31	0.31	7.00	0.00	7.00	0.01	0.03	0.02	0.00	0.00
10 Percentile	8.50	8.97	0.09	0.06	0.06	0.06	0.01	0.01	0.02	-0.11	0.00	2.75	1.84	1.84	18.80	3.80	15.00	0.18	0.17	0.60	0.00	7.83
25 Percentile	8.90	9.00	0.22	0.18	0.19	0.18	0.01	0.01	0.03	-0.07	0.00	6.88	5.55	5.55	39.00	24.00	15.00	0.32	0.28	1.10	0.00	24.79
Median-25Percentile	0.20	0.20	0.28	0.25	0.27	0.25	0.02	0.01	0.03	0.07	0.00	8.59	7.73	7.89	24.40	24.40	0.00	0.31	0.32	1.20	0.01	26.46
Mean	9.03	9.13	0.83	0.71	0.81	0.78	0.02	0.02	0.06	0.03	0.07	25.95	22.26	24.42	67.19	52.50	14.69	0.67	0.60	2.37	0.23	54.74
Standard Deviation	0.39	0.14	0.85	0.77	0.85	0.85	0.02	0.02	0.04	0.14	0.11	26.56	24.00	26.68	45.63	45.25	1.30	0.60	0.38	2.18	0.61	50.08
Median	9.10	9.20	0.50	0.43	0.46	0.43	0.02	0.02	0.06	0.00	0.00	15.47	13.28	13.44	63.40	48.40	15.00	0.63	0.61	2.30	0.01	51.25
75Percentile-Median	0.18	0.00	0.70	0.60	0.72	0.69	0.02	0.02	0.04	0.11	0.11	21.80	18.83	21.55	24.60	24.60	0.00	0.27	0.27	0.83	0.10	23.13
75 Percentile	9.28	9.20	1.19	1.03	1.17	1.12	0.04	0.03	0.10	0.11	0.11	37.27	32.11	34.98	88.00	73.00	15.00	0.90	0.87	3.13	0.11	74.38
90 Percentile	9.40	9.23	1.98	1.78	1.97	1.95	0.04	0.05	0.11	0.22	0.22	61.94	55.69	60.90	104.08	89.08	15.00	1.07	0.98	3.72	0.73	89.26
Maximum	9.70	9.30	4.43	4.11	4.41	4.41	0.09	0.09	0.14	0.54	0.54	138.44	128.44	137.69	341.70	326.70	15.00	4.76	1.97	17.59	4.76	396.69
Interquartile Range (IQR) 1	0.38	0.20	0.97	0.85	0.98	0.94	0.03	0.02	0.07	0.18	0.11	30.39	26.56	29.44	49.00	49.00	0.00	0.58	0.59	2.03	0.11	49.59
Variance	0.15	0.02	0.72	0.59	0.73	0.73	0.00	0.00	0.00	0.02	0.01	705.37	576.22	711.57	2081.92	2047.79	1.69	0.36	0.15	4.75	0.38	2508.31
Skewness	-1.34	-0.59	1.66	1.80	1.65	1.70	1.22	1.60	0.22	1.09	1.92	1.66	1.80	1.70	2.89	2.97	-4.75	4.31	0.83	4.50	5.48	4.21
Coefficient of Variation (CoV) 2	0.04	0.02	1.02	1.08	1.05	1.09	0.81	0.83	0.63	4.14	1.61	1.02	1.08	1.09	0.68	0.86	0.09	0.89	0.65	0.92	2.66	0.91
NPR < 1.0 or NPR = 1.0																						
1.0 < NPR < 2.0																						
NPR > 2.0 or NPR =2.0																						
Sum Check																						
% NPR < 1.0 or NPR = 1.0 of Total																						
% 1.0 < NPR < 2.0 of Total																						
% NPR > 2.0 or NPR =2.0 of Total																						
Sum Check																						
% Samples NPR = 0.01																						
MITCHELL - Leach breccia/bornite breccia																						
Count	23	4	23	23	23	23	13	23	23	23	23	23	23	23	23	23	23	23	13	23	23	23
Minimum	3.48	6.60	1.96	1.21	1.93	1.93	0.01	0.01	0.00	0.00	0.00	61.25	37.81	60.27	-4.30	0.00	-4.30	0.01	0.03	0.02	0.00	0.42
10 Percentile	3.72	6.75	3.73	2.78	3.50	3.50	0.02	0.01	0.00	0.28	0.28	116.63	86.75	109.26	1.68	0.00	1.68	0.01	0.03	0.02	0.00	0.42
25 Percentile	4.83	6.98	4.22	3.40	3.98	3.98	0.03	0.01	0.00	0.59	0.59	131.88	106.25	124.22	5.15	0.00	5.15	0.01	0.03	0.11	0.00	0.83
Median-25Percentile	1.69	0.13	1.26	0.64	1.27	1.27	0.01	0.02	0.00	0.37	0.37	39.38	20.00	39.74	2.65	0.00	2.65	0.00	0.00	0.09	0.01	0.00
Mean	6.12	7.18	6.42	4.93	5.96	5.96	0.13	0.46	0.00	1.02	1.02	200.72	154.13	186.15	11.01	3.14	7.87	0.09	0.10	0.31	0.04	7.59
Standard Deviation	1.56	0.54	3.48	3.05	3.50	3.49	0.32	1.21	0.00	0.66	0.66	108.62	95.25	109.21	12.69	9.05	5.68	0.14	0.11	0.32	0.08	11.58
Median	6.51	7.10	5.48	4.04	5.25	5.25	0.04	0.03	0.00	0.96	0.96	171.25	126.25	163.97	7.80	0.00	7.80	0.01	0.03	0.20	0.01	0.83
75Percentile-Median	0.81	0.20	2.09	1.42	1.63	1.63	0.01	0.09	0.00	0.55	0.55	65.16	44.22	50.92	7.20	1.50	5.70	0.11	0.14	0.14	0.04	9.17
75 Percentile	7.32	7.30	7.57	5.46	6.88	6.88	0.05	0.12	0.00	1.51	1.51	236.41	170.47	214.89	15.00	1.50	13.50	0.12	0.16	0.34	0.05	10.00
90 Percentile	7.84	7.66	9.32	7.81	8.87	8.87	0.07	0.96	0.01	1.83	1.83	291.31	243.94	277.12	20.28	5.28	15.00	0.25	0.26	0.86	0.18	20.50
Maximum	8.10	7.90	19.05	16.35	19.00	18.99	1.18	4.34	0.01	2.64	2.64	595.31	510.94	593.52	57.00	42.00	15.00	0.57	0.31	1.10	0.26	47.50
Interquartile Range (IQR) 1	2.50	0.33	3.35	2.06	2.90	2.90	0.02	0.11	0.00	0.92	0.92	104.53	64.22	90.66	9.85	1.50	8.35	0.11	0.14	0.23	0.05	9.17
Variance	2.42	0.29	12.08	9.29	12.22	12.21	0.10	1.46	0.00	0.43	0.43	11797.65	9072.20	11926.99	161.06	81.94	32.25	0.02	0.01	0.10	0.01	134.04
Skewness	-0.61	0.82	2.31	2.61	2.58	2.58	3.59	2.97	1.12	0.57	0.57	2.31	2.61	2.58	2.34	3.99	-0.37	2.22	1.19	1.41	1.90	2.22
Coefficient of Variation (CoV) 2	0.25	0.07	0.54	0.62	0.59	0.59	2.51	2.60	0.90	0.64	0.64	0.54	0.62	0.59	1.15	2.88	0.72	1.53	1.11	1.05	1.72	1.53
NPR < 1.0 or NPR = 1.0																						
1.0 < NPR < 2.0																						
NPR > 2.0 or NPR =2.0																						
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% NPR < 1.0 or NPR = 1.0 of Total																						
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Sum Check																						
% Samples NPR = 0.01																						

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Paste pH Unit Less	Rinse pH Unit Less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2C O3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %	CANP_TTL kg $CaCO_3$ / t
IRON CAP - All																						
Count	356	0	356	356	356	356	149	356	75	356	356	356	356	356	356	356	356	356	193	313	356	356
Minimum	2.95	0.00	0.11	0.12	0.10	0.12	0.01	0.00	0.00	-0.04	0.00	3.44	3.75	3.75	-5.03	0.00	-5.03	0.01	0.01	0.01	0.00	0.42
10 Percentile	6.30	#NUM!	1.00	0.82	0.98	0.97	0.01	0.01	0.00	0.03	0.03	31.09	25.47	30.27	4.24	0.00	4.23	0.01	0.03	0.09	0.00	0.83
25 Percentile	7.55	#NUM!	1.98	1.49	1.98	1.98	0.01	0.01	0.00	0.13	0.13	61.95	46.41	61.76	7.91	0.00	7.91	0.03	0.03	0.20	0.00	2.50
Median-25Percentile	0.70	#NUM!	1.13	0.96	1.12	1.12	0.01	0.01	0.00	0.33	0.33	35.23	30.10	34.96	22.91	15.83	7.09	0.22	0.28	0.80	0.03	18.33
Mean	7.90	#DIV/0!	3.17	2.52	3.15	3.15	0.03	0.02	0.00	0.63	0.63	99.15	78.89	98.52	37.74	25.83	11.91	0.33	0.42	1.26	0.17	27.68
Standard Deviation	1.10	#DIV/0!	1.70	1.38	1.69	1.69	0.07	0.03	0.01	0.58	0.58	53.01	43.22	52.68	39.59	37.23	4.56	0.38	0.49	1.39	0.31	31.76
Median	8.25	#NUM!	3.11	2.45	3.10	3.10	0.02	0.01	0.00	0.46	0.46	97.19	76.51	96.72	30.83	15.83	15.00	0.25	0.30	1.00	0.03	20.83
75Percentile-Median	0.35	#NUM!	1.11	0.88	1.11	1.11	0.01	0.01	0.00	0.60	0.60	34.77	27.45	34.67	20.19	20.19	0.00	0.23	0.25	0.80	0.21	19.17
75 Percentile	8.60	#NUM!	4.22	3.33	4.21	4.20	0.03	0.02	0.00	1.05	1.05	131.95	103.96	131.39	51.02	36.02	15.00	0.48	0.55	1.80	0.23	40.00
90 Percentile	8.90	#NUM!	5.24	4.44	5.20	5.20	0.06	0.04	0.01	1.39	1.39	163.59	138.75	162.65	74.25	59.25	15.00	0.70	1.07	2.50	0.53	57.92
Maximum	9.55	0.00	11.86	8.60	11.67	11.67	0.58	0.24	0.04	3.24	3.24	370.63	268.75	364.65	257.50	242.50	15.00	2.88	2.60	10.97	2.88	240.02
Interquartile Range (IQR) 1	1.05	#NUM!	2.24	1.84	2.23	2.23	0.02	0.02	0.00	0.92	0.92	70.00	57.55	69.63	43.11	36.02	7.09	0.45	0.53	1.60	0.23	37.50
Variance	1.21	#DIV/0!	2.88	1.91	2.84	2.84	0.00	0.00	0.00	0.33	0.33	2809.86	1868.02	2775.29	1566.99	1385.97	20.83	0.15	0.24	1.92	0.10	1008.91
Skewness	-1.55	#DIV/0!	0.60	0.64	0.58	0.58	6.94	4.79	3.61	1.01	1.02	0.60	0.64	0.58	2.27	2.61	-1.10	2.49	2.03	2.56	3.89	2.49
Coefficient of Variation (CoV) 2	0.14	#DIV/0!	0.53	0.55	0.53	0.53	2.03	1.32	1.68	0.92	0.92	0.53	0.55	0.53	1.05	1.44	0.38	1.15	1.19	1.10	1.83	1.15
NPR < 1.0 or NPR = 1.0																						
1.0 < NPR < 2.0																						
NPR > 2.0 or NPR =2.0																						
Sum Check																						
% NPR < 1.0 or NPR = 1.0 of Total																						
% 1.0 < NPR < 2.0 of Total																						
% NPR > 2.0 or NPR =2.0 of Total																						
Sum Check																						
% Samples NPR = 0.01																						

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm
ALL																					
Count	2030	2030	2030	2030	2030	2030	2030	2030	2030	2030	2030	2030	2030	2030	2030	2030		1350	1724	1749	1749
Minimum	0.23	0.00	0.00	-590.31	-595.31	-588.52	-593.52	-590.76	-0.03	0.00	-0.04	0.00	0.010	0.010	0.00	1.00		0.01	6800.00	0.68	0.10
10 Percentile	2.27	0.00	0.00	-159.59	-169.41	-153.50	-161.87	-163.97	0.05	0.00	0.06	0.05	0.05	0.01	0.02	1.00		0.30	61700.00	6.11	3.50
25 Percentile	13.65	9.74	31.50	-95.22	-108.17	-88.41	-100.91	-102.01	0.20	0.05	0.24	0.21	0.21	0.06	0.14	2.00		0.55	68000.00	6.79	5.70
Median-25Percentile	24.33	31.72	48.68	67.53	67.20	66.97	65.98	63.74	0.42	0.36	0.54	0.48	0.48	0.40	0.34	1.00		0.49	6100.00	0.61	6.10
Mean	45.75	48.39	85.19	-29.05	-42.51	-24.42	-37.88	-45.84	4.44	3.78	5.39	5.18	4.23	3.62	3.05	2.83		53.35	72668.21	7.26	45.39
Standard Deviation	43.43	42.87	65.17	104.24	102.61	102.10	100.41	92.76	26.98	25.19	23.87	23.83	13.50	12.68	19.82	0.92		383.38	10811.52	1.08	311.27
Median	37.98	41.45	80.18	-27.69	-40.97	-21.44	-34.92	-38.27	0.62	0.41	0.78	0.69	0.69	0.46	0.48	3.00		1.05	74100.00	7.40	11.80
75Percentile-Median	25.70	33.96	44.03	67.71	65.99	63.06	61.54	54.26	1.52	1.26	1.69	1.50	1.50	1.25	0.99	0.00		0.87	5000.00	0.50	15.60
75 Percentile	63.68	75.42	124.20	40.02	25.02	41.62	26.62	15.98	2.14	1.68	2.46	2.19	2.19	1.71	1.47	3.00		1.91	79100.00	7.90	27.40
90 Percentile	98.27	107.88	174.39	101.31	86.31	103.74	88.74	58.28	6.24	5.19	7.81	7.36	7.36	5.89	4.26	4.00		4.03	83400.00	8.34	64.16
Maximum	423.01	342.12	472.76	481.78	466.78	481.46	466.46	422.39	771.84	747.84	514.56	514.56	100.00	100.00	676.82	4.00		7714.00	106100.00	10.61	9310.00
Interquartile Range (IQR) 1	50.03	65.68	92.70	135.24	133.19	130.03	127.52	118.00	1.94	1.62	2.22	1.98	1.98	1.65	1.33	1.00		1.36	11100.00	1.11	21.70
Variance	1886.52	1838.26	4247.11	10864.96	10528.62	10424.38	10082.63	8604.31	727.79	634.75	569.63	568.03	182.21	160.79	392.77	0.84		146980.08	116889029.66	1.17	96889.26
Skewness	2.08	1.01	0.76	-0.08	-0.05	-0.11	-0.08	-0.29	21.63	22.78	11.69	11.75	5.67	6.07	25.48	-0.51		13.28	-1.49	-1.45	23.40
Coefficient of Variation (CoV) 2	0.95	0.89	0.76	-3.59	-2.41	-4.18	-2.65	-2.02	6.08	6.66	4.43	4.60	3.19	3.50	6.50	0.32		7.19	0.15	0.15	6.86
NPR < 1.0 or NPR = 1.0									1239	1369	1140	1198	1198	1345	1359						
1.0 < NPR < 2.0									262	206	298	289	289	221	288						
NPR > 2.0 or NPR =2.0									529	455	592	543	543	464	383						
Sum Check									2030	2030	2030	2030	2030	2030	2030						
% NPR < 1.0 or NPR = 1.0 of Total									1	1	1	1	1	1	1						
% 1.0 < NPR < 2.0 of Total									12.9%	10.1%	14.7%	14.2%	14.2%	10.9%	14.2%						
% NPR > 2.0 or NPR =2.0 of Total									26.1%	22.4%	29.2%	26.7%	26.7%	22.9%	18.9%						
Sum Check									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
% Samples NPR = 0.01									count=0, 0%	count=0, 0%	count=0, 0%	count=10, 0.5%	count=26, 1.3%	count=443, 21.8%	count=0, 0%						
KERR - All																					
Count	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305		227	305	305	305
Minimum	0.23	0.25	7.16	-355.46	-370.46	-355.46	-370.46	-379.25	-0.03	0.00	-0.04	0.00	0.01	0.01	0.00	1.00		0.05	28600.00	2.86	0.10
10 Percentile	0.23	6.59	19.19	-246.20	-254.99	-238.91	-248.87	-253.39	0.03	0.00	0.03	0.03	0.03	0.01	0.00	1.00		0.10	63920.00	6.39	3.14
25 Percentile	2.27	9.24	31.50	-192.25	-202.63	-185.91	-192.94	-197.75	0.04	0.00	0.05	0.05	0.05	0.01	0.01	1.00		0.30	70100.00	7.01	7.60
Median-25Percentile	8.64	10.49	26.92	83.81	82.11	83.89	77.40	77.23	0.12	0.04	0.15	0.13	0.13	0.03	0.08	1.00		0.30	6200.00	0.62	11.50
Mean	33.90	42.68	81.02	-88.18	-100.00	-82.98	-94.81	-107.73	10.87	9.89	11.80	11.60	6.92	6.44	7.29	2.22		1.04	75003.93	7.50	121.76
Standard Deviation	48.68	46.31	65.14	140.78	138.74	138.26	136.19	122.05	64.57	61.12	50.41	50.38	22.33	21.68	48.08	1.08		1.56	9565.60	0.96	704.94
Median	10.92	19.73	58.41	-108.44	-120.51	-102.02	-115.54	-120.53	0.16	0.04	0.20	0.17	0.17	0.04	0.09	2.00		0.60	76300.00	7.63	19.10
75Percentile-Median	43.67	53.94	60.71	106.73	103.80	100.66	100.27	99.68	0.78	0.62	0.91	0.80	0.80	0.62	0.53	1.00		0.44	4700.00	0.47	28.90
75 Percentile	54.58	73.67	119.12	-1.71	-16.71	-1.36	-15.26	-20.85	0.94	0.66	1.10	0.97	0.97	0.66	0.62	3.00		1.04	81000.00	8.10	48.00
90 Percentile	96.66	107.63	173.13	120.85	105.85	121.38	106.38	59.90	6.89	5.54	10.48	9.61	9.61	7.89	3.76	4.00		2.34	85320.00	8.53	139.00
Maximum	423.01	342.12	472.76	481.78	466.78	481.46	466.46	422.39	771.84	747.84	514.56	514.56	100.00	100.00	676.82	4.00		14.30	100700.00	10.07	9310.00
Interquartile Range (IQR) 1	52.31	64.43	87.62	190.54	185.91	184.55	177.68	176.90	0.90	0.66	1.05	0.93	0.93	0.65	0.61	2.00		0.74	10900.00	1.09	40.40
Variance	2369.75	2144.23	4243.84	19818.94	19248.90	19115.43	18548.42	14896.43	4169.70	3735.57	2541.50	2537.73	498.67	470.06	2311.49	1.16		2.43	91500708.15	0.92	496943.78
Skewness	2.94	1.93	1.50	0.66	0.67	0.65	0.67	0.44	10.05	10.25	6.60	6.62	3.70	3.78	11.56	0.37		4.45	-0.91	-0.91	11.05
Coefficient of Variation (CoV) 2	1.44	1.08	0.80	-1.60	-1.39	-1.67	-1.44	-1.13	5.94	6.18	4.27	4.34	3.23	3.36	6.59	0.49		1.49	0.13	0.13	5.79
NPR < 1.0 or NPR = 1.0									230	236	227	230	230	236	237						
1.0 < NPR < 2.0									15	13	11	14	14	13	20						
NPR > 2.0 or NPR =2.0									60	56	67	61	61	56	48						
Sum Check									305	305	305	305	305	305	305						
% NPR < 1.0 or NPR = 1.0 of Total									1	1	1	1	1	1	1						
% 1.0 < NPR < 2.0 of Total									4.9%	4.3%	3.6%	4.6%	4.6%	4.3%	6.6%						
% NPR > 2.0 or NPR =2.0 of Total									19.7%	18.4%	22.0%	20.0%	20.0%	18.4%	15.7%						
Sum Check									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
% Samples NPR = 0.01													count=10, 3.3%	count=140, 45.9%							

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm
SULPHURETS - All																					
Count	433	433	433	433	433	433	433	433	433	433	433	433	433	433	433	433		301	433	433	433
Minimum	1.82	4.00	10.59	-198.68	-206.87	-198.68	-206.87	-198.69	0.04	0.00	0.04	0.04	0.04	0.01	0.01	1.00		0.05	33300.00	3.33	1.50
10 Percentile	15.92	22.97	54.69	-39.74	-54.74	-39.73	-54.73	-54.91	0.47	0.25	0.53	0.47	0.47	0.26	0.35	2.00		0.22	67820.00	6.78	4.00
25 Percentile	38.66	48.70	89.05	14.53	-0.48	14.83	-0.17	-13.95	1.30	0.98	1.41	1.31	1.31	1.00	0.74	3.00		0.38	72600.00	7.26	7.00
Median-25Percentile	21.61	25.72	35.51	50.20	50.20	50.79	50.79	35.79	1.64	1.49	2.18	1.75	1.75	1.57	0.92	0.00		0.26	3200.00	0.32	7.70
Mean	69.16	76.72	132.41	59.91	45.20	60.67	45.96	20.13	7.21	6.13	9.11	8.66	8.20	7.16	4.74	2.95		1.41	75766.74	7.58	47.33
Standard Deviation	45.55	40.32	61.54	78.68	78.13	78.92	78.36	64.71	15.81	13.34	19.36	19.35	16.06	15.01	10.70	0.78		4.20	7072.44	0.71	177.52
Median	60.27	74.42	124.56	64.73	49.73	65.62	50.62	21.84	2.94	2.48	3.59	3.06	3.06	2.56	1.66	3.00		0.64	75800.00	7.58	14.70
75Percentile-Median	32.98	28.22	50.97	48.84	48.84	49.94	49.94	32.32	3.22	2.69	3.92	3.89	3.89	3.16	2.13	0.00		0.53	4100.00	0.41	16.30
75 Percentile	93.24	102.64	175.53	113.56	98.56	115.56	100.56	54.17	6.17	5.17	7.51	6.94	6.94	5.73	3.79	3.00		1.17	79900.00	7.99	31.00
90 Percentile	130.77	132.50	215.45	150.01	135.01	150.64	135.64	100.82	15.95	13.77	19.93	19.14	19.14	16.69	10.46	4.00		1.91	84100.00	8.41	72.32
Maximum	247.67	226.00	350.49	266.55	251.55	268.28	253.28	216.66	222.08	174.08	208.96	208.96	100.00	100.00	136.09	4.00		54.40	94600.00	9.46	2850.00
Interquartile Range (IQR) 1	54.58	53.94	86.48	99.04	99.04	100.73	100.73	68.11	4.87	4.18	6.10	5.63	5.63	4.73	3.05	0.00		0.79	7300.00	0.73	24.00
Variance	2074.38	1625.84	3787.15	6191.32	6104.26	6227.90	6140.82	4187.97	250.04	177.88	374.88	374.37	257.83	225.26	114.59	0.60		17.60	50019400.71	0.50	31512.38
Skewness	0.98	0.41	0.43	-0.36	-0.34	-0.36	-0.33	-0.24	7.50	6.65	5.38	5.45	3.94	4.28	6.44	-0.48		9.33	-0.90	-0.90	11.28
Coefficient of Variation (CoV) 2	0.66	0.53	0.46	1.31	1.73	1.30	1.70	3.21	2.19	2.18	2.13	2.23	1.96	2.10	2.26	0.26		2.98	0.09	0.09	3.75
NPR < 1.0 or NPR = 1.0									81	111	74	80	80	110	140						
1.0 < NPR < 2.0									80	77	63	78	78	78	111						
NPR > 2.0 or NPR =2.0									272	245	296	275	275	245	182						
Sum Check									433	433	433	433	433	433	433						
% NPR < 1.0 or NPR = 1.0 of Total									0	0	0	0	0	0	0						
% 1.0 < NPR < 2.0 of Total									18.5%	17.8%	14.5%	18.0%	18.0%	18.0%	25.6%						
% NPR > 2.0 or NPR =2.0 of Total									62.8%	56.6%	68.4%	63.5%	63.5%	56.6%	42.0%						
Sum Check									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
													count=0, 0%	count=23, 5.3%							
SULPHURETS - Overburden																					
Count	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9		7	9	9	9
Minimum	2.27	4.00	14.89	-101.44	-108.44	-100.80	-107.80	-106.16	0.06	0.00	0.07	0.06	0.06	0.01	0.02	1.00		0.24	62300.00	6.23	3.00
10 Percentile	2.27	8.19	28.63	-33.84	-47.24	-30.43	-43.83	-40.51	0.57	0.00	0.68	0.61	0.61	0.01	0.46	1.00		0.26	70620.00	7.06	3.40
25 Percentile	26.15	36.71	65.57	9.13	-1.87	9.75	-1.25	-0.77	2.07	0.43	2.77	2.11	2.11	0.46	0.98	2.00		0.30	73700.00	7.37	3.50
Median-25Percentile	11.83	4.25	23.19	32.53	28.52	32.63	28.63	19.11	3.79	1.26	4.44	5.09	5.09	1.30	0.84	1.00		0.04	5100.00	0.51	3.50
Mean	51.27	70.09	118.55	46.95	33.29	48.21	34.54	20.92	7.31	5.76	11.06	8.75	8.75	6.76	4.64	2.67		0.40	75922.22	7.59	41.60
Standard Deviation	45.94	56.20	78.92	82.77	80.77	82.71	80.70	68.47	7.40	7.10	12.97	9.35	9.35	8.93	5.78	1.12		0.17	5761.03	0.58	57.11
Median	37.98	40.95	88.77	41.65	26.65	42.38	27.38	18.34	5.87	1.69	7.20	7.20	7.20	1.76	1.82	3.00		0.33	78800.00	7.88	7.00
75Percentile-Median	21.15	78.66	97.36	46.98	46.98	46.87	46.87	24.59	4.59	7.16	4.00	4.00	4.00	7.72	3.76	0.00		0.13	700.00	0.07	59.40
75 Percentile	59.13	119.62	186.13	88.63	73.63	89.25	74.25	42.93	10.45	8.85	11.20	11.20	11.20	9.49	5.58	3.00		0.46	79500.00	7.95	66.40
90 Percentile	122.22	141.14	207.37	151.06	136.06	152.70	137.70	114.22	17.29	15.81	31.69	20.27	20.27	18.52	12.52	4.00		0.62	79920.00	7.99	92.26
Maximum	128.95	149.34	235.09	172.04	157.04	173.29	158.29	117.70	21.29	19.20	34.97	28.09	28.09	25.34	16.77	4.00		0.70	80000.00	8.00	174.50
Interquartile Range (IQR) 1	32.98	82.91	120.55	79.50	75.50	79.50	75.50	43.70	8.38	8.42	8.43	9.09	9.09	9.02	4.60	1.00		0.16	5800.00	0.58	62.90
Variance	2110.12	3158.91	6228.60	6850.96	6524.30	6841.58	6513.07	4687.69	54.80	50.41	168.21	87.47	87.47	79.66	33.40	1.25		0.03	33189444.44	0.33	3261.14
Skewness	0.90	0.32	0.18	-0.17	-0.09	-0.17	-0.08	-0.23	1.00	1.15	1.31	1.25	1.25	1.43	1.52	-0.54		1.24	-1.97	-1.97	1.84
Coefficient of Variation (CoV) 2	0.90	0.80	0.67	1.76	2.43	1.72	2.34	3.27	1.01	1.23	1.17	1.07	1.07	1.32	1.25	0.42		0.43	0.08	0.08	1.37
NPR < 1.0 or NPR = 1.0									2	3	2	2	2	3	3						
1.0 < NPR < 2.0									0	2	0	0	0	2	2						
NPR > 2.0 or NPR =2.0									7	4	7	7	7	4	4						
Sum Check									9	9	9	9	9	9	9						
% NPR < 1.0 or NPR = 1.0 of Total									0	0	0	0	0	0	0						
% 1.0 < NPR < 2.0 of Total									0.0%	22.2%	0.0%	0.0%	0.0%	22.2%	22.2%						
% NPR > 2.0 or NPR =2.0 of Total									77.8%	44.4%	77.8%	77.8%	77.8%	44.4%	44.4%						
Sum Check									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
													count=0, 0%	count=2, 22.2%							

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm
SULPHURETS - Au, Leach, Raewn zones																					
Count	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51		34	51	51	51
Minimum	2.27	4.50	10.59	-184.88	-199.88	-181.85	-196.85	-190.96	0.04	0.00	0.05	0.04	0.04	0.01	0.02	1.00		0.08	57500.00	5.75	3.00
10 Percentile	4.55	7.49	20.04	-119.89	-130.31	-119.27	-129.69	-125.54	0.08	0.00	0.08	0.08	0.08	0.01	0.04	1.00		0.17	63900.00	6.39	6.50
25 Percentile	7.05	12.86	30.07	-75.34	-89.41	-74.74	-88.63	-87.80	0.17	0.00	0.17	0.17	0.17	0.01	0.09	2.00		0.38	67700.00	6.77	13.25
Median-25Percentile	14.93	11.11	25.77	40.41	44.78	42.93	45.03	47.91	0.30	0.24	0.36	0.31	0.31	0.24	0.28	0.00		0.18	5200.00	0.52	11.15
Mean	29.25	31.06	63.91	-33.14	-46.62	-32.20	-45.68	-48.09	1.18	0.88	1.56	1.50	1.50	1.16	0.78	2.10		0.76	73684.31	7.37	40.79
Standard Deviation	26.11	23.88	39.02	66.34	65.26	66.31	65.23	57.50	2.28	1.94	4.32	4.31	4.31	3.66	1.52	0.76		0.66	7827.19	0.78	44.58
Median	21.98	23.97	55.84	-34.94	-44.63	-31.81	-43.60	-39.88	0.47	0.24	0.53	0.47	0.47	0.25	0.37	2.00		0.56	72900.00	7.29	24.40
75Percentile-Median	20.09	14.61	37.08	46.45	41.14	44.03	40.82	30.53	0.80	0.67	0.86	0.82	0.82	0.68	0.40	0.50		0.36	7150.00	0.71	23.00
75 Percentile	42.07	38.58	92.92	11.51	-3.49	12.22	-2.78	-9.35	1.27	0.92	1.38	1.30	1.30	0.94	0.78	2.50		0.91	80050.00	8.01	47.40
90 Percentile	72.78	67.18	114.25	58.88	43.88	59.50	44.50	16.56	2.54	2.00	2.72	2.62	2.62	2.06	1.46	3.00		1.54	84100.00	8.41	92.20
Maximum	104.62	98.14	143.46	89.75	74.75	92.88	77.88	66.56	15.36	12.96	30.72	30.72	30.72	25.92	9.46	4.00		2.89	89300.00	8.93	265.00
Interquartile Range (IQR) 1	35.02	25.72	62.85	86.86	85.92	86.96	85.85	78.45	1.11	0.91	1.21	1.13	1.13	0.93	0.69	0.50		0.53	12350.00	1.24	34.15
Variance	681.47	570.46	1522.60	4401.43	4259.46	4396.98	4254.80	3305.75	5.19	3.76	18.67	18.62	18.62	13.37	2.30	0.57		0.44	61264949.02	0.61	1987.74
Skewness	1.09	1.18	0.44	-0.13	-0.14	-0.13	-0.13	-0.32	5.12	5.12	6.40	6.47	6.47	6.47	4.47	0.41		1.70	-0.06	-0.06	2.90
Coefficient of Variation (CoV) 2	0.89	0.77	0.61	-2.00	-1.40	-2.06	-1.43	-1.20	1.93	2.20	2.77	2.87	2.87	3.16	1.94	0.36		0.87	0.11	0.11	1.09
NPR < 1.0 or NPR = 1.0									35	39	33	34	34	38	41						
1.0 < NPR < 2.0									6	6	8	7	7	6	7						
NPR > 2.0 or NPR =2.0									10	6	10	10	10	7	3						
Sum Check									51	51	51	51	51	51	51						
% NPR < 1.0 or NPR = 1.0 of Total									1	1	1	1	1	1	1						
% 1.0 < NPR < 2.0 of Total									11.8%	11.8%	15.7%	13.7%	13.7%	11.8%	13.7%						
% NPR > 2.0 or NPR =2.0 of Total									19.6%	11.8%	19.6%	19.6%	19.6%	13.7%	5.9%						
Sum Check									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
													count=0, 0%	count=14, 27.5%							
SULPHURETS - Lower Au zone																					
Count	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31		16	31	31	31
Minimum	13.65	22.97	57.84	-114.89	-129.89	-114.89	-129.89	-155.57	0.39	0.24	0.41	0.40	0.40	0.24	0.17	2.00		0.21	64600.00	6.46	5.20
10 Percentile	28.43	29.72	71.59	-50.00	-65.00	-48.86	-63.86	-55.43	0.43	0.30	0.48	0.43	0.43	0.30	0.26	2.00		0.23	68500.00	6.85	9.40
25 Percentile	34.34	38.33	81.18	-5.03	-20.03	-17.77	-32.77	-40.57	0.86	0.56	0.77	0.75	0.75	0.50	0.49	2.00		0.29	74100.00	7.41	14.65
Median-25Percentile	15.69	20.35	30.50	23.80	23.80	32.65	32.65	27.12	0.42	0.48	0.54	0.53	0.53	0.50	0.34	1.00		0.15	4200.00	0.42	3.95
Mean	62.27	60.68	118.94	16.57	1.57	15.03	0.03	-12.74	1.48	1.23	1.52	1.47	1.47	1.22	0.99	2.71		0.96	78480.65	7.85	29.46
Standard Deviation	39.99	27.84	47.52	53.51	53.51	54.32	54.32	52.32	1.03	0.95	1.03	1.03	1.03	0.95	0.77	0.64		1.13	7419.63	0.74	36.22
Median	50.03	58.69	111.68	18.77	3.77	14.88	-0.12	-13.45	1.28	1.04	1.31	1.28	1.28	1.00	0.83	3.00		0.44	78300.00	7.83	18.60
75Percentile-Median	26.72	21.23	25.91	27.06	27.06	31.10	31.10	27.45	0.65	0.45	0.71	0.68	0.68	0.52	0.39	0.00		0.69	6300.00	0.63	13.40
75 Percentile	76.76	79.91	137.59	45.83	30.83	45.98	30.98	14.00	1.93	1.49	2.02	1.96	1.96	1.51	1.23	3.00		1.13	84600.00	8.46	32.00
90 Percentile	129.63	99.14	187.27	86.48	71.48	86.48	71.48	28.34	2.34	2.07	2.34	2.34	2.34	2.07	1.84	3.00		2.49	87900.00	8.79	50.30
Maximum	175.80	123.61	237.67	118.40	103.40	118.40	103.40	105.32	4.61	4.01	4.61	4.61	4.61	4.01	4.01	4.00		4.08	92400.00	9.24	205.00
Interquartile Range (IQR) 1	42.41	41.58	56.41	50.86	50.86	63.75	63.75	54.57	1.07	0.94	1.25	1.21	1.21	1.01	0.73	1.00		0.83	10500.00	1.05	17.35
Variance	1599.14	775.03	2257.86	2863.41	2863.41	2950.70	2950.70	2737.19	1.06	0.90	1.06	1.07	1.07	0.90	0.59	0.41		1.29	55050946.24	0.55	1311.68
Skewness	1.23	0.57	0.95	-0.38	-0.38	-0.30	-0.30	-0.16	1.70	1.63	1.60	1.69	1.69	1.63	2.23	0.34		1.97	0.12	0.12	4.08
Coefficient of Variation (CoV) 2	0.64	0.46	0.40	3.23	34.01	3.62	2091.36	-4.11	0.69	0.77	0.68	0.70	0.70	0.78	0.78	0.24		1.18	0.09	0.09	1.23
NPR < 1.0 or NPR = 1.0									9	15	9	10	10	16	18						
1.0 < NPR < 2.0									15	12	13	13	13	11	11						
NPR > 2.0 or NPR =2.0									7	4	9	8	8	4	2						
Sum Check									31	31	31	31	31	31	31						
% NPR < 1.0 or NPR = 1.0 of Total									0	0	0	0	0	1	1						
% 1.0 < NPR < 2.0 of Total									48.4%	38.7%	41.9%	41.9%	41.9%	35.5%	35.5%						
% NPR > 2.0 or NPR =2.0 of Total									22.6%	12.9%	29.0%	25.8%	25.8%	12.9%	6.5%						
Sum Check									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
													count=0, 0%	count=0, 0%							

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm
SULPHURETS - LP Hazelton																					
Count	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40		27	40	40	40
Minimum	17.97	20.23	43.24	-68.16	-83.16	-68.16	-83.16	-119.22	0.42	0.25	0.43	0.42	0.42	0.25	0.30	2.00		0.20	50300.00	5.03	2.50
10 Percentile	26.81	33.31	69.52	-25.85	-40.85	-25.85	-40.85	-42.31	0.67	0.48	0.68	0.64	0.64	0.42	0.37	2.00		0.34	62620.00	6.26	6.77
25 Percentile	40.54	47.45	101.87	3.67	-11.33	3.38	-11.62	-27.49	1.07	0.82	1.11	1.06	1.06	0.82	0.67	3.00		0.58	71425.00	7.14	11.68
Median-25Percentile	19.39	22.73	12.67	44.56	44.56	45.79	45.79	34.16	0.75	0.69	0.95	0.76	0.76	0.70	0.43	0.00		0.33	4975.00	0.50	8.48
Mean	79.51	80.97	138.84	55.21	40.21	55.63	40.63	11.40	2.48	2.18	2.83	2.55	2.55	2.24	1.60	3.25		3.68	75062.50	7.51	32.81
Standard Deviation	50.33	42.52	66.18	73.61	73.61	74.16	74.16	55.36	2.85	2.69	3.21	3.14	3.14	2.97	1.96	0.74		10.53	9280.05	0.93	35.20
Median	59.93	70.17	114.54	48.23	33.23	49.17	34.17	6.67	1.82	1.51	2.06	1.82	1.82	1.52	1.10	3.00		0.90	76400.00	7.64	20.15
75Percentile-Median	54.81	41.08	57.84	31.41	31.41	31.21	31.21	37.61	0.93	0.82	1.26	0.97	0.97	0.84	0.47	1.00		0.36	3850.00	0.38	17.48
75 Percentile	114.74	111.25	172.38	79.64	64.64	80.39	65.39	44.28	2.75	2.33	3.33	2.79	2.79	2.36	1.56	4.00		1.26	80250.00	8.03	37.63
90 Percentile	153.06	143.97	220.23	120.43	105.43	120.49	105.49	82.69	3.98	3.53	4.48	4.04	4.04	3.54	2.84	4.00		4.94	84080.00	8.41	67.22
Maximum	193.31	185.55	350.49	266.55	251.55	268.28	253.28	177.06	17.40	16.48	19.67	19.48	19.48	18.45	11.90	4.00		54.40	94600.00	9.46	161.50
Interquartile Range (IQR) 1	74.20	63.80	70.51	75.98	75.98	77.01	77.01	71.78	1.68	1.52	2.22	1.73	1.73	1.54	0.90	1.00		0.68	8825.00	0.88	25.95
Variance	2532.88	1807.81	4379.58	5418.27	5418.27	5499.53	5499.53	3064.31	8.09	7.22	10.30	9.83	9.83	8.79	3.83	0.55		110.97	86119326.92	0.86	1239.18
Skewness	0.75	0.61	1.31	1.10	1.10	1.11	1.11	0.56	4.05	4.17	4.00	4.35	4.35	4.47	4.06	-0.45		4.66	-0.90	-0.90	2.27
Coefficient of Variation (CoV) 2	0.63	0.53	0.48	1.33	1.83	1.33	1.83	4.86	1.15	1.23	1.13	1.23	1.23	1.32	1.22	0.23		2.86	0.12	0.12	1.07
NPR < 1.0 or NPR = 1.0									9	12	8	9	9	11	18						
1.0 < NPR < 2.0									15	14	9	15	15	15	14						
NPR > 2.0 or NPR =2.0									16	14	23	16	16	14	8						
Sum Check									40	40	40	40	40	40	40						
% NPR < 1.0 or NPR = 1.0 of Total									0	0	0	0	0	0	0						
% 1.0 < NPR < 2.0 of Total									37.5%	35.0%	22.5%	37.5%	37.5%	37.5%	35.0%						
% NPR > 2.0 or NPR =2.0 of Total									40.0%	35.0%	57.5%	40.0%	40.0%	35.0%	20.0%						
Sum Check									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
													count=0, 0%	count=0, 0%							
SULPHURETS - UP Hazelton																					
Count	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114		74	114	114	114
Minimum	2.27	9.99	33.50	-198.68	-206.87	-198.68	-206.87	-198.69	0.04	0.00	0.04	0.04	0.04	0.01	0.01	1.00		0.10	59600.00	5.96	1.50
10 Percentile	24.79	30.89	74.59	9.91	-5.09	11.27	-3.73	-19.90	1.21	0.68	1.35	1.28	1.28	0.75	0.64	2.00		0.39	70230.00	7.02	3.52
25 Percentile	49.69	65.24	116.04	48.08	33.08	48.70	33.70	4.93	1.82	1.46	2.20	1.88	1.88	1.48	1.12	3.00		0.59	72825.00	7.28	6.10
Median-25Percentile	27.75	25.91	37.30	41.77	41.77	42.57	42.57	27.10	1.60	1.52	2.11	1.63	1.63	1.62	0.87	0.00		0.31	2975.00	0.30	3.90
Mean	83.44	89.43	152.86	79.98	65.22	80.99	66.23	36.67	9.65	8.29	10.17	9.61	9.39	8.31	6.61	3.09		1.52	75922.81	7.59	15.98
Standard Deviation	48.45	40.88	59.51	77.23	76.46	77.35	76.58	69.55	24.14	19.95	18.81	18.88	17.68	16.41	15.99	0.72		4.00	5448.47	0.54	24.61
Median	77.44	91.15	153.34	89.84	74.84	91.27	76.27	32.02	3.42	2.98	4.31	3.50	3.50	3.10	1.99	3.00		0.90	75800.00	7.58	10.00
75Percentile-Median	32.24	20.66	35.44	35.96	35.96	35.43	35.43	38.41	2.75	2.69	3.21	3.01	3.01	2.81	2.57	1.00		0.48	3450.00	0.35	7.80
75 Percentile	109.68	111.81	188.77	125.80	110.80	126.70	111.70	70.44	6.17	5.68	7.52	6.51	6.51	5.90	4.56	4.00		1.38	79250.00	7.93	17.80
90 Percentile	151.78	146.06	230.17	156.35	141.35	157.22	142.22	124.35	20.09	16.84	22.01	22.01	22.01	18.52	12.44	4.00		1.95	82340.00	8.23	27.70
Maximum	247.67	226.00	338.18	242.16	227.16	242.16	227.16	196.92	222.08	174.08	114.56	114.56	100.00	100.00	136.09	4.00		34.90	89900.00	8.99	223.20
Interquartile Range (IQR) 1	59.98	46.57	72.73	77.73	77.73	78.00	78.00	65.51	4.34	4.21	5.31	4.63	4.63	4.43	3.45	1.00		0.78	6425.00	0.64	11.70
Variance	2347.16	1671.14	3540.96	5963.96	5846.53	5983.04	5865.12	4837.13	582.92	398.16	353.67	356.63	312.67	269.34	255.57	0.52		16.03	29685846.92	0.30	605.85
Skewness	0.68	0.22	0.12	-1.21	-1.15	-1.22	-1.17	-0.61	6.66	5.94	3.83	3.86	3.56	3.72	5.65	-0.85		8.16	-0.28	-0.28	6.36
Coefficient of Variation (CoV) 2	0.58	0.46	0.39	0.97	1.17	0.96	1.16	1.90	2.50	2.41	1.85	1.96	1.88	1.97	2.42	0.23		2.63	0.07	0.07	1.54
NPR < 1.0 or NPR = 1.0									10	15	9	9	9	15	23						
1.0 < NPR < 2.0									21	23	16	22	22	23	35						
NPR > 2.0 or NPR =2.0									83	76	89	83	83	76	56						
Sum Check									114	114	114	114	114	114	114						
% NPR < 1.0 or NPR = 1.0 of Total									0	0	0	0	0	0	0						
% 1.0 < NPR < 2.0 of Total									18.4%	20.2%	14.0%	19.3%	19.3%	20.2%	30.7%						
% NPR > 2.0 or NPR =2.0 of Total									72.8%	66.7%	78.1%	72.8%	72.8%	66.7%	49.1%						
Sum Check									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
													count=0, 0%	count=5, 4.4%							

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm
SULPHURETS - Monzonite																					
Count	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85		61	85	85	85
Minimum	1.82	8.99	29.49	6.10	-4.63	7.04	-4.00	-6.08	1.80	0.00	1.62	1.62	1.62	0.01	0.43	1.00		0.05	33300.00	3.33	1.90
10 Percentile	24.24	43.40	74.91	34.19	19.19	35.30	20.30	9.07	2.95	2.28	3.49	3.09	3.09	2.30	1.48	3.00		0.17	67640.00	6.76	3.04
25 Percentile	40.71	58.44	89.34	55.13	40.13	55.56	40.56	23.58	4.27	3.38	5.13	4.63	4.63	3.67	2.25	3.00		0.26	72500.00	7.25	4.00
Median-25Percentile	15.46	9.24	16.61	16.19	16.19	15.75	15.75	23.48	2.98	2.61	3.60	3.90	3.90	3.57	2.37	0.00		0.14	3100.00	0.31	2.00
Mean	71.03	79.29	126.98	87.27	72.35	88.32	73.40	56.10	13.64	11.34	20.22	19.88	17.83	15.56	9.37	2.99		0.50	75268.24	7.53	8.29
Standard Deviation	48.25	38.44	60.45	49.41	49.29	49.65	49.53	46.48	16.67	14.34	32.49	32.60	23.81	22.95	12.13	0.48		0.32	8349.28	0.83	7.68
Median	56.17	67.68	105.95	71.31	56.31	71.31	56.31	47.05	7.25	5.99	8.74	8.52	8.52	7.24	4.62	3.00		0.40	75600.00	7.56	6.00
75Percentile-Median	27.97	27.47	45.82	45.26	45.26	47.42	47.42	20.72	6.93	6.49	9.62	7.97	7.97	7.75	7.03	0.00		0.26	3600.00	0.36	4.00
75 Percentile	84.15	95.15	151.76	116.57	101.57	118.74	103.74	67.78	14.18	12.47	18.35	16.49	16.49	14.99	11.64	3.00		0.66	79200.00	7.92	10.00
90 Percentile	127.90	137.35	213.67	157.01	142.01	160.56	145.56	114.19	32.55	26.23	43.58	43.58	43.58	37.58	21.35	3.00		1.00	84400.00	8.44	15.00
Maximum	231.97	212.27	316.99	228.88	213.88	230.13	215.13	216.66	84.37	69.44	208.96	208.96	100.00	100.00	65.50	4.00		1.30	92500.00	9.25	58.40
Interquartile Range (IQR) 1	43.44	36.71	62.42	61.44	61.44	63.17	63.17	44.20	9.91	9.10	13.22	11.87	11.87	11.32	9.40	0.00		0.40	6700.00	0.67	6.00
Variance	2328.27	1477.75	3654.60	2441.23	2429.34	2464.98	2453.08	2160.12	278.00	205.69	1055.61	1063.01	566.79	526.50	147.12	0.23		0.10	69710526.61	0.70	58.94
Skewness	1.38	1.09	1.12	0.93	0.95	0.92	0.93	1.39	2.64	2.72	3.64	3.63	2.45	2.74	2.70	-0.72		0.89	-1.71	-1.71	3.92
Coefficient of Variation (CoV) 2	0.68	0.48	0.48	0.57	0.68	0.56	0.67	0.83	1.22	1.26	1.61	1.64	1.34	1.47	1.29	0.16		0.64	0.11	0.11	0.93
NPR < 1.0 or NPR = 1.0									0	2	0	0	0	2	3						
1.0 < NPR < 2.0									3	5	1	2	2	6	17						
NPR > 2.0 or NPR =2.0									82	78	84	83	83	77	65						
Sum Check									85	85	85	85	85	85	85						
% NPR < 1.0 or NPR = 1.0 of Total									0	0	0	0	0	0	0						
% 1.0 < NPR < 2.0 of Total									3.5%	5.9%	1.2%	2.4%	2.4%	7.1%	20.0%						
% NPR > 2.0 or NPR =2.0 of Total									96.5%	91.8%	98.8%	97.6%	97.6%	90.6%	76.5%						
Sum Check									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
													count=0, 0%	count=1, 1.2%							
SULPHURETS - Undefined																					
Count	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103		82	103	103	103
Minimum	6.82	8.99	39.52	-138.88	-153.88	-137.93	-152.93	-137.95	0.23	0.00	0.26	0.23	0.23	0.01	0.08	1.00		0.05	55900.00	5.59	3.00
10 Percentile	34.57	47.45	92.32	-17.33	-30.64	-14.93	-29.33	-41.37	0.82	0.64	0.83	0.82	0.82	0.65	0.48	2.00		0.32	70640.00	7.06	10.02
25 Percentile	50.26	65.93	120.84	16.37	1.37	18.45	3.45	-16.71	1.40	1.02	1.62	1.43	1.43	1.07	0.81	3.00		0.40	73350.00	7.34	17.00
Median-25Percentile	15.69	22.48	28.92	59.95	59.95	59.73	59.73	41.02	1.85	1.76	2.33	1.94	1.94	1.79	0.85	0.00		0.30	3050.00	0.31	12.00
Mean	71.22	86.90	150.95	77.19	62.22	78.13	63.16	19.15	5.74	5.07	7.05	6.42	6.42	5.65	3.19	3.17		1.68	76479.61	7.65	129.00
Standard Deviation	34.84	30.80	47.53	75.48	75.44	75.37	75.33	50.64	9.69	8.82	11.39	11.31	11.31	10.24	5.96	0.76		3.45	5869.05	0.59	348.35
Median	65.95	88.40	149.76	76.31	61.31	78.18	63.18	24.31	3.25	2.78	3.94	3.37	3.37	2.85	1.66	3.00		0.70	76400.00	7.64	29.00
75Percentile-Median	18.31	18.23	33.79	54.81	54.81	54.15	54.15	26.13	2.34	2.04	2.79	2.55	2.55	2.15	1.38	1.00		0.81	3800.00	0.38	46.50
75 Percentile	84.26	106.63	183.55	131.12	116.12	132.32	117.32	50.44	5.59	4.82	6.73	5.92	5.92	5.00	3.04	4.00		1.51	80200.00	8.02	75.50
90 Percentile	114.62	129.66	214.36	166.00	151.00	167.09	152.09	85.63	11.04	10.15	16.39	11.80	11.80	10.64	5.99	4.00		3.02	82960.00	8.30	264.80
Maximum	189.67	151.33	264.58	245.51	230.51	246.33	231.33	128.11	75.04	68.18	75.04	75.04	75.04	68.18	49.59	4.00		24.20	93200.00	9.32	2850.00
Interquartile Range (IQR) 1	34.00	40.71	62.71	114.76	114.76	113.88	113.88	67.15	4.19	3.80	5.12	4.49	4.49	3.94	2.23	1.00		1.11	6850.00	0.69	58.50
Variance	1213.51	948.54	2259.55	5697.25	5691.76	5680.69	5675.36	2564.31	93.85	77.87	129.69	127.98	127.98	104.83	35.51	0.58		11.89	34445756.71	0.34	121346.17
Skewness	0.93	-0.08	0.03	-0.13	-0.13	-0.13	-0.13	-0.36	4.95	5.00	4.16	4.37	4.37	4.48	5.67	-0.44		4.91	-0.43	-0.43	5.69
Coefficient of Variation (CoV) 2	0.49	0.35	0.31	0.98	1.21	0.96	1.19	2.64	1.69	1.74	1.62	1.76	1.76	1.81	1.87	0.24		2.06	0.08	0.08	2.70
NPR < 1.0 or NPR = 1.0									16	25	13	16	16	25	34						
1.0 < NPR < 2.0									20	15	16	19	19	15	25						
NPR > 2.0 or NPR =2.0									67	63	74	68	68	63	44						
Sum Check									103	103	103	103	103	103	103						
% NPR < 1.0 or NPR = 1.0 of Total									0	0	0	0	0	0	0						
% 1.0 < NPR < 2.0 of Total									19.4%	14.6%	15.5%	18.4%	18.4%	14.6%	24.3%						
% NPR > 2.0 or NPR =2.0 of Total									65.0%	61.2%	71.8%	66.0%	66.0%	61.2%	42.7%						
Sum Check									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
													count=0, 0%	count=0, 0%							

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm
MITCHELL - All																					
Count	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936		747	936	936	936
Minimum	0.45	0.50	2.58	-590.31	-595.31	-588.52	-593.52	-590.76	-0.02	0.00	-0.03	0.01	0.01	0.01	0.00	1.00		0.01	6800.00	0.68	0.10
10 Percentile	4.55	8.99	28.92	-144.91	-154.69	-136.65	-149.32	-149.83	0.09	0.00	0.11	0.09	0.09	0.01	0.04	2.00		0.45	56850.00	5.69	3.25
25 Percentile	19.33	24.72	59.20	-87.78	-101.45	-75.81	-90.02	-95.79	0.27	0.12	0.34	0.31	0.31	0.15	0.19	3.00		0.82	65800.00	6.58	5.00
Median-25Percentile	19.33	22.97	29.14	57.25	55.92	53.53	53.11	53.51	0.34	0.28	0.42	0.38	0.38	0.32	0.29	0.00		0.49	6000.00	0.60	3.90
Mean	44.02	52.93	92.50	-38.63	-52.63	-30.87	-44.87	-48.07	2.28	1.77	3.10	2.97	2.66	2.08	1.67	3.04		1.94	70183.33	7.02	19.33
Standard Deviation	38.05	36.63	51.05	82.21	80.93	79.43	78.04	80.47	8.68	7.29	14.08	14.06	9.58	8.55	5.74	0.74		2.99	11692.20	1.17	47.09
Median	38.66	47.70	88.34	-30.53	-45.53	-22.28	-36.92	-42.27	0.61	0.40	0.76	0.69	0.69	0.47	0.47	3.00		1.31	71800.00	7.18	8.90
75Percentile-Median	19.16	25.72	30.21	44.34	44.34	38.44	38.08	47.13	0.71	0.57	0.82	0.71	0.71	0.58	0.65	1.00		0.74	5600.00	0.56	9.23
75 Percentile	57.82	73.42	118.55	13.81	-1.19	16.16	1.16	4.85	1.32	0.97	1.58	1.40	1.40	1.05	1.12	4.00		2.05	77400.00	7.74	18.13
90 Percentile	81.87	101.14	160.21	57.24	42.24	59.21	44.21	39.01	3.52	2.56	4.53	4.15	4.15	2.92	2.72	4.00		3.60	81850.00	8.19	43.05
Maximum	400.04	216.51	349.92	331.39	316.39	331.70	316.70	389.73	138.72	114.72	294.40	294.40	100.00	100.00	88.79	4.00		46.10	103000.00	10.30	1080.30
Interquartile Range (IQR) 1	38.49	48.70	59.35	101.59	100.27	91.97	91.18	100.64	1.05	0.85	1.24	1.09	1.09	0.90	0.93	1.00		1.23	11600.00	1.16	13.13
Variance	1448.02	1341.51	2605.80	6758.39	6550.46	6309.49	6090.96	6475.98	75.31	53.11	198.21	197.80	91.70	73.03	33.00	0.54		8.93	136707614.97	1.37	2217.03
Skewness	2.79	1.03	0.95	-0.45	-0.41	-0.61	-0.56	-0.26	9.71	9.72	13.21	13.27	7.90	8.90	9.05	-0.63		8.58	-1.69	-1.69	14.78
Coefficient of Variation (CoV) 2	0.86	0.69	0.55	-2.13	-1.54	-2.57	-1.74	-1.67	3.81	4.12	4.54	4.73	3.60	4.12	3.43	0.24		1.54	0.17	0.17	2.44
NPR < 1.0 or NPR = 1.0									632	712	556	593	593	690	682						
1.0 < NPR < 2.0									143	101	194	172	172	113	129						
NPR > 2.0 or NPR =2.0									161	123	186	171	171	133	125						
Sum Check									936	936	936	936	936	936	936						
% NPR < 1.0 or NPR = 1.0 of Total									1	1	1	1	1	1	1						
% 1.0 < NPR < 2.0 of Total									15.3%	10.8%	20.7%	18.4%	18.4%	12.1%	13.8%						
% NPR > 2.0 or NPR =2.0 of Total									17.2%	13.1%	19.9%	18.3%	18.3%	14.2%	13.4%						
Sum Check									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
													count=10, 1.1%	count=143, 15.3%							
MITCHELL - Overburden																					
Count	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		7	7	7	7
Minimum	2.27	5.49	27.78	-76.69	-84.69	-76.00	-83.99	-82.41	0.09	0.00	0.11	0.10	0.10	0.01	0.03	2.00		0.74	60900.00	6.09	3.70
10 Percentile	3.64	6.69	36.54	-53.44	-65.64	-52.41	-64.61	-56.97	0.29	0.00	0.34	0.31	0.31	0.01	0.11	2.00		0.81	64260.00	6.43	4.00
25 Percentile	19.33	19.23	54.84	-26.75	-39.75	-24.81	-37.81	-31.01	0.47	0.17	0.54	0.50	0.50	0.18	0.34	2.50		0.93	68650.00	6.87	5.40
Median-25Percentile	17.06	20.23	12.46	39.63	37.62	40.16	38.16	37.00	0.73	0.79	0.74	0.75	0.75	0.83	0.87	0.50		0.82	4450.00	0.44	1.60
Mean	44.51	41.06	79.73	5.02	-8.41	7.09	-6.34	-0.76	1.97	1.50	2.57	2.17	2.17	1.66	1.58	2.86		1.76	72471.43	7.25	12.13
Standard Deviation	38.79	33.49	45.38	58.05	56.21	58.37	56.52	52.27	2.43	2.18	3.35	2.70	2.70	2.42	1.81	0.69		1.23	7397.23	0.74	15.32
Median	36.39	39.46	67.29	12.88	-2.13	15.35	0.35	5.99	1.20	0.96	1.29	1.25	1.25	1.01	1.21	3.00		1.74	73100.00	7.31	7.00
75Percentile-Median	30.70	10.61	26.77	9.75	9.75	10.14	10.14	22.86	1.05	0.55	1.71	1.28	1.28	0.69	0.74	0.00		0.11	3100.00	0.31	1.40
75 Percentile	67.09	50.07	94.06	22.63	7.63	25.49	10.49	28.85	2.25	1.51	3.00	2.53	2.53	1.69	1.96	3.00		1.85	76200.00	7.62	8.40
90 Percentile	95.97	76.32	128.97	61.70	46.70	63.23	48.23	52.34	4.61	3.70	6.32	5.09	5.09	4.09	3.49	3.40		2.90	80000.00	8.00	24.10
Maximum	100.07	103.89	165.22	107.19	92.19	108.92	93.92	75.43	7.02	6.18	9.52	7.77	7.77	6.84	5.23	4.00		4.33	83600.00	8.36	46.60
Interquartile Range (IQR) 1	47.76	30.84	39.23	49.38	47.37	50.30	48.30	59.86	1.78	1.33	2.45	2.04	2.04	1.51	1.62	0.50		0.92	7550.00	0.76	3.00
Variance	1504.88	1121.57	2059.04	3369.67	3159.50	3406.95	3194.30	2732.38	5.90	4.76	11.24	7.27	7.27	5.84	3.27	0.48		1.51	54719047.62	0.55	234.64
Skewness	0.58	1.05	1.11	0.54	0.65	0.48	0.59	-0.18	1.89	2.11	1.90	1.89	1.89	2.11	1.63	0.17		1.83	-0.14	-0.14	2.56
Coefficient of Variation (CoV) 2	0.87	0.82	0.57	11.57	-6.68	8.23	-8.92	-69.01	1.24	1.46	1.30	1.24	1.24	1.46	1.14	0.24		0.70	0.10	0.10	1.26
NPR < 1.0 or NPR = 1.0									3	5	3	3	3	3	3						
1.0 < NPR < 2.0									2	0	2	2	2	2	2						
NPR > 2.0 or NPR =2.0									2	2	2	2	2	2	2						
Sum Check									7	7	7	7	7	7	7						
% NPR < 1.0 or NPR = 1.0 of Total									0	1	0	0	0	0	0						
% 1.0 < NPR < 2.0 of Total									28.6%	0.0%	28.6%	28.6%	28.6%	28.6%	28.6%						
% NPR > 2.0 or NPR =2.0 of Total									28.6%	28.6%	28.6%	28.6%	28.6%	28.6%	28.6%						
Sum Check									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
													count=0, 0%	count=2, 28.6%							

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm
MITCHELL - UP Hazelton																					
Count	273	273	273	273	273	273	273	273	273	273	273	273	273	273	273	273		245	273	273	273
Minimum	4.55	2.25	8.88	-363.44	-378.44	-362.85	-377.85	-366.60	0.09	0.00	0.12	0.09	0.09	0.01	0.04	2.00		0.20	52000.00	5.20	0.40
10 Percentile	15.92	21.03	37.91	-61.83	-76.83	-60.89	-75.89	-74.94	0.34	0.14	0.37	0.34	0.34	0.15	0.23	3.00		0.47	63000.00	6.30	3.80
25 Percentile	27.29	35.46	60.71	-33.88	-47.25	-32.85	-46.62	-44.25	0.55	0.34	0.62	0.57	0.57	0.35	0.44	3.00		0.75	67700.00	6.77	5.60
Median-25Percentile	18.19	13.98	26.63	28.00	26.94	27.59	27.49	31.46	0.35	0.27	0.40	0.36	0.36	0.27	0.34	0.00		0.62	4600.00	0.46	5.20
Mean	52.03	53.29	89.46	-5.14	-19.92	-3.97	-18.75	-15.66	3.18	2.53	3.52	3.38	3.20	2.64	1.90	3.26		1.85	72150.18	7.22	18.35
Standard Deviation	33.89	28.47	41.03	54.64	54.59	54.70	54.65	53.03	12.99	10.76	13.77	13.77	12.15	10.95	6.59	0.54		2.43	7465.68	0.75	22.84
Median	45.49	49.45	87.34	-5.88	-20.31	-5.25	-19.14	-12.80	0.90	0.61	1.02	0.93	0.93	0.62	0.78	3.00		1.37	72300.00	7.23	10.80
75Percentile-Median	22.74	20.48	24.63	29.75	29.19	30.69	29.57	26.08	0.61	0.55	0.79	0.66	0.66	0.58	0.54	1.00		0.66	4400.00	0.44	10.90
75 Percentile	68.23	69.92	111.96	23.88	8.88	25.43	10.43	13.28	1.51	1.16	1.81	1.59	1.59	1.20	1.31	4.00		2.03	76700.00	7.67	21.70
90 Percentile	95.70	91.45	144.61	58.14	43.14	59.64	44.64	41.71	2.76	2.22	3.26	3.07	3.07	2.38	2.30	4.00		3.12	81600.00	8.16	40.62
Maximum	220.60	216.51	287.49	147.41	132.41	148.01	133.01	160.79	138.72	114.72	138.72	138.72	100.00	100.00	88.79	4.00		30.00	91300.00	9.13	196.50
Interquartile Range (IQR) 1	40.94	34.46	51.26	57.75	56.13	58.28	57.06	57.53	0.96	0.82	1.18	1.02	1.02	0.85	0.88	1.00		1.28	9000.00	0.90	16.10
Variance	1148.77	810.27	1683.36	2985.13	2980.15	2991.58	2986.76	2811.98	168.78	115.87	189.68	189.56	147.54	119.93	43.48	0.30		5.89	55736332.69	0.56	521.61
Skewness	1.33	1.10	0.70	-0.75	-0.76	-0.76	-0.77	-0.84	7.85	7.86	7.61	7.64	7.13	7.43	10.05	0.08		7.35	-0.17	-0.17	3.75
Coefficient of Variation (CoV) 2	0.65	0.53	0.46	-10.64	-2.74	-13.78	-2.91	-3.39	4.09	4.25	3.92	4.07	3.80	4.14	3.48	0.17		1.31	0.10	0.10	1.24
NPR < 1.0 or NPR = 1.0									155	191	133	148	148	186	176						
1.0 < NPR < 2.0									71	49	81	73	73	52	63						
NPR > 2.0 or NPR =2.0									47	33	59	52	52	35	34						
Sum Check									273	273	273	273	273	273	273						
% NPR < 1.0 or NPR = 1.0 of Total									1	1	0	1	1	1	1						
% 1.0 < NPR < 2.0 of Total									26.0%	17.9%	29.7%	26.7%	26.7%	19.0%	23.1%						
% NPR > 2.0 or NPR =2.0 of Total									17.2%	12.1%	21.6%	19.0%	19.0%	12.8%	12.5%						
Sum Check									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
													count=0, 0%	count=16, 5.9%							
MITCHELL - LP Hazelton																					
Count	553	553	553	553	553	553	553	553	553	553	553	553	553	553	553	553		412	553	553	553
Minimum	0.45	0.50	2.58	-280.71	-280.31	-277.27	-276.87	-279.86	0.00	0.00	0.00	0.01	0.01	0.01	0.00	1.00		0.08	6800.00	0.68	0.10
10 Percentile	4.55	8.49	26.92	-159.69	-169.92	-148.58	-159.56	-163.40	0.06	0.00	0.07	0.06	0.06	0.01	0.03	2.00		0.62	52400.00	5.24	3.60
25 Percentile	15.92	20.98	61.85	-112.39	-123.50	-99.46	-112.04	-117.86	0.20	0.08	0.24	0.22	0.22	0.09	0.14	3.00		0.99	64700.00	6.47	5.40
Median-25Percentile	18.19	24.47	28.92	47.45	43.56	51.42	49.45	45.71	0.21	0.18	0.31	0.28	0.28	0.24	0.17	0.00		0.40	6900.00	0.69	3.60
Mean	40.15	53.56	96.96	-60.99	-74.77	-49.29	-63.06	-69.63	1.18	0.94	1.45	1.33	1.33	1.05	1.00	2.96		2.18	69094.03	6.91	21.38
Standard Deviation	37.39	40.22	55.40	77.93	76.62	76.69	75.19	76.55	4.58	4.16	4.79	4.75	4.75	4.30	3.88	0.76		3.48	13285.35	1.33	58.19
Median	34.11	45.45	90.77	-64.94	-79.94	-48.03	-62.59	-72.15	0.40	0.26	0.55	0.50	0.50	0.34	0.32	3.00		1.39	71600.00	7.16	9.00
75Percentile-Median	18.19	33.46	35.79	53.75	53.75	49.39	48.95	50.68	0.45	0.33	0.59	0.52	0.52	0.41	0.36	0.00		0.86	5900.00	0.59	9.70
75 Percentile	52.31	78.91	126.57	-11.19	-26.19	1.36	-13.64	-21.48	0.85	0.60	1.14	1.02	1.02	0.75	0.68	3.00		2.25	77500.00	7.75	18.70
90 Percentile	76.85	111.08	171.46	34.21	19.21	37.14	22.14	18.12	1.97	1.53	2.43	2.15	2.15	1.63	1.49	4.00		3.80	81800.00	8.18	44.56
Maximum	309.19	212.02	349.92	235.41	220.41	235.73	220.73	287.00	73.14	66.29	73.14	73.14	73.14	66.29	58.22	4.00		46.10	103000.00	10.30	1080.30
Interquartile Range (IQR) 1	36.39	57.94	64.71	101.20	97.31	100.82	98.40	96.39	0.65	0.52	0.90	0.80	0.80	0.65	0.53	0.00		1.26	12800.00	1.28	13.30
Variance	1398.29	1617.58	3068.94	6073.74	5870.15	5881.45	5653.05	5859.86	20.96	17.31	22.96	22.52	22.52	18.45	15.04	0.58		12.14	176500562.15	1.77	3385.71
Skewness	2.92	0.96	0.86	0.33	0.37	0.07	0.12	0.59	11.91	12.23	10.73	11.08	11.08	11.48	10.53	-0.55		8.18	-1.57	-1.57	13.04
Coefficient of Variation (CoV) 2	0.93	0.75	0.57	-1.28	-1.02	-1.56	-1.19	-1.10	3.88	4.42	3.31	3.58	3.58	4.11	3.89	0.26		1.60	0.19	0.19	2.72
NPR < 1.0 or NPR = 1.0									437	471	386	406	406	457	463						
1.0 < NPR < 2.0									62	41	103	89	89	52	53						
NPR > 2.0 or NPR =2.0									54	41	64	58	58	44	37						
Sum Check									553	553	553	553	553	553	553						
% NPR < 1.0 or NPR = 1.0 of Total									1	1	1	1	1	1	1						
% 1.0 < NPR < 2.0 of Total									11.2%	7.4%	18.6%	16.1%	16.1%	9.4%	9.6%						
% NPR > 2.0 or NPR =2.0 of Total									9.8%	7.4%	11.6%	10.5%	10.5%	8.0%	6.7%						
Sum Check									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
													count=6, 1.1%	count=101, 18.3%							

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm
MITCHELL - Monzonite																					
Count	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80		70	80	80	80
Minimum	0.45	4.99	18.61	-128.44	-138.44	-127.69	-137.69	-133.89	0.07	0.00	0.08	0.07	0.07	0.01	0.03	1.00		0.01	51800.00	5.18	0.70
10 Percentile	13.65	15.98	37.51	-16.66	-31.66	-15.21	-30.21	-35.70	0.72	0.31	0.81	0.74	0.74	0.33	0.42	3.00		0.15	65480.00	6.55	1.59
25 Percentile	25.02	36.15	69.22	12.47	-1.95	12.94	-1.33	2.64	1.76	0.93	2.15	1.84	1.84	0.94	1.37	3.00		0.29	67875.00	6.79	2.70
Median-25Percentile	27.29	22.16	17.97	36.19	35.61	37.48	36.75	27.21	2.49	1.59	3.36	3.42	3.42	2.54	1.76	0.00		0.35	6575.00	0.66	1.20
Mean	53.99	56.17	86.97	41.24	26.55	42.77	28.08	28.04	7.45	5.42	14.05	13.84	10.79	7.88	6.07	3.28		0.86	73706.25	7.37	6.86
Standard Deviation	49.57	28.58	40.65	53.89	53.53	53.93	53.58	57.93	11.12	9.33	37.25	37.27	18.36	16.68	10.57	0.66		0.95	6909.64	0.69	11.19
Median	52.31	58.31	87.19	48.66	33.66	50.42	35.42	29.86	4.25	2.52	5.51	5.27	5.27	3.48	3.13	3.00		0.64	74450.00	7.45	3.90
75Percentile-Median	18.76	14.55	14.53	21.28	21.28	20.67	20.67	19.83	3.70	3.00	3.76	3.87	3.87	2.89	2.76	1.00		0.39	3650.00	0.36	3.10
75 Percentile	71.07	72.86	101.72	69.94	54.94	71.09	56.09	49.68	7.94	5.52	9.27	9.14	9.14	6.37	5.89	4.00		1.02	78100.00	7.81	7.00
90 Percentile	84.60	82.81	115.40	86.32	71.32	87.03	72.03	64.98	16.38	10.77	27.90	27.62	27.62	15.69	11.73	4.00		1.37	82430.00	8.24	12.54
Maximum	400.04	195.04	308.68	331.39	316.39	331.70	316.70	389.73	73.60	61.60	294.40	294.40	100.00	100.00	67.32	4.00		5.45	87700.00	8.77	87.70
Interquartile Range (IQR) 1	46.05	36.71	32.50	57.47	56.89	58.15	57.41	47.04	6.18	4.58	7.12	7.30	7.30	5.43	4.52	1.00		0.74	10225.00	1.02	4.30
Variance	2457.24	816.90	1652.79	2903.61	2865.63	2908.97	2870.53	3355.55	123.61	87.12	1387.69	1388.79	337.09	278.20	111.81	0.43		0.90	47743125.00	0.48	125.19
Skewness	4.50	1.25	2.21	1.49	1.54	1.45	1.50	2.77	3.77	4.01	6.20	6.20	3.48	4.55	4.07	-0.63		2.96	-0.31	-0.31	5.52
Coefficient of Variation (CoV) 2	0.92	0.51	0.47	1.31	2.02	1.26	1.91	2.07	1.49	1.72	2.65	2.69	1.70	2.12	1.74	0.20		1.11	0.09	0.09	1.63
NPR < 1.0 or NPR = 1.0									14	22	11	13	13	21	17						
1.0 < NPR < 2.0									8	11	8	8	8	7	11						
NPR > 2.0 or NPR =2.0									58	47	61	59	59	52	52						
Sum Check									80	80	80	80	80	80	80						
% NPR < 1.0 or NPR = 1.0 of Total									0	0	0	0	0	0	0						
% 1.0 < NPR < 2.0 of Total									10.0%	13.8%	10.0%	10.0%	10.0%	8.8%	13.8%						
% NPR > 2.0 or NPR =2.0 of Total									72.5%	58.8%	76.3%	73.8%	73.8%	65.0%	65.0%						
Sum Check									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
													count=0, 0%	count=7, 8.8%							
MITCHELL - Leach breccia/bornite breccia																					
Count	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23		13	23	23	23
Minimum	0.45	1.75	7.16	-590.31	-595.31	-588.52	-593.52	-590.76	-0.02	0.00	-0.03	0.01	0.01	0.01	0.00	1.00		0.30	18700.00	1.87	0.30
10 Percentile	0.45	4.94	13.80	-289.51	-290.19	-276.34	-275.22	-287.86	0.01	0.00	0.01	0.01	0.01	0.01	0.00	1.00		0.81	40640.00	4.06	3.06
25 Percentile	2.50	6.12	16.89	-224.16	-230.16	-208.73	-214.08	-225.61	0.02	0.00	0.03	0.02	0.02	0.01	0.01	1.00		1.01	50650.00	5.07	4.40
Median-25Percentile	2.05	1.87	6.30	68.78	62.61	54.96	50.11	63.00	0.03	0.00	0.04	0.03	0.03	0.00	0.02	1.00		0.34	13450.00	1.35	3.10
Mean	7.02	25.78	44.32	-189.71	-197.58	-175.13	-183.00	-193.70	0.07	0.02	0.10	0.09	0.09	0.04	0.04	1.74		2.13	60078.26	6.01	27.20
Standard Deviation	7.35	48.01	56.85	111.45	110.13	113.04	111.20	109.40	0.10	0.07	0.14	0.13	0.13	0.09	0.05	0.69		2.13	16573.01	1.66	39.32
Median	4.55	7.99	23.19	-155.38	-167.55	-153.77	-163.97	-162.61	0.05	0.00	0.07	0.05	0.05	0.01	0.03	2.00		1.35	64100.00	6.41	7.50
75Percentile-Median	3.18	3.25	12.74	30.50	35.68	39.47	39.74	35.28	0.04	0.01	0.07	0.05	0.05	0.00	0.03	0.00		0.90	7150.00	0.72	32.05
75 Percentile	7.73	11.24	35.94	-124.88	-131.87	-114.30	-124.22	-127.33	0.10	0.01	0.13	0.10	0.10	0.01	0.05	2.00		2.25	71250.00	7.13	39.55
90 Percentile	19.47	78.31	124.22	-94.61	-107.42	-93.24	-106.06	-104.02	0.12	0.03	0.19	0.15	0.15	0.04	0.09	2.80		4.21	78400.00	7.84	80.88
Maximum	25.02	185.80	229.36	-54.95	-61.25	-34.18	-49.18	-56.25	0.45	0.33	0.63	0.63	0.63	0.46	0.20	3.00		8.21	82600.00	8.26	152.20
Interquartile Range (IQR) 1	5.23	5.12	19.04	99.28	98.28	94.43	89.85	98.28	0.07	0.01	0.11	0.08	0.08	0.00	0.05	1.00		1.24	20600.00	2.06	35.15
Variance	53.98	2305.11	3231.39	12421.32	12127.58	12776.97	12365.31	11968.31	0.01	0.00	0.02	0.02	0.02	0.01	0.00	0.47		4.54	274664505.93	2.75	1545.84
Skewness	1.41	2.69	2.47	-2.22	-2.25	-2.40	-2.46	-2.30	3.13	4.47	2.97	3.76	3.76	4.66	1.98	0.39		2.31	-0.90	-0.90	1.90
Coefficient of Variation (CoV) 2	1.05	1.86	1.28	-0.59	-0.56	-0.65	-0.61	-0.56	1.34	3.28	1.34	1.47	1.47	2.67	1.24	0.40		1.00	0.28	0.28	1.45
NPR < 1.0 or NPR = 1.0									23	23	23	23	23	23	23						
1.0 < NPR < 2.0									0	0	0	0	0	0	0						
NPR > 2.0 or NPR =2.0									0	0	0	0	0	0	0						
Sum Check									23	23	23	23	23	23	23						
% NPR < 1.0 or NPR = 1.0 of Total									1	1	1	1	1	1	1						
% 1.0 < NPR < 2.0 of Total									0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%						
% NPR > 2.0 or NPR =2.0 of Total									0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%						
Sum Check									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
													count=4, 17.4%	count=17, 73.9%							

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t	TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check	Ag ppm	Al ppm	Al %	As ppm
IRON CAP - All																					
Count	356	356	356	356	356	356	356	356	356	356	356	356	356	356	356	356		75	50	75	75
Minimum	0.23	0.00	0.00	-375.65	-370.62	-369.67	-364.64	-369.94	-0.01	0.00	-0.02	0.00	0.01	0.01	0.00	1.00		0.77	50300.00	4.43	5.40
10 Percentile	1.59	0.00	0.00	-142.44	-154.55	-141.71	-153.59	-149.01	0.04	0.00	0.05	0.04	0.04	0.01	0.01	1.00		1.62	60030.00	5.74	9.46
25 Percentile	4.28	0.00	0.00	-109.33	-120.50	-108.92	-119.64	-111.28	0.08	0.00	0.11	0.08	0.08	0.01	0.04	2.00		4.55	66600.00	6.49	16.50
Median-25Percentile	19.48	0.00	0.00	43.57	42.37	43.58	42.58	39.29	0.19	0.14	0.24	0.19	0.19	0.13	0.19	1.00		662.45	10150.00	0.73	15.30
Mean	31.96	6.89	12.14	-61.41	-73.32	-60.78	-72.69	-67.19	1.23	0.98	1.39	1.23	1.23	0.98	0.96	2.64		932.18	78104.00	7.46	48.80
Standard Deviation	37.78	19.23	30.67	76.45	74.61	76.16	74.34	72.10	4.35	3.91	4.38	4.25	4.25	3.82	3.28	1.07		1360.30	15034.38	1.47	50.42
Median	23.77	0.00	0.00	-65.77	-78.12	-65.33	-77.06	-72.00	0.28	0.14	0.35	0.28	0.28	0.14	0.22	3.00		667.00	76750.00	7.22	31.80
75Percentile-Median	19.48	0.00	0.00	46.07	43.85	45.91	43.03	47.17	0.39	0.34	0.50	0.40	0.40	0.34	0.39	1.00		492.50	13900.00	1.00	29.85
75 Percentile	43.24	0.00	0.00	-19.70	-34.28	-19.43	-34.03	-24.83	0.67	0.48	0.85	0.67	0.67	0.48	0.61	4.00		1159.50	90650.00	8.22	61.65
90 Percentile	69.36	29.84	49.97	38.10	23.10	38.01	23.01	20.94	1.94	1.65	2.42	1.95	1.95	1.66	1.62	4.00		2175.80	99490.00	9.78	104.60
Maximum	249.49	154.08	260.29	226.25	211.25	226.96	211.96	163.55	49.75	45.38	45.60	45.60	45.60	41.60	35.73	4.00		7714.00	106100.00	10.61	280.60
Interquartile Range (IQR) 1	38.96	0.00	0.00	89.63	86.22	89.49	85.61	86.46	0.59	0.48	0.74	0.59	0.59	0.47	0.57	2.00		1154.95	24050.00	1.73	45.15
Variance	1426.96	369.94	940.89	5844.20	5566.61	5801.04	5525.90	5198.30	18.90	15.28	19.14	18.10	18.10	14.62	10.73	1.15		1850417.64	226032636.73	2.17	2542.02
Skewness	2.42	4.17	3.71	0.51	0.55	0.53	0.57	0.28	7.59	7.86	6.84	7.26	7.26	7.51	7.24	-0.20		3.29	0.15	0.45	2.47
Coefficient of Variation (CoV) 2	1.18	2.79	2.53	-1.24	-1.02	-1.25	-1.02	-1.07	3.54	4.00	3.15	3.46	3.46	3.90	3.41	0.41		1.46	0.19	0.20	1.03
NPR < 1.0 or NPR = 1.0									296	310	283	295	295	309	300						
1.0 < NPR < 2.0									24	15	30	25	25	17	28						
NPR > 2.0 or NPR =2.0									36	31	43	36	36	30	28						
Sum Check									356	356	356	356	356	356	356						
% NPR < 1.0 or NPR = 1.0 of Total									1	1	1	1	1	1	1						
% 1.0 < NPR < 2.0 of Total									6.7%	4.2%	8.4%	7.0%	7.0%	4.8%	7.9%						
% NPR > 2.0 or NPR =2.0 of Total									10.1%	8.7%	12.1%	10.1%	10.1%	8.4%	7.9%						
Sum Check									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
													count=6, 1.7%	count=137, 38.5%							

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Ba ppm	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %
ALL																					
Count	1749	1749	1749	1725	1749	1749	1749	1749	1749	1442	1749	1749	1732	1749	1442	993	1749	993	993	1688	1749
Minimum	7.00	0.05	0.01	0.00	0.01	0.01	0.50	0.60	0.50	0.30	2.70	0.00	0.00	0.54	4.10	0.03	0.01	0.01	0.01	2300.00	0.23
10 Percentile	36.00	0.50	0.07	3440.00	0.35	0.05	8.09	7.00	4.00	1.70	106.00	0.01	27700.00	2.77	13.44	0.11	0.30	0.01	0.03	23400.00	2.37
25 Percentile	96.00	0.75	0.16	8900.00	0.89	0.09	12.10	10.10	7.00	2.64	341.85	0.03	35700.00	3.57	15.20	0.13	0.41	0.01	0.04	29900.00	3.03
Median-25Percentile	234.00	0.25	0.23	11100.00	1.11	0.17	5.35	3.60	21.00	0.95	422.35	0.04	8700.00	0.86	1.80	0.03	0.21	0.01	0.02	7200.00	0.72
Mean	840.34	1.19	0.90	22502.78	2.25	1.21	18.42	15.37	45.68	3.90	1118.02	0.11	45746.36	4.57	17.36	0.16	0.76	0.17	0.10	36808.71	3.73
Standard Deviation	1106.62	0.62	2.03	16507.90	1.65	4.56	10.99	8.03	50.30	1.97	1311.47	0.13	16452.89	1.64	4.06	0.06	0.50	1.08	0.16	10698.02	1.11
Median	330.00	1.00	0.39	20000.00	2.00	0.26	17.45	13.70	28.00	3.59	764.20	0.08	44400.00	4.43	17.00	0.16	0.62	0.02	0.06	37100.00	3.75
75Percentile-Median	860.00	0.54	0.48	12400.00	1.24	0.43	4.85	5.10	38.00	1.20	630.80	0.06	9000.00	0.90	1.80	0.03	0.34	0.04	0.04	6800.00	0.69
75 Percentile	1190.00	1.54	0.87	32400.00	3.24	0.69	22.30	18.80	66.00	4.79	1395.00	0.14	53400.00	5.33	18.80	0.19	0.96	0.06	0.10	43900.00	4.44
90 Percentile	2466.80	2.00	1.89	44700.00	4.47	1.92	28.00	26.02	118.00	6.20	2399.36	0.24	64900.00	6.48	21.40	0.22	1.30	0.19	0.18	49800.00	5.04
Maximum	7150.00	4.58	42.70	137000.00	13.70	73.60	128.00	65.20	311.00	16.70	10000.00	1.00	162500.00	16.25	43.40	0.75	4.60	29.00	2.47	78900.00	8.41
Interquartile Range (IQR) 1	1094.00	0.79	0.71	23500.00	2.35	0.60	10.20	8.70	59.00	2.15	1053.15	0.11	17700.00	1.76	3.60	0.06	0.55	0.05	0.06	14000.00	1.41
Variance	1224599.57	0.39	4.11	272510897.12	2.72	20.76	120.88	64.52	2530.13	3.89	1719955.49	0.02	270697623.97	2.69	16.48	0.00	0.25	1.16	0.03	114447576.75	1.24
Skewness	1.93	1.25	9.56	1.00	1.01	9.51	3.65	1.37	1.69	1.51	3.37	3.37	1.15	1.16	1.39	1.68	2.45	21.01	8.80	0.06	0.19
Coefficient of Variation (CoV) 2	1.32	0.52	2.25	0.73	0.73	3.78	0.60	0.52	1.10	0.51	1.17	1.17	0.36	0.36	0.23	0.34	0.66	6.51	1.65	0.29	0.30
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
% Samples NPR = 0.01																					
KERR - All																					
Count	305	305	305	305	305	305	305	305	305	166	305	305	305	305	166	88	305	88	88	305	305
Minimum	7.00	0.30	0.02	100.00	0.01	0.01	0.50	0.90	0.50	1.20	2.70	0.00	16200.00	1.62	7.10	0.12	0.03	0.01	0.02	3000.00	0.30
10 Percentile	20.00	0.50	0.05	2640.00	0.26	0.05	2.07	10.28	11.00	2.50	62.61	0.01	40160.00	4.02	14.10	0.15	0.28	0.02	0.04	25540.00	2.55
25 Percentile	29.00	0.50	0.08	3700.00	0.37	0.09	6.12	14.60	26.00	3.10	209.00	0.02	47100.00	4.71	15.46	0.18	0.37	0.04	0.05	30700.00	3.07
Median-25Percentile	51.00	0.00	0.12	4200.00	0.42	0.11	4.88	4.40	22.00	0.55	476.00	0.05	9500.00	0.95	1.54	0.02	0.13	0.08	0.04	5400.00	0.54
Mean	417.39	0.77	0.42	17091.15	1.71	0.68	13.43	20.07	58.26	3.62	1477.30	0.15	58996.39	5.90	17.06	0.21	0.66	1.02	0.19	34797.38	3.48
Standard Deviation	746.49	0.38	0.62	18542.68	1.85	1.60	16.35	8.22	45.83	0.89	1976.35	0.20	17535.67	1.75	2.79	0.06	0.57	3.36	0.31	8019.93	0.80
Median	80.00	0.50	0.20	7900.00	0.79	0.20	11.00	19.00	48.00	3.65	685.00	0.07	56600.00	5.66	16.99	0.20	0.50	0.12	0.09	36100.00	3.61
75Percentile-Median	300.00	0.50	0.30	21600.00	2.16	0.40	3.75	6.30	33.00	0.55	1239.55	0.12	10900.00	1.09	1.29	0.05	0.30	0.51	0.15	3800.00	0.38
75 Percentile	380.00	1.00	0.50	29500.00	2.95	0.60	14.75	25.30	81.00	4.20	1924.55	0.19	67500.00	6.75	18.28	0.25	0.80	0.63	0.24	39900.00	3.99
90 Percentile	1356.00	1.00	1.06	43100.00	4.31	1.62	21.00	30.36	118.00	4.69	4000.00	0.40	79760.00	7.98	20.35	0.30	1.10	2.38	0.34	43460.00	4.35
Maximum	4560.00	3.00	6.33	137000.00	13.70	18.65	123.00	51.00	259.00	5.83	10000.00	1.00	157500.00	15.75	31.95	0.37	4.60	29.00	2.39	52400.00	5.24
Interquartile Range (IQR) 1	351.00	0.50	0.42	25800.00	2.58	0.51	8.63	10.70	55.00	1.10	1715.55	0.17	20400.00	2.04	2.83	0.07	0.43	0.59	0.19	9200.00	0.92
Variance	557243.41	0.15	0.38	343831072.69	3.44	2.55	267.20	67.54	2100.51	0.79	3905943.20	0.04	307499756.69	3.07	7.77	0.00	0.32	11.32	0.10	64319203.62	0.64
Skewness	2.65	2.15	4.42	1.93	1.93	7.05	4.53	0.61	1.55	-0.34	2.34	2.34	1.14	1.14	0.84	0.80	3.93	7.08	4.96	-1.00	-1.00
Coefficient of Variation (CoV) 2	1.79	0.50	1.47	1.08	1.08	2.35	1.22	0.41	0.79	0.25	1.34	1.34	0.30	0.30	0.16	0.27	0.85	3.28	1.62	0.23	0.23
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
% Samples NPR = 0.01																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Ba ppm	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %
SULPHURETS - All																					
Count	433	433	433	433	433	433	433	433	433	298	433	433	433	433	298	166	433	166	166	433	433
Minimum	17.00	0.25	0.02	1600.00	0.16	0.01	2.00	1.70	1.00	0.65	19.21	0.00	9100.00	0.91	10.24	0.05	0.22	0.01	0.02	9400.00	0.94
10 Percentile	94.20	0.50	0.06	9200.00	0.92	0.04	12.86	7.40	11.00	1.81	101.00	0.01	25400.00	2.54	14.32	0.10	0.50	0.01	0.04	24620.00	2.46
25 Percentile	225.00	0.89	0.12	19500.00	1.95	0.05	15.54	11.50	25.00	2.80	248.00	0.02	34100.00	3.41	15.69	0.13	0.60	0.02	0.06	30000.00	3.00
Median-25Percentile	565.00	0.11	0.17	10300.00	1.03	0.05	3.76	5.10	24.00	1.10	457.00	0.05	9900.00	0.99	2.01	0.02	0.20	0.02	0.03	6900.00	0.69
Mean	1237.03	1.15	0.72	30722.17	3.07	1.32	20.59	18.24	59.96	4.69	1217.70	0.12	44576.21	4.46	17.80	0.15	0.89	0.19	0.15	36992.61	3.70
Standard Deviation	1233.45	0.53	2.37	16146.38	1.61	4.93	7.40	9.60	45.75	2.74	1562.23	0.16	15666.44	1.57	2.87	0.06	0.35	0.66	0.19	10057.51	1.01
Median	790.00	1.00	0.29	29800.00	2.98	0.10	19.30	16.60	49.00	3.90	705.00	0.07	44000.00	4.40	17.70	0.15	0.80	0.04	0.10	36900.00	3.69
75Percentile-Median	1120.00	0.41	0.32	11300.00	1.13	0.39	4.70	7.20	32.00	2.24	785.00	0.08	9100.00	0.91	2.06	0.03	0.30	0.06	0.06	7300.00	0.73
75 Percentile	1910.00	1.41	0.61	41100.00	4.11	0.49	24.00	23.80	81.00	6.14	1490.00	0.15	53100.00	5.31	19.76	0.18	1.10	0.10	0.16	44200.00	4.42
90 Percentile	3118.00	2.00	1.40	53060.00	5.31	2.83	30.15	30.98	130.80	7.97	2686.16	0.27	62280.00	6.23	21.43	0.20	1.40	0.28	0.25	49100.00	4.91
Maximum	7150.00	3.00	42.70	90500.00	9.05	73.60	49.20	65.20	246.00	16.70	10000.00	1.00	123300.00	12.33	25.30	0.75	2.20	6.75	1.75	70000.00	7.00
Interquartile Range (IQR) 1	1685.00	0.52	0.49	21600.00	2.16	0.44	8.46	12.30	56.00	3.34	1242.00	0.12	19000.00	1.90	4.07	0.05	0.50	0.08	0.10	14200.00	1.42
Variance	1521404.90	0.28	5.62	260705711.02	2.61	24.29	54.82	92.18	2092.69	7.49	2440563.30	0.02	245437418.95	2.45	8.25	0.00	0.12	0.43	0.04	101153602.66	1.01
Skewness	1.25	0.78	13.91	0.41	0.41	9.39	1.11	1.10	1.07	1.33	3.01	3.01	0.97	0.97	0.15	5.67	0.87	7.57	5.23	0.15	0.15
Coefficient of Variation (CoV) 2	1.00	0.46	3.30	0.53	0.53	3.73	0.36	0.53	0.76	0.58	1.28	1.28	0.35	0.35	0.16	0.39	0.39	3.44	1.33	0.27	0.27
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
SULPHURETS - Overburden																					
Count	9	9	9	9	9	9	9	9	9	8	9	9	9	9	8	6	9	6	6	9	9
Minimum	150.00	0.50	0.05	1600.00	0.16	0.03	15.50	5.50	4.00	1.37	72.50	0.01	17200.00	1.72	15.03	0.05	0.40	0.01	0.03	22200.00	2.22
10 Percentile	390.00	0.88	0.05	3280.00	0.33	0.04	15.86	5.98	5.60	1.69	171.30	0.02	30320.00	3.03	16.27	0.08	0.40	0.01	0.04	28600.00	2.86
25 Percentile	1327.00	1.00	0.06	14700.00	1.47	0.04	16.79	9.80	17.00	2.33	243.00	0.02	36700.00	3.67	16.80	0.11	0.60	0.01	0.06	31900.00	3.19
Median-25Percentile	203.00	0.02	0.10	1700.00	0.17	0.03	2.26	1.90	13.00	0.84	793.05	0.08	2900.00	0.29	1.69	0.02	0.30	0.03	0.02	10000.00	1.00
Mean	1470.56	1.08	0.41	28066.67	2.81	0.21	22.02	12.67	48.56	2.94	755.47	0.08	43344.44	4.33	19.10	0.13	0.80	0.06	0.26	39044.44	3.90
Standard Deviation	787.20	0.30	0.67	22506.39	2.25	0.34	6.97	7.29	50.78	1.00	534.56	0.05	15233.28	1.52	3.37	0.06	0.27	0.08	0.42	9761.03	0.98
Median	1530.00	1.02	0.16	16400.00	1.64	0.07	19.05	11.70	30.00	3.17	1036.05	0.10	39600.00	3.96	18.49	0.13	0.90	0.04	0.09	41900.00	4.19
75Percentile-Median	230.00	0.14	0.22	31500.00	3.15	0.04	9.95	0.80	32.00	0.35	208.95	0.02	10000.00	1.00	1.55	0.05	0.10	0.03	0.07	5500.00	0.55
75 Percentile	1760.00	1.16	0.38	47900.00	4.79	0.11	29.00	12.50	62.00	3.52	1245.00	0.12	49600.00	4.96	20.04	0.18	1.00	0.07	0.16	47400.00	4.74
90 Percentile	2140.40	1.34	0.84	56520.00	5.65	0.54	30.66	17.38	91.60	3.84	1259.00	0.13	59700.00	5.97	23.48	0.20	1.02	0.14	0.65	48320.00	4.83
Maximum	2790.00	1.65	2.14	59800.00	5.98	1.06	33.80	30.50	166.00	4.43	1295.00	0.13	70900.00	7.09	25.30	0.20	1.10	0.21	1.12	49200.00	4.92
Interquartile Range (IQR) 1	433.00	0.16	0.32	33200.00	3.32	0.07	12.21	2.70	45.00	1.19	1002.00	0.10	12900.00	1.29	3.24	0.07	0.40	0.06	0.09	15500.00	1.55
Variance	619688.78	0.09	0.44	506537500.00	5.07	0.12	48.63	53.14	2579.03	1.00	285756.72	0.00	232052777.78	2.32	11.34	0.00	0.07	0.01	0.18	95277777.78	0.95
Skewness	-0.30	0.01	2.70	0.32	0.32	2.44	0.80	2.07	1.73	-0.31	-0.25	-0.25	0.20	0.20	0.97	-0.10	-0.69	1.87	2.37	-0.54	-0.54
Coefficient of Variation (CoV) 2	0.54	0.28	1.62	0.80	0.80	1.62	0.32	0.58	1.05	0.34	0.71	0.71	0.35	0.35	0.18	0.43	0.33	1.21	1.63	0.25	0.25
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Ba ppm	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %
SULPHURETS - Au, Leach, Raewn zones																					
Count	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	34	51	34	34	51	51
Minimum	38.00	0.25	0.07	1800.00	0.18	0.04	10.88	7.90	8.00	1.42	19.21	0.00	11600.00	1.16	10.24	0.07	0.22	0.01	0.02	26000.00	2.60
10 Percentile	100.00	0.50	0.12	3000.00	0.30	0.08	13.08	11.50	16.00	2.99	102.00	0.01	19500.00	1.95	13.15	0.09	0.40	0.03	0.05	31000.00	3.10
25 Percentile	263.50	0.89	0.17	5150.00	0.52	0.15	17.19	16.00	23.00	3.45	388.00	0.04	30700.00	3.07	14.84	0.13	0.55	0.06	0.07	39900.00	3.99
Median-25Percentile	296.50	0.12	0.08	4450.00	0.45	0.49	4.04	4.20	25.00	2.36	1855.84	0.19	8700.00	0.87	2.56	0.02	0.15	0.08	0.02	7200.00	0.72
Mean	861.06	1.10	0.31	12437.25	1.24	2.34	22.67	22.35	57.18	6.14	3256.15	0.33	37966.67	3.80	17.20	0.15	0.72	0.23	0.16	45931.37	4.59
Standard Deviation	966.20	0.48	0.23	9564.18	0.96	5.05	7.78	10.07	39.58	3.14	3125.33	0.31	13056.17	1.31	2.97	0.04	0.30	0.33	0.16	10348.61	1.03
Median	560.00	1.00	0.24	9600.00	0.96	0.64	21.22	20.20	48.00	5.80	2243.84	0.22	39400.00	3.94	17.40	0.15	0.70	0.14	0.09	47100.00	4.71
75Percentile-Median	455.00	0.32	0.15	5850.00	0.59	0.93	6.30	7.80	34.50	1.84	2811.16	0.28	7450.00	0.75	1.74	0.03	0.20	0.13	0.11	3600.00	0.36
75 Percentile	1015.00	1.32	0.39	15450.00	1.55	1.57	27.52	28.00	82.50	7.64	5055.00	0.51	46850.00	4.69	19.14	0.18	0.90	0.27	0.20	50700.00	5.07
90 Percentile	1770.00	1.81	0.54	26900.00	2.69	4.80	32.90	35.00	128.00	10.20	8438.47	0.84	53500.00	5.35	21.20	0.19	1.00	0.42	0.27	60400.00	6.04
Maximum	4640.00	2.40	1.41	39300.00	3.93	26.40	42.00	57.80	155.00	16.70	10000.00	1.00	69600.00	6.96	22.90	0.27	2.20	1.58	0.66	70000.00	7.00
Interquartile Range (IQR) 1	751.50	0.43	0.23	10300.00	1.03	1.42	10.34	12.00	59.50	4.20	4667.00	0.47	16150.00	1.62	4.30	0.05	0.35	0.21	0.13	10800.00	1.08
Variance	933545.70	0.23	0.05	91473584.31	0.91	25.55	60.49	101.37	1566.23	9.89	9767704.48	0.10	170463466.67	1.70	8.81	0.00	0.09	0.11	0.02	107093796.08	1.07
Skewness	2.32	0.53	2.50	1.18	1.18	3.77	0.62	1.18	0.75	1.05	0.85	0.85	-0.13	-0.13	-0.11	0.25	2.35	3.15	2.10	0.15	0.15
Coefficient of Variation (CoV) 2	1.12	0.44	0.75	0.77	0.77	2.16	0.34	0.45	0.69	0.51	0.96	0.96	0.34	0.34	0.17	0.29	0.42	1.40	0.97	0.23	0.23
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
SULPHURETS - Lower Au zone																					
Count	31	31	31	31	31	31	31	31	31	30	31	31	31	31	30	15	31	15	15	31	31
Minimum	44.00	0.50	0.09	9200.00	0.92	0.03	9.17	7.60	12.00	2.30	210.95	0.02	25400.00	2.54	12.56	0.13	0.47	0.02	0.04	25000.00	2.50
10 Percentile	63.00	0.50	0.11	11900.00	1.19	0.06	13.19	12.70	22.00	3.24	357.04	0.04	34900.00	3.49	16.26	0.13	0.54	0.02	0.05	29300.00	2.93
25 Percentile	115.00	1.00	0.16	15350.00	1.54	0.10	24.23	15.00	28.50	5.17	638.79	0.06	40300.00	4.03	18.02	0.14	0.65	0.02	0.08	30800.00	3.08
Median-25Percentile	183.00	0.13	0.06	8150.00	0.82	0.29	5.39	5.90	12.50	2.19	531.22	0.05	9800.00	0.98	1.38	0.04	0.25	0.01	0.02	1800.00	0.18
Mean	557.29	1.22	0.30	24296.77	2.43	2.25	29.06	21.60	47.26	7.66	1428.00	0.14	53222.58	5.32	19.38	0.17	0.96	0.14	0.15	36661.29	3.67
Standard Deviation	553.10	0.49	0.26	11147.96	1.11	3.77	10.22	8.17	27.86	3.59	1120.14	0.11	18099.68	1.81	2.92	0.03	0.36	0.20	0.14	7372.19	0.74
Median	298.00	1.13	0.22	23500.00	2.35	0.38	29.61	20.90	41.00	7.36	1170.00	0.12	50100.00	5.01	19.40	0.18	0.90	0.03	0.10	32600.00	3.26
75Percentile-Median	537.00	0.51	0.10	8500.00	0.85	3.25	6.04	3.95	14.50	3.58	501.61	0.05	9050.00	0.90	1.71	0.01	0.31	0.13	0.04	10150.00	1.02
75 Percentile	835.00	1.64	0.32	32000.00	3.20	3.63	35.65	24.85	55.50	10.94	1671.61	0.17	59150.00	5.92	21.10	0.19	1.21	0.16	0.14	42750.00	4.28
90 Percentile	1250.00	2.00	0.44	39700.00	3.97	6.18	43.92	30.40	66.00	12.28	3200.00	0.32	81000.00	8.10	23.48	0.20	1.41	0.42	0.27	46700.00	4.67
Maximum	2200.00	2.17	1.30	49500.00	4.95	17.71	48.70	44.10	149.00	16.20	4620.00	0.46	102600.00	10.26	24.63	0.24	1.70	0.63	0.57	52700.00	5.27
Interquartile Range (IQR) 1	720.00	0.64	0.16	16650.00	1.67	3.53	11.43	9.85	27.00	5.77	1032.82	0.10	18850.00	1.89	3.09	0.05	0.56	0.14	0.06	11950.00	1.20
Variance	305921.48	0.24	0.07	124276989.25	1.24	14.21	104.51	66.74	776.00	12.92	1254709.11	0.01	327598473.12	3.28	8.50	0.00	0.13	0.04	0.02	54349118.28	0.54
Skewness	1.26	0.31	2.88	0.57	0.57	2.73	-0.21	0.83	2.02	0.47	1.36	1.36	0.99	0.99	-0.33	0.41	0.48	1.98	2.50	0.41	0.41
Coefficient of Variation (CoV) 2	0.99	0.40	0.86	0.46	0.46	1.67	0.35	0.38	0.59	0.47	0.78	0.78	0.34	0.34	0.15	0.19	0.38	1.45	0.94	0.20	0.20
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Ba ppm	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %
SULPHURETS - LP Hazelton																					
Count	40	40	40	40	40	40	40	40	40	24	40	40	40	40	24	11	40	11	11	40	40
Minimum	42.00	0.50	0.07	8100.00	0.81	0.05	11.00	4.80	3.00	1.50	85.80	0.01	21500.00	2.15	13.90	0.14	0.50	0.04	0.02	9400.00	0.94
10 Percentile	69.50	0.96	0.15	13340.00	1.33	0.10	16.71	8.75	28.00	3.36	365.15	0.04	30280.00	3.03	14.75	0.14	0.58	0.05	0.08	16920.00	1.69
25 Percentile	93.50	1.00	0.25	19000.00	1.90	0.59	20.60	12.38	35.00	4.90	589.25	0.06	36275.00	3.63	16.58	0.15	0.62	0.09	0.08	31150.00	3.12
Median-25Percentile	88.00	0.00	0.23	9100.00	0.91	1.10	4.03	3.98	12.50	1.03	235.67	0.02	5225.00	0.52	1.28	0.02	0.18	0.24	0.02	5650.00	0.57
Mean	398.45	1.32	1.28	32425.00	3.24	3.15	25.07	17.19	60.85	6.04	1188.74	0.12	45097.50	4.51	18.47	0.17	0.88	0.75	0.13	35020.00	3.50
Standard Deviation	415.34	0.52	2.70	17026.04	1.70	3.92	7.77	6.86	41.35	2.19	965.97	0.10	15431.69	1.54	2.94	0.03	0.30	1.17	0.08	10098.27	1.01
Median	181.50	1.00	0.48	28100.00	2.81	1.69	24.63	16.35	47.50	5.92	824.92	0.08	41500.00	4.15	17.86	0.17	0.80	0.33	0.10	36800.00	3.68
75Percentile-Median	471.50	1.00	0.42	16450.00	1.65	2.28	4.33	4.83	18.50	1.56	779.12	0.08	10675.00	1.07	2.66	0.01	0.30	0.32	0.07	6825.00	0.68
75 Percentile	653.00	2.00	0.90	44550.00	4.46	3.97	28.96	21.18	66.00	7.48	1604.03	0.16	52175.00	5.22	20.52	0.18	1.10	0.65	0.17	43625.00	4.36
90 Percentile	1066.60	2.00	2.42	57650.00	5.77	7.59	36.03	25.92	110.10	9.06	2449.47	0.24	57630.00	5.76	22.51	0.18	1.30	1.83	0.25	46700.00	4.67
Maximum	1440.00	2.23	16.28	74300.00	7.43	19.20	46.00	32.20	216.00	10.20	4613.38	0.46	99800.00	9.98	24.30	0.25	1.60	3.90	0.30	49300.00	4.93
Interquartile Range (IQR) 1	559.50	1.00	0.66	25550.00	2.56	3.38	8.36	8.80	31.00	2.58	1014.78	0.10	15900.00	1.59	3.94	0.03	0.48	0.56	0.09	12475.00	1.25
Variance	172505.43	0.27	7.28	289886025.64	2.90	15.38	60.42	47.12	1710.08	4.81	933105.49	0.01	238137173.08	2.38	8.65	0.00	0.09	1.36	0.01	101974974.36	1.02
Skewness	1.17	0.30	4.77	0.61	0.61	2.22	0.65	0.32	1.98	-0.04	1.60	1.60	1.81	1.81	0.33	1.88	0.93	2.38	0.98	-0.84	-0.84
Coefficient of Variation (CoV) 2	1.04	0.39	2.11	0.53	0.53	1.24	0.31	0.40	0.68	0.36	0.81	0.81	0.34	0.34	0.16	0.18	0.34	1.56	0.64	0.29	0.29
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
SULPHURETS - UP Hazelton																					
Count	114	114	114	114	114	114	114	114	114	70	114	114	114	114	70	30	114	30	30	114	114
Minimum	29.00	0.50	0.02	4000.00	0.40	0.01	8.00	3.90	3.00	1.00	84.90	0.01	21100.00	2.11	11.37	0.07	0.30	0.01	0.03	13300.00	1.33
10 Percentile	96.90	0.50	0.06	12370.00	1.24	0.05	12.07	9.63	8.30	1.98	334.03	0.03	30160.00	3.02	14.11	0.10	0.47	0.01	0.04	24120.00	2.41
25 Percentile	149.00	0.50	0.12	26125.00	2.61	0.05	14.51	13.13	24.25	2.71	747.25	0.07	37550.00	3.76	15.09	0.12	0.60	0.02	0.06	28725.00	2.87
Median-25Percentile	462.00	0.50	0.11	10375.00	1.04	0.04	2.63	5.38	38.75	0.89	502.40	0.05	9050.00	0.91	1.81	0.02	0.14	0.01	0.02	6725.00	0.67
Mean	1053.68	1.13	0.60	35813.16	3.58	0.35	17.23	20.34	65.58	4.02	1436.10	0.14	46102.63	4.61	16.91	0.14	0.78	0.04	0.10	35650.00	3.57
Standard Deviation	1138.56	0.60	1.05	16369.81	1.64	1.34	4.12	9.55	48.64	1.93	1029.81	0.10	12467.79	1.25	2.53	0.04	0.29	0.03	0.05	9748.18	0.97
Median	611.00	1.00	0.23	36500.00	3.65	0.09	17.13	18.50	63.00	3.60	1249.65	0.12	46600.00	4.66	16.90	0.14	0.74	0.03	0.09	35450.00	3.55
75Percentile-Median	1161.50	0.26	0.45	8275.00	0.83	0.04	2.47	7.93	35.75	1.48	686.10	0.07	6875.00	0.69	1.47	0.03	0.17	0.02	0.03	6625.00	0.66
75 Percentile	1772.50	1.26	0.68	44775.00	4.48	0.13	19.60	26.43	98.75	5.08	1935.75	0.19	53475.00	5.35	18.37	0.17	0.90	0.05	0.12	42075.00	4.21
90 Percentile	2480.00	2.00	1.29	58490.00	5.85	0.26	21.80	32.78	129.70	6.26	2658.77	0.27	62340.00	6.23	20.59	0.19	1.10	0.08	0.17	47250.00	4.73
Maximum	7150.00	3.00	8.20	90500.00	9.05	11.30	37.00	51.00	199.00	10.35	6360.00	0.64	84600.00	8.46	22.90	0.22	2.20	0.10	0.19	65600.00	6.56
Interquartile Range (IQR) 1	1623.50	0.76	0.56	18650.00	1.87	0.08	5.10	13.30	74.50	2.36	1188.50	0.12	15925.00	1.59	3.28	0.05	0.30	0.03	0.06	13350.00	1.34
Variance	1296324.06	0.36	1.09	267970533.30	2.68	1.80	17.00	91.24	2365.50	3.74	1060517.59	0.01	155445745.23	1.55	6.38	0.00	0.08	0.00	0.00	95026946.90	0.95
Skewness	1.88	1.04	4.89	0.22	0.22	6.67	0.91	0.62	0.71	1.00	1.57	1.57	0.36	0.36	0.24	0.36	1.48	0.96	0.52	0.30	0.30
Coefficient of Variation (CoV) 2	1.08	0.53	1.75	0.46	0.46	3.80	0.24	0.47	0.74	0.48	0.72	0.72	0.27	0.27	0.15	0.26	0.37	0.66	0.49	0.27	0.27
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Ba ppm	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %
SULPHURETS - Monzonite																					
Count	85	85	85	85	85	85	85	85	85	56	85	85	85	85	56	32	85	32	32	85	85
Minimum	111.00	0.50	0.02	3600.00	0.36	0.01	2.00	1.70	2.00	0.65	40.40	0.00	9100.00	0.91	13.22	0.07	0.30	0.01	0.02	12700.00	1.27
10 Percentile	413.80	0.50	0.04	17380.00	1.74	0.03	13.34	4.88	5.00	1.55	131.10	0.01	21800.00	2.18	14.76	0.12	0.51	0.01	0.03	23120.00	2.31
25 Percentile	1150.00	1.00	0.05	23400.00	2.34	0.04	16.25	6.40	12.00	2.58	221.20	0.02	25200.00	2.52	16.26	0.13	0.70	0.02	0.04	30800.00	3.08
Median-25Percentile	1593.00	0.00	0.05	3700.00	0.37	0.01	2.85	2.00	36.00	0.54	238.18	0.02	4000.00	0.40	2.70	0.02	0.40	0.00	0.02	6500.00	0.65
Mean	2394.11	1.19	0.24	31750.59	3.18	0.06	19.73	10.53	49.98	3.40	654.23	0.07	32537.65	3.25	18.58	0.16	1.07	0.03	0.07	37425.88	3.74
Standard Deviation	1351.61	0.49	0.36	15393.50	1.54	0.05	6.25	6.93	42.38	1.51	600.92	0.06	10805.39	1.08	2.63	0.04	0.40	0.02	0.04	10117.71	1.01
Median	2743.00	1.00	0.10	27100.00	2.71	0.05	19.10	8.40	48.00	3.12	459.38	0.05	29200.00	2.92	18.96	0.15	1.10	0.02	0.07	37300.00	3.73
75Percentile-Median	587.00	0.53	0.16	11000.00	1.10	0.02	3.78	3.80	29.00	1.12	386.62	0.04	10100.00	1.01	1.72	0.04	0.30	0.02	0.04	8900.00	0.89
75 Percentile	3330.00	1.53	0.26	38100.00	3.81	0.07	22.88	12.20	77.00	4.24	846.00	0.08	39300.00	3.93	20.68	0.18	1.40	0.04	0.11	46200.00	4.62
90 Percentile	4066.00	2.00	0.50	55000.00	5.50	0.10	26.36	18.90	99.20	5.42	1344.00	0.13	48260.00	4.83	21.85	0.23	1.60	0.06	0.12	49060.00	4.91
Maximum	5750.00	2.13	2.52	85000.00	8.50	0.49	41.00	41.30	212.00	7.87	2820.00	0.28	66400.00	6.64	23.00	0.26	1.90	0.08	0.16	59900.00	5.99
Interquartile Range (IQR) 1	2180.00	0.53	0.21	14700.00	1.47	0.03	6.63	5.80	65.00	1.66	624.80	0.06	14100.00	1.41	4.42	0.05	0.70	0.02	0.06	15400.00	1.54
Variance	1826858.64	0.24	0.13	236959910.36	2.37	0.00	39.04	47.99	1796.21	2.29	361102.48	0.00	116756422.97	1.17	6.93	0.00	0.16	0.00	0.00	102368131.65	1.02
Skewness	-0.07	0.42	3.97	1.09	1.09	6.35	0.54	2.14	1.12	0.69	1.66	1.66	0.60	0.60	-0.25	0.65	0.02	1.16	0.74	-0.19	-0.19
Coefficient of Variation (CoV) 2	0.56	0.41	1.51	0.48	0.48	0.87	0.32	0.66	0.85	0.44	0.92	0.92	0.33	0.33	0.14	0.28	0.37	0.68	0.50	0.27	0.27
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
SULPHURETS - Undefined																					
Count	103	103	103	103	103	103	103	103	103	59	103	103	103	103	59	38	103	38	38	103	103
Minimum	17.00	0.50	0.02	3600.00	0.36	0.03	5.63	6.40	1.00	1.10	24.71	0.00	32500.00	3.25	11.62	0.08	0.30	0.01	0.05	18500.00	1.85
10 Percentile	95.60	0.50	0.10	19000.00	1.90	0.05	11.45	12.30	15.20	1.72	58.01	0.01	37700.00	3.77	13.92	0.10	0.53	0.01	0.06	24420.00	2.44
25 Percentile	295.00	0.50	0.26	26400.00	2.64	0.06	14.73	14.35	28.00	1.98	97.15	0.01	43500.00	4.35	15.83	0.12	0.70	0.02	0.09	26800.00	2.68
Median-25Percentile	564.00	0.50	0.30	9000.00	0.90	0.10	4.72	3.55	24.00	1.12	128.73	0.01	8000.00	0.80	1.28	0.03	0.20	0.02	0.05	7900.00	0.79
Mean	1181.07	1.07	1.39	34797.09	3.48	2.03	19.56	20.14	67.83	3.65	419.99	0.04	53397.09	5.34	17.38	0.16	0.94	0.29	0.22	34381.55	3.44
Standard Deviation	1092.13	0.52	4.32	12332.92	1.23	8.56	6.90	9.23	51.63	1.97	507.15	0.05	15336.89	1.53	2.77	0.10	0.34	1.14	0.31	8541.36	0.85
Median	859.00	1.00	0.56	35400.00	3.54	0.16	19.45	17.90	52.00	3.10	225.88	0.02	51500.00	5.15	17.11	0.15	0.90	0.04	0.13	34700.00	3.47
75Percentile-Median	798.00	0.28	0.75	7300.00	0.73	0.39	3.50	6.25	46.50	1.65	314.87	0.03	8400.00	0.84	1.54	0.02	0.20	0.05	0.08	7050.00	0.71
75 Percentile	1657.00	1.28	1.31	42700.00	4.27	0.55	22.95	24.15	98.50	4.75	540.75	0.05	59900.00	5.99	18.65	0.17	1.10	0.09	0.21	41750.00	4.18
90 Percentile	2777.40	1.98	2.16	51920.00	5.19	2.50	26.00	30.70	145.80	6.43	1021.86	0.10	68480.00	6.85	20.40	0.18	1.40	0.16	0.29	45700.00	4.57
Maximum	4687.00	3.00	42.70	60600.00	6.06	73.60	49.20	65.20	246.00	8.22	2540.00	0.25	123300.00	12.33	24.70	0.75	2.00	6.75	1.75	51000.00	5.10
Interquartile Range (IQR) 1	1362.00	0.78	1.05	16300.00	1.63	0.49	8.22	9.80	70.50	2.77	443.60	0.04	16400.00	1.64	2.82	0.05	0.40	0.07	0.13	14950.00	1.50
Variance	1192737.34	0.27	18.70	152100873.79	1.52	73.19	47.58	85.16	2665.51	3.88	257201.90	0.00	235220285.55	2.35	7.69	0.01	0.12	1.30	0.09	72954852.47	0.73
Skewness	1.25	1.10	8.82	-0.08	-0.08	6.79	1.43	2.08	1.00	0.86	2.31	2.31	1.87	1.87	0.58	5.22	0.82	5.33	4.05	0.11	0.11
Coefficient of Variation (CoV) 2	0.92	0.49	3.12	0.35	0.35	4.21	0.35	0.46	0.76	0.54	1.21	1.21	0.29	0.29	0.16	0.66	0.36	3.91	1.43	0.25	0.25
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
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% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Ba ppm	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %
MITCHELL - All																					
Count	936	936	936	936	936	936	936	936	936	928	936	936	936	936	928	739	936	739	739	936	936
Minimum	9.00	0.05	0.01	200.00	0.02	0.01	2.28	0.60	1.00	0.30	14.20	0.00	6900.00	0.69	4.10	0.03	0.01	0.01	0.01	2300.00	0.23
10 Percentile	57.00	0.50	0.10	3600.00	0.36	0.06	9.17	6.50	3.00	1.57	130.00	0.01	27150.00	2.72	13.10	0.11	0.29	0.01	0.02	21950.00	2.20
25 Percentile	120.00	0.91	0.23	9900.00	0.99	0.14	13.07	9.28	4.00	2.41	420.75	0.04	34475.00	3.45	14.95	0.13	0.40	0.01	0.04	29400.00	2.94
Median-25Percentile	240.00	0.25	0.24	9200.00	0.92	0.22	5.29	2.83	6.00	1.04	356.46	0.04	7825.00	0.78	1.75	0.03	0.20	0.01	0.02	8300.00	0.83
Mean	848.00	1.31	1.08	21194.87	2.12	1.28	18.77	12.42	34.30	3.64	960.04	0.10	42472.22	4.25	17.24	0.16	0.71	0.06	0.08	37161.86	3.72
Standard Deviation	1109.80	0.65	2.08	14666.78	1.47	5.10	8.97	5.38	52.21	1.73	832.09	0.08	14301.29	1.43	4.58	0.05	0.53	0.16	0.12	11502.68	1.15
Median	360.00	1.16	0.47	19100.00	1.91	0.36	18.35	12.10	10.00	3.45	777.21	0.08	42300.00	4.23	16.70	0.16	0.60	0.02	0.06	37700.00	3.77
75Percentile-Median	780.00	0.50	0.59	10300.00	1.03	0.34	4.29	2.90	26.00	1.22	516.43	0.05	6700.00	0.67	1.86	0.03	0.30	0.02	0.03	7400.00	0.74
75 Percentile	1140.00	1.65	1.06	29400.00	2.94	0.69	22.64	15.00	36.00	4.67	1293.64	0.13	49000.00	4.90	18.55	0.19	0.90	0.04	0.09	45100.00	4.51
90 Percentile	2335.00	2.11	2.39	40500.00	4.05	1.59	27.30	18.15	111.00	5.86	1927.87	0.19	57250.00	5.73	21.76	0.21	1.30	0.10	0.13	51250.00	5.13
Maximum	6112.00	4.58	29.40	86700.00	8.67	65.10	111.00	41.20	311.00	13.10	10000.00	1.00	162500.00	16.25	43.40	0.54	4.00	2.58	2.47	78900.00	7.89
Interquartile Range (IQR) 1	1020.00	0.74	0.83	19500.00	1.95	0.55	9.58	5.73	32.00	2.27	872.89	0.09	14525.00	1.45	3.60	0.06	0.50	0.03	0.05	15700.00	1.57
Variance	1231645.29	0.43	4.32	215114433.57	2.15	26.04	80.49	28.99	2726.18	3.01	692381.98	0.01	204527035.06	2.05	20.98	0.00	0.28	0.02	0.01	132311709.48	1.32
Skewness	2.09	1.33	6.46	1.03	1.03	8.59	2.54	1.19	2.31	0.97	2.84	2.84	1.32	1.32	1.51	0.41	2.36	8.95	13.41	0.03	0.03
Coefficient of Variation (CoV) 2	1.31	0.50	1.93	0.69	0.69	3.98	0.48	0.43	1.52	0.48	0.87	0.87	0.34	0.34	0.27	0.31	0.74	2.75	1.51	0.31	0.31
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
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Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
MITCHELL - Overburden																					
Count	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Minimum	520.00	0.80	0.03	2200.00	0.22	0.04	11.60	7.70	3.00	1.28	660.00	0.07	21900.00	2.19	13.20	0.13	0.30	0.01	0.01	28300.00	2.83
10 Percentile	724.00	0.90	0.07	2680.00	0.27	0.09	11.90	8.00	3.00	1.92	742.80	0.07	23880.00	2.39	14.46	0.14	0.42	0.02	0.02	31480.00	3.15
25 Percentile	1055.00	0.99	0.18	7700.00	0.77	0.15	15.95	8.30	3.00	3.00	858.00	0.09	33300.00	3.33	15.30	0.15	0.55	0.02	0.03	35800.00	3.58
Median-25Percentile	435.00	0.21	0.19	8100.00	0.81	0.14	4.45	0.10	2.00	1.91	217.00	0.02	8200.00	0.82	1.65	0.00	0.05	0.01	0.03	5600.00	0.56
Mean	1987.14	1.29	0.95	16442.86	1.64	0.35	21.70	11.24	20.86	4.11	1295.86	0.13	38314.29	3.83	17.94	0.15	0.71	0.03	0.06	43100.00	4.31
Standard Deviation	1459.56	0.45	1.33	13410.67	1.34	0.36	8.65	4.07	42.47	1.75	707.42	0.07	10390.93	1.04	4.08	0.02	0.30	0.01	0.04	11528.80	1.15
Median	1490.00	1.19	0.36	15800.00	1.58	0.28	20.40	8.40	5.00	4.90	1075.00	0.11	41500.00	4.15	16.95	0.15	0.60	0.03	0.05	41400.00	4.14
75Percentile-Median	1075.00	0.28	0.85	4250.00	0.43	0.08	5.55	5.60	2.50	0.46	430.00	0.04	3550.00	0.36	3.15	0.01	0.30	0.01	0.04	7650.00	0.77
75 Percentile	2565.00	1.47	1.21	20050.00	2.01	0.36	25.95	14.00	7.50	5.36	1505.00	0.15	45050.00	4.51	20.10	0.16	0.90	0.04	0.09	49050.00	4.91
90 Percentile	3772.00	1.81	2.63	30560.00	3.06	0.68	31.06	15.90	52.80	5.80	2196.00	0.22	46480.00	4.65	23.16	0.17	1.02	0.04	0.10	56240.00	5.62
Maximum	4660.00	2.12	3.53	41600.00	4.16	1.11	36.10	18.00	117.00	5.86	2610.00	0.26	48100.00	4.81	24.60	0.18	1.20	0.05	0.11	62300.00	6.23
Interquartile Range (IQR) 1	1510.00	0.49	1.03	12350.00	1.24	0.21	10.00	5.70	4.50	2.36	647.00	0.06	11750.00	1.18	4.80	0.02	0.35	0.02	0.06	13250.00	1.33
Variance	2130323.81	0.20	1.76	179846190.48	1.80	0.13	74.85	16.56	1803.48	3.07	500438.81	0.01	107971428.57	1.08	16.65	0.00	0.09	0.00	0.00	132913333.33	1.33
Skewness	1.18	1.09	1.62	1.05	1.05	2.03	0.47	0.82	2.63	-0.74	1.36	1.36	-1.05	-1.05	0.79	0.51	0.37	0.35	0.22	0.55	0.55
Coefficient of Variation (CoV) 2	0.73	0.35	1.39	0.82	0.82	1.03	0.40	0.36	2.04	0.43	0.55	0.55	0.27	0.27	0.23	0.11	0.42	0.47	0.68	0.27	0.27
NPR < 1.0 or NPR = 1.0																					
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% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Ba ppm	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %
MITCHELL - UP Hazelton																					
Count	273	273	273	273	273	273	273	273	273	273	273	273	273	273	273	245	273	245	245	273	273
Minimum	33.00	0.50	0.04	900.00	0.09	0.01	2.86	0.60	1.00	0.71	14.20	0.00	8800.00	0.88	5.74	0.03	0.30	0.01	0.01	14400.00	1.44
10 Percentile	200.00	1.00	0.26	8420.00	0.84	0.04	8.42	3.82	3.00	1.56	104.60	0.01	17860.00	1.79	14.64	0.10	0.47	0.01	0.02	33880.00	3.39
25 Percentile	390.00	1.30	0.47	14200.00	1.42	0.07	11.34	8.80	6.00	2.14	396.00	0.04	28500.00	2.85	16.15	0.13	0.60	0.02	0.04	40700.00	4.07
Median-25Percentile	470.00	0.36	0.59	5600.00	0.56	0.09	4.91	3.60	8.00	1.30	383.00	0.04	7500.00	0.75	1.75	0.03	0.30	0.01	0.02	4900.00	0.49
Mean	1060.70	1.79	2.07	21339.56	2.13	0.82	19.13	12.72	25.64	3.85	946.02	0.09	36268.86	3.63	19.44	0.16	1.07	0.07	0.07	45750.55	4.58
Standard Deviation	864.40	0.72	3.20	11398.61	1.14	4.18	12.27	6.55	27.01	2.11	817.98	0.08	13499.91	1.35	5.71	0.05	0.70	0.21	0.05	9666.55	0.97
Median	860.00	1.66	1.06	19800.00	1.98	0.16	16.25	12.40	14.00	3.44	779.00	0.08	36000.00	3.60	17.90	0.16	0.90	0.03	0.06	45600.00	4.56
75Percentile-Median	580.00	0.49	1.02	8200.00	0.82	0.31	7.35	3.70	21.00	1.51	531.00	0.05	8300.00	0.83	2.20	0.03	0.40	0.02	0.03	5900.00	0.59
75 Percentile	1440.00	2.15	2.08	28000.00	2.80	0.47	23.60	16.10	35.00	4.95	1310.00	0.13	44300.00	4.43	20.10	0.19	1.30	0.05	0.09	51500.00	5.15
90 Percentile	2292.00	2.66	4.83	36620.00	3.66	1.03	32.00	19.60	68.20	6.85	1799.00	0.18	52780.00	5.28	28.06	0.22	2.08	0.09	0.12	56780.00	5.68
Maximum	4774.00	4.58	29.40	86700.00	8.67	60.10	111.00	41.20	118.00	11.80	5620.00	0.56	108500.00	10.85	43.40	0.37	4.00	2.58	0.44	78900.00	7.89
Interquartile Range (IQR) 1	1050.00	0.85	1.61	13800.00	1.38	0.40	12.26	7.30	29.00	2.81	914.00	0.09	15800.00	1.58	3.95	0.06	0.70	0.03	0.05	10800.00	1.08
Variance	747180.85	0.51	10.22	129928282.16	1.30	17.49	150.47	42.91	729.55	4.46	669083.56	0.01	182247446.13	1.82	32.55	0.00	0.49	0.04	0.00	93442214.77	0.93
Skewness	1.36	1.07	4.38	1.10	1.10	11.63	2.90	0.71	1.52	1.08	2.15	2.15	0.55	0.55	1.55	0.17	1.70	8.87	2.91	0.10	0.10
Coefficient of Variation (CoV) 2	0.81	0.40	1.54	0.53	0.53	5.10	0.64	0.52	1.05	0.55	0.86	0.86	0.37	0.37	0.29	0.32	0.65	2.99	0.69	0.21	0.21
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
MITCHELL - LP Hazelton																					
Count	553	553	553	553	553	553	553	553	553	553	553	553	553	553	553	412	553	412	412	553	553
Minimum	9.00	0.05	0.01	200.00	0.02	0.01	2.66	3.20	1.00	0.30	23.00	0.00	17600.00	1.76	4.10	0.03	0.01	0.01	0.01	2300.00	0.23
10 Percentile	41.20	0.50	0.07	3400.00	0.34	0.16	9.89	8.10	3.00	1.91	152.20	0.02	34200.00	3.42	12.42	0.12	0.20	0.01	0.03	19440.00	1.94
25 Percentile	90.00	0.74	0.15	8400.00	0.84	0.28	14.40	9.80	4.00	2.77	474.00	0.05	39800.00	3.98	14.45	0.14	0.30	0.01	0.04	25900.00	2.59
Median-25Percentile	110.00	0.26	0.20	9800.00	0.98	0.21	4.20	2.50	4.00	0.83	334.00	0.03	5100.00	0.51	1.74	0.02	0.17	0.00	0.02	6700.00	0.67
Mean	493.15	1.02	0.64	21448.10	2.14	1.69	18.46	12.81	39.10	3.71	989.86	0.10	46423.69	4.64	15.82	0.16	0.51	0.06	0.09	31899.64	3.19
Standard Deviation	776.75	0.42	1.19	16105.36	1.61	5.91	7.00	4.67	60.59	1.45	758.45	0.08	12192.45	1.22	2.92	0.05	0.29	0.14	0.15	9169.69	0.92
Median	200.00	1.00	0.35	18200.00	1.82	0.49	18.60	12.30	8.00	3.60	808.00	0.08	44900.00	4.49	16.19	0.16	0.47	0.01	0.06	32600.00	3.26
75Percentile-Median	310.00	0.22	0.32	13400.00	1.34	0.39	3.50	2.60	28.00	1.07	532.00	0.05	5900.00	0.59	1.46	0.03	0.13	0.03	0.04	6200.00	0.62
75 Percentile	510.00	1.22	0.67	31600.00	3.16	0.88	22.10	14.90	36.00	4.67	1340.00	0.13	50800.00	5.08	17.65	0.19	0.60	0.04	0.09	38800.00	3.88
90 Percentile	1284.00	1.55	1.36	44480.00	4.45	2.06	25.20	17.68	140.40	5.56	1974.00	0.20	59640.00	5.96	18.80	0.21	0.80	0.13	0.14	42980.00	4.30
Maximum	4730.00	3.27	18.35	84900.00	8.49	65.10	68.20	40.80	311.00	13.10	5066.42	0.51	118400.00	11.84	31.45	0.54	2.53	1.56	2.47	54600.00	5.46
Interquartile Range (IQR) 1	420.00	0.48	0.52	23200.00	2.32	0.60	7.70	5.10	32.00	1.90	866.00	0.09	11000.00	1.10	3.20	0.05	0.30	0.03	0.06	12900.00	1.29
Variance	603339.93	0.18	1.42	259382500.92	2.59	34.95	48.95	21.83	3671.69	2.10	575253.48	0.01	148655868.98	1.49	8.50	0.00	0.08	0.02	0.02	84083224.51	0.84
Skewness	3.02	0.95	8.51	0.96	0.96	7.20	1.23	1.84	1.98	0.66	1.56	1.56	1.50	1.50	-0.53	0.99	1.83	6.26	11.01	-0.37	-0.37
Coefficient of Variation (CoV) 2	1.58	0.41	1.86	0.75	0.75	3.49	0.38	0.36	1.55	0.39	0.77	0.77	0.26	0.26	0.18	0.29	0.56	2.45	1.74	0.29	0.29
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
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% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Ba ppm	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %
MITCHELL - Monzonite																					
Count	80	80	80	80	80	80	80	80	80	72	80	80	80	80	72	62	80	62	62	80	80
Minimum	77.00	0.50	0.07	2000.00	0.20	0.01	3.94	1.10	1.00	0.78	51.10	0.01	6900.00	0.69	13.49	0.03	0.30	0.01	0.01	15400.00	1.54
10 Percentile	661.20	1.18	0.13	6400.00	0.64	0.04	9.68	5.03	2.00	1.00	110.05	0.01	21030.00	2.10	15.36	0.03	0.40	0.01	0.03	37940.00	3.79
25 Percentile	1122.50	1.38	0.23	14475.00	1.45	0.06	11.96	6.30	2.00	1.20	210.24	0.02	27900.00	2.79	17.28	0.12	0.72	0.01	0.04	42775.00	4.28
Median-25Percentile	1337.50	0.40	0.14	8875.00	0.89	0.03	8.74	1.30	4.00	0.86	192.26	0.02	3700.00	0.37	3.19	0.03	0.28	0.01	0.01	4025.00	0.40
Mean	2689.13	1.78	0.61	22492.50	2.25	0.15	19.79	9.08	21.68	2.62	658.32	0.07	32255.00	3.23	20.99	0.14	0.98	0.03	0.05	46622.50	4.66
Standard Deviation	1696.54	0.61	0.66	11445.16	1.14	0.19	7.92	4.42	30.01	1.88	643.43	0.06	10219.14	1.02	4.76	0.06	0.42	0.03	0.04	7844.92	0.78
Median	2460.00	1.78	0.37	23350.00	2.34	0.09	20.70	7.60	6.00	2.06	402.50	0.04	31600.00	3.16	20.46	0.15	1.00	0.02	0.05	46800.00	4.68
75Percentile-Median	1687.50	0.22	0.31	5825.00	0.58	0.08	5.30	4.73	27.75	1.18	557.37	0.06	4325.00	0.43	3.19	0.03	0.20	0.01	0.01	3875.00	0.39
75 Percentile	4147.50	2.00	0.68	29175.00	2.92	0.17	26.00	12.33	33.75	3.24	959.87	0.10	35925.00	3.59	23.65	0.18	1.20	0.03	0.06	50675.00	5.07
90 Percentile	4925.00	2.26	1.36	33160.00	3.32	0.28	30.01	14.91	63.10	4.99	1343.31	0.13	43610.00	4.36	25.88	0.20	1.35	0.05	0.08	53610.00	5.36
Maximum	6112.00	4.48	3.58	78100.00	7.81	1.30	35.90	21.70	133.00	9.50	2760.00	0.28	80700.00	8.07	39.00	0.22	2.70	0.13	0.27	77400.00	7.74
Interquartile Range (IQR) 1	3025.00	0.62	0.45	14700.00	1.47	0.11	14.04	6.03	31.75	2.04	749.63	0.07	8025.00	0.80	6.38	0.06	0.48	0.02	0.02	7900.00	0.79
Variance	2878243.66	0.37	0.43	130991588.61	1.31	0.04	62.80	19.51	900.68	3.54	414004.82	0.00	104430860.76	1.04	22.70	0.00	0.18	0.00	0.00	61542778.48	0.62
Skewness	0.22	1.29	2.53	1.25	1.25	4.18	-0.08	0.79	1.67	1.70	1.62	1.62	1.23	1.23	1.20	-0.87	1.12	2.21	3.76	-0.08	-0.08
Coefficient of Variation (CoV) 2	0.63	0.34	1.09	0.51	0.51	1.32	0.40	0.49	1.38	0.72	0.98	0.98	0.32	0.32	0.23	0.41	0.43	1.00	0.66	0.17	0.17
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
MITCHELL - Leach breccia/bornite breccia																					
Count	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	13	23	13	13	23	23
Minimum	9.00	0.38	0.22	700.00	0.07	0.01	2.28	2.90	2.00	0.60	71.70	0.01	20200.00	2.02	5.00	0.13	0.04	0.01	0.02	9400.00	0.94
10 Percentile	17.20	0.50	0.60	1980.00	0.20	0.08	6.96	6.00	3.00	1.32	192.80	0.02	32160.00	3.22	7.45	0.14	0.11	0.01	0.03	18060.00	1.81
25 Percentile	25.00	0.50	0.74	2450.00	0.25	0.24	10.97	9.40	3.50	1.98	608.82	0.06	43400.00	4.34	9.96	0.16	0.30	0.01	0.04	22750.00	2.28
Median-25Percentile	45.00	0.35	0.28	750.00	0.08	0.40	6.29	1.60	1.50	0.44	84.18	0.01	12000.00	1.20	4.24	0.02	0.20	0.00	0.04	8050.00	0.81
Mean	104.74	0.86	1.49	10321.74	1.03	1.04	17.31	11.62	69.78	2.46	1356.92	0.14	57900.00	5.79	13.51	0.19	0.48	0.06	0.08	27026.09	2.70
Standard Deviation	94.32	0.36	1.33	19225.72	1.92	1.20	8.58	5.71	86.77	1.03	2130.91	0.21	28299.34	2.83	4.37	0.05	0.24	0.12	0.04	6744.51	0.67
Median	70.00	0.85	1.02	3200.00	0.32	0.64	17.25	11.00	5.00	2.42	693.00	0.07	55400.00	5.54	14.20	0.18	0.50	0.01	0.08	30800.00	3.08
75Percentile-Median	85.00	0.20	0.57	1300.00	0.13	0.58	5.55	1.80	120.00	0.40	419.74	0.04	8050.00	0.81	2.56	0.02	0.14	0.07	0.03	1300.00	0.13
75 Percentile	155.00	1.05	1.59	4500.00	0.45	1.22	22.80	12.80	125.00	2.82	1112.74	0.11	63450.00	6.35	16.76	0.20	0.64	0.08	0.11	32100.00	3.21
90 Percentile	230.00	1.20	3.14	31360.00	3.14	2.13	26.60	16.50	219.60	4.02	1874.00	0.19	82560.00	8.26	18.32	0.23	0.80	0.09	0.13	33300.00	3.33
Maximum	330.00	1.78	5.90	74400.00	7.44	4.44	36.18	31.90	245.00	4.70	10000.00	1.00	162500.00	16.25	20.30	0.31	0.82	0.43	0.16	34700.00	3.47
Interquartile Range (IQR) 1	130.00	0.55	0.85	2050.00	0.21	0.98	11.84	3.40	121.50	0.84	503.92	0.05	20050.00	2.01	6.80	0.04	0.34	0.07	0.07	9350.00	0.94
Variance	8896.20	0.13	1.76	369628142.29	3.70	1.44	73.59	32.63	7529.45	1.07	4540776.64	0.05	800852727.27	8.01	19.07	0.00	0.06	0.01	0.00	45488379.45	0.45
Skewness	1.12	0.73	2.05	2.69	2.69	1.93	0.11	1.97	0.98	0.35	3.53	3.53	2.34	2.34	-0.48	1.41	-0.36	3.13	0.14	-1.06	-1.06
Coefficient of Variation (CoV) 2	0.90	0.42	0.89	1.86	1.86	1.16	0.50	0.49	1.24	0.42	1.57	1.57	0.49	0.49	0.32	0.26	0.50	1.86	0.52	0.25	0.25
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Ba ppm	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %
IRON CAP - All																					
Count	75	75	75	51	75	75	75	75	75	50	75	75	58	75	50	0	75	0	0	14	75
Minimum	21.00	0.50	0.05	0.00	0.03	0.04	4.84	2.50	12.00	2.60	57.59	0.01	0.00	0.54	7.86	0.00	0.21	0.00	0.00	33900.00	2.53
10 Percentile	31.40	1.00	0.32	2000.00	0.25	0.13	10.02	6.88	21.00	2.99	261.84	0.03	20850.00	2.11	14.21	#NUM!	0.51	#NUM!	#NUM!	38600.00	3.87
25 Percentile	47.00	1.00	0.55	2900.00	0.39	0.26	12.89	11.30	29.00	3.43	447.61	0.04	29925.00	3.12	16.18	#NUM!	0.63	#NUM!	#NUM!	41400.00	4.28
Median-25Percentile	28.00	1.00	0.31	5200.00	0.78	0.37	5.12	3.80	19.00	0.88	363.19	0.04	8675.00	0.72	1.91	#NUM!	0.24	#NUM!	#NUM!	8900.00	0.74
Mean	174.43	1.67	1.73	9086.27	1.31	1.76	21.77	16.35	54.19	4.83	1053.08	0.11	37643.10	3.79	17.92	#DIV/0!	0.86	#DIV/0!	#DIV/0!	51328.57	5.21
Standard Deviation	292.98	0.59	2.43	7156.90	1.21	2.75	16.67	9.60	30.30	1.81	822.21	0.08	13148.19	1.16	3.06	#DIV/0!	0.31	#DIV/0!	#DIV/0!	11745.40	1.22
Median	75.00	2.00	0.86	8100.00	1.16	0.63	18.00	15.10	48.00	4.30	810.80	0.08	38600.00	3.84	18.10	#NUM!	0.86	#NUM!	#NUM!	50300.00	5.02
75Percentile-Median	74.50	0.00	0.75	5200.00	0.55	1.26	7.37	3.65	29.00	1.38	646.63	0.06	8950.00	0.77	1.40	#NUM!	0.15	#NUM!	#NUM!	8125.00	0.91
75 Percentile	149.50	2.00	1.61	13300.00	1.71	1.89	25.37	18.75	77.00	5.68	1457.43	0.15	47550.00	4.61	19.50	#NUM!	1.01	#NUM!	#NUM!	58425.00	5.93
90 Percentile	417.40	2.00	3.90	18400.00	2.59	4.82	35.00	27.48	93.60	7.41	2190.54	0.22	52130.00	5.20	21.60	#NUM!	1.21	#NUM!	#NUM!	67540.00	6.80
Maximum	1757.00	3.00	13.50	26700.00	6.17	14.60	128.00	53.00	151.00	10.40	4014.60	0.40	59200.00	5.92	26.27	0.00	1.90	0.00	0.00	72000.00	8.41
Interquartile Range (IQR) 1	102.50	1.00	1.06	10400.00	1.33	1.63	12.49	7.45	48.00	2.25	1009.82	0.10	17625.00	1.49	3.32	#NUM!	0.38	#NUM!	#NUM!	17025.00	1.65
Variance	85837.00	0.35	5.89	51221207.84	1.47	7.56	277.73	92.09	917.94	3.29	676037.42	0.01	172874776.16	1.35	9.39	#DIV/0!	0.10	#DIV/0!	#DIV/0!	137954505.49	1.48
Skewness	3.61	-0.28	3.18	0.79	2.00	3.03	4.20	1.73	0.73	1.16	1.30	1.30	-0.88	-0.66	-0.31	#DIV/0!	0.70	#DIV/0!	#DIV/0!	0.34	0.43
Coefficient of Variation (CoV) 2	1.68	0.35	1.41	0.79	0.93	1.56	0.77	0.59	0.56	0.38	0.78	0.78	0.35	0.31	0.17	#DIV/0!	0.36	#DIV/0!	#DIV/0!	0.23	0.23
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	La ppm	Li ppm	Mg ppm	Mg %	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm
ALL																				
Count	1749	1749	1688	1749	1749	1749	1341	1541	1749	1541	1749	1541	1749	993	1607	1749	1541	1749	1009	1749
Minimum	0.20	1.20	300.00	0.03	16.00	0.10	200.00	0.02	0.29	0.10	0.01	1.76	8.30	0.00	300.00	0.02	0.12	0.30	1.00	0.20
10 Percentile	3.60	6.10	3900.00	0.38	189.60	2.00	860.00	0.08	1.90	2.00	0.10	6.20	63.50	0.00	4000.00	0.40	1.25	8.18	3.00	0.90
25 Percentile	5.80	9.70	7300.00	0.69	502.00	4.70	2160.00	0.18	3.40	3.40	0.14	9.48	80.10	0.01	11700.00	1.16	2.03	12.00	5.00	1.10
Median-25Percentile	3.00	5.00	4200.00	0.44	311.00	11.60	11140.00	0.96	2.10	3.10	679.86	9.52	17.90	0.03	13900.00	1.35	1.51	5.00	3.00	0.40
Mean	9.57	17.34	12257.76	1.20	1007.72	40.87	13816.70	1.29	5.78	13.33	683.73	64.73	101.28	0.17	29554.95	2.91	10.79	17.25	8.84	1.78
Standard Deviation	6.81	12.74	7039.04	0.70	1030.63	69.11	11201.95	1.12	3.35	16.25	692.02	273.62	32.64	0.37	22264.89	2.19	40.71	7.52	6.11	1.11
Median	8.80	14.70	11500.00	1.13	813.00	16.30	13300.00	1.14	5.50	6.50	680.00	19.00	98.00	0.04	25600.00	2.51	3.54	17.00	8.00	1.50
75Percentile-Median	2.80	6.40	4400.00	0.44	472.00	32.10	10000.00	1.10	1.91	10.60	620.00	26.30	20.50	0.13	17200.00	1.69	3.10	4.60	3.00	0.60
75 Percentile	11.60	21.10	15900.00	1.57	1285.00	48.40	23300.00	2.24	7.41	17.10	1300.00	45.30	118.50	0.18	42800.00	4.20	6.64	21.60	11.00	2.10
90 Percentile	15.10	31.10	21000.00	2.08	1850.00	103.50	28900.00	2.85	9.80	34.30	1550.00	104.00	144.10	0.47	61000.00	5.97	16.25	26.30	16.00	2.72
Maximum	78.60	135.30	60300.00	6.03	24800.00	995.10	49900.00	4.99	33.30	111.40	5800.00	5520.00	236.30	4.37	100000.00	10.00	790.00	50.40	55.00	17.80
Interquartile Range (IQR) 1	5.80	11.40	8600.00	0.88	783.00	43.70	21140.00	2.06	4.01	13.70	1299.86	35.82	38.40	0.17	31100.00	3.04	4.61	9.60	6.00	1.00
Variance	46.36	162.38	49548084.37	0.49	1062194.98	4776.43	125483725.57	1.26	11.26	263.92	478892.10	74870.38	1065.31	0.14	495725303.97	4.78	1657.44	56.62	37.30	1.23
Skewness	4.04	3.24	1.31	1.32	9.06	5.07	0.39	0.50	1.80	2.36	0.54	14.17	0.61	5.37	0.88	0.90	12.12	0.59	2.01	4.95
Coefficient of Variation (CoV) 2	0.71	0.73	0.57	0.58	1.02	1.69	0.81	0.87	0.58	1.22	1.01	4.23	0.32	2.13	0.75	0.75	3.77	0.44	0.69	0.62
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
% Samples NPR = 0.01																				
KERR - All																				
Count	305	305	305	305	305	305	154	293	305	293	305	293	305	88	305	305	293	305	88	305
Minimum	0.20	2.00	1000.00	0.10	16.00	0.10	220.00	0.02	0.29	0.50	0.01	1.76	10.10	0.00	400.00	0.02	0.20	3.00	1.00	0.30
10 Percentile	0.80	4.30	3140.00	0.31	46.40	0.70	558.00	0.05	1.40	2.50	0.11	5.60	53.88	0.00	4160.00	0.42	1.11	13.00	2.00	0.70
25 Percentile	2.50	6.70	5700.00	0.57	146.00	2.10	725.00	0.08	2.34	5.10	0.14	8.60	67.30	0.01	19700.00	1.97	2.57	19.00	9.00	1.00
Median-25Percentile	2.60	4.00	4200.00	0.42	645.00	4.36	545.00	0.08	1.71	3.20	0.04	6.30	13.80	0.02	27300.00	2.73	2.01	3.50	4.50	0.60
Mean	6.48	13.82	11204.92	1.12	1219.65	15.69	2874.48	0.46	4.70	16.15	474.01	34.95	81.56	0.07	45227.87	4.52	13.65	22.58	15.81	1.84
Standard Deviation	8.79	12.76	8026.21	0.80	1444.76	28.35	4863.79	0.71	3.91	19.12	806.99	64.98	22.38	0.09	29201.97	2.92	38.37	7.19	10.28	1.06
Median	5.10	10.70	9900.00	0.99	791.00	6.46	1270.00	0.15	4.05	8.30	0.18	14.90	81.10	0.03	47000.00	4.70	4.58	22.50	13.50	1.60
75Percentile-Median	2.10	6.70	5000.00	0.50	1029.00	10.91	845.00	0.21	2.35	11.10	1169.82	19.10	16.00	0.05	21000.00	2.10	5.32	3.50	9.50	0.80
75 Percentile	7.20	17.40	14900.00	1.49	1820.00	17.37	2115.00	0.36	6.40	19.40	1170.00	34.00	97.10	0.08	68000.00	6.80	9.90	26.00	23.00	2.40
90 Percentile	10.36	24.88	19020.00	1.90	2804.00	33.76	6220.00	1.51	7.46	42.00	1740.00	67.12	110.00	0.17	83000.00	8.30	26.40	31.60	30.00	3.20
Maximum	71.40	128.80	60300.00	6.03	9880.00	296.04	31800.00	3.90	33.30	111.40	5800.00	686.00	146.00	0.44	100000.00	10.00	500.61	48.00	55.00	5.90
Interquartile Range (IQR) 1	4.70	10.70	9200.00	0.92	1674.00	15.27	1390.00	0.29	4.06	14.30	1169.86	25.40	29.80	0.07	48300.00	4.83	7.33	7.00	14.00	1.40
Variance	77.33	162.70	64420008.63	0.64	2087330.65	803.55	23656466.72	0.51	15.31	365.65	651235.77	4222.04	501.00	0.01	852755306.30	8.53	1472.23	51.68	105.70	1.11
Skewness	4.75	4.72	2.14	2.14	2.58	5.13	3.53	2.31	3.97	2.29	1.82	5.82	-0.18	2.55	0.02	0.02	8.61	0.35	0.79	1.09
Coefficient of Variation (CoV) 2	1.36	0.92	0.72	0.72	1.18	1.81	1.69	1.56	0.83	1.18	1.70	1.86	0.27	1.37	0.65	0.65	2.81	0.32	0.65	0.57
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
% Samples NPR = 0.01																				

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	La ppm	Li ppm	Mg ppm	Mg %	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm
SULPHURETS - All																				
Count	433	433	433	433	433	433	365	365	433	365	433	365	433	166	360	433	365	433	166	433
Minimum	1.10	2.60	1400.00	0.14	62.00	0.40	300.00	0.03	0.95	1.60	0.01	2.50	26.90	0.00	300.00	0.02	1.47	3.00	1.00	0.20
10 Percentile	5.82	9.00	6700.00	0.67	506.60	1.70	3540.00	0.35	3.19	4.60	0.09	4.60	65.48	0.00	2000.00	0.21	2.55	8.30	2.00	1.00
25 Percentile	7.60	12.60	10300.00	1.03	724.00	3.86	8900.00	0.89	4.12	8.40	0.12	6.40	82.60	0.00	5075.00	0.56	3.40	12.40	3.00	1.30
Median-25Percentile	2.20	5.10	4700.00	0.47	325.00	7.55	10600.00	1.06	1.58	8.90	0.06	4.80	17.30	0.01	7925.00	0.73	2.10	5.00	2.00	0.40
Mean	10.39	18.62	15519.63	1.55	1215.10	34.10	17829.81	1.78	6.08	23.56	486.25	95.88	104.25	0.07	16369.72	1.61	14.93	18.16	5.64	1.98
Standard Deviation	4.25	8.69	7336.23	0.73	1366.16	79.44	9859.63	0.99	2.61	19.49	676.37	501.51	32.38	0.20	14370.22	1.38	54.02	7.86	4.12	1.37
Median	9.80	17.70	15000.00	1.50	1049.00	11.41	19500.00	1.95	5.70	17.30	0.17	11.20	99.90	0.01	13000.00	1.29	5.50	17.40	5.00	1.70
75Percentile-Median	2.30	5.30	5300.00	0.53	411.00	19.49	5630.00	0.56	2.10	17.00	1049.83	18.70	23.60	0.04	9325.00	0.91	3.80	5.80	2.00	0.60
75 Percentile	12.10	23.00	20300.00	2.03	1460.00	30.90	25130.00	2.51	7.80	34.30	1050.00	29.90	123.50	0.05	22325.00	2.20	9.30	23.20	7.00	2.30
90 Percentile	15.56	30.52	24360.00	2.44	1838.00	81.14	28666.00	2.87	9.69	51.36	1470.00	100.24	150.88	0.13	35020.00	3.38	17.34	28.80	10.00	3.00
Maximum	27.70	61.10	48100.00	4.81	24800.00	995.10	49900.00	4.99	18.00	93.90	2650.00	5520.00	208.00	2.23	77100.00	7.71	624.00	44.90	26.00	17.80
Interquartile Range (IQR) 1	4.50	10.40	10000.00	1.00	736.00	27.04	16230.00	1.62	3.68	25.90	1049.88	23.50	40.90	0.05	17250.00	1.64	5.90	10.80	4.00	1.00
Variance	18.09	75.52	53820285.05	0.54	1866398.12	6310.45	97212324.41	0.97	6.83	379.74	457473.66	251513.31	1048.37	0.04	206503231.12	1.91	2918.12	61.83	16.98	1.86
Skewness	1.22	1.19	0.74	0.74	12.57	6.99	-0.02	-0.02	0.75	1.21	1.02	8.94	0.49	8.11	1.49	1.50	8.94	0.65	2.11	5.11
Coefficient of Variation (CoV) 2	0.41	0.47	0.47	0.47	1.12	2.33	0.55	0.55	0.43	0.83	1.39	5.23	0.31	3.05	0.88	0.86	3.62	0.43	0.73	0.69
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
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Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
SULPHURETS - Overburden																				
Count	9	9	9	9	9	9	7	7	9	7	9	7	9	6	8	9	7	9	6	9
Minimum	7.60	8.70	3600.00	0.36	78.00	3.04	1100.00	0.11	3.00	4.60	0.11	3.10	49.00	0.00	700.00	0.07	1.64	9.80	1.00	1.10
10 Percentile	7.68	10.46	6720.00	0.67	334.00	3.17	9080.00	0.91	4.33	5.08	0.11	5.80	64.44	0.00	1750.00	0.19	1.80	11.32	1.50	1.10
25 Percentile	8.00	12.10	8200.00	0.82	1124.00	3.89	14800.00	1.48	5.30	7.20	0.18	7.80	76.10	0.01	2575.00	0.27	2.40	14.90	2.25	1.20
Median-25Percentile	1.40	2.00	6100.00	0.61	43.00	0.41	6900.00	0.69	2.59	4.50	969.82	0.40	21.50	0.00	5125.00	0.13	0.70	6.40	0.75	0.10
Mean	11.27	16.44	13333.33	1.33	1069.22	8.81	20744.29	2.07	7.04	13.87	1008.93	12.83	92.99	0.01	11237.50	1.04	18.14	19.68	3.50	1.90
Standard Deviation	4.40	6.37	5944.54	0.59	503.18	9.75	11861.28	1.19	2.58	9.06	951.53	10.85	26.69	0.01	12747.32	1.22	28.87	6.46	2.17	1.22
Median	9.40	14.10	14300.00	1.43	1167.00	4.30	21700.00	2.17	7.89	11.70	970.00	8.20	97.60	0.01	7700.00	0.40	3.10	21.30	3.00	1.30
75Percentile-Median	4.00	5.80	2800.00	0.28	308.00	3.93	7250.00	0.73	0.81	6.35	700.00	5.30	11.50	0.00	5950.00	0.83	15.88	3.30	1.50	1.00
75 Percentile	13.40	19.90	17100.00	1.71	1475.00	8.23	28950.00	2.90	8.70	18.05	1670.00	13.50	109.10	0.01	13650.00	1.23	18.98	24.60	4.50	2.30
90 Percentile	15.22	25.12	18940.00	1.89	1501.80	18.88	34364.00	3.44	9.38	23.46	1972.00	23.54	122.88	0.03	24060.00	2.19	49.74	26.54	6.00	2.82
Maximum	20.90	27.60	22300.00	2.23	1525.00	32.60	34910.00	3.49	11.30	30.30	2540.00	35.90	134.00	0.04	38900.00	3.89	79.50	28.30	7.00	4.90
Interquartile Range (IQR) 1	5.40	7.80	8900.00	0.89	351.00	4.34	14150.00	1.42	3.40	10.85	1669.82	5.70	33.00	0.01	11075.00	0.96	16.58	9.70	2.25	1.10
Variance	19.35	40.64	35337500.00	0.35	253186.69	95.11	140690061.90	1.41	6.64	82.07	905410.23	117.73	712.55	0.00	162494107.14	1.48	833.27	41.69	4.70	1.49
Skewness	1.43	0.74	-0.27	-0.27	-1.30	2.25	-0.39	-0.39	0.02	0.96	0.26	2.01	-0.11	1.75	1.69	1.86	2.09	-0.32	0.79	2.24
Coefficient of Variation (CoV) 2	0.39	0.39	0.45	0.45	0.47	1.11	0.57	0.57	0.37	0.65	0.94	0.85	0.29	0.97	1.13	1.17	1.59	0.33	0.62	0.64
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
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Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
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% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	La ppm	Li ppm	Mg ppm	Mg %	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm
SULPHURETS - Au, Leach, Raewn zones																				
Count	51	51	51	51	51	51	40	40	51	40	51	40	51	34	51	51	40	51	34	51
Minimum	4.20	2.60	1400.00	0.14	62.00	1.60	1700.00	0.17	0.95	2.90	0.04	4.00	68.30	0.00	2100.00	0.21	2.91	4.40	2.00	0.90
10 Percentile	6.20	6.10	3000.00	0.30	115.00	4.46	2590.00	0.26	1.52	6.31	0.10	9.15	94.90	0.00	9800.00	0.98	5.92	7.00	3.00	1.50
25 Percentile	8.35	9.90	4700.00	0.47	194.50	8.03	3675.00	0.37	2.25	9.18	0.15	13.78	107.15	0.01	14450.00	1.45	7.93	12.00	5.25	2.10
Median-25Percentile	2.55	7.90	3300.00	0.33	309.50	39.27	2125.00	0.21	1.25	9.33	699.85	12.00	28.75	0.04	6550.00	0.66	1.19	2.70	3.25	0.50
Mean	11.74	18.45	9880.39	0.99	628.88	123.75	8635.75	0.86	3.62	24.67	756.70	55.29	131.47	0.17	25480.39	2.55	24.24	16.96	9.56	3.45
Standard Deviation	4.76	10.00	6277.93	0.63	562.04	188.34	7328.46	0.73	1.63	19.60	694.94	78.02	28.94	0.39	15106.59	1.51	42.46	8.77	5.69	1.97
Median	10.90	17.80	8000.00	0.80	504.00	47.30	5800.00	0.58	3.50	18.50	700.00	25.78	135.90	0.05	21000.00	2.10	9.12	14.70	8.50	2.60
75Percentile-Median	3.00	7.60	7050.00	0.71	346.50	111.81	2950.00	0.30	1.35	16.38	545.00	33.58	16.80	0.09	13700.00	1.37	7.19	5.70	3.25	1.90
75 Percentile	13.90	25.40	15050.00	1.51	850.50	159.11	8750.00	0.88	4.85	34.88	1245.00	59.35	152.70	0.14	34700.00	3.47	16.30	20.40	11.75	4.50
90 Percentile	18.10	31.60	19500.00	1.95	1530.00	292.78	20775.00	2.08	5.80	53.17	1660.00	111.14	167.50	0.40	48000.00	4.80	52.10	30.10	16.70	5.70
Maximum	23.40	42.00	23000.00	2.30	2350.00	995.10	27600.00	2.76	7.30	81.20	2370.00	361.71	184.00	2.23	63400.00	6.34	238.00	38.60	26.00	9.60
Interquartile Range (IQR) 1	5.55	15.50	10350.00	1.04	656.00	151.08	5075.00	0.51	2.60	25.70	1244.85	45.58	45.55	0.14	20250.00	2.03	8.37	8.40	6.50	2.40
Variance	22.69	99.93	39412407.84	0.39	315893.83	35470.92	53706368.65	0.54	2.65	384.05	482935.86	6086.46	837.76	0.15	228209207.84	2.28	1802.63	76.88	32.38	3.89
Skewness	0.86	0.33	0.49	0.49	1.35	2.92	1.42	1.42	0.30	1.27	0.53	2.91	-0.13	4.67	0.73	0.73	3.99	0.97	1.04	1.37
Coefficient of Variation (CoV) 2	0.41	0.54	0.64	0.64	0.89	1.52	0.85	0.85	0.45	0.79	0.92	1.41	0.22	2.26	0.59	0.59	1.75	0.52	0.60	0.57
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
SULPHURETS - Lower Au zone																				
Count	31	31	31	31	31	31	26	26	31	26	31	26	31	15	30	31	26	31	15	31
Minimum	4.10	8.70	6900.00	0.69	237.00	3.04	300.00	0.03	1.67	6.90	0.06	3.80	71.20	0.00	8900.00	0.89	3.19	7.90	5.00	1.00
10 Percentile	5.40	13.30	9600.00	0.96	632.00	5.81	5100.00	0.51	3.10	10.30	0.10	5.73	92.40	0.01	11590.00	1.17	5.77	12.30	5.00	1.40
25 Percentile	10.95	18.30	13150.00	1.32	742.50	13.08	10457.50	1.05	3.80	18.68	0.12	7.15	99.65	0.02	17600.00	1.78	7.34	14.25	6.00	1.75
Median-25Percentile	3.55	6.10	2850.00	0.29	306.50	17.98	4547.50	0.45	1.60	10.53	0.06	16.40	19.65	0.05	5150.00	0.54	3.45	1.95	2.00	0.25
Mean	14.31	25.30	17238.71	1.72	1161.39	40.54	15888.85	1.59	4.90	30.80	619.42	73.98	124.32	0.11	25403.33	2.56	13.29	17.77	7.60	2.20
Standard Deviation	5.89	9.81	6905.83	0.69	631.22	45.77	9104.25	0.91	1.51	17.91	702.66	133.06	33.25	0.19	13043.39	1.29	11.25	6.16	2.53	0.94
Median	14.50	24.40	16000.00	1.60	1049.00	31.06	15005.00	1.50	5.40	29.20	0.17	23.55	119.30	0.07	22750.00	2.32	10.79	16.20	8.00	2.00
75Percentile-Median	3.15	5.95	4250.00	0.43	301.00	16.32	7690.00	0.77	0.69	9.50	1199.83	61.25	22.30	0.01	7075.00	0.68	3.40	3.35	0.50	0.45
75 Percentile	17.65	30.35	20250.00	2.03	1350.00	47.38	22695.00	2.27	6.09	38.70	1200.00	84.80	141.60	0.08	29825.00	3.00	14.19	19.55	8.50	2.45
90 Percentile	21.50	34.90	26500.00	2.65	1625.00	73.24	28405.00	2.84	6.40	52.90	1550.00	159.87	167.00	0.20	38950.00	3.85	19.76	26.10	9.00	2.90
Maximum	27.70	55.50	34700.00	3.47	3460.00	237.00	35200.00	3.52	7.68	76.60	2140.00	669.00	208.00	0.76	71700.00	7.17	58.99	33.90	15.00	6.00
Interquartile Range (IQR) 1	6.70	12.05	7100.00	0.71	607.50	34.30	12237.50	1.22	2.29	20.03	1199.89	77.65	41.95	0.06	12225.00	1.22	6.85	5.30	2.50	0.70
Variance	34.71	96.24	47690451.61	0.48	398433.11	2095.19	82887410.62	0.83	2.27	320.94	493737.12	17705.98	1105.40	0.04	170129988.51	1.65	126.63	38.00	6.40	0.89
Skewness	0.09	0.99	0.94	0.94	1.87	2.98	0.32	0.32	-0.45	0.95	0.52	3.85	0.74	3.24	1.60	1.57	3.05	0.89	1.77	2.40
Coefficient of Variation (CoV) 2	0.41	0.39	0.40	0.40	0.54	1.13	0.57	0.57	0.31	0.58	1.13	1.80	0.27	1.79	0.51	0.50	0.85	0.35	0.33	0.43
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	La ppm	Li ppm	Mg ppm	Mg %	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm
SULPHURETS - LP Hazelton																				
Count	40	40	40	40	40	40	34	34	40	34	40	34	40	11	40	40	34	40	11	40
Minimum	5.00	8.40	7000.00	0.70	595.00	1.60	1400.00	0.14	1.70	4.20	0.07	3.60	43.40	0.00	5000.00	0.50	3.50	8.00	5.00	0.30
10 Percentile	7.18	10.36	10370.00	1.04	898.70	4.89	3788.00	0.38	3.39	14.99	0.10	12.65	72.85	0.01	9160.00	0.92	5.68	9.99	5.00	0.90
25 Percentile	8.98	11.33	11175.00	1.12	1127.50	7.19	8392.50	0.84	4.06	17.33	0.12	25.20	98.20	0.02	15225.00	1.52	8.09	12.75	5.50	1.58
Median-25Percentile	2.23	3.48	2925.00	0.29	747.50	7.96	6207.50	0.62	1.37	8.93	0.02	53.44	28.30	0.01	3775.00	0.38	3.46	2.25	1.50	0.53
Mean	11.86	17.96	16062.50	1.61	2501.93	25.35	16931.18	1.69	5.18	28.06	324.84	364.16	124.83	0.05	22112.50	2.21	39.10	15.53	7.45	2.14
Standard Deviation	4.24	8.86	8142.88	0.81	3784.57	26.84	11041.88	1.10	1.53	13.70	550.50	1026.52	39.35	0.04	12427.87	1.24	109.27	4.74	3.39	0.92
Median	11.20	14.80	14100.00	1.41	1875.00	15.15	14600.00	1.46	5.43	26.25	0.13	78.64	126.50	0.03	19000.00	1.90	11.55	15.00	7.00	2.10
75Percentile-Median	2.50	7.25	3900.00	0.39	377.75	16.63	9900.00	0.99	0.73	11.63	732.37	50.36	25.40	0.05	8175.00	0.82	13.28	3.00	1.00	0.55
75 Percentile	13.70	22.05	18000.00	1.80	2252.75	31.78	24500.00	2.45	6.16	37.88	732.50	129.00	151.90	0.08	27175.00	2.72	24.83	18.00	8.00	2.65
90 Percentile	17.66	30.27	22680.00	2.27	3136.70	58.11	26980.00	2.70	7.11	47.31	1325.00	525.68	170.14	0.11	31370.00	3.14	45.29	19.20	8.00	3.10
Maximum	24.50	48.60	48100.00	4.81	24800.00	119.11	49900.00	4.99	8.40	58.30	1510.00	5310.00	202.00	0.12	73000.00	7.30	624.00	29.90	17.00	5.00
Interquartile Range (IQR) 1	4.73	10.73	6825.00	0.68	1125.25	24.59	16107.50	1.61	2.10	20.55	732.38	103.80	53.70	0.06	11950.00	1.20	16.73	5.25	2.50	1.08
Variance	18.01	78.58	66306506.41	0.66	14323002.43	720.33	121923168.27	1.22	2.34	187.59	303053.11	1053748.36	1548.34	0.00	154451891.03	1.54	11940.56	22.49	11.47	0.85
Skewness	1.09	1.51	2.63	2.63	5.54	1.91	0.75	0.75	-0.28	0.43	1.23	4.21	-0.13	0.82	2.07	2.07	5.05	1.00	2.58	0.49
Coefficient of Variation (CoV) 2	0.36	0.49	0.51	0.51	1.51	1.06	0.65	0.65	0.30	0.49	1.69	2.82	0.32	0.84	0.56	0.56	2.79	0.31	0.45	0.43
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
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Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
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% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
SULPHURETS - UP Hazelton																				
Count	114	114	114	114	114	114	96	96	114	96	114	96	114	30	87	114	96	114	30	114
Minimum	3.10	5.30	4800.00	0.48	119.00	1.23	680.00	0.07	1.74	3.60	0.07	3.10	40.00	0.00	500.00	0.05	1.61	6.00	2.00	0.70
10 Percentile	5.50	10.69	9550.00	0.96	606.90	3.05	3240.00	0.32	3.52	6.40	0.10	4.08	69.66	0.00	1460.00	0.20	2.58	11.30	2.00	1.30
25 Percentile	6.90	15.05	13825.00	1.38	727.00	5.82	9612.50	0.96	4.18	8.90	0.13	5.79	81.18	0.01	4250.00	0.60	3.03	16.00	3.00	1.53
Median-25Percentile	1.50	3.35	3525.00	0.35	317.50	13.23	10697.50	1.07	2.06	7.60	0.05	2.12	12.38	0.01	6750.00	0.60	1.30	4.00	0.50	0.28
Mean	8.57	19.31	17571.05	1.76	1106.56	30.90	17297.29	1.73	6.49	23.21	361.34	26.47	98.81	0.05	13888.51	1.50	13.31	20.91	4.03	1.96
Standard Deviation	2.68	8.72	6060.78	0.61	783.18	41.76	8780.31	0.88	2.73	19.93	647.61	112.62	27.25	0.13	14201.39	1.36	53.51	7.71	1.94	0.68
Median	8.40	18.40	17350.00	1.74	1044.50	19.05	20310.00	2.03	6.24	16.50	0.17	7.90	93.55	0.01	11000.00	1.20	4.33	20.00	3.50	1.80
75Percentile-Median	1.68	2.95	4375.00	0.44	218.50	19.05	3915.00	0.39	2.06	14.85	777.33	4.83	17.10	0.01	6900.00	0.75	3.20	5.45	1.50	0.48
75 Percentile	10.08	21.35	21725.00	2.17	1263.00	38.10	24225.00	2.42	8.30	31.35	777.50	12.73	110.65	0.02	17900.00	1.95	7.53	25.45	5.00	2.28
90 Percentile	11.67	27.89	24570.00	2.46	1704.00	78.09	26650.00	2.67	10.17	52.05	1344.00	23.02	138.61	0.08	24420.00	3.04	10.50	32.44	6.10	2.60
Maximum	17.90	61.10	38000.00	3.80	8165.00	287.00	32800.00	3.28	18.00	93.90	2650.00	1030.00	177.50	0.73	69200.00	6.92	500.61	44.90	10.00	5.50
Interquartile Range (IQR) 1	3.18	6.30	7900.00	0.79	536.00	32.28	14612.50	1.46	4.12	22.45	777.37	6.94	29.48	0.02	13650.00	1.35	4.50	9.45	2.00	0.75
Variance	7.18	76.10	36733048.44	0.37	613377.26	1743.95	77093788.38	0.77	7.46	397.23	419394.60	12684.09	742.46	0.02	201679401.23	1.84	2863.62	59.52	3.76	0.47
Skewness	0.57	2.09	0.31	0.31	6.58	3.30	-0.55	-0.55	0.91	1.71	1.58	8.11	0.71	5.05	2.20	1.92	8.36	0.60	1.35	2.15
Coefficient of Variation (CoV) 2	0.31	0.45	0.34	0.34	0.71	1.35	0.51	0.51	0.42	0.86	1.79	4.26	0.28	2.90	1.02	0.90	4.02	0.37	0.48	0.35
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
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Sum Check																				
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% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	La ppm	Li ppm	Mg ppm	Mg %	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm
SULPHURETS - Monzonite																				
Count	85	85	85	85	85	85	78	78	85	78	85	78	85	32	65	85	78	85	32	85
Minimum	1.10	4.90	3700.00	0.37	366.00	0.73	620.00	0.06	1.50	2.00	0.01	2.50	26.90	0.00	300.00	0.02	1.47	3.00	2.00	0.20
10 Percentile	6.54	7.60	6080.00	0.61	533.40	1.49	12050.00	1.21	3.90	3.10	0.08	3.80	57.56	0.00	840.00	0.09	1.90	7.00	2.00	1.00
25 Percentile	8.60	9.50	7300.00	0.73	697.00	3.19	18172.50	1.82	5.40	3.90	0.09	5.63	74.50	0.01	2000.00	0.21	2.49	8.00	2.00	1.20
Median-25Percentile	1.30	3.60	2900.00	0.29	123.00	4.01	5177.50	0.52	2.60	2.30	0.03	1.07	14.40	0.01	1900.00	0.20	0.72	2.00	1.00	0.30
Mean	10.59	14.81	12592.94	1.26	909.27	17.08	22296.54	2.23	7.39	13.16	437.94	9.57	89.91	0.03	4461.54	0.50	3.56	14.68	3.03	1.80
Standard Deviation	4.27	7.92	7280.47	0.73	357.44	38.74	7877.10	0.79	2.46	14.61	619.07	9.61	24.35	0.03	4085.90	0.41	1.48	9.55	1.15	1.87
Median	9.90	13.10	10200.00	1.02	820.00	7.20	23350.00	2.34	8.00	6.20	0.12	6.70	88.90	0.01	3900.00	0.41	3.20	10.00	3.00	1.50
75Percentile-Median	2.30	3.70	5000.00	0.50	315.00	8.50	3137.50	0.31	1.40	7.93	959.88	2.70	17.20	0.03	1300.00	0.19	1.13	9.50	0.00	0.50
75 Percentile	12.20	16.80	15200.00	1.52	1135.00	15.70	26487.50	2.65	9.40	14.13	960.00	9.40	106.10	0.04	5200.00	0.60	4.33	19.50	3.00	2.00
90 Percentile	14.90	27.12	25300.00	2.53	1394.20	29.66	29713.00	2.97	10.22	36.58	1322.00	16.45	120.88	0.06	9280.00	0.99	5.41	29.70	4.90	2.40
Maximum	25.00	42.00	34800.00	3.48	1887.00	323.20	47800.00	4.78	10.93	74.80	2210.00	71.70	149.00	0.15	23700.00	2.37	8.33	40.70	6.00	17.80
Interquartile Range (IQR) 1	3.60	7.30	7900.00	0.79	438.00	12.51	8315.00	0.83	4.00	10.23	959.91	3.77	31.60	0.03	3200.00	0.39	1.85	11.50	1.00	0.80
Variance	18.26	62.69	53005187.68	0.53	127760.82	1500.95	62048698.25	0.62	6.06	213.37	383246.25	92.34	592.85	0.00	16694591.35	0.17	2.18	91.24	1.32	3.48
Skewness	1.32	1.56	1.22	1.22	1.00	6.48	-0.07	-0.07	-0.57	1.99	1.10	4.30	0.04	2.12	2.49	1.96	1.05	1.13	1.29	7.72
Coefficient of Variation (CoV) 2	0.40	0.53	0.58	0.58	0.39	2.27	0.35	0.35	0.33	1.11	1.41	1.00	0.27	1.21	0.92	0.83	0.42	0.65	0.38	1.04
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
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Sum Check																				
SULPHURETS - Undefined																				
Count	103	103	103	103	103	103	84	84	103	84	103	84	103	38	79	103	84	103	38	103
Minimum	2.30	5.70	5500.00	0.55	390.00	0.40	650.00	0.07	2.85	1.60	0.08	3.40	36.50	0.00	600.00	0.06	1.64	9.00	1.00	0.40
10 Percentile	5.62	11.60	10200.00	1.02	841.60	0.98	4182.00	0.42	3.88	6.66	0.11	5.73	62.20	0.00	3000.00	0.30	2.64	12.42	2.00	0.80
25 Percentile	7.10	15.05	12550.00	1.26	992.50	1.70	10477.50	1.05	4.60	13.45	0.12	9.05	73.50	0.00	8050.00	0.81	3.78	15.05	3.00	0.90
Median-25Percentile	2.70	4.15	4550.00	0.46	367.50	1.91	10622.50	1.06	1.10	5.65	0.06	7.80	22.30	0.00	5650.00	0.58	2.01	3.85	1.00	0.30
Mean	9.73	19.54	17919.42	1.79	1407.07	10.96	19390.48	1.94	6.38	29.84	507.37	179.80	95.60	0.02	17200.00	1.70	13.37	19.60	4.63	1.33
Standard Deviation	3.63	6.76	6865.54	0.69	631.97	18.98	10352.31	1.04	2.59	21.91	701.67	781.37	28.20	0.03	13491.58	1.30	58.44	5.98	3.20	0.59
Median	9.80	19.20	17100.00	1.71	1360.00	3.61	21100.00	2.11	5.70	19.10	0.18	16.85	95.80	0.00	13700.00	1.39	5.79	18.90	4.00	1.20
75Percentile-Median	1.40	4.10	4900.00	0.49	261.00	8.24	5370.00	0.54	1.40	27.45	1159.82	19.20	16.70	0.01	9100.00	0.84	3.37	4.15	2.00	0.30
75 Percentile	11.20	23.30	22000.00	2.20	1621.00	11.85	26470.00	2.65	7.10	46.55	1160.00	36.05	112.50	0.01	22800.00	2.23	9.16	23.05	6.00	1.50
90 Percentile	13.60	29.32	25560.00	2.56	1829.00	30.46	31168.00	3.12	9.78	61.22	1600.00	165.60	130.26	0.04	33560.00	3.46	11.97	27.52	7.00	2.08
Maximum	25.10	40.20	39000.00	3.90	5737.00	136.50	44800.00	4.48	15.80	83.50	2120.00	5520.00	170.00	0.17	77100.00	7.71	540.90	36.00	20.00	3.90
Interquartile Range (IQR) 1	4.10	8.25	9450.00	0.95	628.50	10.15	15992.50	1.60	2.50	33.10	1159.88	27.00	39.00	0.01	14750.00	1.42	5.37	8.00	3.00	0.60
Variance	13.21	45.73	47135697.70	0.47	399385.89	360.23	107170382.90	1.07	6.72	480.14	492343.16	610546.46	795.47	0.00	182022820.51	1.68	3415.17	35.72	10.24	0.34
Skewness	1.29	0.49	0.72	0.72	3.60	4.09	-0.24	-0.24	1.53	0.68	0.87	5.81	0.25	3.18	1.62	1.55	9.08	0.68	3.11	1.68
Coefficient of Variation (CoV) 2	0.37	0.35	0.38	0.38	0.45	1.73	0.53	0.53	0.41	0.73	1.38	4.35	0.30	1.96	0.78	0.76	4.37	0.30	0.69	0.44
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
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% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	La ppm	Li ppm	Mg ppm	Mg %	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm
MITCHELL - All																				
Count	936	936	936	936	936	936	808	808	936	808	936	808	936	739	936	936	808	936	739	936
Minimum	0.50	1.20	300.00	0.03	20.00	0.64	200.00	0.02	0.39	0.10	0.01	2.50	8.30	0.00	300.00	0.02	0.12	0.30	2.00	0.40
10 Percentile	4.30	6.40	3650.00	0.37	279.50	2.77	900.00	0.09	1.90	1.70	0.12	7.80	67.95	0.00	6350.00	0.64	1.09	7.25	3.00	1.00
25 Percentile	6.58	10.20	6700.00	0.67	495.50	7.81	2300.00	0.23	3.40	2.80	290.00	12.00	84.68	0.01	15675.00	1.57	1.68	11.20	5.00	1.10
Median-25Percentile	2.73	4.65	4200.00	0.42	262.00	20.39	11540.00	1.15	2.40	1.40	760.00	10.45	15.33	0.05	12475.00	1.25	0.84	4.50	3.00	0.30
Mean	10.02	17.88	11107.05	1.11	874.28	51.62	14106.11	1.41	6.01	8.20	898.20	58.68	102.31	0.21	29489.00	2.95	7.26	15.50	8.78	1.59
Standard Deviation	6.18	13.25	6024.72	0.60	600.49	70.58	11334.98	1.13	3.47	10.80	596.87	161.27	29.84	0.41	18607.57	1.86	34.86	6.63	5.12	0.79
Median	9.30	14.85	10900.00	1.09	757.50	28.20	13840.00	1.38	5.80	4.20	1050.00	22.45	100.00	0.06	28150.00	2.82	2.52	15.70	8.00	1.40
75Percentile-Median	2.60	6.15	3525.00	0.35	360.25	41.75	9310.00	0.93	2.10	4.43	330.00	24.35	19.50	0.18	13550.00	1.36	1.93	3.50	3.00	0.50
75 Percentile	11.90	21.00	14425.00	1.44	1117.75	69.95	23150.00	2.32	7.90	8.63	1380.00	46.80	119.50	0.24	41700.00	4.17	4.45	19.20	11.00	1.90
90 Percentile	15.25	33.95	17850.00	1.79	1583.00	122.25	29617.00	2.96	10.39	19.38	1530.00	107.80	142.00	0.54	53650.00	5.37	8.54	22.95	15.00	2.40
Maximum	74.50	122.50	52600.00	5.26	5503.00	836.00	49000.00	4.90	31.80	105.00	2540.00	2170.00	231.00	4.37	100000.00	10.00	790.00	50.40	44.00	12.80
Interquartile Range (IQR) 1	5.33	10.80	7725.00	0.77	622.25	62.14	20850.00	2.09	4.50	5.83	1090.00	34.80	34.83	0.23	26025.00	2.60	2.77	8.00	6.00	0.80
Variance	38.19	175.52	36297255.04	0.36	360586.55	4981.39	128481788.84	1.28	12.04	116.54	356252.67	26008.94	890.26	0.17	346241622.09	3.46	1214.94	43.96	26.18	0.62
Skewness	3.88	2.72	1.19	1.19	2.08	3.74	0.39	0.39	1.19	3.66	-0.31	8.72	0.32	4.85	0.72	0.72	17.46	0.52	1.81	5.28
Coefficient of Variation (CoV) 2	0.62	0.74	0.54	0.54	0.69	1.37	0.80	0.80	0.58	1.32	0.66	2.75	0.29	1.95	0.63	0.63	4.80	0.43	0.58	0.50
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
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Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
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% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
MITCHELL - Overburden																				
Count	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Minimum	7.00	8.90	6600.00	0.66	276.00	4.99	900.00	0.09	1.90	2.00	910.00	7.60	103.50	0.01	4900.00	0.49	1.59	9.80	3.00	0.90
10 Percentile	7.60	9.26	6660.00	0.67	394.80	5.09	1260.00	0.13	3.82	2.00	1000.00	8.14	105.00	0.01	5740.00	0.57	1.73	11.90	3.60	0.90
25 Percentile	8.70	9.70	8900.00	0.89	552.50	7.19	7850.00	0.79	5.40	2.90	1085.00	14.30	107.25	0.02	7800.00	0.78	2.18	13.80	4.00	1.05
Median-25Percentile	1.10	4.40	3700.00	0.37	163.50	3.72	6750.00	0.68	1.80	1.10	105.00	9.20	15.25	0.02	2100.00	0.21	0.63	0.90	1.00	0.35
Mean	11.80	17.34	11400.00	1.14	750.57	26.14	12542.86	1.25	6.90	10.46	1277.14	22.60	120.14	0.13	15671.43	1.57	3.26	16.27	4.86	1.37
Standard Deviation	4.43	12.03	3567.45	0.36	353.96	26.30	8664.65	0.87	3.02	17.84	296.97	11.35	15.05	0.18	10542.72	1.05	1.53	4.36	1.21	0.43
Median	9.80	14.10	12600.00	1.26	716.00	10.90	14600.00	1.46	7.20	4.00	1190.00	23.50	122.50	0.04	9900.00	0.99	2.80	14.70	5.00	1.40
75Percentile-Median	4.90	4.00	750.00	0.08	195.00	27.75	950.00	0.10	1.45	1.30	255.00	8.15	5.50	0.12	14950.00	1.50	1.59	5.70	1.00	0.15
75 Percentile	14.70	18.10	13350.00	1.34	911.00	38.65	15550.00	1.56	8.65	5.30	1445.00	31.65	128.00	0.16	24850.00	2.49	4.39	20.40	6.00	1.55
90 Percentile	16.96	29.90	14480.00	1.45	1167.00	54.22	19560.00	1.96	10.08	23.80	1600.00	34.96	136.70	0.32	28940.00	2.89	5.30	20.88	6.00	1.86
Maximum	19.00	42.80	16100.00	1.61	1335.00	75.40	25500.00	2.55	11.10	50.80	1780.00	35.20	144.50	0.52	29600.00	2.96	5.32	21.00	6.00	2.10
Interquartile Range (IQR) 1	6.00	8.40	4450.00	0.45	358.50	31.47	7700.00	0.77	3.25	2.40	360.00	17.35	20.75	0.14	17050.00	1.71	2.21	6.60	2.00	0.50
Variance	19.59	144.73	12726666.67	0.13	125284.29	691.70	75076190.48	0.75	9.11	318.38	88190.48	128.88	226.56	0.03	111149047.62	1.11	2.33	18.97	1.48	0.19
Skewness	0.67	2.01	-0.48	-0.48	0.52	1.24	-0.24	-0.24	-0.35	2.61	0.65	-0.35	0.48	2.00	0.49	0.49	0.58	-0.16	-0.41	0.61
Coefficient of Variation (CoV) 2	0.38	0.69	0.31	0.31	0.47	1.01	0.69	0.69	0.44	1.71	0.23	0.50	0.13	1.41	0.67	0.67	0.47	0.27	0.25	0.31
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
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% NPR < 1.0 or NPR = 1.0 of Total																				
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% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	La ppm	Li ppm	Mg ppm	Mg %	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm
MITCHELL - UP Hazelton																				
Count	273	273	273	273	273	273	255	255	273	255	273	255	273	245	273	273	255	273	245	273
Minimum	1.80	1.60	900.00	0.09	106.00	0.66	700.00	0.07	1.40	0.50	0.04	2.50	46.50	0.00	400.00	0.02	0.75	0.30	2.00	0.40
10 Percentile	5.00	7.70	3040.00	0.30	364.40	2.32	2440.00	0.24	4.70	2.40	4.26	6.78	85.82	0.00	7160.00	0.72	1.54	4.18	4.00	0.90
25 Percentile	6.10	12.10	5800.00	0.58	537.00	4.26	11400.00	1.14	6.00	4.40	420.00	10.15	97.60	0.01	12700.00	1.27	2.01	10.30	5.00	1.10
Median-25Percentile	2.90	6.50	3600.00	0.36	317.00	6.04	7400.00	0.74	2.10	4.00	740.00	8.75	17.40	0.01	8200.00	0.82	0.78	4.70	3.00	0.30
Mean	11.49	23.30	9903.30	0.99	1042.12	25.54	18003.02	1.80	8.40	12.68	966.76	72.49	119.49	0.05	22235.90	2.22	6.80	15.18	8.60	1.49
Standard Deviation	8.53	15.33	5562.53	0.56	713.24	35.60	10292.12	1.03	3.51	12.01	576.77	158.71	30.47	0.08	13046.53	1.31	31.03	7.97	4.29	0.58
Median	9.00	18.60	9400.00	0.94	854.00	10.30	18800.00	1.88	8.10	8.40	1160.00	18.90	115.00	0.02	20900.00	2.09	2.79	15.00	8.00	1.40
75Percentile-Median	5.10	13.40	3900.00	0.39	446.00	22.00	6050.00	0.61	2.00	9.20	270.00	53.45	26.00	0.05	9500.00	0.95	1.54	5.70	3.00	0.40
75 Percentile	14.10	32.00	13300.00	1.33	1300.00	32.30	24850.00	2.49	10.10	17.60	1430.00	72.35	141.00	0.06	30400.00	3.04	4.33	20.70	11.00	1.80
90 Percentile	19.88	44.32	16500.00	1.65	1962.20	70.03	30420.00	3.04	12.50	27.74	1610.00	166.90	159.90	0.12	36860.00	3.69	6.39	24.18	13.00	2.20
Maximum	74.50	94.00	31400.00	3.14	4230.00	257.00	49000.00	4.90	31.80	67.80	2030.00	1535.00	231.00	0.77	100000.00	10.00	475.00	41.40	29.00	5.80
Interquartile Range (IQR) 1	8.00	19.90	7500.00	0.75	763.00	28.04	13450.00	1.35	4.10	13.20	1010.00	62.20	43.40	0.06	17700.00	1.77	2.32	10.40	6.00	0.70
Variance	72.82	235.03	30941717.03	0.31	508704.57	1267.33	105927684.15	1.06	12.33	144.26	332658.46	25187.39	928.25	0.01	170211868.40	1.70	962.93	63.59	18.37	0.33
Skewness	3.37	1.36	0.80	0.80	1.67	2.72	0.15	0.15	1.57	1.85	-0.45	5.53	0.58	4.62	1.16	1.15	13.82	0.39	1.25	2.07
Coefficient of Variation (CoV) 2	0.74	0.66	0.56	0.56	0.68	1.39	0.57	0.57	0.42	0.95	0.60	2.19	0.25	1.73	0.59	0.59	4.56	0.53	0.50	0.39
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
MITCHELL - LP Hazelton																				
Count	553	553	553	553	553	553	463	463	553	463	553	463	553	412	553	553	463	553	412	553
Minimum	0.80	1.20	300.00	0.03	20.00	0.64	200.00	0.02	0.39	0.10	0.01	4.48	8.30	0.00	800.00	0.08	0.12	1.40	2.00	0.50
10 Percentile	3.90	6.70	4900.00	0.49	243.80	4.29	700.00	0.07	1.50	1.80	0.11	9.06	61.26	0.01	11700.00	1.17	0.96	8.84	4.00	1.00
25 Percentile	6.80	10.50	9100.00	0.91	503.00	16.15	1200.00	0.12	2.70	2.70	0.22	14.15	76.90	0.04	22300.00	2.23	1.47	12.40	6.00	1.10
Median-25Percentile	2.50	3.60	3200.00	0.32	254.00	31.62	5400.00	0.54	1.70	0.90	1029.78	11.45	17.60	0.13	12700.00	1.27	1.04	4.20	2.00	0.30
Mean	9.30	15.87	12411.93	1.24	827.35	70.30	10583.09	1.06	4.45	6.27	881.26	58.69	93.90	0.34	34999.28	3.50	8.32	16.19	9.31	1.61
Standard Deviation	4.85	11.21	6022.68	0.60	529.83	82.71	10357.37	1.04	2.17	9.74	611.83	176.44	26.91	0.51	17647.64	1.76	39.81	5.91	5.18	0.83
Median	9.30	14.10	12300.00	1.23	757.00	47.77	6600.00	0.66	4.40	3.60	1030.00	25.60	94.50	0.18	35000.00	3.50	2.51	16.60	8.00	1.40
75Percentile-Median	1.90	4.10	2800.00	0.28	303.00	45.33	12950.00	1.30	1.84	1.60	350.00	22.60	17.00	0.24	11700.00	1.17	2.20	2.60	3.00	0.50
75 Percentile	11.20	18.20	15100.00	1.51	1060.00	93.10	19550.00	1.96	6.24	5.20	1380.00	48.20	111.50	0.42	46700.00	4.67	4.71	19.20	11.00	1.90
90 Percentile	13.20	24.92	18800.00	1.88	1409.20	151.76	26580.00	2.66	7.40	14.16	1510.00	94.90	124.00	0.74	56660.00	5.67	12.12	22.10	16.00	2.40
Maximum	57.70	122.50	52600.00	5.26	5503.00	836.00	45700.00	4.57	10.80	105.00	2540.00	2170.00	189.00	4.37	97700.00	9.77	790.00	50.40	43.00	12.80
Interquartile Range (IQR) 1	4.40	7.70	6000.00	0.60	557.00	76.95	18350.00	1.84	3.54	2.50	1379.78	34.05	34.60	0.38	24400.00	2.44	3.24	6.80	5.00	0.80
Variance	23.48	125.74	36272647.16	0.36	280718.21	6841.46	107275132.65	1.07	4.71	94.93	374330.73	31131.51	723.91	0.26	311439311.07	3.11	1584.93	34.97	26.83	0.68
Skewness	3.68	4.53	1.37	1.37	2.14	3.27	0.74	0.74	0.17	5.89	-0.26	9.34	-0.07	3.83	0.39	0.39	16.85	0.68	1.70	5.50
Coefficient of Variation (CoV) 2	0.52	0.71	0.49	0.49	0.64	1.18	0.98	0.98	0.49	1.56	0.69	3.01	0.29	1.53	0.50	0.50	4.79	0.37	0.56	0.51
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	La ppm	Li ppm	Mg ppm	Mg %	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm
MITCHELL - Monzonite																				
Count	80	80	80	80	80	80	70	70	80	70	80	70	80	62	80	80	70	80	62	80
Minimum	2.30	2.80	600.00	0.06	69.00	0.64	700.00	0.07	4.10	1.20	0.07	3.20	62.00	0.00	300.00	0.03	0.84	1.00	2.00	0.60
10 Percentile	5.39	5.60	3390.00	0.34	387.40	1.45	11540.00	1.15	6.56	1.49	0.10	6.27	81.92	0.00	900.00	0.09	1.14	6.95	2.00	1.09
25 Percentile	6.88	7.08	4575.00	0.46	560.25	2.79	20000.00	2.00	8.20	1.73	297.50	9.33	92.15	0.01	2375.00	0.24	1.48	9.45	2.00	1.30
Median-25Percentile	3.68	4.13	1525.00	0.15	166.75	3.94	6800.00	0.68	1.60	0.88	692.50	3.58	7.55	0.01	2875.00	0.29	0.56	1.65	1.00	0.20
Mean	10.50	16.46	7880.00	0.79	811.03	13.92	25301.43	2.53	9.87	5.52	842.77	17.62	104.77	0.02	8486.25	0.85	2.60	12.89	4.74	1.61
Standard Deviation	4.15	14.41	5348.71	0.53	537.32	16.17	9712.45	0.97	2.93	7.40	538.00	15.10	21.87	0.03	8192.83	0.82	1.84	6.09	3.16	0.53
Median	10.55	11.20	6100.00	0.61	727.00	6.73	26800.00	2.68	9.80	2.60	990.00	12.90	99.70	0.02	5250.00	0.53	2.04	11.10	3.00	1.50
75Percentile-Median	2.83	9.68	3650.00	0.37	152.25	10.54	5550.00	0.56	1.30	4.05	152.50	6.88	19.80	0.01	7850.00	0.79	0.95	4.75	4.00	0.30
75 Percentile	13.38	20.88	9750.00	0.98	879.25	17.26	32350.00	3.24	11.10	6.65	1142.50	19.78	119.50	0.03	13100.00	1.31	2.99	15.85	7.00	1.80
90 Percentile	16.12	36.44	14440.00	1.44	1075.50	37.32	35900.00	3.59	12.34	11.77	1485.00	29.94	133.05	0.06	19430.00	1.94	4.76	20.84	8.90	2.10
Maximum	19.20	86.10	30100.00	3.01	4199.00	81.50	39800.00	3.98	24.10	47.00	1750.00	81.70	178.00	0.12	41500.00	4.15	10.25	31.70	14.00	3.50
Interquartile Range (IQR) 1	6.50	13.80	5175.00	0.52	319.00	14.48	12350.00	1.24	2.90	4.93	845.00	10.45	27.35	0.03	10725.00	1.07	1.52	6.40	5.00	0.50
Variance	17.19	207.56	28608708.86	0.29	288708.10	261.44	94331737.06	0.94	8.58	54.74	289441.90	227.92	478.22	0.00	67122466.77	0.67	3.38	37.09	10.00	0.29
Skewness	0.10	2.21	2.12	2.12	3.76	1.87	-0.78	-0.78	1.65	3.51	-0.42	2.76	0.85	1.78	1.44	1.44	2.37	0.91	1.19	1.51
Coefficient of Variation (CoV) 2	0.40	0.88	0.68	0.68	0.66	1.16	0.38	0.38	0.30	1.34	0.64	0.86	0.21	1.08	0.97	0.97	0.71	0.47	0.67	0.33
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
MITCHELL - Leach breccia/bornite breccia																				
Count	23	23	23	23	23	23	13	13	23	13	23	13	23	13	23	23	13	23	13	23
Minimum	0.50	2.00	1800.00	0.18	25.00	10.40	1100.00	0.11	0.50	1.20	0.02	5.30	27.10	0.02	20600.00	2.06	0.30	5.50	9.00	1.10
10 Percentile	2.84	3.00	2160.00	0.22	46.60	23.41	1340.00	0.13	0.92	1.36	0.07	7.32	61.30	0.13	39480.00	3.95	0.43	7.14	9.40	1.34
25 Percentile	4.25	3.30	2850.00	0.29	75.50	32.79	1500.00	0.15	1.02	1.70	0.17	13.80	69.75	0.21	44500.00	4.45	0.72	8.25	11.00	1.80
Median-25Percentile	2.55	3.20	2150.00	0.22	33.50	14.11	300.00	0.03	0.31	0.10	569.83	9.10	21.85	0.09	13300.00	1.33	0.15	4.35	4.00	0.40
Mean	7.82	6.97	5156.52	0.52	268.17	51.04	3700.00	0.37	1.52	2.36	569.19	28.18	86.38	0.31	60352.17	6.04	5.99	11.43	16.92	2.56
Standard Deviation	4.50	4.08	2840.75	0.28	335.73	25.74	6064.93	0.61	0.74	1.44	580.17	19.44	24.26	0.16	21178.37	2.12	9.88	3.28	9.50	1.73
Median	6.80	6.50	5000.00	0.50	109.00	46.90	1800.00	0.18	1.33	1.80	570.00	22.90	91.60	0.30	57800.00	5.78	0.87	12.60	15.00	2.20
75Percentile-Median	4.80	3.15	1700.00	0.17	200.00	17.51	700.00	0.07	0.57	0.50	500.00	12.40	12.40	0.14	14350.00	1.44	5.94	1.60	2.00	0.40
75 Percentile	11.60	9.65	6700.00	0.67	309.00	64.41	2500.00	0.25	1.90	2.30	1070.00	35.30	104.00	0.44	72150.00	7.22	6.81	14.20	17.00	2.60
90 Percentile	13.44	12.56	8280.00	0.83	509.80	82.02	3800.00	0.38	2.10	4.34	1188.00	57.68	110.00	0.48	92760.00	9.28	23.23	14.96	25.00	3.42
Maximum	15.60	17.10	13200.00	1.32	1282.00	117.35	23700.00	2.37	3.90	6.10	1810.00	66.00	123.50	0.60	100000.00	10.00	28.00	16.40	44.00	9.90
Interquartile Range (IQR) 1	7.35	6.35	3850.00	0.39	233.50	31.62	1000.00	0.10	0.88	0.60	1069.83	21.50	34.25	0.23	27650.00	2.77	6.09	5.95	6.00	0.80
Variance	20.23	16.61	8069841.90	0.08	112712.15	662.57	36783333.33	0.37	0.55	2.08	336596.41	377.84	588.67	0.03	448523517.79	4.49	97.52	10.75	90.24	2.99
Skewness	0.08	0.89	1.10	1.10	2.21	0.77	3.49	3.49	1.61	2.00	0.39	0.84	-0.76	-0.07	0.34	0.34	1.87	-0.31	2.18	3.73
Coefficient of Variation (CoV) 2	0.57	0.58	0.55	0.55	1.25	0.50	1.64	1.64	0.49	0.61	1.02	0.69	0.28	0.52	0.35	0.35	1.65	0.29	0.56	0.68
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	La ppm	Li ppm	Mg ppm	Mg %	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm
IRON CAP - All																				
Count	75	75	14	75	75	75	14	75	75	75	75	75	75	0	6	75	75	75	16	75
Minimum	1.40	2.60	3600.00	0.17	51.00	1.97	3010.00	0.03	1.22	0.80	0.01	4.80	69.40	0.00	6000.00	0.28	1.39	1.60	2.00	0.70
10 Percentile	4.24	5.70	5450.00	0.32	96.20	5.08	4067.00	0.07	2.68	1.90	0.06	17.19	109.84	#NUM!	15100.00	1.32	2.39	6.14	2.70	1.10
25 Percentile	5.40	8.25	6625.00	0.41	172.50	10.42	6917.50	0.14	3.85	2.40	0.09	31.35	123.40	#NUM!	27875.00	2.25	3.11	10.00	3.00	1.40
Median-25Percentile	3.20	3.05	3175.00	0.21	357.50	10.17	2492.50	0.24	1.57	2.70	0.03	29.70	20.40	#NUM!	11675.00	1.21	2.54	2.00	4.50	0.50
Mean	11.78	17.49	11242.86	0.70	614.00	48.16	12850.00	0.92	5.45	7.72	0.13	94.66	151.46	#DIV/0!	34250.00	3.29	17.55	12.09	6.41	2.57
Standard Deviation	11.77	21.08	6887.64	0.44	494.85	73.13	9033.31	1.05	2.21	6.60	0.07	105.06	38.95	#DIV/0!	16636.80	1.44	27.94	4.57	3.77	2.11
Median	8.60	11.30	9800.00	0.61	530.00	20.59	9410.00	0.38	5.42	5.10	0.12	61.05	143.80	#NUM!	39550.00	3.45	5.64	12.00	7.50	1.90
75Percentile-Median	4.55	4.50	3175.00	0.20	345.00	20.89	6582.50	1.14	1.79	5.95	0.04	40.53	39.75	#NUM!	3050.00	0.77	10.73	2.90	0.95	1.20
75 Percentile	13.15	15.80	12975.00	0.81	875.00	41.48	15992.50	1.52	7.21	11.05	0.16	101.58	183.55	#NUM!	42600.00	4.22	16.37	14.90	8.45	3.10
90 Percentile	21.50	32.82	18830.00	1.24	1292.80	126.84	23860.00	2.56	8.03	18.58	0.18	245.82	208.00	#NUM!	48100.00	5.21	61.28	18.32	9.50	4.50
Maximum	78.60	135.30	29200.00	2.92	2314.00	357.10	34490.00	3.62	10.90	27.10	0.48	511.40	236.30	0.00	52800.00	6.35	131.78	24.10	15.60	15.10
Interquartile Range (IQR) 1	7.75	7.55	6350.00	0.40	702.50	31.06	9075.00	1.38	3.36	8.65	0.07	70.23	60.15	#NUM!	14725.00	1.97	13.27	4.90	5.45	1.70
Variance	138.50	444.34	47439560.44	0.19	244876.57	5348.67	81600707.69	1.09	4.90	43.55	0.01	11038.30	1517.34	#DIV/0!	276783000.00	2.08	780.51	20.92	14.18	4.44
Skewness	3.82	3.90	1.55	2.37	1.15	2.55	1.20	1.21	0.24	1.13	2.21	2.21	0.24	#DIV/0!	-1.05	-0.04	2.39	0.19	0.77	3.46
Coefficient of Variation (CoV) 2	1.00	1.20	0.61	0.62	0.81	1.52	0.70	1.13	0.41	0.86	0.58	1.11	0.26	#DIV/0!	0.49	0.44	1.59	0.38	0.59	0.82
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %
ALL																					
Count	1541	1749	993	1749	1607	1749	993	1749	1749	1748	1749	1749	1749	993	993	993	472	993	993	993	987
Minimum	4.80	0.03	0.03	0.10	260.00	0.03	0.17	0.10	2.00	0.10	0.90	4.00	0.60	2.70	0.02	0.01	0.01	1.00	0.27	0.12	0.01
10 Percentile	49.60	0.10	0.06	1.00	876.00	0.09	0.62	0.60	108.00	0.80	4.50	27.00	9.58	12.61	0.13	0.47	0.01	3.82	2.93	0.73	0.03
25 Percentile	117.00	0.20	0.11	1.40	1470.00	0.15	0.91	1.00	146.00	1.80	6.50	43.00	13.50	14.15	0.20	1.30	0.01	5.02	3.87	1.32	0.07
Median-25Percentile	94.00	0.10	0.12	1.00	670.00	0.07	0.59	0.60	36.00	3.00	2.50	29.60	5.90	1.50	0.10	1.31	0.01	1.21	1.08	0.74	0.03
Mean	247.92	0.32	0.46	2.76	2221.08	0.23	1.57	2.52	217.82	7.02	9.61	170.24	22.94	15.18	0.34	2.94	0.01	6.32	5.16	2.10	0.12
Standard Deviation	191.83	0.25	0.80	2.20	1138.66	0.11	0.79	4.87	134.50	8.96	4.58	505.09	16.71	2.36	0.20	2.08	0.01	2.22	1.88	1.11	0.14
Median	211.00	0.30	0.23	2.40	2140.00	0.22	1.50	1.60	182.00	4.80	9.00	72.60	19.40	15.65	0.30	2.61	0.01	6.23	4.95	2.06	0.10
75Percentile-Median	118.00	0.10	0.28	0.90	610.00	0.06	0.59	0.70	66.00	4.80	3.00	60.40	8.10	1.09	0.14	1.55	0.00	1.17	1.24	0.64	0.06
75 Percentile	329.00	0.40	0.51	3.30	2750.00	0.28	2.09	2.30	248.00	9.60	12.00	133.00	27.50	16.74	0.44	4.16	0.01	7.40	6.19	2.70	0.16
90 Percentile	475.00	0.50	1.03	4.40	3550.00	0.36	2.63	4.40	349.20	15.50	15.20	294.00	39.34	17.52	0.56	5.81	0.02	8.70	7.69	3.34	0.23
Maximum	1801.00	5.77	14.70	28.00	11600.00	1.16	4.87	103.00	1315.00	166.70	50.50	10000.00	217.00	21.40	2.27	12.28	0.05	23.23	11.27	9.16	3.40
Interquartile Range (IQR) 1	212.00	0.20	0.40	1.90	1280.00	0.13	1.18	1.30	102.00	7.80	5.50	90.00	14.00	2.59	0.24	2.86	0.01	2.38	2.32	1.38	0.09
Variance	36799.07	0.06	0.65	4.85	1296547.60	0.01	0.63	23.68	18090.96	80.36	20.97	255118.87	279.27	5.57	0.04	4.33	0.00	4.94	3.52	1.22	0.02
Skewness	2.00	12.87	8.10	4.08	1.85	1.71	0.60	11.57	3.02	6.31	1.59	10.78	4.06	-1.56	2.24	0.93	1.94	1.37	0.60	1.12	14.22
Coefficient of Variation (CoV) 2	0.77	0.77	1.74	0.80	0.51	0.50	0.50	1.93	0.62	1.28	0.48	2.97	0.73	0.16	0.61	0.71	0.66	0.35	0.36	0.53	1.11
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
KERR - All																					
Count	293	305	88	305	305	305	88	305	305	305	305	305	305	88	88	88	88	88	88	88	88
Minimum	12.00	0.05	0.03	0.20	480.00	0.05	0.49	0.20	2.00	0.30	1.80	7.20	1.20	8.52	0.07	0.01	0.01	4.81	0.85	0.34	0.01
10 Percentile	27.20	0.09	0.10	0.60	818.00	0.08	1.46	0.40	142.40	0.90	3.64	25.76	9.04	13.39	0.16	0.31	0.01	6.26	3.05	0.58	0.01
25 Percentile	48.00	0.14	0.30	0.80	1110.00	0.11	1.80	0.50	185.00	1.60	4.70	56.00	12.00	15.74	0.19	0.46	0.01	7.42	3.87	1.06	0.01
Median-25Percentile	54.00	0.06	0.29	0.40	920.00	0.09	0.18	0.20	30.00	0.90	2.20	36.90	5.10	1.30	0.03	0.19	0.00	0.75	0.73	0.96	0.08
Mean	188.98	0.27	1.03	1.45	2160.79	0.22	2.01	0.79	211.10	3.14	8.07	172.36	22.36	16.32	0.26	1.77	0.01	8.83	4.40	2.02	0.15
Standard Deviation	229.81	0.21	1.33	1.09	1564.76	0.16	0.50	0.46	59.18	2.18	5.29	351.69	23.04	1.99	0.16	2.11	0.01	2.57	0.96	1.22	0.19
Median	102.00	0.20	0.59	1.20	2030.00	0.20	1.98	0.70	215.00	2.50	6.90	92.90	17.10	17.04	0.22	0.65	0.01	8.18	4.60	2.02	0.09
75Percentile-Median	158.00	0.20	0.62	0.40	560.00	0.06	0.29	0.20	28.00	1.60	2.90	73.10	8.30	0.44	0.05	1.57	0.01	1.71	0.52	0.60	0.13
75 Percentile	260.00	0.40	1.20	1.60	2590.00	0.26	2.27	0.90	243.00	4.10	9.80	166.00	25.40	17.48	0.27	2.22	0.01	9.88	5.11	2.61	0.22
90 Percentile	404.00	0.45	2.10	2.26	3448.00	0.34	2.56	1.30	270.00	6.36	12.78	331.60	36.80	17.89	0.35	5.38	0.02	11.68	5.48	3.33	0.37
Maximum	1801.00	1.80	6.86	7.70	11600.00	1.16	3.97	3.60	466.00	13.90	39.20	4560.00	217.00	20.50	1.11	10.46	0.04	23.02	5.97	7.09	1.23
Interquartile Range (IQR) 1	212.00	0.26	0.91	0.80	1480.00	0.15	0.47	0.40	58.00	2.50	5.10	110.00	13.40	1.74	0.08	1.76	0.01	2.46	1.24	1.55	0.21
Variance	52812.46	0.05	1.78	1.18	2448467.14	0.02	0.25	0.22	3501.94	4.74	28.03	123688.53	530.81	3.96	0.03	4.45	0.00	6.62	0.92	1.49	0.04
Skewness	2.98	3.42	2.88	3.29	3.05	3.05	0.11	2.35	-0.44	1.42	2.88	8.26	5.33	-1.58	3.72	1.76	2.83	2.24	-0.95	1.40	2.73
Coefficient of Variation (CoV) 2	1.22	0.78	1.29	0.75	0.72	0.72	0.25	0.59	0.28	0.69	0.66	2.04	1.03	0.12	0.62	1.19	0.75	0.29	0.22	0.61	1.26
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %
SULPHURETS - All																					
Count	365	433	166	433	360	433	166	433	433	432	433	433	433	166	166	166	162	166	166	166	166
Minimum	18.00	0.05	0.03	0.60	550.00	0.06	0.17	0.30	60.00	1.40	2.00	8.00	6.10	10.62	0.06	0.20	0.01	1.85	1.59	0.32	0.01
10 Percentile	129.20	0.20	0.03	1.10	1768.00	0.18	0.47	0.90	125.20	4.30	7.60	26.00	13.80	13.67	0.11	0.98	0.01	3.56	3.13	1.15	0.05
25 Percentile	190.50	0.23	0.06	1.50	2237.50	0.23	0.67	1.20	152.00	6.20	9.30	34.00	17.00	14.66	0.18	2.04	0.01	4.83	3.99	1.75	0.09
Median-25Percentile	103.50	0.07	0.05	0.70	657.50	0.07	0.41	0.60	35.00	3.10	2.30	17.00	5.30	1.26	0.07	1.59	0.00	1.42	1.34	0.75	0.04
Mean	311.11	0.34	0.31	2.53	2921.25	0.30	1.29	2.13	204.03	12.13	11.83	215.85	25.01	15.76	0.28	3.94	0.01	6.34	5.31	2.70	0.16
Standard Deviation	173.82	0.13	1.17	1.33	943.97	0.10	0.83	1.44	76.28	13.30	3.64	738.86	10.74	1.59	0.15	2.44	0.01	2.26	1.74	1.28	0.26
Median	294.00	0.30	0.11	2.20	2895.00	0.30	1.08	1.80	187.00	9.30	11.60	51.00	22.30	15.92	0.25	3.63	0.01	6.25	5.34	2.50	0.13
75Percentile-Median	86.00	0.10	0.13	1.00	665.00	0.07	0.63	0.70	64.00	3.93	2.40	59.30	8.50	1.05	0.12	1.80	0.01	1.27	0.99	1.09	0.06
75 Percentile	380.00	0.40	0.24	3.20	3560.00	0.37	1.71	2.50	251.00	13.23	14.00	110.30	30.80	16.97	0.37	5.43	0.01	7.52	6.33	3.59	0.19
90 Percentile	480.00	0.50	0.59	4.50	4003.00	0.41	2.54	3.90	309.00	20.56	16.56	372.80	41.94	17.64	0.45	7.35	0.02	8.70	7.88	4.32	0.25
Maximum	1420.00	1.00	14.70	7.70	7000.00	0.70	3.96	9.70	592.00	166.70	27.40	10000.00	62.50	19.59	1.19	12.22	0.03	15.15	9.51	6.69	3.40
Interquartile Range (IQR) 1	189.50	0.17	0.18	1.70	1322.50	0.14	1.04	1.30	99.00	7.03	4.70	76.30	13.80	2.31	0.19	3.39	0.01	2.69	2.33	1.84	0.10
Variance	30212.33	0.02	1.37	1.77	891083.39	0.01	0.68	2.07	5818.57	176.83	13.23	545920.17	115.30	2.52	0.02	5.94	0.00	5.11	3.04	1.63	0.07
Skewness	1.81	0.77	11.44	1.11	0.42	0.28	1.04	2.05	1.17	6.00	0.53	8.71	1.02	-0.41	1.69	0.67	1.58	0.85	0.24	0.56	11.24
Coefficient of Variation (CoV) 2	0.56	0.40	3.74	0.53	0.32	0.32	0.64	0.68	0.37	1.10	0.31	3.42	0.43	0.10	0.54	0.62	0.71	0.36	0.33	0.47	1.66
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
SULPHURETS - Overburden																					
Count	7	9	6	9	8	9	6	9	9	9	9	9	9	6	6	6	6	6	6	6	6
Minimum	49.60	0.18	0.03	1.00	1960.00	0.20	0.39	0.60	146.00	2.80	9.70	30.00	10.10	13.10	0.13	0.20	0.01	2.54	2.66	0.75	0.01
10 Percentile	138.64	0.20	0.03	1.48	2352.00	0.24	0.46	0.92	149.20	4.56	10.10	32.40	11.14	14.19	0.15	0.37	0.01	3.69	3.23	1.12	0.03
25 Percentile	237.50	0.31	0.04	1.70	2527.50	0.25	0.56	1.10	154.00	5.30	10.70	37.00	11.60	15.48	0.17	0.92	0.01	4.92	3.97	1.75	0.08
Median-25Percentile	81.50	0.09	0.04	0.80	247.50	0.04	0.08	0.80	41.00	1.70	0.70	8.20	12.60	0.89	0.04	3.00	0.00	1.34	0.99	1.03	0.09
Mean	420.23	0.37	0.15	2.51	3027.50	0.31	1.22	1.71	228.44	10.86	12.01	89.47	20.49	16.08	0.22	4.06	0.01	6.51	4.84	2.55	0.13
Standard Deviation	452.85	0.13	0.20	1.03	797.49	0.08	1.18	0.75	77.60	8.56	1.92	108.84	7.76	1.73	0.08	3.57	0.00	2.93	1.47	1.22	0.08
Median	319.00	0.40	0.08	2.50	2775.00	0.29	0.64	1.90	195.00	7.00	11.40	45.20	24.20	16.37	0.21	3.92	0.01	6.26	4.96	2.78	0.16
75Percentile-Median	20.00	0.04	0.05	0.40	802.50	0.08	0.78	0.50	100.00	9.50	2.30	39.80	1.50	1.02	0.08	3.10	0.00	1.84	1.04	0.73	0.03
75 Percentile	339.00	0.44	0.13	2.90	3577.50	0.37	1.41	2.40	295.00	16.50	13.70	85.00	25.70	17.39	0.29	7.02	0.01	8.10	6.00	3.51	0.19
90 Percentile	777.40	0.51	0.35	3.94	3927.00	0.42	2.56	2.52	309.00	19.42	14.18	147.40	27.34	17.68	0.32	7.90	0.01	9.59	6.34	3.75	0.20
Maximum	1420.00	0.57	0.56	4.10	4410.00	0.44	3.44	2.60	357.00	29.50	15.30	373.00	31.50	17.72	0.33	8.34	0.01	10.81	6.49	3.82	0.21
Interquartile Range (IQR) 1	101.50	0.13	0.09	1.20	1050.00	0.12	0.86	1.30	141.00	11.20	3.00	48.00	14.10	1.91	0.12	6.10	0.00	3.18	2.03	1.76	0.11
Variance	205075.30	0.02	0.04	1.05	635992.86	0.01	1.40	0.56	6021.03	73.26	3.70	11846.31	60.18	2.99	0.01	12.77	0.00	8.58	2.17	1.49	0.01
Skewness	2.34	-0.14	2.21	0.30	0.59	0.24	1.78	-0.20	0.44	1.50	0.56	2.75	-0.27	-1.07	0.43	0.09	0.97	0.20	-0.41	-0.56	-0.81
Coefficient of Variation (CoV) 2	1.08	0.35	1.35	0.41	0.26	0.26	0.97	0.44	0.34	0.79	0.16	1.22	0.38	0.11	0.36	0.88	0.39	0.45	0.30	0.48	0.62
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %
SULPHURETS - Au, Leach, Raewn zones																					
Count	40	51	34	51	51	51	34	51	51	51	51	51	51	34	34	34	34	34	34	34	34
Minimum	70.90	0.05	0.03	0.70	550.00	0.06	0.82	0.90	60.00	2.40	2.60	21.00	6.10	12.99	0.08	0.25	0.01	1.85	3.19	0.32	0.01
10 Percentile	99.66	0.10	0.05	1.30	1080.00	0.11	1.19	1.10	83.00	3.70	6.10	34.00	12.20	13.40	0.12	0.40	0.01	3.07	4.95	0.58	0.02
25 Percentile	109.75	0.16	0.07	1.80	1350.00	0.14	1.77	1.35	107.00	6.10	7.45	62.00	15.20	14.22	0.18	0.83	0.01	4.12	6.32	0.96	0.03
Median-25Percentile	27.25	0.06	0.06	0.50	670.00	0.07	0.45	0.35	69.00	3.40	2.25	60.00	5.00	1.19	0.02	0.73	0.01	1.86	0.85	0.58	0.03
Mean	160.66	0.23	0.29	2.35	2109.41	0.21	2.20	2.07	174.61	10.81	10.08	214.35	20.05	15.58	0.24	1.92	0.01	5.59	6.99	1.81	0.09
Standard Deviation	73.89	0.11	0.34	0.93	882.47	0.09	0.73	1.37	92.15	6.46	3.96	305.94	6.40	1.64	0.12	1.52	0.01	2.00	1.64	1.11	0.08
Median	137.00	0.21	0.13	2.30	2020.00	0.20	2.22	1.70	176.00	9.50	9.70	122.00	20.20	15.41	0.20	1.56	0.01	5.98	7.16	1.54	0.06
75Percentile-Median	45.50	0.09	0.26	0.50	685.00	0.07	0.55	0.85	17.00	5.45	2.10	128.25	3.35	1.67	0.12	0.63	0.00	1.02	0.94	1.15	0.07
75 Percentile	182.50	0.30	0.39	2.80	2705.00	0.27	2.77	2.55	193.00	14.95	11.80	250.25	23.55	17.08	0.32	2.18	0.01	6.99	8.10	2.69	0.13
90 Percentile	259.70	0.36	0.83	3.60	3370.00	0.34	3.03	3.30	256.00	17.70	15.00	404.00	27.90	17.60	0.41	4.19	0.02	8.20	8.71	3.36	0.23
Maximum	394.00	0.50	1.31	5.00	3940.00	0.39	3.52	9.70	512.00	34.00	23.40	1820.00	35.80	18.25	0.58	5.86	0.03	9.55	9.51	4.08	0.31
Interquartile Range (IQR) 1	72.75	0.15	0.32	1.00	1355.00	0.14	1.00	1.20	86.00	8.85	4.35	188.25	8.35	2.86	0.14	1.35	0.01	2.88	1.79	1.73	0.10
Variance	5459.89	0.01	0.12	0.87	778761.65	0.01	0.53	1.89	8491.32	41.74	15.69	93601.70	41.01	2.68	0.01	2.30	0.00	3.99	2.69	1.22	0.01
Skewness	1.61	0.54	1.65	0.94	0.31	0.31	-0.08	3.68	1.93	1.27	0.85	3.72	0.41	-0.04	1.06	1.18	1.78	-0.11	-0.69	0.53	1.26
Coefficient of Variation (CoV) 2	0.46	0.48	1.17	0.40	0.42	0.42	0.33	0.66	0.53	0.60	0.39	1.43	0.32	0.11	0.48	0.79	0.62	0.36	0.23	0.61	0.90
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
SULPHURETS - Lower Au zone																					
Count	26	31	15	31	30	31	15	31	31	31	31	31	31	15	15	15	15	15	15	15	15
Minimum	101.50	0.05	0.05	1.10	1500.00	0.15	0.92	0.80	98.00	4.20	6.20	27.70	13.80	12.70	0.07	1.25	0.01	3.64	3.42	1.42	0.03
10 Percentile	134.00	0.20	0.08	1.70	1799.00	0.18	1.19	1.30	113.00	4.70	6.90	32.00	16.30	13.39	0.08	1.41	0.01	4.92	3.60	1.73	0.09
25 Percentile	155.13	0.30	0.10	2.30	2815.00	0.27	1.49	1.60	139.00	5.65	10.80	50.80	18.40	15.43	0.10	2.09	0.01	5.89	3.92	2.12	0.10
Median-25Percentile	30.88	0.06	0.08	0.90	355.00	0.04	0.12	0.30	33.00	5.15	2.40	40.20	6.80	0.50	0.10	0.80	0.01	1.41	1.52	0.40	0.02
Mean	219.10	0.35	0.19	2.98	3090.00	0.31	1.96	2.18	179.45	29.58	13.57	244.39	28.55	15.75	0.20	3.32	0.01	7.34	5.30	2.95	0.15
Standard Deviation	92.09	0.13	0.13	0.96	736.67	0.07	0.84	1.06	51.96	37.79	4.13	332.44	12.23	1.53	0.11	1.90	0.00	2.44	1.52	1.28	0.10
Median	186.00	0.35	0.18	3.20	3170.00	0.32	1.61	1.90	172.00	10.80	13.20	91.00	25.20	15.93	0.20	2.88	0.01	7.30	5.43	2.51	0.12
75Percentile-Median	91.75	0.07	0.02	0.30	440.00	0.04	0.69	0.40	54.50	30.20	3.80	176.85	10.30	0.69	0.05	0.93	0.00	0.23	0.68	0.81	0.08
75 Percentile	277.75	0.42	0.20	3.50	3610.00	0.36	2.30	2.30	226.50	41.00	17.00	267.85	35.50	16.62	0.25	3.81	0.01	7.53	6.11	3.32	0.20
90 Percentile	334.50	0.50	0.33	4.00	3864.00	0.38	3.08	3.30	252.00	84.60	18.90	647.70	45.60	17.21	0.35	6.31	0.01	10.81	7.16	4.62	0.22
Maximum	495.00	0.60	0.56	5.00	4290.00	0.43	3.96	6.10	268.00	166.70	19.60	1267.40	60.50	18.31	0.41	7.23	0.01	12.68	8.39	6.05	0.47
Interquartile Range (IQR) 1	122.63	0.12	0.10	1.20	795.00	0.08	0.81	0.70	87.50	35.35	6.20	217.05	17.10	1.19	0.15	1.73	0.01	1.64	2.19	1.21	0.10
Variance	8480.72	0.02	0.02	0.93	542682.76	0.01	0.70	1.12	2699.59	1428.34	17.06	110513.89	149.64	2.34	0.01	3.61	0.00	5.96	2.31	1.63	0.01
Skewness	1.24	-0.18	1.86	-0.41	-0.62	-0.55	1.20	2.11	0.23	2.11	-0.33	2.23	0.94	-0.69	0.77	1.03	-0.79	1.01	0.50	1.23	2.20
Coefficient of Variation (CoV) 2	0.42	0.38	0.71	0.32	0.24	0.24	0.43	0.48	0.29	1.28	0.30	1.36	0.43	0.10	0.56	0.57	0.29	0.33	0.29	0.43	0.66
NPR < 1.0 or NPR = 1.0																					
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Sum Check																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %
SULPHURETS - LP Hazelton																					
Count	34	40	11	40	40	40	11	40	40	39	40	40	40	11	11	11	11	11	11	11	11
Minimum	112.00	0.10	0.06	1.00	1110.00	0.11	0.51	0.80	97.00	3.00	7.80	33.00	10.50	10.62	0.06	1.86	0.01	3.05	1.96	1.48	0.09
10 Percentile	141.10	0.20	0.09	1.49	2031.00	0.20	0.98	1.19	108.80	4.48	9.88	67.80	15.24	13.22	0.08	2.60	0.01	5.14	2.78	2.09	0.12
25 Percentile	175.75	0.30	0.13	2.00	2667.50	0.27	1.16	1.50	134.25	5.15	11.18	184.15	17.93	14.95	0.11	2.89	0.01	5.47	3.55	2.14	0.19
Median-25Percentile	26.25	0.00	0.13	0.75	332.50	0.03	0.11	0.45	28.75	1.85	2.43	137.65	5.38	1.12	0.07	0.60	0.01	0.60	1.06	0.37	0.08
Mean	241.51	0.33	0.28	2.71	3018.50	0.30	1.32	2.26	164.75	11.00	13.74	688.08	24.96	15.72	0.17	4.44	0.01	6.76	4.40	2.69	0.52
Standard Deviation	109.02	0.10	0.24	0.90	701.70	0.07	0.38	1.04	40.84	12.62	3.73	998.39	9.10	2.35	0.09	2.18	0.00	3.02	1.40	0.79	0.96
Median	202.00	0.30	0.25	2.75	3000.00	0.30	1.27	1.95	163.00	7.00	13.60	321.80	23.30	16.06	0.17	3.49	0.01	6.07	4.60	2.50	0.26
75Percentile-Median	71.25	0.10	0.10	0.58	552.50	0.06	0.37	0.95	24.50	3.50	1.70	374.70	6.70	1.04	0.05	2.38	0.00	1.24	0.49	0.65	0.04
75 Percentile	273.25	0.40	0.35	3.33	3552.50	0.36	1.64	2.90	187.50	10.50	15.30	696.50	30.00	17.10	0.22	5.87	0.01	7.31	5.09	3.15	0.30
90 Percentile	379.40	0.43	0.39	3.90	3842.00	0.38	1.68	3.62	206.50	20.12	19.32	1327.00	38.45	17.33	0.27	7.42	0.01	7.76	5.90	3.80	0.32
Maximum	639.00	0.53	0.91	4.50	4460.00	0.45	1.81	5.40	283.00	76.40	26.60	4160.00	50.00	19.59	0.33	8.56	0.02	15.00	6.66	4.11	3.40
Interquartile Range (IQR) 1	97.50	0.10	0.23	1.33	885.00	0.09	0.48	1.40	53.25	5.35	4.13	512.35	12.08	2.15	0.12	2.98	0.01	1.84	1.55	1.01	0.11
Variance	11884.46	0.01	0.06	0.81	492387.44	0.00	0.14	1.08	1667.88	159.18	13.93	996775.10	82.78	5.54	0.01	4.74	0.00	9.14	1.95	0.62	0.92
Skewness	1.77	-0.30	2.05	0.03	-0.42	-0.42	-0.77	1.04	0.69	4.04	1.19	2.65	0.99	-0.77	0.60	0.84	1.64	2.21	-0.29	0.51	3.28
Coefficient of Variation (CoV) 2	0.45	0.31	0.85	0.33	0.23	0.23	0.29	0.46	0.25	1.15	0.27	1.45	0.36	0.15	0.51	0.49	0.52	0.45	0.32	0.29	1.85
NPR < 1.0 or NPR = 1.0																					
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% NPR < 1.0 or NPR = 1.0 of Total																					
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% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
SULPHURETS - UP Hazelton																					
Count	96	114	30	114	87	114	30	114	114	114	114	114	114	30	30	30	27	30	30	30	30
Minimum	18.00	0.10	0.03	0.70	1510.00	0.15	0.21	0.50	118.00	1.90	5.20	16.00	10.30	12.59	0.09	0.79	0.01	3.13	1.65	0.97	0.05
10 Percentile	151.00	0.20	0.03	1.03	2040.00	0.22	0.37	0.90	163.20	5.23	8.13	27.86	12.72	14.12	0.15	1.27	0.01	3.85	3.06	1.86	0.08
25 Percentile	205.75	0.26	0.05	1.40	2480.00	0.26	0.47	1.20	193.75	7.15	10.00	34.00	15.75	14.60	0.20	2.75	0.01	5.03	3.60	2.51	0.09
Median-25Percentile	84.75	0.04	0.06	0.20	510.00	0.05	0.20	0.40	56.25	2.70	2.25	8.85	4.45	0.97	0.06	2.25	0.00	1.13	1.02	0.75	0.04
Mean	303.81	0.35	0.12	2.03	3093.45	0.33	0.64	1.97	254.35	11.23	12.26	63.75	21.72	15.61	0.30	5.01	0.01	6.22	4.72	3.40	0.13
Standard Deviation	166.93	0.14	0.09	1.11	912.27	0.09	0.23	1.37	80.71	5.96	3.33	102.63	8.75	1.46	0.20	2.65	0.01	1.62	1.59	1.28	0.05
Median	290.50	0.30	0.11	1.60	2990.00	0.31	0.67	1.60	250.00	9.85	12.25	42.85	20.20	15.57	0.26	5.01	0.01	6.16	4.62	3.26	0.13
75Percentile-Median	63.00	0.10	0.04	0.80	505.00	0.07	0.10	0.70	57.50	4.30	2.53	9.15	5.08	0.97	0.07	2.27	0.02	1.37	1.04	1.01	0.04
75 Percentile	353.50	0.40	0.15	2.40	3495.00	0.39	0.77	2.30	307.50	14.15	14.78	52.00	25.28	16.54	0.32	7.28	0.02	7.53	5.66	4.27	0.16
90 Percentile	464.00	0.50	0.25	3.60	4554.00	0.46	0.90	3.41	349.70	20.02	16.24	68.40	32.39	17.21	0.46	8.27	0.03	8.15	6.35	4.85	0.20
Maximum	1045.00	1.00	0.36	6.10	5550.00	0.56	1.14	8.30	592.00	32.80	23.30	724.00	60.80	18.80	1.19	9.91	0.03	9.31	8.37	6.69	0.25
Interquartile Range (IQR) 1	147.75	0.14	0.10	1.00	1015.00	0.13	0.30	1.10	113.75	7.00	4.78	18.00	9.53	1.93	0.12	4.52	0.02	2.50	2.06	1.76	0.07
Variance	27867.07	0.02	0.01	1.22	832241.46	0.01	0.05	1.87	6514.34	35.54	11.10	10533.47	76.65	2.12	0.04	7.00	0.00	2.62	2.51	1.65	0.00
Skewness	1.55	1.38	1.33	1.68	0.59	0.29	0.30	2.40	1.08	1.08	0.17	5.21	1.57	-0.01	3.20	0.00	1.03	-0.15	0.47	0.34	0.53
Coefficient of Variation (CoV) 2	0.55	0.39	0.76	0.55	0.29	0.28	0.36	0.69	0.32	0.53	0.27	1.61	0.40	0.09	0.68	0.53	0.86	0.26	0.34	0.38	0.40
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
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% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %
SULPHURETS - Monzonite																					
Count	78	85	32	85	65	85	32	85	85	85	85	85	85	32	32	32	31	32	32	32	32
Minimum	95.00	0.05	0.03	0.60	1420.00	0.07	0.17	0.40	78.00	2.30	2.00	8.00	6.80	13.66	0.09	0.89	0.01	2.55	1.59	0.88	0.07
10 Percentile	244.90	0.20	0.03	1.20	1754.00	0.17	0.32	1.04	112.80	4.18	7.60	18.40	14.38	14.21	0.13	3.35	0.01	3.22	2.54	1.19	0.09
25 Percentile	292.00	0.26	0.03	2.00	2030.00	0.20	0.46	1.80	141.00	5.90	8.50	24.00	18.10	14.61	0.24	3.57	0.01	3.65	3.70	1.59	0.10
Median-25Percentile	49.00	0.10	0.01	1.90	300.00	0.03	0.14	0.80	22.00	2.30	1.90	4.50	10.60	1.28	0.12	1.00	0.00	0.82	1.42	0.80	0.02
Mean	376.10	0.36	0.05	3.70	2511.54	0.24	0.60	3.03	178.85	8.09	10.28	30.89	29.11	15.77	0.33	5.32	0.01	5.04	4.78	2.74	0.13
Standard Deviation	161.32	0.13	0.03	1.78	750.62	0.07	0.20	1.75	66.29	3.25	2.51	11.38	12.04	1.27	0.14	2.49	0.01	1.70	1.51	1.41	0.04
Median	341.00	0.36	0.04	3.90	2330.00	0.23	0.60	2.60	163.00	8.20	10.40	28.50	28.70	15.89	0.35	4.57	0.01	4.47	5.13	2.39	0.12
75Percentile-Median	55.25	0.12	0.03	1.10	460.00	0.05	0.17	1.30	34.00	2.00	1.80	7.50	9.20	0.88	0.04	2.55	0.01	2.44	0.85	1.69	0.04
75 Percentile	396.25	0.48	0.07	5.00	2790.00	0.28	0.77	3.90	197.00	10.20	12.20	36.00	37.90	16.77	0.39	7.11	0.01	6.90	5.98	4.07	0.15
90 Percentile	537.30	0.53	0.10	5.80	3682.00	0.35	0.85	5.70	284.20	12.22	13.10	47.40	45.50	17.17	0.48	8.07	0.02	7.38	6.57	4.63	0.19
Maximum	1005.00	0.59	0.16	7.70	4630.00	0.46	0.94	8.00	387.00	18.40	15.50	70.00	55.90	18.05	0.71	12.22	0.03	7.55	7.35	5.98	0.24
Interquartile Range (IQR) 1	104.25	0.22	0.05	3.00	760.00	0.08	0.32	2.10	56.00	4.30	3.70	12.00	19.80	2.15	0.16	3.55	0.01	3.26	2.28	2.49	0.05
Variance	26022.74	0.02	0.00	3.17	563428.85	0.01	0.04	3.07	4394.04	10.58	6.32	129.49	144.88	1.61	0.02	6.19	0.00	2.87	2.29	1.99	0.00
Skewness	2.07	-0.10	1.37	0.06	1.20	0.93	-0.22	0.86	1.27	0.46	-0.65	0.74	0.21	-0.05	0.38	1.06	1.58	0.25	-0.34	0.58	1.06
Coefficient of Variation (CoV) 2	0.43	0.36	0.66	0.48	0.30	0.30	0.34	0.58	0.37	0.40	0.24	0.37	0.41	0.08	0.43	0.47	0.86	0.34	0.32	0.51	0.33
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
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% NPR < 1.0 or NPR = 1.0 of Total																					
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Sum Check																					
SULPHURETS - Undefined																					
Count	84	103	38	103	79	103	38	103	103	103	103	103	103	38	38	38	38	38	38	38	38
Minimum	59.20	0.10	0.03	0.60	1790.00	0.18	0.50	0.30	107.00	1.40	5.40	26.00	8.30	11.80	0.07	0.44	0.01	4.70	2.30	1.21	0.05
10 Percentile	184.30	0.20	0.05	1.00	2384.00	0.26	0.68	0.60	138.40	4.10	8.02	35.54	15.70	14.16	0.14	1.71	0.01	5.41	3.47	1.76	0.10
25 Percentile	277.75	0.27	0.09	1.40	2860.00	0.30	0.98	0.90	157.50	7.25	10.15	45.50	19.80	14.95	0.21	2.73	0.01	6.13	4.09	2.19	0.12
Median-25Percentile	89.25	0.03	0.11	0.60	700.00	0.05	0.26	0.50	36.50	2.65	1.55	30.50	3.30	1.50	0.14	1.10	0.01	1.23	0.84	0.33	0.05
Mean	378.29	0.35	0.78	2.00	3468.73	0.35	1.33	1.56	204.19	12.40	12.21	356.65	27.06	16.02	0.33	3.84	0.01	7.67	5.07	2.84	0.17
Standard Deviation	163.22	0.14	2.38	0.78	890.33	0.08	0.56	1.20	55.76	9.21	3.74	1294.77	11.64	1.70	0.15	1.68	0.01	2.16	1.45	1.04	0.07
Median	367.00	0.30	0.20	2.00	3560.00	0.36	1.25	1.40	194.00	9.90	11.70	76.00	23.10	16.45	0.35	3.83	0.01	7.35	4.93	2.53	0.17
75Percentile-Median	105.25	0.10	0.38	0.45	275.00	0.03	0.36	0.45	52.00	5.70	2.40	48.40	10.85	0.76	0.09	0.88	0.01	1.28	0.85	0.78	0.04
75 Percentile	472.25	0.40	0.58	2.45	3835.00	0.39	1.60	1.85	246.00	15.60	14.10	124.40	33.95	17.21	0.44	4.70	0.02	8.63	5.78	3.31	0.21
90 Percentile	569.40	0.50	1.01	3.10	4214.00	0.44	1.89	2.30	266.60	22.44	16.86	384.60	44.06	17.84	0.52	6.01	0.02	9.86	6.62	4.02	0.25
Maximum	885.00	0.90	14.70	5.20	7000.00	0.70	3.04	9.30	335.00	51.40	27.40	10000.00	62.50	18.58	0.66	8.03	0.02	15.15	8.85	6.53	0.44
Interquartile Range (IQR) 1	194.50	0.13	0.49	1.05	975.00	0.09	0.62	0.95	88.50	8.35	3.95	78.90	14.15	2.26	0.23	1.98	0.01	2.51	1.69	1.12	0.09
Variance	26641.35	0.02	5.65	0.61	792685.56	0.01	0.31	1.43	3108.81	84.83	13.96	1676430.83	135.42	2.89	0.02	2.81	0.00	4.65	2.09	1.08	0.01
Skewness	0.68	1.43	5.73	0.72	1.11	0.93	1.15	3.65	0.54	2.09	0.87	5.87	1.00	-0.78	0.14	0.16	0.72	1.42	0.58	1.46	1.32
Coefficient of Variation (CoV) 2	0.43	0.40	3.04	0.39	0.26	0.24	0.42	0.76	0.27	0.74	0.31	3.63	0.43	0.11	0.44	0.44	0.58	0.28	0.29	0.37	0.42
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
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Sum Check																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %
MITCHELL - All																					
Count	808	936	739	936	936	936	739	936	936	936	936	936	936	739	739	739	222	739	739	739	733
Minimum	4.80	0.03	0.03	0.10	260.00	0.03	0.27	0.10	32.00	0.10	0.90	4.00	0.60	2.70	0.02	0.04	0.01	1.00	0.27	0.12	0.01
10 Percentile	60.40	0.10	0.07	1.40	790.00	0.08	0.64	0.90	96.00	0.60	4.40	28.50	7.90	12.27	0.13	0.53	0.01	3.72	2.93	0.72	0.04
25 Percentile	128.00	0.20	0.12	2.00	1335.00	0.13	0.95	1.30	135.00	1.10	6.18	47.00	12.10	13.87	0.21	1.46	0.01	4.94	3.86	1.26	0.07
Median-25Percentile	81.50	0.12	0.12	0.90	645.00	0.06	0.52	0.40	34.00	2.20	2.43	27.00	5.60	1.53	0.12	1.14	0.00	1.09	1.16	0.72	0.03
Mean	246.33	0.31	0.43	3.33	1973.96	0.20	1.58	2.94	229.41	5.91	9.14	147.55	21.77	14.92	0.36	2.86	0.01	6.01	5.21	1.98	0.11
Standard Deviation	181.91	0.15	0.55	2.61	914.24	0.09	0.79	5.31	171.48	6.93	4.40	423.18	16.78	2.48	0.21	1.89	0.01	1.97	1.97	1.00	0.07
Median	209.50	0.32	0.24	2.90	1980.00	0.20	1.47	1.70	169.00	3.30	8.60	74.00	17.70	15.39	0.33	2.60	0.01	6.02	5.01	1.97	0.10
75Percentile-Median	101.00	0.08	0.26	0.70	520.00	0.05	0.61	0.83	91.00	5.30	2.90	48.00	8.23	1.16	0.14	1.40	0.00	1.01	1.26	0.62	0.04
75 Percentile	310.50	0.40	0.50	3.60	2500.00	0.25	2.08	2.53	260.00	8.60	11.50	122.00	25.93	16.55	0.47	4.00	0.01	7.03	6.27	2.59	0.14
90 Percentile	489.00	0.50	0.92	4.90	3020.00	0.30	2.66	5.30	439.50	14.55	14.65	245.50	38.15	17.33	0.58	5.38	0.02	7.95	7.88	3.10	0.21
Maximum	1345.00	0.99	4.62	28.00	7650.00	0.77	4.87	103.00	1315.00	67.30	50.50	7105.40	181.50	21.40	2.27	12.28	0.05	23.23	11.27	9.16	0.57
Interquartile Range (IQR) 1	182.50	0.20	0.38	1.60	1165.00	0.12	1.13	1.23	125.00	7.50	5.33	75.00	13.83	2.68	0.26	2.54	0.00	2.09	2.41	1.34	0.07
Variance	33089.67	0.02	0.31	6.81	835841.06	0.01	0.62	28.17	29405.76	47.99	19.36	179078.60	281.54	6.16	0.05	3.57	0.00	3.87	3.87	1.01	0.01
Skewness	1.78	0.19	3.41	3.93	0.94	0.94	0.68	9.68	2.51	2.69	1.78	11.05	3.08	-1.55	2.16	0.89	2.17	1.22	0.59	1.19	1.71
Coefficient of Variation (CoV) 2	0.74	0.46	1.29	0.78	0.46	0.46	0.50	1.81	0.75	1.17	0.48	2.87	0.77	0.17	0.60	0.66	0.57	0.33	0.38	0.51	0.64
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
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Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
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% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
MITCHELL - Overburden																					
Count	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	4	7	7	7	7
Minimum	37.30	0.12	0.06	1.40	1120.00	0.11	0.70	1.10	100.00	0.30	6.50	38.00	11.10	12.20	0.17	0.30	0.01	3.22	3.49	1.21	0.03
10 Percentile	49.72	0.25	0.08	2.00	1444.00	0.14	0.79	1.28	114.40	0.48	6.68	49.40	12.84	12.84	0.18	0.35	0.01	3.29	3.78	1.24	0.05
25 Percentile	94.75	0.35	0.11	2.90	1765.00	0.18	0.87	1.55	146.50	1.70	7.00	59.00	15.60	13.47	0.21	1.05	0.01	4.51	4.28	1.61	0.07
Median-25Percentile	67.25	0.09	0.05	0.80	355.00	0.04	0.06	0.25	32.50	2.70	1.10	16.00	2.50	1.81	0.03	1.21	0.00	1.58	1.04	0.55	0.03
Mean	168.83	0.40	0.36	3.61	2215.71	0.22	1.39	2.33	383.71	4.59	10.01	96.86	22.74	14.85	0.29	2.29	0.01	5.45	5.51	2.06	0.10
Standard Deviation	105.44	0.15	0.52	1.39	819.02	0.08	0.72	1.44	380.90	3.55	4.26	70.72	10.46	1.81	0.13	1.84	0.01	1.52	1.80	0.63	0.05
Median	162.00	0.43	0.16	3.70	2120.00	0.21	0.93	1.80	179.00	4.40	8.10	75.00	18.10	15.27	0.23	2.25	0.01	6.09	5.32	2.16	0.10
75Percentile-Median	70.00	0.05	0.11	0.70	410.00	0.04	1.03	0.75	378.00	2.90	4.05	25.50	11.35	1.11	0.10	0.60	0.01	0.48	0.90	0.35	0.02
75 Percentile	232.00	0.48	0.27	4.40	2530.00	0.25	1.96	2.55	557.00	7.30	12.15	100.50	29.45	16.38	0.33	2.85	0.02	6.57	6.22	2.51	0.12
90 Percentile	290.00	0.54	0.83	4.94	3080.00	0.31	2.27	4.06	921.40	8.32	15.76	171.60	34.80	16.70	0.42	4.25	0.02	6.63	7.50	2.69	0.15
Maximum	329.00	0.58	1.51	5.60	3680.00	0.37	2.47	5.20	1000.00	9.40	17.20	246.00	39.90	16.78	0.53	5.66	0.03	6.69	8.77	2.82	0.17
Interquartile Range (IQR) 1	137.25	0.13	0.16	1.50	765.00	0.08	1.09	1.00	410.50	5.60	5.15	41.50	13.85	2.92	0.13	1.81	0.01	2.06	1.94	0.90	0.05
Variance	11117.82	0.02	0.27	1.94	670795.24	0.01	0.52	2.09	145084.57	12.59	18.18	5001.81	109.37	3.28	0.02	3.39	0.00	2.32	3.22	0.40	0.00
Skewness	0.26	-0.96	2.44	-0.33	0.73	0.73	0.63	1.66	1.21	0.03	1.13	1.98	0.67	-0.36	1.42	0.92	1.72	-1.03	0.95	-0.45	0.29
Coefficient of Variation (CoV) 2	0.62	0.37	1.46	0.39	0.37	0.37	0.52	0.62	0.99	0.77	0.43	0.73	0.46	0.12	0.44	0.81	0.81	0.28	0.33	0.31	0.48
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
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Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
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Sum Check																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %
MITCHELL - UP Hazelton																					
Count	255	273	245	273	273	273	245	273	273	273	273	273	273	245	245	245	121	245	245	245	245
Minimum	29.80	0.05	0.06	0.80	310.00	0.03	0.40	0.50	38.00	1.20	1.50	11.00	8.80	10.06	0.05	0.12	0.01	1.22	1.76	0.25	0.01
10 Percentile	116.20	0.25	0.15	1.30	756.00	0.08	0.62	1.10	133.00	3.40	4.46	21.00	12.72	13.20	0.12	1.14	0.01	2.59	4.60	0.62	0.05
25 Percentile	146.75	0.32	0.23	1.50	1770.00	0.18	0.79	1.70	191.00	5.30	7.20	34.00	16.40	14.13	0.17	1.90	0.01	4.14	5.69	1.08	0.07
Median-25Percentile	50.75	0.08	0.21	1.00	610.00	0.06	0.37	1.10	145.00	3.40	2.40	26.00	10.70	1.01	0.10	0.84	0.00	0.99	0.82	0.62	0.04
Mean	206.95	0.39	0.68	4.05	2303.92	0.23	1.25	5.57	356.62	10.19	10.46	111.53	32.16	15.04	0.31	2.93	0.01	5.18	6.74	1.76	0.14
Standard Deviation	85.81	0.12	0.73	4.06	1002.92	0.10	0.56	8.92	209.37	7.24	5.24	416.88	21.58	1.51	0.19	1.55	0.00	1.99	1.83	0.89	0.09
Median	197.50	0.40	0.44	2.50	2380.00	0.24	1.16	2.80	336.00	8.70	9.60	60.00	27.10	15.14	0.27	2.74	0.01	5.13	6.51	1.70	0.11
75Percentile-Median	59.00	0.06	0.35	2.20	500.00	0.05	0.48	2.90	126.00	4.40	3.70	24.00	11.00	0.93	0.12	1.09	0.00	1.11	1.20	0.67	0.06
75 Percentile	256.50	0.46	0.79	4.70	2880.00	0.29	1.64	5.70	462.00	13.10	13.30	84.00	38.10	16.07	0.39	3.83	0.01	6.24	7.71	2.37	0.17
90 Percentile	311.80	0.54	1.45	10.26	3308.00	0.33	2.05	11.98	598.00	17.98	16.60	136.40	59.52	16.80	0.55	4.81	0.02	7.68	9.38	2.94	0.24
Maximum	585.00	0.85	4.62	28.00	5860.00	0.59	3.47	103.00	1252.00	67.30	50.50	6420.00	126.50	18.19	1.11	12.28	0.03	15.48	11.20	4.59	0.57
Interquartile Range (IQR) 1	109.75	0.14	0.56	3.20	1110.00	0.11	0.85	4.00	271.00	7.80	6.10	50.00	21.70	1.94	0.22	1.93	0.00	2.10	2.02	1.29	0.10
Variance	7362.73	0.01	0.53	16.51	1005849.66	0.01	0.31	79.55	43834.67	52.41	27.42	173792.27	465.66	2.27	0.03	2.41	0.00	3.97	3.34	0.78	0.01
Skewness	1.16	0.20	2.49	2.35	0.24	0.24	0.78	6.02	1.19	2.70	1.95	13.30	1.78	-0.58	1.53	1.14	1.79	0.70	0.28	0.45	1.65
Coefficient of Variation (CoV) 2	0.41	0.29	1.07	1.00	0.44	0.44	0.45	1.60	0.59	0.71	0.50	3.74	0.67	0.10	0.61	0.53	0.35	0.38	0.27	0.50	0.66
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
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% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
MITCHELL - LP Hazelton																					
Count	463	553	412	553	553	553	412	553	553	553	553	553	553	412	412	412	82	412	412	412	408
Minimum	4.80	0.03	0.03	0.10	260.00	0.03	0.27	0.10	32.00	0.10	0.90	7.00	0.60	2.70	0.02	0.04	0.01	2.77	0.27	0.12	0.01
10 Percentile	43.44	0.09	0.06	1.50	844.00	0.08	0.96	0.70	92.00	0.40	4.42	46.00	6.40	11.04	0.15	0.44	0.01	4.97	2.45	0.88	0.03
25 Percentile	98.05	0.18	0.10	2.30	1220.00	0.12	1.32	1.10	124.00	0.80	5.70	60.00	10.30	13.61	0.24	1.21	0.01	5.78	3.34	1.67	0.07
Median-25Percentile	121.95	0.08	0.08	0.60	550.00	0.06	0.49	0.40	33.00	0.60	2.10	32.00	4.40	1.81	0.14	1.24	0.00	0.70	0.85	0.56	0.03
Mean	245.85	0.26	0.31	2.82	1848.05	0.18	1.91	1.67	156.74	3.50	8.53	184.33	16.30	14.72	0.40	2.86	0.02	6.61	4.18	2.21	0.10
Standard Deviation	180.99	0.12	0.40	0.91	856.36	0.09	0.78	1.68	55.23	5.47	3.96	461.95	11.47	2.96	0.23	2.10	0.01	1.50	1.35	1.03	0.06
Median	220.00	0.26	0.18	2.90	1770.00	0.18	1.81	1.50	157.00	1.40	7.80	92.00	14.70	15.43	0.38	2.45	0.01	6.48	4.19	2.23	0.10
75Percentile-Median	122.00	0.10	0.20	0.50	580.00	0.06	0.68	0.30	18.00	1.90	2.80	71.00	6.20	1.23	0.12	1.62	0.01	0.86	0.78	0.51	0.03
75 Percentile	342.00	0.36	0.38	3.40	2350.00	0.24	2.49	1.80	175.00	3.30	10.60	163.00	20.90	16.65	0.50	4.07	0.02	7.33	4.96	2.74	0.13
90 Percentile	492.20	0.41	0.67	3.80	2710.00	0.27	2.96	2.20	225.40	9.60	13.50	293.20	25.80	17.42	0.63	6.01	0.03	8.25	5.62	3.24	0.17
Maximum	1345.00	0.59	4.00	9.70	7650.00	0.77	4.87	29.50	424.00	45.20	37.10	7105.40	181.50	21.40	2.27	9.81	0.05	13.03	9.66	9.16	0.34
Interquartile Range (IQR) 1	243.95	0.18	0.28	1.10	1130.00	0.11	1.17	0.70	51.00	2.50	4.90	103.00	10.60	3.04	0.26	2.86	0.01	1.55	1.62	1.07	0.06
Variance	32757.40	0.01	0.16	0.83	733353.06	0.01	0.61	2.83	3050.87	29.95	15.65	213398.27	131.61	8.75	0.05	4.41	0.00	2.26	1.83	1.06	0.00
Skewness	1.34	-0.02	4.37	0.23	1.49	1.49	0.48	10.14	1.12	3.26	1.53	9.46	6.26	-1.42	2.41	0.88	1.33	0.91	0.42	1.44	1.04
Coefficient of Variation (CoV) 2	0.74	0.46	1.28	0.32	0.46	0.46	0.41	1.01	0.35	1.56	0.46	2.51	0.70	0.20	0.58	0.73	0.68	0.23	0.32	0.47	0.58
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
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% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %
MITCHELL - Monzonite																					
Count	70	80	62	80	80	80	62	80	80	80	80	80	80	62	62	62	15	62	62	62	62
Minimum	29.50	0.20	0.03	1.00	420.00	0.04	0.33	0.70	120.00	1.10	1.40	4.00	9.30	12.48	0.05	0.26	0.01	1.00	1.89	0.16	0.01
10 Percentile	122.60	0.30	0.05	1.40	1522.00	0.15	0.44	1.20	154.80	3.27	6.37	19.90	13.20	13.31	0.13	0.88	0.01	3.05	5.34	0.76	0.05
25 Percentile	158.75	0.40	0.09	2.28	1855.00	0.19	0.50	1.90	174.00	4.78	8.48	23.00	18.05	14.80	0.21	1.93	0.01	4.18	5.68	0.97	0.07
Median-25Percentile	241.75	0.10	0.06	1.98	175.00	0.02	0.12	1.00	43.50	3.28	1.43	9.00	5.60	1.52	0.13	1.23	0.00	0.54	0.41	0.31	0.03
Mean	434.02	0.48	0.22	4.62	2035.50	0.20	0.72	3.18	321.64	9.07	9.77	42.75	25.88	15.99	0.35	3.06	0.01	4.83	6.39	1.52	0.10
Standard Deviation	298.91	0.13	0.28	3.46	574.81	0.06	0.35	1.89	236.93	7.54	3.17	30.07	13.09	1.68	0.17	1.48	0.00	1.58	1.44	0.92	0.05
Median	400.50	0.50	0.15	4.25	2030.00	0.20	0.62	2.90	217.50	8.05	9.90	32.00	23.65	16.32	0.34	3.16	0.01	4.72	6.09	1.28	0.10
75Percentile-Median	212.00	0.06	0.08	1.15	290.00	0.03	0.15	1.33	145.25	3.15	1.33	18.00	4.98	1.10	0.16	0.87	0.00	0.58	0.51	0.54	0.02
75 Percentile	612.50	0.56	0.23	5.40	2320.00	0.23	0.76	4.23	362.75	11.20	11.23	50.00	28.63	17.42	0.50	4.03	0.01	5.30	6.60	1.82	0.11
90 Percentile	897.00	0.62	0.42	6.96	2712.00	0.27	1.26	5.01	599.10	14.56	13.02	84.41	38.85	17.77	0.58	4.66	0.01	6.45	8.11	2.75	0.14
Maximum	1160.00	0.99	1.77	23.60	3430.00	0.34	1.83	14.30	1315.00	60.60	18.00	196.00	93.10	18.52	0.64	6.67	0.02	11.41	11.27	5.57	0.33
Interquartile Range (IQR) 1	453.75	0.16	0.14	3.13	465.00	0.05	0.26	2.33	188.75	6.43	2.75	27.00	10.58	2.62	0.29	2.10	0.00	1.12	0.92	0.85	0.04
Variance	89346.25	0.02	0.08	12.00	330407.34	0.00	0.12	3.58	56134.01	56.86	10.04	904.20	171.29	2.83	0.03	2.20	0.00	2.48	2.09	0.84	0.00
Skewness	0.69	0.48	4.08	3.05	-0.47	-0.47	1.70	2.64	2.20	4.30	-0.10	2.24	2.50	-0.66	0.05	-0.04	3.87	0.93	1.04	1.93	2.14
Coefficient of Variation (CoV) 2	0.69	0.28	1.27	0.75	0.28	0.28	0.48	0.60	0.74	0.83	0.32	0.70	0.51	0.11	0.48	0.48	0.24	0.33	0.23	0.60	0.54
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
MITCHELL - Leach breccia/bornite breccia																					
Count	13	23	13	23	23	23	13	23	23	23	23	23	23	13	13	13	0	13	13	13	11
Minimum	15.60	0.05	0.11	0.70	340.00	0.03	1.31	0.30	69.00	0.20	1.70	18.00	1.00	8.94	0.11	0.08	0.00	4.60	2.15	0.39	0.01
10 Percentile	16.06	0.05	0.16	1.24	532.00	0.05	1.37	0.62	79.40	0.42	2.74	18.44	3.70	9.81	0.11	0.30	#NUM!	5.40	2.44	0.46	0.01
25 Percentile	17.90	0.05	0.17	1.80	645.00	0.06	1.50	0.90	90.00	0.55	4.10	28.85	9.65	12.45	0.14	0.32	#NUM!	6.65	2.94	0.53	0.02
Median-25Percentile	13.60	0.03	0.18	0.60	105.00	0.01	0.17	0.50	13.00	1.55	1.60	24.15	5.45	1.70	0.03	0.09	#NUM!	1.11	0.90	0.44	0.01
Mean	67.18	0.09	0.45	2.60	797.39	0.08	1.92	1.46	98.83	2.42	5.69	70.71	15.15	13.88	0.22	0.83	#DIV/0!	8.96	3.44	1.04	0.04
Standard Deviation	110.60	0.05	0.40	1.14	297.06	0.03	0.50	0.75	14.48	3.00	2.23	78.36	7.87	2.81	0.10	1.34	#DIV/0!	4.78	0.68	0.58	0.04
Median	31.50	0.08	0.35	2.40	750.00	0.08	1.67	1.40	103.00	2.10	5.70	53.00	15.10	14.15	0.17	0.41	#NUM!	7.76	3.84	0.97	0.02
75Percentile-Median	27.40	0.04	0.05	1.35	150.00	0.02	0.74	0.55	6.00	1.25	1.75	22.80	6.30	2.34	0.12	0.14	#NUM!	1.71	0.03	0.35	0.04
75 Percentile	58.90	0.12	0.40	3.75	900.00	0.09	2.41	1.95	109.00	3.35	7.45	75.80	21.40	16.49	0.29	0.55	#NUM!	9.47	3.87	1.32	0.06
90 Percentile	100.62	0.14	1.01	4.14	1056.00	0.11	2.56	2.10	114.00	3.94	8.76	117.20	24.66	16.93	0.35	1.14	#NUM!	12.03	3.99	1.58	0.07
Maximum	424.00	0.24	1.47	4.50	1830.00	0.18	2.57	3.60	116.00	14.60	9.10	390.00	26.70	17.68	0.40	5.20	0.00	23.23	4.21	2.40	0.15
Interquartile Range (IQR) 1	41.00	0.07	0.23	1.95	255.00	0.03	0.91	1.05	19.00	2.80	3.35	46.95	11.75	4.04	0.15	0.23	#NUM!	2.82	0.93	0.79	0.04
Variance	12231.48	0.00	0.16	1.29	88247.43	0.00	0.25	0.57	209.79	8.99	4.97	6140.80	61.90	7.88	0.01	1.80	#DIV/0!	22.83	0.46	0.34	0.00
Skewness	3.25	1.42	1.81	0.25	1.87	1.87	0.24	0.80	-0.71	3.26	-0.02	3.36	-0.27	-0.47	0.55	3.35	#DIV/0!	2.50	-0.90	0.99	1.93
Coefficient of Variation (CoV) 2	1.65	0.53	0.89	0.44	0.37	0.37	0.26	0.52	0.15	1.24	0.39	1.11	0.52	0.20	0.47	1.61	#DIV/0!	0.53	0.20	0.56	1.01
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %
IRON CAP - All																					
Count	75	75	0	75	6	75	0	75	75	75	75	75	75	0	0	0	0	0	0	0	0
Minimum	45.00	0.05	0.00	0.50	1330.00	0.05	0.00	1.10	53.00	1.60	2.50	18.60	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10 Percentile	73.80	0.10	#NUM!	1.10	1450.00	0.12	#NUM!	1.44	125.40	3.90	5.38	38.64	16.36	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
25 Percentile	108.00	0.20	#NUM!	1.40	1580.00	0.16	#NUM!	2.00	143.00	4.95	6.35	60.75	19.75	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Median-25Percentile	63.00	0.10	#NUM!	0.50	140.00	0.03	#NUM!	1.10	27.00	1.25	1.85	27.85	7.15	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Mean	187.81	0.46	#DIV/0!	2.21	1825.00	0.20	#DIV/0!	6.48	180.23	7.24	8.87	181.37	28.04	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Standard Deviation	104.00	0.92	#DIV/0!	1.26	404.26	0.06	#DIV/0!	12.61	54.85	3.36	4.04	222.91	10.75	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Median	171.00	0.30	#NUM!	1.90	1720.00	0.20	#NUM!	3.10	170.00	6.20	8.20	88.60	26.90	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
75Percentile-Median	64.00	0.10	#NUM!	0.80	462.50	0.05	#NUM!	2.45	53.50	3.15	2.55	125.55	7.95	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
75 Percentile	235.00	0.40	#NUM!	2.70	2182.50	0.24	#NUM!	5.55	223.50	9.35	10.75	214.15	34.85	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
90 Percentile	350.00	0.56	#NUM!	3.66	2305.00	0.28	#NUM!	9.52	255.60	12.10	12.02	449.00	43.18	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Maximum	435.00	5.77	0.00	8.00	2310.00	0.38	0.00	94.70	344.00	15.90	26.90	1223.00	59.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interquartile Range (IQR) 1	127.00	0.20	#NUM!	1.30	602.50	0.08	#NUM!	3.55	80.50	4.40	4.40	153.40	15.10	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Variance	10816.69	0.84	#DIV/0!	1.60	163430.00	0.00	#DIV/0!	159.10	3007.99	11.28	16.35	49687.00	115.61	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Skewness	0.78	5.38	#DIV/0!	2.00	0.33	0.18	#DIV/0!	5.53	0.38	0.83	2.36	2.90	0.55	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Coefficient of Variation (CoV) 2	0.55	1.98	#DIV/0!	0.57	0.22	0.32	#DIV/0!	1.95	0.30	0.46	0.46	1.23	0.38	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %	Total_DC %
ALL							
Count	993	993	993	980	993	993	993
Minimum	0.01	0.02	40.94	0.01	0.03	0.89	89.74
10 Percentile	0.17	0.13	52.32	0.01	0.30	3.15	98.39
25 Percentile	0.31	0.21	55.20	0.02	0.38	4.14	98.82
Median-25Percentile	1.37	0.06	3.05	0.01	0.09	1.17	0.69
Mean	1.83	0.27	58.97	0.03	0.46	5.52	99.25
Standard Deviation	1.50	0.10	6.23	0.02	0.15	2.01	0.87
Median	1.68	0.27	58.25	0.03	0.47	5.31	99.51
75Percentile-Median	1.39	0.05	3.46	0.01	0.07	1.36	0.29
75 Percentile	3.07	0.32	61.71	0.04	0.54	6.67	99.80
90 Percentile	3.88	0.37	66.76	0.05	0.63	8.26	99.89
Maximum	6.33	1.25	91.23	0.18	1.38	13.35	100.05
Interquartile Range (IQR) 1	2.76	0.11	6.51	0.02	0.16	2.53	0.98
Variance	2.26	0.01	38.86	0.00	0.02	4.05	0.75
Skewness	0.47	0.79	1.01	2.17	0.09	0.55	-4.31
Coefficient of Variation (CoV) 2	0.82	0.38	0.11	0.68	0.32	0.36	0.01
NPR < 1.0 or NPR = 1.0							
1.0 < NPR < 2.0							
NPR > 2.0 or NPR =2.0							
Sum Check							
% NPR < 1.0 or NPR = 1.0 of Total							
% 1.0 < NPR < 2.0 of Total							
% NPR > 2.0 or NPR =2.0 of Total							
Sum Check							
% Samples NPR = 0.01							
KERR - All							
Count	88	88	88	88	88	88	88
Minimum	0.10	0.13	44.79	0.01	0.23	3.44	91.95
10 Percentile	0.15	0.25	53.08	0.01	0.43	5.03	98.56
25 Percentile	0.19	0.31	55.16	0.01	0.49	6.06	99.16
Median-25Percentile	0.05	0.05	2.09	0.00	0.04	0.86	0.53
Mean	0.51	0.36	57.08	0.02	0.55	7.10	99.38
Standard Deviation	0.73	0.12	3.88	0.03	0.13	1.73	0.95
Median	0.24	0.36	57.25	0.01	0.53	6.92	99.69
75Percentile-Median	0.15	0.03	2.23	0.02	0.08	1.14	0.13
75 Percentile	0.38	0.39	59.48	0.03	0.60	8.06	99.81
90 Percentile	1.24	0.45	60.92	0.05	0.73	9.62	99.91
Maximum	4.47	1.25	67.84	0.15	0.95	11.60	100.00
Interquartile Range (IQR) 1	0.19	0.08	4.32	0.02	0.12	2.00	0.65
Variance	0.53	0.01	15.07	0.00	0.02	3.01	0.90
Skewness	3.43	4.43	-0.30	2.61	0.85	0.51	-5.80
Coefficient of Variation (CoV) 2	1.42	0.34	0.07	1.09	0.23	0.24	0.01
NPR < 1.0 or NPR = 1.0							
1.0 < NPR < 2.0							
NPR > 2.0 or NPR =2.0							
Sum Check							
% NPR < 1.0 or NPR = 1.0 of Total							
% 1.0 < NPR < 2.0 of Total							
% NPR > 2.0 or NPR =2.0 of Total							
Sum Check							
% Samples NPR = 0.01							

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %	Total_DC %
SULPHURETS - All							
Count	166	166	166	166	166	166	166
Minimum	0.09	0.08	43.02	0.01	0.26	1.56	98.14
10 Percentile	0.49	0.16	49.51	0.01	0.36	3.21	98.38
25 Percentile	1.05	0.21	52.06	0.02	0.44	4.14	98.96
Median-25Percentile	1.41	0.05	3.59	0.01	0.09	0.90	0.67
Mean	2.34	0.28	56.25	0.03	0.53	5.43	99.38
Standard Deviation	1.39	0.10	5.69	0.02	0.14	1.92	0.56
Median	2.46	0.27	55.65	0.03	0.54	5.04	99.63
75Percentile-Median	0.94	0.06	4.12	0.01	0.09	1.50	0.19
75 Percentile	3.40	0.33	59.77	0.04	0.62	6.53	99.82
90 Percentile	3.84	0.42	63.48	0.05	0.70	8.27	99.91
Maximum	6.33	0.60	72.59	0.13	0.93	11.25	100.05
Interquartile Range (IQR) 1	2.35	0.11	7.71	0.02	0.18	2.39	0.86
Variance	1.92	0.01	32.39	0.00	0.02	3.70	0.32
Skewness	0.21	0.78	0.46	1.24	0.23	0.71	-0.85
Coefficient of Variation (CoV) 2	0.59	0.36	0.10	0.51	0.26	0.35	0.01
NPR < 1.0 or NPR = 1.0							
1.0 < NPR < 2.0							
NPR > 2.0 or NPR =2.0							
Sum Check							
% NPR < 1.0 or NPR = 1.0 of Total							
% 1.0 < NPR < 2.0 of Total							
% NPR > 2.0 or NPR =2.0 of Total							
Sum Check							
SULPHURETS - Overburden							
Count	6	6	6	6	6	6	6
Minimum	0.18	0.10	49.90	0.01	0.45	1.72	98.53
10 Percentile	1.06	0.16	50.49	0.02	0.46	2.96	98.96
25 Percentile	1.93	0.25	51.26	0.02	0.48	4.39	99.49
Median-25Percentile	0.53	0.10	0.88	0.01	0.09	0.95	0.29
Mean	2.47	0.33	56.80	0.05	0.59	4.91	99.54
Standard Deviation	1.45	0.17	8.59	0.04	0.15	1.82	0.53
Median	2.46	0.35	52.14	0.04	0.57	5.34	99.78
75Percentile-Median	0.84	0.03	10.72	0.01	0.09	0.52	0.07
75 Percentile	3.30	0.38	62.85	0.04	0.66	5.86	99.86
90 Percentile	3.89	0.49	67.78	0.09	0.75	6.44	99.89
Maximum	4.37	0.59	69.24	0.13	0.83	6.97	99.90
Interquartile Range (IQR) 1	1.37	0.13	11.60	0.02	0.19	1.47	0.37
Variance	2.11	0.03	73.86	0.00	0.02	3.31	0.28
Skewness	-0.43	0.25	0.98	2.05	0.77	-1.13	-1.89
Coefficient of Variation (CoV) 2	0.59	0.50	0.15	0.96	0.25	0.37	0.01
NPR < 1.0 or NPR = 1.0							
1.0 < NPR < 2.0							
NPR > 2.0 or NPR =2.0							
Sum Check							
% NPR < 1.0 or NPR = 1.0 of Total							
% 1.0 < NPR < 2.0 of Total							
% NPR > 2.0 or NPR =2.0 of Total							
Sum Check							

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %	Total_DC %
SULPHURETS - Au, Leach, Raewn zones							
Count	34	34	34	34	34	34	34
Minimum	0.27	0.08	51.12	0.01	0.26	1.56	98.14
10 Percentile	0.39	0.11	53.73	0.01	0.31	3.11	98.39
25 Percentile	0.52	0.17	56.24	0.01	0.36	3.72	98.81
Median-25Percentile	0.28	0.07	4.08	0.01	0.15	0.83	0.57
Mean	1.15	0.25	60.61	0.02	0.49	4.49	99.24
Standard Deviation	0.98	0.11	5.68	0.01	0.13	1.33	0.57
Median	0.80	0.24	60.33	0.02	0.52	4.56	99.37
75Percentile-Median	0.46	0.07	3.75	0.00	0.06	0.60	0.36
75 Percentile	1.26	0.30	64.08	0.02	0.58	5.15	99.73
90 Percentile	2.91	0.43	68.66	0.03	0.62	6.17	99.82
Maximum	3.80	0.50	72.59	0.05	0.73	7.58	99.95
Interquartile Range (IQR) 1	0.74	0.14	7.84	0.01	0.22	1.43	0.93
Variance	0.97	0.01	32.25	0.00	0.02	1.78	0.33
Skewness	1.60	0.62	0.38	1.12	-0.21	-0.02	-0.61
Coefficient of Variation (CoV) 2	0.85	0.46	0.09	0.52	0.26	0.30	0.01
NPR < 1.0 or NPR = 1.0							
1.0 < NPR < 2.0							
NPR > 2.0 or NPR =2.0							
Sum Check							
% NPR < 1.0 or NPR = 1.0 of Total							
% 1.0 < NPR < 2.0 of Total							
% NPR > 2.0 or NPR =2.0 of Total							
Sum Check							
SULPHURETS - Lower Au zone							
Count	15	15	15	15	15	15	15
Minimum	0.09	0.15	46.55	0.01	0.38	3.34	98.34
10 Percentile	0.64	0.19	47.25	0.01	0.52	4.06	98.40
25 Percentile	0.81	0.22	54.81	0.02	0.55	4.75	98.61
Median-25Percentile	0.85	0.06	1.16	0.00	0.03	0.30	0.98
Mean	2.01	0.28	55.81	0.02	0.58	5.52	99.24
Standard Deviation	1.44	0.08	5.37	0.01	0.08	1.38	0.63
Median	1.66	0.28	55.96	0.02	0.58	5.05	99.59
75Percentile-Median	1.24	0.07	3.44	0.01	0.05	1.44	0.19
75 Percentile	2.90	0.35	59.40	0.03	0.63	6.49	99.78
90 Percentile	3.92	0.36	60.02	0.04	0.67	7.29	99.83
Maximum	4.80	0.46	65.90	0.04	0.73	8.25	99.96
Interquartile Range (IQR) 1	2.09	0.12	4.59	0.01	0.08	1.74	1.18
Variance	2.08	0.01	28.81	0.00	0.01	1.89	0.39
Skewness	0.58	0.31	-0.40	0.83	-0.66	0.50	-0.35
Coefficient of Variation (CoV) 2	0.72	0.30	0.10	0.39	0.14	0.25	0.01
NPR < 1.0 or NPR = 1.0							
1.0 < NPR < 2.0							
NPR > 2.0 or NPR =2.0							
Sum Check							
% NPR < 1.0 or NPR = 1.0 of Total							
% 1.0 < NPR < 2.0 of Total							
% NPR > 2.0 or NPR =2.0 of Total							
Sum Check							

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %	Total_DC %
SULPHURETS - LP Hazelton							
Count	11	11	11	11	11	11	11
Minimum	0.29	0.17	47.02	0.02	0.41	4.14	98.27
10 Percentile	0.35	0.19	48.47	0.02	0.47	4.30	98.38
25 Percentile	1.35	0.23	50.44	0.02	0.51	5.06	98.82
Median-25Percentile	0.95	0.01	4.57	0.01	0.08	0.44	0.66
Mean	2.48	0.26	54.46	0.03	0.58	6.73	99.23
Standard Deviation	1.71	0.06	4.86	0.01	0.09	2.37	0.59
Median	2.30	0.25	55.01	0.03	0.59	5.49	99.47
75Percentile-Median	1.03	0.06	3.13	0.01	0.07	2.94	0.26
75 Percentile	3.33	0.30	58.14	0.04	0.66	8.43	99.73
90 Percentile	3.64	0.33	58.73	0.04	0.67	9.82	99.83
Maximum	6.25	0.34	62.17	0.04	0.69	11.00	99.87
Interquartile Range (IQR) 1	1.98	0.07	7.70	0.02	0.15	3.37	0.92
Variance	2.93	0.00	23.64	0.00	0.01	5.59	0.35
Skewness	0.81	-0.25	-0.20	0.41	-0.38	0.65	-0.60
Coefficient of Variation (CoV) 2	0.69	0.21	0.09	0.31	0.16	0.35	0.01
NPR < 1.0 or NPR = 1.0							
1.0 < NPR < 2.0							
NPR > 2.0 or NPR =2.0							
Sum Check							
% NPR < 1.0 or NPR = 1.0 of Total							
% 1.0 < NPR < 2.0 of Total							
% NPR > 2.0 or NPR =2.0 of Total							
Sum Check							
SULPHURETS - UP Hazelton							
Count	30	30	30	30	30	30	30
Minimum	0.47	0.16	47.12	0.02	0.28	2.04	98.19
10 Percentile	1.10	0.20	49.12	0.02	0.38	2.88	98.25
25 Percentile	1.93	0.24	49.90	0.03	0.47	3.55	98.90
Median-25Percentile	0.97	0.05	2.95	0.00	0.06	2.58	0.75
Mean	2.61	0.30	54.58	0.04	0.54	5.90	99.35
Standard Deviation	1.02	0.10	5.53	0.01	0.14	2.35	0.62
Median	2.89	0.29	52.85	0.03	0.52	6.13	99.65
75Percentile-Median	0.44	0.03	6.14	0.02	0.09	1.82	0.16
75 Percentile	3.33	0.32	58.99	0.05	0.61	7.95	99.81
90 Percentile	3.55	0.40	61.02	0.05	0.65	8.85	99.89
Maximum	4.77	0.60	70.10	0.06	0.93	9.21	100.00
Interquartile Range (IQR) 1	1.40	0.08	9.08	0.02	0.14	4.40	0.91
Variance	1.05	0.01	30.58	0.00	0.02	5.52	0.38
Skewness	-0.32	1.45	0.84	0.20	0.93	-0.11	-0.89
Coefficient of Variation (CoV) 2	0.39	0.35	0.10	0.34	0.25	0.40	0.01
NPR < 1.0 or NPR = 1.0							
1.0 < NPR < 2.0							
NPR > 2.0 or NPR =2.0							
Sum Check							
% NPR < 1.0 or NPR = 1.0 of Total							
% 1.0 < NPR < 2.0 of Total							
% NPR > 2.0 or NPR =2.0 of Total							
Sum Check							

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %	Total_DC %
SULPHURETS - Monzonite							
Count	32	32	32	32	32	32	32
Minimum	0.45	0.14	43.02	0.01	0.28	2.51	98.64
10 Percentile	2.09	0.16	49.68	0.03	0.30	3.69	99.06
25 Percentile	2.90	0.20	52.81	0.04	0.36	4.02	99.46
Median-25Percentile	0.26	0.03	3.98	0.00	0.08	0.57	0.34
Mean	3.14	0.25	55.92	0.05	0.46	5.70	99.64
Standard Deviation	0.98	0.09	5.07	0.01	0.16	2.38	0.37
Median	3.16	0.23	56.80	0.04	0.44	4.59	99.80
75Percentile-Median	0.47	0.05	2.85	0.01	0.07	2.37	0.11
75 Percentile	3.63	0.28	59.64	0.05	0.51	6.96	99.91
90 Percentile	3.76	0.42	61.25	0.06	0.72	9.75	99.95
Maximum	6.33	0.49	64.01	0.07	0.89	11.25	100.05
Interquartile Range (IQR) 1	0.73	0.08	6.83	0.01	0.15	2.94	0.45
Variance	0.97	0.01	25.67	0.00	0.02	5.65	0.14
Skewness	0.28	1.37	-0.58	0.06	1.39	0.91	-1.21
Coefficient of Variation (CoV) 2	0.31	0.37	0.09	0.29	0.34	0.42	0.00
NPR < 1.0 or NPR = 1.0							
1.0 < NPR < 2.0							
NPR > 2.0 or NPR =2.0							
Sum Check							
% NPR < 1.0 or NPR = 1.0 of Total							
% 1.0 < NPR < 2.0 of Total							
% NPR > 2.0 or NPR =2.0 of Total							
Sum Check							
SULPHURETS - Undefined							
Count	38	38	38	38	38	38	38
Minimum	0.10	0.17	47.02	0.01	0.32	3.00	98.27
10 Percentile	0.48	0.21	50.04	0.02	0.39	4.06	98.36
25 Percentile	1.45	0.25	50.97	0.03	0.52	4.67	98.96
Median-25Percentile	1.40	0.03	2.66	0.01	0.07	0.43	0.71
Mean	2.60	0.30	54.55	0.04	0.59	5.35	99.38
Standard Deviation	1.48	0.08	4.37	0.02	0.13	1.25	0.57
Median	2.85	0.28	53.62	0.04	0.59	5.11	99.67
75Percentile-Median	0.64	0.09	3.33	0.01	0.09	0.74	0.14
75 Percentile	3.48	0.37	56.95	0.05	0.68	5.84	99.81
90 Percentile	4.15	0.41	59.94	0.06	0.73	6.93	99.86
Maximum	6.08	0.47	65.93	0.07	0.86	8.97	99.95
Interquartile Range (IQR) 1	2.04	0.12	5.99	0.02	0.16	1.17	0.85
Variance	2.19	0.01	19.11	0.00	0.02	1.55	0.33
Skewness	0.03	0.53	0.90	-0.21	-0.28	0.94	-0.91
Coefficient of Variation (CoV) 2	0.57	0.27	0.08	0.41	0.22	0.23	0.01
NPR < 1.0 or NPR = 1.0							
1.0 < NPR < 2.0							
NPR > 2.0 or NPR =2.0							
Sum Check							
% NPR < 1.0 or NPR = 1.0 of Total							
% 1.0 < NPR < 2.0 of Total							
% NPR > 2.0 or NPR =2.0 of Total							
Sum Check							

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %	Total_DC %
MITCHELL - All							
Count	739	739	739	726	739	739	739
Minimum	0.01	0.02	40.94	0.01	0.03	0.89	89.74
10 Percentile	0.16	0.11	53.64	0.01	0.25	3.09	98.39
25 Percentile	0.31	0.20	55.89	0.02	0.37	4.00	98.77
Median-25Percentile	1.50	0.07	2.76	0.01	0.09	1.23	0.67
Mean	1.87	0.25	59.81	0.03	0.44	5.35	99.20
Standard Deviation	1.51	0.09	6.36	0.02	0.14	1.98	0.91
Median	1.81	0.27	58.65	0.03	0.46	5.22	99.44
75Percentile-Median	1.27	0.05	4.03	0.00	0.05	1.21	0.35
75 Percentile	3.08	0.31	62.68	0.03	0.51	6.43	99.79
90 Percentile	3.95	0.34	67.76	0.05	0.59	8.04	99.89
Maximum	6.33	0.55	91.23	0.18	1.38	13.35	100.05
Interquartile Range (IQR) 1	2.77	0.11	6.79	0.01	0.14	2.44	1.03
Variance	2.28	0.01	40.43	0.00	0.02	3.94	0.83
Skewness	0.42	-0.48	1.11	2.28	0.04	0.60	-4.17
Coefficient of Variation (CoV) 2	0.81	0.36	0.11	0.67	0.33	0.37	0.01
NPR < 1.0 or NPR = 1.0							
1.0 < NPR < 2.0							
NPR > 2.0 or NPR =2.0							
Sum Check							
% NPR < 1.0 or NPR = 1.0 of Total							
% 1.0 < NPR < 2.0 of Total							
% NPR > 2.0 or NPR =2.0 of Total							
Sum Check							
MITCHELL - Overburden							
Count	7	7	7	7	7	7	7
Minimum	0.16	0.19	55.26	0.01	0.29	1.68	99.13
10 Percentile	0.21	0.21	55.48	0.01	0.30	2.38	99.30
25 Percentile	1.09	0.23	57.41	0.01	0.37	3.13	99.46
Median-25Percentile	0.86	0.01	7.62	0.01	0.11	1.67	0.36
Mean	1.66	0.27	62.28	0.02	0.46	4.40	99.64
Standard Deviation	1.11	0.06	5.55	0.01	0.12	1.91	0.30
Median	1.94	0.24	65.03	0.02	0.48	4.79	99.81
75Percentile-Median	0.06	0.08	0.72	0.01	0.05	0.56	0.06
75 Percentile	2.01	0.32	65.76	0.03	0.53	5.35	99.88
90 Percentile	2.58	0.34	67.29	0.04	0.59	6.24	99.90
Maximum	3.34	0.37	69.37	0.04	0.63	7.40	99.90
Interquartile Range (IQR) 1	0.92	0.09	8.35	0.02	0.16	2.23	0.42
Variance	1.24	0.00	30.85	0.00	0.02	3.63	0.09
Skewness	-0.22	0.37	-0.29	0.80	-0.14	0.13	-0.89
Coefficient of Variation (CoV) 2	0.67	0.24	0.09	0.63	0.27	0.43	0.00
NPR < 1.0 or NPR = 1.0							
1.0 < NPR < 2.0							
NPR > 2.0 or NPR =2.0							
Sum Check							
% NPR < 1.0 or NPR = 1.0 of Total							
% 1.0 < NPR < 2.0 of Total							
% NPR > 2.0 or NPR =2.0 of Total							
Sum Check							

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %	Total_DC %
MITCHELL - UP Hazelton							
Count	245	245	245	244	245	245	245
Minimum	0.09	0.02	42.92	0.01	0.03	0.89	93.31
10 Percentile	0.34	0.07	54.32	0.02	0.11	2.46	98.45
25 Percentile	1.43	0.17	56.06	0.02	0.34	3.35	98.79
Median-25Percentile	1.06	0.10	2.81	0.00	0.11	1.21	0.72
Mean	2.40	0.24	59.58	0.03	0.42	4.52	99.28
Standard Deviation	1.38	0.11	4.93	0.01	0.17	1.60	0.68
Median	2.49	0.27	58.87	0.02	0.45	4.56	99.51
75Percentile-Median	0.87	0.05	3.91	0.01	0.07	1.07	0.29
75 Percentile	3.36	0.31	62.78	0.03	0.52	5.63	99.80
90 Percentile	4.07	0.36	66.52	0.04	0.59	6.40	99.89
Maximum	6.33	0.44	76.40	0.06	0.76	10.85	100.05
Interquartile Range (IQR) 1	1.93	0.15	6.72	0.01	0.18	2.28	1.01
Variance	1.91	0.01	24.34	0.00	0.03	2.57	0.47
Skewness	0.17	-0.61	0.36	0.58	-0.69	0.28	-2.99
Coefficient of Variation (CoV) 2	0.57	0.45	0.08	0.34	0.40	0.35	0.01
NPR < 1.0 or NPR = 1.0							
1.0 < NPR < 2.0							
NPR > 2.0 or NPR =2.0							
Sum Check							
% NPR < 1.0 or NPR = 1.0 of Total							
% 1.0 < NPR < 2.0 of Total							
% NPR > 2.0 or NPR =2.0 of Total							
Sum Check							
MITCHELL - LP Hazelton							
Count	412	412	412	402	412	412	412
Minimum	0.01	0.04	40.94	0.01	0.05	1.75	89.74
10 Percentile	0.10	0.15	52.86	0.01	0.30	3.81	98.34
25 Percentile	0.21	0.21	55.27	0.01	0.39	4.85	98.68
Median-25Percentile	0.45	0.06	3.17	0.02	0.08	1.01	0.74
Mean	1.39	0.26	59.84	0.03	0.45	6.09	99.13
Standard Deviation	1.39	0.08	7.33	0.02	0.13	1.87	1.07
Median	0.66	0.28	58.44	0.03	0.47	5.86	99.42
75Percentile-Median	1.84	0.04	4.21	0.01	0.04	1.36	0.37
75 Percentile	2.50	0.32	62.65	0.04	0.50	7.22	99.79
90 Percentile	3.53	0.34	69.53	0.06	0.58	8.52	99.89
Maximum	6.08	0.55	91.23	0.18	1.38	13.35	100.05
Interquartile Range (IQR) 1	2.29	0.10	7.38	0.03	0.11	2.37	1.11
Variance	1.94	0.01	53.77	0.00	0.02	3.51	1.14
Skewness	0.85	-0.10	1.18	1.95	1.15	0.72	-4.04
Coefficient of Variation (CoV) 2	1.00	0.31	0.12	0.68	0.29	0.31	0.01
NPR < 1.0 or NPR = 1.0							
1.0 < NPR < 2.0							
NPR > 2.0 or NPR =2.0							
Sum Check							
% NPR < 1.0 or NPR = 1.0 of Total							
% 1.0 < NPR < 2.0 of Total							
% NPR > 2.0 or NPR =2.0 of Total							
Sum Check							

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

Static Summary Statistics	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %	Total_DC %
MITCHELL - Monzonite							
Count	62	62	62	61	62	62	62
Minimum	0.11	0.03	51.94	0.01	0.09	1.10	98.21
10 Percentile	1.53	0.11	56.30	0.01	0.15	1.64	98.48
25 Percentile	2.42	0.21	57.24	0.02	0.35	2.70	98.75
Median-25Percentile	1.05	0.03	1.35	0.02	0.02	0.82	0.57
Mean	3.25	0.24	59.54	0.05	0.37	3.56	99.24
Standard Deviation	1.27	0.08	3.76	0.03	0.11	1.40	0.56
Median	3.47	0.24	58.59	0.04	0.37	3.52	99.32
75Percentile-Median	0.76	0.04	1.65	0.02	0.05	0.86	0.45
75 Percentile	4.23	0.28	60.24	0.06	0.42	4.38	99.77
90 Percentile	4.61	0.35	64.62	0.10	0.50	5.42	99.88
Maximum	4.94	0.39	71.69	0.14	0.65	7.64	99.96
Interquartile Range (IQR) 1	1.81	0.07	3.00	0.04	0.07	1.67	1.02
Variance	1.61	0.01	14.14	0.00	0.01	1.95	0.31
Skewness	-0.84	-0.49	1.48	1.05	-0.63	0.33	-0.26
Coefficient of Variation (CoV) 2	0.39	0.35	0.06	0.71	0.31	0.39	0.01
NPR < 1.0 or NPR = 1.0							
1.0 < NPR < 2.0							
NPR > 2.0 or NPR =2.0							
Sum Check							
% NPR < 1.0 or NPR = 1.0 of Total							
% 1.0 < NPR < 2.0 of Total							
% NPR > 2.0 or NPR =2.0 of Total							
Sum Check							
MITCHELL - Leach breccia/bornite breccia							
Count	13	13	13	12	13	13	13
Minimum	0.14	0.08	49.65	0.01	0.30	4.10	98.51
10 Percentile	0.18	0.14	55.32	0.01	0.37	4.61	98.90
25 Percentile	0.21	0.17	60.08	0.01	0.43	5.59	99.17
Median-25Percentile	0.12	0.06	2.11	0.00	0.11	0.28	0.35
Mean	0.52	0.23	62.97	0.01	0.50	6.81	99.45
Standard Deviation	0.80	0.08	6.82	0.01	0.10	2.43	0.47
Median	0.33	0.23	62.19	0.01	0.54	5.87	99.52
75Percentile-Median	0.05	0.03	3.32	0.00	0.04	1.95	0.36
75 Percentile	0.38	0.26	65.51	0.01	0.58	7.82	99.88
90 Percentile	0.52	0.29	70.59	0.01	0.61	9.50	99.96
Maximum	3.15	0.39	76.19	0.05	0.65	13.05	99.99
Interquartile Range (IQR) 1	0.17	0.08	5.43	0.00	0.15	2.23	0.71
Variance	0.64	0.01	46.50	0.00	0.01	5.91	0.22
Skewness	3.48	0.06	-0.02	3.46	-0.57	1.58	-0.63
Coefficient of Variation (CoV) 2	1.52	0.35	0.11	0.87	0.21	0.36	0.00
NPR < 1.0 or NPR = 1.0							
1.0 < NPR < 2.0							
NPR > 2.0 or NPR =2.0							
Sum Check							
% NPR < 1.0 or NPR = 1.0 of Total							
% 1.0 < NPR < 2.0 of Total							
% NPR > 2.0 or NPR =2.0 of Total							
Sum Check							

Appendix 5.1-1. Static Tests Results and Statistical Summary for the Kerr, Sulphurets, Mitchell and Iron Cap Deposits

	Na2O	P2O5	SiO2	SRO	TiO2	LOI	Total_DC
Static Summary Statistics	%	%	%	%	%	%	%
IRON CAP - All							
Count	0	0	0	0	0	0	0
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10 Percentile	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
25 Percentile	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Median-25Percentile	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Mean	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Standard Deviation	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Median	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
75Percentile-Median	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
75 Percentile	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
90 Percentile	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interquartile Range (IQR) 1	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Variance	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Skewness	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Coefficient of Variation (CoV) 2	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
NPR < 1.0 or NPR = 1.0							
1.0 < NPR < 2.0							
NPR > 2.0 or NPR =2.0							
Sum Check							
% NPR < 1.0 or NPR = 1.0 of Total							
% 1.0 < NPR < 2.0 of Total							
% NPR > 2.0 or NPR =2.0 of Total							
Sum Check							

Appendix 5.1-2

X-Ray Diffraction Analysis Results for KSM Waste Rock

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Appendix 5.1-2a. X-ray Diffraction Analysis Results for KSM

		Silicates, Oxides and Hydroxides					
		Quartz	Biotite	Brucite	Clinochlore	Diaspore ?	Hematite
Sample ID	Deposit	SiO_2	$K(Mg,Fe)_3(AlSi_3O_{10})(F,OH)_2$	$Mg(OH)_2$	$(Mg,Fe^{2+})_5Al(Si_3Al)O_{10}(OH)_8$	α-AlO(OH)	Fe_2O_3
HCT-1	Iron Cap	15.7			3.5		
HCT-2	Iron Cap	16.4			3		
HCT-3	Iron Cap	29.1					
HCT-4	Iron Cap	22.3					
HCT-5	Iron Cap	24.6					
HCT-6	Iron Cap	19.7					
HC20	Kerr	29.9			4.918		
HC21	Kerr	39.197		0.263		0.514	
HC22	Kerr	58.205			2.451		
HC23	Kerr	37.3			2.526		
HC1	Mitchell	51.825			2.702		
HC2	Mitchell	18.923			5.261		
HC3	Mitchell	12.779			9.617		
HC4	Mitchell	21.47	2.848		1.982		
HC5	Mitchell	13.561					
HC6	Mitchell	11.937					
HC7	Mitchell	10.944					
HC8	Mitchell	35.841			9.452		
HC9	Mitchell	36.537			5.738		
HC10	Mitchell	15.604			4.911		
HC11	Mitchell	12.654					
HC12	Mitchell	26.48			6.615		
HC13	Mitchell	18.473	5.833		2.582		1.256
HC14	Mitchell	14.302	4.691		3.857		
HC15	Mitchell	42.09			1.923		
HC26	Mitchell	30.73			5.04		
HC16	Mitchell	25.184			3.409		
HC17	Sulphurets	9.966			14.351		
HC18	Sulphurets	9.948			16.425		
HC19	Sulphurets	11.487			11.417		
HC24	Sulphurets	16.197			7.933		
HC25	Sulphurets	22.821			22.347		

Notes:

When dolomite/ankerite is reported by the lab it is included in the summary as dolomite

Appendix 5.1-2a. X-ray Diffraction Analysis Results for KSM

		Silicates, Oxides and Hydroxides						
Sample ID	Deposit	Hydroxylapatite $Ca_5(PO_4)_3(OH)$	K-Feldspar $KAlSi_3O_8$	Magnetite Fe_3O_4	Muscovite 1M $KAl_2(AlSi_3O_{10})(OH)_2$	Muscovite 2M $KAl_2(AlSi_3O_{10})(OH)_2$	Plagioclase $NaAlSi_3O_8$ - $CaAl_2Si_2O_8$	Rutile TiO_2
HCT-1	Iron Cap		13.4		8.3	22.5	26.7	
HCT-2	Iron Cap		16.5		8	24.8	18.4	
HCT-3	Iron Cap		14.6		11.9	29	7.3	
HCT-4	Iron Cap		33.2		8.6	24.8	9.5	
HCT-5	Iron Cap		31.9		8.5	17.5	3.6	
HCT-6	Iron Cap		22.9		12.4	24.4	10.9	
HC20	Kerr		1.923		12.628	32.598	5.838	
HC21	Kerr		4.744		38.861			
HC22	Kerr		1.628			22.688		
HC23	Kerr		2.831			37.921		
HC1	Mitchell		1.741			33.152		
HC2	Mitchell		21.867		10.676	10.97	26.703	
HC3	Mitchell		18.011			6.008	27.47	
HC4	Mitchell	0.719	29.972	3.089		2.915	25.506	
HC5	Mitchell		27.346		6.95	17.508	17.95	
HC6	Mitchell		37.774		7.768	4.459	19.206	
HC7	Mitchell		9.147		6.064	4.756	55.326	
HC8	Mitchell		2.003		8.682	35.098		
HC9	Mitchell		1.804		4.993	28.406		
HC10	Mitchell		50.645			13.645	1.519	
HC11	Mitchell		18.079		9.802	25.671	17.891	
HC12	Mitchell		3.281		6.687	30.496	13.357	
HC13	Mitchell		35.736				31.159	
HC14	Mitchell		40.045			5.578	22.241	
HC15	Mitchell		1.763			20.931		
HC26	Mitchell		1.824		9.942	39.296		
HC16	Mitchell				4.147	40.423	3.44	
HC17	Sulphurets		21.211			8.059	34.787	
HC18	Sulphurets		53.961					
HC19	Sulphurets		59.759			6.072		
HC24	Sulphurets		13.387		24.172	10.647	19.802	
HC25	Sulphurets		3.533		14.096	13.913		

Notes:

When dolomite/ankerite is reported by the lab it is included in the summary as dolomite

Appendix 5.1-2a. X-ray Diffraction Analysis Results for KSM

		Carbonates			Sulphates		Sulphides					
Sample ID	Deposit	Calcite $CaCO_3$	Dolomite $CaMg(CO_3)_2$	Siderite $Fe^{2+}CO_3$	Anhydrite $CaSO_4$	Gypsum $CaSO_4 \cdot 2H_2O$	Chalcopyrite $CuFeS_2$	Galena PbS	Molybdenite MoS_2	Pyrite FeS_2	Sphalerite (Zn,Fe)S	Tennantite $Cu_{12}As_4S_{13}$
HCT-1	Iron Cap	3.3	0.5	0.5						5.5		
HCT-2	Iron Cap	3.8		0.3						8.8		
HCT-3	Iron Cap	0.5								7.7		
HCT-4	Iron Cap									1.5		
HCT-5	Iron Cap	3.6								10.3		
HCT-6	Iron Cap	0.8		0.3						8.6		
HC20	Kerr	4.386		0.419			0.622			6.768		
HC21	Kerr						0.143			15.573		0.706
HC22	Kerr		1.123				1.926			11.979		
HC23	Kerr					0.886	0.865			17.671		
HC1	Mitchell	0.476							trace	10.081		
HC2	Mitchell									5.602		
HC3	Mitchell	20.18								5.935		
HC4	Mitchell	5.811								5.688		
HC5	Mitchell		9.402	0.422						6.86		
HC6	Mitchell	2.314	5.837							10.705		
HC7	Mitchell	0.654	8.301							4.807		
HC8	Mitchell	3.714								5.211		
HC9	Mitchell	8.169							0.207	14.146		
HC10	Mitchell	4.449								9.227		
HC11	Mitchell	3.611	1.184	0.561						10.548		
HC12	Mitchell	4.667	0.599	0.326						7.491		
HC13	Mitchell	3.2	0.24	0.47						1.05		
HC14	Mitchell	6.054								3.232		
HC15	Mitchell									33.292		
HC26	Mitchell	5.727							0.056	7.384		
HC16	Mitchell	4.114			6.724	1.297				11.262		
HC17	Sulphurets	8.791							0.073	2.762		
HC18	Sulphurets	10.787								8.879		
HC19	Sulphurets	4.368		0.222				0.703		4.393	1.579	
HC24	Sulphurets	2.114	0.748							4.998		
HC25	Sulphurets	14.129								9.162		

Notes:

When dolomite/ankerite is reported by the lab it is included in the summary as dolomite

QUANTITATIVE PHASE ANALYSIS OF 26 POWDER SAMPLES USING THE RIETVELD METHOD AND X-RAY POWDER DIFFRACTION DATA.

(Project: 1005 Seabridge KSM – PO# 42083)

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March 24, 2010

EXPERIMENTAL METHOD

The twenty-six samples of **Project 1005 Seabridge KSM** were reduced to the optimum grain-size range for quantitative X-ray analysis (<10 μm) by grinding under ethanol in a vibratory McCrone Micronising Mill for 7 minutes. Step-scan X-ray powder-diffraction data were collected over a range 3-80°2θ with CoKa radiation on a Bruker D8 Focus Bragg-Brentano diffractometer equipped with an Fe monochromator foil, 0.6 mm (0.3°) divergence slit, incident- and diffracted-beam Soller slits and a LynxEye detector. The long fine-focus Co X-ray tube was operated at 35 kV and 40 mA, using a take-off angle of 6°.

RESULTS

The X-ray diffractograms were analyzed using the International Centre for Diffraction Database PDF-4 and Search-Match software by Siemens (Bruker). X-ray powder-diffraction data of the samples were refined with Rietveld program Topas 4.2 (Bruker AXS). The results of quantitative phase analysis by Rietveld refinements are given in Table 1 (separate file, ***SGS CEMI Results Mar 24 2010 - Proj 1005 Seabridge KSM.xls***). These amounts represent the relative amounts of crystalline phases normalized to 100%. Ideal formulae for the minerals are given in Table 2. The Rietveld refinement plots are shown in Figures 1 – 26.

Table 2.

Mineral	**Ideal formula**
Anhydrite	$CaSO_4$
Biotite	$K(Mg,Fe^{2+})_3AlSi_3O_{10}(OH)_2$
Brucite	$Mg(OH)_2$
Calcite	$CaCO_3$
Chalcopyrite	$CuFeS_2$
Clinochlore	$(Mg,Fe^{2+})_5Al(Si_3Al)O_{10}(OH)_8$
Diaspore	$AlO(OH)$
Dolomite	$CaMg(CO_3)_2$
Galena	PbS
Gypsum	$CaSO_4 \cdot 2H_2O$
Hematite	α-Fe_2O_3
Hydroxylapatite	$Ca_5(PO_4)_3(OH)$
K-feldspar	$KAlSi_3O_8$
Magnetite	Fe_3O_4
Molybdenite	MoS_2
Muscovite	$KAl_2AlSi_3O_{10}(OH)_2$
Plagioclase	$NaAlSi_3O_8 – CaAl_2Si_2O_8$
Pyrite	FeS_2
Quartz	SiO_2
Siderite	$Fe^{2+}CO_3$
Sphalerite	$(Zn,Fe)S$
Tennantite	$(Cu,Ag,Fe,Zn)_{12}As_4S_{13}$

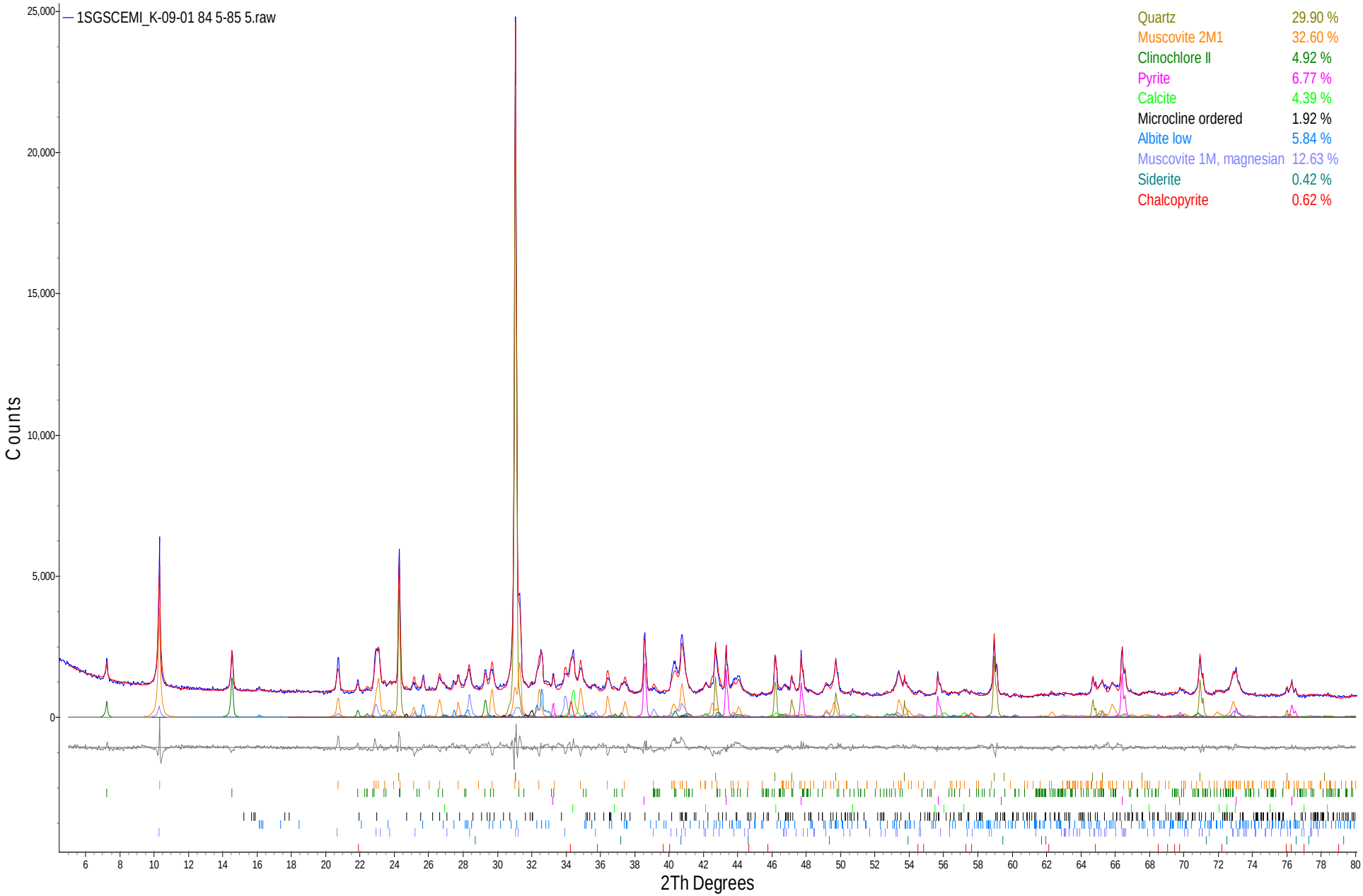


Figure 1. Rietveld refinement plot of sample **SGS CEMI "K-09-01 84.5-85.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

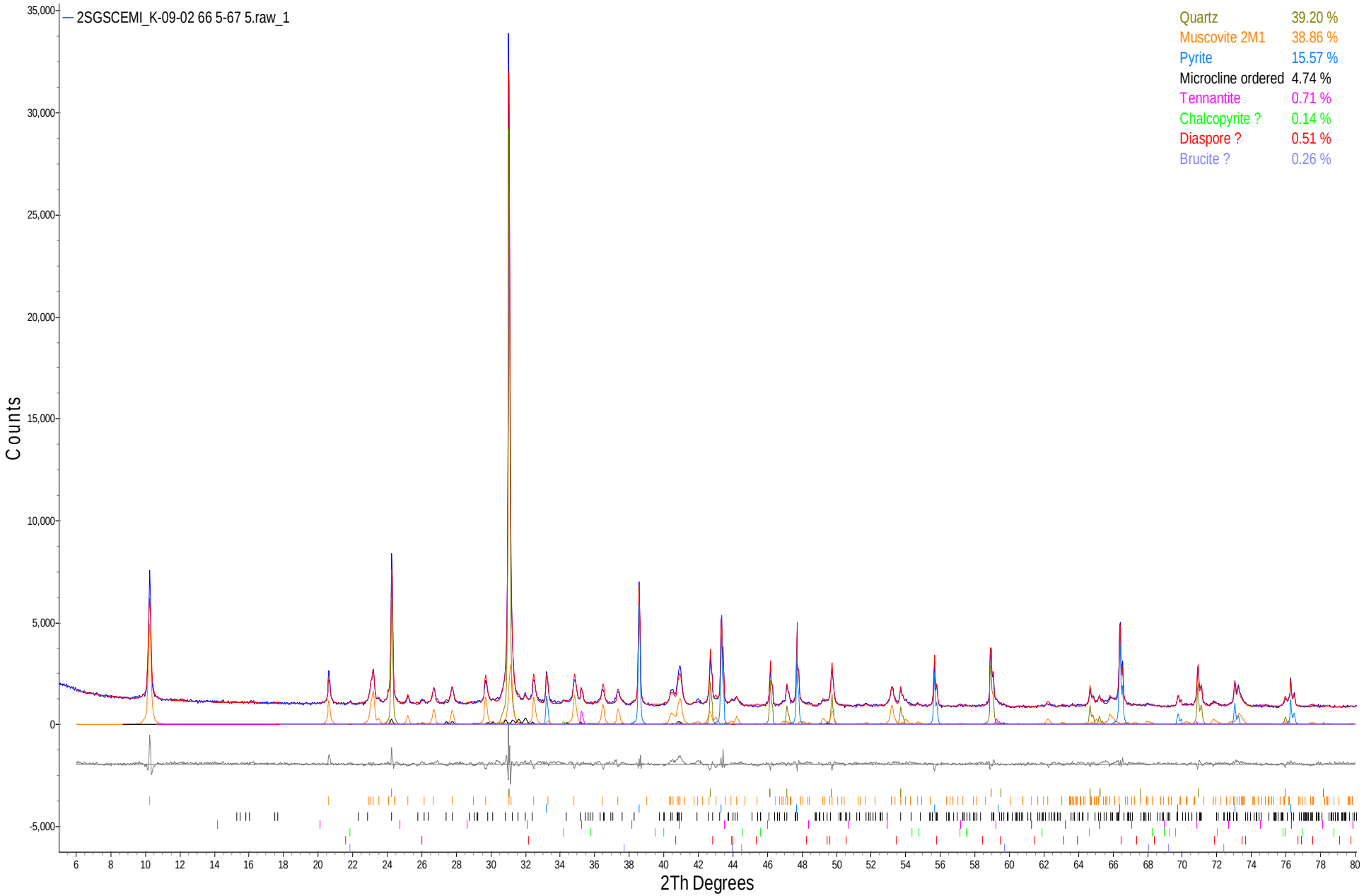


Figure 2. Rietveld refinement plot of sample **SGS CEMI "K-09-02 66.5-67.5"**(blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

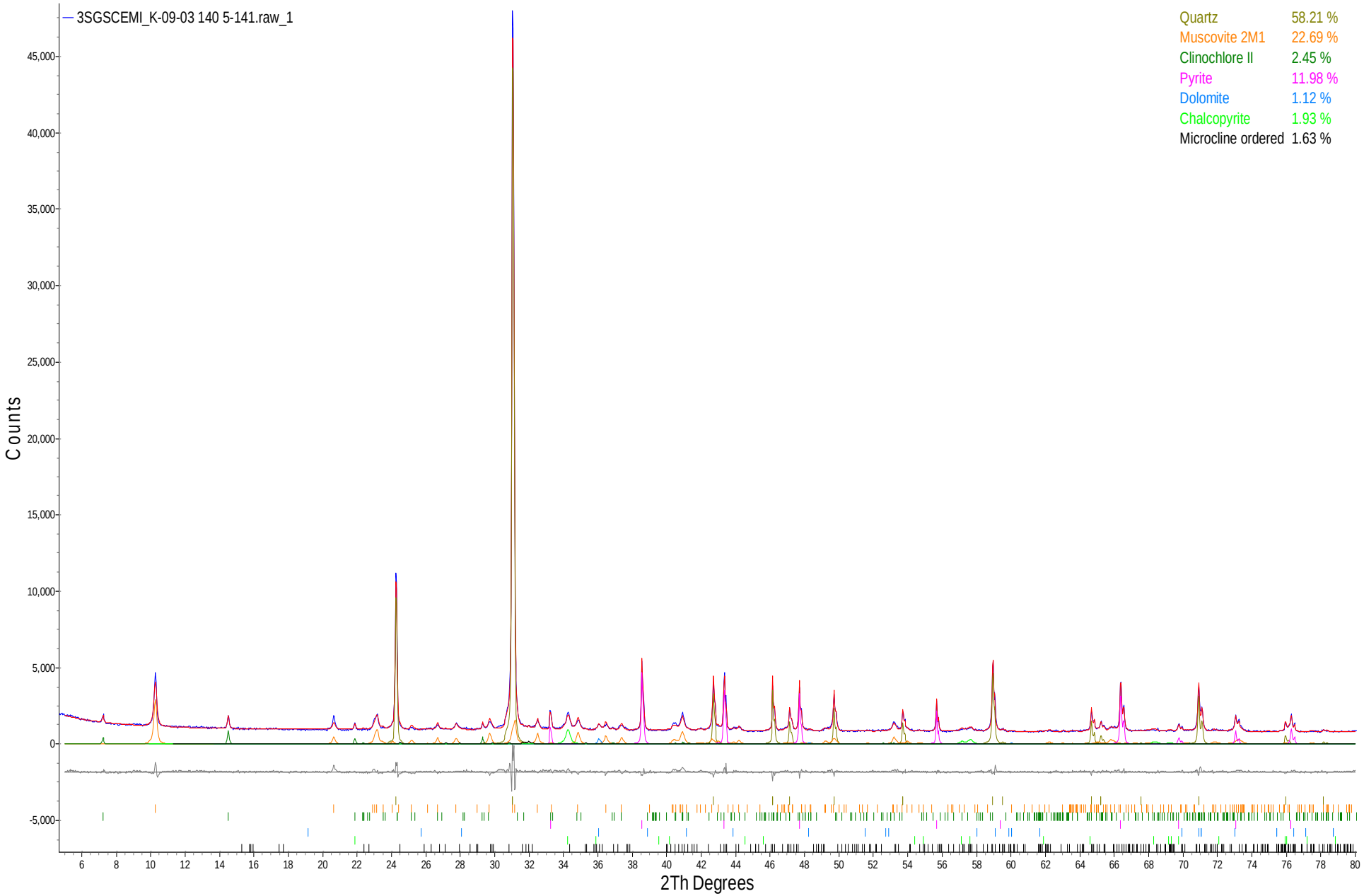


Figure 3. Rietveld refinement plot of sample **SGS CEMI "K-09-03 140.5-141"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

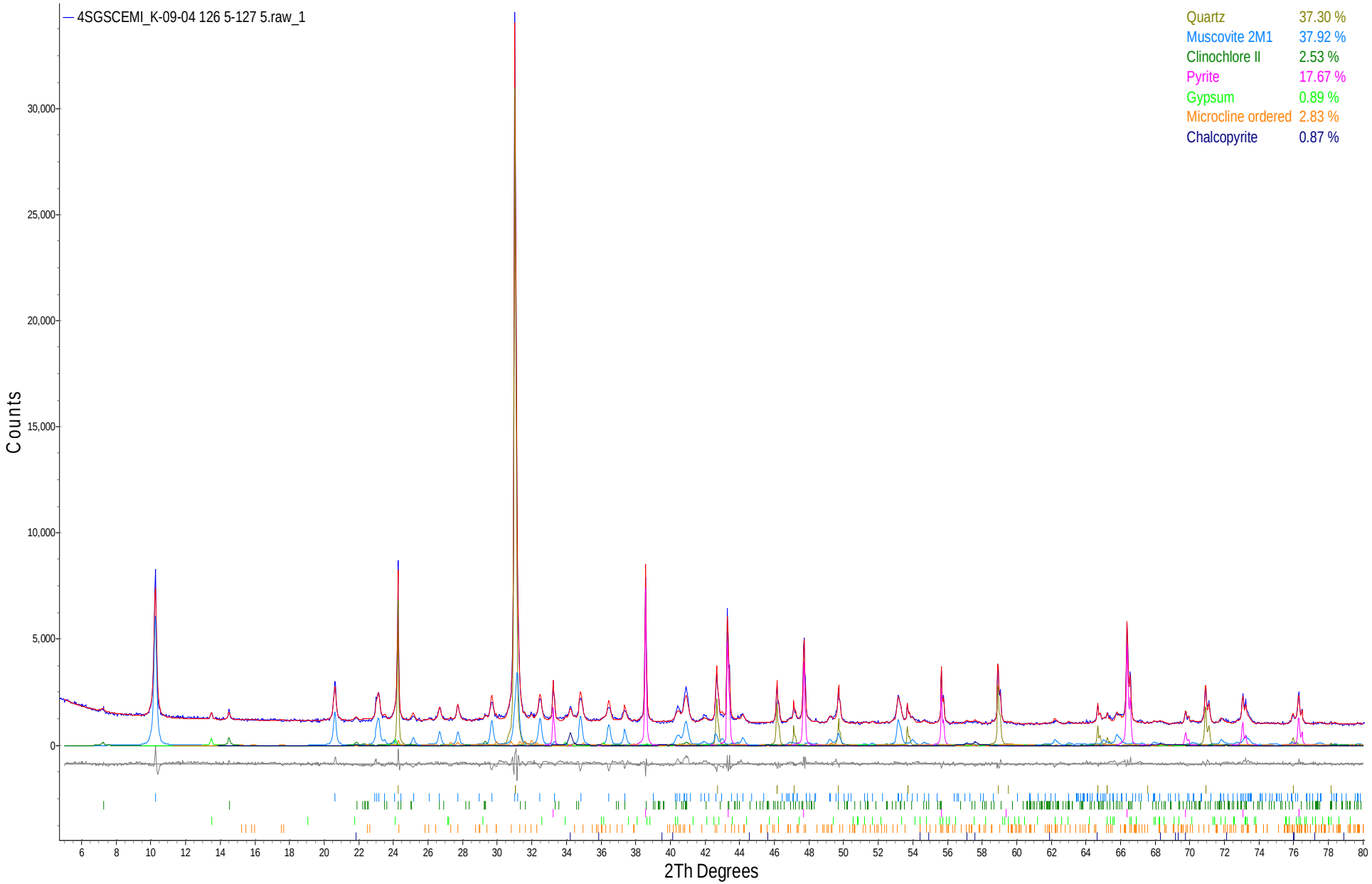


Figure 4. Rietveld refinement plot of sample **SGS CEMI "K-09-04 126.5-127.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

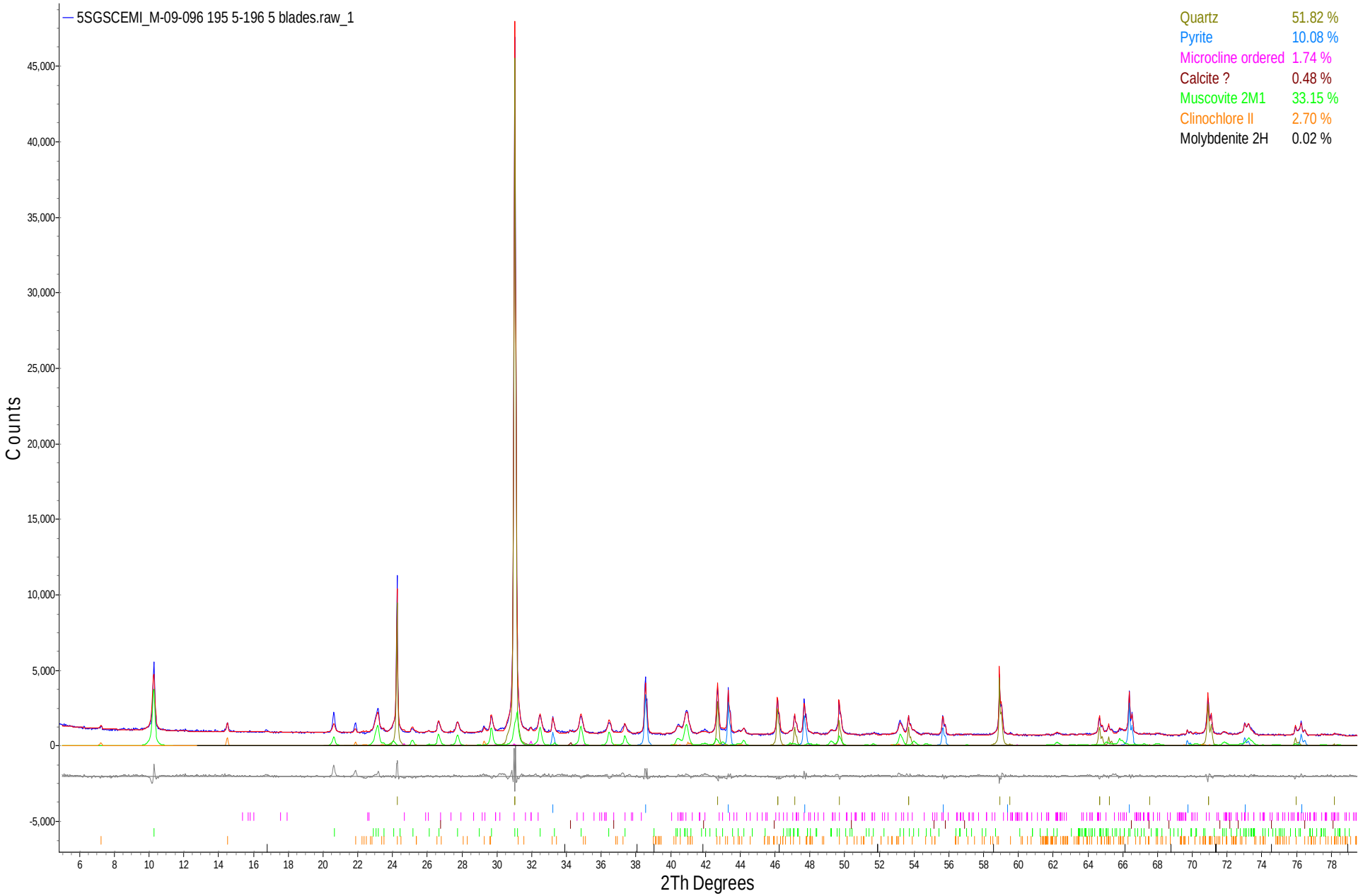


Figure 5. Rietveld refinement plot of sample **SGS CEMI "M-09-096 195.5-196.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

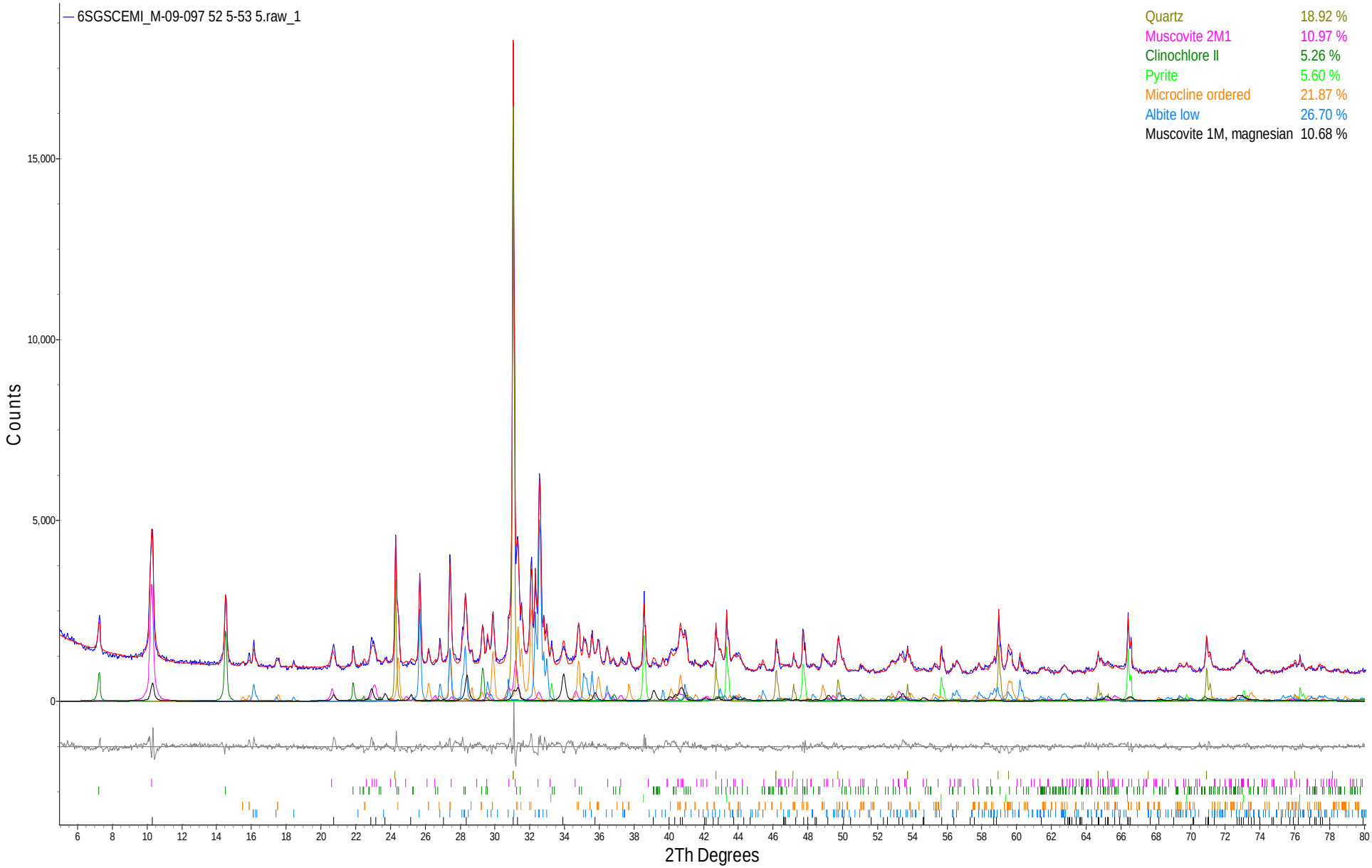


Figure 6. Rietveld refinement plot of sample **SGS CEMI "M-09-097 52.5-53.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

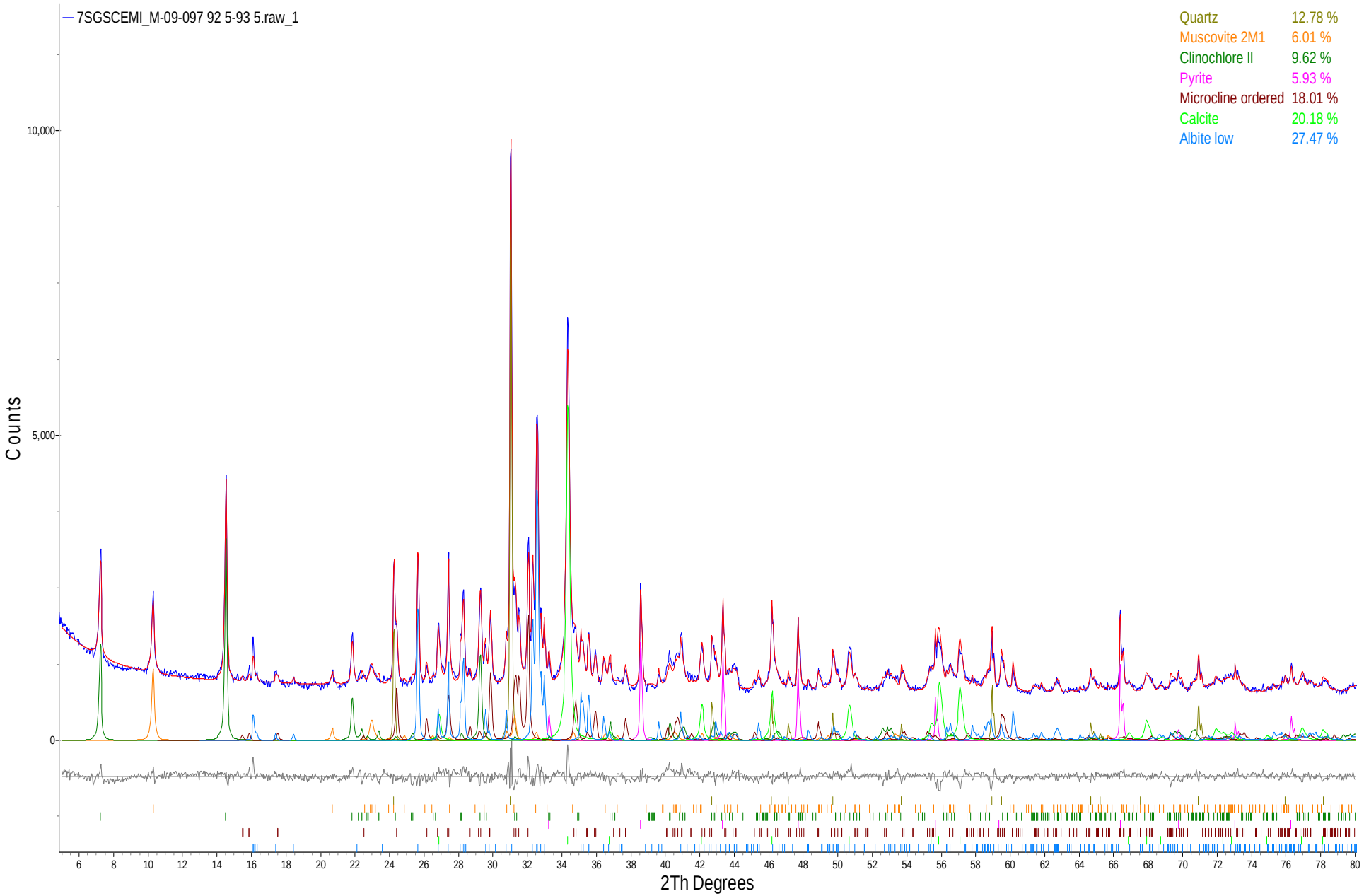


Figure 7. Rietveld refinement plot of sample **SGS CEMI "M-09-097 92.5-93.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

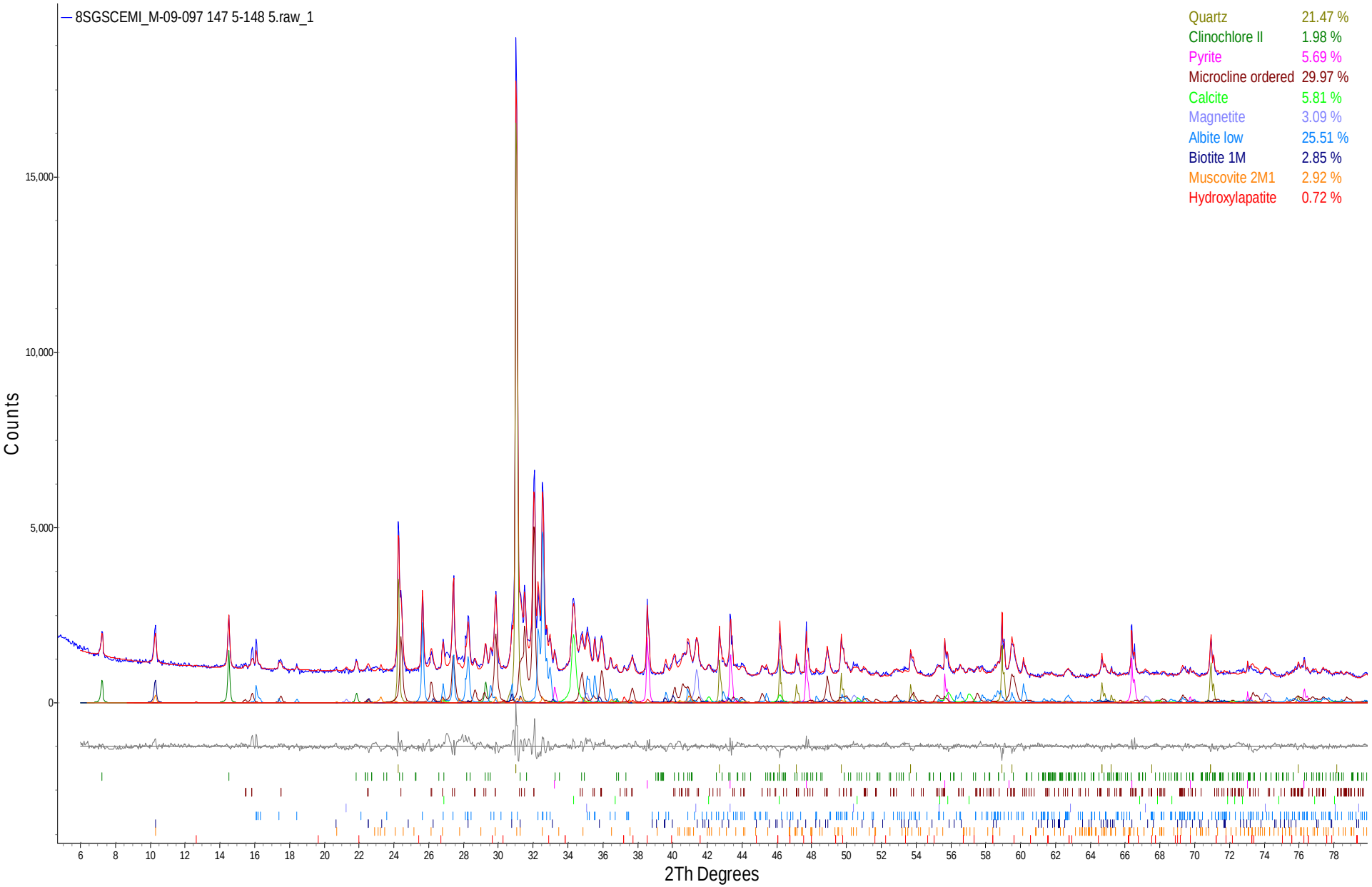


Figure 8. Rietveld refinement plot of sample **SGS CEMI "M-09-097 147.5-148.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

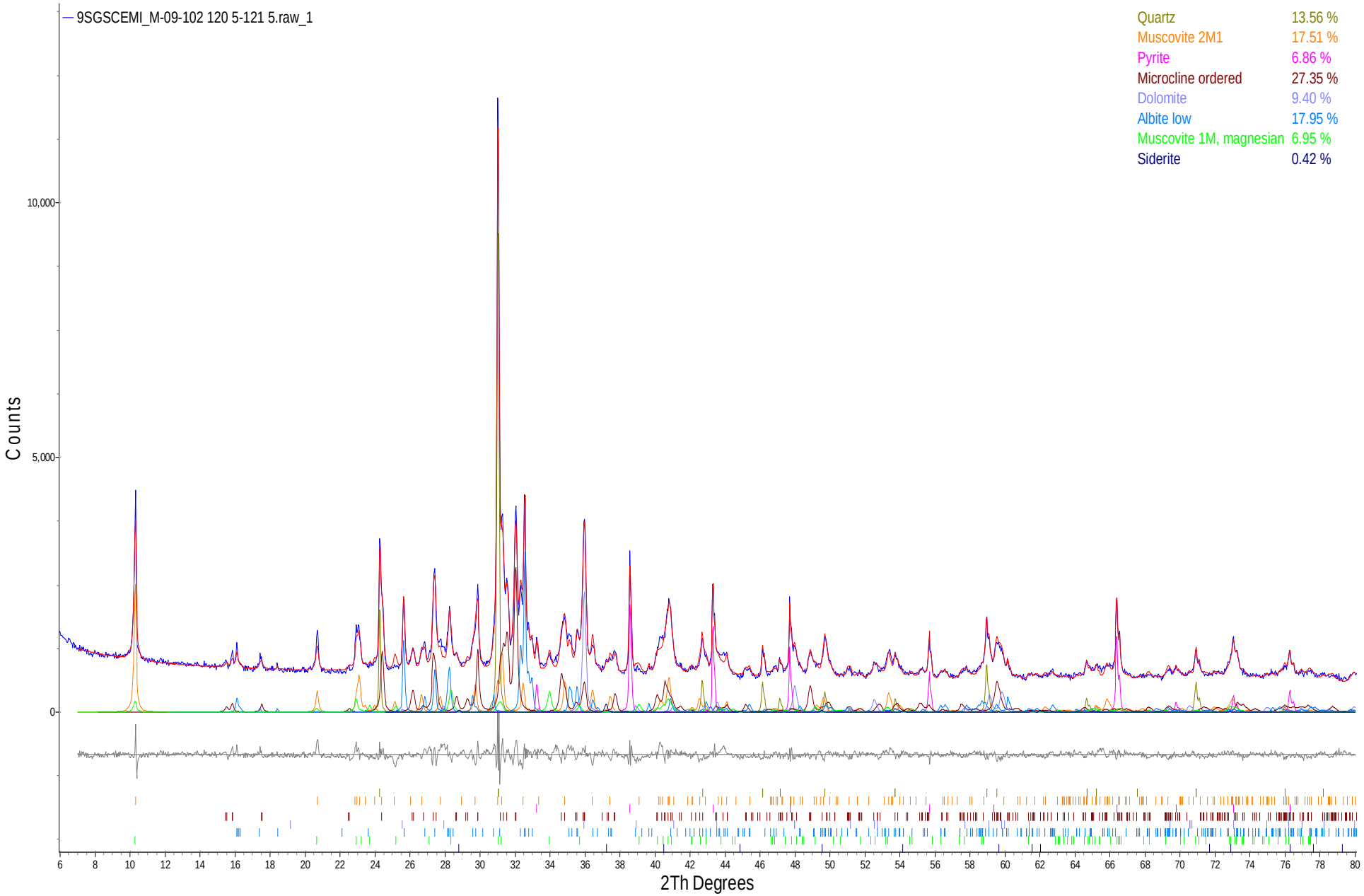


Figure 9. Rietveld refinement plot of sample **SGS CEMI "M-09-102 120.5-121.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

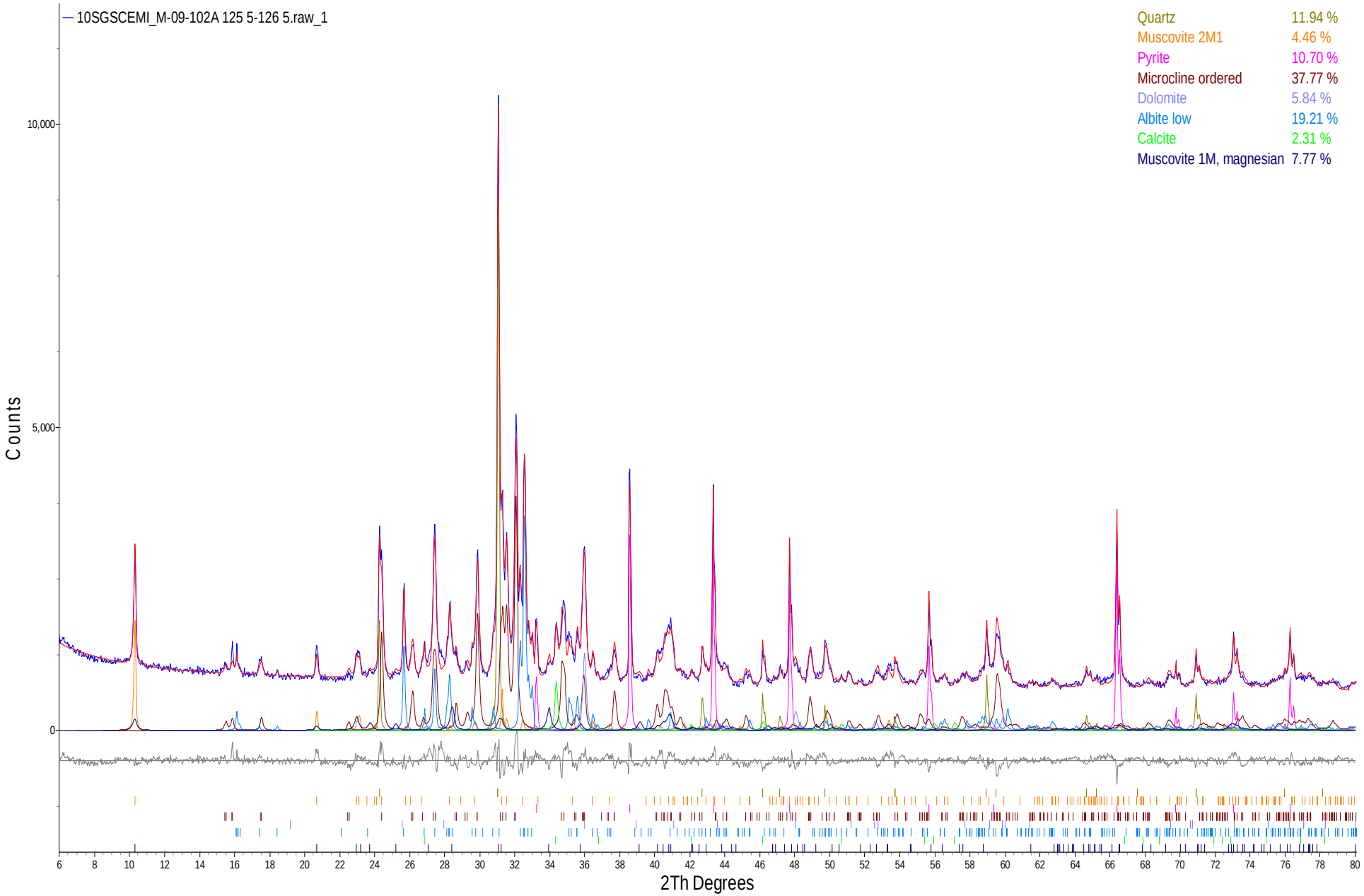


Figure 10. Rietveld refinement plot of sample **SGS CEMI "M-09-102A 125.5-126.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

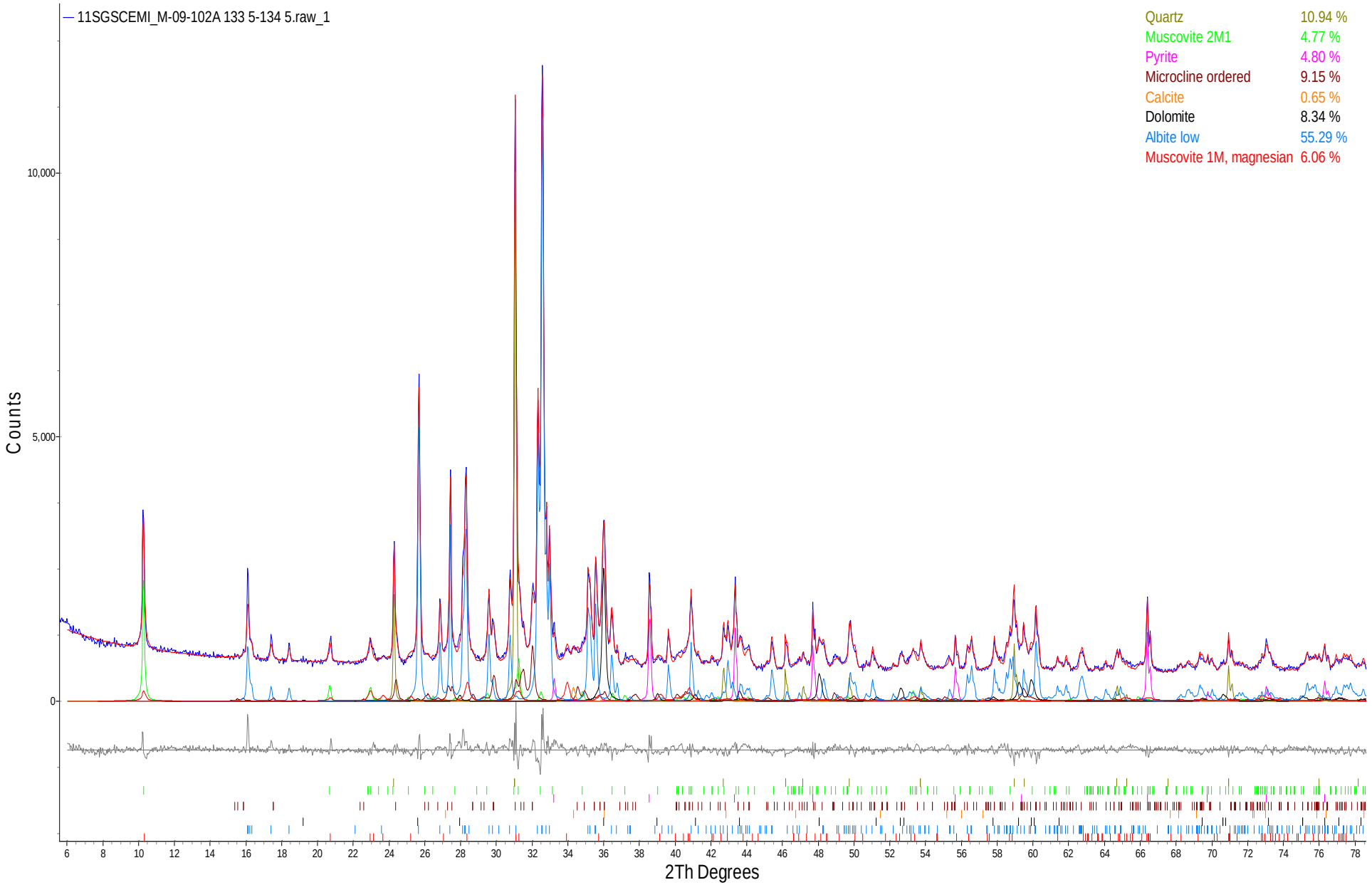


Figure 11. Rietveld refinement plot of sample **SGS CEMI "M-09-102A 133.5-134.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

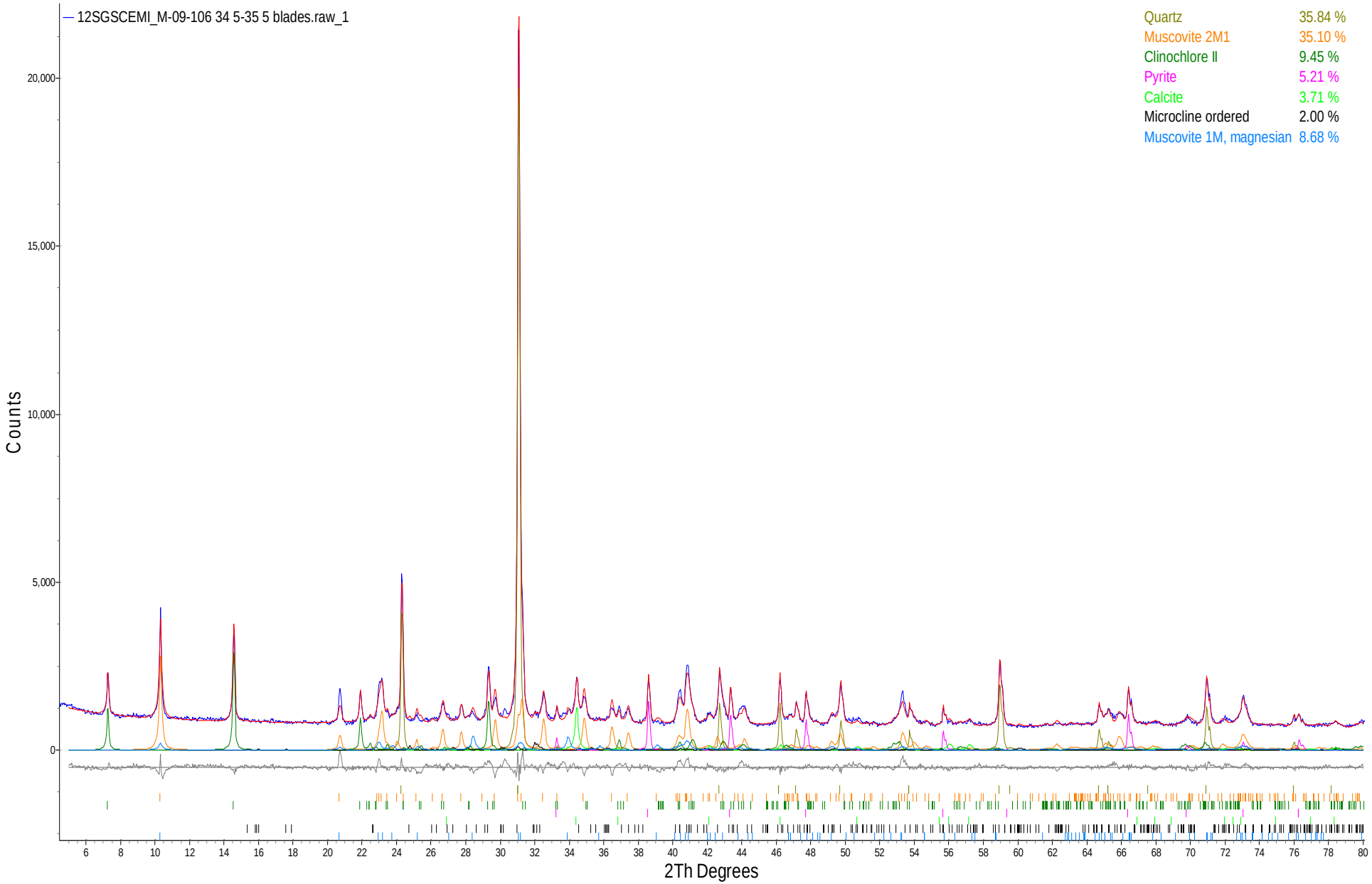


Figure 12. Rietveld refinement plot of sample **SGS CEMI "M-09-106 34.5-35.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

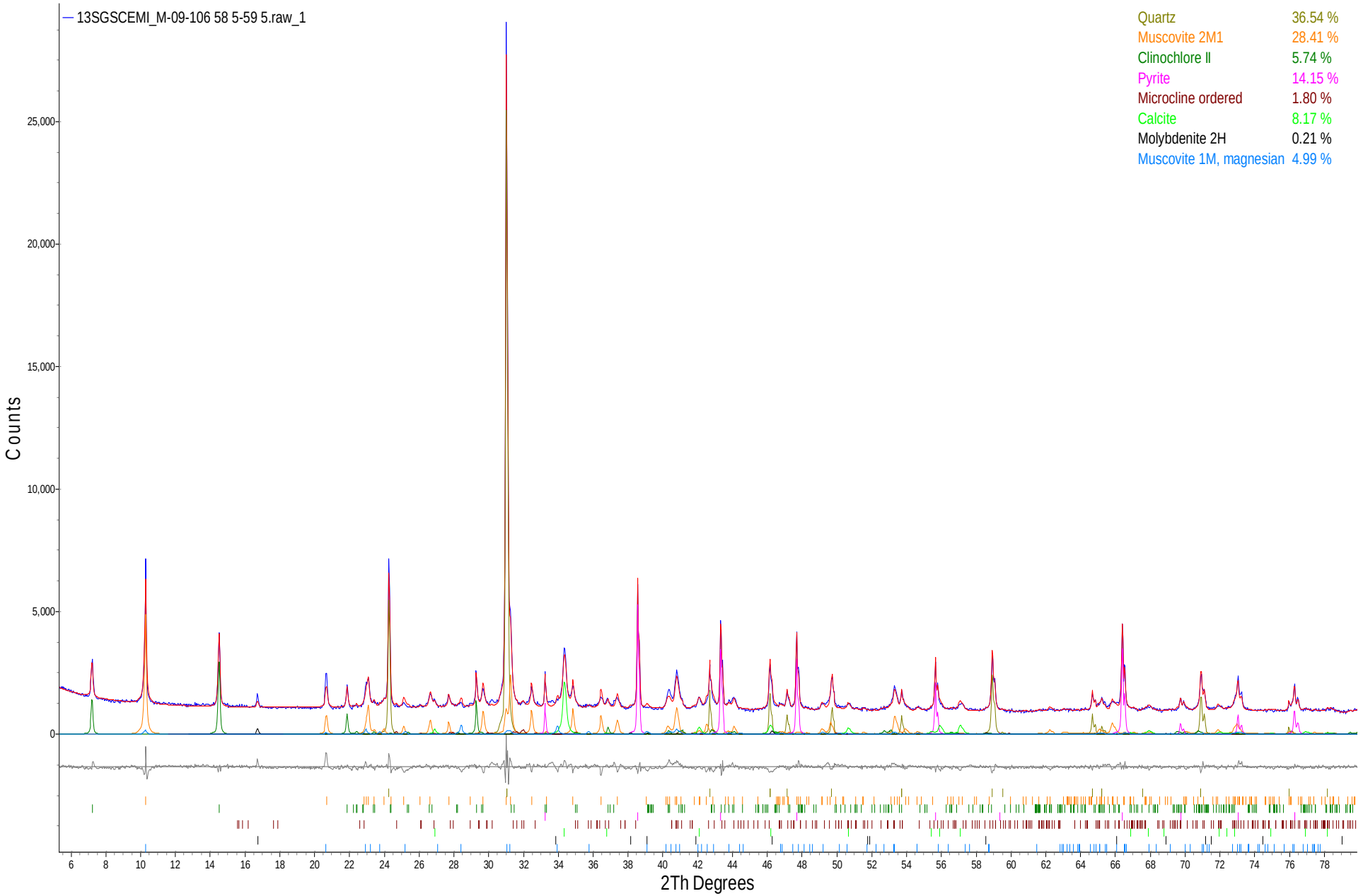


Figure 13. Rietveld refinement plot of sample **SGS CEMI "M-09-106 58.5-59.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

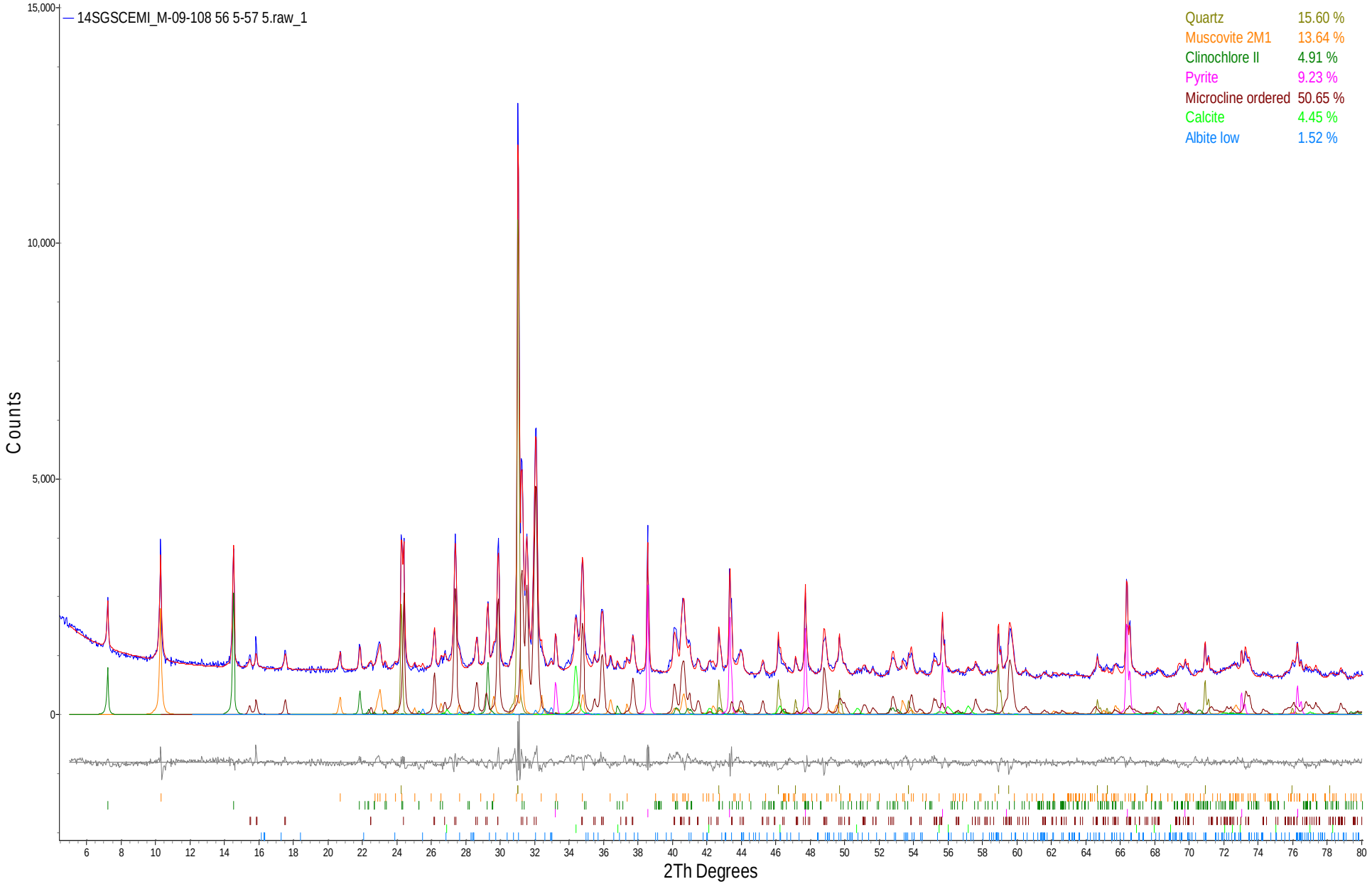


Figure 14. Rietveld refinement plot of sample **SGS CEMI "M-09-108 56.5-57.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

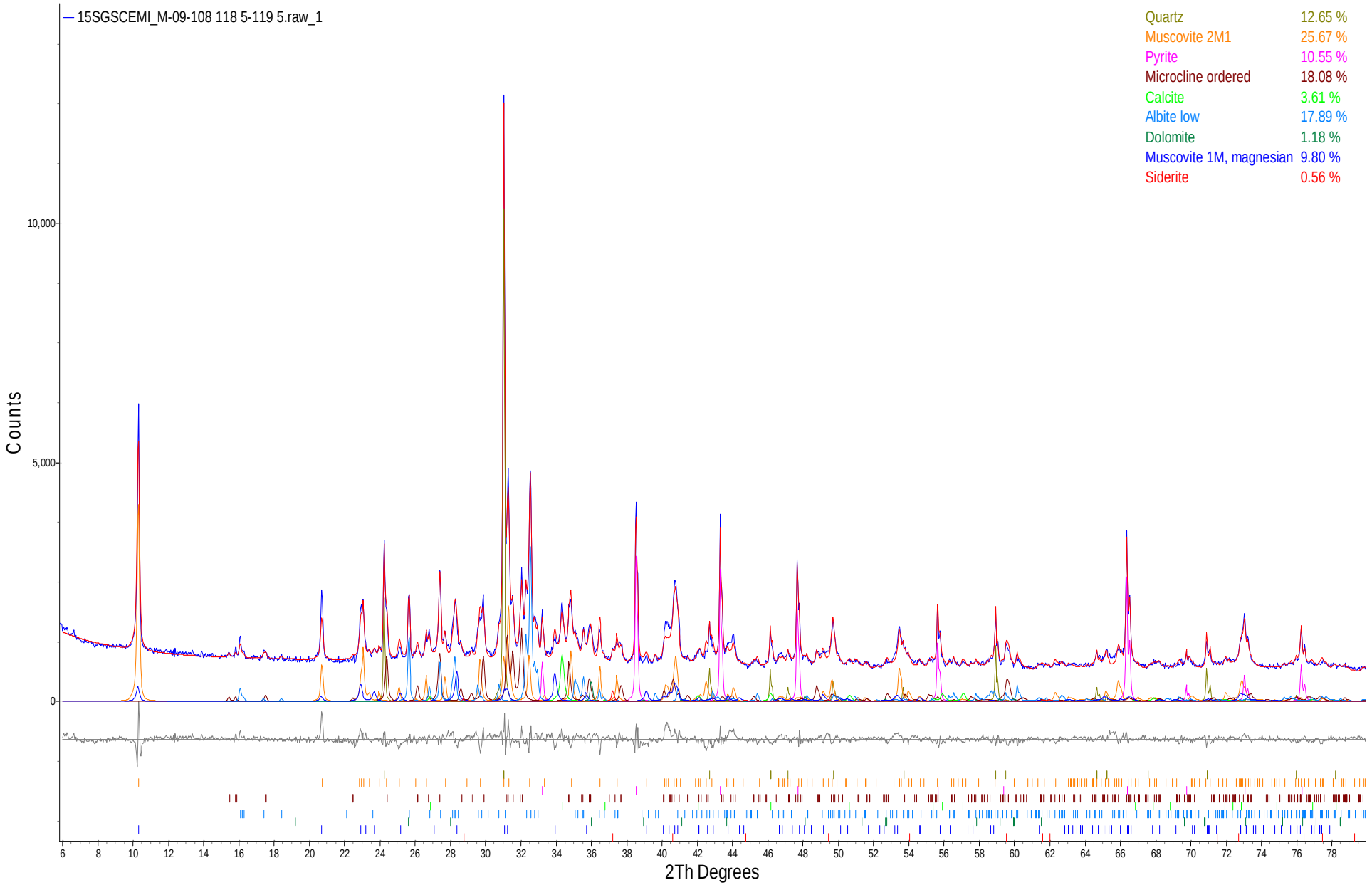


Figure 15. Rietveld refinement plot of sample **SGS CEMI "M-09-108 118.5-119.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

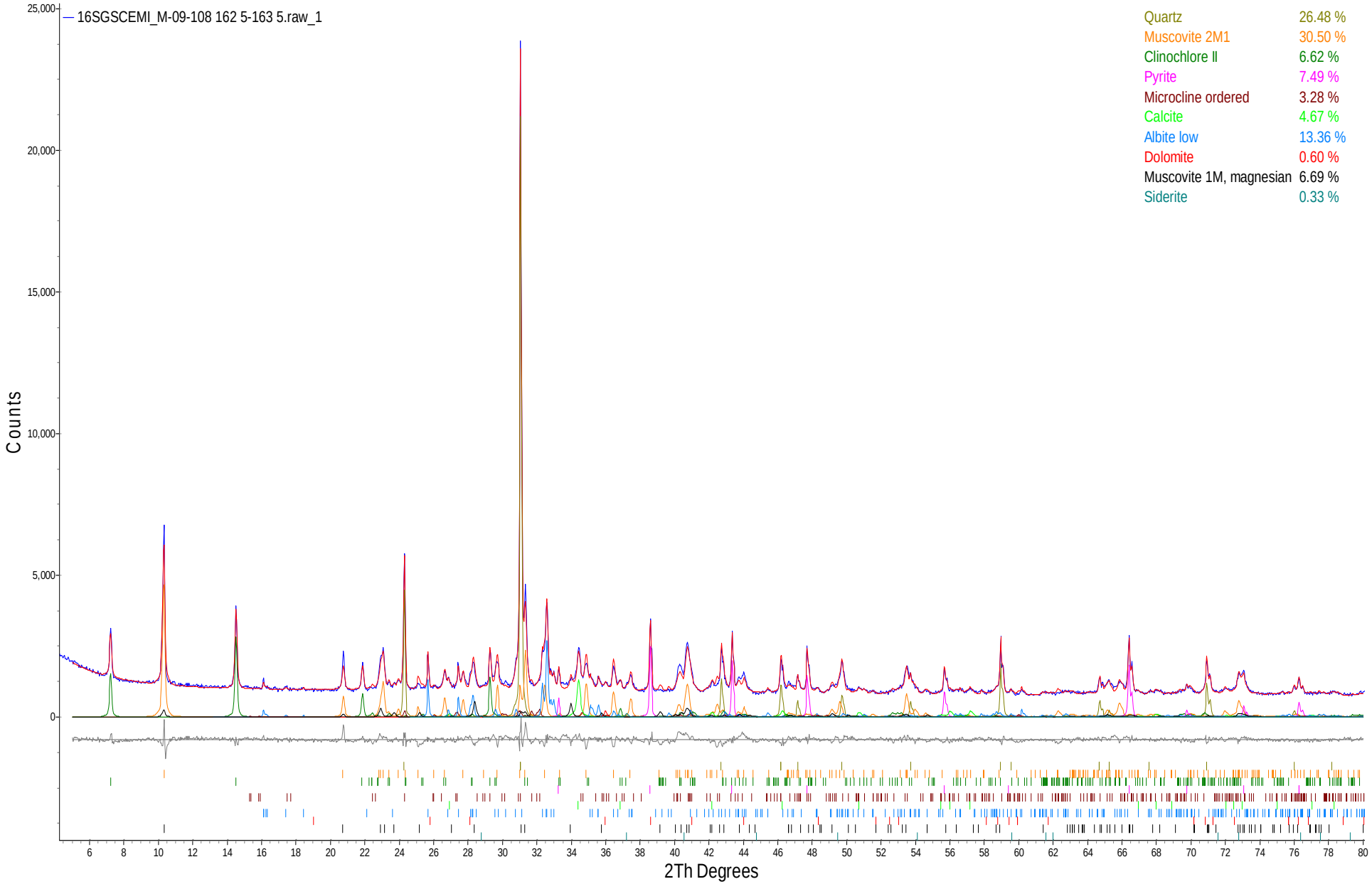


Figure 16. Rietveld refinement plot of sample **SGS CEMI "M-09-108 162.5-163.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

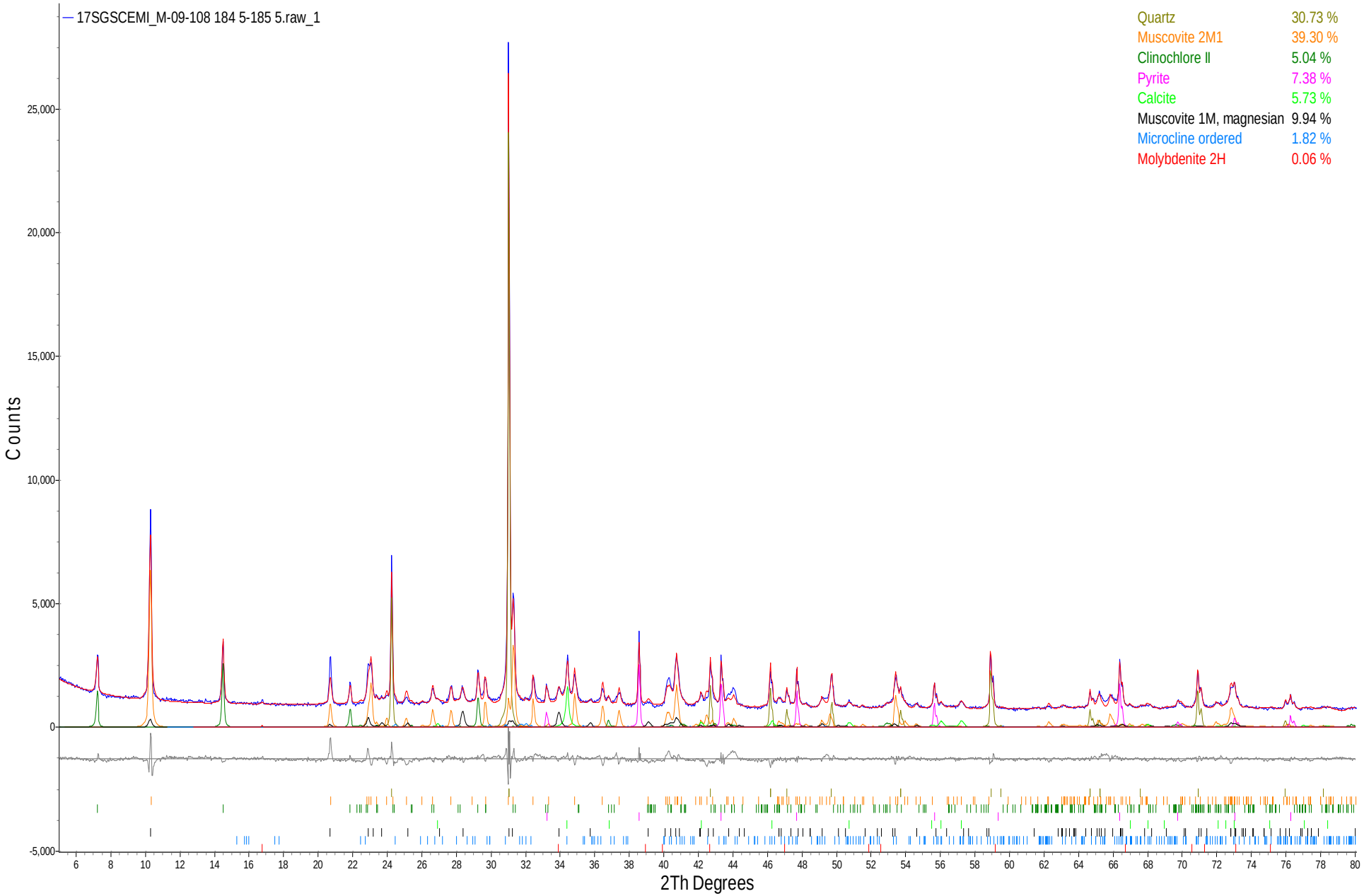


Figure 17. Rietveld refinement plot of sample **SGS CEMI "M-09-108 184.5-185.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

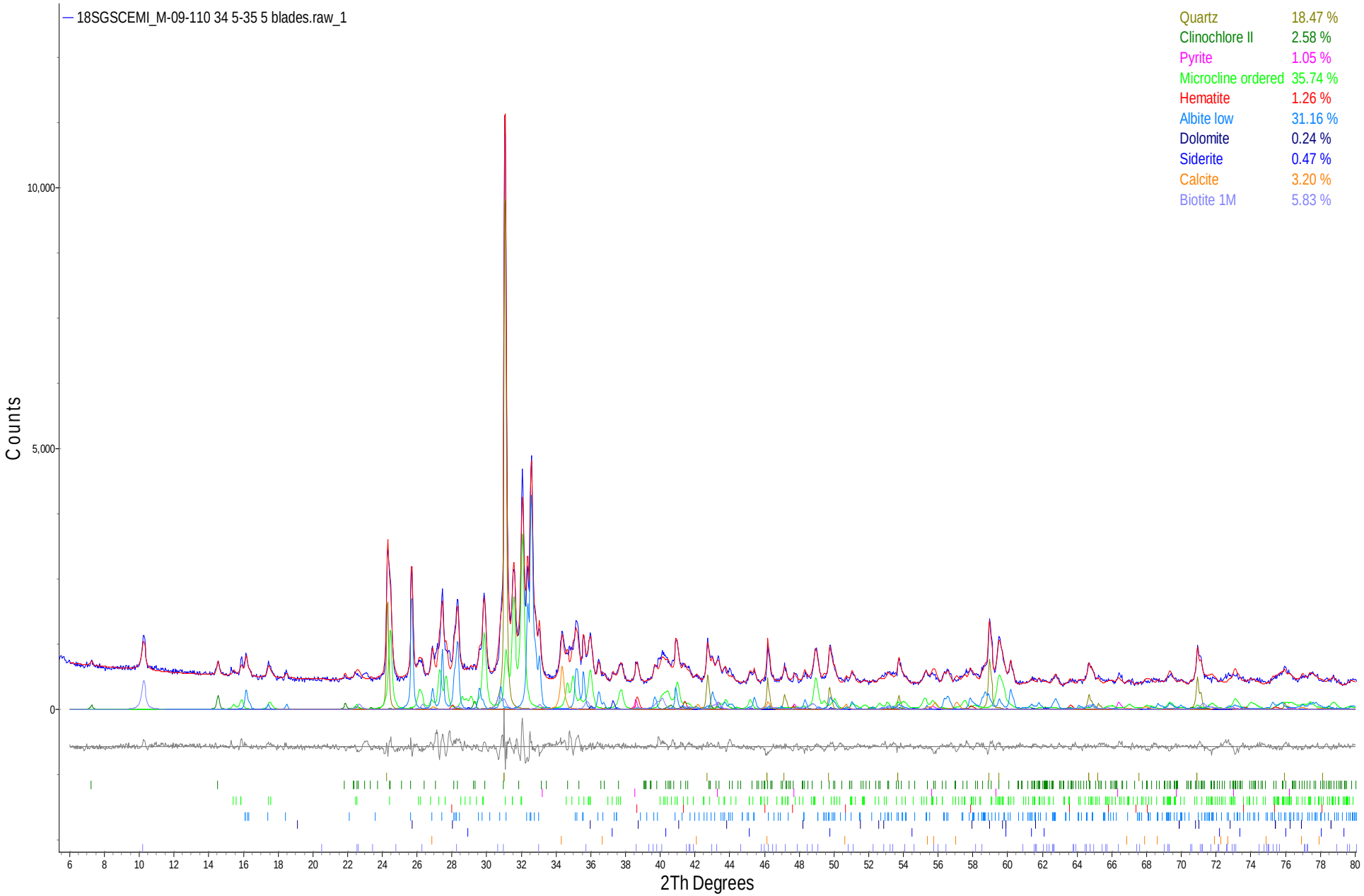


Figure 18. Rietveld refinement plot of sample **SGS CEMI "M-09-110 34.5-35.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

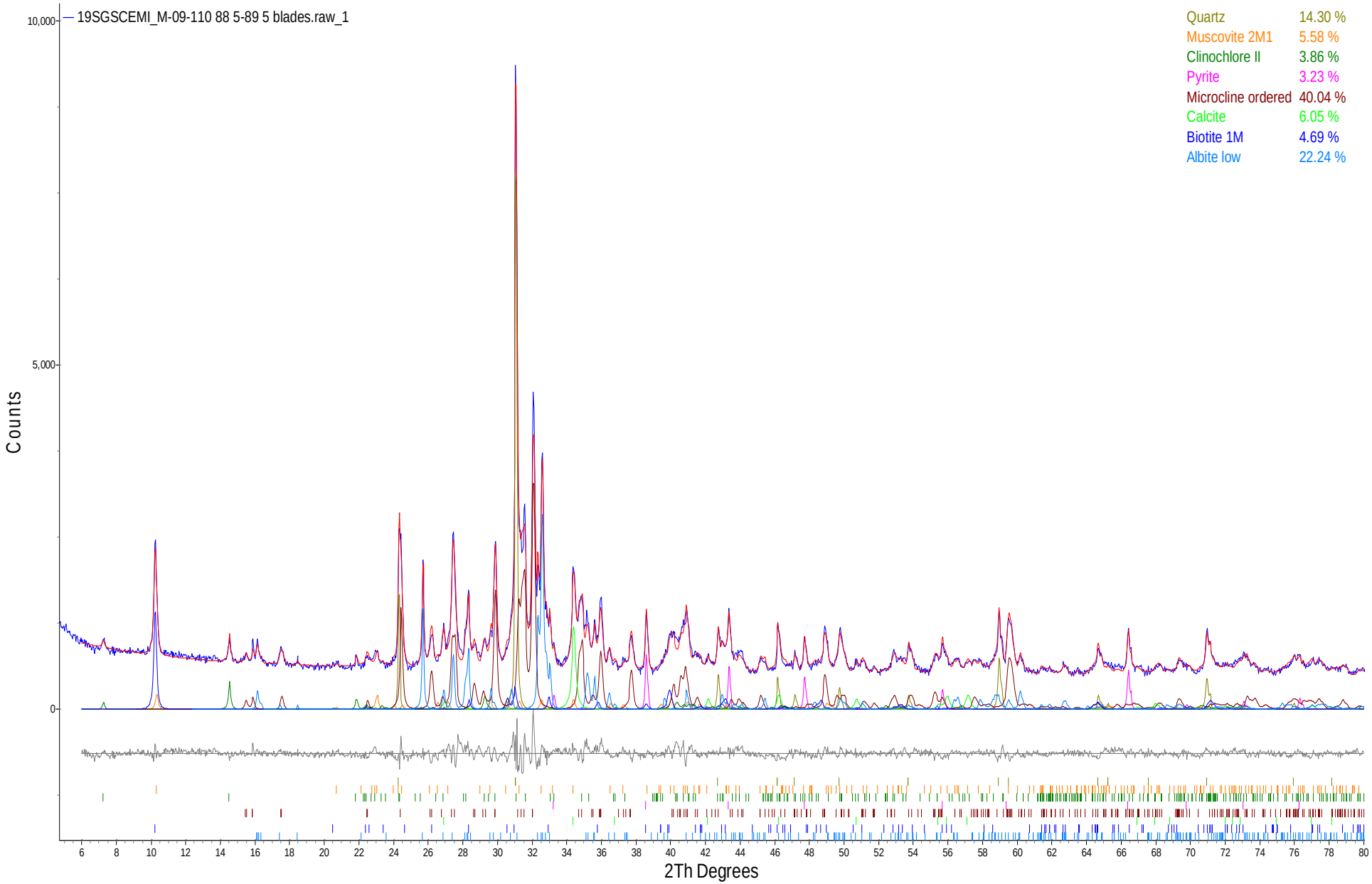


Figure 19. Rietveld refinement plot of sample **SGS CEMI "M-09-110 88.5-89.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

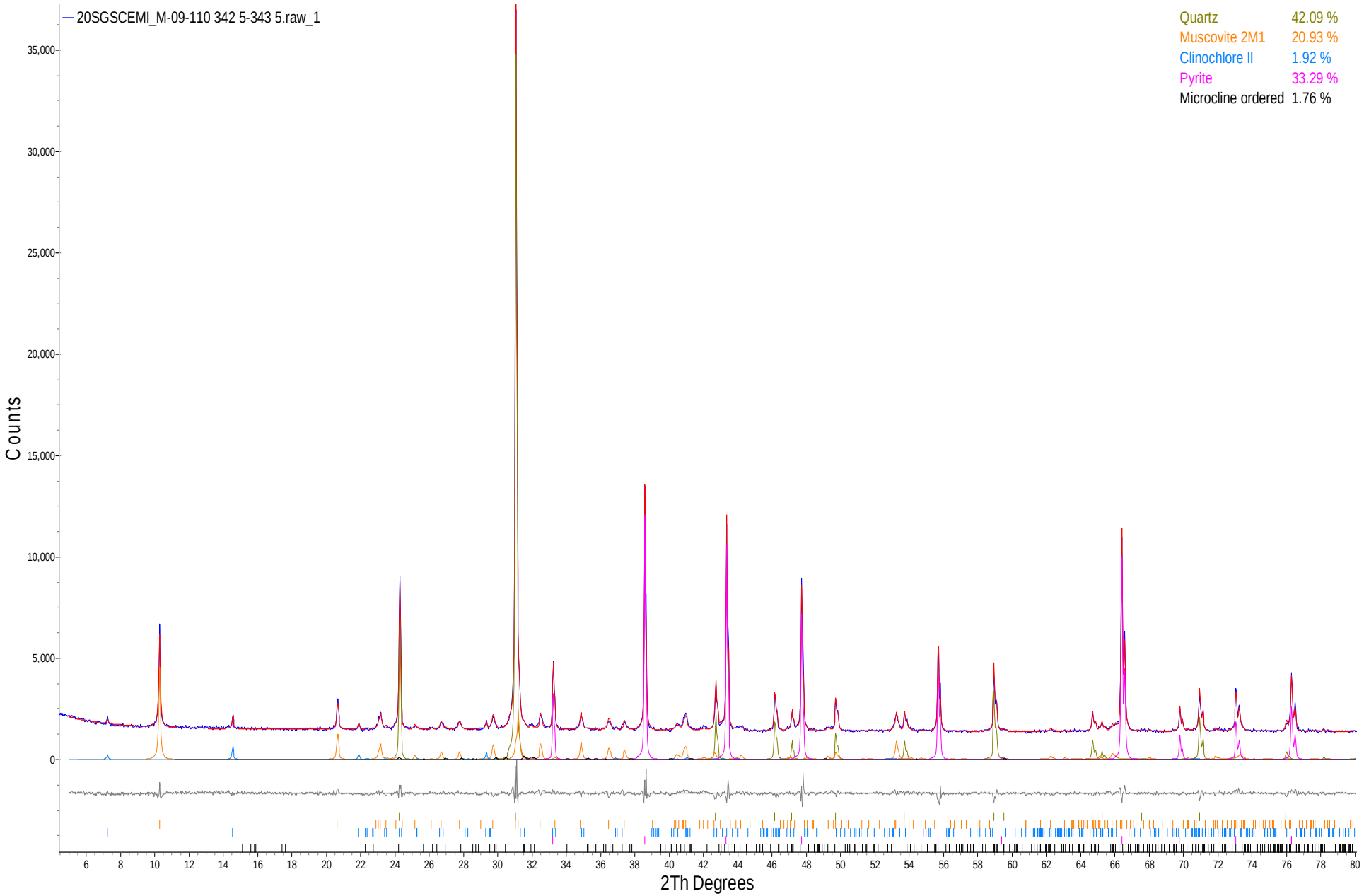


Figure 20. Rietveld refinement plot of sample **SGS CEMI "M-09-110 342.5-343.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

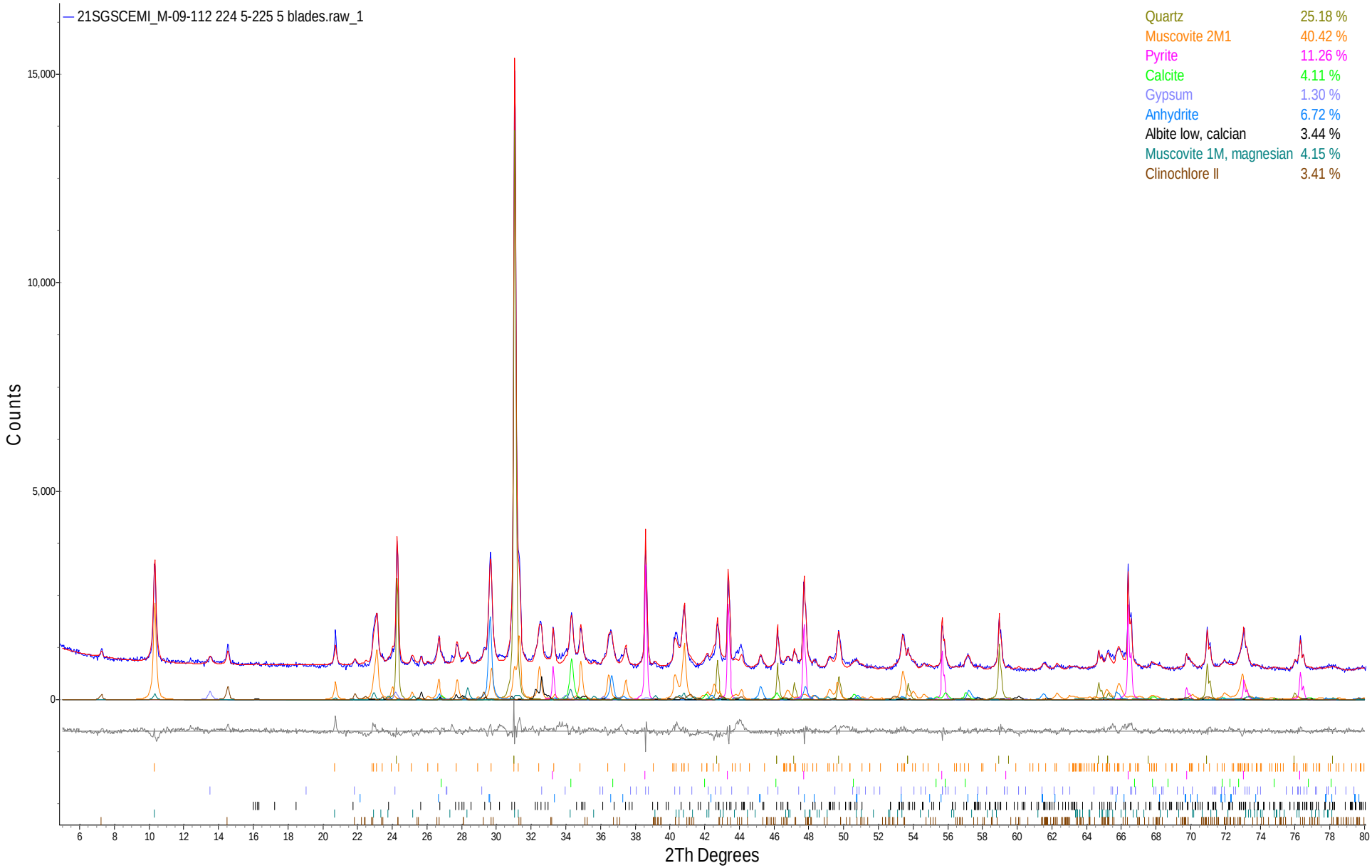


Figure 21. Rietveld refinement plot of sample **SGS CEMI "M-09-112 224.5-225.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

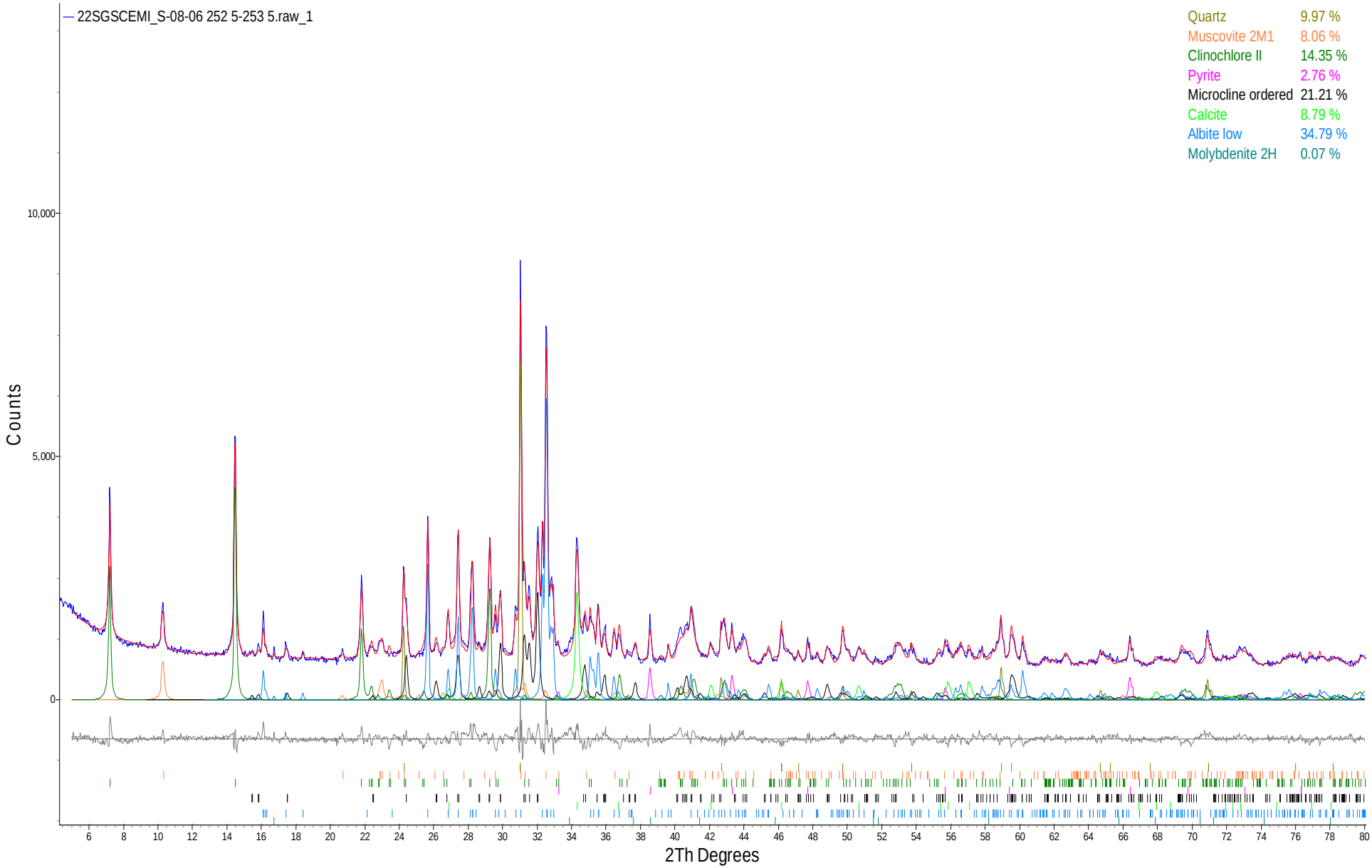


Figure 22. Rietveld refinement plot of sample **SGS CEMI "S-08-06 252.5-253.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

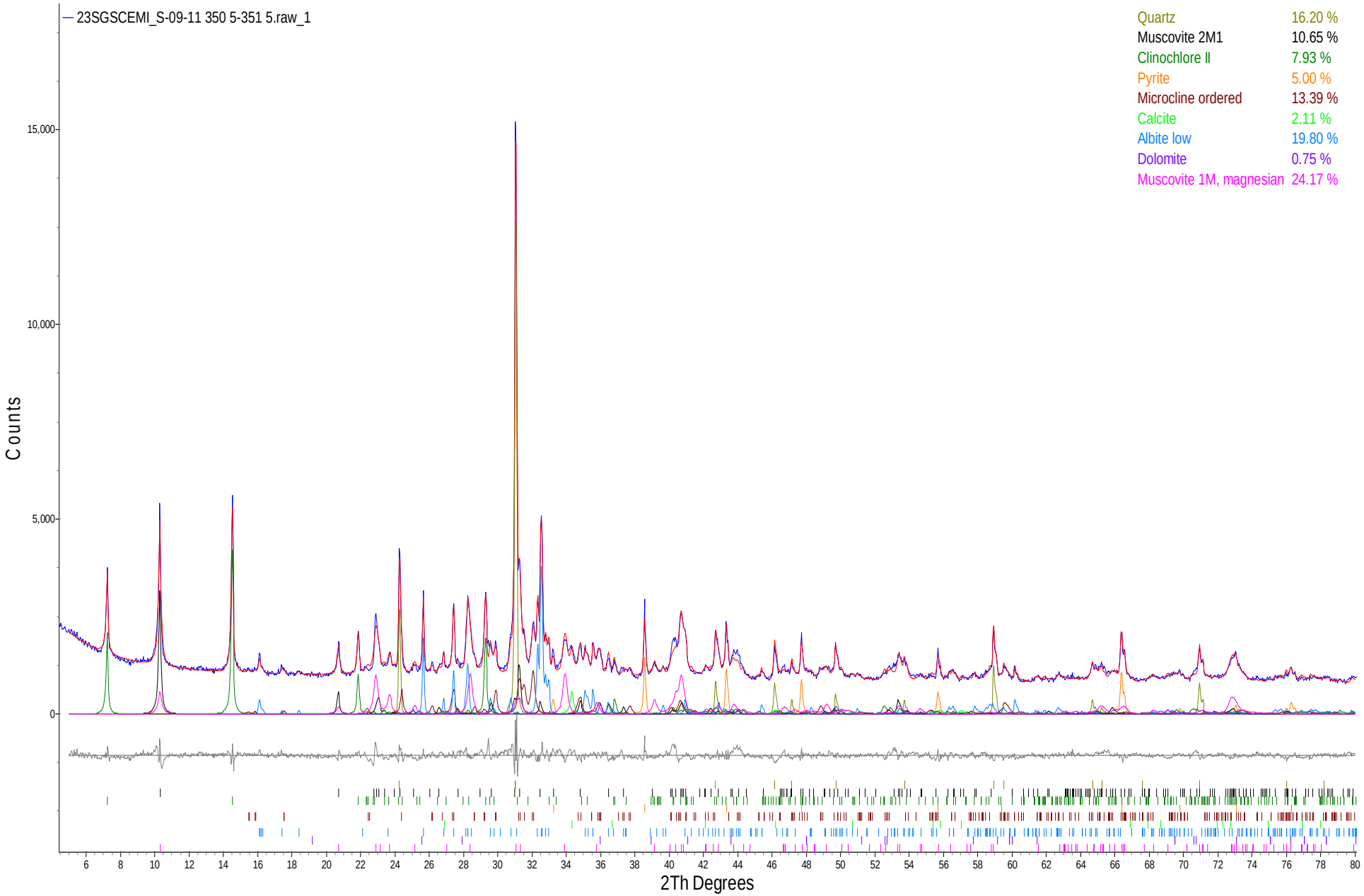


Figure 23. Rietveld refinement plot of sample **SGS CEMI "S-09-11 350.5-351.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

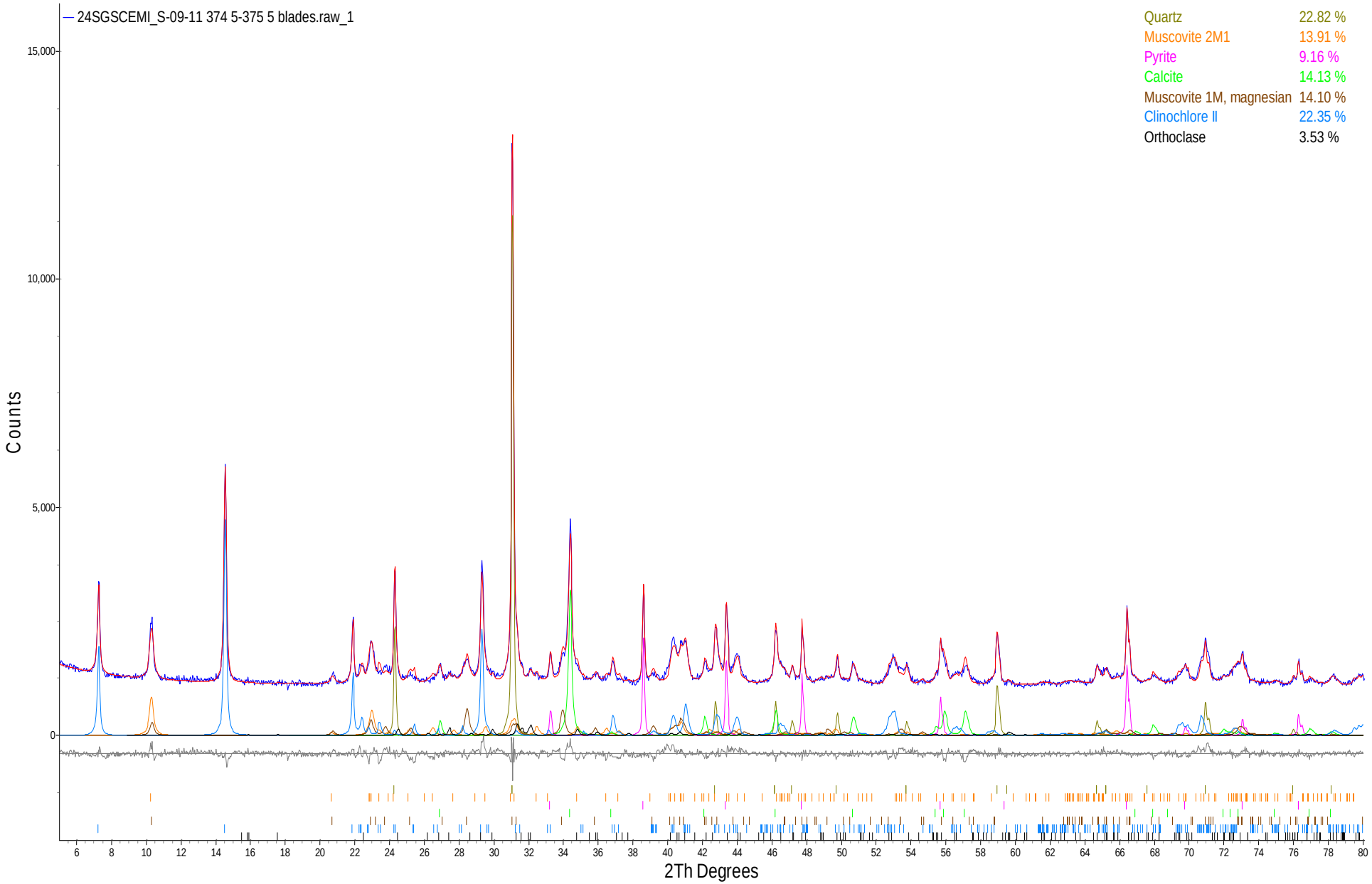


Figure 24. Rietveld refinement plot of sample **SGS CEMI "S-09-11 374.5-375.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

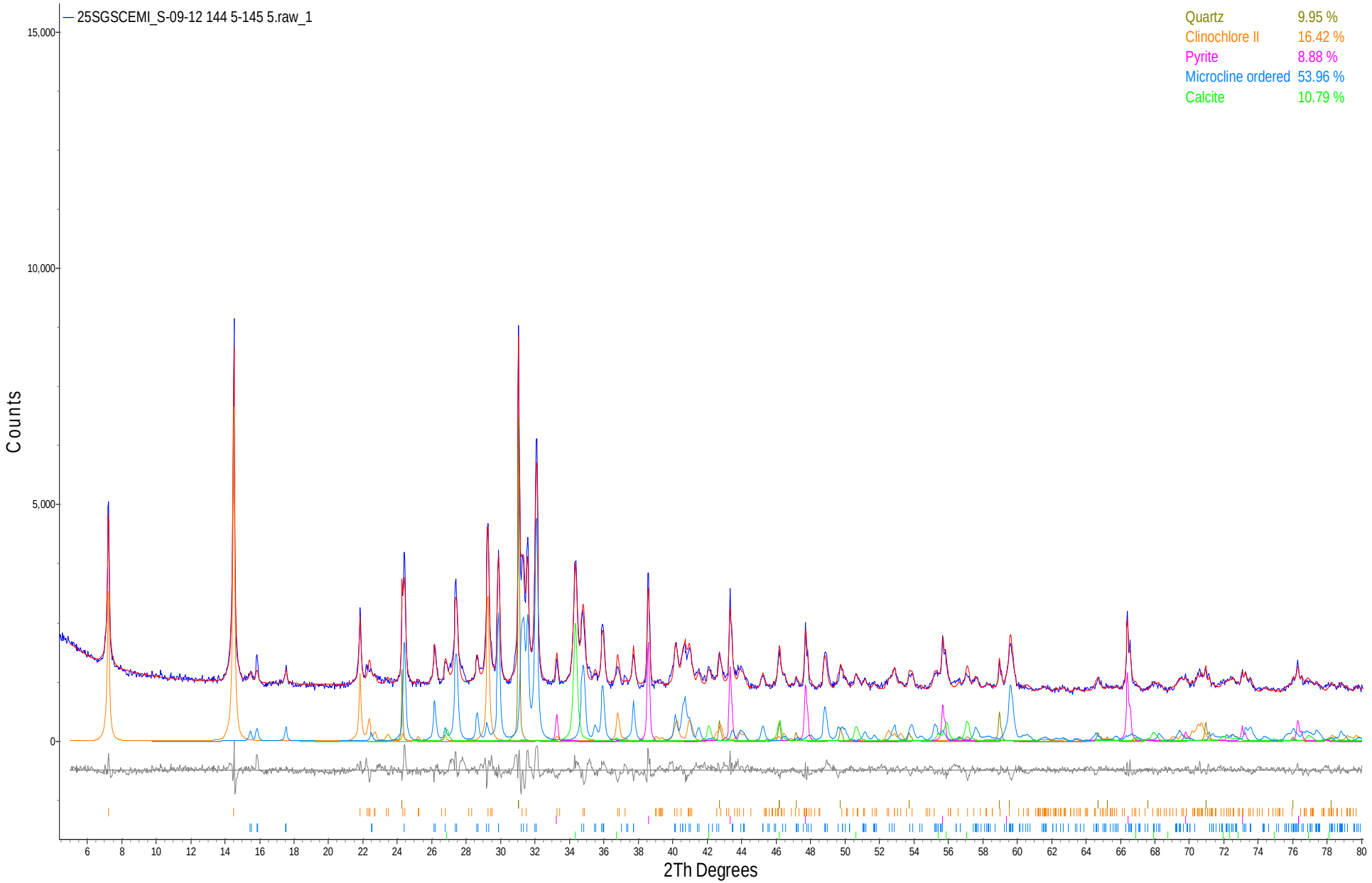


Figure 25. Rietveld refinement plot of sample **SGS CEMI "S-09-12 144.5-145.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

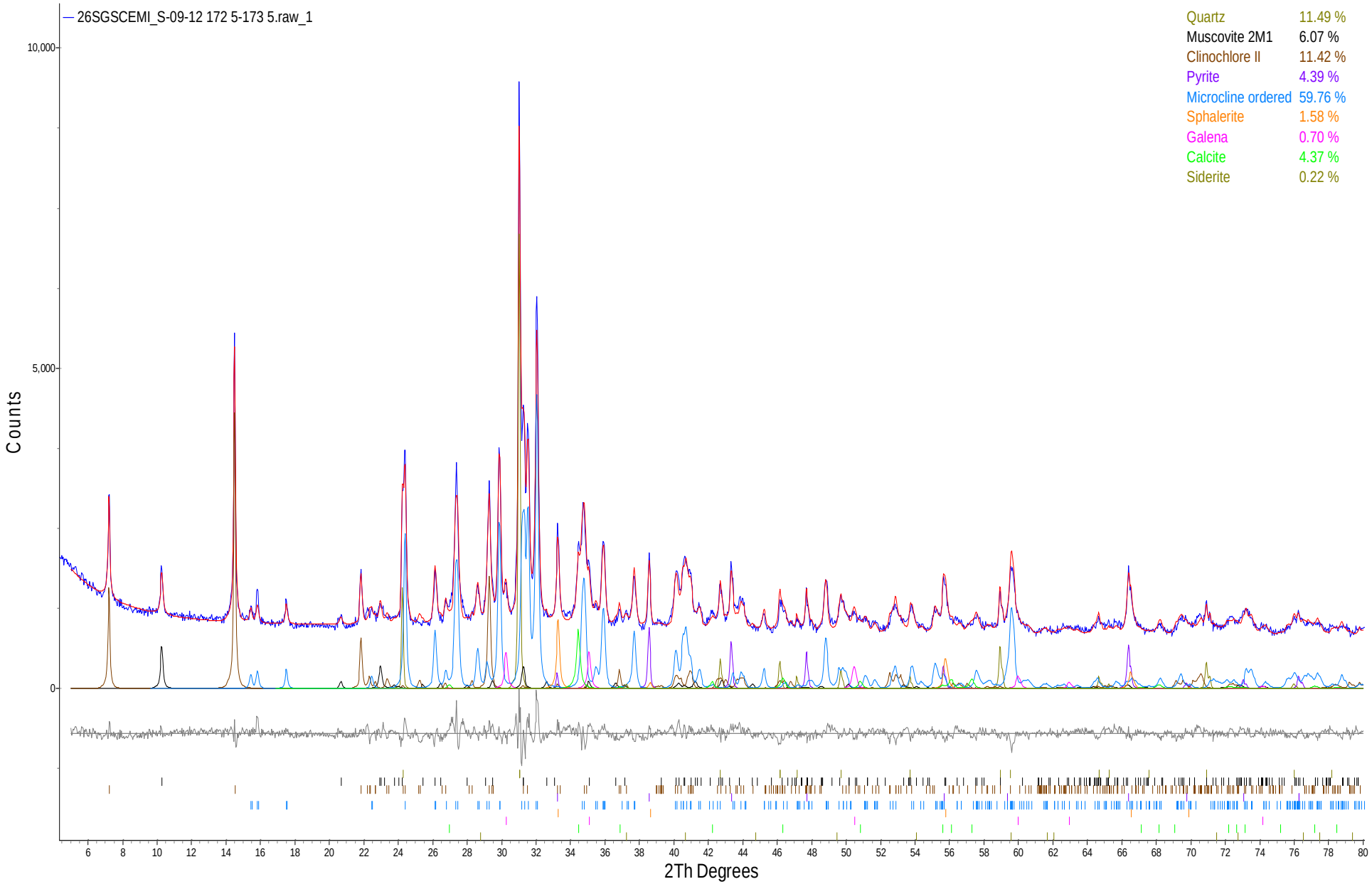


Figure 26. Rietveld refinement plot of sample **SGS CEMI "S-09-12 172.5-173.5"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

QUANTITATIVE PHASE ANALYSIS OF FIVE POWDER SAMPLES USING THE RIETVELD METHOD AND X-RAY POWDER DIFFRACTION DATA.

(Project: Rescan – Seabridge Sulphurets ABA 2-21-958)

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The University of British Columbia
6339 Stores Road
Vancouver, BC V6T 1Z4

January 30, 2012

EXPERIMENTAL METHOD

The five samples of **Project Rescan – Seabridge Sulphurets** were reduced to the optimum grain-size range for quantitative X-ray analysis (<10 μm) by grinding under ethanol in a vibratory McCrone Micronising Mill for 7 minutes. Continuous-scan X-ray powder-diffraction data were collected over a range 3-80°2θ with CoKa radiation on a Bruker D8 Focus Bragg-Brentano diffractometer equipped with an Fe monochromator foil, 0.6 mm (0.3°) divergence slit, incident- and diffracted-beam Soller slits and a LynxEye detector. The long fine-focus Co X-ray tube was operated at 35 kV and 40 mA, using a take-off angle of 6°.

RESULTS

The X-ray diffractograms were analyzed using the International Centre for Diffraction Database PDF-4 and Search-Match software by Siemens (Bruker). X-ray powder-diffraction data of the samples were refined with Rietveld program Topas 4.2 (Bruker AXS). The results of quantitative phase analysis by Rietveld refinements are given in Table 1. These amounts represent the relative amounts of crystalline phases normalized to 100%. The Rietveld refinement plots are shown in Figures 1 – 5.

Table 1. Results of quantitative phase analysis (wt.%)

Mineral	**Ideal Formula**	**3: Comp #3**	**42: Comp #42**	**64: Comp #64**	**66: Comp #66**	**69: Comp #69**
Quartz	SiO_2	21.3	19.4	16.9	5.6	11.7
Muscovite 2M	$KAl_2(AlSi_3O_{10})(OH)_2$	17.2	14.8	13.8	4.9	
Muscovite 1M	$K(Al,Mg,Fe)_2AlSi_3O_{10}(OH)_2$	7.6	10.0	6.7		
Biotite	$K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$				2.4	2.1
Clinochlore	$(Mg,Fe^{2+})_5Al(Si_3Al)O_{10}(OH)_8$	7.2	10.2	4.5	16.6	16.4
Actinolite	$Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$					5.2
Plagioclase	$NaAlSi_3O_8 – CaAl_2Si_2O_8$	19.7	6.1	28.0	39.0	27.0
K-Feldspar	$KAlSi_3O_8$	12.1	20.4	21.5	13.7	24.9
Calcite	$CaCO_3$	4.7	12.4	5.9	9.2	10.5
Siderite	$Fe^{2+}CO_3$				0.8	0.3
Ankerite – Dolomite	$Ca(Fe^{2+},Mg,Mn)(CO_3)_2 – CaMg(CO_3)_2$	3.9		0.4	1.0	
Pyrite	FeS_2	6.3	6.6	1.7	6.8	1.1
Magnetite	Fe_3O_4			0.7		0.8
Total		100.0	100.0	100.0	100.0	100.0

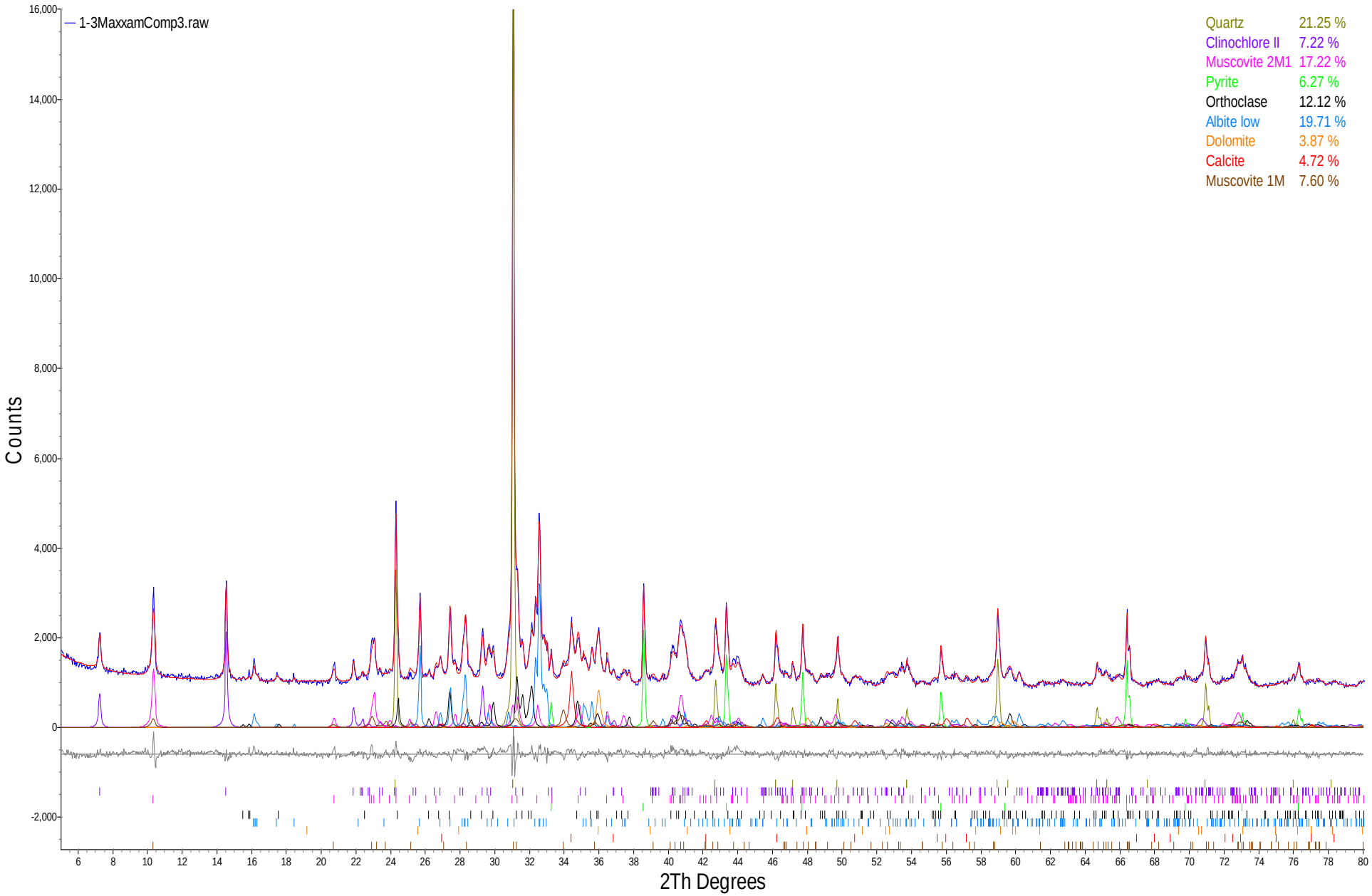


Figure 1. Rietveld refinement plot of sample **"Comp #3"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

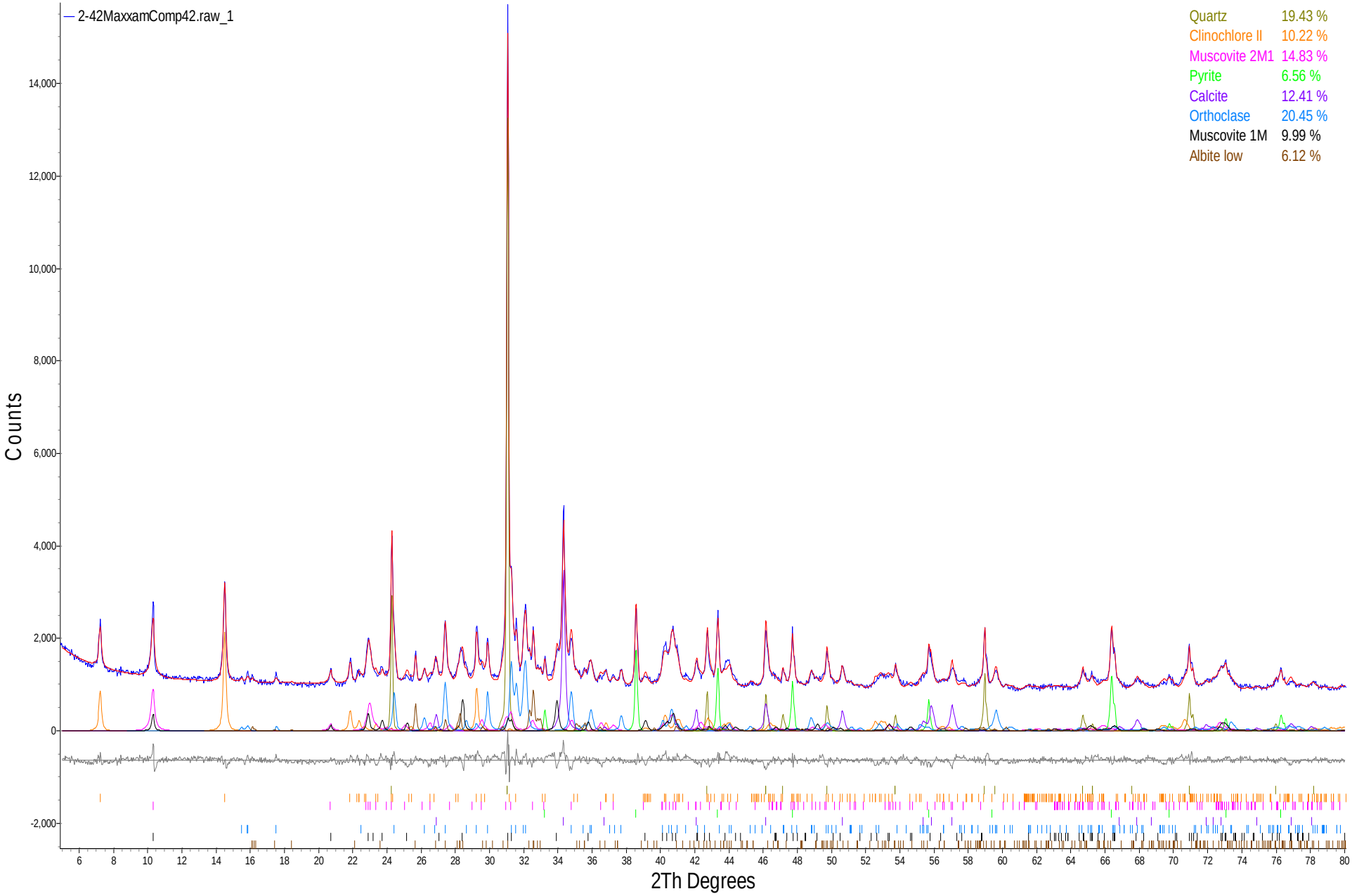


Figure 2. Rietveld refinement plot of sample **"Comp #42"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

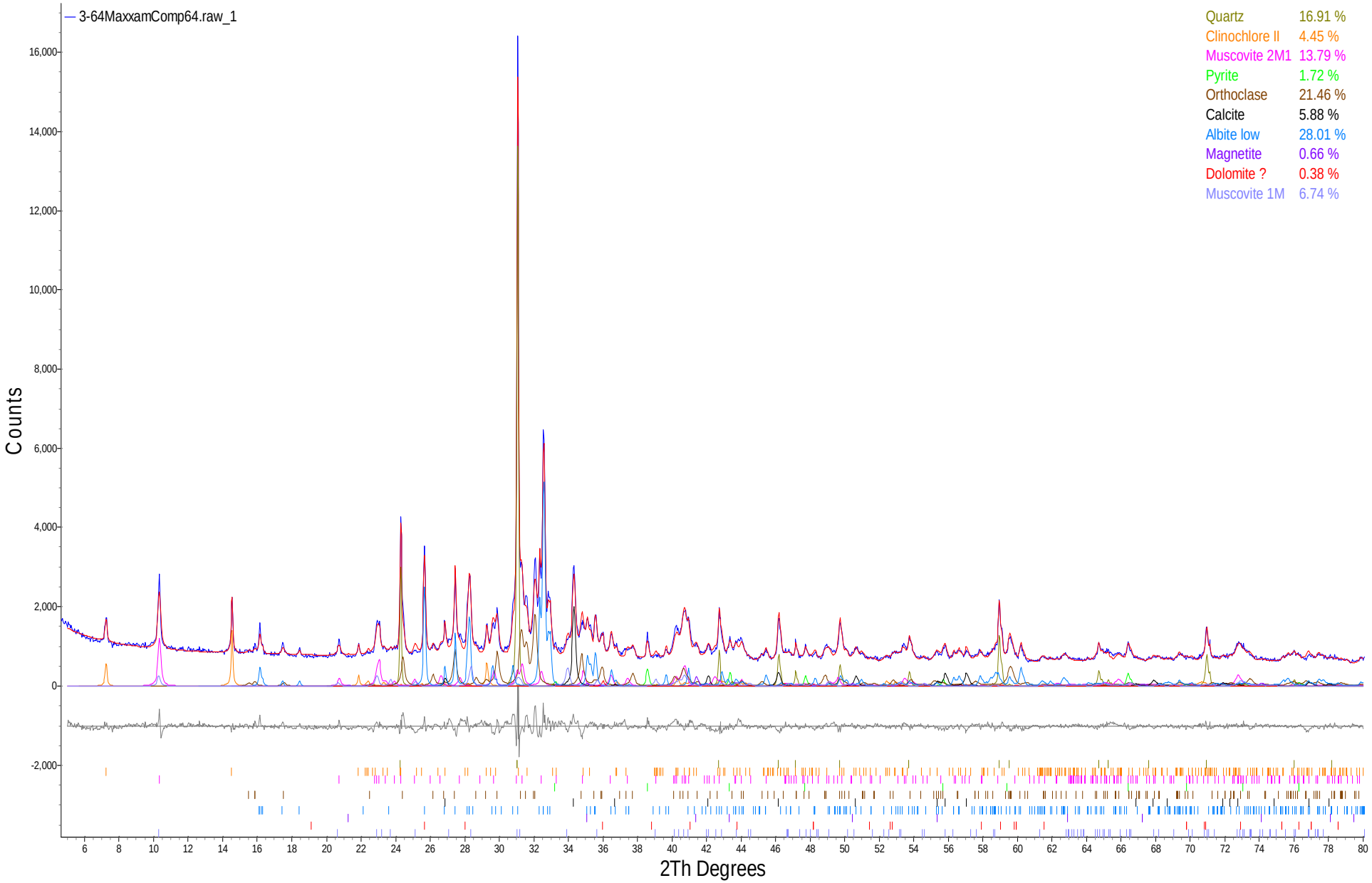


Figure 3. Rietveld refinement plot of sample **"Comp #64"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

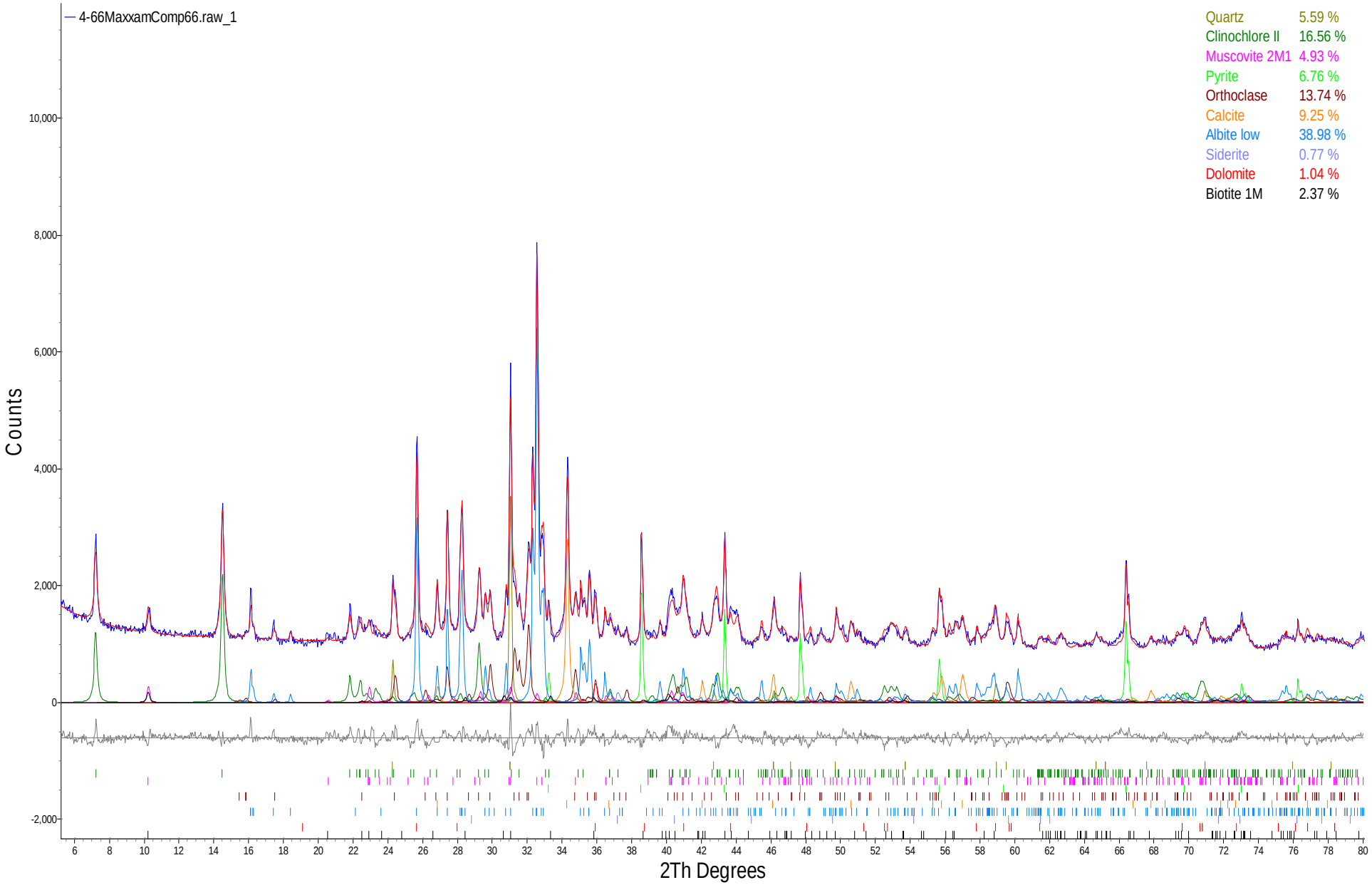


Figure 4. Rietveld refinement plot of sample **"Comp #66"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

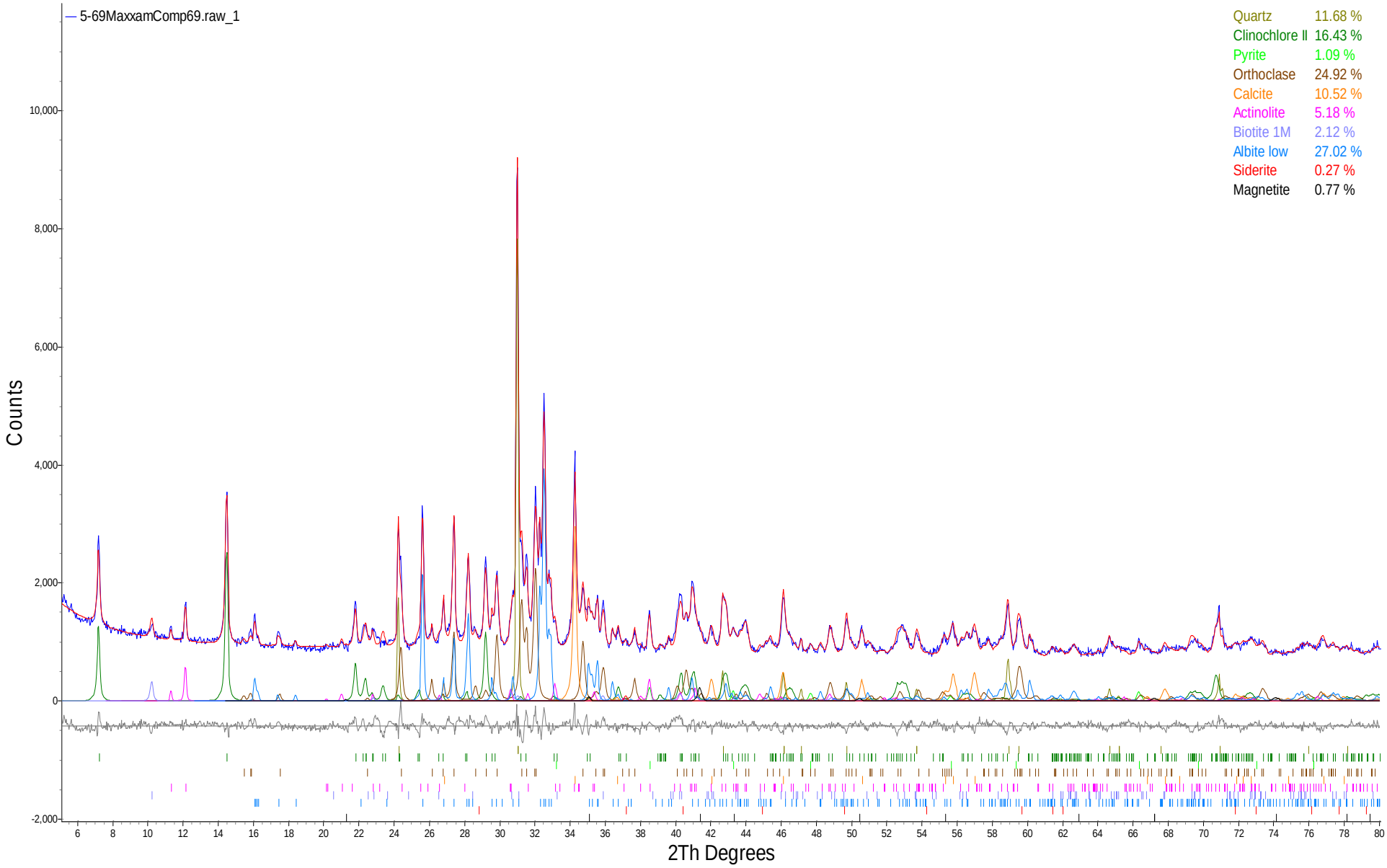


Figure 5. Rietveld refinement plot of sample **"Comp #69"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

QUANTITATIVE PHASE ANALYSIS OF 25 POWDER SAMPLES USING THE RIETVELD METHOD AND X-RAY POWDER DIFFRACTION DATA.

Project: # 0868-017-016-01 KSM Waste Rock Mineralogy

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February 17, 2012

EXPERIMENTAL METHOD

The twenty-five samples of **Project # 0868-017-016-01 KSM Waste Rock Mineralogy** were reduced to the optimum grain-size range for quantitative X-ray analysis (<10 μm) by grinding under ethanol in a vibratory McCrone Micronising Mill for 7 minutes. Step-scan X-ray powder-diffraction data were collected over a range 3-80°2θ with CoKa radiation on a Bruker D8 Focus Bragg-Brentano diffractometer equipped with an Fe monochromator foil, 0.6 mm (0.3°) divergence slit, incident- and diffracted-beam Soller slits and a LynxEye detector. The long fine-focus Co X-ray tube was operated at 35 kV and 40 mA, using a take-off angle of 6°.

RESULTS

The X-ray diffractograms were analyzed using the International Centre for Diffraction Database PDF-4 and Search-Match software by Siemens (Bruker). X-ray powder-diffraction data of the samples were refined with Rietveld program Topas 4.2 (Bruker AXS). The results of quantitative phase analysis by Rietveld refinement are given in Table 1 (separate file, ***Rescan Environmental Services Ltd Results Feb 17 2012 – Proj 0868-017-016-01 KSM Waste Rock Mineralogy.xls***). These amounts represent the relative amounts of crystalline phases normalized to 100%. The Rietveld refinement plots are shown in Figures 1 – 25. The ideal formulae of phases present are given in Table 2.

Table 2.

Mineral	**Ideal Formula**
Actinolite	$Ca_2(Mg,Fe^{2+})_5Si_8O_{22}(OH)_2$
Anhydrite	$CaSO_4$
Ankerite/Dolomite	$Ca(Fe^{2+},Mg,Mn)(CO_3)_2/CaMg(CO_3)_2$
Barite	$BaSO_4$
Biotite	$K(Mg,Fe^{2+})_3AlSi_3O_{10}(OH)_2$
Calcite	$CaCO_3$
Chalcopyrite	$CuFeS_2$
Clinochlore	$(Mg,Fe^{2+})_5Al(Si_3Al)O_{10}(OH)_8$
Gypsum	$CaSO_4 \cdot 2H_2O$
Hematite	α-Fe_2O_3
K-feldspar	$KAlSi_3O_8$
Magnetite	Fe_3O_4
Muscovite 1M, 2M	$KAl_2(AlSi_3O_{10})(OH)_2$
Plagioclase	$NaAlSi_3O_8 - CaAl_2Si_2O_8$
Pyrite	FeS_2
Quartz	SiO_2
Siderite	$Fe^{2+}CO_3$
Titanite	$CaTiSiO_5$

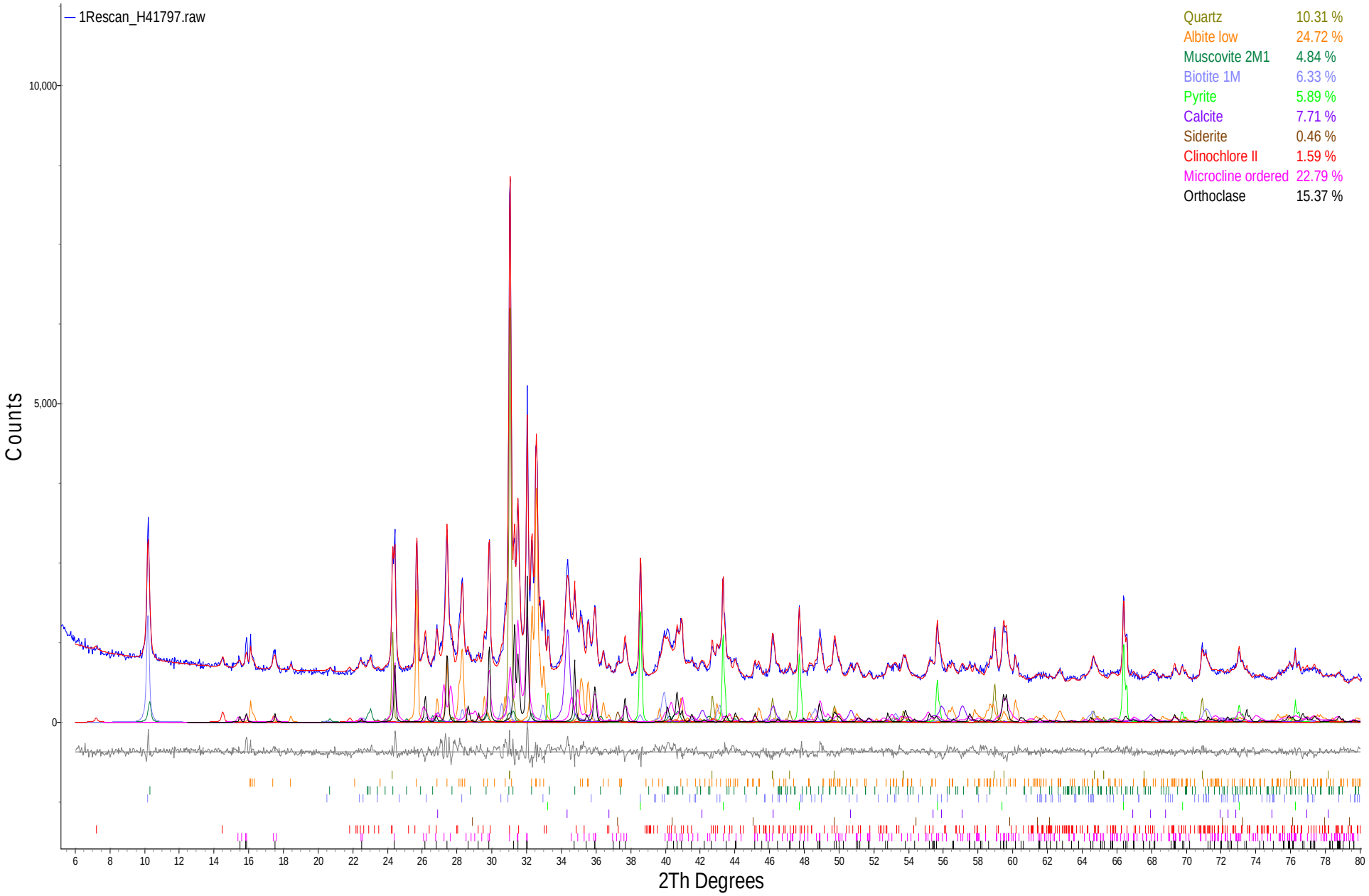


Figure 1. Rietveld refinement plot of sample **Rescan "H41797"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

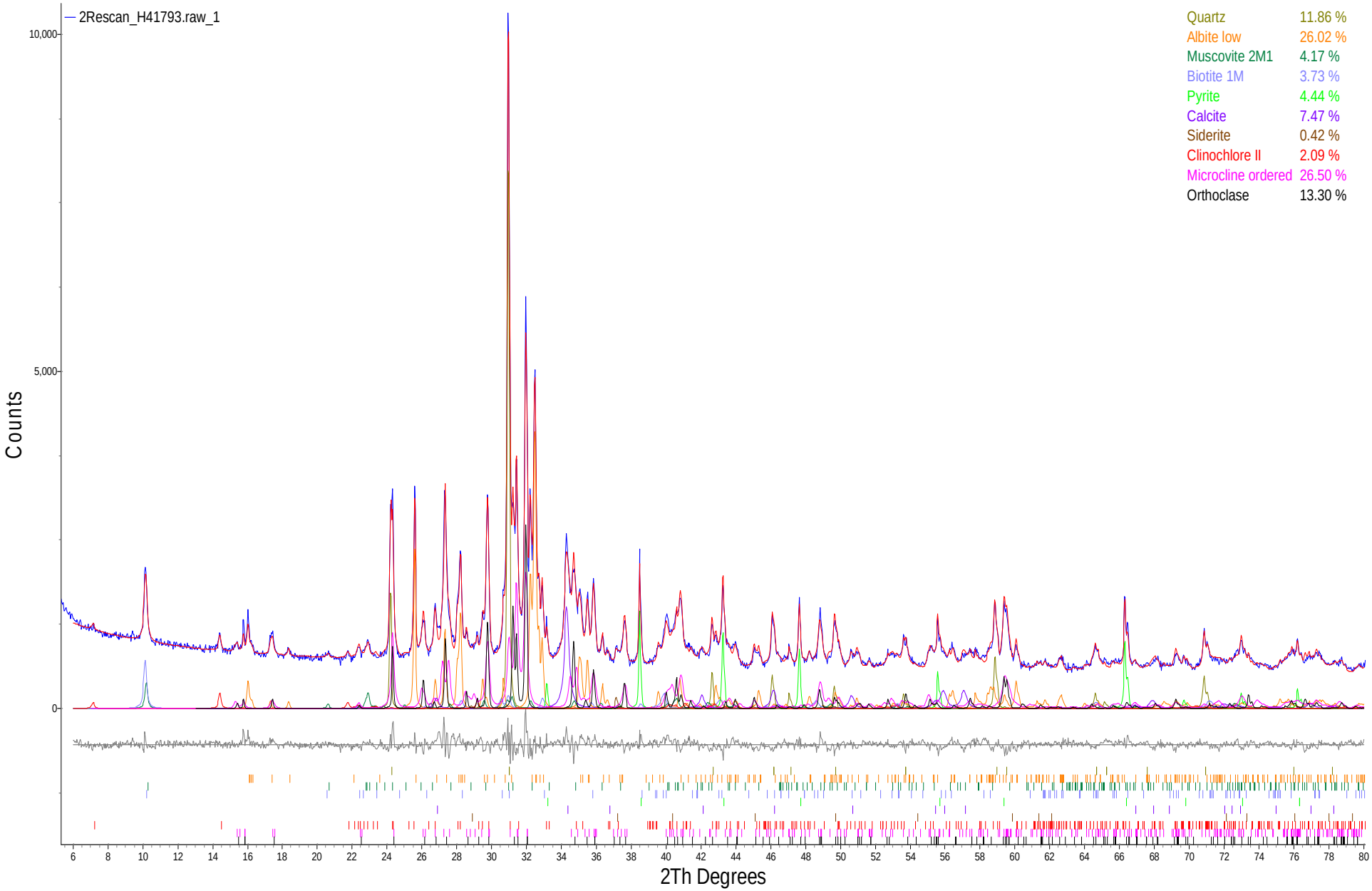


Figure 2. Rietveld refinement plot of sample **Rescan "H41793"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

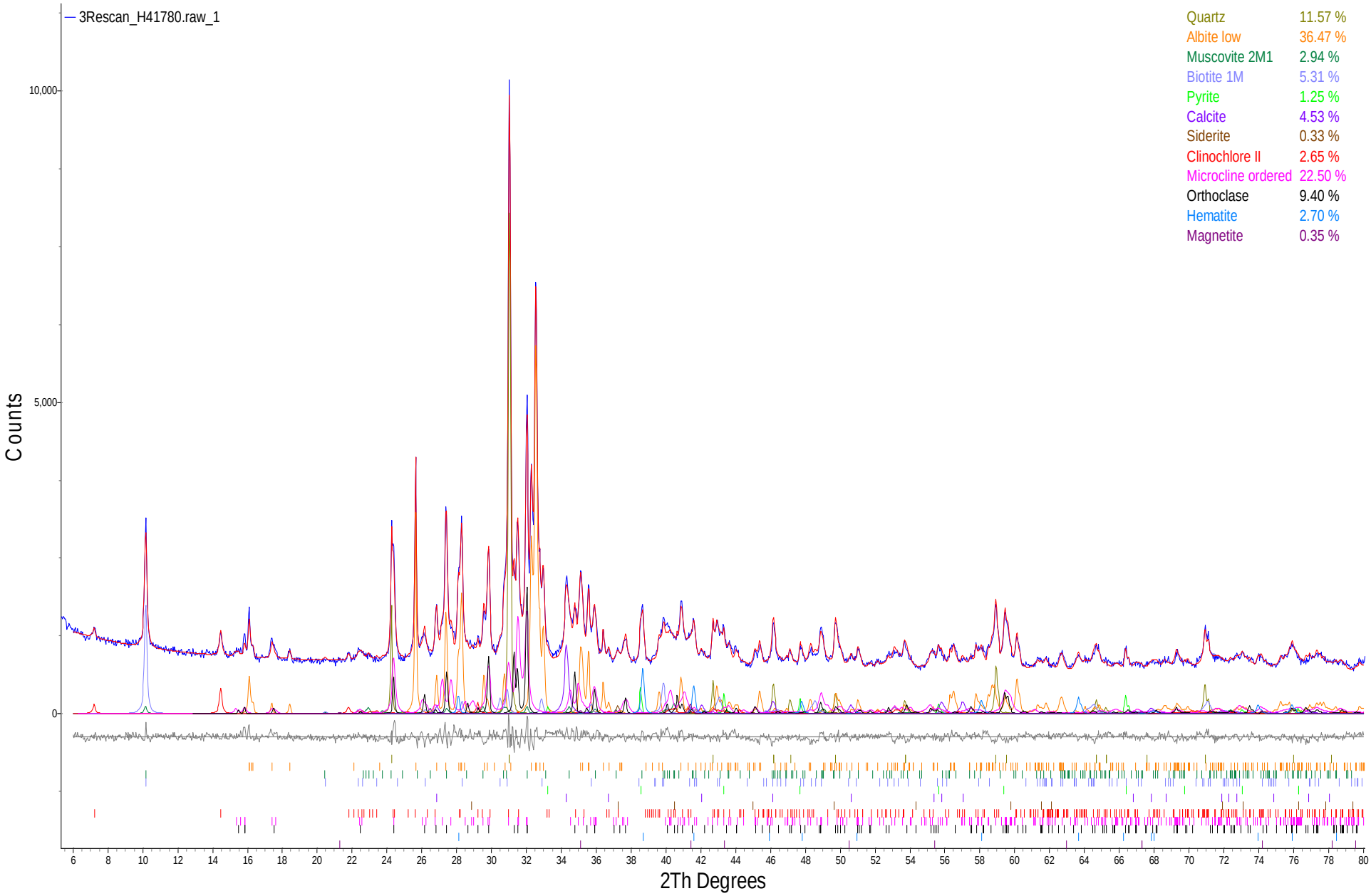


Figure 3. Rietveld refinement plot of sample **Rescan "H41780"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

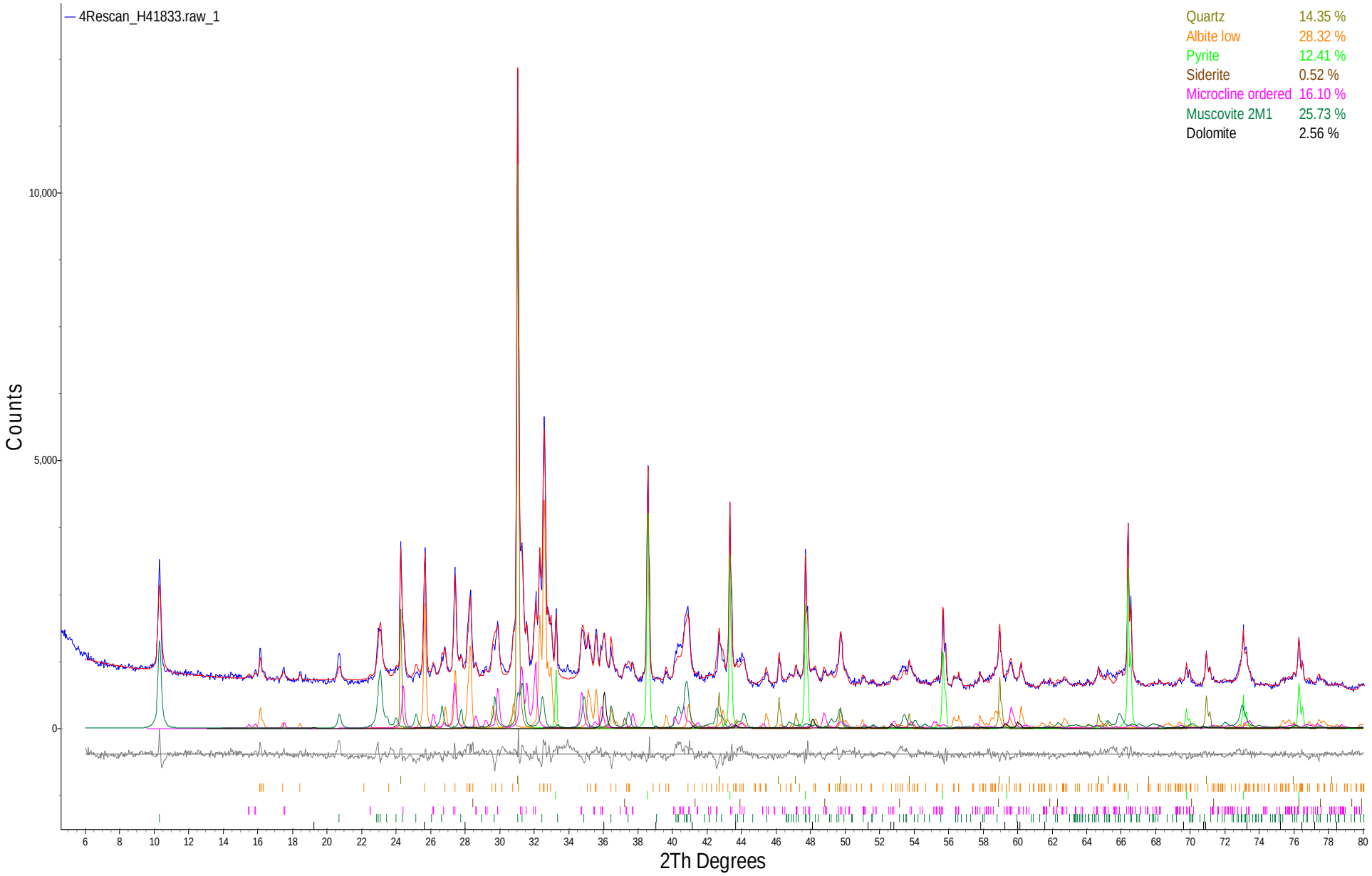


Figure 4. Rietveld refinement plot of sample **Rescan "H41833"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

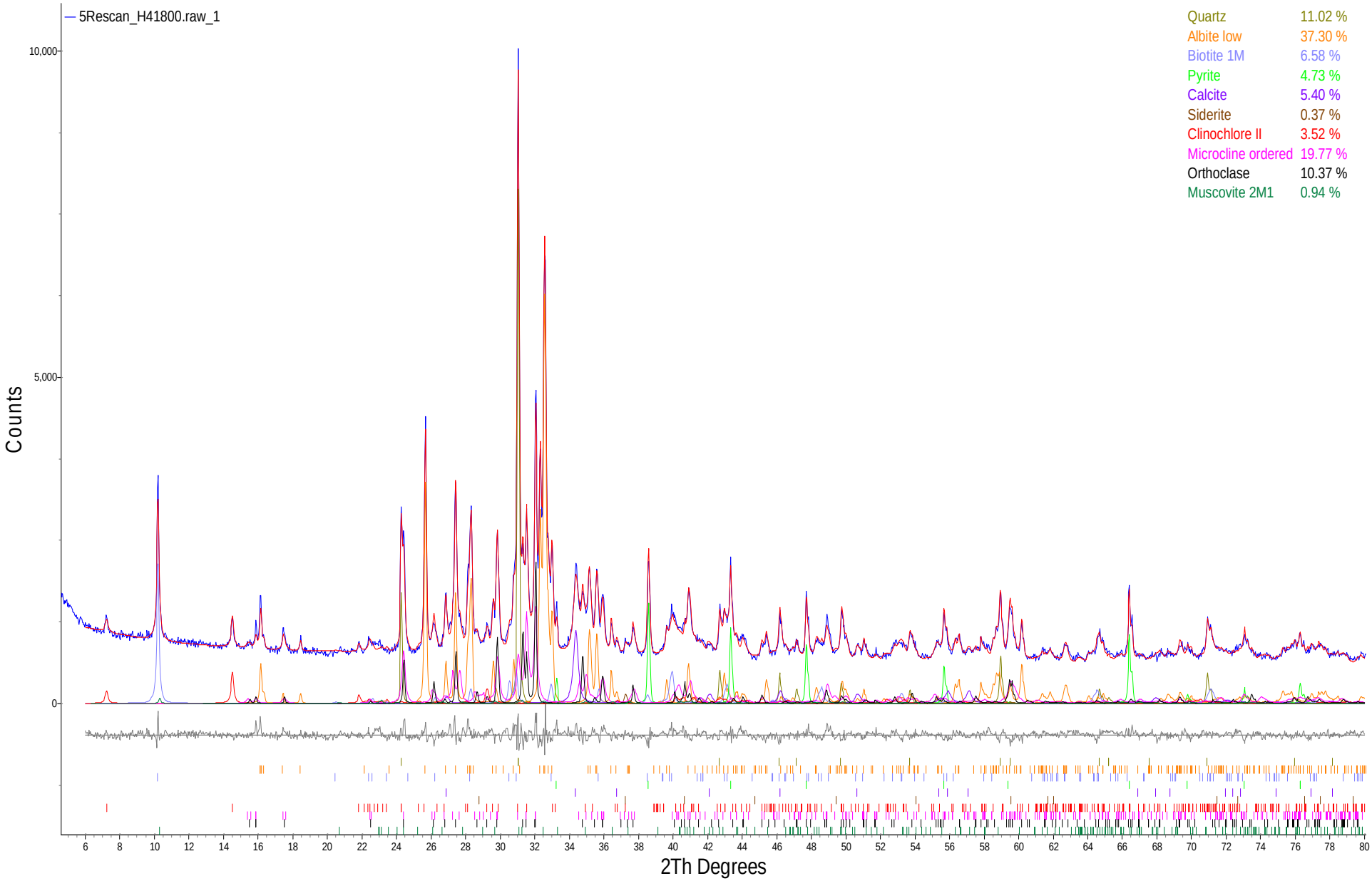


Figure 5. Rietveld refinement plot of sample **Rescan "H41800"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

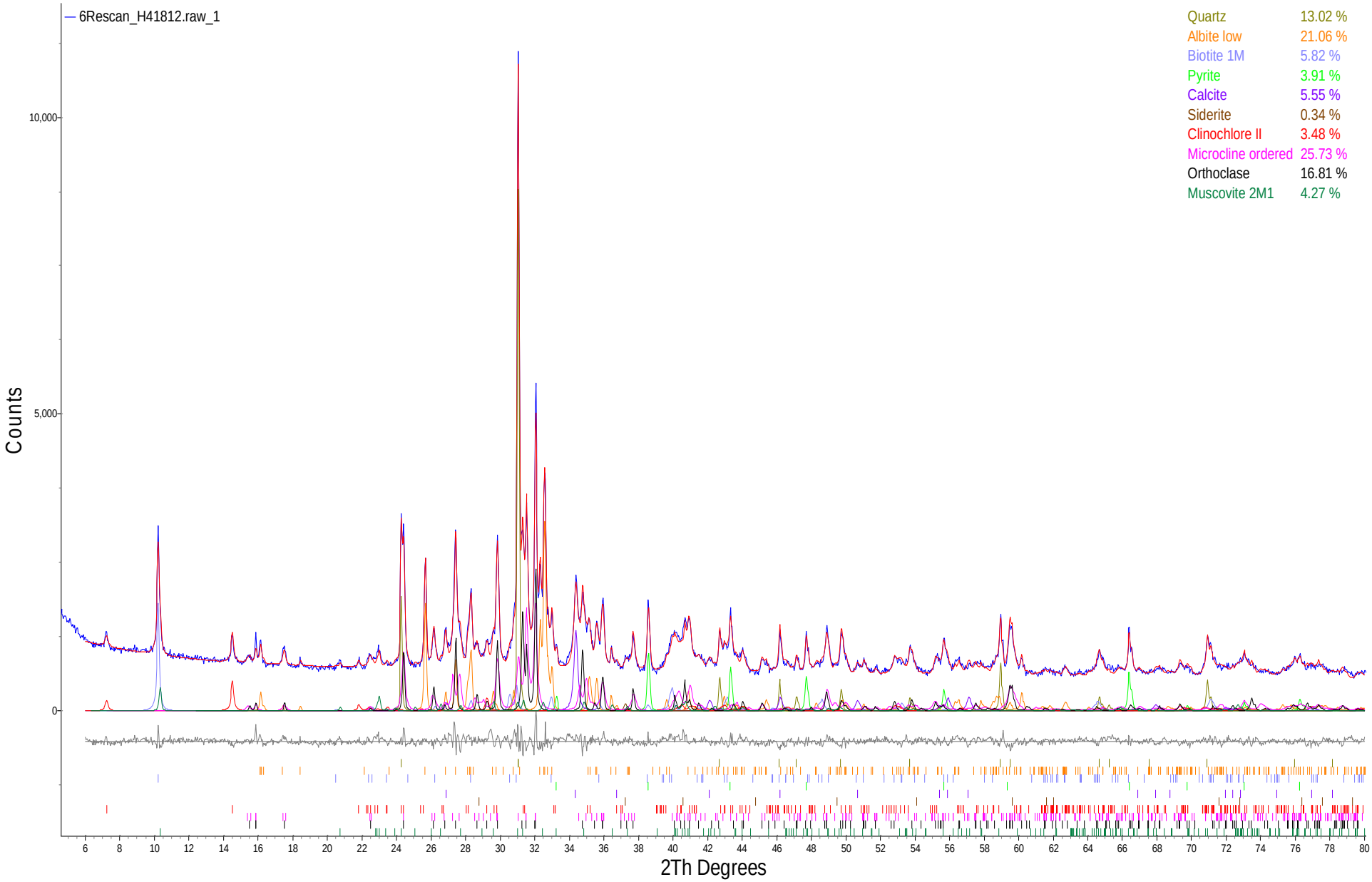


Figure 6. Rietveld refinement plot of sample **Rescan "H41812"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

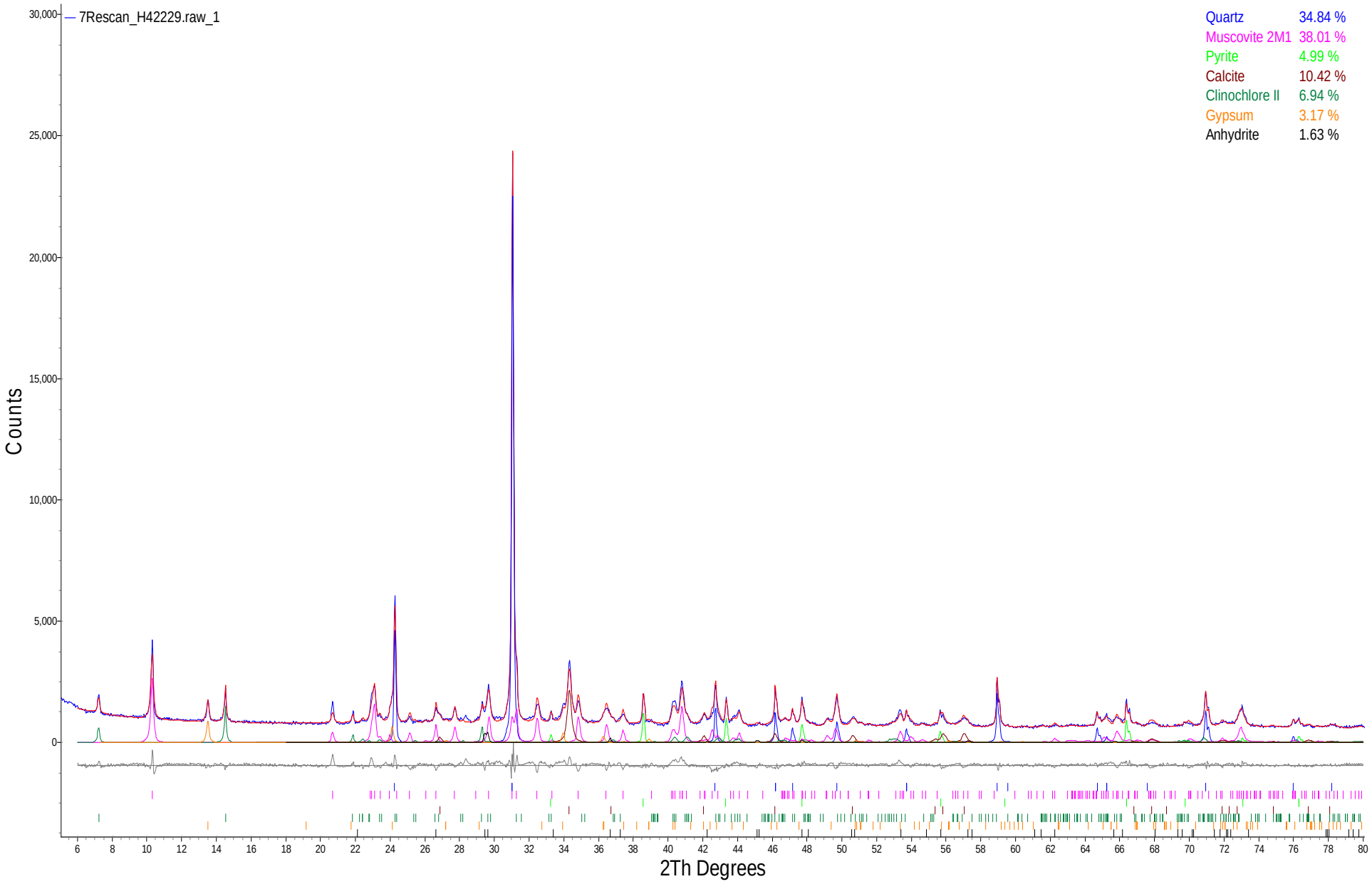


Figure 7. Rietveld refinement plot of sample **Rescan "H42229"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

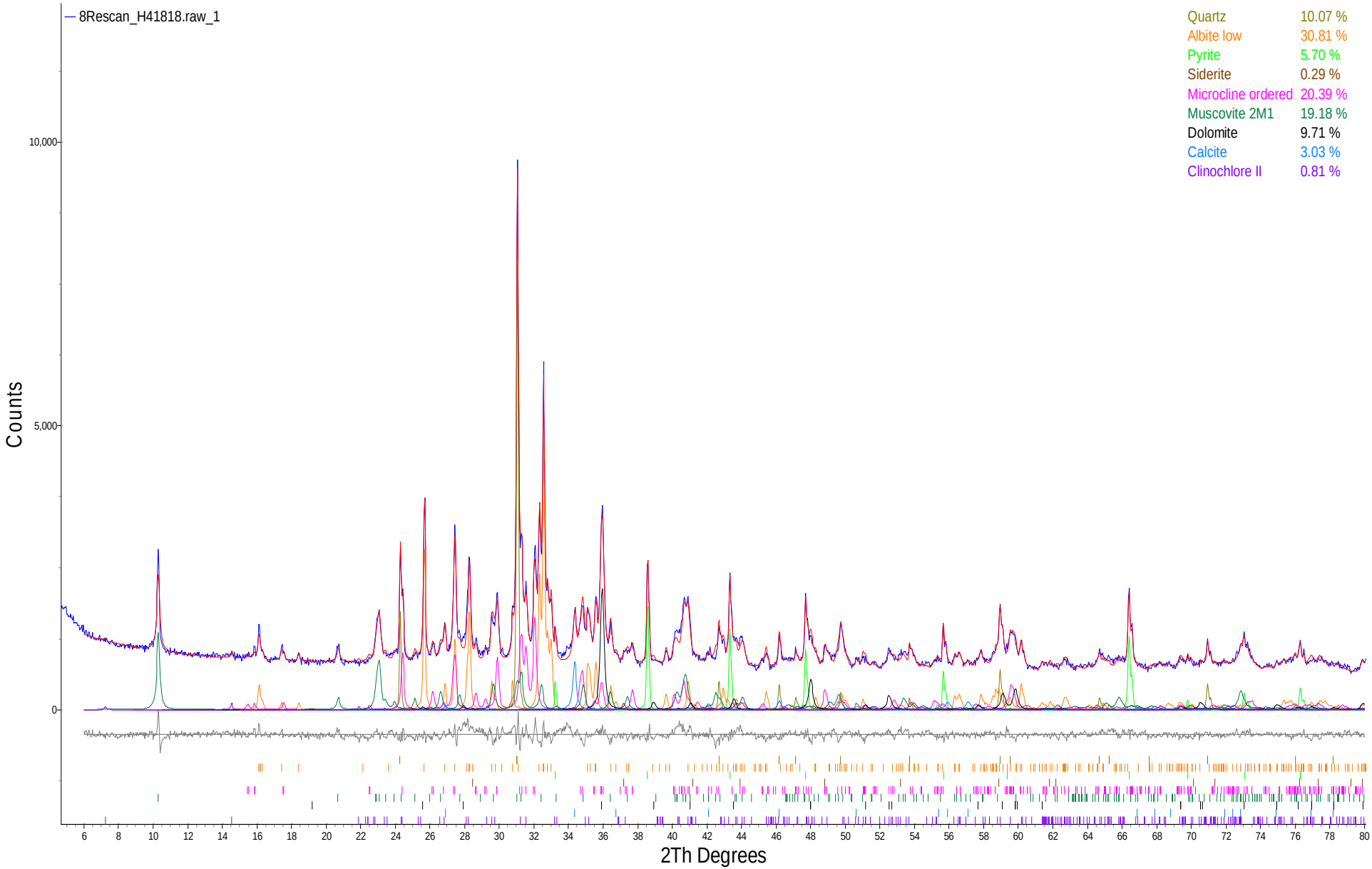


Figure 8. Rietveld refinement plot of sample **Rescan "H41818"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

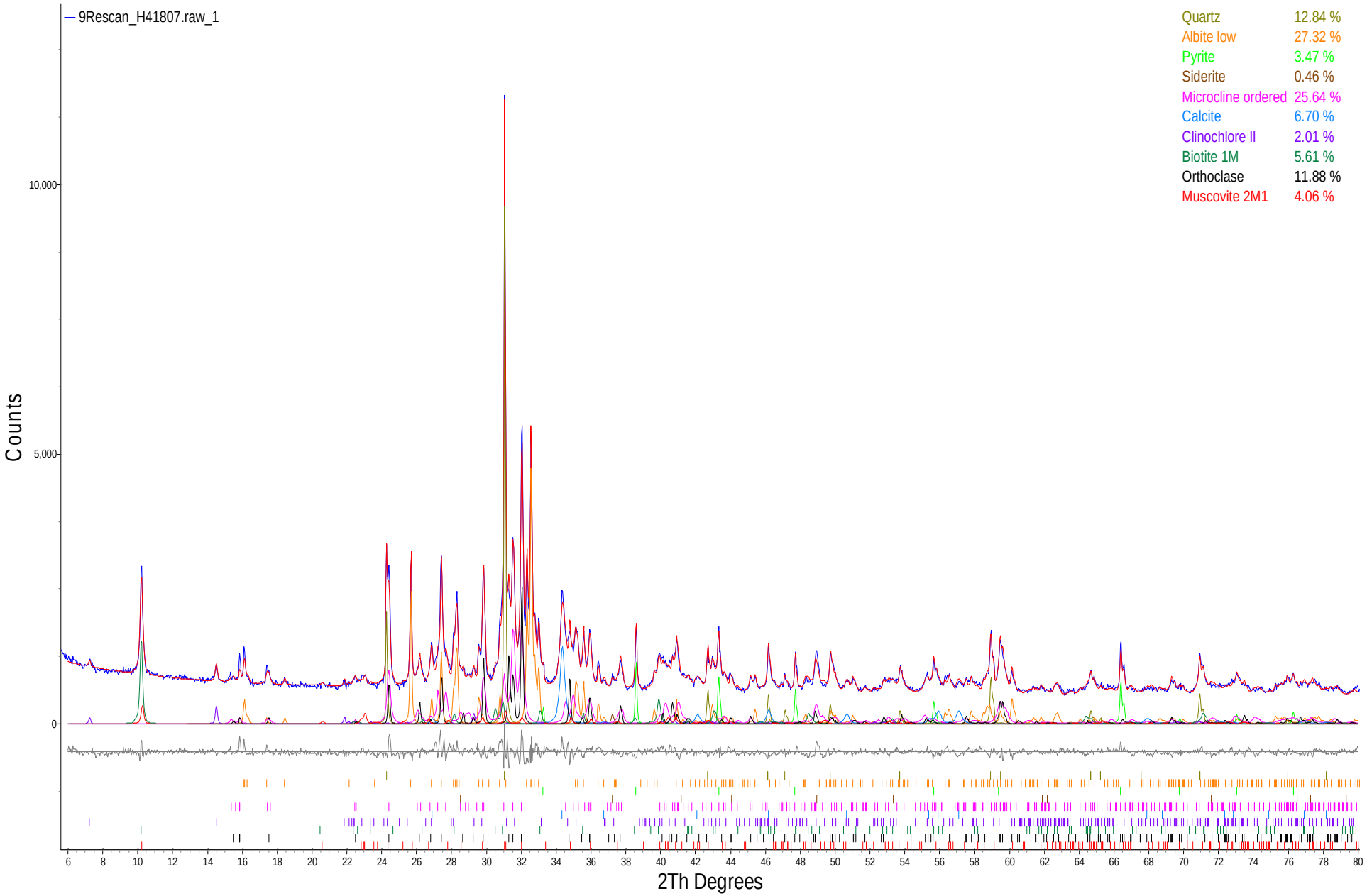


Figure 9. Rietveld refinement plot of sample **Rescan "H41807"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

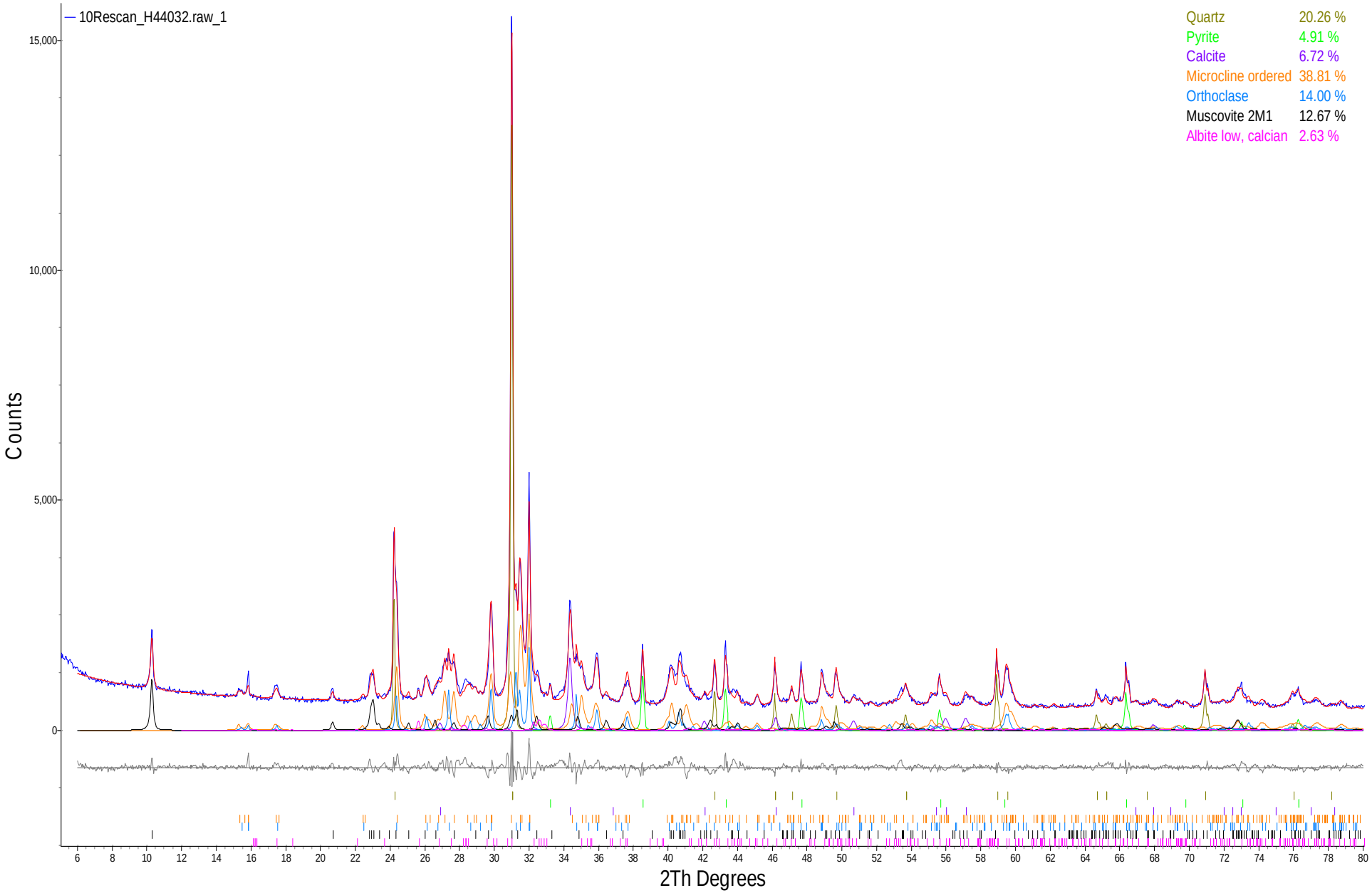


Figure 10. Rietveld refinement plot of sample **Rescan "H44032"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

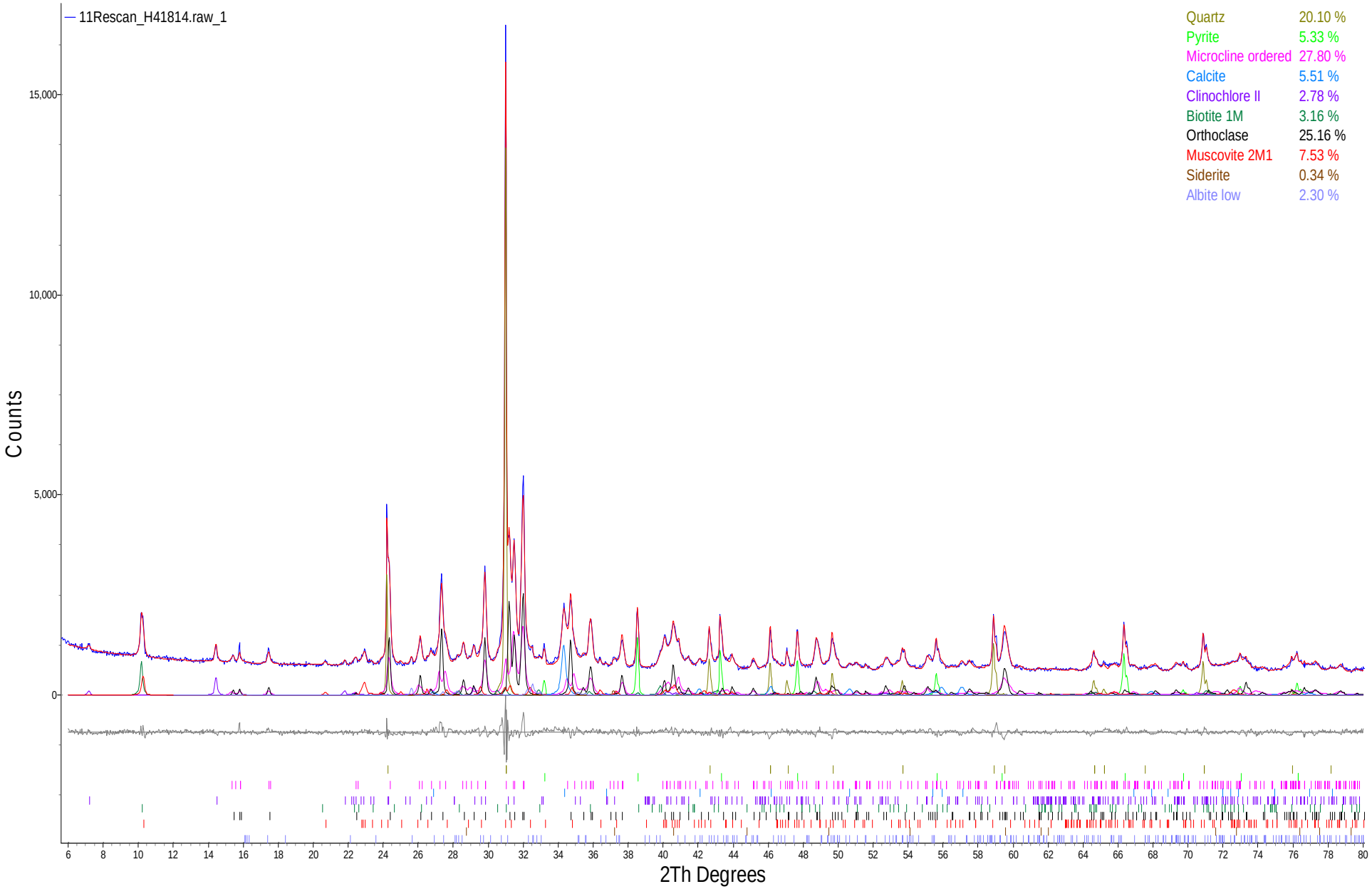


Figure 11. Rietveld refinement plot of sample **Rescan "H41814"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

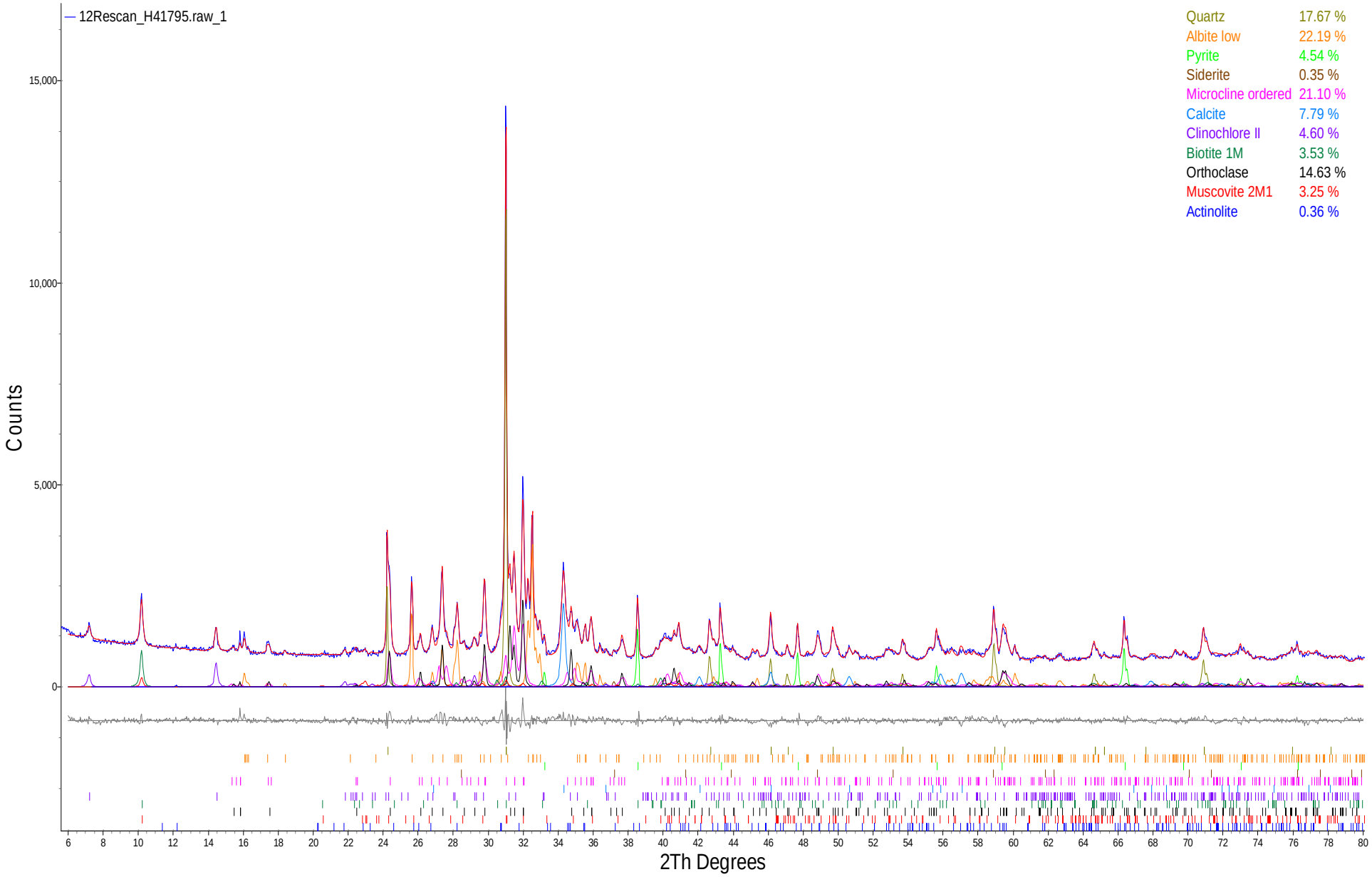


Figure 12. Rietveld refinement plot of sample **Rescan "H41795"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

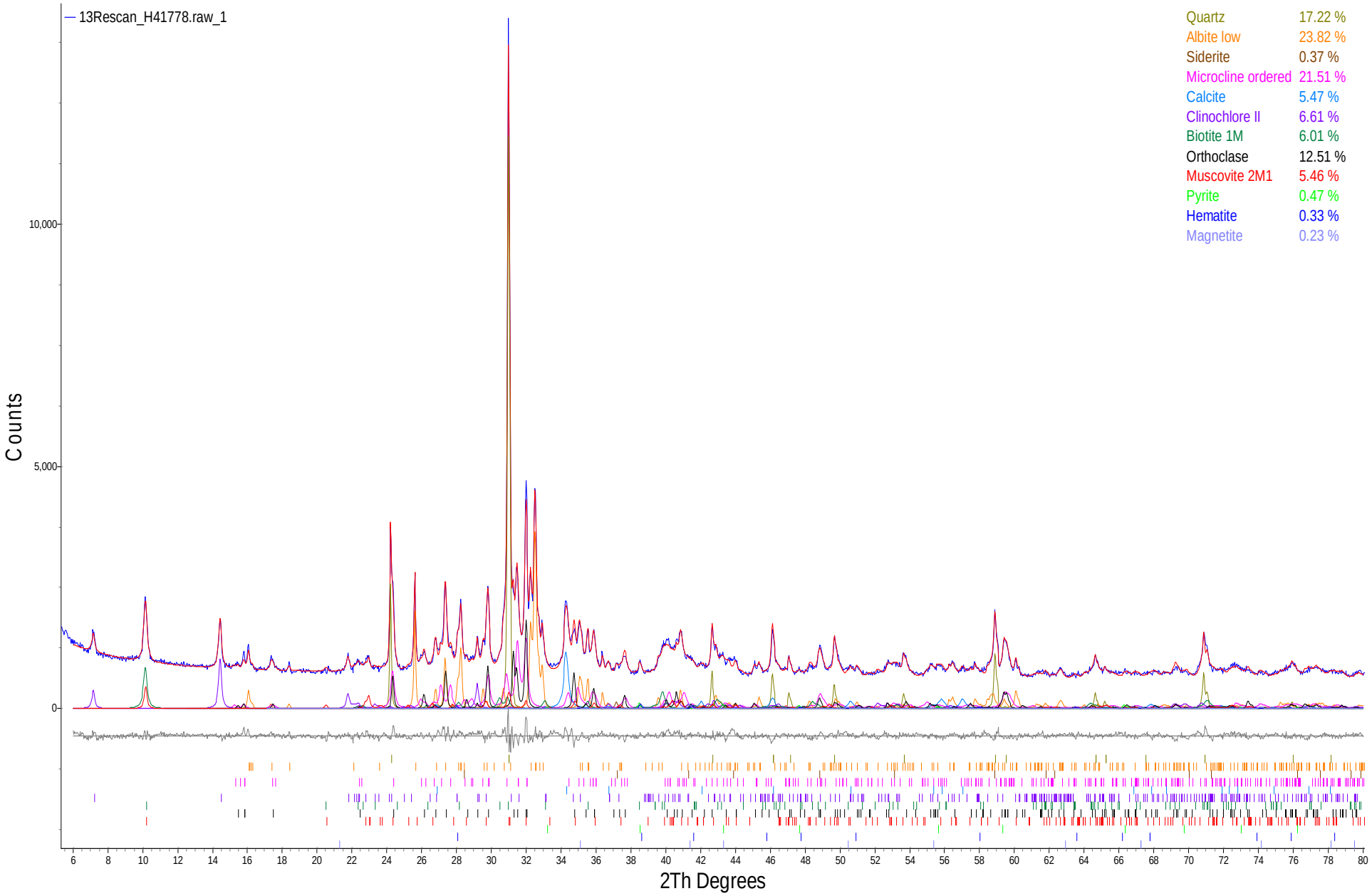


Figure 13. Rietveld refinement plot of sample **Rescan "H41778"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

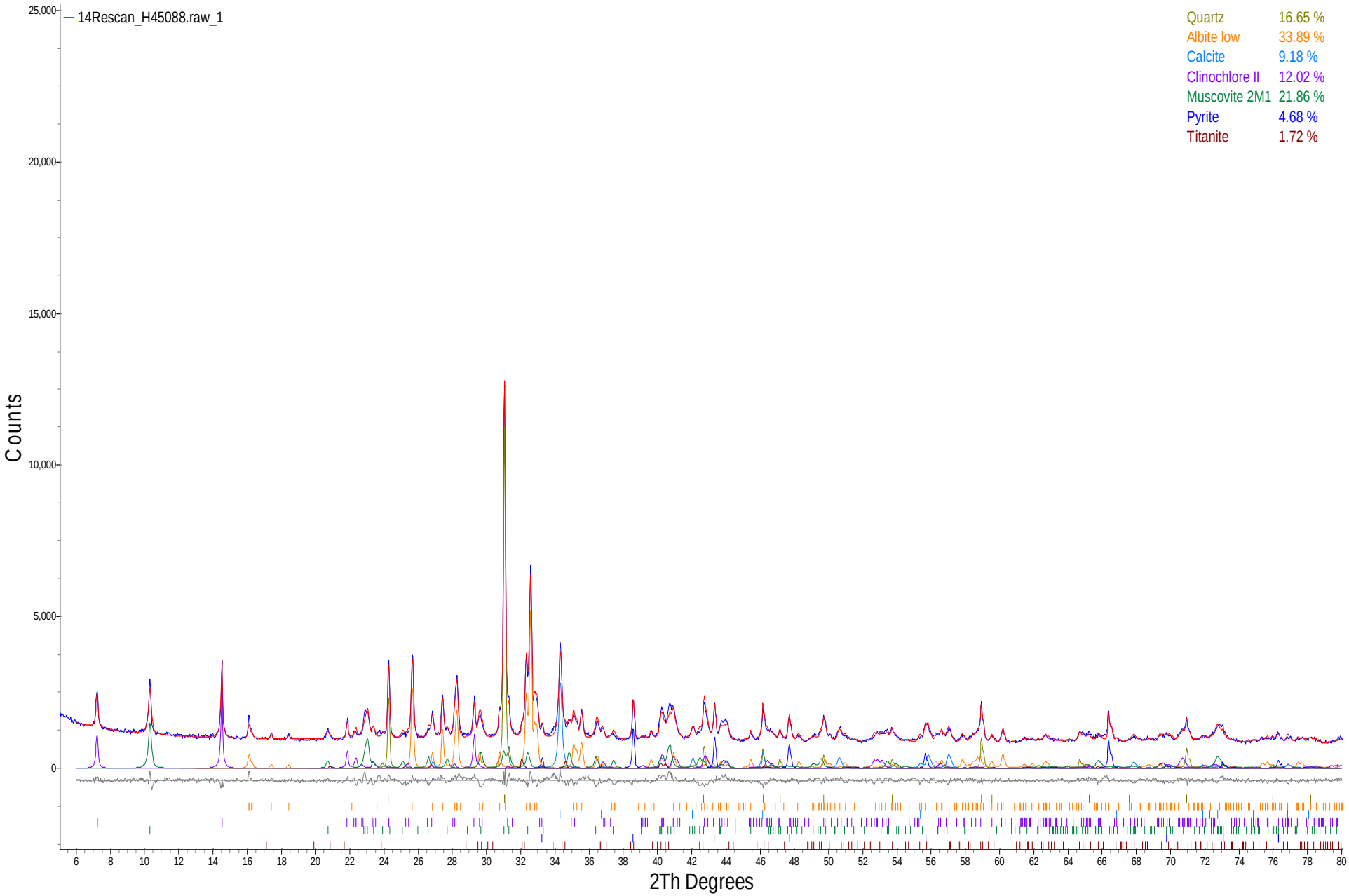


Figure 14. Rietveld refinement plot of sample **Rescan "H45088"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

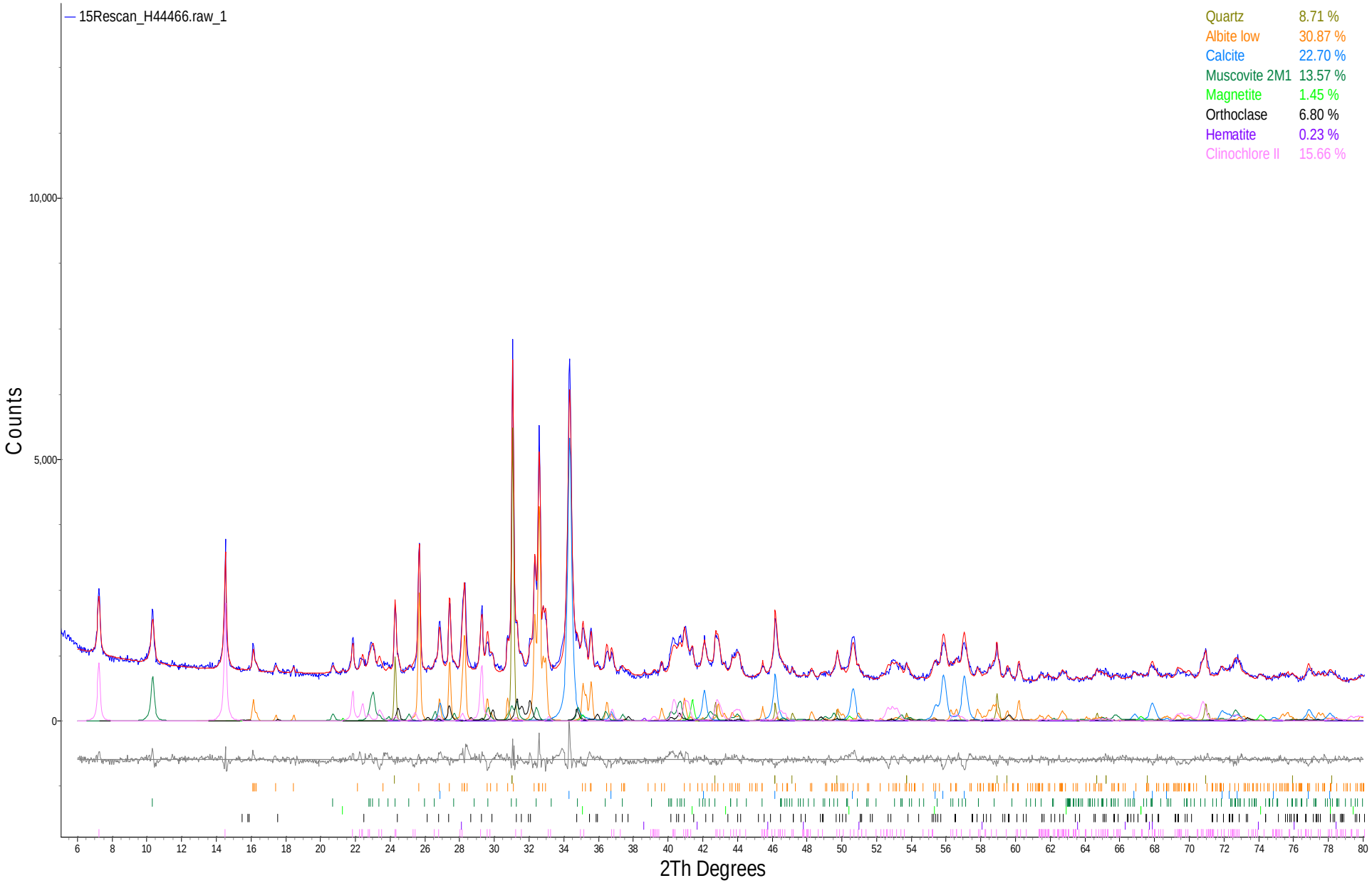


Figure 15. Rietveld refinement plot of sample **Rescan "H44466"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

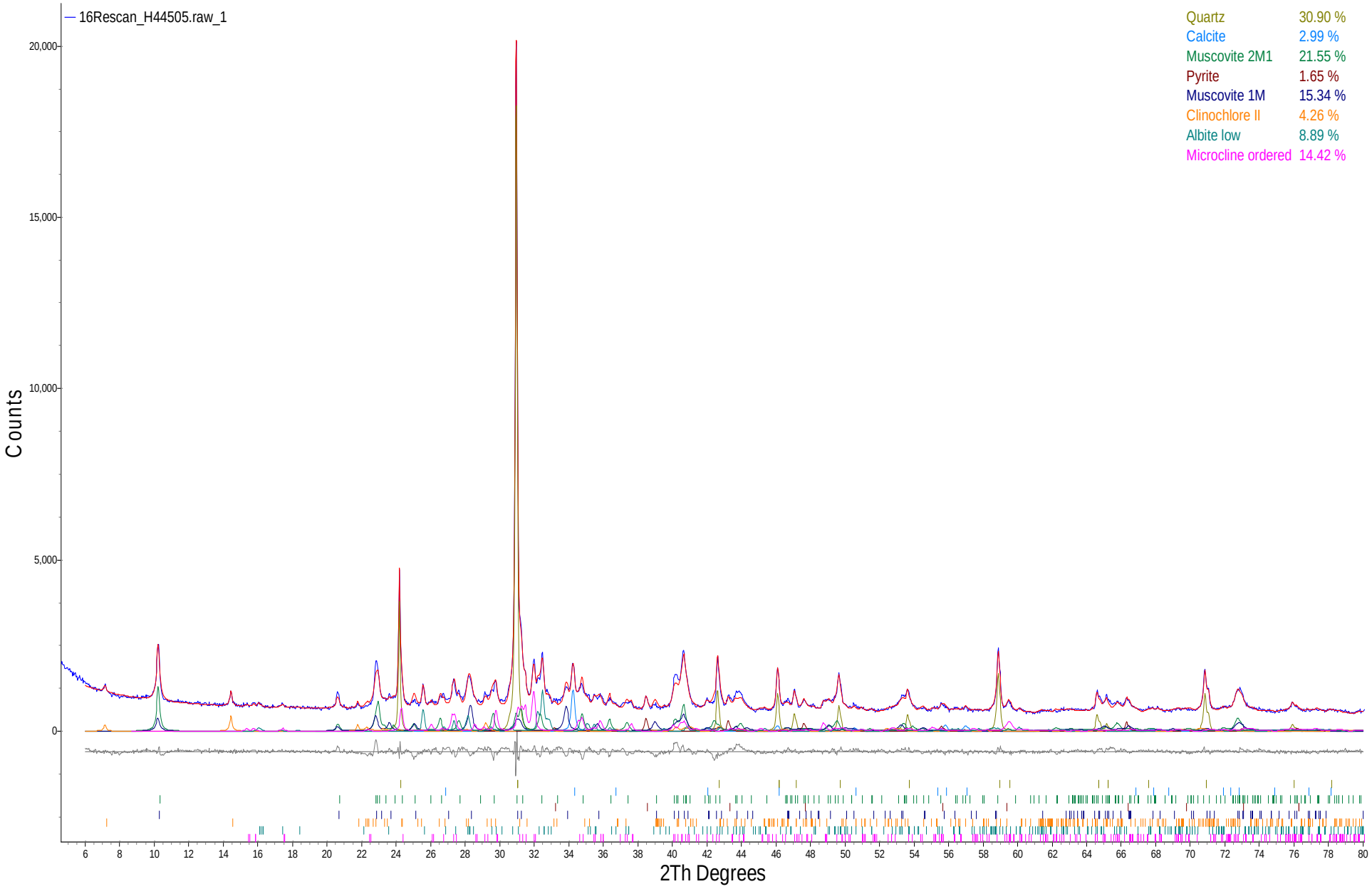


Figure 16. Rietveld refinement plot of sample **Rescan "H44505"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

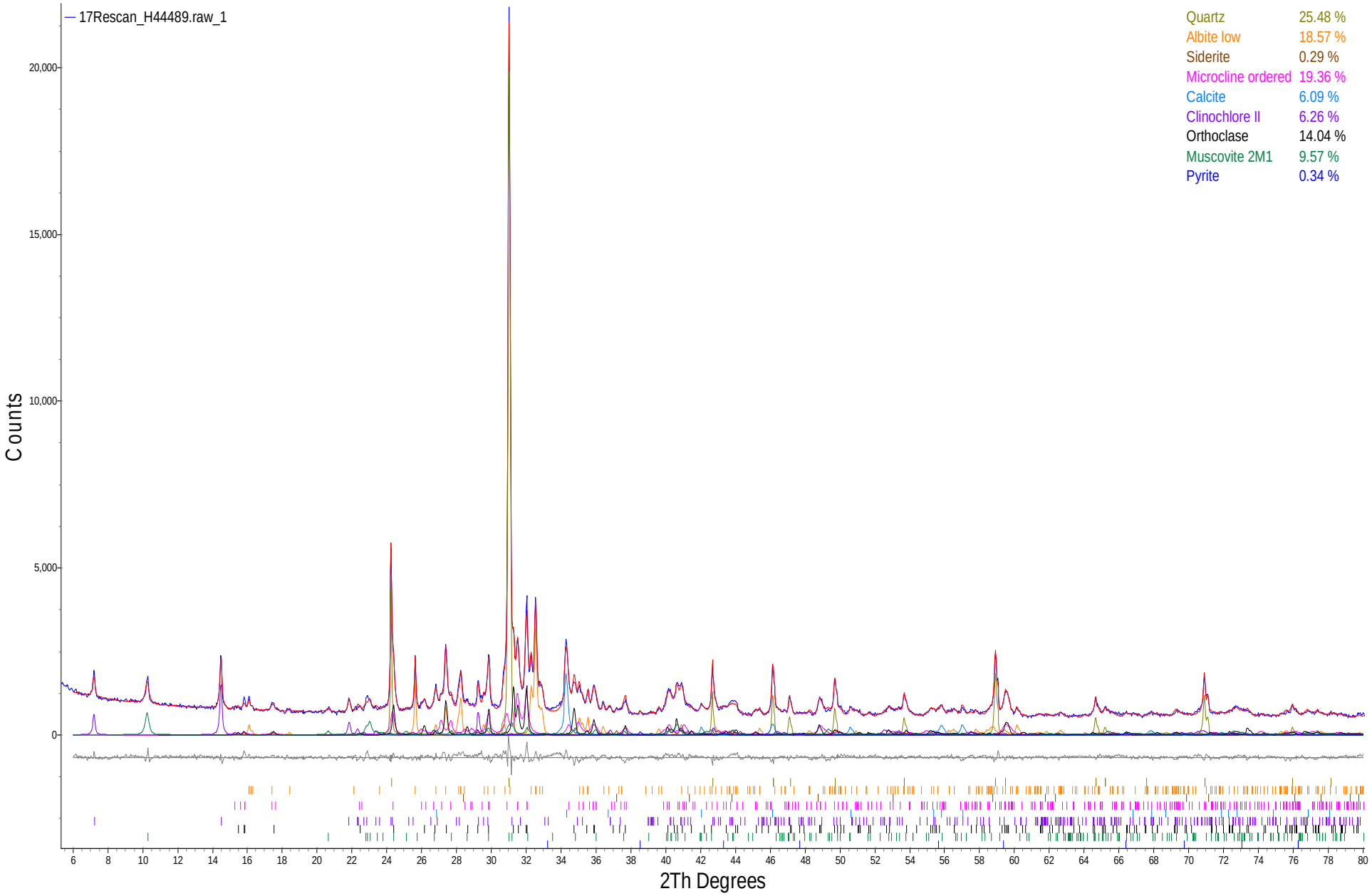


Figure 17. Rietveld refinement plot of sample **Rescan "H44489"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

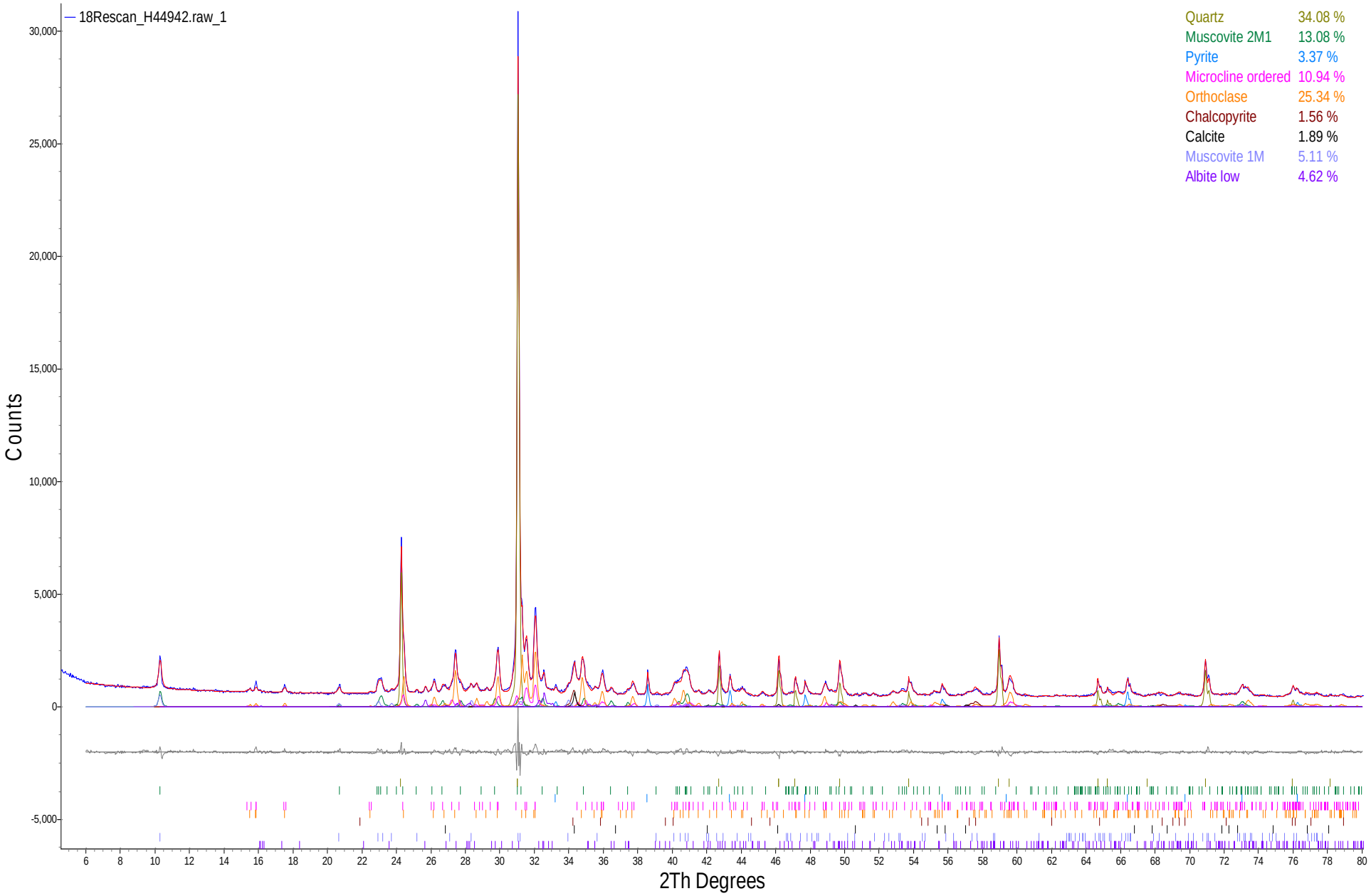


Figure 18. Rietveld refinement plot of sample **Rescan "H44942"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

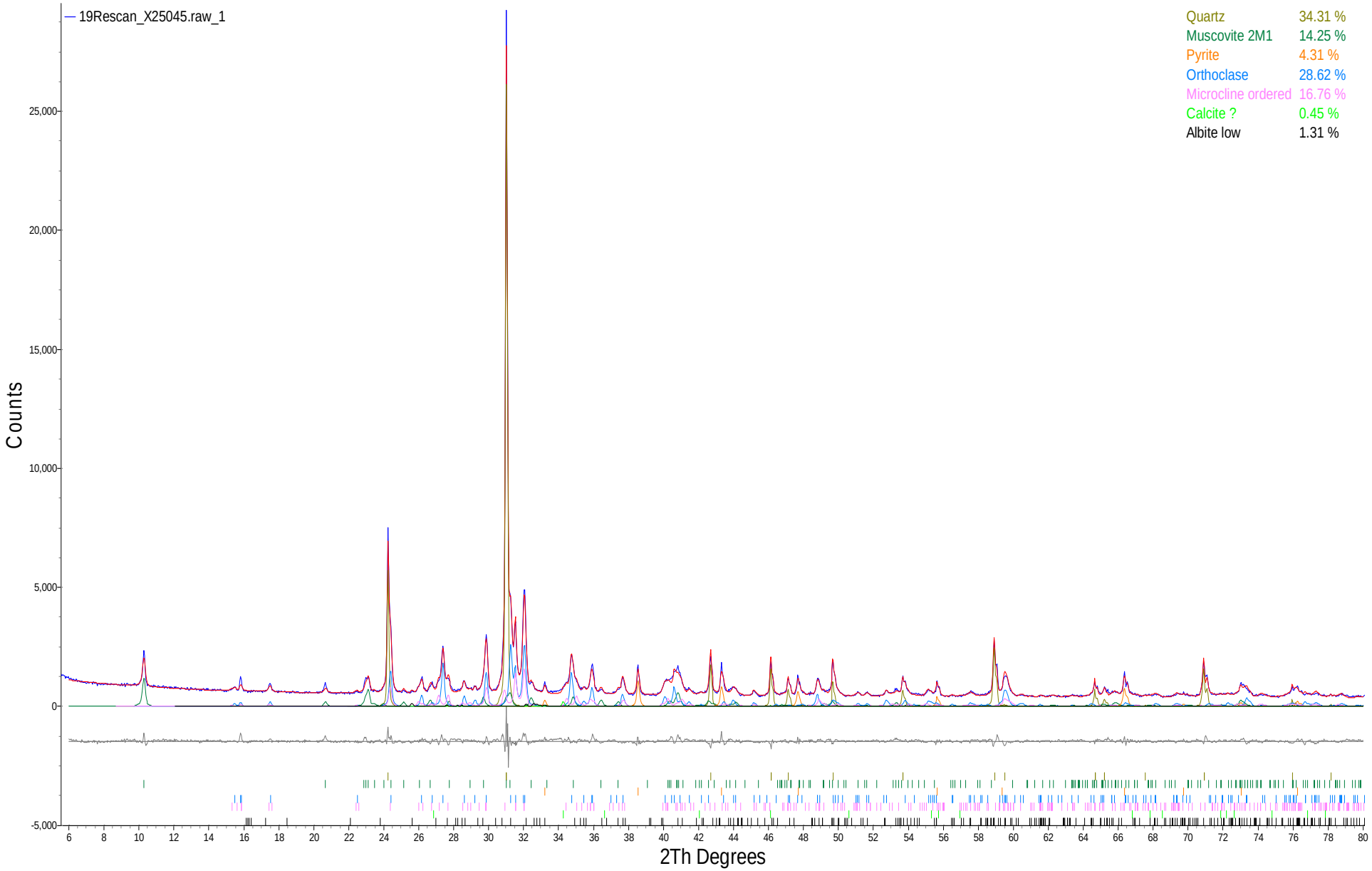


Figure 19. Rietveld refinement plot of sample **Rescan "X25045"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

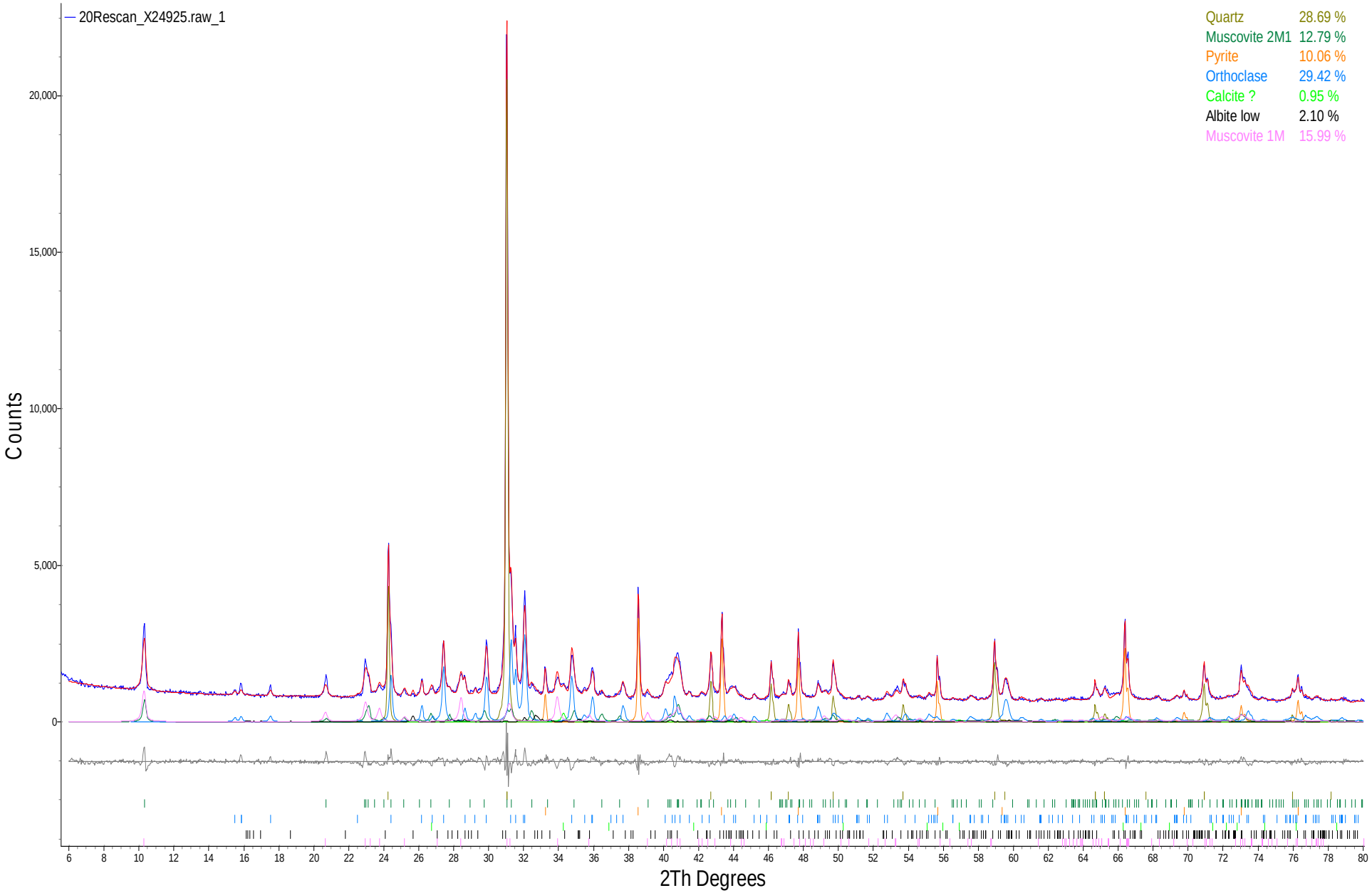


Figure 20. Rietveld refinement plot of sample **Rescan "X24925"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

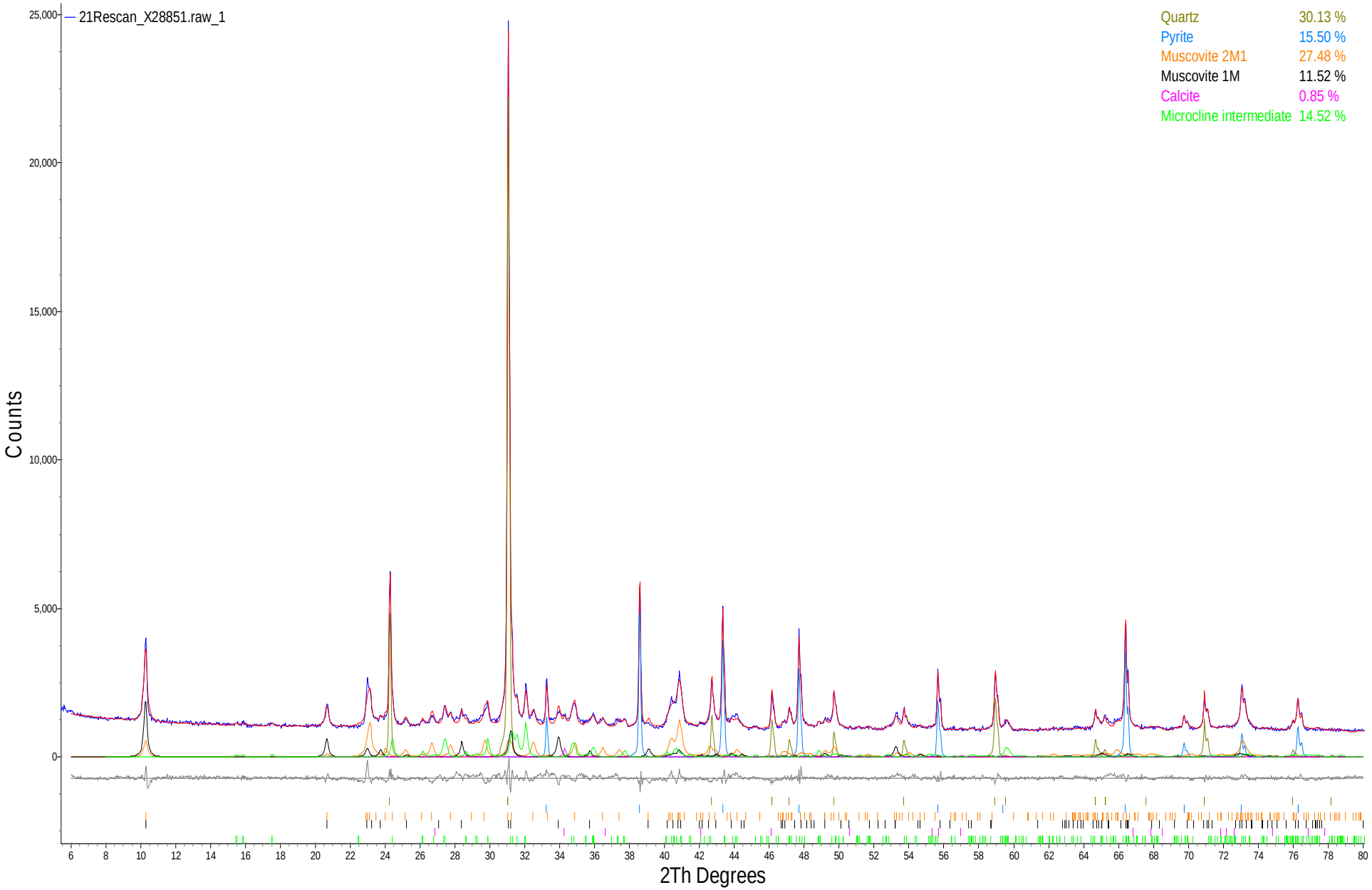


Figure 21. Rietveld refinement plot of sample **Rescan "X28851"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

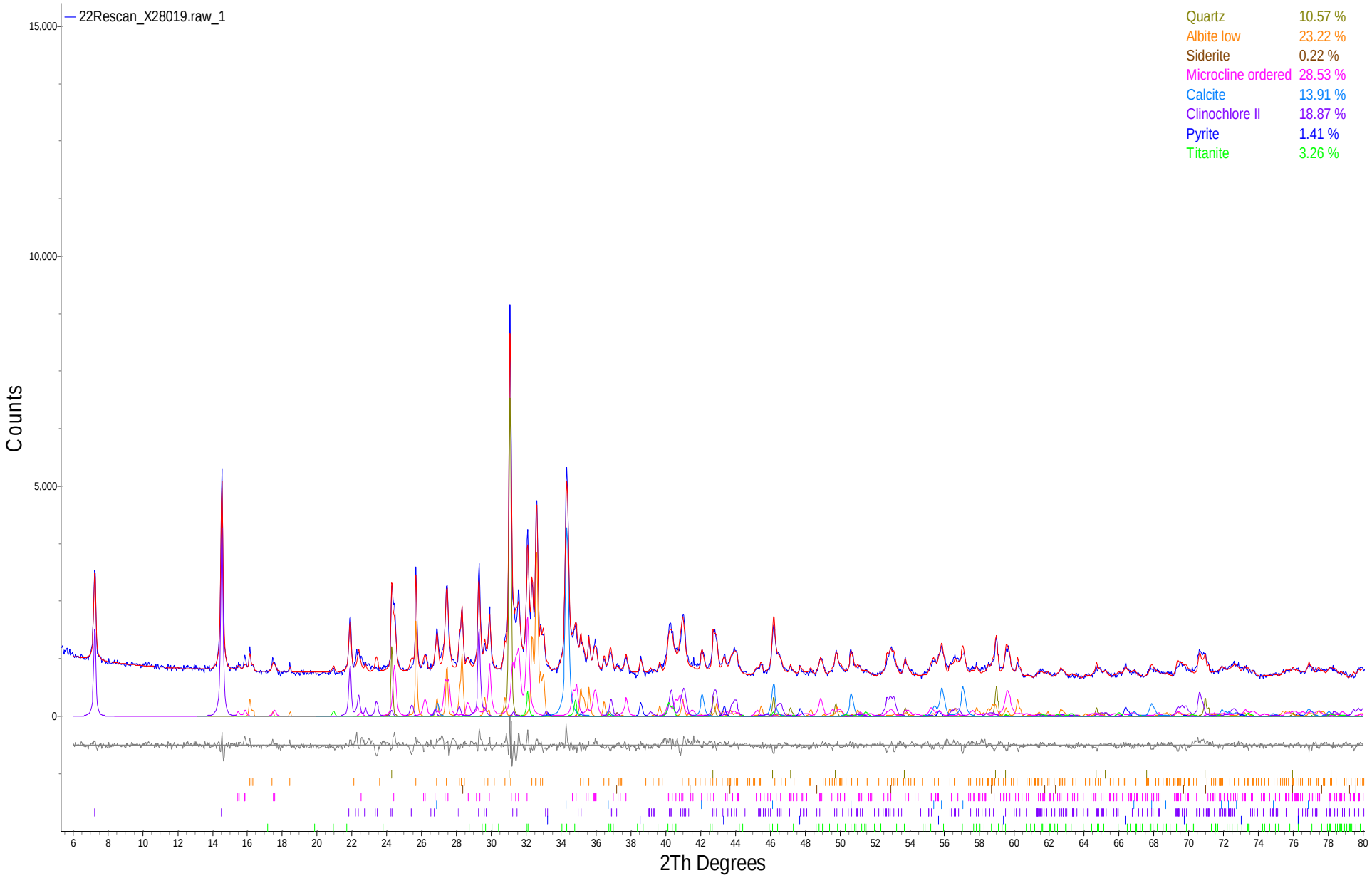


Figure 22. Rietveld refinement plot of sample **Rescan "X28019"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

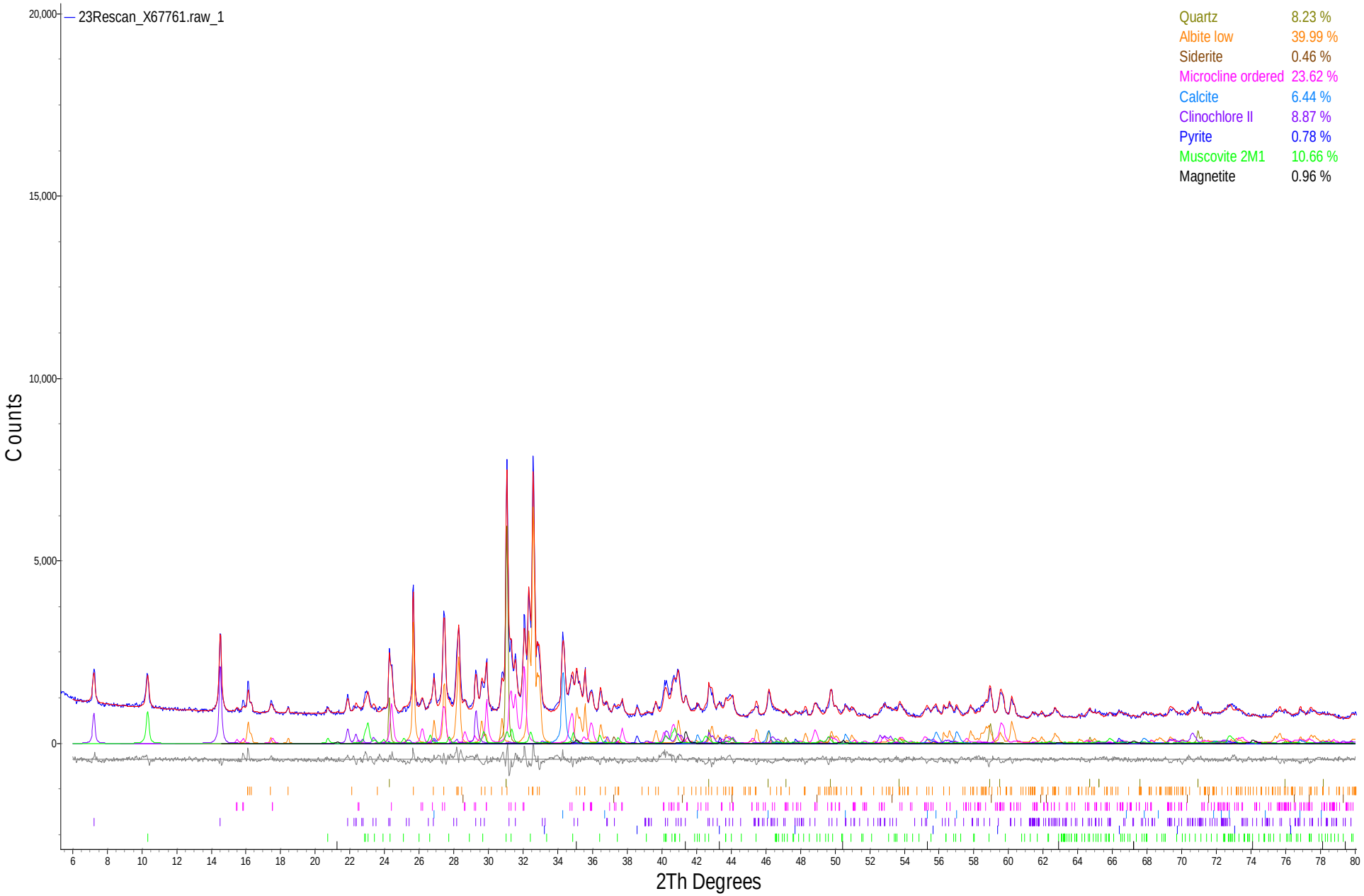


Figure 23. Rietveld refinement plot of sample **Rescan "X67761"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

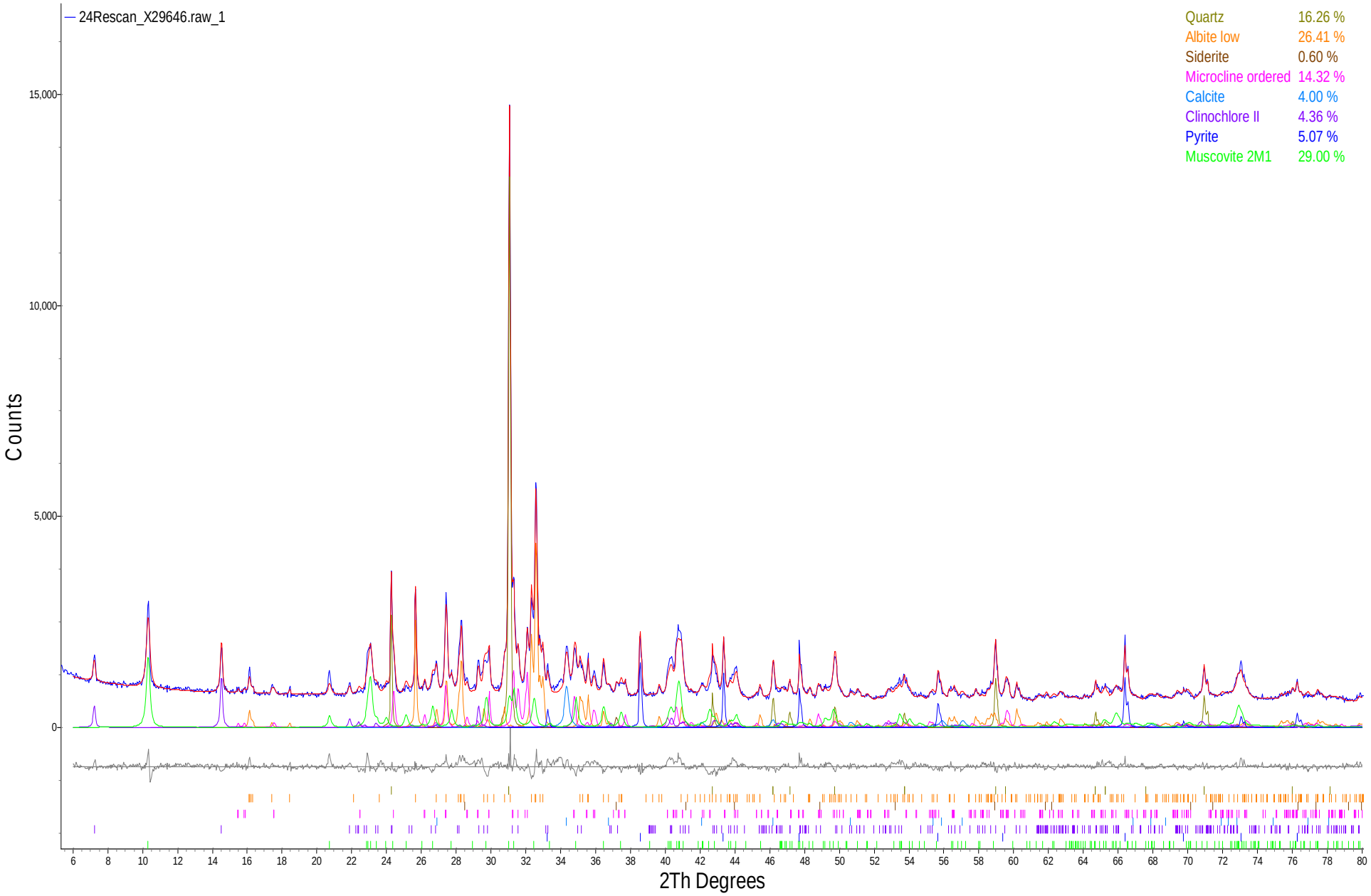


Figure 24. Rietveld refinement plot of sample **Rescan "X29646"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

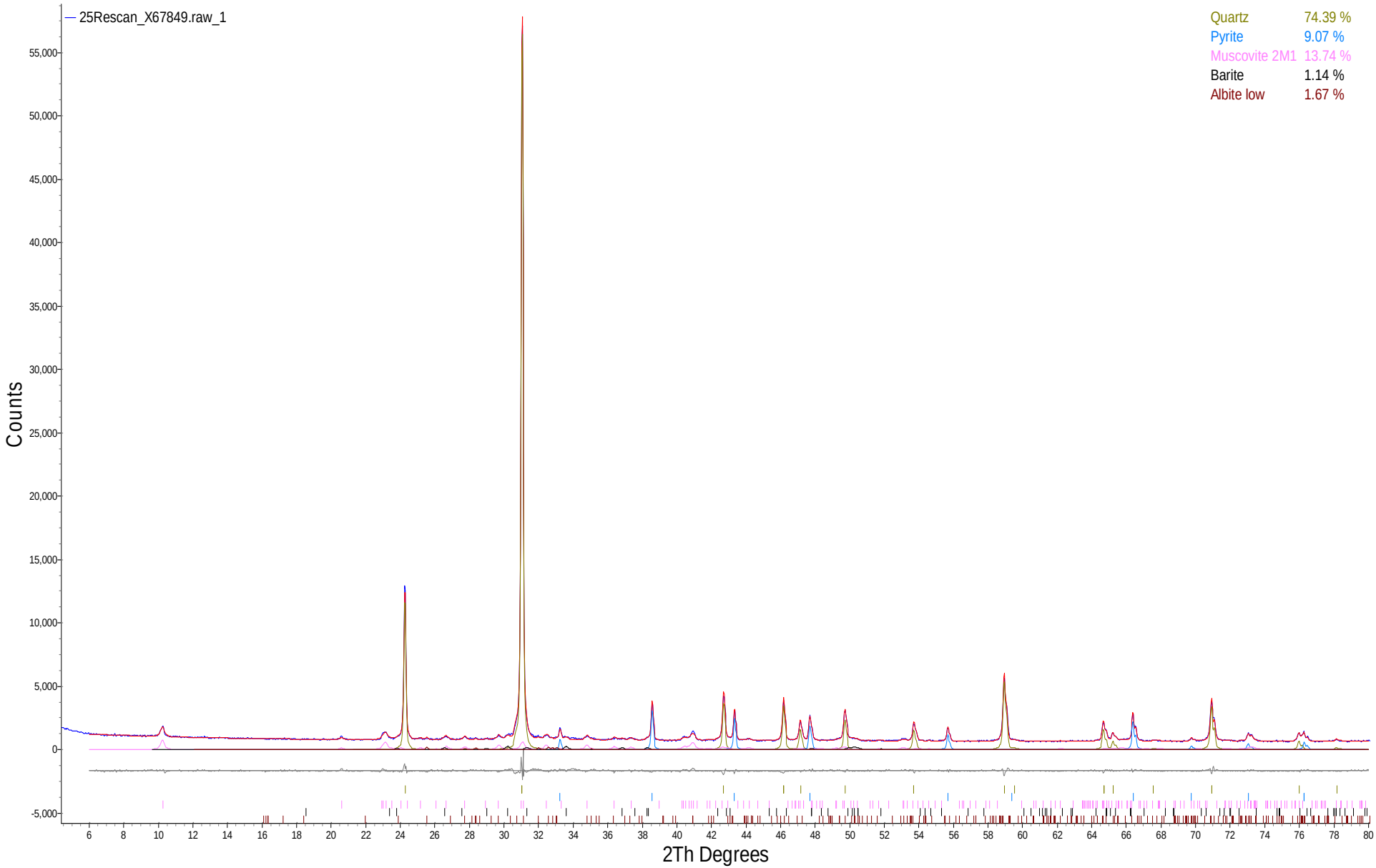


Figure 25. Rietveld refinement plot of sample **Rescan "X67849"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

Appendix 5.1-2e. Results of Quantitative Phase Analysis (wt.%) XRD-Rietveld

1		2		3		4		5
H41797		H41793		H41780		H41833		H41800
Quartz	10.3	Quartz	11.9	Quartz	11.6	Quartz	14.4	Quartz	11.0
Plagioclase	24.7	Plagioclase	26.0	Plagioclase	36.5	Plagioclase	28.3	Plagioclase	37.3
Muscovite 2M1	4.8	Muscovite 2M1	4.2	Muscovite 2M1	2.9	Pyrite	12.4	Biotite	6.6
Biotite	6.3	Biotite	3.7	Biotite	5.3	Siderite	0.5	Pyrite	4.7
Pyrite	5.9	Pyrite	4.4	Pyrite	1.2	K-feldspar	16.1	Calcite	5.4
Calcite	7.7	Calcite	7.5	Calcite	4.5	Muscovite 2M1	25.7	Siderite	0.4
Siderite	0.5	Siderite	0.4	Siderite	0.3	Dolomite	2.6	Clinochlore	3.5
Clinochlore	1.6	Clinochlore	2.1	Clinochlore	2.7			K-feldspar	30.1
K-feldspar	38.2	K-feldspar	39.8	K-feldspar	31.9			Muscovite 2M1	0.9
				Hematite	2.7				
				Magnetite	0.3				
Total	**100.0**		**100.0**		**100.0**		**100.0**		**100.0**

6		7		8		9		10
H41812		H42229		H41818		H41807		H44032
Quartz	13.0	Quartz	34.8	Quartz	10.1	Quartz	12.8	Quartz	20.3
Plagioclase	21.1	Muscovite 2M1	38.0	Plagioclase	30.8	Plagioclase	27.3	Pyrite	4.9
Biotite	5.8	Pyrite	5.0	Pyrite	5.7	Pyrite	3.5	Calcite	6.7
Pyrite	3.9	Calcite	10.4	Siderite	0.3	Siderite	0.5	K-feldspar	52.8
Calcite	5.5	Clinochlore	6.9	K-feldspar	20.4	K-feldspar	37.5	Muscovite 2M1	12.7
Siderite	0.3	Gypsum	3.2	Muscovite 2M1	19.2	Calcite	6.7	Plagioclase	2.6
Clinochlore	3.5	Anhydrite	1.6	Dolomite	9.7	Clinochlore	2.0		
K-feldspar	42.5			Calcite	3.0	Biotite	5.6		
Muscovite 2M1	4.3			Clinochlore	0.8	Muscovite 2M1	4.1		
	100.0		**100.0**		**100.0**		**100.0**		**100.0**

11		12		13		14		15
H41814		H41795		H41778		H45088		H44466
Quartz	20.1	Quartz	17.7	Quartz	17.2	Quartz	16.7	Quartz	8.7
Pyrite	5.3	Plagioclase	22.2	Plagioclase	23.8	Plagioclase	33.9	Plagioclase	30.9
K-feldspar	53.0	Pyrite	4.5	Siderite	0.4	Calcite	9.2	Calcite	22.7
Calcite	5.5	Siderite	0.3	K-feldspar	34.0	Clinochlore	12.0	Muscovite 2M1	13.6
Clinochlore	2.8	K-feldspar	35.7	Calcite	5.5	Muscovite 2M1	21.9	Magnetite	1.5
Biotite	3.2	Calcite	7.8	Clinochlore	6.6	Pyrite	4.7	K-feldspar	6.8
Muscovite 2M1	7.5	Clinochlore	4.6	Biotite	6.0	Titanite	1.7	Hematite	0.2
Siderite	0.3	Biotite	3.5	Muscovite 2M1	5.5			Clinochlore	15.7
Plagioclase	2.3	Muscovite 2M1	3.3	Pyrite	0.5				
		Actinolite	0.4	Hematite	0.3				
				Magnetite	0.2				
	100.0		**100.0**		**100.0**	**Total**	**100.0**		**100.0**

Appendix 5.1-2e. Results of Quantitative Phase Analysis (wt.%) XRD-Rietveld

	16		17		18		19		20
	H44505		H44489		H44942		X25045		X24925
Quartz	30.9	Quartz	25.5	Quartz	34.1	Quartz	34.3	Quartz	28.7
Calcite	3.0	Plagioclase	18.6	Muscovite 2M1	13.1	Muscovite 2M1	14.3	Muscovite 2M1	12.8
Muscovite 2M1	21.5	Siderite	0.3	Pyrite	3.4	Pyrite	4.3	Pyrite	10.1
Pyrite	1.6	K-feldspar	33.4	Microcline orderec	36.3	K-feldspar	45.4	K-feldspar	29.4
Muscovite 1M	15.3	Calcite	6.1	Chalcopyrite	1.6	Calcite ?	0.5	Calcite ?	1.0
Clinochlore	4.3	Clinochlore	6.3	Calcite	1.9	Plagioclase	1.3	Plagioclase	2.1
Plagioclase	8.9	Muscovite 2M1	9.6	Muscovite 1M	5.1			Muscovite 1M	16.0
K-feldspar	14.4	Pyrite	0.3	Plagioclase	4.6				
	100.0		100.0		100.0		100.0		100.0

	21		22		23		24		25
	X28851		X28019		X67761		X29646		X67849
Quartz	30.1	Quartz	10.6	Quartz	8.2	Quartz	16.3	Quartz	74.4
Pyrite	15.5	Plagioclase	23.2	Plagioclase	40.0	Plagioclase	26.4	Pyrite	9.1
Muscovite 2M1	27.5	Siderite	0.2	Siderite	0.5	Siderite	0.6	Muscovite 2M1	13.7
Muscovite 1M	11.5	K-feldspar	28.5	K-feldspar	23.6	K-feldspar	14.3	Barite	1.1
Calcite	0.8	Calcite	13.9	Calcite	6.4	Calcite	4.0	Plagioclase	1.7
K-feldspar	14.5	Clinochlore	18.9	Clinochlore	8.9	Clinochlore	4.4		
		Pyrite	1.4	Pyrite	0.8	Pyrite	5.1		
		Titanite	3.3	Muscovite 2M1	10.7	Muscovite 2M1	29.0		
	100.0		100.0		99.0		100.0		100.0

Appendix 5.1-2f. Results of Quantitative Phase Analysis (wt.%) XRD-Rietveld - Maxxam Analytics Project Rescan Seabridge - Iron Cap

	#1		#2		#3		#4		#5		#6
UBC #	**Comp #2**		**Comp #4**		**Comp #8**		**Comp #9**		**Comp #10**		**Comp #14**
Quartz	17.3	Quartz	12.4	Quartz	24.2	Quartz	18.6	Quartz	18.6	Quartz	15.3
Calcite	3.0	Muscovite 2M1	6.2	Muscovite 2M1	8.0	Calcite	4.8	Calcite	4.3	Muscovite 2M1	6.0
Pyrite	6.5	Calcite	2.4	Calcite	12.9	Pyrite	7.3	Pyrite	8.6	Pyrite	8.4
Siderite	0.4	Pyrite	2.2	Pyrite	3.8	Ankerite	1.0	Siderite	1.1	Ankerite	0.6
Muscovite 2M1	2.8	Muscovite 1M	7.1	Plagioclase	8.3	Siderite	0.4	K-feldspar	55.1	Siderite	0.2
K-feldspar	61.2	Plagioclase	41.3	Clinochlore	13.3	K-feldspar	55.9	Plagioclase	1.7	K-feldspar	68.9
Molybdenite	0.1	Clinochlore	8.5	K-feldspar	28.3	Plagioclase	2.4	Muscovite 2M1	1.9	Calcite	0.4
Muscovite 1M	6.6	K-feldspar	19.8	Dolomite	1.3	Muscovite 2M1	3.4	Muscovite 1M	4.7	Sphalerite ?	0.1
Plagioclase	2.1					Muscovite 1M	6.1	Fluorite ?	0.6		
						Sphalerite ?	0.1	Biotite	2.1		
								Ankerite	1.3		
Total	**100.0**		**100.0**		**100.0**		**100.0**		**100.0**		**100.0**

	#7		#8		#9		#10		#11
UBC #	**H47142**		**H47085**		**H47391**		**X29422**		**X27364**
Quartz	24.8	Quartz	37.7	Quartz	19.1	Quartz	14.1	Quartz	16.5
Calcite	8.7	Muscovite 2M1	34.7	Muscovite 2M1	41.2	Muscovite 2M1	24.4	Muscovite 2M1	10.9
Pyrite	3.6	Pyrite	8.9	Calcite	3.7	Calcite	5.5	Pyrite	7.0
Plagioclase	3.0	K-feldspar	11.6	Pyrite	7.6	Pyrite	4.8	K-feldspar	60.3
K-feldspar	4.4	Calcite ?	0.7	Plagioclase	10.8	Muscovite 1M	6.4	Sphalerite ?	0.3
Clinochlore	16.9	Muscovite 1M	6.1	K-feldspar	8.7	Plagioclase	24.7	Muscovite 1M	5.1
Muscovite 2M1	38.6	Sphalerite	0.3	Muscovite 1M	8.8	Clinochlore	5.1		
						K-feldspar	14.6		
						Siderite	0.4		
Total	**100.0**		**100.0**		**100.0**		**100.0**		**100.0**

QUANTITATIVE PHASE ANALYSIS OF 11 POWDER SAMPLES USING THE RIETVELD METHOD AND X-RAY POWDER DIFFRACTION DATA.

Project: Rescan – Seabridge - Iron Cap

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February 15, 2012

EXPERIMENTAL METHOD

The eleven samples of **Project Rescan – Seabridge - Iron Cap** were reduced to the optimum grain-size range for quantitative X-ray analysis (<10 μm) by grinding under ethanol in a vibratory McCrone Micronising Mill for 7 minutes. Continuous-scan X-ray powder-diffraction data were collected over a range 3-80°2θ with CoKa radiation on a Bruker D8 Focus Bragg-Brentano diffractometer equipped with an Fe monochromator foil, 0.6 mm (0.3°) divergence slit, incident- and diffracted-beam Soller slits and a LynxEye detector. The long fine-focus Co X-ray tube was operated at 35 kV and 40 mA, using a take-off angle of 6°.

RESULTS

The X-ray diffractograms were analyzed using the International Centre for Diffraction Database PDF-4 and Search-Match software by Siemens (Bruker). X-ray powder-diffraction data of the samples were refined with Rietveld program Topas 4.2 (Bruker AXS). The results of quantitative phase analysis by Rietveld refinement are given in Table 1 (separate file, ***Maxxam Analytics Results Feb 15 2012 – Project Rescan-Seabridge – Iron Cap.xls***). These amounts represent the relative amounts of crystalline phases normalized to 100%. The Rietveld refinement plots are shown in Figures 1 – 11. Ideal formulae of the mineral phases are shown in Table 2.

Table 2.

Mineral	**Ideal Formula**
Ankerite – Dolomite	$Ca(Fe^{2+},Mg,Mn)(CO_3)_2 – CaMg(CO_3)_2$
Biotite	$K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$
Calcite	$CaCO_3$
Clinochlore	$(Mg,Fe^{2+})_5Al(Si_3Al)O_{10}(OH)_8$
Fluorite	CaF_2
K-Feldspar	$KAlSi_3O_8$
Molybdenite	MoS_2
Muscovite	$KAl_2(AlSi_3O_{10})(OH)_2$
Plagioclase	$NaAlSi_3O_8 – CaAl_2Si_2O_8$
Pyrite	FeS_2
Quartz	SiO_2
Siderite	$Fe^{2+}CO_3$
Sphalerite	(Zn,Fe)S

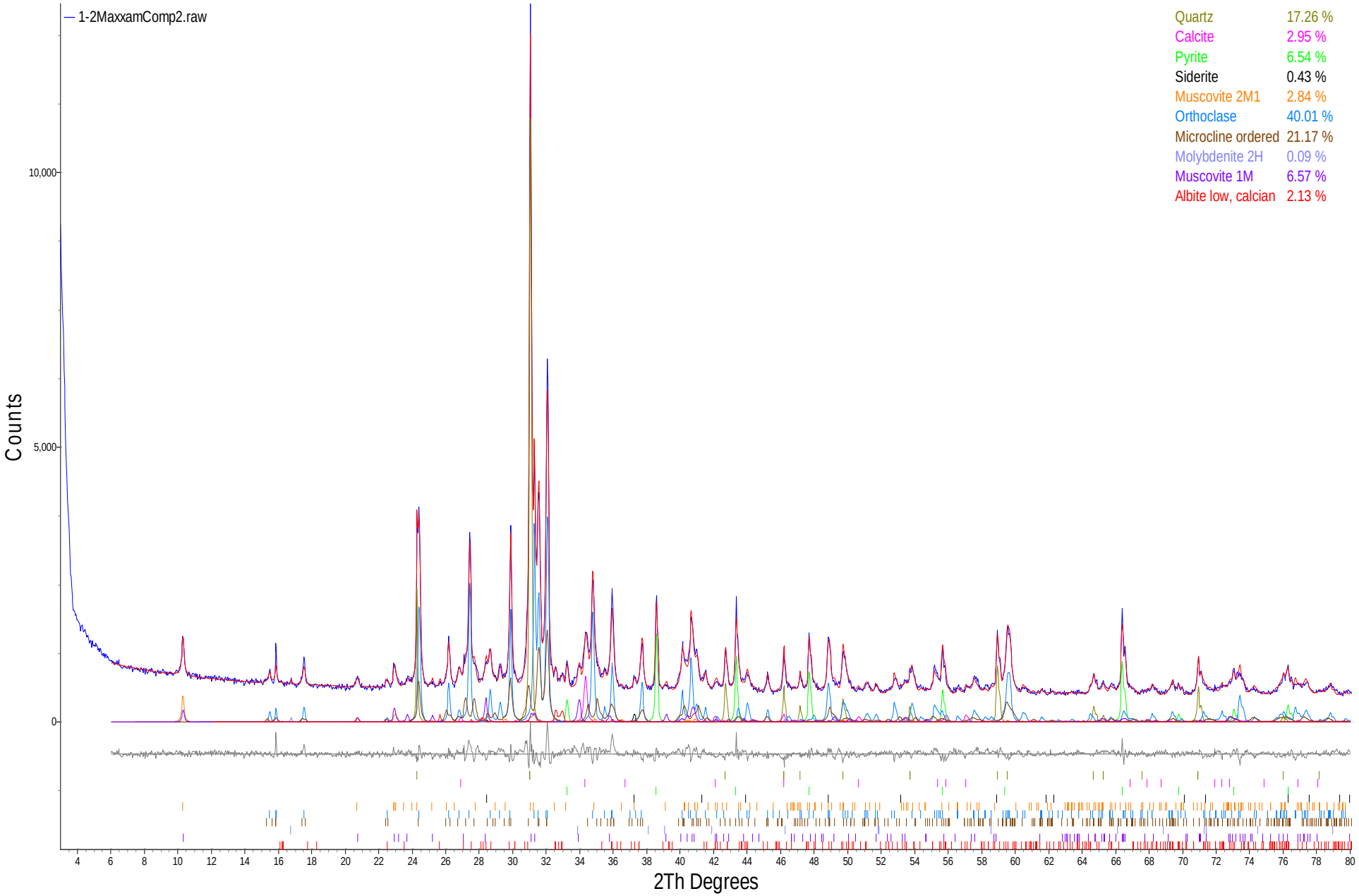


Figure 1. Rietveld refinement plot of sample **"Comp #2"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

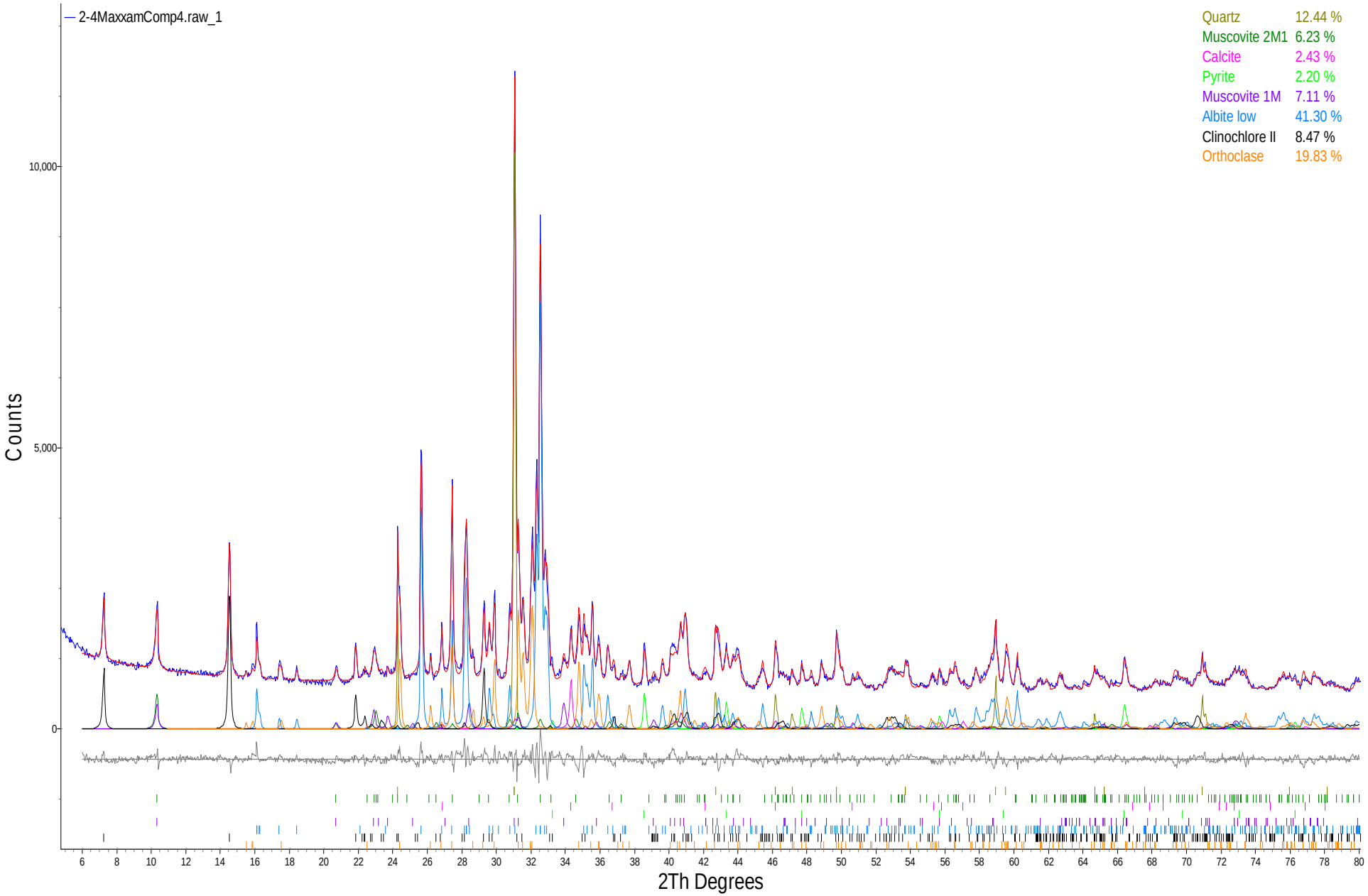


Figure 2. Rietveld refinement plot of sample **"Comp #4"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

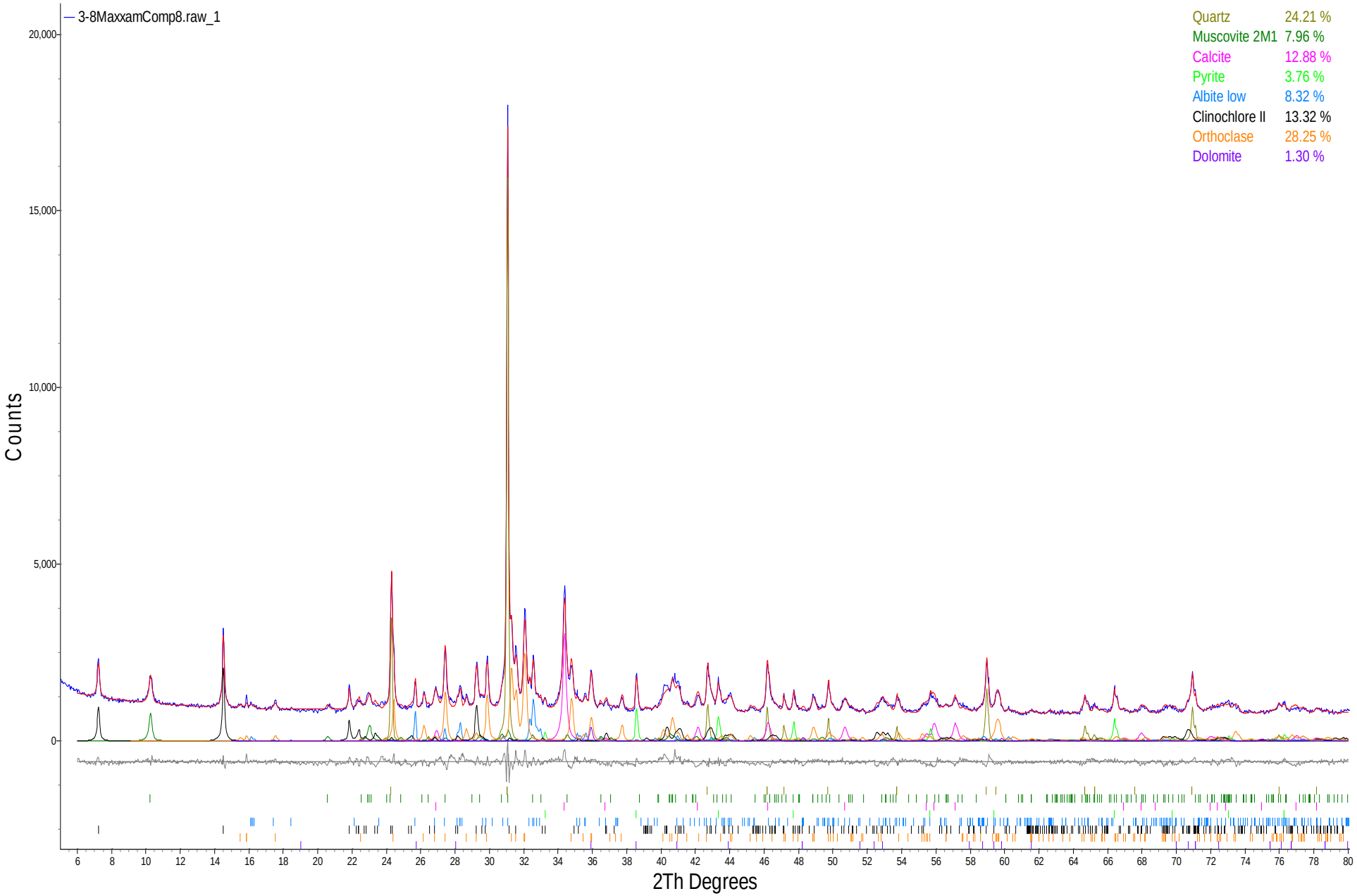


Figure 3. Rietveld refinement plot of sample **"Comp #8"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

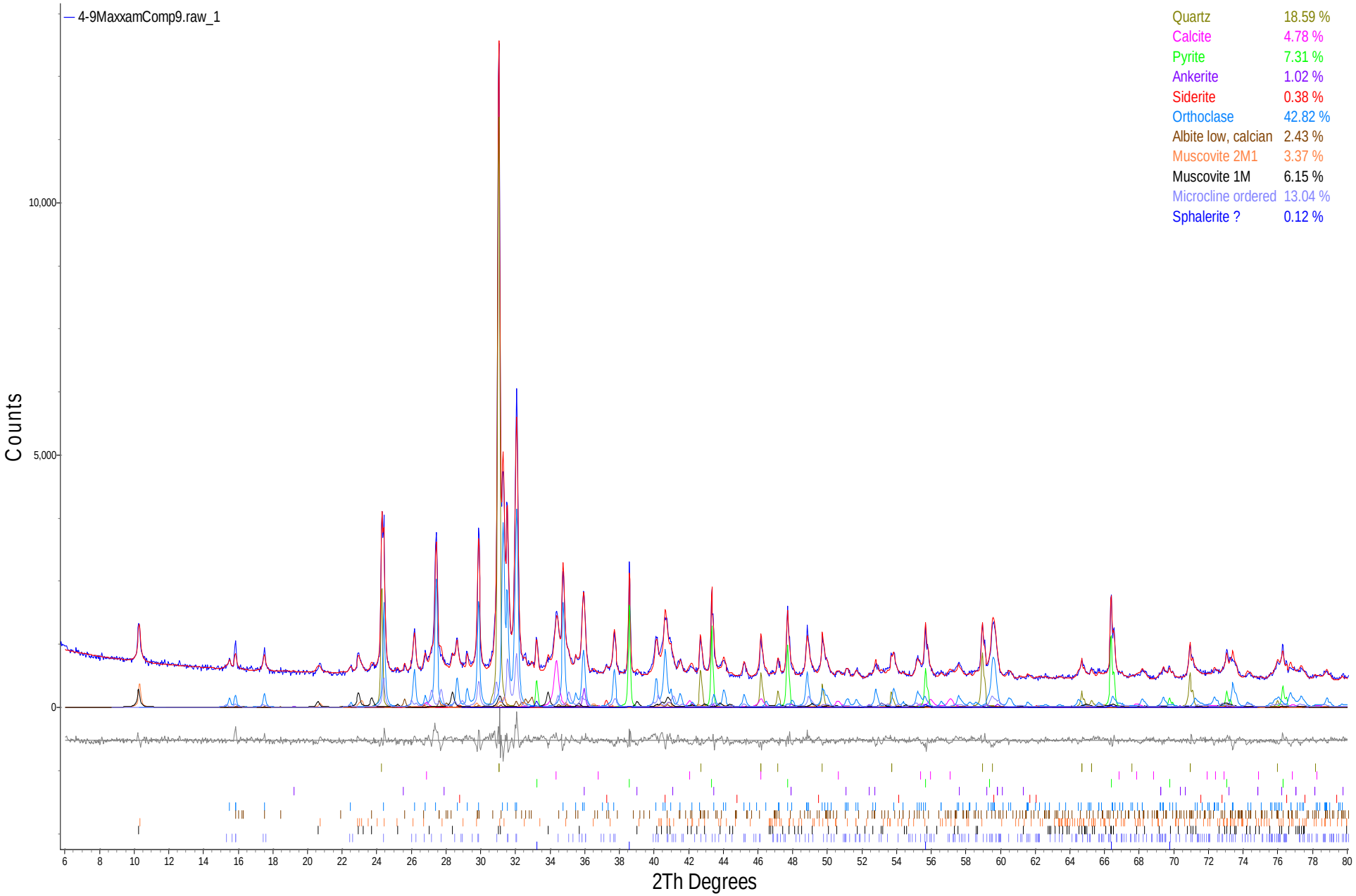


Figure 4. Rietveld refinement plot of sample **"Comp #9"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

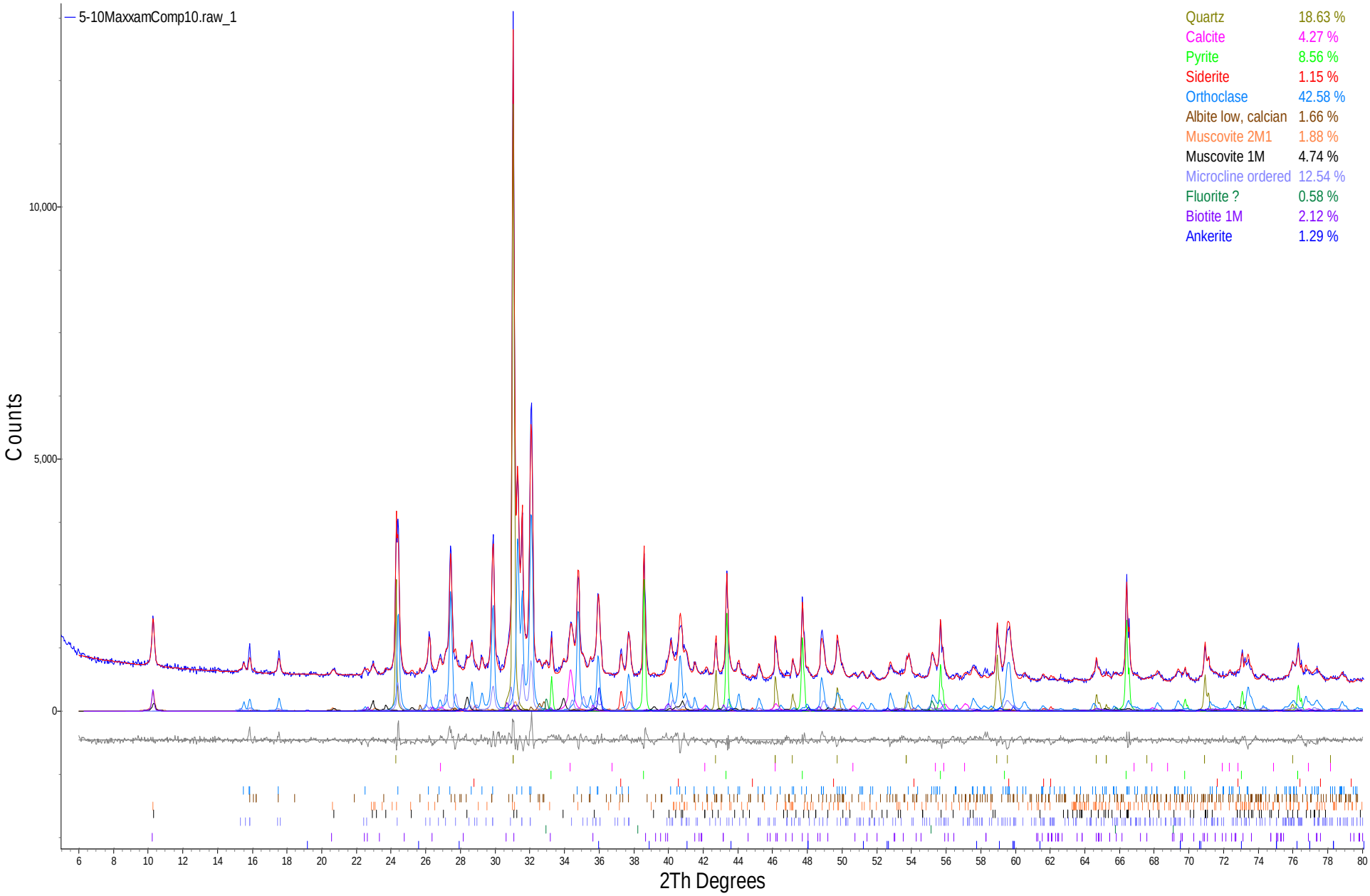


Figure 5. Rietveld refinement plot of sample **"Comp #10"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

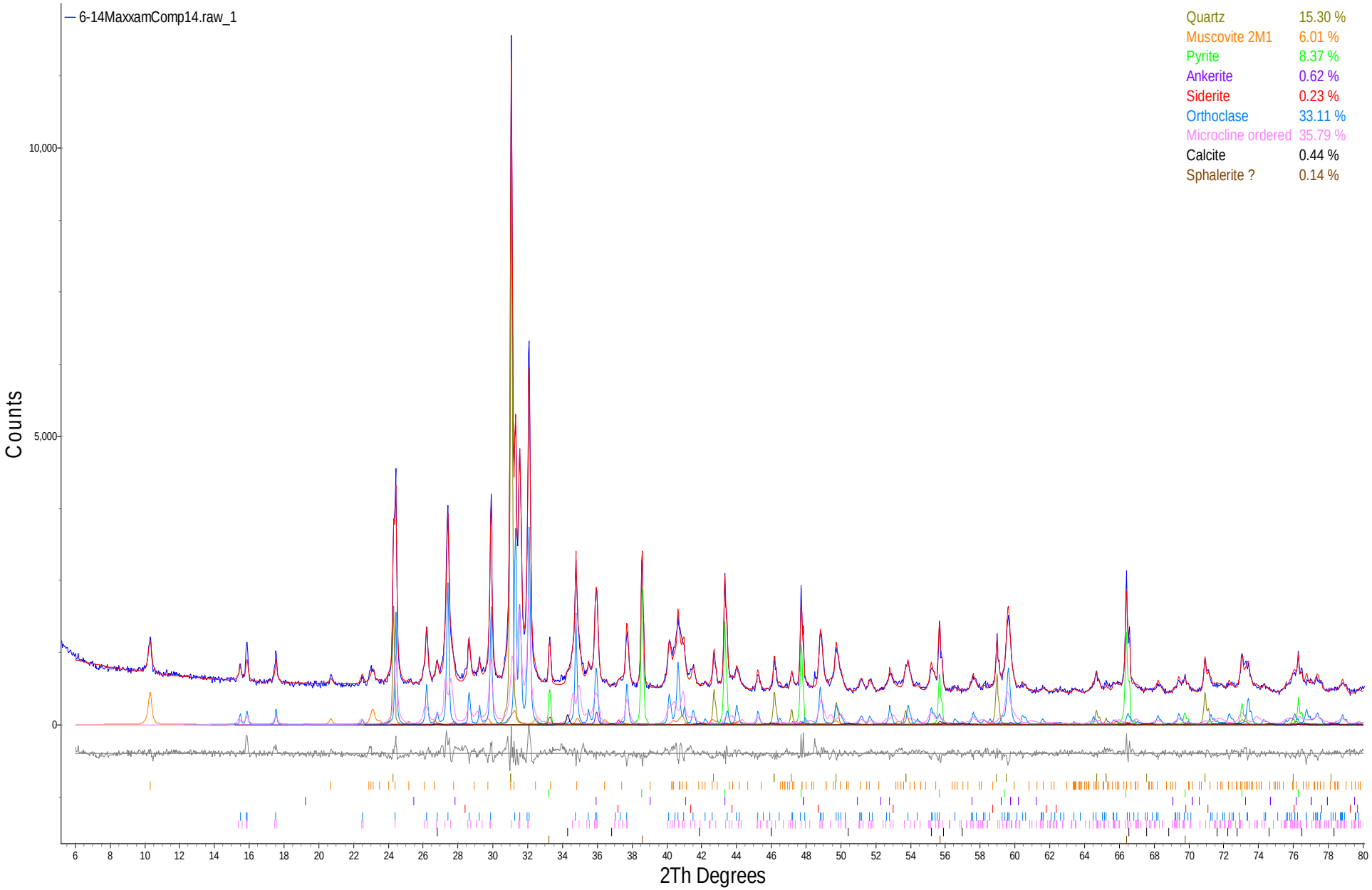


Figure 6. Rietveld refinement plot of sample **"Comp #14"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

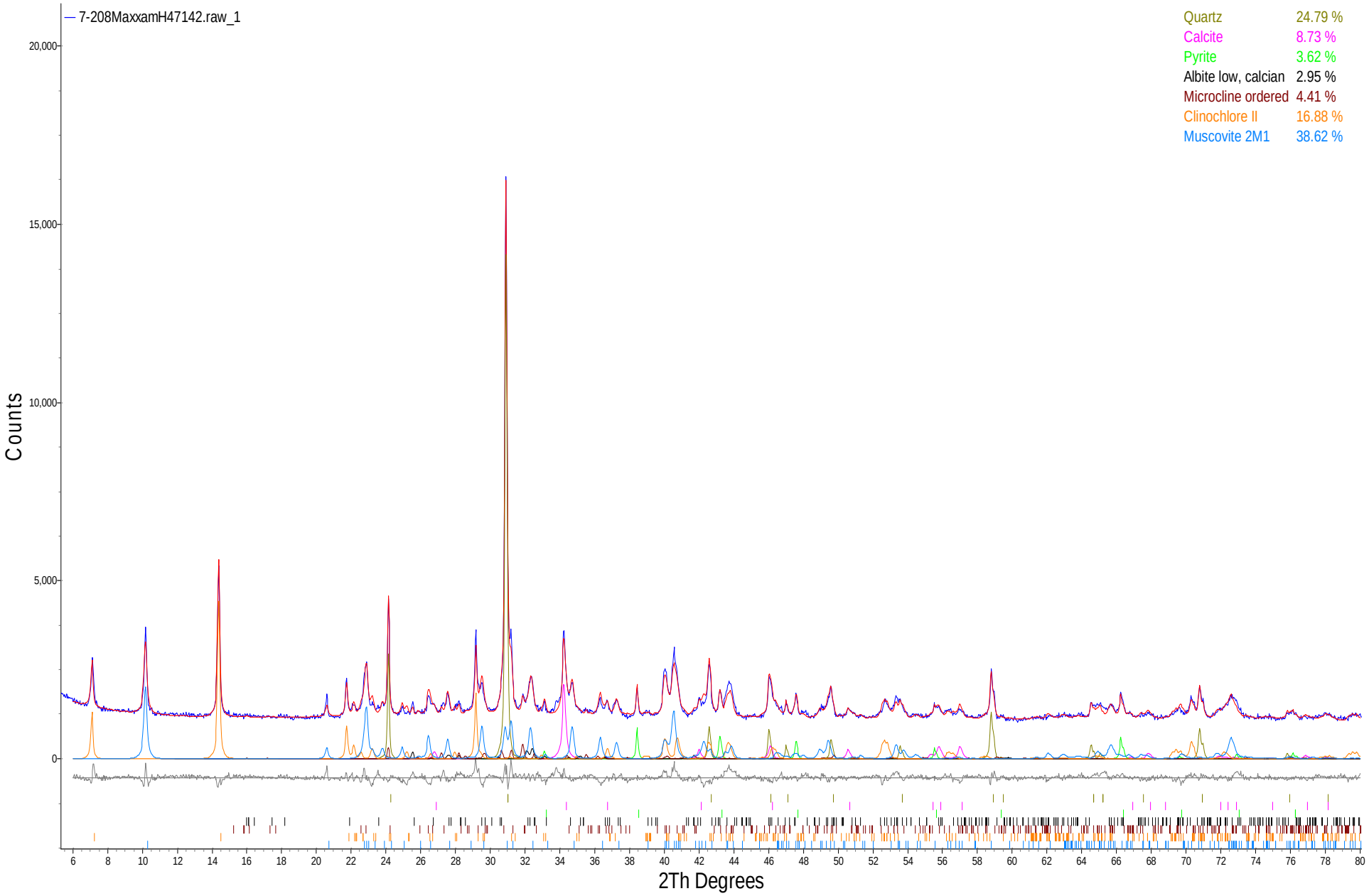


Figure 7. Rietveld refinement plot of sample **"H47142"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

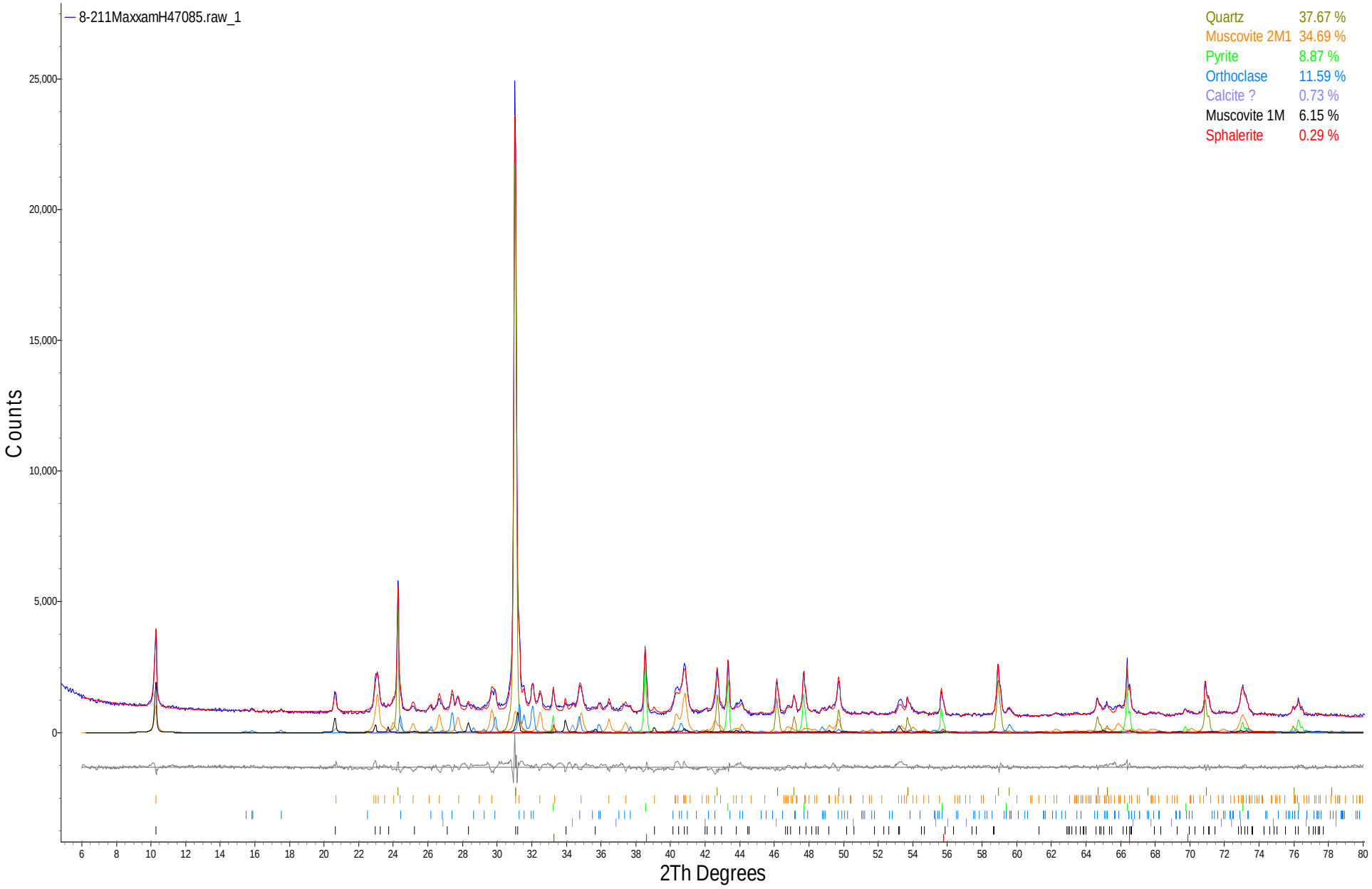


Figure 8. Rietveld refinement plot of sample **"H47085"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

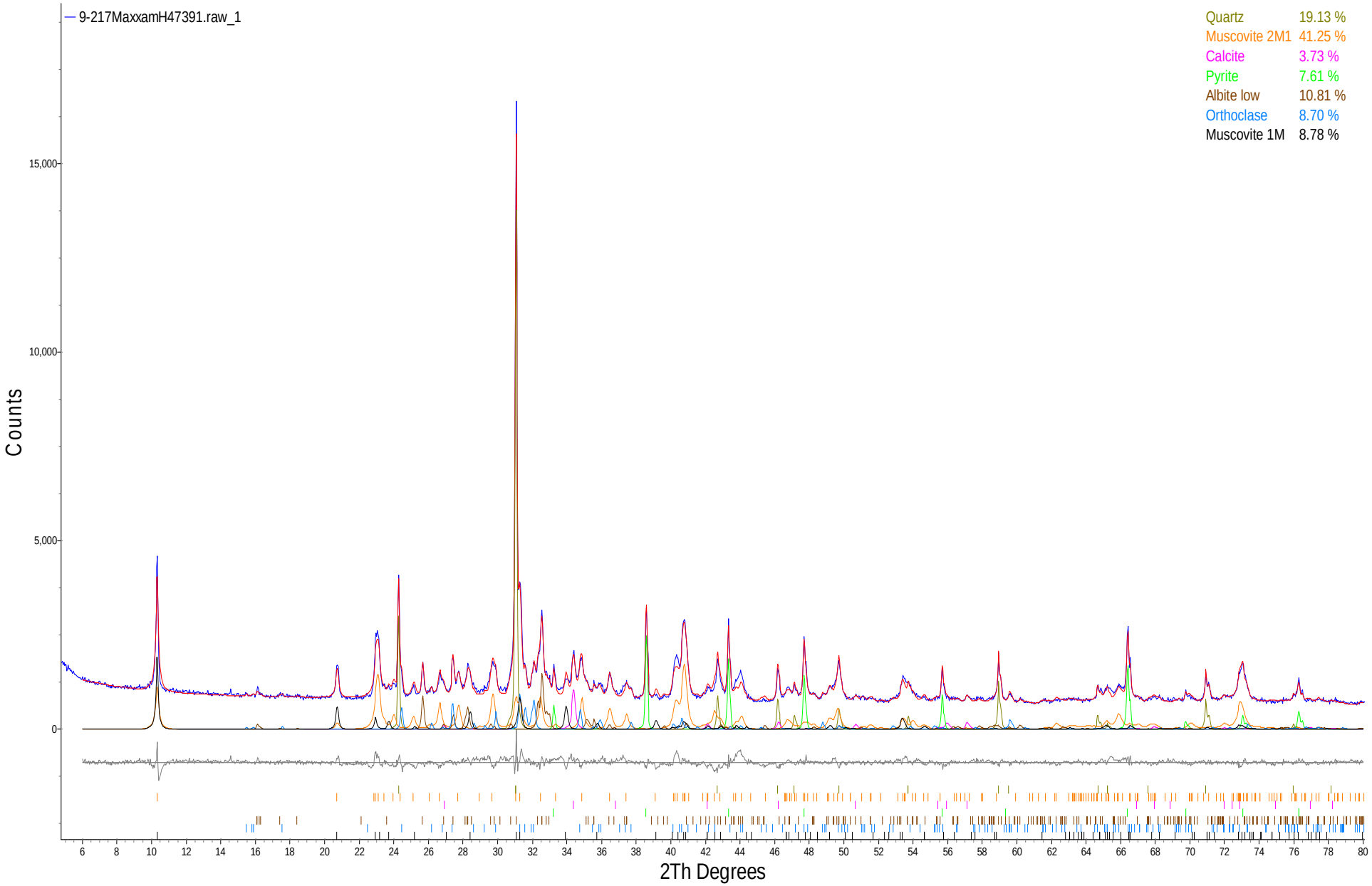


Figure 9. Rietveld refinement plot of sample **"H47391"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

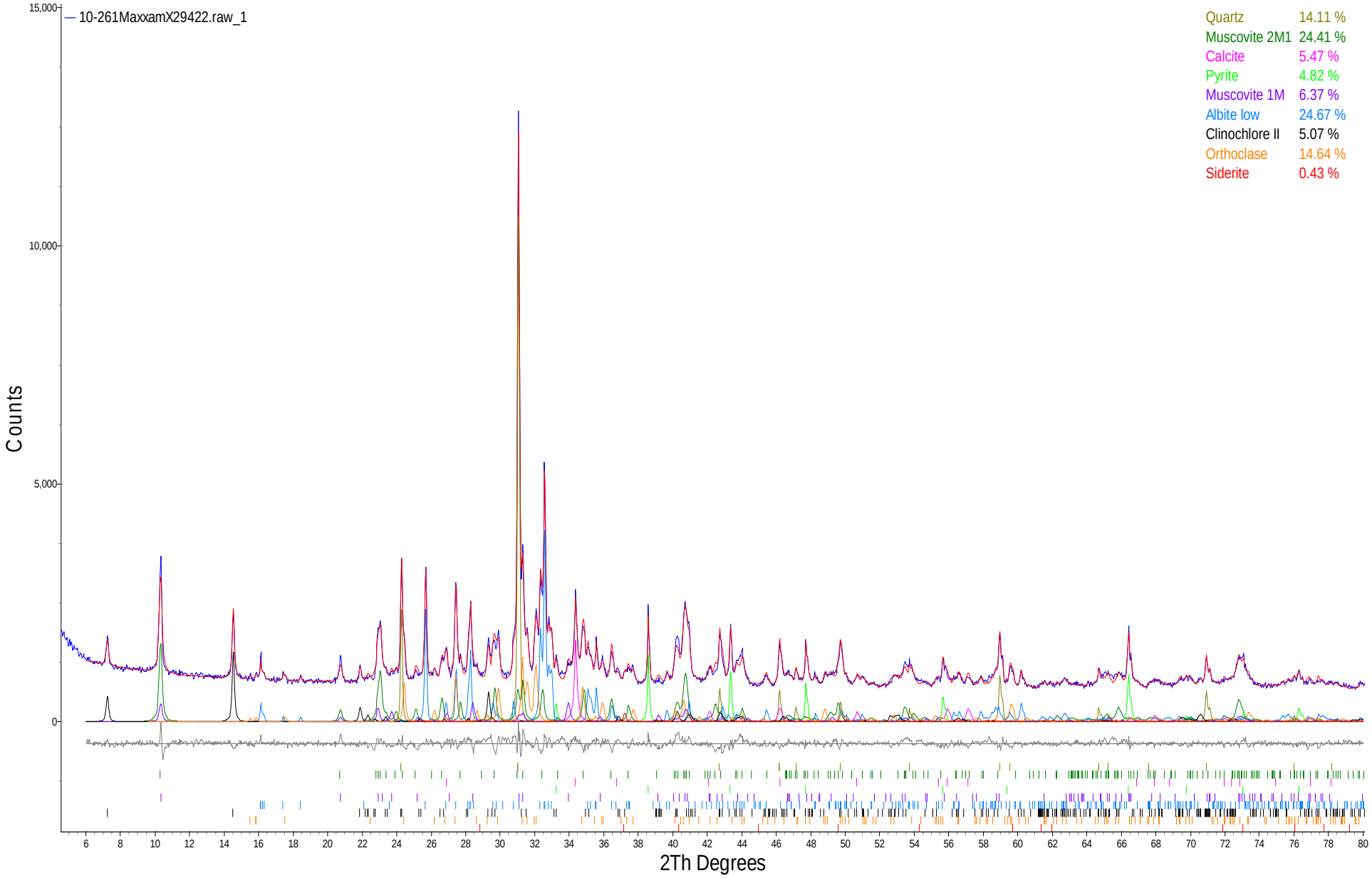


Figure 10. Rietveld refinement plot of sample **"X29422"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

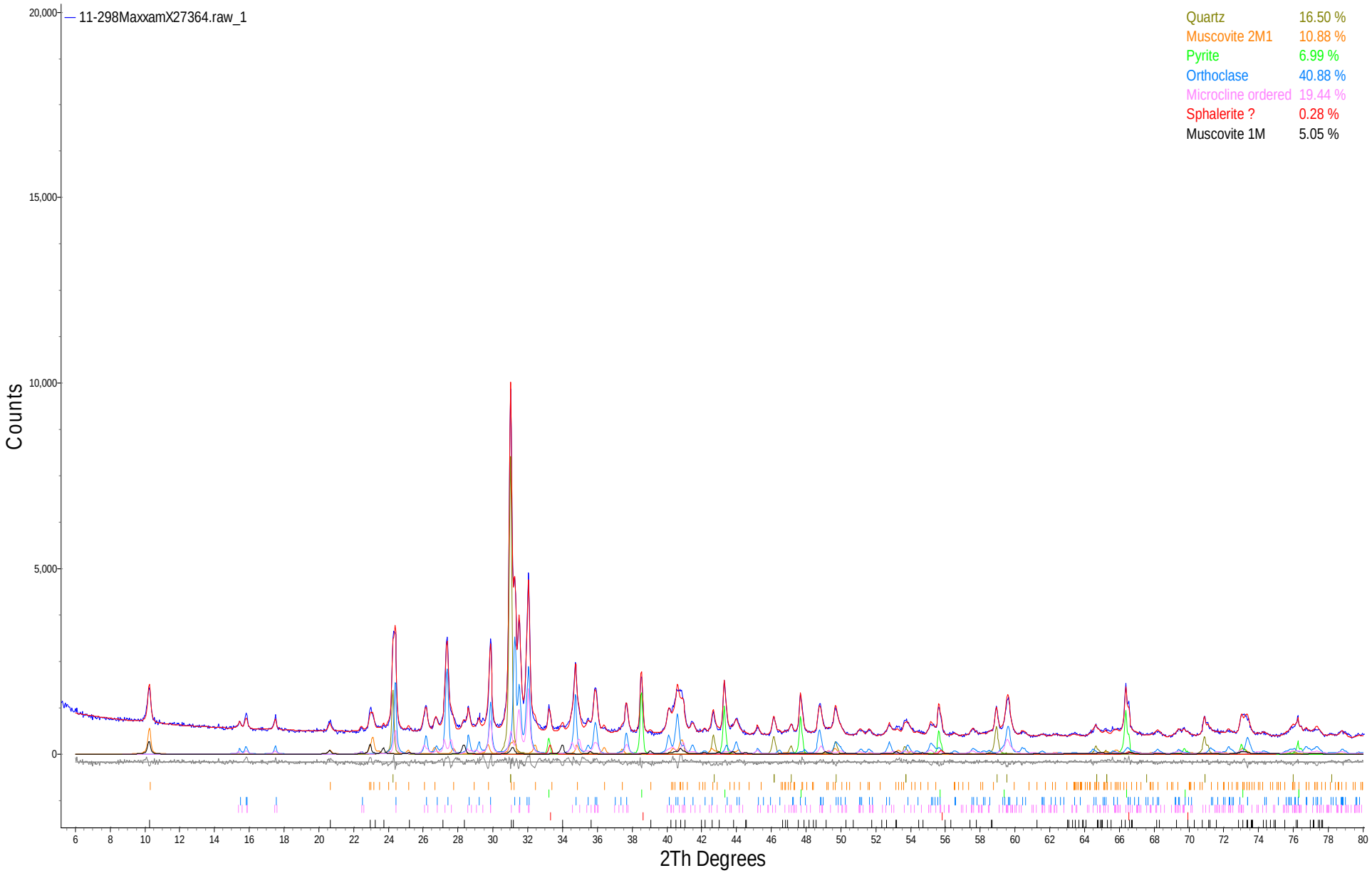


Figure 11. Rietveld refinement plot of sample **"X27364"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

Appendix 5.1-3

Petrographic Analysis Results at the Kerr, Sulphurets, and Mitchell Deposits

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Appendix 5.1-3a. Petrographic Analysis Results at the Kerr, Sulphurets, and Mitchell Deposits

Sample	Lithology	Gangue Minerals	Mineralogy	Pyrite	Chalcopyrite	Other	Sulphide Grain Boundaries
M-09-096 195.5-196.5	Quartz-sericite-schist	Lithic clasts of microcrystalline granular to foliated masses of sericite and variably internally deformed and recrystallized quartz grains with disseminated rutile grains; disseminated quartz mineral and illite grains/sheaves fragments	50% quartz; 35% illite; 10% pyrite, 1% rutile; 1% chalcopyrite; tr bornite; tr sphalerite	Liberated (5 µm - 1 mm in size) and disseminated (5-600 µm) in lithic clasts	Liberated (5-800 µm) and in clasts (5-500 µm); also as inclusions (<50 µm in size) and as fracture infill in pyrite	Common inclusions of bornite, enargite, sphalerite and tetrahedrite-tennantite in pyrite, all <0.05 mm in size; Disseminated tetrahedrite-tennantite in lithic clasts	Unaltered
M-09-097 52.5-53.5	Feldspar-amphibole porphyry	Microcrystalline to fine-grained lithic clasts, patchy (possibly clastic?) to porphyritic; Groundmass and phenocrysts variably made up of quartz + feldspars, sericite, chlorite + biotite; Amphibole suggested by diamond-shaped chlorite+ biotite pseudomorphs; disseminated apatite throughout; Lithic clasts and grain boundaries variably oxidized	55% quartz + feldspars; 15% biotite; 10% pyrite; 5% sericite; 5% chlorite; 3% chalcopyrite; 1% hematite, 1% apatite; 1% Fe-oxyhydroxides; tr rutile; tr enargite; tr digenite; tr covellite	Angular liberated (5-300 µm in size) grains and subhedral disseminated (5-800 µm) grains in clasts	Anhedral grains, liberated (5-300 µm) and in lithic clasts (5-100 µm); also as inclusions (<50 µm in size) in pyrite	Variably developed rims of Fe-oxyhydroxides around lithic clasts; rare inclusions of enargite in pyrite	Variably developed rims of hematite and Fe-oxyhydroxides around pyrite and of digenite/covellite around chalcopyrite; oxidation affects liberated grains and grains in lithic clasts
M-09-097 92.5-93.5	Feldspar porphyry + carbonate (± pyrite ± chalcopyrite) veins	1) Very fine-grained granular to porphyritic quartz-plagioclase-K-feldspar clasts with patches of chlorite (possible phenocrysts) and variably altered by sericite and carbonate; contain disseminated titanite, rutile and apatite and locally fine- to medium-grained anhedral quartz aggregates (quartz vein) ; 2) fine- to medium-grained granular carbonate-pyrite vein clasts	25% carbonate; 20% K-feldspar; 20% (quartz + plagioclase); 7% chlorite; 7% sericite; 7% pyrite; 1% apatite; 1% chalcopyrite; tr-1% magnetite; tr-1% titanite; tr-1% rutile; tr hematite	Typically disseminated (5 µm - 1 mm) in clasts, finer-grained in lithic clasts than in vein clasts; anhedral to subhedral; very rarely as liberated grains (5-200 µm in size)	Small anhedral grains (5-200 µm in size) in lithic clasts, locally associated with magnetite or titanite	Very fine-grained disseminated associated magnetite/hematite in lithic clasts	Pyrite grain boundaries commonly ragged and irregular
M-09-097 147.5-148.5	Feldspar porphyry + quartz (± carbonate ± chalcopyrite) veins	1) Very fine-grained granular to porphyritic quartz-plagioclase-K-feldspar clasts with coarse-grained disseminated K-feldspar phenocrysts; weakly altered by sericite and carbonate; contain disseminated chlorite, titanite, rutile and apatite and locally fine- to medium-grained anhedral quartz aggregates (quartz vein) ; 2) Medium-grained granular quartz-pyrite (-carbonate) vein clasts	30% K-feldspar; 30% (quartz + plagioclase); 10% chlorite; 5% sericite; 5% carbonate; 5% pyrite; 3% magnetite; 3% chalcopyrite; 1% apatite; 1% titanite; tr-1% rutile; tr enargite; tr chalcocite; tr sphalerite	Liberated (5 µm - 2.6 mm in size) and disseminated (5 µm - 1.2 mm) in clasts; typically anhedral	Small anhedral grains (5-300 µm in size) in lithic clasts or liberated (5-100 µm in size); also as inclusions and fracture infill in pyrite	Very fine-grained inclusions of enargite, chalcocite and sphalerite in pyrite; inclusions <50 µm in size	Unaltered
M-09-106 58.5-59.5	Sericite-quartz schist + quartz-carbonate-chlorite-pyrite veins	Lithic clasts of microcrystalline granular to foliated masses of sericite and variably internally deformed and recrystallized quartz grains with disseminated rutile grains; lithic clasts of granular quartz and carbonate (+ chlorite + pyrite); disseminated quartz mineral and sericite, chlorite grains/sheaves fragments	40% quartz; 20% sericite; 15% carbonate; 10% chlorite; 12% pyrite, 1% chalcopyrite, 1% apatite; tr rutile, tr molybdenite, tr tetrahedrite-tennantite, tr bornite; tr sphalerite	Liberated (5 µm - 12mm in size) and disseminated (5 µm - 1.4 mm) in clasts	Liberated (5-100 µm) and in clasts (5-200 µm); also as inclusions (<100 µm in size) and as fracture infill in pyrite	Sporadic inclusions of bornite, sphalerite and tetrahedrite-tennantite in pyrite, all <0.1 mm in size; Tetrahedrite-tennantite in fractures in pyrite with chalcopyrite; Sheaves of molybdenite (0.1 -0.3 mm), liberated and in clasts	Unaltered
M-09-106 34.5-35.5	Chlorite-sericite-quartz schist + quartz-carbonate-pyrite veins	Lithic clasts of microcrystalline granular to foliated masses of sericite, foliated chlorite and variably internally deformed and recrystallized quartz grains with disseminated rutile grains; Lithic clasts of granular quartz and interstitial carbonate (± pyrite); disseminated quartz and carbonate mineral fragments and of sericite, chlorite grains/sheaves fragments	40% quartz; 5% carbonate; 30% sericite; 15% chlorite; 8% pyrite, 1% chalcopyrite, tr rutile; tr sphalerite	Liberated (5 µm - 0.5mm in size) and disseminated (5 µm - 1 mm) in clasts	Liberated (5-100 µm) and in clasts (5-200 µm); also as inclusions (<60 µm in size), overgrowths and fracture infill in pyrite	Rare inclusions of sphalerite in pyrite	Unaltered
M-09-108 56.5-57.5	Feldspar porphyry + carbonate-quartz veins	Altered porphyritic clasts made up of fine-grained quartz (+ feldspar) groundmass with disseminated apatite, chlorite, carbonate; phenocrysts of K-feldspars and plagioclase locally preserved from sericite + chlorite alteration; patches of chlorite + sulphides throughout (former phenocrysts?); coarser-grained carbonate in thin veinlets in clasts and as monomineralic vein fragments; local Fe-oxyhydroxide rims and stain in clasts	55% quartz + feldspars; 12% carbonate; 10% chlorite; 10% sericite; 7% pyrite, 2% chalcopyrite, 1% apatite; tr rutile; tr sphalerite; tr covellite; tr hematite; tr Fe-oxyhydroxides	Anhedral grains, variably poikilitic, disseminated (5 µm - 1.4 mm in size) in lithic clasts	Anhedral grains (5-100 µm) disseminated in clasts	Anhedral grains and masses of sphalerite (5 µm - 1 mm) in lithic clasts	Sporadic covellite rims around sphalerite or chalcopyrite; local rims of hematite around pyrite or chalcopyrite
M-09-108 118.5-119.5	Feldspar porphyry	Fine- to medium-grained plagioclase and K-feldspar phenocrysts in a very fine-grained groundmass of feldspars + quartz, variably altered by sericite and carbonate; possible mafic phenocrysts pseudomorphed by rutile + sericite; most altered clasts similar to sericite schists; cut by variably thick fine-grained carbonate (+ quartz) veinlets	45% quartz + feldspars; 25% sericite; 15% pyrite; 10% carbonate; 2% chlorite; tr chalcopyrite; tr rutile; tr enargite; tr apatite	Anhedral grains, typically disseminated (5-800 µm) in clasts or rarely liberated (5-800 µm in size)	Rare small anhedral grains in clasts (5-50 µm); also as inclusions (<50 µm in size) and as fracture infill in pyrite	Rare inclusions of enargite (<50 µm) in pyrite	Unaltered
M-09-108 162.5-163.5	Sericite schist	Patchy fine- to very fine-grained clasts of granular quartz (and possibly feldspars), carbonate, foliated sericite and chlorite; local attachments of coarser-grained quartz or carbonate suggesting vein material; Liberated quartz, feldspars and carbonate mineral fragments and sericite, chlorite sheaves	40% quartz + feldspars; 30% sericite; 10% chlorite; 7% pyrite; 7% carbonate; 1% chalcopyrite; tr rutile; tr enargite; tr apatite; tr hematite; tr sphalerite	Anhedral grains, disseminated (5 µm- 1mm) in clasts or liberated (5-400 µm in size)	Anhedral grains (5-80 µm) in clasts; also as inclusions (<50 µm in size), overgrowths, attachments and as fracture infill in pyrite	Inclusions of enargite, sphalerite and hematite in pyrite; all inclusions <50 µm	Unaltered
M-09-108 184.5-185.5	Sericite schist + quartz-carbonate-pyrite veins	Lithic clasts of microcrystalline granular to fine-grained foliated masses of sericite, foliated chlorite and disseminated quartz, carbonate, rutile, opaque (Fe, Ti)-oxides and apatite; Lithic clasts of granular quartz and carbonate (+ pyrite); disseminated quartz and carbonate mineral fragments and of sericite, chlorite grains/sheaves fragments.	70% sericite; 15% quartz; 10% chlorite; 5% carbonate, 15% pyrite, 1% chalcopyrite, tr rutile, tr (Fe, Ti)-oxides; tr apatite; tr molybdenite; tr tetrahedrite-tennantite; tr sphalerite	Liberated (5-750 µm in size) and disseminated (5-200 µm) in lithic clasts	Liberated (5-100 µm) and in clasts (5-80 µm); also as inclusions (<50 µm in size) and as fracture infill in pyrite and as pyrite overgrowths	Rare inclusions of sphalerite and tetrahedrite-tennantite in pyrite; molybdenite (10-200) occurring liberated or as attachments to pyrite	Unaltered
M-09-102 120.5-121.5	Feldspar porphyry	Patchy to vaguely porphyritic fine- to very fine-grained clasts of granular quartz, feldspars, carbonate, foliated sericite and chlorite; local thin carbonate veins throughout clasts	40% feldspars; 20% quartz; 15% sericite; 15% carbonate; 5% pyrite; 1% chlorite; 1% rutile; 1% apatite; tr chalcopyrite, tr enargite; tr tetrahedrite-tennantite; tr sphalerite	Disseminated subhedral grains (5-600 µm) in lithic clasts; less commonly as anhedral masses in clasts	Anhedral grains (5-100 µm) in clasts; also as inclusions, attachments and fracture infill in pyrite	Rare inclusions of rutile, sphalerite and tetrahedrite-tennantite in pyrite; all inclusions < 50 µm in size	Unaltered

Appendix 5.1-3a. Petrographic Analysis Results at the Kerr, Sulphurets, and Mitchell Deposits

Sample	Lithology	Gangue Minerals	Mineralogy	Pyrite	Chalcopyrite	Other	Sulphide Grain Boundaries
M-09-102A 125.5-126.5	Feldspar porphyry	Granular to porphyritic very fine-grained clasts of granular quartz, feldspars, carbonate and foliated sericite	35% feldspars; 20% quartz; 15% sericite; 15% carbonate; 12% pyrite; 1% rutile; tr apatite; tr chalcopyrite, tr tetrahedrite-tennantite, tr zircon; tr sphalerite	Disseminated anhedral to subhedral grains (5-800 µm) in lithic clasts; very rare inclusions (< 30 µm in size) in chalcopyrite	Anhedral grains (5-200 µm) in clasts; rarely as inclusions (< 30 µm) in pyrite	Few inclusions of sphalerite and tennantite in chalcopyrite; none in pyrite	Unaltered
M-09-102A 133.5-134.5	Undetermined	Granular very fine-grained to microcrystalline clasts, locally containing ill-defined phenocrysts; Clast groundmass made up of granular quartz and feldspars with disseminated carbonate and sericite; Cut by variably thick carbonate veinlets	60% (quartz + feldspars); 20% carbonate; 10% sericite; 5% pyrite; 1% rutile; 1% apatite; tr-1% chalcopyrite; tr sphalerite	Disseminated anhedral to subhedral grains (5-400 µm) in lithic clasts	Anhedral grains (5-25 µm) in clasts; rarely as inclusions (< 25 µm) or attachments to pyrite; disseminated, extremely fine-grained (<30 µm) in a carbonate vein in a clast	Few inclusions of sphalerite in pyrite	Unaltered
M-09-110 34.5-35.5	Undetermined	Granular very fine-grained to microcrystalline clasts; Clast groundmass made up of granular quartz and feldspars with disseminated carbonate, sericite, chlorite, rutile, apatite, titanite and sulphides; Possible quartz and feldspar phenocrysts present but extensively internally deformed or recrystallized; Fine-grained biotite/sericite dissemination in some lithic clasts; Lithic clasts locally cut by thin carbonate veinlets and with patches of malachite; Lithic clasts variably stained and rimmed by Fe-oxyhydroxides	60% (quartz + feldspars); 15% biotite; 5% carbonate; 5% sericite; 5% chlorite;1-2% hematite; 1-2% pyrite; 1% rutile; 1% chalcopyrite; 1% apatite; 1% Fe-oxyhydroxides; 1% titanite; tr magnetite; tr covellite;	Disseminated anhedral to euhedral grains (5-300 µm) in lithic clasts	Anhedral grains (5-200 µm) in lithic clasts and rare inclusions in pyrite	Anhedral grains of sphalerite (5-300 µm in size) and anhedral to subhedral grains of hematite (5-100 µm) disseminated in clasts; few granular clusters of magnetite	Rims of Fe-oxyhydroxides developed around lithic clasts and around sulphides / hematite and associated with covellite; disseminated hematite
M-09-110 88.5-89.5	Undetermined + carbonate veins + quartz veins	Granular very fine-grained clasts with locally preserved extensively internally deformed feldspar and quartz phenocrysts, locally possible clastic texture; Clast groundmass made up of granular quartz and feldspars with disseminated carbonate, biotite, sericite, chlorite, rutile, apatite and sulphides; Lithic clasts locally cut by thin carbonate veinlets; rare coarse-grained quartz or carbonate grain fragments suggest quartz or carbonate vein fragments	50% (quartz + feldspars); 20% biotite; 7% carbonate; 5% sericite; 5% chlorite; 5% pyrite; 2% rutile; 2% chalcopyrite; 2% apatite; tr enargite	Anhedral to subhedral grains (5-300 µm in size) in lithic clasts	Anhedral grains (5-200 µm in size) in lithic clasts; rare inclusions (<50 µm in size) in pyrite; local corona around pyrite	Inclusions (<25 µm in size) of possible enargite in pyrite	Unaltered
M-09-110 342.5-343.5	Sericite-quartz schist + quartz-carbonate-chlorite-pyrite veins	Lithic clasts of microcrystalline granular to foliated masses of sericite (+ chlorite) and variably internally deformed quartz; Disseminated rutile in lithic clasts; Disseminated quartz and carbonate mineral fragments and sericite and chlorite sheaves.	25% sericite; 35% quartz; 5% chlorite; 30% pyrite, 1% chalcopyrite, tr rutile; tr molybdenite; tr tetrahedrite-tennantite	Mostly liberated (5 µm - 2 mm in size) and less commonly disseminated (5-600 µm) in lithic clasts	Rare irregularly shaped inclusions (<100 µm in size) in pyrite	-	Unaltered
M-09-112 224.5-225.5	Anhydrite-quartz-sericite schist + quartz-carbonate-chlorite-pyrite veins	Lithic clasts of microcrystalline granular to foliated masses of sericite with disseminated grains and patches of quartz, feldspars and anhydrite; disseminated clusters of rutile; coarser-grained quartz and carbonate in veins in clasts and as liberated vein fragments; liberated quartz, feldspars, chlorite and sericite	40% sericite; 35% (feldspars + quartz); 7% pyrite, 7% anhydrite; 3% carbonate; 1% chalcopyrite, 1% rutile; 1% apatite; tr bornite; tr chalcocite; tr sphalerite	Disseminated anhedral grains (5 µm - 1 mm) in lithic clasts	Anhedral grains (5-100 µm) in clasts; also as inclusions (<75 µm in size) and overgrowths in pyrite	Inclusions (<75 µm in size) of bornite, sphalerite and chalcocite in pyrite	Unaltered
K-09-01 84.5-85.5	Sericite schist + quartz-carbonate-chlorite-pyrite-chalcopyrite veins	Lithic clasts of microcrystalline granular to foliated masses of sericite/chlorite with disseminated grains and patches of quartz and feldspars, clusters of rutile and grains of apatite; coarser-grained quartz and carbonate in veins in clasts and as liberated vein fragments; liberated quartz, feldspars, chlorite and sericite	45% sericite; 15% (feldspars + quartz); 15% chlorite; 10% pyrite, 5% carbonate; 2% chalcopyrite, 2% rutile; 2% Fe-oxyhydroxides; 2% apatite; tr enargite; tr chalcocite, tr bornite	Anhedral to subhedral grains, liberated (5-600 µm in size) and disseminated (5 µm - 1 mm) in lithic clasts	Anhedral grains and masses (5-200 µm) in clasts or liberated (5-500 µm). Also as inclusions (<50 µm in size) in pyrite	Rounded inclusions of enargite, bornite (<200 µm) in pyrite and elongated inclusions (< 75 µm long) of possible chalcocite; Anhedral masses of Fe-oxyhydroxides, typically liberated, rarely in schist clasts	Anhedral masses of Fe-oxyhydroxides, liberated or occurring in schist clasts and preserving bits of pyrite
K-09-02 66.5-67.5	Sericite-quartz schist	Extremely thin section; Lithic clasts of microcrystalline granular to foliated masses of sericite and variably internally deformed quartz; Disseminated rutile in lithic clasts; Disseminated quartz mineral fragments and sericite sheaves.	35% quartz; 25% sericite; 30% pyrite; 3% chalcocite; 2% chalcopyrite; 2% apatite; 1% rutile; tr covellite	Liberated (5-900 µm in size) and disseminated (5-400 µm) in lithic clasts	Mostly as overgrowths, fracture infill and inclusions (<100 µm in size) in pyrite; also disseminated (5-400 µm) in clasts or liberated (5-100 µm)	Liberated chalcocite (5-600 µm); groundmass of chalcocite in one lithic clast; Inclusions and overgrowths of chalcocite associated with chalcopyrite in pyrite; covellite as local rims and fracture infill around Cu-sulphides	Local partial to complete rims and fracture infill of covellite around chalcopyrite / chalcocite
K-09-03 140.5-141	Sericite-quartz schist + quartz-carbonate(-pyrite-chalcopyrite) veins	Lithic clasts of microcrystalline granular to foliated masses of sericite (+ chlorite) and variably internally deformed quartz; Disseminated rutile and apatite in lithic clasts; Fine-grained granular lithic clasts of quartz (+carbonate). Disseminated quartz and carbonate grain fragments and sericite sheaves.	45% quartz; 25% sericite; 20% pyrite; 5% chlorite; 2% carbonate; 2% chalcopyrite; 1% apatite; tr rutile; tr bornite; tr enargite	Liberated (5 µm - 1 mm in size) and disseminated (5 µm-1.2 mm) in lithic clasts	Overgrowths, fracture infill and inclusions (<100 µm in size) in pyrite; Masses liberated (5-200 µm in size) or set (5-400 µm) in lithic clasts	Bornite, enargite and possible rutile inclusions in pyrite; all inclusions < 50 µm in size	Unaltered
K-09-04 126.5-127.5	Sericite-quartz schist + quartz(-carbonate-pyrite-chalcopyrite) veins	Lithic clasts of variably internally deformed quartz with disseminated masses of microcrystalline granular to foliated sericite (+ chlorite); Disseminated rutile and apatite in lithic clasts; Fine-grained monomineralic lithic quartz clasts. Disseminated quartz mineral fragments and sericite sheaves.	40% quartz; 30% pyrite; 20% sericite; 5% chlorite; 2-3% chalcopyrite; 1% apatite; tr rutile; tr bornite; tr enargite	Liberated (5 µm - 1.6 mm in size) and disseminated (5 µm - 2 mm) in lithic clasts	Overgrowths, fracture infill and inclusions (<100 µm in size) in pyrite; Liberated (5-200 µm in size) and disseminated (5 µm 1 mm) in lithic clasts	Bornite, enargite and possible rutile inclusions in pyrite; all inclusions < 50 µm in size	Unaltered
S-08-06 252.5-253.5	Feldspar porphyry + quartz ± carbonate veins	Variably altered porphyritic clasts, made up of fine-grained granular quartz and feldspars and coarser-grained feldspar phenocrysts; chlorite, apatite and rutile disseminated in the groundmass; variably altered by sericite and carbonate; Some carbonate(+quartz) veins in clasts	45% (quartz + feldspars); 25% chlorite; 10% sericite; 7% carbonate; 5% pyrite; 2% chalcopyrite; 2% rutile; 1% apatite; tr molybdenite	Disseminated anhedral to subhedral grains (5-600 µm) in lithic clasts; one liberated subhedral grain 0.3 mm in size	Anhedral grains (5-200 µm) in vein clasts	One elongated mass (1 mm long) of molybdenite sheaves in a clast	Unaltered

Appendix 5.1-3a. Petrographic Analysis Results at the Kerr, Sulphurets, and Mitchell Deposits

Sample	Lithology	Gangue Minerals	Mineralogy	Pyrite	Chalcopyrite	Other	Sulphide Grain Boundaries
S-09-11 350.5-351.5	Sericite schist + quartz ± chlorite ± carbonate veins	Microcrystalline foliated clasts of associated sericite and chlorite with disseminated rutile and quartz (and feldspars) grains; coarser-grained mineral fragments and polygranular lithic fragments of chlorite, carbonate, quartz, suggest possible vein material	40% sericite; 25% (quartz + feldspars); 15% chlorite; 10% pyrite; 5% carbonate; 2% chalcopyrite; 2% rutile; 1% apatite	Anhedral to subhedral grains, occurring disseminated (5 µm- 2mm) in lithic clasts or liberated (5-600 µm)	Anhedral grains (5-200 µm) in lithic clasts; also as inclusions (< 200 µm in size) and fracture infill in pyrite	-	Unaltered
S-09-11 374.5-375.5	Sericite schist + quartz ± carbonate (± chlorite) veins	Microcrystalline foliated lithic clasts of sericite and lesser chlorite with disseminated patches of chlorite + rutile and of sulphides ± chlorite ± carbonate and disseminated grains of quartz/feldspars; Thin irregular carbonate or chlorite/carbonate veinlets throughout clasts; Coarser-grained mineral fragments and polygranular vein fragments of carbonate ± chlorite, or metamorphic quartz	25% sericite; 20% (quartz + feldspars); 20% chlorite; 20% carbonate; 7% pyrite; 2% chalcopyrite; 2% rutile; tr enargite	Anhedral to subhedral grains, occurring disseminated (5 µm- 1.2mm) in lithic clasts or liberated (5-600 µm)	Anhedral grains (5-600 µm) in lithic clasts; also as inclusions (< 50 µm in size) in pyrite	Inclusions of enargite in pyrite; all inclusions <50 µm	Unaltered
S-09-12 144.5-145.5	Brecciated porphyritic rock	Lithic clasts of possible feldspar porphyry as well as clasts made up of anhedral granular quartz + feldspars, polycrystalline microcrystalline to fine-grained felsic rock fragments all set in a groundmass of chlorite, rutile and carbonate and suggesting clasts of fragmental rock; all fragments commonly crosscut by very thin carbonate veinlets	50% (quartz + feldspar); 30% chlorite; 15% carbonate; 3% pyrite; 1% rutile; tr chalcopyrite	Anhedral disseminated grains (20-600 µm) in lithic clasts	Anhedral grains (5-200 µm) in lithic clasts	-	Unaltered
S-09-12 172.5-173.5	Brecciated porphyritic rock	Lithic clasts made up of anhedral K-feldspar fragments, polycrystalline microcrystalline to fine-grained felsic rock fragments all set in a groundmass of chlorite + sulphides + carbonate and suggesting clasts of brecciated rock; all fragments commonly crosscut by very thin carbonate veinlets; quartz and plagioclase abundance low	60% (quartz + feldspar); 15% carbonate; 10% chlorite; 5% pyrite; 2% rutile; 2% sphalerite; tr-1% galena; tr chalcopyrite	Anhedral to subhedral disseminated grains (5-40 µm rarely up to 300 µm) in lithic clasts; also in clusters up to 1.6 mm in size made up of subhedral pyrite and interstitial sphalerite	As chalcopyrite disease in sphalerite	Rare grains of galena (95-100 µm in size) and cores / attachments to chalcopyrite-free sphalerite in lithic clasts; Anhedral sphalerite (5-200 µm) associated with chlorite and pitted by chalcopyrite disease in lithic clasts; Ribbons of sphalerite interstitial to pyrite	Unaltered

MINERAL SERVICES

CANADA

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PETROGRAPHY OF TWENTY SIX SAMPLES FROM THE KERR-SULPHURETS-MITCHELL (KSM) GOLD-COPPER PROJECT (B.C.)

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PETROGRAPHY OF TWENTY SIX SAMPLES FROM THE KERR-SULPHURETS-MITCHELL (KSM) GOLD-COPPER PROJECT (B.C.)

1. INTRODUCTION

This report presents the results of petrographic analyses of twenty six samples received from Keith Mountjoy of Rescan Environmental services. The samples were submitted, prior to humidity cell testing, as crushed material and no detailed geologic or spatial information was provided with the samples. The samples were collected in the Kerr (4 samples), Sulphurets (5 samples) and Mitchell (17 samples) deposits defining the project. The aim of the study was to characterize the mineralogy of the samples, focusing on carbonate, sulphides and oxides.

Table 1: List of samples examined as part of this investigation.

SAMPLE	SAMPLE NAME	DEPOSIT
1	M-09-096 195.5-196.5m	MITCHELL
2	M-09-097 52.5-53.5m	MITCHELL
3	M-09-097 92.5-93.5m	MITCHELL
4	M-09-097 147.5-148.5m	MITCHELL
5	M-09-106 58.5-59.5m	MITCHELL
6	M-09-106 34.5-35.5m	MITCHELL
7	M-09-108 56.5-57.5m	MITCHELL
8	M-09-108 118.5-119.5m	MITCHELL
9	M-09-108 162.5-163.5m	MITCHELL
10	M-09-108 184.5-185.5m	MITCHELL
11	M-09-102 120.5-121.5m	MITCHELL
12	M-09-102A 125.5-126.5m	MITCHELL
13	M-09-102A 133.5-134.5m	MITCHELL
14	M-09-110 34.5-35.5m	MITCHELL
15	M-09-110 88.5-89.5m	MITCHELL
16	M-09-110 342.5-343.5m	MITCHELL
17	M-09-112 224.5-225.5m	MITCHELL
18	K-09-01 84.5-85.5m	KERR
19	K-09-02 66.5-67.5m	KERR
20	K-09-03 140.5-141m	KERR
21	K-09-04 126.5-127.5m	KERR
22	S-08-06 252.5-253.5m	SULPHURETS
23	S-09-11 350.5-351.5m	SULPHURETS
24	S-09-11 374.5-375.5m	SULPHURETS
25	S-09-12 144.5-145.5m	SULPHURETS
26	S-09-12 172.5-173.5m	SULPHURETS

2. METHODS

Petrographic descriptions were performed in the office of Mineral Services Canada Inc. using a Nikon Eclipse E400 microscope equipped with transmitted and reflected light. The microscopic characteristics of the samples are described in Appendix A and are included with the hand sample descriptions of the samples in a separate Excel file (MSC10-016R.xls). A series of representative photomicrographs are presented in Appendices B, C and D. The main characteristics of the samples are described below.

3. RESULTS

3.1. MITCHELL ZONE

Samples from the Mitchell zone are represented in samples 1 to 17. The sample suite includes samples classified as a variety of schists (samples, 1, 5, 6, 9, 10, 16 and 17), possibly brecciated feldspar porphyries (samples 2, 3, 4, 7, 8, 11 and 12) and samples of undetermined origin (samples 13, 14 and 15).

3.1.1. GANGUE MINERALS

Schist samples

The schist samples consist of lithic clasts made up of various amounts of schistose bands of sericite (± chlorite) that either alternate with bands of felsic minerals (quartz and lesser amounts of feldspars) or wrap around grains and clusters of felsic minerals or of pyrite. Felsic minerals are typically extensively internally deformed, strained or recrystallized. Carbonate is variably associated with felsic minerals in most samples, and anhydrite occurs in sample 17 as disseminated grains within felsic layers and bands.

The amount of felsic minerals present in the clasts is highly variable (15% in sample 10 to 50% in sample 1) and the samples are variably referred to as sericite-quartz schists (samples 1, 5 and 16), chlorite-sericite-quartz schists (sample 6), sericite schist (samples 9 and 10) and anhydrite-quartz-sericite (sample 17). Apatite and rutile are disseminated in all samples.

Schist clasts are cut by thin veinlets and clasts of possible vein material also occur throughout the schist samples, except in sample 1. The vein material (in schist and vein clasts) typically consists of quartz ± carbonate ± pyrite ± chalcopyrite. The grain size of the vein material is typically coarser than the one of the schist hostrock and quartz and carbonate can be extremely stretched and strained. In sample 6, pyrite and carbonate are interstitial to quartz.

Porphyritic samples

Samples 2, 3, 4, 7, 8, 11 and 12 are interpreted as feldspar porphyries. They consist of a very fine-grained groundmass of quartz and feldspars and contain feldspar phenocrysts. Both the groundmass and phenocrysts are variably altered, typically replaced by sericite ± carbonate ± chlorite. Mafic phenocrysts are not present, but chlorite ± sulphides ± rutile ± biotite ± sericite pseudomorphs occur. A diamond shaped pseudomorph is recognized in sample 2 suggesting that it replaces amphibole. Rutile and apatite are disseminated in all samples, with titanite additionally occurring in samples 3 and 4.

In the samples most altered by sericite, clasts locally have a well-developed schistose texture (sample 8) but faint brecciated textures are also recognized in some samples.

Variably thick carbonate veinlets cut lithic clasts in samples 3, 7, 8 and 11. In sample 3 and 7, grain fragments and granular clasts of medium- to coarse-grained carbonate suggest carbonate vein fragments (pyrite-hosting in sample 3). Medium-grained liberated quartz (samples 2, 3 and 4) or quartz grains and granular fragments additionally suggest possible fragments of quartz veins in these samples. In sample 4, carbonate and pyrite occur interstitial to quartz in the quartz vein clasts.

Undetermined samples

These samples are represented in samples 13, 14 and 15 and essentially consist of fine- to very fine-grained, granular to patchy lithic clasts made up of quartz, feldspar, sericite and carbonate with additional biotite and chlorite in samples 14 and 15. Minor amounts of apatite and rutile also occur in all samples. Subtle fragmental textures are locally observed in some clasts.

Thin carbonate veinlets locally cut the lithic clasts (samples 13 and 15) and medium-grained liberated quartz (samples 14 and 15) or carbonate (samples 13 and 15) grains and granular fragments suggest possible fragments of quartz veins or carbonate veins, respectively.

3.1.2. CARBONATE

Carbonate occurs in all samples except in samples 1, 2 and 16. Its abundance varies from 3% in sample 17 to 25% in sample 3. Carbonate is typically colourless (likely calcite) except in samples 11, 12 and 13 in which it is brownish and pleochroic (possible dolomite/ankerite). In sample 5, both colourless and brownish carbonates are observed and in sample 14, green malachite is associated with colourless carbonate.

The carbonates occur as anhedral to strongly elongated grains in thin veins cutting lithic clasts or in clasts of vein material. They also occur as small alteration patches disseminated in the lithic clasts of most carbonate-bearing samples.

3.1.3. OPAQUE MINERALS

Pyrite and lesser chalcopyrite are the dominant sulphides and occur in all samples. Bornite, enargite, sphalerite, chalcocite, possible tetrahedrite-tennantite, covellite and molybdenite additionally variably occur throughout the samples, in amounts close to or below 1%.

Pyrite abundance varies from 1-2% in sample 14 to approximately 30% in sample 16. Pyrite typically occurs as anhedral to subhedral grains disseminated in lithic clasts as well as disseminated in vein clasts (samples 3 and 4). In clasts, it varies in size from 5 µm to 1.4 mm. Pyrite also occurs as subangular liberated grains, 5 µm to 2.6 mm in size. Sulphides inclusions are common in pyrite and variably consist of chalcopyrite, bornite, enargite, sphalerite, tetrahedrite-tennantite, rutile and hematite. Inclusions are typically less than 50 µm in size.

The abundance of chalcopyrite varies from trace in samples 8, 11 and 12 to approximately 3% in samples 2 and 4. Chalcopyrite occurs as liberated grains (samples 1, 4, 5, 6 and 10), as anhedral grains set in the hostrock of lithic clasts (all samples except sample 8), or in veins (either in lithic clasts or vein clasts) in samples 4, 8, 9, 10, 14 and17. It also commonly occurs as inclusions in pyrite and rarely as fracture infill and coating around pyrite. In sample 12, chalcopyrite contains rare inclusions of sphalerite and tetrahedrite-tennantite.

Bornite (samples 1, 5 and 17), enargite (samples 1, 2, 4, 8, 9 and 15), sphalerite (samples 1, 4, 5, 6, 9, 10, 11, 13 and 17), possible tetrahedrite-tennantite (samples 1, 5, 10 and 11) and chalcocite (samples 4 and 17) occur as inclusions in pyrite. Sphalerite and tetrahedrite-tennantite occur as inclusions in chalcopyrite in sample 12. The inclusions (in pyrite and chalcopyrite) are typically very small (< 50 µm in size), making definitive identification difficult.

Tetrahedrite-tennantite also occurs in lithic clasts in sample 1 or in fractures in pyrite associated with chalcopyrite (sample 5). Sheaves of molybdenite occur liberated, in lithic clasts or as attachments to pyrite in samples 5 and 10. In sample 7 and 14, grains and masses of sphalerite occur in lithic clasts.

Grain boundaries of all sulphides are typically unaltered. However, in samples 2, 7 and 14, rims of hematite ± Fe-oxyhydroxides are variably developed around pyrite (and chalcopyrite in samples 7 and 14) as well as rims of covellite ± digenite ± Fe-oxyhydroxides around chalcopyrite. In sample 7, sporadic covellite rims are additionally observed around sphalerite. In sample 14, Fe-oxyhydroxides also occur as thin coating around lithic clasts.

Magnetite is disseminated in clasts in samples 3 and 14.

3.2. KERR ZONE

3.2.1. GANGUE MINERALS

Samples from the Kerr zone are represented in samples 18 to 21. The samples are classified as chlorite-sericite schists (sample 18) and sericite-quartz schists (samples 19, 20 and 21). The latter samples essentially consist of lithic clasts made up of schistose bands of sericite and variable amounts of chlorite wrapping around internally deformed or recrystallized grains and clusters of quartz or around subhedral grains of pyrite. In sample 18, no quartz is observed and lithic fragments are essentially made up of schistose sericite and lesser chlorite. Fine-grained apatite and very fine-grained rutile are disseminated in all samples. Thin veinlets occur in lithic clasts in samples 18, 20 and 21 as

well as coarser-grained granular vein clasts. The vein material in lithic and vein clasts is made up of quartz-carbonate-chlorite-pyrite-chalcopyrite in sample 18 and of quartz-carbonate-pyrite-chalcopyrite in samples 20 and 21.

3.2.2. CARBONATES

Carbonate occurs in samples 18, 20 and 21. No carbonate is observed in sample 19. The abundance of carbonate is close to 5% in sample 18, close to 1% in sample 20 and below 1% in sample 21. In all samples, carbonate is colourless and essentially occurs as anhedral grains and clusters of vein material in lithic or vein clasts.

3.2.3. OPAQUE MINERALS

In all four samples, pyrite is the dominant sulphide. Its abundance is close to 10% in sample 18, 20% in sample 20 and 30% in samples 19 and 21. Pyrite typically forms anhedral to subhedral grains (5 µm to 2 mm in size) that occur associated with quartz and sericite in lithic clasts as well as disseminated in vein clasts (except in sample 19 in which no vein material is observed). Pyrite also occurs as subangular liberated grains, 5 µm to 1.6 mm in size.

Chalcopyrite occurs in all samples in amounts close to 2-3%. It forms liberated grains (5 -500 µm in size) and anhedral grains (5 µm to 1 mm in size) in lithic clasts (samples 18, 19 and 20) or in vein clasts (samples 18, 20 and 21). In samples 19, 20 and 21, chalcopyrite also commonly occurs as overgrowths, fracture infill and inclusions in pyrite.

Other sulphides are variably present throughout the samples and occur in amounts ranging from trace to 3%. They consist of enargite, bornite, chalcocite and covellite.

Enargite and bornite occur in all samples as inclusions in pyrite in addition to chalcopyrite, rutile, possible chalcocite (in sample 18 only) and associated chalcopyrite/chalcocite in sample 19.

Chalcocite and covellite essentially occur in sample 19. Chalcocite forms liberated masses and masses associated with chalcopyrite in vein clasts. It also occurs as inclusions and overgrowths in and around chalcopyrite. Covellite sporadically forms partial rims and fracture infills in and around chalcopyrite/chalcocite.

The sulphide grain boundaries are typically unaltered, except in samples 18 and 19. In sample 18, masses of Fe-oxyhydroxides are observed that locally preserve blebs of pyrite. The masses of Fe-oxyhydroxides are liberated or less commonly enclosed in lithic clasts. In sample 19, masses of chalcopyrite/chalcocite are variably coated by covellite around grain boundaries and fractures.

3.3. SULPHURETS ZONE

3.3.1. GANGUE MINERALS

Samples from the Sulphurets zone are represented in samples 22 to 26. Three types of samples are recognized: sample 22 is of feldspar porphyry, samples 23 and 24 are of sericite schists and quartz ± chlorite ± carbonate veins and samples 25 and 26 are of brecciated feldspar porphyry.

In sample 22, lithic clasts are porphyritic, made up of fine-grained granular quartz and feldspars and coarser-grained feldspar phenocrysts. Feldspars are variably altered to secondary K-feldspar and pitted by sericite and carbonate. Masses of chlorite that are associated with sulphides or rutile occur throughout the clasts and likely represent altered mafic phenocrysts. Apatite is disseminated throughout the lithic clasts that are on some occasions cut by fine-grained veinlets of carbonate + chalcopyrite (+ quartz). A faint fragmental texture is recognized in rare clasts.

In samples 23 and 24, lithic clasts essentially consist of schistose bands of sericite and variable amounts of chlorite. Microcrystalline quartz (and possibly feldspars) is disseminated throughout the sericite-chlorite bands, as are clusters of rutile and grains of apatite. Granular clusters of carbonate ± quartz ± chlorite that likely represent vein material occur as attachments to lithic clasts and as vein fragments. This vein material is typically barren of sulphides.

In samples 25 and 26, fragments are typically porphyritic, but sharp variations of the groundmass grain sizes and textures (anhedral microcrystalline to lath-like, fine-grained) as well as the occurrence of ribbons of chlorite (+carbonate) lining porphyritic clusters suggest that lithic clasts are brecciated. Groundmass and phenocrysts are made up of feldspars (and likely minor quartz although quartz and feldspars cannot be resolved due to the very fine grain size) that are variably altered by secondary K-feldspar and carbonate. Patches and ribbons of chlorite and chlorite + carbonate occur in lithic clasts and the matrix of the brecciated clasts is of chlorite and carbonate. Rutile is disseminated in lithic clasts and these are commonly cut by variably thin carbonate veinlets.

3.3.2. CARBONATES

Carbonate occurs in all five samples, in amounts ranging from 5% in sample 23 to 20% in sample 24. Carbonate is typically colourless (calcite) although a darker variety (possible dolomite or ankerite) occurs in sample 23. In sample 22, 23 and 24, carbonate occurs in granular vein clasts made up of carbonate and quartz (sample 22), of dark carbonate ± quartz ± chlorite (sample 23) or of carbonate ± chlorite (sample 24). In all samples, carbonate also occurs as small granular veins in lithic clasts. In the porphyritic to clastic samples (samples 22, 25 and 26) carbonate additionally occurs as alteration product of feldspars.

3.3.3. OPAQUE MINERALS

Pyrite and chalcopyrite are the only sulphides that occur in all the samples. Pyrite abundance varies from approximately 3% in sample 25 to 10% in sample 23. Chalcopyrite abundance is below 1% in samples 25 and 26 and close to 2% in samples 22, 23 and 24.

Pyrite occurs as anhedral to subhedral grains, 5 µm to 2 mm in size, in lithic clasts or less commonly as subangular liberated grains, 5 to 600 µm in size (samples 22, 23 and 24 only). Chalcopyrite variably occurs as anhedral grains, 5 to 600 µm in size, in lithic clasts in samples 22, 23, 24 and 25, as inclusion or fracture infill in pyrite (samples 23 and 24) or as chalcopyrite disease (in sphalerite in sample 26). In sample 22, chalcopyrite is additionally disseminated in carbonate veins.

Trace amounts of enargite, molybdenite, galena and sphalerite are observed in some samples. Enargite occurs as inclusions in pyrite in sample 24 and molybdenite forms one elongated mass in a lithic clast in sample 22. In sample 26, masses of sphalerite and of galena occur in the chlorite (+ carbonate) breccia matrix. Sphalerite is pitted by chalcopyrite disease or has cores or attachments of galena.

Grain boundaries of all sulphides are unaltered and no Fe-oxyhydroxides occur in the samples.

4. SUMMARY AND CONCLUSION

The results of petrographic analyses of twenty six samples are presented in this report. The samples were collected in the Kerr, Sulphurets, and Mitchell deposits defining the KSM project. The purpose of the study was to characterize the mineralogy of the samples with particular emphasis on the carbonates and sulphides present. The main conclusions are summarized below.

- The sample suite is mostly made up of a range of different felsic rocks including sericite ± chlorite ± quartz schists, (brecciated) feldspar porphyries and undetermined granular to patchy felsic rocks.
- All samples are dominated by various amounts of quartz, feldspars and sericite. Biotite and chlorite are variably present throughout the sample suite and rutile, titanite and apatite are disseminated in most samples.
- Carbonate is present in most samples and occurs in amounts varying from trace to 20%. It is dominantly colourless (calcite) although possible dolomite/ankerite is also recognized in a few samples. Malachite is additionally observed in sample 14.
- Carbonate is fine- to medium-grained, anhedral and variably occurs as liberated grains and aggregates (vein material), in veins in lithic clasts and as dissemination in lithic clasts.
- In all samples, sulphides are dominated by pyrite and lesser chalcopyrite.
- The two sulphides variably occur as fine to medium-grained liberated grains and grains set in lithic or vein clasts. Chalcopyrite commonly also forms inclusions in pyrite.

- Minor amounts of enargite, bornite, possible chalcocite, galena, tetrahedrite-tennantite, digenite, covellite and sphalerite are observed in some samples.
- Most sulphides occur as inclusions in pyrite or sporadically as inclusions in chalcopyrite. When present, molybdenite forms elongated masses in lithic clast. Chalcocite occurs in sample 19 as liberated masses and masses associated with chalcopyrite in vein clasts. It also occurs as inclusions and overgrowths in and around chalcopyrite. Digenite and covellite sporadically forms partial rims and fracture infills in and around chalcopyrite/chalcocite. In sample 7, 14 and 26, grains and masses of sphalerite occur in lithic clasts. In sample 26, masses of galena also occur in lithic clasts.
- Grain boundaries of all sulphides are typically unaltered. However, in samples 2, 7, 14, 18 and 19, oxidation rims are variably developed around sulphides. These rims can be of hematite and/or Fe-oxyhydroxides around pyrite (samples 2, 7, 14 and 18) or around chalcopyrite (samples 7 and 14) of covellite ± digenite ± Fe-oxyhydroxides around chalcopyrite or chalcocite (samples 2, 7, 14 and 19) or of covellite around sphalerite (sample 7). In sample 14, Fe-oxyhydroxides also occur as thin coating around lithic clasts.

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APPENDIX A: SAMPLE DESCRIPTIONS

Sample	Lithology	Gangue minerals	Mineralogy	Pyrite	Chalcopyrite	Other	Sulphide grain boundaries
1 (M-09-096 195.5-196.5)	Quartz-sericite-schist	Lithic clasts of microcrystalline granular to foliated masses of sericite and variably internally deformed and recrystallized quartz grains with disseminated rutile grains; disseminated quartz mineral and illite grains/sheaves fragments	50% quartz; 35% illite; 10% pyrite, 1% rutile; 1% chalcopyrite; tr bornite; tr sphalerite	Liberated (5 µm - 1 mm in size) and disseminated (5-600 µm) in lithic clasts	Liberated (5-800 µm) and in clasts (5-500 µm); also as inclusions (<50 µm in size) and as fracture infill in pyrite	Common inclusions of bornite, enargite, sphalerite and tetrahedrite-tennantite in pyrite, all <0.05 mm in size; Disseminated tetrahedrite-tennantite in lithic clasts	Unaltered
2 (M-09-097 52.5-53.5)	Feldspar-amphibole porphyry	Microcrystalline to fine-grained lithic clasts, patchy (possibly clastic?) to porphyritic; Groundmass and phenocrysts variably made up of quartz + feldspars, sericite, chlorite + biotite; Amphibole suggested by diamond-shaped chlorite+ biotite pseudomorphs; disseminated apatite throughout; Lithic clasts and grain boundaries variably oxidized	55% quartz + feldspars; 15% biotite; 10% pyrite; 5% sericite; 5% chlorite; 3% chalcopyrite; 1% hematite, 1% apatite; 1% Fe-oxyhydroxides; tr rutile; tr enargite; tr digenite; tr covellite	Angular liberated (5-300 µm in size) grains and subhedral disseminated (5-800 µm) grains in clasts	Anhedral grains, liberated (5-300 µm) and in lithic clasts (5-100 µm); also as inclusions (<50 µm in size) in pyrite	Variably developed rims of Fe-oxyhydroxides around lithic clasts; rare inclusions of enargite in pyrite	Variably developed rims of hematite and Fe-oxyhydroxides around pyrite and of digenite/covellite around chalcopyrite; oxidation affects liberated grains and grains in lithic clasts
3 (M-09-097 92.5-93.5)	Feldspar porphyry + carbonate (± pyrite ± chalcopyrite) veins	1) Very fine-grained granular to porphyritic quartz-plagioclase-K-feldspar clasts with patches of chlorite (possible phenocrysts) and variably altered by sericite and carbonate; contain disseminated titanite, rutile and apatite and locally fine- to medium-grained anhedral quartz aggregates (quartz vein) ; 2) fine- to medium-grained granular carbonate-pyrite vein clasts	25% carbonate; 20% K-feldspar; 20% (quartz + plagioclase); 7% chlorite; 7% sericite; 7% pyrite; 1% apatite; 1% chalcopyrite; tr-1% magnetite; tr-1% titanite; tr-1% rutile; tr hematite	Typically disseminated (5 µm - 1 mm) in clasts, finer-grained in lithic clasts than in vein clasts; anhedral to subhedral; very rarely as liberated grains (5-200 µm in size)	Small anhedral grains (5-200 µm in size) in lithic clasts, locally associated with magnetite or titanite	Very fine-grained disseminated associated magnetite/hematite in lithic clasts	Pyrite grain boundaries commonly ragged and irregular

Sample	Lithology	Gangue minerals	Mineralogy	Pyrite	Chalcopyrite	Other	Sulphide grain boundaries
4 (M-09-097 147.5-148.5)	Feldspar porphyry + quartz (± carbonate ± chalcopyrite) veins	1) Very fine-grained granular to porphyritic quartz-plagioclase-K-feldspar clasts with coarse-grained disseminated K-feldspar phenocrysts; weakly altered by sericite and carbonate; contain disseminated chlorite, titanite, rutile and apatite and locally fine- to medium-grained anhedral quartz aggregates (quartz vein) ; 2) Medium-grained granular quartz-pyrite(-carbonate) vein clasts	30% K-feldspar; 30% (quartz + plagioclase); 10% chlorite; 5% sericite; 5% carbonate; 5% pyrite; 3% magnetite; 3% chalcopyrite; 1% apatite; 1% titanite; tr-1% rutile; tr enargite; tr chalcocite; tr sphalerite	Liberated (5 µm - 2.6 mm in size) and disseminated (5 µm - 1.2 mm) in clasts; typically anhedral	Small anhedral grains (5-300 µm in size) in lithic clasts or liberated (5-100 µm in size); also as inclusions and fracture infill in pyrite	Very fine-grained inclusions of enargite, chalcocite and sphalerite in pyrite; inclusions <50 µm in size	Unaltered
5 (M-09-106 58.5-59.5)	Sericite-quartz schist + quartz-carbonate-chlorite-pyrite veins	Lithic clasts of microcrystalline granular to foliated masses of sericite and variably internally deformed and recrystallized quartz grains with disseminated rutile grains; lithic clasts of granular quartz and carbonate (+ chlorite + pyrite); disseminated quartz mineral and sericite, chlorite grains/sheaves fragments	40% quartz; 20% sericite; 15% carbonate; 10% chlorite; 12% pyrite, 1% chalcopyrite, 1% apatite; tr rutile, tr molybdenite, tr tetrahedrite-tennantite, tr bornite; tr sphalerite	Liberated (5 µm - 12mm in size) and disseminated (5 µm - 1.4 mm) in clasts	Liberated (5-100 µm) and in clasts (5-200 µm); also as inclusions (<100 µm in size) and as fracture infill in pyrite	Sporadic inclusions of bornite, sphalerite and tetrahedrite-tennantite in pyrite, all <0.1 mm in size; Tetrahedrite-tennantite in fractures in pyrite with chalcopyrite; Sheaves of molybdenite (0.1 -0.3 mm), liberated and in clasts	Unaltered
6 (M-09-106 34.5-35.5)	Chlorite-sericite-quartz schist + quartz-carbonate-pyrite veins	Lithic clasts of microcrystalline granular to foliated masses of sericite, foliated chlorite and variably internally deformed and recrystallized quartz grains with disseminated rutile grains; Lithic clasts of granular quartz and interstitial carbonate (± pyrite); disseminated quartz and carbonate mineral fragments and of sericite, chlorite grains/sheaves fragments	40% quartz; 5% carbonate; 30% sericite; 15% chlorite; 8% pyrite, 1% chalcopyrite, tr rutile; tr sphalerite	Liberated (5 µm - 0.5mm in size) and disseminated (5 µm - 1 mm) in clasts	Liberated (5-100 µm) and in clasts (5-200 µm); also as inclusions (<60 µm in size), overgrowths and fracture infill in pyrite	Rare inclusions of sphalerite in pyrite	Unaltered
7 (M-09-108 56.5-57.5)	Feldspar porphyry + carbonate-quartz veins	Altered porphyritic clasts made up of fine-grained quartz (+ feldspar) groundmass with disseminated apatite, chlorite, carbonate; phenocrysts of K-feldspars and plagioclase locally preserved from sericite + chlorite alteration; patches of chlorite + sulphides throughout (former phenocrysts?); coarser-grained carbonate in thin veinlets in clasts and as monomineralic vein fragments; local Fe-oxyhydroxide rims and stain in clasts	55% quartz + feldspars; 12% carbonate; 10% chlorite; 10% sericite; 7% pyrite, 2% chalcopyrite, 1% apatite; tr rutile; tr sphalerite; tr covellite; tr hematite; tr Fe-oxyhydroxides	Anhedral grains, variably poikilitic, disseminated (5 µm - 1.4 mm in size) in lithic clasts	Anhedral grains (5-100 µm) disseminated in clasts	Anhedral grains and masses of sphalerite (5 µm - 1 mm) in lithic clasts	Sporadic covellite rims around sphalerite or chalcopyrite; local rims of hematite around pyrite or chalcopyrite

Sample	Lithology	Gangue minerals	Mineralogy	Pyrite	Chalcopyrite	Other	Sulphide grain boundaries
8 (M-09-108 118.5-119.5)	Feldspar porphyry	Fine- to medium-grained plagioclase and K-feldspar phenocrysts in a very fine-grained groundmass of feldspars + quartz, variably altered by sericite and carbonate; possible mafic phenocrysts pseudomorphed by rutile + sericite; most altered clasts similar to sericite schists; cut by variably thick fine-grained carbonate (+ quartz) veinlets	45% quartz + feldspars; 25% sericite; 15% pyrite; 10% carbonate; 2% chlorite; tr chalcopyrite; tr rutile; tr enargite; tr apatite	Anhedral grains, typically disseminated (5-800 µm) in clasts or rarely liberated (5-800 µm in size)	Rare small anhedral grains in clasts (5-50 µm); also as inclusions (<50 µm in size) and as fracture infill in pyrite	Rare inclusions of enargite (<50 µm) in pyrite	Unaltered
9 (M-09-108 162.5-163.5)	Sericite schist	Patchy fine- to very fine-grained clasts of granular quartz (and possibly feldspars), carbonate, foliated sericite and chlorite; local attachments of coarser-grained quartz or carbonate suggesting vein material; Liberated quartz, feldspars and carbonate mineral fragments and sericite, chlorite sheaves	40% quartz + feldspars; 30% sericite; 10% chlorite; 7% pyrite; 7% carbonate; 1% chalcopyrite; tr rutile; tr enargite; tr apatite; tr hematite; tr sphalerite	Anhedral grains, disseminated (5 µm- 1mm) in clasts or liberated (5-400 µm in size)	Anhedral grains (5-80 µm) in clasts; also as inclusions (<50 µm in size), overgrowths, attachments and as fracture infill in pyrite	Inclusions of enargite, sphalerite and hematite in pyrite; all inclusions <50 µm	Unaltered
10 (M-09-108 184.5-185.5)	Sericite schist + quartz-carbonate-pyrite veins	Lithic clasts of microcrystalline granular to fine-grained foliated masses of sericite, foliated chlorite and disseminated quartz, carbonate, rutile, opaque (Fe, Ti)-oxides and apatite; Lithic clasts of granular quartz and carbonate (+ pyrite); disseminated quartz and carbonate mineral fragments and of sericite, chlorite grains/sheaves fragments.	70% sericite; 15% quartz; 10% chlorite; 5% carbonate, 15% pyrite, 1% chalcopyrite, tr rutile, tr (Fe, Ti)-oxides; tr apatite; tr molybdenite; tr tetrahedrite-tennantite; tr sphalerite	Liberated (5-750 µm in size) and disseminated (5-200 µm) in lithic clasts	Liberated (5-100 µm) and in clasts (5-80 µm); also as inclusions (<50 µm in size) and as fracture infill in pyrite and as pyrite overgrowths	Rare inclusions of sphalerite and tetrahedrite-tennantite in pyrite; molybdenite (10-200) occurring liberated or as attachments to pyrite	Unaltered
11 (M-09-102 120.5-121.5)	Feldspar porphyry	Patchy to vaguely porphyritic fine- to very fine-grained clasts of granular quartz, feldspars, carbonate, foliated sericite and chlorite; local thin carbonate veins throughout clasts	40% feldspars; 20% quartz; 15% sericite; 15% carbonate; 5% pyrite; 1% chlorite; 1% rutile; 1% apatite; tr chalcopyrite, tr enargite; tr tetrahedrite-tennantite; tr sphalerite	Disseminated subhedral grains (5-600 µm) in lithic clasts; less commonly as anhedral masses in clasts	Anhedral grains (5-100 µm) in clasts; also as inclusions, attachments and fracture infill in pyrite	Rare inclusions of rutile, sphalerite and tetrahedrite-tennantite in pyrite; all inclusions < 50 µm in size	Unaltered

Sample	Lithology	Gangue minerals	Mineralogy	Pyrite	Chalcopyrite	Other	Sulphide grain boundaries
12 (M-09-102A 125.5-126.5)	Feldspar porphyry	Granular to porphyritic very fine-grained clasts of granular quartz, feldspars, carbonate and foliated sericite	35% feldspars; 20% quartz; 15% sericite; 15% carbonate; 12% pyrite; 1% rutile; tr apatite; tr chalcopyrite, tr tetrahedrite-tennantite, tr zircon; tr sphalerite	Disseminated anhedral to subhedral grains (5-800 µm) in lithic clasts; very rare inclusions (< 30 µm in size) in chalcopyrite	Anhedral grains (5-200 µm) in clasts; rarely as inclusions (< 30 µm) in pyrite	Few inclusions of sphalerite and tennantite in chalcopyrite; none in pyrite	Unaltered
13 (M-09-102A 133.5-134.5)	Undetermined	Granular very fine-grained to microcrystalline clasts, locally containing ill-defined phenocrysts; Clast groundmass made up of granular quartz and feldspars with disseminated carbonate and sericite; Cut by variably thick carbonate veinlets	60% (quartz + feldspars); 20% carbonate; 10% sericite; 5% pyrite; 1% rutile; 1% apatite; tr-1% chalcopyrite; tr sphalerite	Disseminated anhedral to subhedral grains (5-400 µm) in lithic clasts	Anhedral grains (5-25 µm) in clasts; rarely as inclusions (< 25 µm) or attachments to pyrite; disseminated, extremely fine-grained (<30 µm) in a carbonate vein in a clast	Few inclusions of sphalerite in pyrite	Unaltered
14 (M-09-110 34.5-35.5)	Undetermined	Granular very fine-grained to microcrystalline clasts; Clast groundmass made up of granular quartz and feldspars with disseminated carbonate, sericite, chlorite, rutile, apatite, titanite and sulphides; Possible quartz and feldspar phenocrysts present but extensively internally deformed or recrystallized; Fine-grained biotite/sericite dissemination in some lithic clasts; Lithic clasts locally cut by thin carbonate veinlets and with patches of malachite; Lithic clasts variably stained and rimmed by Fe-oxyhydroxides	60% (quartz + feldspars); 15% biotite; 5% carbonate; 5% sericite; 5% chlorite;1-2% hematite; 1-2% pyrite; 1% rutile; 1% chalcopyrite; 1% apatite; 1% Fe-oxyhydroxides; 1% titanite; tr magnetite; tr covellite;	Disseminated anhedral to euhedral grains (5-300 µm) in lithic clasts	Anhedral grains (5-200 µm) in lithic clasts and rare inclusions in pyrite	Anhedral grains of sphalerite (5-300 µm in size) and anhedral to subhedral grains of hematite (5-100 µm) disseminated in clasts; few granular clusters of magnetite	Rims of Fe-oxyhydroxides developed around lithic clasts and around sulphides / hematite and associated with covellite; disseminated hematite

Sample	Lithology	Gangue minerals	Mineralogy	Pyrite	Chalcopyrite	Other	Sulphide grain boundaries
15 (M-09-110 88.5-89.5)	Undetermined + carbonate veins + quartz veins	Granular very fine-grained clasts with locally preserved extensively internally deformed feldspar and quartz phenocrysts, locally possible clastic texture; Clast groundmass made up of granular quartz and feldspars with disseminated carbonate, biotite, sericite, chlorite, rutile, apatite and sulphides; Lithic clasts locally cut by thin carbonate veinlets; rare coarse-grained quartz or carbonate grain fragments suggest quartz or carbonate vein fragments	50% (quartz + feldspars); 20% biotite; 7% carbonate; 5% sericite; 5% chlorite; 5% pyrite; 2% rutile; 2% chalcopyrite; 2% apatite; tr enargite	Anhedral to subhedral grains (5-300 µm in size) in lithic clasts	Anhedral grains (5-200 µm in size) in lithic clasts; rare inclusions (<50 µm in size) in pyrite; local corona around pyrite	Inclusions (<25 µm in size) of possible enargite in pyrite	Unaltered
16 (M-09-110 342.5-343.5)	Sericite-quartz schist + quartz-carbonate-chlorite-pyrite veins	Lithic clasts of microcrystalline granular to foliated masses of sericite (+ chlorite) and variably internally deformed quartz; Disseminated rutile in lithic clasts; Disseminated quartz and carbonate mineral fragments and sericite and chlorite sheaves.	25% sericite; 35% quartz; 5% chlorite; 30% pyrite, 1% chalcopyrite, tr rutile; tr molybdenite; tr tetrahedrite-tennantite	Mostly liberated (5 µm - 2 mm in size) and less commonly disseminated (5-600 µm) in lithic clasts	Rare irregularly shaped inclusions (<100 µm in size) in pyrite	-	Unaltered
17 (M-09-112 224.5-225.5)	Anhydrite-quartz-sericite schist + quartz-carbonate-chlorite-pyrite veins	Lithic clasts of microcrystalline granular to foliated masses of sericite with disseminated grains and patches of quartz, feldspars and anhydrite; disseminated clusters of rutile; coarser-grained quartz and carbonate in veins in clasts and as liberated vein fragments; liberated quartz, feldspars, chlorite and sericite	40% sericite; 35% (feldspars + quartz); 7% pyrite, 7% anhydrite; 3% carbonate; 1% chalcopyrite, 1% rutile; 1% apatite; tr bornite; tr chalcocite; tr sphalerite	Disseminated anhedral grains (5 µm - 1 mm) in lithic clasts	Anhedral grains (5-100 µm) in clasts; also as inclusions (<75 µm in size) and overgrowths in pyrite	Inclusions (<75 µm in size) of bornite, sphalerite and chalcocite in pyrite	Unaltered
18 (K-09-01 84.5-85.5)	Sericite schist + quartz-carbonate-chlorite-pyrite-chalcopyrite veins	Lithic clasts of microcrystalline granular to foliated masses of sericite/chlorite with disseminated grains and patches of quartz and feldspars, clusters of rutile and grains of apatite; coarser-grained quartz and carbonate in veins in clasts and as liberated vein fragments; liberated quartz, feldspars, chlorite and sericite	45% sericite; 15% (feldspars + quartz); 15% chlorite; 10% pyrite, 5% carbonate; 2% chalcopyrite, 2% rutile; 2% Fe-oxyhydroxides; 2% apatite; tr enargite; tr chalcocite, tr bornite	Anhedral to subhedral grains, liberated (5-600 µm in size) and disseminated (5 µm - 1 mm) in lithic clasts	Anhedral grains and masses (5-200 µm) in clasts or liberated (5-500 µm). Also as inclusions (<50 µm in size) in pyrite	Rounded inclusions of enargite, bornite (<200 µm) in pyrite and elongated inclusions (< 75 µm long) of possible chalcocite; Anhedral masses of Fe-oxyhydroxides, typically liberated, rarely in schist clasts	Anhedral masses of Fe-oxyhydroxides, liberated or occurring in schist clasts and preserving bits of pyrite

Sample	Lithology	Gangue minerals	Mineralogy	Pyrite	Chalcopyrite	Other	Sulphide grain boundaries
19 (K-09-02 66.5-67.5)	Sericite-quartz schist	Extremely thin section; Lithic clasts of microcrystalline granular to foliated masses of sericite and variably internally deformed quartz; Disseminated rutile in lithic clasts; Disseminated quartz mineral fragments and sericite sheaves.	35% quartz; 25% sericite; 30% pyrite; 3% chalcocite; 2% chalcopyrite; 2% apatite; 1% rutile; tr covellite	Liberated (5-900 µm in size) and disseminated (5-400 µm) in lithic clasts	Mostly as overgrowths, fracture infill and inclusions (<100 µm in size) in pyrite; also disseminated (5-400 µm) in clasts or liberated (5-100 µm)	Liberated chalcocite (5-600 µm); groundmass of chalcocite in one lithic clast; Inclusions and overgrowths of chalcocite associated with chalcopyrite in pyrite; covellite as local rims and fracture infill around Cu-sulphides	Local partial to complete rims and fracture infill of covellite around chalcopyrite / chalcocite
20 (K-09-03 140.5-141)	Sericite-quartz schist + quartz-carbonate(-pyrite-chalcopyrite) veins	Lithic clasts of microcrystalline granular to foliated masses of sericite (+ chlorite) and variably internally deformed quartz; Disseminated rutile and apatite in lithic clasts; Fine-grained granular lithic clasts of quartz (+carbonate). Disseminated quartz and carbonate grain fragments and sericite sheaves.	45% quartz; 25% sericite; 20% pyrite; 5% chlorite; 2% carbonate; 2% chalcopyrite; 1% apatite; tr rutile; tr bornite; tr enargite	Liberated (5 µm - 1 mm in size) and disseminated (5 µm-1.2 mm) in lithic clasts	Overgrowths, fracture infill and inclusions (<100 µm in size) in pyrite; Masses liberated (5-200 µm in size) or set (5-400 µm) in lithic clasts	Bornite, enargite and possible rutile inclusions in pyrite; all inclusions < 50 µm in size	Unaltered
21 (K-09-04 126.5-127.5)	Sericite-quartz schist + quartz(-carbonate-pyrite-chalcopyrite) veins	Lithic clasts of variably internally deformed quartz with disseminated masses of microcrystalline granular to foliated sericite (+ chlorite); Disseminated rutile and apatite in lithic clasts; Fine-grained monomineralic lithic quartz clasts. Disseminated quartz mineral fragments and sericite sheaves.	40% quartz; 30% pyrite; 20% sericite; 5% chlorite; 2-3% chalcopyrite; 1% apatite; tr rutile; tr bornite; tr enargite	Liberated (5 µm - 1.6 mm in size) and disseminated (5 µm - 2 mm) in lithic clasts	Overgrowths, fracture infill and inclusions (<100 µm in size) in pyrite; Liberated (5-200 µm in size) and disseminated (5 µm 1 mm) in lithic clasts	Bornite, enargite and possible rutile inclusions in pyrite; all inclusions < 50 µm in size	Unaltered
22 (S-08-06 252.5-253.5)	Feldspar porphyry + quartz ± carbonate veins	Variably altered porphyritic clasts, made up of fine-grained granular quartz and feldspars and coarser-grained feldspar phenocrysts; chlorite, apatite and rutile disseminated in the groundmass; variably altered by sericite and carbonate; Some carbonate(+quartz) veins in clasts	45% (quartz + feldspars); 25% chlorite; 10% sericite; 7% carbonate; 5% pyrite; 2% chalcopyrite; 2% rutile; 1% apatite; tr molybdenite	Disseminated anhedral to subhedral grains (5-600 µm) in lithic clasts; one liberated subhedral grain 0.3 mm in size	Anhedral grains (5-200 µm) in vein clasts	One elongated mass (1 mm long) of molybdenite sheaves in a clast	Unaltered

Sample	Lithology	Gangue minerals	Mineralogy	Pyrite	Chalcopyrite	Other	Sulphide grain boundaries
23 (S-09-11 350.5-351.5)	Sericite schist + quartz ± chlorite ± carbonate veins	Microcrystalline foliated clasts of associated sericite and chlorite with disseminated rutile and quartz (and feldspars) grains; coarser-grained mineral fragments and polygranular lithic fragments of chlorite, carbonate, quartz, suggest possible vein material	40% sericite; 25% (quartz + feldspars); 15% chlorite; 10% pyrite; 5% carbonate; 2% chalcopyrite; 2% rutile; 1% apatite	Anhedral to subhedral grains, occurring disseminated (5 µm- 2mm) in lithic clasts or liberated (5-600 µm)	Anhedral grains (5-200 µm) in lithic clasts; also as inclusions (< 200 µm in size) and fracture infill in pyrite	-	Unaltered
24 (S-09-11 374.5-375.5)	Sericite schist + quartz ± carbonate (± chlorite) veins	Microcrystalline foliated lithic clasts of sericite and lesser chlorite with disseminated patches of chlorite + rutile and of sulphides ± chlorite ± carbonate and disseminated grains of quartz/feldspars; Thin irregular carbonate or chlorite/carbonate veinlets throughout clasts; Coarser-grained mineral fragments and polygranular vein fragments of carbonate ± chlorite, or metamorphic quartz	25% sericite; 20% (quartz + feldspars); 20% chlorite; 20% carbonate; 7% pyrite; 2% chalcopyrite; 2% rutile; tr enargite	Anhedral to subhedral grains, occurring disseminated (5 µm- 1.2mm) in lithic clasts or liberated (5-600 µm)	Anhedral grains (5-600 µm) in lithic clasts; also as inclusions (< 50 µm in size) in pyrite	Inclusions of enargite in pyrite; all inclusions <50 µm	Unaltered
25 (S-09-12 144.5-145.5)	Brecciated porphyritic rock	Lithic clasts of possible feldspar porphyry as well as clasts made up of anhedral granular quartz + feldspars, polycrystalline microcrystalline to fine-grained felsic rock fragments all set in a groundmass of chlorite, rutile and carbonate and suggesting clasts of fragmental rock; all fragments commonly crosscut by very thin carbonate veinlets	50% (quartz + feldspar); 30% chlorite; 15% carbonate; 3% pyrite; 1% rutile; tr chalcopyrite	Anhedral disseminated grains (20-600 µm) in lithic clasts	Anhedral grains (5-200 µm) in lithic clasts	-	Unaltered
26 (S-09-12 172.5-173.5)	Brecciated porphyritic rock	Lithic clasts made up of anhedral K-feldspar fragments, polycrystalline microcrystalline to fine-grained felsic rock fragments all set in a groundmass of chlorite + sulphides + carbonate and suggesting clasts of brecciated rock; all fragments commonly crosscut by very thin carbonate veinlets; quartz and plagioclase abundance low	60% (quartz + feldspar); 15% carbonate; 10% chlorite; 5% pyrite; 2% rutile; 2% sphalerite; tr-1% galena; tr chalcopyrite	Anhedral to subhedral disseminated grains (5-40 µm rarely up to 300 µm) in lithic clasts; also in clusters up to 1.6 mm in size made up of subhedral pyrite and interstitial sphalerite	As chalcopyrite disease in sphalerite	Rare grains of galena (95-100 µm in size) and cores / attachments to chalcopyrite-free sphalerite in lithic clasts; Anhedral sphalerite (5-200 µm) associated with chlorite and pitted by chalcopyrite disease in lithic clasts; Ribbons of sphalerite interstitial to pyrite	Unaltered

APPENDIX B: REPRESENTATIVE PHOTOMICROGRAPHS OF SAMPLES FROM THE MITCHELL DEPOSIT

List of abbreviations used in the description of photomicrographs:

FOV: Field of view – defined for the long dimension of photomicrographs
PPL: Plane polarized light
XPL: Crossed polars
RL: Reflected light

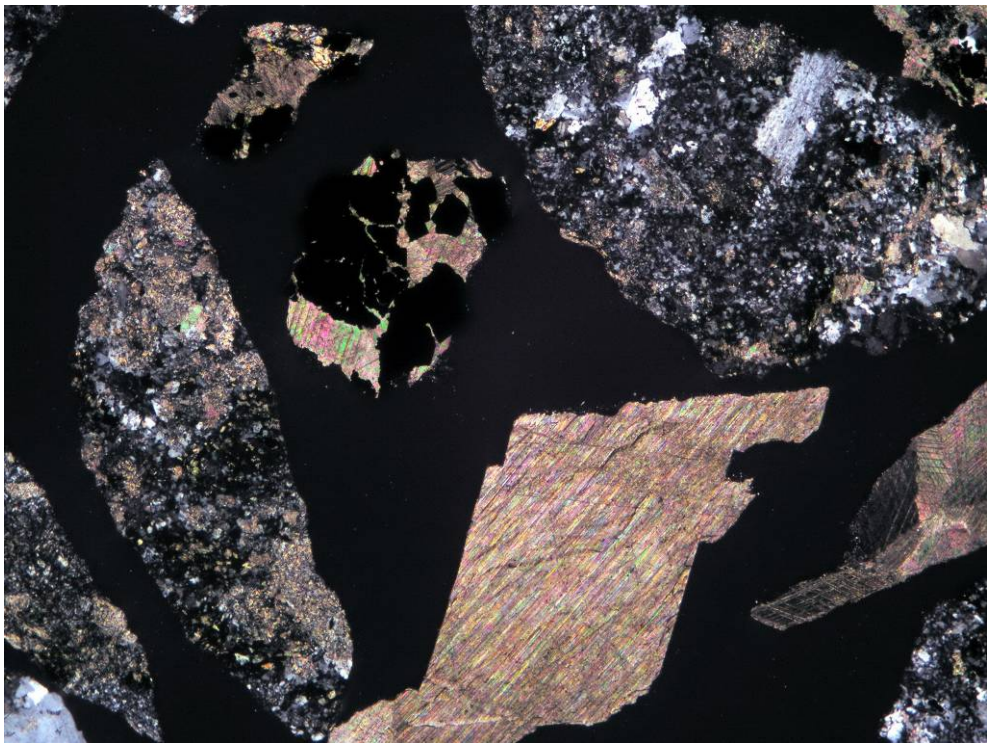


Figure M1: *Photomicrograph of sample 3 showing porphyritic clasts and vein clasts represented by liberated carbonate grains and carbonate-sulphide aggregates. XPL, FOV = ~ 7 mm.*

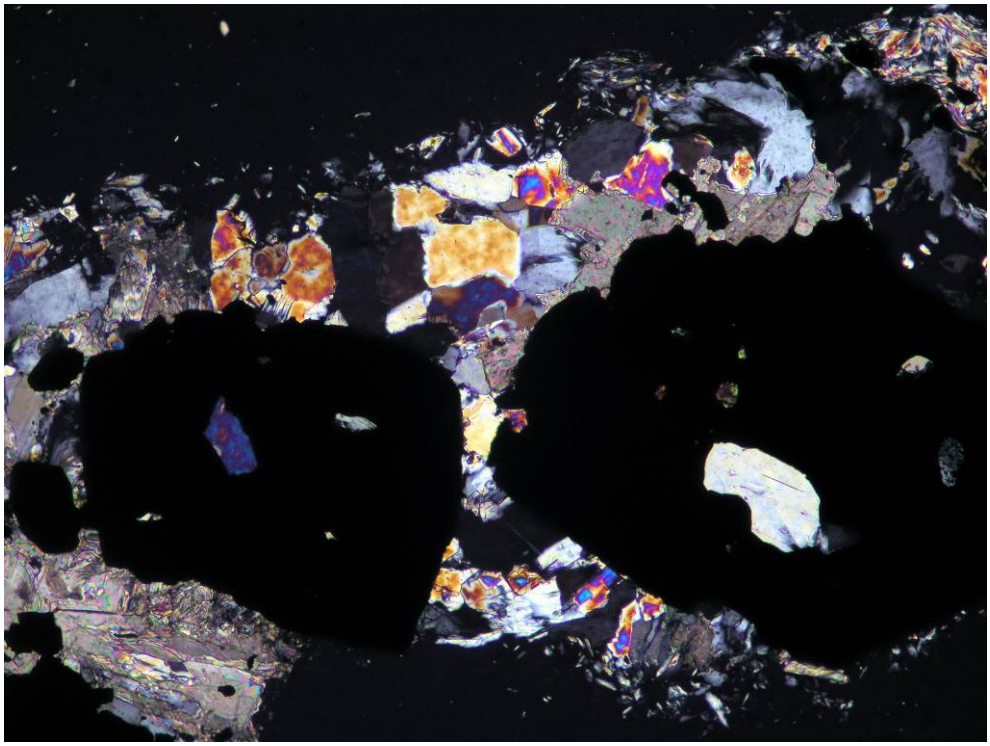


Figure M2: *Photomicrograph of sample 17 showing part of a lithic clasts essentially containing sulphides (black, opaque), carbonate (pinkish birefringence colours) carbonate and anhydrite (bright birefringence colours). XPL, FOV =~ 1.4 mm.*

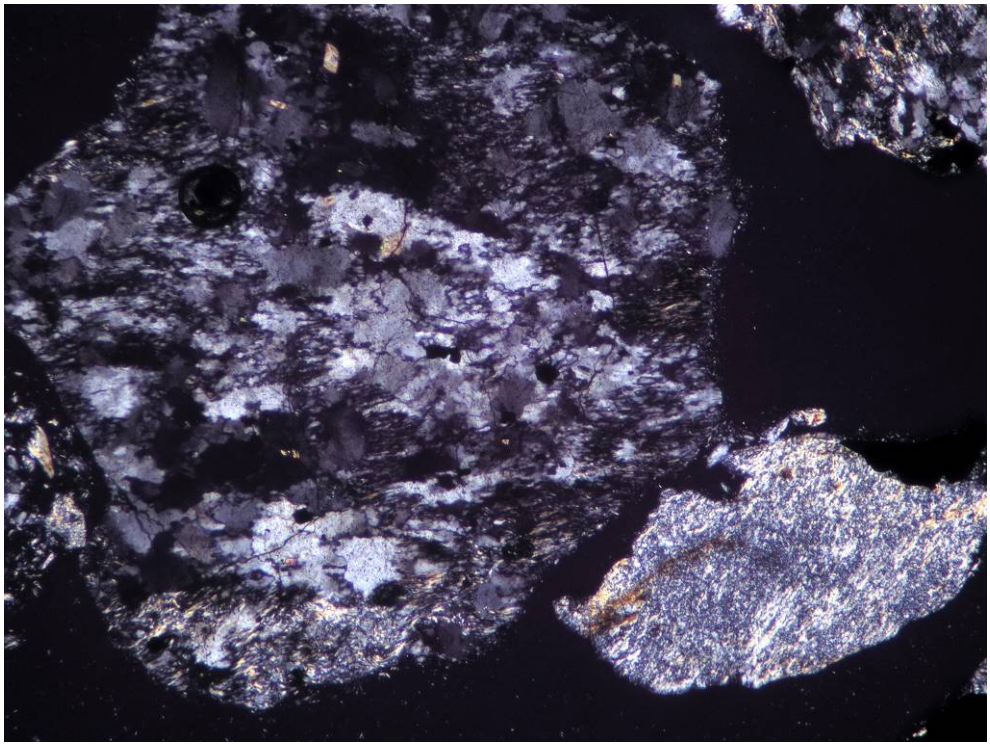


Figure M3: *Photomicrograph of sample 1 showing a quartz clast in which quartz is extremely internally deformed. Subgrains and much finer-grained recrystallized grains occur in the clast. XPL, FOV = ~ 2.7 mm.*

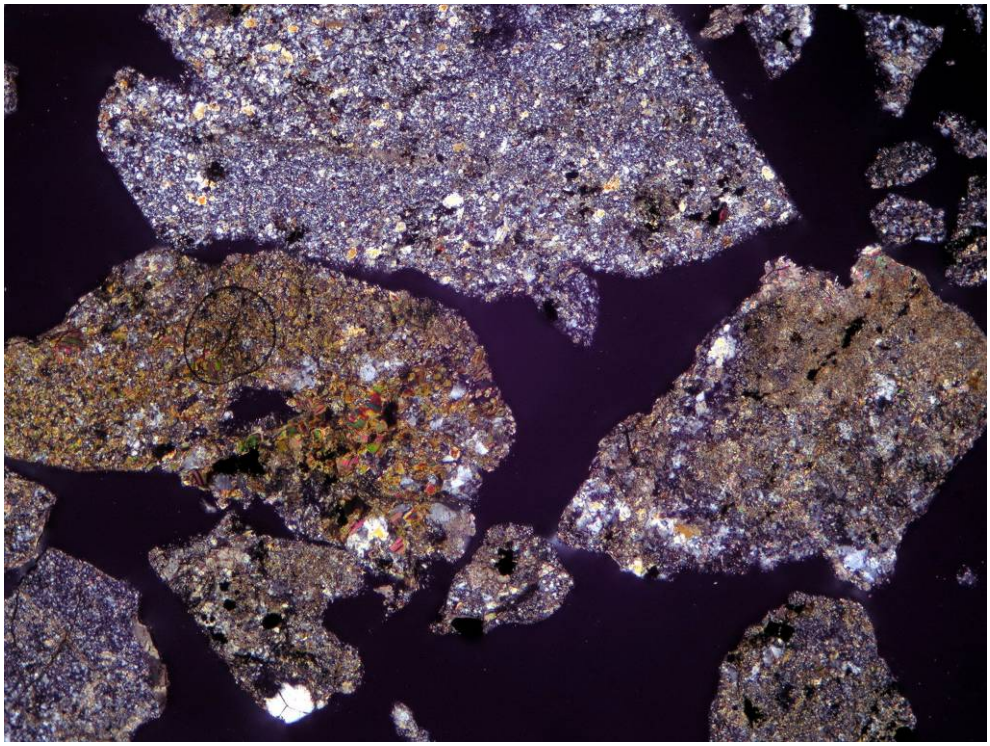


Figure M4: *Photomicrograph of sample 15 showing the occurrence of fine-grained granular clasts. The clast of on the left side of the photomicrograph contains abundant very fine-grained biotite. XPL, FOV = ~ 7 mm.*

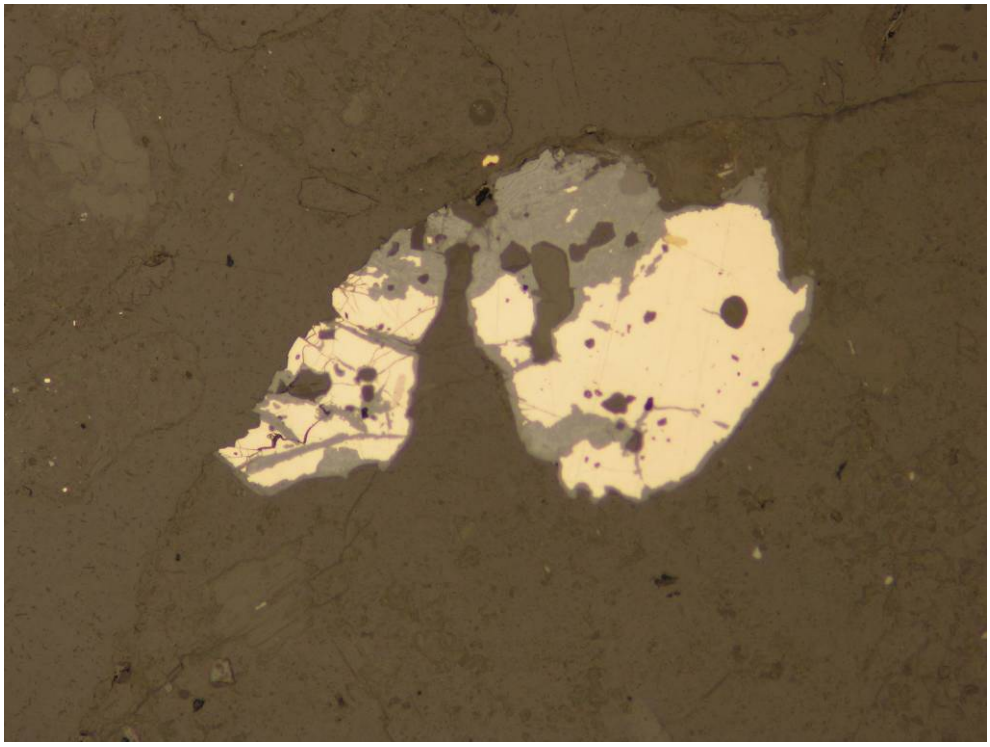


Figure M5: *Photomicrograph of sample 2 showing grains of pyrite (whitish) in a lithic clast. Fractures and grain boundaries are variably coated (and replaced) by hematite and Fe-oxyhydroxides. A yellow inclusion of chalcopyrite also occurs in pyrite (top right). RL, FOV = ~ 1.4 mm*

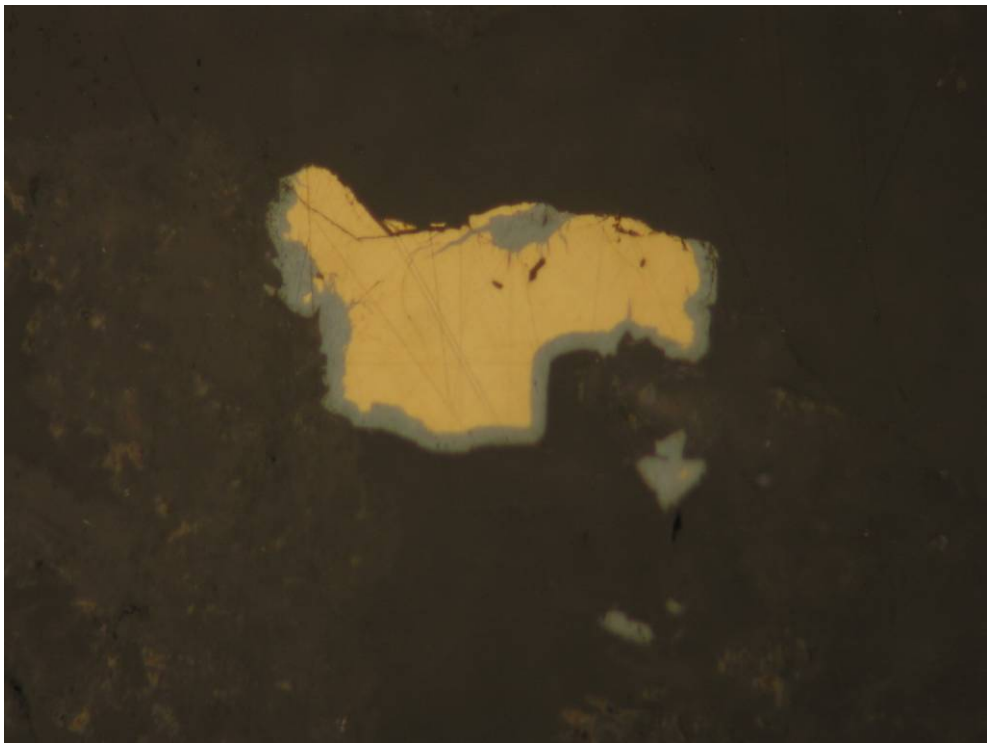


Figure M6: *Photomicrograph of sample 2 showing a grain of chalcopyrite partially rimmed by digenite. RL, FOV = ~ 0.28 mm*

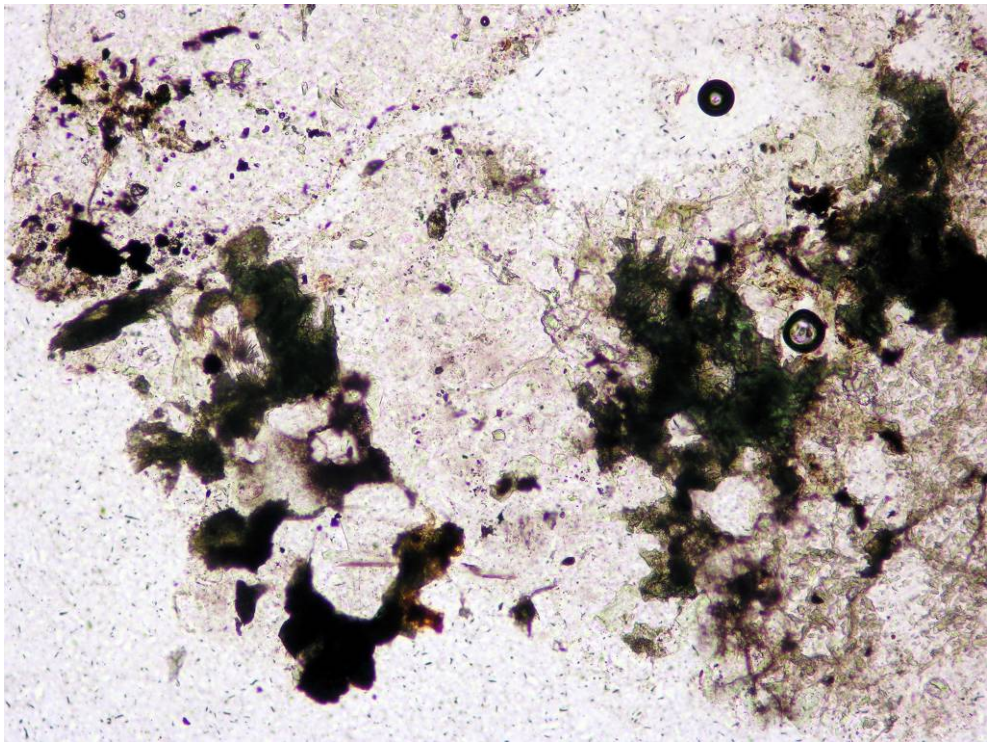


Figure M7: *Photomicrograph of sample 14 showing a lithic clast containing disseminated patches of oxidized sulphides (opaque to brownish) that are associated with green malachite. PPL, FOV = ~ 0.27 mm*

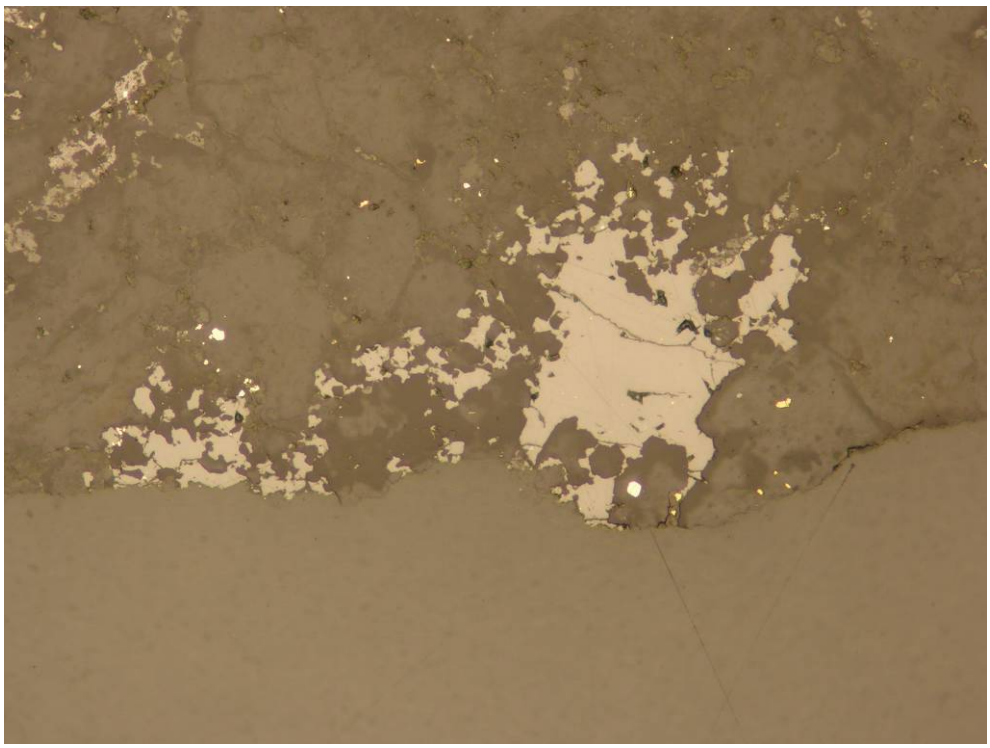


Figure M8: *Photomicrograph of sample 14 showing masses of sphalerite in a lithic clast. RL, FOV = ~ 1.4 mm*

APPENDIX C: REPRESENTATIVE PHOTOMICROGRAPHS OF SAMPLES FROM THE KERR DEPOSIT

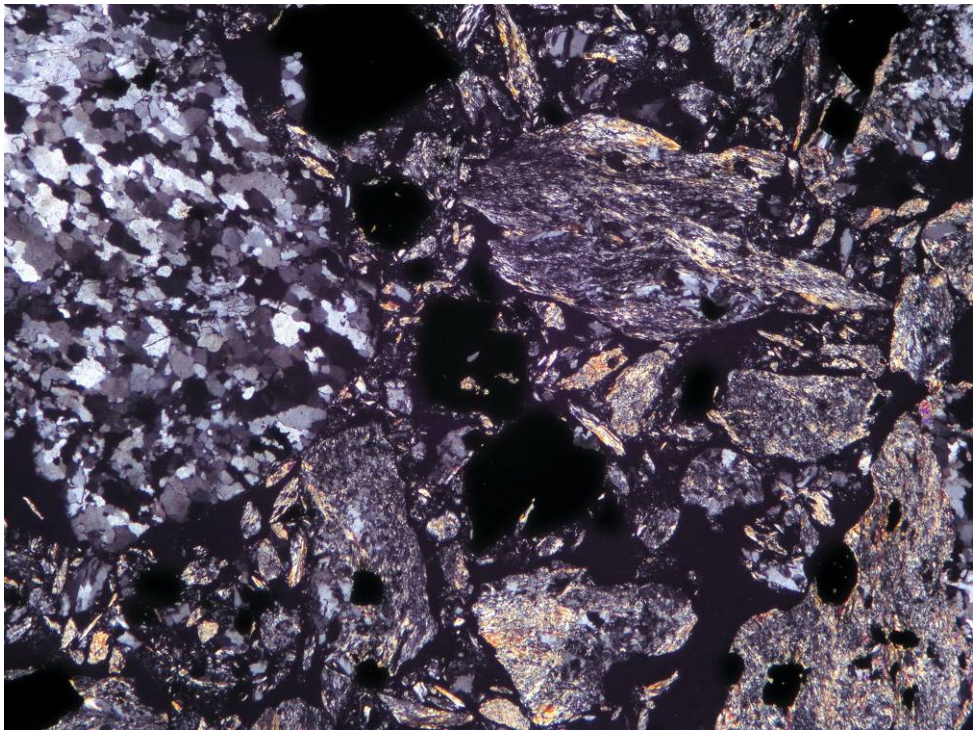


Figure K1: *Photomicrograph of sample 21 showing that most lithic clasts are of foliated sericite-quartz schist. The granular quartz clast on the left side of the photomicrograph is interpreted as vein material. XPL, FOV =~ 7 mm.*

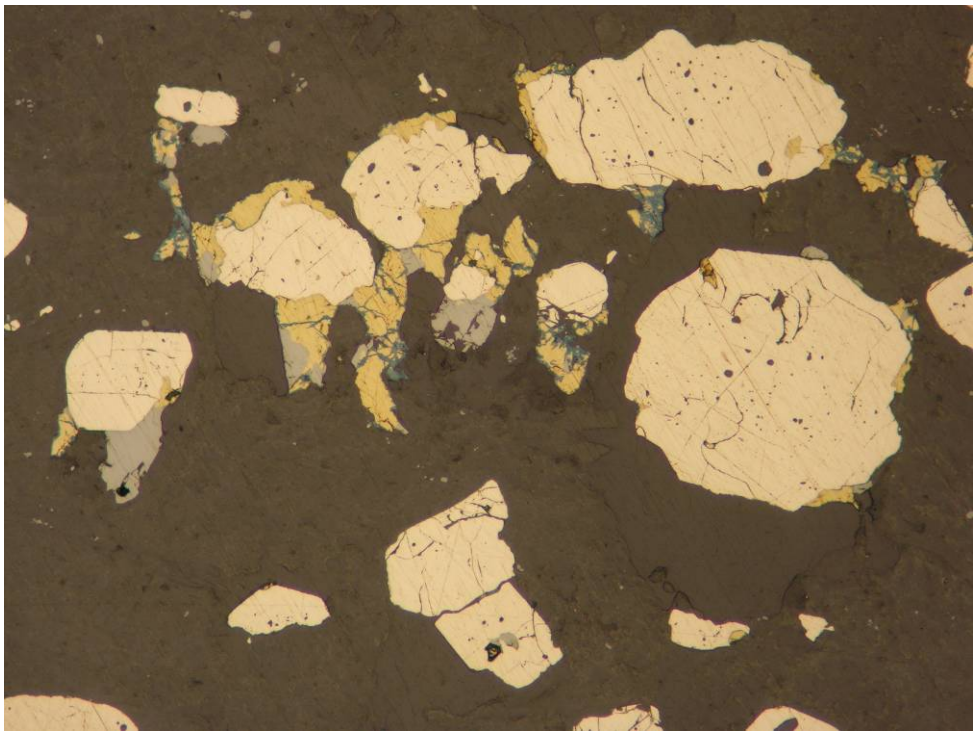


Figure K2: *Photomicrograph of sample 19 showing disseminated small grains of pyrite (off-white) in a lithic clast. The pyrite grains are partially rimmed by yellow chalcopyrite that is associated with grey chalcocite and dark blue covellite. RL, FOV =~ 2.7 mm.*

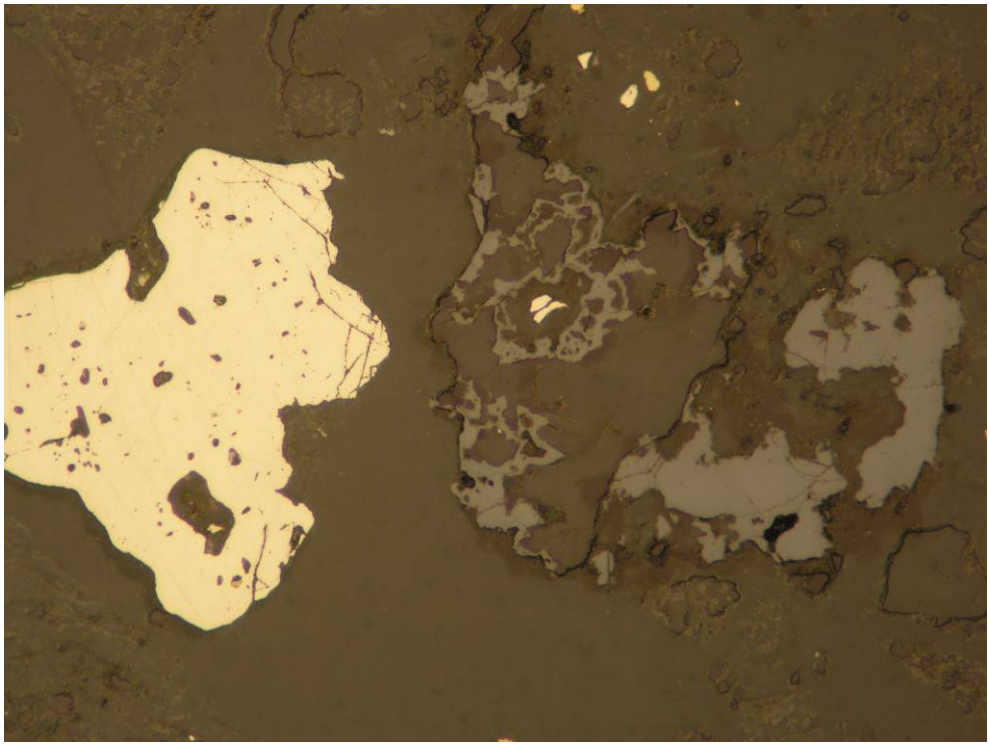


Figure K3: *Photomicrograph of sample 18 showing a liberated mass of pyrite (left) and a lithic clast (right). The payrite is virtually iunaltered while the lithic clast is partially rimmed by Fe-oxyhydroxides. RL, FOV = ~ 0.7 mm.*

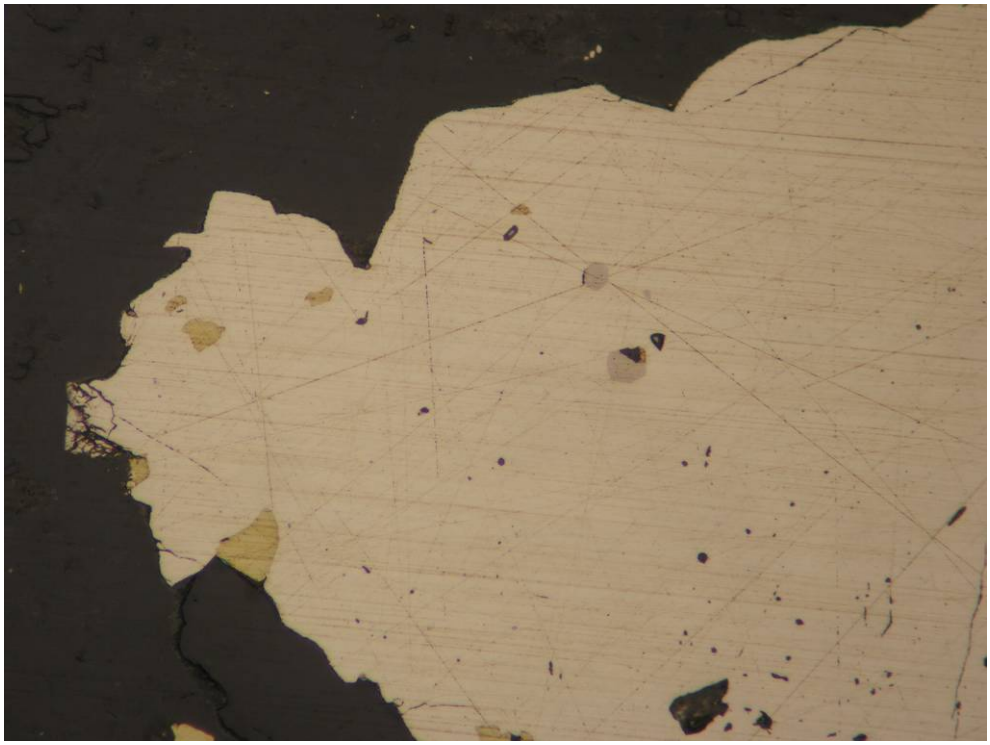


Figure K4: *Photomicrograph of sample 20 showing inclusions of chalcopyrite (yellow) and pinkish inclusions of bornite and enargite in pyrite. RL, FOV = ~ 0.7 mm.*

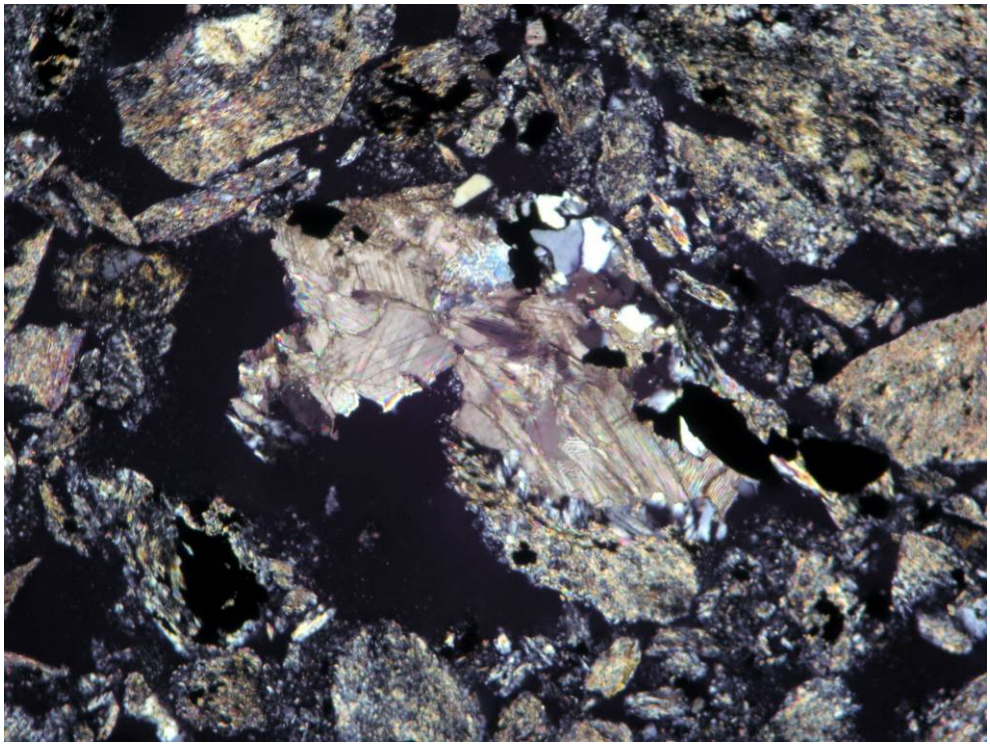


Figure K5: *Photomicrograph of sample 18 showing veins of carbonate (pinkish birefringence colours) and opaque sulphides in a clast of sericite-quartz schist (centre). FOV = ~ 0.27 mm*

APPENDIX D: REPRESENTATIVE PHOTOMICROGRAPHS OF SAMPLES FROM THE SULPHURETS DEPOSIT

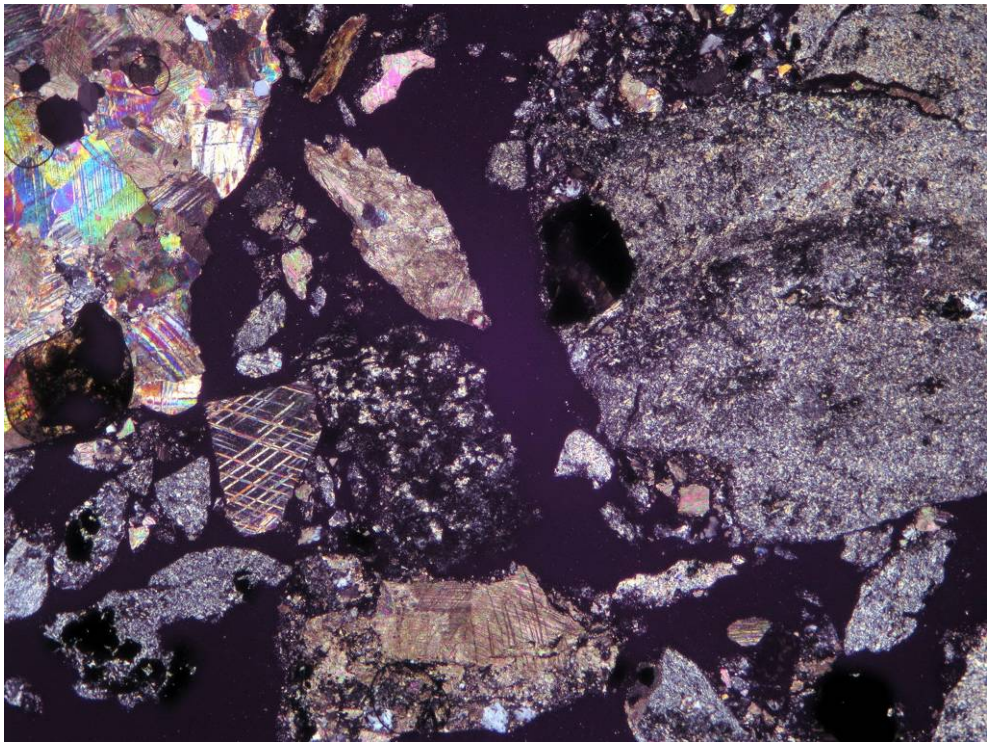


Figure S1: *Photomicrograph of sample 24 showing that the sample is formed by clasts of sericite schist and coarser-grained fragments of carbonate (± quartz) veins. XPL, FOV = ~ 7 mm.*

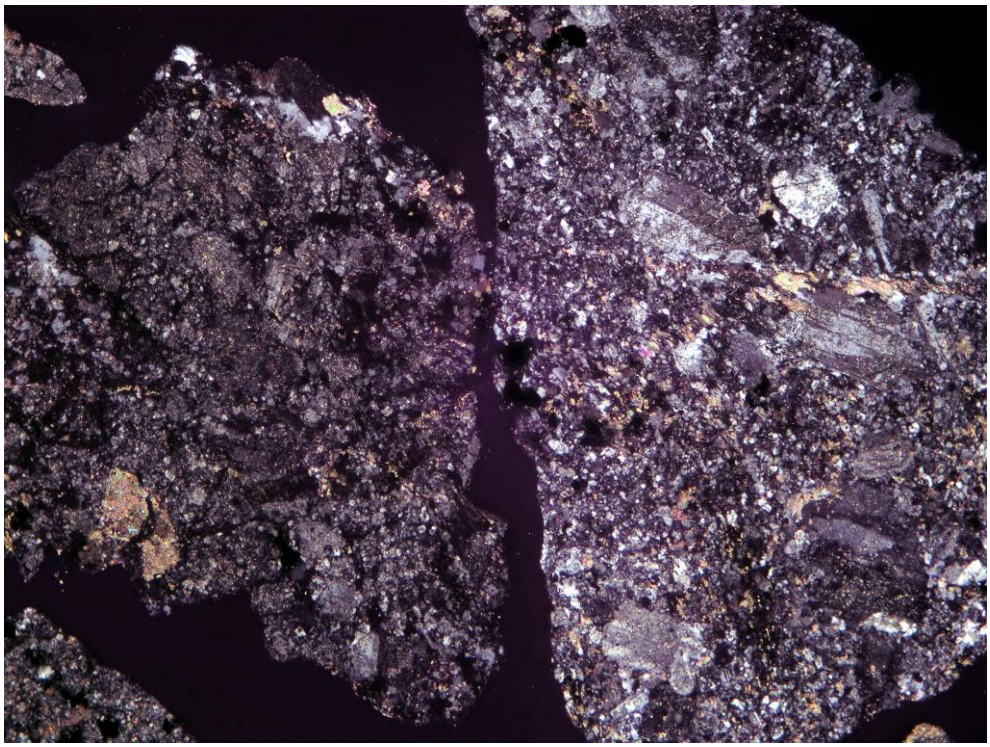


Figure S2: *Photomicrograph of sample 22 showing porphyritic clasts made up of a very fine-grained groundmass of quartz and feldspars containing disseminated feldspar phenocrysts. XPL, FOV =~ 7 mm.*

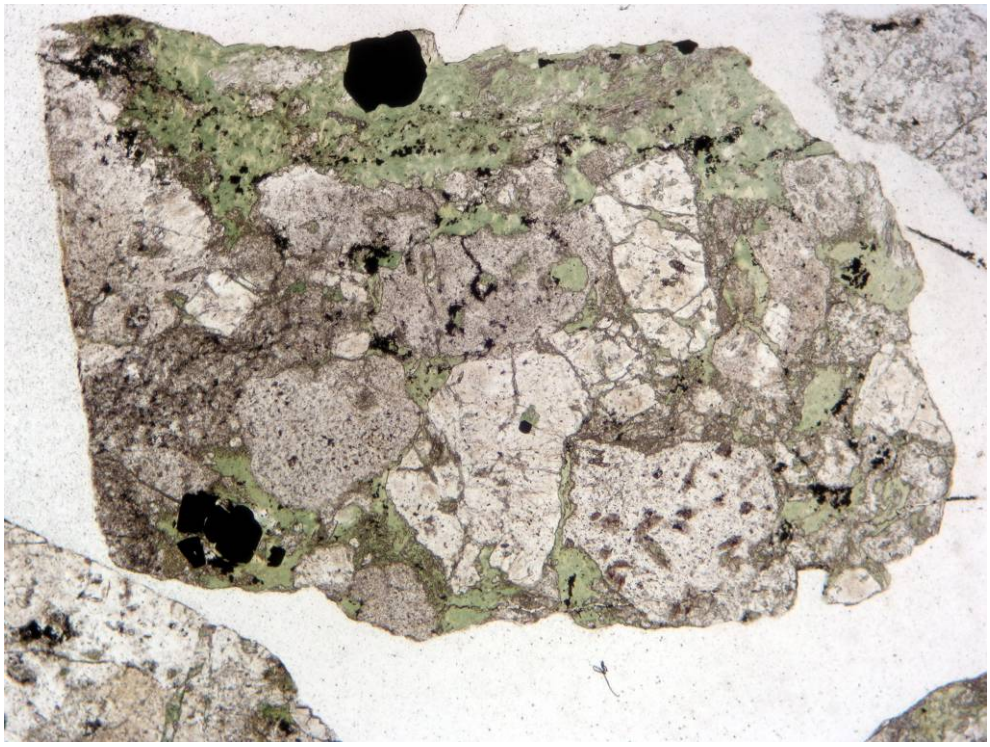


Figure S3: *Photomicrograph of sample 24 showing a brecciated clast. Subangular felsic clasts occur in a groundmass essentially made up of chlorite. PPL, FOV = ~ 7 mm.*

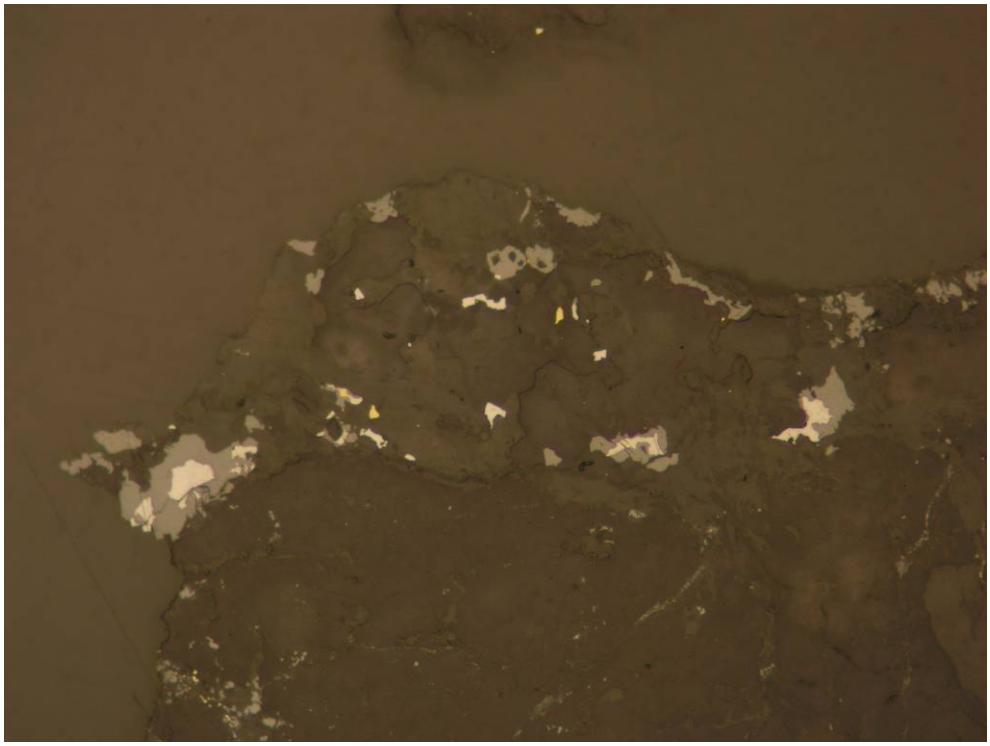


Figure S4: *Photomicrograph of sample 26 showing disseminated masses of off-white galena variably rimmed by masses of chalcopyrite-free sphalerite. RL, FOV = ~ 1.4 mm.*

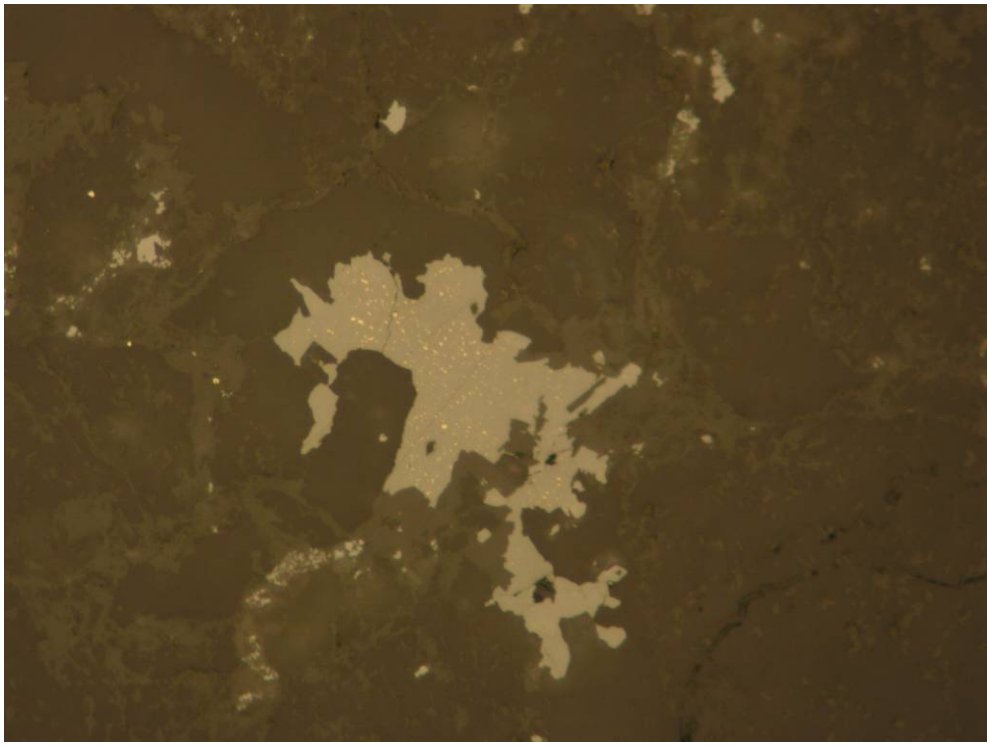


Figure S5: *Photomicrograph of sample 26 showing a mass of sphalerite in a lithic clast. The sphalerite is pitted by chalcopyrite disease. FOV = ~ 0.7 mm*

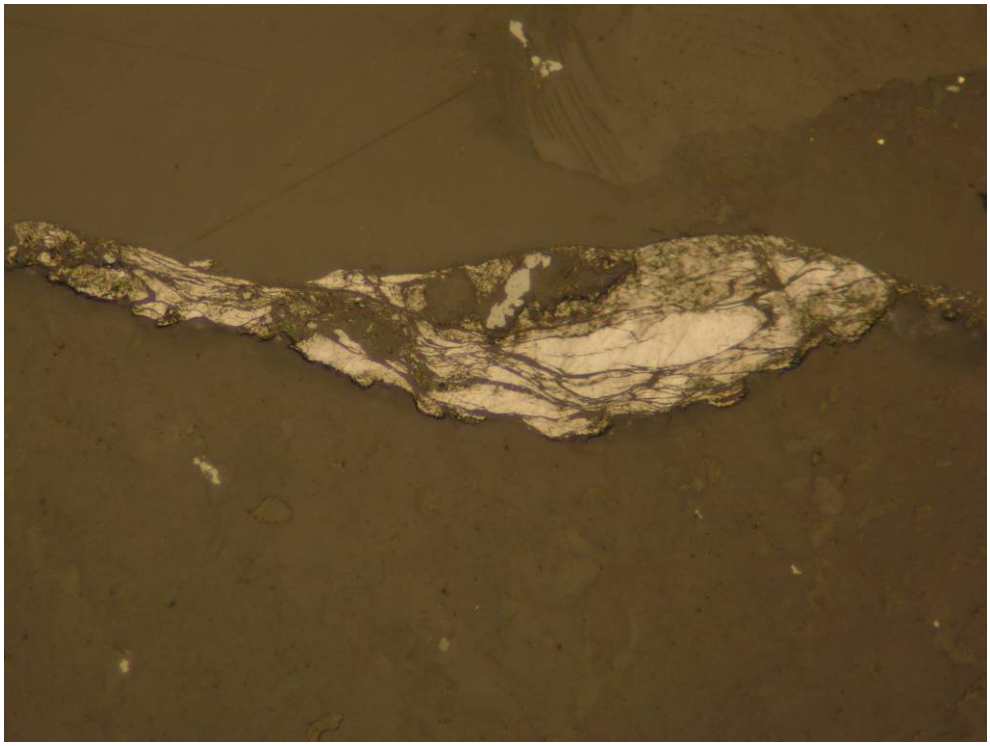


Figure S6: *Photomicrograph of sample 22 showing a mass of molybdenite in a lithic clast. RL, FOV = ~ 0.7 mm*

Appendix 5.2-1

Pre-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

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Appendix 5.2-1. Pre-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

HC	Zone	Year	Drill Hole	From	To		Interval	PFS Sample#	2012 ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	PFS Litho	PFS Alt	Rock Model	Lithology	Alteration 1	Alt_1_Intensity	Alt_2_Code	Alt_2_Intensity	Position
NM-05-03	Mitchell	2008	NM-05-03	46	48	NM-05-03 (46-48m)	2	9289	Monzonite	WASTE	IN PIT	0	0	nm monz	PQMZ	KP	2	0	0	ABOVE MTF
2	Mitchell	2009	M-09-97	52.5	53.5	M-09-97 (52.5-53.5m)	1	H43086	UP Hazelton	ORE	IN PIT	PMON	KP	NM VOLC	PMON	KP	2	None		ABOVE MTF
3	Mitchell	2009	M-09-97	92.5	93.5	M-09-97 (92.5-93.5m)	1	H43086	UP Hazelton	ORE	IN PIT	PMON	KP	NM VOLC	PMON	KP	2	None		ABOVE MTF
4	Mitchell	2009	M-09-97	147.5	148.5	M-09-97 (147.5-148.5m)	1	H43140	UP Hazelton	MARGINAL	IN PIT	PMON	PR	NM VOLC	PMON	PR	3	MTH	1	ABOVE MTF
M-07-33	Mitchell	2008	M-07-33	96	98	M-07-33 (96-98m)	2	G34723	UP Hazelton	WASTE	IN PIT	SEDS	SIH		SEDS	SIH		QSP		ABOVE MTF
10	Mitchell	2009	M-09-108	56.5	57.5	M-09-108 (56.5-57.5m)	1	H41633	UP Hazelton	ORE	IN PIT	VU	SIH	NM VOLC	VU	SIH	2	PSBX	1	ABOVE MTF
13	Mitchell	2009	M-09-110	34.5	35.5	M-09-110 (34.5-35.5m)	1	H41782	UP Hazelton	MARGINAL	IN PIT	PMON	SIH	NM VOLC	PMON	SIH	3	HEM	3	ABOVE MTF
14	Mitchell	2009	M-09-110	88.5	89.5	M-09-110 (88.5-89.5m)	1	H41812	UP Hazelton	WASTE	IN PIT	PMON	SIH	NM VOLC	PMON	SIH	5	0	0	ABOVE MTF
M-07-44	Mitchell	2008	M-07-44	57	59	M-07-44 (57-59m)	2	G37849	UP Hazelton	ORE	IN PIT	VATF	IARG		VATF	IARG				ABOVE MTF
M-07-30	Mitchell	2008	M-07-30	5	7	M-07-30 (5-7m)	2	G36541	Monzonite	WASTE	IN PIT	VULT	FEOX		VULT	FEOX				BELOW MTF
M-06-14	Mitchell	2008	M-06-14	107	109	M-06-14 (107-109m)	2	E217257	LP Hazelton	ORE	IN PIT	VALT	IARG		VATF	IARG				BELOW MTF
M-07-43	Mitchell	2008	M-07-43	220	222	M-07-43 (220-222m)	2	G37765	LP Hazelton	ORE	IN PIT	VALT	IARG		VALT	IARG		QSP		BELOW MTF
12	Mitchell	2009	M-09-108	162.5	163.5	M-09-108 (162.5-163.5m)	1	H41691	LP Hazelton	ORE	IN PIT	VU	IARG	IARG	VU	IARG	4	CL	1	BELOW MTF
16	Mitchell	2009	M-09-112	224.5	225.5	M-09-112 (224.5-225.5m)	1	H42251	LP Hazelton	WASTE	IN PIT	VUTF	IARG	IARG	VUTF	IARG	2	CL	1	BELOW MTF
26	Mitchell	2009	M-09-108	184.5	185.5	M-09-108 (184.5-185.5m)	1	H41704	LP Hazelton	ORE	IN PIT	VU	IARG	IARG	VU	IARG	4	CL	1	BELOW MTF
15	Mitchell	2009	M-09-110	342.5	343.5	M-09-110 (342.5-343.5m)	1	H41951	Leach breccia/bornite breccia	WASTE	IN PIT	VU	QSP	QSP	VU	QSP	5	None		BELOW MTF
1	Mitchell	2009	M-09-96	195.5	196.5	M-09-96 (195.5-196.5m)	1	H43401	LP Hazelton	ORE	IN PIT	IVOL	QSP	IARG	IVOL	QSP	3	None		BELOW MTF
5	Mitchell	2009	M-09-102	120.5	121.5	M-09-102 (120.5-121.5m)	1	H41040	LP Hazelton	WASTE	IN PIT	0	0	HORN/PROP	PSBX	SI	5	QSP	1	BELOW MTF
6	Mitchell	2009	M-09-102A	125.5	126.5	M-09-102A (125.5-126.5m)	1	H41075	LP Hazelton	WASTE	IN PIT	PSBX	SI	HORN/PROP	PSBX	SI	2	None		BELOW MTF
11	Mitchell	2009	M-09-108	118.5	119.5	M-09-108 (118.5-119.5m)	1	H41669	LP Hazelton	ORE	IN PIT	VU	SIL	HORN/PROP	VU	SIL	3	PSBX	2	BELOW MTF
7	Mitchell	2009	M-09-102A	133.5	134.5	M-09-102A (133.5-134.5m)	1	H41079	LP Hazelton	WASTE	IN PIT	SARG	SIH	HORN/PROP	SARG	SIH	3	CL	1	BELOW MTF
8	Mitchell	2009	M-09-106	34.5	35.5	M-09-106 (34.5-35.5m)	1	H41431	LP Hazelton	MARGINAL	IN PIT	VU	CL	IARG	VU	CL	4	QSP	3	BELOW MTF
9	Mitchell	2009	M-09-106	58.5	59.5	M-09-106 (58.5-59.5m)	1	H41443	LP Hazelton	ORE	IN PIT	VU	CL	IARG	VU	CL	4	QSP	3	BELOW MTF
S-06-04	Sulphurets	2008	S-06-04	30	32	S-06-04 (30-32m)	2	G24663	UP Hazelton	WASTE	IN	PPFP	PR		PPFP	PR		SIL		MC Panel
17	Sulphurets	2009	S-08-06	252.5	253.5	S-08-06 (252.5-253.5m)	1	X15860	UP Hazelton	ORE	IN	VUTF	CL		VUTF	CL	3	None		MC Panel
S-06-05	Sulphurets	2008	S-06-05	10.4	12	S-06-05 (10.4-12m)	1.6	G24857	Overburden	ORE	IN	VU	Sil		VU	SIL				Upper Panel
24	Sulphurets	2009	S-09-11	350.5	351.5	S-09-11 (350.5-351.5m)	1	H45195	Lower Au zone	ORE	IN	VU	SIH		VU	SIH	4	CL	2	Upper Panel
25	Sulphurets	2009	S-09-11	374.5	375.5	S-09-11 (374.5-375.5m)	1	H45208	Lower Au zone	MARGINAL	OUT	VU	SIH		VU	SIH	4/3	CL	2/3	Upper Panel
18	Sulphurets	2009	S-09-12	144.5	145.5	S-09-12 (144.5-145.5m)	1	H42406	Undefined	WASTE	IN	PMON	CL		PMON	CL	3	IARG	1	Upper Panel
19	Sulphurets	2009	S-09-12	172.5	173.5	S-09-12 (172.5-173.5m)	1	H42421	Undefined	WASTE	IN	VAAT	CL		VAAT	CL	2	KP	1	Upper Panel
20	Kerr	2009	K-09-01	84.5	85.5	K-09-01 (84.5-85.5m)	1	K-09-01_15	KERR	0	0	0	0	KERR	VU	IARG	3	CL	1	
21	Kerr	2009	K-09-02	66.5	67.5	K-09-02 (66.5-67.5m)	1	K-09-02_8_B	KERR	0	0	0	0	KERR	VU	IARG	4	QSP	1	
22	Kerr	2009	K-09-03	140.5	141.5	K-09-03 (140.5-141.5m)	1	K-09-04_7	KERR	0	0	0	0	KERR	VU	QSP	5	None		
23	Kerr	2009	K-09-04	126.5	127.5	K-09-04 (126.5-127.5m)	1	K-09-03_2	KERR	0	0	0	0	KERR	VU	QSP	3	IARG	3	
HCT-1	Iron Cap	2011	IC-10-007	Composite				H46789,H46801-B,H4	IRON CAP	WASTE	IN	0	0	IRON CAP	0	CL	0	CARB	0	
HCT-2	Iron Cap	2011	0	Composite				H46894,H46895,H47	IRON CAP	WASTE	IN	0	0	IRON CAP	0	CL	0	0	0	
HCT-3	Iron Cap	2011	IC-10-010	Composite				H48504,H48517,H48	IRON CAP	WASTE	IN	0	0	IRON CAP	IBX	QSP	5	IARG	4	
HCT-4	Iron Cap	2011	IC-10-010	Composite				H48532,H48545,H48	IRON CAP	WASTE	IN	0	0	IRON CAP	IBX	QSP	5	IARG	4	
HCT-5	Iron Cap	2011	IC-10-006	Composite				H48336,H48251,H48	IRON CAP	ORE	IN	0	0	IRON CAP	SEDS	SIL	4	CL	1	
HCT-6	Iron Cap	2011	0	Composite				H47377,H48761,H47	IRON CAP	WASTE	IN	0	0	IRON CAP	0	SIL	4	0	0	

Appendix 5.2-1. Pre-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

HC	Paste pH unit less	Rinse pH unit less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CAL %	S_SO4_NA2CO %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg CaCO3 / t	SAP kg CaCO3 / t	AP(S Del Calc) kg CaCO3 / t	NP kg CaCO3 / t	NP_ADJ kg CaCO3 / t	UNP kg CaCO3 / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %	CANP_TTL kg CaCO3 / t	CANP_INORG kg CaCO3 / t
NM-05-03	9.6	0	0.23	0.18	0.21	0.21	<0.01	0.02	0.019837665	0.03	0.03	7.1875	5.625	6.5625	31	16	15	0.29	0.28	1	0.01	24.17	22.7
2	8.2	8.3	2.22	1.9	2.21	2.215	0.02	0.005	0.030573342	0.315	0.315	69.375	59.375	69.21875	12	0	12	0.03	<0.05	0.2	-0.02	2.5	4.55
3	8.2	8.3	2.22	1.9	2.21	2.215	0.02	0.005	0.030573342	0.315	0.315	69.375	59.375	69.21875	12	0	12	0.03	<0.05	0.2	-0.02	2.5	4.55
4	9.1	8.8	3.12	2.8	3.1	3.1	0.03	0.02	0.01306952	0.3	0.3	97.5	87.5	96.875	58	43	15	0.63	0.6	2.2	0.03	52.5	50
M-07-33	8.6	0	2.6	2.37	2.59	2.59	0.01	0.01	0.009101987	0.22	0.22	81.25	74.0625	80.9375	62	47	15	0.85	0.82	3	0.03	70.84	68.2
10	8.6	7.5	4.45	4.23	4.44	4.445	0.05	0.005	0.003033996	0.215	0.215	139.0625	132.1875	138.90625	45	30	15	0.33	0.34	1.3	-0.01	27.5	29.6
13	9	8.9	0.67	0.63	0.65	0.65	0.02	0.02	0.043176094	0.02	0.02	20.9375	19.6875	20.3125	26	11	15	0.21	0.21	0.8	0	17.5	18.2
14	9.2	9.2	1.85	1.67	1.84	1.84	0.04	0.01	0.026605809	0.17	0.17	57.8125	52.1875	57.5	72	57	15	0.54	0.59	2.2	-0.05	45	50
M-07-44	7.8	0	12.75	9.17	12.74	12.74	0.04	0.01	0.008868603	3.57	3.57	398.4375	286.5625	398.125	35	20	15	0.4	0.37	1.4	0.03	33.3	31.8
M-07-30	7.9	0	0.04	0.02	0.03	0.03	<0.01	0.01	0.036174565	0.01	0.01	1.25	0.625	0.9375	17	2	15	0.14	0.18	0.7	-0.04	11.67	15.9
M-06-14	5.5	0	6.86	6.11	6.83	6.83	0.05	0.03	0.001867074	0.72	0.72	214.375	190.9375	213.4375	13	0	13	0.43	<0.05	0.2	0.38	35.84	4.55
M-07-43	6.9	0	2.39	2.25	2.38	2.38	0.03	0.01	0.008401834	0.13	0.13	74.6875	70.3125	74.375	12	0	12	<0.01	<0.05	0.2	-0.04	0.8334	4.55
12	8.6	7.3	3.92	3.68	3.83	3.83	0.11	0.09	0.002567227	0.15	0.15	122.5	115	119.6875	49	34	15	0.5	0.53	2	-0.03	41.7	45.5
16	8.3	7.7	8.14	6.04	6.32	6.32	1.91	1.82	0.005367839	0.28	0.28	254.375	188.75	197.5	50	35	15	0.58	0.57	2.1	0.01	48.34	47.8
26	8.8	8.1	3.7	3.5	3.69	3.69	0.03	0.01	0.007001529	0.19	0.19	115.625	109.375	115.3125	57	42	15	0.54	0.57	2.1	-0.03	45	47.8
15	4.9	6.6	19.05	16.35	19.00	19.00	0.05	0.05	0.007234913	2.65	2.65	595.3125	510.9375	593.75	5	0	5	<0.01	<0.05	0.2	-0.04	0.8334	4.55
1	6.9	7	5.15	5.01	5.09	5.09	0.05	0.06	0.002333843	0.08	0.08	160.9375	156.5625	159.0625	9	0	9	0.03	<0.05	0.2	-0.02	2.5	4.55
5	9	8.7	3.1	3.09	3.09	3.10	0.03	0.005	0.008868603	0.005	0.005	96.875	96.5625	96.71875	76	61	15	1.02	0.98	3.6	0.04	85.01	81.9
6	8.9	8.8	5.38	5.31	5.37	5.37	0.06	0.01	0.002800611	0.06	0.06	168.125	165.9375	167.8125	76	61	15	0.99	0.93	3.4	0.06	82.51	77.3
11	8.6	7.6	5.23	4.71	5.22	5.23	0.05	0.005	0.002333843	0.515	0.515	163.4375	147.1875	163.28125	45	30	15	0.45	0.47	1.7	-0.02	37.5	38.7
7	9.4	9.2	2.04	1.95	2.03	2.04	0.02	0.005	0.014936595	0.085	0.085	63.75	60.9375	63.59375	81	66	15	1.08	1.05	3.8	0.03	90.01	86.4
8	8.7	8.6	2.46	1.99	2.33	2.33	0.16	0.13	0.005367839	0.34	0.34	76.875	62.1875	72.8125	66	51	15	0.71	0.62	2.3	0.09	59.17	52.3
9	8.3	8.3	8.25	7.22	8.09	8.09	0.2	0.16	0.000933537	0.87	0.87	257.8125	225.625	252.8125	82	67	15	0.95	0.93	3.4	0.02	79.17	77.3
S-06-04	9	0	0.53	0.42	0.52	0.47	0.01	0.005	0.057879304	0.047120696	0.047120696	16.5625	13.125	14.59752175	43	28	15	0.43	0.42	1.6	0.01	35.84	36.39
17	9	9	1.28	1.21	1.24	1.21	0.08	0.04	0.054145155	-0.024145155	0	40	37.8125	37.8125	88	73	15	0.85	0.88	3.2	-0.03	70.84	72.78
S-06-05	7.3	0	3.47	3.41	3.46	3.45	0.01	0.01	0.010502293	0.039497707	0.039497707	108.4375	106.5625	107.7968033	7	0	7	0.01	0.025	0.1	-0.04	0.83	2.27
24	8.9	8.8	2.27	2.19	2.26	2.25	0.02	0.005	0.017737206	0.057262794	0.057262794	70.9375	68.4375	70.22696231	33	18	15	0.27	0.19	0.7	0.08	22.50	15.92
25	8.6	8.6	3.66	3.51	3.65	3.64	0.03	0.01	0.012135983	0.127864017	0.127864017	114.375	109.6875	113.6832505	147	132	15	1.57	1.54	5.7	0.03	130.84	129.63
18	8.3	8.3	3.88	3.56	3.87	3.87	0.08	0.005	0.00980214	0.30519786	0.30519786	121.25	111.25	120.7874331	125	110	15	0.12	0.1	0.4	0.02	10.00	9.10
19	8.7	8.7	2.42	2.19	2.41	2.39	0.01	0.01	0.0163369	0.2036631	0.2036631	75.625	68.4375	74.80197186	51	36	15	0.51	0.46	1.7	0.05	42.50	38.66
20	8.3	8.1	3.57	3.41	3.55	3.54	0.03	0.02	0.008868603	0.131131397	0.131131397	111.5625	106.5625	110.6603562	40	25	15	0.39	0.39	1.4	0	32.50	31.84
21	5.3	5.3	10.65	10.3	10.59	10.59	0.05	0.06	0.001400306	0.288599694	0.288599694	332.8125	321.875	330.8937404	7	0	7	0.005	0.025	0.1	-0.02	0.42	2.27
22	6	6.3	9.53	9.36	9.43	9.43	0.2	0.1	0.000700153	0.069299847	0.069299847	297.8125	292.5	294.6656202	5	0	5	0.005	0.025	0.1	-0.02	0.42	2.27
23	7.1	7.6	7.13	6.42	7.13	7.12	0.05	0.005	0.001166921	0.703833079	0.703833079	222.8125	200.625	222.6197837	15	0	15	0.12	0.15	0.5	-0.03	10.00	11.37
HCT-1	9.55	0	2.5	2.49	2.49	2.49	0	0.01	0.001260275	-0.001260275	0	78.125	77.8125	77.8125	41.20603015	26.20603015	15	0.41	0	1.52	0.41	34.17	126.68
HCT-2	8.73	0	4.07	3.69	4.05	4.05	0	0.02	0.000536784	0.359463216	0.359463216	127.1875	115.3125	126.5457255	36.4321608	21.4321608	15	0.36	0	1.4	0.36	30.00	116.67
HCT-3	6.94	0	3.61	3.59	3.59	3.59	0	0.02	0.000583461	-0.000583461	0	112.8125	112.1875	112.1875	7.914572864	0	7.914572864	0.01	0	0.07	0.01	0.83	5.83
HCT-4	8.8	0	0.68	0.56	0.66	0.66	0	0.01	0.007304928	0.102695072	0.102695072	21.25	17.5	20.70922099	6.281407035	0	6.281407035	0.01	0	0.05	0.01	0.83	4.17
HCT-5	8.75	0	5.24	5.22	5.22	5.22	0	0.02	0.00074683	-0.00074683	0	163.75	163.125	163.125	33.91959799	18.91959799	15	0.37	0	1.43	0.37	30.84	119.17
HCT-6	7.96	0	4.4	2.3	4.39	4.39	0	0.01	0.000560122	2.089439878	2.089439878	137.5	71.875	137.1699962	7.788944724	0	7.788944724	0.03	0	0.11	0.03	2.50	9.17

Appendix 5.2-1. Pre-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

HC	CANP_CA kg CaCO3 / t	CANP_CAMG kg CaCO3 / t	TNNP kg CaCO3 / t	TNNP_ADJ kg CaCO3 / t	SNNP kg CaCO3 / t	SNNP_ADJ kg CaCO3 / t	ICNNP kg CaCO3 / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	PR (S DEL CAL unit less	NPR for graph unit less	R_ADJ for gra unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check 0	Ag ppm	Al ppm	Al %	As ppm	Ba ppm	Be ppm
NM-05-03	24.22	32.64	23.812	8.812	24.4375	10.06	15.56	4.313043478	2.226086957	5.511111111	4.723809524	4.723809524	2.438095238	3.164	2	Disagree	1	62100	6.21	9.5	850	3.49
2	9.49	47.25	-57.38	-69.38	-57.21875	-71.11	-64.83	0.172972973	0	0.202105263	0.173363431	0.173363431	0.001	0.06556	1	Agree	1.17	80200	8.02	7.7	1310	1.97
3	9.49	47.25	-57.38	-69.38	-57.21875	-71.11	-64.83	0.172972973	0	0.202105263	0.173363431	0.173363431	0.001	0.06556	1	Agree	1.17	80200	8.02	7.7	1310	1.97
4	56.44	75.6	-39.5	-54.5	-38.875	-53.47	-47.47	0.594871795	0.441025641	0.662857143	0.598709677	0.598709677	0.443870968	0.5132	2	Agree	1.84	60300	6.03	5.5	560	1.95
M-07-33	42.2	67.58	-19.2	-34.2	-18.9375	-33.65	-13	0.763076923	0.578461538	0.837130802	0.766023166	0.766023166	0.580694981	0.84	2	Agree	0.31	79000	7.9	14.1	390	1.62
10	47.7	77.6	-94.1	-109.1	-93.90625	-108.7	-109.5	0.323595506	0.215730337	0.340425532	0.323959505	0.323959505	0.215973003	0.2126	2	Disagree	13.4	74000	7.4	32	130	2.04
13	25.22	50.4	5.06	-9.94	5.6875	-8.688	-2.743	1.241791045	0.525373134	1.320634921	1.28	1.28	0.541538462	0.869	2	Disagree	5.9	71700	7.17	10.4	1850	3.08
14	54.44	108.2	14.19	-0.81	14.5	0.3314	-7.779	1.245405405	0.985945946	1.379640719	1.252173913	1.252173913	0.991304348	0.8654	3	Disagree	1.73	78400	7.84	35	1140	2.01
M-07-44	36.96	66.15	-363.44	-378.44	-363.125	-377.85	-366.6	0.087843137	0.050196078	0.122137405	0.087912088	0.087912088	0.050235479	0.079911	2	Disagree	30	72000	7.2	196.5	380	1.14
M-07-30	15.98	49.25	15.75	0.75	16.0625	1.375	14.67	13.6	1.6	27.2	18.13333333	18.13333333	2.133333333	12.74	2	Disagree	0.12	82000	8.2	8.7	1550	2.57
M-06-14	13.24	79.89	-201.4	-214.4	-200.4375	-215.4	-209.8	0.060641399	0	0.068085106	0.06090776	0.06090776	0.001	0.02122	1	Agree	1.11	85100	8.51	28.2	80	1.24
M-07-43	8.99	61.85	-62.69	-74.69	-62.375	-77.11	-70.14	0.160669456	0	0.170666667	0.161344538	0.161344538	0.001	0.0609	1	Agree	0.93	79100	7.91	8	360	1.76
12	46.7	99.65	-73.5	-88.5	-70.6875	-85.61	-77.01	0.4	0.27755102	0.426086957	0.409399478	0.409399478	0.284073107	0.3713	2	Disagree	6.07	79300	7.93	27.7	110	0.83
16	106.4	154.1	-204.4	-219.4	-147.5	-162.3	-206.6	0.196560197	0.137592138	0.264900662	0.253164557	0.253164557	0.17721519	0.1878	2	Agree	1.3	67200	6.72	11.3	230	1.04
26	53.44	111.1	-59	-74	-58.3125	-73.09	-67.9	0.492972973	0.363243243	0.521142857	0.494308943	0.494308943	0.364227642	0.413	2	Agree	0.93	82400	8.24	11.2	300	1.25
15	5.744	14.32	-590.31	-595.31	-588.75	-603.52	-590.76	0.00839895	0	0.009785933	0.008421053	0.008421053	0.001	0.0076405	1	Agree	1.35	49000	4.9	18.9	310	0.38
1	8.241	22.62	-151.9	-160.9	-150.0625	-165	-156.4	0.05592233	0	0.05748503	0.056581532	0.056581532	0.001	0.02826	1	Agree	0.74	76200	7.62	52.2	100	1
5	47.2	80.18	-20.9	-35.9	-20.71875	-35.56	-15	0.784516129	0.629677419	0.787055016	0.785783522	0.785783522	0.630694669	0.845	2	Agree	1.16	76500	7.65	23.9	380	1.69
6	54.44	82.47	-92.1	-107.1	-91.8125	-106.7	-90.8	0.45204461	0.362825279	0.458003766	0.452886406	0.452886406	0.363500931	0.4599	2	Agree	1.11	66800	6.68	10.3	120	1.13
11	41.45	73.88	-118.4	-133.4	-118.28125	-133.1	-124.8	0.275334608	0.183556405	0.305732484	0.275598086	0.275598086	0.183732057	0.2366	2	Disagree	2.02	82400	8.24	58.7	100	1.88
7	56.19	102.2	17.25	2.25	17.40625	3.029	22.67	1.270588235	1.035294118	1.329230769	1.273710074	1.273710074	1.037837838	1.356	2	Agree	0.79	67100	6.71	12.7	640	1.76
8	57.94	118.3	-10.88	-25.88	-6.8125	-21.64	-24.57	0.858536585	0.663414634	1.061306533	0.906437768	0.906437768	0.700429185	0.6804	3	Disagree	1.07	78500	7.85	12.9	230	1.13
9	77.91	127.1	-175.8	-190.8	-170.8125	-185.8	-180.5	0.318060606	0.259878788	0.363434903	0.324351051	0.324351051	0.265018541	0.2999	2	Agree	8.82	68300	6.83	15.2	40	0.98
S-06-04	39.71	67.29	26.44	11.44	29.875	14.875	19.82559362	2.596226415	1.690566038	3.276190476	2.945705493	2.945705493	2.133333333	2.197016973	2	Disagree	0.39	78600	7.86	8	2480	1.14
17	76.67	152.62	48.00	33.00	50.1875	35.1875	32.77618723	2.2	1.825	2.327272727	2.327272727	2.327272727	1.930578512	1.819404681	3	Disagree	0.86	75800	7.58	9.5	2320	1.13
S-06-05	4.00	14.89	-101.44	-108.44	-99.5625	-106.5625	-106.1632441	0.064553314	0	0.06568915	0.064936991	0.064936991	0.001	0.020972965	1	Agree	0.32	62300	6.23	71.7	450	0.98
24	22.97	79.03	-37.94	-52.94	-35.4375	-50.4375	-55.01770904	0.465198238	0.253744493	0.482191781	0.46990499	0.46990499	0.263013699	0.224419961	2	Disagree	0.33	78300	7.83	11.2	760	2
25	123.61	237.67	32.63	17.63	37.3125	22.3125	15.2575835	1.285245902	1.154098361	1.34017094	1.293066475	1.293066475	1.203418803	1.133399637	3	Agree	0.49	65300	6.53	35.3	520	1.65
18	106.88	180.68	3.75	-11.25	13.75	-1.25	-112.1529766	1.030927835	0.907216495	1.123595506	1.034875871	1.034875871	0.988764045	0.075026997	3	Agree	0.88	71400	7.14	38.2	420	0.94
19	46.20	87.62	-24.63	-39.63	-17.4375	-32.4375	-36.96265053	0.674380165	0.476033058	0.745205479	0.681800208	0.681800208	0.526027397	0.511237679	2	Agree	8.76	74100	7.41	125	700	1.07
20	38.96	81.32	-71.56	-86.56	-66.5625	0	-79.72291809	0.358543417	0.224089636	0.375366569	0.225916497	0.375366569	0.234604106	0.285396813	2	Disagree	0.76	80700	8.07	11.8	380	0.8
21	7.24	18.33	-325.81	-332.81	-314.875	0	-330.5382441	0.021032864	0	0.021747573	0	0.021747573	0.001	0.006833445	1	Agree	0.41	76300	7.63	128	60	0.3
22	9.49	19.76	-292.81	-297.81	-287.5	0	-295.5382441	0.016789087	0	0.017094017	0	0.017094017	0.001	0.007636536	1	Agree	0.77	71700	7.17	16.5	30	0.74
23	13.24	31.50	-207.81	-222.81	-185.625	0	-211.4412207	0.067321178	0	0.074766355	0	0.074766355	0.001	0.051035194	2	Disagree	0.69	50200	5.02	15.1	50	0.43
HCT-1	36.71	65.00	-36.92	-51.92	-36.60646985	-51.60646985	-78.125	0.527437186	0.335437186	0.529555408	0.336784323	0.529555408	0.336784323	1.013089242	1	Agree	0.625	99400	9.94	61.3	54	1
HCT-2	34.46	62.14	-90.76	-105.76	-78.8803392	-93.8803392	-127.1875	0.286444508	0.16850839	0.315942858	0.169362977	0.287897206	0.169362977	2.013089242	1	Agree	0.752	96000	9.6	112.5	23	2
HCT-3	12.49	30.93	-104.90	-112.81	-104.2729271	-112.1875	-112.8125	0.070156879	0	0.070547725	0	0.070547725	0.001	3.013089242	0	#N/A	1.02	91500	9.15	246.1	25	2
HCT-4	8.24	19.76	-14.97	-21.25	-11.21859296	-17.5	-21.25	0.295595625	0	0.358937545	0	0.303314501	0.001	4.013089242	0	#N/A	0.707	101800	10.18	32	313	1
HCT-5	33.46	53.55	-129.83	-144.83	-129.205402	-144.205402	-163.75	0.207142583	0.11553953	0.207936233	0.11598221	0.207936233	0.11598221	5.013089242	1	Agree	2.75	79500	7.95	63.4	32	1
HCT-6	9.74	30.07	-129.71	-137.50	-64.08605528	-71.875	-137.5	0.056646871	0	0.108367927	0	0.056783152	0.001	6.013089242	0	#N/A	1.184	100300	10.03	31.8	24	1

Appendix 5.2-1. Pre-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

HC	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %
NM-05-03	1.35	9700	0.97	0.17	8.8	2.5	5	0.84	428	0.04	17200	1.72	29.1	0.12	1.5	0.03	0.021	52300	5.23	5.2	2.8	1700	0.17
2	0.77	3800	0.38	0.11	25.2	23	13	6.94	1790	0.18	42200	4.22	18.6	0.2	0.7	0.05	0.08	44600	4.46	11.1	37.6	12700	1.27
3	0.77	3800	0.38	0.11	25.2	23	13	6.94	1790	0.18	42200	4.22	18.6	0.2	0.7	0.05	0.08	44600	4.46	11.1	37.6	12700	1.27
4	2.2	22600	2.26	0.05	10.6	23.7	11	1.55	1750	0.18	48400	4.84	18.65	0.18	1.6	0.02	0.123	39900	3.99	5.7	9	3800	0.38
M-07-33	0.95	16900	1.69	0.15	16.8	12.3	8	2.15	85.9	0.01	34000	3.4	18.8	0.19	0.8	0.04	0.037	49900	4.99	10.9	10.8	6700	0.67
10	6.99	19100	1.91	13.5	26.2	15.6	6	3.3	1580	0.16	57800	5.78	18.2	0.18	1.1	0.45	0.051	48500	4.85	17.1	14.2	8000	0.8
13	3.33	10100	1.01	1.19	16.7	6.7	26	3.05	3280	0.33	21900	2.19	19	0.1	1	0.05	0.027	39900	3.99	9.1	38.7	7500	0.75
14	0.39	21800	2.18	0.2	27.2	15.7	81	6.9	1160	0.12	31700	3.17	17.9	0.16	1.1	0.02	0.045	41100	4.11	15.5	42.6	16000	1.6
M-07-44	15.2	14800	1.48	4.08	13.7	11.7	4	3.56	1105	0.11	108500	10.85	14.5	0.22	0.4	1.19	0.443	40000	4	6	7.9	8300	0.83
M-07-30	0.23	6400	0.64	0.18	35.9	14.4	3	8.42	92.9	0.01	43700	4.37	18.5	0.18	2.7	0.01	0.054	52100	5.21	19.2	17.8	10800	1.08
M-06-14	0.35	5300	0.53	1.99	10.55	24.1	9	5.15	655	0.07	78600	7.86	21.3	0.23	0.5	0.07	0.103	26700	2.67	4.5	29.2	22600	2.26
M-07-43	0.13	3600	0.36	0.24	15.05	8.5	2	4.61	601	0.06	45400	4.54	17.9	0.19	0.5	<0.01	0.027	24100	2.41	6.3	35.6	18000	1.8
12	0.58	18700	1.87	0.31	26	21	4	4.76	1060	0.11	53200	5.32	16.9	0.18	0.5	0.04	0.056	37100	3.71	13	12.7	16100	1.61
16	0.44	42600	4.26	0.16	18.6	21.5	4	4.84	910	0.09	62900	6.29	15.65	0.16	0.3	<0.01	0.041	36700	3.67	9.7	12	11200	1.12
26	0.39	21400	2.14	0.31	24.4	14.2	4	5.88	671	0.07	49000	4.9	18.45	0.18	0.5	0.01	0.064	45800	4.58	12.9	15.1	17400	1.74
15	0.95	2300	0.23	0.05	6.63	31.9	5	1.75	71.7	0.01	162500	16.25	6.23	0.31	0.3	0.01	0.038	19100	1.91	3	4.6	2700	0.27
1	0.47	3300	0.33	0.18	23.9	15.3	4	3.8	757	0.08	49100	4.91	17.2	0.21	0.6	0.12	0.056	30400	3.04	10.9	6.5	4600	0.46
5	1.97	18900	1.89	0.15	17.55	12.6	6	2.62	177.5	0.02	37400	3.74	17.55	0.23	0.7	0.04	0.077	43900	4.39	12.5	14.8	9100	0.91
6	1.6	21800	2.18	0.2	15.7	14.1	26	1.7	116.5	0.01	49400	4.94	17.05	0.27	1.2	0.06	0.005	41800	4.18	8.7	17.3	7000	0.7
11	1.09	16600	1.66	0.13	20.6	15.8	4	4.09	70.1	0.01	50100	5.01	18.35	0.17	0.8	0.04	0.108	44900	4.49	10	12.8	9200	0.92
7	2.42	22500	2.25	1.4	54.8	4.4	33	7.64	420	0.04	24100	2.41	19.55	0.21	1.6	0.26	0.029	22200	2.22	40.8	103.5	13200	1.32
8	0.13	23200	2.32	0.24	20	13.7	7	6.5	603	0.06	42500	4.25	17.7	0.16	0.7	<0.01	0.042	35800	3.58	10.1	21.9	18100	1.81
9	0.78	31200	3.12	0.87	19.05	19.7	3	5.05	1175	0.12	85000	8.5	14.65	0.27	0.4	<0.01	0.062	32500	3.25	10.1	14.2	13200	1.32
S-06-04	0.22	15900	1.59	0.04	19.65	10.1	4	2.14	248	0.0248	21100	2.11	22.9	0.07	1.1	0.03	0.025	45700	4.57	9.6	9.2	7600	0.76
17	0.09	30700	3.07	0.02	13.6	32.3	23	2.61	1750	0.175	39500	3.95	17.65	0.14	0.8	0.04	0.066	32900	3.29	6.3	24.9	22600	2.26
S-06-05	0.51	1600	0.16	1.06	33.8	30.5	20	4.43	1245	0.1245	36700	3.67	16.8	0.12	1	0.21	0.063	48100	4.81	20.9	12.1	3600	0.36
24	0.09	9200	0.92	1.1	36	24.1	56	10.75	1320	0.132	50100	5.01	24.5	0.19	1.3	0.08	0.054	43500	4.35	16.5	33.1	18400	1.84
25	0.25	49500	4.95	0.09	24.3	22.6	22	16.2	1170	0.117	82000	8.2	20.6	0.24	1.7	0.02	0.328	29300	2.93	16.1	55.5	33500	3.35
18	2.44	42800	4.28	0.07	22.4	29.4	133	1.84	247	0.0247	86800	8.68	19.45	0.17	1	0.02	0.548	49900	4.99	11.2	21.2	20300	2.03
19	1.8	18500	1.85	73.6	24.1	16.8	86	3.06	227	0.0227	54600	5.46	20.3	0.16	1.1	6.75	0.213	42700	4.27	10.9	27.8	12100	1.21
20	0.09	15600	1.56	0.21	13.7	25.9	24	5.04	3190	0.32	52300	5.23	18.15	0.22	0.6	0.02	0.063	42300	4.23	6.4	10.2	12800	1.28
21	0.46	2900	0.29	0.17	10.95	29.9	69	3.47	386	0.04	101000	10.1	15.7	0.35	0.5	0.64	0.145	31400	3.14	4.8	7.2	3500	0.35
22	0.22	3800	0.38	0.06	1.3	23.1	38	3.38	2740	0.27	91700	9.17	14.7	0.31	0.3	0.13	0.141	30700	3.07	<0.5	3.4	3100	0.31
23	0.25	5300	0.53	0.17	2.44	9.9	7	2.14	6090	0.61	67500	6.75	12.05	0.21	0.2	0.59	0.292	20700	2.07	1.1	5	5700	0.57
HCT-1	0.62	14700	1.47	0.22	14.33	11.1	30	7.4	525.6	0.05256	41000	4.1	16.66	0	0.65	0	0	47100	4.71	6.4	9.1	8000	0.8
HCT-2	1.36	13800	1.38	0.47	24.4	27	30	6.4	930.3	0.09303	54800	5.48	19.34	0	0.93	0	0	53300	5.33	10.9	15.9	7900	0.79
HCT-3	0.86	5000	0.5	0.63	30.08	40.6	29	4.3	810.8	0.08108	38500	3.85	17.3	0	1.01	0	0	55500	5.55	13.3	13.7	5800	0.58
HCT-4	0.73	3300	0.33	0.55	41.87	7	21	3.2	449.52	0.044952	8400	0.84	13.63	0	0.68	0	0	72000	7.2	23.6	9.8	3600	0.36
HCT-5	0.88	13400	1.34	6.42	28.2	18.9	56	4.1	1447.15	0.144715	52700	5.27	16.25	0	0.55	0	0	68800	6.88	13.6	6.4	5300	0.53
HCT-6	2.06	3900	0.39	2.34	13.12	15.1	37	5.8	897.63	0.089763	43100	4.31	18.33	0	0.85	0	0	64600	6.46	4.5	10.6	6600	0.66

Appendix 5.2-1. Pre-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

HC	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm
NM-05-03	433	0.8	21500	2.15	14.3	2.8	240	10	92.2	<0.002	2600	0.26	3.19	3	2	1.8	119	0.65	0.17	11.9	880	0.088	0.54
2	987	28.9	19700	1.97	5.9	11.3	1650	8.5	207	0.021	21200	2.12	4.04	31.8	9	1.2	67.3	0.36	0.79	1.9	2250	0.225	1.09
3	987	28.9	19700	1.97	5.9	11.3	1650	8.5	207	0.021	21200	2.12	4.04	31.8	9	1.2	67.3	0.36	0.79	1.9	2250	0.225	1.09
4	602	11.75	20200	2.02	11.5	9	990	13.4	114.5	0.015	30300	3.03	1.74	25.7	10	3.2	157	0.44	0.83	4.8	2160	0.216	0.52
M-07-33	745	24.7	24100	2.41	5.8	4.5	1200	13.9	124.5	0.075	25500	2.55	3.23	21.6	14	0.7	262	0.35	0.44	1.8	1880	0.188	1.52
10	2210	3.52	1100	0.11	13.6	9.1	1690	647	147.5	0.004	43500	4.35	4.06	20.7	13	1.9	217	0.6	0.29	5.2	2710	0.271	2.05
13	608	12.4	25200	2.52	11.2	15.7	1210	183	99.8	0.002	6900	0.69	2.63	11.8	4	0.9	143	0.66	0.57	1.7	2610	0.261	0.65
14	1280	3.57	16300	1.63	10.9	47	1470	31.9	97.6	0.01	19300	1.93	3.24	18.6	7	1.2	266	0.53	0.76	1.8	3300	0.33	1.42
M-07-44	503	4.02	4600	0.46	3.3	2.5	1310	117.5	142.5	0.007	100000	10	475	16.5	29	5.8	128.5	0.19	3.42	2.5	1500	0.15	2.24
M-07-30	857	4.25	700	0.07	8.5	7.5	960	9.6	170	0.005	300	0.03	7.84	17.5	2	1.3	29.5	0.56	<0.05	8.6	3430	0.343	1.66
M-06-14	961	123.5	2600	0.26	3.7	5.8	2540	57.2	66.3	0.608	67900	6.79	2.46	50.4	7	3	36.1	0.18	0.46	2.2	2140	0.214	2.58
M-07-43	862	69.6	2300	0.23	5.1	2.1	1550	26.4	75.8	0.259	22300	2.23	1.11	14.3	9	1.6	98	0.28	0.07	3	2620	0.262	1.83
12	1370	206	11100	1.11	7.4	3.4	1390	19.9	120.5	0.661	39000	3.9	5.27	17.7	9	1.2	184.5	0.41	0.18	3.3	2480	0.248	2.58
16	479	93.1	3400	0.34	6.2	3.9	1210	31.1	112.5	0.368	80700	8.07	4.2	15.7	12	1	384	0.36	0.32	2.9	2050	0.205	2.19
26	1720	138.5	600	0.06	6.5	2.2	1440	21.7	140	1.2	38500	3.85	5.97	18.6	9	1.3	64	0.37	0.19	3.4	2380	0.238	3.13
15	69	59.7	1500	0.15	1.1	6.1	1000	35	69.9	0.443	100000	10	1.22	8.2	44	2.2	15.7	0.1	0.37	1.8	540	0.054	1.36
1	255	256	2000	0.2	1.9	2.1	1430	88.4	97.6	2.23	51400	5.14	1.01	17.2	19	2.7	151	0.12	0.26	2.8	1010	0.101	3.67
5	1080	12.3	15200	1.52	5.6	3.8	1190	81.5	126	0.019	30200	3.02	10.3	18	16	0.7	252	0.38	0.58	1.7	1740	0.174	1.47
6	873	97	13600	1.36	4.6	20.5	950	49	106	0.075	52800	5.28	8.49	15.1	23	1.6	201	0.3	0.43	1.9	2010	0.201	1.54
11	548	5.1	10900	1.09	8.2	3.9	1520	16.3	149.5	0.006	51200	5.12	3.95	18.7	9	1.1	162	0.45	1.49	3.2	2640	0.264	2.6
7	1040	18	44500	4.45	6.3	18.5	960	42.3	92.5	0.082	21600	2.16	16.25	12.4	7	2.1	227	0.4	0.53	2.1	3580	0.358	1.04
8	1300	120	1300	0.13	6.2	3.3	1470	12.7	122	0.702	23600	2.36	2.85	18.2	6	1.1	341	0.35	0.1	3.5	2170	0.217	3.17
9	998	215	500	0.05	3.3	3.6	1280	94.5	119.5	1.09	81100	8.11	2.63	15.3	28	2	220	0.17	4	2.8	1280	0.128	2.38
S-06-04	368	1.72	24200	2.42	7.8	4	1030	8.6	87.1	0.003	6000	0.6	2.88	12.1	3	1.2	353	0.46	0.06	3.8	2550	0.255	0.62
17	625	287	27200	2.72	4.7	19.9	1260	6.5	76.1	0.734	13400	1.34	5.7	22.6	6	1.7	444	0.28	0.11	1.4	3280	0.328	0.47
S-06-05	78	32.6	1100	0.11	3	11.7	430	35.9	134	0.037	38900	3.89	79.5	18.4	7	4.9	49.6	0.18	0.56	2.9	1960	0.196	3.44
24	632	28.5	15300	1.53	6.5	46.7	1550	32.6	161	0.031	23300	2.33	9.43	17.4	5	1.9	107.5	0.43	0.07	5	3720	0.372	1.61
25	1550	50.4	300	0.03	4.2	22.8	760	7.1	167	0.073	38500	3.85	16.15	16.6	15	6	294	0.3	0.15	3.4	2880	0.288	3.32
18	1220	9.18	1000	0.1	6.1	73.6	1790	12.9	97.7	0.004	38300	3.83	3.11	28.1	4	2.2	476	0.33	1.33	2.1	3620	0.362	1.27
19	3090	2.48	1200	0.12	8.4	46.2	1900	5520	87	0.008	22500	2.25	11.9	25.9	9	1.2	430	0.45	0.74	2.5	4310	0.431	2.03
20	672	55.8	5800	0.58	5.7	14.1	1800	8.6	84.8	0.202	37500	3.75	5.12	24.6	18	2.5	84.8	0.41	0.3	1.4	2780	0.278	1.86
21	27	6.46	1900	0.19	1.6	23.4	1520	47.3	79.5	0.019	100000	>10.0	10.6	40.6	32	4	285	0.11	1.89	0.8	1130	0.113	2.28
22	71	21.1	1200	0.12	2.3	19.7	1040	5.6	78.3	0.129	99400	9.94	0.54	21	32	1.8	109.5	0.15	0.75	0.8	1200	0.12	2.16
23	262	4.82	700	0.07	3.4	3.2	1200	14.9	52.7	0.026	68700	6.87	2.39	12.3	25	1.6	51.7	0.2	0.47	0.8	1040	0.104	1.13
HCT-1	846	5.54	21620	2.162	5.61	2.2	0.136	34.8	183.5	0	24200	2.42	3.85	14.6	3	4.1	197	0.4	0	1.9	2310	0.231	0
HCT-2	608	22.23	15730	1.573	6.15	3.3	0.122	27.96	211.1	0	40200	4.02	2.69	19.1	3	15.1	216	0.3	0	2.8	2300	0.23	0
HCT-3	87	41.94	5810	0.581	3.52	2.1	0.088	77.76	197.6	0	38900	3.89	66.48	12	8	7.1	99	0.2	0	2.6	1330	0.133	0
HCT-4	106	103.69	8700	0.87	5.42	1.7	0.147	61.05	209.8	0	6000	0.6	47.46	8.8	2	8.4	217	0.3	0	1.8	1570	0.157	0
HCT-5	592	19.58	3010	0.301	2.66	20.2	0.096	126.87	218.8	0	52800	5.28	4.91	11.2	8	3.6	145	0.2	0	2.2	1830	0.183	0
HCT-6	133	23.28	10120	1.012	4.69	5.4	0.135	102.06	236.3	0	43400	4.34	34.38	16	10	5	102	0.2	0	2	1610	0.161	0

Appendix 5.2-1. Pre-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

HC	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al2O3 %	BaO %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	SRO %	TiO2 %	LOI %	Total_DC %
NM-05-03	5.5	376	4.9	2.8	48	34.6	13.04	0.09	1.37	<0.01	2.43	6.5	0.37	0.06	2.97	0.06	71.1	0.01	0.14	1.63	99.77
2	1.9	337	12.3	14.4	52	19.5	17.37	0.22	0.58	0.02	6.51	5.87	2.3	0.14	2.81	0.367	59.17	0.01	0.52	3.92	99.8
3	1.9	337	12.3	14.4	52	19.5	17.37	0.22	0.58	0.02	6.51	5.87	2.3	0.14	2.81	0.367	59.17	0.01	0.52	3.92	99.8
4	5	934	28.7	10.4	26	46.7	12.83	0.14	3.27	0.01	7.29	5.75	0.75	0.08	2.72	0.221	61.67	0.02	0.37	4.21	99.33
M-07-33	1.8	188	11	6.5	49	20.8	18.08	0.62	2.37	<0.01	5.13	6.93	1.39	0.1	3.28	0.272	55.51	0.03	0.37	5.73	99.81
10	12.1	433	8.3	12.2	1120	31.3	15.14	0.56	2.64	<0.01	8.46	9.3	1.55	0.29	0.25	0.366	54.49	0.03	0.58	5.48	99.13
13	2.6	345	4.2	12.6	114	33.1	14.87	0.21	1.4	0.01	3.16	6.6	1.41	0.08	3.57	0.266	65.84	0.02	0.51	1.81	99.76
14	5.1	550	6.7	15.1	94	35.2	15.36	0.32	3.05	0.02	4.62	7.69	2.92	0.17	2.31	0.316	58.01	0.03	0.59	4.57	99.99
M-07-44	1.7	145	3.3	8.8	362	14	14.51	0.5	1.95	<0.01	15.48	4.87	1.56	0.06	0.59	0.28	48.7	0.02	0.4	10.85	99.79
M-07-30	3.5	152	2.8	17.7	99	93.1	17.64	0.17	0.88	<0.01	6.35	7.06	2.06	0.12	0.11	0.216	60.28	<0.01	0.65	4.02	99.57
M-06-14	1.7	424	0.5	10.1	472	15.3	18.11	0.25	0.78	<0.01	11.5	3.33	4.21	0.13	0.35	0.551	50.74	<0.01	0.78	8.52	99.26
M-07-43	1.7	152	0.8	8.5	169	17.9	17.69	0.34	0.53	<0.01	6.83	3.15	3.39	0.12	0.31	0.364	61.27	0.01	0.65	5.18	99.84
12	1.7	155	6.2	9.4	81	17.4	15.84	0.65	2.6	<0.01	7.6	4.54	2.93	0.18	1.51	0.297	56.6	0.03	0.46	5.98	99.22
16	1.6	150	2.3	13.3	56	12	14.25	0.6	6.14	<0.01	9.18	4.63	2.14	0.07	0.53	0.273	49.84	0.05	0.42	10.35	98.48
26	1.9	163	1.6	9	137	14.9	16.11	0.19	2.89	0.01	6.97	5.6	3.17	0.22	0.16	0.304	56.66	0.01	0.47	6.8	99.56
15	0.9	69	2.1	5.7	25	10.4	9.52	0.11	0.29	<0.01	23.23	2.4	0.53	0.01	0.28	0.229	49.65	<0.01	0.36	13.05	99.66
1	1.3	119	1	8.6	56	19.2	14.84	0.34	0.42	<0.01	6.96	3.71	0.87	0.03	0.27	0.303	65.75	0.02	0.57	5.77	99.85
5	1.4	213	7.5	7.4	39	17.9	16.85	0.5	2.79	<0.01	5.74	6.86	1.78	0.15	2.14	0.267	55.2	0.03	0.34	7.06	99.71
6	5	202	26.6	10.2	28	36.4	14.68	0.35	3.18	0.01	7.56	7.46	1.4	0.12	1.86	0.211	54.16	0.02	0.46	7.95	99.42
11	2.2	180	16.4	7.8	23	21.5	18.25	0.55	2.41	<0.01	7.5	6.91	1.85	0.08	1.57	0.338	52.75	0.03	0.52	7.05	99.79
7	8.6	226	17.1	10.9	186	46.1	15.69	0.08	3.32	0.01	3.75	2.83	2.38	0.14	5.97	0.215	59.14	0.03	0.67	5.65	99.87
8	1.8	165	1.7	8.8	168	24.5	16.58	0.7	3.41	<0.01	6.4	4.46	3.36	0.18	0.27	0.324	56.72	0.05	0.5	6.22	99.17
9	1.2	144	1.2	7.7	47	14.7	13.18	0.82	4.3	<0.01	12.17	3.88	2.35	0.13	0.13	0.273	51.42	0.03	0.38	10.05	99.11
S-06-04	1.8	193	8.7	12	24	25.8	16.46	0.3	2.31	0.005	3.13	5.98	1.53	0.05	3.34	0.23	62.55	0.04	0.46	3.31	99.7
17	1.8	200	7.6	9.2	28	21.9	16.89	0.51	4.51	0.005	6.03	4.22	4.33	0.09	3.89	0.292	52.71	0.05	0.62	5.76	99.91
S-06-05	2.5	150	29.5	11.4	373	25.7	13.1	0.13	0.2	0.005	5.19	6.18	0.75	0.01	0.18	0.102	69.24	0.01	0.5	4.19	99.78
24	2.6	153	4.5	16.8	237	35.6	18.31	0.09	1.35	0.01	7.63	5.67	3.6	0.09	2.25	0.351	54.6	0.01	0.73	5.05	99.74
25	6.1	265	99.5	17.1	74	60.5	13.03	0.08	7.23	0.005	12.68	3.47	6.05	0.22	0.09	0.178	46.55	0.03	0.51	8.25	98.38
18	1.9	261	51.4	11.4	71	29.3	13.94	0.36	6.05	0.02	12.72	7.43	3.68	0.17	0.21	0.401	47.02	0.05	0.64	5.82	98.51
19	1.8	326	24.8	10.5	>10000	30.9	16.39	0.58	2.63	0.02	8.02	8.85	2.39	0.44	0.55	0.426	53.54	0.06	0.82	3.63	98.33
20	0.5	248	3.5	7.1	88	19.4	17.61	0.2	2.13	0.005	7.49	5.35	2.45	0.09	0.82	0.382	56.32	0.01	0.57	6.07	99.49
21	0.4	249	3.3	8.7	38	16.5	15.42	0.25	0.4	0.01	14.43	3.87	0.68	0.005	0.35	0.328	53.75	0.04	0.58	9.7	99.81
22	0.5	177	1	8	15	8.5	14.8	0.3	0.51	0.01	13.38	4.02	0.62	0.01	0.23	0.236	56.31	0.02	0.51	8.92	99.88
23	0.3	116	2.3	3.8	28	5	9.83	0.1	0.7	0.005	9.46	2.65	1.04	0.03	0.14	0.26	67.78	0.01	0.23	6.31	98.55
HCT-1	1.4	152	2.9	7	73	16.8															
HCT-2	6.9	236	4.2	13.6	113.9	28.5															
HCT-3	7.1	176	9.4	11.9	89.1	32.4															
HCT-4	4.8	136	12.1	10.8	81.1	23.1															
HCT-5	3.3	191	6.1	11.1	562.5	18.5															
HCT-6	4.1	164	5	11	209.8	29.3															

Appendix 5.2-1. Pre-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

	Ag ppm	Al ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm
Mitchell UP Hazelton																				
Count	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Minimum	0.31	60300.00	6.03	5.50	130.00	1.62	0.39	3800.00	0.38	0.05	8.80	2.50	5.00	0.84	85.90	0.01	17200.00	1.72	17.90	0.10
10 Percentile	0.79	61560.00	6.16	7.04	312.00	1.85	0.66	3800.00	0.38	0.09	10.06	5.44	5.70	1.34	325.37	0.03	20490.00	2.05	18.11	0.11
25 Percentile	1.13	69300.00	6.93	7.70	517.50	1.97	0.77	8225.00	0.82	0.11	15.18	10.90	7.50	2.00	977.00	0.10	29250.00	2.93	18.50	0.15
Median-25Percentile	0.32	6900.00	0.69	2.25	477.50	0.02	0.38	5275.00	0.53	0.05	5.83	4.75	4.50	1.18	688.00	0.07	8850.00	0.89	0.13	0.03
Mean	3.32	73237.50	7.32	15.24	942.50	2.27	2.09	13475.00	1.35	1.94	19.59	15.31	20.38	3.96	1482.99	0.15	36925.00	3.69	19.86	0.17
Standard Deviation	4.42	8028.33	0.80	11.57	567.32	0.65	2.20	7641.94	0.76	4.69	7.35	7.89	25.35	2.58	975.97	0.10	13489.55	1.35	3.75	0.04
Median	1.45	76200.00	7.62	9.95	995.00	1.99	1.15	13500.00	1.35	0.16	21.00	15.65	12.00	3.18	1665.00	0.17	38100.00	3.81	18.63	0.18
75Percentile-Median	1.41	3100.00	0.31	8.63	315.00	0.31	1.33	6275.00	0.63	0.29	4.45	7.35	4.25	3.74	125.00	0.01	5650.00	0.57	0.23	0.01
75 Percentile	2.86	79300.00	7.93	18.58	1310.00	2.30	2.48	19775.00	1.98	0.45	25.45	23.00	16.25	6.91	1790.00	0.18	43750.00	4.38	18.85	0.19
90 Percentile	8.15	80200.00	8.02	32.90	1472.00	3.20	4.43	22040.00	2.20	4.88	26.50	23.21	42.50	6.94	2237.00	0.22	51220.00	5.12	22.03	0.20
Maximum	13.40	80200.00	8.02	35.00	1850.00	3.49	6.99	22600.00	2.26	13.50	27.20	23.70	81.00	6.94	3280.00	0.33	57800.00	5.78	29.10	0.20
Interquartile Range (IQR) 1	1.73	10000.00	1.00	10.88	792.50	0.34	1.71	11550.00	1.16	0.34	10.28	12.10	8.75	4.91	813.00	0.08	14500.00	1.45	0.35	0.04
Variance	19.52	64454107.14	0.64	133.94	321850.00	0.42	4.83	58399285.71	0.58	21.98	53.99	62.31	642.84	6.64	952521.06	0.01	181967857.14	1.82	14.07	0.00
Skewness	2.16	-0.94	-0.94	1.27	0.10	1.37	1.94	-0.15	-0.15	2.79	-0.45	-0.49	2.49	0.30	0.40	0.40	-0.03	-0.03	2.78	-1.07
Coefficient of Variation (CoV)	1.33	0.11	0.11	0.76	0.60	0.29	1.05	0.57	0.57	2.42	0.38	0.52	1.24	0.65	0.66	0.66	0.37	0.37	0.19	0.22
Mitchell LP Hazelton																				
Count	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Minimum	0.12	49000.00	4.90	8.00	80.00	0.38	0.13	2300.00	0.23	0.05	6.63	4.40	2.00	1.70	70.10	0.01	24100.00	2.41	6.23	0.16
10 Percentile	0.75	66860.00	6.69	9.02	100.00	0.86	0.15	3360.00	0.34	0.13	11.45	9.32	3.20	1.92	75.94	0.01	38420.00	3.84	15.90	0.16
25 Percentile	0.93	67200.00	6.72	11.20	110.00	1.04	0.35	5300.00	0.53	0.16	15.70	13.70	4.00	3.80	116.50	0.01	43700.00	4.37	17.05	0.18
Median-25Percentile	0.18	11300.00	1.13	1.70	120.00	0.20	0.12	13400.00	1.34	0.04	4.30	0.70	0.00	0.96	484.50	0.05	5400.00	0.54	0.65	0.01
Mean	1.44	74738.46	7.47	21.90	346.92	1.36	0.83	15892.31	1.59	0.43	22.28	16.27	8.54	4.75	477.36	0.05	57530.77	5.75	17.10	0.21
Standard Deviation	1.46	9905.26	0.99	16.47	394.36	0.56	0.74	11509.96	1.15	0.58	12.20	7.01	9.58	2.05	342.37	0.03	33988.29	3.40	3.54	0.04
Median	1.11	78500.00	7.85	12.90	230.00	1.24	0.47	18700.00	1.87	0.20	20.00	14.40	4.00	4.76	601.00	0.06	49100.00	4.91	17.70	0.19
75Percentile-Median	0.19	3500.00	0.35	14.80	130.00	0.52	0.62	3100.00	0.31	0.11	4.40	6.60	3.00	1.12	70.00	0.01	4100.00	0.41	0.75	0.04
75 Percentile	1.30	82000.00	8.20	27.70	360.00	1.76	1.09	21800.00	2.18	0.31	24.40	21.00	7.00	5.88	671.00	0.07	53200.00	5.32	18.45	0.23
90 Percentile	1.89	82400.00	8.24	47.40	588.00	1.86	1.90	23060.00	2.31	1.18	33.92	23.58	22.60	7.41	879.40	0.09	75460.00	7.55	19.34	0.26
Maximum	6.07	85100.00	8.51	58.70	1550.00	2.57	2.42	42600.00	4.26	1.99	54.80	31.90	33.00	8.42	1060.00	0.11	162500.00	16.25	21.30	0.31
Interquartile Range (IQR) 1	0.37	14800.00	1.48	16.50	250.00	0.72	0.74	16500.00	1.65	0.15	8.70	7.30	3.00	2.08	554.50	0.06	9500.00	0.95	1.40	0.05
Variance	2.12	98114230.77	0.98	271.10	155523.08	0.31	0.55	132479102.56	1.32	0.34	148.84	49.19	91.77	4.21	117218.86	0.00	###########	11.55	12.54	0.00
Skewness	3.08	-1.60	-1.60	1.49	2.71	0.50	1.16	0.76	0.76	2.31	1.66	0.66	2.13	0.16	0.13	0.13	2.79	2.79	-2.64	1.22
Coefficient of Variation (CoV)	1.01	0.13	0.13	0.75	1.14	0.41	0.90	0.72	0.72	1.36	0.55	0.43	1.12	0.43	0.72	0.72	0.59	0.59	0.21	0.22
Sulphurets																				
Count	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Minimum	0.32	62300.00	6.23	8.00	420.00	0.94	0.09	1600.00	0.16	0.02	13.60	10.10	4.00	1.84	247.00	0.02	21100.00	2.11	16.80	0.07
10 Percentile	0.33	63800.00	6.38	8.75	435.00	0.96	0.09	5400.00	0.54	0.03	16.63	16.35	12.00	1.99	247.50	0.02	28900.00	2.89	17.23	0.10
25 Percentile	0.35	66825.00	6.68	9.93	467.50	1.02	0.12	10875.00	1.09	0.05	20.34	22.98	20.50	2.26	478.50	0.05	37400.00	3.74	18.10	0.13
Median-25Percentile	0.10	6775.00	0.68	13.33	172.50	0.12	0.11	12425.00	1.24	0.03	3.01	3.78	2.00	1.26	729.00	0.07	7400.00	0.74	1.93	0.03
Mean	0.55	71950.00	7.20	28.98	1158.33	1.31	0.60	24950.00	2.50	0.40	24.96	24.83	43.00	6.33	996.67	0.10	52700.00	5.27	20.32	0.16
Standard Deviation	0.26	6884.98	0.69	24.84	970.49	0.42	0.91	19128.90	1.91	0.53	8.54	8.14	47.24	5.87	614.21	0.06	26293.95	2.63	2.98	0.06
Median	0.44	73600.00	7.36	23.25	640.00	1.14	0.24	23300.00	2.33	0.08	23.35	26.75	22.50	3.52	1207.50	0.12	44800.00	4.48	20.03	0.16
75Percentile-Median	0.33	4075.00	0.41	14.23	1290.00	0.39	0.21	16475.00	1.65	0.74	8.08	3.48	25.25	5.65	93.75	0.01	29225.00	2.92	2.30	0.03
75 Percentile	0.77	77675.00	7.77	37.48	1930.00	1.52	0.45	39775.00	3.98	0.82	31.43	30.23	47.75	9.17	1301.25	0.13	74025.00	7.40	22.33	0.19
90 Percentile	0.87	78450.00	7.85	54.95	2400.00	1.83	1.48	46150.00	4.62	1.08	34.90	31.40	94.50	13.48	1535.00	0.15	84400.00	8.44	23.70	0.22
Maximum	0.88	78600.00	7.86	71.70	2480.00	2.00	2.44	49500.00	4.95	1.10	36.00	32.30	133.00	16.20	1750.00	0.18	86800.00	8.68	24.50	0.24
Interquartile Range (IQR) 1	0.42	10850.00	1.09	27.55	1462.50	0.51	0.32	28900.00	2.89	0.77	11.09	7.25	27.25	6.91	822.75	0.08	36625.00	3.66	4.23	0.06
Variance	0.07	47403000.00	0.47	617.14	941856.67	0.18	0.84	365915000.00	3.66	0.28	72.85	66.26	2232.00	34.42	377254.27	0.00	691372000.00	6.91	8.90	0.00
Skewness	0.75	-0.54	-0.54	1.11	0.92	1.10	2.30	0.14	0.14	0.96	0.20	-1.40	1.83	1.23	-0.46	-0.46	0.44	0.44	0.31	0.00
Coefficient of Variation (CoV)	0.48	0.10	0.10	0.86	0.84	0.32	1.52	0.77	0.77	1.34	0.34	0.33	1.10	0.93	0.62	0.62	0.50	0.50	0.15	0.38

Appendix 5.2-1. Pre-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm
Mitchell UP Hazelton																				
Count	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	7	8
Minimum	0.70	0.02	0.02	39900.00	3.99	5.20	2.80	1700.00	0.17	433.00	0.80	1100.00	0.11	5.80	2.80	240.00	8.50	92.20	0.00	2600.00
10 Percentile	0.70	0.02	0.03	39900.00	3.99	5.55	7.14	3170.00	0.32	551.30	2.70	11740.00	1.17	5.87	3.99	765.00	8.50	95.98	0.00	5610.00
25 Percentile	0.78	0.03	0.03	40800.00	4.08	8.25	10.35	5975.00	0.60	606.50	3.56	18850.00	1.89	5.90	7.88	1147.50	9.63	99.25	0.01	16200.00
Median-25Percentile	0.28	0.02	0.01	3800.00	0.38	2.75	15.55	1775.00	0.18	259.50	8.52	1100.00	0.11	5.15	2.33	192.50	4.03	20.25	0.01	5000.00
Mean	1.06	0.09	0.06	45100.00	4.51	10.71	24.16	8637.50	0.86	981.50	14.32	18475.00	1.85	9.89	13.84	1262.50	114.53	136.26	0.02	21312.50
Standard Deviation	0.34	0.15	0.03	4736.18	0.47	4.18	16.37	4843.24	0.48	565.52	11.70	7546.19	0.75	3.53	13.99	485.88	223.22	47.07	0.02	12831.59
Median	1.05	0.05	0.05	44600.00	4.46	11.00	25.90	7750.00	0.78	866.00	12.08	19950.00	2.00	11.05	10.20	1340.00	13.65	119.50	0.02	21200.00
75Percentile-Median	0.15	0.01	0.03	4250.00	0.43	1.20	11.98	4950.00	0.50	194.25	13.68	2200.00	0.22	0.98	2.20	310.00	56.03	42.88	0.01	5500.00
75 Percentile	1.20	0.05	0.08	48850.00	4.89	12.20	37.88	12700.00	1.27	1060.25	25.75	22150.00	2.22	12.03	12.40	1650.00	69.68	162.38	0.02	26700.00
90 Percentile	1.53	0.17	0.09	50620.00	5.06	15.98	39.87	13690.00	1.37	1559.00	28.90	24430.00	2.44	13.81	25.09	1662.00	322.20	207.00	0.04	34260.00
Maximum	1.60	0.45	0.12	52300.00	5.23	17.10	42.60	16000.00	1.60	2210.00	28.90	25200.00	2.52	14.30	47.00	1690.00	647.00	207.00	0.08	43500.00
Interquartile Range (IQR) 1	0.43	0.02	0.05	8050.00	0.81	3.95	27.53	6725.00	0.67	453.75	22.19	3300.00	0.33	6.13	4.53	502.50	60.05	63.13	0.01	10500.00
Variance	0.12	0.02	0.00	22431428.57	0.22	17.45	268.07	23456964.29	0.23	319811.71	136.88	56945000.00	0.57	12.44	195.85	236078.57	49829.30	2215.95	0.00	164649821.43
Skewness	0.60	2.79	0.97	0.32	0.32	0.19	-0.10	0.13	0.13	1.68	0.28	-2.10	-2.10	-0.22	2.37	-1.47	2.49	0.92	2.15	0.20
Coefficient of Variation (Co\	0.32	1.65	0.59	0.11	0.11	0.39	0.68	0.56	0.56	0.58	0.82	0.41	0.41	0.36	1.01	0.38	1.95	0.35	1.18	0.60
Mitchell LP Hazelton																				
Count	13	10	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Minimum	0.30	0.01	0.01	19100.00	1.91	3.00	4.60	2700.00	0.27	69.00	4.25	600.00	0.06	1.10	2.10	950.00	9.60	66.30	0.01	300.00
10 Percentile	0.34	0.01	0.03	22580.00	2.26	4.86	7.60	5080.00	0.51	299.80	6.54	820.00	0.08	2.26	2.12	960.00	13.42	71.08	0.01	21740.00
25 Percentile	0.50	0.02	0.04	26700.00	2.67	8.70	12.70	9100.00	0.91	548.00	18.00	1500.00	0.15	4.60	3.30	1000.00	19.90	92.50	0.08	23600.00
Median-25Percentile	0.10	0.02	0.02	10000.00	1.00	1.40	2.40	2100.00	0.21	325.00	75.10	1100.00	0.11	1.60	0.60	390.00	11.20	20.00	0.29	15400.00
Mean	0.84	0.07	0.05	35430.77	3.54	12.43	23.37	12307.69	1.23	878.00	92.54	8438.46	0.84	5.48	6.39	1354.62	37.78	111.43	0.51	44576.92
Standard Deviation	0.67	0.08	0.03	10261.37	1.03	9.47	25.51	5890.17	0.59	457.76	77.72	12058.78	1.21	2.22	6.05	423.00	25.24	31.24	0.63	27046.26
Median	0.60	0.04	0.05	36700.00	3.67	10.10	15.10	11200.00	1.12	873.00	93.10	2600.00	0.26	6.20	3.90	1390.00	31.10	112.50	0.37	39000.00
75Percentile-Median	0.20	0.03	0.01	7200.00	0.72	2.80	6.80	6200.00	0.62	207.00	30.40	8500.00	0.85	0.30	2.20	80.00	17.90	13.50	0.29	13800.00
75 Percentile	0.80	0.07	0.06	43900.00	4.39	12.90	21.90	17400.00	1.74	1080.00	123.50	11100.00	1.11	6.50	6.10	1470.00	49.00	126.00	0.66	52800.00
90 Percentile	1.52	0.13	0.10	45620.00	4.56	17.96	34.32	18080.00	1.81	1356.00	192.50	14880.00	1.49	8.04	16.30	1544.00	76.64	147.60	1.10	78140.00
Maximum	2.70	0.26	0.11	52100.00	5.21	40.80	103.50	22600.00	2.26	1720.00	256.00	44500.00	4.45	8.50	20.50	2540.00	88.40	170.00	2.23	100000.00
Interquartile Range (IQR) 1	0.30	0.05	0.03	17200.00	1.72	4.20	9.20	8300.00	0.83	532.00	105.50	9600.00	0.96	1.90	2.80	470.00	29.10	33.50	0.59	29200.00
Variance	0.44	0.01	0.00	105295641.03	1.05	89.64	650.67	34694102.56	0.35	209540.17	6039.81	145414230.77	1.45	4.92	36.61	178926.92	636.83	976.12	0.39	731500256.41
Skewness	2.16	2.17	0.52	-0.13	-0.13	2.49	2.96	0.05	0.05	-0.07	0.76	2.52	2.52	-0.72	1.89	1.87	1.00	0.21	1.94	0.54
Coefficient of Variation (Co\	0.79	1.15	0.54	0.29	0.29	0.76	1.09	0.48	0.48	0.52	0.84	1.43	1.43	0.40	0.95	0.31	0.67	0.28	1.22	0.61
Sulphurets																				
Count	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Minimum	0.80	0.02	0.03	29300.00	2.93	6.30	9.20	3600.00	0.36	78.00	1.72	300.00	0.03	3.00	4.00	430.00	6.50	76.10	0.00	6000.00
10 Percentile	0.90	0.02	0.04	31100.00	3.11	7.95	10.65	5600.00	0.56	223.00	5.45	650.00	0.07	3.60	7.85	595.00	6.80	81.60	0.00	9700.00
25 Percentile	1.00	0.02	0.06	35550.00	3.56	10.00	14.38	10300.00	1.03	432.25	14.01	1025.00	0.10	4.33	13.75	827.50	7.48	89.75	0.01	15875.00
Median-25Percentile	0.05	0.01	0.01	9050.00	0.91	3.65	8.68	9050.00	0.91	196.25	16.54	7175.00	0.72	1.08	7.60	317.50	3.28	26.10	0.02	14925.00
Mean	1.15	0.07	0.18	41566.67	4.16	13.43	26.00	17666.67	1.77	745.50	68.23	11516.67	1.15	5.38	29.78	1136.67	17.27	120.48	0.15	26400.00
Standard Deviation	0.31	0.07	0.21	8467.98	0.85	5.34	16.85	10786.23	1.08	545.50	108.57	12377.95	1.24	1.74	25.86	503.10	13.38	38.97	0.29	14415.55
Median	1.05	0.04	0.06	44600.00	4.46	13.65	23.05	19350.00	1.94	628.50	30.55	8200.00	0.82	5.40	21.35	1145.00	10.75	115.85	0.03	30800.00
75Percentile-Median	0.20	0.04	0.20	2900.00	0.29	2.75	8.00	2675.00	0.27	444.50	15.40	13775.00	1.38	1.00	19.38	332.50	16.93	38.40	0.03	7650.00
75 Percentile	1.25	0.07	0.26	47500.00	4.75	16.40	31.05	22025.00	2.20	1073.00	45.95	21975.00	2.20	6.40	40.73	1477.50	27.68	154.25	0.06	38450.00
90 Percentile	1.50	0.15	0.44	49000.00	4.90	18.70	44.30	28050.00	2.81	1385.00	168.70	25700.00	2.57	7.15	60.15	1670.00	34.25	164.00	0.40	38700.00
Maximum	1.70	0.21	0.55	49900.00	4.99	20.90	55.50	33500.00	3.35	1550.00	287.00	27200.00	2.72	7.80	73.60	1790.00	35.90	167.00	0.73	38900.00
Interquartile Range (IQR) 1	0.25	0.05	0.21	11950.00	1.20	6.40	16.68	11725.00	1.17	640.75	31.94	20950.00	2.10	2.08	26.98	650.00	20.20	64.50	0.05	22575.00
Variance	0.10	0.01	0.04	71706666.67	0.72	28.57	284.07	116342666.67	1.16	297567.10	11787.33	153213666.67	1.53	3.03	668.86	253106.67	179.15	1518.30	0.08	207808000.00
Skewness	1.16	2.01	1.39	-0.77	-0.77	0.07	1.16	0.07	0.07	0.50	2.31	0.36	0.36	0.02	1.12	-0.13	0.88	0.17	2.41	-0.53
Coefficient of Variation (Co\	0.27	1.10	1.17	0.20	0.20	0.40	0.65	0.61	0.61	0.73	1.59	1.07	1.07	0.32	0.87	0.44	0.78	0.32	1.96	0.55

Appendix 5.2-1. Pre-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
Mitchell UP Hazelton																		
Count	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Minimum	0.26	1.74	3.00	2.00	0.70	67.30	0.35	0.17	1.70	880.00	0.09	0.52	1.80	188.00	4.20	2.80	26.00	19.50
10 Percentile	0.56	2.36	9.16	3.40	0.84	67.30	0.36	0.25	1.77	1580.00	0.16	0.53	1.87	292.30	4.69	5.39	41.40	19.50
25 Percentile	1.62	3.05	16.90	6.25	1.13	106.08	0.36	0.40	1.80	2090.00	0.21	0.62	1.90	337.00	6.25	9.43	48.75	20.48
Median-25Percentile	0.50	0.19	4.25	2.75	0.08	43.93	0.13	0.26	0.10	160.00	0.02	0.47	1.90	23.50	3.40	2.98	3.25	11.73
Mean	2.13	3.27	20.63	8.50	1.51	162.33	0.49	0.58	3.88	2255.00	0.23	1.11	4.49	437.50	11.05	11.05	194.38	30.09
Standard Deviation	1.28	0.81	9.78	4.11	0.79	79.29	0.13	0.25	3.55	703.60	0.07	0.54	3.46	224.87	7.80	4.34	375.07	9.59
Median	2.12	3.24	21.15	9.00	1.20	150.00	0.49	0.67	1.90	2250.00	0.23	1.09	3.80	360.50	9.65	12.40	52.00	32.20
75Percentile-Median	0.55	0.81	6.08	1.75	0.63	78.25	0.13	0.13	3.00	385.00	0.04	0.36	1.40	101.75	2.65	2.00	47.00	2.55
75 Percentile	2.67	4.04	27.23	10.75	1.83	228.25	0.61	0.79	4.90	2635.00	0.26	1.45	5.20	462.25	12.30	14.40	99.00	34.75
90 Percentile	3.43	4.05	31.80	13.30	2.29	263.20	0.65	0.80	7.21	2887.00	0.29	1.68	7.48	665.20	17.22	14.61	415.80	38.65
Maximum	4.35	4.06	31.80	14.00	3.20	266.00	0.66	0.83	11.90	3300.00	0.33	2.05	12.10	934.00	28.70	15.10	1120.00	46.70
Interquartile Range (IQR) 1	1.05	0.99	10.33	4.50	0.70	122.18	0.25	0.39	3.10	545.00	0.05	0.82	3.30	125.25	6.05	4.98	50.25	14.28
Variance	1.65	0.65	95.59	16.86	0.63	6287.33	0.02	0.07	12.59	495057.14	0.00	0.29	11.97	50568.29	60.84	18.82	140681.13	91.92
Skewness	0.20	-0.89	-0.66	-0.30	1.54	0.18	0.14	-0.64	2.03	-0.75	-0.75	0.54	1.76	1.76	1.94	-1.19	2.80	0.36
Coefficient of Variation (Co\	0.60	0.25	0.47	0.48	0.52	0.49	0.27	0.44	0.92	0.31	0.31	0.49	0.77	0.51	0.71	0.39	1.93	0.32
Mitchell LP Hazelton																		
Count	13	13	13	13	13	13	13	12	13	13	13	13	13	13	13	13	13	13
Minimum	0.03	1.01	8.20	2.00	0.70	15.70	0.10	0.07	1.70	540.00	0.05	1.04	0.90	69.00	0.50	5.70	23.00	10.40
10 Percentile	2.17	1.13	12.78	6.20	1.02	30.82	0.13	0.11	1.82	1156.00	0.12	1.38	1.32	125.20	0.84	7.48	25.60	12.58
25 Percentile	2.36	2.46	15.10	7.00	1.10	64.00	0.28	0.19	2.10	2010.00	0.20	1.54	1.60	152.00	1.60	8.50	39.00	15.30
Median-25Percentile	1.54	1.74	2.40	2.00	0.20	98.00	0.08	0.16	0.80	160.00	0.02	0.65	0.10	11.00	0.70	0.50	42.00	2.60
Mean	4.46	5.46	18.62	13.23	1.61	165.06	0.33	0.42	3.11	2214.62	0.22	2.22	2.56	182.31	6.66	9.80	118.38	26.66
Standard Deviation	2.70	4.39	10.01	10.85	0.69	116.97	0.13	0.38	1.77	833.75	0.08	0.81	2.11	83.07	8.22	2.99	121.39	22.29
Median	3.90	4.20	17.50	9.00	1.30	162.00	0.36	0.35	2.90	2170.00	0.22	2.19	1.70	163.00	2.30	9.00	81.00	17.90
75Percentile-Median	1.38	3.64	0.70	7.00	0.80	65.00	0.04	0.13	0.40	450.00	0.05	0.41	0.50	39.00	5.20	1.20	87.00	6.60
75 Percentile	5.28	7.84	18.20	16.00	2.10	227.00	0.40	0.48	3.30	2620.00	0.26	2.60	2.20	202.00	7.50	10.20	168.00	24.50
90 Percentile	7.81	9.94	18.68	22.20	2.60	323.20	0.44	0.58	3.48	3272.00	0.33	3.16	4.70	223.40	16.96	12.82	182.60	44.16
Maximum	10.00	16.25	50.40	44.00	3.00	384.00	0.56	1.49	8.60	3580.00	0.36	3.67	8.60	424.00	26.60	17.70	472.00	93.10
Interquartile Range (IQR) 1	2.92	5.38	3.10	9.00	1.00	163.00	0.12	0.29	1.20	610.00	0.06	1.06	0.60	50.00	5.90	1.70	129.00	9.20
Variance	7.32	19.28	100.12	117.69	0.48	13682.26	0.02	0.14	3.13	695143.59	0.01	0.66	4.44	6900.40	67.63	8.97	14736.09	496.66
Skewness	0.54	1.30	3.01	2.14	0.87	0.47	-0.37	2.35	2.79	-0.35	-0.35	0.30	2.35	2.13	1.57	1.62	2.27	2.57
Coefficient of Variation (Co\	0.61	0.80	0.54	0.82	0.43	0.71	0.40	0.91	0.57	0.38	0.38	0.37	0.82	0.46	1.23	0.31	1.03	0.84
Sulphurets																		
Count	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Minimum	0.60	2.88	12.10	3.00	1.20	49.60	0.18	0.06	1.40	1960.00	0.20	0.47	1.80	150.00	4.50	9.20	24.00	21.90
10 Percentile	0.97	3.00	14.35	3.50	1.45	78.55	0.23	0.07	1.75	2255.00	0.23	0.55	1.80	151.50	6.05	10.30	26.00	23.80
25 Percentile	1.59	3.76	16.80	4.25	1.75	154.13	0.29	0.08	2.30	2632.50	0.26	0.78	1.83	163.00	7.88	11.40	38.75	25.73
Median-25Percentile	1.49	3.81	1.10	1.25	0.30	169.38	0.03	0.05	0.85	447.50	0.04	0.66	0.38	33.50	11.23	0.30	33.75	1.83
Mean	2.64	19.46	19.20	6.67	2.98	287.35	0.33	0.38	3.10	3001.67	0.30	1.79	2.78	203.67	33.53	12.98	134.50	33.13
Standard Deviation	1.44	29.83	5.51	4.32	1.97	175.13	0.10	0.50	1.27	675.23	0.07	1.30	1.66	50.25	36.93	3.22	140.45	14.18
Median	3.08	7.57	17.90	5.50	2.05	323.50	0.32	0.13	3.15	3080.00	0.31	1.44	2.20	196.50	19.10	11.70	72.50	27.55
75Percentile-Median	0.77	6.91	3.65	1.25	2.18	97.75	0.09	0.33	0.55	455.00	0.05	1.45	0.38	49.25	26.83	3.90	123.75	6.48
75 Percentile	3.85	14.47	21.55	6.75	4.23	421.25	0.41	0.46	3.70	3535.00	0.35	2.89	2.58	245.75	45.93	15.60	196.25	34.03
90 Percentile	3.87	47.83	25.35	11.00	5.45	460.00	0.45	0.95	4.40	3670.00	0.37	3.38	4.35	263.00	75.45	16.95	305.00	48.05
Maximum	3.89	79.50	28.10	15.00	6.00	476.00	0.46	1.33	5.00	3720.00	0.37	3.44	6.10	265.00	99.50	17.10	373.00	60.50
Interquartile Range (IQR) 1	2.26	10.71	4.75	2.50	2.48	267.13	0.12	0.38	1.40	902.50	0.09	2.11	0.75	82.75	38.05	4.20	157.50	8.30
Variance	2.08	889.58	30.36	18.67	3.88	30670.66	0.01	0.25	1.62	455936.67	0.00	1.70	2.77	2524.67	1363.85	10.36	19726.70	200.99
Skewness	-0.53	2.30	0.65	1.88	0.98	-0.47	-0.09	1.82	0.19	-0.58	-0.58	0.55	2.21	0.32	1.40	0.56	1.26	1.92
Coefficient of Variation (Co\	0.55	1.53	0.29	0.65	0.66	0.61	0.31	1.32	0.41	0.22	0.22	0.73	0.60	0.25	1.10	0.25	1.04	0.43

Appendix 5.2-1. Pre-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

		Ag	Al	Al	As	Ba	Be	Bi	Ca	Ca	Cd	Ce	Co	Cr	Cs	Cu	Cu	Fe	Fe	Ga	Ge
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%	ppm	ppm
Kerr																					
	Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Minimum	0.41	71700.00	7.17	11.80	30.00	0.30	0.09	2900.00	0.29	0.06	1.30	23.10	24.00	3.38	386.00	0.04	52300.00	5.23	14.70	0.22
	10 Percentile	0.48	72620.00	7.26	12.74	36.00	0.39	0.12	3080.00	0.31	0.08	3.23	23.66	26.80	3.40	856.80	0.09	60180.00	6.02	14.90	0.24
	25 Percentile	0.59	74000.00	7.40	14.15	45.00	0.52	0.16	3350.00	0.34	0.12	6.13	24.50	31.00	3.43	1563.00	0.16	72000.00	7.20	15.20	0.27
	Median-25Percentile	0.18	2300.00	0.23	2.35	15.00	0.22	0.07	450.00	0.05	0.06	4.83	1.40	7.00	0.05	1177.00	0.12	19700.00	1.97	0.50	0.05
	Mean	0.65	76233.33	7.62	52.10	156.67	0.61	0.26	7433.33	0.74	0.15	8.65	26.30	43.67	3.96	2105.33	0.21	81666.67	8.17	16.18	0.29
	Standard Deviation	0.21	4500.37	0.45	65.77	193.99	0.27	0.19	7086.84	0.71	0.08	6.51	3.42	23.03	0.93	1505.89	0.15	25853.88	2.59	1.78	0.07
	Median	0.76	76300.00	7.63	16.50	60.00	0.74	0.22	3800.00	0.38	0.17	10.95	25.90	38.00	3.47	2740.00	0.27	91700.00	9.17	15.70	0.31
	75Percentile-Median	0.01	2200.00	0.22	55.75	160.00	0.03	0.12	5900.00	0.59	0.02	1.38	2.00	15.50	0.79	225.00	0.02	4650.00	0.47	1.23	0.02
	75 Percentile	0.77	78500.00	7.85	72.25	220.00	0.77	0.34	9700.00	0.97	0.19	12.33	27.90	53.50	4.26	2965.00	0.30	96350.00	9.64	16.93	0.33
	90 Percentile	0.77	79820.00	7.98	105.70	316.00	0.79	0.41	13240.00	1.32	0.20	13.15	29.10	62.80	4.73	3100.00	0.31	99140.00	9.91	17.66	0.34
	Maximum	0.77	80700.00	8.07	128.00	380.00	0.80	0.46	15600.00	1.56	0.21	13.70	29.90	69.00	5.04	3190.00	0.32	101000.00	10.10	18.15	0.35
	Interquartile Range (IQR) 1	0.18	4500.00	0.45	58.10	175.00	0.25	0.19	6350.00	0.64	0.08	6.20	3.40	22.50	0.83	1402.00	0.14	24350.00	2.44	1.73	0.06
	Variance	0.04	20253333.33	0.20	4326.13	37633.33	0.07	0.04	50223333.33	0.50	0.01	42.41	11.68	530.33	0.87	2267705.33	0.02	668423333.33	6.68	3.15	0.00
	Skewness	-1.73	-0.07	-0.07	1.72	1.69	-1.64	0.85	1.70	1.70	-1.23	-1.39	0.52	1.04	1.71	-1.56	-1.56	-1.48	-1.48	1.13	-1.06
	Coefficient of Variation (CoV)	0.32	0.06	0.06	1.26	1.24	0.45	0.73	0.95	0.95	0.53	0.75	0.13	0.53	0.24	0.72	0.72	0.32	0.32	0.11	0.23
Iron Cap																					
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	Minimum	0.63	79500.00	7.95	32.00	23.00	1.00	0.62	3300.00	0.33	0.22	14.33	7.00	21.00	3.20	449.52	0.04	8400.00	0.84	13.63	0.00
	10 Percentile	0.66	84300.00	8.43	43.72	23.80	1.00	0.66	3980.00	0.40	0.32	18.36	8.64	24.20	3.56	479.95	0.05	20440.00	2.04	14.68	0.00
	25 Percentile	0.71	91500.00	9.15	61.30	25.00	1.00	0.73	5000.00	0.50	0.47	24.40	11.10	29.00	4.10	525.60	0.05	38500.00	3.85	16.25	0.00
	Median-25Percentile	0.05	4500.00	0.45	2.10	7.00	0.00	0.13	8400.00	0.84	0.08	3.80	7.80	1.00	0.20	285.20	0.03	2500.00	0.25	0.41	0.00
	Mean	1.17	93640.00	9.36	103.06	89.40	1.40	0.89	10040.00	1.00	1.66	27.78	20.92	33.20	5.08	832.67	0.08	39080.00	3.91	16.64	0.00
	Standard Deviation	0.90	8801.31	0.88	85.02	125.60	0.55	0.28	5430.75	0.54	2.67	9.95	13.40	13.29	1.75	396.45	0.04	18560.09	1.86	2.06	0.00
	Median	0.75	96000.00	9.60	63.40	32.00	1.00	0.86	13400.00	1.34	0.55	28.20	18.90	30.00	4.30	810.80	0.08	41000.00	4.10	16.66	0.00
	75Percentile-Median	0.27	3400.00	0.34	49.10	22.00	1.00	0.02	400.00	0.04	0.08	1.88	8.10	0.00	2.10	119.50	0.01	11700.00	1.17	0.64	0.00
	75 Percentile	1.02	99400.00	9.94	112.50	54.00	2.00	0.88	13800.00	1.38	0.63	30.08	27.00	30.00	6.40	930.30	0.09	52700.00	5.27	17.30	0.00
	90 Percentile	2.06	100840.00	10.08	192.66	209.40	2.00	1.17	14340.00	1.43	4.10	37.15	35.16	45.60	7.00	1240.41	0.12	53960.00	5.40	18.52	0.00
	Maximum	2.75	101800.00	10.18	246.10	313.00	2.00	1.36	14700.00	1.47	6.42	41.87	40.60	56.00	7.40	1447.15	0.14	54800.00	5.48	19.34	0.00
	Interquartile Range (IQR) 1	0.31	7900.00	0.79	51.20	29.00	1.00	0.15	8800.00	0.88	0.16	5.68	15.90	1.00	2.30	404.70	0.04	14200.00	1.42	1.05	0.00
	Variance	0.80	77463000.00	0.77	7228.97	15775.30	0.30	0.08	29493000.00	0.29	7.11	99.08	179.64	176.70	3.06	157172.87	0.00	344477000.00	3.44	4.23	0.00
	Skewness	2.09	-1.28	-1.28	1.65	2.18	0.61	1.47	-0.63	-0.63	2.22	0.14	0.73	1.76	0.52	0.99	0.99	-1.46	-1.46	-0.34	#DIV/0!
	Coefficient of Variation (CoV)	0.76	0.09	0.09	0.82	1.40	0.39	0.32	0.54	0.54	1.61	0.36	0.64	0.40	0.34	0.48	0.48	0.47	0.47	0.12	#DIV/0!

Appendix 5.2-1. Pre-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

		Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm	Mg %	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm
Kerr																					
	Count	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Minimum	0.30	0.02	0.06	30700.00	3.07	4.80	3.40	3100.00	0.31	27.00	6.46	1200.00	0.12	1.60	14.10	1040.00	5.60	78.30	0.02	37500.00
	10 Percentile	0.34	0.04	0.08	30840.00	3.08	4.96	4.16	3180.00	0.32	35.80	9.39	1340.00	0.13	1.74	15.22	1136.00	6.20	78.54	0.04	49880.00
	25 Percentile	0.40	0.08	0.10	31050.00	3.11	5.20	5.30	3300.00	0.33	49.00	13.78	1550.00	0.16	1.95	16.90	1280.00	7.10	78.90	0.07	68450.00
	Median-25Percentile	0.10	0.06	0.04	350.00	0.04	0.40	1.90	200.00	0.02	22.00	7.32	350.00	0.04	0.35	2.80	240.00	1.50	0.60	0.06	30950.00
	Mean	0.47	0.26	0.12	34800.00	3.48	5.60	6.93	6466.67	0.65	256.67	27.79	2966.67	0.30	3.20	19.07	1453.33	20.50	80.87	0.12	78966.67
	Standard Deviation	0.15	0.33	0.05	6504.61	0.65	1.13	3.41	5488.47	0.55	360.36	25.34	2478.57	0.25	2.19	4.68	384.36	23.26	3.46	0.09	35912.44
	Median	0.50	0.13	0.14	31400.00	3.14	5.60	7.20	3500.00	0.35	71.00	21.10	1900.00	0.19	2.30	19.70	1520.00	8.60	79.50	0.13	99400.00
	75Percentile-Median	0.05	0.26	0.00	5450.00	0.55	0.40	1.50	4650.00	0.47	300.50	17.35	1950.00	0.20	1.70	1.85	140.00	19.35	2.65	0.04	300.00
	75 Percentile	0.55	0.39	0.14	36850.00	3.69	6.00	8.70	8150.00	0.82	371.50	38.45	3850.00	0.39	4.00	21.55	1660.00	27.95	82.15	0.17	99700.00
	90 Percentile	0.58	0.54	0.14	40120.00	4.01	6.24	9.60	10940.00	1.09	551.80	48.86	5020.00	0.50	5.02	22.66	1744.00	39.56	83.74	0.19	99880.00
	Maximum	0.60	0.64	0.15	42300.00	4.23	6.40	10.20	12800.00	1.28	672.00	55.80	5800.00	0.58	5.70	23.40	1800.00	47.30	84.80	0.20	100000.00
	Interquartile Range (IQR) 1	0.15	0.31	0.04	5800.00	0.58	0.80	3.40	4850.00	0.49	322.50	24.67	2300.00	0.23	2.05	4.65	380.00	20.85	3.25	0.09	31250.00
	Variance	0.02	0.11	0.00	42310000.00	0.42	1.28	11.61	30123333.33	0.30	129860.33	642.14	6143333.33	0.06	4.81	21.92	147733.33	540.93	11.96	0.01	##########
	Skewness	-0.94	1.52	-1.72	1.71	1.71	#DIV/0!	-0.35	1.72	1.72	1.70	1.10	1.58	1.58	1.54	-0.60	-0.76	1.70	1.50	-0.59	-1.73
	Coefficient of Variation (Co\	0.33	1.26	0.40	0.19	0.19	0.20	0.49	0.85	0.85	1.40	0.91	0.84	0.84	0.69	0.25	0.26	1.13	0.04	0.79	0.45
Iron Cap																					
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	Minimum	0.55	0.00	0.00	47100.00	4.71	6.40	6.40	3600.00	0.36	87.00	5.54	3010.00	0.30	2.66	1.70	0.09	27.96	183.50	0.00	6000.00
	10 Percentile	0.59	0.00	0.00	49580.00	4.96	8.20	7.48	4280.00	0.43	94.60	11.16	4130.00	0.41	3.00	1.86	0.09	30.70	189.14	0.00	13280.00
	25 Percentile	0.65	0.00	0.00	53300.00	5.33	10.90	9.10	5300.00	0.53	106.00	19.58	5810.00	0.58	3.52	2.10	0.10	34.80	197.60	0.00	24200.00
	Median-25Percentile	0.03	0.00	0.00	2200.00	0.22	2.40	0.70	500.00	0.05	486.00	2.65	2890.00	0.29	1.90	0.10	0.03	26.25	12.20	0.00	14700.00
	Mean	0.76	0.00	0.00	59340.00	5.93	13.56	10.98	6120.00	0.61	447.80	38.60	10974.00	1.10	4.67	5.90	0.12	65.69	204.16	0.00	32420.00
	Standard Deviation	0.20	0.00	0.00	10616.17	1.06	6.31	3.79	1859.30	0.19	336.16	38.63	7602.96	0.76	1.50	8.02	0.03	39.65	13.82	0.00	17912.62
	Median	0.68	0.00	0.00	55500.00	5.55	13.30	9.80	5800.00	0.58	592.00	22.23	8700.00	0.87	5.42	2.20	0.12	61.05	209.80	0.00	38900.00
	75Percentile-Median	0.25	0.00	0.00	13300.00	1.33	0.30	3.90	2100.00	0.21	16.00	19.71	7030.00	0.70	0.19	1.10	0.01	16.71	1.30	0.00	1300.00
	75 Percentile	0.93	0.00	0.00	68800.00	6.88	13.60	13.70	7900.00	0.79	608.00	41.94	15730.00	1.57	5.61	3.30	0.14	77.76	211.10	0.00	40200.00
	90 Percentile	0.98	0.00	0.00	70720.00	7.07	19.60	15.02	7960.00	0.80	750.80	78.99	19264.00	1.93	5.93	13.44	0.14	107.23	215.72	0.00	47760.00
	Maximum	1.01	0.00	0.00	72000.00	7.20	23.60	15.90	8000.00	0.80	846.00	103.69	21620.00	2.16	6.15	20.20	0.15	126.87	218.80	0.00	52800.00
	Interquartile Range (IQR) 1	0.28	0.00	0.00	15500.00	1.55	2.70	4.60	2600.00	0.26	502.00	22.36	9920.00	0.99	2.09	1.20	0.04	42.96	13.50	0.00	16000.00
	Variance	0.04	0.00	0.00	112703000.00	1.13	39.80	14.38	3457000.00	0.03	113006.20	1492.64	57805030.00	0.58	2.25	64.26	0.00	1571.99	191.04	0.00	320862000.00
	Skewness	0.42	#DIV/0!	#DIV/0!	0.27	0.27	1.04	0.27	-0.28	-0.28	-0.18	1.65	0.63	0.63	-0.64	2.21	-0.15	0.99	-0.86	#DIV/0!	-0.71
	Coefficient of Variation (Co\	0.26	#DIV/0!	#DIV/0!	0.18	0.18	0.47	0.35	0.30	0.30	0.75	1.00	0.69	0.69	0.32	1.36	0.21	0.60	0.07	#DIV/0!	0.55

Appendix 5.2-1. Pre-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

		S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Ti	Tl	U	V	W	Y	Zn	Zr
		%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Kerr																			
	Count	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Minimum	3.75	0.54	21.00	18.00	1.80	84.80	0.11	0.30	0.80	1130.00	0.11	1.86	0.40	177.00	1.00	7.10	15.00	8.50
	10 Percentile	4.37	1.46	21.72	20.80	1.94	89.74	0.12	0.39	0.80	1144.00	0.11	1.92	0.42	191.20	1.46	7.28	19.60	10.10
	25 Percentile	5.30	2.83	22.80	25.00	2.15	97.15	0.13	0.53	0.80	1165.00	0.12	2.01	0.45	212.50	2.15	7.55	26.50	12.50
	Median-25Percentile	1.55	2.29	1.80	7.00	0.35	12.35	0.02	0.23	0.00	35.00	0.00	0.15	0.05	35.50	1.15	0.45	11.50	4.00
	Mean	6.85	5.42	28.73	27.33	2.77	159.77	0.22	0.98	1.00	1703.33	0.17	2.10	0.47	224.67	2.60	7.93	47.00	14.80
	Standard Deviation	4.38	5.04	10.43	8.08	1.12	109.16	0.16	0.82	0.35	933.08	0.09	0.22	0.06	41.28	1.39	0.80	37.32	5.65
	Median	6.85	5.12	24.60	32.00	2.50	109.50	0.15	0.75	0.80	1200.00	0.12	2.16	0.50	248.00	3.30	8.00	38.00	16.50
	75Percentile-Median	1.55	2.74	8.00	0.00	0.75	87.75	0.13	0.57	0.30	790.00	0.08	0.06	0.00	0.50	0.10	0.35	25.00	1.45
	75 Percentile	8.39	7.86	32.60	32.00	3.25	197.25	0.28	1.32	1.10	1990.00	0.20	2.22	0.50	248.50	3.40	8.35	63.00	17.95
	90 Percentile	9.32	9.50	37.40	32.00	3.70	249.90	0.36	1.66	1.28	2464.00	0.25	2.26	0.50	248.80	3.46	8.56	78.00	18.82
	Maximum	9.94	10.60	40.60	32.00	4.00	285.00	0.41	1.89	1.40	2780.00	0.28	2.28	0.50	249.00	3.50	8.70	88.00	19.40
	Interquartile Range (IQR) 1	3.10	5.03	9.80	7.00	1.10	100.10	0.15	0.80	0.30	825.00	0.08	0.21	0.05	36.00	1.25	0.80	36.50	5.45
	Variance	19.16	25.37	108.85	65.33	1.26	11915.06	0.03	0.67	0.12	870633.33	0.01	0.05	0.00	1704.33	1.93	0.64	1393.00	31.87
	Skewness	#DIV/0!	0.27	1.50	-1.73	1.01	1.63	1.62	1.16	1.73	1.72	1.72	-1.15	-1.73	-1.73	-1.69	-0.37	1.02	-1.23
	Coefficient of Variation (Co\	0.64	0.93	0.36	0.30	0.41	0.68	0.73	0.84	0.35	0.55	0.55	0.10	0.12	0.18	0.53	0.10	0.79	0.38
Iron Cap																			
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	Minimum	0.60	2.69	8.80	2.00	3.60	99.00	0.20	0.00	1.80	1330.00	0.13	0.00	1.40	136.00	2.90	7.00	73.00	16.80
	10 Percentile	1.33	3.15	9.76	2.40	3.80	117.40	0.20	0.00	1.84	1426.00	0.14	0.00	2.16	142.40	3.42	8.52	76.24	17.48
	25 Percentile	2.42	3.85	11.20	3.00	4.10	145.00	0.20	0.00	1.90	1570.00	0.16	0.00	3.30	152.00	4.20	10.80	81.10	18.50
	Median-25Percentile	1.47	1.06	0.80	0.00	3.00	52.00	0.10	0.00	0.30	260.00	0.03	0.00	1.50	24.00	1.90	0.30	8.00	4.60
	Mean	3.24	25.08	13.14	4.80	7.66	174.80	0.28	0.00	2.26	1868.00	0.19	0.00	4.70	178.20	6.94	10.88	183.92	23.86
	Standard Deviation	1.79	29.89	3.92	2.95	4.62	51.49	0.08	0.00	0.43	436.37	0.04	0.00	2.42	38.65	3.78	2.43	212.19	6.59
	Median	3.89	4.91	12.00	3.00	7.10	197.00	0.30	0.00	2.20	1830.00	0.18	0.00	4.80	176.00	6.10	11.10	89.10	23.10
	75Percentile-Median	0.13	42.55	2.60	5.00	1.30	19.00	0.00	0.00	0.40	470.00	0.05	0.00	2.10	15.00	3.30	0.80	24.80	5.40
	75 Percentile	4.02	47.46	14.60	8.00	8.40	216.00	0.30	0.00	2.60	2300.00	0.23	0.00	6.90	191.00	9.40	11.90	113.90	28.50
	90 Percentile	4.78	58.87	17.30	8.00	12.42	216.60	0.36	0.00	2.72	2306.00	0.23	0.00	7.02	218.00	11.02	12.92	383.06	30.84
	Maximum	5.28	66.48	19.10	8.00	15.10	217.00	0.40	0.00	2.80	2310.00	0.23	0.00	7.10	236.00	12.10	13.60	562.50	32.40
	Interquartile Range (IQR) 1	1.60	43.61	3.40	5.00	4.30	71.00	0.10	0.00	0.70	730.00	0.07	0.00	3.60	39.00	5.20	1.10	32.80	10.00
	Variance	3.21	893.42	15.39	8.70	21.34	2651.20	0.01	0.00	0.19	190420.00	0.00	0.00	5.87	1494.20	14.30	5.89	45022.91	43.40
	Skewness	-0.71	0.83	0.86	0.52	1.27	-0.93	0.51	#DIV/0!	0.27	-0.08	-0.08	#DIV/0!	-0.42	0.74	0.50	-1.09	2.21	0.32
	Coefficient of Variation (Co\	0.55	1.19	0.30	0.61	0.60	0.29	0.30	#DIV/0!	0.19	0.23	0.23	#DIV/0!	0.52	0.22	0.54	0.22	1.15	0.28

Appendix 5.2-2

Humidity Cell Leachate Concentrations: Kerr Deposit

Rescan™
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Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time Sampled	Sample ID	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (as $CaCO_3$) ($CaCO_3$ mg/L)	Alkalinity, Total (as $CaCO_3$) ($CaCO_3$ mg/L)	Sulfate (SO_4) (mg/L)	Chloride (Cl) (mg/L)
HC20 KERR																										
K0901_84.5-85.5	20	0	4-Feb-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	405	188.96	103	233.51	7.54	#N/A	2.74	31.10	114.00	1.4
K0901_84.5-85.5	20	1	11-Feb-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	495	266.6	97.2	238.15	7.38	#N/A	2.31	21.18	94.00	0.6
K0901_84.5-85.5	20	2	18-Feb-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	505	291.99	87.5	198.58	7.34	#N/A	3.10	20.82	86.00	0.2
K0901_84.5-85.5	20	3	25-Feb-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	510	309.57	72.6	174.85	7.42	#N/A	3.00	24.81	64.00	0.1
K0901_84.5-85.5	20	4	4-Mar-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	480	300.78	56.6	143.97	7.33	#N/A	2.65	20.64	49.00	0.1
K0901_84.5-85.5	20	5	11-Mar-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	495	351.07	64.1	147.87	7.37	#N/A	3.21	23.11	45.00	0.1
K0901_84.5-85.5	20	6	18-Mar-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	505	357.91	61.5	142.85	7.42	#N/A	3.02	20.82	47.00	0.1
K0901_84.5-85.5	20	7	25-Mar-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	500	339.35	67.3	146.33	7.34	#N/A	3.45	21.77	52.00	0.1
K0901_84.5-85.5	20	8	1-Apr-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	440	344.72	60.6	138.59	7.35	#N/A	3.04	16.85	54.00	0.1
K0901_84.5-85.5	20	9	8-Apr-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	450	322.75	54	129.51	7.27	#N/A	2.60	15.45	46.00	0.1
K0901_84.5-85.5	20	10	15-Apr-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	430	313.96	55.2	128.11	7.31	#N/A	3.95	14.81	43.00	0.1
K0901_84.5-85.5	20	11	22-Apr-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	415	298.82	53.9	131.24	7.33	#N/A	4.45	14.26	43.00	0.1
K0901_84.5-85.5	20	12	29-Apr-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	475	298.33	36	100.3	7.38	#N/A	2.14	12.93	28.00	0.1
K0901_84.5-85.5	20	13	6-May-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	490	322.75	49.6	113.92	7.19	#N/A	4.26	13.66	41.00	0.1
K0901_84.5-85.5	20	14	13-May-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	420	348.63	57.3	130.27	7.33	#N/A	3.39	13.80	49.00	0.1
K0901_84.5-85.5	20	15	20-May-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	445	353.02	43.6	106.21	7.38	#N/A	3.86	12.67	21.00	0.1
K0901_84.5-85.5	20	16	27-May-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	495	357.91	47.7	107.93	7.4	#N/A	6.52	16.25	25.00	0.1
K0901_84.5-85.5	20	17	3-Jun-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	490	336.42	50.7	110.04	7.3	#N/A	3.60	13.16	28.00	0.1
K0901_84.5-85.5	20	18	10-Jun-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	495	340.33	51.8	114.26	7.45	#N/A	4.91	13.60	36.00	0.1
K0901_84.5-85.5	20	19	17-Jun-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	520	322.75	48.5	111.24	7.45	#N/A	3.81	12.64	24.00	0.1
K0901_84.5-85.5	20	20	24-Jun-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	495	412.1	52.8	116.78	7.34	#N/A	2.72	13.32	36.00	0.1
K0901_84.5-85.5	20	21	1-Jul-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	490	422.85	49	109.36	7.35	#N/A	2.63	11.59	30.00	0.1
K0901_84.5-85.5	20	22	8-Jul-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	500	351.56	43.3	110.96	7.12	#N/A	2.59	11.36	27.00	0.1
K0901_84.5-85.5	20	23	15-Jul-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	495	351.56	45.5	111.47	7.26	#N/A	3.66	12.36	27.00	0.1
K0901_84.5-85.5	20	24	22-Jul-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	500	353.02	41.6	101.79	7.15	#N/A	3.32	11.57	30.00	0.1
K0901_84.5-85.5	20	25	29-Jul-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	495	336.42	48.6	104.49	7.37	#N/A	3.95	12.95	31.00	0.1
K0901_84.5-85.5	20	26	5-Aug-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	500	418.45	46.5	102.56	7.17	#N/A	3.05	10.11	28.00	0.1
K0901_84.5-85.5	20	27	12-Aug-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	440	416.01	45.9	108.96	7.34	#N/A	3.90	12.07	39.00	0.1
K0901_84.5-85.5	20	28	19-Aug-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	475	386.71	40	93.01	7.41	#N/A	4.71	11.08	31.00	0.1
K0901_84.5-85.5	20	29	26-Aug-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	440	366.69	38.3	90.8	7.15	#N/A	2.50	10.22	33.00	0.1
K0901_84.5-85.5	20	30	2-Sep-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	445	411.62	39.8	82.64	7.24	#N/A	4.58	10.95	38.00	0.1
K0901_84.5-85.5	20	31	9-Sep-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	470	375	34.7	84.12	6.99	#N/A	4.49	10.13	30.00	0.1
K0901_84.5-85.5	20	32	16-Sep-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	485	364.74	32.5	75.69	6.96	#N/A	3.15	8.89	33.00	0.1
K0901_84.5-85.5	20	33	23-Sep-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	455	347.16	36.2	75.04	7.09	#N/A	2.45	9.87	38.00	0.1
K0901_84.5-85.5	20	34	30-Sep-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	460	352.53	40.2	71.51	7.14	#N/A	2.81	12.14	32.00	0.1
K0901_84.5-85.5	20	35	7-Oct-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	465	342.28	42.1	101.79	7.14	#N/A	3.35	12.12	36.00	0.1
K0901_84.5-85.5	20	36	14-Oct-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	450	330.56	42.2	95.22	7.07	#N/A	3.18	10.61	35.00	0.1
K0901_84.5-85.5	20	37	21-Oct-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	450	373.04	38.7	92.08	7.09	#N/A	3.12	11.01	36.00	0.1
K0901_84.5-85.5	20	38	28-Oct-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	420	364.25	38.7	96.68	7.05	#N/A	3.28	10.77	37.00	0.1
K0901_84.5-85.5	20	39	4-Nov-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	430	403.8	36.1	97	7.16	#N/A	2.36	9.43	35.00	0.1
K0901_84.5-85.5	20	40	11-Nov-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	425	366.69	39	103	7.26	#N/A	2.36	9.94	27.00	0.1
K0901_84.5-85.5	20	41	18-Nov-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	425	375.48	36.1	73	7.38	#N/A	3.29	10.15	21.00	0.1
K0901_84.5-85.5	20	42	25-Nov-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	405	331.54	34.7	84.56	7.13	#N/A	3.13	10.71	24.00	0.1
K0901_84.5-85.5	20	43	2-Dec-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	425	276.85	39.4	77.94	7.1	#N/A	3.08	9.84	20.00	0.1
K0901_84.5-85.5	20	44	9-Dec-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	440	357.91	32.9	75.49	7.11	#N/A	3.49	9.95	22.00	0.1
K0901_84.5-85.5	20	45	16-Dec-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	440	236.32	40.1	83.21	7.11	#N/A	4.32	11.52	29.00	0.1
K0901_84.5-85.5	20	46	23-Dec-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	435	361.81	36.3	80.81	7.29	#N/A	4.85	11.56	28.00	0.1
K0901_84.5-85.5	20	47	30-Dec-10	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	440	241.69	34.8	72.07	6.91	#N/A	5.64	10.86	29.00	0.1
K0901_84.5-85.5	20	48	6-Jan-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	445	366.69	33.65	59.3	7.3	#N/A	4.74	11.82	25.50	0.1
K0901_84.5-85.5	20	49	13-Jan-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	490	270.01	32.5	63.1	7.38	#N/A	3.83	12.77	22.00	0.1
K0901_84.5-85.5	20	50	20-Jan-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	465	357.91	33.45	77.48	7.01	#N/A	4.11	12.48	22.00	0.1
K0901_84.5-85.5	20	51	27-Jan-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	470	238.76	34.4	62.62	7.2	#N/A	4.39	12.18	22.00	0.1
K0901_84.5-85.5	20	52	3-Feb-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	470	347.65	33.1	59.36	7.06	#N/A	3.42	10.67	22.00	0.1
K0901_84.5-85.5	20	53	10-Feb-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	460	286.62	31.8	60.36	7.36	#N/A	2.44	9.16	22.00	0.1
K0901_84.5-85.5	20	54	17-Feb-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	455	353.51	30.85	60.84	7.13	#N/A	3.19	9.31	24.00	0.1
K0901_84.5-85.5	20	55	24-Feb-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	455	229.49	29.9	76.9	7.27	#N/A	3.94	9.46	26.00	0.1
K0901_84.5-85.5	20	56	3-Mar-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	465	338.37	28.3	70.31	7.05	#N/A	3.60	9.48	23.00	0.1
K0901_84.5-85.5	20	57	10-Mar-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	455	222.65	26.7	65.98	7.35	#N/A	3.25	9.49	20.00	0.1
K0901_84.5-85.5	20	58	17-Mar-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	465	325.68	27.9	74.5	7.15	#N/A	3.30	10.81	19.00	0.2
K0901_84.5-85.5	20	59	24-Mar-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	465	342.28	29.1	101.79	7.14	#N/A	3.35	12.12	18.00	0.3
K0901_84.5-85.5	20	60	31-Mar-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	475	319.82	28.9	74.22	7.41	#N/A	4.00	11.80	19.50	0.2
K0901_84.5-85.5	20	61	7-Apr-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	470	221.67	28.7	73.77	7.4	#N/A	4.65	11.48	21.00	0.1
K0901_84.5-85.5	20	62	14-Apr-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	465	291.5	30.6	84.01	7.52	#N/A	3.41	10.71	21.00	0.1
K0901_84.5-85.5	20	63	21-Apr-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	445	191.4	32.5	80.35	7.35	#N/A	2.16	9.94	21.00	0.1
K0901_84.5-85.5	20	64	28-Apr-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	465	368.16	34.5	77.52	7.38	#N/A	2.87	10.01	24.00	0.1

Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	(Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
HC20 KERR																				
K0901_84.5-85.5	0.19	0.0629	0.0015	0.0015	0.032	0.00001	0.000005	0.006	0.000052	37.9	0.00025	0.000398	0.0028	0.005	0.00006	0.007	2.06	0.188	0.000005	0.031
K0901_84.5-85.5	0.17	0.0718	0.0016	0.0012	0.0203	0.00001	0.000005	0.006	0.000073	35.9	0.00025	0.000347	0.0023	0.005	0.00005	0.005	1.84	0.203	0.000005	0.0327
K0901_84.5-85.5	0.17	0.0524	0.0016	0.001	0.0151	0.00001	0.000005	0.0056	0.000065	32.3	0.00025	0.000372	0.0032	0.005	0.00012	0.005	1.66	0.215	0.000005	0.0348
K0901_84.5-85.5	0.18	0.0683	0.0017	0.0013	0.0173	0.00001	0.000005	0.0046	0.000034	27	0.00025	0.000252	0.0029	0.005	0.00006	0.004	1.25	0.171	0.000005	0.0312
K0901_84.5-85.5	0.15	0.0716	0.0015	0.0011	0.00989	0.00001	0.000005	0.005	0.00004	21.1	0.00025	0.000198	0.003	0.005	0.00009	0.003	0.959	0.121	0.00002	0.026
K0901_84.5-85.5	0.14	0.0689	0.0015	0.0009	0.00944	0.00001	0.000005	0.004	0.000044	24	0.00025	0.000211	0.003	0.005	0.00005	0.004	1.03	0.158	0.000005	0.0239
K0901_84.5-85.5	0.11	0.0609	0.0012	0.0006	0.00961	0.00001	0.000005	0.004	0.00009	23	0.00025	0.00017	0.0027	0.005	0.00006	0.003	0.955	0.155	0.000005	0.0191
K0901_84.5-85.5	0.11	0.0656	0.0016	0.0005	0.00898	0.00001	0.000005	0.004	0.000032	25.3	0.0008	0.000187	0.0037	0.005	0.00021	0.003	0.989	0.163	0.000005	0.022
K0901_84.5-85.5	0.10	0.044	0.001	0.0005	0.0095	0.00001	0.000005	0.003	0.000086	22.9	0.0008	0.000191	0.0051	0.005	0.00025	0.002	0.847	0.123	0.000005	0.0187
K0901_84.5-85.5	0.88	0.0353	0.0012	0.0004	0.00883	0.00001	0.000005	0.003	0.000059	20.4	0.00025	0.000204	0.0053	0.005	0.00044	0.003	0.766	0.114	0.000005	0.0177
K0901_84.5-85.5	0.08	0.0404	0.001	0.0005	0.0102	0.00001	0.000005	0.003	0.000057	20.9	0.0006	0.000206	0.0061	0.005	0.00034	0.002	0.701	0.109	0.000005	0.016
K0901_84.5-85.5	0.07	0.0301	0.0008	0.0005	0.011	0.00001	0.000005	0.003	0.000045	20.4	0.0007	0.000205	0.0076	0.005	0.00121	0.002	0.711	0.11	0.000005	0.0181
K0901_84.5-85.5	0.03	0.023	0.0008	0.0003	0.01	0.00001	0.000005	0.003	0.000061	13.6	0.0005	0.000208	0.0041	0.005	0.00025	0.002	0.492	0.097	0.000005	0.0151
K0901_84.5-85.5	0.06	0.0206	0.0009	0.0004	0.00975	0.00001	0.000005	0.003	0.000101	18.8	0.0006	0.00024	0.0047	0.005	0.00173	0.002	0.662	0.132	0.000005	0.0141
K0901_84.5-85.5	0.06	0.0253	0.0013	0.0004	0.00991	0.00001	0.000005	0.0031	0.000052	21.8	0.0007	0.000182	0.0067	0.004	0.00034	0.002	0.715	0.108	0.000005	0.019
K0901_84.5-85.5	0.06	0.02	0.0008	0.0004	0.00785	0.00001	0.000005	0.0026	0.000049	16.7	0.00025	0.000196	0.0042	0.001	0.0017	0.002	0.487	0.0915	0.000005	0.0147
K0901_84.5-85.5	0.03	0.0159	0.0009	0.0004	0.00837	0.00001	0.000005	0.003	0.000063	18.2	0.0008	0.00022	0.0048	0.004	0.0013	0.002	0.556	0.126	0.00001	0.0133
K0901_84.5-85.5	0.03	0.0172	0.0008	0.0003	0.00902	0.00001	0.000005	0.0028	0.000053	19.4	0.00025	0.000194	0.0038	0.001	0.00001	0.002	0.563	0.128	0.000005	0.0138
K0901_84.5-85.5	0.03	0.015	0.0007	0.0001	0.00854	0.00001	0.000005	0.003	0.000133	19.8	0.00025	0.00022	0.0047	0.002	0.00037	0.002	0.559	0.136	0.000005	0.0123
K0901_84.5-85.5	0.03	0.0155	0.0008	0.0003	0.00929	0.00001	0.000005	0.0026	0.000117	18.6	0.00025	0.00024	0.0058	0.001	0.00047	0.002	0.502	0.13	0.000005	0.0131
K0901_84.5-85.5	0.03	0.0119	0.0009	0.0001	0.00877	0.00001	0.00001	0.0027	0.000083	20.3	0.00025	0.000219	0.0048	0.001	0.00001	0.0005	0.54	0.144	0.000005	0.0132
K0901_84.5-85.5	0.03	0.0106	0.0008	0.0002	0.00759	0.00001	0.000005	0.0023	0.000075	18.8	0.00025	0.000222	0.0053	0.002	0.00023	0.002	0.487	0.136	0.000005	0.0116
K0901_84.5-85.5	0.03	0.0135	0.0006	0.0002	0.00782	0.00001	0.000005	0.0033	0.000076	16.5	0.0007	0.00028	0.0062	0.005	0.00038	0.003	0.495	0.143	0.000005	0.0123
K0901_84.5-85.5	0.03	0.013	0.0004	0.0001	0.0086	0.00001	0.000005	0.0028	0.000094	17.5	0.00025	0.000293	0.006	0.001	0.00025	0.002	0.444	0.139	0.000005	0.0129
K0901_84.5-85.5	0.03	0.0084	0.0004	0.0001	0.00965	0.00001	0.000005	0.0025	0.000072	16	0.00025	0.000262	0.0069	0.001	0.00034	0.002	0.402	0.129	0.000005	0.0119
K0901_84.5-85.5	0.03	0.011	0.0004	0.0001	0.00754	0.00001	0.000005	0.0026	0.000071	18.8	0.00025	0.000239	0.0059	0.003	0.00034	0.002	0.438	0.135	0.000005	0.0121
K0901_84.5-85.5	0.03	0.0091	0.0006	0.0001	0.00714	0.00001	0.000005	0.0021	0.000072	18	0.00025	0.000239	0.0072	0.003	0.00024	0.002	0.406	0.14	0.000005	0.0114
K0901_84.5-85.5	0.03	0.0122	0.0004	0.0002	0.072	0.00001	0.000005	0.0021	0.000065	17.8	0.0007	0.000242	0.0084	0.001	0.00014	0.002	0.345	0.0903	0.000005	0.0109
K0901_84.5-85.5	0.03	0.01	0.0004	0.0002	0.00644	0.00001	0.000005	0.0025	0.000071	15.5	0.00025	0.000267	0.0128	0.007	0.00023	0.002	0.34	0.096	0.000005	0.011
K0901_84.5-85.5	0.03	0.0106	0.0004	0.0001	0.00643	0.00001	0.000005	0.0019	0.000058	14.8	0.0008	0.00023	0.0065	0.001	0.0002	0.002	0.292	0.0765	0.000005	0.0104
K0901_84.5-85.5	1.88	0.0105	0.0001	0.0001	0.00655	0.00001	0.000005	0.0022	0.000063	15.4	0.00025	0.000223	0.0083	0.001	0.00016	0.002	0.321	0.0748	0.000005	0.0118
K0901_84.5-85.5	0.03	0.0089	0.0002	0.0001	0.00605	0.00001	0.000005	0.0026	0.000068	13.5	0.0005	0.000238	0.0083	0.001	0.00018	0.002	0.265	0.0958	0.000005	0.0102
K0901_84.5-85.5	0.03	0.0075	0.0005	0.0001	0.00724	0.00001	0.000005	0.0019	0.000064	12.6	0.00025	0.000241	0.0079	0.003	0.00028	0.002	0.28	0.0898	0.000005	0.0101
K0901_84.5-85.5	0.03	0.0078	0.0004	0.0001	0.00637	0.00001	0.000005	0.0025	0.000096	14	0.00025	0.000349	0.0085	0.001	0.00031	0.002	0.297	0.0885	0.000005	0.011
K0901_84.5-85.5	0.03	0.0146	0.0004	0.0001	0.0064	0.00001	0.000005	0.0027	0.000062	15.6	0.00025	0.000227	0.0061	0.008	0.00029	0.002	0.333	0.104	0.000005	0.012
K0901_84.5-85.5	0.03	0.0131	0.0005	0.0001	0.0068	0.00001	0.000005	0.0032	0.000115	16.3	0.00025	0.000287	0.007	0.001	0.00055	0.001	0.338	0.106	0.000005	0.0135
K0901_84.5-85.5	0.06	0.0111	0.0005	0.0001	0.00621	0.00001	0.000005	0.0029	0.000075	16.4	0.00025	0.000243	0.0082	0.182	0.00022	0.002	0.337	0.0991	0.000005	0.0123
K0901_84.5-85.5	0.03	0.0095	0.0004	0.0001	0.00574	0.00001	0.000005	0.0028	0.000072	15	0.00025	0.000234	0.0079	0.014	0.00009	0.002	0.285	0.0919	0.000005	0.012
K0901_84.5-85.5	0.03	0.0124	0.0001	0.0001	0.00651	0.00001	0.000005	0.0023	0.000066	15	0.0005	0.000309	0.0089	0.002	0.00012	0.002	0.275	0.0791	0.000005	0.0121
K0901_84.5-85.5	0.03	0.0099	0.0001	0.0002	0.00671	0.00001	0.000005	0.0025	0.000075	14	0.00025	0.000221	0.0099	0.004	0.00069	0.002	0.26	0.073	0.000005	0.0124
K0901_84.5-85.5	0.03	0.0122	0.0002	0.0001	0.00659	0.00001	0.000005	0.0019	0.000072	15.1	0.00025	0.000279	0.0087	0.006	0.0006	0.002	0.288	0.0855	0.000005	0.0117
K0901_84.5-85.5	0.03	0.0101	0.0003	0.0001	0.00694	0.00001	0.000005	0.0031	0.000068	14	0.0006	0.000553	0.0076	0.003	0.00015	0.002	0.256	0.084	0.000005	0.0106
K0901_84.5-85.5	0.03	0.0089	0.0003	0.0001	0.00636	0.00001	0.000005	0.0021	0.000065	13.5	0.0007	0.000293	0.0117	0.004	0.00015	0.002	0.236	0.0821	0.000005	0.00999
K0901_84.5-85.5	0.03	0.0097	0.0004	0.0002	0.00652	0.00001	0.00002	0.0023	0.000053	15.3	0.0008	0.000247	0.0101	0.004	0.00194	0.002	0.275	0.085	0.000005	0.0103
K0901_84.5-85.5	0.03	0.0087	0.0003	0.0001	0.00654	0.00001	0.000005	0.0021	0.000053	12.8	0.001	0.000437	0.0083	0.006	0.00172	0.001	0.234	0.0842	0.000005	0.01
K0901_84.5-85.5	0.03	0.0076	0.0003	0.0001	0.00643	0.00001	0.000005	0.0025	0.000039	15.6	0.00025	0.000688	0.0088	0.011	0.00009	0.001	0.272	0.0863	0.000005	0.00988
K0901_84.5-85.5	0.03	0.009	0.0003	0.0001	0.00608	0.00001	0.000005	0.0026	0.000095	14.2	0.00025	0.000245	0.0105	0.004	0.00103	0.001	0.243	0.0792	0.000005	0.00987
K0901_84.5-85.5	0.03	0.0075	0.0002	0.0001	0.0064	0.00001	0.000005	0.002	0.000067	13.6	0.0005	0.000241	0.0099	0.003	0.00073	0.001	0.232	0.0748	0.00001	0.00983
K0901_84.5-85.5	0.03	0.0074	0.00025	0.0001	0.00663	0.00001	0.000005	0.00265	0.0000685	13.15	0.000375	0.0002285	0.0091	0.0025	0.000495	0.001	0.2175	0.08555	0.0000075	0.00833
K0901_84.5-85.5	0.03	0.0073	0.0003	0.0001	0.00686	0.00001	0.000005	0.0033	0.00007	12.7	0.00025	0.000216	0.0083	0.002	0.00026	0.001	0.203	0.0963	0.000005	0.00683
K0901_84.5-85.5	0.03	0.009	0.0003	0.0001	0.006585	0.00001	0.000005	0.00275	0.0000915	13.05	0.00025	0.0002215	0.008	0.0015	0.00019	0.001	0.2175	0.0981	0.000005	0.007545
K0901_84.5-85.5	0.03	0.0107	0.0003	0.0001	0.00631	0.00001	0.000005	0.0022	0.000113	13.4	0.00025	0.000227	0.0077	0.001	0.00012	0.001	0.232	0.0999	0.000005	0.00826
K0901_84.5-85.5	0.03	0.0087	0.00025	0.0001	0.00643	0.00001	0.000005	0.0025	0.000091	12.9	0.00025	0.0002255	0.00795	0.0015	0.000265	0.001	0.2175	0.0916	0.000005	0.007715
K0901_84.5-85.5	0.03	0.0067	0.0002	0.0001	0.00655	0.00001	0.000005	0.0028	0.000069	12.4	0.00025	0.000224	0.0082	0.002	0.00041	0.001	0.203	0.0833	0.000005	0.00717
K0901_84.5-85.5	0.03	0.0069	0.0002	0.0001	0.00594	0.00001	0.000005	0.00285	0.000072	12.05	0.00025	0.0002665	0.0097	0.0015	0.0005	0.001	0.196	0.0801	0.000005	0.007375
K0901_84.5-85.5	0.03	0.0071	0.0002	0.0001	0.00533	0.00001	0.000005	0.0029	0.000075	11.7	0.00025	0.000309	0.0112	0.001	0.00059	0.001	0.189	0.0769	0.000005	0.00758
K0901_84.5-85.5	0.03	0.0063	0.00015	0.0001	0.00498	0.00001	0.000005	0.00205	0.0000625	11.05	0.00025	0.000252	0.0101	0.0035	0.000705	0.00075	0.1795	0.0757	0.000005	0.007255
K0901_84.5-85.5	0.03	0.0055	0.0001	0.0001	0.00463	0.00001	0.000005	0.0012	0.00005	10.4	0.00025	0.000195	0.009	0.006	0.00082	0.0005	0.17	0.0745	0.000005	0.00693
K0901_84.5-85.5	0.03	0.0061	0.0001	0.0001	0.00463	0.00001	0.000005	0.0013	0.000052	10.9	0.00025	0.000196	0.0083	0.004	0.000495	0.0005	0.1745	0.07795	0.000005	0.007285
K0901_84.5-85.5	0.03	0.0067	0.0001	0.0001	0.00463	0.00001	0.000005	0.0014	0.000054	11.4	0.00025	0.000197	0.0076	0.002	0.00017	0.0005	0.179	0.0814	0.000005	0.00764
K0901_84.5-85.5	0.03	0.0063	0.00015	0.0002	0.00481	0.00001	0.000005	0.0013	0.0000555	11.3	0.00025	0.0001935	0.0083	0.0065	0.000185	0.0005	0.181	0.08175	0.000005	0.007455
K0901_84.5-85.5	0.03	0.0059	0.0002	0.0003	0.00499	0.00001	0.000005	0.0012	0.000057	11.2	0.00025	0.00019	0.009	0.011	0.0002	0.0005	0.183	0.0821	0.000005	0.00727
K0901_84.5-85.5	0.03	0.00655	0.00025	0.0002	0.00516	0.00001	0.000005	0.00135	0.000055	12	0.00025	0.000216	0.0089	0.006	0.000155	0.0005	0.1765	0.0796	0.0000075	0.009035
K0901_84.5-85.5	0.03	0.0072	0.0003	0.0001	0.00533	0.00001	0.000005	0.0015	0.000053	12.8	0.00025	0.000242	0.0088	0.001	0.00011	0.0005	0.17	0.0771	0.00001	0.0108
K0901_84.5-85.5	0.03	0.0066	0.0003	0.0001	0.00549	0.00001	0.000005	0.00155	0.0000565	13.55	0.00025	0.000245	0.0091	0.001	0.00015	0.0005	0.1775	0.08215	0.00001	0.010205

Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S) Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
HC20 KERR																
K0901_84.5-85.5	0.0007	0.005	14	0.0194	1.01	0.000005	2.84	0.189	31.7	0.0001	0.00016	0.0001	0.000065	0.00035	0.0005	0.000005
K0901_84.5-85.5	0.0003	0.005	10.1	0.015	1.1	0.000005	1.89	0.139	31.6	0.0001	0.00011	0.00005	0.000054	0.00029	0.0005	0.000005
K0901_84.5-85.5	0.0003	0.005	7.66	0.0092	1.18	0.000005	1.29	0.13	26.8	0.0001	0.00006	0.00005	0.000116	0.00042	0.0005	0.000005
K0901_84.5-85.5	0.0002	0.005	6.77	0.0067	1.27	0.000005	0.87	0.115	20.3	0.0001	0.00009	0.00005	0.000061	0.00034	0.0005	0.000005
K0901_84.5-85.5	0.0004	0.005	4.9	0.00494	1.08	0.000005	0.54	0.0857	15.1	0.0001	0.00012	0.0001	0.000043	0.00032	0.0005	0.000005
K0901_84.5-85.5	0.00005	0.005	4.84	0.00433	1.23	0.000005	0.4	0.0979	17.4	0.0001	0.00015	0.00005	0.000084	0.00029	0.0005	0.00008
K0901_84.5-85.5	0.00005	0.005	3.76	0.00313	1.11	0.000005	0.31	0.0954	16.9	0.0001	0.00008	0.00005	0.000032	0.00022	0.0005	0.00005
K0901_84.5-85.5	0.0001	0.005	3.83	0.00358	1.25	0.000005	0.41	0.103	17.1	0.0001	0.00029	0.00005	0.000028	0.00024	0.0005	0.000005
K0901_84.5-85.5	0.0002	0.005	2.95	0.00284	0.91	0.000005	0.37	0.0944	18	0.0001	0.00034	0.00005	0.000036	0.00016	0.001	0.000005
K0901_84.5-85.5	0.00005	0.005	2.48	0.00216	0.8	0.000005	0.24	0.0898	14.7	0.0001	0.00028	0.00005	0.000022	0.00011	0.0005	0.000005
K0901_84.5-85.5	0.0002	0.005	2.38	0.00267	0.71	0.000005	0.25	0.0984	15.5	0.0001	0.00032	0.00005	0.000051	0.00014	0.0005	0.000005
K0901_84.5-85.5	0.0002	0.005	2.21	0.00286	0.73	0.000005	0.22	0.0973	14.6	0.0001	0.00035	0.00005	0.000017	0.00013	0.001	0.00001
K0901_84.5-85.5	0.00005	0.005	1.69	0.00299	0.69	0.000005	0.16	0.066	9.73	0.0001	0.00028	0.00005	0.000009	0.0001	0.0005	0.000005
K0901_84.5-85.5	0.0003	0.02	1.89	0.00231	0.76	0.00006	0.15	0.0865	13.7	0.0001	0.00037	0.00005	0.000023	0.00009	0.001	0.00001
K0901_84.5-85.5	0.0002	0.0045	2.06	0.00275	0.8	0.00003	0.19	0.104	15.5	0.0001	0.00024	0.0002	0.000017	0.00009	0.0005	0.00001
K0901_84.5-85.5	0.00005	0.0045	1.47	0.00256	0.59	0.000005	0.14	0.077	12.8	0.0001	0.00025	0.00005	0.000019	0.0001	0.001	0.000005
K0901_84.5-85.5	0.00005	0.0045	1.45	0.00221	0.73	0.00003	0.16	0.085	13.5	0.0001	0.00028	0.00005	0.000021	0.00009	0.0005	0.000005
K0901_84.5-85.5	0.00005	0.026	1.41	0.00207	0.67	0.000005	0.14	0.0876	14.8	0.0001	0.00022	0.00005	0.000004	0.00007	0.001	0.000005
K0901_84.5-85.5	0.0001	0.01	1.31	0.00197	0.63	0.00001	0.15	0.0894	14.5	0.0001	0.00031	0.00005	0.000016	0.00006	0.001	0.000005
K0901_84.5-85.5	0.0001	0.0045	1.16	0.00267	0.58	0.000005	0.15	0.0845	13.8	0.0001	0.00021	0.00005	0.00004	0.00008	0.002	0.00001
K0901_84.5-85.5	0.00005	0.0045	1.31	0.00145	0.65	0.000005	0.15	0.0925	15	0.0001	0.00018	0.00005	0.000035	0.000015	0.001	0.000005
K0901_84.5-85.5	0.0002	0.0045	1.05	0.00179	0.54	0.00001	0.07	0.0849	13.9	0.0001	0.00006	0.00005	0.00001	0.00005	0.0005	0.000005
K0901_84.5-85.5	0.0002	0.0045	1.1	0.00106	0.6	0.00001	0.13	0.0881	14.5	0.0001	0.00026	0.0001	0.000012	0.00006	0.001	0.00002
K0901_84.5-85.5	0.0003	0.0045	0.98	0.00173	0.56	0.000005	0.12	0.0831	12.2	0.0001	0.0007	0.00005	0.000019	0.00006	0.0005	0.000005
K0901_84.5-85.5	0.00005	0.0045	0.897	0.00164	0.51	0.000005	0.12	0.0769	11	0.0001	0.00044	0.00005	0.000015	0.00003	0.001	0.000005
K0901_84.5-85.5	0.00005	0.01	0.951	0.00176	0.56	0.000005	0.15	0.0861	13	0.0001	0.00005	0.00005	0.000012	0.00004	0.001	0.000005
K0901_84.5-85.5	0.00005	0.022	0.881	0.00158	0.54	0.000005	0.1	0.0825	12.2	0.0001	0.00009	0.00005	0.000006	0.000015	0.0005	0.000005
K0901_84.5-85.5	0.0001	0.0045	0.812	0.00185	0.46	0.000005	0.11	0.0805	13.7	0.0001	0.00002	0.00005	0.000011	0.00006	0.001	0.000005
K0901_84.5-85.5	0.00005	0.0045	0.744	0.00186	0.5	0.000005	0.1	0.0733	11.9	0.0001	0.00038	0.00005	0.000007	0.00007	0.001	0.000005
K0901_84.5-85.5	0.00005	0.0045	0.7	0.0017	0.4	0.000005	0.09	0.07	11.5	0.0001	0.00077	0.00005	0.000003	0.00005	0.001	0.000005
K0901_84.5-85.5	0.0001	0.0045	0.694	0.00156	0.43	0.000005	0.11	0.0727	11.8	0.0001	0.00013	0.00005	0.000009	0.00007	0.001	0.000005
K0901_84.5-85.5	0.0001	0.0045	0.627	0.0007	0.4	0.000005	0.09	0.0606	9.67	0.0001	0.00012	0.00005	0.000025	0.00008	0.001	0.00001
K0901_84.5-85.5	0.0002	0.0045	0.621	0.00153	0.4	0.000005	0.09	0.061	9.54	0.0001	0.00017	0.00005	0.000011	0.00005	0.001	0.000005
K0901_84.5-85.5	0.00005	0.0045	0.706	0.0015	0.41	0.000005	0.12	0.0667	10.3	0.0001	0.0001	0.00005	0.000016	0.00006	0.001	0.000005
K0901_84.5-85.5	0.0002	0.0045	0.747	0.00156	0.46	0.000005	0.13	0.0738	11.6	0.0001	0.00062	0.00005	0.000006	0.00006	0.0005	0.000005
K0901_84.5-85.5	0.0009	0.018	0.751	0.00187	0.48	0.000005	0.14	0.0774	12.2	0.0001	0.00063	0.00005	0.000029	0.00006	0.002	0.00001
K0901_84.5-85.5	0.0006	0.0045	0.705	0.00121	0.46	0.000005	0.14	0.0812	11.3	0.0001	0.00045	0.00005	0.0000005	0.00006	0.0005	0.000005
K0901_84.5-85.5	0.00005	0.0045	0.656	0.00163	0.41	0.000005	0.11	0.0704	10.7	0.0001	0.00005	0.00005	0.000003	0.000015	0.003	0.000005
K0901_84.5-85.5	0.0007	0.0045	0.624	0.00118	0.4	0.000005	0.11	0.0721	11.6	0.0001	0.00005	0.00005	0.000009	0.00007	0.002	0.000005
K0901_84.5-85.5	0.0008	0.0045	0.608	0.00161	0.38	0.000005	0.14	0.07	9.79	0.0001	0.00019	0.0002	0.000005	0.000015	0.003	0.00001
K0901_84.5-85.5	0.0001	0.036	0.661	0.00137	0.36	0.000005	0.13	0.0762	9.82	0.0001	0.00025	0.00005	0.000007	0.00004	0.002	0.00005
K0901_84.5-85.5	0.0004	0.0045	0.578	0.0014	0.38	0.000005	0.1	0.0692	9.43	0.0001	0.00018	0.00005	0.000023	0.00003	0.002	0.000005
K0901_84.5-85.5	0.00005	0.0045	0.546	0.00161	0.35	0.000005	0.07	0.0677	8.49	0.0001	0.00031	0.00005	0.000007	0.00005	0.008	0.000005
K0901_84.5-85.5	0.0002	0.0045	0.548	0.00127	0.36	0.000005	0.09	0.0665	8.73	0.0001	0.00011	0.00005	0.000009	0.00005	0.005	0.000005
K0901_84.5-85.5	0.0002	0.0045	0.507	0.00043	0.33	0.000005	0.12	0.0646	7.86	0.0001	0.0009	0.00005	0.000019	0.00007	0.005	0.00003
K0901_84.5-85.5	0.0002	0.0045	0.548	0.00112	0.38	0.000005	0.12	0.0774	9.94	0.0001	0.00032	0.00005	0.000028	0.00007	0.0005	0.000005
K0901_84.5-85.5	0.0002	0.015	0.557	0.00101	0.4	0.000005	0.1	0.0724	10.6	0.0001	0.00011	0.00005	0.000007	0.00006	0.003	0.000005
K0901_84.5-85.5	0.0003	0.0045	0.497	0.0013	0.37	0.000005	0.09	0.0693	9.24	0.0001	0.0001	0.00005	0.000014	0.00005	0.002	0.000005
K0901_84.5-85.5	0.000175	0.00825	0.4495	0.00095	0.38	0.000005	0.1	0.0667	9.09	0.0001	0.000345	0.00005	0.000048	0.0000325	0.002	0.000005
K0901_84.5-85.5	0.00005	0.012	0.402	0.0006	0.39	0.000005	0.11	0.0641	8.94	0.0001	0.00059	0.00005	0.000048	0.000015	0.002	0.000005
K0901_84.5-85.5	0.000225	0.0235	0.4325	0.000865	0.39	0.000005	0.105	0.06525	8.84	0.0001	0.000445	0.00005	0.000003	0.0000225	0.003	0.0000125
K0901_84.5-85.5	0.0004	0.035	0.463	0.00113	0.39	0.000005	0.1	0.0664	8.74	0.0001	0.0003	0.00005	0.000003	0.00003	0.004	0.00002
K0901_84.5-85.5	0.00045	0.038	0.44	0.001155	0.38	0.000005	0.095	0.06315	8.28	0.0001	0.000175	0.00005	0.000008	0.0000225	0.0035	0.0000125
K0901_84.5-85.5	0.0005	0.041	0.417	0.00118	0.37	0.000005	0.09	0.0599	7.82	0.0001	0.00005	0.00005	0.000013	0.000015	0.003	0.000005
K0901_84.5-85.5	0.00045	0.037	0.403	0.001085	0.345	0.000005	0.085	0.05895	7.705	0.0001	0.000075	0.00005	0.0000165	0.0000675	0.002	0.000005
K0901_84.5-85.5	0.0004	0.033	0.389	0.00099	0.32	0.000005	0.08	0.058	7.59	0.0001	0.0001	0.00005	0.00002	0.00012	0.001	0.000005
K0901_84.5-85.5	0.00035	0.03	0.367	0.00077	0.31	0.000005	0.085	0.05455	6.955	0.000055	0.000155	0.00005	0.0000165	0.000075	0.002	0.000005
K0901_84.5-85.5	0.0003	0.027	0.345	0.00055	0.3	0.000005	0.09	0.0511	6.32	0.00001	0.00021	0.00005	0.000013	0.00003	0.003	0.000005
K0901_84.5-85.5	0.0003	0.01575	0.337	0.000785	0.295	0.000005	0.075	0.0532	6.87	0.000055	0.000195	0.00005	0.0000075	0.0000225	0.002	0.000005
K0901_84.5-85.5	0.0003	0.0045	0.329	0.00102	0.29	0.000005	0.06	0.0553	7.42	0.0001	0.00018	0.00005	0.000002	0.000015	0.001	0.000005
K0901_84.5-85.5	0.000175	0.00925	0.3355	0.000925	0.285	0.000005	0.07	0.0561	7.615	0.0001	0.000165	0.00005	0.0000035	0.0000325	0.0015	0.000005
K0901_84.5-85.5	0.00005	0.014	0.342	0.00083	0.28	0.000005	0.08	0.0569	7.81	0.0001	0.00015	0.00005	0.000005	0.00005	0.002	0.000005
K0901_84.5-85.5	0.000125	0.012	0.3335	0.001195	0.3	0.0000275	0.1	0.05985	8.22	0.0001	0.00015	0.00005	0.000004	0.00006	0.0025	0.000005
K0901_84.5-85.5	0.0002	0.01	0.325	0.00156	0.32	0.00005	0.12	0.0628	8.63	0.0001	0.00015	0.00005	0.000003	0.00007	0.003	0.000005
K0901_84.5-85.5	0.0004	0.011	0.342	0.00085	0.34	0.0000275	0.1	0.06645	9.15	0.0001	0.00014	0.000175	0.00000175	0.0000425	0.002	0.000005

Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time Sampled	Sample ID	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (as $CaCO_3$) ($CaCO_3$ mg/L)	Alkalinity, Total (as $CaCO_3$) ($CaCO_3$ mg/L)	Sulfate (SO_4) (mg/L)	Chloride (Cl) (mg/L)
K0901_84.5-85.5	20	65	5-May-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	485	262.2	36.5	89.68	7.08	#N/A	3.58	10.07	27.00	0.1
K0901_84.5-85.5	20	66	12-May-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	485	366.21	36.85	87.18	7.29	#N/A	3.31	10.67	25.00	0.1
K0901_84.5-85.5	20	67	19-May-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	490	343.26	37.2	88.33	7.54	#N/A	3.04	11.26	23.00	0.1
K0901_84.5-85.5	20	68	26-May-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	485	308.1	34.2	89.12	7.45	#N/A	3.87	11.12	22.00	0.1
K0901_84.5-85.5	20	69	2-Jun-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	500	300.78	31.2	82.67	7.36	#N/A	4.70	10.97	21.00	0.1
K0901_84.5-85.5	20	70	9-Jun-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	495	349.12	32.6	87.84	7.2	#N/A	4.68	11.25	21.50	0.1
K0901_84.5-85.5	20	71	16-Jun-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	495	355.46	34	81.62	7.37	#N/A	4.65	11.52	22.00	0.1
K0901_84.5-85.5	20	72	23-Jun-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	495	341.3	36.95	86.51	7.26	#N/A	4.41	12.84	27.00	0.2
K0901_84.5-85.5	20	73	30-Jun-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	505	349.6	39.9	92.09	7.46	#N/A	4.17	14.15	32.00	0.3
K0901_84.5-85.5	20	74	7-Jul-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	490	319.82	40.1	86.59	7.28	#N/A	4.13	13.98	29.00	0.2
K0901_84.5-85.5	20	75	14-Jul-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	500	302.24	40.3	86.88	7.4	#N/A	4.09	13.81	26.00	0.1
K0901_84.5-85.5	20	76	21-Jul-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	495	299.8	36.65	83.94	7.4	#N/A	4.13	13.87	26.00	0.1
K0901_84.5-85.5	20	77	28-Jul-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	495	312.98	33	85.35	7.52	#N/A	4.16	13.92	26.00	0.1
K0901_84.5-85.5	20	78	4-Aug-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	465	319.82	33.55	77.25	7.32	#N/A	3.96	13.32	23.00	0.1
K0901_84.5-85.5	20	79	11-Aug-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	470	257.32	34.1	73.52	7.49	#N/A	3.75	12.71	20.00	0.1
K0901_84.5-85.5	20	80	18-Aug-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	470	273.92	33.95	73.83	7.43	#N/A	4.24	13.55	21.00	0.1
K0901_84.5-85.5	20	81	25-Aug-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	480	277.34	33.8	75.77	7.54	#N/A	4.73	14.38	22.00	0.1
K0901_84.5-85.5	20	82	1-Sep-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	465	320	33.25	80.28	7.57	#N/A	4.50	13.38	23.50	0.1
K0901_84.5-85.5	20	83	8-Sep-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	470	289	32.7	72.9	7.43	#N/A	4.26	12.37	25.00	0.1
K0901_84.5-85.5	20	84	15-Sep-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	475	301	33.1	78.26	7.35	#N/A	4.20	12.50	24.50	0.1
K0901_84.5-85.5	20	85	22-Sep-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	490	269.53	33.5	79.65	7.06	#N/A	4.14	12.62	24.00	0.1
K0901_84.5-85.5	20	86	29-Sep-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	485	328.12	33.65	76.94	7.31	#N/A	4.64	12.79	24.00	0.1
K0901_84.5-85.5	20	87	6-Oct-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	490	309.08	33.8	76.51	7.28	#N/A	5.14	12.95	24.00	0.1
K0901_84.5-85.5	20	88	13-Oct-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	470	287.59	33.25	75.03	7.62	#N/A	4.87	12.40	23.00	0.1
K0901_84.5-85.5	20	89	20-Oct-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	460	280.76	32.7	71.85	7.1	#N/A	4.59	11.85	22.00	0.1
K0901_84.5-85.5	20	90	27-Oct-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	445	327.63	30.85	73.5	7.36	#N/A	5.16	11.64	20.50	0.1
K0901_84.5-85.5	20	91	3-Nov-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	460	278.32	29	67.6	7.51	#N/A	5.72	11.43	19.00	0.1
K0901_84.5-85.5	20	92	10-Nov-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	465	312.98	31.15	64.02	7.61	#N/A	4.79	11.42	19.00	0.1
K0901_84.5-85.5	20	93	17-Nov-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	495	305.66	33.3	73.39	7.38	#N/A	3.86	11.40	19.00	0.1
K0901_84.5-85.5	20	94	24-Nov-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	475	330.56	30.85	66.71	7.5	#N/A	4.60	11.87	18.00	0.1
K0901_84.5-85.5	20	95	1-Dec-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	465	355.95	28.4	64.33	7.42	#N/A	5.33	12.33	17.00	0.1
K0901_84.5-85.5	20	96	8-Dec-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	470	319.82	28.2	66.66	7.4	#N/A	4.86	12.33	17.00	0.1
K0901_84.5-85.5	20	97	15-Dec-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	445	335.93	28	65.58	7.43	#N/A	4.39	12.33	17.00	0.1
K0901_84.5-85.5	20	98	22-Dec-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	455	333.98	28.025	66.73	7.5	#N/A	4.34	12.39	16.75	0.1
K0901_84.5-85.5	20	99	29-Dec-11	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	450	278.8	28.05	68.35	7.36	#N/A	4.30	12.45	16.50	0.1
K0901_84.5-85.5	20	100	5-Jan-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	465	286.62	28.075	59.55	7.2	#N/A	4.25	12.51	16.25	0.1
K0901_84.5-85.5	20	101	12-Jan-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	460	341.3	28.1	64.98	7.32	#N/A	4.20	12.57	16.00	0.1
K0901_84.5-85.5	20	102	19-Jan-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	450	319.82	27.85	60.36	7.38	#N/A	4.64	13.08	16.00	0.1
K0901_84.5-85.5	20	103	26-Jan-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	460	370.11	27.6	61.27	7.21	#N/A	5.08	13.58	16.00	0.1
K0901_84.5-85.5	20	104	2-Feb-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	465	317.38	27.35	66.2	7.43	#N/A	5.51	14.09	16.00	0.1
K0901_84.5-85.5	20	105	9-Feb-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	460	400.87	27.1	66.38	7.59	#N/A	5.95	14.59	16.00	0.1
K0901_84.5-85.5	20	106	16-Feb-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	465	354	27.575	66.48	7.56	#N/A	5.90	13.86	17.00	0.1
K0901_84.5-85.5	20	107	23-Feb-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	455	359.37	28.05	66.75	7.26	#N/A	5.85	13.13	18.00	0.1
K0901_84.5-85.5	20	108	1-Mar-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	465	408.69	28.525	64.02	7.18	#N/A	5.80	12.40	19.00	0.1
K0901_84.5-85.5	20	109	8-Mar-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	450	347.16	29	66.33	7.38	#N/A	5.75	11.67	20.00	0.1
K0901_84.5-85.5	20	110	15-Mar-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	455	361.81	28.525	65.24	7.28	#N/A	5.47	11.50	20.00	0.1
K0901_84.5-85.5	20	111	22-Mar-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	465	368.16	28.05	66.27	7.3	#N/A	5.19	11.32	20.00	0.1
K0901_84.5-85.5	20	112	29-Mar-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	475	361.32	27.575	71.49	7.21	#N/A	4.91	11.15	20.00	0.1
K0901_84.5-85.5	20	113	5-Apr-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	480	403.8	27.1	62.76	7.21	#N/A	4.63	10.97	20.00	0.1
K0901_84.5-85.5	20	114	12-Apr-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	445	355.46	27.1	66.72	7.21	#N/A	4.63	10.97	20.00	0.1
K0901_84.5-85.5	20	115	19-Apr-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	475	349.6	27.1	72.97	7.36	#N/A	4.63	10.97	20.00	0.1
K0901_84.5-85.5	20	116	26-Apr-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	475	464	28.225	76	7.16	#N/A	5.67	12.79	19.25	0.1
K0901_84.5-85.5	20	117	3-May-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	475	364.25	28.6	65.61	7.6	#N/A	6.02	13.40	19.00	0.1
K0901_84.5-85.5	20	118	10-May-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	475	490	29.175	85	7.21	#N/A	6.23	13.26	17.50	0.1
K0901_84.5-85.5	20	119	17-May-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	475	309.08	29.75	68.13	7.23	#N/A	6.44	13.11	16.00	0.1
K0901_84.5-85.5	20	120	24-May-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	475	314.94	30.325	65.94	7.37	#N/A	6.65	12.97	14.50	0.1
K0901_84.5-85.5	20	121	31-May-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	475	365.72	30.9	68.66	7.43	#N/A	6.86	12.82	13.00	0.1
K0901_84.5-85.5	20	122	7-Jun-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	475	378	30.875	73	7.31	#N/A	6.72	13.04	14.75	0.1
K0901_84.5-85.5	20	123	14-Jun-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	490	368.16	30.85	72.81	7.5	#N/A	6.58	13.25	16.50	0.1
K0901_84.5-85.5	20	124	21-Jun-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	475	349.12	30.825	68.79	7.31	#N/A	6.44	13.47	18.25	0.1
K0901_84.5-85.5	20	125	28-Jun-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	480	349.6	30.8	73.11	7.39	#N/A	6.30	13.68	20.00	0.1
K0901_84.5-85.5	20	126	5-Jul-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	485	371	30.55	78	7.32	#N/A	5.84	13.38	18.25	0.1
K0901_84.5-85.5	20	127	12-Jul-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	480	399.9	30.3	71.24	7.23	#N/A	5.38	13.08	16.50	0.1
K0901_84.5-85.5	20	128	19-Jul-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	495	352.05	30.05	67.28	7.27	#N/A	4.92	12.78	14.75	0.1
K0901_84.5-85.5	20	129	26-Jul-12	Kerr	0	KERR	VU	IARG	3	CL	1	Drillcore		K-09-01_15	Water	500	470	334.47	29.8	70.45	7.28	#N/A	4.46	12.48	13.00	0.1
Mean last 10 weeks	10																	358.296	30.5275	70.928	7.341	#N/A	6.015	13.0935	15.95	0.1

Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	(Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
K0901_84.5-85.5	0.03	0.006	0.0003	0.0001	0.00565	0.00001	0.000005	0.0016	0.00006	14.3	0.00025	0.000248	0.0094	0.001	0.00019	0.0005	0.185	0.0872	0.00001	0.00961
K0901_84.5-85.5	0.03	0.00585	0.0003	0.0001	0.005805	0.00001	0.000005	0.0016	0.0000645	14.45	0.00025	0.000237	0.0089	0.001	0.000165	0.00075	0.1895	0.0877	0.0000075	0.009545
K0901_84.5-85.5	0.03	0.0057	0.0003	0.0001	0.00596	0.00001	0.000005	0.0016	0.000069	14.6	0.00025	0.000226	0.0084	0.001	0.00014	0.001	0.194	0.0882	0.000005	0.00948
K0901_84.5-85.5	0.03	0.0057	0.0003	0.0001	0.005885	0.00001	0.0000075	0.0016	0.0000785	13.4	0.00025	0.00024	0.00945	0.001	0.00019	0.00075	0.1765	0.08345	0.0000075	0.009005
K0901_84.5-85.5	0.03	0.0057	0.0003	0.0001	0.00581	0.00001	0.00001	0.0016	0.000088	12.2	0.00025	0.000254	0.0105	0.001	0.00024	0.0005	0.159	0.0787	0.00001	0.00853
K0901_84.5-85.5	0.03	0.00575	0.00025	0.0001	0.00571	0.00001	0.0000075	0.0017	0.000066	12.75	0.00025	0.000235	0.0101	0.001	0.00014	0.0005	0.1655	0.08215	0.00001	0.008225
K0901_84.5-85.5	0.03	0.0058	0.0002	0.0001	0.00561	0.00001	0.000005	0.0018	0.000044	13.3	0.00025	0.000216	0.0097	0.001	0.00004	0.0005	0.172	0.0856	0.00001	0.00792
K0901_84.5-85.5	0.03	0.0088	0.00025	0.00015	0.0066	0.00001	0.000005	0.00195	0.000076	14.5	0.00025	0.0002105	0.0087	0.0015	0.000155	0.00075	0.186	0.0948	0.00001	0.00921
K0901_84.5-85.5	0.03	0.0118	0.0003	0.0002	0.00759	0.00001	0.000005	0.0021	0.000108	15.7	0.00025	0.000205	0.0077	0.002	0.00027	0.001	0.2	0.104	0.00001	0.0105
K0901_84.5-85.5	0.03	0.01015	0.0003	0.00025	0.0077	0.00001	0.000005	0.00225	0.0000865	15.75	0.00025	0.000209	0.00795	0.0015	0.00026	0.001	0.1975	0.103	0.0000075	0.01022
K0901_84.5-85.5	0.03	0.0085	0.0003	0.0003	0.00781	0.00001	0.000005	0.0024	0.000065	15.8	0.00025	0.000213	0.0082	0.001	0.00025	0.001	0.195	0.102	0.000005	0.00994
K0901_84.5-85.5	0.03	0.0099	0.0003	0.0003	0.008955	0.00001	0.000005	0.00225	0.000068	14.35	0.00025	0.0002155	0.0084	0.008	0.0003	0.00075	0.1935	0.114	0.000005	0.01017
K0901_84.5-85.5	0.03	0.0113	0.0003	0.0003	0.0101	0.00001	0.000005	0.0021	0.000071	12.9	0.00025	0.000218	0.0086	0.015	0.00035	0.0005	0.192	0.126	0.000005	0.0104
K0901_84.5-85.5	0.03	0.01105	0.00025	0.0002	0.00914	0.00001	0.000005	0.0019	0.0000645	13.15	0.000625	0.0001895	0.008	0.008	0.0003	0.0005	0.1775	0.1007	0.000005	0.01045
K0901_84.5-85.5	0.03	0.0108	0.0002	0.0001	0.00818	0.00001	0.000005	0.0017	0.000058	13.4	0.001	0.000161	0.0074	0.001	0.00025	0.0005	0.163	0.0754	0.000005	0.0105
K0901_84.5-85.5	0.03	0.0103	0.0002	0.0001	0.008495	0.00001	0.000005	0.00195	0.0000655	13.3	0.00085	0.0001625	0.0084	0.001	0.00026	0.0005	0.164	0.0775	0.000005	0.00994
K0901_84.5-85.5	0.03	0.0098	0.0002	0.0001	0.00881	0.00001	0.000005	0.0022	0.000073	13.2	0.0007	0.000164	0.0094	0.001	0.00027	0.0005	0.165	0.0796	0.000005	0.00938
K0901_84.5-85.5	0.03	0.01095	0.00015	0.0001	0.008415	0.00001	0.000005	0.00225	0.000076	13	0.0008	0.000156	0.0089	0.001	0.00028	0.0005	0.158	0.0768	0.000005	0.01009
K0901_84.5-85.5	0.03	0.0121	0.0001	0.0001	0.00802	0.00001	0.000005	0.0023	0.000079	12.8	0.0009	0.000148	0.0084	0.001	0.00029	0.0005	0.151	0.074	0.000005	0.0108
K0901_84.5-85.5	0.03	0.0105	0.0002	0.00015	0.00966	0.00001	0.000005	0.00225	0.0000705	13	0.001	0.00016	0.0084	0.0035	0.00024	0.0005	0.1545	0.07685	0.0000075	0.0098
K0901_84.5-85.5	0.03	0.0089	0.0003	0.0002	0.0113	0.00001	0.000005	0.0022	0.000062	13.2	0.0011	0.000172	0.0084	0.006	0.00019	0.0005	0.158	0.0797	0.00001	0.0088
K0901_84.5-85.5	0.03	0.0098	0.00045	0.00015	0.01014	0.00001	0.000005	0.00215	0.000059	13.25	0.0009	0.000169	0.0086	0.0035	0.00015	0.0005	0.158	0.0818	0.00001	0.0085
K0901_84.5-85.5	0.03	0.0107	0.0006	0.0001	0.00898	0.00001	0.000005	0.0021	0.000056	13.3	0.0007	0.000166	0.0088	0.001	0.00011	0.0005	0.158	0.0839	0.00001	0.0082
K0901_84.5-85.5	0.03	0.0101	0.0004	0.0001	0.008765	0.00001	0.000005	0.00225	0.000057	13.05	0.000475	0.0001515	0.00815	0.00125	0.00017	0.0005	0.1515	0.0793	0.00001	0.007945
K0901_84.5-85.5	0.03	0.0095	0.0002	0.0001	0.00855	0.00001	0.000005	0.0024	0.000058	12.8	0.00025	0.000137	0.0075	0.0015	0.00023	0.0005	0.145	0.0747	0.00001	0.00769
K0901_84.5-85.5	0.03	0.00915	0.0002	0.00025	0.008645	0.00001	0.000005	0.00255	0.000051	12.1	0.000525	0.0001445	0.00815	0.00275	0.000135	0.0005	0.138	0.0696	0.0000075	0.00756
K0901_84.5-85.5	0.03	0.0088	0.0002	0.0004	0.00874	0.00001	0.000005	0.0027	0.000044	11.4	0.0008	0.000152	0.0088	0.004	0.00004	0.0005	0.131	0.0645	0.000005	0.00743
K0901_84.5-85.5	0.03	0.01305	0.0002	0.00025	0.008545	0.00001	0.000005	0.00225	0.0000595	12.25	0.000525	0.0001675	0.00865	0.00275	0.00012	0.0005	0.133	0.07485	0.000005	0.007465
K0901_84.5-85.5	0.03	0.0173	0.0002	0.0001	0.00835	0.00001	0.000005	0.0018	0.000075	13.1	0.00025	0.000183	0.0085	0.0015	0.0002	0.0005	0.135	0.0852	0.000005	0.0075
K0901_84.5-85.5	0.03	0.0187	0.00025	0.0001	0.008425	0.00001	0.000005	0.00165	0.000074	12.15	0.00025	0.0001735	0.009	0.0015	0.00017	0.0005	0.132	0.076	0.000005	0.00795
K0901_84.5-85.5	0.03	0.0201	0.0003	0.0001	0.0085	0.00001	0.000005	0.0015	0.000073	11.2	0.00025	0.000164	0.0095	0.0015	0.00014	0.0005	0.129	0.0668	0.000005	0.0084
K0901_84.5-85.5	0.03	0.0238	0.0002	0.0001	0.008995	0.00001	0.000005	0.00145	0.0000535	11.1	0.00025	0.0001545	0.0087	0.0015	0.000075	0.0005	0.128	0.0649	0.0000075	0.007995
K0901_84.5-85.5	0.03	0.0275	0.0001	0.0001	0.00949	0.00001	0.000005	0.0014	0.000034	11	0.00025	0.000145	0.0079	0.0015	0.00001	0.0005	0.127	0.063	0.00001	0.00759
K0901_84.5-85.5	0.03	0.02535	0.0001	0.0001	0.00913	0.00001	0.000005	0.001425	0.00004325	11	0.00025	0.00014325	0.007925	0.0015	0.0000525	0.0005	0.12825	0.063675	0.00000875	0.0076075
K0901_84.5-85.5	0.03	0.0232	0.0001	0.0001	0.00877	0.00001	0.000005	0.00145	0.0000525	11	0.00025	0.0001415	0.00795	0.0015	0.000095	0.0005	0.1295	0.06435	0.0000075	0.007625
K0901_84.5-85.5	0.03	0.02105	0.0001	0.0001	0.00841	0.00001	0.000005	0.001475	0.00006175	11	0.00025	0.00013975	0.007975	0.0015	0.0001375	0.0005	0.13075	0.065025	0.00000625	0.0076425
K0901_84.5-85.5	0.03	0.0189	0.0001	0.0001	0.00805	0.00001	0.000005	0.0015	0.000071	11	0.00025	0.000138	0.008	0.0015	0.00018	0.0005	0.132	0.0657	0.000005	0.00766
K0901_84.5-85.5	0.03	0.018925	0.000125	0.0001	0.0077925	0.00001	0.000005	0.00155	0.000072	10.925	0.00025	0.00014	0.00795	0.0015	0.0001725	0.0005	0.12975	0.065575	0.000005	0.0075925
K0901_84.5-85.5	0.03	0.01895	0.00015	0.0001	0.007535	0.00001	0.000005	0.0016	0.000073	10.85	0.00025	0.000142	0.0079	0.0015	0.000165	0.0005	0.1275	0.06545	0.000005	0.007525
K0901_84.5-85.5	0.03	0.018975	0.000175	0.0001	0.0072775	0.00001	0.000005	0.00165	0.000074	10.775	0.00025	0.000144	0.00785	0.0015	0.0001575	0.0005	0.12525	0.065325	0.000005	0.0074575
K0901_84.5-85.5	0.03	0.019	0.0002	0.0001	0.00702	0.00001	0.000005	0.0017	0.000075	10.7	0.00025	0.000146	0.0078	0.0015	0.00015	0.0005	0.123	0.0652	0.000005	0.00739
K0901_84.5-85.5	0.03	0.018875	0.0002	0.000175	0.007205	0.00001	0.000005	0.0014	0.0000695	10.875	0.00025	0.00014125	0.007675	0.0015	0.000135	0.0005	0.1255	0.06465	0.000005	0.0075
K0901_84.5-85.5	0.03	0.01875	0.0002	0.00025	0.00739	0.00001	0.000005	0.0011	0.000064	11.05	0.00025	0.0001365	0.00755	0.0015	0.00012	0.0005	0.128	0.0641	0.000005	0.00761
K0901_84.5-85.5	0.03	0.018625	0.0002	0.000325	0.007575	0.00001	0.000005	0.0008	0.0000585	11.225	0.00025	0.00013175	0.007425	0.0015	0.000105	0.0005	0.1305	0.06355	0.000005	0.00772
K0901_84.5-85.5	0.03	0.0185	0.0002	0.0004	0.00776	0.00001	0.000005	0.0005	0.000053	11.4	0.00025	0.000127	0.0073	0.0015	0.00009	0.0005	0.133	0.063	0.000005	0.00783
K0901_84.5-85.5	0.03	0.02235	0.0002	0.000325	0.0074625	0.00001	0.000005	0.00075	0.00005075	11.2	0.00025	0.00013	0.007275	0.0015	0.000115	0.0005	0.12875	0.06185	0.00001125	0.0076575
K0901_84.5-85.5	0.03	0.0262	0.0002	0.00025	0.007165	0.00001	0.000005	0.001	0.0000485	11	0.00025	0.000133	0.00725	0.0015	0.00014	0.0005	0.1245	0.0607	0.0000175	0.007485
K0901_84.5-85.5	0.03	0.03005	0.0002	0.000175	0.0068675	0.00001	0.000005	0.00125	0.00004625	10.8	0.00025	0.000136	0.007225	0.0015	0.000165	0.0005	0.12025	0.05955	0.00002375	0.0073125
K0901_84.5-85.5	0.03	0.0339	0.0002	0.0001	0.00657	0.00001	0.000005	0.0015	0.000044	10.6	0.00025	0.000139	0.0072	0.0015	0.00019	0.0005	0.116	0.0584	0.00003	0.00714
K0901_84.5-85.5	0.03	0.0339	0.0002	0.0001	0.00657	0.00001	0.000005	0.0015	0.000044	10.6	0.00025	0.000139	0.0072	0.0015	0.00019	0.0005	0.116	0.0584	0.00003	0.00714
K0901_84.5-85.5	0.03	0.0339	0.0002	0.0001	0.00657	0.00001	0.000005	0.0015	0.000044	10.6	0.00025	0.000139	0.0072	0.0015	0.00019	0.0005	0.116	0.0584	0.00003	0.00714
K0901_84.5-85.5	0.03	0.018975	0.000125	0.0001	0.0072225	0.00001	0.000005	0.001725	0.00005675	11.125	0.00025	0.000127	0.00825	0.0015	0.00046	0.0005	0.12125	0.06035	0.0000225	0.007065
K0901_84.5-85.5	0.03	0.014	0.0001	0.0001	0.00744	0.00001	0.000005	0.0018	0.000061	11.3	0.00025	0.000123	0.0086	0.0015	0.00055	0.0005	0.123	0.061	0.00002	0.00704
K0901_84.5-85.5	0.03	0.019025	0.000125	0.0001	0.00751	0.00001	0.000005	0.001825	0.000055	11.525	0.00025	0.0001245	0.0083	0.0015	0.0004475	0.0005	0.12625	0.0621	0.00002	0.007305
K0901_84.5-85.5	0.03	0.02405	0.00015	0.0001	0.00758	0.00001	0.000005	0.00185	0.000049	11.75	0.00025	0.000126	0.008	0.0015	0.000345	0.0005	0.1295	0.0632	0.00002	0.00757
K0901_84.5-85.5	0.03	0.029075	0.000175	0.0001	0.00765	0.00001	0.000005	0.001875	0.000043	11.975	0.00025	0.0001275	0.0077	0.0015	0.0002425	0.0005	0.13275	0.0643	0.00002	0.007835
K0901_84.5-85.5	0.03	0.0341	0.0002	0.0001	0.00772	0.00001	0.000005	0.0019	0.000037	12.2	0.00025	0.000129	0.0074	0.0015	0.00014	0.0005	0.136	0.0654	0.00002	0.0081
K0901_84.5-85.5	0.03	0.0352	0.0002	0.0001	0.007925	0.00001	0.000005	0.0021	0.00004275	12.175	0.00025	0.000127	0.0076	0.0015	0.00015	0.0005	0.1345	0.06455	0.00001625	0.00807
K0901_84.5-85.5	0.03	0.0363	0.0002	0.0001	0.00813	0.00001	0.000005	0.0023	0.0000485	12.15	0.00025	0.000125	0.0078	0.0015	0.00016	0.0005	0.133	0.0637	0.0000125	0.00804
K0901_84.5-85.5	0.03	0.0374	0.0002	0.0001	0.008335	0.00001	0.000005	0.0025	0.00005425	12.125	0.00025	0.000123	0.008	0.0015	0.00017	0.0005	0.1315	0.06285	0.00000875	0.00801
K0901_84.5-85.5	0.03	0.0385	0.0002	0.0001	0.00854	0.00001	0.000005	0.0027	0.00006	12.1	0.00025	0.000121	0.0082	0.0015	0.00018	0.0005	0.13	0.062	0.000005	0.00798
K0901_84.5-85.5	0.03	0.038775	0.0002	0.0001	0.008555	0.00001	0.000005	0.00245	0.0000575	12	0.00025	0.000118	0.008125	0.0015	0.000165	0.0005	0.12775	0.0618	0.00000625	0.0078475
K0901_84.5-85.5	0.03	0.03905	0.0002	0.0001	0.00857	0.00001	0.000005	0.0022	0.000055	11.9	0.00025	0.000115	0.00805	0.0015	0.00015	0.0005	0.1255	0.0616	0.0000075	0.007715
K0901_84.5-85.5	0.03	0.039325	0.0002	0.0001	0.008585	0.00001	0.000005	0.00195	0.0000525	11.8	0.00025	0.000112	0.007975	0.0015	0.000135	0.0005	0.12325	0.0614	0.00000875	0.0075825
K0901_84.5-85.5	0.03	0.0396	0.0002	0.0001	0.0086	0.00001	0.000005	0.0017	0.00005	11.7	0.00025	0.000109	0.0079	0.0015	0.00012	0.0005	0.121	0.0612	0.00001	0.00745
Mean last 10 weeks	0.03	0.0367325	0.0001975	0.0001	0.008261	0.00001	0.000005	0.0021675	0.00005005	12.0125	0.00025	0.00012065	0.007875	0.0015	0.00016125	0.0005	0.129525	0.06288	0.0000115	0.007863

Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S) Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
K0901_84.5-85.5	0.0006	0.012	0.359	0.00014	0.36	0.000005	0.08	0.0701	9.67	0.0001	0.00013	0.0003	0.0000005	0.000015	0.001	0.000005
K0901_84.5-85.5	0.0005	0.00825	0.3735	0.000635	0.41	0.000005	0.085	0.07045	9.82	0.000055	0.00014	0.000175	0.00000175	0.0000375	0.0015	0.000005
K0901_84.5-85.5	0.0004	0.0045	0.388	0.00113	0.46	0.000005	0.09	0.0708	9.97	0.00001	0.00015	0.00005	0.000003	0.00006	0.002	0.000005
K0901_84.5-85.5	0.000225	0.02225	0.342	0.000985	0.395	0.000005	0.085	0.06525	8.985	0.00001	0.00019	0.00005	0.0000055	0.00005	0.0075	0.000005
K0901_84.5-85.5	0.00005	0.04	0.296	0.00084	0.33	0.000005	0.08	0.0597	8	0.00001	0.00023	0.00005	0.000008	0.00004	0.013	0.000005
K0901_84.5-85.5	0.000375	0.02225	0.3125	0.000915	0.36	0.000005	0.095	0.06205	8.425	0.00001	0.00034	0.00005	0.0000065	0.000035	0.0075	0.0000075
K0901_84.5-85.5	0.0007	0.0045	0.329	0.00099	0.39	0.000005	0.11	0.0644	8.85	0.00001	0.00045	0.00005	0.000005	0.00003	0.002	0.00001
K0901_84.5-85.5	0.00055	0.0045	0.368	0.001075	0.415	0.000005	0.1	0.07095	9.095	0.00001	0.000285	0.00005	0.000004	0.0000225	0.002	0.0000075
K0901_84.5-85.5	0.0004	0.0045	0.407	0.00116	0.44	0.000005	0.09	0.0775	9.34	0.00001	0.00012	0.00005	0.000003	0.000015	0.002	0.000005
K0901_84.5-85.5	0.0003	0.0045	0.4	0.001035	0.465	0.000005	0.09	0.0764	9.41	0.00001	0.00008	0.00005	0.0000025	0.0000225	0.002	0.000005
K0901_84.5-85.5	0.0002	0.0045	0.393	0.00091	0.49	0.000005	0.09	0.0753	9.48	0.00001	0.00004	0.00005	0.000002	0.00003	0.002	0.000005
K0901_84.5-85.5	0.00045	0.01625	0.362	0.000915	0.455	0.000005	0.075	0.072	8.48	0.00001	0.00004	0.000175	0.0000035	0.0000225	0.0025	0.000005
K0901_84.5-85.5	0.0007	0.028	0.331	0.00092	0.42	0.000005	0.06	0.0687	7.48	0.00001	0.00004	0.0003	0.000005	0.000015	0.003	0.000005
K0901_84.5-85.5	0.000375	0.01625	0.3435	0.000935	0.415	0.000005	0.07	0.06855	7.87	0.00001	0.000045	0.000175	0.0000035	0.000015	0.003	0.0000125
K0901_84.5-85.5	0.00005	0.0045	0.356	0.00095	0.41	0.000005	0.08	0.0684	8.26	0.00001	0.00005	0.00005	0.000002	0.000015	0.003	0.00002
K0901_84.5-85.5	0.000075	0.0045	0.339	0.00077	0.395	0.000005	0.075	0.0685	8.16	0.00001	0.000085	0.000125	0.0000035	0.0000225	0.005	0.0000125
K0901_84.5-85.5	0.0001	0.0045	0.322	0.00059	0.38	0.000005	0.07	0.0686	8.06	0.00001	0.00012	0.0002	0.000005	0.00003	0.007	0.000005
K0901_84.5-85.5	0.00025	0.0045	0.3155	0.000955	0.36	0.000005	0.055	0.0668	8.005	0.00001	0.0001	0.00015	0.00000275	0.0000225	0.0085	0.000005
K0901_84.5-85.5	0.0004	0.0045	0.309	0.00132	0.34	0.000005	0.04	0.065	7.95	0.00001	0.00008	0.0001	0.0000005	0.000015	0.01	0.000005
K0901_84.5-85.5	0.0003	0.00725	0.296	0.001095	0.35	0.000005	0.07	0.06635	8.04	0.00001	0.00021	0.000075	0.00000575	0.0000225	0.0065	0.000005
K0901_84.5-85.5	0.0002	0.01	0.283	0.00087	0.36	0.000005	0.1	0.0677	8.13	0.00001	0.00034	0.00005	0.000011	0.00003	0.003	0.000005
K0901_84.5-85.5	0.000125	0.00725	0.3025	0.000955	0.375	0.000005	0.09	0.0681	7.91	0.00001	0.000235	0.00005	0.0000105	0.000035	0.0035	0.0000125
K0901_84.5-85.5	0.00005	0.0045	0.322	0.00104	0.39	0.000005	0.08	0.0685	7.69	0.00001	0.00013	0.00005	0.00001	0.00004	0.004	0.00002
K0901_84.5-85.5	0.000075	0.0045	0.314	0.000855	0.385	0.000005	0.075	0.0663	7.7	0.00001	0.000105	0.00005	0.0000075	0.0000275	0.0035	0.0000125
K0901_84.5-85.5	0.0001	0.0045	0.306	0.00067	0.38	0.000005	0.07	0.0641	7.71	0.00001	0.00008	0.00005	0.000005	0.000015	0.003	0.000005
K0901_84.5-85.5	0.0002	0.0045	0.279	0.000585	0.345	0.000005	0.065	0.0611	7.445	0.00001	0.00011	0.00005	0.0000065	0.000015	0.0025	0.000005
K0901_84.5-85.5	0.0003	0.0045	0.252	0.0005	0.31	0.000005	0.06	0.0581	7.18	0.00001	0.00014	0.00005	0.000008	0.000015	0.002	0.000005
K0901_84.5-85.5	0.0004	0.0045	0.2515	0.0005	0.345	0.000005	0.065	0.0614	7.56	0.00001	0.000125	0.000075	0.000008	0.0000575	0.003	0.000005
K0901_84.5-85.5	0.0005	0.0045	0.251	0.0005	0.38	0.000005	0.07	0.0647	7.94	0.00001	0.00011	0.0001	0.000008	0.0001	0.004	0.000005
K0901_84.5-85.5	0.00045	0.0045	0.2465	0.000805	0.345	0.000005	0.055	0.0608	7.04	0.00001	0.00009	0.00015	0.000009	0.000185	0.004	0.000005
K0901_84.5-85.5	0.0004	0.0045	0.242	0.00111	0.31	0.000005	0.04	0.0569	6.14	0.00001	0.00007	0.0002	0.00001	0.00027	0.004	0.000005
K0901_84.5-85.5	0.00035	0.0045	0.236	0.000985	0.315	0.000005	0.065	0.0555	6.33	0.00001	0.000055	0.00025	0.000007	0.00029	0.003	0.0000175
K0901_84.5-85.5	0.0003	0.0045	0.23	0.00086	0.32	0.000005	0.09	0.0541	6.52	0.00001	0.00004	0.0003	0.000004	0.00031	0.002	0.00003
K0901_84.5-85.5	0.00025	0.0045	0.23275	0.0009	0.315	0.000005	0.085	0.0549	6.4975	0.00001	0.0000375	0.0002375	0.00000425	0.00028	0.00225	0.00002375
K0901_84.5-85.5	0.0002	0.0045	0.2355	0.00094	0.31	0.000005	0.08	0.0557	6.475	0.00001	0.000035	0.000175	0.0000045	0.00025	0.0025	0.0000175
K0901_84.5-85.5	0.00015	0.0045	0.23825	0.00098	0.305	0.000005	0.075	0.0565	6.4525	0.00001	0.0000325	0.0001125	0.00000475	0.00022	0.00275	0.00001125
K0901_84.5-85.5	0.0001	0.0045	0.241	0.00102	0.3	0.000005	0.07	0.0573	6.43	0.00001	0.00003	0.00005	0.000005	0.00019	0.003	0.000005
K0901_84.5-85.5	0.0000875	0.0045	0.237	0.0009825	0.2925	0.000005	0.075	0.05685	6.3225	0.00001	0.0000275	0.00005	0.000005	0.0002	0.003	0.000005
K0901_84.5-85.5	0.000075	0.0045	0.233	0.000945	0.285	0.000005	0.08	0.0564	6.215	0.00001	0.000025	0.00005	0.000005	0.00021	0.003	0.000005
K0901_84.5-85.5	0.0000625	0.0045	0.229	0.0009075	0.2775	0.000005	0.085	0.05595	6.1075	0.00001	0.0000225	0.00005	0.000005	0.00022	0.003	0.000005
K0901_84.5-85.5	0.00005	0.0045	0.225	0.00087	0.27	0.000005	0.09	0.0555	6	0.00001	0.00002	0.00005	0.000005	0.00023	0.003	0.000005
K0901_84.5-85.5	0.0000875	0.0045	0.229	0.0009075	0.2875	0.000005	0.0925	0.05615	6.09	0.00001	0.000025	0.00005	0.00000475	0.0002175	0.003	0.000005
K0901_84.5-85.5	0.000125	0.0045	0.233	0.000945	0.305	0.000005	0.095	0.0568	6.18	0.00001	0.00003	0.00005	0.0000045	0.000205	0.003	0.000005
K0901_84.5-85.5	0.0001625	0.0045	0.237	0.0009825	0.3225	0.000005	0.0975	0.05745	6.27	0.00001	0.000035	0.00005	0.00000425	0.0001925	0.003	0.000005
K0901_84.5-85.5	0.0002	0.0045	0.241	0.00102	0.34	0.000005	0.1	0.0581	6.36	0.00001	0.00004	0.00005	0.000004	0.00018	0.003	0.000005
K0901_84.5-85.5	0.000225	0.0045	0.23125	0.0009525	0.325	0.000005	0.095	0.057225	6.355	0.00001	0.0000375	0.0000875	0.0000045	0.0002175	0.00325	0.00000625
K0901_84.5-85.5	0.00025	0.0045	0.2215	0.000885	0.31	0.000005	0.09	0.05635	6.35	0.00001	0.000035	0.000125	0.000005	0.000255	0.0035	0.0000075
K0901_84.5-85.5	0.000275	0.0045	0.21175	0.0008175	0.295	0.000005	0.085	0.055475	6.345	0.00001	0.0000325	0.0001625	0.0000055	0.0002925	0.00375	0.00000875
K0901_84.5-85.5	0.0003	0.0045	0.202	0.00075	0.28	0.000005	0.08	0.0546	6.34	0.00001	0.00003	0.0002	0.000006	0.00033	0.004	0.00001
K0901_84.5-85.5	0.0003	0.0045	0.202	0.00075	0.28	0.000005	0.08	0.0546	6.34	0.00001	0.00003	0.0002	0.000006	0.00033	0.004	0.00001
K0901_84.5-85.5	0.0003	0.0045	0.202	0.00075	0.28	0.000005	0.08	0.0546	6.34	0.00001	0.00003	0.0002	0.000006	0.00033	0.004	0.00001
K0901_84.5-85.5	0.000225	0.0045	0.21175	0.0007425	0.2875	0.000005	0.0725	0.05655	6.385	0.00001	0.0002475	0.0000875	0.000006	0.0002025	0.0025	0.00000625
K0901_84.5-85.5	0.0002	0.0045	0.215	0.00074	0.29	0.000005	0.07	0.0572	6.4	0.00001	0.00032	0.00005	0.000006	0.00016	0.002	0.000005
K0901_84.5-85.5	0.0002	0.0045	0.22325	0.0007975	0.3075	0.000005	0.075	0.05855	6.52	0.00001	0.000285	0.00005	0.0000055	0.00018	0.002	0.000005
K0901_84.5-85.5	0.0002	0.0045	0.2315	0.000855	0.325	0.000005	0.08	0.0599	6.64	0.00001	0.00025	0.00005	0.000005	0.0002	0.002	0.000005
K0901_84.5-85.5	0.0002	0.0045	0.23975	0.0009125	0.3425	0.000005	0.085	0.06125	6.76	0.00001	0.000215	0.00005	0.0000045	0.00022	0.002	0.000005
K0901_84.5-85.5	0.0002	0.0045	0.248	0.00097	0.36	0.000005	0.09	0.0626	6.88	0.00001	0.00018	0.00005	0.000004	0.00024	0.002	0.000005
K0901_84.5-85.5	0.0002	0.0045	0.2435	0.00092	0.3475	0.000005	0.09	0.06265	7.0125	0.00001	0.000195	0.00005	0.000005	0.000245	0.0025	0.000005
K0901_84.5-85.5	0.0002	0.0045	0.239	0.00087	0.335	0.000005	0.09	0.0627	7.145	0.00001	0.00021	0.00005	0.000006	0.00025	0.003	0.000005
K0901_84.5-85.5	0.0002	0.0045	0.2345	0.00082	0.3225	0.000005	0.09	0.06275	7.2775	0.00001	0.000225	0.00005	0.000007	0.000255	0.0035	0.000005
K0901_84.5-85.5	0.0002	0.0045	0.23	0.00077	0.31	0.000005	0.09	0.0628	7.41	0.00001	0.00024	0.00005	0.000008	0.00026	0.004	0.000005
K0901_84.5-85.5	0.000175	0.0045	0.2255	0.00081	0.3125	0.000005	0.085	0.062125	7.2975	0.00001	0.0001875	0.0000875	0.0000085	0.00026	0.0035	0.000005
K0901_84.5-85.5	0.00015	0.0045	0.221	0.00085	0.315	0.000005	0.08	0.06145	7.185	0.00001	0.000135	0.000125	0.000009	0.00026	0.003	0.000005
K0901_84.5-85.5	0.000125	0.0045	0.2165	0.00089	0.3175	0.000005	0.075	0.060775	7.0725	0.00001	0.0000825	0.0001625	0.0000095	0.00026	0.0025	0.000005
K0901_84.5-85.5	0.0001	0.0045	0.212	0.00093	0.32	0.000005	0.07	0.0601	6.96	0.00001	0.00003	0.0002	0.00001	0.00026	0.002	0.000005
Mean last 10 weeks	0.000175	0.0045	0.230975	0.00087425	0.32825	0.000005	0.0845	0.06192	7.1	0.00001	0.00017	0.0000875	0.00000715	0.000251	0.0028	0.000005

Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time Sampled	Sample ID	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (as $CaCO_3$) ($CaCO_3$ mg/L)	Alkalinity, Total (as $CaCO_3$) ($CaCO_3$ mg/L)	Sulfate (SO_4) (mg/L)	Chloride (Cl) (mg/L)
HC21 KERR																										
K-09-02 66.5-67.5	21	0	4-Feb-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	365	335	64	302	4.34	4	59	#N/A	160	1.80
K-09-02 66.5-67.5	21	1	11-Feb-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	505	351	48	271	4.58	#N/A	59	1.17	126	1.00
K-09-02 66.5-67.5	21	2	18-Feb-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	475	353	35	217	4.46	2	65	#N/A	111	0.50
K-09-02 66.5-67.5	21	3	25-Feb-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	495	359	27	234	4.26	6	79	#N/A	115	0.50
K-09-02 66.5-67.5	21	4	4-Mar-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	520	369	19	233	4.11	10	93	#N/A	95	0.50
K-09-02 66.5-67.5	21	5	11-Mar-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	475	395	11	211	4.06	13	92	#N/A	82	0.10
K-09-02 66.5-67.5	21	6	18-Mar-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	510	467	8	229	4.00	16	103	#N/A	110	0.10
K-09-02 66.5-67.5	21	7	25-Mar-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	495	426	5	232	3.86	29	116	#N/A	112	0.50
K-09-02 66.5-67.5	21	8	1-Apr-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	470	420	3	231	3.61	33	120	#N/A	129	1.00
K-09-02 66.5-67.5	21	9	8-Apr-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	490	399	2	226	3.81	33	117	#N/A	107	1.00
K-09-02 66.5-67.5	21	10	15-Apr-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	495	402	1	234	3.78	38	127	#N/A	107	0.50
K-09-02 66.5-67.5	21	11	22-Apr-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	490	387	1	278	3.68	52	151	#N/A	146	0.50
K-09-02 66.5-67.5	21	12	29-Apr-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	495	396	1	264	3.65	19	53	#N/A	114	0.50
K-09-02 66.5-67.5	21	13	6-May-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	505	398	1	297	3.56	56	159	#N/A	147	0.40
K-09-02 66.5-67.5	21	14	13-May-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	460	440	2	332	3.50	62	168	#N/A	140	0.50
K-09-02 66.5-67.5	21	15	20-May-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	485	435	1	342	3.46	61	178	#N/A	137	0.50
K-09-02 66.5-67.5	21	16	27-May-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	495	440	1	333	3.51	66	193	#N/A	136	0.50
K-09-02 66.5-67.5	21	17	3-Jun-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	510	432	1	346	3.42	51	167	#N/A	139	0.50
K-09-02 66.5-67.5	21	18	10-Jun-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	495	460	1	340	3.47	45	163	#N/A	126	0.50
K-09-02 66.5-67.5	21	19	17-Jun-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	490	449	1	341	3.60	33	164	#N/A	102	0.30
K-09-02 66.5-67.5	21	20	24-Jun-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	505	405	1	370	3.56	34	179	#N/A	124	0.30
K-09-02 66.5-67.5	21	21	1-Jul-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	500	418	1	367	3.51	32	160	#N/A	123	0.50
K-09-02 66.5-67.5	21	22	8-Jul-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	495	437	12	354	3.34	51	160	#N/A	127	0.50
K-09-02 66.5-67.5	21	23	15-Jul-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	495	473	1	366	3.30	49	160	#N/A	131	0.50
K-09-02 66.5-67.5	21	24	22-Jul-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	490	412	1	345	3.35	36	136	#N/A	121	0.50
K-09-02 66.5-67.5	21	25	29-Jul-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	510	486	1	372	3.31	47	167	#N/A	167	0.50
K-09-02 66.5-67.5	21	26	5-Aug-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	495	418	1	358	3.54	32	141	#N/A	103	0.10
K-09-02 66.5-67.5	21	27	12-Aug-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	475	425	2	339	3.65	30	140	#N/A	120	0.10
K-09-02 66.5-67.5	21	28	19-Aug-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	490	405	2	386	3.57	35	163	#N/A	113	0.50
K-09-02 66.5-67.5	21	29	26-Aug-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	455	410	3	347	3.41	36	139	#N/A	111	0.10
K-09-02 66.5-67.5	21	30	2-Sep-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	485	365	3	329	3.65	29	127	#N/A	137	0.10
K-09-02 66.5-67.5	21	31	9-Sep-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	460	405	4	382	3.32	44	148	#N/A	132	0.10
K-09-02 66.5-67.5	21	32	16-Sep-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	475	387	2	347	3.29	40	145	#N/A	158	0.50
K-09-02 66.5-67.5	21	33	23-Sep-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	490	375	2	337	3.32	44	156	#N/A	119	0.50
K-09-02 66.5-67.5	21	34	30-Sep-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	470	382	3	321	3.22	41	128	#N/A	114	0.10
K-09-02 66.5-67.5	21	35	7-Oct-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	475	396	2	443	3.18	48	155	#N/A	166	0.10
K-09-02 66.5-67.5	21	36	14-Oct-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	470	405	2	414	3.29	43	146	#N/A	186	0.10
K-09-02 66.5-67.5	21	37	21-Oct-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	480	400	1	397	3.33	42	150	#N/A	168	0.50
K-09-02 66.5-67.5	21	38	28-Oct-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	475	442	2	394	3.24	37	128	#N/A	179	0.50
K-09-02 66.5-67.5	21	39	4-Nov-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	460	368	2	425	3.43	37	131	#N/A	165	0.50
K-09-02 66.5-67.5	21	40	11-Nov-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	475	305	2	391	3.47	35	135	#N/A	169	0.50
K-09-02 66.5-67.5	21	41	18-Nov-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	475	362	1	319	3.52	37	139	#N/A	156	0.50
K-09-02 66.5-67.5	21	42	25-Nov-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	495	352	1	359	3.44	31	116	#N/A	133	0.10
K-09-02 66.5-67.5	21	43	2-Dec-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	480	405	1	356	3.37	35	122	#N/A	126	0.75
K-09-02 66.5-67.5	21	44	9-Dec-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	480	405	1	356	3.37	35	122	#N/A	126	1.40
K-09-02 66.5-67.5	21	45	16-Dec-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	475	411	1	353	3.37	32	123	#N/A	117	0.50
K-09-02 66.5-67.5	21	46	23-Dec-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	485	527	1	343	3.38	34	122	#N/A	116	0.50
K-09-02 66.5-67.5	21	47	30-Dec-10	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	490	418	1	335	3.49	32	127	#N/A	99	0.50
K-09-02 66.5-67.5	21	48	6-Jan-11	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	475	461	1	290	3.46	33	126	#N/A	101	0.75
K-09-02 66.5-67.5	21	49	13-Jan-11	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	495	345	1	272	3.51	33	124	#N/A	104	1.00
K-09-02 66.5-67.5	21	50	20-Jan-11	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	485	376	1	338	3.39	33	118	#N/A	104	0.75
K-09-02 66.5-67.5	21	51	27-Jan-11	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	490	363	1	307	3.43	33	113	#N/A	104	0.50
K-09-02 66.5-67.5	21	52	3-Feb-11	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	480	402	1	300	3.45	33	113	#N/A	115	0.50
K-09-02 66.5-67.5	21	53	10-Feb-11	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	485	337	1	335	3.42	32	113	#N/A	127	0.50
K-09-02 66.5-67.5	21	54	17-Feb-11	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	485	361	1	318	3.46	32	113	#N/A	122	0.50
K-09-02 66.5-67.5	21	55	24-Feb-11	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	485	347	1	407	3.43	33	113	#N/A	118	0.50
K-09-02 66.5-67.5	21	56	3-Mar-11	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	490	376	1	386	3.42	32	112	#N/A	110	0.50
K-09-02 66.5-67.5	21	57	10-Mar-11	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	490	354	1	390	3.44	31	111	#N/A	103	0.50
K-09-02 66.5-67.5	21	58	17-Mar-11	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	485	395	1	406	3.36	39	133	#N/A	102	0.60
K-09-02 66.5-67.5	21	59	24-Mar-11	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	500	396	2	443	3.18	48	155	#N/A	101	0.70
K-09-02 66.5-67.5	21	60	31-Mar-11	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	490	369	1	404	3.38	40	130	#N/A	98	0.60
K-09-02 66.5-67.5	21	61	7-Apr-11	Kerr	0	KERR	VU	IARG	4	QSP	1	Drillcore		K-09-02_8_B	Water	500	490	373	1	420	3.40	33	104	#N/A	95	0.50
																		370.991	0.878	380.925	3.394	35.366	119.7694516	#N/A	108.9758065	0.54

Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	(Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
HC21 KERR																				
K-09-02 66.5-67.5	1.37	3.28	0.036995	0.028732	0.082439	0.000902	0.000005	0.017531	0.003194	18.125968	0.000804	0.144071	16.988387	0.621613	0.004015	0.009032	4.535565	0.355176	0.000005	0.000163
K-09-02 66.5-67.5	1.56	3.54	0.013795	0.020932	0.093039	0.000862	0.000005	0.029531	0.002494	13.525968	0.000254	0.119071	18.888387	0.421613	0.004195	0.004032	3.365565	0.279176	0.000005	0.000793
K-09-02 66.5-67.5	1.44	3.83	0.011195	0.014732	0.091539	0.001102	0.000005	0.022731	0.001784	10.025968	0.000254	0.093471	19.488387	0.681613	0.003525	0.003032	2.415565	0.208176	0.000005	0.000563
K-09-02 66.5-67.5	1.43	5.20	0.011495	0.012432	0.084939	0.001372	0.000005	0.016331	0.001784	7.825968	0.000254	0.077771	21.588387	1.161613	0.008495	0.002032	1.825565	0.166176	0.000005	0.000473
K-09-02 66.5-67.5	1.32	6.41	0.011395	0.011232	0.081339	0.001742	0.000005	0.015531	0.001444	5.645968	0.000254	0.060171	21.288387	1.731613	0.004035	0.001032	1.275565	0.114176	0.000005	0.000463
K-09-02 66.5-67.5	1.02	6.49	0.010295	0.009232	0.091239	0.001702	0.000005	0.010531	0.001054	3.255968	0.000504	0.044071	20.188387	2.521613	0.003815	0.000532	0.687565	0.062176	0.000010	0.000453
K-09-02 66.5-67.5	0.81	7.31	0.009795	0.007532	0.085439	0.001832	0.000005	0.009531	0.001154	2.395968	0.000704	0.030471	19.088387	3.771613	0.003645	0.000532	0.480565	0.048176	0.000005	0.000423
K-09-02 66.5-67.5	0.61	9.31	0.011895	0.008032	0.071639	0.001912	0.000020	0.007531	0.000026	1.455968	0.001304	0.027771	21.888387	5.581613	0.004895	0.000532	0.268565	0.028176	0.000005	0.000443
K-09-02 66.5-67.5	0.46	8.83	0.009995	0.007532	0.078539	0.001832	0.000005	0.006531	0.000877	0.865968	0.001204	0.025271	19.988387	5.841613	0.003755	0.000532	0.152565	0.018176	0.000005	0.000513
K-09-02 66.5-67.5	0.32	10.91	0.009995	0.006832	0.080239	0.001542	0.000005	0.005531	0.000773	0.495968	0.000604	0.019571	22.488387	6.751613	0.003175	0.000532	0.086565	0.010176	0.000005	0.000473
K-09-02 66.5-67.5	0.24	10.00	0.009295	0.008332	0.075839	0.001622	0.000005	0.005531	0.000857	0.375968	0.001204	0.019971	20.088387	8.691613	0.004825	0.000532	0.061565	0.008176	0.000005	0.000733
K-09-02 66.5-67.5	0.20	11.21	0.008495	0.008332	0.061539	0.001672	0.000005	0.003531	0.001021	0.465968	0.001504	0.023071	24.588387	10.241613	0.003165	0.000532	0.058565	0.007176	0.000010	0.000613
K-09-02 66.5-67.5	0.13	9.45	0.008595	0.009332	0.052939	0.001432	0.000005	0.004531	0.000991	0.205968	0.001304	0.020171	21.088387	9.941613	0.002965	0.000532	0.038565	0.005176	0.000005	0.003063
K-09-02 66.5-67.5	0.12	9.48	0.009095	0.011632	0.051439	0.001382	0.000005	0.003531	0.001164	0.225968	0.001404	0.021671	24.788387	14.741613	0.003065	0.000532	0.043565	0.025176	0.000005	0.000173
K-09-02 66.5-67.5	0.12	10.71	0.008995	0.011732	0.048639	0.001452	0.000005	0.009031	0.001374	0.565968	0.002604	0.024071	25.888387	16.741613	0.003315	0.000532	0.055565	0.031176	0.000005	0.000313
K-09-02 66.5-67.5	0.09	11.61	0.008995	0.017432	0.037739	0.001392	0.000005	0.010031	0.001574	0.305968	0.002004	0.023771	27.588387	19.341613	0.003195	0.000532	0.045565	0.030176	0.000005	0.000323
K-09-02 66.5-67.5	0.07	11.01	0.008795	0.020332	0.043439	0.001292	0.000005	0.006131	0.001594	0.255968	0.002004	0.023771	26.188387	22.341613	0.003035	0.000532	0.050565	0.034176	0.000020	0.000133
K-09-02 66.5-67.5	0.03	10.11	0.008695	0.022532	0.041139	0.001002	0.000005	0.003131	0.001674	0.255968	0.001204	0.037971	28.788387	24.341613	0.002855	0.000532	0.049565	0.035076	0.000005	0.000083
K-09-02 66.5-67.5	0.03	8.89	0.007695	0.023032	0.043739	0.000822	0.000005	0.005131	0.001744	0.215968	0.001804	0.021871	26.988387	24.241613	0.003315	0.000532	0.049565	0.036676	0.000005	0.001553
K-09-02 66.5-67.5	0.03	8.33	0.012495	0.030932	0.044039	0.001042	0.000005	0.052131	0.001824	0.255968	0.001804	0.026271	24.188387	24.841613	0.003575	0.000532	0.050565	0.036976	0.000005	0.001033
K-09-02 66.5-67.5	0.03	8.04	0.009695	0.032432	0.054339	0.000842	0.000005	0.003531	0.002034	0.275968	0.002004	0.021071	29.988387	29.241613	0.004055	0.000532	0.053565	0.043976	0.000005	0.000293
K-09-02 66.5-67.5	0.03	7.50	0.007695	0.031332	0.040439	0.001112	0.000005	0.002931	0.002034	0.225968	0.002004	0.025071	24.588387	26.241613	0.002145	0.000532	0.048565	0.038376	0.000005	0.001833
K-09-02 66.5-67.5	0.03	5.31	0.007095	0.031432	0.037639	0.000622	0.000005	0.030331	0.002004	4.635968	0.003704	0.019571	23.988387	28.341613	0.001985	0.008032	0.046565	0.043076	0.000010	0.000583
K-09-02 66.5-67.5	0.03	6.29	0.007295	0.036032	0.036939	0.000612	0.000005	0.002831	0.002284	0.205968	0.001904	0.027771	25.788387	27.941613	0.002275	0.000532	0.043565	0.041276	0.000005	0.000273
K-09-02 66.5-67.5	0.03	4.26	0.006295	0.033132	0.039039	0.000532	0.000005	0.002731	0.002464	0.255968	0.001604	0.022371	24.788387	26.341613	0.011305	0.000532	0.039565	0.040776	0.000020	0.001103
K-09-02 66.5-67.5	0.03	3.95	0.007795	0.038632	0.035939	0.000522	0.000005	0.002831	0.002164	0.345968	0.000904	0.021271	23.088387	31.941613	0.002355	0.000532	0.044565	0.040876	0.000010	0.000123
K-09-02 66.5-67.5	0.03	3.77	0.007095	0.036532	0.036539	0.000362	0.000005	0.002731	0.002034	0.305968	0.001404	0.017271	20.888387	27.341613	0.001675	0.000532	0.036565	0.039376	0.000020	0.002763
K-09-02 66.5-67.5	0.03	3.48	0.007595	0.039432	0.040839	0.000382	0.000005	0.002431	0.002164	0.805968	0.001904	0.018471	20.088387	25.541613	0.047845	0.000532	0.016565	0.019576	0.000010	0.000008
K-09-02 66.5-67.5	0.03	3.79	0.002595	0.039232	0.034839	0.000422	0.000005	0.002731	0.002494	0.605968	0.001704	0.020371	24.388387	29.441613	0.001515	0.000532	0.019565	0.024376	0.000100	0.000008
K-09-02 66.5-67.5	0.08	3.02	0.005595	0.035632	0.038639	0.000332	0.000005	0.001931	0.002144	1.105968	0.002304	0.018671	20.988387	24.141613	0.005385	0.000532	0.020565	0.019776	0.000020	0.000008
K-09-02 66.5-67.5	0.08	2.90	0.006495	0.041332	0.041539	0.000292	0.000005	0.002431	0.002224	1.015968	0.001804	0.017871	19.888387	25.641613	0.008165	0.000532	0.025565	0.022576	0.000010	0.000053
K-09-02 66.5-67.5	0.11	2.94	0.005995	0.036132	0.037839	0.000322	0.000005	0.002131	0.002424	1.625968	0.002304	0.018071	20.788387	25.741613	0.002275	0.000532	0.022565	0.040776	0.000020	0.000073
K-09-02 66.5-67.5	0.07	3.13	0.007795	0.046332	0.036939	0.000312	0.000005	0.002231	0.002674	0.815968	0.001804	0.017571	21.288387	27.741613	0.012205	0.000532	0.039565	0.040776	0.000020	0.002503
K-09-02 66.5-67.5	0.03	2.92	0.006595	0.052932	0.036939	0.000302	0.000005	0.002931	0.002454	0.615968	0.001804	0.021371	21.588387	29.741613	0.001575	0.000532	0.039565	0.042076	0.000020	0.000008
K-09-02 66.5-67.5	0.11	2.29	0.006195	0.045032	0.065739	0.000282	0.000005	0.002231	0.002514	1.185968	0.001704	0.019471	19.888387	29.241613	0.001695	0.000532	0.050565	0.042176	0.000010	0.000083
K-09-02 66.5-67.5	0.08	2.37	0.006295	0.050732	0.044439	0.000342	0.000005	0.002731	0.002714	0.925968	0.001804	0.022171	20.588387	30.741613	0.001975	0.000532	0.045565	0.048776	0.000020	0.000383
K-09-02 66.5-67.5	0.03	2.37	0.005695	0.046532	0.041539	0.000312	0.000005	0.003331	0.002664	0.785968	0.001804	0.019871	20.188387	31.941613	0.001465	0.000532	0.045565	0.050876	0.000020	0.000303
K-09-02 66.5-67.5	0.03	2.43	0.006595	0.057632	0.035539	0.000292	0.000005	0.003331	0.002684	0.435968	0.001504	0.019171	20.888387	30.241613	0.001465	0.000532	0.029565	0.042876	0.000030	0.000343
K-09-02 66.5-67.5	0.07	2.01	0.006795	0.055332	0.037739	0.000252	0.000005	0.002631	0.002854	0.755968	0.001504	0.024071	19.988387	27.241613	0.006225	0.000532	0.034565	0.041976	0.000010	0.000373
K-09-02 66.5-67.5	0.06	2.74	0.005195	0.036132	0.039439	0.000212	0.000005	0.003031	0.002794	0.685968	0.001704	0.017071	18.688387	25.541613	0.002585	0.000532	0.036565	0.036476	0.000005	0.000773
K-09-02 66.5-67.5	0.03	2.32	0.005895	0.042432	0.034139	0.000232	0.000005	0.002831	0.002994	0.595968	0.001704	0.019371	20.688387	29.941613	0.002355	0.000532	0.039565	0.040476	0.000020	0.001043
K-09-02 66.5-67.5	0.03	2.34	0.005695	0.029232	0.031839	0.000232	0.000005	0.002431	0.002874	0.495968	0.001604	0.019271	20.188387	29.441613	0.001345	0.000532	0.035565	0.041376	0.000010	0.000393
K-09-02 66.5-67.5	0.03	1.49	0.005895	0.033132	0.039139	0.000182	0.000005	0.002731	0.002724	0.445968	0.001504	0.015471	1.958387	30.241613	0.003485	0.000532	0.027565	0.042176	0.000005	0.000008
K-09-02 66.5-67.5	0.03	1.50	0.006145	0.031332	0.037589	0.000162	0.000005	0.002681	0.001868	0.415968	0.001554	0.015421	10.273387	28.191613	0.004545	0.000532	0.027065	0.039426	0.000013	0.000961
K-09-02 66.5-67.5	0.03	1.52	0.006395	0.029532	0.036039	0.000142	0.000005	0.002631	0.001012	0.385968	0.001604	0.015371	18.588387	26.141613	0.005605	0.000532	0.026565	0.036676	0.000020	0.001913
K-09-02 66.5-67.5	0.03	1.36	0.006395	0.032332	0.035239	0.000152	0.000005	0.002231	0.001614	0.485968	0.001604	0.015571	18.688387	28.941613	0.001135	0.000532	0.024565	0.033576	0.000010	0.000008
K-09-02 66.5-67.5	0.03	1.14	0.006495	0.026832	0.033239	0.000132	0.000005	0.002331	0.002704	0.345968	0.001004	0.015571	18.688387	27.141613	0.001545	0.000532	0.024565	0.036576	0.000010	0.000203
K-09-02 66.5-67.5	0.03	1.16	0.006495	0.028232	0.040439	0.000142	0.000005	0.002331	0.002654	0.325968	0.001104	0.014971	18.388387	27.041613	0.002225	0.000532	0.021565	0.034676	0.000005	0.000008
K-09-02 66.5-67.5	0.03	1.15	0.006495	0.029332	0.037789	0.000127	0.000005	0.002581	0.002669	0.385968	0.000854	0.015621	18.088387	26.441613	0.001710	0.000532	0.021565	0.035076	0.000005	0.000056
K-09-02 66.5-67.5	0.03	1.14	0.006495	0.030432	0.035139	0.000112	0.000005	0.002831	0.002684	0.445968	0.000604	0.016271	17.788387	25.841613	0.001195	0.000532	0.021565	0.035476	0.000005	0.000103
K-09-02 66.5-67.5	0.03	1.01	0.006445	0.031532	0.036289	0.000107	0.000005	0.002581	0.002879	0.405968	0.000604	0.015221	18.238387	25.041613	0.001170	0.000532	0.022565	0.034926	0.000005	0.000093
K-09-02 66.5-67.5	0.03	0.88	0.006395	0.032632	0.037439	0.000102	0.000005	0.002331	0.003074	0.365968	0.000604	0.014171	18.688387	24.241613	0.001145	0.000532	0.023565	0.034376	0.000005	0.000083
K-09-02 66.5-67.5	0.10	0.95	0.007445	0.040932	0.035189	0.000107	0.000005	0.002431	0.003284	0.295968	0.000654	0.014771	19.588387	25.841613	0.009125	0.000532	0.020565	0.035626	0.000008	0.000078
K-09-02 66.5-67.5	0.16	1.02	0.008495	0.049232	0.032939	0.000112	0.000005	0.002531	0.003494	0.225968	0.000704	0.015371	20.488387	27.441613	0.017105	0.000532	0.017565	0.036876	0.000010	0.000073
K-09-02 66.5-67.5	0.10	1.02	0.007145	0.039532	0.030639	0.000107	0.000005	0.002631	0.003359	0.230968	0.000704	0.015121	19.288387	25.741613	0.009115	0.000532	0.016065	0.034426	0.000015	0.000078
K-09-02 66.5-67.5	0.03	1.02	0.005795	0.029832	0.028339	0.000102	0.000005	0.002731	0.003224	0.235968	0.000704	0.014871	18.088387	24.041613	0.001125	0.000532	0.014565	0.031976	0.000020	0.000083
K-09-02 66.5-67.5	0.03	1.06	0.006295	0.033832	0.027439	0.000092	0.000005	0.002381	0.003284	0.280968	0.000804	0.014421	19.088387	24.391613	0.001940	0.000532	0.015565	0.032526	0.000020	0.000073
K-09-02 66.5-67.5	0.03	1.10	0.006795	0.037832	0.026539	0.000082	0.000005	0.002031	0.003344	0.325968	0.000904	0.013971	20.088387	24.741613	0.002755	0.000532	0.016565	0.033076	0.000020	0.000063
K-09-02 66.5-67.5	0.05	1.00	0.006745	0.038182	0.026989	0.000082	0.000005	0.002181	0.003274	0.495968	0.000954	0.013721	18.338387	24.991613	0.002060	0.000532	0.016065	0.032926	0.000013	0.000048
K-09-02 66.5-67.5	0.06	0.91	0.006695	0.038532	0.027439	0.000082	0.000005	0.002331	0.003204	0.665968	0.001004	0.013471	16.588387	25.241613	0.001365	0.000532	0.015565	0.032776	0.000005	0.000033
K-09-02 66.5-67.5	0.05	0.90	0.006495	0.030732	0.028189	0.000062	0.000005	0.002081	0.003259	0.505968	0.000804	0.014421	17.388387	27.291613	0.001545	0.000532	0.020065	0.038676	0.000005	0.000118
K-09-02 66.5-67.5	0.03	0.89	0.006295	0.022932	0.028939	0.000042	0.000005	0.001831	0.003314	0.345968	0.000604	0.015371	18.188387	29.341613	0.001725	0.000532	0.024565	0.044576	0.000005	0.000203
	0.064419355	0.98536129	0.006820	0.036157	0.029264	0.000087	0.000005	0.002316	0.003304	0.360968	0.000784	0.014551	18.713387	25.906613	0.004786	0.000532	0.017715	0.035346	0.000012	0.000085

Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S) Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
HC21 KERR																
K-09-02 66.5-67.5	0.025832	0.021403	23.641935	0.055156	0.763710	0.000005	5.707419	1.674387	43.7	0.000702	0.000192	0.000110	0.000496	0.000982	0.702290	0.00004
K-09-02 66.5-67.5	0.020632	0.041403	15.041935	0.050756	4.403710	0.000005	2.647419	1.734387	40	0.000402	0.000512	0.000310	0.000309	0.001062	0.499290	0.00001
K-09-02 66.5-67.5	0.016132	0.041403	10.241935	0.042856	4.423710	0.000005	1.187419	1.474387	33.2	0.000302	0.000082	0.000310	0.000387	0.000962	0.401290	0.00002
K-09-02 66.5-67.5	0.014832	0.031403	8.841935	0.044056	4.853710	0.000005	0.757419	1.344387	33.6	0.000302	0.000102	0.000310	0.000547	0.000842	0.379290	0.00001
K-09-02 66.5-67.5	0.013032	0.031403	6.741935	0.042156	4.963710	0.000005	0.417419	1.124387	33.2	0.000202	0.000062	0.000310	0.000690	0.000732	0.338290	0.00001
K-09-02 66.5-67.5	0.009032	0.021403	4.611935	0.034456	4.333710	0.000005	0.197419	0.826387	30.1	0.000102	0.000232	0.000310	0.000818	0.000612	0.271290	0.00006
K-09-02 66.5-67.5	0.007232	0.011403	3.711935	0.029156	5.003710	0.000005	0.177419	0.798387	35.1	0.000102	0.000112	0.000310	0.000952	0.000502	0.232290	0.00013
K-09-02 66.5-67.5	0.006832	0.031403	3.181935	0.028356	5.053710	0.000005	0.247419	0.653387	34.3	0.000102	0.000222	0.000310	0.001141	0.000572	0.210290	0.000005
K-09-02 66.5-67.5	0.006232	0.021403	2.431935	0.026356	4.323710	0.000005	0.177419	0.529387	37.5	0.000102	0.000312	0.000210	0.001251	0.000442	0.206290	0.00001
K-09-02 66.5-67.5	0.005132	0.011403	1.871935	0.021556	3.903710	0.000005	0.127419	0.447387	33.1	0.000102	0.000202	0.000210	0.001201	0.000302	0.197290	0.000005
K-09-02 66.5-67.5	0.005732	0.011403	1.701935	0.023856	3.873710	0.000010	0.177419	0.394387	34.9	0.000102	0.000262	0.000210	0.001391	0.000392	0.195290	0.00001
K-09-02 66.5-67.5	0.006832	0.006403	1.581935	0.023956	3.743710	0.000005	0.167419	0.379387	39.1	0.000102	0.000192	0.000110	0.001621	0.000452	0.239290	0.00002
K-09-02 66.5-67.5	0.006232	0.006403	1.321935	0.020056	3.953710	0.000020	0.127419	0.274387	33.7	0.000102	0.000232	0.000210	0.001581	0.000352	0.225290	0.000005
K-09-02 66.5-67.5	0.006632	0.411403	1.301935	0.021056	4.533710	0.000020	0.097419	0.317387	44.5	0.000102	0.000312	0.000110	0.001681	0.000462	0.270290	0.00002
K-09-02 66.5-67.5	0.008632	0.442403	1.185935	0.022656	3.503710	0.000005	0.107419	0.288387	48.1	0.000102	0.000032	0.000410	0.002051	0.000742	0.310290	0.00004
K-09-02 66.5-67.5	0.008132	0.441403	0.993935	0.021956	3.873710	0.000030	0.087419	0.268387	51.1	0.000102	0.000212	0.000510	0.002171	0.000702	0.576290	0.00007
K-09-02 66.5-67.5	0.006832	0.434403	0.959935	0.020556	3.713710	0.000060	0.097419	0.265387	52.1	0.000102	0.000182	0.000510	0.001741	0.000632	0.622290	0.00006
K-09-02 66.5-67.5	0.006932	0.441403	0.908935	0.017956	3.593710	0.000010	0.117419	0.262387	53.5	0.000102	0.000252	0.000210	0.001841	0.000712	0.648290	0.00004
K-09-02 66.5-67.5	0.006432	0.972403	1.381935	0.017956	3.083710	0.000040	0.307419	0.240387	47.4	0.000102	0.000312	0.001210	0.001811	0.000532	0.385290	0.00015
K-09-02 66.5-67.5	0.007032	0.482403	0.783935	0.021556	2.913710	0.000050	0.127419	0.229387	46.9	0.000102	0.000032	0.000110	0.001491	0.000562	0.465290	0.00006
K-09-02 66.5-67.5	0.006732	0.513403	0.846935	0.020156	3.093710	0.000060	0.127419	0.248387	51.7	0.000102	0.000172	0.000410	0.001821	0.000572	0.439290	0.00008
K-09-02 66.5-67.5	0.009532	0.508403	0.739935	0.020356	2.563710	0.000060	0.057419	0.235387	49.4	0.000102	0.000102	0.000110	0.001481	0.000382	0.557290	0.00006
K-09-02 66.5-67.5	0.006532	0.558403	0.727935	0.016556	2.593710	0.000070	0.117419	0.238387	47.8	0.000102	0.000212	0.002610	0.001311	0.000802	0.468290	0.00006
K-09-02 66.5-67.5	0.007332	2.011403	0.686935	0.016856	2.533710	0.000050	0.097419	0.234387	44.3	0.000102	0.000112	0.000060	0.001371	0.000362	0.600290	0.00005
K-09-02 66.5-67.5	0.006332	0.495403	0.647935	0.016656	2.263710	0.000050	0.107419	0.160387	39.7	0.000102	0.000482	0.000110	0.001551	0.000402	0.523290	0.00005
K-09-02 66.5-67.5	0.006432	0.470403	0.705935	0.027256	2.263710	0.000060	0.127419	0.253387	48.1	0.000102	0.000012	0.000310	0.001111	0.000592	0.512290	0.00005
K-09-02 66.5-67.5	0.005332	0.385403	0.637935	0.016756	1.973710	0.000060	0.097419	0.223387	40.3	0.000102	0.000112	0.000060	0.000974	0.000282	0.452290	0.00003
K-09-02 66.5-67.5	0.006232	0.349403	0.611935	0.016356	1.613710	0.000060	0.097419	0.218387	40.8	0.000102	0.000102	0.000060	0.001121	0.000312	0.487290	0.00003
K-09-02 66.5-67.5	0.007032	0.401403	0.639935	0.019756	2.033710	0.000160	0.097419	0.247387	48.4	0.000102	0.000192	0.000060	0.000984	0.000017	0.606290	0.00002
K-09-02 66.5-67.5	0.006532	0.321403	0.587935	0.016156	1.353710	0.000070	0.097419	0.210387	40.2	0.000102	0.000942	0.000060	0.000936	0.000312	0.526290	0.00003
K-09-02 66.5-67.5	0.005432	0.282403	0.538935	0.017156	1.453710	0.000080	0.097419	0.213387	39.4	0.000102	0.000082	0.000110	0.000776	0.000382	0.490290	0.00001
K-09-02 66.5-67.5	0.006332	0.293403	0.551935	0.016256	1.433710	0.000080	0.097419	0.211387	42	0.000102	0.000462	0.000060	0.000826	0.000562	0.532290	0.00002
K-09-02 66.5-67.5	0.006132	0.321403	0.555935	0.021056	1.563710	0.000070	0.107419	0.215387	42.7	0.000102	0.000172	0.000060	0.018301	0.000442	0.596290	0.00004
K-09-02 66.5-67.5	0.007132	0.369403	0.563935	0.015256	1.563710	0.000070	0.127419	0.212387	43.4	0.000102	0.000792	0.000060	0.000655	0.000512	0.586290	0.00002
K-09-02 66.5-67.5	0.009132	0.319403	0.559935	0.014256	1.703710	0.000090	0.137419	0.220387	46.2	0.000102	0.002162	0.000060	0.000771	0.000372	0.596290	0.00006
K-09-02 66.5-67.5	0.007932	0.360403	0.546935	0.015556	1.733710	0.000090	0.127419	0.219387	47.9	0.000102	0.000622	0.000110	0.001071	0.000412	0.643290	0.00001
K-09-02 66.5-67.5	0.006732	0.357403	0.542935	0.010016	1.603710	0.000060	0.117419	0.222387	42.9	0.000102	0.000582	0.000060	0.000952	0.000432	0.584290	0.00001
K-09-02 66.5-67.5	0.006832	0.384403	0.502935	0.014956	1.443710	0.000060	0.097419	0.200387	42.4	0.000102	0.000142	0.000060	0.000604	0.000522	0.623290	0.000005
K-09-02 66.5-67.5	0.007032	0.268403	0.492935	0.015056	1.563710	0.000050	0.087419	0.187387	41.4	0.000102	0.000007	0.000060	0.000543	0.000372	0.673290	0.000005
K-09-02 66.5-67.5	0.006032	0.260403	0.466935	0.014056	1.433710	0.000080	0.087419	0.173387	36.9	0.000102	0.000232	0.001010	0.000766	0.000282	0.654290	0.000005
K-09-02 66.5-67.5	0.006632	0.486403	0.475935	0.015556	1.253710	0.000030	0.127419	0.194387	40.2	0.000102	0.000202	0.000110	0.002331	0.000342	0.701290	0.000005
K-09-02 66.5-67.5	0.006432	0.374403	0.467935	0.015556	1.473710	0.000070	0.087419	0.184387	41.1	0.000102	0.000252	0.000060	0.000608	0.000302	0.656290	0.000005
K-09-02 66.5-67.5	0.005732	0.305403	0.429935	0.015756	1.323710	0.000060	0.067419	0.180387	36.7	0.000102	0.000162	0.000060	0.000322	0.000142	0.629290	0.000005
K-09-02 66.5-67.5	0.005782	0.292403	0.426435	0.015556	1.273710	0.000060	0.092419	0.178387	34.9	0.000102	0.000537	0.000060	0.000476	0.000152	0.613290	0.0000125
K-09-02 66.5-67.5	0.005832	0.279403	0.422935	0.015356	1.223710	0.000060	0.117419	0.176387	33.1	0.000102	0.000912	0.000060	0.000476	0.000162	0.597290	0.00002
K-09-02 66.5-67.5	0.005432	0.454403	0.436935	0.016756	1.123710	0.000040	0.137419	0.195387	38	0.000102	0.000232	0.000060	0.000317	0.000192	0.647290	0.00001
K-09-02 66.5-67.5	0.005632	0.473403	0.429935	0.015956	1.133710	0.000070	0.097419	0.186387	41.1	0.000102	0.000132	0.000060	0.000285	0.000222	0.634290	0.000005
K-09-02 66.5-67.5	0.004432	0.398403	0.410935	0.017856	1.143710	0.000070	0.097419	0.188387	36.1	0.000102	0.000062	0.000110	0.000275	0.000182	0.583290	0.000005
K-09-02 66.5-67.5	0.004632	0.362403	0.402435	0.018056	1.153710	0.000090	0.102419	0.188387	37.5	0.000102	0.000227	0.000160	0.000393	0.000207	0.585290	0.0000125
K-09-02 66.5-67.5	0.004832	0.326403	0.393935	0.018256	1.163710	0.000110	0.107419	0.188387	38.9	0.000102	0.000392	0.000210	0.000393	0.000232	0.587290	0.00002
K-09-02 66.5-67.5	0.005032	0.347903	0.401435	0.016806	1.123710	0.000105	0.102419	0.184887	37.35	0.000102	0.000552	0.000210	0.000266	0.000172	0.583290	0.00002
K-09-02 66.5-67.5	0.005232	0.369403	0.408935	0.015356	1.083710	0.000100	0.097419	0.181387	35.8	0.000102	0.000712	0.000210	0.000266	0.000112	0.579290	0.00002
K-09-02 66.5-67.5	0.005332	0.376903	0.424435	0.017606	1.148710	0.000090	0.092419	0.189887	36.5	0.000102	0.000377	0.000210	0.000275	0.000127	0.689790	0.0000125
K-09-02 66.5-67.5	0.005432	0.384403	0.439935	0.019856	1.213710	0.000080	0.087419	0.198387	37.2	0.000102	0.000042	0.000210	0.000285	0.000142	0.800290	0.000005
K-09-02 66.5-67.5	0.005482	0.386403	0.414435	0.017906	1.148710	0.000100	0.087419	0.183387	35.65	0.000102	0.000032	0.000260	0.000264	0.000182	0.762790	0.000005
K-09-02 66.5-67.5	0.005532	0.388403	0.388935	0.015956	1.083710	0.000120	0.087419	0.168387	34.1	0.000102	0.000022	0.000310	0.000243	0.000222	0.725290	0.000005
K-09-02 66.5-67.5	0.005432	0.356403	0.385935	0.015406	1.073710	0.000110	0.092419	0.166887	33.45	0.000057	0.000127	0.000185	0.000278	0.000182	0.761290	0.000005
K-09-02 66.5-67.5	0.005332	0.324403	0.382935	0.014856	1.063710	0.000100	0.097419	0.165387	32.8	0.000012	0.000232	0.000060	0.000313	0.000142	0.797290	0.000005
K-09-02 66.5-67.5	0.005032	0.297403	0.378435	0.014506	0.958710	0.000100	0.087419	0.171387	34.5	0.000057	0.000202	0.000085	0.000245	0.000157	0.739290	0.000005
K-09-02 66.5-67.5	0.004732	0.270403	0.373935	0.014156	0.853710	0.000100	0.077419	0.177387	36.2	0.000102	0.000172	0.000110	0.000178	0.000172	0.681290	0.000005
K-09-02 66.5-67.5	0.004932	0.287903	0.382935	0.012306	0.963710	0.000125	0.087419	0.174387	37.1	0.000102	0.000127	0.000210	0.000292	0.000197	0.723790	0.0000075
K-09-02 66.5-67.5	0.005132	0.305403	0.391935	0.010456	1.073710	0.000150	0.097419	0.171387	38	0.000102	0.000082	0.000310	0.000406	0.000222	0.766290	0.00001
	0.005237	0.337803	0.396385	0.015301	1.058210	0.000108	0.089419	0.176687	35.55	0.000084	0.000142	0.000195	0.000278	0.000174	0.744740	0.0000065

Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time Sampled	Sample ID	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (as $CaCO_3$) ($CaCO_3$ mg/L)	Alkalinity, Total (as $CaCO_3$) ($CaCO_3$ mg/L)	Sulfate (SO_4) (mg/L)	Chloride (Cl) (mg/L)
HC22 KERR																										
K-09-03 140.5-141	22	0	4-Feb-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	380	164	294	547	6.98	#N/A	3.7	6.2	329	3.60
K-09-03 140.5-141	22	1	11-Feb-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	480	192	134	313	6.92	#N/A	3.1	6.0	147	1.20
K-09-03 140.5-141	22	2	18-Feb-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	490	180	100	210	7.05	#N/A	4.2	8.4	110	0.40
K-09-03 140.5-141	22	3	25-Feb-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	495	186	71	170	6.95	#N/A	4.1	7.0	75	0.10
K-09-03 140.5-141	22	4	4-Mar-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	495	188	56	165	6.74	#N/A	3.6	5.6	61	0.10
K-09-03 140.5-141	22	5	11-Mar-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	490	296	67	159	6.64	#N/A	4.2	5.9	63	0.10
K-09-03 140.5-141	22	6	18-Mar-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	505	294	67	155	6.86	#N/A	4.3	5.6	65	0.10
K-09-03 140.5-141	22	7	25-Mar-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	490	232	64	141	6.62	#N/A	4.6	4.7	59	0.10
K-09-03 140.5-141	22	8	1-Apr-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	480	251	62	140	6.69	#N/A	4.8	4.8	64	0.10
K-09-03 140.5-141	22	9	8-Apr-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	490	220	61	143	6.51	#N/A	4.0	4.1	53	0.10
K-09-03 140.5-141	22	10	15-Apr-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	500	221	59	140	6.52	#N/A	5.1	4.5	60	0.10
K-09-03 140.5-141	22	11	22-Apr-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	485	214	66	154	6.46	#N/A	7.6	4.3	59	0.10
K-09-03 140.5-141	22	12	29-Apr-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	500	229	54	148	6.42	#N/A	3.0	3.4	56	0.10
K-09-03 140.5-141	22	13	6-May-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	500	240	63	146	6.43	#N/A	6.2	4.7	59	0.10
K-09-03 140.5-141	22	14	13-May-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	283	67	150	6.30	#N/A	4.8	2.3	58	0.10
K-09-03 140.5-141	22	15	20-May-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	505	259	68	162	6.52	#N/A	5.5	3.9	60	0.10
K-09-03 140.5-141	22	16	27-May-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	505	290	65	143	6.27	#N/A	8.0	4.2	41	0.10
K-09-03 140.5-141	22	17	3-Jun-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	505	245	64	141	6.34	#N/A	5.2	3.0	48	0.10
K-09-03 140.5-141	22	18	10-Jun-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	500	249	64	147	6.71	#N/A	5.9	7.5	55	0.10
K-09-03 140.5-141	22	19	17-Jun-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	500	225	61	141	6.53	#N/A	5.7	3.8	47	0.10
K-09-03 140.5-141	22	20	24-Jun-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	500	363	66	146	6.51	#N/A	4.8	4.0	51	0.10
K-09-03 140.5-141	22	21	1-Jul-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	495	371	61	137	6.47	#N/A	4.1	3.1	50	0.10
K-09-03 140.5-141	22	22	8-Jul-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	490	257	54	138	6.12	#N/A	4.3	1.9	42	0.10
K-09-03 140.5-141	22	23	15-Jul-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	505	237	57	136	6.38	#N/A	5.1	3.4	46	0.10
K-09-03 140.5-141	22	24	22-Jul-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	495	281	52	128	6.32	#N/A	4.7	2.7	46	0.10
K-09-03 140.5-141	22	25	29-Jul-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	505	274	61	129	6.11	#N/A	5.6	3.0	51	0.10
K-09-03 140.5-141	22	26	5-Aug-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	490	367	55	128	6.13	#N/A	4.5	2.1	54	0.10
K-09-03 140.5-141	22	27	12-Aug-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	394	54	130	6.19	#N/A	5.7	2.7	49	0.10
K-09-03 140.5-141	22	28	19-Aug-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	485	368	52	121	6.06	#N/A	6.4	3.0	46	0.50
K-09-03 140.5-141	22	29	26-Aug-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	470	350	51	123	5.88	#N/A	4.1	1.7	50	0.10
K-09-03 140.5-141	22	30	2-Sep-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	460	374	54	117	6.07	#N/A	5.9	2.4	65	0.10
K-09-03 140.5-141	22	31	9-Sep-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	465	306	53	130	5.71	#N/A	6.5	2.1	55	0.10
K-09-03 140.5-141	22	32	16-Sep-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	490	272	49	116	5.68	#N/A	4.7	1.4	55	0.10
K-09-03 140.5-141	22	33	23-Sep-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	500	235	53	111	5.81	#N/A	4.7	1.7	63	0.10
K-09-03 140.5-141	22	34	30-Sep-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	485	274	56	103	5.69	#N/A	4.9	1.8	47	0.10
K-09-03 140.5-141	22	35	7-Oct-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	500	226	55	138	5.87	#N/A	5.4	2.2	61	0.10
K-09-03 140.5-141	22	36	14-Oct-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	495	204	62	135	5.98	#N/A	5.0	2.2	57	0.10
K-09-03 140.5-141	22	37	21-Oct-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	505	278	56	137	6.00	#N/A	5.3	2.8	60	0.50
K-09-03 140.5-141	22	38	28-Oct-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	490	259	50	126	5.89	#N/A	5.0	2.0	57	0.10
K-09-03 140.5-141	22	39	4-Nov-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	495	337	51	137	5.78	#N/A	4.6	1.7	58	0.10
K-09-03 140.5-141	22	40	11-Nov-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	495	282	54	121	6.18	#N/A	4.6	2.4	47	0.10
K-09-03 140.5-141	22	41	18-Nov-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	490	320	54	103	6.16	#N/A	5.2	2.5	56	0.10
K-09-03 140.5-141	22	42	25-Nov-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	505	171	47	115	5.97	#N/A	4.8	2.0	46	0.50
K-09-03 140.5-141	22	43	2-Dec-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	490	213	57	116	5.83	#N/A	4.9	1.6	42	0.10
K-09-03 140.5-141	22	44	9-Dec-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	500	241	50	32	6.79	#N/A	4.6	10.9	43	0.10
K-09-03 140.5-141	22	45	16-Dec-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	505	229	54	114	5.95	#N/A	5.8	2.6	51	0.10
K-09-03 140.5-141	22	46	23-Dec-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	500	322	49	110	6.04	#N/A	6.6	3.2	52	0.10
K-09-03 140.5-141	22	47	30-Dec-10	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	495	275	46	97	5.95	#N/A	6.9	2.6	47	0.10
K-09-03 140.5-141	22	48	6-Jan-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	490	345	46	85	5.95	#N/A	6.3	2.4	46	0.10
K-09-03 140.5-141	22	49	13-Jan-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	505	266	45	90	5.92	#N/A	5.7	2.3	45	0.10
K-09-03 140.5-141	22	50	20-Jan-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	500	264	46	97	5.84	#N/A	5.7	2.4	45	0.10
K-09-03 140.5-141	22	51	27-Jan-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	450	251	47	88	5.79	#N/A	5.6	2.5	45	0.10
K-09-03 140.5-141	22	52	3-Feb-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	415	288	46	87	5.89	#N/A	4.9	2.0	47	0.10
K-09-03 140.5-141	22	53	10-Feb-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	395	301	45	90	5.79	#N/A	4.2	1.5	48	0.10
K-09-03 140.5-141	22	54	17-Feb-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	405	273	36	73	5.74	#N/A	4.6	1.8	39	0.10
K-09-03 140.5-141	22	55	24-Feb-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	490	233	26	71	6.09	#N/A	5.1	2.2	29	0.10
K-09-03 140.5-141	22	56	3-Mar-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	410	246	27	85	5.95	#N/A	4.8	1.9	30	0.10
K-09-03 140.5-141	22	57	10-Mar-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	415	220	28	73	5.93	#N/A	4.5	1.7	30	0.10
K-09-03 140.5-141	22	58	17-Mar-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	420	231	28	69	5.51	#N/A	4.9	2.0	26	0.10
K-09-03 140.5-141	22	59	24-Mar-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	420	226	27	138	5.87	#N/A	5.4	2.2	21	0.10
K-09-03 140.5-141	22	60	31-Mar-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	415	252	29	71	5.74	#N/A	5.2	2.2	23	0.10
K-09-03 140.5-141	22	61	7-Apr-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	465	175	30	74	5.73	#N/A	5.1	2.3	24	0.10
K-09-03 140.5-141	22	62	14-Apr-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	460	298	33	81	7.28	#N/A	4.1	2.2	28	0.10
K-09-03 140.5-141	22	63	21-Apr-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	455	240	35	92	6.19	#N/A	3.1	2.2	31	0.10
K-09-03 140.5-141	22	64	28-Apr-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	495	378	37	94	5.91	#N/A	3.7	2.1	35	0.10

Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	(Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
HC22 KERR																				
K-09-03 140.5-141	0.16	0.0152	0.0029	0.0016	0.0309	0.00001	0.000005	0.027	0.000204	102	0.00025	0.00174	0.0103	0.005	0.0004	0.003	9.61	1.28	0.000005	0.00393
K-09-03 140.5-141	0.12	0.0108	0.0019	0.0012	0.038	0.00001	0.000005	0.022	0.000102	45	0.00025	0.000939	0.0081	0.005	0.00005	0.002	5.1	0.738	0.000005	0.00377
K-09-03 140.5-141	0.10	0.0068	0.0019	0.0008	0.0303	0.00001	0.000005	0.0209	0.000077	33	0.00025	0.000796	0.0102	0.005	0.00004	0.002	4.19	0.692	0.000005	0.00226
K-09-03 140.5-141	0.08	0.0044	0.0017	0.0006	0.0292	0.00001	0.000005	0.0148	0.000071	23	0.00025	0.00069	0.0137	0.005	0.00005	0.001	3.19	0.564	0.000005	0.00156
K-09-03 140.5-141	0.07	0.0027	0.0016	0.0006	0.0325	0.00001	0.000005	0.015	0.00009	18	0.00025	0.000774	0.0201	0.005	0.00008	0.002	2.75	0.519	0.000005	0.00124
K-09-03 140.5-141	0.06	0.0025	0.0015	0.0005	0.0312	0.00001	0.000005	0.013	0.0001	21	0.00025	0.000863	0.0255	0.01	0.00005	0.002	3.53	0.702	0.000005	0.00103
K-09-03 140.5-141	0.06	0.0088	0.0012	0.0004	0.0265	0.00001	0.000005	0.01	0.000106	21	0.00025	0.000747	0.0704	0.005	0.00052	0.002	3.83	0.774	0.000005	0.00081
K-09-03 140.5-141	0.03	0.0026	0.0013	0.0003	0.0219	0.00001	0.000005	0.008	0.000047	19	0.0011	0.000917	0.0313	0.005	0.00028	0.0005	3.85	0.779	0.000005	0.00079
K-09-03 140.5-141	0.03	0.0039	0.001	0.0002	0.0262	0.00001	0.000005	0.007	0.000105	18	0.0006	0.00102	0.0427	0.005	0.0001	0.0005	3.94	0.804	0.000005	0.00067
K-09-03 140.5-141	0.03	0.0013	0.001	0.0003	0.0256	0.00001	0.000005	0.007	0.000106	18	0.00025	0.001028	0.0725	0.005	0.00043	0.001	4.06	0.839	0.000005	0.00064
K-09-03 140.5-141	0.03	0.0011	0.0008	0.0003	0.0208	0.00001	0.000005	0.006	0.000111	17	0.00025	0.00098	0.0629	0.005	0.0002	0.0005	4.11	0.839	0.000005	0.00068
K-09-03 140.5-141	0.03	0.0019	0.0006	0.0004	0.0187	0.00001	0.000005	0.005	0.000116	19	0.00025	0.00123	0.0703	0.005	0.0002	0.0005	4.74	0.95	0.000005	0.00056
K-09-03 140.5-141	0.03	0.0023	0.0006	0.0002	0.0225	0.00001	0.000005	0.005	0.000127	15	0.00025	0.0013	0.0888	0.01	0.00009	0.0005	4.07	0.865	0.000005	0.00037
K-09-03 140.5-141	0.03	0.0067	0.0006	0.0002	0.0177	0.00001	0.000005	0.005	0.000151	17	0.0006	0.00141	0.119	0.02	0.00197	0.0005	4.92	1.05	0.000005	0.00034
K-09-03 140.5-141	0.03	0.0011	0.0005	0.0001	0.0148	0.00001	0.000005	0.0043	0.000128	18	0.0007	0.00133	0.104	0.003	0.00015	0.0005	5.23	1.01	0.000005	0.00046
K-09-03 140.5-141	0.03	0.001	0.0005	0.0002	0.0156	0.00001	0.000005	0.0047	0.000146	18	0.00025	0.00169	0.112	0.002	0.00074	0.0005	5.53	1.13	0.000005	0.00031
K-09-03 140.5-141	0.03	0.0009	0.0004	0.0002	0.0141	0.00001	0.000005	0.0042	0.000138	17	0.0005	0.00157	0.129	0.032	0.00105	0.0005	5.4	1.12	0.000005	0.00057
K-09-03 140.5-141	0.03	0.0009	0.0004	0.0003	0.0143	0.00001	0.000005	0.0041	0.000138	17	0.00025	0.00159	0.133	0.035	0.00019	0.0005	5.29	1.06	0.000005	0.00078
K-09-03 140.5-141	0.03	0.0009	0.0003	0.0001	0.013	0.00001	0.000005	0.0037	0.00015	17	0.00025	0.00184	0.159	0.009	0.00028	0.0005	5.54	1.14	0.000005	0.00061
K-09-03 140.5-141	0.03	0.0015	0.0003	0.0001	0.0122	0.00002	0.000005	0.0035	0.000187	16	0.00025	0.00181	0.158	0.01	0.00054	0.0005	5.39	1.1	0.000005	0.00169
K-09-03 140.5-141	0.03	0.0012	0.0006	0.0001	0.0137	0.00002	0.000005	0.0047	0.000166	17	0.00025	0.00198	0.204	0.013	0.00023	0.0005	5.93	1.2	0.000005	0.00043
K-09-03 140.5-141	0.03	0.0015	0.0004	0.0002	0.0112	0.00002	0.000005	0.0031	0.000151	15	0.0005	0.0019	0.19	0.017	0.00038	0.0005	5.47	1.12	0.000005	0.00076
K-09-03 140.5-141	0.03	0.0011	0.0003	0.0001	0.0154	0.00003	0.000005	0.0036	0.000213	13	0.0009	0.00205	0.191	0.052	0.00035	0.001	5.44	1.08	0.000005	0.00048
K-09-03 140.5-141	0.03	0.0009	0.0001	0.0001	0.0129	0.00002	0.000005	0.0029	0.000172	14	0.00025	0.00223	0.222	0.136	0.00032	0.0005	5.31	1.06	0.000005	0.00054
K-09-03 140.5-141	0.03	0.0009	0.0001	0.0003	0.0112	0.00002	0.000005	0.0033	0.000155	13	0.0005	0.00207	0.228	0.113	0.00038	0.0005	4.95	0.981	0.000005	0.0006
K-09-03 140.5-141	0.03	0.0006	0.0001	0.0001	0.0135	0.00001	0.000005	0.0029	0.000156	15	0.00025	0.00213	0.209	0.088	0.00034	0.0005	5.67	1.03	0.000005	0.00081
K-09-03 140.5-141	0.03	0.0003	0.0002	0.0001	0.0118	0.00001	0.000005	0.0023	0.000161	14	0.00025	0.00199	0.216	0.001	0.00044	0.0005	5.21	1.03	0.00001	0.00048
K-09-03 140.5-141	0.03	0.0014	0.0002	0.0001	0.0145	0.00001	0.000005	0.0028	0.000226	14	0.0007	0.00199	0.252	0.281	0.00068	0.0005	4.99	0.958	0.000005	0.00055
K-09-03 140.5-141	0.03	0.0024	0.0001	0.0001	0.0113	0.00002	0.000005	0.0027	0.000148	13	0.00025	0.00201	0.247	0.307	0.00049	0.0005	5.05	0.955	0.000005	0.00058
K-09-03 140.5-141	0.03	0.0015	0.0001	0.0001	0.0139	0.00002	0.000005	0.0021	0.000144	13	0.0007	0.00187	0.264	0.282	0.00033	0.0005	4.82	0.874	0.00001	0.00038
K-09-03 140.5-141	0.03	0.001	0.0001	0.0001	0.0146	0.00002	0.000005	0.0024	0.000155	13	0.00025	0.00185	0.245	0.189	0.00032	0.0005	5.12	0.928	0.000005	0.00068
K-09-03 140.5-141	0.03	0.0006	0.0001	0.0001	0.0133	0.00002	0.000005	0.0028	0.000183	13	0.0005	0.002	0.281	0.201	0.00281	0.0005	5.12	0.93	0.000005	0.00065
K-09-03 140.5-141	0.03	0.0005	0.0003	0.0001	0.0111	0.00002	0.000005	0.0021	0.000156	12	0.00025	0.00214	0.286	0.013	0.00031	0.0005	4.78	0.947	0.000005	0.00059
K-09-03 140.5-141	0.03	0.0073	0.0002	0.0001	0.012	0.00002	0.000005	0.0028	0.000227	13	0.00025	0.00217	0.254	0.018	0.00082	0.0005	5.27	0.993	0.000005	0.00063
K-09-03 140.5-141	0.03	0.0007	0.0002	0.0001	0.0131	0.00002	0.000005	0.0035	0.000175	13	0.00025	0.00229	0.339	0.003	0.00041	0.0005	5.6	1.04	0.000005	0.00082
K-09-03 140.5-141	0.03	0.0013	0.0003	0.0001	0.0113	0.00003	0.000005	0.0035	0.000189	13	0.00025	0.00245	0.309	0.004	0.00047	0.0005	5.49	1.02	0.000005	0.00108
K-09-03 140.5-141	0.03	0.0009	0.0003	0.0001	0.0127	0.00002	0.000005	0.0033	0.000191	14	0.00025	0.00249	0.347	0.121	0.00208	0.0005	6.29	1.15	0.000005	0.001
K-09-03 140.5-141	0.03	0.0006	0.0001	0.0001	0.0127	0.00001	0.000005	0.0037	0.000224	13	0.00025	0.00243	0.334	0.012	0.00032	0.0005	5.56	1.02	0.000005	0.00084
K-09-03 140.5-141	0.03	0.0009	0.0001	0.0001	0.0125	0.00001	0.000005	0.0026	0.000176	12	0.00025	0.00248	0.349	0.005	0.00035	0.0005	5.01	0.918	0.000005	0.00098
K-09-03 140.5-141	0.03	0.0006	0.0001	0.0001	0.0115	0.00001	0.000005	0.0031	0.000186	12	0.00025	0.00222	0.343	0.01	0.0005	0.0005	5.19	0.913	0.000005	0.00076
K-09-03 140.5-141	0.03	0.0014	0.0001	0.0001	0.0103	0.00001	0.000005	0.0021	0.00016	13	0.0006	0.00252	0.365	0.006	0.00091	0.0005	5.48	0.956	0.00002	0.00053
K-09-03 140.5-141	0.03	0.0007	0.0001	0.0001	0.0103	0.00003	0.000005	0.0032	0.000178	13	0.00025	0.00245	0.357	0.006	0.00035	0.0005	5.45	0.957	0.000005	0.00053
K-09-03 140.5-141	0.03	0.0007	0.0001	0.0003	0.00913	0.00003	0.000005	0.0021	0.00017	11	0.0006	0.00227	0.401	0.004	0.00038	0.0005	4.73	0.863	0.00071	0.00054
K-09-03 140.5-141	0.03	0.0011	0.0003	0.0001	0.0105	0.00003	0.000005	0.0023	0.00017	14	0.0007	0.00235	0.367	0.041	0.00153	0.0005	5.68	1.018	0.000005	0.00028
K-09-03 140.5-141	0.03	0.0004	0.0001	0.0001	0.0105	0.00002	0.000005	0.0022	0.000202	12	0.0007	0.00276	0.388	0.094	0.00138	0.0005	5.08	0.891	0.000005	0.00056
K-09-03 140.5-141	0.03	0.0004	0.0001	0.0001	0.0107	0.00002	0.000005	0.0026	0.000131	13	0.00025	0.00214	0.391	0.262	0.00036	0.0005	5.54	0.954	0.000005	0.0004
K-09-03 140.5-141	0.03	0.0012	0.0001	0.0001	0.0111	0.00001	0.000005	0.0029	0.000179	11	0.00025	0.00219	0.384	0.015	0.00103	0.0005	5.01	0.894	0.000005	0.0005
K-09-03 140.5-141	0.03	0.0014	0.0001	0.0001	0.0111	0.00002	0.000005	0.0022	0.000172	11	0.00025	0.0023	0.389	0.014	0.00078	0.0005	4.8	0.827	0.000005	0.0006
K-09-03 140.5-141	0.03	0.001	0.0002	0.0001	0.01095	0.000015	0.000005	0.00205	0.0001695	11	0.00025	0.00216	0.391	0.037	0.00055	0.0005	4.7	0.8125	0.000005	0.00034
K-09-03 140.5-141	0.03	0.0006	0.0003	0.0001	0.0108	0.00001	0.000005	0.0019	0.000167	10	0.00025	0.00202	0.393	0.06	0.00032	0.0005	4.6	0.798	0.000005	0.00008
K-09-03 140.5-141	0.03	0.00075	0.0002	0.0001	0.01095	0.00002	0.000005	0.00185	0.000151	11	0.00025	0.001865	0.393	0.032	0.00035	0.0005	4.595	0.772	0.000005	0.0002
K-09-03 140.5-141	0.03	0.0009	0.0001	0.0001	0.0111	0.00003	0.000005	0.0018	0.000135	11	0.00025	0.00171	0.393	0.004	0.00038	0.0005	4.59	0.746	0.000005	0.00032
K-09-03 140.5-141	0.05	0.00065	0.0001	0.0001	0.01455	0.00002	0.000005	0.00215	0.000138	11	0.00025	0.001605	0.413	0.0065	0.000615	0.0005	4.635	0.686	0.0000075	0.00059
K-09-03 140.5-141	0.06	0.0004	0.0001	0.0001	0.018	0.00001	0.000005	0.0025	0.000141	10	0.00025	0.0015	0.433	0.009	0.00085	0.0005	4.68	0.626	0.00001	0.00086
K-09-03 140.5-141	0.05	0.00095	0.0001	0.0001	0.01585	0.00001	0.000005	0.00275	0.000158	8	0.00025	0.00134	0.3515	0.009	0.000745	0.0005	3.715	0.5565	0.00001	0.00066
K-09-03 140.5-141	0.03	0.0015	0.0001	0.0001	0.0137	0.00001	0.000005	0.003	0.000175	6	0.00025	0.00118	0.27	0.009	0.00064	0.0005	2.75	0.487	0.00001	0.00046
K-09-03 140.5-141	0.03	0.00095	0.0001	0.0001	0.01675	0.00002	0.000005	0.0022	0.000263	6	0.00025	0.0009965	0.274	0.019	0.00091	0.0005	2.805	0.4255	0.00002	0.0005
K-09-03 140.5-141	0.03	0.0004	0.0001	0.0001	0.0198	0.00003	0.000005	0.0014	0.000351	7	0.00025	0.000813	0.278	0.029	0.00118	0.0005	2.86	0.364	0.00003	0.00054
K-09-03 140.5-141	0.03	0.00045	0.0001	0.0001	0.0206	0.00003	0.000005	0.0017	0.0002145	7	0.00025	0.000889	0.3275	0.0195	0.00076	0.0005	2.65	0.372	0.0000175	0.00046
K-09-03 140.5-141	0.03	0.0005	0.0001	0.0001	0.0214	0.00003	0.000005	0.002	0.000078	7	0.00025	0.000965	0.377	0.01	0.00034	0.0005	2.44	0.38	0.000005	0.00038
K-09-03 140.5-141	0.03	0.18725	0.0002	0.00075	0.0387	0.000045	0.000005	0.0018	0.0000785	7	0.000425	0.0010975	0.529	0.3995	0.003795	0.0005	2.83	0.4305	0.0000475	0.00059
K-09-03 140.5-141	0.03	0.374	0.0003	0.0014	0.056	0.00006	0.000005	0.0016	0.000079	7	0.0006	0.00123	0.681	0.789	0.00725	0.0005	3.22	0.481	0.00009	0.0008
K-09-03 140.5-141	0.03	0.18765	0.0002	0.00075	0.034	0.000045	0.000005	0.0019	0.000082	7	0.000425	0.001295	0.551	0.395	0.003795	0.0005	3.46	0.504	0.000055	0.001395
K-09-03 140.5-141	0.03	0.0013	0.0001	0.0001	0.012	0.00003	0.000005	0.0022	0.000085	8	0.00025	0.00136	0.421	0.001	0.00034	0.0005	3.7	0.527	0.00002	0.00199
K-09-03 140.5-141	0.03	0.001	0.0001	0.0001	0.01125	0.00002	0.000005	0.0019	0.000096	8	0.00025	0.001515	0.415	0.001	0.000345	0.0005	3.91	0.575	0.0000125	0.001495

Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S) Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
HC22 KERR																
K-09-03 140.5-141	0.0017	0.005	14.6	0.0393	0.87	0.000005	5.76	0.995	94.2	0.0002	0.00019	0.00005	0.00002	0.00008	0.005	0.00001
K-09-03 140.5-141	0.0006	0.005	7.5	0.016	1.02	0.000005	2.09	0.502	46.5	0.0001	0.00021	0.0001	0.000045	0.00009	0.002	0.000005
K-09-03 140.5-141	0.0003	0.005	5.17	0.01	1.05	0.000005	1.09	0.38	33.3	0.0001	0.00002	0.00005	0.000033	0.00006	0.001	0.000005
K-09-03 140.5-141	0.0003	0.005	3.42	0.00688	0.86	0.000005	0.61	0.27	23.2	0.0001	0.0001	0.00005	0.00002	0.00004	0.001	0.000005
K-09-03 140.5-141	0.0004	0.005	2.29	0.00573	0.66	0.000005	0.3	0.211	18	0.0001	0.00019	0.00005	0.000013	0.00005	0.0005	0.000005
K-09-03 140.5-141	0.0001	0.005	2.32	0.00516	0.8	0.000005	0.24	0.245	22.2	0.0001	0.00013	0.00005	0.000014	0.000015	0.002	0.00001
K-09-03 140.5-141	0.0002	0.005	1.9	0.00375	0.76	0.000005	0.18	0.239	22.4	0.0001	0.00006	0.00005	0.000018	0.000015	0.003	0.00002
K-09-03 140.5-141	0.0003	0.005	1.64	0.00359	0.72	0.000005	0.2	0.22	19.9	0.0001	0.00017	0.00005	0.000015	0.000015	0.003	0.000005
K-09-03 140.5-141	0.0003	0.005	1.34	0.0034	0.63	0.000005	0.18	0.206	21.4	0.0001	0.00019	0.00005	0.000016	0.000015	0.003	0.000005
K-09-03 140.5-141	0.00005	0.005	1.16	0.00302	0.58	0.000005	0.15	0.197	19.7	0.0001	0.00019	0.00005	0.000017	0.000015	0.003	0.000005
K-09-03 140.5-141	0.0003	0.005	1.14	0.00326	0.49	0.000005	0.17	0.187	20	0.0001	0.00021	0.00005	0.000034	0.000015	0.003	0.00001
K-09-03 140.5-141	0.0003	0.005	1.04	0.00325	0.55	0.000005	0.13	0.193	20.7	0.0001	0.00032	0.00005	0.000022	0.000015	0.004	0.00004
K-09-03 140.5-141	0.0002	0.005	0.93	0.00414	0.56	0.000005	0.09	0.156	17.7	0.0001	0.00018	0.00005	0.000012	0.000015	0.002	0.000005
K-09-03 140.5-141	0.0004	0.02	0.88	0.00435	0.55	0.00003	0.09	0.178	20.9	0.0001	0.00037	0.00005	0.000012	0.000015	0.004	0.000005
K-09-03 140.5-141	0.0003	0.0045	0.82	0.00355	0.5	0.000005	0.09	0.174	21.4	0.0001	0.00014	0.00005	0.000004	0.000015	0.002	0.000005
K-09-03 140.5-141	0.0001	0.0045	0.709	0.00448	0.48	0.000005	0.09	0.172	23.6	0.0001	0.00017	0.00005	0.000006	0.000015	0.003	0.000005
K-09-03 140.5-141	0.0001	0.0045	0.664	0.00415	0.47	0.00001	0.08	0.162	22.3	0.0001	0.00014	0.00005	0.000004	0.000015	0.004	0.000005
K-09-03 140.5-141	0.0003	0.012	0.624	0.00379	0.53	0.000005	1.03	0.15	22.5	0.0001	0.00021	0.00005	0.0000005	0.000015	0.003	0.00002
K-09-03 140.5-141	0.0004	0.021	0.563	0.0041	0.44	0.000005	0.1	0.148	21.1	0.0001	0.00024	0.00005	0.000007	0.000015	0.003	0.000005
K-09-03 140.5-141	0.0003	0.0045	0.518	0.00456	0.42	0.000005	0.1	0.138	20.3	0.0001	0.00009	0.00005	0.000007	0.000015	0.003	0.000005
K-09-03 140.5-141	0.0004	0.0045	0.582	0.00427	0.49	0.000005	0.1	0.147	21.8	0.0001	0.00012	0.0002	0.000012	0.000015	0.003	0.00001
K-09-03 140.5-141	0.0004	0.0045	0.45	0.00411	0.4	0.000005	0.01	0.13	20.1	0.0001	0.00015	0.00005	0.000007	0.000015	0.003	0.000005
K-09-03 140.5-141	0.0005	0.03	0.466	0.00378	0.4	0.00001	0.09	0.133	20	0.0001	0.00023	0.00005	0.000016	0.000015	0.003	0.00002
K-09-03 140.5-141	0.0004	0.0045	0.431	0.0044	0.42	0.000005	0.06	0.129	17.7	0.0001	0.00011	0.00005	0.000024	0.000015	0.003	0.000005
K-09-03 140.5-141	0.0003	0.987	0.407	0.00375	0.39	0.000005	0.08	0.0862	16.2	0.0001	0.00052	0.00005	0.000008	0.000015	0.003	0.000005
K-09-03 140.5-141	0.0003	0.02	0.415	0.00453	0.42	0.000005	0.09	0.123	19.5	0.0001	0.00001	0.00005	0.000011	0.000015	0.003	0.000005
K-09-03 140.5-141	0.00005	0.0045	0.381	0.00381	0.39	0.000005	0.06	0.111	17.4	0.0001	0.00012	0.00005	0.000013	0.000015	0.003	0.000005
K-09-03 140.5-141	0.0003	0.0045	0.377	0.00394	0.4	0.000005	0.07	0.113	19.4	0.0001	0.00006	0.00005	0.000006	0.000015	0.005	0.000005
K-09-03 140.5-141	0.0002	0.0045	0.326	0.00395	0.37	0.000005	0.06	0.103	19.1	0.0001	0.00026	0.00005	0.000003	0.00003	0.003	0.000005
K-09-03 140.5-141	0.0003	0.0045	0.345	0.00344	0.34	0.000005	0.05	0.104	18.6	0.0001	0.00034	0.00005	0.000003	0.000015	0.004	0.000005
K-09-03 140.5-141	0.0003	0.0045	0.332	0.00387	0.37	0.000005	0.06	0.106	19.4	0.0001	0.00007	0.00005	0.000006	0.000015	0.003	0.000005
K-09-03 140.5-141	0.0004	0.0045	0.322	0.0033	0.37	0.000005	0.05	0.1	18.7	0.0001	0.00002	0.00005	0.000006	0.00004	0.004	0.000005
K-09-03 140.5-141	0.0004	0.01	0.295	0.00383	0.38	0.000005	0.06	0.0911	17.5	0.0001	0.00013	0.00005	0.000005	0.000015	0.003	0.000005
K-09-03 140.5-141	0.0004	0.0045	0.312	0.00393	0.38	0.000005	0.08	0.0946	18.2	0.0001	0.00068	0.00005	0.000001	0.000015	0.005	0.000005
K-09-03 140.5-141	0.0005	0.0045	0.324	0.00387	0.4	0.000005	0.08	0.098	19.9	0.0001	0.00068	0.00005	0.000005	0.000015	0.004	0.000005
K-09-03 140.5-141	0.0011	0.02	0.299	0.0039	0.4	0.000005	0.09	0.0968	19.3	0.0001	0.00075	0.00005	0.000032	0.000015	0.004	0.000005
K-09-03 140.5-141	0.0009	0.016	0.308	0.00395	0.43	0.000005	0.51	0.107	18.9	0.0001	0.0005	0.00005	0.0000005	0.000015	0.004	0.000005
K-09-03 140.5-141	0.0004	0.027	0.28	0.00409	0.41	0.000005	0.06	0.1	18.9	0.0001	0.00008	0.00005	0.000003	0.000015	0.005	0.000005
K-09-03 140.5-141	0.0009	0.0045	0.258	0.00368	0.36	0.000005	0.05	0.088	17.8	0.0001	0.00001	0.00005	0.000004	0.000015	0.005	0.000005
K-09-03 140.5-141	0.0011	0.0045	0.248	0.004	0.37	0.000005	0.05	0.0893	16.4	0.0001	0.00005	0.0004	0.000003	0.000015	0.005	0.000005
K-09-03 140.5-141	0.0004	0.03	0.243	0.00376	0.34	0.000005	0.09	0.0911	16.4	0.0001	0.00068	0.00005	0.000012	0.00004	0.006	0.000005
K-09-03 140.5-141	0.0007	0.042	0.245	0.00284	0.36	0.000005	0.06	0.0885	17.1	0.0001	0.00013	0.00005	0.000006	0.000015	0.005	0.000005
K-09-03 140.5-141	0.0002	0.0045	0.201	0.00335	0.3	0.000005	0.03	0.0779	14.8	0.0001	0.00019	0.00005	0.000011	0.000015	0.006	0.00001
K-09-03 140.5-141	0.0004	0.025	0.22	0.00334	0.33	0.000005	0.04	0.0839	16	0.0001	0.00008	0.00005	0.000005	0.000015	0.014	0.000005
K-09-03 140.5-141	0.0006	0.0045	0.219	0.0034	0.32	0.000005	0.07	0.0835	14.8	0.0001	0.00012	0.00005	0.000025	0.00007	0.005	0.000005
K-09-03 140.5-141	0.0004	0.019	0.219	0.00324	0.35	0.000005	0.08	0.0906	16.6	0.0001	0.00041	0.00005	0.000005	0.000015	0.004	0.000005
K-09-03 140.5-141	0.0005	0.04	0.227	0.00277	0.38	0.000005	0.06	0.083	17.6	0.0001	0.00008	0.00005	0.000064	0.000015	0.004	0.000005
K-09-03 140.5-141	0.0006	0.026	0.191	0.00282	0.32	0.000005	0.05	0.0764	15	0.0001	0.00011	0.00005	0.000021	0.00004	0.006	0.000005
K-09-03 140.5-141	0.00045	0.021	0.1825	0.002985	0.32	0.000005	0.045	0.07575	15.55	0.0001	0.000115	0.00005	0.000043	0.0000275	0.0055	0.000005
K-09-03 140.5-141	0.0003	0.016	0.174	0.00315	0.32	0.000005	0.04	0.0751	16.1	0.0001	0.00012	0.00005	0.000043	0.000015	0.005	0.000005
K-09-03 140.5-141	0.00045	0.0285	0.187	0.00294	0.3	0.000005	0.055	0.0777	15.8	0.0001	0.00033	0.00005	0.000019	0.000015	0.0045	0.000005
K-09-03 140.5-141	0.0006	0.041	0.2	0.00273	0.28	0.000005	0.07	0.0803	15.5	0.0001	0.00054	0.00005	0.000019	0.000015	0.004	0.000005
K-09-03 140.5-141	0.00065	0.0405	0.3055	0.003195	0.36	0.000005	0.075	0.07975	15.05	0.0001	0.000315	0.00005	0.0000335	0.000015	0.003	0.000005
K-09-03 140.5-141	0.0007	0.04	0.411	0.00366	0.44	0.000005	0.08	0.0792	14.6	0.0001	0.00009	0.00005	0.000048	0.000015	0.002	0.000005
K-09-03 140.5-141	0.00055	0.0325	0.346	0.00297	0.375	0.000005	0.07	0.0636	11.475	0.0001	0.0000475	0.00005	0.000026	0.0000325	0.0035	0.000005
K-09-03 140.5-141	0.0004	0.025	0.281	0.00228	0.31	0.000005	0.06	0.048	8.35	0.0001	0.000005	0.00005	0.000004	0.00005	0.005	0.000005
K-09-03 140.5-141	0.0004	0.01475	0.329	0.002355	0.315	0.000005	0.07	0.0517	8.525	0.000055	0.0001075	0.00005	0.000005	0.0000325	0.0045	0.000005
K-09-03 140.5-141	0.0004	0.0045	0.377	0.00243	0.32	0.000005	0.08	0.0554	8.7	0.00001	0.00021	0.00005	0.000006	0.000015	0.004	0.000005
K-09-03 140.5-141	0.00035	0.00925	0.344	0.00242	0.29	0.000005	0.065	0.0566	9	0.000055	0.000225	0.00005	0.0000055	0.000015	0.0035	0.000005
K-09-03 140.5-141	0.0003	0.014	0.311	0.00241	0.26	0.000005	0.05	0.0578	9.3	0.0001	0.00024	0.00005	0.000005	0.000015	0.003	0.000005
K-09-03 140.5-141	0.0003	0.113	0.3645	0.002515	0.435	0.0000425	0.055	0.05635	9.585	0.0001	0.00016	0.000575	0.0000165	0.0004025	0.0045	0.000005
K-09-03 140.5-141	0.0003	0.212	0.418	0.00262	0.61	0.00008	0.06	0.0549	9.87	0.0001	0.00008	0.0011	0.000028	0.00079	0.006	0.000005
K-09-03 140.5-141	0.00035	0.10825	0.342	0.00318	0.42	0.00012	0.07	0.0574	10.935	0.0001	0.000185	0.000575	0.0000315	0.00041	0.005	0.0000125
K-09-03 140.5-141	0.0004	0.0045	0.266	0.00374	0.23	0.00016	0.08	0.0599	12	0.0001	0.00029	0.00005	0.000035	0.00003	0.004	0.00002
K-09-03 140.5-141	0.00025	0.01325	0.268	0.00206	0.23	0.000125	0.065	0.06035	12.45	0.0001	0.000195	0.000225	0.00001775	0.0000225	0.0035	0.0000125

Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time Sampled	Sample ID	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (as $CaCO_3$) ($CaCO_3$ mg/L)	Alkalinity, Total (as $CaCO_3$) ($CaCO_3$ mg/L)	Sulfate (SO_4) (mg/L)	Chloride (Cl) (mg/L)
K-09-03 140.5-141	22	65	5-May-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	470	301	39	100	6.13	#N/A	4.3	2.1	39	0.10
K-09-03 140.5-141	22	66	12-May-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	380	43	99	6.39	#N/A	4.7	2.8	42	0.10
K-09-03 140.5-141	22	67	19-May-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	480	287	48	119	6.98	#N/A	5.1	3.5	44	0.10
K-09-03 140.5-141	22	68	26-May-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	327	44	111	6.45	#N/A	5.3	3.4	43	0.10
K-09-03 140.5-141	22	69	2-Jun-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	480	320	40	109	6.73	#N/A	5.6	3.3	41	0.10
K-09-03 140.5-141	22	70	9-Jun-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	368	42	109	6.17	#N/A	5.6	2.9	41	0.10
K-09-03 140.5-141	22	71	16-Jun-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	359	45	112	6.59	#N/A	5.7	2.5	40	0.10
K-09-03 140.5-141	22	72	23-Jun-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	349	48	120	6.35	#N/A	5.4	2.5	47	0.10
K-09-03 140.5-141	22	73	30-Jun-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	354	52	127	6.51	#N/A	5.0	2.4	54	0.10
K-09-03 140.5-141	22	74	7-Jul-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	480	339	53	126	6.43	#N/A	5.3	2.6	51	0.10
K-09-03 140.5-141	22	75	14-Jul-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	490	321	54	124	6.65	#N/A	5.5	2.8	48	0.10
K-09-03 140.5-141	22	76	21-Jul-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	313	48	115	6.54	#N/A	5.2	2.6	48	0.10
K-09-03 140.5-141	22	77	28-Jul-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	480	332	43	116	6.70	#N/A	4.8	2.3	48	0.10
K-09-03 140.5-141	22	78	4-Aug-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	340	44	112	6.37	#N/A	4.8	2.7	47	0.10
K-09-03 140.5-141	22	79	11-Aug-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	485	273	45	114	6.87	#N/A	4.7	3.1	46	0.10
K-09-03 140.5-141	22	80	18-Aug-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	289	46	111	6.60	#N/A	5.3	3.6	48	0.10
K-09-03 140.5-141	22	81	25-Aug-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	480	292	48	114	6.88	#N/A	5.9	4.1	49	0.10
K-09-03 140.5-141	22	82	1-Sep-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	353	47	118	7.14	#N/A	6.0	2.9	51	0.10
K-09-03 140.5-141	22	83	8-Sep-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	485	303	47	122	6.71	#N/A	6.0	1.8	52	0.10
K-09-03 140.5-141	22	84	15-Sep-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	490	323	46	116	6.65	#N/A	5.3	2.3	51	0.10
K-09-03 140.5-141	22	85	22-Sep-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	485	324	45	113	6.24	#N/A	4.7	2.9	50	0.10
K-09-03 140.5-141	22	86	29-Sep-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	490	361	44	111	6.44	#N/A	5.4	2.8	48	0.10
K-09-03 140.5-141	22	87	6-Oct-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	505	336	43	105	6.58	#N/A	6.1	2.7	46	0.10
K-09-03 140.5-141	22	88	13-Oct-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	485	310	44	111	7.22	#N/A	5.7	2.7	46	0.10
K-09-03 140.5-141	22	89	20-Oct-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	313	45	105	6.32	#N/A	5.2	2.6	46	0.10
K-09-03 140.5-141	22	90	27-Oct-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	440	355	42	97	6.31	#N/A	5.8	2.6	46	0.10
K-09-03 140.5-141	22	91	3-Nov-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	465	321	40	100	6.34	#N/A	6.4	2.6	45	0.10
K-09-03 140.5-141	22	92	10-Nov-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	460	351	42	93	6.88	#N/A	5.7	2.5	44	0.10
K-09-03 140.5-141	22	93	17-Nov-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	495	350	44	104	6.26	#N/A	4.9	2.3	42	0.10
K-09-03 140.5-141	22	94	24-Nov-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	362	41	93	6.48	#N/A	5.8	2.4	41	0.10
K-09-03 140.5-141	22	95	1-Dec-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	460	388	38	93	6.42	#N/A	6.8	2.4	40	0.10
K-09-03 140.5-141	22	96	8-Dec-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	460	363	38	92	6.28	#N/A	6.2	2.4	41	0.10
K-09-03 140.5-141	22	97	15-Dec-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	485	363	37	94	6.31	#N/A	5.6	2.3	41	0.10
K-09-03 140.5-141	22	98	22-Dec-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	460	367	38	93	6.49	#N/A	5.4	2.2	41	0.10
K-09-03 140.5-141	22	99	29-Dec-11	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	455	311	39	95	6.20	#N/A	5.3	2.2	41	0.10
K-09-03 140.5-141	22	100	5-Jan-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	455	349	40	91	6.31	#N/A	5.2	2.1	41	0.10
K-09-03 140.5-141	22	101	12-Jan-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	455	397	41	100	6.59	#N/A	5.1	2.1	41	0.10
K-09-03 140.5-141	22	102	19-Jan-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	465	367	40	94	6.24	#N/A	5.5	2.2	41	0.10
K-09-03 140.5-141	22	103	26-Jan-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	460	417	39	93	6.07	#N/A	6.0	2.4	41	0.10
K-09-03 140.5-141	22	104	2-Feb-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	465	372	38	104	6.29	#N/A	6.5	2.6	41	0.10
K-09-03 140.5-141	22	105	9-Feb-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	460	417	37	100	6.76	#N/A	7.0	2.7	41	0.10
K-09-03 140.5-141	22	106	16-Feb-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	465	409	38	101	6.62	#N/A	7.0	2.4	42	0.10
K-09-03 140.5-141	22	107	23-Feb-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	455	399	39	99	6.21	#N/A	7.1	2.2	43	0.10
K-09-03 140.5-141	22	108	1-Mar-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	450	459	39	93	6.13	#N/A	7.1	1.9	44	0.10
K-09-03 140.5-141	22	109	8-Mar-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	450	415	40	99	6.02	#N/A	7.2	1.6	45	0.10
K-09-03 140.5-141	22	110	15-Mar-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	455	433	40	102	6.17	#N/A	6.9	1.6	45	0.10
K-09-03 140.5-141	22	111	22-Mar-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	445	423	40	100	6.28	#N/A	6.6	1.5	46	0.10
K-09-03 140.5-141	22	112	29-Mar-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	440	423	40	105	6.01	#N/A	6.2	1.5	46	0.10
K-09-03 140.5-141	22	113	5-Apr-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	460	480	41	103	6.01	#N/A	5.9	1.5	46	0.10
K-09-03 140.5-141	22	114	12-Apr-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	455	417	41	110	5.91	#N/A	5.9	1.5	46	0.10
K-09-03 140.5-141	22	115	19-Apr-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	485	402	41	124	6.06	#N/A	5.9	1.5	46	0.10
K-09-03 140.5-141	22	116	26-Apr-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	470	522	47	126	5.96	#N/A	7.5	2.3	51	0.10
K-09-03 140.5-141	22	117	3-May-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	404	50	121	6.50	#N/A	8.1	2.6	52	0.10
K-09-03 140.5-141	22	118	10-May-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	501	50	81	6.01	#N/A	8.2	2.7	52	0.10
K-09-03 140.5-141	22	119	17-May-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	480	379	51	121	5.94	#N/A	8.4	2.7	51	0.10
K-09-03 140.5-141	22	120	24-May-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	376	51	126	6.06	#N/A	8.6	2.7	51	0.10
K-09-03 140.5-141	22	121	31-May-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	480	414	52	128	6.31	#N/A	8.8	2.7	50	0.10
K-09-03 140.5-141	22	122	7-Jun-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	480	394	53	126	6.08	#N/A	9.0	2.8	51	0.10
K-09-03 140.5-141	22	123	14-Jun-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	490	418	54	132	6.10	#N/A	9.2	2.8	52	0.10
K-09-03 140.5-141	22	124	21-Jun-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	401	55	131	5.99	#N/A	9.4	2.8	52	0.10
K-09-03 140.5-141	22	125	28-Jun-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	415	55	141	6.18	#N/A	9.6	2.9	53	0.10
K-09-03 140.5-141	22	126	5-Jul-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	393	55	131	6.01	#N/A	9.0	2.6	53	0.10
K-09-03 140.5-141	22	127	12-Jul-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	470	452	54	148	5.81	#N/A	8.4	2.3	54	0.10
K-09-03 140.5-141	22	128	19-Jul-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	485	414	54	135	5.91	#N/A	7.8	2.0	54	0.10
K-09-03 140.5-141	22	129	26-Jul-12	Kerr	0	KERR	VU	QSP	5	None	0	Drillcore		K-09-04_7	Water	500	475	401	53	137	5.82	#N/A	7.2	1.7	54	0.10
																		407.797	53.5225	133.573	6.027	#N/A	8.70325	2.52925	52.25	0.1

Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	(Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
K-09-03 140.5-141	0.03	0.0007	0.0001	0.0001	0.0105	0.00001	0.000005	0.0016	0.000107	9	0.00025	0.00167	0.409	0.001	0.00035	0.0005	4.12	0.623	0.000005	0.001
K-09-03 140.5-141	0.03	0.00125	0.0001	0.00015	0.012	0.000015	0.000005	0.0018	0.000141	10	0.000425	0.00185	0.4335	0.001	0.000405	0.0005	4.56	0.6955	0.000005	0.00074
K-09-03 140.5-141	0.03	0.0018	0.0001	0.0002	0.0135	0.00002	0.000005	0.002	0.000175	11	0.0006	0.00203	0.458	0.001	0.00046	0.0005	5	0.768	0.000005	0.00048
K-09-03 140.5-141	0.03	0.0017	0.0001	0.00015	0.0122	0.000025	0.000005	0.00195	0.0001575	10	0.000425	0.00196	0.4655	0.001	0.000415	0.0005	4.585	0.7075	0.0000075	0.000665
K-09-03 140.5-141	0.03	0.0016	0.0001	0.0001	0.0109	0.00003	0.000005	0.0019	0.00014	9	0.00025	0.00189	0.473	0.001	0.00037	0.0005	4.17	0.647	0.00001	0.00085
K-09-03 140.5-141	0.03	0.00135	0.0001	0.0001	0.009525	0.000035	0.000005	0.002	0.000148	10	0.00025	0.00188	0.458	0.001	0.00037	0.0005	4.465	0.697	0.00001	0.00068
K-09-03 140.5-141	0.03	0.0011	0.0001	0.0001	0.00815	0.00004	0.000005	0.0021	0.000156	10	0.00025	0.00187	0.443	0.001	0.00037	0.0005	4.76	0.747	0.00001	0.00051
K-09-03 140.5-141	0.03	0.00095	0.0001	0.00015	0.012925	0.00003	0.000005	0.00225	0.000169	11	0.00025	0.00206	0.4955	0.001	0.000335	0.0005	5.13	0.815	0.00001	0.000645
K-09-03 140.5-141	0.03	0.0008	0.0001	0.0002	0.0177	0.00002	0.000005	0.0024	0.000182	12	0.00025	0.00225	0.548	0.001	0.0003	0.0005	5.5	0.883	0.00001	0.00078
K-09-03 140.5-141	0.03	0.0007	0.0001	0.0002	0.01695	0.000015	0.000005	0.0027	0.0001785	12	0.00025	0.00235	0.524	0.001	0.00028	0.0005	5.525	0.898	0.0000075	0.00078
K-09-03 140.5-141	0.03	0.0006	0.0001	0.0002	0.0162	0.00001	0.000005	0.003	0.000175	12	0.00025	0.00245	0.5	0.001	0.00026	0.0005	5.55	0.913	0.000005	0.00078
K-09-03 140.5-141	0.03	0.0005	0.0001	0.00025	0.0159	0.00001	0.000005	0.0027	0.000209	11	0.00025	0.002405	0.4855	0.009	0.000355	0.0005	4.985	0.844	0.0000125	0.000965
K-09-03 140.5-141	0.03	0.0004	0.0001	0.0003	0.0156	0.00001	0.000005	0.0024	0.000243	10	0.00025	0.00236	0.471	0.017	0.00045	0.0005	4.42	0.775	0.00002	0.00115
K-09-03 140.5-141	0.03	0.0005	0.0001	0.0002	0.0139	0.00001	0.000005	0.00215	0.000206	10	0.000525	0.002355	0.4615	0.009	0.000345	0.0005	4.54	0.7715	0.0000125	0.001375
K-09-03 140.5-141	0.03	0.0006	0.0001	0.0001	0.0122	0.00001	0.000005	0.0019	0.000169	10	0.0008	0.00235	0.452	0.001	0.00024	0.0005	4.66	0.768	0.000005	0.0016
K-09-03 140.5-141	0.03	0.0008	0.0001	0.0001	0.01275	0.000015	0.000005	0.0022	0.0001705	10	0.00095	0.00225	0.4875	0.0025	0.000485	0.0005	4.85	0.7885	0.000005	0.001075
K-09-03 140.5-141	0.03	0.001	0.0001	0.0001	0.0133	0.00002	0.000005	0.0025	0.000172	11	0.0011	0.00215	0.523	0.004	0.00073	0.0005	5.04	0.809	0.000005	0.00055
K-09-03 140.5-141	0.03	0.00085	0.0001	0.0001	0.0123	0.000015	0.000005	0.0025	0.0001815	11	0.000675	0.00216	0.5615	0.0025	0.00052	0.0005	4.97	0.8105	0.0000075	0.001305
K-09-03 140.5-141	0.03	0.0007	0.0001	0.0001	0.0113	0.00001	0.000005	0.0025	0.000191	11	0.00025	0.00217	0.6	0.001	0.00031	0.0005	4.9	0.812	0.00001	0.00206
K-09-03 140.5-141	0.03	0.0009	0.0001	0.0001	0.01165	0.00001	0.000005	0.00225	0.0002075	10	0.000825	0.00223	0.5515	0.0035	0.000305	0.0005	4.775	0.796	0.00001	0.0012
K-09-03 140.5-141	0.03	0.0011	0.0001	0.0001	0.012	0.00001	0.000005	0.002	0.000224	10	0.0014	0.00229	0.503	0.006	0.0003	0.0005	4.65	0.78	0.00001	0.00034
K-09-03 140.5-141	0.03	0.001	0.0002	0.00015	0.0119	0.00001	0.000005	0.00215	0.000199	10	0.00115	0.00223	0.4905	0.0035	0.000255	0.0005	4.575	0.781	0.00001	0.000425
K-09-03 140.5-141	0.03	0.0009	0.0003	0.0002	0.0118	0.00001	0.000005	0.0023	0.000174	10	0.0009	0.00217	0.478	0.001	0.00021	0.0005	4.5	0.782	0.00001	0.00051
K-09-03 140.5-141	0.03	0.0008	0.0002	0.0002	0.01225	0.00001	0.000005	0.00245	0.00017	10	0.000575	0.002055	0.472	0.00125	0.000275	0.0005	4.625	0.7665	0.00001	0.00032
K-09-03 140.5-141	0.03	0.0007	0.0001	0.0002	0.0127	0.00001	0.000005	0.0026	0.000166	10	0.00025	0.00194	0.466	0.0015	0.00034	0.0005	4.75	0.751	0.00001	0.00013
K-09-03 140.5-141	0.03	0.0005	0.0001	0.00015	0.012	0.000025	0.000008	0.00265	0.0001585	10	0.000575	0.001915	0.522	0.00375	0.0011	0.0005	4.425	0.691	0.00001	0.00011
K-09-03 140.5-141	0.03	0.0003	0.0001	0.0001	0.0113	0.00004	0.00001	0.0027	0.000151	9	0.0009	0.00189	0.578	0.006	0.00186	0.0005	4.1	0.631	0.00001	0.00009
K-09-03 140.5-141	0.03	0.00555	0.0001	0.0001	0.01005	0.000035	0.0000075	0.00225	0.0001695	10	0.000575	0.00208	0.579	0.00375	0.00107	0.0005	4.32	0.708	0.00001	0.000165
K-09-03 140.5-141	0.03	0.0108	0.0001	0.0001	0.0088	0.00003	0.000005	0.0018	0.000188	10	0.00025	0.00227	0.58	0.0015	0.00028	0.0005	4.54	0.785	0.00001	0.00024
K-09-03 140.5-141	0.03	0.01015	0.0001	0.0001	0.0099	0.00003	0.000005	0.00175	0.0001785	9	0.00025	0.002075	0.594	0.0015	0.000375	0.0005	4.24	0.716	0.00001	0.00032
K-09-03 140.5-141	0.03	0.0095	0.0001	0.0001	0.011	0.00003	0.000005	0.0017	0.000169	9	0.00025	0.00188	0.608	0.0015	0.00047	0.0005	3.94	0.647	0.00001	0.0004
K-09-03 140.5-141	0.03	0.00995	0.0001	0.0001	0.00993	0.00003	0.000005	0.00145	0.0002355	9	0.00025	0.001875	0.603	0.0015	0.001215	0.0005	3.87	0.6395	0.00001	0.00026
K-09-03 140.5-141	0.03	0.0104	0.0001	0.0001	0.00886	0.00003	0.000005	0.0012	0.000302	9	0.00025	0.00187	0.598	0.0015	0.00196	0.0005	3.8	0.632	0.00001	0.00012
K-09-03 140.5-141	0.03	0.009875	0.0001	0.0001	0.00907	0.00003	0.000005	0.0013	0.0002665	9	0.00025	0.001885	0.618	0.0015	0.0015375	0.0005	3.925	0.649	0.00000875	0.000165
K-09-03 140.5-141	0.03	0.00935	0.0001	0.0001	0.00928	0.00003	0.000005	0.0014	0.000231	9	0.00025	0.0019	0.638	0.0015	0.001115	0.0005	4.05	0.666	0.0000075	0.00021
K-09-03 140.5-141	0.03	0.008825	0.0001	0.0001	0.00949	0.00003	0.000005	0.0015	0.0001955	9	0.00025	0.001915	0.658	0.0015	0.0006925	0.0005	4.175	0.683	0.00000625	0.000255
K-09-03 140.5-141	0.03	0.0083	0.0001	0.0001	0.0097	0.00003	0.000005	0.0016	0.00016	9	0.00025	0.00193	0.678	0.0015	0.00027	0.0005	4.3	0.7	0.000005	0.0003
K-09-03 140.5-141	0.03	0.010075	0.0001	0.0001	0.009405	0.0000325	0.000005	0.00165	0.0001685	9	0.00025	0.001925	0.68275	0.0015	0.00031	0.0005	4.1875	0.69375	0.000005	0.000305
K-09-03 140.5-141	0.03	0.01185	0.0001	0.0001	0.00911	0.000035	0.000005	0.0017	0.000177	9	0.00025	0.00192	0.6875	0.0015	0.00035	0.0005	4.075	0.6875	0.000005	0.00031
K-09-03 140.5-141	0.03	0.013625	0.0001	0.0001	0.008815	0.0000375	0.000005	0.00175	0.0001855	9	0.00025	0.001915	0.69225	0.0015	0.00039	0.0005	3.9625	0.68125	0.000005	0.000315
K-09-03 140.5-141	0.03	0.0154	0.0001	0.0001	0.00852	0.00004	0.000005	0.0018	0.000194	9	0.00025	0.00191	0.697	0.0015	0.00043	0.0005	3.85	0.675	0.000005	0.00032
K-09-03 140.5-141	0.03	0.0138	0.0001	0.000175	0.0084	0.0000375	0.000005	0.001525	0.00018975	9	0.00025	0.00189	0.7175	0.0015	0.00046	0.0005	3.9225	0.677	0.00000625	0.0003325
K-09-03 140.5-141	0.03	0.0122	0.0001	0.00025	0.00828	0.000035	0.000005	0.00125	0.0001855	9	0.00025	0.00187	0.738	0.0015	0.00049	0.0005	3.995	0.679	0.0000075	0.000345
K-09-03 140.5-141	0.03	0.0106	0.0001	0.000325	0.00816	0.0000325	0.000005	0.000975	0.00018125	9	0.00025	0.00185	0.7585	0.0015	0.00052	0.0005	4.0675	0.681	0.00000875	0.0003575
K-09-03 140.5-141	0.03	0.009	0.0001	0.0004	0.00804	0.00003	0.000005	0.0007	0.000177	9	0.00025	0.00183	0.779	0.0015	0.00055	0.0005	4.14	0.683	0.00001	0.00037
K-09-03 140.5-141	0.03	0.01315	0.0001	0.000325	0.0077325	0.0000375	0.000005	0.000975	0.00017475	9	0.00025	0.0019075	0.8025	0.0015	0.0007225	0.0005	4.1475	0.69275	0.00001	0.00037
K-09-03 140.5-141	0.03	0.0173	0.0001	0.00025	0.007425	0.000045	0.000005	0.00125	0.0001725	9	0.00025	0.001985	0.826	0.0015	0.000895	0.0005	4.155	0.7025	0.00001	0.00037
K-09-03 140.5-141	0.03	0.02145	0.0001	0.000175	0.0071175	0.0000525	0.000005	0.001525	0.00017025	9	0.00025	0.0020625	0.8495	0.0015	0.0010675	0.0005	4.1625	0.71225	0.00001	0.00037
K-09-03 140.5-141	0.03	0.0256	0.0001	0.0001	0.00681	0.00006	0.000005	0.0018	0.000168	9	0.00025	0.00214	0.873	0.0015	0.00124	0.0005	4.17	0.722	0.00001	0.00037
K-09-03 140.5-141	0.03	0.0256	0.0001	0.0001	0.00681	0.00006	0.000005	0.0018	0.000168	9	0.00025	0.00214	0.873	0.0015	0.00124	0.0005	4.17	0.722	0.00001	0.00037
K-09-03 140.5-141	0.03	0.0256	0.0001	0.0001	0.00681	0.00006	0.000005	0.0018	0.000168	9	0.00025	0.00214	0.873	0.0015	0.00124	0.0005	4.17	0.722	0.00001	0.00037
K-09-03 140.5-141	0.03	0.0121	0.0001	0.0001	0.007005	0.00006	0.000005	0.00195	0.0002025	11	0.00025	0.0025075	0.96825	0.0015	0.000775	0.0005	5.0775	0.88325	0.0000175	0.0003025
K-09-03 140.5-141	0.03	0.0076	0.0001	0.0001	0.00707	0.00006	0.000005	0.002	0.000214	11	0.00025	0.00263	1	0.0015	0.00062	0.0005	5.38	0.937	0.00002	0.00028
K-09-03 140.5-141	0.03	0.0117	0.0001	0.0001	0.007265	0.000065	0.000005	0.002	0.00024575	11	0.00025	0.0026775	1.035	0.0015	0.00078	0.0005	5.4325	0.947	0.00002	0.000295
K-09-03 140.5-141	0.03	0.0158	0.0001	0.0001	0.00746	0.00007	0.000005	0.002	0.0002775	11	0.00025	0.002725	1.07	0.0015	0.00094	0.0005	5.485	0.957	0.00002	0.00031
K-09-03 140.5-141	0.03	0.0199	0.0001	0.0001	0.007655	0.000075	0.000005	0.002	0.00030925	11	0.00025	0.0027725	1.105	0.0015	0.0011	0.0005	5.5375	0.967	0.00002	0.000325
K-09-03 140.5-141	0.03	0.024	0.0001	0.0001	0.00785	0.00008	0.000005	0.002	0.000341	12	0.00025	0.00282	1.14	0.0015	0.00126	0.0005	5.59	0.977	0.00002	0.00034
K-09-03 140.5-141	0.03	0.02625	0.0001	0.0001	0.0078425	0.0000825	0.000005	0.002175	0.00031575	12	0.00025	0.00295	1.2175	0.0015	0.0011875	0.0005	5.6675	0.99525	0.00001625	0.0003275
K-09-03 140.5-141	0.03	0.0285	0.0001	0.0001	0.007835	0.000085	0.000005	0.00235	0.0002905	12	0.00025	0.00308	1.295	0.0015	0.001115	0.0005	5.745	1.0135	0.0000125	0.000315
K-09-03 140.5-141	0.03	0.03075	0.0001	0.0001	0.0078275	0.0000875	0.000005	0.002525	0.00026525	12	0.00025	0.00321	1.3725	0.0015	0.0010425	0.0005	5.8225	1.03175	0.00000875	0.0003025
K-09-03 140.5-141	0.03	0.033	0.0001	0.0001	0.00782	0.00009	0.000005	0.0027	0.00024	13	0.00025	0.00334	1.45	0.0015	0.00097	0.0005	5.9	1.05	0.000005	0.00029
K-09-03 140.5-141	0.03	0.0339	0.0001	0.0001	0.0075325	0.000095	0.000005	0.002475	0.00025025	12	0.00025	0.0033825	1.5125	0.0015	0.00103	0.0005	5.85	1.0425	0.000005	0.0003375
K-09-03 140.5-141	0.03	0.0348	0.0001	0.0001	0.007245	0.0001	0.000005	0.00225	0.0002605	12	0.00025	0.003425	1.575	0.0015	0.00109	0.0005	5.8	1.035	0.000005	0.000385
K-09-03 140.5-141	0.03	0.0357	0.0001	0.0001	0.0069575	0.000105	0.000005	0.002025	0.00027075	12	0.00025	0.0034675	1.6375	0.0015	0.00115	0.0005	5.75	1.0275	0.000005	0.0004325
K-09-03 140.5-141	0.03	0.0366	0.0001	0.0001	0.00667	0.00011	0.000005	0.0018	0.000281	12	0.00025	0.00351	1.7	0.0015	0.00121	0.0005	5.7	1.02	0.000005	0.00048
	0.03	0.03034	0.0001	0.0001	0.0075235	0.000091	0.000005	0.00223	0.000282425	11.9975	0.00025	0.00319575	1.4005	0.0015	0.0011155	0.0005	5.73625	1.01595	0.00001025	0.0003535

Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S) Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
K-09-03 140.5-141	0.0001	0.022	0.27	0.00038	0.23	0.00009	0.05	0.0608	12.9	0.0001	0.0001	0.0004	0.0000005	0.000015	0.003	0.000005
K-09-03 140.5-141	0.0004	0.0165	0.285	0.002015	0.285	0.00006	0.065	0.06665	14.7	0.000055	0.00014	0.000225	0.00001425	0.000015	0.004	0.000005
K-09-03 140.5-141	0.0007	0.011	0.3	0.00365	0.34	0.00003	0.08	0.0725	16.5	0.00001	0.00018	0.00005	0.000028	0.000015	0.005	0.000005
K-09-03 140.5-141	0.00055	0.039	0.2565	0.00333	0.28	0.000025	0.065	0.06495	14.7	0.00001	0.00073	0.00005	0.0000175	0.000015	0.0065	0.000005
K-09-03 140.5-141	0.0004	0.067	0.213	0.00301	0.22	0.00002	0.05	0.0574	12.9	0.00001	0.00128	0.00005	0.000007	0.000015	0.008	0.000005
K-09-03 140.5-141	0.00065	0.03575	0.2195	0.00317	0.25	0.00002	0.075	0.06015	14.05	0.00001	0.001055	0.00005	0.00001	0.000015	0.0065	0.000005
K-09-03 140.5-141	0.0009	0.0045	0.226	0.00333	0.28	0.00002	0.1	0.0629	15.2	0.00001	0.00083	0.00005	0.000013	0.000015	0.005	0.000005
K-09-03 140.5-141	0.0008	0.0045	0.245	0.003565	0.305	0.000015	0.08	0.0683	16.05	0.00001	0.000685	0.00005	0.000009	0.000015	0.005	0.000005
K-09-03 140.5-141	0.0007	0.0045	0.264	0.0038	0.33	0.00001	0.06	0.0737	16.9	0.00001	0.00054	0.00005	0.000005	0.000015	0.005	0.000005
K-09-03 140.5-141	0.00065	0.0045	0.2575	0.003755	0.36	0.0000075	0.055	0.0739	17.5	0.00001	0.00051	0.00005	0.00000275	0.0000325	0.0055	0.000005
K-09-03 140.5-141	0.0006	0.0045	0.251	0.00371	0.39	0.000005	0.05	0.0741	18.1	0.00001	0.00048	0.00005	0.0000005	0.00005	0.006	0.000005
K-09-03 140.5-141	0.0008	0.01025	0.225	0.00333	0.365	0.000005	0.035	0.06965	16.2	0.00001	0.00045	0.000325	0.00000125	0.0000325	0.006	0.000005
K-09-03 140.5-141	0.001	0.016	0.199	0.00295	0.34	0.000005	0.02	0.0652	14.3	0.00001	0.00042	0.0006	0.000002	0.000015	0.006	0.000005
K-09-03 140.5-141	0.00075	0.01025	0.1975	0.00307	0.335	0.000005	0.03	0.06545	14.9	0.00001	0.00034	0.000325	0.000003	0.000015	0.006	0.000005
K-09-03 140.5-141	0.0005	0.0045	0.196	0.00319	0.33	0.000005	0.04	0.0657	15.5	0.00001	0.00026	0.00005	0.000004	0.000015	0.006	0.000005
K-09-03 140.5-141	0.00055	0.0045	0.193	0.00313	0.33	0.000005	0.045	0.06855	15.95	0.00001	0.000275	0.000175	0.0000055	0.000015	0.0065	0.000005
K-09-03 140.5-141	0.0006	0.0045	0.19	0.00307	0.33	0.000005	0.05	0.0714	16.4	0.00001	0.00029	0.0003	0.000007	0.000015	0.007	0.000005
K-09-03 140.5-141	0.0007	0.0045	0.1845	0.00336	0.325	0.000005	0.0275	0.07005	16.3	0.00001	0.000245	0.0002	0.000007	0.000015	0.0075	0.000005
K-09-03 140.5-141	0.0008	0.0045	0.179	0.00365	0.32	0.000005	0.005	0.0687	16.2	0.00001	0.0002	0.0001	0.000007	0.000015	0.008	0.000005
K-09-03 140.5-141	0.00075	0.0045	0.1665	0.003365	0.31	0.000005	0.0375	0.06755	15.6	0.00001	0.000275	0.000075	0.000006	0.000015	0.008	0.000005
K-09-03 140.5-141	0.0007	0.0045	0.154	0.00308	0.3	0.000005	0.07	0.0664	15	0.00001	0.00035	0.00005	0.000005	0.000015	0.008	0.000005
K-09-03 140.5-141	0.0006	0.0045	0.157	0.00344	0.295	0.000005	0.06	0.0655	14.65	0.00001	0.0003	0.00005	0.000005	0.000015	0.0075	0.0000075
K-09-03 140.5-141	0.0005	0.0045	0.16	0.0038	0.29	0.000005	0.05	0.0646	14.3	0.00001	0.00025	0.00005	0.000005	0.000015	0.007	0.00001
K-09-03 140.5-141	0.0005	0.0045	0.1605	0.003325	0.295	0.000005	0.05	0.0654	14.85	0.00001	0.00019	0.00005	0.00000275	0.000015	0.0065	0.0000075
K-09-03 140.5-141	0.0005	0.0045	0.161	0.00285	0.3	0.000005	0.05	0.0662	15.4	0.00001	0.00013	0.00005	0.0000005	0.000015	0.006	0.000005
K-09-03 140.5-141	0.00055	0.0045	0.1415	0.002755	0.265	0.000005	0.04	0.06275	14.65	0.00001	0.000165	0.00005	0.00000275	0.000015	0.0055	0.000005
K-09-03 140.5-141	0.0006	0.0045	0.122	0.00266	0.23	0.000005	0.03	0.0593	13.9	0.00001	0.0002	0.00005	0.000005	0.000015	0.005	0.000005
K-09-03 140.5-141	0.0007	0.0045	0.123	0.002595	0.26	0.0000075	0.045	0.06005	14.35	0.00001	0.000135	0.00005	0.0000075	0.0000575	0.006	0.000005
K-09-03 140.5-141	0.0008	0.0045	0.124	0.00253	0.29	0.00001	0.06	0.0608	14.8	0.00001	0.00007	0.00005	0.00001	0.0001	0.007	0.000005
K-09-03 140.5-141	0.0008	0.0045	0.122	0.00282	0.25	0.0000075	0.045	0.05825	13.6	0.00001	0.000085	0.000075	0.00001	0.000145	0.0065	0.000005
K-09-03 140.5-141	0.0008	0.0045	0.12	0.00311	0.21	0.000005	0.03	0.0557	12.4	0.00001	0.0001	0.0001	0.00001	0.00019	0.006	0.000005
K-09-03 140.5-141	0.00065	0.0045	0.118	0.00305	0.21	0.000005	0.045	0.0537	12.65	0.00001	0.00007	0.000075	0.0000075	0.000155	0.008	0.000005
K-09-03 140.5-141	0.0005	0.0045	0.116	0.00299	0.21	0.000005	0.06	0.0517	12.9	0.00001	0.00004	0.00005	0.000005	0.00012	0.01	0.000005
K-09-03 140.5-141	0.0005	0.0045	0.11975	0.003115	0.2125	0.00000625	0.055	0.052875	13.25	0.00001	0.0000375	0.00005	0.0000055	0.0001275	0.009	0.000005
K-09-03 140.5-141	0.0005	0.0045	0.1235	0.00324	0.215	0.0000075	0.05	0.05405	13.6	0.00001	0.000035	0.00005	0.000006	0.000135	0.008	0.000005
K-09-03 140.5-141	0.0005	0.0045	0.12725	0.003365	0.2175	0.00000875	0.045	0.055225	13.95	0.00001	0.0000325	0.00005	0.0000065	0.0001425	0.007	0.000005
K-09-03 140.5-141	0.0005	0.0045	0.131	0.00349	0.22	0.00001	0.04	0.0564	14.3	0.00001	0.00003	0.00005	0.000007	0.00015	0.006	0.000005
K-09-03 140.5-141	0.000475	0.0045	0.12475	0.00339	0.2175	0.000015	0.0475	0.054775	13.8	0.00001	0.000035	0.0000625	0.00000875	0.0001625	0.00625	0.000005
K-09-03 140.5-141	0.00045	0.0045	0.1185	0.00329	0.215	0.00002	0.055	0.05315	13.3	0.00001	0.00004	0.000075	0.0000105	0.000175	0.0065	0.000005
K-09-03 140.5-141	0.000425	0.0045	0.11225	0.00319	0.2125	0.000025	0.0625	0.051525	12.8	0.00001	0.000045	0.0000875	0.00001225	0.0001875	0.00675	0.000005
K-09-03 140.5-141	0.0004	0.0045	0.106	0.00309	0.21	0.00003	0.07	0.0499	12.3	0.00001	0.00005	0.0001	0.000014	0.0002	0.007	0.000005
K-09-03 140.5-141	0.00045	0.007375	0.10475	0.00303	0.215	0.000025	0.07	0.05025	12.55	0.00001	0.0000475	0.0001	0.00001325	0.0002	0.0075	0.000005
K-09-03 140.5-141	0.0005	0.01025	0.1035	0.00297	0.22	0.00002	0.07	0.0506	12.8	0.00001	0.000045	0.0001	0.0000125	0.0002	0.008	0.000005
K-09-03 140.5-141	0.00055	0.013125	0.10225	0.00291	0.225	0.000015	0.07	0.05095	13.05	0.00001	0.0000425	0.0001	0.00001175	0.0002	0.0085	0.000005
K-09-03 140.5-141	0.0006	0.016	0.101	0.00285	0.23	0.00001	0.07	0.0513	13.3	0.00001	0.00004	0.0001	0.000011	0.0002	0.009	0.000005
K-09-03 140.5-141	0.00065	0.013125	0.09975	0.00295	0.225	0.00001	0.0675	0.05055	13.5	0.00001	0.000045	0.000125	0.000011	0.00022	0.00875	0.000005
K-09-03 140.5-141	0.0007	0.01025	0.0985	0.00305	0.22	0.00001	0.065	0.0498	13.7	0.00001	0.00005	0.00015	0.000011	0.00024	0.0085	0.000005
K-09-03 140.5-141	0.00075	0.007375	0.09725	0.00315	0.215	0.00001	0.0625	0.04905	13.9	0.00001	0.000055	0.000175	0.000011	0.00026	0.00825	0.000005
K-09-03 140.5-141	0.0008	0.0045	0.096	0.00325	0.21	0.00001	0.06	0.0483	14.1	0.00001	0.00006	0.0002	0.000011	0.00028	0.008	0.000005
K-09-03 140.5-141	0.0008	0.0045	0.096	0.00325	0.21	0.00001	0.06	0.0483	14.1	0.00001	0.00006	0.0002	0.000011	0.00028	0.008	0.000005
K-09-03 140.5-141	0.0008	0.0045	0.096	0.00325	0.21	0.00001	0.06	0.0483	14.1	0.00001	0.00006	0.0002	0.000011	0.00028	0.008	0.000005
K-09-03 140.5-141	0.0008	0.0045	0.12225	0.0044125	0.255	0.00001	0.045	0.05325	16.5	0.00001	0.000225	0.0000875	0.0000125	0.0001675	0.0095	0.000005
K-09-03 140.5-141	0.0008	0.0045	0.131	0.0048	0.27	0.00001	0.04	0.0549	17.3	0.00001	0.00028	0.00005	0.000013	0.00013	0.01	0.000005
K-09-03 140.5-141	0.0008	0.0045	0.13225	0.004685	0.285	0.00000875	0.045	0.0554	17.375	0.00001	0.0002475	0.00005	0.00001275	0.00015	0.0105	0.000005
K-09-03 140.5-141	0.0008	0.0045	0.1335	0.00457	0.3	0.0000075	0.05	0.0559	17.45	0.00001	0.000215	0.00005	0.0000125	0.00017	0.011	0.000005
K-09-03 140.5-141	0.0008	0.0045	0.13475	0.004455	0.315	0.00000625	0.055	0.0564	17.525	0.00001	0.0001825	0.00005	0.00001225	0.00019	0.0115	0.000005
K-09-03 140.5-141	0.0008	0.0045	0.136	0.00434	0.33	0.000005	0.06	0.0569	17.6	0.00001	0.00015	0.00005	0.000012	0.00021	0.012	0.000005
K-09-03 140.5-141	0.00085	0.0045	0.136	0.004585	0.325	0.000005	0.06	0.0577	18.1	0.00001	0.0001625	0.0000875	0.00001375	0.00024	0.0115	0.000005
K-09-03 140.5-141	0.0009	0.0045	0.136	0.00483	0.32	0.000005	0.06	0.0585	18.6	0.00001	0.000175	0.000125	0.0000155	0.00027	0.011	0.000005
K-09-03 140.5-141	0.00095	0.0045	0.136	0.005075	0.315	0.000005	0.06	0.0593	19.1	0.00001	0.0001875	0.0001625	0.00001725	0.0003	0.0105	0.000005
K-09-03 140.5-141	0.001	0.0045	0.136	0.00532	0.31	0.000005	0.06	0.0601	19.6	0.00001	0.0002	0.0002	0.000019	0.00033	0.01	0.000005
K-09-03 140.5-141	0.000975	0.0045	0.135	0.0055375	0.31	0.000005	0.055	0.058275	19.45	0.00001	0.00016	0.0001625	0.00002025	0.0003	0.01	0.000005
K-09-03 140.5-141	0.00095	0.0045	0.134	0.005755	0.31	0.000005	0.05	0.05645	19.3	0.00001	0.00012	0.000125	0.0000215	0.00027	0.01	0.000005
K-09-03 140.5-141	0.000925	0.0045	0.133	0.0059725	0.31	0.000005	0.045	0.054625	19.15	0.00001	0.00008	0.0000875	0.00002275	0.00024	0.01	0.000005
K-09-03 140.5-141	0.0009	0.0045	0.132	0.00619	0.31	0.000005	0.04	0.0528	19	0.00001	0.00004	0.00005	0.000024	0.00021	0.01	0.000005
	0.000905	0.0045	0.134875	0.005206	0.3155	0.000005125	0.0545	0.057105	18.7425	0.00001	0.00014575	0.00011	0.000017825	0.000256	0.01065	0.000005

Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time Sampled	Sample ID	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (as $CaCO_3$) ($CaCO_3$ mg/L)	Alkalinity, Total (as $CaCO_3$) ($CaCO_3$ mg/L)	Sulfate (SO_4) (mg/L)	Chloride (Cl) (mg/L)
HC23 KERR																										
K-09-04	126.5-127.5	23	0	4-Feb-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	375	212.89	548	1091.16	6.15	#N/A	8.59	#N/A	746.50	2
K-09-04	126.5-127.5	23	1	11-Feb-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	475	249.51	439	921.56	5.41	#N/A	10.11	#N/A	489.50	0.9
K-09-04	126.5-127.5	23	2	18-Feb-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	505	355.46	462	875.02	4.47	2.01	35.65	#N/A	576.50	0.5
K-09-04	126.5-127.5	23	3	25-Feb-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	500	362.3	423	966.71	4.18	5.11	50.58	#N/A	537.50	0.5
K-09-04	126.5-127.5	23	4	4-Mar-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	500	369.62	358	847.87	4.02	7.35	52.51	#N/A	480.50	0.5
K-09-04	126.5-127.5	23	5	11-Mar-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	490	386.71	426	870.06	3.94	8.74	60.37	#N/A	513.50	0.5
K-09-04	126.5-127.5	23	6	18-Mar-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	505	414.06	376	799.39	3.94	9.05	58.52	#N/A	488.50	0.1
K-09-04	126.5-127.5	23	7	25-Mar-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	490	364.74	357	746.3	3.79	12.07	62.69	#N/A	463.50	0.5
K-09-04	126.5-127.5	23	8	1-Apr-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	485	393.06	369	808.05	3.66	14.98	73.22	#N/A	495.50	< 2
K-09-04	126.5-127.5	23	9	8-Apr-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	485	364.74	246	576.96	3.79	11	50.23	#N/A	299.50	< 2
K-09-04	126.5-127.5	23	10	15-Apr-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	495	358.39	269	644.41	3.67	16.65	71.50	#N/A	335.50	0.5
K-09-04	126.5-127.5	23	11	22-Apr-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	470	358.39	224	583.13	3.66	16.48	72.75	#N/A	304.50	0.5
K-09-04	126.5-127.5	23	12	29-Apr-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	495	371.09	192	585.68	3.62	7.71	32.17	#N/A	311.50	0.5
K-09-04	126.5-127.5	23	13	6-May-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	490	370.6	248	627.11	3.55	21.78	87.32	#N/A	292.50	0.5
K-09-04	126.5-127.5	23	14	13-May-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	480	418.94	232	613.96	3.49	22.31	90.61	#N/A	282.50	0.5
K-09-04	126.5-127.5	23	15	20-May-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	485	405.76	193	578.85	3.45	24.32	95.49	#N/A	230.50	0.5
K-09-04	126.5-127.5	23	16	27-May-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	495	435.54	250	665.86	3.41	33.88	120.88	#N/A	258.50	0.5
K-09-04	126.5-127.5	23	17	3-Jun-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	500	414.55	222	636.93	3.31	31.03	107.16	#N/A	283.50	0.5
K-09-04	126.5-127.5	23	18	10-Jun-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	500	427.73	204	616.15	3.39	31.05	109.56	#N/A	320.50	0.5
K-09-04	126.5-127.5	23	19	17-Jun-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	490	422.36	166	549.51	3.5	27.42	98.98	#N/A	187.50	0.4
K-09-04	126.5-127.5	23	20	24-Jun-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	495	360.83	149	551.52	3.43	30.17	107.14	#N/A	219.50	0.3
K-09-04	126.5-127.5	23	21	1-Jul-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	490	370.6	160	603.46	3.38	34.71	121.04	#N/A	215.50	0.5
K-09-04	126.5-127.5	23	22	8-Jul-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	510	431.64	132	610.47	3.14	42.81	130.47	#N/A	214.50	0.5
K-09-04	126.5-127.5	23	23	15-Jul-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	505	416.5	128	596.17	3.12	43.84	133.91	#N/A	205.50	0.5
K-09-04	126.5-127.5	23	24	22-Jul-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	520	428.71	92.1	489.16	3.22	31.26	99.39	#N/A	179.50	0.5
K-09-04	126.5-127.5	23	25	29-Jul-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	495	447.26	91.6	466.42	3.21	33.48	106.44	#N/A	167.50	0.5
K-09-04	126.5-127.5	23	26	5-Aug-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	490	380.37	81.8	459.43	3.48	30.93	109.40	#N/A	163.50	0.1
K-09-04	126.5-127.5	23	27	12-Aug-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	470	403.32	68.7	447.91	3.5	29.75	115.91	#N/A	168.50	0.1
K-09-04	126.5-127.5	23	28	19-Aug-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	485	381.34	70.7	483.92	3.43	36.26	137.46	#N/A	158.50	0.5
K-09-04	126.5-127.5	23	29	26-Aug-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	480	431.64	53.9	418.77	3.31	31.86	110.83	#N/A	141.50	0.1
K-09-04	126.5-127.5	23	30	2-Sep-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	470	352.53	50	426.86	3.45	31.68	115.58	#N/A	186.50	0.5
K-09-04	126.5-127.5	23	31	9-Sep-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	465	416.5	43.7	387.38	3.31	30.29	110.29	#N/A	152.50	0.1
K-09-04	126.5-127.5	23	32	16-Sep-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	470	405.76	43.9	403.75	3.19	33.81	125.10	#N/A	194.50	0.5
K-09-04	126.5-127.5	23	33	23-Sep-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	470	390.13	42.8	386.77	3.19	36.86	130.97	#N/A	145.50	0.5
K-09-04	126.5-127.5	23	34	30-Sep-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	465	397.94	36.9	342.45	3.16	33.73	120.40	#N/A	162.50	0.1
K-09-04	126.5-127.5	23	35	7-Oct-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	485	392.08	36.3	440.23	3.21	32.55	121.31	#N/A	190.50	0.1
K-09-04	126.5-127.5	23	36	14-Oct-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	465	405.76	52.1	471.94	3.26	35.69	138.67	#N/A	216.50	0.1
K-09-04	126.5-127.5	23	37	21-Oct-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	480	421.87	33.8	488.5	3.2	43.48	154.68	#N/A	212.50	0.5
K-09-04	126.5-127.5	23	38	28-Oct-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	470	430.17	34.6	543.03	3.05	45.6	158.43	#N/A	250.50	0.5
K-09-04	126.5-127.5	23	39	4-Nov-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	480	344.23	37.5	482	3.26	43.83	148.43	#N/A	214.50	0.5
K-09-04	126.5-127.5	23	40	11-Nov-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	500	310.54	54.2	599	3.39	32.75	115.18	#N/A	168.50	0.1
K-09-04	126.5-127.5	23	41	18-Nov-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	485	330.56	25.5	341	3.49	36.72	139.10	#N/A	183.50	0.5
K-09-04	126.5-127.5	23	42	25-Nov-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	500	390.62	20	383.33	3.25	30.62	107.26	#N/A	153.50	0.1
K-09-04	126.5-127.5	23	43	2-Dec-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	490	406.25	26.8	442.43	3.18	38.95	126.51	#N/A	140.50	0.1
K-09-04	126.5-127.5	23	44	9-Dec-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	490	428.71	23.3	460.16	3.14	38.66	123.25	#N/A	200.50	1.4
K-09-04	126.5-127.5	23	45	16-Dec-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	500	443.84	25.1	497.73	3.03	50.86	157.22	#N/A	165.50	0.5
K-09-04	126.5-127.5	23	46	23-Dec-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	475	497.55	20.2	452.2	3.15	44.66	133.03	#N/A	163.50	0.5
K-09-04	126.5-127.5	23	47	30-Dec-10	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	505	458.49	18.7	457.15	3.15	41.33	135.19	#N/A	142.50	0.5
K-09-04	126.5-127.5	23	48	6-Jan-11	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	495	489.25	18.05	429.08	3.13	45.945	141.26	#N/A	144.50	0.75
K-09-04	126.5-127.5	23	49	13-Jan-11	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	495	403.8	17.4	379.2	3.12	50.56	147.32	#N/A	146.50	1
K-09-04	126.5-127.5	23	50	20-Jan-11	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	500	410.15	16	471.73	3.15	47.335	129.94	#N/A	129.00	0.75
K-09-04	126.5-127.5	23	51	27-Jan-11	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	465	409.17	14.6	352.14	3.15	44.11	112.55	#N/A	111.50	0.5
K-09-04	126.5-127.5	23	52	3-Feb-11	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	470	430.66	17.25	425.44	3.14	57.285	139.95	#N/A	153.50	0.5
K-09-04	126.5-127.5	23	53	10-Feb-11	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	455	429.68	19.9	505.8	3.01	70.46	167.35	#N/A	195.50	0.5
K-09-04	126.5-127.5	23	54	17-Feb-11	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	455	477.53	27.75	887.43	2.91	161.08	303.97	#N/A	359.00	1.5
K-09-04	126.5-127.5	23	55	24-Feb-11	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	415	489.74	35.6	1186.05	2.74	251.7	440.58	#N/A	522.50	2.5
K-09-04	126.5-127.5	23	56	3-Mar-11	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	445	491.21	29.2	931.34	2.81	227.67	381.74	#N/A	471.50	1.75
K-09-04	126.5-127.5	23	57	10-Mar-11	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	455	499.02	22.8	1067.36	2.7	203.64	322.90	#N/A	420.50	1
K-09-04	126.5-127.5	23	58	17-Mar-11	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	445	511.23	26.9	1309.39	2.69	118.095	222.11	#N/A	480.00	1
K-09-04	126.5-127.5	23	59	24-Mar-11	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	455	392.08	31	440.23	3.21	32.55	121.31	#N/A	539.50	1
K-09-04	126.5-127.5	23	60	31-Mar-11	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	505	540.03	56.75	1813.01	2.62	459.92	537.91	#N/A	914.50	1.75
K-09-04	126.5-127.5	23	61	7-Apr-11	Kerr	0	KERR	VU	QSP	3	IARG	3	Drillcore		K-09-03_2	Water	500	445	572.26	82.5	2338.74	2.39	887.29	954.51	#N/A	1289.50	2.5
																		483.344	34.965	1090.479	2.822	246.969	359.2357097	#N/A	534.6	1.4

Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	(Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
HC23 KERR																				
K-09-04 126.5-127.5	0.07	0.223671	0.000811	0.002516	0.042121	0.000678	0.000005	0.063179	0.000873	205.219355	0.000353	0.043411	0.339	1.180806	0.001596	0.017048	8.820806	0.962210	0.000005	0.000113
K-09-04 126.5-127.5	0.08	0.308871	0.000411	0.001416	0.029021	0.001528	0.000005	0.059179	0.000801	163.219355	0.000353	0.035311	0.392	1.295806	0.001696	0.010048	8.050806	1.243210	0.000005	0.000353
K-09-04 126.5-127.5	0.23	1.483871	0.000111	0.001316	0.032621	0.013288	0.000005	0.079279	0.001326	168.219355	0.000353	0.067511	7.17	1.755806	0.011206	0.025048	10.330806	1.983210	0.000005	0.000243
K-09-04 126.5-127.5	0.24	2.283871	0.000111	0.001316	0.029121	0.017828	0.000005	0.042879	0.001226	156.219355	0.000353	0.063811	9.43	2.725806	0.010306	0.022048	8.390806	1.743210	0.000005	0.000083
K-09-04 126.5-127.5	0.19	2.383871	0.000111	0.001216	0.026821	0.019428	0.000005	0.031179	0.000980	133.219355	0.000353	0.050011	9.29	3.715806	0.009466	0.013048	6.130806	1.373210	0.000005	0.000063
K-09-04 126.5-127.5	0.18	2.733871	0.000111	0.001316	0.026521	0.019528	0.000005	0.023179	0.000864	161.219355	0.000353	0.044011	9.86	5.905806	0.008386	0.008048	5.590806	1.353210	0.000005	0.000073
K-09-04 126.5-127.5	0.14	2.013871	0.000111	0.000816	0.026421	0.015928	0.000005	0.017179	0.000660	144.219355	0.000803	0.027711	6.23	6.405806	0.006366	0.005048	4.230806	1.103210	0.000005	0.000073
K-09-04 126.5-127.5	0.11	2.763871	0.000111	0.000616	0.028721	0.014028	0.000005	0.013179	0.000088	138.219355	0.001103	0.025611	8.3	7.655806	0.011506	0.002048	3.360806	0.907210	0.000005	0.000033
K-09-04 126.5-127.5	0.12	2.753871	0.000111	0.000716	0.028421	0.013528	0.000005	0.010179	0.000593	143.219355	0.001103	0.026011	8.39	8.535806	0.015006	0.002048	3.120806	0.866210	0.000005	0.000063
K-09-04 126.5-127.5	0.09	2.643871	0.000111	0.000616	0.031221	0.008098	0.000005	0.007179	0.000337	95.719355	0.000353	0.014511	6.83	6.455806	0.004096	0.001048	1.820806	0.511210	0.000005	0.000093
K-09-04 126.5-127.5	0.11	2.973871	0.000111	0.000916	0.031921	0.009258	0.000005	0.008179	0.000423	105.219355	0.001203	0.017611	8.32	8.905806	0.004246	0.001048	2.060806	0.576210	0.000005	0.000233
K-09-04 126.5-127.5	0.10	2.813871	0.000111	0.000816	0.034321	0.007818	0.000005	0.005179	0.000392	86.919355	0.001203	0.016411	8.78	9.225806	0.003166	0.001048	1.940806	0.536210	0.000005	0.000093
K-09-04 126.5-127.5	0.10	2.593871	0.000111	0.000716	0.031121	0.006858	0.000005	0.006179	0.000372	74.519355	0.001203	0.015611	8.78	8.675806	0.005486	0.000548	1.600806	0.436210	0.000005	0.000383
K-09-04 126.5-127.5	0.12	2.713871	0.000111	0.000916	0.029421	0.006508	0.000005	0.005179	0.000520	96.019355	0.001303	0.017311	11.61	11.675806	0.007246	0.000548	2.070806	0.566210	0.000005	0.000043
K-09-04 126.5-127.5	0.13	2.993871	0.000111	0.000816	0.026721	0.006208	0.000005	0.007179	0.000488	89.519355	0.001503	0.017911	12.81	13.475806	0.045406	0.001048	2.180806	0.572210	0.000020	0.000143
K-09-04 126.5-127.5	0.14	3.073871	0.000111	0.001016	0.025321	0.005578	0.000005	0.007179	0.000415	74.719355	0.001103	0.017711	12.51	12.175806	0.002096	0.001048	1.830806	0.483210	0.000005	0.000243
K-09-04 126.5-127.5	0.16	3.693871	0.000111	0.001016	0.022721	0.005348	0.000005	0.006079	0.000462	96.819355	0.001603	0.018211	15.51	14.475806	0.003266	0.000548	2.160806	0.555210	0.000010	0.000043
K-09-04 126.5-127.5	0.12	3.353871	0.000111	0.001116	0.024521	0.004108	0.000005	0.005179	0.000417	85.919355	0.000353	0.021311	17.91	13.675806	0.025106	0.000548	1.920806	0.475210	0.000005	0.000013
K-09-04 126.5-127.5	0.16	3.313871	0.000111	0.001016	0.028521	0.003728	0.000005	0.006479	0.000402	79.219355	0.001703	0.015611	17.61	12.975806	0.001866	0.000548	1.710806	0.426210	0.000005	0.000783
K-09-04 126.5-127.5	0.14	2.763871	0.000111	0.002116	0.030521	0.003218	0.000005	0.018979	0.000456	64.319355	0.001503	0.016111	15.01	11.775806	0.004056	0.000548	1.460806	0.356210	0.000005	0.000853
K-09-04 126.5-127.5	0.04	2.583871	0.000111	0.001116	0.028321	0.002808	0.000005	0.004879	0.000443	57.519355	0.001703	0.016211	19.31	13.775806	0.001626	0.001048	1.530806	0.367210	0.000005	0.000263
K-09-04 126.5-127.5	0.17	2.983871	0.000111	0.001316	0.022521	0.003308	0.000005	0.004479	0.000444	61.319355	0.002003	0.020611	21.91	15.475806	0.001146	0.001048	1.780806	0.421210	0.000005	0.001073
K-09-04 126.5-127.5	0.18	2.403871	0.000111	0.000916	0.023521	0.002778	0.000005	0.014079	0.000449	50.319355	0.003703	0.017911	20.71	16.875806	0.001166	0.011048	1.710806	0.389210	0.000005	0.000343
K-09-04 126.5-127.5	0.21	2.843871	0.000111	0.000716	0.021021	0.002378	0.000005	0.005179	0.000544	49.019355	0.001703	0.022311	24.31	17.375806	0.001336	0.002048	1.630806	0.360210	0.000005	0.000133
K-09-04 126.5-127.5	0.18	1.603871	0.000111	0.001116	0.022521	0.001808	0.000005	0.006679	0.000675	35.119355	0.001303	0.015711	19.61	13.575806	0.002126	0.001048	1.200806	0.261210	0.000010	0.000693
K-09-04 126.5-127.5	0.22	1.493871	0.000111	0.001316	0.023521	0.001578	0.000005	0.004179	0.000372	34.919355	0.000353	0.014711	18.51	14.575806	0.002626	0.000548	1.250806	0.247210	0.000005	0.000008
K-09-04 126.5-127.5	0.18	1.713871	0.000111	0.000716	0.022021	0.001348	0.000005	0.004079	0.000354	31.119355	0.001103	0.013611	19.41	15.275806	0.000906	0.000548	1.170806	0.259210	0.000005	0.001613
K-09-04 126.5-127.5	0.04	1.613871	0.000111	0.000716	0.021121	0.001378	0.000005	0.003779	0.000396	25.919355	0.001903	0.015611	21.61	14.975806	0.004086	0.001048	1.170806	0.237210	0.000005	0.000008
K-09-04 126.5-127.5	0.19	1.723871	0.000111	0.000716	0.019821	0.001468	0.000005	0.004179	0.000448	26.619355	0.001603	0.017311	24.51	17.275806	0.000886	0.001048	1.210806	0.246210	0.000005	0.000008
K-09-04 126.5-127.5	0.19	1.473871	0.000111	0.000516	0.022021	0.001128	0.000005	0.003279	0.000453	20.019355	0.001803	0.014511	21.01	14.875806	0.003436	0.001048	1.080806	0.208210	0.000005	0.000008
K-09-04 126.5-127.5	0.19	1.473871	0.000111	0.000516	0.020521	0.001038	0.000005	0.003379	0.000385	18.519355	0.001703	0.014011	22.31	15.575806	0.000576	0.001048	1.090806	0.209210	0.000005	0.000008
K-09-04 126.5-127.5	0.21	1.333871	0.000111	0.000716	0.021921	0.000978	0.000005	0.003179	0.000429	16.119355	0.001803	0.013011	21.01	14.575806	0.000806	0.001048	0.978806	0.206210	0.000005	0.000043
K-09-04 126.5-127.5	0.23	1.763871	0.000511	0.001516	0.021221	0.001098	0.000005	0.003279	0.000542	16.119355	0.001703	0.014011	25.11	16.775806	0.004436	0.000548	1.050806	0.215210	0.000010	0.001853
K-09-04 126.5-127.5	0.20	1.693871	0.000111	0.000716	0.020821	0.001078	0.000005	0.004279	0.000550	15.619355	0.001703	0.017211	27.61	18.575806	0.002266	0.002048	1.080806	0.212210	0.000005	0.000008
K-09-04 126.5-127.5	0.22	1.683871	0.000111	0.000516	0.019121	0.000938	0.000005	0.003579	0.000452	13.319355	0.001603	0.015511	25.51	18.375806	0.000436	0.001048	1.060806	0.201210	0.000005	0.000053
K-09-04 126.5-127.5	0.23	1.343871	0.000111	0.000816	0.019921	0.000948	0.000005	0.004179	0.000460	13.119355	0.001603	0.016011	24.61	18.675806	0.000516	0.000548	1.050806	0.202210	0.000005	0.000233
K-09-04 126.5-127.5	0.04	1.763871	0.000111	0.000616	0.017021	0.001048	0.000005	0.004779	0.000565	18.519355	0.002103	0.019011	30.61	23.175806	0.000356	0.002048	1.590806	0.324210	0.000005	0.000193
K-09-04 126.5-127.5	0.24	1.853871	0.000111	0.000316	0.015421	0.001018	0.000005	0.004379	0.000549	11.919355	0.001803	0.018011	32.11	21.475806	0.002966	0.002048	1.140806	0.215210	0.000005	0.000213
K-09-04 126.5-127.5	0.26	1.683871	0.000111	0.000816	0.017321	0.001048	0.000005	0.004179	0.000582	12.219355	0.002003	0.022511	35.41	22.575806	0.000656	0.002048	1.150806	0.216210	0.000005	0.000273
K-09-04 126.5-127.5	0.25	1.993871	0.000111	0.001116	0.022021	0.000838	0.000005	0.004779	0.000634	13.419355	0.001903	0.018311	32.91	23.175806	0.000836	0.001048	1.120806	0.202210	0.000005	0.000553
K-09-04 126.5-127.5	0.04	0.185271	0.000111	0.000116	0.010921	0.000038	0.000005	0.002279	0.000166	12.919355	0.000703	0.003131	0.475	1.181806	0.000916	0.000548	5.510806	0.959210	0.000020	0.000533
K-09-04 126.5-127.5	0.20	1.513871	0.000111	0.000616	0.016221	0.000668	0.000005	0.003279	0.000464	9.029355	0.001703	0.015811	28.01	18.975806	0.003576	0.001048	0.873806	0.156210	0.000020	0.000303
K-09-04 126.5-127.5	0.16	1.163871	0.000111	0.001416	0.015521	0.000588	0.000005	0.004579	0.000582	7.119355	0.001703	0.012511	24.91	14.875806	0.009066	0.001048	0.698806	0.129210	0.000250	0.000113
K-09-04 126.5-127.5	0.18	1.413871	0.000111	0.000516	0.017121	0.000628	0.000005	0.003479	0.000512	9.489355	0.001803	0.014811	2.88	20.475806	0.004206	0.000548	0.918806	0.165210	0.000005	0.000008
K-09-04 126.5-127.5	0.16	1.593871	0.000111	0.000316	0.015821	0.000518	0.000005	0.003179	0.000494	8.169355	0.002103	0.015611	30.11	20.275806	0.002776	0.000548	0.856806	0.153210	0.000010	0.003193
K-09-04 126.5-127.5	0.19	1.593871	0.000111	0.000616	0.019021	0.000608	0.000005	0.002679	0.000528	8.639355	0.001903	0.016511	31.51	23.575806	0.001226	0.002048	1.022806	0.172210	0.000005	0.000008
K-09-04 126.5-127.5	0.19	1.263871	0.000111	0.000516	0.018521	0.000488	0.000005	0.002979	0.000468	7.059355	0.001603	0.015411	28.01	19.075806	0.001126	0.001048	0.781806	0.136210	0.000010	0.000153
K-09-04 126.5-127.5	0.18	1.353871	0.000111	0.000716	0.019021	0.000508	0.000005	0.002879	0.000475	6.469355	0.001703	0.014611	28.81	19.675806	0.001196	0.001048	0.780806	0.132210	0.000010	0.000008
K-09-04 126.5-127.5	0.16	1.298871	0.000111	0.000816	0.018971	0.000473	0.000005	0.003229	0.000468	6.264355	0.001453	0.015561	28.61	19.175806	0.000716	0.001048	0.750306	0.126710	0.000008	0.000020
K-09-04 126.5-127.5	0.15	1.243871	0.000111	0.000916	0.018921	0.000438	0.000005	0.003579	0.000462	6.059355	0.001203	0.016511	28.41	18.675806	0.000236	0.001048	0.719806	0.121210	0.000005	0.000033
K-09-04 126.5-127.5	0.15	1.106371	0.000111	0.000616	0.019521	0.000368	0.000005	0.002979	0.000415	5.594355	0.001053	0.014661	25.81	16.175806	0.000706	0.000798	0.666306	0.110010	0.000005	0.000038
K-09-04 126.5-127.5	0.15	0.968871	0.000111	0.000316	0.020121	0.000298	0.000005	0.002379	0.000368	5.129355	0.000903	0.012811	23.21	13.675806	0.001176	0.000548	0.612806	0.098810	0.000005	0.000043
K-09-04 126.5-127.5	0.16	1.771371	0.000111	0.000766	0.019171	0.000383	0.000005	0.002529	0.000538	5.949355	0.001803	0.016061	28.01	18.725806	0.001496	0.000798	0.746806	0.121010	0.000005	0.000038
K-09-04 126.5-127.5	0.18	2.573871	0.000111	0.001216	0.018221	0.000468	0.000005	0.002679	0.000709	6.769355	0.002703	0.019311	32.81	23.775806	0.001816	0.001048	0.880806	0.143210	0.000005	0.000033
K-09-04 126.5-127.5	0.39	5.033871	0.000111	0.002616	0.016421	0.000693	0.000005	0.002579	0.000802	9.394355	0.006303	0.036261	35.76	57.875806	0.001306	0.002048	1.205806	0.217710	0.000028	0.000033
K-09-04 126.5-127.5	0.60	7.493871	0.000111	0.004016	0.014621	0.000918	0.000005	0.002479	0.000895	12.019355	0.009903	0.053211	38.71	91.975806	0.000796	0.003048	1.530806	0.292210	0.000050	0.000033
K-09-04 126.5-127.5	0.49	6.318871	0.000111	0.002716	0.012571	0.000708	0.000005	0.002129	0.000789	9.704355	0.008303	0.046261	31.31	84.625806	0.001306	0.002548	1.370806	0.258210	0.000035	0.000033
K-09-04 126.5-127.5	0.39	5.143871	0.000111	0.001416	0.010521	0.000498	0.000005	0.001779	0.000683	7.389355	0.006703	0.039311	23.91	77.275806	0.001816	0.002048	1.210806	0.224210	0.000020	0.000033
K-09-04 126.5-127.5	0.45	5.438871	0.000111	0.003866	0.010241	0.000513	0.000005	0.001979	0.000682	8.729355	0.007853	0.046011	21.21	103.725806	0.001146	0.002548	1.390806	0.269710	0.000013	0.000048
K-09-04 126.5-127.5	0.52	5.733871	0.000111	0.006316	0.009961	0.000528	0.000005	0.002179	0.000682	10.069355	0.009003	0.052711	18.51	130.175806	0.000476	0.003048	1.570806	0.315210	0.000005	0.000063
K-09-04 126.5-127.5	1.13	9.058871	0.000111	0.022566	0.009561	0.000638	0.000005	0.001929	0.000746	18.694355	0.013303	0.087161	19.96	270.175806	0.001141	0.004048	2.600806	0.546210	0.000005	0.000143
K-09-04 126.5-127.5	1.75	12.383871	0.000111	0.038816	0.009161	0.000748	0.000005	0.001679	0.000810	27.319355	0.017603	0.121611	21.41	410.175806	0.001806	0.005048	3.630806	0.777210	0.000005	0.000223
	0.607677419	6.095121	0.000111	0.008431	0.013045	0.000610	0.000005	0.002194	0.000733	11.603855	0.008348	0.051791	27.16	126.850806	0.001311	0.002623	1.613906	0.316490	0.000017	0.000068

Appendix 5.2-2. Humidity Cell Leachate Concentrations: Kerr Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S) Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
HC23 KERR																
K-09-04 126.5-127.5	0.015008	0.008145	24.830645	0.022963	1.089355	0.000006	86.017258	1.181903	203	0.000602	0.000161	0.000115	0.000453	0.000154	0.016323	0.00002
K-09-04 126.5-127.5	0.012608	0.008145	17.530645	0.023563	3.089355	0.000006	30.717258	1.211903	177	0.000402	0.000051	0.000215	0.000923	0.000114	0.017323	0.000005
K-09-04 126.5-127.5	0.021708	0.008145	18.630645	0.025463	7.959355	0.000011	21.417258	1.531903	178	0.000402	0.000041	0.000415	0.006521	0.000144	0.049323	0.000005
K-09-04 126.5-127.5	0.022608	0.008145	14.830645	0.019263	8.269355	0.000011	11.017258	1.341903	164	0.000402	0.000101	0.000515	0.008171	0.000064	0.051323	0.000005
K-09-04 126.5-127.5	0.021208	0.008145	9.770645	0.020093	6.949355	0.000011	3.737258	1.061903	136	0.000302	0.000191	0.000415	0.007931	0.000029	0.045323	0.000005
K-09-04 126.5-127.5	0.016708	0.008145	9.250645	0.022563	7.649355	0.000021	1.657258	1.131903	168	0.000202	0.000121	0.000415	0.007191	0.000029	0.038323	0.00003
K-09-04 126.5-127.5	0.011508	0.008145	6.170645	0.017963	6.609355	0.000006	0.817258	1.021903	149	0.000102	0.000091	0.000315	0.004861	0.000029	0.026323	0.00007
K-09-04 126.5-127.5	0.010708	0.008145	5.150645	0.020263	6.259355	0.000031	0.597258	0.894903	133	0.000102	0.000151	0.000315	0.003961	0.000029	0.027323	0.00111
K-09-04 126.5-127.5	0.011108	0.008145	4.650645	0.022263	5.819355	0.000021	0.477258	0.864903	155	0.000102	0.000351	0.000215	0.003291	0.000029	0.027323	0.00002
K-09-04 126.5-127.5	0.006108	0.008145	2.570645	0.012563	3.379355	0.000021	0.277258	0.537903	96.4	0.000102	0.000231	0.000215	0.001641	0.000029	0.016323	0.000005
K-09-04 126.5-127.5	0.008408	0.008145	2.870645	0.017463	4.229355	0.000031	0.347258	0.598903	113	0.000102	0.000281	0.000215	0.001971	0.000029	0.020323	0.00003
K-09-04 126.5-127.5	0.008008	0.008145	2.140645	0.016063	3.639355	0.000011	0.307258	0.503903	90.8	0.000102	0.000361	0.000065	0.001581	0.000029	0.020323	0.00003
K-09-04 126.5-127.5	0.007608	0.008145	2.010645	0.014663	3.989355	0.000041	0.237258	0.440903	80.1	0.000102	0.000241	0.000115	0.001471	0.000029	0.019323	0.00001
K-09-04 126.5-127.5	0.008408	0.193145	2.100645	0.016363	4.529355	0.000051	0.247258	0.550903	104	0.000102	0.000271	0.000115	0.001381	0.000029	0.024323	0.00002
K-09-04 126.5-127.5	0.009208	0.222145	1.800645	0.017363	4.059355	0.000021	0.227258	0.512903	100	0.000102	0.000006	0.000215	0.001231	0.000029	0.030323	0.00005
K-09-04 126.5-127.5	0.008508	0.210145	1.520645	0.016863	3.519355	0.000051	0.207258	0.439903	90.4	0.000102	0.000201	0.000065	0.001091	0.000029	0.123323	0.000005
K-09-04 126.5-127.5	0.009508	0.260145	1.670645	0.017663	4.139355	0.000071	0.207258	0.553903	115	0.000102	0.000131	0.000215	0.000799	0.000029	0.160323	0.00006
K-09-04 126.5-127.5	0.008608	0.281145	1.500645	0.015663	3.689355	0.000041	0.207258	0.510903	108	0.000102	0.000201	0.000065	0.000761	0.000029	0.160323	0.00004
K-09-04 126.5-127.5	0.008208	0.306145	1.283645	0.013063	3.279355	0.000006	0.197258	0.469903	94.3	0.000102	0.000261	0.000115	0.000704	0.000029	0.028323	0.00003
K-09-04 126.5-127.5	0.008508	0.525145	1.410645	0.013463	2.919355	0.000751	0.277258	0.393903	80.8	0.000102	0.000101	0.000315	0.000871	0.000044	0.034323	0.00002
K-09-04 126.5-127.5	0.008508	0.327145	1.156645	0.010363	3.099355	0.000091	0.187258	0.410903	78.2	0.000102	0.000141	0.000615	0.000742	0.000029	0.026323	0.00003
K-09-04 126.5-127.5	0.011908	0.424145	1.159645	0.016063	3.249355	0.000081	0.127258	0.444903	87.3	0.000102	0.000071	0.000115	0.000585	0.000029	0.027323	0.00003
K-09-04 126.5-127.5	0.009408	1.863145	1.236645	0.014863	3.379355	0.000101	0.197258	0.444903	83.6	0.000102	0.000231	0.001315	0.000519	0.000084	0.023323	0.00003
K-09-04 126.5-127.5	0.010108	0.524145	1.222645	0.015463	3.469355	0.000081	0.187258	0.452903	73.2	0.000102	0.000221	0.000065	0.000482	0.000029	0.029323	0.00001
K-09-04 126.5-127.5	0.007708	0.413145	1.073645	0.012163	2.639355	0.000051	0.237258	0.278903	57	0.000102	0.000261	0.000115	0.000392	0.000029	0.052323	0.00004
K-09-04 126.5-127.5	0.007308	0.364145	1.003645	0.015063	2.549355	0.000081	0.167258	0.386903	59.5	0.000102	0.000031	0.000415	0.000331	0.000029	0.021323	0.00002
K-09-04 126.5-127.5	0.007008	0.358145	0.918645	0.011963	2.499355	0.000081	0.127258	0.370903	54.9	0.000102	0.000091	0.000065	0.000338	0.000029	0.017323	0.00001
K-09-04 126.5-127.5	0.008508	0.326145	0.875645	0.010663	2.229355	0.000101	0.127258	0.343903	55.3	0.000102	0.000081	0.000065	0.000333	0.000029	0.018323	0.00002
K-09-04 126.5-127.5	0.009308	0.364145	0.927645	0.012963	2.659355	0.000121	0.117258	0.390903	61	0.000102	0.000071	0.000065	0.000335	0.000029	0.020323	0.00002
K-09-04 126.5-127.5	0.007808	0.323145	0.854645	0.011763	1.869355	0.000101	0.107258	0.321903	50	0.000102	0.000871	0.000065	0.000292	0.000029	0.018323	0.00003
K-09-04 126.5-127.5	0.007108	0.323145	0.828645	0.012263	1.859355	0.000101	0.107258	0.315903	49.9	0.000102	0.000081	0.000065	0.000278	0.000029	0.020323	0.000005
K-09-04 126.5-127.5	0.006908	0.273145	0.719645	0.009533	1.689355	0.000111	0.107258	0.288903	44	0.000102	0.000561	0.000115	0.000486	0.000184	0.024323	0.00002
K-09-04 126.5-127.5	0.007808	0.383145	0.780645	0.016463	1.939355	0.000111	0.127258	0.307903	49.6	0.000102	0.000251	0.000115	0.007011	0.000029	0.021323	0.00003
K-09-04 126.5-127.5	0.009808	0.451145	0.806645	0.012663	1.919355	0.000131	0.137258	0.312903	51.6	0.000102	0.000791	0.000065	0.000495	0.000074	0.022323	0.00002
K-09-04 126.5-127.5	0.008808	0.360145	0.784645	0.011663	1.969355	0.000141	0.107258	0.288903	50	0.000102	0.000671	0.000065	0.000289	0.000029	0.019323	0.00005
K-09-04 126.5-127.5	0.008908	0.406145	0.740645	0.010463	2.139355	0.000141	0.147258	0.286903	49.9	0.000102	0.000861	0.000315	0.000354	0.000029	0.021323	0.00004
K-09-04 126.5-127.5	0.013308	0.539145	0.831645	0.007513	2.359355	0.000131	0.267258	0.333903	53.4	0.000102	0.000541	0.000065	0.000775	0.000029	0.018323	0.00002
K-09-04 126.5-127.5	0.010108	0.551145	0.745645	0.012863	2.159355	0.000151	0.137258	0.286903	53.9	0.000102	0.000031	0.000115	0.000286	0.000029	0.020323	0.000005
K-09-04 126.5-127.5	0.011508	0.419145	0.803645	0.014763	2.459355	0.000151	0.117258	0.297903	59.8	0.000102	0.000031	0.000315	0.000299	0.000029	0.054323	0.000005
K-09-04 126.5-127.5	0.010308	0.457145	0.828645	0.015063	2.519355	0.000171	0.117258	0.324903	55.9	0.000102	0.000141	0.001315	0.000261	0.000029	0.034323	0.00003
K-09-04 126.5-127.5	0.000808	0.033145	0.573645	0.003823	0.509355	0.000006	0.107258	0.093003	16.4	0.000102	0.000681	0.000065	0.000023	0.000054	0.006323	0.000005
K-09-04 126.5-127.5	0.008408	0.508145	0.645645	0.010963	2.029355	0.000131	0.107258	0.244903	44.6	0.000102	0.002901	0.000065	0.001601	0.000029	0.021323	0.00001
K-09-04 126.5-127.5	0.007108	0.471145	0.568645	0.010163	1.519355	0.000111	0.077258	0.196903	37	0.000102	0.000681	0.000215	0.000395	0.000029	0.031323	0.00017
K-09-04 126.5-127.5	0.009008	0.406145	0.612645	0.011263	1.849355	0.000141	0.087258	0.224903	44.3	0.000102	0.000261	0.000065	0.000259	0.000029	0.018323	0.000005
K-09-04 126.5-127.5	0.009208	0.493145	0.633645	0.011763	1.889355	0.000141	0.097258	0.225903	44.3	0.000102	0.000201	0.000215	0.000294	0.000029	0.016323	0.00002
K-09-04 126.5-127.5	0.009408	0.774145	0.654645	0.012963	1.939355	0.000141	0.117258	0.239903	53.3	0.000102	0.000271	0.000215	0.000250	0.000029	0.018323	0.00002
K-09-04 126.5-127.5	0.009208	0.663145	0.630645	0.010963	1.729355	0.000161	0.097258	0.193903	50.9	0.000102	0.000241	0.000065	0.000230	0.000029	0.017323	0.000005
K-09-04 126.5-127.5	0.007508	0.583145	0.593645	0.011163	1.749355	0.000141	0.097258	0.186903	45	0.000102	0.000101	0.000115	0.000182	0.000029	0.016323	0.000005
K-09-04 126.5-127.5	0.007958	0.532645	0.594145	0.011763	1.734355	0.000136	0.092258	0.181403	46.65	0.000102	0.000271	0.000115	0.000163	0.000029	0.016323	0.0000075
K-09-04 126.5-127.5	0.008408	0.482145	0.594645	0.012363	1.719355	0.000131	0.087258	0.175903	48.3	0.000102	0.000441	0.000115	0.000163	0.000029	0.016323	0.00001
K-09-04 126.5-127.5	0.008108	0.455645	0.573645	0.010273	1.474355	0.000141	0.092258	0.163903	43.05	0.000102	0.000366	0.000115	0.000552	0.000046	0.015823	0.000015
K-09-04 126.5-127.5	0.007808	0.429145	0.552645	0.008183	1.229355	0.000151	0.097258	0.151903	37.8	0.000102	0.000291	0.000115	0.000552	0.000064	0.015323	0.00002
K-09-04 126.5-127.5	0.009708	0.536645	0.565645	0.011073	1.449355	0.000161	0.097258	0.171403	47.65	0.000102	0.000201	0.000165	0.000438	0.000046	0.022823	0.0000125
K-09-04 126.5-127.5	0.011608	0.644145	0.578645	0.013963	1.669355	0.000171	0.097258	0.190903	57.5	0.000102	0.000111	0.000215	0.000323	0.000029	0.030323	0.000005
K-09-04 126.5-127.5	0.022908	0.983645	0.627145	0.016463	2.694355	0.000251	0.112258	0.198403	94.75	0.000102	0.000076	0.000465	0.000662	0.000386	0.028323	0.0000075
K-09-04 126.5-127.5	0.034208	1.323145	0.675645	0.018963	3.719355	0.000331	0.127258	0.205903	132	0.000102	0.000041	0.000715	0.001000	0.000744	0.026323	0.00001
K-09-04 126.5-127.5	0.029758	1.012645	0.619145	0.015113	3.694355	0.000316	0.127258	0.171403	118.5	0.000057	0.000136	0.000615	0.000832	0.000514	0.025323	0.000015
K-09-04 126.5-127.5	0.025308	0.702145	0.562645	0.011263	3.669355	0.000301	0.127258	0.136903	105	0.000012	0.000231	0.000515	0.000663	0.000284	0.024323	0.00002
K-09-04 126.5-127.5	0.029708	1.112645	0.559645	0.011613	3.969355	0.000376	0.117258	0.131403	137	0.000057	0.000191	0.000815	0.000660	0.000719	0.022323	0.0000125
K-09-04 126.5-127.5	0.034108	1.523145	0.556645	0.011963	4.269355	0.000451	0.107258	0.125903	169	0.000102	0.000151	0.001115	0.000657	0.001154	0.020323	0.000005
K-09-04 126.5-127.5	0.057758	5.243145	0.687645	0.012013	8.269355	0.000666	0.132258	0.164903	275.5	0.000102	0.000151	0.003315	0.001004	0.003739	0.028823	0.0000425
K-09-04 126.5-127.5	0.081408	8.963145	0.818645	0.012063	12.269355	0.000881	0.157258	0.203903	382	0.000102	0.000151	0.005515	0.001351	0.006324	0.037323	0.00008
	0.033648	2.204445	0.625145	0.013449	4.567355	0.000390	0.120258	0.170103	151.89	0.000084	0.000144	0.001345	0.000759	0.001394	0.026623	0.000021

Appendix 5.2-3

Waste Rock Humidity Cell Leach Rates for Additional Parameters

Rescan™
Engineers and Scientists

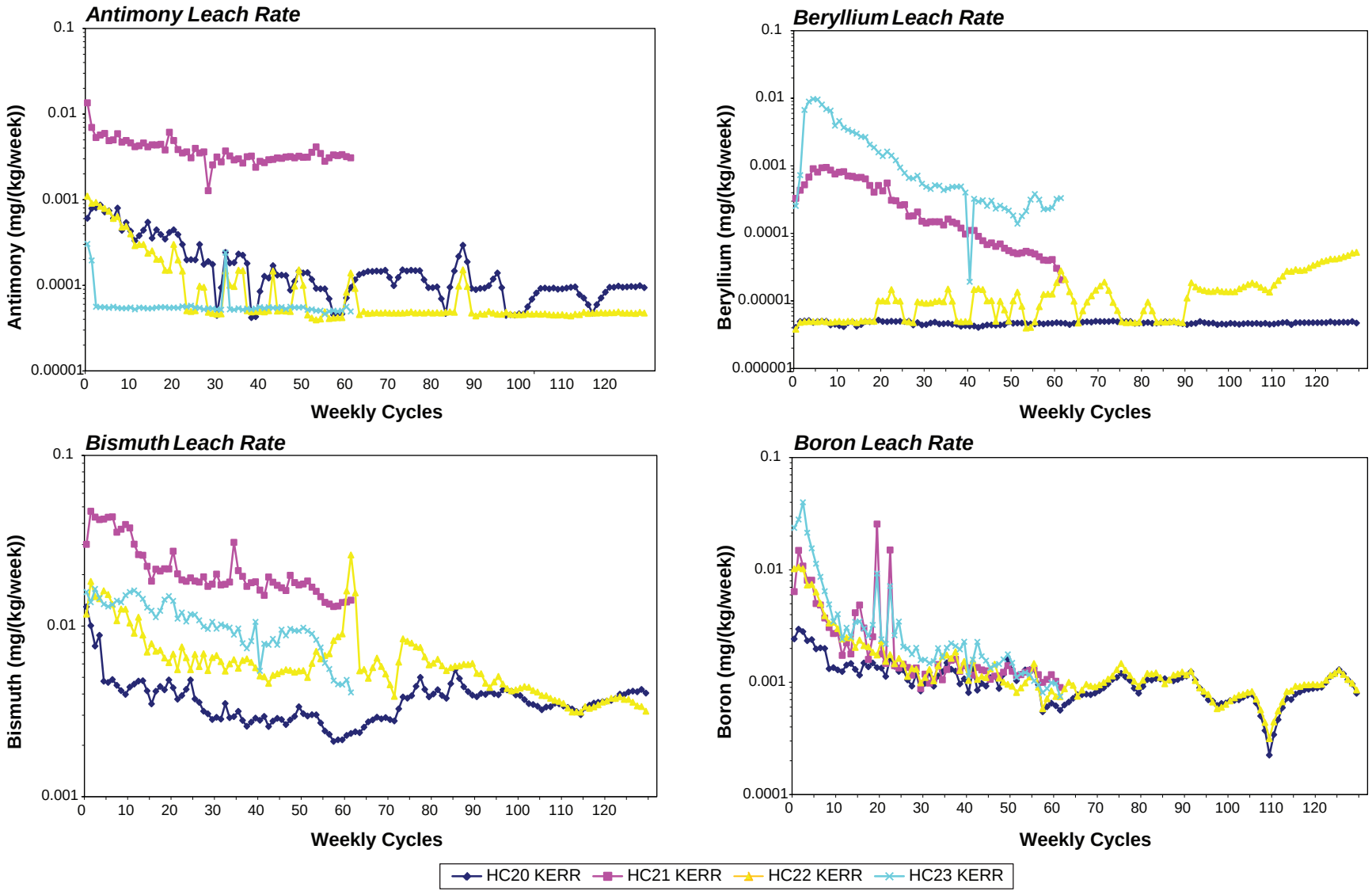


Figure 1

SEABRIDGE GOLD
KSM PROJECT

Antimony, Beryllium, Bismuth, and Boron Leach Rates, Kerr Deposit Waste Rock

Figure 1

Rescan™ Engineers & Scientists

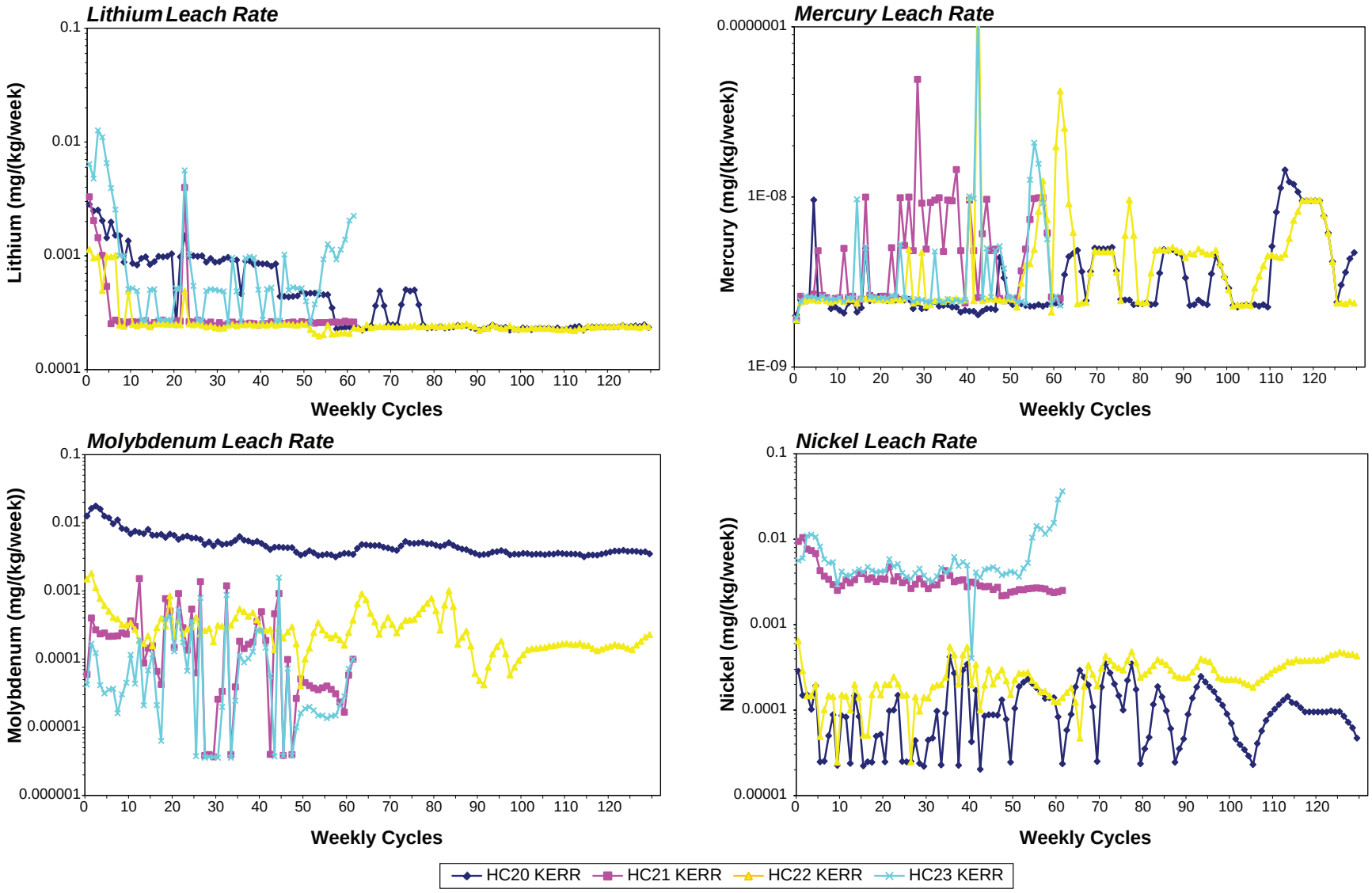


Figure 2

SEABRIDGE GOLD
KSM PROJECT

Lithium, Mercury, Molybdenum, and Nickel Leach Rates, Kerr Deposit Waste Rock

Figure 2

Rescan™ Engineers & Scientists

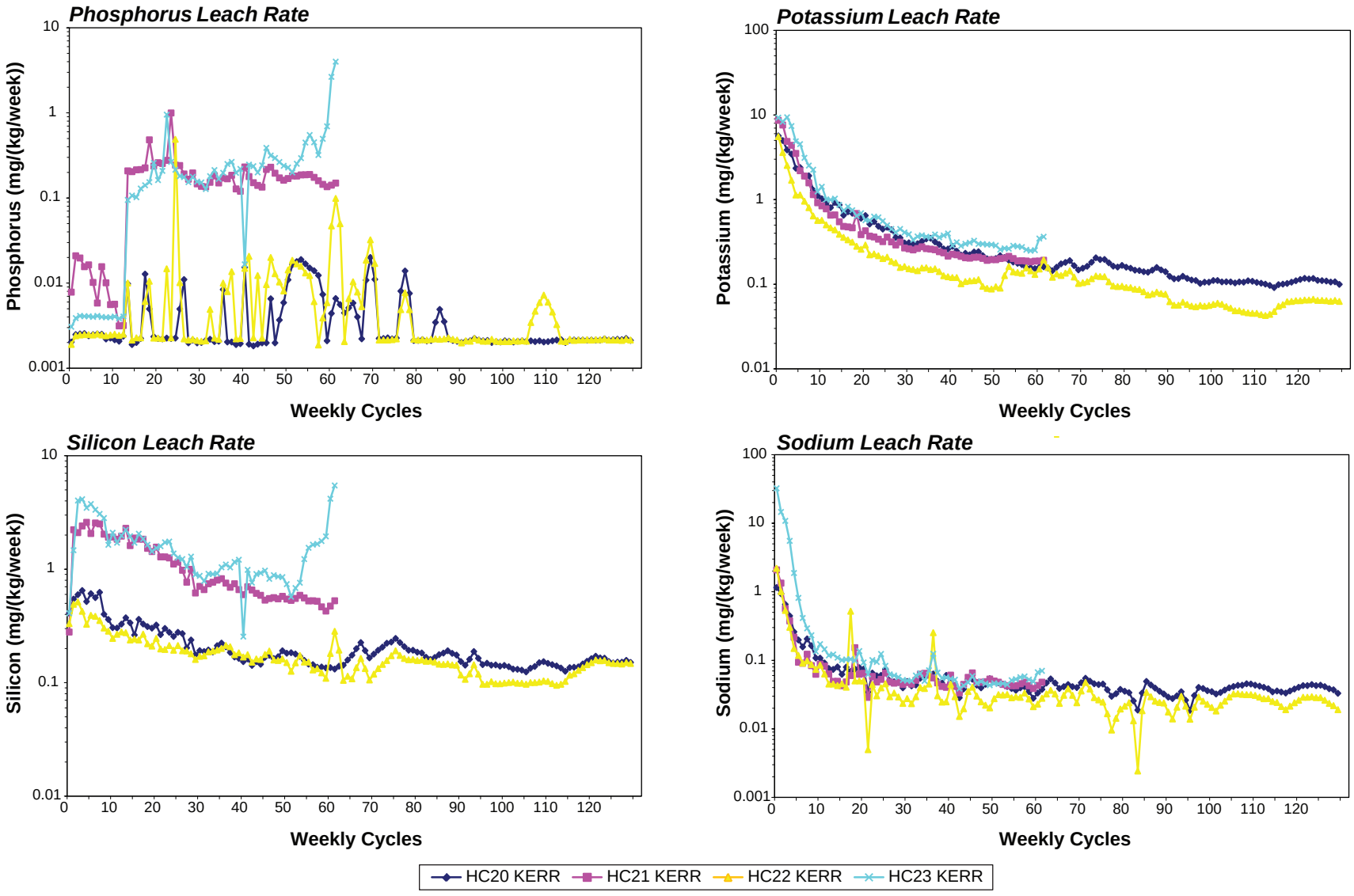


Figure 3

SEABRIDGE GOLD
KSM PROJECT

Phosphorus, Potassium, Silicon, and Sodium Leach Rates, Kerr Deposit Waste Rock

Figure 3

Rescan™ Engineers & Scientists

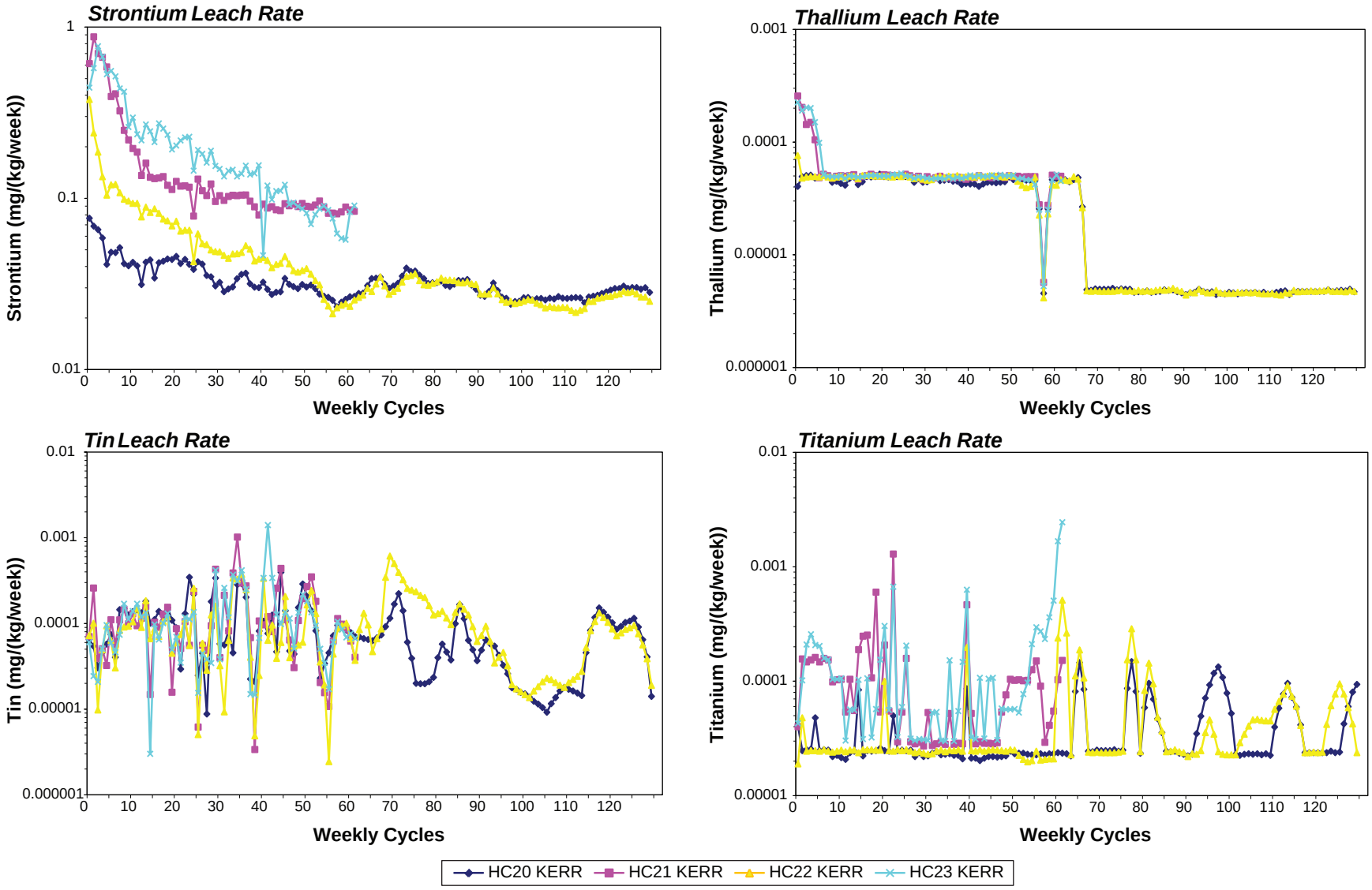


Figure 4

SEABRIDGE GOLD
KSM PROJECT

Strontium, Thallium, Tin, and Titanium Leach Rates, Kerr Deposit Waste Rock

Figure 4

Rescan™ Engineers & Scientists

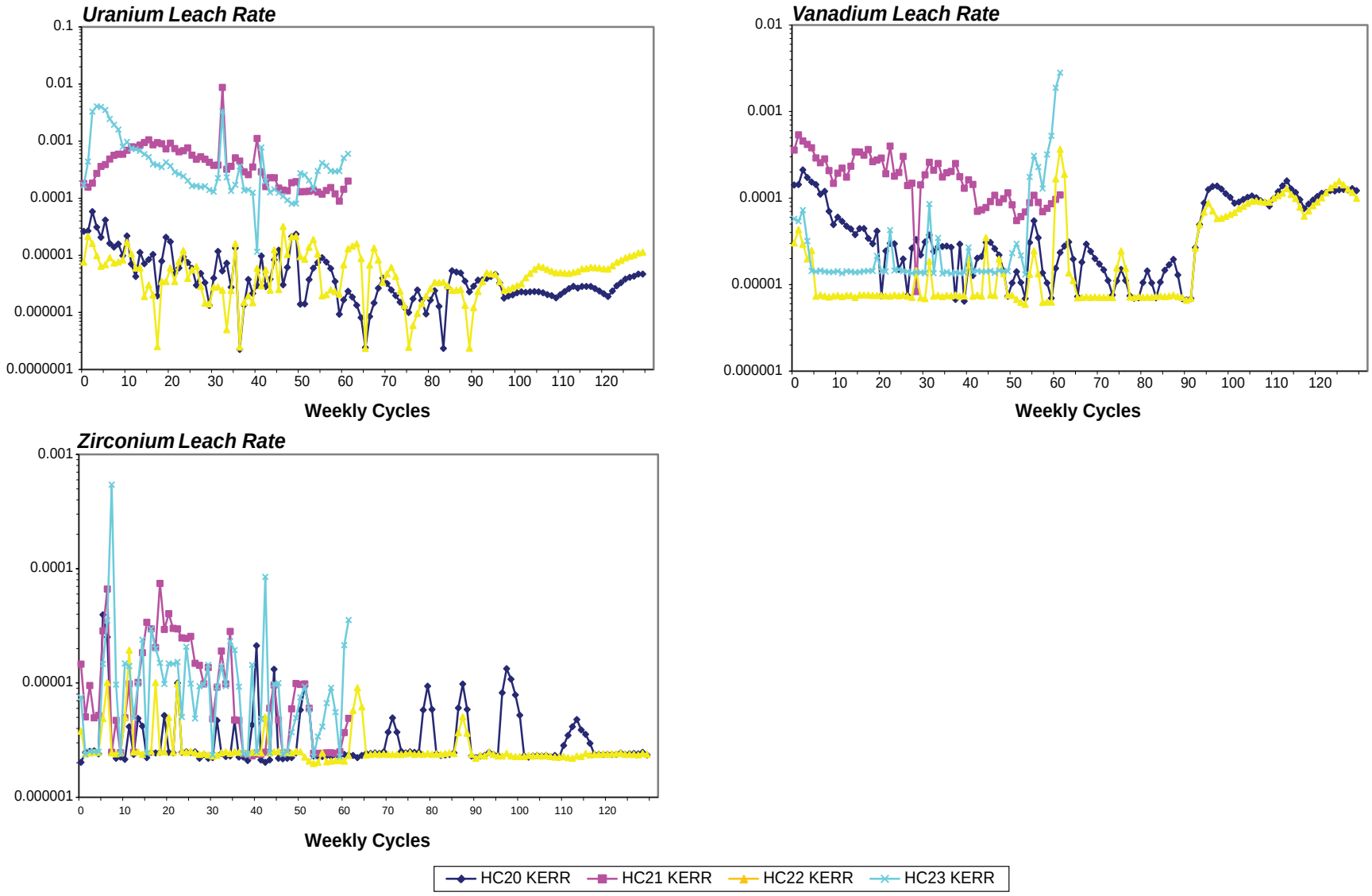


Figure 5

SEABRIDGE GOLD
KSM PROJECT

Uranium, Vanadium, and Zirconium Leach Rates, Kerr Deposit Waste Rock

Figure 5

Rescan™ Engineers & Scientists

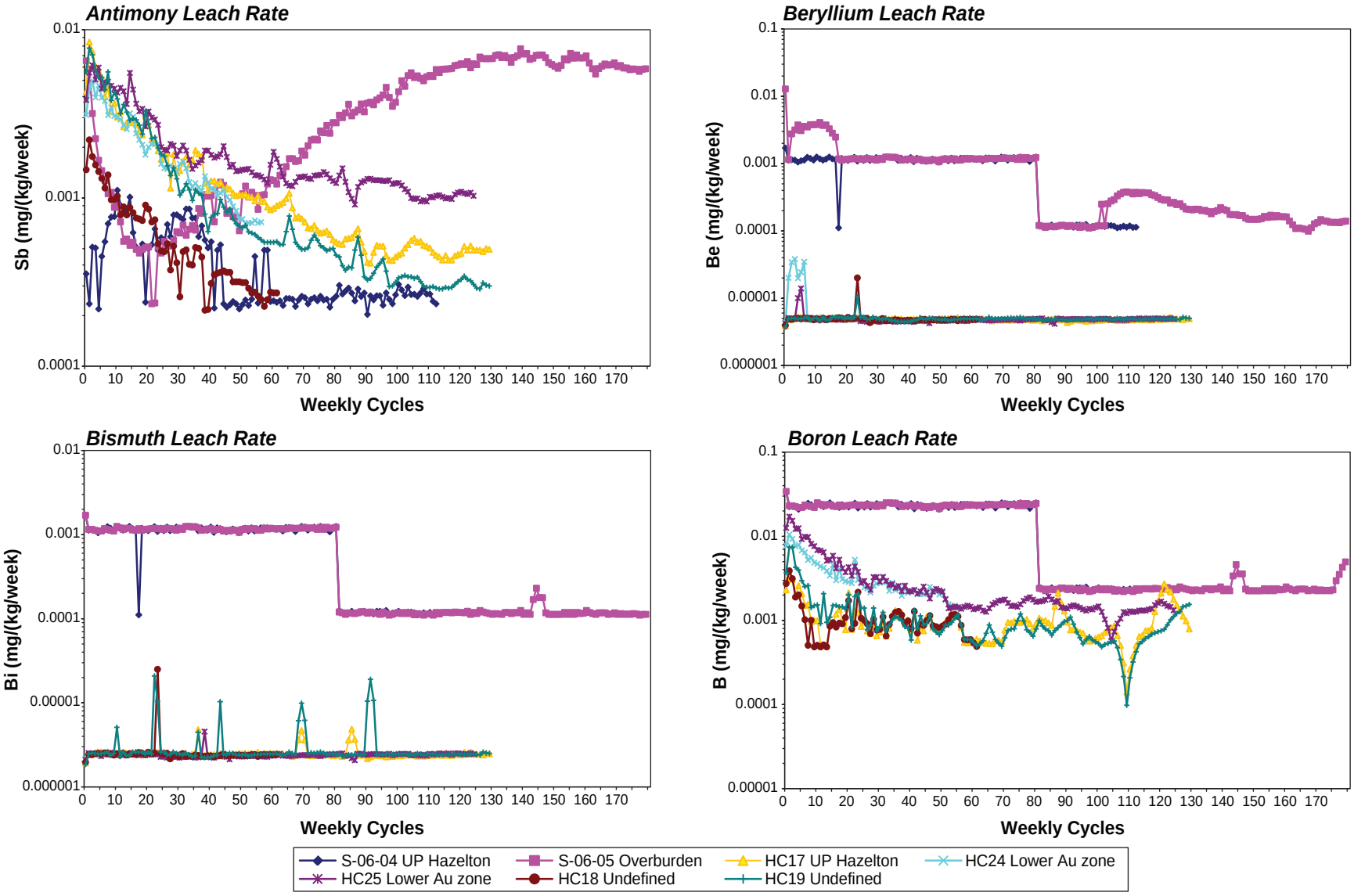


Figure 6

SEABRIDGE GOLD
KSM PROJECT

Antimony, Beryllium, Bismuth, and Boron Leach Rates, Sulphurets Deposit Waste Rock

Figure 6

Rescan™ Engineers & Scientists

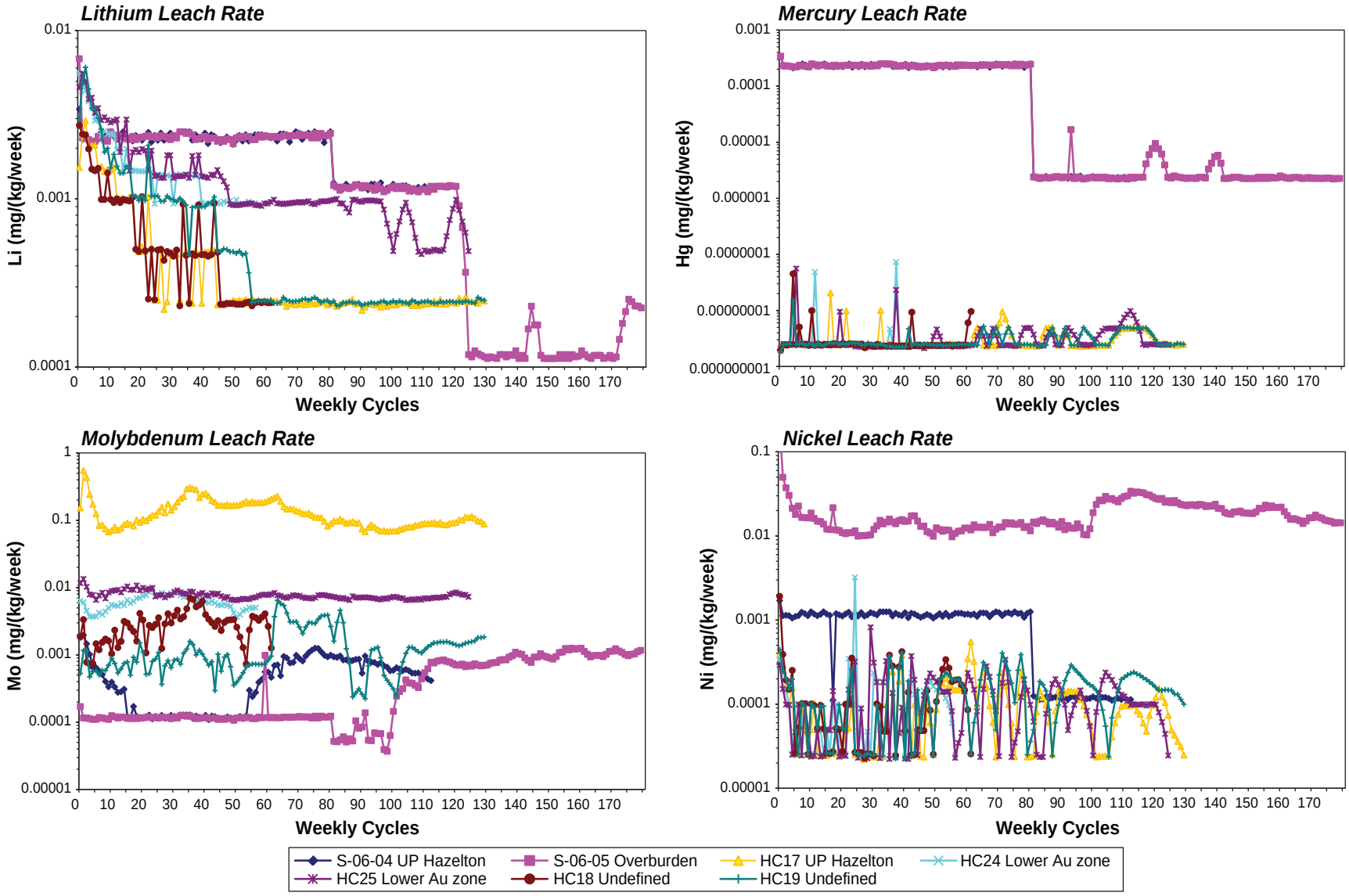


Figure 7

SEABRIDGE GOLD
KSM PROJECT

Lithium, Mercury, Molybdenum, and Nickel Leach Rates, Sulphurets Deposit Waste Rock

Figure 7

Rescan™ Engineers & Scientists

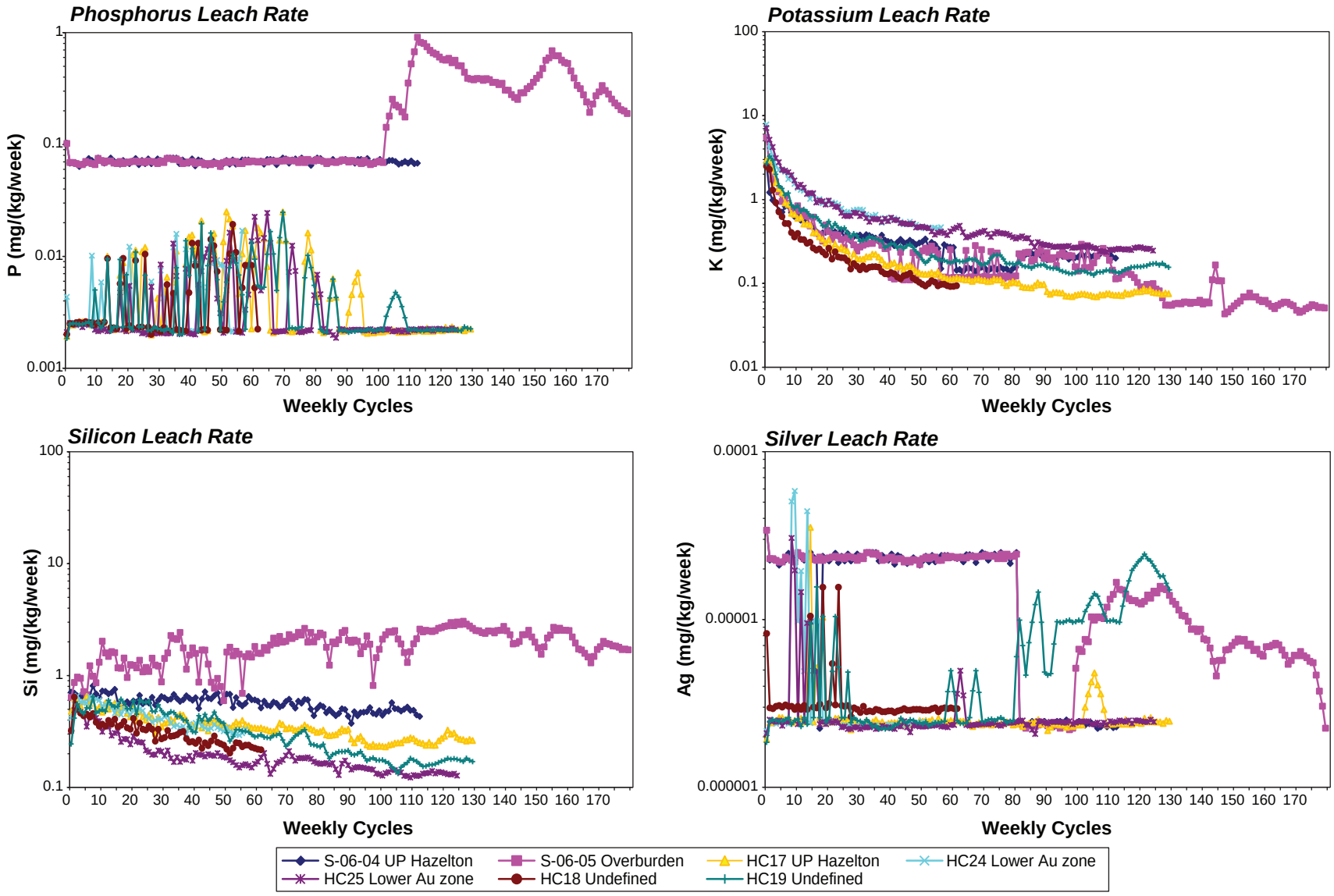


Figure 8

SEABRIDGE GOLD
KSM PROJECT

Phosphorus, Potassium, Silicon, and Silver Leach Rates, Sulphurets Deposit Waste Rock

Figure 8

Rescan™ Engineers & Scientists

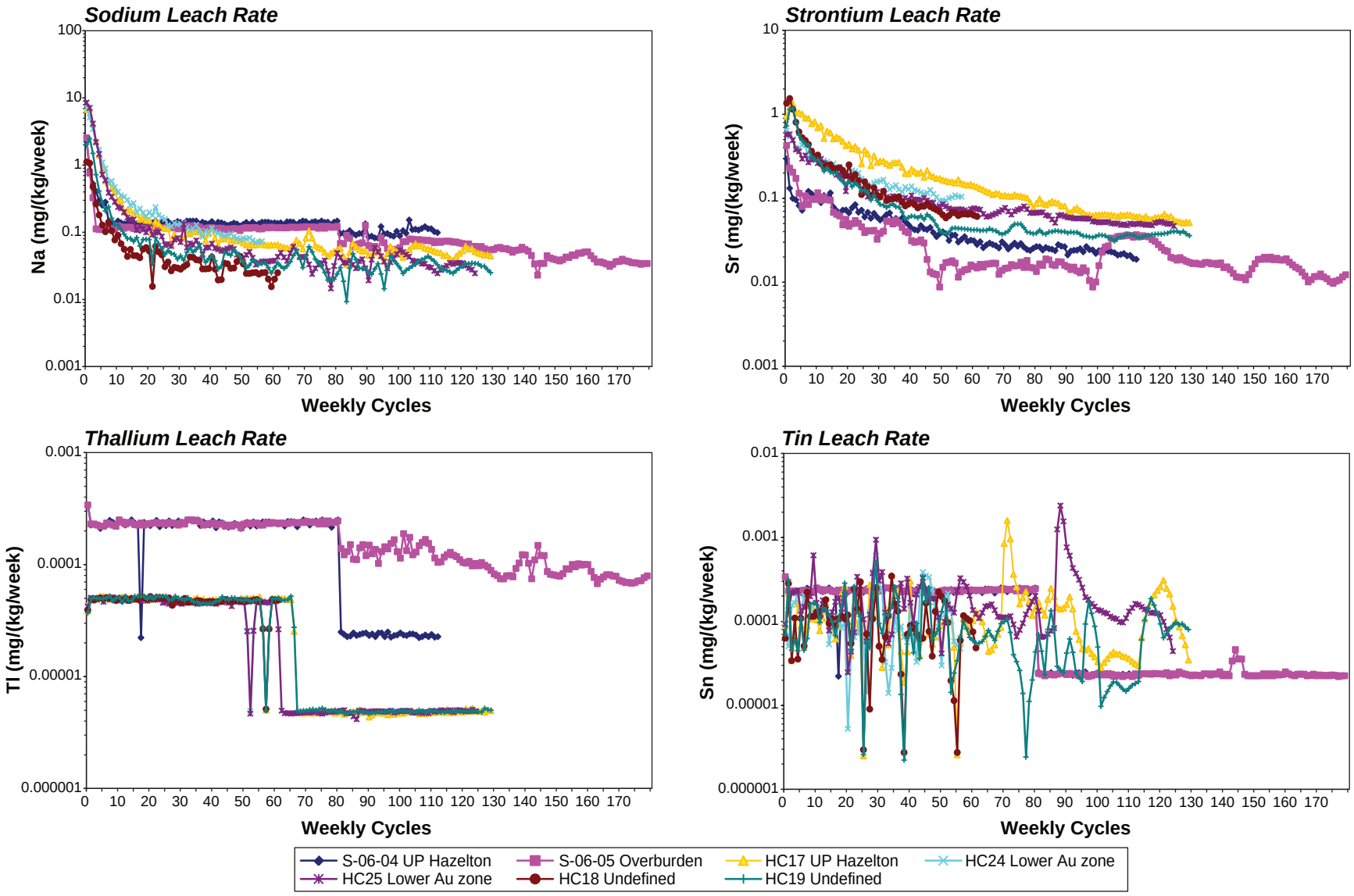


Figure 9

SEABRIDGE GOLD
KSM PROJECT

Sodium, Strontium, Thallium, and Tin Leach Rates, Sulphurets Deposit Waste Rock

Figure 9

Rescan™ Engineers & Scientists

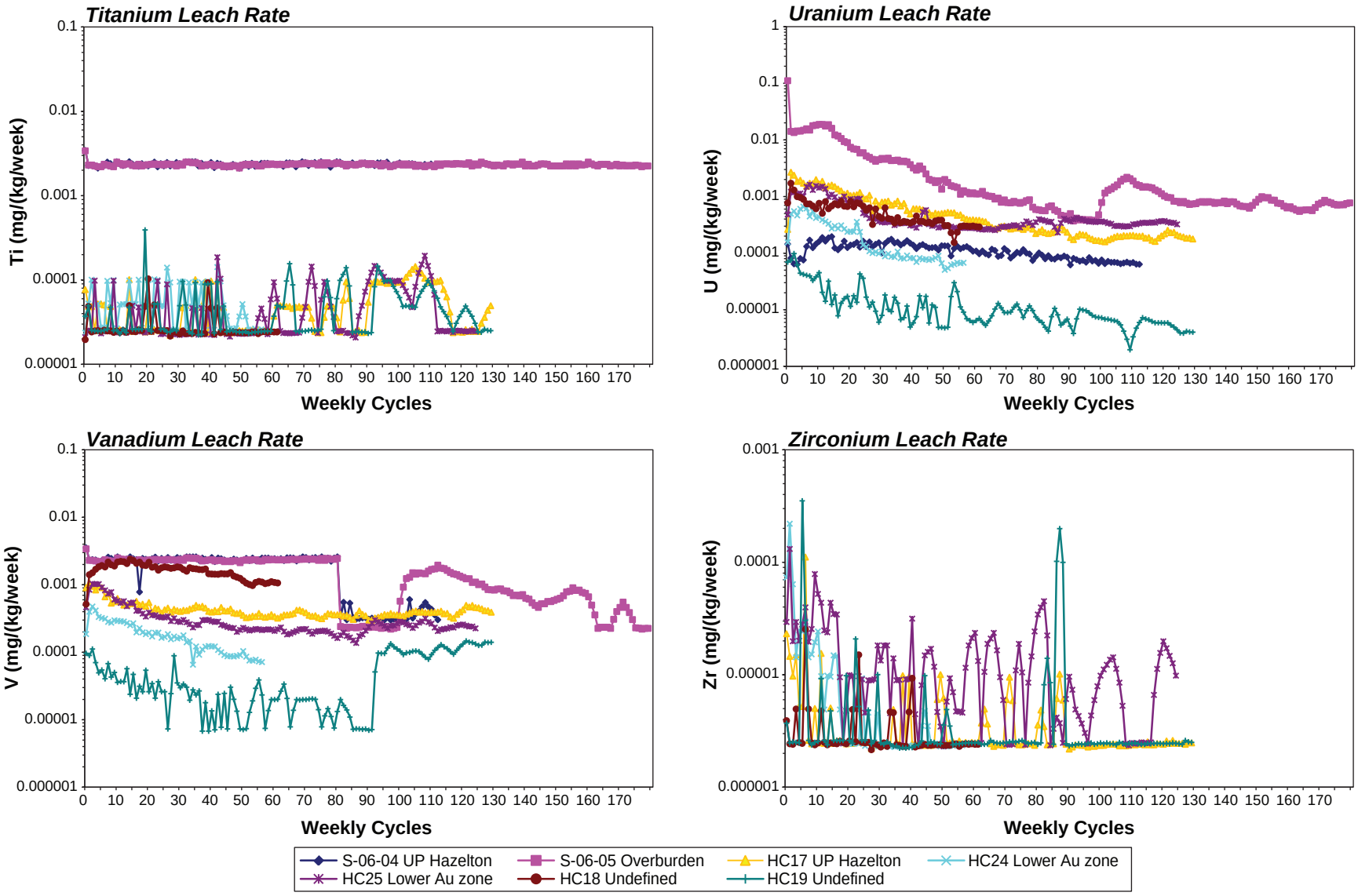


Figure 10

SEABRIDGE GOLD
KSM PROJECT

Titanium, Uranium, Vanadium, and Zirconium Leach Rates, Sulphurets Deposit Waste Rock

Figure 10

Rescan™ Engineers & Scientists

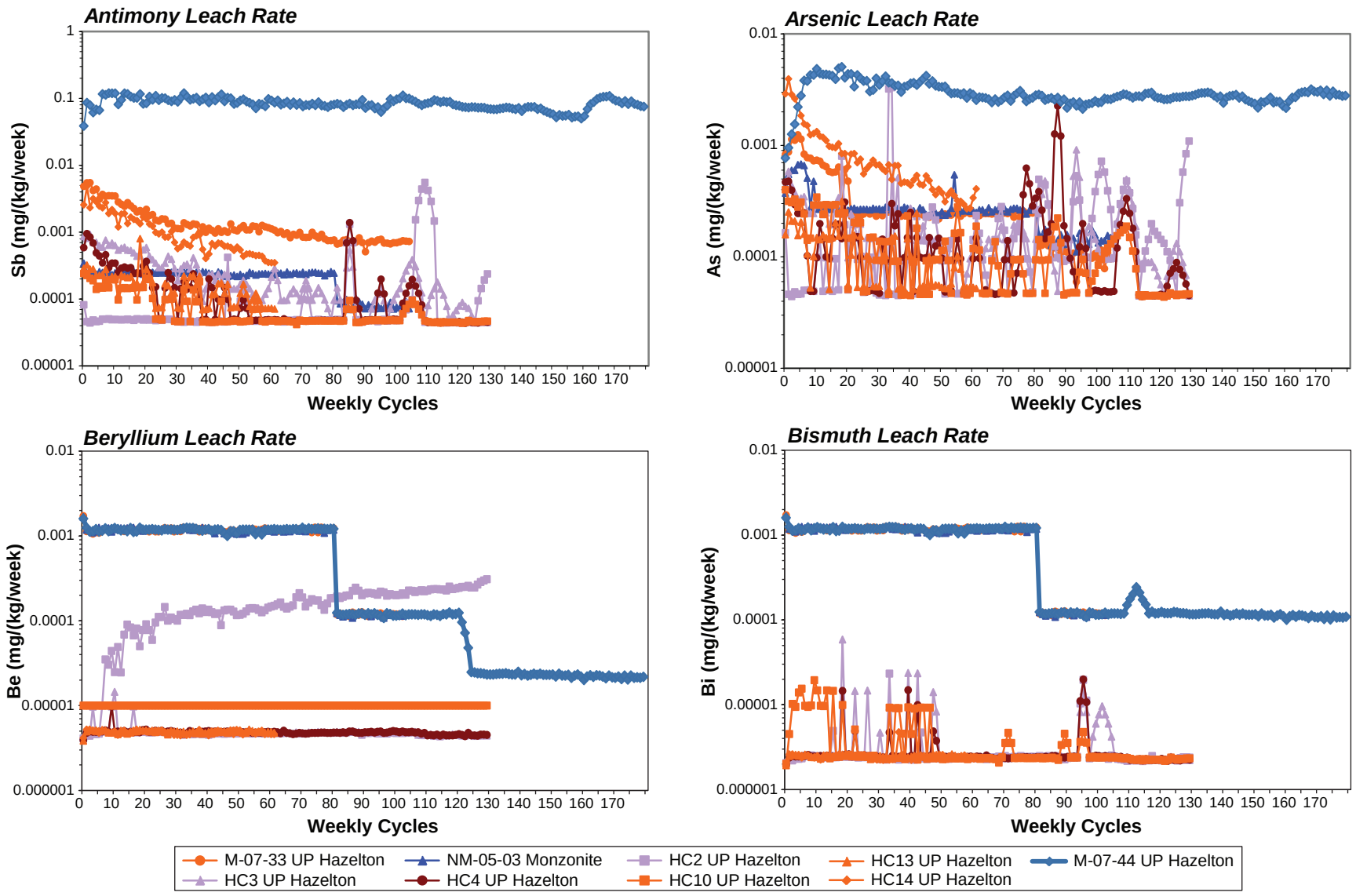


Figure 11

SEABRIDGE GOLD
KSM PROJECT

Antimony, Arsenic, Beryllium and Bismuth Leach Rates, Mitchell Deposit Waste Rock Upper Panel

Figure 11

Rescan™ Engineers & Scientists

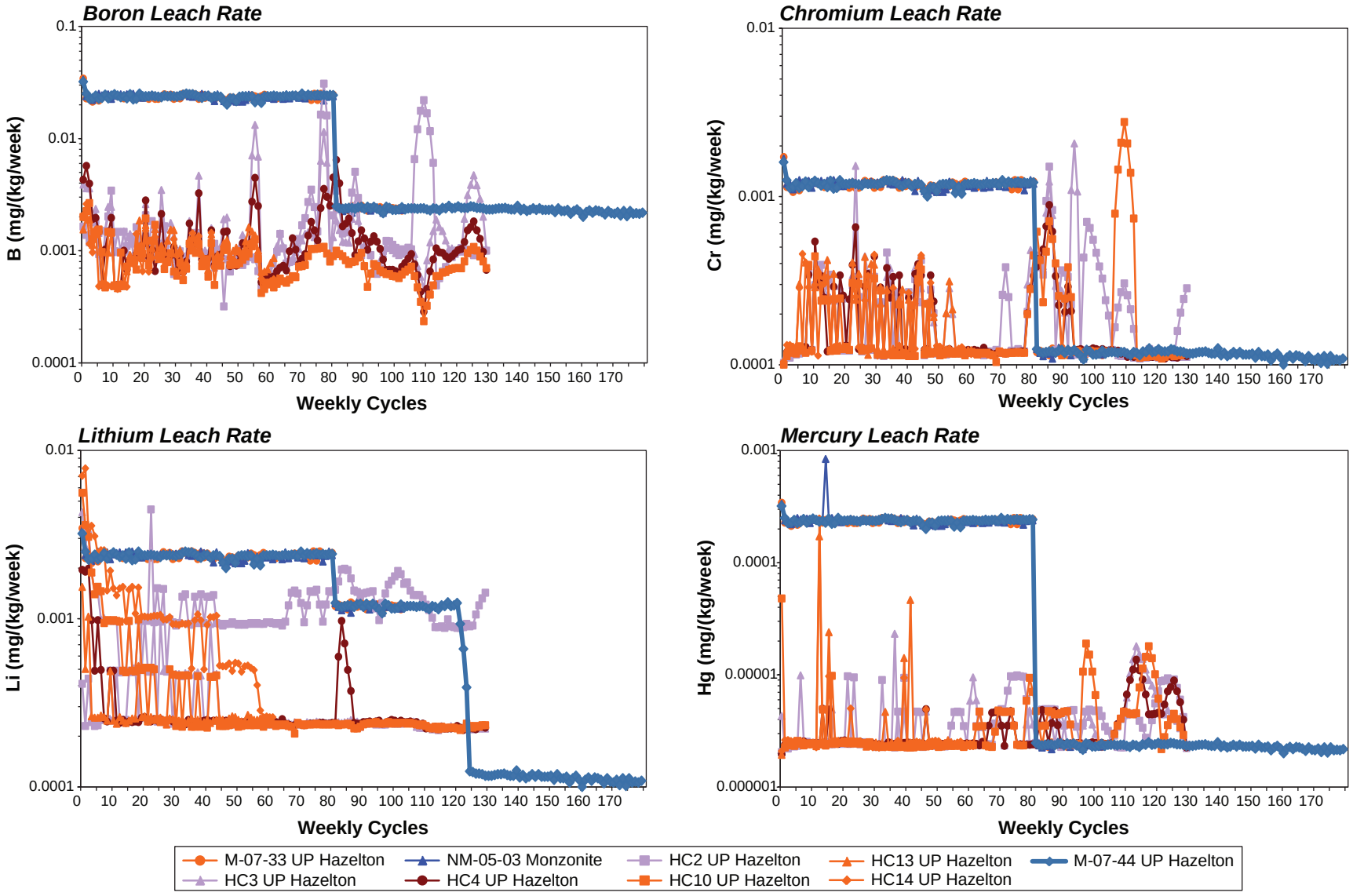


Figure 12

SEABRIDGE GOLD
KSM PROJECT

Boron, Chromium, Lithium, and Mercury Leach Rates, Mitchell Deposit Waste Rock Upper Panel

Figure 12

Rescan™ Engineers & Scientists

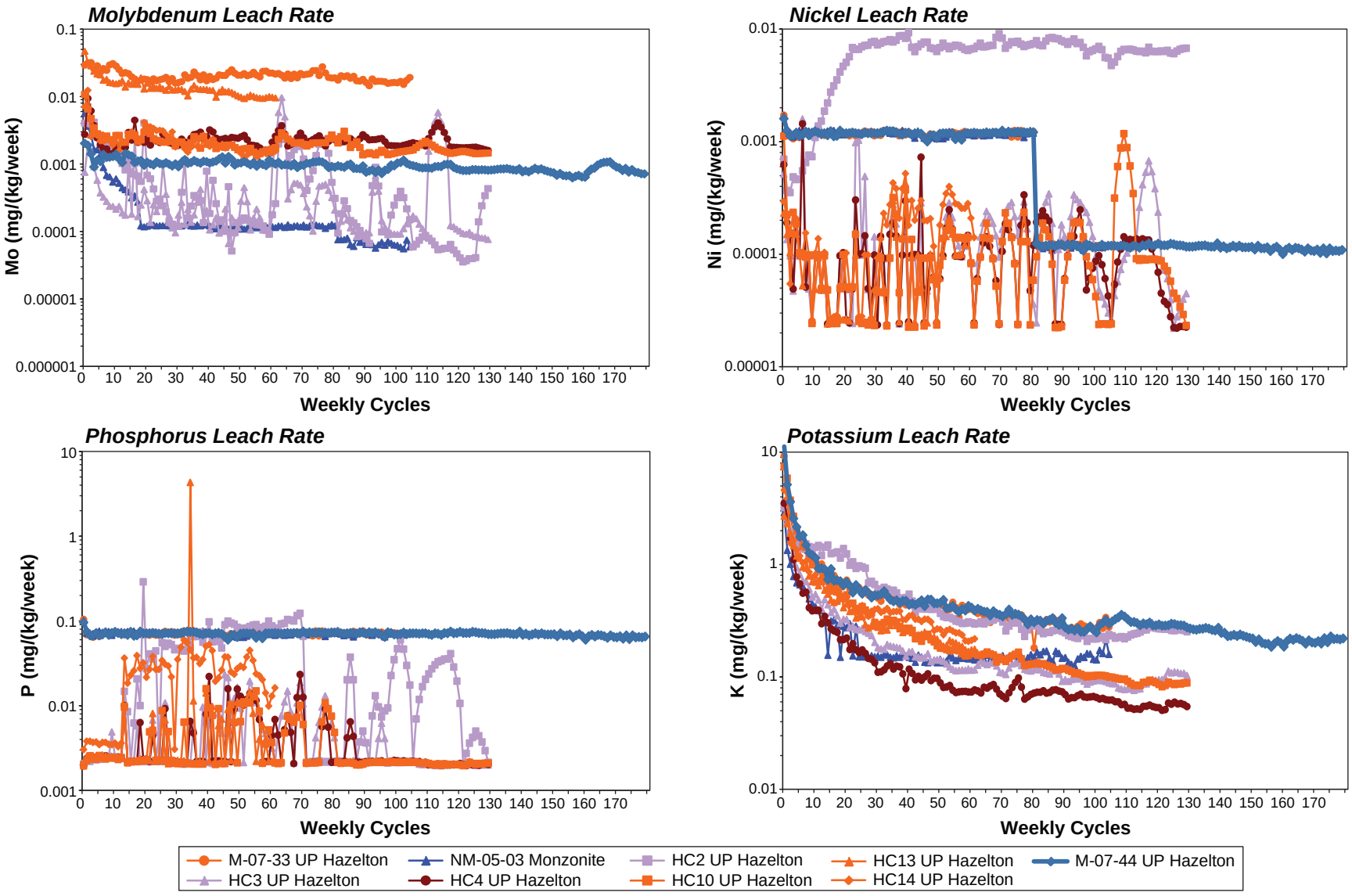


Figure 13

SEABRIDGE GOLD
KSM PROJECT

Molybdenum, Nickel, Phosphours, and Potassium Leach Rates, Mitchell Deposit Waste Rock Upper Panel

Figure 13

Rescan™ Engineers & Scientists

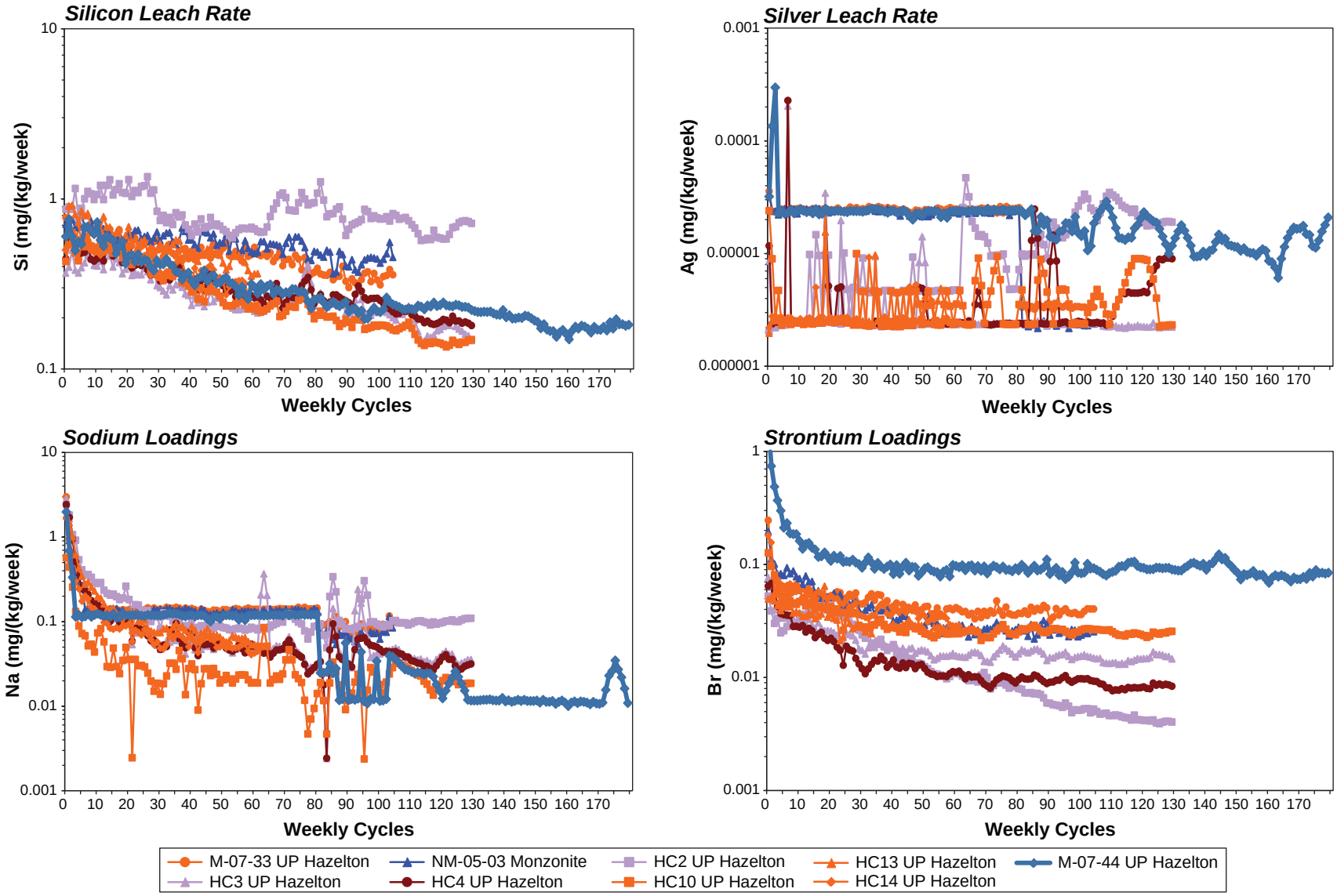


Figure 14

SEABRIDGE GOLD
KSM PROJECT

Silicon, Silver, Sodium, and Strontium Leach Rates, Mitchell Deposit Waste Rock Upper Panel

Figure 14

Rescan™ Engineers & Scientists

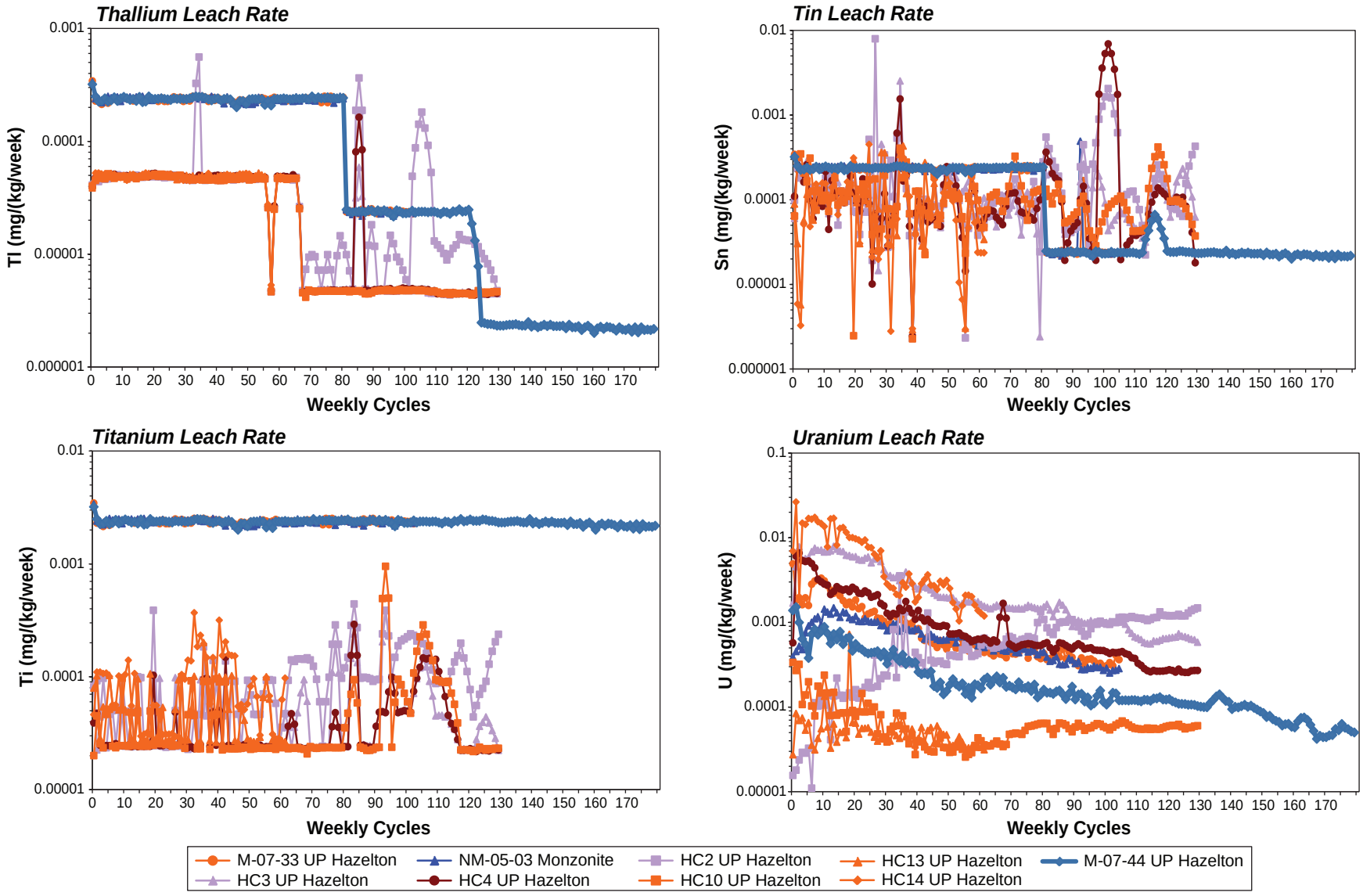


Figure 15

SEABRIDGE GOLD
KSM PROJECT

Thallium, Tin, Titanium, and Uranium Leach Rates, Mitchell Deposit Waste Rock Upper Panel

Figure 15

Rescan™ Engineers & Scientists

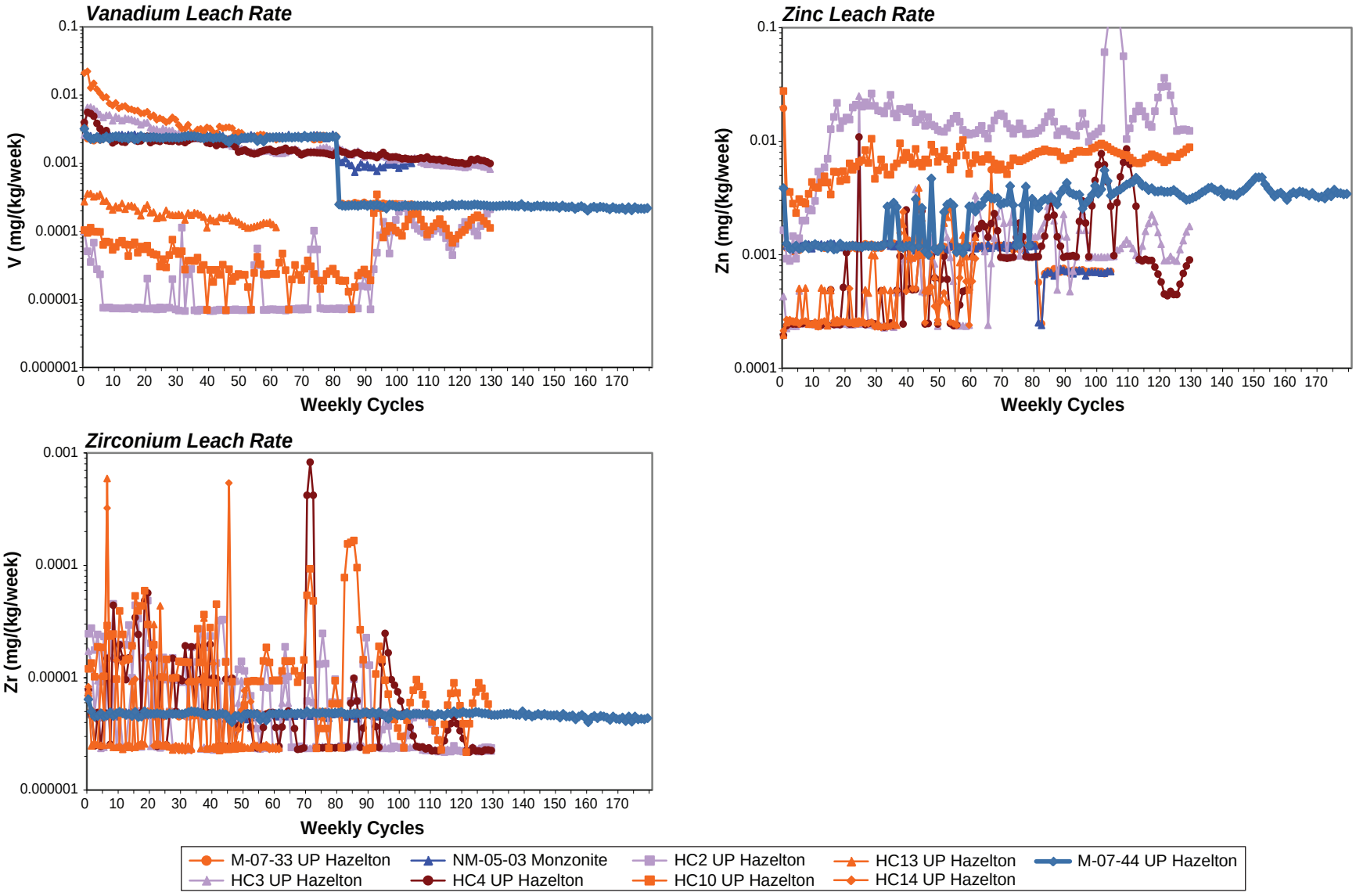


Figure 16

SEABRIDGE GOLD
KSM PROJECT

Vanadium, Zinc, and Zirconium Leach Rates,
Mitchell Deposit Waste Rock Upper Panel

Figure 16

Rescan™
Engineers & Scientists

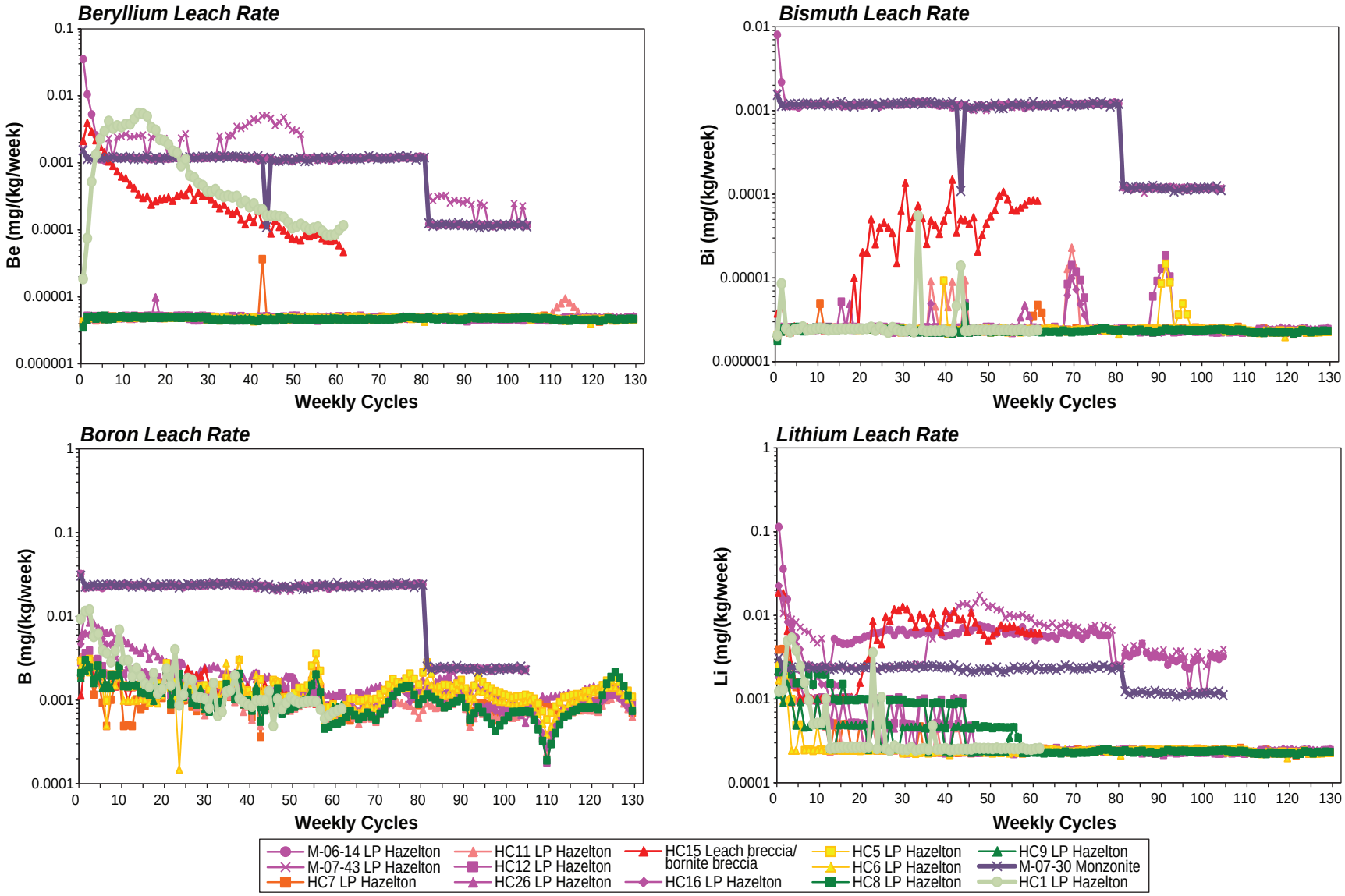


Figure 17

SEABRIDGE GOLD
KSM PROJECT

Beryllium, Bismuth, Boron, and Lithium Leach Rates, Mitchell Deposit Waste Rock Lower Panel

Figure 17

Rescan™ Engineers & Scientists

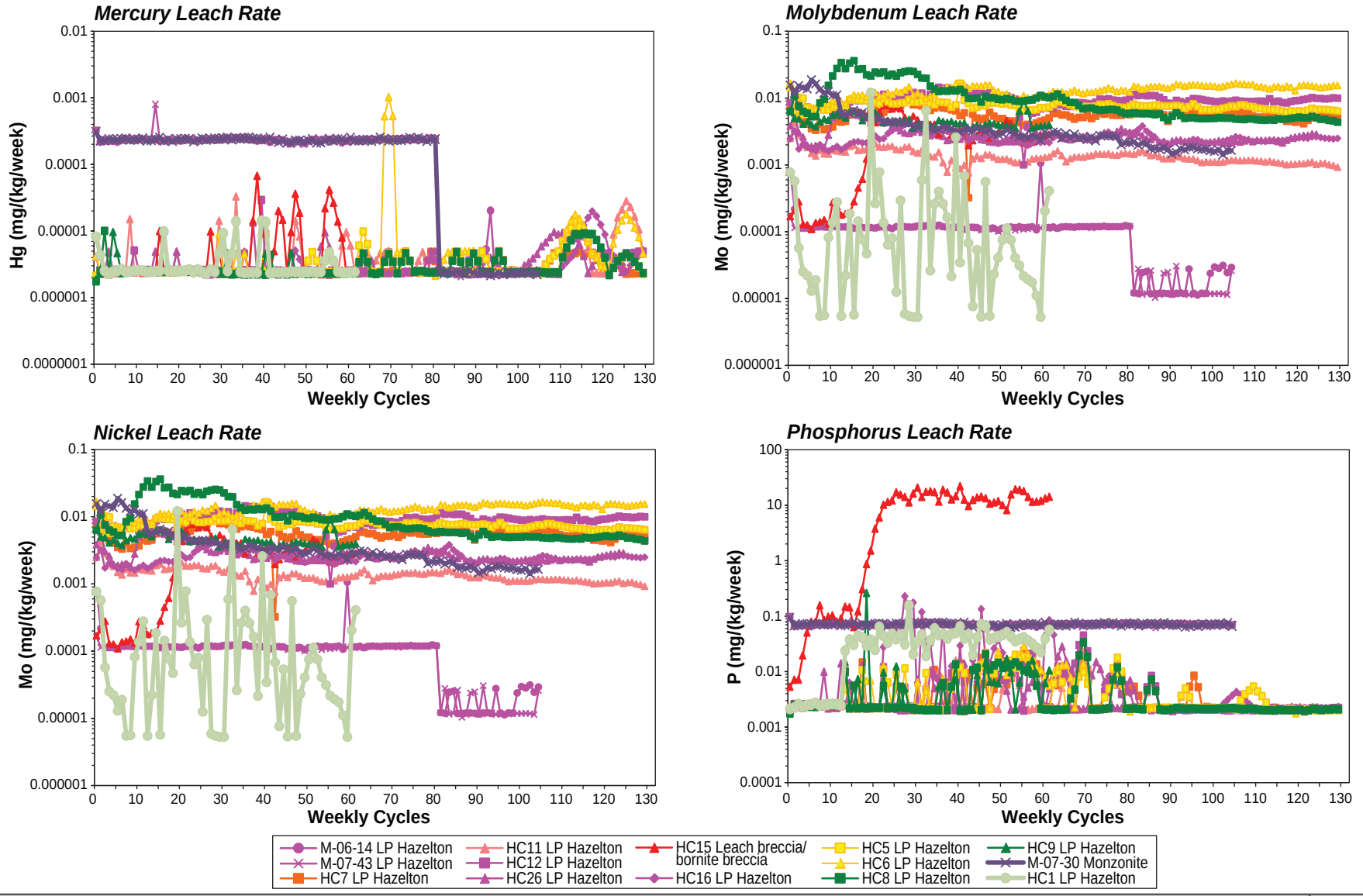


Figure 18

SEABRIDGE GOLD
KSM PROJECT

Mercury, Molybdenum, Nickel, and Phosphorus Leach Rates, Mitchell Deposit Waste Rock Lower Panel

Figure 18

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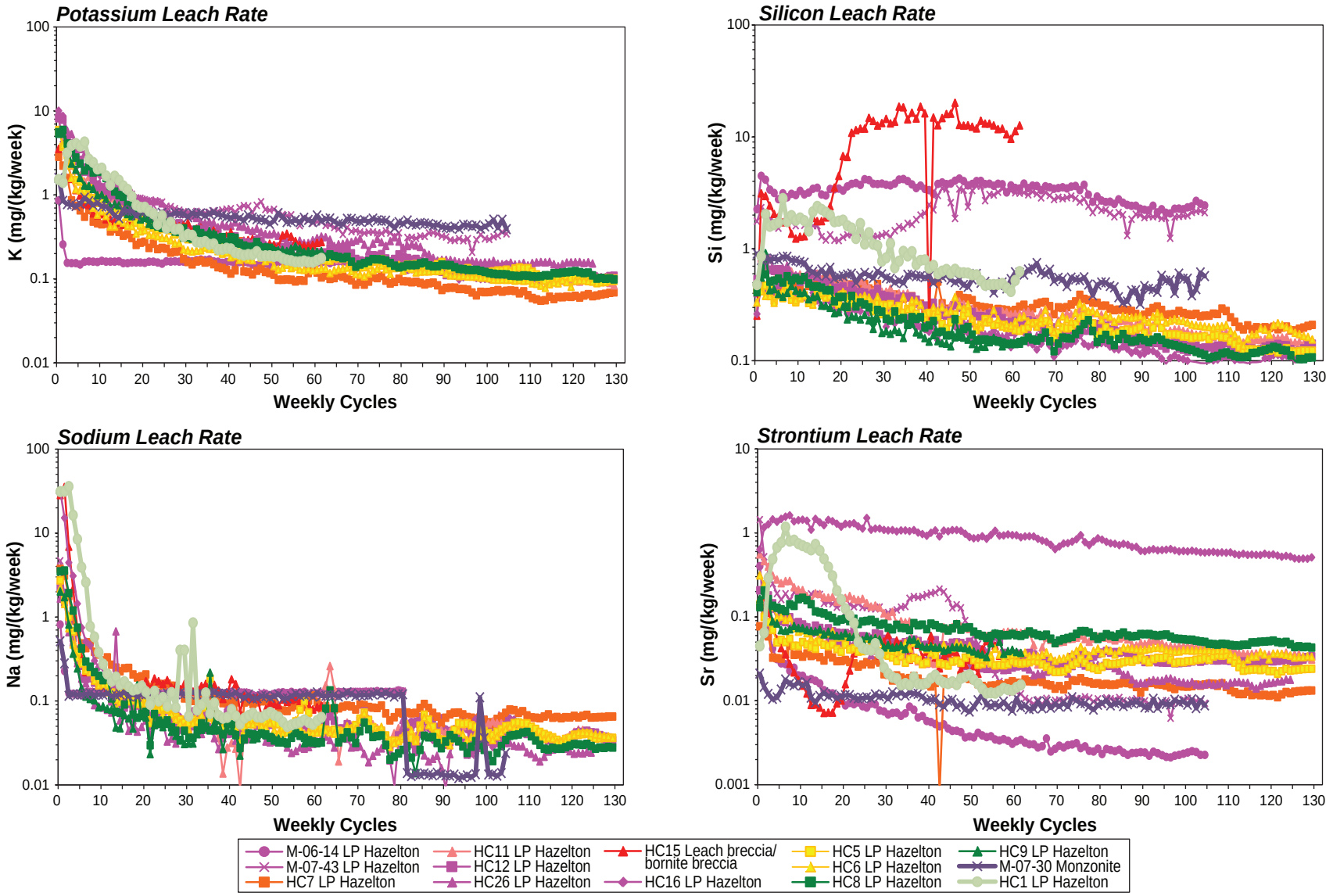


Figure 19

SEABRIDGE GOLD
KSM PROJECT

Potassium, Silicon, Sodium, and Strontium Leach Rates, Mitchell Deposit Waste Rock Lower Panel

Figure 19

Rescan™ Engineers & Scientists

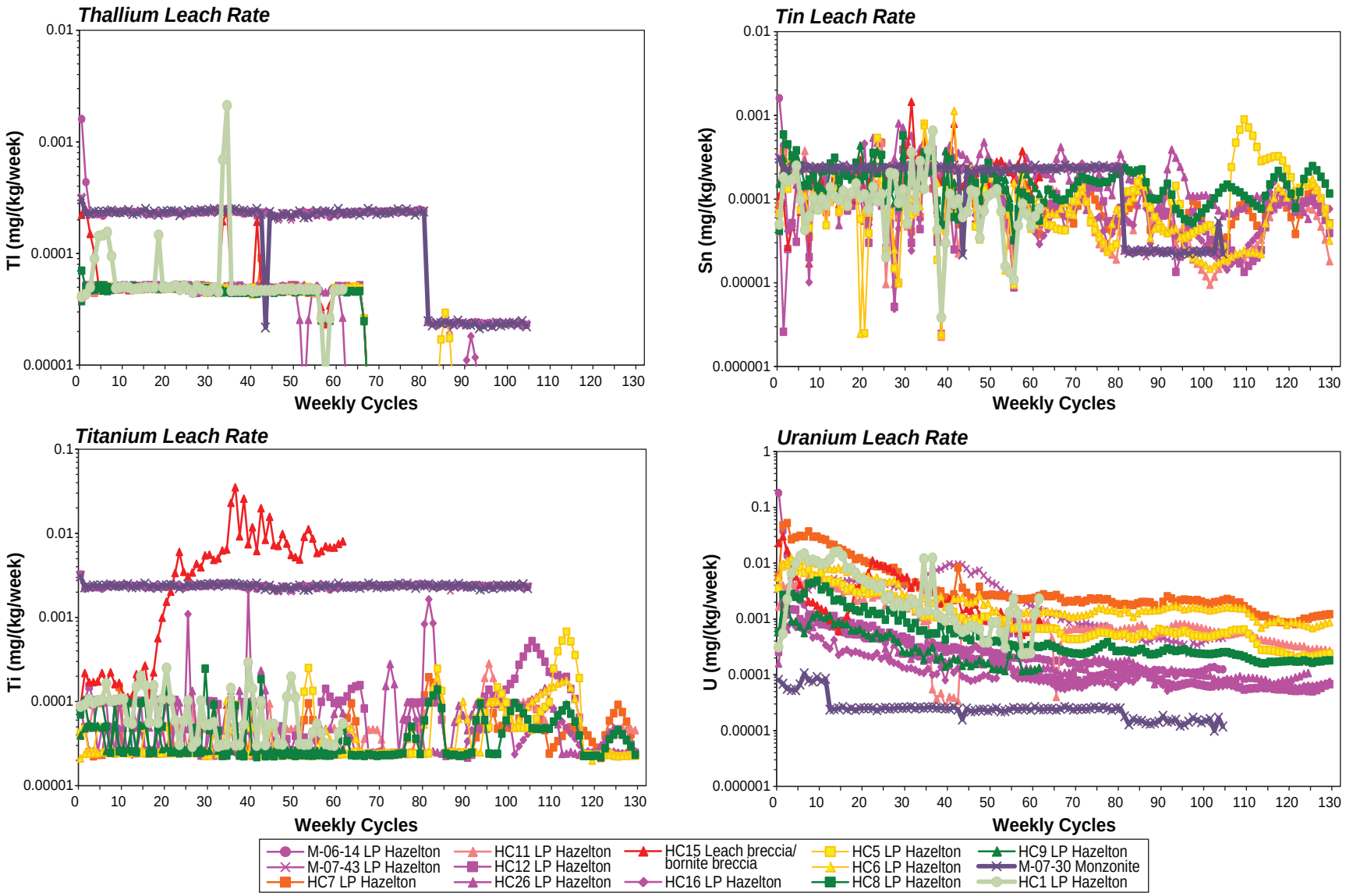


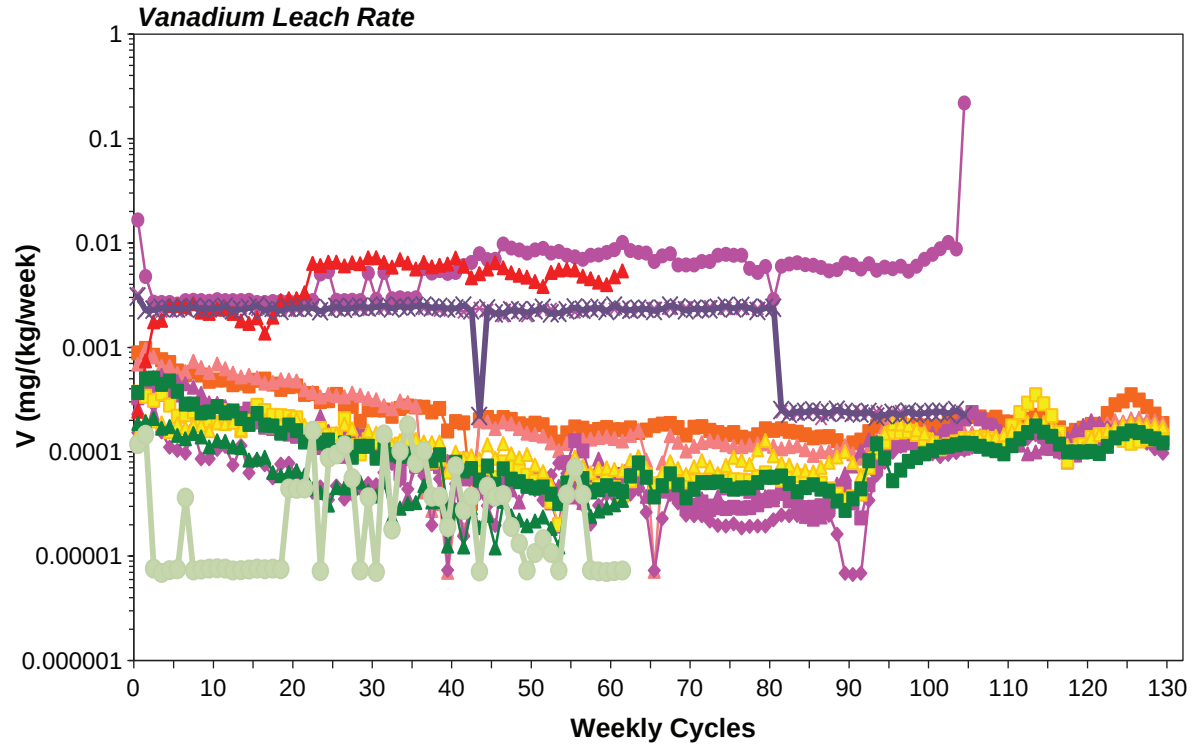
Figure 20

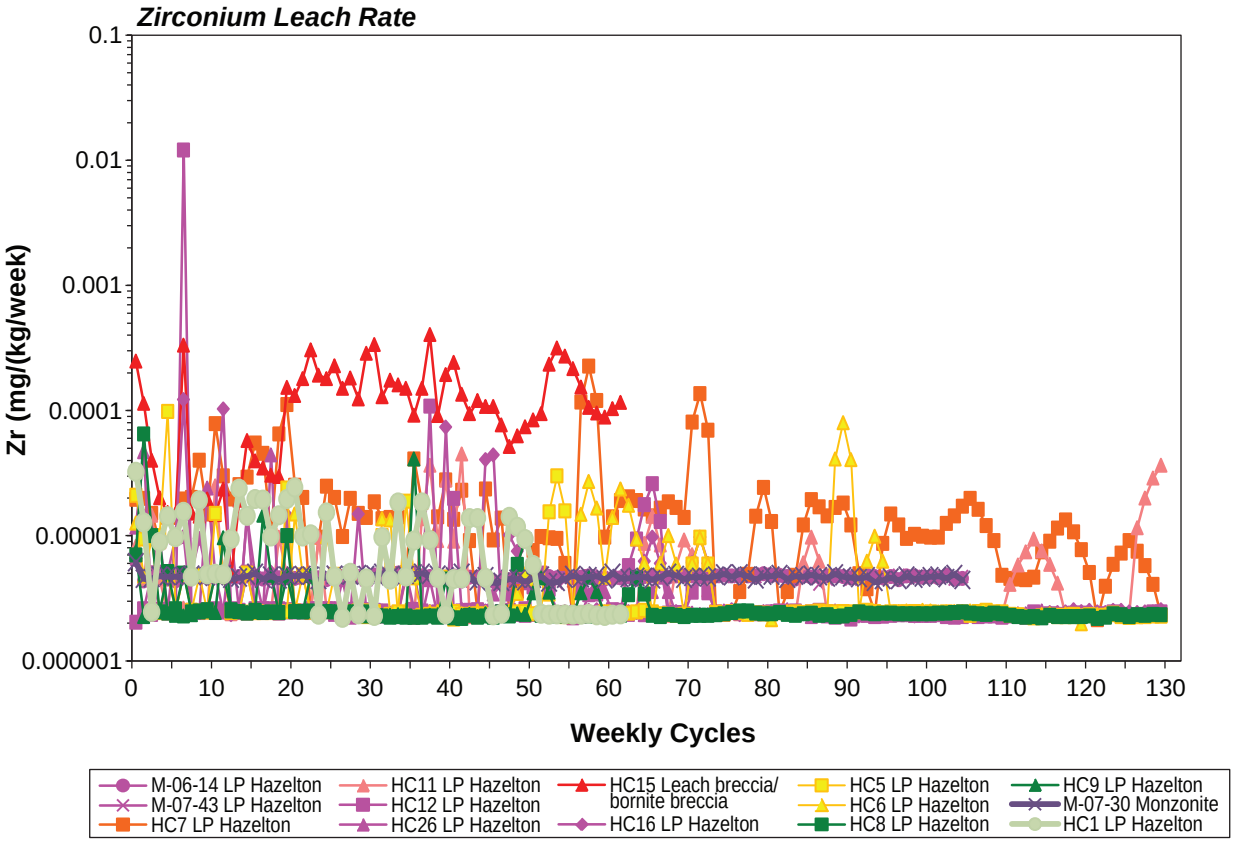
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KSM PROJECT

Thallium, Tin, Titanium, and Uranium Leach Rates, Mitchell Deposit Waste Rock Lower Panel

Figure 20

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SEABRIDGE GOLD
KSM PROJECT

Zirconium Leach Rates, Mitchell Deposit Waste Rock Lower Panel

Figure 21

Rescan™ Engineers & Scientists

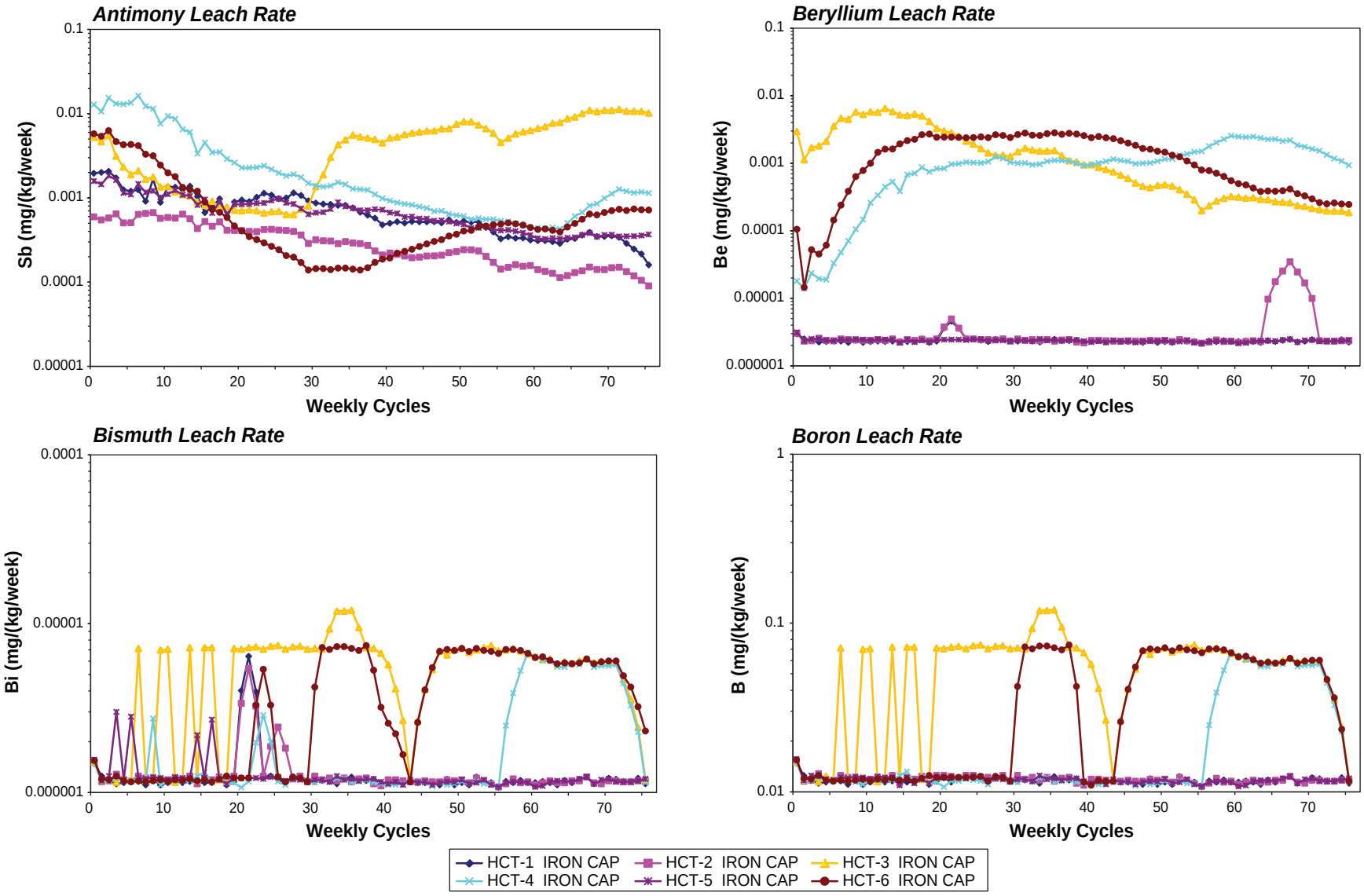


Figure 22

SEABRIDGE GOLD
KSM PROJECT

Antimony, Beryllium, Bismuth, and Boron Leach Rates, Iron Cap Deposit Waste Rock

Figure 22

Rescan™ Engineers & Scientists

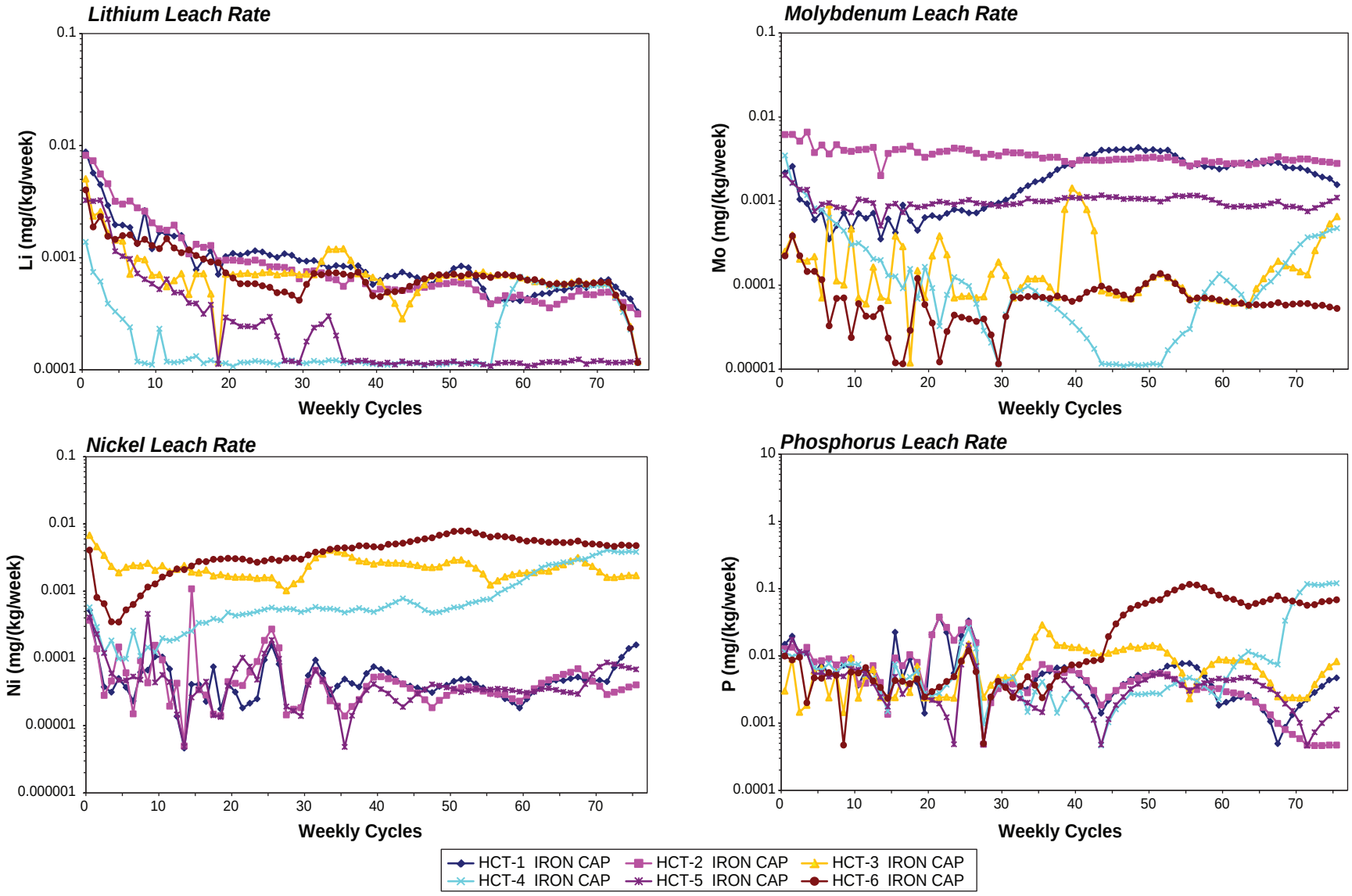


Figure 23

SEABRIDGE GOLD
KSM PROJECT

Lithium, Molybdenumm, and Phosphorus Leach Rates, Iron Cap Deposit Waste Rock

Figure 23

Rescan™ Engineers & Scientists

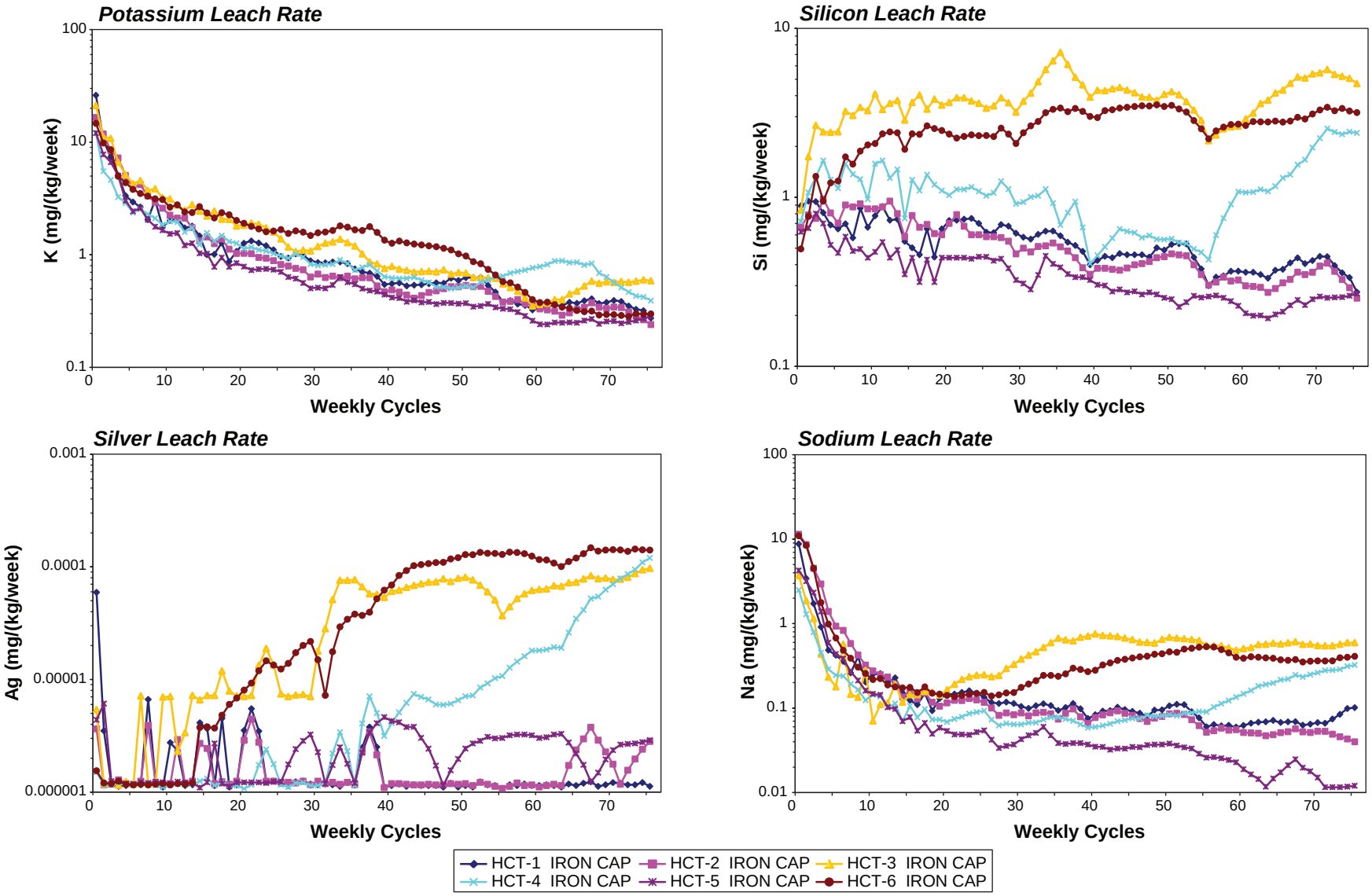


Figure 24

SEABRIDGE GOLD
KSM PROJECT

Potassium, Silicon, and Sodium Leach Rates, Iron Cap Deposit Waste Rock

Figure 24

Rescan™ Engineers & Scientists

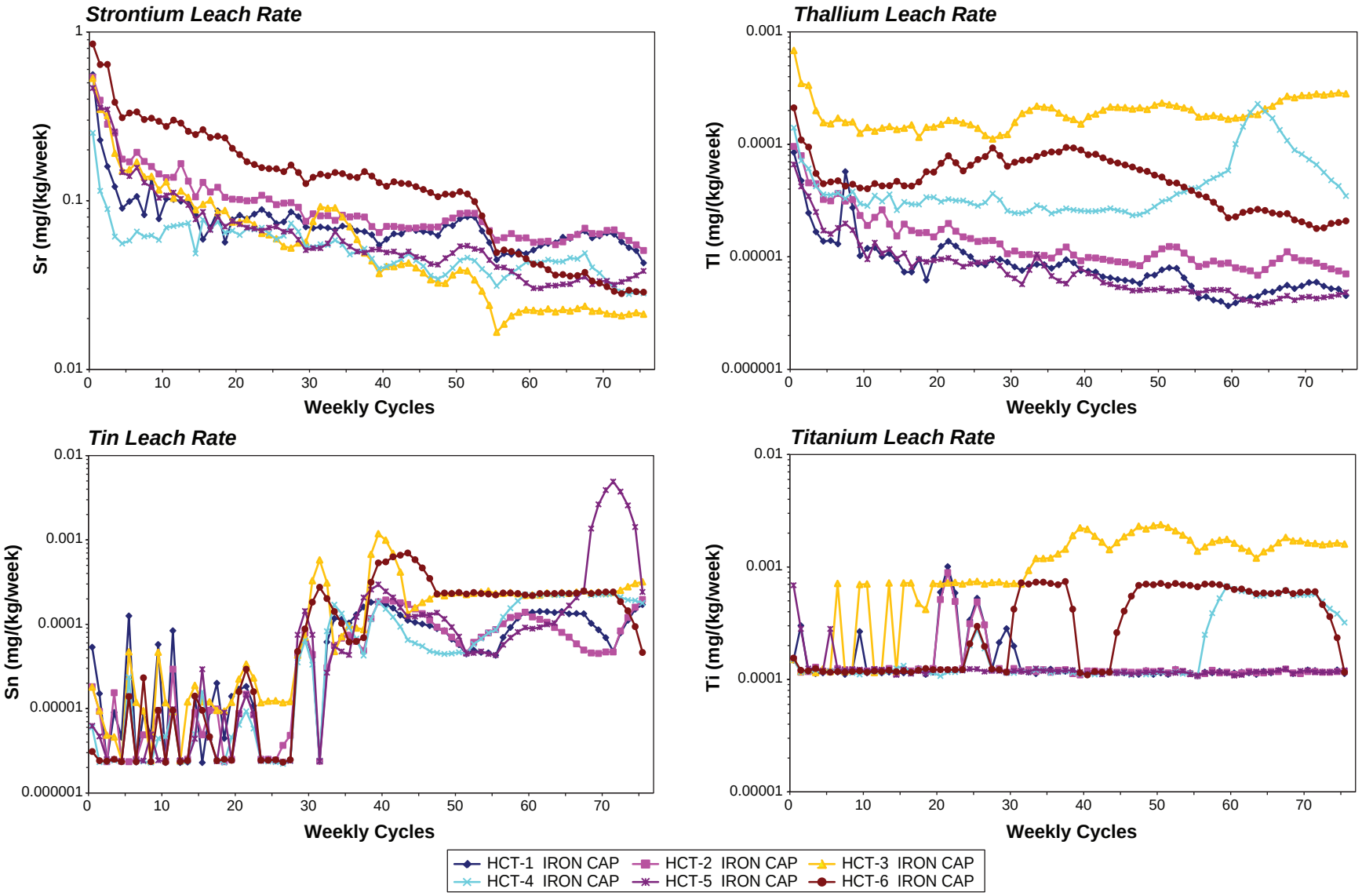


Figure 25

SEABRIDGE GOLD
KSM PROJECT

Strontium, Thallium, Tin, and Titanium Leach Rates, Iron Cap Deposit Waste Rock

Figure 25

Rescan™ Engineers & Scientists

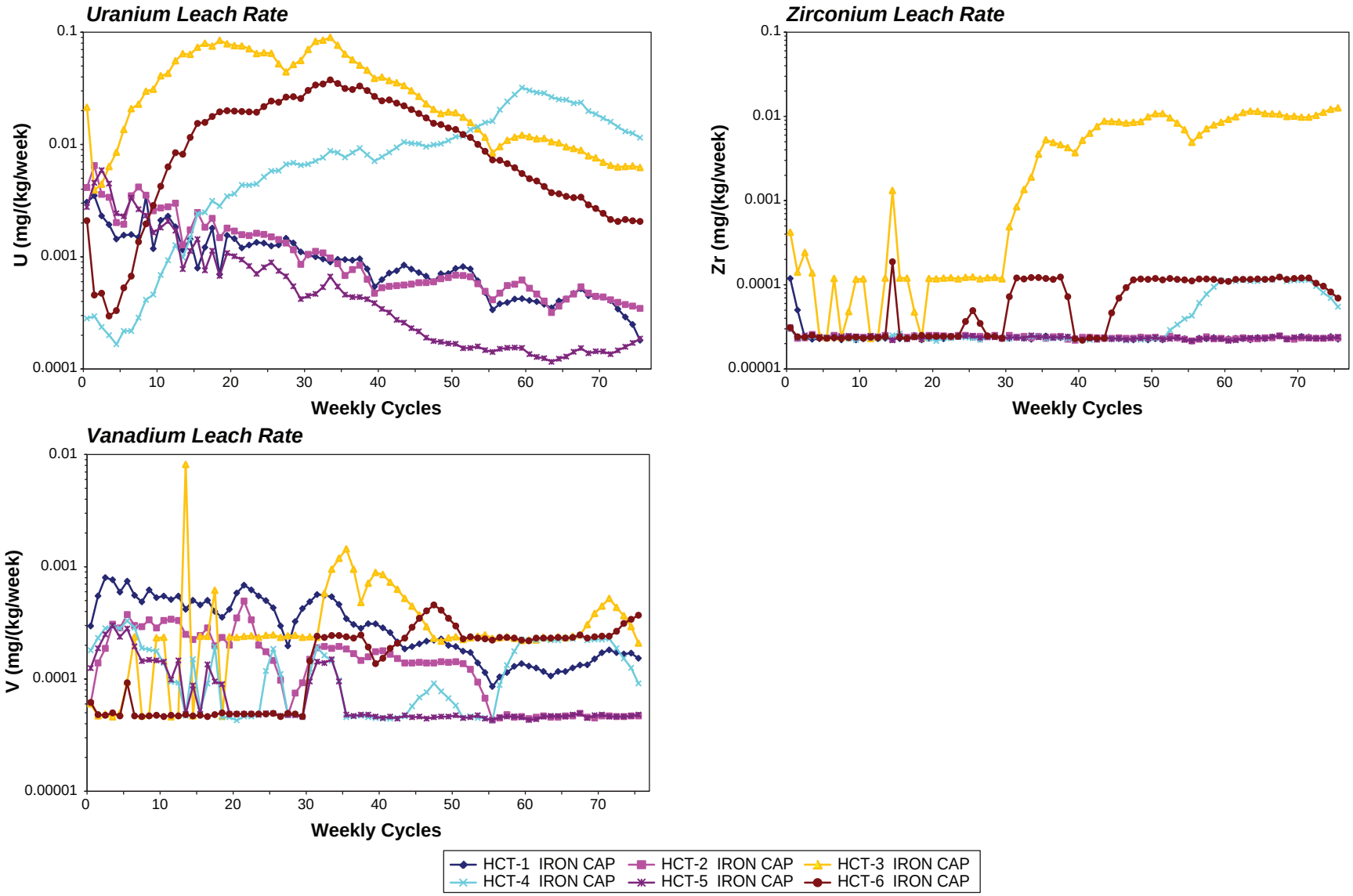


Figure 26

SEABRIDGE GOLD
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Uranium, Vanadium, and Zirconium Leach Rates, Iron Cap Deposit Waste Rock

Figure 26

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Appendix 5.2-4

Humidity Cell Leachate Concentrations: Sulphurets Deposit

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Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Calculated Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
S-06-04 UP Hazelton																									
S-06-04-0		0	20-Feb-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	750	680		92.492524	212	7.63		2.50	17.86	75.36	
S-06-04-1		1	27-Feb-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	450		49.360524	129	7.88		1.30	16.96	41.36	
S-06-04-2		2	6-Mar-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	455		31.507724	82.4	7.93		1.40	17.36	19.46	
S-06-04-3		3	13-Mar-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	450		29.060924	71.7	7.94		1.90	20.26	13.36	
S-06-04-4		4	20-Mar-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	420		27.675624	65.4	7.96		1.50	20.56	10.36	
S-06-04-5		5	27-Mar-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	440		25.180924	60.4	7.91		1.70	19.66	8.37	
S-06-04-6		6	3-Apr-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	450		28.159324	63.8	7.88		1.60	25.06	6.93	
S-06-04-7		7	10-Apr-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	495		32.433924	71	7.85		3.90	29.36	7.39	
S-06-04-8		8	17-Apr-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	475		29.253524	64.2	7.86		1.90	26.46	6.02	
S-06-04-9		9	24-Apr-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	450		28.458424	64.5	7.83		3.20	25.06	5.77	
S-06-04-10		10	1-May-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	500		31.839524	70	8.09		2.50	27.06	5.86	
S-06-04-11		11	8-May-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	470		30.810824	69.1	8		2.60	25.56	6.01	
S-06-04-12		12	15-May-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	450		31.884624	70.2	8		1.60	26.36	6.12	
S-06-04-13		13	22-May-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	465		32.360024	71.7	8.05		3.20	27.46	5.98	
S-06-04-14		14	29-May-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	500		33.437924	72.4	8.08		1.70	29.36	5.40	
S-06-04-15		15	5-Jun-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	470		26.450124	58.3	8.04		3.40	22.66	4.65	
S-06-04-16		16	12-Jun-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	455		24.518524	55.1	8.05		1.50	21.86	4.01	
S-06-04-17		17	19-Jun-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	440		26.015624	56.3	7.99		1.50	22.06	4.55	
S-06-04-18		18	26-Jun-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	475		26.790224	60.2	8.02		1.60	23.86	4.67	
S-06-04-19		19	3-Jul-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	460		26.077124	56.3	8.02		3.40	23.66	4.32	
S-06-04-20		20	10-Jul-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	445		29.339424	64.1	8		2.60	27.46	4.23	
S-06-04-21		21	17-Jul-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	470		28.864024	62.8	8		4.80	24.96	3.99	
S-06-04-22		22	24-Jul-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	495		32.368124	67	8.06		5.50	28.26	4.60	
S-06-04-23		23	31-Jul-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	435		29.540224	62.8	7.75		1.30	26.06	4.13	
S-06-04-24		24	7-Aug-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	475		30.663224	65	7.88		1.70	26.26	4.24	
S-06-04-25		25	14-Aug-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	445		28.486924	60	7.88		3.00	25.56	4.39	
S-06-04-26		26	21-Aug-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	490		31.380424	66	7.9		1.20	27.66	4.73	
S-06-04-27		27	28-Aug-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	445		29.749224	62.1	7.97		3.60	25.06	4.45	
S-06-04-28		28	4-Sep-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	460		32.310724	65.3	7.98		3.50	26.86	5.50	
S-06-04-29		29	11-Sep-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	490		31.003324	65.3	7.97		3.90	26.86	5.53	
S-06-04-30		30	18-Sep-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	475		31.589424	64.2	7.93		2.20	26.56	4.92	
S-06-04-31		31	25-Sep-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	460		32.573024	68	7.98		2.10	28.56	5.65	
S-06-04-32		32	2-Oct-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	500		31.950124	68.1	8.07		3.40	27.86	5.20	
S-06-04-33		33	9-Oct-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	500		34.831224	66.8	8.09		2.70	30.36	5.22	
S-06-04-34		34	16-Oct-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	500		30.966424	66.1	8.03		3.90	27.56	5.01	
S-06-04-35		35	23-Oct-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	500		32.154924	67	8		3.10	27.76	4.61	
S-06-04-36		36	30-Oct-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	445		32.437724	67.3	8.02		5.00	27.66	5.14	
S-06-04-37		37	6-Nov-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	480		33.236924	69.5	8.03		2.10	27.96	5.58	
S-06-04-38		38	13-Nov-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	460		35.950024	74.2	8.09		3.10	30.46	4.83	
S-06-04-39		39	20-Nov-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	450		33.921324	70.5	8.01		1.40	30.56	4.82	
S-06-04-40		40	27-Nov-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	490		32.597524	63.4	8.02		4.60	25.16	4.88	
S-06-04-41		41	4-Dec-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	425		28.302424	62.6	8.04		3.10	24.76	4.21	
S-06-04-42		42	11-Dec-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	480		29.093424	64	8.05		2.70	25.56	4.91	
S-06-04-43		43	18-Dec-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	470		30.609824	65.2	8.06		3.60	27.16	5.46	
S-06-04-44		44	24-Dec-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	450		28.761424	63	7.99		5.20	23.16	4.76	
S-06-04-45		45	31-Dec-09	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	430		30.185624	65.45	7.975		5.90	24.91	4.99	
S-06-04-46		46	8-Jan-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	445		31.609824	67.9	7.96		6.60	26.66	5.21	
S-06-04-47		47	15-Jan-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	465		29.040124	62.8	7.96		3.10	25.06	5.25	
S-06-04-48		48	22-Jan-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	450		27.474524	61.7	7.89		4.90	24.86	4.66	
S-06-04-49		49	29-Jan-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	420		35.917224	75.7	8.02		4.00	30.66	5.47	
S-06-04-50		50	5-Feb-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	445		31.589324	67.8	8.16		5.80	26.76	5.56	
S-06-04-51		51	12-Feb-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	475		30.318824	63.1	8.17		4.40	24.86	4.63	
S-06-04-52		52	19-Feb-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	440		26.499124	56	8.23		2.90	22.26	4.13	
S-06-04-53		53	26-Feb-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	480		27.523724	59.3	8.25		3.40	23.76	4.81	
S-06-04-54		54	5-Mar-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	440		34.384424	70.4	8.08		8.20	28.96	5.46	
S-06-04-55		55	12-Mar-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	455		27.757324	58.7	8.12		6.40	22.66	5.17	
S-06-04-56		56	19-Mar-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	480		28.712224	60.5	8.12		1.80	23.56	5.25	
S-06-04-57		57	26-Mar-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	480		29.818824	62.4	8.09		5.20	25.36	5.61	
S-06-04-58		58	2-Apr-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	480		27.732724	58	8.12		2.90	24.26	5.37	
S-06-04-59		59	9-Apr-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	465		29.995024	58.8	8.1		3.50	23.86	4.83	
S-06-04-60		60	16-Apr-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	470		27.474524	57	8.06		2.30	23.16	5.56	
S-06-04-61		61	23-Apr-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	460		25.287624	54	8.13		2.30	22.46	4.36	
S-06-04-62		62	30-Apr-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	470		27.216324	57.3	8.15		4.50	23.66	5.21	
S-06-04-63		63	7-May-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	440		26.421224	55.1	8.11		5.10	22.16	4.87	
S-06-04-64		64	14-May-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	485		27.474524	54.1	8.11		2.70	22.06	4.64	

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
S-06-04 UP Hazelton																				
S-06-04-0	0.21	0.098796	0.000521	0.000538	0.048119	0.002502	0.002502	0.050044	0.000250	35.154956	0.002502	0.000500	0.002122	0.015345	0.000250	0.005022	1.123204	0.029413	0.000500	0.002696
S-06-04-1	0.23	0.143796	0.000521	0.000538	0.061319	0.002502	0.002502	0.050044	0.000250	18.754956	0.002502	0.000500	0.002322	0.015345	0.000250	0.005022	0.603204	0.014013	0.000500	0.004356
S-06-04-2	0.23	0.150796	0.001121	0.000538	0.077519	0.002502	0.002502	0.050044	0.000250	11.954956	0.002502	0.000500	0.001922	0.015345	0.000250	0.005022	0.395204	0.010213	0.000500	0.003196
S-06-04-3	0.25	0.191796	0.001121	0.000538	0.106619	0.002502	0.002502	0.050044	0.000250	11.054956	0.002502	0.000500	0.002322	0.015345	0.000250	0.005022	0.347204	0.009173	0.000500	0.002256
S-06-04-4	0.22	0.210796	0.000521	0.000538	0.123619	0.002502	0.002502	0.050044	0.000250	10.554956	0.002502	0.000500	0.003122	0.015345	0.000250	0.005022	0.314204	0.011413	0.000500	0.001536
S-06-04-5	0.29	0.197796	0.001021	0.000538	0.087919	0.002502	0.002502	0.050044	0.000250	9.584956	0.002502	0.000500	0.002122	0.015345	0.000250	0.005022	0.297204	0.008253	0.000500	0.001456
S-06-04-6	0.22	0.212796	0.001221	0.000538	0.105619	0.002502	0.002502	0.050044	0.000250	10.654956	0.002502	0.000500	0.002922	0.015345	0.000250	0.005022	0.371204	0.014713	0.000500	0.001276
S-06-04-7	0.26	0.168796	0.001421	0.000538	0.124619	0.002502	0.002502	0.050044	0.000250	12.354956	0.002502	0.000500	0.002322	0.015345	0.000250	0.005022	0.377204	0.020313	0.000500	0.001026
S-06-04-8	0.20	0.168796	0.001621	0.000538	0.128619	0.002502	0.002502	0.050044	0.000250	11.154956	0.002502	0.000500	0.001922	0.015345	0.000250	0.005022	0.333204	0.014913	0.000500	0.000846
S-06-04-9	0.15	0.186796	0.001721	0.000538	0.145619	0.002502	0.002502	0.050044	0.000250	10.854956	0.002502	0.000500	0.002622	0.015345	0.000250	0.005022	0.322204	0.016413	0.000500	0.000746
S-06-04-10	0.17	0.160796	0.002221	0.000538	0.124619	0.002502	0.002502	0.050044	0.000250	12.254956	0.002502	0.000500	0.002522	0.015345	0.000250	0.005022	0.293204	0.019213	0.000500	0.000786
S-06-04-11	0.16	0.169796	0.001921	0.000538	0.099819	0.002502	0.002502	0.050044	0.000250	11.854956	0.002502	0.000500	0.002222	0.015345	0.000250	0.005022	0.286204	0.018213	0.000500	0.000706
S-06-04-12	0.17	0.181796	0.001821	0.000538	0.157619	0.002502	0.002502	0.050044	0.000250	12.254956	0.002502	0.000500	0.002422	0.015345	0.000250	0.005022	0.304204	0.017713	0.000500	0.000616
S-06-04-13	0.13	0.155796	0.001821	0.000538	0.157619	0.002502	0.002502	0.050044	0.000250	12.454956	0.002502	0.000500	0.002122	0.015345	0.000250	0.005022	0.298204	0.018513	0.000500	0.000606
S-06-04-14	0.11	0.167796	0.002021	0.000538	0.159619	0.002502	0.002502	0.050044	0.000250	12.854956	0.002502	0.000500	0.002322	0.015345	0.000250	0.005022	0.317204	0.020513	0.000500	0.000616
S-06-04-15	0.10	0.198796	0.001321	0.000538	0.128619	0.002502	0.002502	0.050044	0.000250	10.154956	0.002502	0.000500	0.002322	0.015345	0.000250	0.005022	0.259204	0.013413	0.000500	0.000256
S-06-04-16	0.06	0.213796	0.001121	0.000538	0.135619	0.002502	0.002502	0.050044	0.000250	9.424956	0.002502	0.000500	0.003722	0.015345	0.000250	0.005022	0.233204	0.011813	0.000500	0.000256
S-06-04-17	0.05	0.165796	0.001091	0.000628	0.128619	0.000252	0.000252	0.050044	0.000025	10.054956	0.000252	0.000050	0.002042	0.015345	0.000025	0.005022	0.214204	0.013613	0.000500	0.000388
S-06-04-18	0.05	0.152796	0.001121	0.000538	0.122619	0.002502	0.002502	0.050044	0.000250	10.354956	0.002502	0.000500	0.001622	0.015345	0.000250	0.005022	0.220204	0.013513	0.000500	0.000256
S-06-04-19	0.05	0.188796	0.000521	0.000538	0.139619	0.002502	0.002502	0.050044	0.000250	10.054956	0.002502	0.000500	0.001822	0.015345	0.000250	0.005022	0.229204	0.013313	0.000500	0.000256
S-06-04-20	0.06	0.179796	0.001121	0.000538	0.160619	0.002502	0.002502	0.050044	0.000250	11.354956	0.002502	0.000500	0.001722	0.015345	0.000250	0.005022	0.232204	0.016913	0.000500	0.000256
S-06-04-21	0.05	0.179796	0.001121	0.000538	0.181619	0.002502	0.002502	0.050044	0.000250	11.154956	0.002502	0.000500	0.003122	0.015345	0.000250	0.005022	0.238204	0.017013	0.000500	0.000256
S-06-04-22	0.06	0.175796	0.001321	0.000538	0.185619	0.002502	0.002502	0.050044	0.000250	12.554956	0.002502	0.000500	0.001922	0.015345	0.000250	0.005022	0.239204	0.024613	0.000500	0.000256
S-06-04-23	0.04	0.192796	0.001121	0.000538	0.209619	0.002502	0.002502	0.050044	0.000250	11.454956	0.002502	0.000500	0.001922	0.015345	0.000250	0.005022	0.220204	0.017713	0.000500	0.000256
S-06-04-24	0.04	0.171796	0.001221	0.000538	0.158619	0.002502	0.002502	0.050044	0.000250	11.854956	0.002502	0.000500	0.001622	0.015345	0.000250	0.005022	0.250204	0.019213	0.000500	0.000256
S-06-04-25	0.04	0.176796	0.001221	0.000538	0.152619	0.002502	0.002502	0.050044	0.000250	11.054956	0.002502	0.000500	0.001422	0.015345	0.000250	0.005022	0.207204	0.014413	0.000500	0.000256
S-06-04-26	0.04	0.162796	0.001421	0.000538	0.162619	0.002502	0.002502	0.050044	0.000250	12.154956	0.002502	0.000500	0.002122	0.015345	0.000250	0.005022	0.242204	0.018513	0.000500	0.000256
S-06-04-27	0.03	0.174796	0.001321	0.000538	0.149619	0.002502	0.002502	0.050044	0.000250	11.554956	0.002502	0.000500	0.003322	0.015345	0.000250	0.005022	0.210204	0.016613	0.000500	0.000256
S-06-04-28	0.04	0.165796	0.001721	0.000538	0.156619	0.002502	0.002502	0.050044	0.000250	12.554956	0.002502	0.000500	0.001522	0.015345	0.000250	0.005022	0.225204	0.017513	0.000500	0.000256
S-06-04-29	0.04	0.148796	0.001621	0.000538	0.124619	0.002502	0.002502	0.050044	0.000250	12.054956	0.002502	0.000500	0.001122	0.015345	0.000250	0.005022	0.211204	0.016513	0.000500	0.000256
S-06-04-30	0.03	0.181796	0.001621	0.000538	0.131619	0.002502	0.002502	0.050044	0.000250	12.254956	0.002502	0.000500	0.001622	0.015345	0.000250	0.005022	0.232204	0.017513	0.000500	0.000256
S-06-04-31	0.05	0.150796	0.001621	0.000538	0.145619	0.002502	0.002502	0.050044	0.000250	12.654956	0.002502	0.000500	0.001322	0.015345	0.000250	0.005022	0.228204	0.019613	0.000500	0.000256
S-06-04-32	0.03	0.142796	0.001721	0.000538	0.145619	0.002502	0.002502	0.050044	0.000250	12.354956	0.002502	0.000500	0.001122	0.015345	0.000250	0.005022	0.259204	0.019213	0.000500	0.000256
S-06-04-33	0.03	0.138796	0.001721	0.000538	0.169619	0.002502	0.002502	0.050044	0.000250	13.554956	0.002502	0.000500	0.001522	0.015345	0.000250	0.005022	0.230204	0.021213	0.000500	0.000256
S-06-04-34	0.03	0.155796	0.001521	0.000538	0.137619	0.002502	0.002502	0.050044	0.000250	12.054956	0.002502	0.000500	0.001122	0.015345	0.000250	0.005022	0.202204	0.016913	0.000500	0.000256
S-06-04-35	0.01	0.135796	0.001521	0.000538	0.143619	0.002502	0.002502	0.050044	0.000250	12.554956	0.002502	0.000500	0.001122	0.015345	0.000250	0.005022	0.187204	0.018113	0.000500	0.000256
S-06-04-36	0.05	0.175796	0.001321	0.000538	0.164619	0.002502	0.002502	0.050044	0.000250	12.654956	0.002502	0.000500	0.001822	0.015345	0.000250	0.005022	0.195204	0.018913	0.000500	0.000256
S-06-04-37	0.04	0.170796	0.001421	0.000538	0.158619	0.002502	0.002502	0.050044	0.000250	12.954956	0.002502	0.000500	0.001222	0.015345	0.000250	0.005022	0.207204	0.018213	0.000500	0.000256
S-06-04-38	0.01	0.158796	0.001221	0.000538	0.192619	0.002502	0.002502	0.050044	0.000250	14.054956	0.002502	0.000500	0.002722	0.015345	0.000250	0.005022	0.198204	0.022613	0.000500	0.000256
S-06-04-39	0.03	0.168796	0.001121	0.000538	0.183619	0.002502	0.002502	0.050044	0.000250	13.254956	0.002502	0.000500	0.001322	0.015345	0.000250	0.005022	0.191204	0.019913	0.000500	0.000256
S-06-04-40	0.03	0.145796	0.001121	0.000538	0.138619	0.002502	0.002502	0.050044	0.000250	12.754956	0.002502	0.000500	0.003422	0.015345	0.000250	0.005022	0.173204	0.017213	0.000500	0.000256
S-06-04-41	0.01	0.211796	0.000521	0.000538	0.159619	0.002502	0.002502	0.050044	0.000250	11.054956	0.002502	0.000500	0.001822	0.015345	0.000250	0.005022	0.162204	0.014813	0.000500	0.000256
S-06-04-42	0.01	0.186796	0.001021	0.000538	0.139619	0.002502	0.002502	0.050044	0.000250	11.354956	0.002502	0.000500	0.001822	0.015345	0.000250	0.005022	0.172204	0.015713	0.000500	0.000256
S-06-04-43	0.01	0.209796	0.001121	0.000538	0.171619	0.002502	0.002502	0.050044	0.000250	11.954956	0.002502	0.000500	0.002222	0.015345	0.000250	0.005022	0.176204	0.013113	0.000500	0.000256
S-06-04-44	0.01	0.208796	0.000521	0.000538	0.173619	0.002502	0.002502	0.050044	0.000250	11.254956	0.002502	0.000500	0.001622	0.015345	0.000250	0.005022	0.152204	0.013913	0.000500	0.000256
S-06-04-45	0.02	0.202296	0.000521	0.000538	0.175119	0.002502	0.002502	0.050044	0.000250	11.804956	0.002502	0.000500	0.001572	0.015345	0.000250	0.005022	0.164204	0.013113	0.000500	0.000256
S-06-04-46	0.03	0.195796	0.000521	0.000538	0.176619	0.002502	0.002502	0.050044	0.000250	12.354956	0.002502	0.000500	0.001522	0.015345	0.000250	0.005022	0.176204	0.012313	0.000500	0.000256
S-06-04-47	0.01	0.218796	0.000521	0.000538	0.156619	0.002502	0.002502	0.050044	0.000250	11.354956	0.002502	0.000500	0.002322	0.015345	0.000250	0.005022	0.159204	0.011413	0.000500	0.000256
S-06-04-48	0.01	0.212796	0.000521	0.000538	0.146619	0.002502	0.002502	0.050044	0.000250	10.754956	0.002502	0.000500	0.002022	0.015345	0.000250	0.005022	0.143204	0.011513	0.000500	0.000256
S-06-04-49	0.01	0.189796	0.000521	0.000538	0.203619	0.002502	0.002502	0.050044	0.000250	14.054956	0.002502	0.000500	0.002322	0.015345	0.000250	0.005022	0.190204	0.022513	0.000500	0.000256
S-06-04-50	0.01	0.249796	0.000521	0.000538	0.193619	0.002502	0.002502	0.050044	0.000250	12.354956	0.002502	0.000500	0.003222	0.015345	0.000250	0.005022	0.171204	0.010813	0.000500	0.000256
S-06-04-51	0.01	0.274796	0.000521	0.000538	0.168619	0.002502	0.002502	0.050044	0.000250	11.854956	0.002502	0.000500	0.003122	0.032345	0.000250	0.005022	0.166204	0.013413	0.000500	0.000256
S-06-04-52	0.02	0.216796	0.000521	0.000538	0.134619	0.002502	0.002502	0.050044	0.000250	10.354956	0.002502	0.000500	0.001522	0.015345	0.000250	0.005022	0.149204	0.010513	0.000500	0.000256
S-06-04-53	0.01	0.219796	0.000521	0.000538	0.149619	0.002502	0.002502	0.050044	0.000250	10.754956	0.002502	0.000500	0.002422	0.015345	0.000250	0.005022	0.155204	0.011113	0.000500	0.000256
S-06-04-54	0.01	0.176796	0.001021	0.000538	0.166619	0.002502	0.002502	0.050044	0.000250	13.454956	0.002502	0.000500	0.001622	0.015345	0.000250	0.005022	0.182204	0.020113	0.000500	0.000676
S-06-04-55	0.01	0.188796	0.000521	0.000538	0.123619	0.002502	0.002502	0.050044	0.000250	10.854956	0.002502	0.000500	0.001322	0.015345	0.000250	0.005022	0.151204	0.011213	0.000500	0.000526
S-06-04-56	0.01	0.175796	0.000521	0.000538	0.130619	0.002502	0.002502	0.050044	0.000250	11.254956	0.002502	0.000500	0.001422	0.015345	0.000250	0.005022	0.140204	0.010413	0.000500	0.000576
S-06-04-57	0.01	0.197796	0.001021	0.000538	0.139619	0.002502	0.002502	0.050044	0.000250	11.654956	0.002502	0.000500	0.001822	0.015345	0.000250	0.005022	0.166204	0.011713	0.000500	0.000816
S-06-04-58	0.01	0.223796	0.001021	0.000538	0.125619	0.002502	0.002502	0.050044	0.000250	10.854956	0.002502	0.000500	0.001922	0.015345	0.000250	0.005022	0.145204	0.011413	0.000500	0.000896
S-06-04-59	0.01	0.214796	0.000521	0.000538	0.149619	0.002502	0.002502	0.050044	0.000250	11.754956	0.002502	0.000500	0.002022	0.015345	0.000250	0.005022	0.148204	0.009983	0.000500	0.001196
S-06-04-60	0.01	0.205796	0.000521	0.000538	0.127619	0.002502	0.002502	0.050044	0.000250	10.754956	0.002502	0.000500	0.001422	0.015345	0.000250	0.005022	0.143204	0.008693	0.000500	0.001176
S-06-04-61	0.01	0.215796	0.000521	0.000538	0.116619	0.002502	0.002502	0.050044	0.000250	9.894956	0.002502	0.000500	0.002622	0.015345	0.000250	0.005022	0.134204	0.008493	0.000500	0.001006
S-06-04-62	0.01	0.215796	0.000521	0.000538	0.130619	0.002502	0.002502	0.050044	0.000250	10.654956	0.002502	0.000500	0.001722	0.015345	0.000250	0.005022	0.141204	0.009423	0.000500	0.001476
S-06-04-63	0.01	0.210796	0.000521	0.000538	0.124619	0.002502	0.002502	0.050044	0.000250	10.354956	0.002502	0.000500	0.001722	0.015345	0.000250	0.005022	0.130204	0.007573	0.000500	0.001616
S-06-04-64	0.01	0.182796	0.000521	0.000538	0.106619	0.002502	0.002502	0.050044	0.000250	10.754956	0.002502	0.000500	0.001322	0.015345	0.000250	0.005022	0.143204	0.006903	0.000500	0.001006

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulfur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr) Dissolved (mg/L)
S-06-04 UP Hazelton																
S-06-04-0	0.002502	0.151327	4.021681	0.023430	1.042743	0.000050	3.284513	0.432537		0.000500	0.000500	0.005044	0.000211	0.005172	0.007613	
S-06-04-1	0.002502	0.151327	2.691681	0.014430	1.542743	0.000050	1.864513	0.291537		0.000500	0.000500	0.005044	0.000181	0.005172	0.016113	
S-06-04-2	0.002502	0.151327	2.151681	0.005430	1.442743	0.000050	1.154513	0.218537		0.000500	0.000500	0.005044	0.000141	0.005172	0.002513	
S-06-04-3	0.002502	0.151327	2.001681	0.005430	1.462743	0.000050	0.904513	0.212537		0.000500	0.000500	0.005044	0.000141	0.005172	0.002513	
S-06-04-4	0.002502	0.151327	1.761681	0.005430	1.512743	0.000050	0.704513	0.194537		0.000500	0.000500	0.005044	0.000191	0.005172	0.002513	
S-06-04-5	0.002502	0.151327	1.601681	0.005430	1.452743	0.000050	0.574513	0.163537		0.000500	0.000500	0.005044	0.000171	0.005172	0.002513	
S-06-04-6	0.002502	0.151327	1.841681	0.005430	1.492743	0.000050	0.624513	0.233537		0.000500	0.000500	0.005044	0.000291	0.005172	0.002513	
S-06-04-7	0.002502	0.151327	1.681681	0.005430	1.632743	0.000050	0.294513	0.243537		0.000500	0.000500	0.005044	0.000341	0.005172	0.002513	
S-06-04-8	0.002502	0.151327	1.471681	0.005430	1.442743	0.000050	0.294513	0.237537		0.000500	0.000500	0.005044	0.000261	0.005172	0.002513	
S-06-04-9	0.002502	0.151327	1.391681	0.005430	1.402743	0.000050	0.294513	0.225537		0.000500	0.000500	0.005044	0.000321	0.005172	0.002513	
S-06-04-10	0.002502	0.151327	1.301681	0.005430	1.452743	0.000050	0.294513	0.213537		0.000500	0.000500	0.005044	0.000321	0.005172	0.002513	
S-06-04-11	0.002502	0.151327	1.201681	0.005430	1.532743	0.000050	0.294513	0.188537		0.000500	0.000500	0.005044	0.000401	0.005172	0.002513	
S-06-04-12	0.002502	0.151327	1.241681	0.005430	1.522743	0.000050	0.294513	0.238537		0.000500	0.000500	0.005044	0.000361	0.005172	0.002513	
S-06-04-13	0.002502	0.151327	1.121681	0.005430	1.512743	0.000050	0.294513	0.221537		0.000500	0.000500	0.005044	0.000401	0.005172	0.002513	
S-06-04-14	0.002502	0.151327	0.981681	0.005430	1.502743	0.000050	0.294513	0.231537		0.000500	0.000500	0.005044	0.000391	0.005172	0.002513	
S-06-04-15	0.002502	0.151327	0.981681	0.005430	1.202743	0.000050	0.294513	0.166537		0.000500	0.000500	0.005044	0.000261	0.005172	0.002513	
S-06-04-16	0.002502	0.151327	0.911681	0.005430	1.132743	0.000050	0.294513	0.155537		0.000500	0.000500	0.005044	0.000251	0.005172	0.002513	
S-06-04-17	0.000252	0.151327	0.856681	0.002230	1.192743	0.000005	0.243513	0.145537		0.000050	0.000050	0.005044	0.000293	0.001772	0.002513	
S-06-04-18	0.002502	0.151327	0.841681	0.005430	1.222743	0.000050	0.294513	0.151537		0.000500	0.000500	0.005044	0.000341	0.005172	0.002513	
S-06-04-19	0.002502	0.151327	0.881681	0.005430	1.182743	0.000050	0.294513	0.157537		0.000500	0.000500	0.005044	0.000271	0.005172	0.002513	
S-06-04-20	0.002502	0.151327	0.961681	0.005430	1.332743	0.000050	0.294513	0.150537		0.000500	0.000500	0.005044	0.000311	0.005172	0.002513	
S-06-04-21	0.002502	0.151327	0.861681	0.005430	1.232743	0.000050	0.294513	0.163537		0.000500	0.000500	0.005044	0.000301	0.005172	0.002513	
S-06-04-22	0.002502	0.151327	0.831681	0.005430	1.342743	0.000050	0.294513	0.169537		0.000500	0.000500	0.005044	0.000311	0.005172	0.002513	
S-06-04-23	0.002502	0.151327	0.841681	0.005430	1.282743	0.000050	0.294513	0.156537		0.000500	0.000500	0.005044	0.000291	0.005172	0.002513	
S-06-04-24	0.002502	0.151327	0.881681	0.005430	1.242743	0.000050	0.294513	0.151537		0.000500	0.000500	0.005044	0.000341	0.005172	0.002513	
S-06-04-25	0.002502	0.151327	0.791681	0.005430	1.272743	0.000050	0.294513	0.134537		0.000500	0.000500	0.005044	0.000291	0.005172	0.002513	
S-06-04-26	0.002502	0.151327	0.811681	0.005430	1.302743	0.000050	0.294513	0.138537		0.000500	0.000500	0.005044	0.000321	0.005172	0.002513	
S-06-04-27	0.002502	0.151327	0.721681	0.005430	1.222743	0.000050	0.294513	0.129537		0.000500	0.000500	0.005044	0.000291	0.005172	0.002513	
S-06-04-28	0.002502	0.151327	0.781681	0.005430	1.302743	0.000050	0.294513	0.143537		0.000500	0.000500	0.005044	0.000311	0.005172	0.002513	
S-06-04-29	0.002502	0.151327	0.751681	0.005430	1.322743	0.000050	0.294513	0.121537		0.000500	0.000500	0.005044	0.000311	0.005172	0.002513	
S-06-04-30	0.002502	0.151327	0.791681	0.005430	1.332743	0.000050	0.294513	0.115537		0.000500	0.000500	0.005044	0.000211	0.005172	0.002513	
S-06-04-31	0.002502	0.151327	0.761681	0.005430	1.312743	0.000050	0.294513	0.126537		0.000500	0.000500	0.005044	0.000321	0.005172	0.002513	
S-06-04-32	0.002502	0.151327	0.761681	0.005430	1.232743	0.000050	0.294513	0.127537		0.000500	0.000500	0.005044	0.000331	0.005172	0.002513	
S-06-04-33	0.002502	0.151327	0.741681	0.005430	1.352743	0.000050	0.294513	0.133537		0.000500	0.000500	0.005044	0.000351	0.005172	0.002513	
S-06-04-34	0.002502	0.151327	0.711681	0.005430	1.242743	0.000050	0.294513	0.108537		0.000500	0.000500	0.005044	0.000301	0.005172	0.002513	
S-06-04-35	0.002502	0.151327	0.691681	0.005430	1.172743	0.000050	0.294513	0.114537		0.000500	0.000500	0.005044	0.000311	0.005172	0.002513	
S-06-04-36	0.002502	0.151327	0.711681	0.005430	1.362743	0.000050	0.294513	0.113537		0.000500	0.000500	0.005044	0.000311	0.005172	0.002513	
S-06-04-37	0.002502	0.151327	0.781681	0.005430	1.372743	0.000050	0.294513	0.120537		0.000500	0.000500	0.005044	0.000311	0.005172	0.002513	
S-06-04-38	0.002502	0.151327	0.711681	0.005430	1.362743	0.000050	0.294513	0.114537		0.000500	0.000500	0.005044	0.000361	0.005172	0.002513	
S-06-04-39	0.002502	0.151327	0.701681	0.005430	1.332743	0.000050	0.294513	0.107537		0.000500	0.000500	0.005044	0.000331	0.005172	0.002513	
S-06-04-40	0.002502	0.151327	0.631681	0.005430	1.292743	0.000050	0.294513	0.089337		0.000500	0.000500	0.005044	0.000281	0.005172	0.002513	
S-06-04-41	0.002502	0.151327	0.661681	0.005430	1.192743	0.000050	0.294513	0.099137		0.000500	0.000500	0.005044	0.000281	0.005172	0.002513	
S-06-04-42	0.002502	0.151327	0.641681	0.005430	1.282743	0.000050	0.294513	0.086637		0.000500	0.000500	0.005044	0.000281	0.005172	0.002513	
S-06-04-43	0.002502	0.151327	0.711681	0.005430	1.522743	0.000050	0.294513	0.100537		0.000500	0.000500	0.005044	0.000301	0.005172	0.002513	
S-06-04-44	0.002502	0.151327	0.681681	0.005430	1.392743	0.000050	0.294513	0.095937		0.000500	0.000500	0.005044	0.000291	0.005172	0.002513	
S-06-04-45	0.002502	0.151327	0.706681	0.005430	1.437743	0.000050	0.294513	0.098237		0.000500	0.000500	0.005044	0.000286	0.005172	0.002513	
S-06-04-46	0.002502	0.151327	0.731681	0.005430	1.482743	0.000050	0.294513	0.100537		0.000500	0.000500	0.005044	0.000281	0.005172	0.002513	
S-06-04-47	0.002502	0.151327	0.661681	0.005430	1.502743	0.000050	0.294513	0.084037		0.000500	0.000500	0.005044	0.000271	0.005172	0.002513	
S-06-04-48	0.002502	0.151327	0.641681	0.005430	1.272743	0.000050	0.294513	0.077537		0.000500	0.000500	0.005044	0.000251	0.005172	0.002513	
S-06-04-49	0.002502	0.151327	0.721681	0.005430	1.472743	0.000050	0.294513	0.090137		0.000500	0.000500	0.005044	0.000321	0.005172	0.002513	
S-06-04-50	0.002502	0.151327	0.701681	0.005430	1.532743	0.000050	0.294513	0.089437		0.000500	0.000500	0.005044	0.000301	0.005172	0.002513	
S-06-04-51	0.002502	0.151327	0.711681	0.005430	1.432743	0.000050	0.294513	0.079937		0.000500	0.000500	0.005044	0.000281	0.005172	0.002513	
S-06-04-52	0.002502	0.151327	0.611681	0.005430	1.172743	0.000050	0.294513	0.071137		0.000500	0.000500	0.005044	0.000201	0.005172	0.002513	
S-06-04-53	0.002502	0.151327	0.641681	0.005430	1.322743	0.000050	0.294513	0.075537		0.000500	0.000500	0.005044	0.000251	0.005172	0.002513	
S-06-04-54	0.002502	0.151327	0.661681	0.005430	1.272743	0.000050	0.294513	0.082637		0.000500	0.000500	0.005044	0.000301	0.005172	0.002513	
S-06-04-55	0.002502	0.151327	0.571681	0.005430	1.172743	0.000050	0.294513	0.066037		0.000500	0.000500	0.005044	0.000261	0.005172	0.002513	
S-06-04-56	0.002502	0.151327	0.311681	0.005430	1.172743	0.000050	0.294513	0.067437		0.000500	0.000500	0.005044	0.000261	0.005172	0.002513	
S-06-04-57	0.002502	0.151327	0.601681	0.005430	1.352743	0.000050	0.294513	0.072637		0.000500	0.000500	0.005044	0.000271	0.005172	0.002513	
S-06-04-58	0.002502	0.151327	0.571681	0.005430	1.262743	0.000050	0.294513	0.063837		0.000500	0.000500	0.005044	0.000251	0.005172	0.002513	
S-06-04-59	0.002502	0.151327	0.581681	0.005430	1.302743	0.000050	0.294513	0.068137		0.000500	0.000500	0.005044	0.000231	0.005172	0.002513	
S-06-04-60	0.002502	0.151327	0.571681	0.005430	1.252743	0.000050	0.294513	0.066337		0.000500	0.000500	0.005044	0.000231	0.005172	0.002513	
S-06-04-61	0.002502	0.151327	0.311681	0.005430	1.112743	0.000050	0.294513	0.061037		0.000500	0.000500	0.005044	0.000211	0.005172	0.002513	
S-06-04-62	0.002502	0.151327	0.311681	0.005430	1.252743	0.000050	0.294513	0.064537		0.000500	0.000500	0.005044	0.000231	0.005172	0.002513	
S-06-04-63	0.002502	0.151327	0.311681	0.005430	1.232743	0.000050	0.294513	0.058437		0.000500	0.000500	0.005044	0.000221	0.005172	0.002513	
S-06-04-64	0.002502	0.151327	0.311681	0.005430	1.102743	0.000050	0.294513	0.057337		0.000500	0.000500	0.005044	0.000191	0.005172	0.002513	

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Calculated Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
S-06-04-65		65	21-May-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	485		30.216324	56	8.12		2.80	24.06	5.06	
S-06-04-66		66	28-May-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	480		28.699924	59	8.1		4.10	24.06	5.00	
S-06-04-67		67	4-Jun-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	435		31.974524	61.6	8.09		3.50	25.56	4.90	
S-06-04-68		68	11-Jun-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	475		28.208124	56.6	8.09		3.30	23.16	4.56	
S-06-04-69		69	18-Jun-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	500		28.732724	59.5	8.12		4.90	24.06	5.04	
S-06-04-70		70	25-Jun-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	490		27.671224	56.7	7.86		2.50	23.26	4.65	
S-06-04-71		71	2-Jul-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	450		26.663024	56	7.94		3.10	22.66	4.03	
S-06-04-72		72	9-Jul-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	480		27.454024	56.1	8.11		2.50	23.06	4.41	
S-06-04-73		73	16-Jul-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	490		29.175324	57.1	8.12		2.90	23.56	4.13	
S-06-04-74		74	23-Jul-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	470		27.441724	54.8	8.11		5.90	22.56	4.04	
S-06-04-75		75	30-Jul-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	500		28.158924	57.4	8.14		5.60	23.46	4.35	
S-06-04-76		76	6-Aug-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	475		27.163024	55.2	8.14		4.00	22.56	4.36	
S-06-04-77		77	13-Aug-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	480		24.159324	51.6	8.19		4.90	21.46	3.86	
S-06-04-78		78	20-Aug-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	430		29.175324	58.3	8.17		2.80	25.56	3.38	
S-06-04-79		79	27-Aug-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	480		26.224524	53.5	8.1		3.40	23.96	3.68	
S-06-04-80		80	3-Sep-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	500		27.896624	56.4	8.13		6.00	25.16	3.27	
S-06-04-81		81	10-Sep-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	495		26.425324	53.6	8.13		2.60	23.86	3.15	
S-06-04-82		82	17-Sep-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	470		24.925724	50.4	8.07		3.30	22.56	3.22	
S-06-04-83		83	24-Sep-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	450		29.958124	61.1	8.04		4.60	28.16	3.57	
S-06-04-84		84	1-Oct-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	455		23.362624	55.2	8.08		4.60	24.86	3.42	
S-06-04-85		85	8-Oct-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	485		22.491724	50.8	8.12		2.10	22.56	3.09	
S-06-04-86		86	15-Oct-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	460		24.821224	52.8	8.13		2.20	24.26	3.00	
S-06-04-87		87	22-Oct-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	470		28.966324	58	8.01		3.40	26.36	3.13	
S-06-04-88		88	29-Oct-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	480		27.187624	53.8	7.67		3.10	24.66	3.02	
S-06-04-89		89	5-Nov-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	485		22.537624	53.6	7.76		2.10	23.96	2.81	
S-06-04-90		90	12-Nov-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	460		22.346624	45.4	7.89		2.00	20.46	2.61	
S-06-04-91		91	19-Nov-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	475		25.434324	52.9	7.87		2.30	23.76	2.89	
S-06-04-92		92	26-Nov-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	450		27.183524	56.8	8.03		2.10	26.16	2.91	
S-06-04-93		93	3-Dec-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	485		26.363824	54.9	8.03		1.10	24.66	3.08	
S-06-04-94		94	10-Dec-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	485		26.925324	55	8.05		0.50	23.66	2.88	
S-06-04-95		95	17-Dec-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	450		26.626124	54.7	8.02		2.30	23.46	2.93	
S-06-04-96		96	24-Dec-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	495		27.917124	57.4	8.31		0.50	26.36	3.22	
S-06-04-97		97	31-Dec-10	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	445		28.425324	57.5	8.31		2.00	26.46	2.88	
S-06-04-98		98	7-Jan-11	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	460		26.892524	56	8.15		1.40	26.16	2.83	
S-06-04-99		99	14-Jan-11	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	465		25.442524	52.8	8.15		1.40	23.46	2.81	
S-06-04-100		100	21-Jan-11	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	485		25.467124	53	8.14		1.10	24.16	2.92	
S-06-04-101		101	28-Jan-11	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	465		27.441724	57.6	8.15		0.50	25.46	2.95	
S-06-04-102		102	4-Feb-11	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	460		28.171224	57.6	8.16		0.50	26.56	2.95	
S-06-04-103		103	11-Feb-11	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	475		27.507324	57.8	8.03		0.50	25.76	3.12	
S-06-04-104		104	18-Feb-11	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	475		26.117924	53.9	8.1		1.70	23.26	2.98	
S-06-04-105		105	25-Feb-11	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	465		26.509324	51.9	8.15		1.73	23.84	2.99	
S-06-04-106		106	4-Mar-11	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	440		26.900724	61	8.16		1.75	24.41	3.01	
S-06-04-107		107	11-Mar-11	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	450		27.292124	65.2	8.17		1.78	24.99	3.02	
S-06-04-108		108	18-Mar-11	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	465		27.683524	58.5	8.21		1.80	25.56	3.03	
S-06-04-109		109	25-Mar-11	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	450		26.884849	56.7	8.25		1.48	24.81	2.94	
S-06-04-110		110	1-Apr-11	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	470		26.086174	60.9	8.2		1.15	24.06	2.86	
S-06-04-111		111	8-Apr-11	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	445		25.287499	64.2	8.1		0.83	23.31	2.77	
S-06-04-112		112	15-Apr-11	Sulphurets	MC Panel	UP Hazelton	PPFP	PR	0	SIL	0	Drillcore		Water	500	450		24.488824	51	7.94		0.50	22.56	2.68	
Mean last 10 weeks	10																	26.475829	58.11	8.131		1.324425	24.257832	2.941389	#N/A
S-06-05 Overburden																									
S-06-05-0		0	20-Feb-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	750	680		359.972	763	4.5		73.40	1.00	393.00	
S-06-05-1		1	27-Feb-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		238.547	517	4.92		17.10	2.80	254.00	
S-06-05-2		2	6-Mar-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		199.79	447	4.71		17.10	2.00	219.00	
S-06-05-3		3	13-Mar-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	450		150.539	367	4.51		22.30	1.00	172.00	
S-06-05-4		4	20-Mar-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	440		110.3784	283	4.3		20.90	1.00	125.00	
S-06-05-5		5	27-Mar-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	440		85.3493	248	4.27		22.60	1.00	104.00	
S-06-05-6		6	3-Apr-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	470		88.5625	255	4.26		24.60	1.00	110.00	
S-06-05-7		7	10-Apr-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		67.5622	226	4.16		28.60	1.00	94.40	
S-06-05-8		8	17-Apr-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	450		80.6073	260	4.04		32.70	1.00	109.00	
S-06-05-9		9	24-Apr-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	440		76.4392	264	4		39.40	1.00	107.00	
S-06-05-10		10	1-May-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	500		90.5169	280	3.99		37.70	1.00	120.00	
S-06-05-11		11	8-May-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	480		82.6808	291	3.88		44.60	1.00	119.00	
S-06-05-12		12	15-May-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		72.7873	295	3.77		47.10	1.00	114.00	
S-06-05-13		13	22-May-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	475		65.0086	317	3.68		58.60	1.00	121.00	
S-06-05-14		14	29-May-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	475		61.9594	328	3.62		59.80	1.00	120.00	
S-06-05-15		15	5-Jun-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	455		50.9553	306	3.6		63.50	1.00	108.00	

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
S-06-04-65	0.01	0.177796	0.000521	0.000538	0.123619	0.002502	0.002502	0.050044	0.000250	11.854956	0.002502	0.000500	0.001222	0.015345	0.000250	0.005022	0.141204	0.008793	0.000500	0.001946
S-06-04-66	0.01	0.183796	0.000521	0.000538	0.127619	0.002502	0.002502	0.050044	0.000250	11.254956	0.002502	0.000500	0.001522	0.015345	0.000250	0.005022	0.137204	0.008193	0.000500	0.001866
S-06-04-67	0.01	0.211796	0.000521	0.000538	0.155619	0.002502	0.002502	0.050044	0.000250	12.554956	0.002502	0.000500	0.001622	0.015345	0.000250	0.005022	0.143204	0.009643	0.000500	0.001746
S-06-04-68	0.01	0.184796	0.000521	0.000538	0.109619	0.002502	0.002502	0.050044	0.000250	11.054956	0.002502	0.000500	0.001322	0.015345	0.000250	0.005022	0.139204	0.007003	0.000500	0.001626
S-06-04-69	0.01	0.189796	0.000521	0.000538	0.122619	0.002502	0.002502	0.050044	0.000250	11.254956	0.002502	0.000500	0.001322	0.015345	0.000250	0.005022	0.145204	0.007793	0.000500	0.001966
S-06-04-70	0.01	0.196796	0.000521	0.000538	0.116619	0.002502	0.002502	0.050044	0.000250	10.854956	0.002502	0.000500	0.001422	0.015345	0.000250	0.005022	0.130204	0.006123	0.000500	0.001796
S-06-04-71	0.01	0.200796	0.000521	0.000538	0.125619	0.002502	0.002502	0.050044	0.000250	10.454956	0.002502	0.000500	0.001622	0.015345	0.000250	0.005022	0.128204	0.006013	0.000500	0.001796
S-06-04-72	0.01	0.178796	0.000521	0.000538	0.124619	0.002502	0.002502	0.050044	0.000250	10.754956	0.002502	0.000500	0.001122	0.015345	0.000250	0.005022	0.138204	0.006263	0.000500	0.001996
S-06-04-73	0.01	0.175796	0.000521	0.000538	0.135619	0.002502	0.002502	0.050044	0.000250	11.454956	0.002502	0.000500	0.001222	0.015345	0.000250	0.005022	0.131204	0.007043	0.000500	0.002206
S-06-04-74	0.01	0.190796	0.000521	0.000538	0.127619	0.002502	0.002502	0.050044	0.000250	10.754956	0.002502	0.000500	0.001222	0.015345	0.000250	0.005022	0.135204	0.005473	0.000500	0.002496
S-06-04-75	0.01	0.176796	0.000521	0.000538	0.163619	0.002502	0.002502	0.050044	0.000250	11.054956	0.002502	0.000500	0.001262	0.015345	0.000250	0.005022	0.127204	0.004663	0.000500	0.002506
S-06-04-76	0.01	0.196796	0.000521	0.000538	0.144619	0.002502	0.002502	0.050044	0.000250	10.654956	0.002502	0.000500	0.001422	0.015345	0.000250	0.005022	0.128204	0.006243	0.000500	0.002616
S-06-04-77	0.01	0.181796	0.000521	0.000538	0.132619	0.002502	0.002502	0.050044	0.000250	9.464956	0.002502	0.000500	0.001422	0.015345	0.000250	0.005022	0.121204	0.004673	0.000500	0.002296
S-06-04-78	0.01	0.175796	0.000521	0.000538	0.163619	0.002502	0.002502	0.050044	0.000250	11.454956	0.002502	0.000500	0.002022	0.034345	0.000250	0.005022	0.131204	0.008723	0.000500	0.002286
S-06-04-79	0.01	0.176796	0.000521	0.000538	0.155619	0.002502	0.002502	0.050044	0.000250	10.254956	0.002502	0.000500	0.001522	0.015345	0.000250	0.005022	0.143204	0.005203	0.000500	0.001946
S-06-04-80	0.01	0.151796	0.000521	0.000538	0.156619	0.002502	0.002502	0.050044	0.000250	10.954956	0.002502	0.000500	0.001522	0.015345	0.000250	0.005022	0.124204	0.004723	0.000500	0.001976
S-06-04-81	0.01	0.181796	0.000611	0.000408	0.163619	0.000252	0.000252	0.005044	0.000005	10.354956	0.000252	0.000050	0.002202	0.015345	0.000025	0.002522	0.131204	0.004523	0.000005	0.001886
S-06-04-82	0.01	0.185796	0.000571	0.000428	0.157619	0.000252	0.000252	0.005044	0.000005	9.764956	0.000252	0.000050	0.001142	0.043345	0.000025	0.002522	0.125204	0.003943	0.000005	0.001946
S-06-04-83	0.01	0.166796	0.000621	0.000478	0.197619	0.000252	0.000252	0.005044	0.000005	11.754956	0.000252	0.000050	0.001242	0.015345	0.000025	0.002522	0.139204	0.007943	0.000005	0.002136
S-06-04-84	0.01	0.194796	0.000641	0.000598	0.184619	0.000252	0.000252	0.005044	0.000005	9.124956	0.000252	0.000050	0.001522	0.015345	0.000058	0.002522	0.134204	0.004273	0.000005	0.001846
S-06-04-85	0.01	0.191796	0.000561	0.000418	0.155619	0.000252	0.000252	0.005044	0.000005	8.774956	0.000252	0.000050	0.001562	0.015345	0.000025	0.002522	0.135204	0.004463	0.000005	0.001736
S-06-04-86	0.01	0.154796	0.000531	0.000388	0.167619	0.000252	0.000252	0.005044	0.000005	9.714956	0.000252	0.000050	0.000982	0.015345	0.000025	0.002522	0.130204	0.003753	0.000005	0.001796
S-06-04-87	0.01	0.151796	0.000611	0.000398	0.196619	0.000252	0.000252	0.005044	0.000005	11.354956	0.000252	0.000050	0.001082	0.015345	0.000025	0.002522	0.141204	0.004993	0.000005	0.001756
S-06-04-88	0.01	0.160796	0.000541	0.000398	0.190619	0.000252	0.000252	0.005044	0.000005	10.654956	0.000252	0.000050	0.000942	0.015345	0.000025	0.002522	0.134204	0.004133	0.000005	0.001776
S-06-04-89	0.01	0.160796	0.000561	0.000388	0.192619	0.000252	0.000252	0.005044	0.000005	8.794956	0.000252	0.000050	0.000852	0.015345	0.000025	0.002522	0.134204	0.004263	0.000005	0.001776
S-06-04-90	0.01	0.178796	0.000441	0.000328	0.152619	0.000252	0.000252	0.005044	0.000005	8.734956	0.000252	0.000050	0.001682	0.015345	0.000025	0.002522	0.124204	0.002813	0.000005	0.001156
S-06-04-91	0.01	0.174796	0.000551	0.000388	0.180619	0.000252	0.000252	0.005044	0.000005	9.974956	0.000252	0.000050	0.001602	0.015345	0.000025	0.002522	0.121204	0.005133	0.000005	0.002016
S-06-04-92	0.01	0.143796	0.000551	0.000368	0.194619	0.000252	0.000252	0.005044	0.000005	10.654956	0.000252	0.000050	0.000752	0.015345	0.000025	0.002522	0.133204	0.004663	0.000005	0.001776
S-06-04-93	0.01	0.149796	0.000541	0.000328	0.178619	0.000252	0.000252	0.005044	0.000005	10.354956	0.000252	0.000050	0.000942	0.015345	0.000025	0.002522	0.116204	0.004243	0.000005	0.001606
S-06-04-94	0.01	0.150796	0.000541	0.000758	0.188619	0.000252	0.000252	0.005044	0.000005	10.554956	0.000252	0.000050	0.000722	0.015345	0.000025	0.002522	0.131204	0.004023	0.000005	0.001586
S-06-04-95	0.01	0.188796	0.000511	0.000398	0.205619	0.000252	0.000252	0.005044	0.000005	10.454956	0.000252	0.000050	0.001662	0.055345	0.000025	0.002522	0.119204	0.003873	0.000005	0.001596
S-06-04-96	0.01	0.155796	0.000551	0.000398	0.206619	0.000252	0.000252	0.005044	0.000005	10.954956	0.000252	0.000050	0.001162	0.015345	0.000025	0.002522	0.129204	0.003863	0.000005	0.001536
S-06-04-97	0.01	0.164796	0.000561	0.000408	0.214619	0.000252	0.000252	0.005044	0.000005	11.154956	0.000252	0.000050	0.001142	0.015345	0.000025	0.002522	0.131204	0.005553	0.000005	0.001536
S-06-04-98	0.10	0.164796	0.000511	0.000358	0.208619	0.000252	0.000252	0.005044	0.000005	10.554956	0.000252	0.000050	0.001322	0.015345	0.000025	0.002522	0.123204	0.004503	0.000005	0.001426
S-06-04-99	0.01	0.192796	0.000571	0.000348	0.189619	0.000252	0.000252	0.005044	0.000005	9.974956	0.000252	0.000050	0.001682	0.015345	0.000025	0.002522	0.123204	0.004663	0.000005	0.001246
S-06-04-100	0.01	0.163796	0.000631	0.000358	0.195619	0.000252	0.000252	0.005044	0.000005	9.974956	0.000252	0.000050	0.000992	0.015345	0.000025	0.002522	0.129204	0.004283	0.000005	0.001216
S-06-04-101	0.01	0.183796	0.000611	0.000428	0.213619	0.000252	0.000252	0.005044	0.000005	10.754956	0.000252	0.000050	0.001232	0.015345	0.000025	0.002522	0.135204	0.005073	0.000005	0.001386
S-06-04-102	0.01	0.168796	0.000571	0.000378	0.204619	0.000252	0.000252	0.005044	0.000005	11.054956	0.000252	0.000050	0.001462	0.015345	0.000025	0.002522	0.130204	0.005293	0.000005	0.001336
S-06-04-103	0.01	0.229796	0.000621	0.000378	0.209619	0.000252	0.000252	0.005044	0.000005	10.754956	0.000252	0.000050	0.001872	0.015345	0.000025	0.002522	0.151204	0.005063	0.000005	0.001226
S-06-04-104	0.01	0.173796	0.000561	0.000388	0.186619	0.000252	0.000252	0.005044	0.000005	10.254956	0.000252	0.000050	0.001322	0.015345	0.000025	0.002522	0.117204	0.003523	0.000005	0.001276
S-06-04-105	0.01	0.178796	0.000576	0.000395	0.191869	0.000252	0.000252	0.005044	0.000005	10.404956	0.000252	0.000050	0.001317	0.015345	0.000025	0.002522	0.121204	0.003731	0.000005	0.001246
S-06-04-106	0.01	0.183796	0.000591	0.000403	0.197119	0.000252	0.000252	0.005044	0.000005	10.554956	0.000252	0.000050	0.001312	0.015345	0.000025	0.002522	0.125204	0.003938	0.000005	0.001216
S-06-04-107	0.01	0.188796	0.000606	0.000410	0.202369	0.000252	0.000252	0.005044	0.000005	10.704956	0.000252	0.000050	0.001307	0.015345	0.000025	0.002522	0.129204	0.004146	0.000005	0.001186
S-06-04-108	0.01	0.193796	0.000621	0.000418	0.207619	0.000252	0.000252	0.005044	0.000005	10.854956	0.000252	0.000050	0.001302	0.015345	0.000025	0.002522	0.133204	0.004353	0.000005	0.001156
S-06-04-109	0.01	0.190046	0.000596	0.000415	0.200619	0.000252	0.000252	0.005044	0.000005	10.542456	0.000252	0.000050	0.001247	0.015345	0.000025	0.002522	0.128954	0.003963	0.000005	0.001098
S-06-04-110	0.01	0.186296	0.000571	0.000413	0.193619	0.000252	0.000252	0.005044	0.000005	10.229956	0.000252	0.000050	0.001192	0.015345	0.000025	0.002522	0.124704	0.003573	0.000005	0.001039
S-06-04-111	0.01	0.182546	0.000546	0.000410	0.186619	0.000252	0.000252	0.005044	0.000005	9.917456	0.000252	0.000050	0.001137	0.015345	0.000025	0.002522	0.120454	0.003183	0.000005	0.000980
S-06-04-112	0.01	0.178796	0.000521	0.000408	0.179619	0.000252	0.000252	0.005044	0.000005	9.604956	0.000252	0.000050	0.001082	0.015345	0.000025	0.002522	0.116204	0.002793	0.000005	0.000921
Mean last 10 weeks	0.012239	0.188646	0.000581	0.000404	0.195569	0.000252	0.000252	0.005044	0.000005	10.382456	0.000252	0.000050	0.001309	0.015345	0.000025	0.002522	0.126754	0.003827	0.000005	0.001135
S-06-05 Overburden																				
S-06-05-0	0.42	4.03	0.0096	0.0029	0.0715	0.0189	0.0025	0.05	0.0216	131	0.0025	0.711	7.21	5.76	0.045	0.01	7.92	7.59	0.0005	0.00025
S-06-05-1	0.17	0.517	0.0127	0.0027	0.0291	0.0025	0.0025	0.05	0.01	89.4	0.0025	0.272	1.95	0.814	0.00452	0.005	3.67	5.23	0.0005	0.00025
S-06-05-2	0.17	0.392	0.0069	0.0017	0.015	0.006	0.0025	0.05	0.00882	76.8	0.0025	0.179	1.76	0.468	0.00212	0.005	1.9	3.82	0.0005	0.00025
S-06-05-3	0.19	0.611	0.005	0.0017	0.0139	0.007	0.0025	0.05	0.00795	58.1	0.0025	0.144	2.51	0.664	0.00222	0.005	1.29	2.92	0.0005	0.00025
S-06-05-4	0.16	0.67	0.0038	0.0016	0.00995	0.0085	0.0025	0.05	0.00672	42.8	0.0025	0.0917	2.36	1.31	0.0014	0.005	0.824	1.82	0.0005	0.00025
S-06-05-5	0.13	0.503	0.0033	0.0013	0.0129	0.007	0.0025	0.05	0.00619	33.2	0.0025	0.0649	2.04	1.68	0.00183	0.005	0.573	1.32	0.0005	0.00025
S-06-05-6	0.12	0.73	0.0027	0.0016	0.00922	0.0076	0.0025	0.05	0.00766	34.4	0.0025	0.0882	2.92	1.88	0.00135	0.005	0.625	1.94	0.0005	0.00025
S-06-05-7	0.14	0.682	0.0023	0.0015	0.00883	0.0076	0.0025	0.05	0.00663	26.3	0.0025	0.0634	2.67	2.07	0.00105	0.005	0.442	1.24	0.0005	0.00025
S-06-05-8	0.13	1.05	0.0024	0.002	0.00751	0.0084	0.0025	0.05	0.00859	31.5	0.0025	0.0652	3.55	3	0.00101	0.005	0.453	1.26	0.0005	0.00025
S-06-05-9	0.16	1.21	0.002	0.0023	0.00865	0.0086	0.0025	0.05	0.00977	29.9	0.0025	0.0633	3.99	3.07	0.00089	0.005	0.412	1.43	0.0005	0.00025
S-06-05-10	0.13	1.01	0.0018	0.0022	0.00695	0.0076	0.0025	0.05	0.0113	35.7	0.0025	0.0613	3.8	3.14	0.00119	0.005	0.309	1.37	0.0005	0.00025
S-06-05-11	0.14	1.29	0.0015	0.0029	0.00581	0.0085	0.0025	0.05	0.0123	32.6	0.0025	0.0539	3.58	3.53	0.00315	0.005	0.288	1.06	0.0005	0.00025
S-06-05-12	0.16	1.87	0.0012	0.0037	0.0041	0.008	0.0025	0.05	0.0131	28.7	0.0025	0.0524	4.88	4.47	0.00078	0.005	0.253	1.2	0.0005	0.00025
S-06-05-13	0.14	2.22	0.0012	0.0041	0.00436	0.0079	0.0025	0.05	0.0139	25.6	0.0025	0.0516	4.75	5.63	0.00102	0.005	0.246	1.06	0.0005	0.00025
S-06-05-14	0.14	2.64	0.0011	0.0047	0.00322	0.0069	0.0025	0.05	0.0155	24.4	0.0025	0.0455	4.58	5.9	0.00105	0.005	0.234	0.956	0.0005	0.00025
S-06-05-15	0.15	2.6	0.0012	0.0045	0.00342	0.0062	0.0025	0.05	0.0148	20	0.0025	0.0406	3.63	6.37	0.0009	0.005	0.233	0.696	0.0005	0.00025

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulfur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr) Dissolved (mg/L)
S-06-04-65	0.002502	0.151327	0.311681	0.005430	1.192743	0.000050	0.294513	0.060137		0.000500	0.000500	0.005044	0.000241	0.005172	0.002513	
S-06-04-66	0.002502	0.151327	0.311681	0.005430	1.172743	0.000050	0.294513	0.058637		0.000500	0.000500	0.005044	0.000231	0.005172	0.002513	
S-06-04-67	0.002502	0.151327	0.311681	0.005430	1.202743	0.000050	0.294513	0.062637		0.000500	0.000500	0.005044	0.000201	0.005172	0.002513	
S-06-04-68	0.002502	0.151327	0.311681	0.005430	1.132743	0.000050	0.294513	0.053737		0.000500	0.000500	0.005044	0.000191	0.005172	0.002513	
S-06-04-69	0.002502	0.151327	0.311681	0.005430	1.172743	0.000050	0.294513	0.060537		0.000500	0.000500	0.005044	0.000241	0.005172	0.002513	
S-06-04-70	0.002502	0.151327	0.311681	0.005430	1.252743	0.000050	0.294513	0.056837		0.000500	0.000500	0.005044	0.000221	0.005172	0.002513	
S-06-04-71	0.002502	0.151327	0.311681	0.005430	1.232743	0.000050	0.294513	0.055237		0.000500	0.000500	0.005044	0.000181	0.005172	0.002513	
S-06-04-72	0.002502	0.151327	0.311681	0.005430	1.062743	0.000050	0.294513	0.056137		0.000500	0.000500	0.005044	0.000191	0.005172	0.002513	
S-06-04-73	0.002502	0.151327	0.311681	0.005430	1.202743	0.000050	0.294513	0.059537		0.000500	0.000500	0.005044	0.000211	0.005172	0.002513	
S-06-04-74	0.002502	0.151327	0.311681	0.005430	1.202743	0.000050	0.294513	0.057037		0.000500	0.000500	0.005044	0.000211	0.005172	0.002513	
S-06-04-75	0.002502	0.151327	0.311681	0.005430	1.222743	0.000050	0.294513	0.057737		0.000500	0.000500	0.005044	0.000231	0.005172	0.002513	
S-06-04-76	0.002502	0.151327	0.311681	0.005430	1.272743	0.000050	0.294513	0.055137		0.000500	0.000500	0.005044	0.000211	0.005172	0.002513	
S-06-04-77	0.002502	0.151327	0.311681	0.005430	1.042743	0.000050	0.294513	0.051037		0.000500	0.000500	0.005044	0.000201	0.005172	0.002513	
S-06-04-78	0.002502	0.151327	0.311681	0.005430	1.014743	0.000050	0.294513	0.055637		0.000500	0.000500	0.005044	0.000171	0.005172	0.002513	
S-06-04-79	0.002502	0.151327	0.311681	0.005430	1.052743	0.000050	0.294513	0.052837		0.000500	0.000500	0.005044	0.000181	0.005172	0.002513	
S-06-04-80	0.002502	0.151327	0.311681	0.005430	1.082743	0.000050	0.294513	0.053037		0.000500	0.000500	0.005044	0.000201	0.005172	0.002513	
S-06-04-81	0.000252	0.151327	0.438681	0.000910	1.062743	0.000005	0.191513	0.053337	1.19	0.000050	0.000050	0.005044	0.000186	0.000672	0.000513	
S-06-04-82	0.000252	0.151327	0.468681	0.000930	0.988743	0.000005	0.206513	0.051337	1.15	0.000050	0.000050	0.005044	0.000168	0.001172	0.001313	
S-06-04-83	0.000252	0.151327	0.483681	0.000970	1.102743	0.000005	0.214513	0.057637	1.34	0.000050	0.000050	0.005044	0.000200	0.000672	0.001513	
S-06-04-84	0.000252	0.151327	0.496681	0.000920	1.021743	0.000005	0.231513	0.055037	1.35	0.000050	0.000050	0.005044	0.000174	0.001172	0.001513	
S-06-04-85	0.000252	0.151327	0.469681	0.000840	0.899743	0.000005	0.195513	0.050837	1.24	0.000050	0.000050	0.005044	0.000161	0.000672	0.001513	
S-06-04-86	0.000252	0.151327	0.480681	0.000890	0.992743	0.000005	0.197513	0.051537	1.14	0.000050	0.000050	0.005044	0.000187	0.000672	0.001513	
S-06-04-87	0.000252	0.151327	0.478681	0.000890	1.072743	0.000005	0.203513	0.059537	1.12	0.000050	0.000050	0.005044	0.000175	0.000672	0.001513	
S-06-04-88	0.000252	0.151327	0.445681	0.000880	1.032743	0.000005	0.198513	0.055837	1.07	0.000050	0.000050	0.005044	0.000185	0.000672	0.001513	
S-06-04-89	0.000252	0.151327	0.455681	0.000830	0.890743	0.000005	0.274513	0.054537	1.11	0.000050	0.000050	0.005044	0.000174	0.000672	0.001513	
S-06-04-90	0.000252	0.151327	0.413681	0.000790	0.809743	0.000005	0.184513	0.045937	0.89	0.000050	0.000050	0.005044	0.000134	0.000672	0.001513	
S-06-04-91	0.000252	0.151327	0.411681	0.000870	0.997743	0.000005	0.183513	0.049337	0.99	0.000050	0.000050	0.005044	0.000170	0.000672	0.001513	
S-06-04-92	0.000252	0.151327	0.435681	0.000880	0.967743	0.000005	0.183513	0.053337	0.98	0.000050	0.000050	0.005044	0.000170	0.000672	0.001513	
S-06-04-93	0.000252	0.151327	0.421681	0.000820	0.958743	0.000005	0.168513	0.049537	1.05	0.000050	0.000050	0.005044	0.000148	0.000672	0.001513	
S-06-04-94	0.000252	0.151327	0.458681	0.000850	0.966743	0.000005	0.250513	0.051737	1.06	0.000050	0.000050	0.005044	0.000154	0.000672	0.001513	
S-06-04-95	0.000252	0.151327	0.465681	0.000860	1.052743	0.000005	0.209513	0.051037	1.04	0.000050	0.000050	0.005044	0.000153	0.000672	0.001513	
S-06-04-96	0.000252	0.151327	0.457681	0.000840	1.042743	0.000005	0.193513	0.053637	1.07	0.000050	0.000050	0.005044	0.000168	0.000672	0.001513	
S-06-04-97	0.000252	0.151327	0.435681	0.000830	1.028743	0.000005	0.202513	0.054737	0.97	0.000050	0.000050	0.005044	0.000162	0.000672	0.001513	
S-06-04-98	0.000252	0.151327	0.446681	0.000830	0.978743	0.000005	0.189513	0.052737	1.03	0.000050	0.000050	0.005044	0.000161	0.000672	0.001513	
S-06-04-99	0.000252	0.151327	0.435681	0.000800	1.042743	0.000005	0.222513	0.047337	0.99	0.000050	0.000050	0.005044	0.000141	0.000672	0.001513	
S-06-04-100	0.000252	0.151327	0.424681	0.000800	0.907743	0.000005	0.181513	0.048837	1	0.000050	0.000050	0.005044	0.000156	0.000672	0.001513	
S-06-04-101	0.000252	0.151327	0.483681	0.000770	1.019743	0.000005	0.227513	0.051537	1.19	0.000050	0.000050	0.005044	0.000140	0.000672	0.001513	
S-06-04-102	0.000252	0.151327	0.450681	0.000820	1.042743	0.000005	0.210513	0.051337	1.06	0.000050	0.000050	0.005044	0.000155	0.000672	0.001513	
S-06-04-103	0.000252	0.151327	0.543681	0.000790	1.202743	0.000005	0.320513	0.049237	1.11	0.000050	0.000050	0.005044	0.000144	0.001272	0.001513	
S-06-04-104	0.000252	0.151327	0.435681	0.000770	1.062743	0.000005	0.230513	0.048437	1	0.000050	0.000050	0.005044	0.000145	0.000672	0.001513	
S-06-04-105	0.000252	0.151327	0.456431	0.000780	1.077743	0.000005	0.238013	0.048137	1.04	0.000050	0.000050	0.005044	0.000146	0.000797	0.001513	
S-06-04-106	0.000252	0.151327	0.477181	0.000790	1.092743	0.000005	0.245513	0.047837	1.08	0.000050	0.000050	0.005044	0.000147	0.000922	0.001513	
S-06-04-107	0.000252	0.151327	0.497931	0.000800	1.107743	0.000005	0.253013	0.047537	1.12	0.000050	0.000050	0.005044	0.000148	0.001047	0.001513	
S-06-04-108	0.000252	0.151327	0.518681	0.000810	1.122743	0.000005	0.260513	0.047237	1.16	0.000050	0.000050	0.005044	0.000149	0.001172	0.001513	
S-06-04-109	0.000252	0.151327	0.499681	0.000795	1.081243	0.000005	0.250263	0.045812	1.1	0.000050	0.000050	0.005044	0.000147	0.001047	0.001513	
S-06-04-110	0.000252	0.151327	0.480681	0.000780	1.039743	0.000005	0.240013	0.044387	1.04	0.000050	0.000050	0.005044	0.000145	0.000922	0.001513	
S-06-04-111	0.000252	0.151327	0.461681	0.000765	0.998243	0.000005	0.229763	0.042962	0.98	0.000050	0.000050	0.005044	0.000143	0.000797	0.001513	
S-06-04-112	0.000252	0.151327	0.442681	0.000750	0.956743	0.000005	0.219513	0.041537	0.92	0.000050	0.000050	0.005044	0.000141	0.000672	0.001513	
Mean last 10 weeks	0.000252	0.151327	0.481431	0.000783	1.074243	0.000005	0.248763	0.046312	1.055	0.000050	0.000050	0.005044	0.000146	0.000932	0.001513	
S-06-05 Overburden																
S-06-05-0	0.282	0.15	8.03	0.005	0.935	0.00005	3.74	0.626		0.0005	0.0005	0.005	0.163	0.005	9.13	
S-06-05-1	0.108	0.15	5.32	0.016	1.88	0.00005	1.65	0.495		0.0005	0.0005	0.005	0.0306	0.005	3.45	
S-06-05-2	0.081	0.15	3.82	0.011	2.1	0.00005	0.71	0.444		0.0005	0.0005	0.005	0.0292	0.005	3.23	
S-06-05-3	0.0674	0.15	3.61	0.005	2.1	0.00005	0.25	0.383		0.0005	0.0005	0.005	0.0319	0.005	3	
S-06-05-4	0.0483	0.15	2.8	0.005	1.63	0.00005	0.25	0.26		0.0005	0.0005	0.005	0.0324	0.005	2.57	
S-06-05-5	0.0408	0.15	2.15	0.005	1.53	0.00005	0.25	0.181		0.0005	0.0005	0.005	0.0336	0.005	2.5	
S-06-05-6	0.0481	0.15	2.34	0.005	2.6	0.00005	0.25	0.227		0.0005	0.0005	0.005	0.0334	0.005	3.02	
S-06-05-7	0.036	0.15	1.95	0.005	2.14	0.00005	0.25	0.183		0.0005	0.0005	0.005	0.0323	0.005	2.7	
S-06-05-8	0.0365	0.15	1.73	0.005	1.91	0.00005	0.25	0.218		0.0005	0.0005	0.005	0.0396	0.005	3.46	
S-06-05-9	0.0371	0.15	1.62	0.005	2.99	0.00005	0.25	0.22		0.0005	0.0005	0.005	0.0413	0.005	3.93	
S-06-05-10	0.0374	0.15	1.68	0.005	4.05	0.00005	0.25	0.232		0.0005	0.0005	0.005	0.0374	0.005	4.33	
S-06-05-11	0.0336	0.15	1.52	0.005	3.31	0.00005	0.25	0.197		0.0005	0.0005	0.005	0.0391	0.005	4.82	
S-06-05-12	0.0325	0.15	1.42	0.005	3.22	0.00005	0.25	0.224		0.0005	0.0005	0.005	0.038	0.005	5.17	
S-06-05-13	0.0311	0.15	1.33	0.005	3.44	0.00005	0.25	0.202		0.0005	0.0005	0.005	0.039	0.005	5.96	
S-06-05-14	0.029	0.15	1.02	0.005	3.37	0.00005	0.25	0.199		0.0005	0.0005	0.005	0.0336	0.005	6.3	
S-06-05-15	0.0265	0.15	1.35	0.005	2.57	0.00005	0.25	0.149		0.0005	0.0005	0.005	0.0269	0.005	5.75	

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Calculated Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
S-06-05-16		16	12-Jun-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	450		47.0536	317	3.57		61.60	1.00	107.00	
S-06-05-17		17	19-Jun-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	470		47.9798	335	3.5		68.00	1.00	112.00	
S-06-05-18		18	26-Jun-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	450		39.2339	322	3.49		66.20	1.00	101.00	
S-06-05-19		19	3-Jul-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		38.0659	320	3.52		70.20	1.00	103.00	
S-06-05-20		20	10-Jul-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	465		36.2052	316	3.47		64.90	1.00	99.20	
S-06-05-21		21	17-Jul-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	470		35.5986	342	3.41		75.50	1.00	102.00	
S-06-05-22		22	24-Jul-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	475		36.5126	328	3.44		78.10	1.00	103.00	
S-06-05-23		23	31-Jul-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	465		34.615	331	3.41		69.80	1.00	102.00	
S-06-05-24		24	7-Aug-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	470		34.9183	333	3.41		75.40	1.00	103.00	
S-06-05-25		25	14-Aug-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		32.0084	336	3.41		76.70	1.00	102.00	
S-06-05-26		26	21-Aug-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	475		31.5945	341	3.39		77.30	1.00	105.00	
S-06-05-27		27	28-Aug-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	470		31.5494	350	3.38		81.00	1.00	108.00	
S-06-05-28		28	4-Sep-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	465		31.2625	369	3.31		86.00	1.00	107.00	
S-06-05-29		29	11-Sep-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	450		32.0125	386	3.32		88.80	1.00	114.00	
S-06-05-30		30	18-Sep-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	475		32.7871	431	3.27		98.30	1.00	122.00	
S-06-05-31		31	25-Sep-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		33.3281	457	3.22		106.00	1.00	131.00	
S-06-05-32		32	2-Oct-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	500		38.8568	465	3.21		107.00	1.00	141.00	
S-06-05-33		33	9-Oct-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	500		39.0494	491	3.18		107.00	1.00	142.00	
S-06-05-34		34	16-Oct-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	490		39.3691	535	3.15		118.00	1.00	152.00	
S-06-05-35		35	23-Oct-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	495		41.8609	564	3.13		132.00	1.00	166.00	
S-06-05-36		36	30-Oct-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	480		40.0413	552	3.11		133.00	1.00	158.00	
S-06-05-37		37	6-Nov-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	450		42.3773	585	3.1		129.00	1.00	164.00	
S-06-05-38		38	13-Nov-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	455		37.4183	612	3.07		153.00	1.00	175.00	
S-06-05-39		39	20-Nov-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	465		35.7134	634	3.04		124.00	1.00	177.00	
S-06-05-40		40	27-Nov-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	470		35.8937	640	3		163.00	1.00	173.00	
S-06-05-41		41	4-Dec-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	450		33.406	631	3.03		151.00	1.00	172.00	
S-06-05-42		42	11-Dec-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		31.4634	680	3		164.00	1.00	184.00	
S-06-05-43		43	18-Dec-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		31.1478	658	3.01		159.00	1.00	182.00	
S-06-05-44		44	24-Dec-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	440		32.1929	646	3.04		158.00	1.00	175.00	
S-06-05-45		45	31-Dec-09	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	450		28.4224	571	3.03		137.00	1.00	158.00	
S-06-05-46		46	8-Jan-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	440		25.6835	550	3.1		136.00	1.00	140.00	
S-06-05-47		47	15-Jan-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	455		22.8101	529	3.12		120.00	1.00	133.00	
S-06-05-48		48	22-Jan-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	450		23.2822	508	3.12		117.00	1.00	134.00	
S-06-05-49		49	29-Jan-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	425		19.2691	500	3.13		115.00	1.00	125.00	
S-06-05-50		50	5-Feb-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		21.8896	508	3.13		131.00	1.00	136.00	
S-06-05-51		51	12-Feb-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	470		23.099	529	3.12		128.00	1.00	137.00	
S-06-05-52		52	19-Feb-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		23.383	533	3.09		126.00	1.00	143.00	
S-06-05-53		53	26-Feb-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	470		22.251	528	3.11		129.00	1.00	139.00	
S-06-05-54		54	5-Mar-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	470		22.2469	530	3.11		140.00	1.00	142.00	
S-06-05-55		55	12-Mar-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	450		19.2477	500	3.11		117.00	1.00	127.00	
S-06-05-56		56	19-Mar-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	450		21.9059	544	3.09		146.00	1.00	147.00	
S-06-05-57		57	26-Mar-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	475		19.5772	537	3.07		132.00	1.00	141.00	
S-06-05-58		58	2-Apr-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	465		19.9104	530	3.12		130.00	1.00	141.00	
S-06-05-59		59	9-Apr-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	475		21.5813	575	3.1		144.00	1.00	153.00	
S-06-05-60		60	16-Apr-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	470		19.6022	565	3.08		135.00	1.00	138.00	
S-06-05-61		61	23-Apr-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	465		19.1485	564	3.08		139.00	1.00	151.00	
S-06-05-62		62	30-Apr-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	470		20.3522	610	3.08		151.00	1.00	156.00	
S-06-05-63		63	7-May-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	465		20.7739	623	3.07		157.00	1.00	164.00	
S-06-05-64		64	14-May-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	465		21.8358	630	3.05		153.00	1.00	168.00	
S-06-05-65		65	21-May-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	475		22.1612	643	3.03		158.00	1.00	178.00	
S-06-05-66		66	28-May-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	475		20.6403	635	3.02		159.00	1.00	170.00	
S-06-05-67		67	4-Jun-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	470		21.2727	653	3.03		167.00	1.00	164.00	
S-06-05-68		68	11-Jun-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	475		18.4739	635	3.01		163.00	1.00	168.00	
S-06-05-69		69	18-Jun-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	475		17.6321	655	3.04		171.00	1.00	162.00	
S-06-05-70		70	25-Jun-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	485		17.2198	675	2.99		176.00	1.00	178.00	
S-06-05-71		71	2-Jul-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	475		18.3657	693	3.01		178.00	1.00	182.00	
S-06-05-72		72	9-Jul-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	480		20.594	719	2.99		181.00	1.00	194.00	
S-06-05-73		73	16-Jul-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	475		20.1948	710	2.98		178.00	1.00	189.00	
S-06-05-74		74	23-Jul-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		20.044	707	2.97		191.00	1.00	198.00	
S-06-05-75		75	30-Jul-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	490		21.4534	740	2.95		188.00	1.00	205.00	
S-06-05-76		76	6-Aug-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		20.9391	758	2.96		185.00	1.00	226.00	
S-06-05-77		77	13-Aug-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	490		21.0571	736	2.95		190.00	1.00	180.00	
S-06-05-78		78	20-Aug-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	475		19.3247	700	2.97		180.00	1.00	184.00	
S-06-05-79		79	27-Aug-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	475		16.6813	688	2.98		177.00	1.00	184.00	
S-06-05-80		80	3-Sep-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	490		17.021	703	2.97		187.00	1.00	193.00	
S-06-05-81		81	10-Sep-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	480		17.39561	710	2.97		177.00	1.00	172.00	

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
S-06-05-16	0.12	2.45	0.0011	0.0048	0.00253	0.0055	0.0025	0.05	0.0142	18.5	0.0025	0.0406	3.95	7.03	0.00079	0.005	0.196	0.717	0.0005	0.00025
S-06-05-17	0.10	2.4	0.001	0.0058	0.00276	0.0025	0.0025	0.05	0.0149	18.9	0.0025	0.0405	3.42	9.09	0.00054	0.005	0.178	0.613	0.0005	0.00025
S-06-05-18	0.11	2.33	0.0011	0.0055	0.00189	0.0025	0.0025	0.05	0.0139	15.4	0.0025	0.0374	3.4	8.34	0.00025	0.005	0.179	0.547	0.0005	0.00025
S-06-05-19	0.14	2.53	0.0011	0.0053	0.00219	0.0025	0.0025	0.05	0.0133	14.9	0.0025	0.0395	4.06	9.23	0.00057	0.005	0.199	0.638	0.0005	0.00025
S-06-05-20	0.14	1.8	0.0011	0.0052	0.0028	0.0025	0.0025	0.05	0.0125	14.2	0.0025	0.0335	3.15	9.23	0.00025	0.005	0.172	0.445	0.0005	0.00025
S-06-05-21	0.16	2.21	0.0005	0.0055	0.00233	0.0025	0.0025	0.05	0.0125	14	0.0025	0.035	3.5	10.2	0.00025	0.005	0.146	0.529	0.0005	0.00025
S-06-05-22	0.17	2.32	0.0005	0.005	0.00215	0.0025	0.0025	0.05	0.0123	14.3	0.0025	0.0353	3.92	10.8	0.00025	0.005	0.186	0.599	0.0005	0.00025
S-06-05-23	0.14	2.17	0.0011	0.0054	0.00164	0.0025	0.0025	0.05	0.0118	13.6	0.0025	0.0348	3.8	10.6	0.00025	0.005	0.15	0.518	0.0005	0.00025
S-06-05-24	0.13	2.31	0.001	0.0054	0.00147	0.0025	0.0025	0.05	0.0117	13.7	0.0025	0.0367	3.82	11.9	0.00025	0.005	0.163	0.499	0.0005	0.00025
S-06-05-25	0.13	1.99	0.0012	0.0054	0.00117	0.0025	0.0025	0.05	0.011	12.6	0.0025	0.0318	3.4	11.7	0.00025	0.005	0.124	0.418	0.0005	0.00025
S-06-05-26	0.09	2.06	0.0011	0.0054	0.00141	0.0025	0.0025	0.05	0.0112	12.4	0.0025	0.032	3.47	12.8	0.00025	0.005	0.145	0.424	0.0005	0.00025
S-06-05-27	0.09	2.2	0.0011	0.0056	0.00117	0.0025	0.0025	0.05	0.0108	12.4	0.0025	0.0316	3.55	12.6	0.00025	0.005	0.134	0.414	0.0005	0.00025
S-06-05-28	0.17	2.24	0.0012	0.0061	0.00088	0.0025	0.0025	0.05	0.0111	12.3	0.0025	0.0326	3.69	13.8	0.00025	0.005	0.125	0.439	0.0005	0.00025
S-06-05-29	0.14	2.07	0.0014	0.0074	0.00057	0.0025	0.0025	0.05	0.0112	12.6	0.0025	0.0323	3.26	13.6	0.00025	0.005	0.125	0.371	0.0005	0.00025
S-06-05-30	0.30	2.58	0.0013	0.0074	0.00074	0.0025	0.0025	0.05	0.0126	12.9	0.0025	0.0375	4.03	15.8	0.00025	0.005	0.131	0.42	0.0005	0.00025
S-06-05-31	0.20	2.78	0.0015	0.0092	0.00071	0.0025	0.0025	0.05	0.0137	13.1	0.0025	0.0408	4.39	17.7	0.00025	0.005	0.141	0.45	0.0005	0.00025
S-06-05-32	0.17	2.84	0.0012	0.0087	0.00082	0.0025	0.0025	0.05	0.0142	15.3	0.0025	0.0435	4.41	17.2	0.00025	0.005	0.148	0.595	0.0005	0.00025
S-06-05-33	0.15	2.83	0.0013	0.0097	0.0007	0.0025	0.0025	0.05	0.013	15.4	0.0025	0.0396	4.33	19.2	0.00025	0.005	0.134	0.549	0.0005	0.00025
S-06-05-34	0.21	3.08	0.0014	0.0105	0.00058	0.0025	0.0025	0.05	0.0139	15.5	0.0025	0.0424	4.3	21.2	0.00025	0.005	0.151	0.498	0.0005	0.00025
S-06-05-35	0.15	3.04	0.0013	0.0111	0.00067	0.0025	0.0025	0.05	0.0148	16.5	0.0025	0.0458	4.63	24.9	0.00025	0.005	0.149	0.552	0.0005	0.00025
S-06-05-36	0.21	3.52	0.0018	0.0104	0.00057	0.0025	0.0025	0.05	0.0139	15.7	0.0025	0.045	4.57	22.5	0.00025	0.005	0.193	0.524	0.0005	0.00025
S-06-05-37	0.23	3.17	0.0018	0.0119	0.00025	0.0025	0.0025	0.05	0.0138	16.7	0.0025	0.0458	4.33	24.5	0.00025	0.005	0.153	0.494	0.0005	0.00025
S-06-05-38	0.19	3.46	0.0023	0.0124	0.00025	0.0025	0.0025	0.05	0.0146	14.7	0.0025	0.0473	4.37	26.7	0.00025	0.005	0.163	0.445	0.0005	0.00025
S-06-05-39	0.23	3.69	0.0022	0.013	0.00025	0.0025	0.0025	0.05	0.0144	14	0.0025	0.0496	4.13	28.5	0.00025	0.005	0.174	0.451	0.0005	0.00025
S-06-05-40	0.19	2.91	0.0022	0.0121	0.00025	0.0025	0.0025	0.05	0.0137	14.1	0.0025	0.0456	3.56	29.7	0.00025	0.005	0.157	0.369	0.0005	0.00025
S-06-05-41	0.17	2.91	0.0016	0.0141	0.00025	0.0025	0.0025	0.05	0.0131	13.1	0.0025	0.0486	4.05	29.3	0.00025	0.005	0.16	0.404	0.0005	0.00025
S-06-05-42	0.23	3.38	0.0026	0.0128	0.00025	0.0025	0.0025	0.05	0.0151	12.3	0.0051	0.0547	4.51	32	0.00025	0.005	0.174	0.414	0.0005	0.00025
S-06-05-43	0.21	3.25	0.0027	0.0146	0.00025	0.0025	0.0025	0.05	0.0148	12.2	0.0025	0.0536	4.7	33	0.00025	0.005	0.158	0.481	0.0005	0.00025
S-06-05-44	0.19	2.65	0.0027	0.0152	0.00025	0.0025	0.0025	0.05	0.0132	12.6	0.0025	0.0494	4.46	32.9	0.00025	0.005	0.169	0.429	0.0005	0.00025
S-06-05-45	0.21	1.93	0.0018	0.0154	0.00025	0.0025	0.0025	0.05	0.00985	11.1	0.0025	0.0415	3.4	32.3	0.00025	0.005	0.164	0.296	0.0005	0.00025
S-06-05-46	0.20	2	0.0019	0.0131	0.00025	0.0025	0.0025	0.05	0.00833	9.97	0.0025	0.0417	3.72	29.9	0.00025	0.005	0.185	0.284	0.0005	0.00025
S-06-05-47	0.20	1.58	0.0017	0.0104	0.00025	0.0025	0.0025	0.05	0.00672	8.86	0.0025	0.0364	3.34	25.7	0.00025	0.005	0.161	0.215	0.0005	0.00025
S-06-05-48	0.20	1.89	0.0017	0.0089	0.00025	0.0025	0.0025	0.05	0.00653	9.08	0.0025	0.0355	3.7	25.6	0.00025	0.005	0.142	0.248	0.0005	0.00025
S-06-05-49	0.22	1.44	0.0015	0.01	0.00025	0.0025	0.0025	0.05	0.00563	7.46	0.0025	0.0344	3.05	25.9	0.00025	0.005	0.151	0.195	0.0005	0.00025
S-06-05-50	0.23	2.16	0.0023	0.008	0.00025	0.0025	0.0025	0.05	0.00693	8.5	0.0025	0.0397	4.17	28.3	0.00025	0.005	0.156	0.295	0.0005	0.00025
S-06-05-51	0.22	2.19	0.0025	0.0094	0.00025	0.0025	0.0025	0.05	0.00715	9.01	0.0025	0.0379	3.95	28.9	0.00025	0.005	0.14	0.284	0.0005	0.00025
S-06-05-52	0.22	2.17	0.0022	0.0086	0.00025	0.0025	0.0025	0.05	0.00722	9.14	0.0025	0.0362	3.88	27.4	0.00025	0.005	0.13	0.276	0.0005	0.00025
S-06-05-53	0.21	2.15	0.0023	0.0088	0.00025	0.0025	0.0025	0.05	0.00765	8.72	0.0025	0.0368	3.81	28.9	0.00025	0.005	0.11	0.275	0.0005	0.00025
S-06-05-54	0.19	2.21	0.0022	0.0082	0.00025	0.0025	0.0025	0.05	0.00788	8.72	0.0025	0.0369	3.79	29	0.00025	0.005	0.109	0.257	0.0005	0.00025
S-06-05-55	0.16	1.48	0.0019	0.0092	0.00025	0.0025	0.0025	0.05	0.00625	7.54	0.0025	0.032	3.05	25.5	0.00025	0.005	0.097	0.186	0.0005	0.00025
S-06-05-56	0.19	1.93	0.0023	0.0084	0.00025	0.0025	0.0025	0.05	0.00744	8.6	0.0025	0.0347	3.69	31.7	0.00025	0.005	0.099	0.241	0.0005	0.00025
S-06-05-57	0.16	1.91	0.0022	0.0084	0.00025	0.0025	0.0025	0.05	0.00757	7.68	0.0025	0.0352	3.63	29.4	0.00025	0.005	0.092	0.243	0.0005	0.00025
S-06-05-58	0.15	2.02	0.0026	0.0079	0.00025	0.0025	0.0025	0.05	0.00768	7.81	0.0025	0.0358	3.82	30.3	0.00025	0.005	0.094	0.228	0.0005	0.00025
S-06-05-59	0.16	2.3	0.0027	0.0097	0.00025	0.0025	0.0025	0.05	0.00832	8.48	0.0025	0.0385	4.18	33.9	0.00025	0.005	0.093	0.247	0.0005	0.00207
S-06-05-60	0.16	2.37	0.0027	0.0088	0.00025	0.0025	0.0025	0.05	0.00808	7.69	0.0025	0.0391	4.17	31.8	0.00025	0.005	0.092	0.252	0.0005	0.00025
S-06-05-61	0.13	2.47	0.0026	0.0088	0.00025	0.0025	0.0025	0.05	0.00812	7.52	0.0025	0.0389	4.25	32.4	0.00025	0.005	0.085	0.239	0.0005	0.00025
S-06-05-62	0.17	2.71	0.0029	0.01	0.00025	0.0025	0.0025	0.05	0.00844	7.99	0.0025	0.0418	4.39	35.9	0.00025	0.005	0.092	0.256	0.0005	0.00025
S-06-05-63	0.15	2.34	0.003	0.0099	0.00025	0.0025	0.0025	0.05	0.00835	8.18	0.0025	0.041	4.09	35.9	0.00025	0.005	0.079	0.243	0.0005	0.00025
S-06-05-64	0.15	2.62	0.0033	0.0105	0.00025	0.0025	0.0025	0.05	0.00851	8.59	0.0025	0.0409	4.29	38.9	0.00025	0.005	0.088	0.251	0.0005	0.00025
S-06-05-65	0.14	2.42	0.0036	0.011	0.00025	0.0025	0.0025	0.05	0.00827	8.73	0.0025	0.0389	4.02	39.4	0.00025	0.005	0.082	0.23	0.0005	0.00025
S-06-05-66	0.14	2.4	0.0036	0.0113	0.00025	0.0025	0.0025	0.05	0.0079	8.12	0.0025	0.0409	4.02	37.7	0.00025	0.005	0.083	0.23	0.0005	0.00025
S-06-05-67	0.16	2.51	0.0035	0.0103	0.00025	0.0025	0.0025	0.05	0.00851	8.35	0.0025	0.044	4.18	40.7	0.00025	0.005	0.097	0.227	0.0005	0.00025
S-06-05-68	0.13	2.42	0.0035	0.0101	0.00025	0.0025	0.0025	0.05	0.00737	7.26	0.0025	0.0351	3.61	38.7	0.00025	0.005	0.079	0.18	0.0005	0.00025
S-06-05-69	0.13	2.36	0.004	0.0108	0.00025	0.0025	0.0025	0.05	0.00776	6.92	0.0025	0.0386	3.7	40.1	0.00025	0.005	0.081	0.194	0.0005	0.00025
S-06-05-70	0.15	2.39	0.0037	0.0107	0.00025	0.0025	0.0025	0.05	0.00754	6.76	0.0025	0.0402	3.89	41.6	0.00025	0.005	0.078	0.186	0.0005	0.00025
S-06-05-71	0.10	2.4	0.0043	0.0129	0.00025	0.0025	0.0025	0.05	0.00754	7.22	0.0025	0.0401	4.03	42.3	0.00025	0.005	0.077	0.199	0.0005	0.00025
S-06-05-72	0.10	2.66	0.0046	0.0127	0.00025	0.0025	0.0025	0.05	0.00813	8.09	0.0025	0.0444	4.39	45.5	0.00025	0.005	0.09	0.213	0.0005	0.00025
S-06-05-73	0.10	2.43	0.0047	0.0131	0.00025	0.0025	0.0025	0.05	0.00812	7.95	0.0025	0.0442	4.26	45.4	0.00025	0.005	0.078	0.213	0.0005	0.00025
S-06-05-74	0.20	2.61	0.0048	0.0123	0.00025	0.0025	0.0025	0.05	0.00836	7.87	0.0025	0.048	4.42	44.6	0.00025	0.005	0.09	0.2	0.0005	0.00025
S-06-05-75	0.20	2.3	0.0051	0.0127	0.00025	0.0025	0.0025	0.05	0.00828	8.46	0.0025	0.0423	4.24	47.1	0.00025	0.005	0.074	0.205	0.0005	0.00025
S-06-05-76	0.20	2.8	0.0053	0.0122	0.00025	0.0025	0.0025	0.05	0.00874	8.21	0.0025	0.0468	4.82	46.7	0.00025	0.005	0.101	0.222	0.0005	0.00025
S-06-05-77	0.50	2.87	0.0055	0.0123	0.00025	0.0025	0.0025	0.05	0.00848	8.29	0.0025	0.0458	4.69	44.4	0.00025	0.005	0.081	0.224	0.0005	0.00025
S-06-05-78	0.20	2.53	0.0051	0.0116	0.00025	0.0025	0.0025	0.05	0.00745	7.62	0.0025	0.0434	4.14	44.3	0.00025	0.005	0.067	0.201	0.0005	0.00025
S-06-05-79	0.20	2.58	0.0059	0.0128	0.00025	0.0025	0.0025	0.05	0.00737	6.52	0.0025	0.0437	4.3	43.5	0.00025	0.005	0.093	0.193	0.0005	0.00025
S-06-05-80	0.20	1.82	0.0057	0.0113	0.00025	0.0025	0.0025	0.05	0.00683	6.71	0.0025	0.0372	3.54	44.6	0.00025	0.005	0.06	0.151	0.0005	0.00025
S-06-05-81	0.50	2.68	0.00646	0.0137	0.000246	0.00025	0.00025	0.005	0.00811	6.84	0.00223	0.0484	4.64	47.6	0.000025	0.0025	0.0721	0.194	0.000005	0.000108

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulfur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr) Dissolved (mg/L)
S-06-05-16	0.0264	0.15	0.88	0.005	2.58	0.00005	0.25	0.143		0.0005	0.0005	0.005	0.026	0.005	5.88	
S-06-05-17	0.0459	0.15	0.82	0.005	3.04	0.00005	0.25	0.131		0.0005	0.0005	0.005	0.0225	0.005	6.49	
S-06-05-18	0.0261	0.15	0.71	0.005	2.13	0.00005	0.25	0.107		0.0005	0.0005	0.005	0.0207	0.005	5.6	
S-06-05-19	0.0251	0.15	1.08	0.005	2.72	0.00005	0.25	0.122		0.0005	0.0005	0.005	0.0194	0.005	5.44	
S-06-05-20	0.0235	0.15	0.89	0.005	2.65	0.00005	0.25	0.1		0.0005	0.0005	0.005	0.0159	0.005	4.83	
S-06-05-21	0.0226	0.15	0.71	0.005	2.49	0.00005	0.25	0.106		0.0005	0.0005	0.005	0.0147	0.005	4.94	
S-06-05-22	0.023	0.15	0.8	0.005	2.88	0.00005	0.25	0.114		0.0005	0.0005	0.005	0.0143	0.005	4.99	
S-06-05-23	0.0234	0.15	0.8	0.005	2.32	0.00005	0.25	0.108		0.0005	0.0005	0.005	0.0126	0.005	4.55	
S-06-05-24	0.0244	0.15	0.71	0.005	2.51	0.00005	0.25	0.0969		0.0005	0.0005	0.005	0.0126	0.005	4.78	
S-06-05-25	0.0216	0.15	0.58	0.005	2.36	0.00005	0.25	0.0847		0.0005	0.0005	0.005	0.0113	0.005	4.42	
S-06-05-26	0.0213	0.15	0.73	0.005	3	0.00005	0.25	0.0865		0.0005	0.0005	0.005	0.0103	0.005	4.49	
S-06-05-27	0.0214	0.15	0.71	0.005	2.64	0.00005	0.25	0.0865		0.0005	0.0005	0.005	0.00963	0.005	4.36	
S-06-05-28	0.0218	0.15	0.62	0.005	2.61	0.00005	0.25	0.089		0.0005	0.0005	0.005	0.00902	0.005	4.49	
S-06-05-29	0.0229	0.15	0.54	0.005	1.95	0.00005	0.25	0.0722		0.0005	0.0005	0.005	0.00989	0.005	4.3	
S-06-05-30	0.0251	0.15	0.57	0.005	2.99	0.00005	0.25	0.0805		0.0005	0.0005	0.005	0.00988	0.005	4.77	
S-06-05-31	0.0285	0.15	0.62	0.005	3.46	0.00005	0.25	0.088		0.0005	0.0005	0.005	0.00982	0.005	5.13	
S-06-05-32	0.0305	0.15	0.59	0.005	4.55	0.00005	0.25	0.107		0.0005	0.0005	0.005	0.00952	0.005	4.95	
S-06-05-33	0.0278	0.15	0.6	0.005	4.28	0.00005	0.25	0.106		0.0005	0.0005	0.005	0.00859	0.005	4.86	
S-06-05-34	0.0298	0.15	0.61	0.005	4.29	0.00005	0.25	0.101		0.0005	0.0005	0.005	0.00883	0.005	5.13	
S-06-05-35	0.032	0.15	0.66	0.005	4.9	0.00005	0.25	0.111		0.0005	0.0005	0.005	0.00886	0.005	5.38	
S-06-05-36	0.0305	0.15	0.69	0.005	3.67	0.00005	0.25	0.106		0.0005	0.0005	0.005	0.00857	0.005	5.08	
S-06-05-37	0.031	0.15	0.63	0.005	2.53	0.00005	0.25	0.1		0.0005	0.0005	0.005	0.00934	0.005	5.03	
S-06-05-38	0.0332	0.15	0.57	0.005	3.35	0.00005	0.25	0.0885		0.0005	0.0005	0.005	0.00895	0.005	5.29	
S-06-05-39	0.0336	0.15	0.58	0.005	3.79	0.00005	0.25	0.0833		0.0005	0.0005	0.005	0.00784	0.005	5.17	
S-06-05-40	0.0316	0.15	0.25	0.005	3.35	0.00005	0.25	0.0665		0.0005	0.0005	0.005	0.00677	0.005	5.41	
S-06-05-41	0.0335	0.15	0.25	0.005	1.94	0.00005	0.25	0.0663		0.0005	0.0005	0.005	0.00647	0.005	4.51	
S-06-05-42	0.0376	0.15	0.25	0.005	3.67	0.00005	0.25	0.0659		0.0005	0.0005	0.005	0.00747	0.005	5.32	
S-06-05-43	0.0377	0.15	0.51	0.005	3.66	0.00005	0.25	0.0693		0.0005	0.0005	0.005	0.00662	0.005	4.99	
S-06-05-44	0.0341	0.15	0.25	0.005	2.87	0.00005	0.25	0.0666		0.0005	0.0005	0.005	0.00568	0.005	4.55	
S-06-05-45	0.0288	0.15	0.25	0.005	1.93	0.00005	0.25	0.0415		0.0005	0.0005	0.005	0.00445	0.005	3.62	
S-06-05-46	0.0297	0.15	0.25	0.005	1.75	0.00005	0.25	0.0301		0.0005	0.0005	0.005	0.00436	0.005	2.98	
S-06-05-47	0.0247	0.15	0.51	0.005	2.07	0.00005	0.25	0.0277		0.0005	0.0005	0.005	0.00386	0.005	2.39	
S-06-05-48	0.024	0.15	0.25	0.005	1.77	0.00005	0.25	0.0274		0.0005	0.0005	0.005	0.00421	0.005	2.5	
S-06-05-49	0.0233	0.15	0.51	0.005	1.4	0.00005	0.25	0.0206		0.0005	0.0005	0.005	0.00316	0.005	2.04	
S-06-05-50	0.0271	0.15	0.53	0.005	3.52	0.00005	0.25	0.0327		0.0005	0.0005	0.005	0.00433	0.005	2.49	
S-06-05-51	0.0253	0.15	0.56	0.005	3.8	0.00005	0.25	0.0364		0.0005	0.0005	0.005	0.00376	0.005	2.67	
S-06-05-52	0.0247	0.15	0.51	0.005	3.26	0.00005	0.25	0.0377		0.0005	0.0005	0.005	0.00336	0.005	2.7	
S-06-05-53	0.025	0.15	0.59	0.005	3.5	0.00005	0.25	0.0382		0.0005	0.0005	0.005	0.00318	0.005	2.78	
S-06-05-54	0.0248	0.15	0.53	0.005	3.3	0.00005	0.25	0.0359		0.0005	0.0005	0.005	0.00306	0.005	2.93	
S-06-05-55	0.0217	0.15	0.5	0.005	1.54	0.00005	0.25	0.0256		0.0005	0.0005	0.005	0.00243	0.005	2.35	
S-06-05-56	0.0238	0.15	0.25	0.005	3.27	0.00005	0.25	0.0295		0.0005	0.0005	0.005	0.0028	0.005	2.99	
S-06-05-57	0.0239	0.15	0.25	0.005	3.29	0.00005	0.25	0.0295		0.0005	0.0005	0.005	0.00249	0.005	2.82	
S-06-05-58	0.0247	0.15	0.25	0.005	3.14	0.00005	0.25	0.0307		0.0005	0.0005	0.005	0.00239	0.005	2.95	
S-06-05-59	0.026	0.15	0.53	0.005	3.82	0.00005	0.25	0.0338		0.0005	0.0005	0.005	0.00244	0.005	3.15	
S-06-05-60	0.0263	0.15	0.25	0.005	3.37	0.00005	0.25	0.0327		0.0005	0.0005	0.005	0.00236	0.005	2.97	
S-06-05-61	0.0253	0.15	0.25	0.005	3.38	0.00005	0.25	0.0318		0.0005	0.0005	0.005	0.00239	0.005	2.99	
S-06-05-62	0.0287	0.15	0.25	0.005	3.78	0.00005	0.25	0.0347		0.0005	0.0005	0.005	0.00261	0.005	3.15	
S-06-05-63	0.0271	0.15	0.25	0.005	3.62	0.00005	0.25	0.0326		0.0005	0.0005	0.005	0.00226	0.005	3.16	
S-06-05-64	0.0273	0.15	0.53	0.005	4.03	0.00005	0.25	0.0353		0.0005	0.0005	0.005	0.00217	0.005	3.3	
S-06-05-65	0.0264	0.15	0.25	0.005	4.54	0.00005	0.25	0.0348		0.0005	0.0005	0.005	0.00211	0.005	3.2	
S-06-05-66	0.0266	0.15	0.25	0.005	4.07	0.00005	0.25	0.0355		0.0005	0.0005	0.005	0.0019	0.005	2.92	
S-06-05-67	0.0291	0.15	0.6	0.005	4.75	0.00005	0.25	0.0357		0.0005	0.0005	0.005	0.00199	0.005	3.06	
S-06-05-68	0.0229	0.15	0.25	0.005	4.18	0.00005	0.25	0.0262		0.0005	0.0005	0.005	0.00166	0.005	2.9	
S-06-05-69	0.0253	0.15	0.53	0.005	4.26	0.00005	0.25	0.0291		0.0005	0.0005	0.005	0.00183	0.005	2.95	
S-06-05-70	0.0263	0.15	0.25	0.005	4.77	0.00005	0.25	0.0301		0.0005	0.0005	0.005	0.0016	0.005	2.85	
S-06-05-71	0.0269	0.15	0.25	0.005	4.5	0.00005	0.25	0.0311		0.0005	0.0005	0.005	0.00162	0.005	2.91	
S-06-05-72	0.03	0.15	0.5	0.005	4.63	0.00005	0.25	0.0337		0.0005	0.0005	0.005	0.00171	0.005	3.07	
S-06-05-73	0.0291	0.15	0.25	0.005	5.12	0.00005	0.25	0.0329		0.0005	0.0005	0.005	0.00165	0.005	3.15	
S-06-05-74	0.0311	0.15	0.5	0.005	4.99	0.00005	0.25	0.0344		0.0005	0.0005	0.005	0.00165	0.005	3.09	
S-06-05-75	0.0279	0.15	0.25	0.005	5.38	0.00005	0.25	0.0353		0.0005	0.0005	0.005	0.0016	0.005	3.09	
S-06-05-76	0.0299	0.15	0.25	0.005	4.32	0.00005	0.25	0.0326		0.0005	0.0005	0.005	0.00183	0.005	3.22	
S-06-05-77	0.0295	0.15	0.25	0.005	4.95	0.00005	0.25	0.037		0.0005	0.0005	0.005	0.00178	0.005	3.16	
S-06-05-78	0.0265	0.15	0.25	0.005	4.2	0.00005	0.25	0.0317		0.0005	0.0005	0.005	0.00136	0.005	2.87	
S-06-05-79	0.0272	0.15	0.25	0.005	4.66	0.00005	0.25	0.0311		0.0005	0.0005	0.005	0.00124	0.005	2.7	
S-06-05-80	0.0234	0.15	0.25	0.005	4.88	0.00005	0.25	0.0274		0.0005	0.0005	0.005	0.00118	0.005	2.81	
S-06-05-81	0.0304	0.15	0.468	0.00189	4.81	0.000005	0.142	0.0343	64.4	0.00029	0.00005	0.005	0.00117	0.0005	2.69	

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Calculated Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
S-06-05-82		82	17-Sep-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	470		18.51406	700	2.95		178.00	1.00	216.00	
S-06-05-83		83	24-Sep-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	450		22.2592	748	2.92		195.00	1.00	206.00	
S-06-05-84		84	1-Oct-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	470		17.18334	750	2.93		203.00	1.00	206.00	
S-06-05-85		85	8-Oct-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	465		17.3698	751	2.93		190.00	1.00	198.00	
S-06-05-86		86	15-Oct-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		16.07839	752	2.95		191.00	1.00	192.00	
S-06-05-87		87	22-Oct-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	470		17.46938	785	2.88		218.00	1.00	201.00	
S-06-05-88		88	29-Oct-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	485		16.05339	755	2.9		193.00	1.00	205.00	
S-06-05-89		89	5-Nov-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	480		13.79272	724	2.9		188.00	1.00	187.00	
S-06-05-90		90	12-Nov-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	465		16.45544	767	2.89		206.00	1.00	205.00	
S-06-05-91		91	19-Nov-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	480		13.68287	719	2.94		173.00	1.00	179.00	
S-06-05-92		92	26-Nov-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	470		14.4837	757	2.9		192.00	1.00	190.00	
S-06-05-93		93	3-Dec-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	465		15.71484	735	2.95		174.00	1.00	192.00	
S-06-05-94		94	10-Dec-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	450		15.21363	717	2.94		179.00	1.00	189.00	
S-06-05-95		95	17-Dec-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	480		15.21076	800	2.88		196.00	1.00	206.00	
S-06-05-96		96	24-Dec-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		14.18452	751	2.91		187.00	1.00	192.00	
S-06-05-97		97	31-Dec-10	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	440		13.83004	701	2.93		164.00	1.00	171.00	
S-06-05-98		98	7-Jan-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	450		12.56692	632	3		156.00	1.00	158.00	
S-06-05-99		99	14-Jan-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	465		12.92264	729	2.93		179.00	1.00	178.00	
S-06-05-100		100	21-Jan-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	475		17.43454	1010	2.78		269.00	1.00	274.00	
S-06-05-101		101	28-Jan-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		22.2637	1190	2.71		346.00	1.00	358.00	
S-06-05-102		102	4-Feb-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	475		25.23581	1360	2.63		384.00	1.00	411.00	
S-06-05-103		103	11-Feb-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		25.2133	1330	2.65		426.00	1.00	410.00	
S-06-05-104		104	18-Feb-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	470		28.6887	1440	2.64		433.00	1.00	432.00	
S-06-05-105		105	25-Feb-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	445		30.5873	1380	2.64		426.25	1.00	427.25	
S-06-05-106		106	4-Mar-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	460		32.4859	1590	2.6		419.50	1.00	422.50	
S-06-05-107		107	11-Mar-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	450		34.3845	1600	2.58		412.75	1.00	417.75	
S-06-05-108		108	18-Mar-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	440		36.2831	1350	2.66		406.00	1.00	413.00	
S-06-05-109		109	25-Mar-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	500	455		34.450075	1580	2.56		448.00	1.00	464.25	
S-06-05-110		110	1-Apr-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	501	455		32.61705	1760	2.52		490.00	1.00	515.50	
S-06-05-111		111	8-Apr-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	502	440		30.784025	1750	2.56		532.00	1.00	566.75	
S-06-05-112		112	15-Apr-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	503	475		28.951	1660	2.55		574.00	1.00	618.00	
S-06-05-113		113	21-Apr-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	504	455		28.345475	1460	2.54		564.75	1.00	608.75	
S-06-05-114		114	29-Apr-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	505	475		27.73995	1790	2.51		555.50	1.00	599.50	
S-06-05-115		115	6-May-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	506	475		27.134425	1650	2.55		546.25	1.00	590.25	
S-06-05-116		116	13-May-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	507	475		26.5289	1620	2.54		537.00	1.00	581.00	
S-06-05-117		117	20-May-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	508	470		25.522025	1560	2.55		532.75	1.00	568.50	
S-06-05-118		118	27-May-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	509	480		24.51515	1470	2.59		528.50	1.00	556.00	
S-06-05-119		119	3-Jun-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	475		23.508275	1450	2.6		524.25	1.00	543.50	
S-06-05-120		120	10-Jun-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	475		22.5014	1500	2.59		520.00	1.00	531.00	
S-06-05-121		121	17-Jun-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	470		21.41164	1380	2.62		510.75	1.00	519.25	
S-06-05-122		122	24-Jun-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	490		20.32188	1410	2.62		501.50	1.00	507.50	
S-06-05-123		123	1-Jul-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		19.23212	1300	2.65		492.25	1.00	495.75	
S-06-05-124		124	8-Jul-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	475		18.14236	1360	2.64		483.00	1.00	484.00	
S-06-05-125		125	15-Jul-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	460		17.80885	1330	2.66		477.00	1.00	474.00	
S-06-05-126		126	22-Jul-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	500		17.47534	1290	2.68		471.00	1.00	464.00	
S-06-05-127		127	29-Jul-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	480		17.14183	1300	2.67		465.00	1.00	454.00	
S-06-05-128		128	5-Aug-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	470		16.80832	1370	2.62		459.00	1.00	444.00	
S-06-05-129		129	12-Aug-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	460		16.3130325	1450	2.61		453.75	1.00	441.75	
S-06-05-130		130	19-Aug-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		15.817745	1370	2.64		448.50	1.00	439.50	
S-06-05-131		131	26-Aug-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	460		15.3224575	1390	2.61		443.25	1.00	437.25	
S-06-05-132		132	2-Sep-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	455		14.82717	1280	2.62		438.00	1.00	435.00	
S-06-05-133		133	9-Sep-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		14.8017575	1390	2.59		437.50	1.00	431.00	
S-06-05-134		134	16-Sep-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	475		14.776345	1340	2.63		437.00	1.00	427.00	
S-06-05-135		135	23-Sep-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	475		14.7509325	1230	2.67		436.50	1.00	423.00	
S-06-05-136		136	30-Sep-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	460		14.72552	1280	2.64		436.00	1.00	419.00	
S-06-05-137		137	7-Oct-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	475		14.9284925	1190	2.67		430.75	1.00	416.75	
S-06-05-138		138	14-Oct-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	470		15.131465	1190	2.68		425.50	1.00	414.50	
S-06-05-139		139	21-Oct-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	500		15.3344375	1280	2.65		420.25	1.00	412.25	
S-06-05-140		140	28-Oct-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		15.53741	1320	2.6		415.00	1.00	410.00	
S-06-05-141		141	4-Nov-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	470		15.182485	1190	2.68		403.50	1.00	402.50	
S-06-05-142		142	11-Nov-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		14.82756	1230	2.67		392.00	1.00	395.00	
S-06-05-143		143	18-NOV-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		12.54048	1190	2.7		374.00	1.00	377.50	
S-06-05-144		144	25-NOV-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	460		10.2534	1150	2.7		356.00	1.00	360.00	
S-06-05-145		145	02-DEC-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	475		10.35625	1210	2.69		377.50	1.00	379.50	
S-06-05-146		146	09-DEC-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	475		10.35625	1210	2.66		377.50	1.00	379.50	
S-06-05-147		147	16-DEC-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	470		10.4591	1460	2.65		399.00	1.00	399.00	

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
S-06-05-82	0.20	2.7	0.00638	0.0131	0.000198	0.00025	0.00025	0.005	0.00828	7.28	0.00227	0.0471	4.3	44.2	0.000025	0.0025	0.0766	0.203	0.000005	0.000109
S-06-05-83	0.20	3.06	0.00712	0.0159	0.000276	0.00025	0.00025	0.005	0.009	8.72	0.00239	0.0516	4.91	48.7	0.000025	0.0025	0.112	0.227	0.000005	0.000121
S-06-05-84	0.20	3.05	0.00767	0.0162	0.000207	0.00025	0.00025	0.005	0.00899	6.73	0.0022	0.0519	4.7	42.7	0.000025	0.0025	0.0874	0.211	0.000005	0.000129
S-06-05-85	0.20	3.11	0.00661	0.0129	0.000245	0.00025	0.00025	0.005	0.00816	6.82	0.00222	0.0505	4.33	44.7	0.000025	0.0025	0.078	0.184	0.000005	0.000109
S-06-05-86	0.20	2.69	0.00703	0.0138	0.000173	0.00025	0.00025	0.005	0.00774	6.32	0.00191	0.0448	3.9	42.9	0.000025	0.0025	0.0679	0.186	0.000005	0.000123
S-06-05-87	0.50	2.67	0.00708	0.0158	0.000224	0.00025	0.00025	0.005	0.00803	6.87	0.00186	0.0493	4.19	51.5	0.000025	0.0025	0.0718	0.188	0.000005	0.000112
S-06-05-88	0.20	2.31	0.00745	0.0172	0.000267	0.00025	0.00025	0.005	0.00763	6.31	0.00169	0.0469	4.01	48.6	0.000025	0.0025	0.0679	0.168	0.000005	0.000216
S-06-05-89	0.20	2.33	0.00676	0.013	0.00018	0.00025	0.00025	0.005	0.00732	5.42	0.00168	0.0439	3.74	41.4	0.000025	0.0025	0.0592	0.167	0.000005	0.000169
S-06-05-90	0.20	2.85	0.00786	0.0164	0.000235	0.00025	0.00025	0.005	0.00931	6.47	0.00222	0.0505	4.36	50	0.000025	0.0025	0.0684	0.171	0.000005	0.000182
S-06-05-91	0.20	1.65	0.00772	0.0144	0.000152	0.00025	0.00025	0.005	0.00769	5.39	0.00133	0.0409	3.52	43.3	0.000025	0.0025	0.0507	0.145	0.000005	0.000287
S-06-05-92	0.20	2.15	0.00762	0.0147	0.000216	0.00025	0.00025	0.005	0.00823	5.7	0.0016	0.0454	3.9	46	0.000025	0.0025	0.057	0.16	0.000005	0.000115
S-06-05-93	0.20	2.16	0.00821	0.0132	0.000147	0.00025	0.00025	0.005	0.00793	6.2	0.00162	0.042	3.72	43.8	0.000025	0.0025	0.0524	0.149	0.000036	0.000114
S-06-05-94	0.20	2.38	0.00873	0.0149	0.000204	0.00025	0.00025	0.005	0.00833	5.98	0.00188	0.0441	3.9	45.5	0.000025	0.0025	0.0643	0.159	0.000005	0.000154
S-06-05-95	0.20	2.38	0.00853	0.016	0.000211	0.00025	0.00025	0.005	0.00821	5.98	0.00174	0.0475	4.03	48.7	0.000025	0.0025	0.0636	0.149	0.000005	0.000141
S-06-05-96	0.20	2.18	0.00988	0.0154	0.000193	0.00025	0.00025	0.005	0.00826	5.58	0.00162	0.0435	3.84	46.2	0.000025	0.0025	0.0572	0.147	0.000005	0.000147
S-06-05-97	0.20	1.51	0.00899	0.0157	0.000151	0.00025	0.00025	0.005	0.0063	5.41	0.00159	0.0377	3.26	40.6	0.000025	0.0025	0.0744	0.111	0.000005	0.000089
S-06-05-98	0.10	1.71	0.00779	0.0124	0.000114	0.00025	0.00025	0.005	0.00579	4.91	0.00116	0.0369	3.39	36.5	0.000025	0.0025	0.0712	0.113	0.000005	0.000082
S-06-05-99	0.20	2.43	0.00796	0.0126	0.000156	0.00025	0.00025	0.005	0.0063	5.07	0.00177	0.0421	3.82	39.4	0.000025	0.0025	0.0604	0.121	0.000005	0.000136
S-06-05-100	0.20	4.57	0.00901	0.0243	0.000198	0.00025	0.00025	0.005	0.00874	6.86	0.00306	0.0645	5.17	57.7	0.000025	0.0025	0.0694	0.164	0.000005	0.000304
S-06-05-101	0.20	6.87	0.0108	0.0436	0.000519	0.00054	0.00025	0.005	0.0102	8.73	0.00426	0.085	5.52	77.4	0.000025	0.0025	0.107	0.223	0.000005	0.000527
S-06-05-102	0.20	6.27	0.0097	0.0649	0.000334	0.00025	0.00025	0.005	0.00948	9.94	0.00416	0.0959	4.62	96.8	0.000025	0.0025	0.0941	0.223	0.000005	0.0006
S-06-05-103	0.20	5.94	0.0116	0.0815	0.000531	0.00055	0.00025	0.005	0.00928	9.9	0.00396	0.096	4.1	99.1	0.000025	0.0025	0.113	0.211	0.000005	0.000681
S-06-05-104	0.50	6.29	0.0118	0.108	0.000312	0.00059	0.00025	0.005	0.00985	11.3	0.0043	0.11	3.83	108	0.000025	0.0025	0.107	0.238	0.000005	0.0009
S-06-05-105	0.52	6.03	0.011675	0.102875	0.00031325	0.000655	0.00025	0.005	0.0091075	12.025	0.0041425	0.109	3.575	104.3	0.000025	0.0025	0.128	0.217	0.000005	0.00086075
S-06-05-106	0.54	5.77	0.01155	0.09775	0.0003145	0.00072	0.00025	0.005	0.008365	12.75	0.003985	0.108	3.32	100.6	0.000025	0.0025	0.149	0.196	0.000005	0.0008215
S-06-05-107	0.55	5.51	0.011425	0.092625	0.00031575	0.000785	0.00025	0.005	0.0076225	13.475	0.0038275	0.107	3.065	96.9	0.000025	0.0025	0.17	0.175	0.000005	0.00078225
S-06-05-108	0.57	5.25	0.0113	0.0875	0.000317	0.00085	0.00025	0.005	0.00688	14.2	0.00367	0.106	2.81	93.2	0.000025	0.0025	0.191	0.154	0.000005	0.000743
S-06-05-109	0.64	5.05	0.011525	0.139875	0.000332	0.000835	0.00025	0.005	0.0072425	13.5	0.0036975	0.112	2.825	107.4	0.000025	0.0025	0.17075	0.1495	0.000005	0.00096475
S-06-05-110	0.71	4.85	0.01175	0.19225	0.000347	0.00082	0.00025	0.005	0.007605	12.8	0.003725	0.118	2.84	121.6	0.000025	0.0025	0.1505	0.145	0.000005	0.0011865
S-06-05-111	0.78	4.65	0.011975	0.244625	0.000362	0.000805	0.00025	0.005	0.0079675	12.1	0.0037525	0.124	2.855	135.8	0.000025	0.0025	0.13025	0.1405	0.000005	0.00140825
S-06-05-112	0.85	4.45	0.0122	0.297	0.000377	0.00079	0.00025	0.005	0.00833	11.4	0.00378	0.13	2.87	150	0.000025	0.0025	0.11	0.136	0.000005	0.00163
S-06-05-113	0.76	4.2975	0.012225	0.27225	0.000366	0.000785	0.00025	0.005	0.008235	11.15	0.00365	0.132	2.84	149.75	0.000025	0.0025	0.11475	0.13575	0.000005	0.001665
S-06-05-114	0.67	4.145	0.01225	0.2475	0.000355	0.00078	0.00025	0.005	0.00814	10.9	0.00352	0.134	2.81	149.5	0.000025	0.0025	0.1195	0.1355	0.000005	0.0017
S-06-05-115	0.58	3.9925	0.012275	0.22275	0.000344	0.000775	0.00025	0.005	0.008045	10.65	0.00339	0.136	2.78	149.25	0.000025	0.0025	0.12425	0.13525	0.000005	0.001735
S-06-05-116	0.49	3.84	0.0123	0.198	0.000333	0.00077	0.00025	0.005	0.00795	10.4	0.00326	0.138	2.75	149	0.000025	0.0025	0.129	0.135	0.000005	0.00177
S-06-05-117	0.52	3.73	0.012525	0.18975	0.0002995	0.0007325	0.00025	0.005	0.0078	10.0075	0.0030625	0.1325	2.7225	146.25	0.000025	0.0025	0.12275	0.129	0.00000875	0.0017
S-06-05-118	0.55	3.62	0.01275	0.1815	0.000266	0.000695	0.00025	0.005	0.00765	9.615	0.002865	0.127	2.695	143.5	0.000025	0.0025	0.1165	0.123	0.0000125	0.00163
S-06-05-119	0.57	3.51	0.012975	0.17325	0.0002325	0.0006575	0.00025	0.005	0.0075	9.2225	0.0026675	0.1215	2.6675	140.75	0.000025	0.0025	0.11025	0.117	0.00001625	0.00156
S-06-05-120	0.60	3.4	0.0132	0.165	0.000199	0.00062	0.00025	0.005	0.00735	8.83	0.00247	0.116	2.64	138	0.000025	0.0025	0.104	0.111	0.00002	0.00149
S-06-05-121	0.60	3.41	0.0132	0.16375	0.00019775	0.000605	0.00025	0.005	0.0071925	8.4	0.0023775	0.114	2.705	134.75	0.000025	0.0019375	0.1004	0.1085	0.00001625	0.0014875
S-06-05-122	0.60	3.42	0.0132	0.1625	0.0001965	0.00059	0.00025	0.005	0.007035	7.97	0.002285	0.112	2.77	131.5	0.000025	0.001375	0.0968	0.106	0.0000125	0.001485
S-06-05-123	0.60	3.43	0.0132	0.16125	0.00019525	0.000575	0.00025	0.005	0.0068775	7.54	0.0021925	0.11	2.835	128.25	0.000025	0.0008125	0.0932	0.1035	0.00000875	0.0014825
S-06-05-124	0.60	3.44	0.0132	0.16	0.000194	0.00056	0.00025	0.005	0.00672	7.11	0.0021	0.108	2.9	125	0.000025	0.00025	0.0896	0.101	0.000005	0.00148
S-06-05-125	0.61	3.345	0.013475	0.1515	0.00019025	0.0005325	0.00025	0.005	0.00661	6.9825	0.00201	0.107	2.9925	122.75	0.000025	0.00025	0.086	0.09825	0.000005	0.001475
S-06-05-126	0.61	3.25	0.01375	0.143	0.0001865	0.000505	0.00025	0.005	0.0065	6.855	0.00192	0.106	3.085	120.5	0.000025	0.00025	0.0824	0.0955	0.000005	0.00147
S-06-05-127	0.62	3.155	0.014025	0.1345	0.00018275	0.0004775	0.00025	0.005	0.00639	6.7275	0.00183	0.105	3.1775	118.25	0.000025	0.00025	0.0788	0.09275	0.000005	0.001465
S-06-05-128	0.62	3.06	0.0143	0.126	0.000179	0.00045	0.00025	0.005	0.00628	6.6	0.00174	0.104	3.27	116	0.000025	0.00025	0.0752	0.09	0.000005	0.00146
S-06-05-129	0.52	3.17	0.014625	0.12675	0.000216	0.0004525	0.00025	0.005	0.0064675	6.4025	0.0018475	0.105	3.3425	114.75	0.000025	0.00025	0.074825	0.088025	0.000005	0.001515
S-06-05-130	0.41	3.28	0.01495	0.1275	0.000253	0.000455	0.00025	0.005	0.006655	6.205	0.001955	0.106	3.415	113.5	0.000025	0.00025	0.07445	0.08605	0.000005	0.00157
S-06-05-131	0.31	3.39	0.015275	0.12825	0.00029	0.0004575	0.00025	0.005	0.0068425	6.0075	0.0020625	0.107	3.4875	112.25	0.000025	0.00025	0.074075	0.084075	0.000005	0.001625
S-06-05-132	0.20	3.5	0.0156	0.129	0.000327	0.00046	0.00025	0.005	0.00703	5.81	0.00217	0.108	3.56	111	0.000025	0.00025	0.0737	0.0821	0.000005	0.00168
S-06-05-133	0.25	3.475	0.015175	0.1295	0.000303	0.0004425	0.00025	0.005	0.006885	5.8025	0.00207	0.10675	3.545	109.25	0.000025	0.00025	0.072075	0.07825	0.000005	0.0017175
S-06-05-134	0.31	3.45	0.01475	0.13	0.000279	0.000425	0.00025	0.005	0.00674	5.795	0.00197	0.1055	3.53	107.5	0.000025	0.00025	0.07045	0.0744	0.000005	0.001755
S-06-05-135	0.36	3.425	0.014325	0.1305	0.000255	0.0004075	0.00025	0.005	0.006595	5.7875	0.00187	0.10425	3.515	105.75	0.000025	0.00025	0.068825	0.07055	0.000005	0.0017925
S-06-05-136	0.41	3.4	0.0139	0.131	0.000231	0.00039	0.00025	0.005	0.00645	5.78	0.00177	0.103	3.5	104	0.000025	0.00025	0.0672	0.0667	0.000005	0.00183
S-06-05-137	0.40	3.38	0.0144	0.12775	0.00023125	0.0004075	0.00025	0.005	0.00625	5.86	0.0017225	0.1025	3.515	104.25	0.000025	0.00025	0.067925	0.068425	0.000007	0.00195
S-06-05-138	0.39	3.36	0.0149	0.1245	0.0002315	0.000425	0.00025	0.005	0.00605	5.94	0.001675	0.102	3.53	104.5	0.000025	0.00025	0.06865	0.07015	0.000009	0.00207
S-06-05-139	0.39	3.34	0.0154	0.12125	0.00023175	0.0004425	0.00025	0.005	0.00585	6.02	0.0016275	0.1015	3.545	104.75	0.000025	0.00025	0.069375	0.071875	0.000011	0.00219
S-06-05-140	0.38	3.32	0.0159	0.118	0.000232	0.00046	0.00025	0.005	0.00565	6.1	0.00158	0.101	3.56	105	0.000025	0.00025	0.0701	0.0736	0.000013	0.00231
S-06-05-141	0.38	3.19	0.01535	0.112	0.000229	0.000425	0.00025	0.005	0.00517	5.965	0.001475	0.0963	3.555	99.55	0.000025	0.00025	0.06585	0.06835	0.000009	0.002155
S-06-05-142	0.39	3.06	0.0148	0.106	0.000226	0.00039	0.00025	0.005	0.00469	5.83	0.00137	0.0916	3.55	94.1	0.000025	0.00025	0.0616	0.0631	0.000005	0.002
S-06-05-143	0.33	3.02	0.01505	0.09835	0.000398	0.000385	0.000375	0.0075	0.00443	4.905	0.001335	0.0879	3.47	90.3	0.0000375	0.000375	0.0678	0.0561	0.000005	0.00184
S-06-05-144	0.26	2.98	0.0153	0.0907	0.00057	0.00038	0.0005	0.01	0.00417	3.98	0.0013	0.0842	3.39	86.5	0.00005	0.0005	0.074	0.0491	0.000005	0.00168
S-06-05-145	0.23	3.055	0.0149	0.10385	0.000377	0.000355	0.000375	0.0075	0.00422	4.04	0.001245	0.08885	3.56	91.5	0.0000375	0.000375	0.0625	0.04805	0.000005	0.001945
S-06-05-146	0.23	3.055	0.0149	0.10385	0.000377	0.000355	0.000375	0.0075	0.00422	4.04	0.001245	0.08885	3.56	91.5	0.0000375	0.000375	0.0625	0.04805	0.000005	0.001945
S-06-05-147	0.20	3.13	0.0145	0.117	0.000184	0.00033	0.00025	0.005	0.00427	4.1	0.00119	0.0935	3.73	96.5	0.000025	0.00025	0.051	0.047	0.000005	0.00221

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulfur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr) Dissolved (mg/L)
S-06-05-82	0.0299	0.15	0.427	0.0019	3.8	0.000005	0.143	0.0338	64.4	0.00026	0.00005	0.005	0.00119	0.0005	2.63	
S-06-05-83	0.0332	0.15	0.516	0.00214	2.75	0.000005	0.2	0.0421	70.4	0.00029	0.00005	0.005	0.00145	0.0005	2.84	
S-06-05-84	0.033	0.15	0.501	0.00193	4.24	0.000005	0.173	0.0391	77.3	0.00032	0.00005	0.005	0.00145	0.0005	2.9	
S-06-05-85	0.0317	0.15	0.393	0.0019	4.14	0.000005	0.13	0.0349	71.1	0.00024	0.00005	0.005	0.00124	0.0005	2.69	
S-06-05-86	0.0302	0.15	0.417	0.00181	4.53	0.000005	0.141	0.0343	73.5	0.00024	0.00005	0.005	0.00118	0.0005	2.47	
S-06-05-87	0.0308	0.15	0.485	0.00199	5.14	0.000005	0.144	0.0374	70.7	0.0003	0.00005	0.005	0.000988	0.0005	2.74	
S-06-05-88	0.0284	0.15	0.519	0.00196	5.21	0.000005	0.144	0.0358	65.4	0.00031	0.00005	0.005	0.000931	0.0005	2.66	
S-06-05-89	0.0265	0.15	0.413	0.00183	4.3	0.000005	0.264	0.0332	70.4	0.00025	0.00005	0.005	0.000829	0.0005	2.39	
S-06-05-90	0.0318	0.15	0.5	0.00199	4.25	0.000005	0.136	0.0328	69.4	0.00032	0.00005	0.005	0.00107	0.0005	3.06	
S-06-05-91	0.0247	0.15	0.403	0.00188	4.32	0.000005	0.121	0.0295	59.1	0.00026	0.00005	0.005	0.000767	0.0005	2.58	
S-06-05-92	0.0282	0.15	0.43	0.00197	4.29	0.000005	0.131	0.0321	63	0.00029	0.00005	0.005	0.000879	0.0005	2.91	
S-06-05-93	0.0266	0.15	0.348	0.00183	3.37	0.000005	0.113	0.0293	62.3	0.00022	0.00005	0.005	0.000826	0.0005	2.68	
S-06-05-94	0.0274	0.15	0.488	0.00197	4.01	0.000005	0.183	0.0288	63.1	0.00029	0.00005	0.005	0.000872	0.0005	2.92	
S-06-05-95	0.0289	0.15	0.487	0.00203	4.7	0.000005	0.145	0.0309	67.7	0.0003	0.00005	0.005	0.000796	0.0005	2.96	
S-06-05-96	0.0273	0.15	0.458	0.00201	4.14	0.000005	0.124	0.0296	63.2	0.0003	0.00005	0.005	0.000846	0.0005	2.92	
S-06-05-97	0.0236	0.15	0.49	0.00205	1.85	0.000005	0.112	0.0238	56.3	0.00035	0.00005	0.005	0.000858	0.0005	2.16	
S-06-05-98	0.0228	0.15	0.472	0.00232	3.2	0.000005	0.124	0.0195	51.7	0.00037	0.00005	0.005	0.000836	0.0005	1.88	
S-06-05-99	0.0261	0.15	0.339	0.00206	3.68	0.000011	0.101	0.0216	59.7	0.00028	0.00005	0.005	0.00102	0.0005	2.13	
S-06-05-100	0.0398	0.15	0.295	0.00232	4.44	0.000014	0.124	0.0331	90.3	0.00024	0.00005	0.005	0.00165	0.0012	2.98	
S-06-05-101	0.0513	0.15	0.636	0.00245	5.02	0.000014	0.158	0.0494	123	0.00041	0.00005	0.005	0.00249	0.002	3.49	
S-06-05-102	0.0562	0.3	0.325	0.00245	5.2	0.000016	0.153	0.0551	136	0.00028	0.00005	0.005	0.0027	0.0026	3.27	
S-06-05-103	0.0568	0.39	0.61	0.00253	5.29	0.000016	0.173	0.0587	137	0.00038	0.00005	0.005	0.00296	0.0028	3.14	
S-06-05-104	0.0627	0.54	0.33	0.00285	5.35	0.000022	0.168	0.0712	149	0.00026	0.00005	0.005	0.00314	0.0032	3.01	
S-06-05-105	0.06145	0.505	0.3955	0.0027875	4.755	0.00002225	0.16875	0.07365	146.25	0.00029	0.00005	0.005	0.0035925	0.003225	2.8325	
S-06-05-106	0.0602	0.47	0.461	0.002725	4.16	0.0000225	0.1695	0.0761	143.5	0.00032	0.00005	0.005	0.004045	0.00325	2.655	
S-06-05-107	0.05895	0.435	0.5265	0.0026625	3.565	0.00002275	0.17025	0.07855	140.75	0.00035	0.00005	0.005	0.0044975	0.003275	2.4775	
S-06-05-108	0.0577	0.4	0.592	0.0026	2.97	0.000023	0.171	0.081	138	0.00038	0.00005	0.005	0.00495	0.0033	2.3	
S-06-05-109	0.061125	0.7775	0.5035	0.003175	3.5925	0.000026	0.167	0.080075	151.5	0.00034	0.00005	0.005	0.00453	0.0035	2.4525	
S-06-05-110	0.06455	1.155	0.415	0.00375	4.215	0.000029	0.163	0.07915	165	0.0003	0.00005	0.005	0.00411	0.0037	2.605	
S-06-05-111	0.067975	1.5325	0.3265	0.004325	4.8375	0.000032	0.159	0.078225	178.5	0.00026	0.00005	0.005	0.00369	0.0039	2.7575	
S-06-05-112	0.0714	1.91	0.238	0.0049	5.46	0.000035	0.155	0.0773	192	0.00022	0.00005	0.005	0.00327	0.0041	2.91	
S-06-05-113	0.07065	1.7975	0.25325	0.004915	5.395	0.00003325	0.155	0.076275	189.75	0.0002325	0.00005	0.005	0.0032	0.003875	2.9	
S-06-05-114	0.0699	1.685	0.2685	0.00493	5.33	0.0000315	0.155	0.07525	187.5	0.000245	0.00005	0.005	0.00313	0.00365	2.89	
S-06-05-115	0.06915	1.5725	0.28375	0.004945	5.265	0.00002975	0.155	0.074225	185.25	0.0002575	0.00005	0.005	0.00306	0.003425	2.88	
S-06-05-116	0.0684	1.46	0.299	0.00496	5.2	0.000028	0.155	0.0732	183	0.00027	0.00005	0.005	0.00299	0.0032	2.87	
S-06-05-117	0.06595	1.3975	0.27125	0.004935	5.3475	0.0000275	0.152	0.068525	180.5	0.0002575	0.00005	0.005	0.0027775	0.003075	2.76	
S-06-05-118	0.0635	1.335	0.2435	0.00491	5.495	0.000027	0.149	0.06385	178	0.000245	0.00005	0.005	0.002565	0.00295	2.65	
S-06-05-119	0.06105	1.2725	0.21575	0.004885	5.6425	0.0000265	0.146	0.059175	175.5	0.0002325	0.00005	0.005	0.0023525	0.002825	2.54	
S-06-05-120	0.0586	1.21	0.188	0.00486	5.79	0.000026	0.143	0.0545	173	0.00022	0.00005	0.005	0.00214	0.0027	2.43	
S-06-05-121	0.0577	1.205	0.19325	0.0048625	5.9225	0.00002725	0.13975	0.051	168	0.00021875	0.00005	0.005	0.0020375	0.0026	2.3925	
S-06-05-122	0.0568	1.2	0.1985	0.004865	6.055	0.0000285	0.1365	0.0475	163	0.0002175	0.00005	0.005	0.001935	0.0025	2.355	
S-06-05-123	0.0559	1.195	0.20375	0.0048675	6.1875	0.00002975	0.13325	0.044	158	0.00021625	0.00005	0.005	0.0018325	0.0024	2.3175	
S-06-05-124	0.055	1.19	0.209	0.00487	6.32	0.000031	0.13	0.0405	153	0.000215	0.00005	0.005	0.00173	0.0023	2.28	
S-06-05-125	0.053825	1.1	0.186	0.00473	6.21	0.00003125	0.12625	0.039825	152	0.00021175	0.00005	0.005	0.0016825	0.002175	2.255	
S-06-05-126	0.05265	1.01	0.163	0.00459	6.1	0.0000315	0.1225	0.03915	151	0.0002085	0.00005	0.005	0.001635	0.00205	2.23	
S-06-05-127	0.051475	0.92	0.14	0.00445	5.99	0.00003175	0.11875	0.038475	150	0.00020525	0.00005	0.005	0.0015875	0.001925	2.205	
S-06-05-128	0.0503	0.83	0.117	0.00431	5.88	0.000032	0.115	0.0378	149	0.000202	0.00005	0.005	0.00154	0.0018	2.18	
S-06-05-129	0.050525	0.835	0.1195	0.0044925	5.7375	0.00003025	0.119	0.037425	147.5	0.0001925	0.00005	0.005	0.0016	0.001825	2.2075	
S-06-05-130	0.05075	0.84	0.122	0.004675	5.595	0.0000285	0.123	0.03705	146	0.000183	0.00005	0.005	0.00166	0.00185	2.235	
S-06-05-131	0.050975	0.845	0.1245	0.0048575	5.4525	0.00002675	0.127	0.036675	144.5	0.0001735	0.00005	0.005	0.00172	0.001875	2.2625	
S-06-05-132	0.0512	0.85	0.127	0.00504	5.31	0.000025	0.131	0.0363	143	0.000164	0.00005	0.005	0.00178	0.0019	2.29	
S-06-05-133	0.050525	0.8325	0.1265	0.0049175	5.2875	0.0000235	0.12575	0.036225	140.75	0.00016525	0.00005	0.005	0.001745	0.0018	2.23	
S-06-05-134	0.04985	0.815	0.126	0.004795	5.265	0.000022	0.1205	0.03615	138.5	0.0001665	0.00005	0.005	0.00171	0.0017	2.17	
S-06-05-135	0.049175	0.7975	0.1255	0.0046725	5.2425	0.0000205	0.11525	0.036075	136.25	0.00016775	0.00005	0.005	0.001675	0.0016	2.11	
S-06-05-136	0.0485	0.78	0.125	0.00455	5.22	0.000019	0.11	0.036	134	0.000169	0.00005	0.005	0.00164	0.0015	2.05	
S-06-05-137	0.048175	0.755	0.12525	0.00452	5.3075	0.0000185	0.11325	0.0353	136.25	0.00019425	0.00005	0.005	0.001645	0.001475	1.9975	
S-06-05-138	0.04785	0.73	0.1255	0.00449	5.395	0.000018	0.1165	0.0346	138.5	0.0002195	0.00005	0.005	0.00165	0.00145	1.945	
S-06-05-139	0.047525	0.705	0.12575	0.00446	5.4825	0.0000175	0.11975	0.0339	140.75	0.00024475	0.00005	0.005	0.001655	0.001425	1.8925	
S-06-05-140	0.0472	0.68	0.126	0.00443	5.57	0.000017	0.123	0.0332	143	0.00027	0.00005	0.005	0.00166	0.0014	1.84	
S-06-05-141	0.04475	0.65	0.128	0.004355	4.91	0.000016	0.1115	0.0323	135.5	0.000218	0.00005	0.005	0.00172	0.0013	1.7	
S-06-05-142	0.0423	0.62	0.13	0.00428	4.25	0.000015	0.1	0.0314	128	0.000166	0.00005	0.005	0.00178	0.0012	1.56	
S-06-05-143	0.04085	0.585	0.245	0.00414	4.31	0.0000125	0.075	0.0283	122	0.000244	0.000075	0.005	0.00163	0.0011	1.47	
S-06-05-144	0.0394	0.55	0.36	0.004	4.37	0.00001	0.05	0.0252	116	0.000322	0.0001	0.005	0.00148	0.001	1.38	
S-06-05-145	0.04065	0.61	0.226	0.00442	4.88	0.000012	0.0725	0.02395	123.5	0.000253	0.000075	0.005	0.0014	0.0011	1.395	
S-06-05-146	0.04065	0.61	0.226	0.00442	4.88	0.000012	0.0725	0.02395	123.5	0.000253	0.000075	0.005	0.0014	0.0011	1.395	
S-06-05-147	0.0419	0.67	0.092	0.00484	5.39	0.000014	0.095	0.0227	131	0.000184	0.00005	0.005	0.00132	0.0012	1.41	

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Calculated Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
S-06-05-148		148	23-DEC-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		11.8125825	1430	2.67		394.00	1.00	397.00	
S-06-05-149		149	30-DEC-11	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		13.166065	1370	2.67		389.00	1.00	395.00	
S-06-05-150		150	06-JAN-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		14.5195475	1540	2.63		384.00	1.00	393.00	
S-06-05-151		151	13-JAN-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		15.87303	1380	2.68		379.00	1.00	391.00	
S-06-05-152		152	20-JAN-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		15.48676	1360	2.7		402.50	1.00	411.75	
S-06-05-153		153	27-JAN-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	475		15.10049	1680	2.55		426.00	1.00	432.50	
S-06-05-154		154	03-FEB-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		14.71422	1480	2.66		449.50	1.00	453.25	
S-06-05-155		155	10-FEB-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	475		14.32795	1540	2.62		473.00	1.00	474.00	
S-06-05-156		156	17-FEB-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		14.3424	1330	2.7		469.75	1.00	461.50	
S-06-05-157		157	24-FEB-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	475		14.35685	1360	2.68		466.50	1.00	449.00	
S-06-05-158		158	02-MAR-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	460		14.3713	1450	2.66		463.25	1.00	436.50	
S-06-05-159		159	09-MAR-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	465		14.38575	1460	2.64		460.00	1.00	424.00	
S-06-05-160		160	16-MAR-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	500		14.0784675	1380	2.67		433.75	1.00	402.50	
S-06-05-161		161	23-MAR-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	475		13.771185	1340	2.65		407.50	1.00	381.00	
S-06-05-162		162	30-MAR-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	460		13.4639025	1270	2.67		381.25	1.00	359.50	
S-06-05-163		163	06-APR-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		13.15662	1220	2.73		355.00	1.00	338.00	
S-06-05-164		164	13-Apr-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	470		12.3522175	1260	2.69		342.75	1.00	329.25	
S-06-05-165		165	20-Apr-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	470		11.547815	1410	2.66		330.50	1.00	320.50	
S-06-05-166		166	27-Apr-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	470		10.7434125	1300	2.68		318.25	1.00	311.75	
S-06-05-167		167	4-May-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		9.93901	1210	2.71		306.00	1.00	303.00	
S-06-05-168		168	11-May-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	455		10.4392175	1120	2.75		322.50	1.00	321.75	
S-06-05-169		169	18-May-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	470		10.939425	1350	2.63		339.00	1.00	340.50	
S-06-05-170		170	25-May-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		11.4396325	1180	2.69		355.50	1.00	359.25	
S-06-05-171		171	1-Jun-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	460		11.93984	1340	2.64		372.00	1.00	378.00	
S-06-05-172		172	8-Jun-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		11.421085	1150	2.74		361.00	1.00	364.25	
S-06-05-173		173	15-Jun-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	455		10.90233	1200	2.71		350.00	1.00	350.50	
S-06-05-174		174	22-Jun-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		10.383575	1280	2.67		339.00	1.00	336.75	
S-06-05-175		175	29-Jun-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	460		9.86482	1190	2.7		328.00	1.00	323.00	
S-06-05-176		176	6-Jul-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	455		10.1664625	1220	2.69		324.75	1.00	321.25	
S-06-05-177		177	13-Jul-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	440		10.468105	1190	2.7		321.50	1.00	319.50	
S-06-05-178		178	20-Jul-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		10.7697475	1200	2.7		318.25	1.00	317.75	
S-06-05-179		179	27-Jul-12	Sulphurets	Upper Panel	Overburden	VU	SIL	0	0	0	Drillcore		Water	510	450		11.07139	1200	2.7		315.00	1.00	316.00	
																		10.468105	1215	2.694		338.5	1	338.625	#N/A
HC17 UP Hazelton																									
S-08-06 252.5-253.5	17	0	4-Feb-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	385	149	40.3	172	7.59	#N/A	2.8	34.1	63	2.30
S-08-06 252.5-253.5	17	1	11-Feb-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	485	175	49.6	199	7.64	#N/A	2.2	35.6	60	1.20
S-08-06 252.5-253.5	17	2	18-Feb-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	485	193	49.8	150	7.6	#N/A	3.5	36.4	45	0.40
S-08-06 252.5-253.5	17	3	25-Feb-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	500	230	38.9	108	7.57	#N/A	3.1	32.9	28	0.10
S-08-06 252.5-253.5	17	4	4-Mar-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	520	218	38.9	107	7.59	#N/A	2.7	32.1	21	0.10
S-08-06 252.5-253.5	17	5	11-Mar-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	520	332	40.3	97	7.61	#N/A	2.9	31.4	22	0.10
S-08-06 252.5-253.5	17	6	18-Mar-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	505	324	38.7	95	7.63	#N/A	3.0	31.3	16	0.10
S-08-06 252.5-253.5	17	7	25-Mar-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	520	277	39.8	89	7.55	#N/A	3.7	31.2	17	0.10
S-08-06 252.5-253.5	17	8	1-Apr-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	485	304	38.6	90	7.66	#N/A	2.9	29.3	18	0.10
S-08-06 252.5-253.5	17	9	8-Apr-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	500	247	41.2	96	7.61	#N/A	2.6	30.6	23	0.10
S-08-06 252.5-253.5	17	10	15-Apr-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	495	242	36.7	86	7.55	#N/A	3.3	29.0	18	0.10
S-08-06 252.5-253.5	17	11	22-Apr-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	515	218	38.6	91	7.64	#N/A	4.1	29.5	17	0.20
S-08-06 252.5-253.5	17	12	29-Apr-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	490	245	30	82	7.7	#N/A	2.2	26.5	15	0.20
S-08-06 252.5-253.5	17	13	6-May-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	500	264	37.9	84	7.52	#N/A	5.2	30.4	11	0.30
S-08-06 252.5-253.5	17	14	13-May-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	505	294	38.6	83	7.67	#N/A	3.2	27.6	18	0.20
S-08-06 252.5-253.5	17	15	20-May-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	490	299	34.6	80	7.66	#N/A	4.0	28.0	15	0.30
S-08-06 252.5-253.5	17	16	27-May-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	515	316	35.6	75	7.6	#N/A	6.6	29.6	9	0.20
S-08-06 252.5-253.5	17	17	3-Jun-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	520	287	33.8	70	7.6	#N/A	3.3	25.6	12	0.10
S-08-06 252.5-253.5	17	18	10-Jun-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	515	312	31.8	69	7.64	#N/A	5.3	27.1	8	0.10
S-08-06 252.5-253.5	17	19	17-Jun-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	485	272	30.6	67	7.77	#N/A	4.7	26.8	7	0.10
S-08-06 252.5-253.5	17	20	24-Jun-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	520	410	30.7	65	7.79	#N/A	2.2	26.7	10	0.10
S-08-06 252.5-253.5	17	21	1-Jul-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	490	414	30.3	62	7.76	#N/A	2.2	26.0	7	0.10
S-08-06 252.5-253.5	17	22	8-Jul-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	515	352	26.2	64	7.59	#N/A	2.3	24.2	6	0.10
S-08-06 252.5-253.5	17	23	15-Jul-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	515	332	27.5	63	7.7	#N/A	3.6	25.3	7	0.10
S-08-06 252.5-253.5	17	24	22-Jul-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	500	344	28.3	61	7.6	#N/A	2.9	24.2	5	0.10
S-08-06 252.5-253.5	17	25	29-Jul-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	500	331	33.8	62	7.74	#N/A	3.5	26.7	13	0.10
S-08-06 252.5-253.5	17	26	5-Aug-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	500	414	30.7	63	7.61	#N/A	2.9	25.6	5	0.10
S-08-06 252.5-253.5	17	27	12-Aug-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	440	413	25.2	57	7.84	#N/A	3.2	23.5	4	0.10
S-08-06 252.5-253.5	17	28	19-Aug-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	490	392	33.8	59	7.85	#N/A	4.6	26.0	9	0.10
S-08-06 252.5-253.5	17	29	26-Aug-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	470	363	29.8	55	7.7	#N/A	2.0	22.4	7	0.10
S-08-06 252.5-253.5	17	30	2-Sep-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	485	408	29.3	51	7.65	#N/A	3.8	25.0	8	0.10
S-08-06 252.5-253.5	17	31	9-Sep-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	470	363	30.6	61	7.39	#N/A	4.2	26.2	10	0.10

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
S-06-05-148	0.25	3.12	0.01415	0.1215	0.00019475	0.00033	0.00025	0.005	0.0043275	4.6425	0.001235	0.092425	3.5575	97.1	0.000025	0.00025	0.050325	0.04855	0.000005	0.0021375
S-06-05-149	0.31	3.11	0.0138	0.126	0.0002055	0.00033	0.00025	0.005	0.004385	5.185	0.00128	0.09135	3.385	97.7	0.000025	0.00025	0.04965	0.0501	0.000005	0.002065
S-06-05-150	0.36	3.1	0.01345	0.1305	0.00021625	0.00033	0.00025	0.005	0.0044425	5.7275	0.001325	0.090275	3.2125	98.3	0.000025	0.00025	0.048975	0.05165	0.000005	0.0019925
S-06-05-151	0.41	3.09	0.0131	0.135	0.000227	0.00033	0.00025	0.005	0.0045	6.27	0.00137	0.0892	3.04	98.9	0.000025	0.00025	0.0483	0.0532	0.000005	0.00192
S-06-05-152	0.36	3.1675	0.013625	0.15225	0.0002545	0.0003375	0.00025	0.005	0.004565	6.115	0.001415	0.09415	3.1525	105.425	0.000025	0.00025	0.0486	0.055375	0.000005	0.002095
S-06-05-153	0.31	3.245	0.01415	0.1695	0.000282	0.000345	0.00025	0.005	0.00463	5.96	0.00146	0.0991	3.265	111.95	0.000025	0.00025	0.0489	0.05755	0.000005	0.00227
S-06-05-154	0.25	3.3225	0.014675	0.18675	0.0003095	0.0003525	0.00025	0.005	0.004695	5.805	0.001505	0.10405	3.3775	118.475	0.000025	0.00025	0.0492	0.059725	0.000005	0.002445
S-06-05-155	0.20	3.4	0.0152	0.204	0.000337	0.00036	0.00025	0.005	0.00476	5.65	0.00155	0.109	3.49	125	0.000025	0.00025	0.0495	0.0619	0.000005	0.00262
S-06-05-156	0.24	3.3875	0.01505	0.197	0.00031625	0.0003575	0.00025	0.005	0.00457	5.6525	0.001495	0.10875	3.4475	123.25	0.000025	0.00025	0.0515	0.060275	0.000005	0.0026275
S-06-05-157	0.29	3.375	0.0149	0.19	0.0002955	0.000355	0.00025	0.005	0.00438	5.655	0.00144	0.1085	3.405	121.5	0.000025	0.00025	0.0535	0.05865	0.000005	0.002635
S-06-05-158	0.33	3.3625	0.01475	0.183	0.00027475	0.0003525	0.00025	0.005	0.00419	5.6575	0.001385	0.10825	3.3625	119.75	0.000025	0.00025	0.0555	0.057025	0.000005	0.0026425
S-06-05-159	0.37	3.35	0.0146	0.176	0.000254	0.00035	0.00025	0.005	0.004	5.66	0.00133	0.108	3.32	118	0.000025	0.00025	0.0575	0.0554	0.000005	0.00265
S-06-05-160	0.35	3.0875	0.013975	0.1585	0.0002425	0.0003225	0.00025	0.005	0.00397	5.545	0.00124	0.10135	3.2125	111.125	0.000025	0.00025	0.052675	0.052475	0.000005	0.002505
S-06-05-161	0.34	2.825	0.01335	0.141	0.000231	0.000295	0.00025	0.005	0.00394	5.43	0.00115	0.0947	3.105	104.25	0.000025	0.00025	0.04785	0.04955	0.000005	0.00236
S-06-05-162	0.32	2.5625	0.012725	0.1235	0.0002195	0.0002675	0.00025	0.005	0.00391	5.315	0.00106	0.08805	2.9975	97.375	0.000025	0.00025	0.043025	0.046625	0.000005	0.002215
S-06-05-163	0.30	2.3	0.0121	0.106	0.000208	0.00024	0.00025	0.005	0.00388	5.2	0.00097	0.0814	2.89	90.5	0.000025	0.00025	0.0382	0.0437	0.000005	0.00207
S-06-05-164	0.29	2.2825	0.0125	0.0985	0.0002125	0.000235	0.00025	0.005	0.0037375	4.875	0.0009375	0.079425	2.9	85.5	0.000025	0.00025	0.040175	0.041975	0.000005	0.002075
S-06-05-165	0.27	2.265	0.0129	0.091	0.000217	0.00023	0.00025	0.005	0.003595	4.55	0.000905	0.07745	2.91	80.5	0.000025	0.00025	0.04215	0.04025	0.000005	0.00208
S-06-05-166	0.26	2.2475	0.0133	0.0835	0.0002215	0.000225	0.00025	0.005	0.0034525	4.225	0.0008725	0.075475	2.92	75.5	0.000025	0.00025	0.044125	0.038525	0.000005	0.002085
S-06-05-167	0.24	2.23	0.0137	0.076	0.000226	0.00022	0.00025	0.005	0.00331	3.9	0.00084	0.0735	2.93	70.5	0.000025	0.00025	0.0461	0.0368	0.000005	0.00209
S-06-05-168	0.23	2.4775	0.0136	0.087	0.00022025	0.000245	0.00025	0.005	0.00345	4.0975	0.000895	0.0798	3.15	75.325	0.000025	0.00025	0.047675	0.03835	0.000005	0.0022375
S-06-05-169	0.22	2.725	0.0135	0.098	0.0002145	0.00027	0.00025	0.005	0.00359	4.295	0.00095	0.0861	3.37	80.15	0.000025	0.00025	0.04925	0.0399	0.000005	0.002385
S-06-05-170	0.21	2.9725	0.0134	0.109	0.00020875	0.000295	0.00025	0.005	0.00373	4.4925	0.001005	0.0924	3.59	84.975	0.000025	0.00025	0.050825	0.04145	0.000005	0.0025325
S-06-05-171	0.20	3.22	0.0133	0.12	0.000203	0.00032	0.00025	0.005	0.00387	4.69	0.00106	0.0987	3.81	89.8	0.000025	0.00025	0.0524	0.043	0.000005	0.00268
S-06-05-172	0.18	3.0975	0.01315	0.109875	0.0002	0.0003125	0.00025	0.005	0.00381	4.4875	0.0010225	0.09365	3.7175	87.225	0.000025	0.000325	0.04935	0.041675	0.000005	0.0025375
S-06-05-173	0.15	2.975	0.013	0.09975	0.000197	0.000305	0.00025	0.005	0.00375	4.285	0.000985	0.0886	3.625	84.65	0.000025	0.0004	0.0463	0.04035	0.000005	0.002395
S-06-05-174	0.13	2.8525	0.01285	0.089625	0.000194	0.0002975	0.00025	0.005	0.00369	4.0825	0.0009475	0.08355	3.5325	82.075	0.000025	0.000475	0.04325	0.039025	0.000005	0.0022525
S-06-05-175	0.10	2.73	0.0127	0.0795	0.000191	0.00029	0.00025	0.005	0.00363	3.88	0.00091	0.0785	3.44	79.5	0.000025	0.00055	0.0402	0.0377	0.000005	0.00211
S-06-05-176	0.17	2.75	0.012775	0.076625	0.000203	0.000295	0.00025	0.0065	0.0036625	3.9975	0.0009575	0.078975	3.4425	77.875	0.000025	0.0005375	0.042125	0.0374	0.000005	0.00223
S-06-05-177	0.23	2.77	0.01285	0.07375	0.000215	0.0003	0.00025	0.008	0.003695	4.115	0.001005	0.07945	3.445	76.25	0.000025	0.000525	0.04405	0.0371	0.000005	0.00235
S-06-05-178	0.30	2.79	0.012925	0.070875	0.000227	0.000305	0.00025	0.0095	0.0037275	4.2325	0.0010525	0.079925	3.4475	74.625	0.000025	0.0005125	0.045975	0.0368	0.000005	0.00247
S-06-05-179	0.36	2.81	0.013	0.068	0.000239	0.00031	0.00025	0.011	0.00376	4.35	0.0011	0.0804	3.45	73	0.000025	0.0005	0.0479	0.0365	0.000005	0.00259
	0.201	2.89675	0.012995	0.0897	0.000207775	0.000303	0.00025	0.0065	0.0037325	4.26125	0.0010045	0.085415	3.55	80.9975	0.000025	0.0004325	0.0462375	0.0391	0.000005	0.00241475
HC17 UP Hazelton																				
S-08-06 252.5-253.5	0.58	0.152	0.0111	0.0025	0.0872	0.00001	0.000005	0.006	0.000234	13	0.00025	0.000186	0.0061	0.005	0.0004	0.004	1.91	0.009	0.000005	0.394
S-08-06 252.5-253.5	0.54	0.119	0.0174	0.0023	0.0803	0.00001	0.000005	0.007	0.000712	15.3	0.00025	0.000222	0.0049	0.005	0.00019	0.005	2.75	0.017	0.000005	1.13
S-08-06 252.5-253.5	0.48	0.113	0.0153	0.0019	0.0812	0.00001	0.000005	0.0063	0.000569	15.6	0.00025	0.000082	0.0025	0.005	0.00004	0.006	2.61	0.022	0.000005	0.885
S-08-06 252.5-253.5	0.37	0.0915	0.0121	0.0016	0.0889	0.00001	0.000005	0.0039	0.000061	12.4	0.00025	0.000069	0.0019	0.005	0.00004	0.004	1.93	0.02	0.000005	0.482
S-08-06 252.5-253.5	0.32	0.129	0.0109	0.0014	0.117	0.00001	0.000005	0.005	0.000236	12.6	0.00025	0.000054	0.0021	0.005	0.00007	0.004	1.82	0.019	0.000005	0.331
S-08-06 252.5-253.5	0.27	0.131	0.01	0.0012	0.126	0.00001	0.000005	0.004	0.000157	13.3	0.00025	0.000049	0.0017	0.005	0.00002	0.004	1.75	0.022	0.000005	0.24
S-08-06 252.5-253.5	0.20	0.0981	0.0079	0.001	0.112	0.00001	0.000005	0.003	0.000184	12.7	0.00025	0.000045	0.0014	0.005	0.00004	0.003	1.69	0.025	0.000005	0.165
S-08-06 252.5-253.5	0.19	0.113	0.0086	0.001	0.109	0.00001	0.000005	0.003	0.0000015	13.3	0.0009	0.00008	0.0035	0.005	0.00039	0.003	1.6	0.026	0.000005	0.163
S-08-06 252.5-253.5	0.15	0.105	0.0067	0.0008	0.131	0.00001	0.000005	0.002	0.000191	12.9	0.0007	0.000068	0.0039	0.005	0.00038	0.003	1.57	0.03	0.000005	0.154
S-08-06 252.5-253.5	0.14	0.109	0.0073	0.0008	0.11	0.00001	0.000005	0.002	0.000143	13.8	0.00025	0.000087	0.0048	0.005	0.0003	0.003	1.62	0.033	0.000005	0.134
S-08-06 252.5-253.5	0.13	0.133	0.0061	0.0009	0.123	0.00001	0.000005	0.002	0.000048	12.5	0.00025	0.000099	0.0056	0.005	0.00022	0.003	1.33	0.031	0.000005	0.142
S-08-06 252.5-253.5	0.12	0.103	0.0063	0.0009	0.0984	0.00001	0.000005	0.001	0.000056	13.2	0.0008	0.000108	0.0057	0.005	0.00025	0.003	1.38	0.03	0.000005	0.154
S-08-06 252.5-253.5	0.10	0.0965	0.0054	0.0008	0.117	0.00001	0.000005	0.001	0.000063	10.4	0.00025	0.000063	0.0027	0.005	0.00004	0.002	1.02	0.027	0.000005	0.146
S-08-06 252.5-253.5	0.09	0.0851	0.0056	0.0009	0.105	0.00001	0.000005	0.001	0.000086	13.1	0.0006	0.000091	0.0048	0.005	0.00006	0.002	1.24	0.038	0.000005	0.153
S-08-06 252.5-253.5	0.09	0.0965	0.0057	0.0008	0.102	0.00001	0.000005	0.0019	0.000067	13.5	0.0007	0.000068	0.0032	0.004	0.00046	0.002	1.18	0.035	0.000005	0.17
S-08-06 252.5-253.5	0.08	0.09	0.0057	0.0009	0.0969	0.00001	0.000005	0.0019	0.000071	12.2	0.00025	0.000082	0.0035	0.001	0.00073	0.002	1.03	0.032	0.000005	0.186
S-08-06 252.5-253.5	0.08	0.0809	0.0053	0.0011	0.104	0.00001	0.000005	0.0023	0.000074	12.6	0.0005	0.000107	0.0021	0.007	0.00009	0.002	1.01	0.0325	0.00004	0.168
S-08-06 252.5-253.5	0.06	0.0909	0.0048	0.0008	0.121	0.00001	0.000005	0.0026	0.000041	12	0.00025	0.000091	0.0024	0.003	0.00001	0.002	0.895	0.0327	0.000005	0.158
S-08-06 252.5-253.5	0.03	0.0922	0.0046	0.0009	0.12	0.00001	0.000005	0.002	0.000064	11.3	0.0005	0.000056	0.0022	0.017	0.00004	0.001	0.852	0.0326	0.000005	0.196
S-08-06 252.5-253.5	0.06	0.0775	0.0063	0.0009	0.115	0.00001	0.000005	0.0016	0.000104	10.9	0.00025	0.000089	0.0028	0.016	0.00005	0.001	0.82	0.0329	0.000005	0.192
S-08-06 252.5-253.5	0.06	0.0859	0.0052	0.0008	0.126	0.00001	0.000005	0.0041	0.00007	11	0.00025	0.000045	0.0029	0.012	0.00002	0.001	0.757	0.0311	0.000005	0.2
S-08-06 252.5-253.5	0.06	0.0619	0.0045	0.0008	0.122	0.00001	0.000005	0.0016	0.000081	10.9	0.00025	0.000052	0.0023	0.032	0.00008	0.001	0.746	0.0356	0.00002	0.201
S-08-06 252.5-253.5	0.03	0.072	0.0041	0.0009	0.117	0.00001	0.000005	0.0025	0.000099	9.29	0.0007	0.000063	0.003	0.036	0.00005	0.002	0.728	0.0347	0.000005	0.211
S-08-06 252.5-253.5	0.03	0.0755	0.0037	0.0009	0.127	0.00001	0.000005	0.0024	0.000123	9.88	0.0006	0.000066	0.003	0.034	0.00004	0.001	0.679	0.0299	0.000005	0.23
S-08-06 252.5-253.5	0.03	0.0541	0.0034	0.0007	0.109	0.00001	0.000005	0.0017	0.000088	10.2	0.00025	0.000065	0.0027	0.074	0.00003	0.0005	0.667	0.0334	0.000005	0.237
S-08-06 252.5-253.5	0.03	0.0623	0.0036	0.0006	0.106	0.00001	0.000005	0.0019	0.000092	12.4	0.00025	0.000057	0.0025	0.074	0.00001	0.0005	0.725	0.0387	0.000005	0.271
S-08-06 252.5-253.5	0.03	0.074	0.0037	0.0007	0.104	0.00001	0.000005	0.0015	0.000129	11.2	0.00025	0.0001	0.0026	0.069	0.00007	0.001	0.657	0.0374	0.000005	0.313
S-08-06 252.5-253.5	0.03	0.0806	0.0026	0.0008	0.126	0.00001	0.000005	0.0016	0.000185	9.29	0.0007	0.000035	0.0021	0.001	0.00002	0.0005	0.496	0.0117	0.000005	0.293
S-08-06 252.5-253.5	0.03	0.0666	0.0037	0.0007	0.116	0.00001	0.000005	0.0018	0.00021	12.6	0.00025	0.000073	0.0036	0.389	0.00005	0.0005	0.602	0.0175	0.000005	0.359
S-08-06 252.5-253.5	0.03	0.0733	0.003	0.0007	0.115	0.00001	0.000005	0.0014	0.000189	11.1	0.0007	0.000041	0.0024	0.34	0.00006	0.001	0.512	0.0135	0.000005	0.298
S-08-06 252.5-253.5	0.03	0.0642	0.003	0.0007	0.103	0.00001	0.000005	0.0015	0.000196	10.8	0.00025	0.000055	0.0024	0.001	0.00003	0.001	0.549	0.0164	0.000005	0.329
S-08-06 252.5-253.5	0.03	0.0673	0.0035	0.0007	0.111	0.00001	0.000005	0.0019	0.000223	11.3	0.00025	0.000062	0.0027	0.192	0.00001	0.001	0.558	0.0377	0.000005	0.396

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulfur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr) Dissolved (mg/L)
S-06-05-148	0.04165	0.735	0.10125	0.0048875	4.9025	0.00001475	0.092	0.027425	130	0.00018175	0.00005	0.005	0.00154	0.00125	1.425	
S-06-05-149	0.0414	0.8	0.1105	0.004935	4.415	0.0000155	0.089	0.03215	129	0.0001795	0.00005	0.005	0.00176	0.0013	1.44	
S-06-05-150	0.04115	0.865	0.11975	0.0049825	3.9275	0.00001625	0.086	0.036875	128	0.00017725	0.00005	0.005	0.00198	0.00135	1.455	
S-06-05-151	0.0409	0.93	0.129	0.00503	3.44	0.000017	0.083	0.0416	127	0.000175	0.00005	0.005	0.0022	0.0014	1.47	
S-06-05-152	0.04285	1.06	0.137	0.0055025	3.9975	0.0000165	0.0865	0.04165	133.5	0.000184	0.00005	0.005	0.0021025	0.001525	1.49	
S-06-05-153	0.0448	1.19	0.145	0.005975	4.555	0.000016	0.09	0.0417	140	0.000193	0.00005	0.005	0.002005	0.00165	1.51	
S-06-05-154	0.04675	1.32	0.153	0.0064475	5.1125	0.0000155	0.0935	0.04175	146.5	0.000202	0.00005	0.005	0.0019075	0.001775	1.53	
S-06-05-155	0.0487	1.45	0.161	0.00692	5.67	0.000015	0.097	0.0418	153	0.000211	0.00005	0.005	0.00181	0.0019	1.55	
S-06-05-156	0.048225	1.3775	0.15325	0.006835	5.615	0.0000145	0.1	0.0412	150	0.00021225	0.00005	0.005	0.001695	0.001825	1.4925	
S-06-05-157	0.04775	1.305	0.1455	0.00675	5.56	0.000014	0.103	0.0406	147	0.0002135	0.00005	0.005	0.00158	0.00175	1.435	
S-06-05-158	0.047275	1.2325	0.13775	0.006665	5.505	0.0000135	0.106	0.04	144	0.00021475	0.00005	0.005	0.001465	0.001675	1.3775	
S-06-05-159	0.0468	1.16	0.13	0.00658	5.45	0.000013	0.109	0.0394	141	0.000216	0.00005	0.005	0.00135	0.0016	1.32	
S-06-05-160	0.043875	1.0575	0.12525	0.006295	5.0475	0.00001375	0.10175	0.037925	134.75	0.0001995	0.00005	0.005	0.001315	0.001325	1.3025	
S-06-05-161	0.04095	0.955	0.1205	0.00601	4.645	0.0000145	0.0945	0.03645	128.5	0.000183	0.00005	0.005	0.00128	0.00105	1.285	
S-06-05-162	0.038025	0.8525	0.11575	0.005725	4.2425	0.00001525	0.08725	0.034975	122.25	0.0001665	0.00005	0.005	0.001245	0.000775	1.2675	
S-06-05-163	0.0351	0.75	0.111	0.00544	3.84	0.000016	0.08	0.0335	116	0.00015	0.00005	0.005	0.00121	0.0005	1.25	
S-06-05-164	0.034125	0.67	0.11625	0.005135	3.6	0.000015	0.07725	0.030725	3.6	0.0001575	0.00005	0.005	0.00122	0.0005	1.2125	
S-06-05-165	0.03315	0.59	0.1215	0.00483	3.36	0.000014	0.0745	0.02795	3.36	0.000165	0.00005	0.005	0.00123	0.0005	1.175	
S-06-05-166	0.032175	0.51	0.12675	0.004525	3.12	0.000013	0.07175	0.025175	3.12	0.0001725	0.00005	0.005	0.00124	0.0005	1.1375	
S-06-05-167	0.0312	0.43	0.132	0.00422	2.88	0.000012	0.069	0.0224	2.88	0.00018	0.00005	0.005	0.00125	0.0005	1.1	
S-06-05-168	0.033	0.505	0.1235	0.004445	3.2575	0.0000125	0.07325	0.0236	3.2575	0.0001735	0.00005	0.005	0.0014025	0.000675	1.15	
S-06-05-169	0.0348	0.58	0.115	0.00467	3.635	0.000013	0.0775	0.0248	3.635	0.000167	0.00005	0.005	0.001555	0.00085	1.2	
S-06-05-170	0.0366	0.655	0.1065	0.004895	4.0125	0.0000135	0.08175	0.026	4.0125	0.0001605	0.00005	0.005	0.0017075	0.001025	1.25	
S-06-05-171	0.0384	0.73	0.098	0.00512	4.39	0.000014	0.086	0.0272	4.39	0.000154	0.00005	0.005	0.00186	0.0012	1.3	
S-06-05-172	0.037	0.675	0.10375	0.0053025	4.2875	0.0000135	0.0835	0.025675	4.2875	0.000153	0.00005	0.005	0.0017775	0.001025	1.275	
S-06-05-173	0.0356	0.62	0.1095	0.005485	4.185	0.000013	0.081	0.02415	4.185	0.000152	0.00005	0.005	0.001695	0.00085	1.25	
S-06-05-174	0.0342	0.565	0.11525	0.0056675	4.0825	0.0000125	0.0785	0.022625	4.0825	0.000151	0.00005	0.005	0.0016125	0.000675	1.225	
S-06-05-175	0.0328	0.51	0.121	0.00585	3.98	0.000012	0.076	0.0211	3.98	0.00015	0.00005	0.005	0.00153	0.0005	1.2	
S-06-05-176	0.032525	0.4875	0.119	0.005455	3.9275	0.00001025	0.076	0.022625	3.9275	0.0001565	0.00005	0.005	0.001575	0.0005	1.1775	
S-06-05-177	0.03225	0.465	0.117	0.00506	3.875	0.0000085	0.076	0.02415	3.875	0.000163	0.00005	0.005	0.00162	0.0005	1.155	
S-06-05-178	0.031975	0.4425	0.115	0.004665	3.8225	0.00000675	0.076	0.025675	3.8225	0.0001695	0.00005	0.005	0.001665	0.0005	1.1325	
S-06-05-179	0.0317	0.42	0.113	0.00427	3.77	0.000005	0.076	0.0272	3.77	0.000176	0.00005	0.005	0.00171	0.0005	1.11	0.005
	0.034305	0.557	0.1118	0.005177	4.03325	0.0000109	0.079075	0.02464	4.03325	0.00015855	0.00005	0.005	0.00167525	0.0007275	1.2075	0.005
HC17 UP Hazelton																
S-08-06 252.5-253.5	0.001	0.005	7.54	0.0124	1.24	0.000005	17.4	2.45	18.6	0.0001	0.00023	0.0002	0.000679	0.00234	0.0005	0.00006
S-08-06 252.5-253.5	0.0006	0.005	6.15	0.0102	1.29	0.000005	14.3	2.92	20.8	0.0001	0.00044	0.0001	0.00553	0.00219	0.0005	0.00003
S-08-06 252.5-253.5	0.0003	0.005	4.81	0.0052	1.28	0.000005	8.38	2.75	14.4	0.0001	0.00007	0.0001	0.00489	0.00195	0.0005	0.00002
S-08-06 252.5-253.5	0.0002	0.005	3.16	0.00347	1.07	0.000005	4.52	2.11	9	0.0001	0.00013	0.00005	0.00369	0.00167	0.0005	0.00003
S-08-06 252.5-253.5	0.0003	0.005	2.58	0.00298	1.12	0.000005	2.71	2	7.45	0.0001	0.00031	0.0001	0.00372	0.00183	0.0005	0.00001
S-08-06 252.5-253.5	0.00005	0.005	2.3	0.00298	1.25	0.000005	1.66	1.93	7.37	0.0001	0.00017	0.0001	0.00329	0.00174	0.0005	0.00001
S-08-06 252.5-253.5	0.00005	0.005	1.8	0.00186	1.11	0.000005	1.16	1.79	6.68	0.0001	0.0001	0.0001	0.003	0.00131	0.0005	0.00022
S-08-06 252.5-253.5	0.0002	0.005	1.67	0.00214	1.21	0.000005	1.06	1.71	6.38	0.0001	0.00017	0.00005	0.00329	0.00141	0.0005	0.000005
S-08-06 252.5-253.5	0.0001	0.005	1.41	0.00183	1.03	0.000005	0.93	1.59	7.03	0.0001	0.00022	0.0001	0.00348	0.0011	0.0005	0.000005
S-08-06 252.5-253.5	0.00005	0.005	1.33	0.00187	1.04	0.000005	0.8	1.63	6.67	0.0001	0.00028	0.00005	0.00396	0.00112	0.0005	0.00001
S-08-06 252.5-253.5	0.0001	0.005	1.21	0.00206	0.95	0.000005	0.59	1.4	6.24	0.0001	0.00021	0.00005	0.00337	0.00126	0.0005	0.000005
S-08-06 252.5-253.5	0.0002	0.005	1.19	0.00179	1.1	0.000005	0.58	1.42	6.13	0.0001	0.00015	0.00005	0.0036	0.00108	0.0005	0.00003
S-08-06 252.5-253.5	0.00005	0.005	1.04	0.00223	1.02	0.000005	0.41	1.05	4.71	0.0001	0.00022	0.00005	0.00289	0.00102	0.0005	0.000005
S-08-06 252.5-253.5	0.0002	0.02	1.02	0.0023	1.06	0.000010	0.43	1.26	5.91	0.0001	0.00033	0.00005	0.00308	0.001	0.0005	0.000005
S-08-06 252.5-253.5	0.0001	0.0045	0.981	0.00227	1.12	0.000070	0.42	1.19	5.31	0.0001	0.00018	0.0002	0.00315	0.00104	0.001	0.00001
S-08-06 252.5-253.5	0.00005	0.0045	0.815	0.0022	0.95	0.000005	0.38	1.04	5.62	0.0001	0.00016	0.00005	0.00305	0.00108	0.001	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.781	0.00199	1.01	0.000010	0.36	1.04	5.45	0.0001	0.00012	0.00005	0.00264	0.0011	0.0005	0.000005
S-08-06 252.5-253.5	0.00005	0.013	0.693	0.00168	0.99	0.000005	0.3	0.986	4.95	0.0001	0.00017	0.00005	0.00241	0.00096	0.0005	0.000005
S-08-06 252.5-253.5	0.00005	0.017	0.649	0.00192	0.89	0.000020	0.32	0.921	4.71	0.0001	0.00041	0.00005	0.00213	0.001	0.0005	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.622	0.00179	0.88	0.000005	0.31	0.872	4.35	0.0001	0.00054	0.00005	0.00235	0.00099	0.0005	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.637	0.0016	1	0.000005	0.29	0.844	4.33	0.0001	0.00019	0.0001	0.002	0.00105	0.0005	0.000005
S-08-06 252.5-253.5	0.0001	0.021	0.512	0.0016	0.8	0.000005	0.2	0.789	4.05	0.0001	0.00008	0.00005	0.00214	0.0008	0.0005	0.000005
S-08-06 252.5-253.5	0.0001	0.022	0.573	0.00071	0.92	0.000005	0.28	0.803	4.16	0.0001	0.00024	0.00005	0.00208	0.00087	0.0005	0.000005
S-08-06 252.5-253.5	0.0002	0.0045	0.499	0.0015	0.83	0.000005	0.26	0.728	3.61	0.0001	0.00018	0.00005	0.00228	0.00084	0.0005	0.000005
S-08-06 252.5-253.5	0.00005	0.022	0.538	0.00076	0.8	0.000005	0.23	0.512	3.79	0.0001	0.00015	0.00005	0.0019	0.00076	0.0005	0.000005
S-08-06 252.5-253.5	0.00005	0.024	0.503	0.00187	0.89	0.000005	0.23	0.747	4.52	0.0001	0.000005	0.00005	0.00181	0.00085	0.0005	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.484	0.0014	0.84	0.000005	0.23	0.677	3.89	0.0001	0.00013	0.00005	0.0021	0.0009	0.0005	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.408	0.00156	0.69	0.000005	0.15	0.555	3.5	0.0001	0.00062	0.00005	0.00109	0.00089	0.0005	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.459	0.00113	0.86	0.000005	0.19	0.65	6.17	0.0001	0.00025	0.00005	0.0017	0.00088	0.0005	0.000005
S-08-06 252.5-253.5	0.00005	0.009	0.419	0.00147	0.74	0.000005	0.17	0.566	5.3	0.0001	0.00049	0.00005	0.00147	0.00088	0.0005	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.402	0.00139	0.77	0.000005	0.17	0.571	4.54	0.0001	0.00011	0.00005	0.00164	0.00083	0.0005	0.000005
S-08-06 252.5-253.5	0.00005	0.01	0.413	0.00077	0.81	0.000005	0.17	0.585	4.71	0.0001	0.00006	0.0001	0.00171	0.00089	0.0005	0.000005

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Calculated Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
S-08-06 252.5-253.5	17	32	16-Sep-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	500	357	25.3	54	7.52	#N/A	2.6	23.8	12	0.10
S-08-06 252.5-253.5	17	33	23-Sep-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	475	334	26.2	48	7.59	#N/A	2.5	22.7	15	0.10
S-08-06 252.5-253.5	17	34	30-Sep-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	490	344	27.4	45	7.54	#N/A	2.6	23.5	11	0.10
S-08-06 252.5-253.5	17	35	7-Oct-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	505	328	27.1	62	7.57	#N/A	3.1	24.5	12	0.10
S-08-06 252.5-253.5	17	36	14-Oct-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	480	321	30.6	60	7.56	#N/A	2.8	25.9	11	0.10
S-08-06 252.5-253.5	17	37	21-Oct-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	490	361	26.3	60	7.54	#N/A	2.8	25.3	12	0.10
S-08-06 252.5-253.5	17	38	28-Oct-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	470	349	23.8	56	7.54	#N/A	2.9	24.3	10	0.10
S-08-06 252.5-253.5	17	39	4-Nov-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	480	406	24	60	7.23	#N/A	3.0	17.1	10	0.10
S-08-06 252.5-253.5	17	40	11-Nov-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	485	344	27.1	53	7.76	#N/A	2.2	25.9	5	0.10
S-08-06 252.5-253.5	17	41	18-Nov-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	485	369	26	49	7.86	#N/A	3.0	27.3	6	0.10
S-08-06 252.5-253.5	17	42	25-Nov-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	485	327	25	55	7.45	#N/A	2.8	24.8	6	0.10
S-08-06 252.5-253.5	17	43	2-Dec-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	495	349	29.8	54	7.65	#N/A	2.8	24.8	5	0.10
S-08-06 252.5-253.5	17	44	9-Dec-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	470	343	24.5	51	7.52	#N/A	3.4	22.7	6	0.10
S-08-06 252.5-253.5	17	45	16-Dec-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	480	352	32	53	7.58	#N/A	3.8	26.2	6	0.10
S-08-06 252.5-253.5	17	46	23-Dec-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	470	352	25.5	51	7.73	#N/A	4.5	25.3	7	0.10
S-08-06 252.5-253.5	17	47	30-Dec-10	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	485	347	24.3	45	7.62	#N/A	4.6	25.2	6	0.10
S-08-06 252.5-253.5	17	48	6-Jan-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	480	346	24.3	40	7.66	#N/A	3.8	24.7	6	0.10
S-08-06 252.5-253.5	17	49	13-Jan-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	500	360	24.3	40	7.67	#N/A	3.0	24.1	5	0.10
S-08-06 252.5-253.5	17	50	20-Jan-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	495	354	24	46	7.34	#N/A	3.6	25.5	5	0.10
S-08-06 252.5-253.5	17	51	27-Jan-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	500	322	23.7	44	7.69	#N/A	4.2	26.9	5	0.10
S-08-06 252.5-253.5	17	52	3-Feb-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	495	329	23.8	40	7.52	#N/A	3.1	25.2	5	0.10
S-08-06 252.5-253.5	17	53	10-Feb-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	505	336	23.9	41	7.65	#N/A	2.1	23.4	4	0.10
S-08-06 252.5-253.5	17	54	17-Feb-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	480	346	24.45	44	7.6	#N/A	2.7	24.1	6	0.10
S-08-06 252.5-253.5	17	55	24-Feb-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	515	335	25	56	7.65	#N/A	3.2	24.8	7	0.10
S-08-06 252.5-253.5	17	56	3-Mar-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	490	322	24.8	51	7.48	#N/A	2.8	24.7	8	0.10
S-08-06 252.5-253.5	17	57	10-Mar-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	500	330	24.6	54	7.67	#N/A	2.5	24.5	9	0.10
S-08-06 252.5-253.5	17	58	17-Mar-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	490	319	25.15	54	7.59	#N/A	2.8	24.5	8	0.10
S-08-06 252.5-253.5	17	59	24-Mar-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	500	328	25.7	62	7.57	#N/A	3.1	24.5	6	0.10
S-08-06 252.5-253.5	17	60	31-Mar-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	495	304	25.7	54	7.76	#N/A	3.5	25.8	7	0.15
S-08-06 252.5-253.5	17	61	7-Apr-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	500	286	25.7	53	7.77	#N/A	3.9	27.2	7	0.20
S-08-06 252.5-253.5	17	62	14-Apr-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	495	288	24.7	53	7.84	#N/A	3.0	25.9	7	0.15
S-08-06 252.5-253.5	17	63	21-Apr-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	495	310	23.7	52	7.6	#N/A	2.1	24.7	6	0.10
S-08-06 252.5-253.5	17	64	28-Apr-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	485	345	23.75	52	7.76	#N/A	2.5	24.4	6	0.10
S-08-06 252.5-253.5	17	65	5-May-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	485	304	23.8	52	7.61	#N/A	2.9	24.1	6	0.10
S-08-06 252.5-253.5	17	66	12-May-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	460	352	24.15	48	7.65	#N/A	2.7	24.8	6	0.10
S-08-06 252.5-253.5	17	67	19-May-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	475	341	24.5	53	7.85	#N/A	2.4	25.6	6	0.10
S-08-06 252.5-253.5	17	68	26-May-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	485	295	24	51	7.83	#N/A	3.4	26.1	6	0.10
S-08-06 252.5-253.5	17	69	2-Jun-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	470	282	23.5	53	7.78	#N/A	4.3	26.5	5	0.10
S-08-06 252.5-253.5	17	70	9-Jun-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	480	337	23.6	50	7.59	#N/A	3.9	26.2	5	0.10
S-08-06 252.5-253.5	17	71	16-Jun-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	475	350	23.7	49	7.84	#N/A	3.6	26.0	5	0.10
S-08-06 252.5-253.5	17	72	23-Jun-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	470	341	23.7	47	7.65	#N/A	3.6	26.0	6	0.10
S-08-06 252.5-253.5	17	73	30-Jun-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	490	344	23.7	50	7.78	#N/A	3.6	26.1	6	0.10
S-08-06 252.5-253.5	17	74	7-Jul-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	475	308	24.8	49	7.64	#N/A	3.6	25.5	6	0.10
S-08-06 252.5-253.5	17	75	14-Jul-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	475	298	25.9	50	7.81	#N/A	3.6	24.8	5	0.10
S-08-06 252.5-253.5	17	76	21-Jul-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	480	291	24.75	47	7.7	#N/A	3.5	24.9	5	0.10
S-08-06 252.5-253.5	17	77	28-Jul-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	490	304	23.6	51	7.89	#N/A	3.5	25.0	4	0.10
S-08-06 252.5-253.5	17	78	4-Aug-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	485	318	22.7	52	7.63	#N/A	3.4	24.6	4	0.10
S-08-06 252.5-253.5	17	79	11-Aug-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	470	240	21.8	45	7.9	#N/A	3.3	24.3	3	0.10
S-08-06 252.5-253.5	17	80	18-Aug-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	475	259	22.7	47	7.89	#N/A	3.9	25.2	3	0.10
S-08-06 252.5-253.5	17	81	25-Aug-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	485	260	23.6	47	7.91	#N/A	4.4	26.1	3	0.10
S-08-06 252.5-253.5	17	82	1-Sep-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	460	320	22.45	47	8	#N/A	3.8	24.7	5	0.10
S-08-06 252.5-253.5	17	83	8-Sep-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	475	289	21.3	44	7.84	#N/A	3.3	23.2	6	0.10
S-08-06 252.5-253.5	17	84	15-Sep-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	480	330	22.65	49	7.75	#N/A	3.5	23.2	6	0.10
S-08-06 252.5-253.5	17	85	22-Sep-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	485	255	24	49	7.49	#N/A	3.7	23.1	5	0.10
S-08-06 252.5-253.5	17	86	29-Sep-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	490	308	22.65	48	7.55	#N/A	4.0	22.8	5	0.10
S-08-06 252.5-253.5	17	87	6-Oct-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	505	292	21.3	44	7.72	#N/A	4.2	22.6	4	0.10
S-08-06 252.5-253.5	17	88	13-Oct-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	475	275	21.85	46	7.94	#N/A	4.0	22.3	5	0.10
S-08-06 252.5-253.5	17	89	20-Oct-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	480	265	22.4	44	7.7	#N/A	3.7	22.1	5	0.10
S-08-06 252.5-253.5	17	90	27-Oct-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	435	320	21.45	44	7.64	#N/A	4.1	23.2	5	0.10
S-08-06 252.5-253.5	17	91	3-Nov-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	455	271	20.5	43	7.83	#N/A	4.6	24.3	5	0.10
S-08-06 252.5-253.5	17	92	10-Nov-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	475	297	21.45	43	7.9	#N/A	3.7	23.6	4	0.10
S-08-06 252.5-253.5	17	93	17-Nov-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	475	295	22.4	45	7.73	#N/A	2.9	22.9	3	0.10
S-08-06 252.5-253.5	17	94	24-Nov-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	470	324	21.35	41	7.74	#N/A	3.9	22.4	3	0.10
S-08-06 252.5-253.5	17	95	1-Dec-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	470	345	20.3	41	7.52	#N/A	4.9	21.8	2	0.10
S-08-06 252.5-253.5	17	96	8-Dec-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	455	311	20	42	7.71	#N/A	4.7	21.9	2	0.10
S-08-06 252.5-253.5	17	97	15-Dec-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	475	314	19.7	43	7.74	#N/A	4.4	22.0	2	0.10

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
S-08-06 252.5-253.5	0.03	0.0648	0.0035	0.0008	0.0942	0.00001	0.000005	0.0013	0.000233	9.26	0.00025	0.000064	0.0026	0.049	0.00001	0.0005	0.529	0.0317	0.00002	0.423
S-08-06 252.5-253.5	0.03	0.0692	0.0033	0.0009	0.103	0.00001	0.000005	0.0017	0.000323	9.66	0.00025	0.000091	0.0027	0.055	0.00001	0.002	0.515	0.0309	0.000005	0.474
S-08-06 252.5-253.5	0.03	0.0711	0.0034	0.0009	0.0885	0.00001	0.000005	0.0024	0.00011	10.1	0.00025	0.000078	0.0027	0.034	0.00003	0.001	0.552	0.0279	0.000005	0.597
S-08-06 252.5-253.5	0.03	0.0699	0.0038	0.0009	0.0829	0.00001	0.000005	0.0026	0.000615	9.98	0.00025	0.000478	0.003	0.025	0.00004	0.0005	0.535	0.0303	0.000005	0.604
S-08-06 252.5-253.5	0.03	0.0707	0.0038	0.0008	0.101	0.00001	0.00001	0.0023	0.00072	11.3	0.00025	0.000398	0.004	0.069	0.00001	0.0005	0.583	0.0379	0.000005	0.61
S-08-06 252.5-253.5	0.03	0.0722	0.0036	0.0007	0.0885	0.00001	0.000005	0.0025	0.000442	9.72	0.00025	0.000289	0.003	0.032	0.00006	0.001	0.494	0.0302	0.000005	0.58
S-08-06 252.5-253.5	0.03	0.0747	0.0026	0.0009	0.108	0.00001	0.000005	0.002	0.000405	8.8	0.00025	0.000079	0.0023	0.03	0.00001	0.001	0.432	0.0274	0.000005	0.459
S-08-06 252.5-253.5	0.03	0.0852	0.0023	0.0008	0.111	0.00001	0.000005	0.0021	0.000446	8.91	0.00025	0.000055	0.0022	0.007	0.00037	0.0005	0.426	0.0268	0.000005	0.508
S-08-06 252.5-253.5	0.03	0.0675	0.0026	0.0008	0.101	0.00001	0.000005	0.0016	0.000445	10.1	0.0006	0.000117	0.0022	0.056	0.00039	0.001	0.492	0.0304	0.000005	0.52
S-08-06 252.5-253.5	0.03	0.0743	0.0026	0.0008	0.116	0.00001	0.000005	0.0027	0.000275	9.67	0.0006	0.000051	0.0018	0.022	0.00001	0.001	0.456	0.0304	0.000005	0.472
S-08-06 252.5-253.5	0.03	0.0614	0.0025	0.0008	0.0993	0.00001	0.000005	0.0012	0.000312	9.31	0.0006	0.000078	0.002	0.021	0.00005	0.001	0.425	0.0288	0.000005	0.406
S-08-06 252.5-253.5	0.03	0.0747	0.0025	0.0008	0.111	0.00001	0.000005	0.0017	0.00024	11.15	0.0007	0.000237	0.0024	0.039	0.00112	0.001	0.484	0.0324	0.000005	0.375
S-08-06 252.5-253.5	0.03	0.0667	0.0024	0.0007	0.113	0.00001	0.000005	0.0016	0.000237	9.17	0.0008	0.000091	0.0025	0.037	0.00166	0.0005	0.397	0.0279	0.000005	0.352
S-08-06 252.5-253.5	0.03	0.067	0.0024	0.0008	0.111	0.00001	0.000005	0.0023	0.000033	12.1	0.00025	0.000049	0.0024	0.123	0.00005	0.0005	0.462	0.0272	0.000005	0.349
S-08-06 252.5-253.5	0.03	0.0724	0.0024	0.0008	0.101	0.00001	0.000005	0.0023	0.000182	9.54	0.00025	0.000072	0.0021	0.062	0.00076	0.0005	0.418	0.026	0.000005	0.35
S-08-06 252.5-253.5	0.03	0.0577	0.0022	0.0008	0.0885	0.00001	0.000005	0.0017	0.000168	9.04	0.00025	0.000065	0.0017	0.012	0.00048	0.0005	0.41	0.0237	0.000005	0.353
S-08-06 252.5-253.5	0.03	0.056	0.00215	0.0007	0.08745	0.00001	0.000005	0.00165	0.000161	9.075	0.00025	0.0000975	0.0017	0.0165	0.000245	0.0005	0.3905	0.0232	0.000005	0.342
S-08-06 252.5-253.5	0.03	0.0543	0.0021	0.0006	0.0864	0.00001	0.000005	0.0016	0.000154	9.11	0.00025	0.00013	0.0017	0.021	0.00001	0.0005	0.371	0.0227	0.000005	0.331
S-08-06 252.5-253.5	0.03	0.05045	0.0021	0.00065	0.0866	0.00001	0.000005	0.00175	0.0002185	9.005	0.00025	0.000216	0.00165	0.021	0.000015	0.0005	0.362	0.02195	0.000005	0.3365
S-08-06 252.5-253.5	0.03	0.0466	0.0021	0.0007	0.0868	0.00001	0.000005	0.0019	0.000283	8.9	0.00025	0.000302	0.0016	0.021	0.00002	0.0005	0.353	0.0212	0.000005	0.342
S-08-06 252.5-253.5	0.03	0.04985	0.00205	0.0007	0.0852	0.00001	0.000005	0.00215	0.000171	8.96	0.00025	0.0001815	0.00155	0.021	0.000345	0.0005	0.3465	0.01925	0.000005	0.3605
S-08-06 252.5-253.5	0.03	0.0531	0.002	0.0007	0.0836	0.00001	0.000005	0.0024	0.000059	9.02	0.00025	0.000061	0.0015	0.021	0.00067	0.0005	0.34	0.0173	0.000005	0.379
S-08-06 252.5-253.5	0.03	0.05485	0.002	0.00075	0.08225	0.00001	0.000005	0.00235	0.000068	9.23	0.00025	0.000048	0.00135	0.0235	0.000425	0.0005	0.3445	0.01555	0.000005	0.3735
S-08-06 252.5-253.5	0.03	0.0566	0.002	0.0008	0.0809	0.00001	0.000005	0.0023	0.000077	9.44	0.00025	0.000035	0.0012	0.026	0.00018	0.0005	0.349	0.0138	0.000005	0.368
S-08-06 252.5-253.5	0.03	0.05305	0.00195	0.00075	0.0879	0.00001	0.000005	0.0017	0.0000635	9.38	0.00025	0.000034	0.00145	0.0335	0.000485	0.0005	0.335	0.01545	0.000005	0.3675
S-08-06 252.5-253.5	0.03	0.0495	0.0019	0.0007	0.0949	0.00001	0.000005	0.0011	0.00005	9.32	0.00025	0.000033	0.0017	0.041	0.00079	0.0005	0.321	0.0171	0.000005	0.367
S-08-06 252.5-253.5	0.03	0.0502	0.0018	0.00065	0.0892	0.00001	0.000005	0.0011	0.0000435	9.535	0.00025	0.0001025	0.00165	0.034	0.0004	0.0005	0.3205	0.0154	0.000005	0.3705
S-08-06 252.5-253.5	0.03	0.0509	0.0017	0.0006	0.0835	0.00001	0.000005	0.0011	0.000037	9.75	0.00025	0.000172	0.0016	0.027	0.00001	0.0005	0.32	0.0137	0.000005	0.374
S-08-06 252.5-253.5	0.03	0.05155	0.00175	0.0007	0.08735	0.00001	0.000005	0.00115	0.000106	9.75	0.00025	0.000105	0.00145	0.065	0.00001	0.0005	0.329	0.01665	0.000005	0.3935
S-08-06 252.5-253.5	0.03	0.0522	0.0018	0.0008	0.0912	0.00001	0.000005	0.0012	0.000175	9.75	0.00025	0.000038	0.0013	0.103	0.00001	0.0005	0.338	0.0196	0.000005	0.413
S-08-06 252.5-253.5	0.03	0.05415	0.00185	0.0007	0.08695	0.00001	0.000005	0.00115	0.0001085	9.385	0.00025	0.000041	0.00125	0.052	0.00001	0.0005	0.315	0.01655	0.0000075	0.4355
S-08-06 252.5-253.5	0.03	0.0561	0.0019	0.0006	0.0827	0.00001	0.000005	0.0011	0.000042	9.02	0.00025	0.000044	0.0012	0.001	0.00001	0.0005	0.292	0.0135	0.00001	0.458
S-08-06 252.5-253.5	0.03	0.0644	0.00205	0.00085	0.09285	0.00001	0.000005	0.0011	0.000036	9.05	0.00025	0.0000545	0.00155	0.001	0.00001	0.0005	0.283	0.0162	0.0000075	0.3925
S-08-06 252.5-253.5	0.03	0.0727	0.0022	0.0011	0.103	0.00001	0.000005	0.0011	0.00003	9.08	0.00025	0.000065	0.0019	0.001	0.00001	0.0005	0.274	0.0189	0.000005	0.327
S-08-06 252.5-253.5	0.03	0.0769	0.0019	0.001	0.1105	0.00001	0.000005	0.00115	0.000039	9.215	0.00025	0.0000515	0.00165	0.001	0.00001	0.0005	0.281	0.01885	0.000005	0.3185
S-08-06 252.5-253.5	0.03	0.0811	0.0016	0.0009	0.118	0.00001	0.000005	0.0012	0.000048	9.35	0.00025	0.000038	0.0014	0.001	0.00001	0.0005	0.288	0.0188	0.000005	0.31
S-08-06 252.5-253.5	0.03	0.08285	0.0016	0.00085	0.113	0.00001	0.0000075	0.0012	0.0000435	9.145	0.00025	0.0000435	0.0014	0.001	0.000015	0.0005	0.2815	0.0189	0.000005	0.3015
S-08-06 252.5-253.5	0.03	0.0846	0.0016	0.0008	0.108	0.00001	0.00001	0.0012	0.000039	8.94	0.00025	0.000049	0.0014	0.001	0.00002	0.0005	0.275	0.019	0.000005	0.293
S-08-06 252.5-253.5	0.03	0.0752	0.0015	0.00085	0.1019	0.00001	0.0000075	0.0016	0.0000505	8.98	0.00025	0.000042	0.0014	0.002	0.00003	0.0005	0.2765	0.0189	0.0000125	0.2795
S-08-06 252.5-253.5	0.03	0.0658	0.0014	0.0009	0.0958	0.00001	0.000005	0.002	0.000062	9.02	0.00025	0.000035	0.0014	0.003	0.00004	0.0005	0.278	0.0188	0.00002	0.266
S-08-06 252.5-253.5	0.03	0.0671	0.0014	0.0008	0.1004	0.00001	0.000005	0.002	0.000046	9.015	0.00025	0.0000355	0.0014	0.0025	0.000025	0.0005	0.2825	0.0194	0.000015	0.264
S-08-06 252.5-253.5	0.03	0.0684	0.0014	0.0007	0.105	0.00001	0.000005	0.002	0.00003	9.01	0.00025	0.000036	0.0014	0.002	0.00001	0.0005	0.287	0.02	0.00001	0.262
S-08-06 252.5-253.5	0.03	0.0642	0.00135	0.00075	0.1021	0.00001	0.000005	0.002	0.0000285	9.45	0.00025	0.000039	0.0014	0.0015	0.00001	0.0005	0.2925	0.02065	0.0000075	0.248
S-08-06 252.5-253.5	0.03	0.06	0.0013	0.0008	0.0992	0.00001	0.000005	0.002	0.000027	9.89	0.00025	0.000042	0.0014	0.001	0.00001	0.0005	0.298	0.0213	0.000005	0.234
S-08-06 252.5-253.5	0.03	0.0673	0.0013	0.0008	0.1061	0.00001	0.000005	0.00205	0.000031	9.44	0.00025	0.00005	0.0016	0.0085	0.000015	0.0005	0.293	0.0402	0.000005	0.228
S-08-06 252.5-253.5	0.03	0.0746	0.0013	0.0008	0.113	0.00001	0.000005	0.0021	0.000035	8.99	0.00025	0.000058	0.0018	0.016	0.00002	0.0005	0.288	0.0591	0.000005	0.222
S-08-06 252.5-253.5	0.03	0.0762	0.00125	0.00075	0.1075	0.00001	0.000005	0.0019	0.000029	8.65	0.000475	0.0000485	0.00165	0.01	0.00003	0.0005	0.265	0.03855	0.000005	0.198
S-08-06 252.5-253.5	0.03	0.0778	0.0012	0.0007	0.102	0.00001	0.000005	0.0017	0.000023	8.31	0.0007	0.000039	0.0015	0.004	0.00004	0.0005	0.242	0.018	0.000005	0.174
S-08-06 252.5-253.5	0.03	0.07445	0.00115	0.0007	0.1055	0.00001	0.000005	0.00195	0.0000345	8.655	0.0009	0.000038	0.0016	0.005	0.00005	0.0005	0.257	0.0196	0.000005	0.187
S-08-06 252.5-253.5	0.03	0.0711	0.0011	0.0007	0.109	0.00001	0.000005	0.0022	0.000046	9	0.0011	0.000037	0.0017	0.006	0.00006	0.0005	0.272	0.0212	0.000005	0.2
S-08-06 252.5-253.5	0.03	0.0757	0.00115	0.00075	0.1031	0.00001	0.000005	0.00215	0.000037	8.57	0.00085	0.0000325	0.00175	0.0035	0.000085	0.0005	0.2525	0.0194	0.000005	0.2095
S-08-06 252.5-253.5	0.03	0.0803	0.0012	0.0008	0.0972	0.00001	0.000005	0.0021	0.000028	8.14	0.0006	0.000028	0.0018	0.001	0.00011	0.0005	0.233	0.0176	0.000005	0.219
S-08-06 252.5-253.5	0.03	0.07235	0.0012	0.00075	0.09585	0.00001	0.0000075	0.00195	0.000026	8.66	0.0008	0.0000375	0.00175	0.0045	0.000085	0.0005	0.248	0.01835	0.0000075	0.2025
S-08-06 252.5-253.5	0.03	0.0644	0.0012	0.0007	0.0945	0.00001	0.00001	0.0018	0.000024	9.18	0.001	0.000047	0.0017	0.008	0.00006	0.0005	0.263	0.0191	0.00001	0.186
S-08-06 252.5-253.5	0.03	0.0729	0.00125	0.00075	0.0909	0.00001	0.0000075	0.003	0.000029	8.665	0.0008	0.0000375	0.0018	0.0045	0.000065	0.0005	0.2515	0.01755	0.00001	0.188
S-08-06 252.5-253.5	0.03	0.0814	0.0013	0.0008	0.0873	0.00001	0.000005	0.0042	0.000034	8.15	0.0006	0.000028	0.0019	0.001	0.00007	0.0005	0.24	0.016	0.00001	0.19
S-08-06 252.5-253.5	0.03	0.0797	0.00115	0.0009	0.09565	0.00001	0.000005	0.00345	0.0000435	8.37	0.000425	0.0000565	0.00635	0.00125	0.000125	0.0005	0.2375	0.0169	0.0000075	0.1905
S-08-06 252.5-253.5	0.03	0.078	0.001	0.001	0.104	0.00001	0.000005	0.0027	0.000053	8.59	0.00025	0.000085	0.0108	0.0015	0.00018	0.0005	0.235	0.0178	0.000005	0.191
S-08-06 252.5-253.5	0.03	0.07165	0.00095	0.001	0.109	0.00001	0.000005	0.0022	0.0000645	8.21	0.000575	0.000095	0.00595	0.00375	0.00013	0.0005	0.2315	0.0195	0.0000075	0.17
S-08-06 252.5-253.5	0.03	0.0653	0.0009	0.001	0.114	0.00001	0.000005	0.0017	0.000076	7.83	0.0009	0.000105	0.0011	0.006	0.00008	0.0005	0.228	0.0212	0.00001	0.149
S-08-06 252.5-253.5	0.03	0.068	0.001	0.00085	0.108	0.00001	0.000005	0.00165	0.0000515	8.205	0.000575	0.00007	0.00135	0.00375	0.00006	0.0005	0.2295	0.02105	0.0000075	0.164
S-08-06 252.5-253.5	0.03	0.0707	0.0011	0.0007	0.102	0.00001	0.000005	0.0016	0.000027	8.58	0.00025	0.000035	0.0016	0.0015	0.00004	0.0005	0.231	0.0209	0.000005	0.179
S-08-06 252.5-253.5	0.03	0.0716	0.0011	0.00075	0.1105	0.00001	0.000005	0.00155	0.000034	8.17	0.00025	0.0000365	0.0016	0.0015	0.000035	0.0005	0.227	0.021	0.000005	0.1675
S-08-06 252.5-253.5	0.03	0.0725	0.0011	0.0008	0.119	0.00001	0.000005	0.0015	0.000041	7.76	0.00025	0.000038	0.0016	0.0015	0.00003	0.0005	0.223	0.0211	0.000005	0.156
S-08-06 252.5-253.5	0.03	0.07615	0.001	0.0007	0.112	0.00001	0.000005	0.00135	0.000031	7.65	0.00025	0.0000365	0.00215	0.0015	0.00002	0.0005	0.218	0.02145	0.000005	0.152
S-08-06 252.5-253.5	0.03	0.0798	0.0009	0.0006	0.105	0.00001	0.000005	0.0012	0.000021	7.54	0.00025	0.000035	0.0027	0.0015	0.00001	0.0005	0.213	0.0218	0.000005	0.148

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulfur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr) Dissolved (mg/L)
S-08-06 252.5-253.5	0.0001	0.013	0.417	0.00153	0.81	0.000005	0.19	0.518	3.57	0.0001	0.00029	0.0001	0.00166	0.00083	0.0005	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.435	0.00155	0.81	0.000005	0.2	0.52	3.39	0.0001	0.00011	0.00005	0.00148	0.00092	0.0005	0.000005
S-08-06 252.5-253.5	0.0002	0.012	0.454	0.00141	0.88	0.000005	0.21	0.537	3.99	0.0001	0.00072	0.00005	0.00152	0.00092	0.0005	0.00001
S-08-06 252.5-253.5	0.0006	0.022	0.439	0.00133	0.89	0.000005	0.2	0.525	3.82	0.0001	0.0004	0.0002	0.00164	0.00098	0.0005	0.000005
S-08-06 252.5-253.5	0.0005	0.0045	0.429	0.00038	0.92	0.000005	0.22	0.555	4.04	0.0001	0.00048	0.00005	0.00141	0.00097	0.0005	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.389	0.00165	0.82	0.000005	0.19	0.478	3.52	0.0001	0.00009	0.0001	0.00154	0.00098	0.007	0.00002
S-08-06 252.5-253.5	0.0004	0.018	0.357	0.00102	0.74	0.000005	0.16	0.42	3.32	0.0001	0.00004	0.0002	0.0012	0.00096	0.001	0.000005
S-08-06 252.5-253.5	0.0008	0.031	0.337	0.00145	0.75	0.000005	0.2	0.409	2.94	0.0001	0.00009	0.00005	0.00102	0.00084	0.004	0.00002
S-08-06 252.5-253.5	0.00005	0.032	0.354	0.0013	0.73	0.000005	0.23	0.455	3.13	0.0001	0.00062	0.0002	0.00125	0.00081	0.0005	0.000005
S-08-06 252.5-253.5	0.0002	0.024	0.362	0.00091	0.81	0.000005	0.17	0.429	3.05	0.0001	0.00016	0.00005	0.00125	0.00086	0.002	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.322	0.00171	0.7	0.000005	0.13	0.408	2.27	0.0001	0.00016	0.0002	0.00124	0.00082	0.006	0.000005
S-08-06 252.5-253.5	0.0002	0.042	0.329	0.0014	0.77	0.000005	0.16	0.412	2.8	0.0001	0.00008	0.00005	0.00117	0.00093	0.005	0.000005
S-08-06 252.5-253.5	0.0002	0.0045	0.311	0.00075	0.68	0.000005	0.17	0.377	2.52	0.0001	0.00014	0.0001	0.000962	0.00087	0.002	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.332	0.00107	0.8	0.000005	0.18	0.445	4	0.0001	0.00036	0.00005	0.00108	0.00085	0.0005	0.000005
S-08-06 252.5-253.5	0.00005	0.026	0.347	0.00126	0.84	0.000005	0.16	0.397	3.1	0.0001	0.00015	0.00005	0.000992	0.00093	0.001	0.000005
S-08-06 252.5-253.5	0.0002	0.033	0.315	0.00122	0.78	0.000005	0.16	0.372	2.6	0.0001	0.00011	0.00005	0.00104	0.00079	0.002	0.000005
S-08-06 252.5-253.5	0.000125	0.01875	0.2905	0.001125	0.75	0.000005	0.155	0.3575	2.805	0.0001	0.000135	0.00005	0.0010195	0.00078	0.00125	0.0000125
S-08-06 252.5-253.5	0.00005	0.0045	0.266	0.00103	0.72	0.000005	0.15	0.343	3.01	0.0001	0.00016	0.00005	0.000999	0.00077	0.0005	0.00002
S-08-06 252.5-253.5	0.000175	0.02725	0.2615	0.001045	0.7	0.000005	0.14	0.333	2.635	0.0001	0.00018	0.00005	0.0010245	0.00071	0.00275	0.0000125
S-08-06 252.5-253.5	0.0003	0.05	0.257	0.00106	0.68	0.000005	0.13	0.323	2.26	0.0001	0.0002	0.00005	0.00105	0.00065	0.005	0.000005
S-08-06 252.5-253.5	0.00035	0.0435	0.2615	0.00115	0.72	0.000005	0.13	0.3165	2.24	0.0001	0.0002	0.00005	0.001035	0.000665	0.00275	0.000005
S-08-06 252.5-253.5	0.0004	0.037	0.266	0.00124	0.76	0.000005	0.13	0.31	2.22	0.0001	0.0002	0.00005	0.00102	0.00068	0.0005	0.000005
S-08-06 252.5-253.5	0.00035	0.023	0.266	0.00125	0.765	0.000005	0.135	0.316	2.275	0.0001	0.0001025	0.00005	0.0009695	0.000705	0.0005	0.000005
S-08-06 252.5-253.5	0.0003	0.009	0.266	0.00126	0.77	0.000005	0.14	0.322	2.33	0.0001	0.000005	0.00005	0.000919	0.00073	0.0005	0.000005
S-08-06 252.5-253.5	0.0003	0.0215	0.2505	0.00085	0.74	0.000005	0.135	0.3065	2.205	0.000055	0.0001125	0.00005	0.0008565	0.000695	0.00175	0.000005
S-08-06 252.5-253.5	0.0003	0.034	0.235	0.00044	0.71	0.000005	0.13	0.291	2.08	0.00001	0.00022	0.00005	0.000794	0.00066	0.003	0.000005
S-08-06 252.5-253.5	0.0003	0.01925	0.2295	0.00082	0.695	0.000005	0.13	0.2915	2.17	0.000055	0.000185	0.00005	0.0007865	0.00069	0.00175	0.000005
S-08-06 252.5-253.5	0.0003	0.0045	0.224	0.0012	0.68	0.000005	0.13	0.292	2.26	0.0001	0.00015	0.00005	0.000779	0.00072	0.0005	0.000005
S-08-06 252.5-253.5	0.0007	0.02025	0.228	0.00112	0.68	0.000005	0.13	0.2825	2.525	0.0001	0.000205	0.000075	0.0007695	0.00068	0.0005	0.000005
S-08-06 252.5-253.5	0.0011	0.036	0.232	0.00104	0.68	0.000005	0.13	0.273	2.79	0.0001	0.00026	0.0001	0.00076	0.00064	0.0005	0.000005
S-08-06 252.5-253.5	0.00065	0.0325	0.229	0.001175	0.67	0.000005	0.125	0.264	2.51	0.0001	0.00023	0.0001	0.0007405	0.00068	0.00125	0.0000075
S-08-06 252.5-253.5	0.0002	0.029	0.226	0.00131	0.66	0.000005	0.12	0.255	2.23	0.0001	0.0002	0.0001	0.000721	0.00072	0.002	0.00001
S-08-06 252.5-253.5	0.00035	0.01675	0.2265	0.00069	0.655	0.000005	0.12	0.248	2.175	0.0001	0.000145	0.0001	0.0006535	0.000735	0.00125	0.0000075
S-08-06 252.5-253.5	0.0005	0.0045	0.227	0.00007	0.65	0.000005	0.12	0.241	2.12	0.0001	0.00009	0.0001	0.000586	0.00075	0.0005	0.000005
S-08-06 252.5-253.5	0.00035	0.0045	0.23	0.000665	0.72	0.000005	0.14	0.2405	2.22	0.000055	0.0001	0.0001	0.0005835	0.000815	0.0005	0.000005
S-08-06 252.5-253.5	0.0002	0.0045	0.233	0.00126	0.79	0.000005	0.16	0.24	2.32	0.00001	0.00011	0.0001	0.000581	0.00088	0.0005	0.000005
S-08-06 252.5-253.5	0.000125	0.02875	0.232	0.001185	0.75	0.000005	0.14	0.233	2.18	0.00001	0.000145	0.0001	0.0006105	0.00087	0.00175	0.000005
S-08-06 252.5-253.5	0.00005	0.053	0.231	0.00111	0.71	0.000005	0.12	0.226	2.04	0.00001	0.00018	0.0001	0.00064	0.00086	0.003	0.000005
S-08-06 252.5-253.5	0.000275	0.02875	0.226	0.00096	0.71	0.000005	0.17	0.2245	2.11	0.00001	0.00176	0.0001	0.0006	0.0008	0.0025	0.0000125
S-08-06 252.5-253.5	0.0005	0.0045	0.221	0.00081	0.71	0.000005	0.22	0.223	2.18	0.00001	0.00334	0.0001	0.00056	0.00074	0.002	0.00002
S-08-06 252.5-253.5	0.00035	0.0045	0.2255	0.000905	0.69	0.000005	0.175	0.2235	2.05	0.00001	0.00204	0.000075	0.0005855	0.000725	0.002	0.0000125
S-08-06 252.5-253.5	0.0002	0.0045	0.23	0.001	0.67	0.000005	0.13	0.224	1.92	0.00001	0.00074	0.00005	0.000611	0.00071	0.002	0.000005
S-08-06 252.5-253.5	0.000125	0.0045	0.231	0.000775	0.715	0.000005	0.125	0.2235	2.035	0.00001	0.00054	0.00005	0.000581	0.000685	0.0015	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.232	0.00055	0.76	0.000005	0.12	0.223	2.15	0.00001	0.00034	0.00005	0.000551	0.00066	0.001	0.000005
S-08-06 252.5-253.5	0.000275	0.01875	0.212	0.00065	0.72	0.000005	0.105	0.2145	2.175	0.00001	0.0004	0.000075	0.0005865	0.00071	0.0025	0.000005
S-08-06 252.5-253.5	0.0005	0.033	0.192	0.00075	0.68	0.000005	0.09	0.206	2.2	0.00001	0.00046	0.0001	0.000622	0.00076	0.004	0.000005
S-08-06 252.5-253.5	0.000275	0.0235	0.2075	0.00085	0.67	0.000005	0.1	0.1845	2.075	0.00001	0.000355	0.0001	0.000547	0.00076	0.0035	0.000005
S-08-06 252.5-253.5	0.00005	0.014	0.223	0.00095	0.66	0.000005	0.11	0.163	1.95	0.00001	0.00025	0.0001	0.000472	0.00076	0.003	0.000005
S-08-06 252.5-253.5	0.00005	0.00925	0.215	0.000595	0.665	0.000005	0.115	0.1825	1.985	0.00001	0.0003	0.000075	0.0005025	0.000755	0.0025	0.0000075
S-08-06 252.5-253.5	0.00005	0.0045	0.207	0.00024	0.67	0.000005	0.12	0.202	2.02	0.00001	0.00035	0.00005	0.000533	0.00075	0.002	0.00001
S-08-06 252.5-253.5	0.000175	0.0045	0.1975	0.000555	0.64	0.000005	0.095	0.189	1.945	0.00001	0.0003	0.000125	0.0004995	0.000745	0.0015	0.0000075
S-08-06 252.5-253.5	0.0003	0.0045	0.188	0.00087	0.61	0.000005	0.07	0.176	1.87	0.00001	0.00025	0.0002	0.000466	0.00074	0.001	0.000005
S-08-06 252.5-253.5	0.00025	0.00875	0.185	0.000735	0.61	0.000005	0.105	0.1825	2.03	0.00001	0.00038	0.000125	0.0004765	0.000685	0.002	0.000005
S-08-06 252.5-253.5	0.0002	0.013	0.182	0.0006	0.61	0.000005	0.14	0.189	2.19	0.00001	0.00051	0.00005	0.000487	0.00063	0.003	0.000005
S-08-06 252.5-253.5	0.000125	0.00875	0.192	0.00047	0.635	0.000005	0.125	0.1805	1.995	0.00001	0.0004	0.00005	0.00054	0.00072	0.002	0.0000125
S-08-06 252.5-253.5	0.00005	0.0045	0.202	0.00034	0.66	0.000005	0.11	0.172	1.8	0.00001	0.00029	0.00005	0.000593	0.00081	0.001	0.00002
S-08-06 252.5-253.5	0.000175	0.0045	0.2025	0.000415	0.675	0.000005	0.11	0.17	1.82	0.00001	0.000295	0.00005	0.00054	0.000765	0.005	0.0000125
S-08-06 252.5-253.5	0.0003	0.0045	0.203	0.00049	0.69	0.000005	0.11	0.168	1.84	0.00001	0.0003	0.00005	0.000487	0.00072	0.009	0.000005
S-08-06 252.5-253.5	0.0003	0.00725	0.183	0.000255	0.62	0.000005	0.105	0.158	1.805	0.00001	0.000365	0.000125	0.000433	0.00069	0.0055	0.000005
S-08-06 252.5-253.5	0.0003	0.01	0.163	0.00002	0.55	0.000005	0.1	0.148	1.77	0.00001	0.00043	0.0002	0.000379	0.00066	0.002	0.000005
S-08-06 252.5-253.5	0.0003	0.0125	0.1635	0.000035	0.575	0.000005	0.105	0.1545	1.77	0.00001	0.000295	0.0002	0.0004165	0.000675	0.00125	0.000005
S-08-06 252.5-253.5	0.0003	0.015	0.164	0.00005	0.6	0.000005	0.11	0.161	1.77	0.00001	0.00016	0.0002	0.000454	0.00069	0.0005	0.000005
S-08-06 252.5-253.5	0.0003	0.00975	0.1635	0.000345	0.555	0.000005	0.095	0.1515	1.61	0.00001	0.00013	0.0002	0.000447	0.00073	0.00075	0.000005
S-08-06 252.5-253.5	0.0003	0.0045	0.163	0.00064	0.51	0.000005	0.08	0.142	1.45	0.00001	0.0001	0.0002	0.00044	0.00077	0.001	0.000005
S-08-06 252.5-253.5	0.00025	0.0045	0.1555	0.00034	0.51	0.000005	0.105	0.1375	1.475	0.00001	0.0001	0.0002	0.000406	0.00078	0.002	0.000005
S-08-06 252.5-253.5	0.0002	0.0045	0.148	0.00004	0.51	0.000005	0.13	0.133	1.5	0.00001	0.0001	0.0002	0.000372	0.00079	0.003	0.000005

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Calculated Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
S-08-06 252.5-253.5	17	98	22-Dec-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	460	320	19.975	43	7.79	#N/A	4.2	22.8	2	0.10
S-08-06 252.5-253.5	17	99	29-Dec-11	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	470	277	20.25	41	7.66	#N/A	4.0	23.6	3	0.10
S-08-06 252.5-253.5	17	100	5-Jan-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	470	280	20.525	39	7.54	#N/A	3.8	24.4	3	0.10
S-08-06 252.5-253.5	17	101	12-Jan-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	470	320	20.8	43	7.61	#N/A	3.5	25.2	3	0.10
S-08-06 252.5-253.5	17	102	19-Jan-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	480	301	20.525	44	7.68	#N/A	3.7	25.0	3	0.10
S-08-06 252.5-253.5	17	103	26-Jan-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	480	342	20.25	43	7.55	#N/A	3.8	24.9	4	0.10
S-08-06 252.5-253.5	17	104	2-Feb-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	485	307	19.975	43	7.74	#N/A	4.0	24.7	4	0.10
S-08-06 252.5-253.5	17	105	9-Feb-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	480	340	19.7	44	7.89	#N/A	4.2	24.6	4	0.10
S-08-06 252.5-253.5	17	106	16-Feb-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	465	336	20.325	43	7.82	#N/A	4.5	24.3	4	0.10
S-08-06 252.5-253.5	17	107	23-Feb-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	480	339	20.95	43	7.55	#N/A	4.9	24.0	5	0.10
S-08-06 252.5-253.5	17	108	1-Mar-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	465	381	21.575	42	7.53	#N/A	5.3	23.7	5	0.10
S-08-06 252.5-253.5	17	109	8-Mar-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	470	338	22.2	46	7.67	#N/A	5.7	23.4	5	0.10
S-08-06 252.5-253.5	17	110	15-Mar-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	480	348	21.875	44	7.53	#N/A	5.3	23.0	5	0.10
S-08-06 252.5-253.5	17	111	22-Mar-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	475	341	21.55	46	7.6	#N/A	4.9	22.6	5	0.10
S-08-06 252.5-253.5	17	112	29-Mar-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	480	362	21.225	44	7.45	#N/A	4.5	22.2	5	0.10
S-08-06 252.5-253.5	17	113	5-Apr-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	495	355	20.9	44	7.55	#N/A	4.1	21.7	5	0.10
S-08-06 252.5-253.5	17	114	12-Apr-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	475	340	20.9	45	7.53	#N/A	4.1	21.7	5	0.10
S-08-06 252.5-253.5	17	115	19-Apr-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	505	308	20.9	47	7.68	#N/A	4.1	21.7	5	0.10
S-08-06 252.5-253.5	17	116	26-Apr-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	475	441	21.425	54	7.7	#N/A	5.4	23.8	5	0.10
S-08-06 252.5-253.5	17	117	3-May-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	475	355	21.6	44	7.84	#N/A	5.8	24.6	5	0.10
S-08-06 252.5-253.5	17	118	10-May-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	490	431	22.05	48	7.61	#N/A	5.9	24.9	5	0.10
S-08-06 252.5-253.5	17	119	17-May-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	485	308	22.5	47	7.53	#N/A	5.9	25.3	4	0.10
S-08-06 252.5-253.5	17	120	24-May-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	480	306	22.95	45	7.77	#N/A	6.0	25.6	4	0.10
S-08-06 252.5-253.5	17	121	31-May-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	515	347	23.4	47	7.82	#N/A	6.1	26.0	3	0.10
S-08-06 252.5-253.5	17	122	7-Jun-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	490	364	22.75	49	7.61	#N/A	6.2	25.4	4	0.10
S-08-06 252.5-253.5	17	123	14-Jun-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	520	351	22.1	47	7.73	#N/A	6.3	24.7	5	0.10
S-08-06 252.5-253.5	17	124	21-Jun-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	490	334	21.45	45	7.67	#N/A	6.4	24.1	5	0.10
S-08-06 252.5-253.5	17	125	28-Jun-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	490	324	20.8	45	7.7	#N/A	6.5	23.5	6	0.10
S-08-06 252.5-253.5	17	126	5-Jul-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	490	361	20.825	53	7.63	#N/A	6.0	23.2	6	0.10
S-08-06 252.5-253.5	17	127	12-Jul-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	480	392	20.85	44	7.59	#N/A	5.5	22.9	5	0.10
S-08-06 252.5-253.5	17	128	19-Jul-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	500	344	20.875	42	7.59	#N/A	5.0	22.6	5	0.10
S-08-06 252.5-253.5	17	129	26-Jul-12	Sulphurets	MC Panel	UP Hazelton	VUTF	CL	3	None	0	Drillcore		Water	500	495	327	20.9	45	7.61	#N/A	4.5	22.3	4	0.10
																	345.006	21.69	46.042	7.672	#N/A	5.84825	24.02675	4.5	0.1
HC24 Lower Au zone																									
S-09-11 350.5-351.5	24	0	11-Mar-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	430	248	71.8	268	7.46	#N/A	3.2	35.6	84	0.9
S-09-11 350.5-351.5	24	1	18-Mar-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	500	264	53.2	193	7.44	#N/A	3.5	26.6	67	0.3
S-09-11 350.5-351.5	24	2	25-Mar-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	490	183	49.4	154	7.33	#N/A	3.9	26.7	49	0.5
S-09-11 350.5-351.5	24	3	1-Apr-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	475	253	40.1	120	7.75	#N/A	3.0	23.8	43	0.1
S-09-11 350.5-351.5	24	4	8-Apr-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	495	188	38.3	114	7.3	#N/A	3.4	22.6	31	0.1
S-09-11 350.5-351.5	24	5	15-Apr-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	485	176	43	118	7.24	#N/A	3.9	21.7	36	0.1
S-09-11 350.5-351.5	24	6	22-Apr-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	495	187	43.3	118	7.19	#N/A	5.3	16.7	35	0.1
S-09-11 350.5-351.5	24	7	29-Apr-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	475	234	31	97	7.38	#N/A	2.6	17.1	27	0.1
S-09-11 350.5-351.5	24	8	6-May-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	505	189	37.7	96	7.04	#N/A	5.3	21.9	26	0.1
S-09-11 350.5-351.5	24	9	13-May-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	485	222	34.9	90	7.19	#N/A	3.5	17.0	29	0.1
S-09-11 350.5-351.5	24	10	20-May-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	485	228	32.2	87	7.18	#N/A	4.6	17.5	28	0.1
S-09-11 350.5-351.5	24	11	27-May-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	485	309	32.7	81	7.29	#N/A	7.0	22.3	12	0.1
S-09-11 350.5-351.5	24	12	3-Jun-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	490	232	32.3	75	7.15	#N/A	4.2	15.7	17	0.1
S-09-11 350.5-351.5	24	13	10-Jun-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	490	260	31.4	77	7.42	#N/A	5.7	18.0	15	0.1
S-09-11 350.5-351.5	24	14	17-Jun-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	480	240	27.5	71	7.4	#N/A	5.4	16.3	15	0.1
S-09-11 350.5-351.5	24	15	24-Jun-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	495	339	30.4	74	7.39	#N/A	2.9	16.6	15	0.1
S-09-11 350.5-351.5	24	16	1-Jul-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	490	359	28.3	68	7.26	#N/A	3.2	15.8	12	0.1
S-09-11 350.5-351.5	24	17	8-Jul-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	490	236	25.2	68	7.1	#N/A	3.6	13.8	10	0.1
S-09-11 350.5-351.5	24	18	15-Jul-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	490	225	25.3	66	7.06	#N/A	4.6	15.3	10	0.1
S-09-11 350.5-351.5	24	19	22-Jul-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	485	300	23.8	62	7.16	#N/A	4.2	13.8	12	0.1
S-09-11 350.5-351.5	24	20	29-Jul-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	485	265	28.5	64	7.07	#N/A	5.2	16.0	19	0.1
S-09-11 350.5-351.5	24	21	5-Aug-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	485	371	28	64	7.13	#N/A	3.6	13.2	13	0.1
S-09-11 350.5-351.5	24	22	12-Aug-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	495	376	26.9	64	7.22	#N/A	5.1	16.4	9	0.1
S-09-11 350.5-351.5	24	23	19-Aug-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	485	354	26.6	61	7.34	#N/A	5.2	15.9	13	0.1
S-09-11 350.5-351.5	24	24	26-Aug-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	465	327	25.3	55	6.89	#N/A	3.8	11.4	12	0.1
S-09-11 350.5-351.5	24	25	2-Sep-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	465	380	23.3	51	7.09	#N/A	4.9	12.4	19	0.1
S-09-11 350.5-351.5	24	26	9-Sep-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	460	279	21.1	55	6.72	#N/A	5.2	10.2	13	0.1
S-09-11 350.5-351.5	24	27	16-Sep-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	455	285	20.8	51	7.09	#N/A	3.5	12.1	15	0.1
S-09-11 350.5-351.5	24	28	23-Sep-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	460	223	22.4	49	6.92	#N/A	3.7	11.0	22	0.1
S-09-11 350.5-351.5	24	29	30-Sep-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	455	243	23.7	45	6.84	#N/A	4.0	10.9	17	0.1
S-09-11 350.5-351.5	24	30	7-Oct-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	465	199	24	61	6.9	#N/A	4.2	11.7	15	0.1
S-09-11 350.5-351.5	24	31	14-Oct-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	465	199	25.1	60	7.15	#N/A	3.6	12.5	17	0.1

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
S-08-06 252.5-253.5	0.03	0.07675	0.000925	0.0006	0.10675	0.00001	0.000005	0.00125	0.0000245	7.64	0.00025	0.000035	0.00245	0.0015	0.00001	0.0005	0.21625	0.02215	0.000005	0.14775
S-08-06 252.5-253.5	0.03	0.0737	0.00095	0.0006	0.1085	0.00001	0.000005	0.0013	0.000028	7.74	0.00025	0.000035	0.0022	0.0015	0.00001	0.0005	0.2195	0.0225	0.000005	0.1475
S-08-06 252.5-253.5	0.03	0.07065	0.000975	0.0006	0.11025	0.00001	0.000005	0.00135	0.0000315	7.84	0.00025	0.000035	0.00195	0.0015	0.00001	0.0005	0.22275	0.02285	0.000005	0.14725
S-08-06 252.5-253.5	0.03	0.0676	0.001	0.0006	0.112	0.00001	0.000005	0.0014	0.000035	7.94	0.00025	0.000035	0.0017	0.0015	0.00001	0.0005	0.226	0.0232	0.000005	0.147
S-08-06 252.5-253.5	0.03	0.066175	0.00105	0.00065	0.108	0.00001	0.000005	0.0015	0.00003125	7.8425	0.00025	0.000035	0.00185	0.0015	0.00002	0.0005	0.21925	0.022325	0.000005	0.1515
S-08-06 252.5-253.5	0.03	0.06475	0.0011	0.0007	0.104	0.00001	0.000005	0.0016	0.0000275	7.745	0.00025	0.000035	0.002	0.0015	0.00003	0.0005	0.2125	0.02145	0.000005	0.156
S-08-06 252.5-253.5	0.03	0.063325	0.00115	0.00075	0.1	0.00001	0.000005	0.0017	0.00002375	7.6475	0.00025	0.000035	0.00215	0.0015	0.00004	0.0005	0.20575	0.020575	0.000005	0.1605
S-08-06 252.5-253.5	0.03	0.0619	0.0012	0.0008	0.096	0.00001	0.000005	0.0018	0.00002	7.55	0.00025	0.000035	0.0023	0.0015	0.00005	0.0005	0.199	0.0197	0.000005	0.165
S-08-06 252.5-253.5	0.03	0.06155	0.001175	0.00085	0.09675	0.00001	0.000005	0.001425	0.0000235	7.79	0.00025	0.0000365	0.002175	0.0015	0.0000925	0.0005	0.20625	0.01975	0.00000625	0.1705
S-08-06 252.5-253.5	0.03	0.0612	0.00115	0.0009	0.0975	0.00001	0.000005	0.00105	0.000027	8.03	0.00025	0.000038	0.00205	0.0015	0.000135	0.0005	0.2135	0.0198	0.0000075	0.176
S-08-06 252.5-253.5	0.03	0.06085	0.001125	0.00095	0.09825	0.00001	0.000005	0.000675	0.0000305	8.27	0.00025	0.0000395	0.001925	0.0015	0.0001775	0.0005	0.22075	0.01985	0.00000875	0.1815
S-08-06 252.5-253.5	0.03	0.0605	0.0011	0.001	0.099	0.00001	0.000005	0.0003	0.000034	8.51	0.00025	0.000041	0.0018	0.0015	0.00022	0.0005	0.228	0.0199	0.00001	0.187
S-08-06 252.5-253.5	0.03	0.064675	0.00105	0.000875	0.093875	0.00001	0.000005	0.00055	0.000025875	8.39	0.00025	0.0000385	0.001725	0.0015	0.0001725	0.0005	0.223	0.01895	0.00001	0.187
S-08-06 252.5-253.5	0.03	0.06885	0.001	0.00075	0.08875	0.00001	0.000005	0.0008	0.00001775	8.27	0.00025	0.000036	0.00165	0.0015	0.000125	0.0005	0.218	0.018	0.00001	0.187
S-08-06 252.5-253.5	0.03	0.073025	0.00095	0.000625	0.083625	0.00001	0.000005	0.00105	0.000009625	8.15	0.00025	0.0000335	0.001575	0.0015	0.0000775	0.0005	0.213	0.01705	0.00001	0.187
S-08-06 252.5-253.5	0.03	0.0772	0.0009	0.0005	0.0785	0.00001	0.000005	0.0013	0.0000015	8.03	0.00025	0.000031	0.0015	0.0015	0.00003	0.0005	0.208	0.0161	0.00001	0.187
S-08-06 252.5-253.5	0.03	0.0772	0.0009	0.0005	0.0785	0.00001	0.000005	0.0013	0.0000015	8.03	0.00025	0.000031	0.0015	0.0015	0.00003	0.0005	0.208	0.0161	0.00001	0.187
S-08-06 252.5-253.5	0.03	0.0772	0.0009	0.0005	0.0785	0.00001	0.000005	0.0013	0.0000015	8.03	0.00025	0.000031	0.0015	0.0015	0.00003	0.0005	0.208	0.0161	0.00001	0.187
S-08-06 252.5-253.5	0.03	0.062425	0.0009	0.000575	0.0812	0.00001	0.000005	0.0016	0.000098625	8.24	0.00025	0.0000295	0.001575	0.0015	0.00006	0.0005	0.20875	0.019175	0.00001	0.181
S-08-06 252.5-253.5	0.03	0.0575	0.0009	0.0006	0.0821	0.00001	0.000005	0.0017	0.000131	8.31	0.00025	0.000029	0.0016	0.0015	0.00007	0.0005	0.209	0.0202	0.00001	0.179
S-08-06 252.5-253.5	0.03	0.0659	0.000925	0.000675	0.082725	0.00001	0.000005	0.0026	0.000098625	8.49	0.00025	0.00003075	0.002275	0.002125	0.000175	0.0005	0.21125	0.020075	0.00000875	0.1835
S-08-06 252.5-253.5	0.03	0.0743	0.00095	0.00075	0.08335	0.00001	0.000005	0.0035	0.00006625	8.67	0.00025	0.0000325	0.00295	0.00275	0.00028	0.0005	0.2135	0.01995	0.0000075	0.188
S-08-06 252.5-253.5	0.03	0.0827	0.000975	0.000825	0.083975	0.00001	0.000005	0.0044	0.000033875	8.85	0.00025	0.00003425	0.003625	0.003375	0.000385	0.0005	0.21575	0.019825	0.00000625	0.1925
S-08-06 252.5-253.5	0.03	0.0911	0.001	0.0009	0.0846	0.00001	0.000005	0.0053	0.0000015	9.03	0.00025	0.000036	0.0043	0.004	0.00049	0.0005	0.218	0.0197	0.000005	0.197
S-08-06 252.5-253.5	0.03	0.093575	0.001	0.00085	0.08465	0.00001	0.000005	0.00475	0.0000015	8.7825	0.00025	0.000034	0.00355	0.003375	0.00037	0.0005	0.2105	0.018875	0.000005	0.20575
S-08-06 252.5-253.5	0.03	0.09605	0.001	0.0008	0.0847	0.00001	0.000005	0.0042	0.0000015	8.535	0.00025	0.000032	0.0028	0.00275	0.00025	0.0005	0.203	0.01805	0.000005	0.2145
S-08-06 252.5-253.5	0.03	0.098525	0.001	0.00075	0.08475	0.00001	0.000005	0.00365	0.0000015	8.2875	0.00025	0.00003	0.00205	0.002125	0.00013	0.0005	0.1955	0.017225	0.000005	0.22325
S-08-06 252.5-253.5	0.03	0.101	0.001	0.0007	0.0848	0.00001	0.000005	0.0031	0.0000015	8.04	0.00025	0.000028	0.0013	0.0015	0.00001	0.0005	0.188	0.0164	0.000005	0.232
S-08-06 252.5-253.5	0.03	0.09695	0.001	0.00065	0.084475	0.00001	0.000005	0.002725	0.000003375	8.0425	0.00025	0.00002275	0.001225	0.0015	0.00001	0.0005	0.18925	0.01655	0.000005	0.21825
S-08-06 252.5-253.5	0.03	0.0929	0.001	0.0006	0.08415	0.00001	0.000005	0.00235	0.00000525	8.045	0.00025	0.0000175	0.00115	0.0015	0.00001	0.0005	0.1905	0.0167	0.000005	0.2045
S-08-06 252.5-253.5	0.03	0.08885	0.001	0.00055	0.083825	0.00001	0.000005	0.001975	0.000007125	8.0475	0.00025	0.00001225	0.001075	0.0015	0.00001	0.0005	0.19175	0.01685	0.000005	0.19075
S-08-06 252.5-253.5	0.03	0.0848	0.001	0.0005	0.0835	0.00001	0.000005	0.0016	0.000009	8.05	0.00025	0.000007	0.001	0.0015	0.00001	0.0005	0.193	0.017	0.000005	0.177
	0.03	0.092645	0.0009975	0.0007125	0.0843425	0.00001	0.000005	0.003405	6.6125E-06	8.371	0.00025	0.000025375	0.0022075	0.0023125	0.0001675	0.0005	0.199525	0.0177175	0.000005125	0.20555
HC24 Lower Au zone																				
S-09-11 350.5-351.5	1.21	0.0638	0.0072	0.0014	0.0164	0.0000	0.0000	0.0180	0.0000	19.0450	0.0007	0.0001	0.0015	0.0102	0.0001	0.0130	5.8974	0.0450	0.000005	0.0148
S-09-11 350.5-351.5	0.89	0.0964	0.0089	0.0021	0.0171	0.0000	0.0000	0.0210	0.0000	13.9450	0.0003	0.0001	0.0132	0.0052	0.0001	0.0100	4.4974	0.0500	0.000005	0.0121
S-09-11 350.5-351.5	0.76	0.1029	0.0101	0.0018	0.0118	0.0001	0.0000	0.0190	0.0000	13.1450	0.0007	0.0002	0.0026	0.0052	0.0002	0.0090	4.0274	0.0560	0.000005	0.0092
S-09-11 350.5-351.5	0.64	0.1189	0.0083	0.0015	0.0118	0.0001	0.0000	0.0160	0.0000	10.7450	0.0007	0.0002	0.0022	0.0052	0.0005	0.0080	3.2774	0.0470	0.000005	0.0077
S-09-11 350.5-351.5	0.54	0.1109	0.0094	0.0013	0.0113	0.0000	0.0000	0.0160	0.0000	10.3450	0.0003	0.0002	0.0018	0.0052	0.0006	0.0070	3.0974	0.0500	0.000005	0.0075
S-09-11 350.5-351.5	0.51	0.1279	0.0081	0.0013	0.0120	0.0001	0.0000	0.0140	0.0000	11.7450	0.0006	0.0002	0.0015	0.0052	0.0002	0.0060	3.3474	0.0560	0.000005	0.0077
S-09-11 350.5-351.5	0.41	0.0821	0.0076	0.0012	0.0123	0.0001	0.0000	0.0130	0.0000	12.0450	0.0007	0.0002	0.0024	0.0052	0.0009	0.0060	3.2474	0.0640	0.000005	0.0085
S-09-11 350.5-351.5	0.33	0.0820	0.0065	0.0009	0.0113	0.0000	0.0000	0.0110	0.0000	8.7450	0.0005	0.0001	0.0034	0.0302	0.0015	0.0050	2.2574	0.0510	0.000005	0.0084
S-09-11 350.5-351.5	0.30	0.0675	0.0068	0.0007	0.0114	0.0000	0.0000	0.0110	0.0000	10.7450	0.0005	0.0001	0.0107	0.0202	0.0001	0.0050	2.6974	0.0690	0.000005	0.0087
S-09-11 350.5-351.5	0.30	0.0732	0.0063	0.0007	0.0115	0.0000	0.0000	0.0100	0.0000	10.0450	0.0006	0.0001	0.0022	0.0052	0.0004	0.0050	2.3974	0.0570	0.000005	0.0103
S-09-11 350.5-351.5	0.27	0.0689	0.0062	0.0008	0.0119	0.0000	0.0000	0.0097	0.0000	9.3850	0.0003	0.0001	0.0020	0.0012	0.0014	0.0050	2.1674	0.0586	0.000005	0.0115
S-09-11 350.5-351.5	0.25	0.0602	0.0060	0.0008	0.0123	0.0000	0.0000	0.0090	0.0001	9.5650	0.0007	0.0001	0.0017	0.0112	0.0014	0.0050	2.1874	0.0628	0.000100	0.0111
S-09-11 350.5-351.5	0.03	0.0697	0.0055	0.0006	0.0108	0.0000	0.0000	0.0086	0.0000	9.5450	0.0003	0.0001	0.0023	0.0142	0.0001	0.0040	2.0974	0.0595	0.000005	0.0109
S-09-11 350.5-351.5	0.19	0.0702	0.0052	0.0006	0.0124	0.0000	0.0000	0.0079	0.0001	9.3250	0.0003	0.0001	0.0019	0.0082	0.0001	0.0040	2.0074	0.0637	0.000005	0.0119
S-09-11 350.5-351.5	0.18	0.0641	0.0066	0.0005	0.0110	0.0000	0.0000	0.0071	0.0001	8.1850	0.0003	0.0001	0.0028	0.0062	0.0002	0.0030	1.7574	0.0574	0.000005	0.0114
S-09-11 350.5-351.5	0.20	0.0649	0.0061	0.0005	0.0115	0.0000	0.0000	0.0092	0.0001	9.1250	0.0003	0.0001	0.0026	0.0082	0.0002	0.0040	1.8874	0.0686	0.000005	0.0132
S-09-11 350.5-351.5	0.14	0.0470	0.0049	0.0007	0.0102	0.0000	0.0000	0.0061	0.0001	8.5050	0.0006	0.0001	0.0025	0.0092	0.0002	0.0030	1.7374	0.0717	0.000005	0.0120
S-09-11 350.5-351.5	0.13	0.0608	0.0045	0.0006	0.0107	0.0000	0.0000	0.0083	0.0001	7.3050	0.0009	0.0001	0.0046	0.0372	0.0001	0.0030	1.7274	0.0682	0.000005	0.0128
S-09-11 350.5-351.5	0.13	0.0507	0.0042	0.0005	0.0110	0.0000	0.0000	0.0063	0.0001	7.6050	0.0003	0.0001	0.0029	0.0592	0.0002	0.0030	1.5674	0.0633	0.000005	0.0142
S-09-11 350.5-351.5	0.12	0.0420	0.0037	0.0004	0.0103	0.0000	0.0000	0.0060	0.0001	7.1050	0.0006	0.0001	0.0039	0.0412	0.0001	0.0030	1.4974	0.0606	0.000005	0.0145
S-09-11 350.5-351.5	0.12	0.0469	0.0041	0.0001	0.0111	0.0000	0.0000	0.0059	0.0001	8.6550	0.0003	0.0001	0.0032	0.0352	0.0001	0.0030	1.7074	0.0646	0.000005	0.0156
S-09-11 350.5-351.5	0.11	0.0414	0.0043	0.0004	0.0115	0.0000	0.0000	0.0057	0.0001	8.5950	0.0003	0.0001	0.0029	0.0402	0.0002	0.0030	1.6174	0.0735	0.000005	0.0159
S-09-11 350.5-351.5	0.09	0.0744	0.0042	0.0005	0.0117	0.0000	0.0000	0.0106	0.0004	8.2750	0.0006	0.0012	0.0098	0.0012	0.0021	0.0030	1.5574	0.0702	0.000005	0.0174
S-09-11 350.5-351.5	0.09	0.0514	0.0043	0.0005	0.0117	0.0000	0.0000	0.0062	0.0001	8.1950	0.0003	0.0001	0.0034	0.0012	0.0001	0.0030	1.5174	0.0663	0.000005	0.0194
S-09-11 350.5-351.5	0.08	0.0566	0.0034	0.0004	0.0096	0.0000	0.0000	0.0059	0.0001	7.7550	0.0005	0.0007	0.0028	0.2932	0.0002	0.0020	1.4774	0.1080	0.000005	0.0161
S-09-11 350.5-351.5	0.07	0.0431	0.0032	0.0004	0.0097	0.0000	0.0000	0.0053	0.0001	7.2250	0.0003	0.0001	0.0025	0.0902	0.0001	0.0030	1.3174	0.0507	0.000005	0.0164
S-09-11 350.5-351.5	0.08	0.0546	0.0032	0.0003	0.0089	0.0000	0.0000	0.0052	0.0001	6.5150	0.0005	0.0001	0.0035	0.1042	0.0001	0.0030	1.2174	0.0551	0.000005	0.0181
S-09-11 350.5-351.5	0.08	0.0470	0.0034	0.0004	0.0089	0.0000	0.0000	0.0047	0.0001	6.4050	0.0003	0.0001	0.0032	0.0022	0.0001	0.0030	1.2074	0.0547	0.000005	0.0156
S-09-11 350.5-351.5	0.08	0.0470	0.0032	0.0004	0.0107	0.0000	0.0000	0.0056	0.0001	6.9550	0.0007	0.0001	0.0038	0.0342	0.0002	0.0030	1.2674	0.0580	0.000005	0.0165
S-09-11 350.5-351.5	0.07	0.0410	0.0031	0.0004	0.0101	0.0000	0.0000	0.0060	0.0001	7.3350	0.0006	0.0001	0.0039	0.0062	0.0001	0.0030	1.3474	0.0619	0.000005	0.0181
S-09-11 350.5-351.5	0.07	0.0442	0.0034	0.0004	0.0104	0.0000	0.0000	0.0060	0.0001	7.4650	0.0003	0.0002	0.0041	0.0042	0.0002	0.0020	1.3274	0.0646	0.000005	0.0188
S-09-11 350.5-351.5	0.20	0.0454	0.0035	0.0005	0.0104	0.0000	0.0000	0.0071	0.0001	7.7650	0.0003	0.0002	0.0053	0.1272	0.0001	0.0030	1.4274	0.0720	0.000005	0.0181

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulfur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr) Dissolved (mg/L)
S-08-06 252.5-253.5	0.0001625	0.0045	0.15075	0.0001725	0.505	0.000005	0.12	0.1335	1.51	0.00001	0.00009	0.0002	0.000363	0.000775	0.00275	0.000005
S-08-06 252.5-253.5	0.000125	0.0045	0.1535	0.000305	0.5	0.000005	0.11	0.134	1.52	0.00001	0.00008	0.0002	0.000354	0.00076	0.0025	0.000005
S-08-06 252.5-253.5	0.0000875	0.0045	0.15625	0.0004375	0.495	0.000005	0.1	0.1345	1.53	0.00001	0.00007	0.0002	0.000345	0.000745	0.00225	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.159	0.00057	0.49	0.000005	0.09	0.135	1.54	0.00001	0.00006	0.0002	0.000336	0.00073	0.002	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.1555	0.0005225	0.4975	0.000006	0.1025	0.1335	1.51	0.00001	0.0000675	0.000225	0.0003555	0.00076	0.002	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.152	0.000475	0.505	0.000008	0.115	0.132	1.48	0.00001	0.000075	0.00025	0.000375	0.00079	0.002	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.1485	0.0004275	0.5125	0.000009	0.1275	0.1305	1.45	0.00001	0.0000825	0.000275	0.0003945	0.00082	0.002	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.145	0.00038	0.52	0.000010	0.14	0.129	1.42	0.00001	0.00009	0.0003	0.000414	0.00085	0.002	0.000005
S-08-06 252.5-253.5	0.0000875	0.0045	0.14875	0.00042	0.5375	0.000009	0.135	0.1305	1.4575	0.00001	0.0000875	0.000275	0.00041925	0.0008425	0.00175	0.000005
S-08-06 252.5-253.5	0.000125	0.0045	0.1525	0.00046	0.555	0.000008	0.13	0.132	1.495	0.00001	0.000085	0.00025	0.0004245	0.000835	0.0015	0.000005
S-08-06 252.5-253.5	0.0001625	0.0045	0.15625	0.0005	0.5725	0.000006	0.125	0.1335	1.5325	0.00001	0.0000825	0.000225	0.00042975	0.0008275	0.00125	0.000005
S-08-06 252.5-253.5	0.0002	0.0045	0.16	0.00054	0.59	0.000005	0.12	0.135	1.57	0.00001	0.00008	0.0002	0.000435	0.00082	0.001	0.000005
S-08-06 252.5-253.5	0.0002	0.0045	0.15675	0.000515	0.5675	0.000005	0.115	0.13175	1.575	0.00001	0.000075	0.0002	0.0004275	0.00082	0.00125	0.000005
S-08-06 252.5-253.5	0.0002	0.0045	0.1535	0.00049	0.545	0.000005	0.11	0.1285	1.58	0.00001	0.00007	0.0002	0.00042	0.00082	0.0015	0.000005
S-08-06 252.5-253.5	0.0002	0.0045	0.15025	0.000465	0.5225	0.000005	0.105	0.12525	1.585	0.00001	0.000065	0.0002	0.0004125	0.00082	0.00175	0.000005
S-08-06 252.5-253.5	0.0002	0.0045	0.147	0.00044	0.5	0.000005	0.1	0.122	1.59	0.00001	0.00006	0.0002	0.000405	0.00082	0.002	0.000005
S-08-06 252.5-253.5	0.0002	0.0045	0.147	0.00044	0.5	0.000005	0.1	0.122	1.59	0.00001	0.00006	0.0002	0.000405	0.00082	0.002	0.000005
S-08-06 252.5-253.5	0.0002	0.0045	0.147	0.00044	0.5	0.000005	0.1	0.122	1.59	0.00001	0.00006	0.0002	0.000405	0.00082	0.002	0.000005
S-08-06 252.5-253.5	0.000125	0.0045	0.15675	0.0005	0.5	0.000005	0.085	0.119	1.62	0.00001	0.000285	0.0000875	0.00035475	0.0007075	0.00125	0.000005
S-08-06 252.5-253.5	0.0001	0.0045	0.16	0.00052	0.5	0.000005	0.08	0.118	1.63	0.00001	0.00036	0.00005	0.000338	0.00067	0.001	0.000005
S-08-06 252.5-253.5	0.00015	0.0045	0.162	0.00053	0.5325	0.000005	0.09	0.12	1.6625	0.00001	0.00042	0.00005	0.00037625	0.0007425	0.0015	0.000005
S-08-06 252.5-253.5	0.0002	0.0045	0.164	0.00054	0.565	0.000005	0.1	0.122	1.695	0.00001	0.00048	0.00005	0.0004145	0.000815	0.002	0.000005
S-08-06 252.5-253.5	0.00025	0.0045	0.166	0.00055	0.5975	0.000005	0.11	0.124	1.7275	0.00001	0.00054	0.00005	0.00045275	0.0008875	0.0025	0.000005
S-08-06 252.5-253.5	0.0003	0.0045	0.168	0.00056	0.63	0.000005	0.12	0.126	1.76	0.00001	0.0006	0.00005	0.000491	0.00096	0.003	0.000005
S-08-06 252.5-253.5	0.00025	0.0045	0.16525	0.00051	0.61	0.000005	0.115	0.1215	1.77	0.00001	0.0005025	0.00005	0.00046975	0.0009525	0.0025	0.000005
S-08-06 252.5-253.5	0.0002	0.0045	0.1625	0.00046	0.59	0.000005	0.11	0.117	1.78	0.00001	0.000405	0.00005	0.0004485	0.000945	0.002	0.000005
S-08-06 252.5-253.5	0.00015	0.0045	0.15975	0.00041	0.57	0.000005	0.105	0.1125	1.79	0.00001	0.0003075	0.00005	0.00042725	0.0009375	0.0015	0.000005
S-08-06 252.5-253.5	0.0001	0.0045	0.157	0.00036	0.55	0.000005	0.1	0.108	1.8	0.00001	0.00021	0.00005	0.000406	0.00093	0.001	0.000005
S-08-06 252.5-253.5	0.0000875	0.0045	0.15575	0.00037	0.545	0.000005	0.0975	0.10675	1.785	0.00001	0.000175	0.0000625	0.000394	0.000895	0.000875	0.000005
S-08-06 252.5-253.5	0.000075	0.0045	0.1545	0.00038	0.54	0.000005	0.095	0.1055	1.77	0.00001	0.00014	0.000075	0.000382	0.00086	0.00075	0.000005
S-08-06 252.5-253.5	0.0000625	0.0045	0.15325	0.00039	0.535	0.000005	0.0925	0.10425	1.755	0.00001	0.000105	0.0000875	0.00037	0.000825	0.000625	0.000005
S-08-06 252.5-253.5	0.00005	0.0045	0.152	0.0004	0.53	0.000005	0.09	0.103	1.74	0.00001	0.00007	0.0001	0.000358	0.00079	0.0005	0.000005
	0.0001525	0.0045	0.1594	0.000439	0.56975	0.000005	0.1035	0.11285	1.76775	0.00001	0.0003055	0.0000625	0.000419925	0.00089825	0.001525	0.000005
HC24 Lower Au zone																
S-09-11 350.5-351.5	0.0008	0.0101	18.1381	0.0064	0.9699	0.000005	16.8074	1.4815	33.4000	0.0001	0.0002	0.0001	0.0004	0.0004	0.00052	0.00017
S-09-11 350.5-351.5	0.0003	0.0051	8.1681	0.0067	1.1999	0.000005	10.2074	1.0815	26.7000	0.0001	0.0001	0.0001	0.0010	0.0008	0.00052	0.00044
S-09-11 350.5-351.5	0.0003	0.0051	6.7681	0.0045	1.3399	0.000005	7.0274	1.0215	16.5000	0.0001	0.0003	0.0002	0.0011	0.0010	0.00052	0.00013
S-09-11 350.5-351.5	0.0002	0.0051	5.3381	0.0041	1.2099	0.000005	4.5874	0.8385	13.0000	0.0001	0.0004	0.0001	0.0010	0.0009	0.00052	0.00003
S-09-11 350.5-351.5	0.0001	0.0051	4.5281	0.0032	1.1699	0.000005	3.4074	0.8015	10.8000	0.0001	0.0004	0.0001	0.0012	0.0007	0.00102	0.00005
S-09-11 350.5-351.5	0.0002	0.0051	4.6981	0.0033	1.1699	0.000005	2.2474	0.8865	12.8000	0.0001	0.0003	0.0001	0.0014	0.0007	0.00102	0.00005
S-09-11 350.5-351.5	0.0002	0.0051	4.2981	0.0025	1.3099	0.000005	1.7974	0.8635	12.0000	0.0001	0.0004	0.0001	0.0012	0.0006	0.00102	0.00006
S-09-11 350.5-351.5	0.0001	0.0051	3.6781	0.0027	1.2199	0.000005	1.1274	0.6115	8.0900	0.0001	0.0003	0.0002	0.0009	0.0006	0.00102	0.00003
S-09-11 350.5-351.5	0.0002	0.0201	3.6281	0.0026	1.2199	0.000100	1.1474	0.7305	9.3600	0.0001	0.0003	0.0001	0.0011	0.0005	0.00052	0.00003
S-09-11 350.5-351.5	0.0001	0.0046	3.1681	0.0018	1.2399	0.000120	0.9674	0.6455	8.3000	0.0001	0.0002	0.0002	0.0009	0.0006	0.00102	0.00004
S-09-11 350.5-351.5	0.0001	0.0046	2.8181	0.0020	1.0899	0.000020	0.8274	0.5945	8.6400	0.0001	0.0003	0.0001	0.0009	0.0006	0.00102	0.00005
S-09-11 350.5-351.5	0.0001	0.0121	2.6781	0.0019	1.1299	0.000040	0.7274	0.6015	8.0200	0.0001	0.0003	0.0001	0.0008	0.0006	0.00052	0.00002
S-09-11 350.5-351.5	0.0001	0.0046	2.5981	0.0018	1.1799	0.000010	0.6874	0.5735	8.1600	0.0001	0.0003	0.0001	0.0007	0.0006	0.00052	0.00001
S-09-11 350.5-351.5	0.0001	0.0046	2.3781	0.0019	1.0599	0.000090	0.6174	0.5535	7.5900	0.0001	0.0003	0.0001	0.0007	0.0006	0.00102	0.00002
S-09-11 350.5-351.5	0.0001	0.0046	2.1181	0.0019	0.9599	0.000005	0.5274	0.4785	6.7000	0.0001	0.0001	0.0002	0.0006	0.0005	0.00202	0.00002
S-09-11 350.5-351.5	0.0001	0.0046	2.3381	0.0014	1.1299	0.000020	0.5474	0.5235	7.2100	0.0001	0.0002	0.0001	0.0006	0.0005	0.00202	0.00003
S-09-11 350.5-351.5	0.0001	0.0046	1.8981	0.0015	0.9099	0.000020	0.4074	0.4765	6.4700	0.0001	0.0002	0.0001	0.0006	0.0004	0.00202	0.00003
S-09-11 350.5-351.5	0.0002	0.0111	2.0581	0.0012	1.0299	0.000020	0.4574	0.4855	6.4600	0.0001	0.0002	0.0002	0.0006	0.0005	0.00202	0.00001
S-09-11 350.5-351.5	0.0002	0.0046	1.8381	0.0015	0.9699	0.000005	0.3974	0.4415	5.7000	0.0001	0.0002	0.0001	0.0005	0.0004	0.00202	0.00001
S-09-11 350.5-351.5	0.0001	0.0101	1.8181	0.0016	0.9199	0.000005	0.3574	0.4035	5.4500	0.0001	0.0002	0.0001	0.0005	0.0004	0.00202	0.00001
S-09-11 350.5-351.5	0.0001	0.0251	1.9381	0.0012	1.0199	0.000005	0.4074	0.4605	6.3100	0.0001	0.0000	0.0002	0.0005	0.0004	0.00202	0.00001
S-09-11 350.5-351.5	0.0001	0.0046	1.8981	0.0013	1.0199	0.000005	0.3674	0.4405	5.8500	0.0001	0.0001	0.0001	0.0005	0.0004	0.00302	0.00001
S-09-11 350.5-351.5	0.0007	0.0046	1.8181	0.0004	1.0099	0.000005	0.4774	0.4225	7.8700	0.0001	0.0001	0.0002	0.0007	0.0004	0.01802	0.00001
S-09-11 350.5-351.5	0.0002	0.0046	1.7881	0.0015	0.9999	0.000005	0.3674	0.4115	8.1500	0.0001	0.0002	0.0002	0.0005	0.0004	0.00202	0.00001
S-09-11 350.5-351.5	0.0069	0.0046	1.6681	0.0017	0.9299	0.000005	0.3574	0.3665	5.9300	0.0001	0.0003	0.0001	0.0003	0.0004	0.00302	0.00002
S-09-11 350.5-351.5	0.0001	0.0046	1.5381	0.0011	0.8899	0.000005	0.3374	0.3455	5.9600	0.0001	0.0001	0.0001	0.0003	0.0004	0.00402	0.00001
S-09-11 350.5-351.5	0.0001	0.0046	1.5281	0.0008	0.8299	0.000005	0.2774	0.3155	5.4100	0.0001	0.0000	0.0003	0.0002	0.0004	0.00202	0.00001
S-09-11 350.5-351.5	0.0001	0.0131	1.5381	0.0015	0.8699	0.000005	0.2674	0.3125	5.3200	0.0001	0.0003	0.0002	0.0002	0.0003	0.00302	0.00001
S-09-11 350.5-351.5	0.0001	0.0046	1.6181	0.0013	0.8899	0.000005	0.2974	0.3325	5.3100	0.0001	0.0009	0.0001	0.0002	0.0004	0.00302	0.00001
S-09-11 350.5-351.5	0.0001	0.0046	1.6581	0.0013	0.8899	0.000005	0.2874	0.3455	6.2200	0.0001	0.0013	0.0001	0.0002	0.0004	0.00302	0.00001
S-09-11 350.5-351.5	0.0005	0.0161	1.6281	0.0013	0.9199	0.000005	0.2874	0.3425	6.1400	0.0001	0.0006	0.0002	0.0002	0.0004	0.00302	0.00001
S-09-11 350.5-351.5	0.0004	0.0091	1.6081	0.0011	0.9399	0.000005	0.2974	0.3575	5.9800	0.0001	0.0005	0.0002	0.0002	0.0004	0.00302	0.00001

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Calculated Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
S-09-11 350.5-351.5	24	32	21-Oct-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	465	254	22.3	58	6.94	#N/A	4.0	11.6	15	0.1
S-09-11 350.5-351.5	24	33	28-Oct-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	455	225	20.6	55	6.94	#N/A	4.4	11.0	16	0.1
S-09-11 350.5-351.5	24	34	4-Nov-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	460	322	21.8	71	7.02	#N/A	3.1	9.7	16	0.1
S-09-11 350.5-351.5	24	35	11-Nov-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	465	320	23.2	62	7.11	#N/A	3.1	12.0	12	0.1
S-09-11 350.5-351.5	24	36	18-Nov-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	455	307	21.2	47	7.07	#N/A	4.4	10.9	11	0.1
S-09-11 350.5-351.5	24	37	25-Nov-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	455	151	19.9	50	6.91	#N/A	4.1	11.0	11	0.1
S-09-11 350.5-351.5	24	38	2-Dec-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	460	196	26	54	6.92	#N/A	4.1	10.9	10	0.1
S-09-11 350.5-351.5	24	39	9-Dec-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	470	307	21.3	49	7.11	#N/A	3.9	10.4	12	0.1
S-09-11 350.5-351.5	24	40	16-Dec-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	465	240	23.7	53	6.79	#N/A	5.4	11.0	14	0.1
S-09-11 350.5-351.5	24	41	23-Dec-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	465	288	21.3	51	7.15	#N/A	5.7	12.5	13	0.1
S-09-11 350.5-351.5	24	42	30-Dec-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	465	271	21	46	6.82	#N/A	6.0	10.4	13	0.1
S-09-11 350.5-351.5	24	43	6-Jan-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	470	343	20.25	39	7.25	#N/A	5.5	12.0	13	0.1
S-09-11 350.5-351.5	24	44	13-Jan-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	475	261	19.5	41	7.17	#N/A	5.0	13.7	12	0.1
S-09-11 350.5-351.5	24	45	20-Jan-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	465	257	20.6	43	6.89	#N/A	5.2	12.4	12	0.1
S-09-11 350.5-351.5	24	46	27-Jan-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	480	259	21.7	40	6.82	#N/A	5.5	11.1	12	0.1
S-09-11 350.5-351.5	24	47	3-Feb-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	475	307	20.15	37	7.08	#N/A	4.7	9.5	12	0.1
S-09-11 350.5-351.5	24	48	10-Feb-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	485	300	18.6	37	6.64	#N/A	3.8	8.0	12	0.1
S-09-11 350.5-351.5	24	49	17-Feb-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	460	222	17.5	40	6.61	#N/A	4.6	7.4	13	0.8
S-09-11 350.5-351.5	24	50	24-Feb-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	490	219	16.4	41	6.36	#N/A	5.3	6.9	13	1.5
S-09-11 350.5-351.5	24	51	3-Mar-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	460	281	17.85	44	7.09	#N/A	5.2	6.9	12	0.8
S-09-11 350.5-351.5	24	52	10-Mar-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	465	232	19.3	48	6.31	#N/A	5.0	6.9	11	0.1
S-09-11 350.5-351.5	24	53	17-Mar-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	465	233	19.75	51	6.09	#N/A	4.6	9.3	10	0.1
S-09-11 350.5-351.5	24	54	24-Mar-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	480	199	20.2	61	6.9	#N/A	4.2	11.7	9	0.1
S-09-11 350.5-351.5	24	55	31-Mar-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	465	311	20.6	47	7.19	#N/A	6.2	10.2	10	0.1
S-09-11 350.5-351.5	24	56	7-Apr-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4	CL	2	Drillcore		Water	500	470	306	21	52	7.09	#N/A	8.1	8.8	11	0.1
																	260.934	19.135	45.91	6.736	#N/A	5.169991	8.550509	11.308480	0.38
HC25 Lower Au zone																									
S-09-11 374.5-375.5	25	0	11-Mar-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	420	281	80.4	301	7.71	#N/A	2.5	31.9	106	2.2
S-09-11 374.5-375.5	25	1	18-Mar-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	505	296	76.2	257	7.6	#N/A	2.8	29.2	84	0.8
S-09-11 374.5-375.5	25	2	25-Mar-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	495	233	66.2	189	7.5	#N/A	3.5	28.2	65	0.3
S-09-11 374.5-375.5	25	3	1-Apr-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	490	293	53.9	151	7.7	#N/A	2.5	28.3	55	0.1
S-09-11 374.5-375.5	25	4	8-Apr-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	500	234	52.2	143	7.54	#N/A	2.7	27.6	44	0.1
S-09-11 374.5-375.5	25	5	15-Apr-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	465	226	47.8	126	7.46	#N/A	3.3	25.2	38	0.1
S-09-11 374.5-375.5	25	6	22-Apr-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	495	220	51.9	132	7.51	#N/A	4.0	27.4	37	0.1
S-09-11 374.5-375.5	25	7	29-Apr-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	490	258	43.9	128	7.63	#N/A	2.5	25.9	36	0.1
S-09-11 374.5-375.5	25	8	6-May-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	510	231	46.6	114	7.42	#N/A	4.4	25.8	31	0.1
S-09-11 374.5-375.5	25	9	13-May-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	490	262	55.6	128	7.51	#N/A	3.4	25.4	38	0.1
S-09-11 374.5-375.5	25	10	20-May-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	475	277	51.5	123	7.52	#N/A	4.1	23.1	36	0.1
S-09-11 374.5-375.5	25	11	27-May-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	485	328	57.1	126	7.46	#N/A	7.0	28.4	25	0.1
S-09-11 374.5-375.5	25	12	3-Jun-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	495	267	52.9	117	7.5	#N/A	3.8	24.8	26	0.1
S-09-11 374.5-375.5	25	13	10-Jun-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	475	287	48.6	111	7.53	#N/A	4.9	25.8	25	0.1
S-09-11 374.5-375.5	25	14	17-Jun-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	485	274	49	113	7.5	#N/A	4.9	22.9	23	0.1
S-09-11 374.5-375.5	25	15	24-Jun-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	495	354	46.8	106	7.62	#N/A	2.4	26.6	21	0.1
S-09-11 374.5-375.5	25	16	1-Jul-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	490	352	44.1	95	7.57	#N/A	2.5	23.5	21	0.1
S-09-11 374.5-375.5	25	17	8-Jul-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	475	278	38.1	101	7.4	#N/A	2.9	23.5	19	0.1
S-09-11 374.5-375.5	25	18	15-Jul-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	490	257	41.6	100	7.43	#N/A	4.0	23.8	17	0.1
S-09-11 374.5-375.5	25	19	22-Jul-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	475	319	37.9	90	7.41	#N/A	3.2	23.3	23	0.1
S-09-11 374.5-375.5	25	20	29-Jul-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	495	287	45	94	7.49	#N/A	4.4	24.8	24	0.1
S-09-11 374.5-375.5	25	21	5-Aug-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	485	371	41.2	89	7.48	#N/A	2.5	23.4	14	0.1
S-09-11 374.5-375.5	25	22	12-Aug-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	495	379	38.5	88	7.59	#N/A	3.9	26.1	18	0.1
S-09-11 374.5-375.5	25	23	19-Aug-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	485	355	40.5	90	7.58	#N/A	5.2	26.1	19	0.1
S-09-11 374.5-375.5	25	24	26-Aug-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	455	359	39.2	81	7.33	#N/A	2.8	22.9	19	0.1
S-09-11 374.5-375.5	25	25	2-Sep-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	460	391	37	73	7.4	#N/A	4.2	23.5	26	0.1
S-09-11 374.5-375.5	25	26	9-Sep-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	445	315	33	80	7.16	#N/A	4.5	22.6	17	0.1
S-09-11 374.5-375.5	25	27	16-Sep-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	445	308	33.4	75	7.3	#N/A	3.2	22.0	22	0.1
S-09-11 374.5-375.5	25	28	23-Sep-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	455	258	35.2	70	7.36	#N/A	2.9	21.0	24	0.1
S-09-11 374.5-375.5	25	29	30-Sep-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	455	295	38.3	66	7.26	#N/A	3.1	22.1	22	0.1
S-09-11 374.5-375.5	25	30	7-Oct-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	445	245	36	87	7.3	#N/A	3.3	22.2	22	0.1
S-09-11 374.5-375.5	25	31	14-Oct-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	455	239	40	85	7.32	#N/A	3.0	20.9	20	0.1
S-09-11 374.5-375.5	25	32	21-Oct-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	455	309	35.2	83	7.31	#N/A	3.4	23.3	20	0.1
S-09-11 374.5-375.5	25	33	28-Oct-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	455	283	33.3	79	7.28	#N/A	3.3	21.7	24	0.1
S-09-11 374.5-375.5	25	34	4-Nov-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	465	332	36.9	81	7.54	#N/A	2.4	22.9	23	0.1
S-09-11 374.5-375.5	25	35	11-Nov-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	445	318	38.5	73	7.54	#N/A	2.6	24.1	17	0.1
S-09-11 374.5-375.5	25	36	18-Nov-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	450	311	35.3	66	7.57	#N/A	3.6	24.0	17	0.1
S-09-11 374.5-375.5	25	37	25-Nov-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	465	218	34.1	79	7.3	#N/A	3.6	24.9	15	0.1
S-09-11 374.5-375.5	25	38	2-Dec-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	455	269	43.6	82	7.37	#N/A	3.4	26.0	13	0.1

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
S-09-11 350.5-351.5	0.06	0.0365	0.0032	0.0001	0.0099	0.0000	0.0000	0.0061	0.0001	6.9650	0.0003	0.0001	0.0032	0.0142	0.0001	0.0030	1.2274	0.0681	0.000005	0.0165
S-09-11 350.5-351.5	0.06	0.0424	0.0027	0.0003	0.0095	0.0000	0.0000	0.0049	0.0001	6.3750	0.0003	0.0002	0.0050	0.0062	0.0001	0.0030	1.1574	0.0604	0.000005	0.0159
S-09-11 350.5-351.5	0.03	0.0398	0.0025	0.0003	0.0094	0.0000	0.0000	0.0061	0.0001	6.8050	0.0003	0.0002	0.0032	0.0102	0.0004	0.0030	1.1974	0.0661	0.000005	0.0164
S-09-11 350.5-351.5	0.06	0.0336	0.0026	0.0004	0.0091	0.0000	0.0000	0.0049	0.0001	7.2150	0.0003	0.0002	0.0040	0.0072	0.0005	0.0030	1.2974	0.0693	0.000010	0.0167
S-09-11 350.5-351.5	0.06	0.0352	0.0025	0.0002	0.0092	0.0000	0.0000	0.0054	0.0002	6.6050	0.0003	0.0002	0.0026	0.0072	0.0002	0.0030	1.1774	0.0651	0.000005	0.0156
S-09-11 350.5-351.5	0.03	0.0310	0.0024	0.0003	0.0085	0.0000	0.0000	0.0043	0.0001	6.2350	0.0006	0.0002	0.0030	0.0062	0.0001	0.0030	1.0874	0.0655	0.000160	0.0134
S-09-11 350.5-351.5	0.07	0.0351	0.0029	0.0003	0.0096	0.0000	0.0000	0.0054	0.0001	8.2750	0.0007	0.0001	0.0024	0.0372	0.0012	0.0030	1.3474	0.0810	0.000005	0.0144
S-09-11 350.5-351.5	0.03	0.0335	0.0026	0.0003	0.0089	0.0000	0.0000	0.0045	0.0002	6.7450	0.0006	0.0002	0.0026	0.0702	0.0013	0.0020	1.1174	0.0693	0.000005	0.0136
S-09-11 350.5-351.5	0.03	0.0329	0.0024	0.0003	0.0092	0.0000	0.0000	0.0048	0.0000	7.4950	0.0003	0.0002	0.0052	0.1762	0.0001	0.0020	1.2474	0.0696	0.000005	0.0130
S-09-11 350.5-351.5	0.06	0.0332	0.0024	0.0003	0.0090	0.0000	0.0000	0.0048	0.0001	6.7350	0.0003	0.0002	0.0053	0.0092	0.0006	0.0020	1.1174	0.0733	0.000005	0.0128
S-09-11 350.5-351.5	0.03	0.0319	0.0022	0.0004	0.0093	0.0000	0.0000	0.0044	0.0001	6.6550	0.0003	0.0002	0.0042	0.0122	0.0010	0.0020	1.1074	0.0683	0.000005	0.0135
S-09-11 350.5-351.5	0.03	0.0302	0.0023	0.0003	0.0095	0.0000	0.0000	0.0044	0.0002	6.4600	0.0003	0.0002	0.0046	0.0297	0.0006	0.0020	1.0409	0.0702	0.000005	0.0125
S-09-11 350.5-351.5	0.03	0.0284	0.0023	0.0002	0.0096	0.0000	0.0000	0.0043	0.0002	6.2650	0.0003	0.0002	0.0049	0.0472	0.0003	0.0020	0.9744	0.0721	0.000005	0.0116
S-09-11 350.5-351.5	0.03	0.0270	0.0022	0.0004	0.0092	0.0000	0.0000	0.0048	0.0001	6.6150	0.0003	0.0002	0.0036	0.0242	0.0002	0.0020	1.0259	0.0753	0.000005	0.0117
S-09-11 350.5-351.5	0.03	0.0255	0.0020	0.0005	0.0087	0.0000	0.0000	0.0052	0.0001	6.9650	0.0003	0.0002	0.0022	0.0012	0.0001	0.0020	1.0774	0.0785	0.000005	0.0119
S-09-11 350.5-351.5	0.05	0.0253	0.0019	0.0004	0.0090	0.0000	0.0000	0.0049	0.0001	6.4950	0.0003	0.0002	0.0024	0.0042	0.0004	0.0020	0.9924	0.0726	0.000005	0.0114
S-09-11 350.5-351.5	0.06	0.0250	0.0017	0.0002	0.0093	0.0000	0.0000	0.0045	0.0001	6.0250	0.0003	0.0002	0.0025	0.0072	0.0008	0.0020	0.9074	0.0667	0.000005	0.0109
S-09-11 350.5-351.5	0.05	0.0262	0.0016	0.0002	0.0084	0.0000	0.0000	0.0044	0.0001	5.6700	0.0003	0.0002	0.0032	0.0207	0.0005	0.0020	0.8519	0.0648	0.000005	0.0092
S-09-11 350.5-351.5	0.03	0.0274	0.0015	0.0002	0.0075	0.0000	0.0000	0.0043	0.0001	5.3150	0.0003	0.0002	0.0039	0.0342	0.0002	0.0020	0.7964	0.0628	0.000005	0.0074
S-09-11 350.5-351.5	0.03	0.0248	0.0015	0.0002	0.0082	0.0000	0.0000	0.0038	0.0001	5.7750	0.0003	0.0002	0.0034	0.0502	0.0006	0.0020	0.8659	0.0694	0.000005	0.0086
S-09-11 350.5-351.5	0.03	0.0221	0.0015	0.0001	0.0089	0.0000	0.0000	0.0033	0.0001	6.2350	0.0003	0.0002	0.0028	0.0662	0.0009	0.0020	0.9354	0.0760	0.000005	0.0097
S-09-11 350.5-351.5	0.03	0.0234	0.0015	0.0002	0.0088	0.0000	0.0000	0.0032	0.0001	6.4050	0.0003	0.0002	0.0036	0.0532	0.0005	0.0020	0.9484	0.0776	0.000005	0.0101
S-09-11 350.5-351.5	0.03	0.0246	0.0015	0.0003	0.0087	0.0000	0.0000	0.0031	0.0001	6.5750	0.0003	0.0002	0.0044	0.0402	0.0001	0.0020	0.9614	0.0792	0.000005	0.0105
S-09-11 350.5-351.5	0.05	0.0253	0.0015	0.0003	0.0093	0.0000	0.0000	0.0030	0.0001	6.6300	0.0003	0.0002	0.0060	0.7702	0.0001	0.0020	1.0194	0.0886	0.000005	0.0106
S-09-11 350.5-351.5	0.06	0.0259	0.0015	0.0003	0.0098	0.0000	0.0000	0.0029	0.0001	6.6850	0.0003	0.0002	0.0076	1.5002	0.0001	0.0020	1.0774	0.0979	0.000005	0.0107
	0.043073	0.024992	0.001592	0.000239	0.008809	0.000010	0.000005	0.003765	0.000134	6.180971	0.000251	0.000188	0.003976	0.254649	0.000408	0.002012	0.935568	0.075593	0.000005	0.009896
HC25 Lower Au zone																				
S-09-11 374.5-375.5	1.20	0.0595	0.0091	0.0016	0.0201	0.0000	0.0000	0.0300	0.0000	23.6000	0.0008	0.0001	0.0023	0.0050	0.0000	0.0110	5.2100	0.0260	0.000005	0.0277
S-09-11 374.5-375.5	1.00	0.0843	0.0110	0.0022	0.0195	0.0000	0.0000	0.0340	0.0000	22.0000	0.0009	0.0000	0.0027	0.0050	0.0004	0.0110	5.1400	0.0300	0.000005	0.0266
S-09-11 374.5-375.5	0.96	0.0953	0.0124	0.0017	0.0144	0.0000	0.0000	0.0310	0.0000	19.5000	0.0007	0.0001	0.0023	0.0050	0.0004	0.0100	4.2300	0.0340	0.000005	0.0207
S-09-11 374.5-375.5	0.88	0.1110	0.0103	0.0014	0.0173	0.0000	0.0000	0.0250	0.0000	16.0000	0.0010	0.0001	0.0015	0.0050	0.0000	0.0080	3.3700	0.0270	0.000005	0.0161
S-09-11 374.5-375.5	0.86	0.1180	0.0119	0.0014	0.0154	0.0000	0.0000	0.0250	0.0000	15.7000	0.0003	0.0001	0.0012	0.0050	0.0001	0.0080	3.1700	0.0270	0.000005	0.0155
S-09-11 374.5-375.5	0.84	0.1230	0.0096	0.0014	0.0140	0.0000	0.0000	0.0200	0.0000	14.7000	0.0003	0.0001	0.0011	0.0050	0.0003	0.0070	2.7200	0.0330	0.000120	0.0141
S-09-11 374.5-375.5	0.73	0.0836	0.0098	0.0013	0.0150	0.0000	0.0000	0.0200	0.0000	16.1000	0.0006	0.0001	0.0015	0.0050	0.0015	0.0070	2.8100	0.0380	0.000005	0.0154
S-09-11 374.5-375.5	0.14	0.0739	0.0100	0.0010	0.0160	0.0000	0.0000	0.0200	0.0000	13.7000	0.0005	0.0000	0.0025	0.0050	0.0015	0.0060	2.3700	0.0330	0.000005	0.0171
S-09-11 374.5-375.5	0.69	0.0743	0.0091	0.0011	0.0126	0.0000	0.0000	0.0160	0.0000	14.7000	0.0006	0.0000	0.0041	0.0050	0.0001	0.0060	2.4300	0.0330	0.000005	0.0135
S-09-11 374.5-375.5	0.68	0.0688	0.0091	0.0009	0.0153	0.0000	0.0000	0.0156	0.0000	17.9000	0.0007	0.0000	0.0014	0.0020	0.0004	0.0060	2.6400	0.0460	0.000005	0.0172
S-09-11 374.5-375.5	0.62	0.0570	0.0089	0.0009	0.0137	0.0000	0.0000	0.0145	0.0000	16.6000	0.0003	0.0000	0.0011	0.0010	0.0000	0.0060	2.4300	0.0452	0.000005	0.0187
S-09-11 374.5-375.5	0.61	0.0465	0.0093	0.0010	0.0139	0.0000	0.0000	0.0140	0.0000	18.5000	0.0005	0.0000	0.0015	0.0030	0.0000	0.0060	2.6800	0.0532	0.000005	0.0187
S-09-11 374.5-375.5	0.50	0.0606	0.0087	0.0008	0.0127	0.0000	0.0000	0.0131	0.0000	17.3000	0.0003	0.0000	0.0016	0.0010	0.0000	0.0060	2.3400	0.0421	0.000005	0.0186
S-09-11 374.5-375.5	0.57	0.0558	0.0076	0.0008	0.0123	0.0000	0.0000	0.0108	0.0000	16.0000	0.0005	0.0000	0.0015	0.0060	0.0000	0.0040	2.1000	0.0459	0.000005	0.0178
S-09-11 374.5-375.5	0.61	0.0642	0.0114	0.0011	0.0133	0.0000	0.0000	0.0109	0.0000	16.2000	0.0003	0.0000	0.0014	0.0010	0.0000	0.0050	2.0800	0.0436	0.000005	0.0197
S-09-11 374.5-375.5	0.67	0.0597	0.0089	0.0006	0.0126	0.0000	0.0000	0.0119	0.0000	15.6000	0.0003	0.0000	0.0024	0.0020	0.0001	0.0060	1.9300	0.0459	0.000005	0.0210
S-09-11 374.5-375.5	0.52	0.0440	0.0074	0.0007	0.0123	0.0000	0.0000	0.0085	0.0000	14.9000	0.0006	0.0000	0.0026	0.0040	0.0001	0.0030	1.7100	0.0511	0.000005	0.0189
S-09-11 374.5-375.5	0.54	0.0503	0.0069	0.0006	0.0125	0.0000	0.0000	0.0111	0.0000	12.4000	0.0009	0.0001	0.0031	0.0050	0.0001	0.0040	1.7000	0.0518	0.000005	0.0195
S-09-11 374.5-375.5	0.54	0.0447	0.0069	0.0006	0.0131	0.0000	0.0000	0.0085	0.0000	13.9000	0.0003	0.0000	0.0018	0.0030	0.0000	0.0040	1.6600	0.0489	0.000005	0.0219
S-09-11 374.5-375.5	0.51	0.0357	0.0056	0.0005	0.0108	0.0000	0.0000	0.0079	0.0000	12.7000	0.0003	0.0000	0.0027	0.0040	0.0001	0.0040	1.5000	0.0492	0.000020	0.0191
S-09-11 374.5-375.5	0.57	0.0388	0.0066	0.0003	0.0119	0.0000	0.0000	0.0087	0.0000	15.3000	0.0003	0.0000	0.0029	0.0040	0.0000	0.0040	1.6800	0.0484	0.000005	0.0200
S-09-11 374.5-375.5	0.53	0.0385	0.0062	0.0004	0.0115	0.0000	0.0000	0.0070	0.0000	14.1000	0.0003	0.0000	0.0020	0.0030	0.0001	0.0040	1.4900	0.0481	0.000005	0.0191
S-09-11 374.5-375.5	0.50	0.0451	0.0059	0.0006	0.0128	0.0000	0.0000	0.0089	0.0001	13.2000	0.0007	0.0002	0.0036	0.0010	0.0003	0.0030	1.3800	0.0468	0.000005	0.0193
S-09-11 374.5-375.5	0.50	0.0395	0.0056	0.0006	0.0127	0.0000	0.0000	0.0078	0.0000	13.9000	0.0006	0.0000	0.0023	0.0010	0.0001	0.0040	1.4100	0.0462	0.000005	0.0204
S-09-11 374.5-375.5	0.51	0.0463	0.0044	0.0005	0.0124	0.0000	0.0000	0.0062	0.0000	13.7000	0.0003	0.0001	0.0021	0.0200	0.0002	0.0030	1.2400	0.0531	0.000005	0.0162
S-09-11 374.5-375.5	0.48	0.0354	0.0042	0.0004	0.0125	0.0000	0.0000	0.0064	0.0000	12.9000	0.0003	0.0000	0.0018	0.0010	0.0000	0.0030	1.1500	0.0398	0.000005	0.0168
S-09-11 374.5-375.5	0.52	0.0478	0.0043	0.0004	0.0103	0.0000	0.0000	0.0058	0.0000	11.4000	0.0005	0.0000	0.0035	0.0120	0.0023	0.0030	1.0800	0.0463	0.000005	0.0174
S-09-11 374.5-375.5	0.53	0.0369	0.0047	0.0005	0.0105	0.0000	0.0000	0.0052	0.0000	11.6000	0.0005	0.0000	0.0018	0.0010	0.0000	0.0030	1.0900	0.0501	0.000005	0.0162
S-09-11 374.5-375.5	0.54	0.0378	0.0045	0.0005	0.0111	0.0000	0.0000	0.0072	0.0000	12.2000	0.0003	0.0000	0.0031	0.0040	0.0001	0.0040	1.1400	0.0468	0.000005	0.0169
S-09-11 374.5-375.5	0.49	0.0370	0.0039	0.0005	0.0111	0.0000	0.0000	0.0072	0.0000	13.3000	0.0003	0.0000	0.0027	0.0010	0.0001	0.0040	1.2000	0.0550	0.000005	0.0171
S-09-11 374.5-375.5	0.51	0.0362	0.0043	0.0004	0.0099	0.0000	0.0000	0.0065	0.0000	12.5000	0.0005	0.0001	0.0042	0.0010	0.0000	0.0030	1.1400	0.0495	0.000005	0.0191
S-09-11 374.5-375.5	1.58	0.0347	0.0045	0.0003	0.0111	0.0000	0.0000	0.0072	0.0000	13.9000	0.0003	0.0001	0.0026	0.0050	0.0000	0.0030	1.3100	0.0601	0.000005	0.0199
S-09-11 374.5-375.5	0.51	0.0324	0.0042	0.0002	0.0092	0.0000	0.0000	0.0065	0.0000	12.3000	0.0003	0.0000	0.0019	0.0080	0.0000	0.0030	1.1000	0.0517	0.000005	0.0187
S-09-11 374.5-375.5	0.48	0.0324	0.0037	0.0003	0.0090	0.0000	0.0000	0.0058	0.0000	11.6000	0.0003	0.0001	0.0019	0.0010	0.0001	0.0030	1.0200	0.0501	0.000005	0.0179
S-09-11 374.5-375.5	0.49	0.0462	0.0032	0.0005	0.0099	0.0000	0.0000	0.0058	0.0000	13.0000	0.0003	0.0000	0.0016	0.0040	0.0003	0.0030	1.0700	0.0527	0.000005	0.0174
S-09-11 374.5-375.5	0.50	0.0356	0.0035	0.0004	0.0083	0.0000	0.0000	0.0055	0.0000	13.5000	0.0003	0.0001	0.0022	0.0060	0.0003	0.0030	1.1600	0.0513	0.000005	0.0196
S-09-11 374.5-375.5	0.52	0.0374	0.0036	0.0003	0.0099	0.0000	0.0000	0.0057	0.0000	12.3000	0.0003	0.0000	0.0021	0.0060	0.0001	0.0040	1.0900	0.0472	0.000005	0.0192
S-09-11 374.5-375.5	0.47	0.0436	0.0036	0.0005	0.0084	0.0000	0.0000	0.0048	0.0000	12.0000	0.0006	0.0001	0.0026	0.0050	0.0000	0.0030	1.0200	0.0464	0.000050	0.0162
S-09-11 374.5-375.5	0.58	0.0447	0.0042	0.0004	0.0093	0.0000	0.0000	0.0057	0.0000	15.4000	0.0008	0.0001	0.0031	0.0060	0.0023	0.0040	1.2300	0.0567	0.000005	0.0175

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulfur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr) Dissolved (mg/L)
S-09-11 350.5-351.5	0.0001	0.0046	1.4181	0.0013	0.8099	0.000005	0.2574	0.3075	5.4000	0.0001	0.0001	0.0001	0.0002	0.0003	0.00602	0.00001
S-09-11 350.5-351.5	0.0004	0.0046	1.3681	0.0008	0.7699	0.000005	0.2374	0.2805	5.4300	0.0001	0.0000	0.0002	0.0002	0.0003	0.00702	0.00001
S-09-11 350.5-351.5	0.0007	0.0261	1.3781	0.0014	0.7799	0.000005	0.2474	0.2955	5.2700	0.0001	0.0001	0.0001	0.0002	0.0001	0.00402	0.00001
S-09-11 350.5-351.5	0.0001	0.0341	1.4081	0.0005	0.7399	0.000005	0.2774	0.3075	5.2000	0.0001	0.0003	0.0002	0.0002	0.0003	0.00502	0.00001
S-09-11 350.5-351.5	0.0003	0.0046	1.3081	0.0009	0.7699	0.000005	0.2274	0.2785	5.0800	0.0001	0.0002	0.0001	0.0002	0.0002	0.00702	0.00001
S-09-11 350.5-351.5	0.0001	0.0046	1.1581	0.0013	0.6599	0.000005	0.1874	0.2615	4.0800	0.0001	0.0002	0.0002	0.0002	0.0002	0.00802	0.00001
S-09-11 350.5-351.5	0.0001	0.0251	1.3081	0.0012	0.7999	0.000005	0.2274	0.2945	4.9800	0.0001	0.0001	0.0001	0.0002	0.0003	0.00702	0.00001
S-09-11 350.5-351.5	0.0001	0.0046	1.2081	0.0009	0.7099	0.000005	0.2074	0.2725	4.4200	0.0001	0.0001	0.0002	0.0002	0.0003	0.00502	0.00001
S-09-11 350.5-351.5	0.0001	0.0046	1.2981	0.0008	0.8099	0.000005	0.2474	0.2975	5.4100	0.0001	0.0003	0.0001	0.0002	0.0003	0.00402	0.00001
S-09-11 350.5-351.5	0.0002	0.0046	1.2781	0.0009	0.8299	0.000005	0.2174	0.2685	5.3100	0.0001	0.0001	0.0001	0.0001	0.0003	0.00502	0.00001
S-09-11 350.5-351.5	0.0005	0.0181	1.2381	0.0011	0.7599	0.000005	0.2074	0.2635	4.7600	0.0001	0.0001	0.0003	0.0002	0.0002	0.00402	0.00001
S-09-11 350.5-351.5	0.0003	0.0113	1.1531	0.0010	0.7249	0.000005	0.1974	0.2500	4.8050	0.0001	0.0004	0.0002	0.0002	0.0002	0.00452	0.00001
S-09-11 350.5-351.5	0.0001	0.0046	1.0681	0.0009	0.6899	0.000005	0.1874	0.2365	4.8500	0.0001	0.0008	0.0001	0.0002	0.0002	0.00502	0.00001
S-09-11 350.5-351.5	0.0002	0.0113	1.0981	0.0009	0.7249	0.000005	0.1924	0.2490	4.8550	0.0001	0.0008	0.0001	0.0002	0.0002	0.00452	0.0000075
S-09-11 350.5-351.5	0.0003	0.0181	1.1281	0.0010	0.7599	0.000005	0.1974	0.2615	4.8600	0.0001	0.0007	0.0001	0.0002	0.0002	0.00402	0.000005
S-09-11 350.5-351.5	0.0004	0.0186	1.0771	0.0009	0.7199	0.000005	0.1824	0.2370	4.4850	0.0001	0.0005	0.0001	0.0002	0.0002	0.00302	0.000005
S-09-11 350.5-351.5	0.0004	0.0191	1.0261	0.0009	0.6799	0.000005	0.1674	0.2125	4.1100	0.0001	0.0003	0.0001	0.0002	0.0002	0.00202	0.000005
S-09-11 350.5-351.5	0.0004	0.0181	0.9981	0.0007	0.6899	0.000005	0.1674	0.2020	3.6650	0.0001	0.0002	0.0001	0.0001	0.0002	0.00302	0.000005
S-09-11 350.5-351.5	0.0003	0.0171	0.9701	0.0006	0.6999	0.000005	0.1674	0.1915	3.2200	0.0001	0.0001	0.0001	0.0001	0.0002	0.00402	0.000005
S-09-11 350.5-351.5	0.0003	0.0108	0.9831	0.0006	0.6799	0.000005	0.1724	0.2035	3.5750	0.0001	0.0003	0.0001	0.0001	0.0002	0.00452	0.000005
S-09-11 350.5-351.5	0.0003	0.0046	0.9961	0.0006	0.6599	0.000005	0.1774	0.2155	3.9300	0.0000	0.0005	0.0001	0.0001	0.0002	0.00502	0.000005
S-09-11 350.5-351.5	0.0003	0.0046	0.9786	0.0006	0.6349	0.000005	0.1624	0.2205	4.2400	0.0001	0.0003	0.0001	0.0001	0.0002	0.00452	0.000005
S-09-11 350.5-351.5	0.0002	0.0046	0.9611	0.0007	0.6099	0.000005	0.1474	0.2255	4.5500	0.0001	0.0001	0.0001	0.0001	0.0002	0.00402	0.000005
S-09-11 350.5-351.5	0.0001	0.0203	0.9761	0.0006	0.6549	0.000005	0.1524	0.2240	5.0900	0.0001	0.0001	0.0001	0.0001	0.0002	0.00502	0.000005
S-09-11 350.5-351.5	0.0001	0.0361	0.9911	0.0005	0.6999	0.000005	0.1574	0.2225	5.6300	0.0001	0.0001	0.0001	0.0001	0.0002	0.00602	0.000005
	0.000265	0.015388	0.995779	0.000660	0.672942	0.000005	0.165427	0.215482	4.2495	0.000083	0.000241	0.000065	0.000142	0.000175	0.004118	0.000005
HC25 Lower Au zone																
S-09-11 374.5-375.5	0.0007	0.0050	16.9000	0.0110	0.7600	0.000005	20.3000	1.3700	38.6000	0.0001	0.0002	0.0001	0.0011	0.0011	0.00050	0.00007
S-09-11 374.5-375.5	0.0003	0.0050	10.2000	0.0081	0.9700	0.000005	14.1000	1.1400	32.2000	0.0001	0.0003	0.0001	0.0024	0.0017	0.00050	0.00026
S-09-11 374.5-375.5	0.0002	0.0050	8.5200	0.0050	1.0300	0.000005	8.3900	0.9900	21.1000	0.0001	0.0004	0.0001	0.0024	0.0021	0.00050	0.00004
S-09-11 374.5-375.5	0.0002	0.0050	6.3400	0.0036	0.9600	0.000005	4.4900	0.7770	16.6000	0.0001	0.0005	0.0002	0.0022	0.0021	0.00050	0.00006
S-09-11 374.5-375.5	0.0001	0.0050	5.5600	0.0031	0.9000	0.000005	2.9300	0.7250	14.0000	0.0001	0.0005	0.0001	0.0023	0.0020	0.00050	0.00004
S-09-11 374.5-375.5	0.0001	0.0050	4.8500	0.0027	0.7500	0.000005	1.5500	0.6360	12.2000	0.0001	0.0003	0.0001	0.0022	0.0020	0.00050	0.00006
S-09-11 374.5-375.5	0.0002	0.0050	4.4500	0.0025	0.8700	0.000005	1.2000	0.6520	12.1000	0.0001	0.0003	0.0001	0.0030	0.0017	0.00050	0.00008
S-09-11 374.5-375.5	0.0001	0.0050	4.3000	0.0027	0.8700	0.000005	0.7900	0.5480	10.2000	0.0001	0.0004	0.0001	0.0033	0.0015	0.00050	0.00004
S-09-11 374.5-375.5	0.0002	0.0050	3.8300	0.0019	0.8200	0.000060	0.6600	0.5620	10.4000	0.0001	0.0004	0.0001	0.0026	0.0015	0.00050	0.00005
S-09-11 374.5-375.5	0.0001	0.0045	3.4300	0.0020	0.8000	0.000040	0.5800	0.6070	12.0000	0.0001	0.0013	0.0002	0.0031	0.0012	0.00300	0.00016
S-09-11 374.5-375.5	0.0001	0.0045	2.9800	0.0020	0.6600	0.000005	0.5000	0.5530	13.1000	0.0001	0.0004	0.0001	0.0030	0.0012	0.00100	0.00011
S-09-11 374.5-375.5	0.0001	0.0045	3.0900	0.0019	0.7200	0.000030	0.4700	0.6050	13.7000	0.0001	0.0003	0.0001	0.0031	0.0011	0.00050	0.00009
S-09-11 374.5-375.5	0.0001	0.0045	2.7900	0.0016	0.7100	0.000005	0.4000	0.5300	12.6000	0.0001	0.0004	0.0001	0.0028	0.0012	0.00050	0.00005
S-09-11 374.5-375.5	0.0001	0.0045	2.4500	0.0016	0.6100	0.000020	0.3500	0.4790	10.9000	0.0001	0.0003	0.0001	0.0021	0.0010	0.00050	0.00005
S-09-11 374.5-375.5	0.0001	0.0045	2.4600	0.0019	0.6300	0.000020	0.3200	0.4710	10.9000	0.0001	0.0002	0.0001	0.0022	0.0011	0.00050	0.00009
S-09-11 374.5-375.5	0.0001	0.0045	2.4000	0.0013	0.6400	0.000010	0.3100	0.4430	9.9400	0.0001	0.0003	0.0001	0.0020	0.0011	0.00050	0.00007
S-09-11 374.5-375.5	0.0001	0.0045	1.8800	0.0011	0.5200	0.000010	0.2200	0.3890	8.9800	0.0001	0.0004	0.0001	0.0017	0.0008	0.00050	0.00007
S-09-11 374.5-375.5	0.0003	0.0100	2.0400	0.0023	0.5700	0.000005	0.2600	0.3960	9.1000	0.0001	0.0004	0.0001	0.0019	0.0009	0.00100	0.00002
S-09-11 374.5-375.5	0.0001	0.0045	1.9400	0.0015	0.5500	0.000005	0.2300	0.3820	8.5200	0.0001	0.0003	0.0001	0.0020	0.0008	0.00050	0.00001
S-09-11 374.5-375.5	0.0001	0.0045	1.8300	0.0013	0.5100	0.000005	0.2100	0.2550	7.1900	0.0001	0.0004	0.0001	0.0016	0.0007	0.00050	0.00001
S-09-11 374.5-375.5	0.0001	0.0110	1.9600	0.0015	0.5800	0.000005	0.2400	0.3750	8.7300	0.0001	0.0001	0.0001	0.0018	0.0008	0.00050	0.00002
S-09-11 374.5-375.5	0.0001	0.0045	1.8100	0.0010	0.5300	0.000005	0.1900	0.3360	7.6800	0.0001	0.0001	0.0001	0.0017	0.0007	0.00050	0.00002
S-09-11 374.5-375.5	0.0003	0.0045	1.6600	0.0015	0.5100	0.000005	0.2000	0.3080	10.1000	0.0001	0.0002	0.0001	0.0018	0.0007	0.00400	0.00001
S-09-11 374.5-375.5	0.0002	0.0045	1.6700	0.0015	0.5200	0.000005	0.2100	0.3190	10.8000	0.0001	0.0007	0.0002	0.0019	0.0007	0.00050	0.00002
S-09-11 374.5-375.5	0.0007	0.0045	1.5200	0.0013	0.4700	0.000005	0.1900	0.2840	7.5600	0.0001	0.0006	0.0001	0.0011	0.0007	0.00050	0.00002
S-09-11 374.5-375.5	0.0001	0.0045	1.3900	0.0013	0.4500	0.000005	0.1400	0.2650	7.3800	0.0001	0.0002	0.0001	0.0010	0.0007	0.00050	0.00001
S-09-11 374.5-375.5	0.0002	0.0045	1.4200	0.0002	0.4400	0.000005	0.1500	0.2350	6.5200	0.0001	0.0001	0.0002	0.0009	0.0008	0.00200	0.00002
S-09-11 374.5-375.5	0.0001	0.0120	1.4300	0.0012	0.4400	0.000005	0.1400	0.2360	6.6700	0.0001	0.0003	0.0001	0.0010	0.0007	0.00050	0.00002
S-09-11 374.5-375.5	0.0001	0.0045	1.5300	0.0016	0.4700	0.000005	0.1700	0.2440	6.8400	0.0001	0.0008	0.0001	0.0009	0.0007	0.00050	0.00002
S-09-11 374.5-375.5	0.0018	0.0045	1.5100	0.0010	0.4600	0.000005	0.1800	0.2610	8.1800	0.0001	0.0021	0.0001	0.0008	0.0006	0.00050	0.00004
S-09-11 374.5-375.5	0.0007	0.0190	1.4200	0.0012	0.4300	0.000005	0.1600	0.2390	7.7800	0.0001	0.0007	0.0001	0.0008	0.0006	0.00050	0.00003
S-09-11 374.5-375.5	0.0004	0.0045	1.4700	0.0002	0.4700	0.000005	0.2900	0.2660	7.5000	0.0001	0.0009	0.0001	0.0008	0.0007	0.00050	0.00004
S-09-11 374.5-375.5	0.0001	0.0045	1.3200	0.0011	0.4000	0.000005	0.1300	0.2270	7.0900	0.0001	0.0003	0.0001	0.0008	0.0006	0.00200	0.00004
S-09-11 374.5-375.5	0.0004	0.0045	1.1900	0.0008	0.3700	0.000005	0.1500	0.2110	7.0300	0.0001	0.0001	0.0001	0.0008	0.0006	0.00100	0.00001
S-09-11 374.5-375.5	0.0007	0.0280	1.2700	0.0014	0.4000	0.000005	0.1400	0.2270	6.7900	0.0001	0.0002	0.0001	0.0007	0.0005	0.00050	0.00003
S-09-11 374.5-375.5	0.0001	0.0150	1.3000	0.0009	0.3800	0.000005	0.1700	0.2350	6.9500	0.0001	0.0003	0.0001	0.0007	0.0006	0.00100	0.00002
S-09-11 374.5-375.5	0.0003	0.0045	1.2900	0.0008	0.4000	0.000005	0.1400	0.2130	6.6900	0.0001	0.0004	0.0001	0.0007	0.0006	0.00200	0.00002
S-09-11 374.5-375.5	0.0001	0.0045	1.1600	0.0011	0.3800	0.000005	0.1000	0.2030	5.2200	0.0001	0.0006	0.0001	0.0007	0.0006	0.00050	0.00001
S-09-11 374.5-375.5	0.0001	0.0170	1.2900	0.0011	0.4200	0.000005	0.1300	0.2220	6.2700	0.0001	0.0003	0.0001	0.0007	0.0007	0.00100	0.00002

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID		HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Calculated Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
S-09-11	374.5-375.5	25	39	9-Dec-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	455	324	35.6	77	7.33	#N/A	3.4	22.4	16	0.1
S-09-11	374.5-375.5	25	40	16-Dec-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	450	288	42	83	7.3	#N/A	4.5	24.2	18	0.1
S-09-11	374.5-375.5	25	41	23-Dec-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	445	324	37.8	79	7.47	#N/A	5.3	24.7	16	0.1
S-09-11	374.5-375.5	25	42	30-Dec-10	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	465	301	36.5	71	7.35	#N/A	5.5	24.6	18	0.1
S-09-11	374.5-375.5	25	43	6-Jan-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	460	354	37	60	7.45	#N/A	5.0	23.2	19	0.1
S-09-11	374.5-375.5	25	44	13-Jan-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	495	304	37.5	71	7.26	#N/A	4.5	21.8	19	0.1
S-09-11	374.5-375.5	25	45	20-Jan-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	455	305	38	70	7.25	#N/A	4.7	22.6	19	0.1
S-09-11	374.5-375.5	25	46	27-Jan-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	425	288	38.5	66	7.31	#N/A	5.0	23.4	19	0.1
S-09-11	374.5-375.5	25	47	3-Feb-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	470	324	35.4	61	7.32	#N/A	4.0	22.2	17	0.1
S-09-11	374.5-375.5	25	48	10-Feb-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	465	333	32.3	60	7.33	#N/A	3.1	21.1	14	0.1
S-09-11	374.5-375.5	25	49	17-Feb-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	460	280	33.6	61	7.5	#N/A	3.9	21.7	17	0.1
S-09-11	374.5-375.5	25	50	24-Feb-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	460	267	34.9	80	7.41	#N/A	4.8	22.3	19	0.1
S-09-11	374.5-375.5	25	51	3-Mar-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	460	302	33.75	72	7.42	#N/A	4.6	22.2	17	0.1
S-09-11	374.5-375.5	25	52	10-Mar-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	465	273	32.6	76	7.41	#N/A	4.5	22.1	15	0.1
S-09-11	374.5-375.5	25	53	17-Mar-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	465	268	31.9	76	7.43	#N/A	3.9	22.1	13	0.1
S-09-11	374.5-375.5	25	54	24-Mar-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	470	245	31.2	87	7.3	#N/A	3.3	22.2	11	0.1
S-09-11	374.5-375.5	25	55	31-Mar-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	470	320	32.45	72	7.63	#N/A	5.6	24.6	12	0.1
S-09-11	374.5-375.5	25	56	7-Apr-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	460	307	33.7	78	7.62	#N/A	7.9	27.1	13	0.1
S-09-11	374.5-375.5	25	57	14-Apr-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	460	295	33.6	77	7.68	#N/A	4.9	24.4	14	0.1
S-09-11	374.5-375.5	25	58	21-Apr-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	455	262	33.5	79	7.51	#N/A	2.0	21.7	14	0.1
S-09-11	374.5-375.5	25	59	28-Apr-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	470	370	34.1	94	7.59	#N/A	2.6	22.6	16	0.1
S-09-11	374.5-375.5	25	60	5-May-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	470	334	34.7	81	7.44	#N/A	3.3	23.4	18	0.1
S-09-11	374.5-375.5	25	61	12-May-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	480	353	34.9	76	7.54	#N/A	3.0	23.9	19	0.1
S-09-11	374.5-375.5	25	62	19-May-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	495	343	35.1	80	7.66	#N/A	2.8	24.3	20	0.1
S-09-11	374.5-375.5	25	63	26-May-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	470	303	32.4	94	7.65	#N/A	3.6	23.5	18	0.2
S-09-11	374.5-375.5	25	64	2-Jun-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	470	277	29.7	77	7.61	#N/A	4.5	22.7	15	0.2
S-09-11	374.5-375.5	25	65	9-Jun-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	465	349	31.4	81	7.45	#N/A	4.3	23.1	15	0.2
S-09-11	374.5-375.5	25	66	16-Jun-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	470	305	33.1	76	7.42	#N/A	4.2	23.5	14	0.1
S-09-11	374.5-375.5	25	67	23-Jun-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	470	350	34.3	79	7.62	#N/A	3.8	23.6	16	0.1
S-09-11	374.5-375.5	25	68	30-Jun-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	475	351	35.5	80	7.65	#N/A	3.4	23.7	17	0.1
S-09-11	374.5-375.5	25	69	7-Jul-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	475	323	38.35	89	7.51	#N/A	3.9	24.1	18	0.1
S-09-11	374.5-375.5	25	70	14-Jul-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	480	294	41.2	86	7.67	#N/A	4.5	24.5	19	0.1
S-09-11	374.5-375.5	25	71	21-Jul-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	475	304	37.15	83	7.62	#N/A	4.1	23.8	19	3.6
S-09-11	374.5-375.5	25	72	28-Jul-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	480	320	33.1	81	7.67	#N/A	3.6	23.1	18	7.0
S-09-11	374.5-375.5	25	73	4-Aug-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	485	333	35.95	89	7.44	#N/A	3.8	23.3	18	3.6
S-09-11	374.5-375.5	25	74	11-Aug-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	470	252	38.8	80	7.76	#N/A	4.0	23.5	17	0.1
S-09-11	374.5-375.5	25	75	18-Aug-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	465	272	40.15	86	7.68	#N/A	4.3	24.6	19	0.1
S-09-11	374.5-375.5	25	76	25-Aug-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	475	271	41.5	90	7.75	#N/A	4.5	25.7	21	0.1
S-09-11	374.5-375.5	25	77	1-Sep-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	485	340	39.75	85	7.8	#N/A	4.4	24.1	22	0.1
S-09-11	374.5-375.5	25	78	8-Sep-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	485	313	38	81	7.59	#N/A	4.2	22.5	22	0.1
S-09-11	374.5-375.5	25	79	15-Sep-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	485	324	38.25	83	7.65	#N/A	4.0	22.7	22	0.1
S-09-11	374.5-375.5	25	80	22-Sep-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	490	280	38.5	85	7.3	#N/A	3.8	22.9	21	0.1
S-09-11	374.5-375.5	25	81	29-Sep-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	495	321	38.2	83	7.44	#N/A	4.4	23.0	20	0.1
S-09-11	374.5-375.5	25	82	6-Oct-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	500	306	37.9	83	7.53	#N/A	5.0	23.1	19	0.1
S-09-11	374.5-375.5	25	83	13-Oct-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	470	270	38.35	79	7.77	#N/A	4.5	22.8	18	0.1
S-09-11	374.5-375.5	25	84	20-Oct-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	470	273	38.8	81	7.54	#N/A	4.0	22.5	17	0.1
S-09-11	374.5-375.5	25	85	27-Oct-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	440	339	36.95	83	7.5	#N/A	4.7	22.9	17	0.1
S-09-11	374.5-375.5	25	86	3-Nov-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	415	265	35.1	79	7.62	#N/A	5.4	23.4	17	0.1
S-09-11	374.5-375.5	25	87	10-Nov-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	495	275	37.1	81	7.72	#N/A	4.6	22.7	18	0.1
S-09-11	374.5-375.5	25	88	17-Nov-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	495	289	39.1	84	7.52	#N/A	3.8	22.0	18	0.1
S-09-11	374.5-375.5	25	89	24-Nov-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	485	326	37.45	79	7.62	#N/A	4.7	22.9	18	0.1
S-09-11	374.5-375.5	25	90	1-Dec-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	480	358	35.8	76	7.53	#N/A	5.5	23.8	17	0.1
S-09-11	374.5-375.5	25	91	8-Dec-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	490	314	35.5	79	7.55	#N/A	5.1	23.4	15	0.1
S-09-11	374.5-375.5	25	92	15-Dec-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	490	306	35.2	80	7.59	#N/A	4.7	23.0	13	0.1
S-09-11	374.5-375.5	25	93	22-Dec-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	490	320	35.125	78	7.56	#N/A	4.5	23.6	14	0.1
S-09-11	374.5-375.5	25	94	29-Dec-11	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	490	285	35.05	77	7.48	#N/A	4.3	24.2	14	0.1
S-09-11	374.5-375.5	25	95	5-Jan-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	485	297	34.975	71	7.38	#N/A	4.1	24.8	15	0.1
S-09-11	374.5-375.5	25	96	12-Jan-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	485	322	34.9	76	7.49	#N/A	3.9	25.5	15	0.1
S-09-11	374.5-375.5	25	97	19-Jan-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	495	303	34.425	74	7.52	#N/A	4.0	25.0	16	0.1
S-09-11	374.5-375.5	25	98	26-Jan-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	475	340	33.95	75	7.44	#N/A	4.1	24.6	16	0.1
S-09-11	374.5-375.5	25	99	2-Feb-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	485	307	33.475	75	7.58	#N/A	4.3	24.1	17	0.1
S-09-11	374.5-375.5	25	100	9-Feb-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	490	351	33	80	7.66	#N/A	4.4	23.7	17	0.1
S-09-11	374.5-375.5	25	101	16-Feb-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	495	348	33.725	81	7.61	#N/A	4.8	23.5	17	0.1
S-09-11	374.5-375.5	25	102	23-Feb-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	490	360	34.45	79	7.35	#N/A	5.2	23.4	17	0.1
S-09-11	374.5-375.5	25	103	1-Mar-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	495	397	35.175	75	7.37	#N/A	5.6	23.2	17	0.1
S-09-11	374.5-375.5	25	104	8-Mar-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	475	338	35.9	77	7.55	#N/A	6.0	23.1	17	0.1

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
S-09-11 374.5-375.5	0.47	0.0411	0.0042	0.0004	0.0094	0.0000	0.0000	0.0049	0.0000	12.5000	0.0009	0.0001	0.0038	0.0080	0.0039	0.0030	1.0500	0.0474	0.000005	0.0183
S-09-11 374.5-375.5	0.59	0.0441	0.0040	0.0004	0.0092	0.0000	0.0000	0.0049	0.0000	14.8000	0.0003	0.0000	0.0023	0.0070	0.0002	0.0030	1.2300	0.0463	0.000005	0.0171
S-09-11 374.5-375.5	0.60	0.0411	0.0039	0.0004	0.0087	0.0000	0.0000	0.0052	0.0000	13.4000	0.0003	0.0000	0.0034	0.0060	0.0005	0.0030	1.0600	0.0486	0.000005	0.0170
S-09-11 374.5-375.5	0.58	0.0412	0.0038	0.0007	0.0092	0.0000	0.0000	0.0045	0.0000	12.9000	0.0003	0.0001	0.0027	0.0050	0.0010	0.0030	1.0400	0.0436	0.000005	0.0177
S-09-11 374.5-375.5	0.55	0.0363	0.0040	0.0005	0.0095	0.0000	0.0000	0.0048	0.0000	13.1500	0.0003	0.0001	0.0030	0.0050	0.0005	0.0030	1.0075	0.0470	0.000005	0.0171
S-09-11 374.5-375.5	0.52	0.0313	0.0041	0.0003	0.0099	0.0000	0.0000	0.0051	0.0000	13.4000	0.0003	0.0000	0.0033	0.0050	0.0000	0.0030	0.9750	0.0503	0.000005	0.0164
S-09-11 374.5-375.5	0.55	0.0333	0.0039	0.0003	0.0094	0.0000	0.0000	0.0047	0.0000	13.6000	0.0003	0.0000	0.0024	0.0030	0.0000	0.0030	0.9870	0.0508	0.000005	0.0164
S-09-11 374.5-375.5	0.57	0.0352	0.0036	0.0003	0.0089	0.0000	0.0000	0.0043	0.0000	13.8000	0.0003	0.0000	0.0015	0.0010	0.0000	0.0030	0.9990	0.0512	0.000005	0.0164
S-09-11 374.5-375.5	0.53	0.0341	0.0034	0.0003	0.0088	0.0000	0.0000	0.0047	0.0000	12.7000	0.0003	0.0000	0.0018	0.0020	0.0006	0.0025	0.8915	0.0474	0.000005	0.0154
S-09-11 374.5-375.5	0.48	0.0330	0.0031	0.0003	0.0087	0.0000	0.0000	0.0051	0.0000	11.6000	0.0003	0.0000	0.0020	0.0030	0.0012	0.0020	0.7840	0.0435	0.000005	0.0143
S-09-11 374.5-375.5	0.52	0.0329	0.0032	0.0004	0.0088	0.0000	0.0000	0.0050	0.0000	12.1000	0.0003	0.0000	0.0021	0.0045	0.0006	0.0020	0.8155	0.0449	0.000008	0.0142
S-09-11 374.5-375.5	0.55	0.0328	0.0032	0.0004	0.0088	0.0000	0.0000	0.0048	0.0000	12.6000	0.0003	0.0000	0.0022	0.0060	0.0000	0.0020	0.8470	0.0463	0.000010	0.0141
S-09-11 374.5-375.5	0.55	0.0298	0.0032	0.0003	0.0088	0.0000	0.0000	0.0039	0.0000	12.1500	0.0003	0.0000	0.0022	0.0085	0.0003	0.0020	0.8395	0.0453	0.000008	0.0144
S-09-11 374.5-375.5	0.55	0.0267	0.0032	0.0002	0.0089	0.0000	0.0000	0.0030	0.0000	11.7000	0.0003	0.0000	0.0021	0.0110	0.0007	0.0020	0.8320	0.0442	0.000005	0.0147
S-09-11 374.5-375.5	0.54	0.0280	0.0031	0.0003	0.0087	0.0000	0.0000	0.0031	0.0000	11.5000	0.0003	0.0000	0.0023	0.0095	0.0004	0.0020	0.7760	0.0445	0.000005	0.0145
S-09-11 374.5-375.5	0.53	0.0293	0.0029	0.0003	0.0086	0.0000	0.0000	0.0031	0.0000	11.3000	0.0003	0.0000	0.0025	0.0080	0.0000	0.0020	0.7200	0.0448	0.000005	0.0143
S-09-11 374.5-375.5	0.55	0.0295	0.0029	0.0004	0.0090	0.0000	0.0000	0.0031	0.0000	11.7000	0.0003	0.0000	0.0023	0.0240	0.0000	0.0020	0.7930	0.0513	0.000005	0.0150
S-09-11 374.5-375.5	0.56	0.0297	0.0029	0.0004	0.0093	0.0000	0.0000	0.0030	0.0000	12.1000	0.0003	0.0000	0.0020	0.0400	0.0000	0.0020	0.8660	0.0577	0.000005	0.0156
S-09-11 374.5-375.5	0.50	0.0301	0.0028	0.0004	0.0093	0.0000	0.0000	0.0032	0.0000	12.2000	0.0003	0.0001	0.0020	0.0210	0.0000	0.0020	0.7840	0.0542	0.000005	0.0164
S-09-11 374.5-375.5	0.43	0.0305	0.0027	0.0003	0.0093	0.0000	0.0000	0.0033	0.0000	12.3000	0.0003	0.0001	0.0020	0.0020	0.0000	0.0020	0.7020	0.0507	0.000005	0.0171
S-09-11 374.5-375.5	0.49	0.0349	0.0034	0.0003	0.0090	0.0000	0.0000	0.0031	0.0000	12.5000	0.0003	0.0001	0.0033	0.0015	0.0001	0.0020	0.7260	0.0503	0.000005	0.0168
S-09-11 374.5-375.5	0.55	0.0392	0.0040	0.0002	0.0088	0.0000	0.0000	0.0029	0.0000	12.7000	0.0003	0.0001	0.0045	0.0010	0.0001	0.0020	0.7500	0.0498	0.000005	0.0164
S-09-11 374.5-375.5	0.52	0.0363	0.0036	0.0003	0.0090	0.0000	0.0000	0.0029	0.0000	12.7500	0.0003	0.0001	0.0031	0.0010	0.0001	0.0020	0.7490	0.0508	0.000005	0.0166
S-09-11 374.5-375.5	0.49	0.0333	0.0031	0.0003	0.0093	0.0000	0.0000	0.0029	0.0000	12.8000	0.0003	0.0001	0.0017	0.0010	0.0000	0.0020	0.7480	0.0517	0.000005	0.0168
S-09-11 374.5-375.5	0.48	0.0317	0.0029	0.0003	0.0087	0.0000	0.0000	0.0028	0.0000	11.8500	0.0003	0.0001	0.0035	0.0010	0.0001	0.0020	0.6785	0.0477	0.000008	0.0164
S-09-11 374.5-375.5	0.46	0.0301	0.0026	0.0002	0.0080	0.0000	0.0000	0.0027	0.0000	10.9000	0.0003	0.0001	0.0052	0.0010	0.0001	0.0020	0.6090	0.0436	0.000010	0.0159
S-09-11 374.5-375.5	0.51	0.0300	0.0026	0.0003	0.0080	0.0000	0.0000	0.0030	0.0001	11.5500	0.0003	0.0001	0.0036	0.0015	0.0001	0.0020	0.6305	0.0454	0.000008	0.0154
S-09-11 374.5-375.5	0.55	0.0298	0.0025	0.0003	0.0079	0.0000	0.0000	0.0033	0.0001	12.2000	0.0003	0.0001	0.0020	0.0020	0.0001	0.0020	0.6520	0.0471	0.000005	0.0149
S-09-11 374.5-375.5	0.53	0.0333	0.0027	0.0003	0.0086	0.0000	0.0000	0.0035	0.0000	12.6500	0.0003	0.0001	0.0032	0.0055	0.0001	0.0020	0.6595	0.0476	0.000008	0.0156
S-09-11 374.5-375.5	0.50	0.0368	0.0028	0.0002	0.0093	0.0000	0.0000	0.0036	0.0000	13.1000	0.0003	0.0001	0.0044	0.0090	0.0000	0.0020	0.6670	0.0481	0.000010	0.0162
S-09-11 374.5-375.5	0.51	0.0371	0.0028	0.0003	0.0092	0.0000	0.0000	0.0037	0.0000	14.2000	0.0003	0.0001	0.0042	0.0050	0.0001	0.0020	0.7015	0.0510	0.000008	0.0160
S-09-11 374.5-375.5	0.51	0.0374	0.0028	0.0004	0.0090	0.0000	0.0000	0.0037	0.0000	15.3000	0.0003	0.0001	0.0039	0.0010	0.0001	0.0020	0.7360	0.0538	0.000005	0.0157
S-09-11 374.5-375.5	0.56	0.0363	0.0028	0.0006	0.0092	0.0000	0.0000	0.0034	0.0000	13.7500	0.0003	0.0001	0.0055	0.0090	0.0001	0.0020	0.6920	0.0722	0.000005	0.0151
S-09-11 374.5-375.5	0.60	0.0351	0.0027	0.0008	0.0094	0.0000	0.0000	0.0031	0.0000	12.2000	0.0003	0.0001	0.0070	0.0170	0.0001	0.0020	0.6480	0.0906	0.000005	0.0145
S-09-11 374.5-375.5	0.58	0.0376	0.0028	0.0005	0.0094	0.0000	0.0000	0.0031	0.0000	13.3000	0.0004	0.0001	0.0058	0.0095	0.0001	0.0020	0.6630	0.0714	0.000005	0.0145
S-09-11 374.5-375.5	0.55	0.0400	0.0029	0.0001	0.0095	0.0000	0.0000	0.0031	0.0000	14.4000	0.0005	0.0001	0.0045	0.0020	0.0001	0.0020	0.6780	0.0522	0.000005	0.0145
S-09-11 374.5-375.5	0.58	0.0388	0.0030	0.0002	0.0105	0.0000	0.0000	0.0034	0.0000	14.9500	0.0007	0.0001	0.0045	0.0030	0.0001	0.0020	0.6790	0.0533	0.000005	0.0153
S-09-11 374.5-375.5	0.60	0.0375	0.0030	0.0003	0.0114	0.0000	0.0000	0.0036	0.0000	15.5000	0.0008	0.0001	0.0045	0.0040	0.0001	0.0020	0.6800	0.0543	0.000005	0.0161
S-09-11 374.5-375.5	0.57	0.0374	0.0029	0.0003	0.0109	0.0000	0.0000	0.0038	0.0000	14.8500	0.0005	0.0001	0.0050	0.0025	0.0001	0.0020	0.6605	0.0519	0.000008	0.0160
S-09-11 374.5-375.5	0.54	0.0372	0.0027	0.0003	0.0103	0.0000	0.0000	0.0039	0.0001	14.2000	0.0003	0.0001	0.0054	0.0010	0.0001	0.0020	0.6410	0.0495	0.000010	0.0159
S-09-11 374.5-375.5	0.56	0.0333	0.0026	0.0003	0.0107	0.0000	0.0000	0.0037	0.0000	14.3000	0.0008	0.0001	0.0054	0.0030	0.0001	0.0020	0.6415	0.0532	0.000010	0.0155
S-09-11 374.5-375.5	0.57	0.0293	0.0025	0.0003	0.0111	0.0000	0.0000	0.0034	0.0000	14.4000	0.0014	0.0001	0.0053	0.0050	0.0001	0.0020	0.6420	0.0568	0.000010	0.0151
S-09-11 374.5-375.5	0.56	0.0311	0.0028	0.0004	0.0105	0.0000	0.0000	0.0034	0.0000	14.3000	0.0011	0.0000	0.0041	0.0030	0.0001	0.0020	0.6185	0.0546	0.000008	0.0147
S-09-11 374.5-375.5	0.54	0.0329	0.0030	0.0004	0.0098	0.0000	0.0000	0.0034	0.0000	14.2000	0.0008	0.0000	0.0029	0.0010	0.0001	0.0020	0.5950	0.0523	0.000005	0.0142
S-09-11 374.5-375.5	0.55	0.0313	0.0027	0.0004	0.0106	0.0000	0.0000	0.0038	0.0000	14.3500	0.0005	0.0000	0.0037	0.0013	0.0001	0.0020	0.6030	0.0534	0.000005	0.0146
S-09-11 374.5-375.5	0.56	0.0297	0.0023	0.0003	0.0113	0.0000	0.0000	0.0041	0.0000	14.5000	0.0003	0.0000	0.0045	0.0015	0.0001	0.0020	0.6110	0.0545	0.000005	0.0149
S-09-11 374.5-375.5	0.58	0.0308	0.0023	0.0003	0.0114	0.0000	0.0000	0.0041	0.0000	13.8000	0.0006	0.0000	0.0032	0.0038	0.0001	0.0020	0.5770	0.0546	0.000008	0.0153
S-09-11 374.5-375.5	0.59	0.0319	0.0022	0.0003	0.0115	0.0000	0.0000	0.0040	0.0000	13.1000	0.0010	0.0001	0.0018	0.0060	0.0000	0.0020	0.5430	0.0547	0.000010	0.0157
S-09-11 374.5-375.5	0.58	0.0335	0.0024	0.0002	0.0112	0.0000	0.0000	0.0035	0.0000	13.9000	0.0006	0.0001	0.0031	0.0038	0.0000	0.0020	0.5605	0.0594	0.000008	0.0150
S-09-11 374.5-375.5	0.57	0.0350	0.0025	0.0001	0.0108	0.0000	0.0000	0.0029	0.0000	14.7000	0.0003	0.0001	0.0043	0.0015	0.0000	0.0020	0.5780	0.0640	0.000005	0.0143
S-09-11 374.5-375.5	0.57	0.0369	0.0026	0.0003	0.0116	0.0000	0.0000	0.0029	0.0000	14.1000	0.0003	0.0001	0.0046	0.0015	0.0000	0.0020	0.5525	0.0637	0.000005	0.0146
S-09-11 374.5-375.5	0.57	0.0388	0.0027	0.0004	0.0124	0.0000	0.0000	0.0029	0.0000	13.5000	0.0003	0.0001	0.0048	0.0015	0.0000	0.0020	0.5270	0.0633	0.000005	0.0148
S-09-11 374.5-375.5	0.64	0.0413	0.0027	0.0004	0.0122	0.0000	0.0000	0.0030	0.0000	13.3500	0.0005	0.0001	0.0037	0.0015	0.0000	0.0020	0.5185	0.0621	0.000008	0.0147
S-09-11 374.5-375.5	0.71	0.0437	0.0026	0.0003	0.0120	0.0000	0.0000	0.0031	0.0000	13.2000	0.0008	0.0001	0.0026	0.0015	0.0000	0.0020	0.5100	0.0609	0.000010	0.0145
S-09-11 374.5-375.5	0.69	0.0407	0.0026	0.0003	0.0122	0.0000	0.0000	0.0030	0.0000	13.2000	0.0007	0.0001	0.0024	0.0015	0.0000	0.0020	0.5073	0.0604	0.000009	0.0143
S-09-11 374.5-375.5	0.68	0.0377	0.0026	0.0003	0.0123	0.0000	0.0000	0.0029	0.0000	13.2000	0.0005	0.0001	0.0023	0.0015	0.0000	0.0020	0.5045	0.0600	0.000008	0.0141
S-09-11 374.5-375.5	0.66	0.0347	0.0026	0.0002	0.0125	0.0000	0.0000	0.0028	0.0000	13.2000	0.0004	0.0001	0.0021	0.0015	0.0000	0.0020	0.5018	0.0595	0.000006	0.0139
S-09-11 374.5-375.5	0.64	0.0317	0.0026	0.0002	0.0126	0.0000	0.0000	0.0027	0.0000	13.2000	0.0003	0.0001	0.0019	0.0015	0.0000	0.0020	0.4990	0.0590	0.000005	0.0137
S-09-11 374.5-375.5	0.62	0.0331	0.0026	0.0002	0.0124	0.0000	0.0000	0.0028	0.0000	13.0250	0.0003	0.0001	0.0025	0.0021	0.0000	0.0018	0.4878	0.0584	0.000005	0.0140
S-09-11 374.5-375.5	0.59	0.0344	0.0026	0.0002	0.0122	0.0000	0.0000	0.0029	0.0000	12.8500	0.0004	0.0001	0.0031	0.0028	0.0000	0.0015	0.4765	0.0578	0.000005	0.0143
S-09-11 374.5-375.5	0.57	0.0358	0.0025	0.0001	0.0120	0.0000	0.0000	0.0029	0.0000	12.6750	0.0005	0.0001	0.0037	0.0034	0.0000	0.0013	0.4653	0.0571	0.000005	0.0146
S-09-11 374.5-375.5	0.54	0.0371	0.0025	0.0001	0.0118	0.0000	0.0000	0.0030	0.0000	12.5000	0.0006	0.0001	0.0043	0.0040	0.0000	0.0010	0.4540	0.0565	0.000005	0.0149
S-09-11 374.5-375.5	0.54	0.0370	0.0024	0.0002	0.0117	0.0000	0.0000	0.0026	0.0000	12.7750	0.0005	0.0001	0.0043	0.0053	0.0001	0.0013	0.4598	0.0566	0.000006	0.0146
S-09-11 374.5-375.5	0.55	0.0368	0.0023	0.0003	0.0117	0.0000	0.0000	0.0021	0.0000	13.0500	0.0004	0.0001	0.0042	0.0065	0.0002	0.0015	0.4655	0.0566	0.000008	0.0143
S-09-11 374.5-375.5	0.55	0.0367	0.0022	0.0003	0.0116	0.0000	0.0000	0.0017	0.0001	13.3250	0.0003	0.0000	0.0042	0.0078	0.0003	0.0018	0.4713	0.0567	0.000009	0.0140
S-09-11 374.5-375.5	0.55	0.0365	0.0021	0.0004	0.0115	0.0000	0.0000	0.0012	0.0001	13.6000	0.0003	0.0000	0.0041	0.0090	0.0003	0.0020	0.4770	0.0567	0.000010	0.0137

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulfur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr) Dissolved (mg/L)
S-09-11 374.5-375.5	0.0002	0.0045	1.2100	0.0008	0.3800	0.000005	0.1300	0.2080	5.6800	0.0001	0.0007	0.0001	0.0007	0.0007	0.01700	0.00002
S-09-11 374.5-375.5	0.0001	0.0045	1.3500	0.0010	0.4500	0.000005	0.1500	0.2400	6.8500	0.0001	0.0004	0.0001	0.0007	0.0006	0.00050	0.00007
S-09-11 374.5-375.5	0.0001	0.0045	1.2800	0.0010	0.4400	0.000005	0.1300	0.2160	7.2800	0.0001	0.0002	0.0001	0.0006	0.0006	0.00400	0.00001
S-09-11 374.5-375.5	0.0008	0.0120	1.2200	0.0014	0.4200	0.000005	0.1200	0.2080	6.2300	0.0001	0.0005	0.0004	0.0007	0.0006	0.00200	0.00001
S-09-11 374.5-375.5	0.0004	0.0160	1.1350	0.0010	0.4100	0.000005	0.1150	0.2060	7.0100	0.0001	0.0006	0.0002	0.0012	0.0006	0.00125	0.00002
S-09-11 374.5-375.5	0.0001	0.0200	1.0500	0.0007	0.4000	0.000005	0.1100	0.2040	7.7900	0.0001	0.0007	0.0001	0.0012	0.0005	0.00050	0.00003
S-09-11 374.5-375.5	0.0002	0.0255	1.1200	0.0008	0.4250	0.000005	0.1250	0.2070	7.2200	0.0001	0.0005	0.0001	0.0007	0.0005	0.00075	0.00004
S-09-11 374.5-375.5	0.0003	0.0310	1.1900	0.0009	0.4500	0.000005	0.1400	0.2100	6.6500	0.0001	0.0004	0.0001	0.0007	0.0005	0.00100	0.00004
S-09-11 374.5-375.5	0.0004	0.0200	1.0940	0.0008	0.4300	0.000005	0.1200	0.1875	6.0750	0.0001	0.0004	0.0001	0.0007	0.0005	0.00300	0.00003
S-09-11 374.5-375.5	0.0005	0.0090	0.9980	0.0008	0.4100	0.000005	0.1000	0.1650	5.5000	0.0001	0.0004	0.0001	0.0006	0.0004	0.00500	0.00001
S-09-11 374.5-375.5	0.0005	0.0068	1.0140	0.0008	0.4050	0.000005	0.0950	0.1745	5.7050	0.0001	0.0002	0.0001	0.0006	0.0005	0.00275	0.00001
S-09-11 374.5-375.5	0.0004	0.0045	1.0300	0.0008	0.4000	0.000005	0.0900	0.1840	5.9100	0.0001	0.0001	0.0001	0.0007	0.0005	0.00050	0.00001
S-09-11 374.5-375.5	0.0004	0.0198	1.0040	0.0006	0.3800	0.000005	0.1000	0.1735	5.5300	0.0001	0.0002	0.0001	0.0006	0.0005	0.00075	0.00001
S-09-11 374.5-375.5	0.0003	0.0350	0.9780	0.0004	0.3600	0.000005	0.1100	0.1630	5.1500	0.0000	0.0003	0.0001	0.0006	0.0005	0.00100	0.00002
S-09-11 374.5-375.5	0.0003	0.0198	0.8940	0.0006	0.3400	0.000005	0.0900	0.1585	5.1750	0.0001	0.0003	0.0001	0.0006	0.0005	0.00075	0.00002
S-09-11 374.5-375.5	0.0003	0.0045	0.8100	0.0008	0.3200	0.000005	0.0700	0.1540	5.2000	0.0001	0.0003	0.0001	0.0006	0.0005	0.00050	0.00001
S-09-11 374.5-375.5	0.0002	0.0045	0.8545	0.0005	0.3350	0.000005	0.0750	0.1570	5.5950	0.0001	0.0005	0.0001	0.0006	0.0005	0.00050	0.00001
S-09-11 374.5-375.5	0.0001	0.0045	0.8990	0.0002	0.3500	0.000005	0.0800	0.1600	5.9900	0.0001	0.0007	0.0001	0.0006	0.0005	0.00050	0.00001
S-09-11 374.5-375.5	0.0001	0.0073	0.8635	0.0008	0.3400	0.000005	0.0800	0.1560	5.9650	0.0001	0.0006	0.0001	0.0006	0.0005	0.00125	0.00003
S-09-11 374.5-375.5	0.0001	0.0100	0.8280	0.0013	0.3300	0.000005	0.0800	0.1520	5.9400	0.0001	0.0006	0.0001	0.0006	0.0005	0.00200	0.00004
S-09-11 374.5-375.5	0.0003	0.0290	0.8870	0.0007	0.3450	0.000005	0.0800	0.1570	5.8850	0.0001	0.0004	0.0001	0.0006	0.0005	0.00300	0.00005
S-09-11 374.5-375.5	0.0005	0.0480	0.9460	0.0001	0.3600	0.000005	0.0800	0.1620	5.8300	0.0001	0.0003	0.0002	0.0006	0.0004	0.00400	0.00005
S-09-11 374.5-375.5	0.0004	0.0290	0.9640	0.0005	0.3850	0.000008	0.0900	0.1550	5.9700	0.0001	0.0003	0.0001	0.0006	0.0005	0.00300	0.00003
S-09-11 374.5-375.5	0.0003	0.0100	0.9820	0.0008	0.4100	0.000010	0.1000	0.1480	6.1100	0.0000	0.0002	0.0001	0.0005	0.0005	0.00200	0.00001
S-09-11 374.5-375.5	0.0002	0.0310	0.8655	0.0008	0.3450	0.000008	0.0900	0.1380	5.6450	0.0000	0.0003	0.0001	0.0006	0.0004	0.00250	0.00002
S-09-11 374.5-375.5	0.0001	0.0520	0.7490	0.0008	0.2800	0.000005	0.0800	0.1280	5.1800	0.0000	0.0003	0.0001	0.0006	0.0004	0.00300	0.00004
S-09-11 374.5-375.5	0.0003	0.0283	0.7730	0.0007	0.3150	0.000005	0.1050	0.1315	5.5750	0.0000	0.0003	0.0001	0.0006	0.0004	0.00450	0.00005
S-09-11 374.5-375.5	0.0006	0.0045	0.7970	0.0006	0.3500	0.000005	0.1300	0.1350	5.9700	0.0000	0.0003	0.0001	0.0005	0.0004	0.00600	0.00005
S-09-11 374.5-375.5	0.0005	0.0045	0.8195	0.0007	0.3600	0.000005	0.1100	0.1400	6.0550	0.0000	0.0003	0.0001	0.0006	0.0004	0.00400	0.00004
S-09-11 374.5-375.5	0.0003	0.0045	0.8420	0.0008	0.3700	0.000005	0.0900	0.1450	6.1400	0.0000	0.0002	0.0001	0.0006	0.0005	0.00200	0.00002
S-09-11 374.5-375.5	0.0002	0.0045	0.8615	0.0006	0.4050	0.000005	0.0900	0.1525	6.6250	0.0000	0.0002	0.0001	0.0006	0.0005	0.00200	0.00001
S-09-11 374.5-375.5	0.0001	0.0045	0.8810	0.0004	0.4400	0.000005	0.0900	0.1600	7.1100	0.0000	0.0002	0.0001	0.0006	0.0005	0.00200	0.00001
S-09-11 374.5-375.5	0.0004	0.0153	0.8130	0.0005	0.4000	0.000005	0.0700	0.1465	6.3100	0.0000	0.0002	0.0002	0.0006	0.0004	0.00150	0.00001
S-09-11 374.5-375.5	0.0007	0.0260	0.7450	0.0006	0.3600	0.000005	0.0500	0.1330	5.5100	0.0000	0.0002	0.0003	0.0006	0.0004	0.00100	0.00001
S-09-11 374.5-375.5	0.0004	0.0153	0.8080	0.0007	0.3750	0.000005	0.0600	0.1440	6.3300	0.0000	0.0002	0.0002	0.0006	0.0004	0.00200	0.00002
S-09-11 374.5-375.5	0.0001	0.0045	0.8710	0.0008	0.3900	0.000005	0.0700	0.1550	7.1500	0.0000	0.0001	0.0001	0.0006	0.0004	0.00300	0.00004
S-09-11 374.5-375.5	0.0001	0.0045	0.8505	0.0008	0.3900	0.000005	0.0750	0.1615	7.4900	0.0000	0.0002	0.0001	0.0007	0.0004	0.00300	0.00002
S-09-11 374.5-375.5	0.0001	0.0045	0.8300	0.0008	0.3900	0.000005	0.0800	0.1680	7.8300	0.0000	0.0002	0.0002	0.0008	0.0004	0.00300	0.00001
S-09-11 374.5-375.5	0.0003	0.0045	0.8010	0.0008	0.3700	0.000005	0.0550	0.1530	7.4050	0.0000	0.0003	0.0002	0.0007	0.0004	0.00300	0.00002
S-09-11 374.5-375.5	0.0004	0.0045	0.7720	0.0008	0.3500	0.000005	0.0300	0.1380	6.9800	0.0000	0.0003	0.0001	0.0006	0.0004	0.00300	0.00003
S-09-11 374.5-375.5	0.0003	0.0093	0.7340	0.0006	0.3400	0.000005	0.0650	0.1375	6.9600	0.0000	0.0004	0.0001	0.0007	0.0004	0.00250	0.00005
S-09-11 374.5-375.5	0.0002	0.0140	0.6960	0.0004	0.3300	0.000005	0.1000	0.1370	6.9400	0.0000	0.0004	0.0001	0.0008	0.0003	0.00200	0.00007
S-09-11 374.5-375.5	0.0001	0.0093	0.7110	0.0006	0.3300	0.000005	0.0850	0.1365	6.8450	0.0000	0.0003	0.0001	0.0008	0.0004	0.00150	0.00008
S-09-11 374.5-375.5	0.0001	0.0045	0.7260	0.0007	0.3300	0.000005	0.0700	0.1360	6.7500	0.0000	0.0001	0.0001	0.0007	0.0004	0.00100	0.00009
S-09-11 374.5-375.5	0.0001	0.0045	0.7315	0.0006	0.3400	0.000005	0.0750	0.1335	6.7900	0.0000	0.0001	0.0001	0.0008	0.0004	0.00150	0.00005
S-09-11 374.5-375.5	0.0001	0.0045	0.7370	0.0005	0.3500	0.000005	0.0800	0.1310	6.8300	0.0000	0.0002	0.0001	0.0008	0.0004	0.00200	0.00001
S-09-11 374.5-375.5	0.0002	0.0045	0.6945	0.0004	0.3300	0.000005	0.0750	0.1270	6.5500	0.0000	0.0002	0.0001	0.0007	0.0003	0.00200	0.00001
S-09-11 374.5-375.5	0.0003	0.0045	0.6520	0.0003	0.3100	0.000005	0.0700	0.1230	6.2700	0.0000	0.0002	0.0001	0.0006	0.0003	0.00200	0.00001
S-09-11 374.5-375.5	0.0004	0.0045	0.6255	0.0002	0.3300	0.000005	0.0750	0.1255	6.6550	0.0000	0.0025	0.0001	0.0007	0.0004	0.00150	0.00001
S-09-11 374.5-375.5	0.0004	0.0045	0.5990	0.0000	0.3500	0.000005	0.0800	0.1280	7.0400	0.0000	0.0048	0.0001	0.0008	0.0004	0.00100	0.00001
S-09-11 374.5-375.5	0.0004	0.0045	0.5960	0.0003	0.3250	0.000005	0.0600	0.1255	6.3400	0.0000	0.0032	0.0002	0.0008	0.0004	0.00150	0.00001
S-09-11 374.5-375.5	0.0003	0.0045	0.5930	0.0006	0.3000	0.000005	0.0400	0.1230	5.6400	0.0000	0.0016	0.0002	0.0008	0.0005	0.00200	0.00002
S-09-11 374.5-375.5	0.0002	0.0045	0.5735	0.0006	0.3050	0.000005	0.0800	0.1200	5.8500	0.0000	0.0012	0.0003	0.0008	0.0006	0.00200	0.00002
S-09-11 374.5-375.5	0.0001	0.0045	0.5540	0.0006	0.3100	0.000005	0.1200	0.1170	6.0600	0.0000	0.0009	0.0003	0.0008	0.0006	0.00200	0.00001
S-09-11 374.5-375.5	0.0002	0.0045	0.5580	0.0006	0.3075	0.000005	0.1050	0.1173	6.0200	0.0000	0.0008	0.0003	0.0008	0.0006	0.00175	0.00001
S-09-11 374.5-375.5	0.0002	0.0045	0.5620	0.0006	0.3050	0.000005	0.0900	0.1175	5.9800	0.0000	0.0006	0.0003	0.0008	0.0005	0.00150	0.00001
S-09-11 374.5-375.5	0.0003	0.0045	0.5660	0.0007	0.3025	0.000005	0.0750	0.1178	5.9400	0.0000	0.0005	0.0002	0.0008	0.0005	0.00125	0.00001
S-09-11 374.5-375.5	0.0003	0.0045	0.5700	0.0007	0.3000	0.000005	0.0600	0.1180	5.9000	0.0000	0.0004	0.0002	0.0007	0.0005	0.00100	0.00001
S-09-11 374.5-375.5	0.0002	0.0045	0.5635	0.0007	0.2900	0.000005	0.0725	0.1148	5.7875	0.0000	0.0004	0.0002	0.0007	0.0005	0.00125	0.00001
S-09-11 374.5-375.5	0.0002	0.0045	0.5570	0.0007	0.2800	0.000005	0.0850	0.1115	5.6750	0.0000	0.0003	0.0002	0.0007	0.0005	0.00150	0.00001
S-09-11 374.5-375.5	0.0001	0.0045	0.5505	0.0006	0.2700	0.000005	0.0975	0.1083	5.5625	0.0000	0.0003	0.0002	0.0007	0.0006	0.00175	0.00002
S-09-11 374.5-375.5	0.0001	0.0045	0.5440	0.0006	0.2600	0.000005	0.1100	0.1050	5.4500	0.0000	0.0003	0.0002	0.0007	0.0006	0.00200	0.00002
S-09-11 374.5-375.5	0.0002	0.0045	0.5520	0.0006	0.2700	0.000005	0.1025	0.1053	5.5400	0.0000	0.0003	0.0002	0.0007	0.0006	0.00250	0.00002
S-09-11 374.5-375.5	0.0003	0.0045	0.5600	0.0005	0.2800	0.000005	0.0950	0.1055	5.6300	0.0000	0.0003	0.0002	0.0007	0.0005	0.00300	0.00003
S-09-11 374.5-375.5	0.0004	0.0045	0.5680	0.0005	0.2900	0.000005	0.0875	0.1058	5.7200	0.0000	0.0003	0.0001	0.0007	0.0005	0.00350	0.00003
S-09-11 374.5-375.5	0.0005	0.0045	0.5760	0.0005	0.3000	0.000005	0.0800	0.1060	5.8100	0.0000	0.0002	0.0001	0.0006	0.0005	0.00400	0.00003

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Calculated Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
S-09-11 374.5-375.5	25	105	15-Mar-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	475	344	35.325	81	7.42	#N/A	5.7	22.7	17	0.1
S-09-11 374.5-375.5	25	106	22-Mar-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	485	347	34.75	81	7.25	#N/A	5.4	22.3	17	0.1
S-09-11 374.5-375.5	25	107	29-Mar-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	470	350	34.175	76	7.39	#N/A	5.1	22.0	17	0.1
S-09-11 374.5-375.5	25	108	5-Apr-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	485	366	33.6	75	7.44	#N/A	4.8	21.6	17	0.1
S-09-11 374.5-375.5	25	109	12-Apr-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	470	343	33.6	84	7.39	#N/A	4.8	21.6	17	0.1
S-09-11 374.5-375.5	25	110	19-Apr-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	495	319	33.6	83	7.52	#N/A	4.8	21.6	17	0.1
S-09-11 374.5-375.5	25	111	26-Apr-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	485	470	35.4	89	7.27	#N/A	5.9	22.8	18	0.1
S-09-11 374.5-375.5	25	112	3-May-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	490	341	36	79	7.68	#N/A	6.2	23.3	18	0.1
S-09-11 374.5-375.5	25	113	10-May-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	500	503	35.85	84	7.51	#N/A	6.3	23.3	17	0.1
S-09-11 374.5-375.5	25	114	17-May-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	495	294	35.7	83	7.46	#N/A	6.5	23.3	16	0.1
S-09-11 374.5-375.5	25	115	24-May-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	490	290	35.55	84	7.6	#N/A	6.6	23.4	14	0.1
S-09-11 374.5-375.5	25	116	31-May-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	500	336	35.4	79	7.68	#N/A	6.7	23.4	13	0.1
S-09-11 374.5-375.5	25	117	7-Jun-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	480	363	36.25	81	7.51	#N/A	6.8	23.5	14	0.1
S-09-11 374.5-375.5	25	118	14-Jun-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	500	373	37.1	82	7.38	#N/A	6.8	23.5	16	0.1
S-09-11 374.5-375.5	25	119	21-Jun-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	500	339	37.95	83	7.57	#N/A	6.9	23.6	17	0.1
S-09-11 374.5-375.5	25	120	28-Jun-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	495	313	38.8	89	7.63	#N/A	6.9	23.6	18	0.1
S-09-11 374.5-375.5	25	121	5-Jul-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	490	363	38.125	89	7.51	#N/A	6.3	23.0	18	0.1
S-09-11 374.5-375.5	25	122	12-Jul-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	490	401	37.45	89	7.42	#N/A	5.7	22.4	18	0.1
S-09-11 374.5-375.5	25	123	19-Jul-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	505	352	36.775	78	7.45	#N/A	5.1	21.7	17	0.1
S-09-11 374.5-375.5	25	124	26-Jul-12	Sulphurets	Upper Panel	Lower Au zone	VU	SIH	4/3	CL	2/3	Drillcore		Water	500	490	325	36.1	83	7.48	#N/A	4.6	21.1	17	0.1
																	345.35	36.95	83.595	7.523	#N/A	6.2405	22.91825	16.125	0.1
HC18 Undefined																									
S-09-12 144.5-145.5	18	0	4-Feb-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	390	168	182	347	7.60	#N/A	3.1	40.2	177	1.4
S-09-12 144.5-145.5	18	1	11-Feb-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	485	231	176	369	7.51	#N/A	2.5	28.2	169	0.6
S-09-12 144.5-145.5	18	2	18-Feb-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	480	251	122	241	7.51	#N/A	3.4	30.4	104	0.2
S-09-12 144.5-145.5	18	3	25-Feb-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	495	279	86	189	7.47	#N/A	3.4	28.0	77	0.1
S-09-12 144.5-145.5	18	4	4-Mar-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	500	275	71	160	7.45	#N/A	2.9	27.9	51	0.1
S-09-12 144.5-145.5	18	5	11-Mar-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	490	348	67	141	7.49	#N/A	3.0	29.3	43	0.1
S-09-12 144.5-145.5	18	6	18-Mar-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	505	348	61	133	7.52	#N/A	3.0	27.1	38	0.1
S-09-12 144.5-145.5	18	7	25-Mar-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	495	314	60	123	7.46	#N/A	3.6	27.1	40	0.1
S-09-12 144.5-145.5	18	8	1-Apr-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	495	333	53	114	7.58	#N/A	3.0	25.4	38	0.1
S-09-12 144.5-145.5	18	9	8-Apr-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	475	290	52	110	7.49	#N/A	2.5	26.3	29	0.1
S-09-12 144.5-145.5	18	10	15-Apr-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	495	284	52	115	7.49	#N/A	3.3	25.8	34	0.1
S-09-12 144.5-145.5	18	11	22-Apr-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	475	260	47	108	7.48	#N/A	4.2	26.0	27	0.1
S-09-12 144.5-145.5	18	12	29-Apr-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	500	282	41	109	7.60	#N/A	2.7	25.2	28	0.1
S-09-12 144.5-145.5	18	13	6-May-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	475	297	48	105	7.43	#N/A	4.7	26.1	29	0.1
S-09-12 144.5-145.5	18	14	13-May-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	495	320	50	107	7.55	#N/A	3.2	23.9	27	0.1
S-09-12 144.5-145.5	18	15	20-May-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	490	331	48	108	7.51	#N/A	4.2	24.4	23	0.1
S-09-12 144.5-145.5	18	16	27-May-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	485	340	50	105	7.48	#N/A	6.6	28.9	18	0.1
S-09-12 144.5-145.5	18	17	3-Jun-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	510	312	51	107	7.51	#N/A	3.4	24.8	22	0.1
S-09-12 144.5-145.5	18	18	10-Jun-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	500	325	51	105	7.56	#N/A	5.9	27.1	23	0.1
S-09-12 144.5-145.5	18	19	17-Jun-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	485	297	47	103	7.64	#N/A	4.3	26.8	17	0.1
S-09-12 144.5-145.5	18	20	24-Jun-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	515	411	65	111	7.63	#N/A	2.7	26.4	25	0.1
S-09-12 144.5-145.5	18	21	1-Jul-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	490	417	48	100	7.51	#N/A	2.6	24.4	15	0.1
S-09-12 144.5-145.5	18	22	8-Jul-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	505	353	43	107	7.50	#N/A	2.7	24.4	23	0.1
S-09-12 144.5-145.5	18	23	15-Jul-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	500	344	45	103	7.51	#N/A	4.1	24.4	22	0.1
S-09-12 144.5-145.5	18	24	22-Jul-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	500	357	42	96	7.45	#N/A	3.2	24.1	12	0.1
S-09-12 144.5-145.5	18	25	29-Jul-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	495	344	49	96	7.54	#N/A	4.0	24.3	23	0.1
S-09-12 144.5-145.5	18	26	5-Aug-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	500	414	44	93	7.56	#N/A	2.9	25.0	16	0.1
S-09-12 144.5-145.5	18	27	12-Aug-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	430	410	42	93	7.65	#N/A	3.7	25.9	20	0.1
S-09-12 144.5-145.5	18	28	19-Aug-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	485	388	45	95	7.58	#N/A	4.6	26.4	18	0.1
S-09-12 144.5-145.5	18	29	26-Aug-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	475	370	38	84	7.59	#N/A	2.3	23.6	16	0.1
S-09-12 144.5-145.5	18	30	2-Sep-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	455	405	40	77	7.55	#N/A	4.0	25.0	26	0.1
S-09-12 144.5-145.5	18	31	9-Sep-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	495	373	43	99	7.31	#N/A	4.5	26.0	26	0.1
S-09-12 144.5-145.5	18	32	16-Sep-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	460	367	38	82	7.42	#N/A	2.8	24.8	23	0.1
S-09-12 144.5-145.5	18	33	23-Sep-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	465	347	40	76	7.51	#N/A	2.5	23.2	25	0.1
S-09-12 144.5-145.5	18	34	30-Sep-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	460	358	42	69	7.43	#N/A	2.6	23.5	29	0.1
S-09-12 144.5-145.5	18	35	7-Oct-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	475	338	42	96	7.44	#N/A	3.1	25.8	25	0.1
S-09-12 144.5-145.5	18	36	14-Oct-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	470	329	44	92	7.42	#N/A	3.1	23.6	25	0.1
S-09-12 144.5-145.5	18	37	21-Oct-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	460	375	41	94	7.45	#N/A	3.1	25.9	26	0.1
S-09-12 144.5-145.5	18	38	28-Oct-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	460	355	38	89	7.38	#N/A	2.9	24.1	28	0.1
S-09-12 144.5-145.5	18	39	4-Nov-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	465	400	41	100	7.55	#N/A	2.3	23.1	30	0.1
S-09-12 144.5-145.5	18	40	11-Nov-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	465	353	44	81	7.64	#N/A	2.4	25.7	23	0.1
S-09-12 144.5-145.5	18	41	18-Nov-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	455	370	42	71	7.68	#N/A	3.1	24.6	22	0.1
S-09-12 144.5-145.5	18	42	25-Nov-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	465	338	38	87	7.31	#N/A	3.5	24.1	17	0.1
S-09-12 144.5-145.5	18	43	2-Dec-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	470	357	47	87	7.51	#N/A	3.0	24.7	18	0.1

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
S-09-11 374.5-375.5	0.55	0.0409	0.0021	0.0003	0.0114	0.0000	0.0000	0.0016	0.0001	13.4000	0.0003	0.0000	0.0052	0.0071	0.0003	0.0018	0.4648	0.0566	0.000010	0.0138
S-09-11 374.5-375.5	0.54	0.0453	0.0021	0.0003	0.0112	0.0000	0.0000	0.0019	0.0000	13.2000	0.0003	0.0000	0.0062	0.0053	0.0002	0.0015	0.4525	0.0564	0.000010	0.0139
S-09-11 374.5-375.5	0.54	0.0496	0.0020	0.0002	0.0111	0.0000	0.0000	0.0023	0.0000	13.0000	0.0003	0.0000	0.0073	0.0034	0.0002	0.0013	0.4403	0.0563	0.000010	0.0139
S-09-11 374.5-375.5	0.53	0.0540	0.0020	0.0001	0.0109	0.0000	0.0000	0.0026	0.0000	12.8000	0.0003	0.0000	0.0083	0.0015	0.0001	0.0010	0.4280	0.0561	0.000010	0.0140
S-09-11 374.5-375.5	0.53	0.0540	0.0020	0.0001	0.0109	0.0000	0.0000	0.0026	0.0000	12.8000	0.0003	0.0000	0.0083	0.0015	0.0001	0.0010	0.4280	0.0561	0.000010	0.0140
S-09-11 374.5-375.5	0.53	0.0540	0.0020	0.0001	0.0109	0.0000	0.0000	0.0026	0.0000	12.8000	0.0003	0.0000	0.0083	0.0015	0.0001	0.0010	0.4280	0.0561	0.000010	0.0140
S-09-11 374.5-375.5	0.56	0.0386	0.0021	0.0002	0.0117	0.0000	0.0000	0.0026	0.0000	13.4750	0.0003	0.0001	0.0094	0.0015	0.0001	0.0010	0.4370	0.0611	0.000018	0.0141
S-09-11 374.5-375.5	0.57	0.0335	0.0021	0.0002	0.0120	0.0000	0.0000	0.0026	0.0000	13.7000	0.0003	0.0001	0.0098	0.0015	0.0000	0.0010	0.4400	0.0628	0.000020	0.0141
S-09-11 374.5-375.5	0.56	0.0378	0.0021	0.0002	0.0123	0.0000	0.0000	0.0026	0.0000	13.6500	0.0003	0.0001	0.0079	0.0015	0.0000	0.0010	0.4343	0.0630	0.000016	0.0142
S-09-11 374.5-375.5	0.55	0.0420	0.0021	0.0002	0.0126	0.0000	0.0000	0.0027	0.0000	13.6000	0.0003	0.0001	0.0059	0.0015	0.0000	0.0010	0.4285	0.0632	0.000013	0.0143
S-09-11 374.5-375.5	0.53	0.0463	0.0020	0.0001	0.0128	0.0000	0.0000	0.0027	0.0000	13.5500	0.0003	0.0000	0.0040	0.0015	0.0000	0.0010	0.4228	0.0633	0.000009	0.0144
S-09-11 374.5-375.5	0.52	0.0505	0.0020	0.0001	0.0131	0.0000	0.0000	0.0027	0.0000	13.5000	0.0003	0.0000	0.0020	0.0015	0.0000	0.0010	0.4170	0.0635	0.000005	0.0145
S-09-11 374.5-375.5	0.53	0.0536	0.0021	0.0001	0.0132	0.0000	0.0000	0.0029	0.0000	13.8250	0.0003	0.0000	0.0021	0.0015	0.0000	0.0013	0.4200	0.0636	0.000005	0.0152
S-09-11 374.5-375.5	0.54	0.0567	0.0021	0.0001	0.0133	0.0000	0.0000	0.0031	0.0000	14.1500	0.0003	0.0000	0.0021	0.0015	0.0000	0.0015	0.4230	0.0637	0.000005	0.0158
S-09-11 374.5-375.5	0.54	0.0598	0.0022	0.0001	0.0134	0.0000	0.0000	0.0032	0.0000	14.4750	0.0003	0.0000	0.0022	0.0015	0.0000	0.0018	0.4260	0.0638	0.000005	0.0165
S-09-11 374.5-375.5	0.55	0.0629	0.0022	0.0001	0.0135	0.0000	0.0000	0.0034	0.0000	14.8000	0.0003	0.0000	0.0022	0.0015	0.0000	0.0020	0.4290	0.0639	0.000005	0.0171
S-09-11 374.5-375.5	0.55	0.0617	0.0022	0.0001	0.0135	0.0000	0.0000	0.0032	0.0000	14.5500	0.0003	0.0000	0.0020	0.0015	0.0000	0.0018	0.4210	0.0646	0.000005	0.0166
S-09-11 374.5-375.5	0.54	0.0605	0.0022	0.0002	0.0134	0.0000	0.0000	0.0031	0.0000	14.3000	0.0003	0.0000	0.0018	0.0015	0.0000	0.0015	0.4130	0.0654	0.000005	0.0160
S-09-11 374.5-375.5	0.54	0.0593	0.0021	0.0002	0.0134	0.0000	0.0000	0.0029	0.0000	14.0500	0.0003	0.0000	0.0015	0.0015	0.0000	0.0013	0.4050	0.0661	0.000005	0.0155
S-09-11 374.5-375.5	0.53	0.0581	0.0021	0.0002	0.0133	0.0000	0.0000	0.0027	0.0000	13.8000	0.0003	0.0000	0.0013	0.0015	0.0000	0.0010	0.3970	0.0668	0.000005	0.0149
	0.53575	0.056935	0.002108	0.0001275	0.0132825	0.00001	0.000005	0.0029775	0.000003	14.1	0.000250	0.000038	0.002100	0.001500	0.000022	0.0014	0.417375	0.0644675	0.000005	0.015630
HC18 Undefined																				
S-09-12 144.5-145.5	0.16	0.0823	0.0038	0.0008	0.0568	0.0000	0.0000	0.0070	0.0000	57.7048	0.0003	0.0044	0.0018	0.0057	0.0002	0.0070	9.3508	0.0750	0.000005	0.0047
S-09-12 144.5-145.5	0.16	0.0828	0.0046	0.0011	0.0415	0.0000	0.0000	0.0080	0.0000	54.9048	0.0003	0.0005	0.0008	0.0057	0.0000	0.0050	9.5008	0.0480	0.000005	0.0069
S-09-12 144.5-145.5	0.14	0.0932	0.0037	0.0009	0.0366	0.0000	0.0000	0.0065	0.0000	39.4048	0.0003	0.0003	0.0026	0.0057	0.0001	0.0050	5.7908	0.0530	0.000005	0.0016
S-09-12 144.5-145.5	0.11	0.0904	0.0032	0.0009	0.0360	0.0000	0.0000	0.0038	0.0000	29.0048	0.0003	0.0002	0.0006	0.0057	0.0000	0.0040	3.5008	0.0380	0.000005	0.0015
S-09-12 144.5-145.5	0.09	0.1038	0.0029	0.0008	0.0365	0.0000	0.0000	0.0040	0.0000	24.4048	0.0003	0.0001	0.0003	0.0057	0.0000	0.0030	2.5908	0.0370	0.000090	0.0015
S-09-12 144.5-145.5	0.08	0.1005	0.0027	0.0008	0.0354	0.0000	0.0000	0.0030	0.0000	23.4048	0.0003	0.0001	0.0003	0.0057	0.0000	0.0030	2.2308	0.0380	0.000005	0.0030
S-09-12 144.5-145.5	0.07	0.0888	0.0023	0.0007	0.0346	0.0000	0.0000	0.0020	0.0000	21.3048	0.0003	0.0001	0.0003	0.0057	0.0000	0.0030	1.9108	0.0360	0.000010	0.0024
S-09-12 144.5-145.5	0.06	0.1016	0.0028	0.0006	0.0318	0.0000	0.0000	0.0010	0.0000	21.4048	0.0009	0.0001	0.0008	0.0057	0.0005	0.0020	1.7408	0.0340	0.000005	0.0031
S-09-12 144.5-145.5	0.06	0.1047	0.0020	0.0005	0.0332	0.0000	0.0000	0.0020	0.0000	18.9048	0.0007	0.0001	0.0008	0.0057	0.0000	0.0020	1.4908	0.0310	0.000005	0.0035
S-09-12 144.5-145.5	0.03	0.1097	0.0021	0.0005	0.0282	0.0000	0.0000	0.0010	0.0000	18.6048	0.0003	0.0001	0.0016	0.0057	0.0000	0.0030	1.3808	0.0330	0.000005	0.0034
S-09-12 144.5-145.5	0.03	0.1246	0.0021	0.0007	0.0270	0.0000	0.0000	0.0010	0.0000	18.9048	0.0010	0.0001	0.0026	0.0057	0.0001	0.0020	1.3208	0.0310	0.000020	0.0021
S-09-12 144.5-145.5	0.03	0.1110	0.0017	0.0007	0.0276	0.0000	0.0000	0.0010	0.0000	17.0048	0.0006	0.0001	0.0025	0.0057	0.0014	0.0020	1.1208	0.0290	0.000005	0.0049
S-09-12 144.5-145.5	0.03	0.1048	0.0018	0.0006	0.0273	0.0000	0.0000	0.0010	0.0000	15.0048	0.0006	0.0001	0.0006	0.0057	0.0000	0.0020	0.9648	0.0270	0.000005	0.0026
S-09-12 144.5-145.5	0.03	0.0973	0.0017	0.0007	0.0252	0.0000	0.0000	0.0010	0.0000	17.7048	0.0006	0.0001	0.0012	0.0057	0.0000	0.0020	1.0608	0.0360	0.000005	0.0033
S-09-12 144.5-145.5	0.03	0.1125	0.0018	0.0006	0.0226	0.0000	0.0000	0.0017	0.0000	18.6048	0.0007	0.0001	0.0013	0.0017	0.0000	0.0020	1.0608	0.0310	0.000005	0.0063
S-09-12 144.5-145.5	0.03	0.1156	0.0017	0.0007	0.0208	0.0000	0.0000	0.0019	0.0000	17.7048	0.0003	0.0001	0.0003	0.0017	0.0001	0.0020	0.9588	0.0303	0.000005	0.0060
S-09-12 144.5-145.5	0.03	0.0921	0.0016	0.0007	0.0215	0.0000	0.0000	0.0017	0.0000	18.8048	0.0006	0.0001	0.0018	0.0027	0.0013	0.0020	0.9638	0.0382	0.000005	0.0052
S-09-12 144.5-145.5	0.03	0.1003	0.0015	0.0006	0.0219	0.0000	0.0000	0.0018	0.0000	19.3048	0.0003	0.0001	0.0003	0.0017	0.0000	0.0020	0.9438	0.0323	0.000005	0.0044
S-09-12 144.5-145.5	0.03	0.0948	0.0015	0.0005	0.0201	0.0000	0.0000	0.0018	0.0000	19.0048	0.0003	0.0001	0.0003	0.0077	0.0000	0.0010	0.9058	0.0361	0.000005	0.0032
S-09-12 144.5-145.5	0.03	0.0937	0.0019	0.0006	0.0219	0.0000	0.0000	0.0022	0.0000	17.9048	0.0003	0.0001	0.0007	0.0137	0.0000	0.0010	0.8138	0.0356	0.000005	0.0085
S-09-12 144.5-145.5	0.03	0.0903	0.0017	0.0005	0.0210	0.0000	0.0000	0.0033	0.0000	24.7048	0.0003	0.0001	0.0014	0.0057	0.0001	0.0020	0.8728	0.0362	0.000005	0.0064
S-09-12 144.5-145.5	0.03	0.0844	0.0015	0.0005	0.0186	0.0000	0.0000	0.0016	0.0000	18.0048	0.0003	0.0001	0.0003	0.0097	0.0000	0.0010	0.7728	0.0372	0.000005	0.0022
S-09-12 144.5-145.5	0.03	0.0866	0.0015	0.0007	0.0217	0.0000	0.0000	0.0018	0.0000	16.1048	0.0008	0.0001	0.0011	0.0167	0.0000	0.0005	0.8018	0.0354	0.000005	0.0054
S-09-12 144.5-145.5	0.03	0.0931	0.0011	0.0006	0.0238	0.0000	0.0001	0.0043	0.0001	17.0048	0.0006	0.0002	0.0008	0.0117	0.0001	0.0010	0.6938	0.0360	0.000005	0.0051
S-09-12 144.5-145.5	0.03	0.0790	0.0010	0.0005	0.0182	0.0000	0.0000	0.0021	0.0000	16.0048	0.0005	0.0001	0.0011	0.0127	0.0000	0.0005	0.6548	0.0318	0.000005	0.0057
S-09-12 144.5-145.5	0.03	0.0899	0.0010	0.0001	0.0179	0.0000	0.0000	0.0020	0.0000	18.5048	0.0003	0.0001	0.0003	0.0087	0.0000	0.0010	0.7058	0.0346	0.000005	0.0072
S-09-12 144.5-145.5	0.03	0.0987	0.0011	0.0004	0.0180	0.0000	0.0000	0.0018	0.0000	17.0048	0.0003	0.0001	0.0008	0.0127	0.0000	0.0010	0.6038	0.0360	0.000005	0.0025
S-09-12 144.5-145.5	0.03	0.0990	0.0009	0.0005	0.0179	0.0000	0.0000	0.0016	0.0000	16.0048	0.0007	0.0001	0.0005	0.0017	0.0000	0.0010	0.5258	0.0135	0.000005	0.0067
S-09-12 144.5-145.5	0.03	0.0969	0.0011	0.0005	0.0182	0.0000	0.0000	0.0021	0.0000	17.1048	0.0005	0.0001	0.0008	0.0507	0.0001	0.0010	0.6038	0.0179	0.000005	0.0084
S-09-12 144.5-145.5	0.03	0.0931	0.0009	0.0003	0.0176	0.0000	0.0000	0.0016	0.0000	14.6048	0.0008	0.0000	0.0008	0.0157	0.0001	0.0010	0.4888	0.0120	0.000005	0.0063
S-09-12 144.5-145.5	0.03	0.0908	0.0006	0.0005	0.0172	0.0000	0.0000	0.0017	0.0000	15.2048	0.0007	0.0001	0.0012	0.0017	0.0001	0.0010	0.5128	0.0141	0.000005	0.0084
S-09-12 144.5-145.5	0.03	0.0822	0.0010	0.0004	0.0186	0.0000	0.0000	0.0022	0.0000	16.5048	0.0003	0.0001	0.0011	0.0237	0.0002	0.0010	0.5298	0.0368	0.000005	0.0093
S-09-12 144.5-145.5	0.03	0.0895	0.0011	0.0005	0.0166	0.0000	0.0000	0.0014	0.0000	14.6048	0.0003	0.0001	0.0006	0.0257	0.0000	0.0005	0.4798	0.0318	0.000005	0.0074
S-09-12 144.5-145.5	0.03	0.0943	0.0009	0.0005	0.0174	0.0000	0.0000	0.0019	0.0000	15.3048	0.0006	0.0004	0.0011	0.0187	0.0000	0.0020	0.4818	0.0314	0.000005	0.0079
S-09-12 144.5-145.5	0.03	0.0987	0.0009	0.0005	0.0160	0.0000	0.0000	0.0024	0.0000	16.1048	0.0003	0.0001	0.0011	0.0127	0.0000	0.0010	0.5068	0.0299	0.000005	0.0105
S-09-12 144.5-145.5	0.03	0.0933	0.0011	0.0004	0.0156	0.0000	0.0000	0.0026	0.0000	16.2048	0.0003	0.0001	0.0013	0.0097	0.0000	0.0005	0.4988	0.0317	0.000005	0.0146
S-09-12 144.5-145.5	0.03	0.0958	0.0011	0.0004	0.0153	0.0000	0.0000	0.0027	0.0000	17.0048	0.0003	0.0001	0.0011	0.0327	0.0000	0.0010	0.5368	0.0346	0.000005	0.0142
S-09-12 144.5-145.5	0.03	0.0958	0.0010	0.0003	0.0153	0.0000	0.0000	0.0025	0.0000	16.0048	0.0003	0.0001	0.0007	0.0107	0.0000	0.0010	0.4688	0.0316	0.000005	0.0112
S-09-12 144.5-145.5	0.03	0.0949	0.0005	0.0004	0.0138	0.0000	0.0000	0.0020	0.0000	14.8048	0.0005	0.0001	0.0008	0.0017	0.0000	0.0020	0.4268	0.0275	0.000005	0.0120
S-09-12 144.5-145.5	0.03	0.0987	0.0005	0.0005	0.0155	0.0000	0.0000	0.0021	0.0000	15.7048	0.0003	0.0001	0.0009	0.0077	0.0009	0.0010	0.4478	0.0327	0.000005	0.0134
S-09-12 144.5-145.5	0.03	0.0872	0.0007	0.0005	0.0138	0.0000	0.0000	0.0017	0.0000	17.0048	0.0006	0.0002	0.0007	0.0107	0.0006	0.0010	0.4878	0.0341	0.000005	0.0085
S-09-12 144.5-145.5	0.03	0.0885	0.0008	0.0004	0.0147	0.0000	0.0000	0.0028	0.0000	16.2048	0.0003	0.0001	0.0003	0.0107	0.0000	0.0010	0.4608	0.0319	0.000005	0.0074
S-09-12 144.5-145.5	0.03	0.0821	0.0008	0.0004	0.0133	0.0000	0.0000	0.0015	0.0000	14.8048	0.0006	0.0002	0.0007	0.0117	0.0000	0.0010	0.4088	0.0308	0.000020	0.0065
S-09-12 144.5-145.5	0.03	0.0896	0.0008	0.0004	0.0154	0.0000	0.0000	0.0019	0.0000	18.4048	0.0006	0.0001	0.0007	0.0147	0.0012	0.0020	0.4628	0.0391	0.000005	0.0056

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulfur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr) Dissolved (mg/L)
S-09-11 374.5-375.5	0.0005	0.0045	0.5560	0.0005	0.2900	0.000005	0.0775	0.1048	5.7775	0.0000	0.0002	0.0002	0.0006	0.0005	0.00375	0.00002
S-09-11 374.5-375.5	0.0004	0.0045	0.5360	0.0005	0.2800	0.000005	0.0750	0.1035	5.7450	0.0000	0.0002	0.0003	0.0006	0.0006	0.00350	0.00002
S-09-11 374.5-375.5	0.0004	0.0045	0.5160	0.0005	0.2700	0.000005	0.0725	0.1023	5.7125	0.0000	0.0002	0.0003	0.0006	0.0006	0.00325	0.00001
S-09-11 374.5-375.5	0.0003	0.0045	0.4960	0.0006	0.2600	0.000005	0.0700	0.1010	5.6800	0.0000	0.0002	0.0004	0.0006	0.0007	0.00300	0.00001
S-09-11 374.5-375.5	0.0003	0.0045	0.4960	0.0006	0.2600	0.000005	0.0700	0.1010	5.6800	0.0000	0.0002	0.0004	0.0006	0.0007	0.00300	0.00001
S-09-11 374.5-375.5	0.0003	0.0045	0.4960	0.0006	0.2600	0.000005	0.0700	0.1010	5.6800	0.0000	0.0002	0.0004	0.0006	0.0007	0.00300	0.00001
S-09-11 374.5-375.5	0.0002	0.0045	0.5140	0.0004	0.2600	0.000005	0.0550	0.1010	6.1150	0.0000	0.0003	0.0001	0.0007	0.0005	0.00150	0.00001
S-09-11 374.5-375.5	0.0002	0.0045	0.5200	0.0004	0.2600	0.000005	0.0500	0.1010	6.2600	0.0000	0.0003	0.0001	0.0007	0.0004	0.00100	0.00001
S-09-11 374.5-375.5	0.0002	0.0045	0.5180	0.0005	0.2650	0.000005	0.0550	0.1000	6.1875	0.0000	0.0003	0.0001	0.0007	0.0004	0.00125	0.00001
S-09-11 374.5-375.5	0.0002	0.0045	0.5160	0.0005	0.2700	0.000005	0.0600	0.0990	6.1150	0.0000	0.0003	0.0001	0.0007	0.0004	0.00150	0.00001
S-09-11 374.5-375.5	0.0002	0.0045	0.5140	0.0006	0.2750	0.000005	0.0650	0.0979	6.0425	0.0000	0.0003	0.0001	0.0007	0.0005	0.00175	0.00001
S-09-11 374.5-375.5	0.0002	0.0045	0.5120	0.0006	0.2800	0.000005	0.0700	0.0969	5.9700	0.0000	0.0003	0.0001	0.0007	0.0005	0.00200	0.00001
S-09-11 374.5-375.5	0.0002	0.0045	0.5200	0.0006	0.2775	0.000005	0.0700	0.0992	6.3950	0.0000	0.0003	0.0001	0.0007	0.0005	0.00200	0.00001
S-09-11 374.5-375.5	0.0002	0.0045	0.5280	0.0006	0.2750	0.000005	0.0700	0.1015	6.8200	0.0000	0.0003	0.0001	0.0007	0.0005	0.00200	0.00002
S-09-11 374.5-375.5	0.0002	0.0045	0.5360	0.0006	0.2725	0.000005	0.0700	0.1037	7.2450	0.0000	0.0002	0.0001	0.0007	0.0005	0.00200	0.00003
S-09-11 374.5-375.5	0.0002	0.0045	0.5440	0.0005	0.2700	0.000005	0.0700	0.1060	7.6700	0.0000	0.0002	0.0001	0.0007	0.0005	0.00200	0.00004
S-09-11 374.5-375.5	0.0002	0.0045	0.5335	0.0006	0.2675	0.000005	0.0650	0.1034	7.4375	0.0000	0.0002	0.0001	0.0007	0.0005	0.00175	0.00004
S-09-11 374.5-375.5	0.0001	0.0045	0.5230	0.0007	0.2650	0.000005	0.0600	0.1008	7.2050	0.0000	0.0002	0.0001	0.0007	0.0005	0.00150	0.00003
S-09-11 374.5-375.5	0.0001	0.0045	0.5125	0.0008	0.2625	0.000005	0.0550	0.0982	6.9725	0.0000	0.0001	0.0001	0.0007	0.0005	0.00125	0.00003
S-09-11 374.5-375.5	0.0001	0.0045	0.5020	0.0008	0.2600	0.000005	0.0500	0.0956	6.7400	0.0000	0.0001	0.0001	0.0007	0.0005	0.00100	0.00002
	0.000163	0.0045	0.5225	0.00063125	0.2705	0.000005	0.0645	0.1003175	6.84975	0.000010	0.000215	0.000050	0.000706	0.000486	0.001725	0.000023
HC18 Undefined																
S-09-12 144.5-145.5	0.0049	0.0052	6.3931	0.0050	0.8215	0.000021	2.8619	3.4733	52.8000	0.0001	0.0002	0.0001	0.0020	0.0013	0.00100	0.00001
S-09-12 144.5-145.5	0.0008	0.0052	4.7031	0.0053	1.3215	0.000006	2.2019	3.1733	64.7000	0.0001	0.0006	0.0001	0.0035	0.0029	0.00050	0.00001
S-09-12 144.5-145.5	0.0004	0.0052	2.7031	0.0019	1.0415	0.000006	0.9919	2.3933	39.0000	0.0001	0.0001	0.0001	0.0027	0.0031	0.00050	0.00001
S-09-12 144.5-145.5	0.0003	0.0052	1.8531	0.0017	0.9315	0.000006	0.5319	1.6233	24.3000	0.0001	0.0002	0.0001	0.0020	0.0034	0.00050	0.00001
S-09-12 144.5-145.5	0.0005	0.0052	1.4231	0.0015	0.8715	0.000006	0.3619	1.2333	18.2000	0.0001	0.0001	0.0001	0.0019	0.0037	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0052	1.2731	0.0011	0.9215	0.000006	0.2619	1.0733	16.9000	0.0001	0.0002	0.0001	0.0018	0.0039	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0052	1.0231	0.0010	0.8415	0.000006	0.2019	0.9633	15.0000	0.0001	0.0001	0.0001	0.0015	0.0036	0.00050	0.00005
S-09-12 144.5-145.5	0.0002	0.0052	1.0431	0.0010	0.9215	0.000006	0.2819	0.8843	13.3000	0.0001	0.0005	0.0001	0.0015	0.0044	0.00050	0.00001
S-09-12 144.5-145.5	0.0002	0.0052	0.8131	0.0009	0.7715	0.000006	0.2119	0.7313	13.1000	0.0001	0.0002	0.0001	0.0014	0.0040	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0052	0.7531	0.0009	0.7415	0.000006	0.1619	0.6663	11.1000	0.0001	0.0002	0.0001	0.0013	0.0040	0.00050	0.00001
S-09-12 144.5-145.5	0.0002	0.0052	0.7931	0.0008	0.7415	0.000006	0.1819	0.6593	11.9000	0.0001	0.0003	0.0001	0.0015	0.0044	0.00050	0.00001
S-09-12 144.5-145.5	0.0002	0.0052	0.7031	0.0009	0.7415	0.000006	0.1419	0.5433	9.7500	0.0001	0.0002	0.0001	0.0011	0.0047	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0052	0.6631	0.0011	0.7915	0.000006	0.1119	0.4673	8.9000	0.0001	0.0003	0.0001	0.0016	0.0044	0.00050	0.00001
S-09-12 144.5-145.5	0.0002	0.0202	0.6331	0.0006	0.7715	0.000006	0.0919	0.5183	10.4000	0.0001	0.0004	0.0001	0.0013	0.0043	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0047	0.6241	0.0010	0.8215	0.000021	0.1119	0.5063	10.4000	0.0001	0.0002	0.0001	0.0014	0.0048	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0047	0.5391	0.0008	0.7115	0.000006	0.0919	0.4623	11.2000	0.0001	0.0002	0.0001	0.0015	0.0047	0.00100	0.00001
S-09-12 144.5-145.5	0.0001	0.0047	0.5131	0.0007	0.7415	0.000006	0.0919	0.4643	10.9000	0.0001	0.0002	0.0001	0.0015	0.0043	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0112	0.5051	0.0007	0.7615	0.000006	0.0819	0.4513	11.5000	0.0001	0.0002	0.0001	0.0016	0.0042	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0192	0.4731	0.0007	0.6815	0.000031	0.1119	0.4273	10.8000	0.0001	0.0002	0.0001	0.0014	0.0039	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0047	0.4511	0.0007	0.6815	0.000006	0.1219	0.3843	10.2000	0.0001	0.0002	0.0001	0.0014	0.0040	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0047	0.5091	0.0005	0.8015	0.000006	0.1019	0.4843	15.5000	0.0001	0.0002	0.0002	0.0016	0.0042	0.00050	0.00001
S-09-12 144.5-145.5	0.0002	0.0047	0.3971	0.0006	0.6215	0.000011	0.0319	0.3523	9.9900	0.0001	0.0001	0.0001	0.0013	0.0037	0.00050	0.00001
S-09-12 144.5-145.5	0.0002	0.0182	0.4721	0.0006	0.7415	0.000006	0.1219	0.3783	10.5000	0.0001	0.0005	0.0001	0.0015	0.0037	0.00050	0.00001
S-09-12 144.5-145.5	0.0007	0.0047	0.4131	0.0006	0.6615	0.000031	0.1019	0.3253	9.1300	0.0001	0.0003	0.0001	0.0015	0.0033	0.00050	0.00003
S-09-12 144.5-145.5	0.0001	0.0047	0.4051	0.0005	0.6515	0.000006	0.0919	0.2213	8.2000	0.0001	0.0006	0.0001	0.0014	0.0036	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0212	0.4061	0.0003	0.7115	0.000006	0.0619	0.3163	9.7200	0.0001	0.0000	0.0001	0.0012	0.0037	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0047	0.3721	0.0003	0.6615	0.000006	0.0719	0.2753	8.4700	0.0001	0.0001	0.0001	0.0013	0.0036	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0047	0.3451	0.0006	0.6015	0.000006	0.0619	0.2493	8.9800	0.0001	0.0000	0.0001	0.0007	0.0041	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0047	0.3551	0.0006	0.6815	0.000006	0.0619	0.2743	9.9700	0.0001	0.0002	0.0001	0.0012	0.0037	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0047	0.3361	0.0001	0.5715	0.000006	0.0619	0.2273	7.9100	0.0001	0.0005	0.0001	0.0009	0.0039	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0047	0.3191	0.0005	0.6115	0.000006	0.0619	0.2273	8.4700	0.0001	0.0001	0.0001	0.0009	0.0040	0.00050	0.00001
S-09-12 144.5-145.5	0.0002	0.0047	0.3251	0.0000	0.6515	0.000006	0.0619	0.2443	9.0300	0.0001	0.0001	0.0001	0.0013	0.0034	0.00100	0.00001
S-09-12 144.5-145.5	0.0002	0.0122	0.3201	0.0005	0.6215	0.000006	0.0719	0.2033	8.1300	0.0001	0.0001	0.0001	0.0009	0.0034	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0047	0.3341	0.0004	0.6215	0.000006	0.0919	0.2103	8.2200	0.0001	0.0003	0.0001	0.0009	0.0038	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0102	0.3421	0.0003	0.6415	0.000006	0.0919	0.2133	9.3100	0.0001	0.0008	0.0001	0.0007	0.0038	0.00050	0.00001
S-09-12 144.5-145.5	0.0008	0.0047	0.3331	0.0003	0.6515	0.000006	0.0819	0.2113	9.2700	0.0001	0.0003	0.0001	0.0009	0.0036	0.00050	0.00001
S-09-12 144.5-145.5	0.0006	0.0047	0.3321	0.0002	0.6715	0.000006	0.0819	0.2213	8.6600	0.0001	0.0003	0.0001	0.0007	0.0036	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0047	0.3001	0.0005	0.5915	0.000006	0.0619	0.1953	8.7300	0.0001	0.0001	0.0001	0.0008	0.0036	0.00300	0.00001
S-09-12 144.5-145.5	0.0006	0.0047	0.2831	0.0003	0.5515	0.000006	0.0619	0.1763	8.4600	0.0001	0.0000	0.0001	0.0008	0.0037	0.00100	0.00001
S-09-12 144.5-145.5	0.0009	0.0102	0.2771	0.0006	0.5515	0.000006	0.0619	0.1833	8.1400	0.0001	0.0002	0.0002	0.0007	0.0031	0.00300	0.00001
S-09-12 144.5-145.5	0.0001	0.0282	0.2881	0.0000	0.5315	0.000006	0.0919	0.1923	8.4300	0.0001	0.0002	0.0001	0.0008	0.0031	0.01000	0.00002
S-09-12 144.5-145.5	0.0003	0.0182	0.2851	0.0002	0.5815	0.000006	0.0619	0.1843	8.5600	0.0001	0.0002	0.0001	0.0010	0.0031	0.00100	0.00001
S-09-12 144.5-145.5	0.0001	0.0282	0.2561	0.0006	0.4815	0.000006	0.0419	0.1653	6.9800	0.0001	0.0002	0.0001	0.0008	0.0031	0.00100	0.00001
S-09-12 144.5-145.5	0.0001	0.0047	0.2401	0.0002	0.5315	0.000006	0.0419	0.1703	7.5700	0.0001	0.0001	0.0001	0.0008	0.0031	0.00100	0.00001

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Calculated Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
S-09-12 144.5-145.5	18	44	9-Dec-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	480	357	40	85	7.39	#N/A	3.5	22.8	20	0.1
S-09-12 144.5-145.5	18	45	16-Dec-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	470	359	45	86	7.43	#N/A	3.8	24.2	23	0.1
S-09-12 144.5-145.5	18	46	23-Dec-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	470	361	41	85	7.54	#N/A	4.7	25.1	20	0.1
S-09-12 144.5-145.5	18	47	30-Dec-10	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	475	358	40	77	7.43	#N/A	5.3	24.2	23	0.1
S-09-12 144.5-145.5	18	48	6-Jan-11	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	475	360	39	67	7.47	#N/A	4.3	23.3	22	0.1
S-09-12 144.5-145.5	18	49	13-Jan-11	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	475	367	38	66	7.52	#N/A	3.4	22.5	21	0.1
S-09-12 144.5-145.5	18	50	20-Jan-11	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	470	361	36	73	7.38	#N/A	3.6	23.1	21	0.1
S-09-12 144.5-145.5	18	51	27-Jan-11	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	470	333	33	67	7.47	#N/A	3.9	23.6	20	0.1
S-09-12 144.5-145.5	18	52	3-Feb-11	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	470	339	35	62	7.39	#N/A	3.2	23.0	20	0.1
S-09-12 144.5-145.5	18	53	10-Feb-11	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	480	345	38	66	7.51	#N/A	2.5	22.3	19	0.1
S-09-12 144.5-145.5	18	54	17-Feb-11	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	485	355	37	69	7.39	#N/A	2.9	22.8	21	0.1
S-09-12 144.5-145.5	18	55	24-Feb-11	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	460	342	36	83	7.48	#N/A	3.4	23.2	23	0.1
S-09-12 144.5-145.5	18	56	3-Mar-11	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	480	333	36	79	7.37	#N/A	3.1	23.1	22	0.1
S-09-12 144.5-145.5	18	57	10-Mar-11	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	485	336	37	81	7.52	#N/A	2.8	23.1	20	0.1
S-09-12 144.5-145.5	18	58	17-Mar-11	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	480	328	37	81	7.43	#N/A	3.0	24.4	17	0.1
S-09-12 144.5-145.5	18	59	24-Mar-11	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	485	338	37	96	7.44	#N/A	3.1	25.8	13	0.1
S-09-12 144.5-145.5	18	60	31-Mar-11	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	480	318	37	80	7.58	#N/A	3.6	25.8	15	0.1
S-09-12 144.5-145.5	18	61	7-Apr-11	Sulphurets	Upper Panel	Undefined	PMON	CL	3	IARG	1	Drillcore		Water	500	480	307	36	83	7.57	#N/A	4.1	25.8	16	0.1
																	334.126	36.495	78.119	7.468	#N/A	3.1515	23.917823	18.464516	0.1
HC19 Undefined																									
S-09-12 172.5-173.5	19	0	4-Feb-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	370	178	63.8	159	7.49	#N/A	2.6	25.4	70	0.9
S-09-12 172.5-173.5	19	1	11-Feb-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	251	80	215	7.42	#N/A	2.1	21.7	68	0.6
S-09-12 172.5-173.5	19	2	18-Feb-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	505	282	96.4	212	7.24	#N/A	3.7	20.5	93	0.1
S-09-12 172.5-173.5	19	3	25-Feb-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	500	299	71	169	7.32	#N/A	3.1	18.2	70	0.1
S-09-12 172.5-173.5	19	4	4-Mar-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	296	54.5	134	7.28	#N/A	2.6	20.0	45	0.1
S-09-12 172.5-173.5	19	5	11-Mar-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	351	51.2	120	7.29	#N/A	2.8	17.7	37	0.1
S-09-12 172.5-173.5	19	6	18-Mar-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	505	354	46.6	111	7.35	#N/A	3.0	17.3	32	0.1
S-09-12 172.5-173.5	19	7	25-Mar-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	520	331	46.7	105	7.31	#N/A	3.5	20.3	33	0.1
S-09-12 172.5-173.5	19	8	1-Apr-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	475	346	40.6	94	7.36	#N/A	3.1	16.9	30	0.1
S-09-12 172.5-173.5	19	9	8-Apr-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	500	312	38.8	93	7.27	#N/A	2.6	16.7	28	0.1
S-09-12 172.5-173.5	19	10	15-Apr-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	510	306	39.2	94	7.3	#N/A	3.7	17.5	29	0.1
S-09-12 172.5-173.5	19	11	22-Apr-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	460	285	40.5	101	7.3	#N/A	4.4	17.0	27	0.1
S-09-12 172.5-173.5	19	12	29-Apr-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	520	294	31.5	89	7.4	#N/A	2.8	16.3	27	0.1
S-09-12 172.5-173.5	19	13	6-May-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	475	314	39.8	92	7.24	#N/A	4.6	17.6	27	0.1
S-09-12 172.5-173.5	19	14	13-May-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	475	334	39.3	89	7.34	#N/A	3.4	15.3	27	0.1
S-09-12 172.5-173.5	19	15	20-May-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	520	342	36.6	87	7.32	#N/A	4.1	14.5	25	0.1
S-09-12 172.5-173.5	19	16	27-May-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	520	349	39.6	84	7.36	#N/A	6.4	18.0	18	0.1
S-09-12 172.5-173.5	19	17	3-Jun-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	520	324	36.3	80	7.26	#N/A	3.3	15.5	18	0.1
S-09-12 172.5-173.5	19	18	10-Jun-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	520	335	34.9	79	7.38	#N/A	4.9	15.5	18	0.1
S-09-12 172.5-173.5	19	19	17-Jun-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	490	311	36.4	83	7.42	#N/A	4.0	15.5	20	0.1
S-09-12 172.5-173.5	19	20	24-Jun-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	520	409	38.9	86	7.35	#N/A	2.6	14.9	21	0.1
S-09-12 172.5-173.5	19	21	1-Jul-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	490	419	38	85	7.32	#N/A	2.7	13.7	21	0.1
S-09-12 172.5-173.5	19	22	8-Jul-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	520	358	33.9	92	7.23	#N/A	2.6	15.6	17	0.1
S-09-12 172.5-173.5	19	23	15-Jul-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	520	350	36.7	91	7.25	#N/A	3.9	14.9	17	0.1
S-09-12 172.5-173.5	19	24	22-Jul-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	520	357	34.8	86	7.14	#N/A	3.5	14.9	12	0.1
S-09-12 172.5-173.5	19	25	29-Jul-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	520	351	39	83	7.29	#N/A	3.8	15.1	23	0.1
S-09-12 172.5-173.5	19	26	5-Aug-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	416	40.7	89	7.29	#N/A	2.9	14.1	22	0.1
S-09-12 172.5-173.5	19	27	12-Aug-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	414	36.2	85	7.38	#N/A	3.5	14.1	19	0.1
S-09-12 172.5-173.5	19	28	19-Aug-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	520	393	37.9	87	7.42	#N/A	4.6	14.5	22	0.1
S-09-12 172.5-173.5	19	29	26-Aug-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	500	365	37.5	89	7.19	#N/A	2.5	13.5	21	0.1
S-09-12 172.5-173.5	19	30	2-Sep-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	409	35.9	73	7.31	#N/A	3.7	13.7	30	0.1
S-09-12 172.5-173.5	19	31	9-Sep-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	480	372	37.6	93	7.02	#N/A	4.8	13.4	29	0.1
S-09-12 172.5-173.5	19	32	16-Sep-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	505	363	34.7	79	7.07	#N/A	3.0	12.5	30	0.1
S-09-12 172.5-173.5	19	33	23-Sep-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	342	39	80	7.17	#N/A	2.7	13.1	31	0.1
S-09-12 172.5-173.5	19	34	30-Sep-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	460	351	44.2	78	7.16	#N/A	2.9	14.0	37	0.1
S-09-12 172.5-173.5	19	35	7-Oct-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	465	338	41.6	101	7.16	#N/A	3.2	15.0	33	0.1
S-09-12 172.5-173.5	19	36	14-Oct-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	445	329	44.1	98	7.16	#N/A	3.3	13.5	31	0.1
S-09-12 172.5-173.5	19	37	21-Oct-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	450	376	41.2	96	7.18	#N/A	3.2	14.6	30	0.1
S-09-12 172.5-173.5	19	38	28-Oct-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	445	357	36.2	90	7.16	#N/A	3.3	15.1	31	0.1
S-09-12 172.5-173.5	19	39	4-Nov-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	450	403	37.6	98	7.29	#N/A	2.4	13.2	32	0.1
S-09-12 172.5-173.5	19	40	11-Nov-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	450	356	40.4	91	7.37	#N/A	2.9	14.7	26	0.1
S-09-12 172.5-173.5	19	41	18-Nov-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	470	372	40.1	79	7.43	#N/A	3.3	14.3	23	0.1
S-09-12 172.5-173.5	19	42	25-Nov-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	475	338	38.3	91	7.05	#N/A	3.5	15.9	24	0.1
S-09-12 172.5-173.5	19	43	2-Dec-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	515	351	43.7	82	7.25	#N/A	2.9	15.7	20	0.1
S-09-12 172.5-173.5	19	44	9-Dec-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	490	359	36.9	84	7.09	#N/A	3.6	15.2	23	0.1
S-09-12 172.5-173.5	19	45	16-Dec-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	358	44.1	88	7.24	#N/A	4.3	16.0	28	0.1

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
S-09-12 144.5-145.5	0.03	0.0817	0.0008	0.0003	0.0142	0.0000	0.0000	0.0018	0.0000	15.6048	0.0008	0.0001	0.0013	0.0117	0.0012	0.0010	0.4168	0.0326	0.000005	0.0067
S-09-12 144.5-145.5	0.03	0.0876	0.0008	0.0004	0.0142	0.0000	0.0000	0.0021	0.0000	17.5048	0.0003	0.0001	0.0011	0.0377	0.0001	0.0005	0.4558	0.0298	0.000005	0.0049
S-09-12 144.5-145.5	0.03	0.0939	0.0008	0.0004	0.0150	0.0000	0.0000	0.0024	0.0000	16.1048	0.0003	0.0001	0.0011	0.0207	0.0005	0.0005	0.4168	0.0321	0.000005	0.0065
S-09-12 144.5-145.5	0.03	0.0784	0.0007	0.0004	0.0151	0.0000	0.0000	0.0018	0.0000	15.6048	0.0006	0.0001	0.0008	0.0057	0.0007	0.0005	0.3998	0.0310	0.000005	0.0069
S-09-12 144.5-145.5	0.03	0.0774	0.0007	0.0004	0.0147	0.0000	0.0000	0.0018	0.0000	15.2548	0.0004	0.0001	0.0008	0.0067	0.0003	0.0005	0.3833	0.0322	0.000005	0.0070
S-09-12 144.5-145.5	0.03	0.0765	0.0007	0.0003	0.0143	0.0000	0.0000	0.0017	0.0000	14.9048	0.0003	0.0001	0.0008	0.0077	0.0000	0.0005	0.3668	0.0333	0.000005	0.0071
S-09-12 144.5-145.5	0.03	0.0731	0.0007	0.0003	0.0136	0.0000	0.0000	0.0018	0.0000	13.9548	0.0003	0.0001	0.0010	0.0067	0.0000	0.0005	0.3438	0.0307	0.000005	0.0055
S-09-12 144.5-145.5	0.03	0.0698	0.0007	0.0003	0.0129	0.0000	0.0000	0.0019	0.0000	13.0048	0.0003	0.0001	0.0011	0.0057	0.0000	0.0005	0.3208	0.0280	0.000005	0.0039
S-09-12 144.5-145.5	0.03	0.0721	0.0006	0.0004	0.0137	0.0000	0.0000	0.0022	0.0000	13.8548	0.0003	0.0001	0.0009	0.0062	0.0000	0.0005	0.3338	0.0298	0.000005	0.0027
S-09-12 144.5-145.5	0.03	0.0745	0.0006	0.0004	0.0145	0.0000	0.0000	0.0024	0.0000	14.7048	0.0003	0.0001	0.0007	0.0067	0.0000	0.0005	0.3468	0.0316	0.000005	0.0015
S-09-12 144.5-145.5	0.03	0.0763	0.0006	0.0004	0.0141	0.0000	0.0000	0.0024	0.0000	14.4048	0.0003	0.0002	0.0006	0.0067	0.0000	0.0005	0.3343	0.0311	0.000005	0.0048
S-09-12 144.5-145.5	0.03	0.0781	0.0006	0.0004	0.0137	0.0000	0.0000	0.0024	0.0000	14.1048	0.0003	0.0003	0.0005	0.0067	0.0000	0.0005	0.3218	0.0305	0.000005	0.0081
S-09-12 144.5-145.5	0.03	0.0736	0.0005	0.0003	0.0141	0.0000	0.0000	0.0018	0.0000	14.2048	0.0003	0.0002	0.0006	0.0137	0.0004	0.0005	0.3223	0.0316	0.000005	0.0074
S-09-12 144.5-145.5	0.03	0.0692	0.0005	0.0002	0.0146	0.0000	0.0000	0.0012	0.0000	14.3048	0.0003	0.0001	0.0007	0.0207	0.0007	0.0005	0.3228	0.0326	0.000005	0.0067
S-09-12 144.5-145.5	0.03	0.0703	0.0005	0.0003	0.0144	0.0000	0.0000	0.0012	0.0000	14.4548	0.0003	0.0001	0.0005	0.0142	0.0004	0.0005	0.3193	0.0319	0.000005	0.0076
S-09-12 144.5-145.5	0.03	0.0715	0.0006	0.0003	0.0142	0.0000	0.0000	0.0012	0.0000	14.6048	0.0003	0.0001	0.0003	0.0077	0.0000	0.0005	0.3158	0.0311	0.000005	0.0084
S-09-12 144.5-145.5	0.03	0.0734	0.0006	0.0005	0.0143	0.0000	0.0000	0.0011	0.0000	14.3548	0.0003	0.0001	0.0003	0.0212	0.0000	0.0005	0.3263	0.0357	0.000013	0.0055
S-09-12 144.5-145.5	0.03	0.0754	0.0006	0.0006	0.0145	0.0000	0.0000	0.0010	0.0000	14.1048	0.0003	0.0001	0.0003	0.0347	0.0000	0.0005	0.3368	0.0402	0.000020	0.0026
	0.030645	0.073457	0.000553	0.000376	0.014214	0.000010	0.000005	0.001704	0.000005	14.309839	0.000251	0.000116	0.000524	0.013811	0.000149	0.000503	0.328006	0.032624	0.000007	0.005543
HC19 Undefined																				
S-09-12 172.5-173.5	0.20	0.0965	0.0152	0.0014	0.0757	0.0000	0.0000	0.0100	0.0000	17.7000	0.0003	0.0004	0.0010	0.0050	0.0164	0.0080	4.7600	0.1690	0.000005	0.0014
S-09-12 172.5-173.5	0.23	0.0596	0.0157	0.0015	0.0577	0.0000	0.0000	0.0150	0.0000	21.4000	0.0003	0.0004	0.0003	0.0050	0.0378	0.0100	6.4300	0.2240	0.000005	0.0023
S-09-12 172.5-173.5	0.22	0.0512	0.0140	0.0018	0.0507	0.0000	0.0000	0.0147	0.0001	27.5000	0.0003	0.0007	0.0010	0.0050	0.0456	0.0120	6.7500	0.4310	0.000005	0.0023
S-09-12 172.5-173.5	0.18	0.0376	0.0115	0.0016	0.0454	0.0000	0.0000	0.0086	0.0001	21.0000	0.0003	0.0006	0.0006	0.0050	0.0422	0.0090	4.5300	0.3610	0.000005	0.0009
S-09-12 172.5-173.5	0.14	0.0413	0.0105	0.0013	0.0468	0.0000	0.0000	0.0080	0.0002	16.6000	0.0003	0.0005	0.0003	0.0050	0.0423	0.0070	3.2000	0.3230	0.000030	0.0011
S-09-12 172.5-173.5	0.13	0.0383	0.0105	0.0012	0.0409	0.0000	0.0000	0.0060	0.0002	15.9000	0.0003	0.0005	0.0003	0.0050	0.0399	0.0070	2.8000	0.3270	0.000005	0.0012
S-09-12 172.5-173.5	0.11	0.0347	0.0087	0.0012	0.0490	0.0000	0.0000	0.0050	0.0002	14.8000	0.0003	0.0003	0.0003	0.0050	0.0389	0.0060	2.3700	0.3340	0.000005	0.0010
S-09-12 172.5-173.5	0.11	0.0443	0.0108	0.0013	0.0497	0.0000	0.0000	0.0050	0.0000	15.2000	0.0008	0.0003	0.0006	0.0050	0.0435	0.0050	2.1200	0.3200	0.000005	0.0011
S-09-12 172.5-173.5	0.09	0.0357	0.0080	0.0011	0.0484	0.0000	0.0000	0.0030	0.0003	13.3000	0.0008	0.0003	0.0009	0.0050	0.0417	0.0040	1.7900	0.3200	0.000005	0.0012
S-09-12 172.5-173.5	0.08	0.0356	0.0085	0.0011	0.0497	0.0000	0.0000	0.0030	0.0003	13.0000	0.0003	0.0003	0.0009	0.0050	0.0464	0.0040	1.5600	0.3420	0.000005	0.0014
S-09-12 172.5-173.5	0.08	0.0370	0.0076	0.0012	0.0446	0.0000	0.0000	0.0030	0.0004	13.2000	0.0006	0.0003	0.0017	0.0050	0.0546	0.0030	1.4800	0.3440	0.000005	0.0017
S-09-12 172.5-173.5	0.07	0.0303	0.0069	0.0012	0.0391	0.0000	0.0000	0.0020	0.0003	13.9000	0.0006	0.0003	0.0013	0.0050	0.0412	0.0040	1.4400	0.3170	0.000005	0.0016
S-09-12 172.5-173.5	0.06	0.0272	0.0069	0.0011	0.0468	0.0000	0.0000	0.0040	0.0005	10.9000	0.0005	0.0003	0.0017	0.0050	0.0454	0.0030	1.0800	0.2970	0.000005	0.0010
S-09-12 172.5-173.5	0.06	0.0237	0.0068	0.0010	0.0402	0.0000	0.0000	0.0020	0.0006	13.8000	0.0007	0.0003	0.0010	0.0050	0.0529	0.0030	1.3200	0.4240	0.000005	0.0013
S-09-12 172.5-173.5	0.03	0.0261	0.0061	0.0008	0.0371	0.0000	0.0000	0.0023	0.0005	13.8000	0.0009	0.0003	0.0009	0.0010	0.0500	0.0030	1.1900	0.3580	0.000005	0.0016
S-09-12 172.5-173.5	0.03	0.0220	0.0057	0.0009	0.0327	0.0000	0.0000	0.0029	0.0005	12.9000	0.0003	0.0003	0.0003	0.0010	0.0475	0.0030	1.0500	0.3480	0.000005	0.0015
S-09-12 172.5-173.5	0.03	0.0198	0.0056	0.0009	0.0349	0.0000	0.0000	0.0029	0.0007	14.1000	0.0003	0.0003	0.0003	0.0010	0.0507	0.0030	1.0700	0.4210	0.000005	0.0010
S-09-12 172.5-173.5	0.03	0.0282	0.0052	0.0010	0.0378	0.0000	0.0000	0.0028	0.0007	13.0000	0.0003	0.0002	0.0003	0.0010	0.0551	0.0020	0.9100	0.3850	0.000005	0.0018
S-09-12 172.5-173.5	0.03	0.0192	0.0046	0.0008	0.0336	0.0000	0.0000	0.0028	0.0008	12.6000	0.0005	0.0003	0.0017	0.0030	0.0526	0.0020	0.8380	0.3830	0.000005	0.0015
S-09-12 172.5-173.5	0.03	0.0259	0.0067	0.0008	0.0330	0.0000	0.0000	0.0028	0.0009	13.2000	0.0003	0.0003	0.0010	0.0260	0.0493	0.0020	0.8390	0.4050	0.000005	0.0031
S-09-12 172.5-173.5	0.03	0.0176	0.0053	0.0006	0.0299	0.0000	0.0000	0.0039	0.0011	14.2000	0.0003	0.0003	0.0008	0.0030	0.0540	0.0020	0.8530	0.4310	0.000005	0.0021
S-09-12 172.5-173.5	0.03	0.0157	0.0046	0.0006	0.0289	0.0000	0.0000	0.0017	0.0011	13.9000	0.0003	0.0003	0.0003	0.0040	0.0471	0.0020	0.8140	0.4320	0.000005	0.0011
S-09-12 172.5-173.5	0.06	0.0207	0.0044	0.0008	0.0336	0.0000	0.0000	0.0037	0.0013	12.3000	0.0008	0.0003	0.0007	0.0100	0.0494	0.0040	0.7950	0.4580	0.000005	0.0010
S-09-12 172.5-173.5	0.03	0.0201	0.0038	0.0007	0.0366	0.0000	0.0000	0.0040	0.0014	13.5000	0.0007	0.0004	0.0011	0.0060	0.0491	0.0020	0.7230	0.4180	0.000005	0.0015
S-09-12 172.5-173.5	0.03	0.0135	0.0035	0.0007	0.0306	0.0000	0.0000	0.0027	0.0015	12.9000	0.0006	0.0004	0.0010	0.0080	0.0476	0.0020	0.6590	0.4080	0.000005	0.0017
S-09-12 172.5-173.5	0.03	0.0160	0.0034	0.0002	0.0328	0.0000	0.0000	0.0027	0.0015	14.5000	0.0003	0.0003	0.0003	0.0040	0.0467	0.0020	0.6650	0.3980	0.000005	0.0021
S-09-12 172.5-173.5	0.03	0.0131	0.0032	0.0004	0.0291	0.0000	0.0000	0.0016	0.0017	15.2000	0.0003	0.0004	0.0005	0.0090	0.0480	0.0020	0.6770	0.4460	0.000005	0.0008
S-09-12 172.5-173.5	0.03	0.0168	0.0028	0.0007	0.0310	0.0000	0.0000	0.0018	0.0013	13.6000	0.0009	0.0002	0.0003	0.0010	0.0366	0.0020	0.5160	0.3340	0.000005	0.0014
S-09-12 172.5-173.5	0.03	0.0275	0.0029	0.0007	0.0304	0.0000	0.0000	0.0027	0.0019	14.2000	0.0003	0.0003	0.0006	0.0280	0.0511	0.0020	0.5740	0.3760	0.000005	0.0016
S-09-12 172.5-173.5	0.03	0.0135	0.0026	0.0005	0.0291	0.0000	0.0000	0.0015	0.0017	14.2000	0.0007	0.0003	0.0009	0.0010	0.0426	0.0020	0.5160	0.3650	0.000005	0.0013
S-09-12 172.5-173.5	0.03	0.0145	0.0021	0.0005	0.0302	0.0000	0.0000	0.0017	0.0016	13.6000	0.0003	0.0002	0.0013	0.0010	0.0434	0.0020	0.4740	0.3180	0.000005	0.0017
S-09-12 172.5-173.5	0.03	0.0175	0.0023	0.0007	0.0302	0.0000	0.0000	0.0026	0.0019	14.3000	0.0006	0.0003	0.0014	0.0040	0.0493	0.0020	0.4730	0.3650	0.000005	0.0018
S-09-12 172.5-173.5	0.03	0.0131	0.0024	0.0005	0.0266	0.0000	0.0000	0.0015	0.0018	13.2000	0.0003	0.0003	0.0010	0.0080	0.0444	0.0020	0.4390	0.3140	0.000005	0.0014
S-09-12 172.5-173.5	0.03	0.0130	0.0023	0.0006	0.0305	0.0000	0.0000	0.0018	0.0017	14.9000	0.0005	0.0002	0.0005	0.0010	0.0477	0.0020	0.4730	0.2900	0.000005	0.0022
S-09-12 172.5-173.5	0.03	0.0127	0.0021	0.0005	0.0266	0.0000	0.0000	0.0022	0.0017	16.9000	0.0003	0.0004	0.0008	0.0040	0.0409	0.0020	0.4950	0.2810	0.000005	0.0026
S-09-12 172.5-173.5	0.03	0.0116	0.0024	0.0005	0.0275	0.0000	0.0000	0.0024	0.0017	15.9000	0.0003	0.0003	0.0007	0.0070	0.0415	0.0010	0.4720	0.2640	0.000005	0.0034
S-09-12 172.5-173.5	0.03	0.0131	0.0024	0.0003	0.0264	0.0000	0.0000	0.0024	0.0016	16.8000	0.0003	0.0002	0.0014	0.0100	0.0345	0.0020	0.5080	0.2540	0.000005	0.0032
S-09-12 172.5-173.5	0.03	0.0118	0.0023	0.0003	0.0265	0.0000	0.0000	0.0022	0.0019	15.8000	0.0003	0.0002	0.0011	0.0130	0.0361	0.0020	0.4340	0.2440	0.000005	0.0022
S-09-12 172.5-173.5	0.03	0.0133	0.0018	0.0004	0.0349	0.0000	0.0000	0.0019	0.0017	13.9000	0.0003	0.0003	0.0003	0.0010	0.0391	0.0020	0.3810	0.2050	0.000005	0.0026
S-09-12 172.5-173.5	0.03	0.0125	0.0014	0.0002	0.0266	0.0000	0.0000	0.0018	0.0016	14.4000	0.0003	0.0002	0.0006	0.0040	0.0247	0.0020	0.3970	0.1620	0.000005	0.0023
S-09-12 172.5-173.5	0.03	0.0129	0.0017	0.0004	0.0252	0.0000	0.0000	0.0013	0.0016	15.5000	0.0003	0.0002	0.0008	0.0090	0.0315	0.0020	0.4300	0.1720	0.000005	0.0019
S-09-12 172.5-173.5	0.03	0.0089	0.0017	0.0005	0.0256	0.0000	0.0000	0.0028	0.0022	15.4000	0.0003	0.0002	0.0003	0.0090	0.0297	0.0020	0.4160	0.2080	0.000010	0.0015
S-09-12 172.5-173.5	0.03	0.0077	0.0017	0.0006	0.0290	0.0000	0.0000	0.0017	0.0028	14.7000	0.0006	0.0003	0.0008	0.0010	0.0331	0.0020	0.3570	0.2410	0.000005	0.0017
S-09-12 172.5-173.5	0.03	0.0095	0.0019	0.0004	0.0308	0.0000	0.0000	0.0022	0.0025	16.8000	0.0003	0.0003	0.0005	0.0070	0.0285	0.0020	0.3960	0.2280	0.000005	0.0006
S-09-12 172.5-173.5	0.03	0.0086	0.0018	0.0004	0.0291	0.0000	0.0000	0.0018	0.0024	14.2000	0.0007	0.0004	0.0055	0.0060	0.0291	0.0010	0.3420	0.1850	0.000005	0.0021
S-09-12 172.5-173.5	0.03	0.0107	0.0017	0.0006	0.0266	0.0000	0.0000	0.0019	0.0025	17.0000	0.0003	0.0002	0.0017	0.0310	0.0279	0.0010	0.4040	0.1860	0.000005	0.0012

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulfur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr) Dissolved (mg/L)
S-09-12 144.5-145.5	0.0001	0.0047	0.2551	0.0004	0.4915	0.000006	0.0719	0.1673	7.1500	0.0001	0.0001	0.0001	0.0007	0.0030	0.00100	0.00001
S-09-12 144.5-145.5	0.0001	0.0047	0.2681	0.0001	0.5515	0.000006	0.0719	0.1833	8.2600	0.0001	0.0004	0.0001	0.0007	0.0031	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0302	0.2801	0.0002	0.6115	0.000006	0.0619	0.1693	8.7200	0.0001	0.0002	0.0001	0.0007	0.0032	0.00200	0.00001
S-09-12 144.5-145.5	0.0003	0.0262	0.2431	0.0002	0.5315	0.000006	0.0619	0.1603	7.8400	0.0001	0.0001	0.0001	0.0008	0.0028	0.00400	0.00001
S-09-12 144.5-145.5	0.0002	0.0154	0.2301	0.0004	0.5165	0.000006	0.0769	0.1528	7.9050	0.0001	0.0003	0.0001	0.0008	0.0027	0.00225	0.00001
S-09-12 144.5-145.5	0.0001	0.0047	0.2171	0.0006	0.5015	0.000006	0.0919	0.1453	7.9700	0.0001	0.0005	0.0001	0.0008	0.0026	0.00050	0.00001
S-09-12 144.5-145.5	0.0002	0.0047	0.2076	0.0004	0.4665	0.000006	0.0719	0.1348	7.0950	0.0001	0.0004	0.0001	0.0007	0.0024	0.00050	0.00001
S-09-12 144.5-145.5	0.0004	0.0047	0.1981	0.0002	0.4315	0.000006	0.0519	0.1243	6.2200	0.0001	0.0004	0.0001	0.0007	0.0022	0.00050	0.00001
S-09-12 144.5-145.5	0.0006	0.0224	0.2111	0.0002	0.4765	0.000006	0.0519	0.1323	6.4100	0.0001	0.0002	0.0001	0.0005	0.0021	0.00050	0.00001
S-09-12 144.5-145.5	0.0007	0.0402	0.2241	0.0002	0.5215	0.000006	0.0519	0.1403	6.6000	0.0001	0.0000	0.0001	0.0003	0.0020	0.00050	0.00001
S-09-12 144.5-145.5	0.0006	0.0224	0.2136	0.0001	0.5115	0.000006	0.0519	0.1378	6.4750	0.0001	0.0000	0.0001	0.0005	0.0022	0.00050	0.00001
S-09-12 144.5-145.5	0.0004	0.0047	0.2031	0.0000	0.5015	0.000006	0.0519	0.1353	6.3500	0.0001	0.0000	0.0001	0.0006	0.0024	0.00050	0.00001
S-09-12 144.5-145.5	0.0004	0.0109	0.2021	0.0001	0.4965	0.000006	0.0519	0.1348	6.2650	0.0001	0.0001	0.0001	0.0006	0.0023	0.00175	0.00001
S-09-12 144.5-145.5	0.0004	0.0172	0.2011	0.0001	0.4915	0.000006	0.0519	0.1343	6.1800	0.0000	0.0002	0.0001	0.0006	0.0021	0.00300	0.00001
S-09-12 144.5-145.5	0.0004	0.0172	0.1951	0.0002	0.4765	0.000006	0.0419	0.1343	6.5100	0.0001	0.0002	0.0001	0.0006	0.0022	0.00175	0.00001
S-09-12 144.5-145.5	0.0003	0.0172	0.1891	0.0002	0.4615	0.000006	0.0319	0.1343	6.8400	0.0001	0.0002	0.0001	0.0006	0.0023	0.00050	0.00001
S-09-12 144.5-145.5	0.0002	0.0109	0.1921	0.0003	0.4565	0.000006	0.0419	0.1303	6.9250	0.0001	0.0002	0.0001	0.0006	0.0022	0.00050	0.00001
S-09-12 144.5-145.5	0.0001	0.0047	0.1951	0.0005	0.4515	0.000006	0.0519	0.1263	7.0100	0.0001	0.0001	0.0001	0.0006	0.0022	0.00050	0.00001
	0.000391	0.016761	0.202615	0.000189	0.484452	0.000006	0.047935	0.133958	6.5565	0.000083	0.000133	0.000050	0.000562	0.002219	0.001003	0.000005
HC19 Undefined																
S-09-12 172.5-173.5	0.0012	0.0050	7.2000	0.0057	0.6600	0.000005	5.5400	1.9600	25.2000	0.0001	0.0002	0.0001	0.0002	0.0003	0.00100	0.00001
S-09-12 172.5-173.5	0.0005	0.0050	6.6300	0.0082	0.8400	0.000005	5.0000	2.3100	31.5000	0.0001	0.0006	0.0001	0.0002	0.0002	0.00400	0.00001
S-09-12 172.5-173.5	0.0004	0.0050	5.7800	0.0078	1.1000	0.000005	2.9500	2.3300	29.2000	0.0001	0.0001	0.0001	0.0002	0.0002	0.00900	0.00001
S-09-12 172.5-173.5	0.0003	0.0050	3.9900	0.0080	0.9700	0.000005	1.4400	1.5900	20.9000	0.0001	0.0001	0.0001	0.0001	0.0001	0.01000	0.00001
S-09-12 172.5-173.5	0.0004	0.0050	2.9400	0.0082	0.9200	0.000005	0.8300	1.1400	14.6000	0.0001	0.0001	0.0001	0.0001	0.0001	0.01200	0.00001
S-09-12 172.5-173.5	0.0001	0.0050	2.7300	0.0084	1.0400	0.000005	0.5600	0.9880	14.0000	0.0001	0.0002	0.0001	0.0001	0.0001	0.01400	0.00071
S-09-12 172.5-173.5	0.0001	0.0050	2.2200	0.0073	1.0100	0.000005	0.4100	0.8810	12.4000	0.0001	0.0001	0.0001	0.0001	0.0001	0.01200	0.00006
S-09-12 172.5-173.5	0.0002	0.0050	2.2900	0.0089	1.2400	0.000005	0.4600	0.8250	10.9000	0.0001	0.0001	0.0001	0.0001	0.0001	0.01100	0.00001
S-09-12 172.5-173.5	0.0002	0.0050	1.8100	0.0077	0.9700	0.000005	0.3400	0.6600	10.7000	0.0001	0.0003	0.0001	0.0001	0.0001	0.01300	0.00001
S-09-12 172.5-173.5	0.0001	0.0100	1.5800	0.0066	0.9600	0.000005	0.2600	0.5810	9.1300	0.0001	0.0003	0.0001	0.0001	0.0001	0.01400	0.00001
S-09-12 172.5-173.5	0.0002	0.0050	1.6500	0.0076	0.9700	0.000005	0.2500	0.5620	9.6200	0.0001	0.0003	0.0001	0.0001	0.0001	0.01600	0.00001
S-09-12 172.5-173.5	0.0002	0.0050	1.5800	0.0081	1.0400	0.000005	0.2400	0.5600	9.8400	0.0001	0.0002	0.0001	0.0000	0.0001	0.01400	0.00002
S-09-12 172.5-173.5	0.0001	0.0050	1.4600	0.0081	1.1500	0.000005	0.1800	0.4030	7.5700	0.0001	0.0003	0.0001	0.0000	0.0001	0.01600	0.00001
S-09-12 172.5-173.5	0.0002	0.0200	1.5000	0.0079	1.1500	0.000005	0.1700	0.4810	9.6300	0.0001	0.0003	0.0001	0.0001	0.0001	0.02100	0.00001
S-09-12 172.5-173.5	0.0002	0.0045	1.3400	0.0078	1.1000	0.000020	0.1700	0.4320	8.8400	0.0001	0.0003	0.0001	0.0000	0.0001	0.01700	0.00001
S-09-12 172.5-173.5	0.0001	0.0045	1.2000	0.0074	1.0200	0.000005	0.1400	0.3810	9.6000	0.0001	0.0002	0.0001	0.0000	0.0001	0.01600	0.00001
S-09-12 172.5-173.5	0.0001	0.0045	1.1900	0.0080	1.1800	0.000030	0.1600	0.3880	9.7300	0.0001	0.0001	0.0001	0.0000	0.0000	0.02200	0.00001
S-09-12 172.5-173.5	0.0001	0.0180	1.0700	0.0074	1.0900	0.000005	0.1200	0.3290	9.0800	0.0001	0.0002	0.0001	0.0000	0.0001	0.02000	0.00001
S-09-12 172.5-173.5	0.0001	0.0045	0.9350	0.0071	0.9700	0.000020	0.1500	0.3020	8.4300	0.0001	0.0003	0.0001	0.0000	0.0001	0.02200	0.00001
S-09-12 172.5-173.5	0.0002	0.0140	0.9720	0.0070	1.0300	0.000005	0.1600	0.2970	9.0900	0.0001	0.0006	0.0008	0.0000	0.0001	0.02400	0.00002
S-09-12 172.5-173.5	0.0001	0.0045	1.0500	0.0070	1.1400	0.000005	0.1500	0.3040	9.6800	0.0001	0.0002	0.0001	0.0000	0.0001	0.02600	0.00001
S-09-12 172.5-173.5	0.0001	0.0045	0.9290	0.0062	0.9200	0.000010	0.0700	0.2800	9.6300	0.0001	0.0001	0.0001	0.0000	0.0001	0.02700	0.00001
S-09-12 172.5-173.5	0.0003	0.0210	0.9930	0.0078	1.1600	0.000020	0.1600	0.2930	9.6900	0.0001	0.0005	0.0001	0.0000	0.0000	0.03000	0.00004
S-09-12 172.5-173.5	0.0005	0.0045	0.8920	0.0078	1.1100	0.000010	0.1300	0.2690	8.7200	0.0001	0.0003	0.0001	0.0001	0.0001	0.03100	0.00001
S-09-12 172.5-173.5	0.0001	0.0045	0.8600	0.0068	1.1000	0.000005	0.1100	0.2350	8.2100	0.0001	0.0002	0.0001	0.0001	0.0001	0.03700	0.00001
S-09-12 172.5-173.5	0.0001	0.0130	0.8810	0.0074	1.1300	0.000005	0.0900	0.2400	9.2100	0.0001	0.0000	0.0001	0.0000	0.0001	0.03400	0.00001
S-09-12 172.5-173.5	0.0001	0.0045	0.8280	0.0065	0.9900	0.000010	0.1100	0.2420	9.8900	0.0001	0.0001	0.0001	0.0000	0.0000	0.04200	0.00001
S-09-12 172.5-173.5	0.0001	0.0045	0.7330	0.0068	0.9800	0.000005	0.1000	0.1960	9.4300	0.0001	0.0001	0.0001	0.0000	0.0001	0.02900	0.00001
S-09-12 172.5-173.5	0.0001	0.0045	0.7490	0.0069	1.0500	0.000005	0.0900	0.2070	10.5000	0.0001	0.0004	0.0001	0.0000	0.0002	0.04500	0.00001
S-09-12 172.5-173.5	0.0001	0.0045	0.7380	0.0066	0.9700	0.000005	0.0800	0.1880	10.3000	0.0001	0.0010	0.0001	0.0000	0.0001	0.03400	0.00002
S-09-12 172.5-173.5	0.0001	0.0045	0.6440	0.0063	0.9100	0.000005	0.0900	0.1700	9.5700	0.0001	0.0002	0.0001	0.0000	0.0001	0.03200	0.00001
S-09-12 172.5-173.5	0.0002	0.0045	0.6830	0.0065	0.9400	0.000005	0.0800	0.1720	10.3000	0.0001	0.0002	0.0002	0.0000	0.0001	0.03900	0.00001
S-09-12 172.5-173.5	0.0001	0.0045	0.6620	0.0070	0.9400	0.000005	0.1000	0.1540	9.5100	0.0001	0.0002	0.0001	0.0000	0.0001	0.03700	0.00001
S-09-12 172.5-173.5	0.0001	0.0045	0.7470	0.0073	0.9600	0.000005	0.1200	0.1690	10.6000	0.0001	0.0002	0.0001	0.0000	0.0000	0.03200	0.00001
S-09-12 172.5-173.5	0.0002	0.0045	0.7600	0.0071	0.9300	0.000005	0.1100	0.1860	12.7000	0.0001	0.0003	0.0001	0.0000	0.0001	0.03300	0.00001
S-09-12 172.5-173.5	0.0008	0.0170	0.7340	0.0072	0.9300	0.000005	0.1200	0.1700	11.4000	0.0001	0.0006	0.0002	0.0000	0.0001	0.03400	0.00001
S-09-12 172.5-173.5	0.0006	0.0045	0.7420	0.0070	0.9000	0.000005	0.1500	0.1760	10.8000	0.0001	0.0004	0.0001	0.0000	0.0001	0.02900	0.00001
S-09-12 172.5-173.5	0.0001	0.0045	0.7050	0.0072	0.8800	0.000005	0.1000	0.1520	10.6000	0.0001	0.0000	0.0001	0.0000	0.0000	0.03700	0.00001
S-09-12 172.5-173.5	0.0006	0.0310	0.6020	0.0064	0.7800	0.000005	0.0800	0.1290	9.6200	0.0001	0.0000	0.0002	0.0000	0.0000	0.03500	0.00001
S-09-12 172.5-173.5	0.0009	0.0150	0.6210	0.0065	0.7000	0.000005	0.0900	0.1310	9.2400	0.0001	0.0001	0.0002	0.0000	0.0000	0.03300	0.00001
S-09-12 172.5-173.5	0.0001	0.0260	0.6630	0.0065	0.6900	0.000005	0.1000	0.1360	9.1200	0.0001	0.0002	0.0002	0.0000	0.0000	0.03600	0.00001
S-09-12 172.5-173.5	0.0004	0.0190	0.6230	0.0061	0.9300	0.000005	0.0800	0.1290	9.6200	0.0001	0.0001	0.0001	0.0000	0.0000	0.04100	0.00001
S-09-12 172.5-173.5	0.0001	0.0045	0.5560	0.0062	0.8300	0.000005	0.0600	0.1230	8.6400	0.0001	0.0002	0.0002	0.0000	0.0001	0.06500	0.00001
S-09-12 172.5-173.5	0.0001	0.0380	0.5390	0.0058	0.8700	0.000005	0.0600	0.1200	8.4800	0.0001	0.0001	0.0001	0.0000	0.0000	0.04900	0.00001
S-09-12 172.5-173.5	0.0003	0.0045	0.5300	0.0050	0.8000	0.000005	0.1000	0.1140	7.9500	0.0001	0.0007	0.0001	0.0000	0.0001	0.05000	0.00002
S-09-12 172.5-173.5	0.0001	0.0170	0.5750	0.0059	0.8600	0.000005	0.1000	0.1320	9.7400	0.0001	0.0004	0.0001	0.0000	0.0000	0.04800	0.00001

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Calculated Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
S-09-12 172.5-173.5	19	46	23-Dec-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	505	366	39.6	85	7.3	#N/A	5.1	17.5	27	0.1
S-09-12 172.5-173.5	19	47	30-Dec-10	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	500	361	37.4	74	7.27	#N/A	5.2	15.8	27	0.1
S-09-12 172.5-173.5	19	48	6-Jan-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	367	33.55	69	7.31	#N/A	4.3	16.1	21	0.1
S-09-12 172.5-173.5	19	49	13-Jan-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	367	29.7	55	7.34	#N/A	3.4	16.5	14	0.1
S-09-12 172.5-173.5	19	50	20-Jan-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	475	356	29.05	61	7.17	#N/A	3.7	15.7	14	0.1
S-09-12 172.5-173.5	19	51	27-Jan-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	490	333	28.4	67	7.33	#N/A	4.1	15.0	14	0.1
S-09-12 172.5-173.5	19	52	3-Feb-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	465	344	31.6	63	7.18	#N/A	3.4	14.6	18	0.1
S-09-12 172.5-173.5	19	53	10-Feb-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	475	344	34.8	64	7.25	#N/A	2.6	14.1	21	0.1
S-09-12 172.5-173.5	19	54	17-Feb-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	355	34.3	68	7.22	#N/A	3.0	14.5	23	0.1
S-09-12 172.5-173.5	19	55	24-Feb-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	344	33.8	82	7.26	#N/A	3.5	14.9	24	0.1
S-09-12 172.5-173.5	19	56	3-Mar-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	490	336	34.2	79	7.14	#N/A	3.1	14.8	23	0.1
S-09-12 172.5-173.5	19	57	10-Mar-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	338	34.6	82	7.29	#N/A	2.8	14.6	22	0.1
S-09-12 172.5-173.5	19	58	17-Mar-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	328	34.5	82	7.21	#N/A	3.0	14.8	21	0.1
S-09-12 172.5-173.5	19	59	24-Mar-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	338	34.4	101	7.16	#N/A	3.2	15.0	19	0.1
S-09-12 172.5-173.5	19	60	31-Mar-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	320	34	82	7.45	#N/A	3.7	15.2	20	0.1
S-09-12 172.5-173.5	19	61	7-Apr-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	500	301	33.6	83	7.42	#N/A	4.3	15.5	20	0.1
S-09-12 172.5-173.5	19	62	14-Apr-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	480	291	34.45	83	7.62	#N/A	3.3	15.1	20	0.1
S-09-12 172.5-173.5	19	63	21-Apr-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	480	317	35.3	85	7.3	#N/A	2.3	14.8	20	0.1
S-09-12 172.5-173.5	19	64	28-Apr-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	359	34.65	84	7.45	#N/A	2.9	14.0	22	0.1
S-09-12 172.5-173.5	19	65	5-May-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	520	313	34	83	7.16	#N/A	3.4	13.2	24	0.1
S-09-12 172.5-173.5	19	66	12-May-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	500	371	34.95	81	7.25	#N/A	3.1	14.2	23	0.1
S-09-12 172.5-173.5	19	67	19-May-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	341	35.9	84	7.5	#N/A	2.7	15.2	22	0.1
S-09-12 172.5-173.5	19	68	26-May-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	490	305	34.35	87	7.43	#N/A	3.8	15.3	22	0.1
S-09-12 172.5-173.5	19	69	2-Jun-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	297	32.8	87	7.23	#N/A	4.9	15.3	21	0.1
S-09-12 172.5-173.5	19	70	9-Jun-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	351	33.8	85	7.2	#N/A	4.8	15.2	20	0.1
S-09-12 172.5-173.5	19	71	16-Jun-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	505	353	34.8	81	7.32	#N/A	4.7	15.0	19	0.1
S-09-12 172.5-173.5	19	72	23-Jun-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	510	345	38.05	84	7.37	#N/A	4.3	18.6	22	0.1
S-09-12 172.5-173.5	19	73	30-Jun-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	500	346	41.3	94	7.38	#N/A	3.9	22.1	25	0.1
S-09-12 172.5-173.5	19	74	7-Jul-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	510	322	41.25	87	7.31	#N/A	4.3	19.8	22	0.1
S-09-12 172.5-173.5	19	75	14-Jul-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	520	300	41.2	87	7.16	#N/A	4.7	17.5	18	0.1
S-09-12 172.5-173.5	19	76	21-Jul-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	505	309	36.9	81	7.29	#N/A	4.5	19.2	19	0.1
S-09-12 172.5-173.5	19	77	28-Jul-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	323	32.6	82	7.24	#N/A	4.4	20.9	20	0.1
S-09-12 172.5-173.5	19	78	4-Aug-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	330	31.75	83	7.31	#N/A	4.2	18.9	19	0.1
S-09-12 172.5-173.5	19	79	11-Aug-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	500	263	30.9	77	7.35	#N/A	4.0	17.0	18	0.1
S-09-12 172.5-173.5	19	80	18-Aug-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	480	273	32.7	78	7.51	#N/A	4.4	17.3	18	0.1
S-09-12 172.5-173.5	19	81	25-Aug-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	288	34.5	77	7.3	#N/A	4.9	17.6	18	0.1
S-09-12 172.5-173.5	19	82	1-Sep-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	465	351	33.95	79	7.11	#N/A	4.5	18.8	21	0.1
S-09-12 172.5-173.5	19	83	8-Sep-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	465	283	33.4	75	7.37	#N/A	4.1	20.1	23	0.1
S-09-12 172.5-173.5	19	84	15-Sep-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	345	34.35	79	7.48	#N/A	4.1	18.0	22	0.1
S-09-12 172.5-173.5	19	85	22-Sep-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	480	297	35.3	79	7.18	#N/A	4.1	15.9	21	0.1
S-09-12 172.5-173.5	19	86	29-Sep-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	490	350	35.15	82	7.1	#N/A	4.5	15.8	22	0.1
S-09-12 172.5-173.5	19	87	6-Oct-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	316	35	78	7.21	#N/A	4.9	15.8	22	0.1
S-09-12 172.5-173.5	19	88	13-Oct-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	480	291	35.15	78	7.63	#N/A	4.7	15.7	22	0.1
S-09-12 172.5-173.5	19	89	20-Oct-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	292	35.3	76	7.19	#N/A	4.4	15.6	21	0.1
S-09-12 172.5-173.5	19	90	27-Oct-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	465	334	35.15	78	7.27	#N/A	4.9	16.0	23	0.1
S-09-12 172.5-173.5	19	91	3-Nov-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	475	299	35	78	7.32	#N/A	5.5	16.5	24	0.1
S-09-12 172.5-173.5	19	92	10-Nov-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	475	319	35.25	73	7.57	#N/A	4.5	16.4	23	0.1
S-09-12 172.5-173.5	19	93	17-Nov-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	320	35.5	76	7.29	#N/A	3.5	16.3	21	0.1
S-09-12 172.5-173.5	19	94	24-Nov-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	480	337	33.15	75	7.41	#N/A	4.3	16.2	20	0.1
S-09-12 172.5-173.5	19	95	1-Dec-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	480	363	30.8	69	7.28	#N/A	5.1	16.0	18	0.1
S-09-12 172.5-173.5	19	96	8-Dec-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	490	328	30.55	71	7.32	#N/A	4.9	16.2	18	0.1
S-09-12 172.5-173.5	19	97	15-Dec-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	346	30.3	69	7.16	#N/A	4.7	16.5	17	0.1
S-09-12 172.5-173.5	19	98	22-Dec-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	480	343	30.575	77	7.37	#N/A	4.5	17.6	17	0.1
S-09-12 172.5-173.5	19	99	29-Dec-11	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	301	30.85	75	7.18	#N/A	4.3	18.7	16	0.1
S-09-12 172.5-173.5	19	100	5-Jan-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	299	31.125	67	7.11	#N/A	4.1	19.8	16	0.1
S-09-12 172.5-173.5	19	101	12-Jan-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	361	31.4	71	7.18	#N/A	3.9	20.9	15	0.1
S-09-12 172.5-173.5	19	102	19-Jan-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	334	30.475	67	7.26	#N/A	4.4	20.0	16	0.1
S-09-12 172.5-173.5	19	103	26-Jan-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	382	29.55	66	7.19	#N/A	5.0	19.1	16	0.1
S-09-12 172.5-173.5	19	104	2-Feb-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	329	28.625	68	7.28	#N/A	5.6	18.2	17	0.1
S-09-12 172.5-173.5	19	105	9-Feb-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	475	464	27.7	68	7.39	#N/A	6.1	17.3	17	0.1
S-09-12 172.5-173.5	19	106	16-Feb-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	500	374	29.05	75	7.41	#N/A	6.1	16.7	18	0.1
S-09-12 172.5-173.5	19	107	23-Feb-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	490	380	30.4	69	7.13	#N/A	6.1	16.2	19	0.1
S-09-12 172.5-173.5	19	108	1-Mar-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	480	424	31.75	69	7.01	#N/A	6.1	15.7	19	0.1
S-09-12 172.5-173.5	19	109	8-Mar-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	490	358	33.1	75	7.21	#N/A	6.0	15.2	20	0.1
S-09-12 172.5-173.5	19	110	15-Mar-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	490	378	32.5	71	7.1	#N/A	5.6	15.0	20	0.1
S-09-12 172.5-173.5	19	111	22-Mar-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	383	31.9	73	7.11	#N/A	5.2	14.8	20	0.1

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
S-09-12 172.5-173.5	0.03	0.0106	0.0017	0.0005	0.0292	0.0000	0.0000	0.0023	0.0024	15.3000	0.0006	0.0002	0.0006	0.0080	0.0272	0.0010	0.3620	0.1730	0.000005	0.0018
S-09-12 172.5-173.5	0.03	0.0089	0.0015	0.0003	0.0294	0.0000	0.0000	0.0016	0.0024	14.4000	0.0007	0.0002	0.0007	0.0020	0.0288	0.0010	0.3430	0.1530	0.000005	0.0020
S-09-12 172.5-173.5	0.03	0.0088	0.0015	0.0003	0.0285	0.0000	0.0000	0.0015	0.0026	12.9500	0.0005	0.0002	0.0005	0.0025	0.0288	0.0010	0.3005	0.1505	0.000005	0.0014
S-09-12 172.5-173.5	0.03	0.0086	0.0014	0.0003	0.0276	0.0000	0.0000	0.0014	0.0027	11.5000	0.0003	0.0002	0.0003	0.0030	0.0288	0.0010	0.2580	0.1480	0.000005	0.0007
S-09-12 172.5-173.5	0.03	0.0087	0.0014	0.0002	0.0283	0.0000	0.0000	0.0016	0.0025	11.2500	0.0003	0.0002	0.0003	0.0025	0.0259	0.0010	0.2510	0.1217	0.000005	0.0008
S-09-12 172.5-173.5	0.03	0.0088	0.0014	0.0001	0.0289	0.0000	0.0000	0.0018	0.0023	11.0000	0.0003	0.0002	0.0003	0.0020	0.0230	0.0010	0.2440	0.0953	0.000005	0.0009
S-09-12 172.5-173.5	0.03	0.0084	0.0014	0.0003	0.0281	0.0000	0.0000	0.0019	0.0023	12.2000	0.0003	0.0002	0.0018	0.0020	0.0206	0.0010	0.2715	0.0923	0.000005	0.0012
S-09-12 172.5-173.5	0.03	0.0080	0.0013	0.0004	0.0272	0.0000	0.0000	0.0020	0.0023	13.4000	0.0003	0.0002	0.0033	0.0020	0.0181	0.0010	0.2990	0.0893	0.000005	0.0014
S-09-12 172.5-173.5	0.03	0.0078	0.0013	0.0004	0.0266	0.0000	0.0000	0.0022	0.0026	13.2500	0.0003	0.0002	0.0020	0.0020	0.0207	0.0008	0.2940	0.0952	0.000005	0.0015
S-09-12 172.5-173.5	0.03	0.0076	0.0012	0.0004	0.0259	0.0000	0.0000	0.0024	0.0029	13.1000	0.0003	0.0003	0.0006	0.0020	0.0233	0.0005	0.2890	0.1010	0.000005	0.0015
S-09-12 172.5-173.5	0.03	0.0071	0.0012	0.0003	0.0271	0.0000	0.0000	0.0018	0.0028	13.2500	0.0003	0.0003	0.0013	0.0050	0.0247	0.0005	0.2900	0.0995	0.000005	0.0015
S-09-12 172.5-173.5	0.03	0.0065	0.0011	0.0002	0.0282	0.0000	0.0000	0.0012	0.0027	13.4000	0.0003	0.0002	0.0019	0.0080	0.0261	0.0005	0.2910	0.0980	0.000005	0.0015
S-09-12 172.5-173.5	0.03	0.0069	0.0011	0.0002	0.0255	0.0000	0.0000	0.0012	0.0028	13.3500	0.0003	0.0002	0.0022	0.0050	0.0234	0.0005	0.2875	0.0906	0.000005	0.0015
S-09-12 172.5-173.5	0.03	0.0072	0.0011	0.0002	0.0228	0.0000	0.0000	0.0012	0.0029	13.3000	0.0003	0.0003	0.0024	0.0020	0.0207	0.0005	0.2840	0.0832	0.000005	0.0015
S-09-12 172.5-173.5	0.03	0.0074	0.0011	0.0003	0.0230	0.0000	0.0000	0.0011	0.0027	13.1000	0.0003	0.0003	0.0018	0.0100	0.0220	0.0005	0.3020	0.0817	0.000005	0.0017
S-09-12 172.5-173.5	0.03	0.0076	0.0011	0.0003	0.0232	0.0000	0.0000	0.0010	0.0024	12.9000	0.0003	0.0003	0.0012	0.0180	0.0232	0.0005	0.3200	0.0801	0.000005	0.0019
S-09-12 172.5-173.5	0.03	0.0081	0.0011	0.0002	0.0250	0.0000	0.0000	0.0011	0.0025	13.2500	0.0003	0.0003	0.0007	0.0095	0.0223	0.0005	0.3070	0.0731	0.000005	0.0077
S-09-12 172.5-173.5	0.03	0.0085	0.0011	0.0001	0.0267	0.0000	0.0000	0.0012	0.0026	13.6000	0.0003	0.0003	0.0003	0.0010	0.0213	0.0005	0.2940	0.0661	0.000005	0.0134
S-09-12 172.5-173.5	0.03	0.0083	0.0013	0.0002	0.0244	0.0000	0.0000	0.0015	0.0029	13.3500	0.0003	0.0003	0.0006	0.0010	0.0232	0.0005	0.2950	0.0612	0.000008	0.0119
S-09-12 172.5-173.5	0.03	0.0081	0.0015	0.0002	0.0221	0.0000	0.0000	0.0017	0.0033	13.1000	0.0003	0.0003	0.0009	0.0010	0.0251	0.0005	0.2960	0.0563	0.000010	0.0104
S-09-12 172.5-173.5	0.03	0.0068	0.0013	0.0002	0.0208	0.0000	0.0000	0.0015	0.0034	13.5000	0.0004	0.0003	0.0016	0.0010	0.0234	0.0005	0.3035	0.0592	0.000008	0.0083
S-09-12 172.5-173.5	0.03	0.0054	0.0011	0.0001	0.0195	0.0000	0.0000	0.0012	0.0036	13.9000	0.0006	0.0003	0.0022	0.0010	0.0218	0.0005	0.3110	0.0621	0.000005	0.0062
S-09-12 172.5-173.5	0.03	0.0058	0.0011	0.0001	0.0185	0.0000	0.0000	0.0011	0.0039	13.3000	0.0004	0.0004	0.0016	0.0010	0.0232	0.0005	0.3005	0.0640	0.000008	0.0063
S-09-12 172.5-173.5	0.03	0.0061	0.0010	0.0001	0.0175	0.0000	0.0000	0.0010	0.0043	12.7000	0.0003	0.0005	0.0009	0.0010	0.0246	0.0005	0.2900	0.0658	0.000010	0.0063
S-09-12 172.5-173.5	0.03	0.0058	0.0010	0.0002	0.0195	0.0000	0.0000	0.0013	0.0038	13.0500	0.0003	0.0004	0.0009	0.0010	0.0230	0.0005	0.2925	0.0604	0.000008	0.0052
S-09-12 172.5-173.5	0.03	0.0054	0.0010	0.0003	0.0214	0.0000	0.0000	0.0015	0.0033	13.4000	0.0003	0.0003	0.0009	0.0010	0.0214	0.0005	0.2950	0.0549	0.000005	0.0041
S-09-12 172.5-173.5	0.03	0.0073	0.0011	0.0004	0.0299	0.0000	0.0000	0.0016	0.0035	14.7000	0.0003	0.0003	0.0006	0.0010	0.0245	0.0005	0.3190	0.0665	0.000008	0.0051
S-09-12 172.5-173.5	0.03	0.0091	0.0012	0.0004	0.0384	0.0000	0.0000	0.0016	0.0038	16.0000	0.0003	0.0003	0.0003	0.0010	0.0275	0.0005	0.3430	0.0780	0.000010	0.0061
S-09-12 172.5-173.5	0.03	0.0079	0.0011	0.0004	0.0341	0.0000	0.0000	0.0020	0.0039	15.9500	0.0003	0.0004	0.0004	0.0010	0.0284	0.0005	0.3395	0.0698	0.000008	0.0058
S-09-12 172.5-173.5	0.03	0.0066	0.0010	0.0004	0.0298	0.0000	0.0000	0.0023	0.0041	15.9000	0.0003	0.0004	0.0005	0.0010	0.0292	0.0005	0.3360	0.0616	0.000005	0.0056
S-09-12 172.5-173.5	0.03	0.0073	0.0010	0.0003	0.0301	0.0000	0.0000	0.0020	0.0046	14.2500	0.0003	0.0005	0.0004	0.0070	0.0285	0.0005	0.3205	0.0775	0.000005	0.0067
S-09-12 172.5-173.5	0.03	0.0079	0.0010	0.0002	0.0303	0.0000	0.0000	0.0016	0.0051	12.6000	0.0003	0.0005	0.0003	0.0130	0.0278	0.0005	0.3050	0.0933	0.000005	0.0078
S-09-12 172.5-173.5	0.03	0.0084	0.0010	0.0002	0.0312	0.0000	0.0000	0.0015	0.0048	12.3000	0.0004	0.0004	0.0003	0.0070	0.0272	0.0005	0.2785	0.0690	0.000005	0.0078
S-09-12 172.5-173.5	0.03	0.0088	0.0010	0.0001	0.0320	0.0000	0.0000	0.0013	0.0045	12.0000	0.0006	0.0004	0.0003	0.0010	0.0266	0.0005	0.2520	0.0446	0.000005	0.0078
S-09-12 172.5-173.5	0.03	0.0089	0.0010	0.0002	0.0306	0.0000	0.0000	0.0017	0.0043	12.6500	0.0007	0.0003	0.0003	0.0020	0.0276	0.0005	0.2680	0.0429	0.000005	0.0055
S-09-12 172.5-173.5	0.03	0.0090	0.0009	0.0003	0.0291	0.0000	0.0000	0.0020	0.0041	13.3000	0.0007	0.0003	0.0003	0.0030	0.0286	0.0005	0.2840	0.0412	0.000005	0.0032
S-09-12 172.5-173.5	0.03	0.0100	0.0009	0.0003	0.0319	0.0000	0.0000	0.0019	0.0038	13.1000	0.0006	0.0003	0.0005	0.0020	0.0262	0.0005	0.2775	0.0414	0.000005	0.0065
S-09-12 172.5-173.5	0.03	0.0110	0.0008	0.0002	0.0346	0.0000	0.0000	0.0017	0.0034	12.9000	0.0005	0.0003	0.0007	0.0010	0.0238	0.0005	0.2710	0.0415	0.000005	0.0099
S-09-12 172.5-173.5	0.03	0.0098	0.0008	0.0003	0.0332	0.0000	0.0000	0.0016	0.0037	13.2500	0.0011	0.0003	0.0009	0.0040	0.0262	0.0005	0.2790	0.0410	0.000005	0.0062
S-09-12 172.5-173.5	0.03	0.0085	0.0008	0.0003	0.0317	0.0000	0.0000	0.0014	0.0039	13.6000	0.0016	0.0003	0.0010	0.0070	0.0286	0.0005	0.2870	0.0405	0.000005	0.0026
S-09-12 172.5-173.5	0.03	0.0086	0.0010	0.0003	0.0312	0.0000	0.0000	0.0016	0.0042	13.5500	0.0012	0.0003	0.0009	0.0040	0.0271	0.0005	0.2850	0.0429	0.000008	0.0015
S-09-12 172.5-173.5	0.03	0.0086	0.0012	0.0003	0.0307	0.0000	0.0000	0.0017	0.0044	13.5000	0.0007	0.0003	0.0008	0.0010	0.0256	0.0005	0.2830	0.0453	0.000010	0.0005
S-09-12 172.5-173.5	0.03	0.0076	0.0010	0.0003	0.0301	0.0000	0.0000	0.0019	0.0045	13.6000	0.0005	0.0003	0.0009	0.0013	0.0282	0.0005	0.2835	0.0431	0.000008	0.0006
S-09-12 172.5-173.5	0.03	0.0066	0.0007	0.0003	0.0295	0.0000	0.0000	0.0020	0.0046	13.7000	0.0003	0.0003	0.0010	0.0015	0.0307	0.0005	0.2840	0.0409	0.000005	0.0006
S-09-12 172.5-173.5	0.03	0.0070	0.0007	0.0002	0.0296	0.0000	0.0000	0.0022	0.0047	13.6000	0.0005	0.0004	0.0006	0.0028	0.0301	0.0005	0.2840	0.0403	0.000008	0.0006
S-09-12 172.5-173.5	0.03	0.0073	0.0007	0.0001	0.0297	0.0000	0.0000	0.0023	0.0049	13.5000	0.0007	0.0004	0.0003	0.0040	0.0295	0.0005	0.2840	0.0396	0.000010	0.0005
S-09-12 172.5-173.5	0.03	0.0125	0.0008	0.0002	0.0282	0.0000	0.0000	0.0019	0.0049	13.6500	0.0005	0.0004	0.0007	0.0028	0.0284	0.0005	0.2735	0.0422	0.000008	0.0015
S-09-12 172.5-173.5	0.03	0.0176	0.0008	0.0002	0.0267	0.0000	0.0000	0.0015	0.0050	13.8000	0.0003	0.0005	0.0011	0.0015	0.0273	0.0005	0.2630	0.0447	0.000005	0.0024
S-09-12 172.5-173.5	0.03	0.0167	0.0009	0.0003	0.0283	0.0000	0.0000	0.0013	0.0052	12.9000	0.0003	0.0005	0.0009	0.0015	0.0260	0.0005	0.2495	0.0424	0.000005	0.0026
S-09-12 172.5-173.5	0.03	0.0157	0.0009	0.0004	0.0299	0.0000	0.0000	0.0011	0.0055	12.0000	0.0003	0.0005	0.0006	0.0015	0.0248	0.0005	0.2360	0.0401	0.000005	0.0027
S-09-12 172.5-173.5	0.03	0.0198	0.0008	0.0003	0.0256	0.0000	0.0000	0.0012	0.0061	11.9000	0.0003	0.0006	0.0008	0.0015	0.0249	0.0005	0.2335	0.0392	0.000008	0.0019
S-09-12 172.5-173.5	0.03	0.0239	0.0006	0.0001	0.0213	0.0000	0.0000	0.0013	0.0068	11.8000	0.0003	0.0008	0.0009	0.0015	0.0250	0.0005	0.2310	0.0382	0.000010	0.0010
S-09-12 172.5-173.5	0.03	0.0218	0.0006	0.0001	0.0224	0.0000	0.0000	0.0012	0.0068	11.9000	0.0003	0.0008	0.0010	0.0015	0.0256	0.0005	0.2310	0.0399	0.000009	0.0009
S-09-12 172.5-173.5	0.03	0.0198	0.0007	0.0002	0.0235	0.0000	0.0000	0.0012	0.0068	12.0000	0.0003	0.0007	0.0011	0.0015	0.0263	0.0005	0.2310	0.0415	0.000008	0.0008
S-09-12 172.5-173.5	0.03	0.0177	0.0007	0.0002	0.0246	0.0000	0.0000	0.0011	0.0069	12.1000	0.0003	0.0007	0.0011	0.0015	0.0269	0.0005	0.2310	0.0432	0.000006	0.0006
S-09-12 172.5-173.5	0.03	0.0156	0.0007	0.0002	0.0257	0.0000	0.0000	0.0010	0.0069	12.2000	0.0003	0.0007	0.0012	0.0015	0.0275	0.0005	0.2310	0.0448	0.000005	0.0005
S-09-12 172.5-173.5	0.03	0.0153	0.0007	0.0002	0.0239	0.0000	0.0000	0.0011	0.0068	11.8500	0.0003	0.0007	0.0011	0.0015	0.0264	0.0005	0.2225	0.0414	0.000005	0.0011
S-09-12 172.5-173.5	0.03	0.0150	0.0007	0.0003	0.0220	0.0000	0.0000	0.0011	0.0067	11.5000	0.0003	0.0007	0.0010	0.0015	0.0253	0.0005	0.2140	0.0379	0.000005	0.0016
S-09-12 172.5-173.5	0.03	0.0146	0.0007	0.0003	0.0202	0.0000	0.0000	0.0012	0.0066	11.1500	0.0003	0.0007	0.0009	0.0015	0.0242	0.0005	0.2055	0.0345	0.000005	0.0022
S-09-12 172.5-173.5	0.03	0.0143	0.0007	0.0003	0.0183	0.0000	0.0000	0.0012	0.0065	10.8000	0.0003	0.0007	0.0008	0.0015	0.0231	0.0005	0.1970	0.0310	0.000005	0.0027
S-09-12 172.5-173.5	0.03	0.0140	0.0007	0.0003	0.0187	0.0000	0.0000	0.0010	0.0065	11.3250	0.0003	0.0007	0.0008	0.0015	0.0230	0.0005	0.2045	0.0317	0.000006	0.0026
S-09-12 172.5-173.5	0.03	0.0137	0.0007	0.0003	0.0192	0.0000	0.0000	0.0007	0.0065	11.8500	0.0003	0.0007	0.0009	0.0015	0.0228	0.0005	0.2120	0.0324	0.000008	0.0024
S-09-12 172.5-173.5	0.03	0.0133	0.0006	0.0003	0.0196	0.0000	0.0000	0.0005	0.0065	12.3750	0.0003	0.0007	0.0009	0.0015	0.0227	0.0005	0.2195	0.0331	0.000009	0.0023
S-09-12 172.5-173.5	0.03	0.0130	0.0006	0.0003	0.0200	0.0000	0.0000	0.0002	0.0064	12.9000	0.0003	0.0007	0.0009	0.0015	0.0225	0.0005	0.2270	0.0338	0.000010	0.0022
S-09-12 172.5-173.5	0.03	0.0170	0.0006	0.0003	0.0194	0.0000	0.0000	0.0004	0.0063	12.6750	0.0003	0.0007	0.0010	0.0015	0.0227	0.0005	0.2185	0.0329	0.000010	0.0024
S-09-12 172.5-173.5	0.03	0.0211	0.0006	0.0002	0.0188	0.0000	0.0000	0.0007	0.0062	12.4500	0.0003	0.0007	0.0010	0.0015	0.0230	0.0005	0.2100	0.0319	0.000010	0.0027

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulfur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr) Dissolved (mg/L)
S-09-12 172.5-173.5	0.0002	0.0320	0.5760	0.0061	0.9300	0.000005	0.0900	0.1190	10.1000	0.0001	0.0005	0.0001	0.0000	0.0001	0.04800	0.00001
S-09-12 172.5-173.5	0.0003	0.0210	0.5360	0.0054	0.8200	0.000005	0.1100	0.1100	8.7000	0.0001	0.0001	0.0001	0.0000	0.0000	0.04800	0.00001
S-09-12 172.5-173.5	0.0002	0.0128	0.4940	0.0051	0.7950	0.000005	0.1000	0.0979	7.4750	0.0001	0.0001	0.0001	0.0000	0.0000	0.05300	0.00001
S-09-12 172.5-173.5	0.0001	0.0045	0.4520	0.0048	0.7700	0.000005	0.0900	0.0858	6.2500	0.0001	0.0002	0.0001	0.0000	0.0000	0.05800	0.00001
S-09-12 172.5-173.5	0.0002	0.0083	0.4040	0.0049	0.6500	0.000005	0.0750	0.0815	6.4300	0.0001	0.0003	0.0001	0.0000	0.0000	0.05350	0.00001
S-09-12 172.5-173.5	0.0004	0.0120	0.3560	0.0049	0.5300	0.000005	0.0600	0.0772	6.6100	0.0001	0.0004	0.0001	0.0000	0.0000	0.04900	0.00001
S-09-12 172.5-173.5	0.0005	0.0170	0.4035	0.0053	0.6100	0.000005	0.0700	0.0848	7.0800	0.0001	0.0002	0.0001	0.0000	0.0000	0.04850	0.00001
S-09-12 172.5-173.5	0.0005	0.0220	0.4510	0.0057	0.6900	0.000005	0.0800	0.0924	7.5500	0.0001	0.0000	0.0001	0.0001	0.0000	0.04800	0.00001
S-09-12 172.5-173.5	0.0005	0.0180	0.4230	0.0050	0.6750	0.000005	0.0750	0.0913	7.3800	0.0001	0.0001	0.0001	0.0000	0.0001	0.05800	0.00001
S-09-12 172.5-173.5	0.0004	0.0140	0.3950	0.0042	0.6600	0.000005	0.0700	0.0901	7.2100	0.0001	0.0001	0.0001	0.0000	0.0001	0.06800	0.00001
S-09-12 172.5-173.5	0.0004	0.0093	0.3870	0.0042	0.6450	0.000005	0.0700	0.0886	7.2650	0.0001	0.0001	0.0001	0.0000	0.0000	0.06600	0.00001
S-09-12 172.5-173.5	0.0004	0.0045	0.3790	0.0043	0.6300	0.000005	0.0700	0.0871	7.3200	0.0000	0.0002	0.0001	0.0000	0.0000	0.06400	0.00001
S-09-12 172.5-173.5	0.0004	0.0158	0.3665	0.0043	0.6000	0.000008	0.0600	0.0862	7.6000	0.0001	0.0002	0.0001	0.0000	0.0000	0.06400	0.00001
S-09-12 172.5-173.5	0.0003	0.0270	0.3540	0.0044	0.5700	0.000010	0.0500	0.0852	7.8800	0.0001	0.0001	0.0001	0.0000	0.0000	0.06400	0.00001
S-09-12 172.5-173.5	0.0002	0.0190	0.3660	0.0039	0.5800	0.000008	0.0600	0.0848	7.9850	0.0001	0.0001	0.0001	0.0000	0.0000	0.05950	0.00001
S-09-12 172.5-173.5	0.0001	0.0110	0.3780	0.0035	0.5900	0.000005	0.0700	0.0844	8.0900	0.0001	0.0001	0.0001	0.0000	0.0000	0.05500	0.00001
S-09-12 172.5-173.5	0.0001	0.0110	0.3790	0.0042	0.5850	0.000005	0.0650	0.0856	8.0900	0.0001	0.0001	0.0001	0.0000	0.0001	0.05550	0.00001
S-09-12 172.5-173.5	0.0002	0.0110	0.3800	0.0050	0.5800	0.000005	0.0600	0.0867	8.0900	0.0001	0.0001	0.0001	0.0000	0.0001	0.05600	0.00001
S-09-12 172.5-173.5	0.0004	0.0215	0.3790	0.0027	0.5700	0.000005	0.0650	0.0851	7.8800	0.0001	0.0001	0.0002	0.0000	0.0000	0.06350	0.00001
S-09-12 172.5-173.5	0.0006	0.0320	0.3780	0.0004	0.5600	0.000005	0.0700	0.0835	7.6700	0.0001	0.0002	0.0003	0.0000	0.0000	0.07100	0.00001
S-09-12 172.5-173.5	0.0005	0.0210	0.3840	0.0023	0.5850	0.000008	0.0900	0.0832	8.0300	0.0001	0.0001	0.0002	0.0000	0.0000	0.08100	0.00001
S-09-12 172.5-173.5	0.0004	0.0100	0.3900	0.0042	0.6100	0.000010	0.1100	0.0828	8.3900	0.0000	0.0001	0.0001	0.0000	0.0000	0.09100	0.00001
S-09-12 172.5-173.5	0.0003	0.0300	0.3625	0.0039	0.5400	0.000008	0.0850	0.0789	7.9700	0.0000	0.0002	0.0001	0.0000	0.0000	0.10550	0.00001
S-09-12 172.5-173.5	0.0001	0.0500	0.3350	0.0037	0.4700	0.000005	0.0600	0.0750	7.5500	0.0000	0.0002	0.0001	0.0000	0.0000	0.12000	0.00001
S-09-12 172.5-173.5	0.0005	0.0273	0.3415	0.0035	0.5000	0.000005	0.0900	0.0777	7.7550	0.0000	0.0002	0.0001	0.0000	0.0000	0.10300	0.00001
S-09-12 172.5-173.5	0.0008	0.0045	0.3480	0.0033	0.5300	0.000005	0.1200	0.0803	7.9600	0.0000	0.0002	0.0001	0.0000	0.0000	0.08600	0.00001
S-09-12 172.5-173.5	0.0007	0.0045	0.3910	0.0041	0.5650	0.000005	0.1000	0.0894	8.2150	0.0000	0.0001	0.0001	0.0000	0.0000	0.08400	0.00001
S-09-12 172.5-173.5	0.0005	0.0045	0.4340	0.0049	0.6000	0.000005	0.0800	0.0984	8.4700	0.0000	0.0001	0.0001	0.0000	0.0000	0.08200	0.00001
S-09-12 172.5-173.5	0.0004	0.0045	0.4260	0.0044	0.6150	0.000005	0.0700	0.0966	8.4600	0.0000	0.0001	0.0001	0.0000	0.0000	0.08750	0.00001
S-09-12 172.5-173.5	0.0002	0.0045	0.4180	0.0039	0.6300	0.000005	0.0600	0.0947	8.4500	0.0000	0.0001	0.0001	0.0000	0.0000	0.09300	0.00001
S-09-12 172.5-173.5	0.0005	0.0128	0.3855	0.0037	0.5650	0.000005	0.0500	0.0882	7.4600	0.0000	0.0000	0.0001	0.0000	0.0000	0.10750	0.00001
S-09-12 172.5-173.5	0.0008	0.0210	0.3530	0.0035	0.5000	0.000005	0.0400	0.0817	6.4700	0.0000	0.0000	0.0002	0.0000	0.0000	0.12200	0.00001
S-09-12 172.5-173.5	0.0004	0.0160	0.3475	0.0036	0.4850	0.000005	0.0400	0.0786	6.5450	0.0000	0.0000	0.0001	0.0000	0.0000	0.10950	0.00001
S-09-12 172.5-173.5	0.0001	0.0110	0.3420	0.0037	0.4700	0.000005	0.0400	0.0755	6.6200	0.0000	0.0000	0.0001	0.0000	0.0000	0.09700	0.00001
S-09-12 172.5-173.5	0.0001	0.0078	0.3525	0.0034	0.4800	0.000013	0.0500	0.0798	6.9650	0.0000	0.0001	0.0001	0.0000	0.0000	0.09250	0.00001
S-09-12 172.5-173.5	0.0001	0.0045	0.3630	0.0031	0.4900	0.000020	0.0600	0.0841	7.3100	0.0000	0.0001	0.0002	0.0000	0.0000	0.08800	0.00001
S-09-12 172.5-173.5	0.0003	0.0045	0.3520	0.0033	0.4400	0.000015	0.0400	0.0823	7.2300	0.0000	0.0001	0.0003	0.0000	0.0000	0.08150	0.00002
S-09-12 172.5-173.5	0.0004	0.0045	0.3410	0.0035	0.3900	0.000010	0.0200	0.0805	7.1500	0.0000	0.0001	0.0003	0.0000	0.0000	0.07500	0.00003
S-09-12 172.5-173.5	0.0004	0.0088	0.3285	0.0033	0.4050	0.000015	0.0600	0.0819	7.3700	0.0000	0.0002	0.0002	0.0000	0.0000	0.07850	0.00002
S-09-12 172.5-173.5	0.0003	0.0130	0.3160	0.0032	0.4200	0.000020	0.1000	0.0832	7.5900	0.0000	0.0003	0.0001	0.0000	0.0000	0.08200	0.00001
S-09-12 172.5-173.5	0.0002	0.0088	0.3275	0.0036	0.4250	0.000025	0.0800	0.0836	7.4350	0.0000	0.0002	0.0001	0.0000	0.0000	0.08350	0.00021
S-09-12 172.5-173.5	0.0001	0.0045	0.3390	0.0040	0.4300	0.000030	0.0600	0.0839	7.2800	0.0000	0.0001	0.0001	0.0000	0.0000	0.08500	0.00041
S-09-12 172.5-173.5	0.0001	0.0045	0.3430	0.0034	0.4350	0.000020	0.0600	0.0833	7.4400	0.0000	0.0001	0.0001	0.0000	0.0000	0.09100	0.00021
S-09-12 172.5-173.5	0.0002	0.0045	0.3470	0.0028	0.4400	0.000010	0.0600	0.0826	7.6000	0.0000	0.0001	0.0001	0.0000	0.0000	0.09700	0.00001
S-09-12 172.5-173.5	0.0003	0.0045	0.3345	0.0025	0.4250	0.000010	0.0550	0.0830	7.6900	0.0000	0.0001	0.0001	0.0000	0.0000	0.10600	0.00001
S-09-12 172.5-173.5	0.0004	0.0045	0.3220	0.0022	0.4100	0.000010	0.0500	0.0833	7.7800	0.0000	0.0001	0.0001	0.0000	0.0000	0.11500	0.00001
S-09-12 172.5-173.5	0.0005	0.0045	0.3170	0.0020	0.4200	0.000015	0.0600	0.0822	7.5450	0.0000	0.0001	0.0002	0.0000	0.0001	0.12100	0.00001
S-09-12 172.5-173.5	0.0006	0.0045	0.3120	0.0017	0.4300	0.000020	0.0700	0.0811	7.3100	0.0000	0.0001	0.0003	0.0000	0.0002	0.12700	0.00001
S-09-12 172.5-173.5	0.0006	0.0045	0.3005	0.0022	0.3950	0.000020	0.0500	0.0776	6.5800	0.0000	0.0000	0.0003	0.0000	0.0002	0.12950	0.00001
S-09-12 172.5-173.5	0.0005	0.0045	0.2890	0.0027	0.3600	0.000020	0.0300	0.0741	5.8500	0.0000	0.0000	0.0002	0.0000	0.0002	0.13200	0.00001
S-09-12 172.5-173.5	0.0005	0.0045	0.2775	0.0023	0.3650	0.000020	0.0600	0.0721	6.0550	0.0000	0.0002	0.0002	0.0000	0.0002	0.16250	0.00001
S-09-12 172.5-173.5	0.0004	0.0045	0.2660	0.0020	0.3700	0.000020	0.0900	0.0700	6.2600	0.0000	0.0003	0.0002	0.0000	0.0003	0.19300	0.00001
S-09-12 172.5-173.5	0.0004	0.0045	0.2718	0.0020	0.3650	0.000020	0.0800	0.0712	6.2650	0.0000	0.0003	0.0002	0.0000	0.0003	0.19450	0.00001
S-09-12 172.5-173.5	0.0004	0.0045	0.2775	0.0020	0.3600	0.000020	0.0700	0.0724	6.2700	0.0000	0.0002	0.0002	0.0000	0.0002	0.19600	0.00001
S-09-12 172.5-173.5	0.0003	0.0045	0.2833	0.0021	0.3550	0.000020	0.0600	0.0736	6.2750	0.0000	0.0001	0.0001	0.0000	0.0002	0.19750	0.00001
S-09-12 172.5-173.5	0.0003	0.0045	0.2890	0.0021	0.3500	0.000020	0.0500	0.0748	6.2800	0.0000	0.0000	0.0001	0.0000	0.0002	0.19900	0.00001
S-09-12 172.5-173.5	0.0002	0.0059	0.2828	0.0020	0.3325	0.000023	0.0550	0.0724	6.1200	0.0000	0.0000	0.0001	0.0000	0.0002	0.19550	0.00001
S-09-12 172.5-173.5	0.0002	0.0073	0.2765	0.0018	0.3150	0.000025	0.0600	0.0700	5.9600	0.0000	0.0000	0.0001	0.0000	0.0002	0.19200	0.00001
S-09-12 172.5-173.5	0.0001	0.0086	0.2703	0.0017	0.2975	0.000028	0.0650	0.0676	5.8000	0.0000	0.0000	0.0001	0.0000	0.0002	0.18850	0.00001
S-09-12 172.5-173.5	0.0001	0.0100	0.2640	0.0016	0.2800	0.000030	0.0700	0.0652	5.6400	0.0000	0.0000	0.0001	0.0000	0.0002	0.18500	0.00001
S-09-12 172.5-173.5	0.0001	0.0086	0.2713	0.0016	0.3025	0.000028	0.0750	0.0679	5.9375	0.0000	0.0000	0.0001	0.0000	0.0002	0.18275	0.00001
S-09-12 172.5-173.5	0.0002	0.0073	0.2785	0.0016	0.3250	0.000025	0.0800	0.0706	6.2350	0.0000	0.0000	0.0002	0.0000	0.0002	0.18050	0.00001
S-09-12 172.5-173.5	0.0003	0.0059	0.2858	0.0016	0.3475	0.000023	0.0850	0.0733	6.5325	0.0000	0.0000	0.0002	0.0000	0.0002	0.17825	0.00001
S-09-12 172.5-173.5	0.0004	0.0045	0.2930	0.0017	0.3700	0.000020	0.0900	0.0760	6.8300	0.0000	0.0000	0.0002	0.0000	0.0002	0.17600	0.00001
S-09-12 172.5-173.5	0.0004	0.0045	0.2890	0.0017	0.3575	0.000020	0.0825	0.0747	6.7525	0.0000	0.0000	0.0002	0.0000	0.0002	0.17275	0.00001
S-09-12 172.5-173.5	0.0005	0.0045	0.2850	0.0017	0.3450	0.000020	0.0750	0.0734	6.6750	0.0000	0.0000	0.0002	0.0000	0.0002	0.16950	0.00001

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID		HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Type	Time	Matrix	Total Volume In (mL)	Total Volume Out (mL)	ORP (mV)	Calculated Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 4.5) ($CaCO_3$ mg/L)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
S-09-12	172.5-173.5	19	112	29-Mar-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	344	31.3	72	7.02	#N/A	4.9	14.6	20	0.1
S-09-12	172.5-173.5	19	113	5-Apr-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	480	472	30.7	70	7.08	#N/A	4.5	14.4	20	0.1
S-09-12	172.5-173.5	19	114	12-Apr-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	480	368	30.7	73	7.11	#N/A	4.5	14.4	20	0.1
S-09-12	172.5-173.5	19	115	19-Apr-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	490	419	30.7	76	7.14	#N/A	4.5	14.4	20	0.1
S-09-12	172.5-173.5	19	116	26-Apr-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	455	30.85	76	7.31	#N/A	5.8	15.8	19	0.1
S-09-12	172.5-173.5	19	117	3-May-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	490	386	30.9	69	7.23	#N/A	6.3	16.3	19	0.1
S-09-12	172.5-173.5	19	118	10-May-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	490	460	30.9	43	7.11	#N/A	6.4	16.4	18	0.1
S-09-12	172.5-173.5	19	119	17-May-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	490	316	30.9	69	7.16	#N/A	6.4	16.5	16	0.1
S-09-12	172.5-173.5	19	120	24-May-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	325	30.9	70	7.36	#N/A	6.5	16.6	15	0.1
S-09-12	172.5-173.5	19	121	31-May-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	490	367	30.9	67	7.44	#N/A	6.6	16.7	13	0.1
S-09-12	172.5-173.5	19	122	7-Jun-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	359	31.375	71	7.41	#N/A	6.6	17.7	15	0.1
S-09-12	172.5-173.5	19	123	14-Jun-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	495	367	31.85	69	7.26	#N/A	6.7	18.7	17	0.1
S-09-12	172.5-173.5	19	124	21-Jun-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	490	354	32.325	71	7.28	#N/A	6.8	19.7	18	0.1
S-09-12	172.5-173.5	19	125	28-Jun-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	485	366	32.8	76	7.35	#N/A	6.8	20.7	20	0.1
S-09-12	172.5-173.5	19	126	5-Jul-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	480	361	31.775	53	7.63	#N/A	6.2	19.8	18	0.1
S-09-12	172.5-173.5	19	127	12-Jul-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	520	411	30.75	74	7.21	#N/A	5.6	19.0	17	0.1
S-09-12	172.5-173.5	19	128	19-Jul-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	505	355	29.725	66	7.17	#N/A	5.0	18.1	15	0.1
S-09-12	172.5-173.5	19	129	26-Jul-12	Sulphurets	Upper Panel	Undefined	VAAT	CL	2	KP	1	Drillcore		Water	500	500	345	28.7	66	7.25	#N/A	4.5	17.3	13	0.1
																		361.009	31.11	68.319	7.336	#N/A	6.12975	18.435	15.95	0.1

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
S-09-12 172.5-173.5	0.03	0.0251	0.0006	0.0002	0.0182	0.0000	0.0000	0.0009	0.0061	12.2250	0.0003	0.0006	0.0011	0.0015	0.0232	0.0005	0.2015	0.0310	0.000010	0.0029
S-09-12 172.5-173.5	0.03	0.0291	0.0006	0.0001	0.0176	0.0000	0.0000	0.0011	0.0060	12.0000	0.0003	0.0006	0.0011	0.0015	0.0234	0.0005	0.1930	0.0300	0.000010	0.0032
S-09-12 172.5-173.5	0.03	0.0291	0.0006	0.0001	0.0176	0.0000	0.0000	0.0011	0.0060	12.0000	0.0003	0.0006	0.0011	0.0015	0.0234	0.0005	0.1930	0.0300	0.000010	0.0032
S-09-12 172.5-173.5	0.03	0.0291	0.0006	0.0001	0.0176	0.0000	0.0000	0.0011	0.0060	12.0000	0.0003	0.0006	0.0011	0.0015	0.0234	0.0005	0.1930	0.0300	0.000010	0.0032
S-09-12 172.5-173.5	0.03	0.0152	0.0006	0.0001	0.0207	0.0000	0.0000	0.0013	0.0068	12.0000	0.0003	0.0007	0.0009	0.0026	0.0236	0.0005	0.1998	0.0317	0.000010	0.0032
S-09-12 172.5-173.5	0.03	0.0106	0.0006	0.0001	0.0217	0.0000	0.0000	0.0014	0.0071	12.0000	0.0003	0.0007	0.0008	0.0030	0.0237	0.0005	0.2020	0.0323	0.000010	0.0032
S-09-12 172.5-173.5	0.03	0.0153	0.0006	0.0001	0.0222	0.0000	0.0000	0.0015	0.0070	12.0000	0.0003	0.0006	0.0008	0.0026	0.0242	0.0005	0.2010	0.0308	0.000009	0.0031
S-09-12 172.5-173.5	0.03	0.0200	0.0007	0.0001	0.0228	0.0000	0.0000	0.0015	0.0069	12.0000	0.0003	0.0006	0.0008	0.0023	0.0247	0.0005	0.2000	0.0293	0.000008	0.0030
S-09-12 172.5-173.5	0.03	0.0246	0.0007	0.0001	0.0233	0.0000	0.0000	0.0016	0.0069	12.0000	0.0003	0.0005	0.0008	0.0019	0.0252	0.0005	0.1990	0.0277	0.000006	0.0029
S-09-12 172.5-173.5	0.03	0.0293	0.0007	0.0001	0.0238	0.0000	0.0000	0.0016	0.0068	12.0000	0.0003	0.0005	0.0008	0.0015	0.0257	0.0005	0.1980	0.0262	0.000005	0.0028
S-09-12 172.5-173.5	0.03	0.0308	0.0007	0.0001	0.0245	0.0000	0.0000	0.0018	0.0070	12.2000	0.0003	0.0005	0.0008	0.0015	0.0257	0.0005	0.2005	0.0271	0.000005	0.0029
S-09-12 172.5-173.5	0.03	0.0322	0.0007	0.0001	0.0253	0.0000	0.0000	0.0021	0.0073	12.4000	0.0003	0.0005	0.0008	0.0015	0.0256	0.0005	0.2030	0.0279	0.000005	0.0030
S-09-12 172.5-173.5	0.03	0.0337	0.0006	0.0001	0.0260	0.0000	0.0000	0.0023	0.0075	12.6000	0.0003	0.0005	0.0008	0.0015	0.0256	0.0005	0.2055	0.0288	0.000005	0.0031
S-09-12 172.5-173.5	0.03	0.0351	0.0006	0.0001	0.0267	0.0000	0.0000	0.0025	0.0077	12.8000	0.0003	0.0005	0.0008	0.0015	0.0255	0.0005	0.2080	0.0296	0.000005	0.0032
S-09-12 172.5-173.5	0.03	0.0354	0.0006	0.0001	0.0316	0.0000	0.0000	0.0027	0.0077	12.4000	0.0003	0.0005	0.0007	0.0015	0.0254	0.0005	0.1985	0.0300	0.000005	0.0034
S-09-12 172.5-173.5	0.03	0.0358	0.0006	0.0002	0.0364	0.0000	0.0000	0.0028	0.0076	12.0000	0.0003	0.0005	0.0005	0.0015	0.0253	0.0005	0.1890	0.0304	0.000005	0.0035
S-09-12 172.5-173.5	0.03	0.0361	0.0006	0.0002	0.0413	0.0000	0.0000	0.0030	0.0075	11.6000	0.0003	0.0004	0.0004	0.0015	0.0252	0.0005	0.1795	0.0307	0.000005	0.0036
S-09-12 172.5-173.5	0.03	0.0364	0.0006	0.0002	0.0461	0.0000	0.0000	0.0031	0.0075	11.2000	0.0003	0.0004	0.0003	0.0015	0.0251	0.0005	0.1700	0.0311	0.000005	0.0037
	0.03	0.0329275	0.0006325	0.000125	0.030483	0.00001	0.000005	0.002330	0.007339	12.12	0.00025	0.000494	0.000663	0.0015375	0.02542	0.0005	0.1951	0.0289375	0.000005	0.003200

Appendix 5.2-4. Humidity Cell Leachate Concentrations: Sulphurets Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulfur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr) Dissolved (mg/L)
S-09-12 172.5-173.5	0.0005	0.0045	0.2810	0.0017	0.3325	0.000020	0.0675	0.0720	6.5975	0.0000	0.0000	0.0001	0.0000	0.0002	0.16625	0.00001
S-09-12 172.5-173.5	0.0005	0.0045	0.2770	0.0017	0.3200	0.000020	0.0600	0.0707	6.5200	0.0000	0.0000	0.0001	0.0000	0.0003	0.16300	0.00001
S-09-12 172.5-173.5	0.0005	0.0045	0.2770	0.0017	0.3200	0.000020	0.0600	0.0707	6.5200	0.0000	0.0000	0.0001	0.0000	0.0003	0.16300	0.00001
S-09-12 172.5-173.5	0.0005	0.0045	0.2770	0.0017	0.3200	0.000020	0.0600	0.0707	6.5200	0.0000	0.0000	0.0001	0.0000	0.0003	0.16300	0.00001
S-09-12 172.5-173.5	0.0004	0.0045	0.3070	0.0018	0.3275	0.000035	0.0525	0.0743	6.3250	0.0000	0.0003	0.0001	0.0000	0.0002	0.19375	0.00001
S-09-12 172.5-173.5	0.0004	0.0045	0.3170	0.0019	0.3300	0.000040	0.0500	0.0755	6.2600	0.0000	0.0004	0.0001	0.0000	0.0002	0.20400	0.00001
S-09-12 172.5-173.5	0.0004	0.0045	0.3195	0.0018	0.3400	0.000043	0.0550	0.0760	6.2225	0.0000	0.0003	0.0001	0.0000	0.0002	0.19325	0.00001
S-09-12 172.5-173.5	0.0004	0.0045	0.3220	0.0018	0.3500	0.000045	0.0600	0.0766	6.1850	0.0000	0.0003	0.0001	0.0000	0.0002	0.18250	0.00001
S-09-12 172.5-173.5	0.0003	0.0045	0.3245	0.0017	0.3600	0.000048	0.0650	0.0771	6.1475	0.0000	0.0002	0.0001	0.0000	0.0003	0.17175	0.00001
S-09-12 172.5-173.5	0.0003	0.0045	0.3270	0.0017	0.3700	0.000050	0.0700	0.0776	6.1100	0.0000	0.0001	0.0001	0.0000	0.0003	0.16100	0.00001
S-09-12 172.5-173.5	0.0003	0.0045	0.3343	0.0016	0.3675	0.000048	0.0700	0.0791	6.2950	0.0000	0.0001	0.0001	0.0000	0.0003	0.16525	0.00001
S-09-12 172.5-173.5	0.0003	0.0045	0.3415	0.0016	0.3650	0.000045	0.0700	0.0806	6.4800	0.0000	0.0002	0.0001	0.0000	0.0003	0.16950	0.00001
S-09-12 172.5-173.5	0.0003	0.0045	0.3488	0.0016	0.3625	0.000043	0.0700	0.0820	6.6650	0.0000	0.0002	0.0001	0.0000	0.0003	0.17375	0.00001
S-09-12 172.5-173.5	0.0003	0.0045	0.3560	0.0015	0.3600	0.000040	0.0700	0.0835	6.8500	0.0000	0.0002	0.0001	0.0000	0.0003	0.17800	0.00001
S-09-12 172.5-173.5	0.0003	0.0045	0.3448	0.0015	0.3550	0.000038	0.0650	0.0805	6.5225	0.0000	0.0002	0.0001	0.0000	0.0003	0.17825	0.00001
S-09-12 172.5-173.5	0.0003	0.0045	0.3335	0.0015	0.3500	0.000035	0.0600	0.0776	6.1950	0.0000	0.0002	0.0001	0.0000	0.0003	0.17850	0.00001
S-09-12 172.5-173.5	0.0002	0.0045	0.3223	0.0014	0.3450	0.000033	0.0550	0.0746	5.8675	0.0000	0.0002	0.0001	0.0000	0.0003	0.17875	0.00001
S-09-12 172.5-173.5	0.0002	0.0045	0.3110	0.0014	0.3400	0.000030	0.0500	0.0716	5.5400	0.0000	0.0002	0.0001	0.0000	0.0003	0.17900	0.00001
	0.000278	0.004500	0.33435	0.00154575	0.3575	0.00004075	0.0645	0.0784075	6.26725	0.00001	0.000172	0.000066	0.000009	0.000276	0.173375	0.000005

Appendix 5.2-5

Humidity Cell Leachate Concentrations: Mitchell Deposit

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Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-06-14 LP Hazelton																							
M-06-14-0		0	20-Feb-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	750	640	923	2960	3.06	1430.19	1.01	2160.53	
M-06-14-1		1	27-Feb-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	435	350	1590	3.14	604.19	1.01	888.53	
M-06-14-2		2	6-Mar-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	455	157	928	3.23	293.19	1.01	428.53	
M-06-14-3		3	13-Mar-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	450	82	664	3.28	204.19	1.01	268.53	
M-06-14-4		4	20-Mar-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	450	57	590	3.26	170.19	1.01	215.53	
M-06-14-5		5	27-Mar-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	435	43	548	3.27	159.19	1.01	191.53	
M-06-14-6		6	3-Apr-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	38	537	3.27	161.19	1.01	182.53	
M-06-14-7		7	10-Apr-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	30	497	3.26	150.19	1.01	163.53	
M-06-14-8		8	17-Apr-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	33	577	3.20	178.19	1.01	196.53	
M-06-14-9		9	24-Apr-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	465	28	544	3.21	180.19	1.01	187.53	
M-06-14-10		10	1-May-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	480	27	588	3.16	180.19	1.01	200.53	
M-06-14-11		11	8-May-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	25	606	3.16	189.19	1.01	202.53	
M-06-14-12		12	15-May-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	29	654	3.17	196.19	1.01	212.53	
M-06-14-13		13	22-May-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	30	716	3.06	233.19	1.01	247.53	
M-06-14-14		14	29-May-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	30	708	3.07	205.19	1.01	227.53	
M-06-14-15		15	5-Jun-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	450	30	756	3.02	234.19	1.01	241.53	
M-06-14-16		16	12-Jun-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	450	29	798	3.01	236.19	1.01	251.53	
M-06-14-17		17	19-Jun-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	460	29	828	2.97	241.19	1.01	259.53	
M-06-14-18		18	26-Jun-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	460	30	900	2.95	263.19	1.01	276.53	
M-06-14-19		19	3-Jul-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	460	33	888	2.95	271.19	1.01	279.53	
M-06-14-20		20	10-Jul-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	455	27	884	2.92	260.19	1.01	279.53	
M-06-14-21		21	17-Jul-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	30	905	2.90	275.19	1.01	284.53	
M-06-14-22		22	24-Jul-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	34	918	2.89	297.19	1.01	294.53	
M-06-14-23		23	31-Jul-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	460	38	939	2.88	286.19	1.01	302.53	
M-06-14-24		24	7-Aug-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	445	38	966	2.90	303.19	1.01	319.53	
M-06-14-25		25	14-Aug-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	34	836	2.95	237.19	1.01	261.53	
M-06-14-26		26	21-Aug-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	39	948	2.87	277.19	1.01	296.53	
M-06-14-27		27	28-Aug-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	38	930	2.88	286.19	1.01	296.53	
M-06-14-28		28	4-Sep-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	35	939	2.87	291.19	1.01	290.53	
M-06-14-29		29	11-Sep-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	32	963	2.90	303.19	1.01	308.53	
M-06-14-30		30	18-Sep-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	485	30	963	2.88	293.19	1.01	299.53	
M-06-14-31		31	25-Sep-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	32	940	2.89	285.19	1.01	290.53	
M-06-14-32		32	2-Oct-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	490	31	900	2.88	274.19	1.01	289.53	
M-06-14-33		33	9-Oct-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	500	31	800	2.95	211.19	1.01	231.53	
M-06-14-34		34	16-Oct-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	490	34	802	2.97	245.19	1.01	243.53	
M-06-14-35		35	23-Oct-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	500	34	896	2.92	263.19	1.01	269.53	
M-06-14-36		36	30-Oct-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	40	990	2.87	312.19	1.01	319.53	
M-06-14-37		37	6-Nov-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	33	939	2.90	280.19	1.01	298.53	
M-06-14-38		38	13-Nov-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	455	35	1050	2.84	349.19	1.01	322.53	
M-06-14-39		39	20-Nov-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	465	32	1030	2.86	279.19	1.01	325.53	
M-06-14-40		40	27-Nov-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	27	993	2.83	320.19	1.01	304.53	
M-06-14-41		41	4-Dec-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	435	35	1060	2.85	344.19	1.01	305.53	
M-06-14-42		42	11-Dec-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	465	31	1070	2.82	339.19	1.01	303.53	
M-06-14-43		43	18-Dec-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	465	34	1080	2.83	349.19	1.01	366.53	
M-06-14-44		44	24-Dec-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	460	32	1020	2.89	333.19	1.01	326.53	
M-06-14-45		45	31-Dec-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	435	36	1140	2.77	375.19	1.01	377.53	
M-06-14-46		46	8-Jan-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	425	43	1260	2.80	458.19	1.01	417.53	
M-06-14-47		47	15-Jan-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	445	39	1210	2.81	411.19	1.01	416.53	
M-06-14-48		48	22-Jan-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	450	37	1170	2.82	391.19	1.01	381.53	
M-06-14-49		49	29-Jan-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	420	37	1210	2.80	406.19	1.01	407.53	
M-06-14-50		50	5-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	450	36	1120	2.82	386.19	1.01	370.53	
M-06-14-51		51	12-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	465	37	1130	2.83	377.19	1.01	361.53	
M-06-14-52		52	19-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	37	1140	2.87	379.19	1.01	392.53	
M-06-14-53		53	26-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	460	33	1090	2.83	371.19	1.01	379.53	
M-06-14-54		54	5-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	34	1070	2.86	374.19	1.01	352.53	
M-06-14-55		55	12-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	460	30	1060	2.84	347.19	1.01	351.53	
M-06-14-56		56	19-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	465	30	1060	2.86	354.19	1.01	337.53	
M-06-14-57		57	26-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	33	1090	2.81	352.19	1.01	342.53	
M-06-14-58		58	2-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	425	35	1130	2.82	372.19	1.01	411.53	
M-06-14-59		59	9-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	450	34	1130	2.85	366.19	1.01	372.53	
M-06-14-60		60	16-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	455	35	1100	2.84	350.19	1.01	392.53	
M-06-14-61		61	23-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	460	33	1080	2.86	342.19	1.01	348.53	
M-06-14-62		62	30-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	30	1080	2.88	334.19	1.01	393.53	
M-06-14-63		63	7-May-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	450	31	1070	2.88	356.19	1.01	340.53	
M-06-14-64		64	14-May-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	28	1020	2.88	334.19	1.01	332.53	
M-06-14-65		65	21-May-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	26	1030	2.89	321.19	1.01	345.53	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-06-14 LP Hazelton																				
M-06-14-0	7.40	112.006029	0.002504	0.002504	0.021190	0.055002	0.012502	0.050048	0.605006	216.029429	0.034002	0.446024	226.000942	160.042762	0.003100	0.177106	93.443714	10.803095	0.000500	0.001250
M-06-14-1	1.90	29.106029	0.001004	0.001004	0.007390	0.024002	0.005002	0.050048	0.228006	83.929429	0.005002	0.175024	78.400942	107.042762	0.000500	0.082106	34.243714	3.783095	0.000500	0.000500
M-06-14-2	1.04	9.686029	0.001604	0.001104	0.007910	0.011602	0.002502	0.050048	0.098106	40.429429	0.002502	0.079124	29.400942	63.242762	0.000250	0.034106	13.643714	1.483095	0.000500	0.000250
M-06-14-3	0.64	4.416029	0.000504	0.000504	0.008400	0.005702	0.002502	0.050048	0.048906	21.429429	0.002502	0.042824	13.900942	48.542762	0.000250	0.017106	7.023714	0.683095	0.000500	0.000250
M-06-14-4	0.43	2.906029	0.000504	0.000504	0.006850	0.002502	0.002502	0.050048	0.033506	14.629429	0.002502	0.031524	9.040942	46.442762	0.000250	0.012106	4.963714	0.436095	0.000500	0.000250
M-06-14-5	0.38	2.756029	0.000504	0.001004	0.008590	0.002502	0.002502	0.050048	0.028206	10.629429	0.002502	0.029124	6.850942	44.942762	0.000250	0.005106	4.073714	0.364095	0.000500	0.000250
M-06-14-6	0.34	3.236029	0.000504	0.001004	0.007850	0.002502	0.002502	0.050048	0.025306	8.259429	0.002502	0.028224	6.480942	46.842762	0.000250	0.005106	4.113714	0.340095	0.000500	0.000250
M-06-14-7	0.34	2.576029	0.000504	0.000504	0.007400	0.002502	0.002502	0.050048	0.018906	6.239429	0.002502	0.023724	5.010942	42.842762	0.000250	0.005106	3.413714	0.272095	0.000500	0.000250
M-06-14-8	0.37	3.886029	0.000504	0.000504	0.006950	0.002502	0.002502	0.050048	0.021406	6.289429	0.002502	0.026924	5.680942	53.242762	0.000250	0.005106	4.093714	0.320095	0.000500	0.000250
M-06-14-9	0.41	3.606029	0.000504	0.000504	0.006120	0.002502	0.002502	0.050048	0.018606	5.189429	0.002502	0.024524	4.940942	52.442762	0.000250	0.005106	3.593714	0.295095	0.000500	0.000250
M-06-14-10	0.38	3.516029	0.000504	0.001004	0.006710	0.002502	0.002502	0.050048	0.019406	4.879429	0.002502	0.025624	4.040942	55.942762	0.000250	0.005106	3.513714	0.263095	0.000500	0.000250
M-06-14-11	0.49	3.556029	0.000504	0.001104	0.006550	0.002502	0.002502	0.050048	0.018106	4.559429	0.002502	0.025224	3.410942	53.642762	0.000250	0.005106	3.383714	0.233095	0.000500	0.000250
M-06-14-12	0.49	5.406029	0.000504	0.001104	0.006000	0.002502	0.002502	0.050048	0.019106	4.349429	0.002502	0.028424	4.650942	56.142762	0.000250	0.005106	4.313714	0.343095	0.000500	0.000250
M-06-14-13	0.48	6.156029	0.000504	0.001204	0.005990	0.002502	0.002502	0.050048	0.017906	4.519429	0.002502	0.029124	4.010942	62.742762	0.000250	0.011106	4.473714	0.348095	0.000500	0.000250
M-06-14-14	0.46	6.496029	0.000504	0.001204	0.005200	0.002502	0.002502	0.050048	0.018406	4.269429	0.002502	0.024224	3.510942	58.742762	0.000250	0.010106	4.793714	0.309095	0.000500	0.000250
M-06-14-15	0.50	7.026029	0.000504	0.001304	0.005010	0.002502	0.002502	0.050048	0.018306	4.049429	0.002502	0.028624	3.200942	60.042762	0.000250	0.010106	4.843714	0.319095	0.000500	0.000250
M-06-14-16	0.41	7.366029	0.000504	0.001304	0.004060	0.002502	0.002502	0.050048	0.018006	3.959429	0.002502	0.029124	3.320942	60.642762	0.000250	0.010106	4.623714	0.341095	0.000500	0.000250
M-06-14-17	0.33	7.016029	0.000504	0.001604	0.005180	0.002502	0.002502	0.050048	0.018106	4.069429	0.002502	0.027224	2.600942	63.342762	0.000250	0.010106	4.613714	0.314095	0.000500	0.000250
M-06-14-18	0.39	7.896029	0.000504	0.001504	0.004860	0.002502	0.002502	0.050048	0.018306	4.149429	0.002502	0.026924	2.650942	66.342762	0.000250	0.011106	4.823714	0.321095	0.000500	0.000250
M-06-14-19	0.47	9.766029	0.000504	0.002004	0.004990	0.002502	0.002502	0.050048	0.018006	3.929429	0.002502	0.029524	3.080942	66.942762	0.000250	0.011106	5.693714	0.387095	0.000500	0.000250
M-06-14-20	0.44	6.496029	0.000504	0.001304	0.004700	0.002502	0.002502	0.050048	0.015906	3.669429	0.002502	0.024024	2.030942	66.642762	0.000250	0.012106	4.233714	0.259095	0.000500	0.000250
M-06-14-21	0.50	8.466029	0.000504	0.001504	0.004920	0.002502	0.002502	0.050048	0.017206	3.899429	0.002502	0.026524	2.560942	68.042762	0.000250	0.012106	5.013714	0.370095	0.000500	0.000250
M-06-14-22	0.52	9.866029	0.000504	0.001504	0.005540	0.002502	0.002502	0.050048	0.017106	4.049429	0.002502	0.026624	2.550942	71.042762	0.000250	0.013106	5.713714	0.409095	0.000500	0.000250
M-06-14-23	0.46	10.506029	0.000504	0.001704	0.005370	0.002502	0.002502	0.050048	0.018806	4.069429	0.002502	0.030524	2.670942	71.442762	0.000250	0.013106	6.723714	0.462095	0.000500	0.000250
M-06-14-24	0.47	11.706029	0.000504	0.001804	0.006810	0.002502	0.002502	0.050048	0.018706	4.089429	0.002502	0.031724	2.530942	73.942762	0.000250	0.014106	6.773714	0.432095	0.000500	0.000250
M-06-14-25	0.42	6.626029	0.000504	0.001804	0.005810	0.002502	0.002502	0.050048	0.015806	4.219429	0.002502	0.022724	1.900942	62.442762	0.000250	0.014106	5.603714	0.379095	0.000500	0.000250
M-06-14-26	0.37	8.696029	0.000504	0.001804	0.005060	0.002502	0.002502	0.050048	0.018106	4.489429	0.002502	0.027124	2.290942	69.642762	0.000250	0.014106	6.733714	0.433095	0.000500	0.000250
M-06-14-27	0.53	9.556029	0.000504	0.001704	0.005330	0.002502	0.002502	0.050048	0.018606	4.129429	0.002502	0.028324	2.390942	68.942762	0.000250	0.012106	6.723714	0.444095	0.000500	0.000250
M-06-14-28	0.52	9.026029	0.000504	0.001504	0.004240	0.002502	0.002502	0.050048	0.017306	3.789429	0.002502	0.026824	2.150942	71.442762	0.000250	0.014106	6.303714	0.428095	0.000500	0.000250
M-06-14-29	0.42	8.356029	0.000504	0.002104	0.004390	0.002502	0.002502	0.050048	0.017606	3.529429	0.002502	0.026724	1.800942	73.442762	0.000250	0.014106	5.583714	0.372095	0.000500	0.000250
M-06-14-30	0.34	7.656029	0.000504	0.001404	0.004350	0.002502	0.002502	0.050048	0.016706	3.319429	0.002502	0.026024	1.930942	73.942762	0.000250	0.012106	5.263714	0.337095	0.000500	0.000250
M-06-14-31	0.49	8.396029	0.000504	0.001604	0.004260	0.002502	0.002502	0.050048	0.018206	3.209429	0.002502	0.026724	1.950942	72.742762	0.000250	0.013106	5.733714	0.364095	0.000500	0.000250
M-06-14-32	0.41	7.156029	0.000504	0.001604	0.004500	0.002502	0.002502	0.050048	0.017806	3.099429	0.002502	0.026624	1.790942	70.842762	0.000250	0.012106	5.713714	0.370095	0.000500	0.000250
M-06-14-33	0.20	5.296029	0.000504	0.001504	0.004440	0.002502	0.002502	0.050048	0.014606	3.359429	0.002502	0.019824	1.490942	62.042762	0.000250	0.012106	5.553714	0.348095	0.000500	0.000250
M-06-14-34	0.60	6.076029	0.000504	0.001304	0.004350	0.002502	0.002502	0.050048	0.014906	4.179429	0.002502	0.020424	1.450942	60.642762	0.000250	0.013106	5.763714	0.364095	0.000500	0.000250
M-06-14-35	0.20	6.246029	0.000504	0.001604	0.004960	0.002502	0.002502	0.050048	0.018106	4.609429	0.002502	0.027424	1.990942	68.142762	0.000250	0.013106	5.383714	0.461095	0.000500	0.000250
M-06-14-36	0.49	9.396029	0.000504	0.001604	0.004020	0.002502	0.002502	0.050048	0.019306	4.359429	0.002502	0.030324	2.150942	79.642762	0.000250	0.013106	7.133714	0.459095	0.000500	0.000250
M-06-14-37	0.59	7.826029	0.000504	0.001704	0.003930	0.002502	0.002502	0.050048	0.016906	3.509429	0.002502	0.027724	1.830942	74.942762	0.000250	0.014106	5.993714	0.431095	0.000500	0.000250
M-06-14-38	0.50	9.186029	0.000504	0.001804	0.003700	0.002502	0.002502	0.050048	0.019706	3.529429	0.002502	0.032024	2.150942	90.842762	0.000250	0.013106	6.423714	0.420095	0.000500	0.000250
M-06-14-39	0.50	8.676029	0.000504	0.001704	0.003320	0.002502	0.002502	0.050048	0.017706	3.069429	0.002502	0.028724	1.870942	85.642762	0.000250	0.012106	5.873714	0.375095	0.000500	0.000250
M-06-14-40	0.50	7.656029	0.000504	0.001704	0.003270	0.002502	0.002502	0.050048	0.016606	2.639429	0.002502	0.028324	1.700942	82.642762	0.000250	0.012106	5.033714	0.330095	0.000500	0.000250
M-06-14-41	0.38	10.306029	0.000504	0.003904	0.003170	0.002502	0.002502	0.050048	0.019406	2.719429	0.002502	0.033124	2.220942	91.642762	0.000250	0.014106	6.793714	0.454095	0.000500	0.000250
M-06-14-42	0.46	8.786029	0.000504	0.001804	0.002630	0.002502	0.002502	0.050048	0.018806	2.569429	0.002502	0.031224	1.930942	95.642762	0.000250	0.013106	5.943714	0.363095	0.000500	0.000250
M-06-14-43	0.45	9.276029	0.000504	0.002204	0.003040	0.002502	0.002502	0.050048	0.019606	2.519429	0.002502	0.034124	2.180942	99.642762	0.000250	0.015106	6.693714	0.462095	0.000500	0.000250
M-06-14-44	0.46	7.676029	0.000504	0.002004	0.002920	0.002502	0.002502	0.050048	0.017506	2.319429	0.002502	0.031024	1.990942	91.742762	0.000250	0.014106	6.373714	0.435095	0.000500	0.000250
M-06-14-45	0.49	9.626029	0.000504	0.002104	0.002410	0.002502	0.002502	0.050048	0.019006	2.779429	0.002502	0.033424	2.090942	108.042762	0.000250	0.015106	7.163714	0.426095	0.000500	0.000250
M-06-14-46	0.44	12.106029	0.000504	0.002204	0.002400	0.002502	0.002502	0.050048	0.023406	3.009429	0.005202	0.039924	2.550942	123.042762	0.000250	0.017106	8.733714	0.530095	0.000500	0.000250
M-06-14-47	0.53	9.736029	0.000504	0.002504	0.002170	0.002502	0.002502	0.050048	0.022106	2.719429	0.002502	0.037924	2.290942	120.042762	0.000250	0.017106	7.973714	0.462095	0.000500	0.000250
M-06-14-48	0.50	9.426029	0.000504	0.002004	0.002220	0.002502	0.002502	0.050048	0.018006	2.599429	0.002502	0.034124	2.150942	114.042762	0.000250	0.016106	7.363714	0.474095	0.000500	0.000250
M-06-14-49	0.56	9.716029	0.000504	0.002404	0.002070	0.002502	0.002502	0.050048	0.019806	2.809429	0.002502	0.035424	2.180942	119.042762	0.000250	0.017106	7.413714	0.450095	0.000500	0.000250
M-06-14-50	0.46	9.156029	0.000504	0.002104	0.002510	0.002502	0.002502	0.050048	0.017406	2.429429	0.002502	0.034624	2.160942	108.042762	0.000250	0.015106	7.313714	0.467095	0.000500	0.000250
M-06-14-51	0.47	9.106029	0.000504	0.002404	0.002420	0.002502	0.002502	0.050048	0.017606	2.469429	0.002502	0.034424	2.070942	109.042762	0.000250	0.013106	7.573714	0.465095	0.000500	0.000250
M-06-14-52	0.46	9.446029	0.000504	0.002004	0.002220	0.002502	0.002502	0.050048	0.016306	2.469429	0.002502	0.033124	2.130942	111.042762	0.000250	0.015106	7.603714	0.428095	0.000500	0.000250
M-06-14-53	0.36	9.016029	0.000504	0.002004	0.002340	0.002502	0.002502	0.050048	0.016106	2.249429	0.002502	0.033524	2.010942	106.042762	0.000250	0.013106	6.613714	0.422095	0.000500	0.000250
M-06-14-54	0.43	8.256029	0.000504	0.001904	0.002390	0.002502	0.002502	0.050048	0.015006	2.409429	0.002502	0.030724	1.910942	103.042762	0.000250	0.013106	6.783714	0.394095	0.000500	0.000250
M-06-14-55	0.40	7.266029	0.000504	0.001804	0.002170	0.002502	0.002502	0.050048	0.013906	2.349429	0.002502	0.028424	1.640942	105.042762	0.000250	0.013106	5.983714	0.367095	0.000500	0.000250
M-06-14-56	0.42	7.216029	0.000504	0.001904	0.001900	0.002502	0.002502	0.050048	0.013406	2.409429	0.002502	0.027424	1.690942	102.042762	0.000250	0.013106	5.883714	0.392095	0.000500	0.000250
M-06-14-57	0.42	8.056029	0.000504	0.001904	0.001990	0.002502	0.002502	0.050048	0.013206	2.419429	0.002502	0.029424	1.680942	105.042762	0.000250	0.015106	6.513714	0.397095	0.000500	0.000250
M-06-14-58	0.45	9.966029	0.000504	0.002004	0.001940	0.002502	0.002502	0.050048	0.014506	2.409429	0.002502	0.034224	2.000942	112.042762	0.000250	0.013106	7.133714	0.435095	0.000500	0.000250
M-06-14-59	0.44	9.146029	0.000504	0.002104	0.001770	0.002502	0.002502	0.050048	0.013606	2.419429	0.002502	0.030024	1.840942	112.042762	0.000250	0.014106	6.823714	0.411095	0.000500	0.002350
M-06-14-60	0.39	9.726029	0.000504	0.002104	0.002070	0.002502	0.002502	0.050048	0.013606	2.149429	0.002502	0.034024	1.990942	109.042762	0.000250	0.011106	7.133714	0.444095	0.000500	0.000250
M-06-14-61	0.39	9.096029	0.000504	0.002304	0.002080	0.002502	0.002502	0.050048	0.013006	2.169429	0.002502	0.034124	1.880942	106.042762	0.000250	0.012106	6.673714	0.430095	0.000500	0.000250
M-06-14-62	0.42	7.616029	0.000504	0.002204	0.001780	0.002502	0.002502	0.050048	0.011606	2.099429	0.002502	0.029624	1.640942	106.042762	0.000250	0.012106	5.993714	0.400095	0.000500	0.000250
M-06-14-63	0.50	7.986029	0.000504	0.002104	0.002120	0.002502	0.002502	0.050048	0.011506	2.219429	0.002502	0.029024	1.640942	108.042762	0.000250	0.012106	6.123714	0.377095	0.000500	0.000250
M-06-14-64	0.50	6.246029	0.000504	0.002204	0.001810	0.002502	0.002502	0.050048	0.010406	2.129429	0.002502	0.024724	1.390942	105.042762	0.000250	0.012106	5.593714	0.366095	0.000500	0.000250
M-06-14-65	0.36	5.696029	0.000504	0.002104	0.001880	0.002502	0.002502	0.050048	0.009566	2.239429	0.002502	0.023624	1.340942	102.042762	0.000250	0.011106	4.973714	0.313095	0.000500	0.000250

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-06-14 LP Hazelton																
M-06-14-0	0.108009	0.151429	1.341143	0.025003	3.520571	0.000250	1.270286	0.627132	0	0.002500	0.002500	0.005048	0.280048	0.025937	55.600937	
M-06-14-1	0.044009	0.151429	0.591143	0.010003	10.290571	0.000100	0.520286	0.273132	0	0.001000	0.001000	0.005048	0.085048	0.010937	21.200937	
M-06-14-2	0.020709	0.151429	0.341143	0.005003	9.100571	0.000050	0.270286	0.158132	0	0.000500	0.000500	0.005048	0.029548	0.005937	8.910937	
M-06-14-3	0.011709	0.151429	0.341143	0.005003	7.500571	0.000050	0.270286	0.092832	0	0.000500	0.000500	0.005048	0.012048	0.005937	4.810937	
M-06-14-4	0.008709	0.151429	0.341143	0.005003	7.000571	0.000050	0.270286	0.069332	0	0.000500	0.000500	0.005048	0.006878	0.005937	3.260937	
M-06-14-5	0.008009	0.151429	0.341143	0.005003	6.370571	0.000050	0.270286	0.063932	0	0.000500	0.000500	0.005048	0.004968	0.005937	2.470937	
M-06-14-6	0.007609	0.151429	0.341143	0.005003	6.650571	0.000050	0.270286	0.058032	0	0.000500	0.000500	0.005048	0.003858	0.005937	2.050937	
M-06-14-7	0.006409	0.151429	0.341143	0.005003	6.070571	0.000050	0.270286	0.047832	0	0.000500	0.000500	0.005048	0.002518	0.005937	1.580937	
M-06-14-8	0.007009	0.151429	0.341143	0.005003	6.580571	0.000050	0.270286	0.052732	0	0.000500	0.000500	0.005048	0.002578	0.005937	1.700937	
M-06-14-9	0.006609	0.151429	0.341143	0.005003	6.490571	0.000050	0.270286	0.043032	0	0.000500	0.000500	0.005048	0.001978	0.005937	1.470937	
M-06-14-10	0.006709	0.151429	0.341143	0.005003	6.870571	0.000050	0.270286	0.041332	0	0.000500	0.000500	0.005048	0.001848	0.005937	1.400937	
M-06-14-11	0.006709	0.151429	0.341143	0.005003	6.490571	0.000050	0.270286	0.037532	0	0.000500	0.000500	0.005048	0.001658	0.005937	1.340937	
M-06-14-12	0.007409	0.151429	0.341143	0.005003	6.750571	0.000050	0.270286	0.038532	0	0.000500	0.000500	0.005048	0.001548	0.005937	1.340937	
M-06-14-13	0.007709	0.151429	0.341143	0.005003	7.310571	0.000050	0.270286	0.036832	0	0.000500	0.000500	0.005048	0.001538	0.005937	1.420937	
M-06-14-14	0.006609	0.151429	0.341143	0.005003	7.390571	0.000050	0.270286	0.033832	0	0.000500	0.000500	0.005048	0.001238	0.005937	1.310937	
M-06-14-15	0.008409	0.151429	0.341143	0.005003	6.790571	0.000050	0.270286	0.029632	0	0.000500	0.000500	0.005048	0.001278	0.005937	1.290937	
M-06-14-16	0.008409	0.151429	0.341143	0.005003	6.660571	0.000050	0.270286	0.027632	0	0.000500	0.000500	0.005048	0.001198	0.005937	1.290937	
M-06-14-17	0.007509	0.151429	0.341143	0.005003	7.430571	0.000050	0.270286	0.026632	0	0.000500	0.000500	0.005048	0.001208	0.005937	1.300937	
M-06-14-18	0.008009	0.151429	0.341143	0.005003	7.390571	0.000050	0.270286	0.024032	0	0.000500	0.000500	0.005048	0.001208	0.005937	1.310937	
M-06-14-19	0.008009	0.151429	0.341143	0.005003	7.480571	0.000050	0.270286	0.023832	0	0.000500	0.000500	0.005048	0.001148	0.005937	1.280937	
M-06-14-20	0.006909	0.151429	0.341143	0.005003	7.270571	0.000050	0.270286	0.019332	0	0.000500	0.000500	0.005048	0.000998	0.005937	1.210937	
M-06-14-21	0.007909	0.151429	0.341143	0.005003	7.670571	0.000050	0.270286	0.020032	0	0.000500	0.000500	0.005048	0.001028	0.005937	1.270937	
M-06-14-22	0.007609	0.151429	0.341143	0.005003	8.090571	0.000050	0.270286	0.019332	0	0.000500	0.000500	0.005048	0.000998	0.005937	1.360937	
M-06-14-23	0.008809	0.151429	0.341143	0.005003	8.410571	0.000050	0.270286	0.020732	0	0.000500	0.000500	0.005048	0.000968	0.010937	1.370937	
M-06-14-24	0.009109	0.151429	0.341143	0.005003	8.350571	0.000050	0.270286	0.019332	0	0.000500	0.000500	0.005048	0.001018	0.011937	1.500937	
M-06-14-25	0.008109	0.151429	0.341143	0.005003	8.790571	0.000050	0.270286	0.017432	0	0.000500	0.000500	0.005048	0.000798	0.005937	1.230937	
M-06-14-26	0.010009	0.151429	0.341143	0.005003	8.740571	0.000050	0.270286	0.019632	0	0.000500	0.000500	0.005048	0.001018	0.005937	1.440937	
M-06-14-27	0.009809	0.151429	0.341143	0.005003	8.020571	0.000050	0.270286	0.019032	0	0.000500	0.000500	0.005048	0.000978	0.005937	1.430937	
M-06-14-28	0.008409	0.151429	0.341143	0.005003	8.050571	0.000050	0.270286	0.016332	0	0.000500	0.000500	0.005048	0.000838	0.005937	1.460937	
M-06-14-29	0.006409	0.151429	0.341143	0.005003	8.140571	0.000050	0.270286	0.015832	0	0.000500	0.000500	0.005048	0.000858	0.010937	1.450937	
M-06-14-30	0.007309	0.151429	0.341143	0.005003	7.700571	0.000050	0.270286	0.014132	0	0.000500	0.000500	0.005048	0.000728	0.005937	1.480937	
M-06-14-31	0.007809	0.151429	0.341143	0.005003	7.740571	0.000050	0.270286	0.015032	0	0.000500	0.000500	0.005048	0.000688	0.010937	1.500937	
M-06-14-32	0.007409	0.151429	0.341143	0.005003	7.800571	0.000050	0.270286	0.014732	0	0.000500	0.000500	0.005048	0.000608	0.005937	1.450937	
M-06-14-33	0.005709	0.151429	0.341143	0.005003	8.290571	0.000050	0.270286	0.013232	0	0.000500	0.000500	0.005048	0.000468	0.005937	1.220937	
M-06-14-34	0.005709	0.151429	0.341143	0.005003	8.550571	0.000050	0.270286	0.014432	0	0.000500	0.000500	0.005048	0.000518	0.005937	1.300937	
M-06-14-35	0.007409	0.151429	0.341143	0.005003	8.050571	0.000050	0.270286	0.017032	0	0.000500	0.000500	0.005048	0.000778	0.005937	1.480937	
M-06-14-36	0.008409	0.151429	0.341143	0.005003	7.910571	0.000050	0.270286	0.016432	0	0.000500	0.000500	0.005048	0.000798	0.011937	1.660937	
M-06-14-37	0.007609	0.151429	0.341143	0.005003	7.420571	0.000050	0.270286	0.013432	0	0.000500	0.000500	0.005048	0.000708	0.010937	1.500937	
M-06-14-38	0.008809	0.151429	0.341143	0.005003	8.060571	0.000050	0.270286	0.014432	0	0.000500	0.000500	0.005048	0.000728	0.011937	1.700937	
M-06-14-39	0.007909	0.151429	0.341143	0.005003	7.370571	0.000050	0.270286	0.012332	0	0.000500	0.000500	0.005048	0.000678	0.010937	1.530937	
M-06-14-40	0.007809	0.151429	0.341143	0.005003	7.040571	0.000050	0.270286	0.011732	0	0.000500	0.000500	0.005048	0.000608	0.010937	1.410937	
M-06-14-41	0.009309	0.151429	0.341143	0.005003	7.130571	0.000050	0.270286	0.012132	0	0.000500	0.000500	0.005048	0.000658	0.013937	1.580937	
M-06-14-42	0.008409	0.151429	0.341143	0.005003	8.170571	0.000050	0.270286	0.010632	0	0.000500	0.000500	0.005048	0.000648	0.013937	1.640937	
M-06-14-43	0.009609	0.151429	0.341143	0.005003	8.410571	0.000050	0.270286	0.011232	0	0.000500	0.000500	0.005048	0.000608	0.016937	1.620937	
M-06-14-44	0.008409	0.151429	0.341143	0.005003	8.230571	0.000050	0.270286	0.010132	0	0.000500	0.000500	0.005048	0.000548	0.014937	1.460937	
M-06-14-45	0.009209	0.151429	0.341143	0.005003	8.790571	0.000050	0.270286	0.010032	0	0.000500	0.000500	0.005048	0.000638	0.015937	1.720937	
M-06-14-46	0.011209	0.151429	0.341143	0.005003	9.530571	0.000050	0.270286	0.010332	0	0.000500	0.000500	0.005048	0.000758	0.022937	2.080937	
M-06-14-47	0.010709	0.151429	0.341143	0.005003	9.530571	0.000050	0.270286	0.009532	0	0.000500	0.000500	0.005048	0.000648	0.019937	1.890937	
M-06-14-48	0.009409	0.151429	0.341143	0.005003	8.960571	0.000050	0.270286	0.008132	0	0.000500	0.000500	0.005048	0.000608	0.018937	1.770937	
M-06-14-49	0.010009	0.151429	0.341143	0.005003	8.770571	0.000050	0.270286	0.008932	0	0.000500	0.000500	0.005048	0.000618	0.018937	1.830937	
M-06-14-50	0.009609	0.151429	0.341143	0.005003	8.430571	0.000050	0.270286	0.008132	0	0.000500	0.000500	0.005048	0.000558	0.018937	1.570937	
M-06-14-51	0.009709	0.151429	0.341143	0.005003	8.670571	0.000050	0.270286	0.008932	0	0.000500	0.000500	0.005048	0.000528	0.018937	1.580937	
M-06-14-52	0.009609	0.151429	0.341143	0.005003	8.600571	0.000050	0.270286	0.008232	0	0.000500	0.000500	0.005048	0.000518	0.016937	1.520937	
M-06-14-53	0.009809	0.151429	0.341143	0.005003	8.220571	0.000050	0.270286	0.008032	0	0.000500	0.000500	0.005048	0.000498	0.017937	1.390937	
M-06-14-54	0.008809	0.151429	0.341143	0.005003	8.020571	0.000050	0.270286	0.007932	0	0.000500	0.000500	0.005048	0.000458	0.015937	1.330937	
M-06-14-55	0.008509	0.151429	0.341143	0.005003	7.940571	0.000050	0.270286	0.007532	0	0.000500	0.000500	0.005048	0.000438	0.015937	1.300937	
M-06-14-56	0.008609	0.151429	0.341143	0.005003	8.180571	0.000050	0.270286	0.007232	0	0.000500	0.000500	0.005048	0.000428	0.014937	1.250937	
M-06-14-57	0.008909	0.151429	0.341143	0.005003	7.940571	0.000050	0.270286	0.007332	0	0.000500	0.000500	0.005048	0.000428	0.015937	1.240937	
M-06-14-58	0.009909	0.151429	0.341143	0.005003	7.490571	0.000050	0.270286	0.007832	0	0.000500	0.000500	0.005048	0.000448	0.017937	1.270937	
M-06-14-59	0.008809	0.151429	0.341143	0.005003	8.190571	0.000050	0.270286	0.006832	0	0.000500	0.000500	0.005048	0.000438	0.017937	1.310937	
M-06-14-60	0.009709	0.151429	0.341143	0.005003	7.690571	0.000050	0.270286	0.007232	0	0.000500	0.000500	0.005048	0.000438	0.018937	1.190937	
M-06-14-61	0.009909	0.151429	0.341143	0.005003	7.520571	0.000050	0.270286	0.007432	0	0.000500	0.000500	0.005048	0.000428	0.021937	1.090937	
M-06-14-62	0.008709	0.151429	0.341143	0.005003	8.120571	0.000050	0.270286	0.006732	0	0.000500	0.000500	0.005048	0.000398	0.017937	1.050937	
M-06-14-63	0.008709	0.151429	0.341143	0.005003	7.730571	0.000050	0.270286	0.006732	0	0.000500	0.000500	0.005048	0.000408	0.017937	1.060937	
M-06-14-64	0.007209	0.151429	0.341143	0.005003	7.790571	0.000050	0.270286	0.006432	0	0.000500	0.000500	0.005048	0.000368	0.016937	1.060937	
M-06-14-65	0.007009	0.151429	0.341143	0.005003	7.680571	0.000050	0.270286	0.005832	0	0.000500	0.000500	0.005048	0.000378	0.013937	0.989937	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-06-14-66		66	28-May-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	28	1050	2.87	336.19	1.01	321.53	
M-06-14-67		67	4-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	465	29	1060	2.88	349.19	1.01	358.53	
M-06-14-68		68	11-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	25	1020	2.85	352.19	1.01	309.53	
M-06-14-69		69	18-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	23	972	2.94	317.19	1.01	311.53	
M-06-14-70		70	25-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	27	940	2.92	311.19	1.01	304.53	
M-06-14-71		71	2-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	29	936	2.92	311.19	1.01	296.53	
M-06-14-72		72	9-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	31	987	2.91	317.19	1.01	321.53	
M-06-14-73		73	16-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	28	1010	2.90	293.19	1.01	310.53	
M-06-14-74		74	23-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	485	29	1000	2.90	340.19	1.01	328.53	
M-06-14-75		75	30-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	25	1020	2.89	337.19	1.01	348.53	
M-06-14-76		76	6-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	30	1010	2.91	309.19	1.01	369.53	
M-06-14-77		77	13-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	27	946	2.91	297.19	1.01	301.53	
M-06-14-78		78	20-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	23	890	2.94	281.19	1.01	284.53	
M-06-14-79		79	27-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	495	27	881	2.94	274.19	1.01	279.53	
M-06-14-80		80	3-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	480	18	904	2.92	295.19	1.01	284.53	
M-06-14-81		81	10-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	480	26	887	2.94	267.19	1.01	264.53	
M-06-14-82		82	17-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	25	923	2.90	286.19	1.01	310.53	
M-06-14-83		83	24-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	450	26	935	2.90	305.19	1.01	305.53	
M-06-14-84		84	1-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	25	890	2.92	287.19	1.01	279.53	
M-06-14-85		85	8-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	465	27	885	2.92	273.19	1.01	275.53	
M-06-14-86		86	15-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	23	870	2.94	260.19	1.01	260.53	
M-06-14-87		87	22-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	23	837	2.93	274.19	1.01	255.53	
M-06-14-88		88	29-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	22	842	2.92	266.19	1.01	260.53	
M-06-14-89		89	5-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	22	877	2.90	282.19	1.01	276.53	
M-06-14-90		90	12-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	460	23	850	2.91	280.19	1.01	263.53	
M-06-14-91		91	19-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	19	865	2.92	254.19	1.01	257.53	
M-06-14-92		92	26-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	480	21	902	2.90	263.19	1.01	269.53	
M-06-14-93		93	3-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	19	875	2.94	248.19	1.01	257.53	
M-06-14-94		94	10-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	460	22	891	2.92	263.19	1.01	265.53	
M-06-14-95		95	17-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	19	856	2.92	247.19	1.01	256.53	
M-06-14-96		96	24-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	445	19	899	2.89	276.19	1.01	267.53	
M-06-14-97		97	31-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	20	838	2.93	247.19	1.01	255.53	
M-06-14-98		98	7-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	475	21	863	2.94	264.19	1.01	270.53	
M-06-14-99		99	14-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	465	22	917	2.91	282.19	1.01	276.53	
M-06-14-100		100	21-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	470	23	959	2.88	295.19	1.01	292.53	
M-06-14-101		101	28-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	460	23	977	2.87	303.19	1.01	285.53	
M-06-14-102		102	4-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	480	24	1030	2.83	312.19	1.01	320.53	
M-06-14-103		103	11-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	450	23	1000	2.86	328.19	1.01	318.53	
M-06-14-104		104	18-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	0	0			Water	500	455	22	967	2.88	287.19	1.01	301.53	
Mean last 10 weeks	10																21.56	930.6	2.891	284.289524	1.009524	284.526667	#N/A
M-07-30 Monzonite																							
M-07-30-0		0	20-Feb-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	750	610	43	93.7	7.91	2.20	33.38	8.66	
M-07-30-1		1	27-Feb-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	450	42	92.7	7.87	1.40	32.08	11.11	
M-07-30-2		2	6-Mar-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	455	35	78.6	7.97	1.60	27.88	8.33	
M-07-30-3		3	13-Mar-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	475	29	64	7.93	2.20	24.88	6.02	
M-07-30-4		4	20-Mar-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	470	31	66.6	7.79	1.60	26.48	5.00	
M-07-30-5		5	27-Mar-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	470	36	75.6	7.91	1.80	31.48	4.25	
M-07-30-6		6	3-Apr-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	475	42	88.6	7.86	1.60	39.88	3.18	
M-07-30-7		7	10-Apr-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	485	40	85.2	7.84	4.10	40.08	2.66	
M-07-30-8		8	17-Apr-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	465	40	82.8	7.9	1.90	39.08	2.32	
M-07-30-9		9	24-Apr-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	470	42	86.9	7.92	3.50	41.08	2.22	
M-07-30-10		10	1-May-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	470	39	80.3	7.88	2.40	38.58	1.93	
M-07-30-11		11	8-May-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	490	41	84	7.94	2.20	40.68	1.91	
M-07-30-12		12	15-May-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	450	30	61.5	7.86	1.50	28.48	1.34	
M-07-30-13		13	22-May-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	460	26	53	7.83	2.60	24.88	1.60	
M-07-30-14		14	29-May-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	475	28	54.9	7.84	1.30	28.18	1.64	
M-07-30-15		15	5-Jun-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	500	29	62.6	7.82	2.70	28.38	1.97	
M-07-30-16		16	12-Jun-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	450	29	61.4	7.8	1.80	27.88	1.79	
M-07-30-17		17	19-Jun-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	475	30	61.3	7.79	1.30	27.88	1.86	
M-07-30-18		18	26-Jun-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	445	30	62.2	7.83	1.40	28.88	2.15	
M-07-30-19		19	3-Jul-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	475	28	60	7.86	3.10	28.08	2.48	
M-07-30-20		20	10-Jul-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	475	30	63.3	7.96	1.50	27.68	2.27	
M-07-30-21		21	17-Jul-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	480	29	60.6	7.86	3.50	26.08	2.47	
M-07-30-22		22	24-Jul-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	475	29	62.3	7.9	3.80	27.68	2.82	
M-07-30-23		23	31-Jul-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	440	28	59.6	7.66	1.20	26.38	2.01	
M-07-30-24		24	7-Aug-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	470	28	57.7	7.88	1.50	26.18	1.73	
M-07-30-25		25	14-Aug-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	485	28	57.3	7.86	2.20	26.28	2.30	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-06-14-66	0.50	6.946029	0.000504	0.001904	0.001660	0.002502	0.002502	0.050048	0.009546	2.139429	0.002502	0.026424	1.410942	103.042762	0.000250	0.013106	5.553714	0.351095	0.000500	0.000250
M-06-14-67	0.50	7.016029	0.000504	0.003404	0.002040	0.002502	0.002502	0.050048	0.010106	2.209429	0.002502	0.028324	1.500942	109.042762	0.000250	0.013106	5.773714	0.388095	0.000500	0.000250
M-06-14-68	0.50	5.836029	0.000504	0.001704	0.001640	0.002502	0.002502	0.050048	0.008246	2.109429	0.002502	0.022724	1.190942	103.042762	0.000250	0.012106	4.853714	0.312095	0.000500	0.000250
M-06-14-69	0.50	4.826029	0.000504	0.001604	0.001820	0.002502	0.002502	0.050048	0.008106	2.039429	0.002502	0.022024	1.060942	98.142762	0.000250	0.013106	4.453714	0.315095	0.000500	0.000250
M-06-14-70	0.50	5.686029	0.000504	0.001804	0.001820	0.002502	0.002502	0.050048	0.008046	2.079429	0.002502	0.024024	1.180942	91.942762	0.000250	0.012106	5.313714	0.341095	0.000500	0.000250
M-06-14-71	1.40	5.646029	0.000504	0.002004	0.001630	0.002502	0.002502	0.050048	0.007876	2.169429	0.002502	0.023524	1.220942	94.942762	0.000250	0.011106	5.713714	0.369095	0.000500	0.000250
M-06-14-72	0.50	6.316029	0.000504	0.001804	0.001630	0.002502	0.002502	0.050048	0.008006	2.329429	0.002502	0.025924	1.260942	101.042762	0.000250	0.012106	6.033714	0.387095	0.000500	0.000250
M-06-14-73	0.50	6.486029	0.000504	0.002004	0.001620	0.002502	0.002502	0.050048	0.007566	2.309429	0.002502	0.027224	1.260942	108.042762	0.000250	0.014106	5.433714	0.385095	0.000500	0.000250
M-06-14-74	0.50	6.486029	0.000504	0.001904	0.001640	0.002502	0.002502	0.050048	0.007946	2.179429	0.002502	0.029124	1.300942	105.042762	0.000250	0.013106	5.773714	0.364095	0.000500	0.000250
M-06-14-75	0.50	6.016029	0.000504	0.002104	0.001600	0.002502	0.002502	0.050048	0.007416	2.099429	0.002502	0.026224	1.250942	108.042762	0.000250	0.012106	4.913714	0.358095	0.000500	0.000250
M-06-14-76	0.50	6.226029	0.000504	0.001904	0.001480	0.002502	0.002502	0.050048	0.007266	2.129429	0.002502	0.027024	1.300942	106.042762	0.000250	0.012106	6.053714	0.383095	0.000500	0.000250
M-06-14-77	0.50	5.936029	0.000504	0.001704	0.001590	0.002502	0.002502	0.050048	0.006346	1.899429	0.002502	0.023924	1.170942	92.442762	0.000250	0.012106	5.333714	0.340095	0.000500	0.000250
M-06-14-78	0.50	5.496029	0.000504	0.001704	0.001640	0.002502	0.002502	0.050048	0.005566	1.919429	0.002502	0.022524	1.080942	89.742762	0.000250	0.005106	4.433714	0.307095	0.000500	0.000250
M-06-14-79	0.50	5.816029	0.000504	0.001704	0.001640	0.002502	0.002502	0.050048	0.005666	1.679429	0.002502	0.024824	1.200942	88.142762	0.000250	0.005106	5.493714	0.330095	0.000500	0.000250
M-06-14-80	0.50	4.216029	0.000504	0.001604	0.001510	0.002502	0.002502	0.050048	0.005016	1.739429	0.002502	0.019924	0.951942	88.942762	0.000250	0.005106	3.293714	0.248095	0.000500	0.000250
M-06-14-81	0.50	6.416029	0.000274	0.001734	0.001740	0.000252	0.000252	0.005048	0.005416	1.669429	0.002132	0.026224	1.290942	90.842762	0.000025	0.007006	5.233714	0.312095	0.000005	0.000025
M-06-14-82	0.50	5.846029	0.000244	0.001784	0.001650	0.000252	0.000252	0.005048	0.005436	1.709429	0.002212	0.025924	1.200942	93.242762	0.000025	0.006806	5.083714	0.321095	0.000005	0.000025
M-06-14-83	0.50	7.036029	0.000174	0.001894	0.001690	0.000252	0.000252	0.005048	0.005536	1.679429	0.002372	0.027824	1.320942	95.542762	0.000025	0.007806	5.433714	0.340095	0.000005	0.000054
M-06-14-84	0.50	6.196029	0.000294	0.001834	0.001930	0.000252	0.000252	0.005048	0.005146	1.669429	0.002152	0.025424	1.220942	90.142762	0.000025	0.007706	5.103714	0.332095	0.000005	0.000053
M-06-14-85	0.50	6.446029	0.000274	0.001594	0.001600	0.000252	0.000252	0.005048	0.004996	1.629429	0.002142	0.025824	1.230942	86.742762	0.000025	0.009806	5.493714	0.333095	0.000005	0.000025
M-06-14-86	0.50	5.746029	0.000194	0.001594	0.001456	0.000252	0.000252	0.005048	0.004526	1.419429	0.001822	0.022024	1.080942	77.142762	0.000025	0.007606	4.743714	0.317095	0.000005	0.000025
M-06-14-87	0.50	5.466029	0.000194	0.001794	0.001810	0.000252	0.000252	0.005048	0.004426	1.509429	0.001802	0.023024	1.130942	81.142762	0.000025	0.006606	4.753714	0.294095	0.000005	0.000025
M-06-14-88	0.50	5.556029	0.000234	0.001594	0.001850	0.000252	0.000252	0.005048	0.004406	1.559429	0.001812	0.023324	1.110942	83.642762	0.000025	0.006706	4.323714	0.284095	0.000005	0.000025
M-06-14-89	0.50	6.116029	0.000224	0.001684	0.001690	0.000252	0.000252	0.005048	0.004536	1.349429	0.002162	0.024924	1.190942	76.042762	0.000025	0.006706	4.573714	0.295095	0.000005	0.000025
M-06-14-90	0.50	6.606029	0.000234	0.001794	0.002000	0.000252	0.000252	0.005048	0.004686	1.509429	0.002042	0.024424	1.180942	83.642762	0.000025	0.006906	4.723714	0.294095	0.000005	0.000025
M-06-14-91	0.50	5.036029	0.000294	0.001694	0.001490	0.000252	0.000252	0.005048	0.004026	1.339429	0.001712	0.022124	1.030942	79.642762	0.000025	0.005406	3.723714	0.260095	0.000005	0.000025
M-06-14-92	0.50	4.956029	0.000314	0.001834	0.001510	0.000252	0.000252	0.005048	0.004366	1.459429	0.001772	0.024024	1.110942	85.442762	0.000025	0.006206	4.173714	0.289095	0.000011	0.000025
M-06-14-93	0.50	4.836029	0.000754	0.001734	0.001620	0.000252	0.000252	0.005048	0.003966	1.389429	0.001672	0.021524	1.020942	79.042762	0.000025	0.006006	3.883714	0.258095	0.000043	0.000025
M-06-14-94	0.50	5.236029	0.000174	0.002014	0.001700	0.000252	0.000252	0.005048	0.004176	1.499429	0.001912	0.023424	1.080942	87.042762	0.000025	0.006606	4.433714	0.279095	0.000005	0.000060
M-06-14-95	0.50	5.286029	0.000154	0.001804	0.001840	0.000252	0.000252	0.005048	0.003966	1.379429	0.001842	0.023124	1.100942	78.842762	0.000025	0.005206	3.853714	0.259095	0.000005	0.000025
M-06-14-96	0.50	5.326029	0.000154	0.001764	0.001670	0.000252	0.000252	0.005048	0.004116	1.359429	0.001852	0.023324	1.070942	82.142762	0.000025	0.005206	3.833714	0.270095	0.000005	0.000025
M-06-14-97	0.50	4.616029	0.000154	0.001604	0.001820	0.000252	0.000252	0.005048	0.003866	1.359429	0.001552	0.020824	0.974942	77.042762	0.000025	0.005906	3.973714	0.254095	0.000005	0.000025
M-06-14-98	0.50	5.076029	0.000184	0.001824	0.001760	0.000252	0.000252	0.005048	0.004186	1.459429	0.001792	0.021924	1.080942	80.142762	0.000025	0.006306	4.163714	0.275095	0.000005	0.000025
M-06-14-99	0.50	5.706029	0.000154	0.001764	0.001710	0.000252	0.000252	0.005048	0.004736	1.499429	0.002102	0.024024	1.140942	87.942762	0.000025	0.002606	4.353714	0.281095	0.000005	0.000051
M-06-14-100	0.50	6.366029	0.000154	0.001884	0.001720	0.000252	0.000252	0.005048	0.004976	1.489429	0.002182	0.024724	1.230942	88.142762	0.000025	0.002606	4.583714	0.296095	0.000005	0.000063
M-06-14-101	0.50	7.106029	0.000254	0.002034	0.002020	0.000252	0.000252	0.005048	0.005556	1.429429	0.002352	0.025724	1.300942	86.142762	0.000025	0.007006	4.673714	0.300095	0.000005	0.000061
M-06-14-102	0.20	7.536029	0.000234	0.002354	0.001700	0.000252	0.000252	0.005048	0.005676	1.659429	0.002672	0.027824	1.330942	101.042762	0.000025	0.006506	4.893714	0.335095	0.000005	0.000065
M-06-14-103	0.20	6.996029	0.000184	0.002204	0.001930	0.000252	0.000252	0.005048	0.005686	1.559429	0.002292	0.025324	1.230942	93.942762	0.000025	0.006706	4.743714	0.316095	0.000005	0.000054
M-06-14-104	0.50	6.456029	0.000244	0.002104	0.002160	0.000252	0.000252	0.005048	0.005466	1.529429	0.002262	0.023124	1.180942	86.142762	0.000025	0.007106	4.533714	0.301095	0.000005	0.000064
Mean last 10 weeks	0.443467	6.047029	0.000187	0.001934	0.001833	0.000252	0.000252	0.005048	0.004823	1.472429	0.002090	0.023994	1.164342	86.152762	0.000025	0.005516	4.360714	0.288795	0.000005	0.000046
M-07-30 Monzonite																				
M-07-30-0	0.86	0.108524	0.001033	0.000514	0.049638	0.002502	0.002502	0.050124	0.000250	16.195238	0.002502	0.000500	0.000508	0.016219	0.000250	0.005024	0.566990	0.00179	0.000500	0.025575
M-07-30-1	0.86	0.168524	0.000533	0.000514	0.039438	0.002502	0.002502	0.050124	0.000250	15.795238	0.002502	0.000500	0.000508	0.039219	0.000250	0.005024	0.560990	0.00267	0.000500	0.025975
M-07-30-2	0.99	0.131524	0.000533	0.000514	0.030738	0.002502	0.002502	0.050124	0.000250	13.195238	0.002502	0.000500	0.000508	0.050219	0.000250	0.005024	0.426990	0.00193	0.000500	0.033775
M-07-30-3	0.97	0.232524	0.000533	0.000514	0.027538	0.002502	0.002502	0.050124	0.000250	10.995238	0.002502	0.000500	0.001208	0.074219	0.000250	0.005024	0.359990	0.00215	0.000500	0.029775
M-07-30-4	0.86	0.182524	0.000533	0.000514	0.029038	0.002502	0.002502	0.050124	0.000250	11.895238	0.002502	0.000500	0.000508	0.079219	0.000250	0.005024	0.367990	0.00218	0.000500	0.029075
M-07-30-5	1.08	0.067524	0.000533	0.000514	0.031938	0.002502	0.002502	0.050124	0.000250	13.695238	0.002502	0.000500	0.001208	0.016219	0.000250	0.005024	0.354990	0.00246	0.000500	0.039975
M-07-30-6	0.81	0.092524	0.000533	0.000514	0.047638	0.002502	0.002502	0.050124	0.000250	15.995238	0.002502	0.000500	0.000508	0.016219	0.000250	0.005024	0.528990	0.00307	0.000500	0.034275
M-07-30-7	0.79	0.054524	0.000533	0.000514	0.041138	0.002502	0.002502	0.050124	0.000250	15.295238	0.002502	0.000500	0.000508	0.016219	0.000250	0.005024	0.455990	0.0028	0.000500	0.027475
M-07-30-8	0.69	0.051524	0.000533	0.000514	0.041738	0.002502	0.002502	0.050124	0.000250	15.295238	0.002502	0.000500	0.000508	0.016219	0.000250	0.005024	0.473990	0.00225	0.000500	0.025675
M-07-30-9	0.74	0.052524	0.000533	0.000514	0.049738	0.002502	0.002502	0.050124	0.000250	15.795238	0.002502	0.000500	0.002008	0.016219	0.000250	0.005024	0.495990	0.00262	0.000500	0.026575
M-07-30-10	0.61	0.066524	0.000533	0.000514	0.041538	0.002502	0.002502	0.050124	0.000250	14.995238	0.002502	0.000500	0.000508	0.016219	0.000250	0.005024	0.430990	0.00229	0.000500	0.023275
M-07-30-11	0.67	0.038524	0.000533	0.000514	0.046138	0.002502	0.002502	0.050124	0.000250	15.795238	0.002502	0.000500	0.000508	0.016219	0.000250	0.005024	0.411990	0.00285	0.000500	0.022775
M-07-30-12	0.44	0.164524	0.000533	0.000514	0.033138	0.002502	0.002502	0.050124	0.000250	11.395238	0.002502	0.000500	0.000508	0.061219	0.000250	0.005024	0.364990	0.00251	0.000500	0.012975
M-07-30-13	0.44	0.123524	0.000533	0.000514	0.029138	0.002502	0.002502	0.050124	0.000250	9.775238	0.002502	0.000500	0.000508	0.055219	0.000250	0.005024	0.310990	0.00204	0.000500	0.012275
M-07-30-14	0.36	0.079524	0.000533	0.000514	0.030338	0.002502	0.002502	0.050124	0.000250	10.595238	0.002502	0.000500	0.000508	0.016219	0.000250	0.005024	0.352990	0.00154	0.000500	0.012375
M-07-30-15	0.42	0.090524	0.000533	0.000514	0.032038	0.002502	0.002502	0.050124	0.000250	11.195238	0.002502	0.000500	0.000508	0.033219	0.000250	0.005024	0.359990	0.00168	0.000500	0.013075
M-07-30-16	0.36	0.128524	0.000533	0.000514	0.034538	0.002502	0.002502	0.050124	0.000250	11.095238	0.002502	0.000500	0.001408	0.047219	0.000250	0.005024	0.383990	0.00214	0.000500	0.012975
M-07-30-17	0.34	0.126524	0.000533	0.000514	0.032438	0.002502	0.002502	0.050124	0.000250	11.195238	0.002502	0.000500	0.000508	0.057219	0.000250	0.005024	0.370990	0.00236	0.000500	0.012775
M-07-30-18	0.26	0.087524	0.000533	0.000514	0.032438	0.002502	0.002502	0.050124	0.000250	11.295238	0.002502	0.000500	0.000508	0.034219	0.000250	0.005024	0.370990	0.00221	0.000500	0.011175
M-07-30-19	0.32	0.087524	0.000533	0.000514	0.032738	0.002502	0.002502	0.050124	0.000250	10.595238	0.002502	0.000500	0.000508	0.016219	0.000250	0.005024	0.378990	0.00171	0.000500	0.010975
M-07-30-20	0.30	0.089524	0.000533	0.000514	0.033138	0.002502	0.002502	0.050124	0.000250	11.395238	0.002502	0.000500	0.000508	0.016219	0.000250	0.005024	0.367990	0.00206	0.000500	0.011275
M-07-30-21	0.28	0.108524	0.000533	0.000514	0.032838	0.002502	0.002502	0.050124	0.000250	10.895238	0.002502	0.000500	0.000508	0.036219	0.000250	0.005024	0.389990	0.00182	0.000500	0.010085
M-07-30-22	0.28	0.140524	0.000533	0.000514	0.031038	0.002502	0.002502	0.050124	0.000250	11.095238	0.002502	0.000500	0.000508	0.049219	0.000250	0.005024	0.401990	0.00211	0.000500	0.009365
M-07-30-23	0.25	0.074524	0.000533	0.000514	0.031138	0.002502	0.002502	0.050124	0.000250	10.595238	0.002502	0.000500	0.000508	0.016219	0.000250	0.005024	0.413990	0.00199	0.000500	0.009685
M-07-30-24	0.25	0.136524	0.000533	0.000514	0.030438	0.002502	0.002502	0.050124	0.000250	10.495238	0.002502	0.000500	0.000508	0.053219	0.000250	0.005024	0.414990	0.0022	0.000500	0.009415
M-07-30-25	0.26	0.105524	0.000533	0.000514	0.031138	0.002502	0.002502	0.050124	0.000250	10.495238	0.002502	0.000500	0.000508	0.052219	0.000250	0.005024	0.367990	0.00215	0.000500	0.009225

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-06-14-66	0.007909	0.151429	0.341143	0.005003	7.100571	0.000050	0.270286	0.006132	0	0.000500	0.000500	0.005048	0.000368	0.015937	0.937937	
M-06-14-67	0.008809	0.151429	0.341143	0.005003	7.770571	0.000050	0.270286	0.007632	0	0.000500	0.000500	0.005048	0.000408	0.016937	0.949937	
M-06-14-68	0.006509	0.151429	0.341143	0.005003	7.470571	0.000050	0.270286	0.005232	0	0.000500	0.000500	0.005048	0.000338	0.012937	0.871937	
M-06-14-69	0.006409	0.151429	0.341143	0.005003	7.240571	0.000050	0.270286	0.005632	0	0.000500	0.000500	0.005048	0.000348	0.012937	0.808937	
M-06-14-70	0.007209	0.151429	0.341143	0.005003	7.340571	0.000050	0.270286	0.006132	0	0.000500	0.000500	0.005048	0.000318	0.012937	0.779937	
M-06-14-71	0.007309	0.151429	0.341143	0.005003	7.460571	0.000050	0.270286	0.005832	0	0.000500	0.000500	0.005048	0.000328	0.013937	0.771937	
M-06-14-72	0.007909	0.151429	0.341143	0.005003	7.270571	0.000050	0.270286	0.006232	0	0.000500	0.000500	0.005048	0.000358	0.013937	0.778937	
M-06-14-73	0.008209	0.151429	0.341143	0.005003	7.560571	0.000050	0.270286	0.006332	0	0.000500	0.000500	0.005048	0.000338	0.015937	0.780937	
M-06-14-74	0.008809	0.151429	0.341143	0.005003	7.510571	0.000050	0.270286	0.006432	0	0.000500	0.000500	0.005048	0.000358	0.015937	0.756937	
M-06-14-75	0.008009	0.151429	0.341143	0.005003	7.040571	0.000050	0.270286	0.005732	0	0.000500	0.000500	0.005048	0.000338	0.015937	0.717937	
M-06-14-76	0.008109	0.151429	0.341143	0.005003	7.850571	0.000050	0.270286	0.006032	0	0.000500	0.000500	0.005048	0.000358	0.015937	0.703937	
M-06-14-77	0.007209	0.151429	0.341143	0.005003	6.410571	0.000050	0.270286	0.005332	0	0.000500	0.000500	0.005048	0.000328	0.011937	0.641937	
M-06-14-78	0.006709	0.151429	0.341143	0.005003	5.520571	0.000050	0.270286	0.005232	0	0.000500	0.000500	0.005048	0.000278	0.010937	0.594937	
M-06-14-79	0.007209	0.151429	0.341143	0.005003	5.920571	0.000050	0.270286	0.005432	0	0.000500	0.000500	0.005048	0.000278	0.011937	0.524937	
M-06-14-80	0.006109	0.151429	0.341143	0.005003	5.630571	0.000050	0.270286	0.004832	0	0.000500	0.000500	0.005048	0.000288	0.005937	0.517937	
M-06-14-81	0.008049	0.151429	0.267143	0.000663	5.450571	0.000005	0.109286	0.005542	95.5	0.000050	0.000050	0.005048	0.000284	0.012437	0.448937	
M-06-14-82	0.007899	0.151429	0.279143	0.000683	5.610571	0.000005	0.119286	0.005502	102	0.000050	0.000050	0.005048	0.000274	0.013337	0.425937	
M-06-14-83	0.008619	0.151429	0.291143	0.000773	5.590571	0.000005	0.126286	0.005572	105	0.000050	0.000050	0.005048	0.000294	0.014337	0.431937	
M-06-14-84	0.007969	0.151429	0.290143	0.000683	5.820571	0.000012	0.135286	0.005502	97.4	0.000050	0.000050	0.005048	0.000288	0.013037	0.423937	
M-06-14-85	0.008119	0.151429	0.291143	0.000583	5.540571	0.000005	0.120286	0.005172	96.9	0.000050	0.000050	0.005048	0.000265	0.013137	0.425937	
M-06-14-86	0.007349	0.151429	0.283143	0.000593	5.250571	0.000005	0.103286	0.004822	98.6	0.000050	0.000050	0.005048	0.000254	0.012337	0.369937	
M-06-14-87	0.007229	0.151429	0.290143	0.000623	5.090571	0.000005	0.125286	0.005012	88.4	0.000050	0.000050	0.005048	0.000235	0.011337	0.373937	
M-06-14-88	0.006999	0.151429	0.275143	0.000593	5.100571	0.000005	0.103286	0.005032	89.4	0.000050	0.000050	0.005048	0.000258	0.011637	0.373937	
M-06-14-89	0.007759	0.151429	0.284143	0.000673	4.850571	0.000005	0.132286	0.005192	102	0.000050	0.000050	0.005048	0.000256	0.013637	0.374937	
M-06-14-90	0.007569	0.151429	0.291143	0.000643	4.860571	0.000005	0.099286	0.005262	94.1	0.000050	0.000050	0.005048	0.000263	0.013437	0.380937	
M-06-14-91	0.006819	0.151429	0.260143	0.000553	4.650571	0.000005	0.092286	0.004662	87.3	0.000050	0.000050	0.005048	0.000224	0.011837	0.351937	
M-06-14-92	0.007579	0.151429	0.249143	0.000703	5.060571	0.000005	0.096286	0.005142	91.5	0.000050	0.000050	0.005048	0.000239	0.013137	0.386937	
M-06-14-93	0.006969	0.151429	0.272143	0.000623	4.500571	0.000005	0.083286	0.005052	86.8	0.000050	0.000050	0.005048	0.000204	0.011637	0.332937	
M-06-14-94	0.007399	0.151429	0.288143	0.000683	4.910571	0.000005	0.133286	0.004882	93.5	0.000050	0.000050	0.005048	0.000241	0.012737	0.362937	
M-06-14-95	0.007089	0.151429	0.287143	0.000643	4.470571	0.000005	0.098286	0.004572	86.3	0.000050	0.000050	0.005048	0.000228	0.012037	0.358937	
M-06-14-96	0.007189	0.151429	0.279143	0.000693	4.650571	0.000005	0.087286	0.004752	89.5	0.000050	0.000050	0.005048	0.000244	0.013437	0.365937	
M-06-14-97	0.006429	0.151429	0.263143	0.000573	4.800571	0.000005	0.094286	0.004652	84.6	0.000050	0.000050	0.005048	0.000230	0.011237	0.337937	
M-06-14-98	0.007149	0.151429	0.283143	0.000683	4.810571	0.000005	0.098286	0.004772	87.8	0.000050	0.000050	0.005048	0.000232	0.012537	0.358937	
M-06-14-99	0.007509	0.151429	0.282143	0.000693	4.850571	0.000011	0.128286	0.005022	94.7	0.000050	0.000050	0.005048	0.000248	0.014937	0.389937	
M-06-14-100	0.007909	0.151429	0.278143	0.000663	4.990571	0.000005	0.094286	0.005142	99.3	0.000050	0.000050	0.005048	0.000263	0.016437	0.427937	
M-06-14-101	0.008199	0.151429	0.303143	0.000563	5.220571	0.000005	0.107286	0.005442	112	0.000050	0.000050	0.005048	0.000292	0.019037	0.464937	
M-06-14-102	0.008639	0.151429	0.291143	0.000693	5.580571	0.000005	0.099286	0.005102	111	0.000050	0.000050	0.005048	0.000286	0.020937	0.512937	
M-06-14-103	0.007999	0.151429	0.312143	0.000833	5.610571	0.000005	0.122286	0.005032	106	0.000050	0.000050	0.005048	0.000279	0.019337	0.504937	
M-06-14-104	0.007289	0.151429	0.324143	0.000623	5.370571	0.000005	0.140286	0.004972	99.3	0.000050	0.000050	0.005048	0.000274	0.479937	0.479937	
Mean last 10 weeks	0.007540	0.151429	0.290343	0.000666	5.035571	0.000006	0.106986	0.004946	97.05	0.000050	0.000050	0.005048	0.000257	0.061987	0.420237	
M-07-30 Monzonite																
M-07-30-0	0.002502	0.151429	2.618095	0.005001	1.483619	0.000050	0.843305	0.034304	0	0.000500	0.000500	0.005048	0.000133	0.005010	0.002514	
M-07-30-1	0.002502	0.151429	1.888095	0.005001	1.763619	0.000050	0.623305	0.032404	0	0.000500	0.000500	0.005048	0.000153	0.005010	0.002514	
M-07-30-2	0.002502	0.151429	1.708095	0.005001	1.793619	0.000050	0.253305	0.026404	0	0.000500	0.000500	0.005048	0.000123	0.005010	0.002514	
M-07-30-3	0.002502	0.151429	1.608095	0.005001	1.683619	0.000050	0.253305	0.022004	0	0.000500	0.000500	0.005048	0.000113	0.005010	0.002514	
M-07-30-4	0.002502	0.151429	1.568095	0.005001	1.733619	0.000050	0.253305	0.023204	0	0.000500	0.000500	0.005048	0.000113	0.005010	0.002514	
M-07-30-5	0.002502	0.151429	1.658095	0.005001	1.703619	0.000050	0.253305	0.028804	0	0.000500	0.000500	0.005048	0.000143	0.005010	0.002514	
M-07-30-6	0.002502	0.151429	1.958095	0.005001	1.783619	0.000050	0.253305	0.037504	0	0.000500	0.000500	0.005048	0.000223	0.005010	0.002514	
M-07-30-7	0.002502	0.151429	1.738095	0.005001	1.753619	0.000050	0.253305	0.032504	0	0.000500	0.000500	0.005048	0.000163	0.005010	0.002514	
M-07-30-8	0.002502	0.151429	1.628095	0.005001	1.683619	0.000050	0.253305	0.032604	0	0.000500	0.000500	0.005048	0.000163	0.005010	0.002514	
M-07-30-9	0.002502	0.151429	1.718095	0.005001	1.673619	0.000050	0.253305	0.035304	0	0.000500	0.000500	0.005048	0.000193	0.005010	0.002514	
M-07-30-10	0.002502	0.151429	1.548095	0.005001	1.623619	0.000050	0.253305	0.032204	0	0.000500	0.000500	0.005048	0.000163	0.005010	0.002514	
M-07-30-11	0.002502	0.151429	1.488095	0.005001	1.533619	0.000050	0.253305	0.033204	0	0.000500	0.000500	0.005048	0.000173	0.005010	0.002514	
M-07-30-12	0.002502	0.151429	1.458095	0.005001	1.443619	0.000050	0.253305	0.024004	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-13	0.002502	0.151429	1.238095	0.005001	1.353619	0.000050	0.253305	0.020704	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-14	0.002502	0.151429	1.108095	0.005001	1.223619	0.000050	0.253305	0.023904	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-15	0.002502	0.151429	1.328095	0.005001	1.303619	0.000050	0.253305	0.025104	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-16	0.002502	0.151429	1.428095	0.005001	1.273619	0.000050	0.253305	0.025004	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-17	0.002502	0.151429	1.368095	0.005001	1.423619	0.000050	0.253305	0.024804	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-18	0.002502	0.151429	1.268095	0.005001	1.223619	0.000050	0.253305	0.024004	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-19	0.002502	0.151429	1.358095	0.005001	1.183619	0.000050	0.253305	0.023804	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-20	0.002502	0.151429	1.328095	0.005001	1.203619	0.000050	0.253305	0.024404	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-21	0.002502	0.151429	1.298095	0.005001	1.223619	0.000050	0.253305	0.024204	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-22	0.002502	0.151429	1.238095	0.005001	1.263619	0.000050	0.253305	0.022804	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-23	0.002502	0.151429	1.318095	0.005001	1.133619	0.000050	0.253305	0.024104	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-24	0.002502	0.151429	1.298095	0.005001	1.213619	0.000050	0.253305	0.022804	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-25	0.002502	0.151429	1.208095	0.005001	1.253619	0.000050	0.253305	0.022604	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-07-30-26		26	21-Aug-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	465	27	56.2	7.86	0.50	26.18	2.16	
M-07-30-27		27	28-Aug-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	475	28	57.9	7.86	2.20	26.08	2.17	
M-07-30-28		28	4-Sep-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	490	28	56	7.86	2.00	25.48	2.16	
M-07-30-29		29	11-Sep-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	480	29	59.2	7.85	2.60	27.38	1.99	
M-07-30-30		30	18-Sep-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	485	28	58	7.87	1.80	27.18	1.67	
M-07-30-31		31	25-Sep-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	500	29	59.8	7.91	1.80	29.28	1.85	
M-07-30-32		32	2-Oct-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	470	28	58	7.84	2.20	27.48	1.46	
M-07-30-33		33	9-Oct-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	490	30	63.2	7.87	3.80	29.88	1.59	
M-07-30-34		34	16-Oct-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	480	29	59.4	7.86	3.80	27.48	1.89	
M-07-30-35		35	23-Oct-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	495	29	60.5	7.86	2.00	28.88	1.58	
M-07-30-36		36	30-Oct-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	500	27	55.8	7.9	3.20	26.08	1.66	
M-07-30-37		37	6-Nov-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	480	29	59.2	7.93	1.70	28.68	1.62	
M-07-30-38		38	13-Nov-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	485	29	57.3	7.8	3.60	27.18	1.40	
M-07-30-39		39	20-Nov-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	470	25	51.2	7.77	1.10	23.38	1.39	
M-07-30-40		40	27-Nov-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	470	26	53.5	7.81	3.00	23.98	1.44	
M-07-30-41		41	4-Dec-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	500	27	55.2	7.81	1.90	25.88	1.29	
M-07-30-42		42	11-Dec-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	450	23	51.2	7.9	1.80	22.98	1.11	
M-07-30-43		43	18-Dec-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	430	24	49.9	7.82	3.00	22.98	1.38	
M-07-30-44		44	24-Dec-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	470	25	52.7	7.84	3.00	25.08	1.41	
M-07-30-45		45	31-Dec-09	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	420	29	61.4	7.85	1.70	27.38	1.60	
M-07-30-46		46	8-Jan-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	425	24	50.1	7.75	4.10	22.58	1.60	
M-07-30-47		47	15-Jan-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	450	25	53	7.78	2.40	23.98	1.88	
M-07-30-48		48	22-Jan-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	450	22	45.9	7.72	3.90	21.78	1.54	
M-07-30-49		49	29-Jan-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	430	21	45.3	7.64	3.20	19.18	1.55	
M-07-30-50		50	5-Feb-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	450	22	47.6	7.75	4.30	20.98	1.40	
M-07-30-51		51	12-Feb-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	475	26	53.8	7.9	2.90	24.08	1.50	
M-07-30-52		52	19-Feb-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	420	34	69.5	7.96	2.70	32.78	1.96	
M-07-30-53		53	26-Feb-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	425	25	52.9	7.89	3.00	24.38	1.44	
M-07-30-54		54	5-Mar-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	450	23	46.7	7.88	3.20	21.98	1.34	
M-07-30-55		55	12-Mar-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	480	22	46.8	7.89	4.70	20.98	1.47	
M-07-30-56		56	19-Mar-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	455	23	47.5	7.83	1.30	21.38	1.40	
M-07-30-57		57	26-Mar-11	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	470	25	51.1	7.89	3.50	24.28	3.73	
M-07-30-58		58	2-Apr-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	475	22	44	7.85	2.40	21.68	1.41	
M-07-30-59		59	9-Apr-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	445	22	43.4	7.86	2.90	20.58	1.10	
M-07-30-60		60	16-Apr-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	500	25	51.5	7.91	3.80	24.38	1.54	
M-07-30-61		61	23-Apr-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	455	22	44.6	7.93	2.20	21.88	1.09	
M-07-30-62		62	30-Apr-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	455	23	48	7.92	3.70	22.98	1.34	
M-07-30-63		63	7-May-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	465	21	42.3	7.84	3.50	20.28	1.20	
M-07-30-64		64	14-May-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	465	22	43.3	7.85	1.50	20.68	1.09	
M-07-30-65		65	21-May-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	445	29	55.4	7.9	2.30	26.78	1.53	
M-07-30-66		66	28-May-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	465	23	47.1	7.85	3.40	22.78	1.26	
M-07-30-67		67	4-Jun-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	500	26	47.9	7.89	3.40	22.38	1.50	
M-07-30-68		68	11-Jun-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	480	23	45.1	7.81	3.60	21.88	1.35	
M-07-30-69		69	18-Jun-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	450	24	47.7	7.88	4.00	22.88	1.10	
M-07-30-70		70	25-Jun-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	465	23	46.8	7.82	3.20	22.18	1.12	
M-07-30-71		71	2-Jul-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	465	25	49.1	7.84	3.20	23.78	1.22	
M-07-30-72		72	9-Jul-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	460	23	44.9	7.93	2.80	21.58	1.07	
M-07-30-73		73	16-Jul-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	475	30	56.5	7.96	2.60	26.68	1.34	
M-07-30-74		74	23-Jul-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	495	25	48	7.94	4.20	22.38	1.27	
M-07-30-75		75	30-Jul-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	470	24	48.2	7.91	4.20	21.58	1.26	
M-07-30-76		76	6-Aug-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	495	24	47.4	7.89	3.50	22.78	1.45	
M-07-30-77		77	13-Aug-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	475	21	44.1	7.91	4.00	20.48	1.15	
M-07-30-78		78	20-Aug-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	445	22	43.5	7.86	2.80	21.48	0.86	
M-07-30-79		79	27-Aug-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	475	23	45.8	7.93	2.90	22.78	0.89	
M-07-30-80		80	3-Sep-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	475	24	48.8	7.91	4.80	24.68	0.90	
M-07-30-81		81	10-Sep-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	490	25	48.7	7.89	2.60	24.48	0.82	
M-07-30-82		82	17-Sep-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	450	23	45.6	7.83	2.90	23.48	0.83	
M-07-30-83		83	24-Sep-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	475	24	48	7.84	3.40	24.08	0.76	
M-07-30-84		84	1-Oct-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	470	24	48.2	7.86	4.10	24.78	0.66	
M-07-30-85		85	8-Oct-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	485	20	44.3	7.88	2.00	22.08	0.61	
M-07-30-86		86	15-Oct-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	470	23	46.3	7.86	2.60	23.38	0.54	
M-07-30-87		87	22-Oct-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	460	24	46.6	7.8	5.30	23.58	0.57	
M-07-30-88		88	29-Oct-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	495	23	44.3	7.8	2.50	23.18	0.59	
M-07-30-89		89	5-Nov-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	470	20	43.7	7.55	1.90	21.68	0.71	
M-07-30-90		90	12-Nov-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	460	21	42.6	7.54	2.10	21.18	0.70	
M-07-30-91		91	19-Nov-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	455	22	44	7.77	2.30	21.68	0.85	
M-07-30-92		92	26-Nov-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	470	25	50.4	7.81	3.00	26.38	0.90	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-07-30-26	0.24	0.128524	0.000533	0.000514	0.031138	0.002502	0.002502	0.050124	0.000250	10.295238	0.002502	0.000500	0.000508	0.054219	0.000250	0.005024	0.386990	0.00212	0.000500	0.009055
M-07-30-27	0.16	0.090524	0.000533	0.000514	0.033238	0.002502	0.002502	0.050124	0.000250	10.695238	0.002502	0.000500	0.000508	0.045219	0.000250	0.005024	0.414990	0.00221	0.000500	0.008885
M-07-30-28	0.24	0.152524	0.000533	0.000514	0.030738	0.002502	0.002502	0.050124	0.000250	10.495238	0.002502	0.000500	0.000508	0.068219	0.000250	0.005024	0.436990	0.00243	0.000500	0.008425
M-07-30-29	0.20	0.085524	0.000533	0.000514	0.031838	0.002502	0.002502	0.050124	0.000250	10.995238	0.002502	0.000500	0.000508	0.047219	0.000250	0.005024	0.408990	0.00237	0.000500	0.007865
M-07-30-30	0.17	0.104524	0.000533	0.000514	0.031438	0.002502	0.002502	0.050124	0.000250	10.595238	0.002502	0.000500	0.000508	0.039219	0.000250	0.005024	0.362990	0.00199	0.000500	0.007435
M-07-30-31	0.22	0.075524	0.000533	0.000514	0.032438	0.002502	0.002502	0.050124	0.000250	10.995238	0.002502	0.000500	0.000508	0.016219	0.000250	0.005024	0.415990	0.00224	0.000500	0.008405
M-07-30-32	0.17	0.133524	0.000533	0.000514	0.034938	0.002502	0.002502	0.050124	0.000250	10.495238	0.002502	0.000500	0.000508	0.034219	0.000250	0.005024	0.426990	0.00254	0.000500	0.007625
M-07-30-33	0.17	0.072524	0.000533	0.000514	0.033938	0.002502	0.002502	0.050124	0.000250	11.395238	0.002502	0.000500	0.000508	0.016219	0.000250	0.005024	0.457990	0.00193	0.000500	0.007315
M-07-30-34	0.20	0.058524	0.000533	0.000514	0.032138	0.002502	0.002502	0.050124	0.000250	10.895238	0.002502	0.000500	0.000508	0.016219	0.000250	0.005024	0.407990	0.00176	0.000500	0.006815
M-07-30-35	0.16	0.111524	0.000533	0.000514	0.037038	0.002502	0.002502	0.050124	0.000250	11.195238	0.002502	0.000500	0.000508	0.057219	0.000250	0.005024	0.353990	0.00237	0.000500	0.006905
M-07-30-36	0.19	0.111524	0.000533	0.000514	0.033638	0.002502	0.002502	0.050124	0.000250	10.195238	0.002502	0.000500	0.000508	0.057219	0.000250	0.005024	0.433990	0.00244	0.000500	0.007635
M-07-30-37	0.19	0.116524	0.000533	0.000514	0.033038	0.002502	0.002502	0.050124	0.000250	10.995238	0.002502	0.000500	0.000508	0.040219	0.000250	0.005024	0.444990	0.002	0.000500	0.007335
M-07-30-38	0.15	0.143524	0.000533	0.000514	0.031738	0.002502	0.002502	0.050124	0.000250	10.795238	0.002502	0.000500	0.000508	0.046219	0.000250	0.005024	0.414990	0.00213	0.000500	0.007175
M-07-30-39	0.17	0.168524	0.000533	0.000514	0.029538	0.002502	0.002502	0.050124	0.000250	9.365238	0.002502	0.000500	0.000508	0.066219	0.000250	0.005024	0.391990	0.00277	0.000500	0.006775
M-07-30-40	0.16	0.141524	0.000533	0.000514	0.030838	0.002502	0.002502	0.050124	0.000250	9.645238	0.002502	0.000500	0.000508	0.066219	0.000250	0.005024	0.354990	0.00283	0.000500	0.006535
M-07-30-41	0.14	0.088524	0.000533	0.000514	0.029338	0.002502	0.002502	0.050124	0.000250	9.995238	0.002502	0.000500	0.000508	0.043219	0.000250	0.005024	0.404990	0.00193	0.000500	0.007105
M-07-30-42	0.15	0.222524	0.000533	0.000514	0.029438	0.002502	0.002502	0.050124	0.000250	8.585238	0.002502	0.000500	0.000508	0.069219	0.000250	0.005024	0.393990	0.00304	0.000500	0.007345
M-07-30-43	0.17	0.148524	0.000463	0.000244	0.027438	0.000252	0.000252	0.050124	0.000025	8.945238	0.000252	0.000050	0.000518	0.062219	0.000025	0.005024	0.370990	0.00207	0.000500	0.007485
M-07-30-44	0.15	0.151524	0.000533	0.000514	0.029938	0.002502	0.002502	0.050124	0.000250	9.445238	0.002502	0.000500	0.000508	0.061219	0.000250	0.005024	0.393990	0.00228	0.000500	0.007645
M-07-30-45	0.17	0.142524	0.000533	0.000514	0.033638	0.002502	0.002502	0.050124	0.000250	10.895238	0.002502	0.000500	0.000508	0.038219	0.000250	0.005024	0.455990	0.00245	0.000500	0.008055
M-07-30-46	0.16	0.149524	0.000533	0.000514	0.027038	0.002502	0.002502	0.050124	0.000250	8.815238	0.002502	0.000500	0.000508	0.046219	0.000250	0.005024	0.373990	0.00196	0.000500	0.007305
M-07-30-47	0.16	0.111524	0.000533	0.000514	0.026638	0.002502	0.002502	0.050124	0.000250	9.375238	0.002502	0.000500	0.000508	0.039219	0.000250	0.005024	0.356990	0.00207	0.000500	0.007675
M-07-30-48	0.13	0.134524	0.000533	0.000514	0.024838	0.002502	0.002502	0.050124	0.000250	8.105238	0.002502	0.000500	0.000508	0.039219	0.000250	0.005024	0.337990	0.0017	0.000500	0.006375
M-07-30-49	0.14	0.127524	0.000533	0.000514	0.024438	0.002502	0.002502	0.050124	0.000250	7.985238	0.002502	0.000500	0.000508	0.044219	0.000250	0.005024	0.328990	0.002	0.000500	0.006635
M-07-30-50	0.15	0.082524	0.000533	0.000514	0.026838	0.002502	0.002502	0.050124	0.000250	8.365238	0.002502	0.000500	0.000508	0.069219	0.000250	0.005024	0.353990	0.00253	0.000500	0.006555
M-07-30-51	0.13	0.219524	0.000533	0.000514	0.031838	0.002502	0.002502	0.050124	0.000250	9.765238	0.002502	0.000500	0.000508	0.080219	0.000250	0.005024	0.401990	0.00259	0.000500	0.007175
M-07-30-52	0.16	0.107524	0.000533	0.000514	0.039638	0.002502	0.002502	0.050124	0.000250	12.695238	0.002502	0.000500	0.000508	0.031219	0.000250	0.005024	0.529990	0.00155	0.000500	0.007445
M-07-30-53	0.13	0.119524	0.000533	0.000514	0.028838	0.002502	0.002502	0.050124	0.000250	9.405238	0.002502	0.000500	0.000508	0.045219	0.000250	0.005024	0.385990	0.00172	0.000500	0.006635
M-07-30-54	0.12	0.094524	0.000533	0.000514	0.026438	0.002502	0.002502	0.050124	0.000250	8.595238	0.002502	0.000500	0.000508	0.038219	0.000250	0.005024	0.371990	0.00163	0.000500	0.005825
M-07-30-55	0.12	0.109524	0.000533	0.000514	0.025338	0.002502	0.002502	0.050124	0.000250	8.395238	0.002502	0.000500	0.000508	0.016219	0.000250	0.005024	0.349990	0.00124	0.000500	0.005595
M-07-30-56	0.12	0.125524	0.000533	0.000514	0.026038	0.002502	0.002502	0.050124	0.000250	8.425238	0.002502	0.000500	0.000508	0.048219	0.000250	0.005024	0.369990	0.0017	0.000500	0.005555
M-07-30-57	0.12	0.123524	0.000533	0.000514	0.029138	0.002502	0.002502	0.050124	0.000250	9.255238	0.002502	0.000500	0.000508	0.040219	0.000250	0.005024	0.401990	0.00173	0.000500	0.005995
M-07-30-58	0.10	0.138524	0.000533	0.000514	0.026238	0.002502	0.002502	0.050124	0.000250	8.095238	0.002502	0.000500	0.000508	0.016219	0.000250	0.005024	0.368990	0.00171	0.000500	0.005555
M-07-30-59	0.11	0.209524	0.000533	0.000514	0.025738	0.002502	0.002502	0.050124	0.000250	8.105238	0.002502	0.000500	0.000508	0.092219	0.000250	0.005024	0.360990	0.00229	0.000500	0.005175
M-07-30-60	0.10	0.120524	0.000533	0.000514	0.031238	0.002502	0.002502	0.050124	0.000250	9.325238	0.002502	0.000500	0.000508	0.070219	0.000250	0.005024	0.455990	0.00169	0.000500	0.006105
M-07-30-61	0.10	0.171524	0.000533	0.000514	0.027238	0.002502	0.002502	0.050124	0.000250	8.055238	0.002502	0.000500	0.000508	0.111219	0.000250	0.005024	0.398990	0.00268	0.000500	0.006025
M-07-30-62	0.10	0.220524	0.000533	0.000514	0.028238	0.002502	0.002502	0.050124	0.000250	8.625238	0.002502	0.000500	0.000508	0.093219	0.000250	0.005024	0.380990	0.0029	0.000500	0.006805
M-07-30-63	0.10	0.255524	0.000533	0.000514	0.026038	0.002502	0.002502	0.050124	0.000250	7.715238	0.002502	0.000500	0.000508	0.131219	0.000250	0.005024	0.371990	0.00357	0.000500	0.006565
M-07-30-64	0.09	0.310524	0.000533	0.000514	0.027138	0.002502	0.002502	0.050124	0.000250	8.055238	0.002502	0.000500	0.000508	0.146219	0.000250	0.005024	0.394990	0.00454	0.000500	0.005365
M-07-30-65	0.09	0.129524	0.000533	0.000514	0.031738	0.002502	0.002502	0.050124	0.000250	10.995238	0.002502	0.000500	0.000508	0.207219	0.000250	0.005024	0.426990	0.00513	0.000500	0.006605
M-07-30-66	0.09	0.182524	0.000533	0.000514	0.025738	0.002502	0.002502	0.050124	0.000250	8.705238	0.002502	0.000500	0.000508	0.115219	0.000250	0.005024	0.371990	0.00229	0.000500	0.005445
M-07-30-67	0.08	0.164524	0.000533	0.000514	0.027338	0.002502	0.002502	0.050124	0.000250	9.625238	0.002502	0.000500	0.000508	0.073219	0.000250	0.005024	0.409990	0.0022	0.000500	0.005755
M-07-30-68	0.08	0.245524	0.000533	0.000514	0.026038	0.002502	0.002502	0.050124	0.000250	8.725238	0.002502	0.000500	0.000508	0.115219	0.000250	0.005024	0.377990	0.00257	0.000500	0.005185
M-07-30-69	0.06	0.195524	0.000533	0.000514	0.028538	0.002502	0.002502	0.050124	0.000250	8.765238	0.002502	0.000500	0.000508	0.070219	0.000250	0.005024	0.414990	0.00225	0.000500	0.005815
M-07-30-70	0.08	0.242524	0.000533	0.000514	0.026238	0.002502	0.002502	0.050124	0.000250	8.535238	0.002502	0.000500	0.000508	0.075219	0.000250	0.005024	0.409990	0.00217	0.000500	0.005125
M-07-30-71	0.07	0.167524	0.000533	0.000514	0.027838	0.002502	0.002502	0.050124	0.000250	9.205238	0.002502	0.000500	0.000508	0.069219	0.000250	0.005024	0.436990	0.00189	0.000500	0.005645
M-07-30-72	0.08	0.182524	0.000533	0.000514	0.025338	0.002502	0.002502	0.050124	0.000250	8.485238	0.002502	0.000500	0.000508	0.066219	0.000250	0.005024	0.426990	0.00176	0.000500	0.004965
M-07-30-73	0.07	0.190524	0.000533	0.000514	0.032138	0.002502	0.002502	0.050124	0.000250	10.995238	0.002502	0.000500	0.000508	0.057219	0.000250	0.005024	0.496990	0.00175	0.000500	0.005825
M-07-30-74	0.08	0.106524	0.000533	0.000514	0.027138	0.002502	0.002502	0.050124	0.000250	9.185238	0.002502	0.000500	0.000508	0.056219	0.000250	0.005024	0.411990	0.00166	0.000500	0.005535
M-07-30-75	0.08	0.165524	0.000533	0.000514	0.027638	0.002502	0.002502	0.050124	0.000250	8.775238	0.002502	0.000500	0.000508	0.066219	0.000250	0.005024	0.445990	0.0016	0.000500	0.005725
M-07-30-76	0.08	0.145524	0.000533	0.000514	0.026438	0.002502	0.002502	0.050124	0.000250	8.855238	0.002502	0.000500	0.009808	0.066219	0.000250	0.005024	0.431990	0.00169	0.000500	0.005455
M-07-30-77	0.06	0.180524	0.000533	0.000514	0.024938	0.002502	0.002502	0.050124	0.000250	7.775238	0.002502	0.000500	0.000508	0.073219	0.000250	0.005024	0.418990	0.00179	0.000500	0.005585
M-07-30-78	0.06	0.118524	0.000533	0.000514	0.023638	0.002502	0.002502	0.050124	0.000250	8.055238	0.002502	0.000500	0.000508	0.053219	0.000250	0.005024	0.398990	0.0016	0.000500	0.004505
M-07-30-79	0.06	0.180524	0.000533	0.000514	0.026138	0.002502	0.002502	0.050124	0.000250	8.395238	0.002502	0.000500	0.000508	0.076219	0.000250	0.005024	0.449990	0.00174	0.000500	0.004525
M-07-30-80	0.05	0.154524	0.000533	0.000514	0.028238	0.002502	0.002502	0.050124	0.000250	8.975238	0.002502	0.000500	0.000508	0.063219	0.000250	0.005024	0.470990	0.00159	0.000500	0.004505
M-07-30-81	0.05	0.165524	0.000303	0.000224	0.027638	0.000252	0.000252	0.005124	0.000005	8.985238	0.000252	0.000050	0.000258	0.057219	0.000025	0.002524	0.513990	0.00161	0.000005	0.004515
M-07-30-82	0.05	0.187524	0.000303	0.000224	0.026838	0.000252	0.000252	0.005124	0.000005	8.415238	0.000252	0.000050	0.000258	0.098219	0.000025	0.002524	0.472990	0.00187	0.000005	0.004365
M-07-30-83	0.05	0.094224	0.000303	0.000234	0.025138	0.000252	0.000252	0.005124	0.000005	8.745238	0.000252	0.000050	0.000258	0.054219	0.000025	0.002524	0.483990	0.00156	0.000005	0.004515
M-07-30-84	0.05	0.144524	0.000323	0.000224	0.027738	0.000252	0.000252	0.005124	0.000005	8.695238	0.000252	0.000050	0.000258	0.016219	0.000025	0.002524	0.490990	0.00183	0.000005	0.004385
M-07-30-85	0.05	0.136524	0.000263	0.000194	0.023738	0.000252	0.000252	0.005124	0.000005	7.325238	0.000252	0.000050	0.000258	0.016219	0.000025	0.002524	0.478990	0.00148	0.000005	0.003585
M-07-30-86	0.04	0.056724	0.000263	0.000194	0.024538	0.000252	0.000252	0.005124	0.000005	8.405238	0.000252	0.000050	0.000258	0.016219	0.000025	0.002524	0.474990	0.0014	0.000005	0.003755
M-07-30-87	0.05	0.089424	0.000273	0.000234	0.026238	0.000252	0.000252	0.005124	0.000005	8.645238	0.000252	0.000050	0.000258	0.051219	0.000025	0.002524	0.485990	0.00146	0.000005	0.003735
M-07-30-88	0.05	0.083924	0.000283	0.000214	0.024838	0.000252	0.000252	0.005124	0.000005	8.505238	0.000252	0.000050	0.000258	0.032219	0.000025	0.002524	0.473990	0.000983	0.000005	0.003695
M-07-30-89	0.05	0.130524	0.000273	0.000214	0.026838	0.000252	0.000252	0.005124	0.000005	7.025238	0.000252	0.000050	0.000258	0.016219	0.000025	0.002524	0.488990	0.00152	0.000005	0.003585
M-07-30-90	0.05	0.203524	0.000233	0.000224	0.025238	0.000252	0.000252	0.005124	0.000005	7.615238	0.000252	0.000050	0.000538	0.102219	0.000025	0.002524	0.479990	0.0031	0.000005	0.003155
M-07-30-91	0.05	0.178524	0.000273	0.000204	0.025738	0.000252	0.000252	0.005124	0.000005	7.905238	0.000252	0.000050	0.000568	0.070219	0.000025	0.002524	0.446990	0.0025	0.000005	0.003365
M-07-30-92	0.03	0.117524	0.000283	0.000204	0.028938	0.000252	0.000252	0.005124	0.000005	9.145238	0.000252	0.000050	0.000258	0.044219	0.000051	0.002524	0.524990	0.00175	0.000005	0.003715

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-07-30-26	0.002502	0.151429	1.228095	0.005001	1.243619	0.000050	0.253305	0.022904	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-27	0.002502	0.151429	1.288095	0.005001	1.153619	0.000050	0.253305	0.025004	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-28	0.002502	0.151429	1.228095	0.005001	1.283619	0.000050	0.253305	0.022904	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-29	0.002502	0.151429	1.248095	0.005001	1.233619	0.000050	0.253305	0.024104	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-30	0.002502	0.151429	1.118095	0.005001	1.133619	0.000050	0.253305	0.021604	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-31	0.002502	0.151429	1.218095	0.005001	1.083619	0.000050	0.253305	0.025004	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-32	0.002502	0.151429	1.258095	0.005001	1.063619	0.000050	0.253305	0.024604	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-33	0.002502	0.151429	1.228095	0.005001	1.063619	0.000050	0.253305	0.025804	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-34	0.002502	0.151429	1.188095	0.005001	1.028619	0.000050	0.253305	0.023904	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-35	0.002502	0.151429	1.208095	0.005001	1.183619	0.000050	0.253305	0.025604	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-36	0.002502	0.151429	1.248095	0.005001	1.173619	0.000050	0.253305	0.024404	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-37	0.002502	0.151429	1.218095	0.005001	1.183619	0.000050	0.253305	0.025004	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-38	0.002502	0.151429	1.178095	0.005001	1.173619	0.000050	0.253305	0.023104	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-39	0.002502	0.151429	1.168095	0.005001	1.183619	0.000050	0.253305	0.021104	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-40	0.002502	0.151429	1.138095	0.005001	1.213619	0.000050	0.253305	0.021904	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-41	0.002502	0.151429	1.118095	0.005001	0.988619	0.000050	0.253305	0.020804	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-42	0.002502	0.151429	1.178095	0.005001	1.213619	0.000050	0.253305	0.020004	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-43	0.000252	0.151429	1.158095	0.000501	1.303619	0.000005	0.253305	0.019704	0	0.000050	0.000050	0.005048	0.000037	0.000510	0.002514	
M-07-30-44	0.002502	0.151429	1.218095	0.005001	1.243619	0.000050	0.253305	0.021204	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-45	0.002502	0.151429	1.278095	0.005001	1.263619	0.000050	0.253305	0.024404	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-46	0.002502	0.151429	1.208095	0.005001	1.183619	0.000050	0.253305	0.019904	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-47	0.002502	0.151429	1.128095	0.005001	1.163619	0.000050	0.253305	0.020504		0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-48	0.002502	0.151429	1.108095	0.005001	1.053619	0.000050	0.253305	0.017404		0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-49	0.002502	0.151429	1.048095	0.005001	1.063619	0.000050	0.253305	0.017204	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-50	0.002502	0.151429	1.098095	0.005001	1.183619	0.000050	0.253305	0.018904		0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-51	0.002502	0.151429	1.278095	0.005001	1.253619	0.000050	0.253305	0.021204	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-52	0.002502	0.151429	1.298095	0.005001	1.183619	0.000050	0.253305	0.028504	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-53	0.002502	0.151429	1.118095	0.005001	1.193619	0.000050	0.253305	0.021004		0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-54	0.002502	0.151429	1.078095	0.005001	1.033619	0.000050	0.253305	0.019204	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-55	0.002502	0.151429	1.048095	0.005001	0.847619	0.000050	0.253305	0.018804	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-56	0.002502	0.151429	1.038095	0.005001	1.043619	0.000050	0.253305	0.018904	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-57	0.002502	0.151429	1.138095	0.005001	1.063619	0.000050	0.253305	0.020704	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-58	0.002502	0.151429	1.058095	0.005001	0.928619	0.000050	0.253305	0.017904	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-59	0.002502	0.151429	1.068095	0.005001	1.203619	0.000050	0.253305	0.017004		0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-60	0.002502	0.151429	1.138095	0.005001	1.233619	0.000050	0.253305	0.021504	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-61	0.002502	0.151429	1.078095	0.005001	1.343619	0.000050	0.253305	0.018404	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-62	0.002502	0.151429	1.138095	0.005001	1.293619	0.000050	0.253305	0.019304	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-63	0.002502	0.151429	1.128095	0.005001	1.403619	0.000050	0.253305	0.017004	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-64	0.002502	0.151429	1.038095	0.005001	1.433619	0.000050	0.253305	0.017304	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-65	0.002502	0.151429	1.018095	0.005001	1.673619	0.000050	0.253305	0.021904	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-66	0.002502	0.151429	0.958095	0.005001	1.323619	0.000050	0.253305	0.017404	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-67	0.002502	0.151429	1.038095	0.005001	1.183619	0.000050	0.253305	0.019504	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-68	0.002502	0.151429	1.078095	0.005001	1.353619	0.000050	0.253305	0.017104	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-69	0.002502	0.151429	1.088095	0.005001	1.143619	0.000050	0.253305	0.020304	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-70	0.002502	0.151429	1.038095	0.005001	1.183619	0.000050	0.253305	0.018304	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-71	0.002502	0.151429	1.078095	0.005001	1.153619	0.000050	0.253305	0.020504	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-72	0.002502	0.151429	1.038095	0.005001	1.007619	0.000050	0.253305	0.018404	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-73	0.002502	0.151429	1.098095	0.005001	1.163619	0.000050	0.253305	0.023104	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-74	0.002502	0.151429	1.008095	0.005001	1.073619	0.000050	0.253305	0.020404	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-75	0.002502	0.151429	1.048095	0.005001	1.113619	0.000050	0.253305	0.019704	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-76	0.002502	0.151429	0.998095	0.005001	1.123619	0.000050	0.253305	0.018904	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-77	0.002502	0.151429	0.958095	0.005001	1.008619	0.000050	0.253305	0.017904	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-78	0.002502	0.151429	0.908095	0.005001	0.860619	0.000050	0.253305	0.017504	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-79	0.002502	0.151429	0.998095	0.005001	1.003619	0.000050	0.253305	0.018804	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-80	0.002502	0.151429	0.958095	0.005001	1.053619	0.000050	0.253305	0.019604	0	0.000500	0.000500	0.005048	0.000053	0.005010	0.002514	
M-07-30-81	0.000252	0.151429	1.012095	0.000051	1.022619	0.000005	0.028305	0.020604	0.25	0.000050	0.000050	0.005048	0.000037	0.000510	0.000514	
M-07-30-82	0.000252	0.151429	0.997095	0.000051	1.032619	0.000005	0.028305	0.019404	0.25	0.000050	0.000050	0.005048	0.000029	0.000510	0.000514	
M-07-30-83	0.000252	0.151429	0.934095	0.000051	0.951619	0.000005	0.028305	0.019604	0.25	0.000050	0.000050	0.005048	0.000034	0.000510	0.001514	
M-07-30-84	0.000252	0.151429	0.987095	0.000051	0.786619	0.000005	0.028305	0.020304	0.25	0.000050	0.000050	0.005048	0.000032	0.000510	0.001514	
M-07-30-85	0.000252	0.151429	0.944095	0.000051	0.681619	0.000005	0.028305	0.017704	0.25	0.000050	0.000050	0.005048	0.000031	0.000510	0.001514	
M-07-30-86	0.000252	0.151429	0.959095	0.000051	0.718619	0.000005	0.028305	0.019204	0.25	0.000050	0.000050	0.005048	0.000029	0.000510	0.001514	
M-07-30-87	0.000252	0.151429	0.939095	0.000051	0.916619	0.000005	0.028305	0.020504	0.25	0.000050	0.000050	0.005048	0.000029	0.000510	0.001514	
M-07-30-88	0.000252	0.151429	0.889095	0.000051	0.862619	0.000005	0.028305	0.019404	0.25	0.000050	0.000050	0.005048	0.000028	0.000510	0.001514	
M-07-30-89	0.000252	0.151429	0.885095	0.000051	0.686619	0.000005	0.028305	0.019704	0.25	0.000050	0.000050	0.005048	0.000031	0.000510	0.001514	
M-07-30-90	0.000252	0.151429	0.889095	0.000051	1.012619	0.000005	0.028305	0.018104	0.25	0.000050	0.000050	0.005048	0.000040	0.000510	0.001514	
M-07-30-91	0.000252	0.151429	0.882095	0.000051	0.964619	0.000005	0.028305	0.018004	0.25	0.000050	0.000050	0.005048	0.000032	0.000510	0.001514	
M-07-30-92	0.000252	0.151429	0.891095	0.000051	0.926619	0.000005	0.028305	0.022404	0.25	0.000050	0.000050	0.005048	0.000032	0.000510	0.001514	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-07-30-93		93	3-Dec-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	425	24	49.7	7.82	1.30	25.08	1.14	
M-07-30-94		94	10-Dec-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	440	26	51.3	7.84	0.50	23.88	0.90	
M-07-30-95		95	17-Dec-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	460	24	47.6	7.8	2.30	23.78	1.26	
M-07-30-96		96	24-Dec-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	440	24	50.5	7.95	1.30	23.48	1.49	
M-07-30-97		97	31-Dec-10	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	475	25	51.1	7.93	2.20	24.18	1.47	
M-07-30-98		98	7-Jan-11	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	450	25	51.8	7.88	1.60	23.58	1.51	
M-07-30-99		99	14-Jan-11	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	460	26	52.1	7.89	1.60	25.18	1.54	
M-07-30-100		100	21-Jan-11	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	470	23	47.9	7.87	1.70	22.78	1.54	
M-07-30-101		101	28-Jan-11	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	475	24	53.2	7.89	1.30	24.48	1.50	
M-07-30-102		102	4-Feb-11	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	455	22	45.6	7.85	1.60	21.78	1.30	
M-07-30-103		103	11-Feb-11	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	490	25	52	7.86	2.50	25.18	1.47	
M-07-30-104		104	18-Feb-11	Mitchell	BELOW MTF	Monzonite	VULT	FEOX	0	0	0			Water	500	440	24	49.5	7.88	1.20	22.68	1.44	
																	24.1209262	50.13	7.88	1.734762	23.709048	1.452381	#N/A
M-07-33 UP Hazelton																							
M-07-33-0		0	20-Feb-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	750	685	151	353	7.69	4.70	20.32	139.12	
M-07-33-1		1	27-Feb-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	455	73	204	8.05	0.50	18.52	73.02	
M-07-33-2		2	6-Mar-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	450	47	133	8.1	2.60	19.72	41.12	
M-07-33-3		3	13-Mar-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	425	36	98.7	8.12	3.40	20.92	25.12	
M-07-33-4		4	20-Mar-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	33	86.5	7.95	2.40	21.12	19.62	
M-07-33-5		5	27-Mar-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	435	28	76	7.98	2.40	20.32	15.32	
M-07-33-6		6	3-Apr-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	460	33	80.7	7.98	1.80	25.72	12.72	
M-07-33-7		7	10-Apr-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	480	30	73.1	7.85	5.00	25.12	11.12	
M-07-33-8		8	17-Apr-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	32	75.3	7.96	2.40	24.92	11.52	
M-07-33-9		9	24-Apr-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	480	32	76.3	7.9	4.30	25.52	11.62	
M-07-33-10		10	1-May-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	485	31	75.5	7.96	3.70	26.02	11.62	
M-07-33-11		11	8-May-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	30	71.4	7.95	3.20	24.12	11.72	
M-07-33-12		12	15-May-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	470	31	69.9	7.97	1.50	22.72	11.22	
M-07-33-13		13	22-May-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	455	31	72.4	8.01	4.30	23.22	12.92	
M-07-33-14		14	29-May-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	480	32	73	7.99	1.50	24.12	11.62	
M-07-33-15		15	5-Jun-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	470	30	71	7.85	5.20	21.72	11.82	
M-07-33-16		16	12-Jun-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	28	65.9	7.98	1.80	20.62	10.22	
M-07-33-17		17	19-Jun-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	450	28	66.1	7.89	1.70	20.62	10.32	
M-07-33-18		18	26-Jun-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	470	29	66.8	7.91	1.70	22.42	10.22	
M-07-33-19		19	3-Jul-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	460	29	65.5	7.95	1.90	22.62	10.04	
M-07-33-20		20	10-Jul-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	470	32	72.6	7.98	3.10	25.92	9.47	
M-07-33-21		21	17-Jul-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	450	32	69.8	8	5.80	24.42	8.68	
M-07-33-22		22	24-Jul-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	485	33	71	7.96	6.40	26.92	8.93	
M-07-33-23		23	31-Jul-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	450	31	67.1	7.78	1.50	24.02	8.39	
M-07-33-24		24	7-Aug-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	450	32	68.1	7.83	1.80	24.32	8.02	
M-07-33-25		25	14-Aug-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	470	31	69.2	7.91	3.30	25.52	8.32	
M-07-33-26		26	21-Aug-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	495	32	66.7	7.96	1.40	26.32	8.17	
M-07-33-27		27	28-Aug-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	470	31	65.7	7.99	3.90	24.52	7.67	
M-07-33-28		28	4-Sep-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	490	31	64.3	7.9	4.00	24.52	7.51	
M-07-33-29		29	11-Sep-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	450	29	64.6	7.89	4.20	23.42	7.67	
M-07-33-30		30	18-Sep-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	480	29	64.3	7.92	2.30	24.72	7.02	
M-07-33-31		31	25-Sep-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	455	30	64.7	8.02	2.30	25.82	7.54	
M-07-33-32		32	2-Oct-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	500	32	69.3	8.04	3.60	27.22	7.44	
M-07-33-33		33	9-Oct-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	490	34	71.7	8.05	2.20	28.12	6.94	
M-07-33-34		34	16-Oct-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	485	31	69	7.82	3.00	26.42	7.24	
M-07-33-35		35	23-Oct-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	500	31	69.8	7.94	3.30	27.72	7.23	
M-07-33-36		36	30-Oct-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	490	30	64.3	8	5.10	24.42	7.51	
M-07-33-37		37	6-Nov-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	450	30	66.2	7.95	2.30	24.22	7.89	
M-07-33-38		38	13-Nov-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	490	32	68.6	7.97	7.20	24.72	8.03	
M-07-33-39		39	20-Nov-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	460	29	62.9	7.94	1.90	24.22	7.50	
M-07-33-40		40	27-Nov-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	485	30	66.6	7.95	4.80	23.32	8.19	
M-07-33-41		41	4-Dec-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	470	30	67.6	7.7	3.30	22.12	7.77	
M-07-33-42		42	11-Dec-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	450	28	65	7.94	2.80	22.52	7.94	
M-07-33-43		43	18-Dec-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	31	67.6	7.95	3.70	22.62	9.25	
M-07-33-44		44	24-Dec-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	460	29	64.3	7.78	5.20	21.32	9.35	
M-07-33-45		45	31-Dec-09	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	445	32	71	7.8	2.30	22.22	12.72	
M-07-33-46		46	8-Jan-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	440	32	72.8	7.74	7.20	21.32	11.82	
M-07-33-47		47	15-Jan-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	465	33	75.6	7.82	3.30	23.52	12.52	
M-07-33-48		48	22-Jan-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	460	31	71.8	7.73	5.50	22.82	11.52	
M-07-33-49		49	29-Jan-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	425	33	76.4	7.8	4.60	23.82	12.22	
M-07-33-50		50	5-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	470	31	70.9	7.78	6.00	21.62	11.52	
M-07-33-51		51	12-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	470	34	74	8.05	4.20	22.72	12.02	
M-07-33-52		52	19-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	460	31	68	8.08	3.20	20.82	11.62	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-07-30-93	0.05	0.163524	0.000273	0.000174	0.028738	0.000252	0.000252	0.005124	0.000005	8.955238	0.000252	0.000050	0.000258	0.063219	0.000025	0.002524	0.514990	0.00221	0.000005	0.003935
M-07-30-94	0.04	0.270524	0.000363	0.000244	0.031938	0.000252	0.000252	0.005124	0.000005	9.315238	0.000252	0.000050	0.000668	0.087219	0.000025	0.002524	0.579990	0.00288	0.000005	0.004175
M-07-30-95	0.04	0.164524	0.000293	0.000194	0.028038	0.000252	0.000252	0.005124	0.000005	8.565238	0.000252	0.000050	0.000638	0.083219	0.000025	0.002524	0.518990	0.00274	0.000005	0.003975
M-07-30-96	0.04	0.235524	0.000313	0.000204	0.028738	0.000252	0.000252	0.005124	0.000005	8.755238	0.000252	0.000050	0.000598	0.092219	0.000025	0.002524	0.529990	0.00236	0.000005	0.003935
M-07-30-97	0.04	0.199524	0.000293	0.000244	0.028238	0.000252	0.000252	0.005124	0.000005	9.035238	0.000252	0.000050	0.000258	0.016219	0.000025	0.002524	0.551990	0.00181	0.000005	0.003585
M-07-30-98	0.04	0.332524	0.000303	0.000154	0.027938	0.000252	0.000252	0.005124	0.000005	8.975238	0.000252	0.000050	0.000578	0.124219	0.000025	0.002524	0.527990	0.00287	0.000005	0.003795
M-07-30-99	0.03	0.194524	0.000303	0.000204	0.029538	0.000252	0.000252	0.005124	0.000005	9.355238	0.000252	0.000050	0.000588	0.090219	0.000025	0.002524	0.561990	0.00243	0.000005	0.003525
M-07-30-100	0.03	0.267524	0.000283	0.000184	0.028038	0.000252	0.000252	0.005124	0.000005	8.315238	0.002272	0.000050	0.000638	0.098219	0.000025	0.002524	0.546990	0.0029	0.000005	0.003375
M-07-30-101	0.03	0.341524	0.000293	0.000214	0.031938	0.000252	0.000252	0.005124	0.000005	8.565238	0.000252	0.000050	0.000718	0.016219	0.000025	0.002524	0.621990	0.00297	0.000005	0.003565
M-07-30-102	0.04	0.158524	0.000263	0.000194	0.027138	0.000252	0.000252	0.005124	0.000005	8.065238	0.000252	0.000050	0.000528	0.062219	0.000025	0.002524	0.506990	0.00188	0.000005	0.003105
M-07-30-103	0.03	0.216524	0.000303	0.000174	0.030638	0.000252	0.000252	0.005124	0.000005	9.075238	0.000252	0.000050	0.000628	0.107219	0.000025	0.002524	0.607990	0.00293	0.000005	0.003415
M-07-30-104	0.03	0.156524	0.000273	0.000184	0.029738	0.000252	0.000252	0.005124	0.000005	8.745238	0.000252	0.000050	0.000608	0.124219	0.000025	0.002524	0.531990	0.00284	0.000005	0.003725
	0.035305	0.226724	0.000292	0.000195	0.028998	0.000252	0.000252	0.005124	0.000005	8.745238	0.000454	0.000050	0.000578	0.081419	0.000025	0.002524	0.550690	0.002573	0.000005	0.003600
M-07-33 UP Hazelton																				
M-07-33-0	0.40	0.150933	0.007053	0.001214	0.041862	0.002502	0.002502	0.050048	0.000250	44.433333	0.002502	0.000500	0.000758	0.038143	0.000250	0.005024	9.717143	0.084032	0.000500	0.042532
M-07-33-1	0.33	0.186933	0.011953	0.001914	0.044162	0.002502	0.002502	0.050048	0.000250	20.133333	0.002502	0.000500	0.002608	0.015143	0.000250	0.005024	5.557143	0.044132	0.000500	0.068932
M-07-33-2	0.23	0.260933	0.012153	0.002514	0.055562	0.002502	0.002502	0.050048	0.000250	12.733333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	3.657143	0.032632	0.000500	0.070832
M-07-33-3	0.18	0.279933	0.009853	0.002614	0.072262	0.002502	0.002502	0.050048	0.000250	9.693333	0.002502	0.000500	0.001108	0.015143	0.000250	0.005024	2.867143	0.025632	0.000500	0.060132
M-07-33-4	0.14	0.273933	0.009253	0.002614	0.064162	0.002502	0.002502	0.050048	0.000250	9.023333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.647143	0.022532	0.000500	0.060132
M-07-33-5	0.10	0.249933	0.007153	0.002614	0.061262	0.002502	0.002502	0.050048	0.000250	7.973333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.077143	0.022132	0.000500	0.052832
M-07-33-6	0.07	0.296933	0.007953	0.001814	0.069562	0.002502	0.002502	0.050048	0.000250	8.613333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.767143	0.036632	0.000500	0.056432
M-07-33-7	0.06	0.249933	0.007153	0.001614	0.068562	0.002502	0.002502	0.050048	0.000250	8.013333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.487143	0.035432	0.000500	0.050832
M-07-33-8	0.05	0.287933	0.007353	0.001614	0.067262	0.002502	0.002502	0.050048	0.000250	8.513333	0.002502	0.000500	0.000508	0.042143	0.000250	0.005024	2.637143	0.038632	0.000500	0.061932
M-07-33-9	0.04	0.228933	0.007253	0.001514	0.077362	0.002502	0.002502	0.050048	0.000250	8.653333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.617143	0.043532	0.000500	0.064132
M-07-33-10	0.05	0.279933	0.007153	0.001514	0.070162	0.002502	0.002502	0.050048	0.000250	8.713333	0.002502	0.000500	0.000508	0.052143	0.000250	0.005024	2.347143	0.044632	0.000500	0.058532
M-07-33-11	0.06	0.241933	0.005953	0.001514	0.059162	0.002502	0.002502	0.050048	0.000250	8.493333	0.002502	0.000500	0.001008	0.041143	0.000250	0.005024	2.087143	0.042032	0.000500	0.052832
M-07-33-12	0.05	0.329933	0.005553	0.001414	0.062662	0.002502	0.002502	0.050048	0.000250	8.283333	0.002502	0.000500	0.000508	0.041143	0.000250	0.005024	2.587143	0.042632	0.000500	0.046532
M-07-33-13	0.04	0.321933	0.005353	0.001414	0.062862	0.002502	0.002502	0.050048	0.000250	8.583333	0.002502	0.000500	0.001508	0.055143	0.000510	0.005024	2.327143	0.046032	0.000500	0.049832
M-07-33-14	0.04	0.303933	0.005753	0.001214	0.059762	0.002502	0.002502	0.050048	0.000250	8.763333	0.002502	0.000500	0.004408	0.039143	0.000250	0.005024	2.467143	0.047932	0.000500	0.045632
M-07-33-15	0.04	0.254933	0.005253	0.001214	0.052562	0.002502	0.002502	0.050048	0.000250	8.393333	0.002502	0.000500	0.000508	0.088143	0.000250	0.005024	2.097143	0.048732	0.000500	0.041632
M-07-33-16	0.02	0.338933	0.004753	0.001214	0.054462	0.002502	0.002502	0.050048	0.000250	7.903333	0.002502	0.000500	0.002808	0.052143	0.000250	0.005024	2.107143	0.050532	0.000500	0.038332
M-07-33-17	0.01	0.335933	0.004453	0.001414	0.050362	0.002502	0.002502	0.050048	0.000250	7.973333	0.002502	0.000500	0.001348	0.060143	0.000530	0.005024	2.057143	0.051132	0.000500	0.037432
M-07-33-18	0.01	0.249933	0.004453	0.000514	0.050862	0.002502	0.002502	0.050048	0.000250	8.333333	0.002502	0.000500	0.001108	0.069143	0.000250	0.005024	2.057143	0.053932	0.000500	0.037032
M-07-33-19	0.03	0.270933	0.004153	0.001314	0.055762	0.002502	0.002502	0.050048	0.000250	7.973333	0.002502	0.000500	0.000508	0.030143	0.000250	0.005024	2.287143	0.058832	0.000500	0.039432
M-07-33-20	0.03	0.218933	0.004653	0.001014	0.066162	0.002502	0.002502	0.050048	0.000250	9.093333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.307143	0.062332	0.000500	0.037932
M-07-33-21	0.03	0.185933	0.003953	0.000514	0.072862	0.002502	0.002502	0.050048	0.000250	8.833333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.297143	0.069732	0.000500	0.036132
M-07-33-22	0.03	0.196933	0.003753	0.000514	0.076762	0.002502	0.002502	0.050048	0.000250	9.123333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.377143	0.072832	0.000500	0.037732
M-07-33-23	0.01	0.212933	0.003353	0.000514	0.077862	0.002502	0.002502	0.050048	0.000250	8.493333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.437143	0.071132	0.000500	0.037932
M-07-33-24	0.01	0.206933	0.003253	0.000514	0.073662	0.002502	0.002502	0.050048	0.000250	8.673333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.467143	0.070432	0.000500	0.039332
M-07-33-25	0.01	0.163933	0.003353	0.000514	0.077962	0.002502	0.002502	0.050048	0.000250	8.873333	0.002502	0.000500	0.001508	0.015143	0.000250	0.005024	2.197143	0.069932	0.000500	0.038732
M-07-33-26	0.01	0.162933	0.003153	0.000514	0.076962	0.002502	0.002502	0.050048	0.000250	8.853333	0.002502	0.000500	0.000508	0.084143	0.000250	0.005024	2.327143	0.074132	0.000500	0.038832
M-07-33-27	0.01	0.148933	0.002853	0.000514	0.071462	0.002502	0.002502	0.050048	0.000250	8.713333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.327143	0.075532	0.000500	0.035432
M-07-33-28	0.01	0.164933	0.002753	0.000514	0.083062	0.002502	0.002502	0.050048	0.000250	8.663333	0.002502	0.000500	0.000508	0.067143	0.000250	0.005024	2.227143	0.076732	0.000500	0.037732
M-07-33-29	0.01	0.166933	0.002553	0.000514	0.073862	0.002502	0.002502	0.050048	0.000250	8.353333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	1.977143	0.070232	0.000500	0.034932
M-07-33-30	0.01	0.169933	0.002353	0.000514	0.077462	0.002502	0.002502	0.050048	0.000250	8.293333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	1.927143	0.067032	0.000500	0.033532
M-07-33-31	0.01	0.134933	0.002453	0.000514	0.081962	0.002502	0.002502	0.050048	0.000250	8.473333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.117143	0.075632	0.000500	0.036532
M-07-33-32	0.01	0.134933	0.002753	0.000514	0.082862	0.002502	0.002502	0.050048	0.000250	8.953333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.297143	0.083332	0.000500	0.042032
M-07-33-33	0.01	0.128933	0.002653	0.000514	0.099162	0.002502	0.002502	0.050048	0.000250	9.393333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.447143	0.087832	0.000500	0.038032
M-07-33-34	0.01	0.114933	0.002553	0.000514	0.082662	0.002502	0.002502	0.050048	0.000250	8.853333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.187143	0.078132	0.000500	0.039832
M-07-33-35	0.01	0.089933	0.002653	0.000514	0.090562	0.002502	0.002502	0.050048	0.000250	9.263333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	1.807143	0.089632	0.000500	0.046132
M-07-33-36	0.01	0.139933	0.002653	0.000514	0.077162	0.002502	0.002502	0.050048	0.000250	8.333333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.307143	0.087432	0.000500	0.041932
M-07-33-37	0.01	0.132933	0.002153	0.000514	0.080662	0.002502	0.002502	0.050048	0.000250	8.513333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.137143	0.086832	0.000500	0.039132
M-07-33-38	0.01	0.132933	0.002453	0.000514	0.077362	0.002502	0.002502	0.050048	0.000250	8.983333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.277143	0.078632	0.000500	0.042732
M-07-33-39	0.01	0.151933	0.002153	0.000514	0.071962	0.002502	0.002502	0.050048	0.000250	8.203333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.097143	0.078332	0.000500	0.037132
M-07-33-40	0.01	0.130933	0.002353	0.000514	0.071462	0.002502	0.002502	0.050048	0.000250	8.853333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	1.947143	0.074632	0.000500	0.041032
M-07-33-41	0.01	0.141933	0.002253	0.000514	0.078562	0.002502	0.002502	0.050048	0.000250	8.243333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.237143	0.087432	0.000500	0.037932
M-07-33-42	0.01	0.173933	0.002153	0.000514	0.073462	0.002502	0.002502	0.050048	0.000250	8.063333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	1.987143	0.078232	0.000500	0.041332
M-07-33-43	0.01	0.153933	0.002353	0.000514	0.078262	0.002502	0.002502	0.050048	0.000250	8.693333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.357143	0.076632	0.000500	0.044132
M-07-33-44	0.01	0.161933	0.002153	0.000514	0.070662	0.002502	0.002502	0.050048	0.000250	8.203333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.127143	0.072732	0.000500	0.044632
M-07-33-45	0.01	0.184933	0.002353	0.000514	0.069762	0.002502	0.002502	0.050048	0.000250	8.903333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.277143	0.073932	0.000500	0.046132
M-07-33-46	0.01	0.157933	0.002253	0.000514	0.056662	0.002502	0.002502	0.050048	0.000250	8.993333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.287143	0.074532	0.000500	0.051732
M-07-33-47	0.01	0.165933	0.002853	0.000514	0.058462	0.002502	0.002502	0.050048	0.000250	9.333333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.307143	0.071032	0.000500	0.053532
M-07-33-48	0.01	0.151933	0.002353	0.000514	0.051362	0.002502	0.002502	0.050048	0.000250	8.773333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.217143	0.078932	0.000500	0.048232
M-07-33-49	0.01	0.141933	0.002453	0.000514	0.083962	0.002502	0.002502	0.050048	0.000250	9.513333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.347143	0.084032	0.000500	0.048732
M-07-33-50	0.01	0.169933	0.002453	0.000514	0.057462	0.002502	0.002502	0.050048	0.000250	8.763333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.317143	0.074932	0.000500	0.043932
M-07-33-51	0.01	0.199933	0.002653	0.000514	0.073862	0.002502	0.002502	0.050048	0.000250	9.453333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.467143	0.086332	0.000500	0.046432
M-07-33-52	0.01	0.176933	0.002353	0.000514	0.046462	0.002502	0.002502	0.050048	0.000250	8.563333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.307143	0.072432	0.000500	0.044232

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-07-30-93	0.000252	0.151429	0.930095	0.000051	0.971619	0.000005	0.028305	0.019204	0.25	0.000050	0.000050	0.005048	0.000037	0.000510	0.001514	
M-07-30-94	0.000252	0.151429	1.004095	0.000051	1.303619	0.000005	0.028305	0.021804	0.25	0.000050	0.000050	0.005048	0.000028	0.000510	0.001514	
M-07-30-95	0.000252	0.151429	0.945095	0.000051	1.123619	0.000005	0.028305	0.019804	0.52	0.000050	0.000050	0.005048	0.000028	0.000510	0.001514	
M-07-30-96	0.000252	0.151429	0.960095	0.000051	1.193619	0.000005	0.028305	0.020404	0.5	0.000050	0.000050	0.005048	0.000033	0.000510	0.001514	
M-07-30-97	0.000252	0.151429	0.915095	0.000051	0.846619	0.000005	0.028305	0.021504	0.25	0.000050	0.000050	0.005048	0.000036	0.000510	0.001514	
M-07-30-98	0.000252	0.151429	0.882095	0.000051	1.333619	0.000005	0.245305	0.021204	0.25	0.000050	0.000050	0.005048	0.000034	0.000510	0.001514	
M-07-30-99	0.000252	0.151429	0.915095	0.000051	1.173619	0.000005	0.078305	0.021304	0.57	0.000050	0.000050	0.005048	0.000031	0.000510	0.001514	
M-07-30-100	0.001032	0.151429	0.952095	0.000051	1.153619	0.000005	0.028305	0.019004	0.54	0.000050	0.000050	0.005048	0.000032	0.000510	0.001514	
M-07-30-101	0.000252	0.151429	1.068095	0.000051	0.808619	0.000005	0.028305	0.021804	0.64	0.000050	0.000050	0.005048	0.000034	0.000510	0.001514	
M-07-30-102	0.000252	0.151429	0.890095	0.000051	0.957619	0.000005	0.028305	0.017904	0.25	0.000050	0.000050	0.005048	0.000022	0.000510	0.001514	
M-07-30-103	0.000252	0.151429	1.032095	0.000051	1.253619	0.000005	0.028305	0.020604	0.25	0.000050	0.000110	0.005048	0.000035	0.000510	0.001514	
M-07-30-104	0.000252	0.151429	0.887095	0.000051	1.293619	0.000005	0.054305	0.019904	0.25	0.000050	0.000050	0.005048	0.000027	0.000510	0.001514	
	0.000330	0.151429	0.944695	0.000051	1.113819	0.000005	0.057605	0.020344	0.402	0.000050	0.000056	0.005048	0.000031	0.000510	0.001514	
M-07-33 UP Hazelton																
M-07-33-0	0.002502	0.151429	13.519048	0.042029	1.131143	0.000052	4.364381	0.358	0	0.000500	0.000500	0.005048	0.007157	0.005030	0.028414	
M-07-33-1	0.002502	0.151429	7.549048	0.021029	1.291143	0.000052	2.074381	0.216	0	0.000500	0.000500	0.005048	0.003987	0.005030	0.002514	
M-07-33-2	0.002502	0.151429	5.829048	0.015029	1.311143	0.000052	1.344381	0.162	0	0.000500	0.000500	0.005048	0.004107	0.005030	0.002514	
M-07-33-3	0.002502	0.151429	4.589048	0.005029	1.311143	0.000052	0.914381	0.144	0	0.000500	0.000500	0.005048	0.003807	0.005030	0.002514	
M-07-33-4	0.002502	0.151429	3.759048	0.005029	1.421143	0.000052	0.704381	0.125	0	0.000500	0.000500	0.005048	0.004097	0.005030	0.002514	
M-07-33-5	0.002502	0.151429	3.229048	0.005029	1.331143	0.000052	0.554381	0.107	0	0.000500	0.000500	0.005048	0.003637	0.005030	0.002514	
M-07-33-6	0.002502	0.151429	3.349048	0.005029	1.291143	0.000052	0.594381	0.129	0	0.000500	0.000500	0.005048	0.006127	0.005030	0.002514	
M-07-33-7	0.002502	0.151429	2.789048	0.005029	1.181143	0.000052	0.294381	0.115	0	0.000500	0.000500	0.005048	0.006417	0.005030	0.002514	
M-07-33-8	0.002502	0.151429	2.499048	0.005029	1.421143	0.000052	0.294381	0.129	0	0.000500	0.000500	0.005048	0.006697	0.005030	0.002514	
M-07-33-9	0.002502	0.151429	2.479048	0.005029	1.291143	0.000052	0.294381	0.138	0	0.000500	0.000500	0.005048	0.006917	0.005030	0.002514	
M-07-33-10	0.002502	0.151429	2.249048	0.005029	1.311143	0.000052	0.294381	0.121	0	0.000500	0.000500	0.005048	0.006387	0.005030	0.002514	
M-07-33-11	0.002502	0.151429	2.099048	0.005029	1.401143	0.000052	0.294381	0.105	0	0.000500	0.000500	0.005048	0.005717	0.005030	0.002514	
M-07-33-12	0.002502	0.151429	2.149048	0.005029	1.311143	0.000052	0.294381	0.126	0	0.000500	0.000500	0.005048	0.005117	0.005030	0.002514	
M-07-33-13	0.002502	0.151429	1.839048	0.005029	1.371143	0.000052	0.294381	0.12	0	0.000500	0.000500	0.005048	0.004837	0.005030	0.002514	
M-07-33-14	0.002502	0.151429	1.589048	0.005029	1.381143	0.000052	0.294381	0.121	0	0.000500	0.000500	0.005048	0.004747	0.005030	0.002514	
M-07-33-15	0.002502	0.151429	1.639048	0.005029	1.271143	0.000052	0.294381	0.105	0	0.000500	0.000500	0.005048	0.004387	0.005030	0.002514	
M-07-33-16	0.002502	0.151429	1.679048	0.005029	1.201143	0.000052	0.294381	0.103	0	0.000500	0.000500	0.005048	0.003807	0.005030	0.002514	
M-07-33-17	0.002502	0.151429	1.529048	0.005029	1.461143	0.000052	0.294381	0.097	0	0.000500	0.000500	0.005048	0.003587	0.005030	0.002514	
M-07-33-18	0.002502	0.151429	1.419048	0.005029	1.221143	0.000052	0.294381	0.0997	0	0.000500	0.000500	0.005048	0.003687	0.005030	0.002514	
M-07-33-19	0.002502	0.151429	1.469048	0.005029	1.091143	0.000052	0.294381	0.11	0	0.000500	0.000500	0.005048	0.003307	0.005030	0.002514	
M-07-33-20	0.002502	0.151429	1.539048	0.005029	1.261143	0.000052	0.294381	0.112	0	0.000500	0.000500	0.005048	0.003897	0.005030	0.002514	
M-07-33-21	0.002502	0.151429	1.329048	0.005029	1.181143	0.000052	0.294381	0.119	0	0.000500	0.000500	0.005048	0.003217	0.005030	0.002514	
M-07-33-22	0.002502	0.151429	1.239048	0.005029	1.211143	0.000052	0.294381	0.118	0	0.000500	0.000500	0.005048	0.003167	0.005030	0.002514	
M-07-33-23	0.002502	0.151429	1.359048	0.005029	1.121143	0.000052	0.294381	0.125	0	0.000500	0.000500	0.005048	0.002507	0.005030	0.002514	
M-07-33-24	0.002502	0.151429	1.379048	0.005029	1.171143	0.000052	0.294381	0.11	0	0.000500	0.000500	0.005048	0.002787	0.005030	0.002514	
M-07-33-25	0.002502	0.151429	1.169048	0.005029	1.151143	0.000052	0.294381	0.108	0	0.000500	0.000500	0.005048	0.002787	0.005030	0.002514	
M-07-33-26	0.002502	0.151429	1.209048	0.005029	1.161143	0.000052	0.294381	0.11	0	0.000500	0.000500	0.005048	0.002727	0.005030	0.002514	
M-07-33-27	0.002502	0.151429	1.139048	0.005029	1.071143	0.000052	0.294381	0.11	0	0.000500	0.000500	0.005048	0.002387	0.005030	0.002514	
M-07-33-28	0.002502	0.151429	1.099048	0.005029	1.141143	0.000052	0.294381	0.114	0	0.000500	0.000500	0.005048	0.002257	0.005030	0.002514	
M-07-33-29	0.002502	0.151429	1.159048	0.005029	1.271143	0.000052	0.294381	0.0995	0	0.000500	0.000500	0.005048	0.002287	0.005030	0.002514	
M-07-33-30	0.002502	0.151429	1.049048	0.005029	1.081143	0.000052	0.294381	0.093	0	0.000500	0.000500	0.005048	0.001907	0.005030	0.002514	
M-07-33-31	0.002502	0.151429	1.039048	0.005029	1.005143	0.000052	0.294381	0.1012	0	0.000500	0.000500	0.005048	0.002127	0.005030	0.002514	
M-07-33-32	0.002502	0.151429	1.079048	0.005029	0.976143	0.000052	0.294381	0.102	0	0.000500	0.000500	0.005048	0.002527	0.005030	0.002514	
M-07-33-33	0.002502	0.151429	1.089048	0.005029	1.101143	0.000052	0.294381	0.112	0	0.000500	0.000500	0.005048	0.002367	0.005030	0.002514	
M-07-33-34	0.002502	0.151429	1.029048	0.005029	0.986143	0.000052	0.294381	0.0991	0	0.000500	0.000500	0.005048	0.002237	0.005030	0.002514	
M-07-33-35	0.002502	0.151429	0.969048	0.005029	0.922143	0.000052	0.294381	0.108	0	0.000500	0.000500	0.005048	0.002547	0.005030	0.002514	
M-07-33-36	0.002502	0.151429	1.089048	0.005029	1.013143	0.000052	0.294381	0.109	0	0.000500	0.000500	0.005048	0.002007	0.005030	0.002514	
M-07-33-37	0.002502	0.151429	0.979048	0.005029	0.988143	0.000052	0.294381	0.099	0	0.000500	0.000500	0.005048	0.002107	0.005030	0.002514	
M-07-33-38	0.002502	0.151429	0.999048	0.005029	1.041143	0.000052	0.294381	0.0973	0	0.000500	0.000500	0.005048	0.002007	0.005030	0.002514	
M-07-33-39	0.002502	0.151429	0.949048	0.005029	0.966143	0.000052	0.294381	0.0889	0	0.000500	0.000500	0.005048	0.001717	0.005030	0.002514	
M-07-33-40	0.002502	0.151429	0.909048	0.005029	1.012143	0.000052	0.294381	0.0881	0	0.000500	0.000500	0.005048	0.001737	0.005030	0.002514	
M-07-33-41	0.002502	0.151429	0.929048	0.005029	0.935143	0.000052	0.294381	0.0967	0	0.000500	0.000500	0.005048	0.001387	0.005030	0.002514	
M-07-33-42	0.002502	0.151429	0.909048	0.005029	1.021143	0.000052	0.294381	0.0839	0	0.000500	0.000500	0.005048	0.001357	0.005030	0.002514	
M-07-33-43	0.002502	0.151429	0.939048	0.005029	1.091143	0.000052	0.294381	0.0931	0	0.000500	0.000500	0.005048	0.001407	0.005030	0.002514	
M-07-33-44	0.002502	0.151429	0.919048	0.005029	1.031143	0.000052	0.294381	0.091	0	0.000500	0.000500	0.005048	0.001257	0.005030	0.002514	
M-07-33-45	0.002502	0.151429	0.959048	0.005029	1.091143	0.000052	0.294381	0.0897	0	0.000500	0.000500	0.005048	0.001257	0.005030	0.002514	
M-07-33-46	0.002502	0.151429	0.939048	0.005029	1.021143	0.000052	0.294381	0.0926	0	0.000500	0.000500	0.005048	0.001147	0.005030	0.002514	
M-07-33-47	0.002502	0.151429	0.959048	0.005029	1.171143	0.000052	0.294381	0.0939	0	0.000500	0.000500	0.005048	0.001307	0.005030	0.002514	
M-07-33-48	0.002502	0.151429	0.909048	0.005029	1.041143	0.000052	0.294381	0.0851	0	0.000500	0.000500	0.005048	0.001177	0.005030	0.002514	
M-07-33-49	0.002502	0.151429	0.979048	0.005029	1.141143	0.000052	0.294381	0.0935	0	0.000500	0.000500	0.005048	0.001137	0.005030	0.002514	
M-07-33-50	0.002502	0.151429	0.919048	0.005029	1.091143	0.000052	0.294381	0.0897	0	0.000500	0.000500	0.005048	0.001167	0.005030	0.002514	
M-07-33-51	0.002502	0.151429	0.999048	0.005029	1.171143	0.000052	0.294381	0.0905	0	0.000500	0.000500	0.005048	0.001187	0.005030	0.002514	
M-07-33-52	0.002502	0.151429	0.849048	0.005029	1.011143	0.000052	0.294381	0.0793	0	0.000500	0.000500	0.005048	0.001077	0.005030	0.002514	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-07-33-53		53	26-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	460	29	68.3	7.97	3.60	20.62	11.22	
M-07-33-54		54	5-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	485	33	71.8	8.06	3.70	22.32	12.22	
M-07-33-55		55	12-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	31	69.5	8.02	7.10	20.92	12.12	
M-07-33-56		56	19-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	450	29	66.5	7.98	6.50	21.12	11.22	
M-07-33-57		57	26-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	33	70	7.97	5.60	23.82	11.32	
M-07-33-58		58	2-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	490	31	66.5	8.03	3.20	22.02	10.52	
M-07-33-59		59	9-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	33	65.6	8.02	4.30	22.42	10.62	
M-07-33-60		60	16-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	31	65.3	8.01	3.30	22.22	9.55	
M-07-33-61		61	23-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	30	63.4	8.06	2.60	22.22	9.30	
M-07-33-62		62	30-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	455	30	64.8	8	5.10	22.82	9.58	
M-07-33-63		63	7-May-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	30	62.5	7.97	5.70	22.32	9.11	
M-07-33-64		64	14-May-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	31	62.4	7.94	3.00	22.12	8.74	
M-07-33-65		65	21-May-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	30	63.8	7.95	3.00	23.02	9.36	
M-07-33-66		66	28-May-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	470	28	62	8	4.60	21.92	8.93	
M-07-33-67		67	4-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	31	61.7	7.98	3.90	21.92	8.65	
M-07-33-68		68	11-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	485	30	64.2	7.75	3.60	21.72	8.46	
M-07-33-69		69	18-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	480	29	62.1	7.97	5.00	21.82	8.27	
M-07-33-70		70	25-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	480	29	65.6	7.83	2.60	22.32	9.05	
M-07-33-71		71	2-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	30	60.4	7.98	3.20	22.22	9.07	
M-07-33-72		72	9-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	480	30	62.6	8.11	3.40	21.42	9.64	
M-07-33-73		73	16-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	440	39	78	8.01	3.30	28.72	10.52	
M-07-33-74		74	23-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	500	31	64	8.05	6.20	22.02	9.14	
M-07-33-75		75	30-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	440	29	63	8	6.00	21.92	8.96	
M-07-33-76		76	6-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	500	33	68.4	7.99	4.10	23.02	11.72	
M-07-33-77		77	13-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	480	29	61.8	7.97	5.50	21.22	9.01	
M-07-33-78		78	20-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	480	29	61	8.07	3.40	21.52	8.54	
M-07-33-79		79	27-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	480	29	59.6	8.11	3.30	22.02	8.32	
M-07-33-80		80	3-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	490	29	62.3	8.02	6.20	22.92	8.21	
M-07-33-81		81	10-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	470	30	59.8	8.04	3.10	22.32	7.72	
M-07-33-82		82	17-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	480	30	62	8	3.50	23.22	8.68	
M-07-33-83		83	24-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	450	31	64	7.98	4.50	23.12	8.85	
M-07-33-84		84	1-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	31	66	8.04	5.10	25.22	9.04	
M-07-33-85		85	8-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	450	32	67.1	7.93	2.70	24.82	8.91	
M-07-33-86		86	15-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	495	32	65.2	8.06	2.60	24.72	8.63	
M-07-33-87		87	22-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	480	30	61.3	7.99	3.20	22.82	7.50	
M-07-33-88		88	29-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	465	34	68	7.94	3.20	26.82	8.38	
M-07-33-89		89	5-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	500	27	60.4	7.85	2.00	22.92	7.74	
M-07-33-90		90	12-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	470	26	53.4	8.09	2.00	19.12	7.62	
M-07-33-91		91	19-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	450	28	60.7	7.87	2.60	22.92	7.35	
M-07-33-92		92	26-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	480	30	64.4	7.93	0.50	24.82	7.96	
M-07-33-93		93	3-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	480	29	60.6	7.91	1.20	22.82	7.88	
M-07-33-94		94	10-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	470	32	64.2	7.88	0.50	23.52	8.05	
M-07-33-95		95	17-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	485	31	65	7.88	2.50	25.82	8.32	
M-07-33-96		96	24-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	470	29	63.2	8.01	1.20	23.92	8.32	
M-07-33-97		97	31-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	460	30	62.5	8.06	2.10	22.92	7.90	
M-07-33-98		98	7-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	29	62.2	8.01	1.60	22.62	7.93	
M-07-33-99		99	14-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	475	30	62.5	7.54	1.40	22.22	8.07	
M-07-33-100		100	21-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	470	29	61.5	8.04	1.70	23.12	8.18	
M-07-33-101		101	28-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	470	31	66.4	8.03	1.20	23.52	8.23	
M-07-33-102		102	4-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	450	33	70.2	7.96	1.20	26.42	8.82	
M-07-33-103		103	11-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	465	34	71.2	7.99	1.80	27.02	9.21	
M-07-33-104		104	18-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	SEDS	SIH	0	QSP	0			Water	500	470	31	67.6	8.01	1.20	24.22	9.00	
																	30.852919	65.23	7.953	1.594762	24.176190	8.398	#N/A
M-07-43 LP Hazelton																							
M-07-43-0		0	20-Feb-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	750	650	257	569	5.16	12.85	3.51	274.33	
M-07-43-1		1	27-Feb-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	455	151	386	5.15	13.45	2.51	179.33	
M-07-43-2		2	6-Mar-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	450	88	261	5.06	13.95	2.11	117.33	
M-07-43-3		3	13-Mar-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	445	62	190	4.94	13.75	1.01	82.63	
M-07-43-4		4	20-Mar-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	455	51	156	4.91	11.65	1.01	65.13	
M-07-43-5		5	27-Mar-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	445	46	148	4.86	12.25	1.01	61.13	
M-07-43-6		6	3-Apr-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	460	46	144	4.82	10.05	1.01	58.73	
M-07-43-7		7	10-Apr-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	480	39	128	4.70	16.25	1.01	51.73	
M-07-43-8		8	17-Apr-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	465	45	142	4.62	12.95	1.01	57.93	
M-07-43-9		9	24-Apr-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	460	43	141	4.54	15.95	1.01	56.63	
M-07-43-10		10	1-May-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	475	44	145	4.48	15.95	1.01	58.93	
M-07-43-11		11	8-May-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	475	40	136	4.50	15.45	1.01	55.93	
M-07-43-12		12	15-May-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	41	136	4.44	13.35	1.01	53.63	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-07-33-53	0.01	0.160933	0.002353	0.000514	0.040662	0.002502	0.002502	0.050048	0.000250	8.223333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.147143	0.066432	0.000500	0.045632
M-07-33-54	0.01	0.149933	0.002553	0.000514	0.043662	0.002502	0.002502	0.050048	0.000250	9.183333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.467143	0.077132	0.000500	0.047132
M-07-33-55	0.01	0.143933	0.002553	0.000514	0.041762	0.002502	0.002502	0.050048	0.000250	8.823333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.197143	0.071232	0.000500	0.043532
M-07-33-56	0.01	0.138933	0.002253	0.000514	0.043362	0.002502	0.002502	0.050048	0.000250	8.413333	0.002502	0.000500	0.000508	0.046143	0.000250	0.005024	2.037143	0.067132	0.000500	0.043332
M-07-33-57	0.01	0.168933	0.002653	0.000514	0.054062	0.002502	0.002502	0.050048	0.000250	9.083333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.457143	0.078932	0.000500	0.049732
M-07-33-58	0.01	0.163933	0.002453	0.000514	0.046262	0.002502	0.002502	0.050048	0.000250	8.583333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.407143	0.072932	0.000500	0.048632
M-07-33-59	0.01	0.150933	0.002453	0.000514	0.048062	0.002502	0.002502	0.050048	0.000250	9.163333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.497143	0.075732	0.000500	0.046932
M-07-33-60	0.01	0.150933	0.002353	0.000514	0.056262	0.002502	0.002502	0.050048	0.000250	8.433333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.437143	0.079832	0.000500	0.046932
M-07-33-61	0.01	0.165933	0.002253	0.000514	0.049062	0.002502	0.002502	0.050048	0.000250	8.173333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.367143	0.072332	0.000500	0.045132
M-07-33-62	0.01	0.169933	0.002153	0.000514	0.056462	0.002502	0.002502	0.050048	0.000250	8.353333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.177143	0.070432	0.000500	0.048232
M-07-33-63	0.01	0.160933	0.002153	0.000514	0.056262	0.002502	0.002502	0.050048	0.000250	8.293333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.227143	0.074432	0.000500	0.043632
M-07-33-64	0.01	0.133933	0.001953	0.000514	0.048462	0.002502	0.002502	0.050048	0.000250	8.703333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.137143	0.070532	0.000500	0.039332
M-07-33-65	0.01	0.154933	0.002053	0.000514	0.063362	0.002502	0.002502	0.050048	0.000250	8.683333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.087143	0.067832	0.000500	0.045332
M-07-33-66	0.01	0.148933	0.001753	0.000514	0.044862	0.002502	0.002502	0.050048	0.000250	8.143333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	1.977143	0.057532	0.000500	0.039332
M-07-33-67	0.01	0.161933	0.001953	0.000514	0.056462	0.002502	0.002502	0.050048	0.000250	8.663333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.237143	0.068632	0.000500	0.045132
M-07-33-68	0.01	0.144933	0.001853	0.000514	0.048562	0.002502	0.002502	0.050048	0.000250	8.373333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.177143	0.063732	0.000500	0.039032
M-07-33-69	0.01	0.146933	0.002053	0.000514	0.053362	0.002502	0.002502	0.050048	0.000250	8.003333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.167143	0.066632	0.000500	0.045732
M-07-33-70	0.01	0.147933	0.001753	0.000514	0.049262	0.002502	0.002502	0.050048	0.000250	8.283333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.087143	0.066032	0.000500	0.043732
M-07-33-71	0.01	0.156933	0.001753	0.000514	0.052662	0.002502	0.002502	0.050048	0.000250	8.343333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.277143	0.062532	0.000500	0.044932
M-07-33-72	0.01	0.147933	0.001753	0.000514	0.052562	0.002502	0.002502	0.050048	0.000250	8.453333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.217143	0.064332	0.000500	0.045432
M-07-33-73	0.01	0.129933	0.002253	0.000514	0.084262	0.002502	0.002502	0.050048	0.000250	11.033333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.897143	0.092332	0.000500	0.055032
M-07-33-74	0.01	0.143933	0.001753	0.000514	0.058362	0.002502	0.002502	0.050048	0.000250	8.723333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.197143	0.065432	0.000500	0.048532
M-07-33-75	0.01	0.159933	0.001853	0.000514	0.064462	0.002502	0.002502	0.050048	0.000250	8.163333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.217143	0.062832	0.000500	0.046432
M-07-33-76	0.01	0.133933	0.001853	0.000514	0.060562	0.002502	0.002502	0.050048	0.000250	9.033333	0.002502	0.000500	0.000508	0.056143	0.000250	0.005024	2.507143	0.067032	0.000500	0.055132
M-07-33-77	0.01	0.153933	0.001653	0.000514	0.050362	0.002502	0.002502	0.050048	0.000250	7.673333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.317143	0.057132	0.000500	0.046632
M-07-33-78	0.01	0.135933	0.001553	0.000514	0.053462	0.002502	0.002502	0.050048	0.000250	8.053333	0.002502	0.000500	0.000508	0.043143	0.000250	0.005024	2.177143	0.058432	0.000500	0.039832
M-07-33-79	0.01	0.141933	0.001553	0.000514	0.055862	0.002502	0.002502	0.050048	0.000250	7.733333	0.002502	0.000500	0.000508	0.034143	0.000250	0.005024	2.297143	0.060332	0.000500	0.039132
M-07-33-80	0.01	0.120933	0.001553	0.000514	0.062362	0.002502	0.002502	0.050048	0.000250	8.213333	0.002502	0.000500	0.000508	0.015143	0.000250	0.005024	2.127143	0.064932	0.000500	0.038632
M-07-33-81	0.01	0.141933	0.001413	0.000264	0.060762	0.000252	0.000252	0.005048	0.000044	7.833333	0.000252	0.000050	0.000258	0.015143	0.000054	0.002524	2.427143	0.062632	0.000005	0.037132
M-07-33-82	0.01	0.127933	0.001423	0.000264	0.063962	0.000252	0.000252	0.005048	0.000014	8.173333	0.000252	0.000050	0.000258	0.015143	0.000057	0.002524	2.377143	0.066532	0.000005	0.042332
M-07-33-83	0.01	0.141933	0.001673	0.000304	0.065962	0.000252	0.000252	0.005048	0.000005	8.163333	0.000252	0.000050	0.000258	0.015143	0.000025	0.002524	2.557143	0.064232	0.000005	0.043732
M-07-33-84	0.01	0.146933	0.001623	0.000264	0.080462	0.000252	0.000252	0.005048	0.000012	8.293333	0.000252	0.000050	0.000258	0.015143	0.000072	0.002524	2.607143	0.073332	0.000005	0.042832
M-07-33-85	0.01	0.122933	0.001563	0.000224	0.069462	0.000252	0.000252	0.005048	0.000013	8.173333	0.000252	0.000050	0.000258	0.015143	0.000025	0.002524	2.757143	0.081132	0.000005	0.041432
M-07-33-86	0.01	0.109933	0.001423	0.000244	0.106962	0.000252	0.000252	0.005048	0.000016	8.293333	0.000252	0.000050	0.000258	0.015143	0.000067	0.002524	2.687143	0.068432	0.000005	0.040332
M-07-33-87	0.01	0.123933	0.001483	0.000254	0.065062	0.000252	0.000252	0.005048	0.000011	8.073333	0.000252	0.000050	0.000258	0.015143	0.000025	0.002524	2.407143	0.068132	0.000005	0.035532
M-07-33-88	0.01	0.116933	0.001763	0.000234	0.079462	0.000252	0.000252	0.005048	0.000005	9.283333	0.000252	0.000050	0.000258	0.015143	0.000025	0.002524	2.707143	0.085032	0.000005	0.036432
M-07-33-89	0.01	0.111933	0.001393	0.000224	0.068862	0.000252	0.000252	0.005048	0.000005	6.873333	0.000252	0.000050	0.000258	0.015143	0.000025	0.002524	2.397143	0.068532	0.000005	0.035932
M-07-33-90	0.01	0.145933	0.001083	0.000234	0.052462	0.000252	0.000252	0.005048	0.000005	6.903333	0.000252	0.000050	0.000258	0.015143	0.000096	0.002524	2.127143	0.052632	0.000005	0.034232
M-07-33-91	0.01	0.137933	0.001543	0.000214	0.080062	0.000252	0.000252	0.005048	0.000005	7.743333	0.000252	0.000050	0.000258	0.015143	0.000113	0.002524	2.147143	0.071432	0.000005	0.032132
M-07-33-92	0.01	0.093633	0.001523	0.000224	0.071262	0.000252	0.000252	0.005048	0.000005	8.223333	0.000252	0.000050	0.000258	0.015143	0.000025	0.002524	2.337143	0.069132	0.000005	0.037932
M-07-33-93	0.01	0.113933	0.001473	0.000124	0.069062	0.000252	0.000252	0.005048	0.000014	7.753333	0.000252	0.000050	0.000258	0.015143	0.000025	0.002524	2.257143	0.060932	0.000005	0.034832
M-07-33-94	0.01	0.106933	0.001623	0.000264	0.073062	0.000252	0.000252	0.005048	0.000013	8.483333	0.000252	0.000050	0.000258	0.015143	0.000025	0.002524	2.537143	0.070732	0.000005	0.035832
M-07-33-95	0.01	0.120933	0.001613	0.000224	0.077962	0.000252	0.000252	0.005048	0.000005	8.433333	0.000252	0.000050	0.000258	0.049143	0.000025	0.002524	2.417143	0.067932	0.000005	0.034532
M-07-33-96	0.01	0.146933	0.001463	0.000214	0.079962	0.000252	0.000252	0.005048	0.000005	8.043333	0.000252	0.000050	0.000528	0.015143	0.000070	0.002524	2.267143	0.067232	0.000005	0.035232
M-07-33-97	0.01	0.150933	0.001483	0.000214	0.071262	0.000252	0.000252	0.005048	0.000005	8.003333	0.000252	0.000050	0.000258	0.015143	0.000080	0.002524	2.377143	0.064132	0.000005	0.034132
M-07-33-98	0.01	0.151933	0.001403	0.000204	0.070962	0.000252	0.000252	0.005048	0.000005	7.883333	0.000252	0.000050	0.000258	0.015143	0.000083	0.002524	2.387143	0.064132	0.000005	0.033532
M-07-33-99	0.01	0.123933	0.001463	0.000224	0.060862	0.000252	0.000252	0.005048	0.000005	8.003333	0.000252	0.000050	0.000258	0.015143	0.000025	0.002524	2.377143	0.063332	0.000005	0.034032
M-07-33-100	0.01	0.112933	0.001473	0.000204	0.063362	0.000252	0.000252	0.005048	0.000005	7.833333	0.000252	0.000050	0.000258	0.015143	0.000025	0.002524	2.297143	0.060032	0.000005	0.033932
M-07-33-101	0.01	0.149933	0.001523	0.000244	0.075962	0.000252	0.000252	0.005048	0.000005	8.273333	0.000252	0.000050	0.000258	0.044143	0.000063	0.002524	2.527143	0.070432	0.000005	0.035732
M-07-33-102	0.01	0.089833	0.001653	0.000174	0.076362	0.000252	0.000252	0.005048	0.000012	9.193333	0.000252	0.000050	0.000258	0.015143	0.000025	0.002524	2.537143	0.091332	0.000005	0.033632
M-07-33-103	0.01	0.146933	0.001573	0.000234	0.077962	0.000252	0.000252	0.005048	0.000010	9.103333	0.000252	0.000050	0.000258	0.015143	0.000060	0.002524	2.827143	0.072332	0.000005	0.037432
M-07-33-104	0.01	0.116933	0.001543	0.000204	0.081262	0.000252	0.000252	0.005048	0.000011	8.623333	0.000252	0.000050	0.000258	0.015143	0.000054	0.002524	2.387143	0.063132	0.000005	0.040832
	0.013038	0.131123	0.001519	0.000214	0.073592	0.000252	0.000252	0.005048	0.000007	8.339333	0.000252	0.000050	0.000285	0.021443	0.000051	0.002524	2.440143	0.068402	0.000005	0.035302
M-07-43 LP Hazelton																				
M-07-43-0	1.40	1.092076	0.000500	0.000500	0.047763	0.002502	0.002502	0.050048	0.002812	81.213333	0.002502	0.01501	0.730312	0.305571	0.016812	0.031126	13.128952	1.982114	0.000500	0.000250
M-07-43-1	2.29	1.362076	0.000500	0.000500	0.029763	0.002502	0.002502	0.050048	0.001532	47.113333	0.002502	0.01041	0.332312	0.084571	0.008922	0.023126	7.988952	1.292114	0.000500	0.000250
M-07-43-2	2.26	1.492076	0.000500	0.000500	0.026663	0.002502	0.002502	0.050048	0.001112	26.813333	0.002502	0.00891	0.286312	0.064571	0.007302	0.022126	5.218952	0.858114	0.000500	0.000250
M-07-43-3	1.94	1.362076	0.000500	0.000500	0.033763	0.002502	0.002502	0.050048	0.000782	18.313333	0.002502	0.00721	0.318312	0.072571	0.006682	0.020126	3.998952	0.654114	0.000500	0.000250
M-07-43-4	1.64	1.132076	0.000500	0.000500	0.026663	0.002502	0.002502	0.050048	0.000632	14.913333	0.002502	0.00621	0.308312	0.094571	0.005532	0.018126	3.228952	0.501114	0.000500	0.000250
M-07-43-5	1.56	0.985076	0.000500	0.000500	0.030963	0.002502	0.002502	0.050048	0.000622	13.913333	0.002502	0.00641	0.348312	0.112571	0.006282	0.016126	2.698952	0.442114	0.000500	0.000250
M-07-43-6	1.52	1.322076	0.000500	0.000500	0.028363	0.005002	0.002502	0.050048	0.000632	13.113333	0.002502	0.00761	0.468312	0.161571	0.006882	0.014126	3.218952	0.558114	0.000500	0.000250
M-07-43-7	1.40	1.092076	0.000500	0.000500	0.028063	0.002502	0.002502	0.050048	0.000532	11.113333	0.002502	0.00651	0.453312	0.161571	0.006092	0.013126	2.648952	0.429114	0.000500	0.000250
M-07-43-8	1.48	1.212076	0.000500	0.000500	0.037663	0.005202	0.002502	0.050048	0.000622	12.813333	0.002502	0.00731	0.621312	0.234571	0.008292	0.011126	3.108952	0.484114	0.000500	0.000250
M-07-43-9	1.49	1.292076	0.000500	0.000500	0.036963	0.005402	0.002502	0.050048	0.000622	12.113333	0.002502	0.00761	0.722312	0.265571	0.008872	0.010126	3.038952	0.530114	0.000500	0.000250
M-07-43-10	1.49	1.092076	0.000500	0.000500	0.024563	0.005602	0.002502	0.050048	0.000682	12.813333	0.002502	0.00831	0.732312	0.375571	0.009942	0.011126	2.868952	0.476114	0.000500	0.000250
M-07-43-11	1.40	0.904076	0.000500	0.000500	0.022663	0.005102	0.002502	0.050048	0.000632	12.013333	0.002502	0.00801	0.693312	0.385571	0.010002	0.005126	2.518952	0.391114	0.000500	0.000250
M-07-43-12	1.30	1.142076	0.000500	0.000500	0.025063	0.005202	0.002502	0.050048	0.000632	11.513333	0.002502	0.00791	1.030312	0.443571	0.010212	0.005126	2.988952	0.511114	0.000500	0.000250

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-07-33-53	0.002502	0.151429	0.869048	0.005029	1.007143	0.000052	0.294381	0.0796	0	0.000500	0.000500	0.005048	0.001087	0.005030	0.002514	
M-07-33-54	0.002502	0.151429	0.949048	0.005029	1.011143	0.000052	0.294381	0.0848	0	0.000500	0.000500	0.005048	0.001277	0.005030	0.002514	
M-07-33-55	0.002502	0.151429	0.869048	0.005029	0.957143	0.000052	0.294381	0.0766	0	0.000500	0.000500	0.005048	0.001147	0.005030	0.002514	
M-07-33-56	0.002502	0.151429	0.749048	0.005029	0.958143	0.000052	0.294381	0.0776	0	0.000500	0.000500	0.005048	0.001017	0.005030	0.002514	
M-07-33-57	0.002502	0.151429	0.909048	0.005029	1.091143	0.000052	0.294381	0.0848	0	0.000500	0.000500	0.005048	0.001227	0.005030	0.002514	
M-07-33-58	0.002502	0.151429	0.829048	0.005029	0.937143	0.000052	0.294381	0.0836	0	0.000500	0.000500	0.005048	0.001107	0.005030	0.002514	
M-07-33-59	0.002502	0.151429	0.839048	0.005029	0.987143	0.000052	0.294381	0.0837	0	0.000500	0.000500	0.005048	0.001067	0.005030	0.002514	
M-07-33-60	0.002502	0.151429	0.849048	0.005029	1.091143	0.000052	0.294381	0.0871	0	0.000500	0.000500	0.005048	0.000987	0.005030	0.002514	
M-07-33-61	0.002502	0.151429	0.809048	0.005029	0.994143	0.000052	0.294381	0.0845	0	0.000500	0.000500	0.005048	0.000927	0.005030	0.002514	
M-07-33-62	0.002502	0.151429	0.809048	0.005029	1.020143	0.000052	0.294381	0.0837	0	0.000500	0.000500	0.005048	0.001007	0.005030	0.002514	
M-07-33-63	0.002502	0.151429	0.819048	0.005029	0.998143	0.000052	0.294381	0.0806	0	0.000500	0.000500	0.005048	0.000897	0.005030	0.002514	
M-07-33-64	0.002502	0.151429	0.739048	0.005029	0.966143	0.000052	0.294381	0.075	0	0.000500	0.000500	0.005048	0.000847	0.005030	0.002514	
M-07-33-65	0.002502	0.151429	0.699048	0.005029	1.015143	0.000052	0.294381	0.0777	0	0.000500	0.000500	0.005048	0.000987	0.005030	0.002514	
M-07-33-66	0.002502	0.151429	0.649048	0.005029	0.911143	0.000052	0.294381	0.0703	0	0.000500	0.000500	0.005048	0.000897	0.005030	0.011914	
M-07-33-67	0.002502	0.151429	0.759048	0.005029	0.955143	0.000052	0.294381	0.081	0	0.000500	0.000500	0.005048	0.000867	0.005030	0.002514	
M-07-33-68	0.002502	0.151429	0.699048	0.005029	1.000143	0.000052	0.294381	0.0699	0	0.000500	0.000500	0.005048	0.000787	0.005030	0.002514	
M-07-33-69	0.002502	0.151429	0.719048	0.005029	0.842143	0.000052	0.294381	0.0802	0	0.000500	0.000500	0.005048	0.000967	0.005030	0.002514	
M-07-33-70	0.002502	0.151429	0.689048	0.005029	0.915143	0.000052	0.294381	0.0737	0	0.000500	0.000500	0.005048	0.000887	0.005030	0.002514	
M-07-33-71	0.002502	0.151429	0.709048	0.005029	0.927143	0.000052	0.294381	0.0818	0	0.000500	0.000500	0.005048	0.000887	0.005030	0.002514	
M-07-33-72	0.002502	0.151429	0.689048	0.005029	0.853143	0.000052	0.294381	0.0772	0	0.000500	0.000500	0.005048	0.000907	0.005030	0.002514	
M-07-33-73	0.002502	0.151429	0.789048	0.005029	1.061143	0.000052	0.294381	0.108	0	0.000500	0.000500	0.005048	0.001247	0.005030	0.002514	
M-07-33-74	0.002502	0.151429	0.709048	0.005029	0.886143	0.000052	0.294381	0.0777	0	0.000500	0.000500	0.005048	0.000977	0.005030	0.002514	
M-07-33-75	0.002502	0.151429	0.699048	0.005029	0.870143	0.000052	0.294381	0.0807	0	0.000500	0.000500	0.005048	0.000857	0.005030	0.002514	
M-07-33-76	0.002502	0.151429	0.709048	0.005029	0.904143	0.000052	0.294381	0.0838	0	0.000500	0.000500	0.005048	0.001057	0.005030	0.002514	
M-07-33-77	0.002502	0.151429	0.669048	0.005029	0.781143	0.000052	0.294381	0.0764	0	0.000500	0.000500	0.005048	0.000937	0.005030	0.002514	
M-07-33-78	0.002502	0.151429	0.639048	0.005029	0.751143	0.000052	0.294381	0.0744	0	0.000500	0.000500	0.005048	0.000817	0.005030	0.002514	
M-07-33-79	0.002502	0.151429	0.659048	0.005029	0.769143	0.000052	0.294381	0.0741	0	0.000500	0.000500	0.005048	0.000777	0.005030	0.002514	
M-07-33-80	0.002502	0.151429	0.369048	0.005029	0.797143	0.000052	0.294381	0.0755	0	0.000500	0.000500	0.005048	0.000877	0.005030	0.002514	
M-07-33-81	0.000252	0.151429	0.628048	0.001099	0.771143	0.000007	0.185381	0.0781	2.66	0.000050	0.000050	0.005048	0.000770	0.000530	0.001214	
M-07-33-82	0.000252	0.151429	0.649048	0.001129	0.742143	0.000007	0.189381	0.0807	2.92	0.000050	0.000050	0.005048	0.000775	0.000530	0.000514	
M-07-33-83	0.000252	0.151429	0.652048	0.001339	0.789143	0.000007	0.205381	0.0804	3.1	0.000050	0.000050	0.005048	0.000862	0.000530	0.001514	
M-07-33-84	0.000252	0.151429	0.678048	0.001169	0.778143	0.000007	0.209381	0.088	3.21	0.000050	0.000050	0.005048	0.000927	0.000530	0.001514	
M-07-33-85	0.000252	0.151429	0.684048	0.001149	0.743143	0.000007	0.197381	0.0857	3.28	0.000050	0.000050	0.005048	0.000863	0.000530	0.001514	
M-07-33-86	0.000252	0.151429	0.677048	0.001069	0.705143	0.000007	0.231381	0.0825	3.05	0.000050	0.000050	0.005048	0.000973	0.000530	0.001514	
M-07-33-87	0.000252	0.151429	0.646048	0.001079	0.731143	0.000007	0.180381	0.0821	2.57	0.000050	0.000050	0.005048	0.000777	0.000530	0.001514	
M-07-33-88	0.000252	0.151429	0.683048	0.001089	0.864143	0.000007	0.195381	0.0932	2.84	0.000050	0.000050	0.005048	0.000965	0.000530	0.001514	
M-07-33-89	0.000252	0.151429	0.602048	0.000929	0.654143	0.000007	0.199381	0.0825	2.84	0.000050	0.000050	0.005048	0.000771	0.000530	0.001514	
M-07-33-90	0.000252	0.151429	0.558048	0.001019	0.640143	0.000007	0.157381	0.0674	2.57	0.000050	0.000050	0.005048	0.000695	0.000530	0.001514	
M-07-33-91	0.000252	0.151429	0.564048	0.000969	0.752143	0.000007	0.165381	0.0758	2.43	0.000050	0.000050	0.005048	0.000684	0.000530	0.001514	
M-07-33-92	0.000252	0.151429	0.571048	0.001009	0.668143	0.000007	0.165381	0.0848	2.64	0.000050	0.000050	0.005048	0.000792	0.000530	0.001514	
M-07-33-93	0.000252	0.151429	0.550048	0.000949	0.644143	0.000007	0.151381	0.074	2.58	0.000050	0.000350	0.005048	0.000662	0.000530	0.001514	
M-07-33-94	0.000252	0.151429	0.598048	0.001049	0.713143	0.000007	0.199381	0.0822	2.79	0.000050	0.000050	0.005048	0.000778	0.000530	0.001514	
M-07-33-95	0.000252	0.151429	0.610048	0.001029	0.752143	0.000007	0.179381	0.0833	2.79	0.000050	0.000050	0.005048	0.000763	0.000530	0.001514	
M-07-33-96	0.000252	0.151429	0.603048	0.000989	0.792143	0.000007	0.172381	0.0794	2.7	0.000050	0.000050	0.005048	0.000745	0.000530	0.001514	
M-07-33-97	0.000252	0.151429	0.604048	0.000979	0.709143	0.000007	0.178381	0.0798	2.6	0.000050	0.000050	0.005048	0.000703	0.000530	0.001514	
M-07-33-98	0.000252	0.151429	0.595048	0.000979	0.767143	0.000007	0.177381	0.079	2.7	0.000050	0.000050	0.005048	0.000690	0.000530	0.001514	
M-07-33-99	0.000252	0.151429	0.566048	0.000939	0.701143	0.000007	0.194381	0.0758	2.71	0.000050	0.000050	0.005048	0.000636	0.000530	0.001514	
M-07-33-100	0.000252	0.151429	0.546048	0.000919	0.664143	0.000007	0.159381	0.0765	2.7	0.000050	0.000050	0.005048	0.000651	0.000530	0.001514	
M-07-33-101	0.000252	0.151429	0.645048	0.000889	0.744143	0.000007	0.197381	0.0817	3	0.000050	0.000050	0.005048	0.000712	0.000530	0.001514	
M-07-33-102	0.000252	0.151429	0.602048	0.000879	0.788143	0.000007	0.180381	0.09	3	0.000050	0.000050	0.005048	0.000684	0.000530	0.001514	
M-07-33-103	0.000252	0.151429	0.725048	0.000969	0.825143	0.000007	0.250381	0.0867	3.08	0.000050	0.000050	0.005048	0.000878	0.000530	0.001514	
M-07-33-104	0.000252	0.151429	0.590048	0.000909	0.762143	0.000007	0.206381	0.0859	2.98	0.000050	0.000050	0.005048	0.000770	0.000530	0.001514	
	0.000252	0.151429	0.608648	0.000948	0.750543	0.000007	0.189581	0.08181	2.826	0.000050	0.000050	0.005048	0.000724	0.000530	0.001514	
M-07-43 LP Hazelton																
M-07-43-0	0.002502	0.151429	12.400952	0.036021	2.712190	0.000050	7.162190	2.200428	0	0.000500	0.000500	0.005048	0.007040	0.005005	0.184187	
M-07-43-1	0.002502	0.151429	8.740952	0.024021	5.122190	0.000050	3.682190	1.140428	0	0.000500	0.000500	0.005048	0.006480	0.005005	0.096987	
M-07-43-2	0.002502	0.151429	8.040952	0.018021	4.812190	0.000050	2.132190	0.765428	0	0.000500	0.000500	0.005048	0.006470	0.005005	0.074987	
M-07-43-3	0.002502	0.151429	6.640952	0.012021	4.162190	0.000050	1.182190	0.555428	0	0.000500	0.000500	0.005048	0.006330	0.005005	0.059587	
M-07-43-4	0.002502	0.151429	5.210952	0.005021	3.862190	0.000050	0.662190	0.415428	0	0.000500	0.000500	0.005048	0.006180	0.005005	0.050987	
M-07-43-5	0.002502	0.151429	5.050952	0.005021	3.432190	0.000050	0.272190	0.360428	0	0.000500	0.000500	0.005048	0.006730	0.005005	0.047187	
M-07-43-6	0.002502	0.151429	4.940952	0.005021	3.822190	0.000050	0.272190	0.408428	0	0.000500	0.000500	0.005048	0.007630	0.005005	0.051187	
M-07-43-7	0.002502	0.151429	4.210952	0.005021	3.742190	0.000050	0.272190	0.327428	0	0.000500	0.000500	0.005048	0.006890	0.005005	0.042987	
M-07-43-8	0.002502	0.151429	3.800952	0.005021	3.722190	0.000050	0.272190	0.420428	0	0.000500	0.000500	0.005048	0.008430	0.005005	0.051687	
M-07-43-9	0.002502	0.151429	3.690952	0.005021	3.492190	0.000050	0.272190	0.411428	0	0.000500	0.000500	0.005048	0.009080	0.005005	0.051987	
M-07-43-10	0.002502	0.151429	3.410952	0.005021	3.852190	0.000050	0.272190	0.382428	0	0.000500	0.000500	0.005048	0.011000	0.005005	0.056487	
M-07-43-11	0.002502	0.151429	3.040952	0.005021	3.412190	0.000050	0.272190	0.330428	0	0.000500	0.000500	0.005048	0.010100	0.005005	0.054687	
M-07-43-12	0.002502	0.151429	3.050952	0.005021	3.352190	0.000050	0.272190	0.397428	0	0.000500	0.000500	0.005048	0.010100	0.005005	0.054687	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-07-43-13		13	22-May-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	475	41	142	4.39	15.05	1.01	56.73	
M-07-43-14		14	29-May-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	41	139	4.38	13.45	1.01	54.33	
M-07-43-15		15	5-Jun-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	460	36	129	4.35	17.75	1.01	49.93	
M-07-43-16		16	12-Jun-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	460	35	129	4.34	13.85	1.01	48.83	
M-07-43-17		17	19-Jun-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	455	36	134	4.27	14.45	1.01	49.63	
M-07-43-18		18	26-Jun-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	460	33	130	4.26	14.65	1.01	47.63	
M-07-43-19		19	3-Jul-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	450	33	125	4.28	16.15	1.01	47.03	
M-07-43-20		20	10-Jul-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	455	30	119	4.28	15.65	1.01	44.33	
M-07-43-21		21	17-Jul-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	465	33	125	4.21	18.75	1.01	47.03	
M-07-43-22		22	24-Jul-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	475	32	126	4.22	17.75	1.01	47.03	
M-07-43-23		23	31-Jul-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	450	34	132	4.14	16.55	1.01	49.03	
M-07-43-24		24	7-Aug-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	465	35	135	4.18	17.35	1.01	49.03	
M-07-43-25		25	14-Aug-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	460	31	128	4.19	18.55	1.01	47.23	
M-07-43-26		26	21-Aug-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	475	31	133	4.15	16.85	1.01	47.83	
M-07-43-27		27	28-Aug-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	465	31	128	4.16	18.95	1.01	48.43	
M-07-43-28		28	4-Sep-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	465	30	125	4.13	19.45	1.01	45.03	
M-07-43-29		29	11-Sep-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	460	29	127	4.12	20.35	1.01	47.03	
M-07-43-30		30	18-Sep-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	490	29	128	4.11	18.65	1.01	45.83	
M-07-43-31		31	25-Sep-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	29	126	4.09	18.45	1.01	46.13	
M-07-43-32		32	2-Oct-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	500	29	129	4.02	20.25	1.01	47.53	
M-07-43-33		33	9-Oct-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	500	32	144	3.97	21.15	1.01	49.33	
M-07-43-34		34	16-Oct-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	475	34	169	3.88	27.55	1.01	55.93	
M-07-43-35		35	23-Oct-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	500	36	182	3.86	25.85	1.01	61.73	
M-07-43-36		36	30-Oct-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	45	226	3.71	35.75	1.01	74.93	
M-07-43-37		37	6-Nov-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	465	49	265	3.62	38.15	1.01	85.93	
M-07-43-38		38	13-Nov-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	455	52	287	3.54	47.15	1.01	95.33	
M-07-43-39		39	20-Nov-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	460	53	307	3.49	38.65	1.01	98.23	
M-07-43-40		40	27-Nov-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	59	369	3.38	64.45	1.01	117.33	
M-07-43-41		41	4-Dec-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	435	65	420	3.32	72.05	1.01	132.33	
M-07-43-42		42	11-Dec-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	460	68	443	3.28	75.95	1.01	137.33	
M-07-43-43		43	18-Dec-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	67	468	3.25	82.75	1.01	146.33	
M-07-43-44		44	24-Dec-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	450	66	505	3.21	94.65	1.01	152.33	
M-07-43-45		45	31-Dec-09	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	420	61	500	3.15	88.35	1.01	154.33	
M-07-43-46		46	8-Jan-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	400	74	586	3.14	120.05	1.01	183.33	
M-07-43-47		47	15-Jan-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	465	71	590	3.12	122.05	1.01	188.33	
M-07-43-48		48	22-Jan-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	435	62	585	3.12	124.05	1.01	179.33	
M-07-43-49		49	29-Jan-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	400	62	602	3.09	125.05	1.01	179.33	
M-07-43-50		50	5-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	445	54	556	3.10	124.05	1.01	161.33	
M-07-43-51		51	12-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	450	51	562	3.12	123.05	1.01	163.33	
M-07-43-52		52	19-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	460	49	541	3.11	118.05	1.01	161.33	
M-07-43-53		53	26-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	420	44	528	3.11	114.05	1.01	150.33	
M-07-43-54		54	5-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	440	45	523	3.13	122.05	1.01	147.33	
M-07-43-55		55	12-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	435	40	536	3.08	123.05	1.01	153.33	
M-07-43-56		56	19-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	440	37	535	3.11	126.05	1.01	148.33	
M-07-43-57		57	26-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	460	40	531	3.08	116.05	1.01	146.33	
M-07-43-58		58	2-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	465	39	516	3.13	109.05	1.01	135.33	
M-07-43-59		59	9-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	455	40	510	3.14	109.05	1.01	138.33	
M-07-43-60		60	16-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	460	38	485	3.15	103.05	1.01	122.33	
M-07-43-61		61	23-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	37	487	3.15	97.95	1.01	129.33	
M-07-43-62		62	30-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	445	34	488	3.17	102.05	1.01	121.33	
M-07-43-63		63	7-May-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	450	33	470	3.18	99.35	1.01	123.33	
M-07-43-64		64	14-May-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	34	448	3.19	93.35	1.01	118.33	
M-07-43-65		65	21-May-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	33	446	3.20	89.05	1.01	120.33	
M-07-43-66		66	28-May-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	30	430	3.20	90.05	1.01	113.33	
M-07-43-67		67	4-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	34	436	3.21	89.45	1.01	105.33	
M-07-43-68		68	11-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	475	31	423	3.17	84.75	1.01	108.33	
M-07-43-69		69	18-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	475	30	410	3.26	84.15	1.01	96.83	
M-07-43-70		70	25-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	475	29	399	3.24	89.45	1.01	106.33	
M-07-43-71		71	2-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	455	31	410	3.23	82.85	1.01	108.33	
M-07-43-72		72	9-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	485	31	409	3.24	80.45	1.01	108.33	
M-07-43-73		73	16-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	475	31	401	3.23	77.15	1.01	104.33	
M-07-43-74		74	23-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	30	402	3.23	83.65	1.01	105.33	
M-07-43-75		75	30-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	29	386	3.25	79.25	1.01	103.33	
M-07-43-76		76	6-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	33	412	3.24	81.65	1.01	122.33	
M-07-43-77		77	13-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	475	30	378	3.26	77.45	1.01	98.83	
M-07-43-78		78	20-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	27	360	3.29	71.35	1.01	94.93	
M-07-43-79		79	27-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	490	27	362	3.28	70.15	1.01	92.83	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-07-43-13	1.30	1.092076	0.000500	0.000500	0.026263	0.005302	0.002502	0.050048	0.000592	11.713333	0.002502	0.00821	1.040312	0.543571	0.011812	0.005126	2.808952	0.487114	0.000500	0.000250
M-07-43-14	1.25	1.182076	0.000500	0.000500	0.022863	0.005502	0.002502	0.050048	0.000662	11.313333	0.002502	0.00761	1.080312	0.543571	0.011612	0.005126	3.008952	0.447114	0.001700	0.000250
M-07-43-15	1.09	0.894076	0.000500	0.000500	0.026363	0.002502	0.002502	0.050048	0.000622	10.113333	0.002502	0.00811	1.000312	0.554571	0.011812	0.005126	2.528952	0.391114	0.000500	0.000250
M-07-43-16	0.96	0.951076	0.000500	0.000500	0.025063	0.005202	0.002502	0.050048	0.000592	9.953333	0.002502	0.00831	1.260312	0.603571	0.012012	0.005126	2.548952	0.427114	0.000500	0.000250
M-07-43-17	1.00	0.950076	0.000500	0.000500	0.032563	0.005502	0.002502	0.050048	0.000642	10.213333	0.002502	0.00871	1.150312	0.681571	0.013612	0.005126	2.578952	0.391114	0.000500	0.000250
M-07-43-18	0.95	0.876076	0.000500	0.000500	0.030963	0.005002	0.002502	0.050048	0.000622	9.553333	0.002502	0.00781	1.200312	0.716571	0.012812	0.005126	2.328952	0.355114	0.000500	0.000250
M-07-43-19	0.88	0.968076	0.000500	0.000500	0.031563	0.005102	0.002502	0.050048	0.000582	8.993333	0.002502	0.00821	1.490312	0.743571	0.013212	0.005126	2.618952	0.420114	0.000500	0.000250
M-07-43-20	0.87	0.754076	0.000500	0.000500	0.038563	0.002502	0.002502	0.050048	0.000582	8.473333	0.002502	0.00791	1.230312	0.720571	0.013512	0.005126	2.138952	0.300114	0.000500	0.000250
M-07-43-21	0.88	0.850076	0.000500	0.000500	0.038163	0.002502	0.002502	0.050048	0.000632	9.133333	0.002502	0.00831	1.620312	0.824571	0.014412	0.005126	2.518952	0.395114	0.000500	0.000250
M-07-43-22	0.86	0.835076	0.000500	0.000500	0.030863	0.002502	0.002502	0.050048	0.000552	8.873333	0.002502	0.00771	1.570312	0.831571	0.013012	0.005126	2.368952	0.377114	0.000500	0.000250
M-07-43-23	0.87	0.924076	0.000500	0.000500	0.038763	0.005202	0.002502	0.050048	0.000622	9.053333	0.002502	0.00921	1.970312	0.973571	0.015112	0.005126	2.798952	0.424114	0.000500	0.000250
M-07-43-24	0.81	0.930076	0.000500	0.000500	0.034563	0.005802	0.002502	0.050048	0.000642	9.243333	0.002502	0.00951	1.950312	1.011571	0.014812	0.005126	2.798952	0.381114	0.000500	0.000250
M-07-43-25	0.73	0.812076	0.000500	0.000500	0.036663	0.002502	0.002502	0.050048	0.000632	8.513333	0.002502	0.00871	1.940312	1.021571	0.015212	0.005126	2.468952	0.354114	0.000500	0.000250
M-07-43-26	0.67	0.763076	0.000500	0.000500	0.036963	0.002502	0.002502	0.050048	0.000622	8.393333	0.002502	0.00861	1.970312	1.091571	0.015112	0.005126	2.448952	0.344114	0.000500	0.000250
M-07-43-27	0.72	0.797076	0.000500	0.000500	0.037363	0.002502	0.002502	0.050048	0.000612	8.173333	0.002502	0.00831	2.050312	1.071571	0.015412	0.005126	2.508952	0.349114	0.000500	0.000250
M-07-43-28	0.69	0.744076	0.000500	0.000500	0.036663	0.002502	0.002502	0.050048	0.000612	8.033333	0.002502	0.00891	2.130312	1.101571	0.015312	0.005126	2.468952	0.376114	0.000500	0.000250
M-07-43-29	0.68	0.663076	0.000500	0.000500	0.034163	0.002502	0.002502	0.050048	0.000632	7.963333	0.002502	0.00851	1.900312	1.191571	0.016512	0.005126	2.198952	0.311114	0.000500	0.000250
M-07-43-30	0.61	0.684076	0.000500	0.000500	0.035963	0.002502	0.002502	0.050048	0.000612	7.883333	0.002502	0.00861	2.230312	1.171571	0.015812	0.005126	2.208952	0.303114	0.000500	0.000250
M-07-43-31	0.64	0.716076	0.000500	0.000500	0.033463	0.002502	0.002502	0.050048	0.000652	7.673333	0.002502	0.00881	2.460312	1.131571	0.016212	0.005126	2.328952	0.315114	0.000500	0.000250
M-07-43-32	0.63	0.722076	0.000500	0.000500	0.035563	0.005002	0.002502	0.050048	0.000712	7.643333	0.002502	0.00951	2.550312	0.995571	0.018012	0.005126	2.508952	0.334114	0.000500	0.000250
M-07-43-33	0.63	0.806076	0.000500	0.000500	0.035763	0.002502	0.002502	0.050048	0.000722	8.183333	0.002502	0.00961	3.030312	0.787571	0.020812	0.005126	2.698952	0.354114	0.000500	0.000250
M-07-43-34	0.70	0.849076	0.000500	0.000500	0.032863	0.005402	0.002502	0.050048	0.000852	8.783333	0.002502	0.01131	3.440312	0.703571	0.024812	0.005126	2.828952	0.375114	0.000500	0.000250
M-07-43-35	0.71	0.754076	0.000500	0.000500	0.048063	0.005102	0.002502	0.050048	0.000972	9.963333	0.002502	0.01321	4.280312	0.693571	0.034912	0.012126	2.638952	0.448114	0.000500	0.000250
M-07-43-36	0.83	1.392076	0.000500	0.000500	0.029263	0.007402	0.002502	0.050048	0.001132	11.213333	0.002502	0.01621	5.290312	0.520571	0.039412	0.011126	4.168952	0.536114	0.000500	0.000250
M-07-43-37	0.93	1.532076	0.000500	0.000500	0.028663	0.007002	0.002502	0.050048	0.001192	12.313333	0.002502	0.01831	5.780312	0.561571	0.046412	0.015126	4.328952	0.521114	0.000500	0.000250
M-07-43-38	0.89	1.802076	0.000500	0.000500	0.025363	0.007702	0.002502	0.050048	0.001262	13.013333	0.002502	0.02021	6.350312	0.739571	0.052612	0.016126	4.858952	0.586114	0.000500	0.000250
M-07-43-39	0.90	1.902076	0.000500	0.000500	0.028263	0.008602	0.002502	0.050048	0.001342	12.813333	0.002502	0.02121	6.770312	0.703571	0.064112	0.017126	5.188952	0.629114	0.000500	0.000250
M-07-43-40	1.01	2.302076	0.000500	0.000500	0.023863	0.009502	0.002502	0.050048	0.001552	14.713333	0.002502	0.02571	7.440312	1.061571	0.075612	0.022126	5.428952	0.658114	0.000500	0.000250
M-07-43-41	1.01	3.142076	0.000500	0.000500	0.023963	0.009902	0.002502	0.050048	0.001622	14.813333	0.002502	0.02821	8.890312	1.391571	0.085712	0.024126	6.808952	0.789114	0.000500	0.000250
M-07-43-42	1.07	3.732076	0.000500	0.000500	0.022463	0.010902	0.002502	0.050048	0.001812	14.613333	0.002502	0.03191	10.100312	1.661571	0.103012	0.028126	7.678952	0.877114	0.000500	0.000250
M-07-43-43	1.09	4.102076	0.000500	0.000500	0.023863	0.010802	0.002502	0.050048	0.001892	14.013333	0.002502	0.03251	10.000312	2.091571	0.114012	0.029126	7.878952	0.896114	0.000500	0.000250
M-07-43-44	1.04	4.772076	0.000500	0.000500	0.027763	0.010202	0.002502	0.050048	0.001892	12.613333	0.002502	0.03301	9.260312	2.331571	0.123012	0.030126	8.368952	0.851114	0.000500	0.000250
M-07-43-45	1.15	4.442076	0.000500	0.000500	0.024663	0.008602	0.002502	0.050048	0.001762	11.713333	0.002502	0.02851	8.170312	2.311571	0.110012	0.029126	7.838952	0.744114	0.000500	0.000250
M-07-43-46	1.30	6.572076	0.000500	0.000500	0.023763	0.010102	0.002502	0.050048	0.002282	13.413333	0.002502	0.03541	10.200312	2.911571	0.139012	0.035126	9.858952	0.941114	0.000500	0.000250
M-07-43-47	1.38	7.612076	0.000500	0.000500	0.022463	0.010202	0.002502	0.050048	0.002312	11.313333	0.002502	0.03701	10.200312	3.371571	0.144012	0.037126	10.328952	1.012114	0.000500	0.000250
M-07-43-48	1.22	7.332076	0.000500	0.000500	0.021463	0.008302	0.002502	0.050048	0.002172	9.653333	0.002502	0.03251	8.350312	3.361571	0.142012	0.033126	9.158952	0.891114	0.000500	0.000250
M-07-43-49	1.20	8.272076	0.000500	0.000500	0.022563	0.007702	0.002502	0.050048	0.002362	8.883333	0.002502	0.03281	8.010312	3.681571	0.131012	0.031126	9.628952	0.894114	0.000500	0.000250
M-07-43-50	0.96	7.592076	0.000500	0.000500	0.023763	0.006702	0.002502	0.050048	0.002232	7.303333	0.002502	0.02801	6.720312	3.371571	0.126012	0.029126	8.838952	0.747114	0.000500	0.000250
M-07-43-51	0.99	7.422076	0.000500	0.000500	0.023263	0.005902	0.002502	0.050048	0.002192	7.053333	0.002502	0.02691	6.150312	3.641571	0.128012	0.026126	8.178952	0.672114	0.000500	0.000250
M-07-43-52	1.04	7.572076	0.000500	0.000500	0.022263	0.002502	0.002502	0.050048	0.002112	6.403333	0.002502	0.02461	5.790312	3.361571	0.116012	0.025126	7.978952	0.638114	0.000500	0.000250
M-07-43-53	0.99	7.582076	0.000500	0.000500	0.024263	0.002502	0.002502	0.050048	0.002182	5.823333	0.002502	0.02381	5.370312	3.221571	0.110012	0.022126	7.168952	0.641114	0.000500	0.000250
M-07-43-54	0.92	8.022076	0.000500	0.001100	0.023863	0.002502	0.002502	0.050048	0.002192	5.583333	0.002502	0.02341	5.350312	2.931571	0.114012	0.023126	7.668952	0.612114	0.000500	0.000250
M-07-43-55	0.89	7.012076	0.000500	0.000500	0.022963	0.002502	0.002502	0.050048	0.002122	5.493333	0.002502	0.02131	4.430312	3.501571	0.105012	0.022126	6.348952	0.537114	0.000500	0.000250
M-07-43-56	0.86	7.152076	0.000500	0.000500	0.022563	0.002502	0.002502	0.050048	0.002122	5.283333	0.002502	0.01951	4.560312	3.391571	0.103012	0.022126	5.908952	0.536114	0.000500	0.000250
M-07-43-57	0.79	7.712076	0.000500	0.000500	0.024263	0.002502	0.002502	0.050048	0.002222	5.103333	0.002502	0.02061	4.410312	3.391571	0.104012	0.022126	6.628952	0.564114	0.000500	0.000250
M-07-43-58	0.72	7.842076	0.000500	0.000500	0.024763	0.002502	0.002502	0.050048	0.002282	4.933333	0.002502	0.02051	4.320312	3.291571	0.095912	0.020126	6.468952	0.543114	0.000500	0.000250
M-07-43-59	0.75	7.582076	0.000500	0.000500	0.024263	0.002502	0.002502	0.050048	0.002182	5.213333	0.002502	0.01881	4.070312	3.221571	0.095112	0.020126	6.508952	0.533114	0.000500	0.000250
M-07-43-60	0.74	7.652076	0.000500	0.000500	0.024963	0.002502	0.002502	0.050048	0.002252	4.823333	0.002502	0.01961	4.150312	2.971571	0.092812	0.017126	6.418952	0.553114	0.000500	0.000250
M-07-43-61	0.64	7.192076	0.000500	0.000500	0.025663	0.002502	0.002502	0.050048	0.002212	4.763333	0.002502	0.01881	4.000312	3.041571	0.088912	0.017126	6.068952	0.523114	0.000500	0.000250
M-07-43-62	0.72	6.592076	0.000500	0.000500	0.025063	0.002502	0.002502	0.050048	0.002162	4.663333	0.002502	0.01811	3.620312	3.001571	0.082612	0.017126	5.448952	0.495114	0.000500	0.000250
M-07-43-63	0.65	6.222076	0.000500	0.000500	0.025663	0.002502	0.002502	0.050048	0.002112	4.753333	0.002502	0.01771	3.510312	2.901571	0.079412	0.016126	5.238952	0.495114	0.000500	0.000250
M-07-43-64	0.64	5.512076	0.000500	0.000500	0.024963	0.002502	0.002502	0.050048	0.002052	4.943333	0.002502	0.01391	2.910312	2.671571	0.079912	0.017126	5.188952	0.432114	0.000500	0.000250
M-07-43-65	0.63	5.522076	0.000500	0.000500	0.026263	0.002502	0.002502	0.050048	0.002102	5.053333	0.002502	0.01491	3.290312	2.601571	0.081212	0.015126	4.908952	0.414114	0.000500	0.000250
M-07-43-66	0.62	5.142076	0.000500	0.000500	0.023763	0.002502	0.002502	0.050048	0.001822	4.633333	0.002502	0.01321	2.760312	2.401571	0.072612	0.016126	4.388952	0.379114	0.000500	0.000250
M-07-43-67	0.63	5.692076	0.000500	0.000500	0.027463	0.002502	0.002502	0.050048	0.002122	5.083333	0.002502	0.01591	3.070312	2.561571	0.072712	0.017126	5.148952	0.426114	0.000500	0.000250
M-07-43-68	0.51	5.032076	0.000500	0.000500	0.024063	0.002502	0.002502	0.050048	0.001822	4.783333	0.002502	0.01271	2.730312	2.541571	0.064412	0.016126	4.628952	0.368114	0.000500	0.000250
M-07-43-69	0.54	5.092076	0.000500	0.000500	0.027363	0.002502	0.002502	0.050048	0.002082	4.463333	0.002502	0.01381	2.790312	2.241571	0.065612	0.015126	4.498952	0.390114	0.000500	0.000250
M-07-43-70	0.62	5.062076	0.000500	0.000500	0.025863	0.002502	0.002502	0.050048	0.001932	4.633333	0.002502	0.01341	2.750312	2.141571	0.063212	0.015126	4.328952	0.379114	0.000500	0.000250
M-07-43-71	0.58	5.302076	0.000500	0.000500	0.027163	0.002502	0.002502	0.050048	0.002002	4.573333	0.002502	0.01381	2.940312	2.391571	0.065312	0.014126	4.728952	0.421114	0.000500	0.000250
M-07-43-72	0.64	5.332076	0.000500	0.000500	0.027263	0.002502	0.002502	0.050048	0.002022	4.863333	0.002502	0.01351	2.770312	2.331571	0.063312	0.013126	4.638952	0.408114	0.000500	0.000250
M-07-43-73	0.49	5.182076	0.000500	0.000500	0.029963	0.002502	0.002502	0.050048	0.002072	4.813333	0.002502	0.01401	2.840312	2.461571	0.065212	0.015126	4.608952	0.413114	0.000500	0.000250
M-07-43-74	0.59	4.752076	0.000500	0.000500	0.029663	0.002502	0.002502	0.050048	0.002002	4.773333	0.002502	0.01411	2.720312	2.271571	0.059612	0.016126	4.398952	0.372114	0.000500	0.000250
M-07-43-75	0.58	4.942076	0.000500	0.000500	0.030163	0.002502	0.002502	0.050048	0.002052	4.523333	0.002502	0.01311	2.850312	2.091571	0.056912	0.013126	4.388952	0.377114	0.000500	0.000250
M-07-43-76	0.70	5.402076	0.000500	0.000500	0.028063	0.002502	0.002502	0.050048	0.002182	4.903333	0.002502	0.01421	3.050312	2.381571	0.060012	0.016126	4.938952	0.423114	0.000500	0.000250
M-07-43-77	0.51	5.402076	0.000500	0.000500	0.027963	0.002502	0.002502	0.050048	0.001992	4.323333	0.002502	0.01351	2.890312	1.891571	0.054312	0.015126	4.708952	0.390114	0.000500	0.000250
M-07-43-78	0.50	4.912076	0.000500	0.000500	0.026263	0.002502	0.002502	0.050048	0.001712	4.183333	0.002502	0.01201	2.630312	1.741571	0.047112	0.014126	4.118952	0.344114	0.000500	0.000250
M-07-43-79	0.49	4.872076	0.000500	0.000500	0.028463	0.002502	0.002502	0.050048	0.001692	3.923333	0.002502	0.01261	2.810312	1.931571	0.046312	0.005126	4.288952	0.349114	0.000500	0.000250

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-07-43-13	0.002502	0.151429	2.610952	0.005021	3.382190	0.000050	0.272190	0.386428	0	0.000500	0.000500	0.005048	0.011100	0.005005	0.058187	
M-07-43-14	0.002502	0.151429	2.260952	0.005021	3.422190	0.000050	0.272190	0.392428	0	0.000500	0.000500	0.005048	0.010300	0.005005	0.058687	
M-07-43-15	0.002502	0.151429	2.490952	0.005021	2.782190	0.000050	0.272190	0.314428	0	0.000500	0.000500	0.005048	0.010100	0.005005	0.054987	
M-07-43-16	0.002502	0.151429	2.460952	0.005021	2.602190	0.000050	0.272190	0.325428	0	0.000500	0.000500	0.005048	0.010500	0.005005	0.055087	
M-07-43-17	0.002502	0.151429	2.230952	0.005021	2.922190	0.000050	0.272190	0.313428	0	0.000500	0.000500	0.005048	0.010800	0.005005	0.057987	
M-07-43-18	0.002502	0.151429	2.000952	0.005021	2.592190	0.000050	0.272190	0.282428	0	0.000500	0.000500	0.005048	0.010300	0.005005	0.053987	
M-07-43-19	0.002502	0.151429	2.020952	0.005021	2.632190	0.000050	0.272190	0.312428	0	0.000500	0.000500	0.005048	0.009840	0.005005	0.052687	
M-07-43-20	0.002502	0.151429	1.920952	0.005021	2.792190	0.000050	0.272190	0.249428	0	0.000500	0.000500	0.005048	0.009230	0.005005	0.051287	
M-07-43-21	0.002502	0.151429	1.830952	0.005021	2.862190	0.000050	0.272190	0.303428	0	0.000500	0.000500	0.005048	0.009880	0.005005	0.056687	
M-07-43-22	0.002502	0.151429	1.580952	0.005021	2.822190	0.000050	0.272190	0.277428	0	0.000500	0.000500	0.005048	0.008430	0.005005	0.056387	
M-07-43-23	0.002502	0.151429	1.850952	0.005021	2.872190	0.000050	0.272190	0.318428	0	0.000500	0.000500	0.005048	0.009370	0.005005	0.057987	
M-07-43-24	0.002502	0.151429	1.760952	0.005021	2.842190	0.000050	0.272190	0.278428	0	0.000500	0.000500	0.005048	0.009460	0.005005	0.062487	
M-07-43-25	0.002502	0.151429	1.590952	0.005021	2.732190	0.000050	0.272190	0.279428	0	0.000500	0.000500	0.005048	0.009080	0.005005	0.057387	
M-07-43-26	0.002502	0.151429	1.520952	0.005021	2.902190	0.000050	0.272190	0.263428	0	0.000500	0.000500	0.005048	0.008810	0.005005	0.058687	
M-07-43-27	0.002502	0.151429	1.470952	0.005021	2.762190	0.000050	0.272190	0.266428	0	0.000500	0.000500	0.005048	0.008160	0.005005	0.058587	
M-07-43-28	0.002502	0.151429	1.410952	0.005021	2.772190	0.000050	0.272190	0.280428	0	0.000500	0.000500	0.005048	0.007950	0.005005	0.057287	
M-07-43-29	0.002502	0.151429	1.370952	0.005021	2.872190	0.000050	0.272190	0.234428	0	0.000500	0.000500	0.005048	0.008380	0.005005	0.057287	
M-07-43-30	0.002502	0.151429	1.230952	0.005021	2.792190	0.000050	0.272190	0.229428	0	0.000500	0.000500	0.005048	0.007910	0.005005	0.059687	
M-07-43-31	0.002502	0.151429	1.250952	0.005021	2.722190	0.000050	0.272190	0.243428	0	0.000500	0.000500	0.005048	0.007720	0.005005	0.063387	
M-07-43-32	0.002502	0.151429	1.270952	0.005021	2.902190	0.000050	0.272190	0.241428	0	0.000500	0.000500	0.005048	0.008220	0.005005	0.063887	
M-07-43-33	0.002502	0.151429	1.230952	0.005021	3.152190	0.000050	0.272190	0.260428	0	0.000500	0.000500	0.005048	0.008740	0.005005	0.070687	
M-07-43-34	0.002502	0.151429	1.280952	0.005021	3.212190	0.000050	0.272190	0.278428	0	0.000500	0.000500	0.005048	0.010200	0.005005	0.080987	
M-07-43-35	0.002502	0.151429	1.240952	0.005021	3.372190	0.000050	0.272190	0.331428	0	0.000500	0.000500	0.005048	0.012800	0.005005	0.087387	
M-07-43-36	0.002502	0.151429	1.360952	0.005021	3.522190	0.000050	0.272190	0.369428	0	0.000500	0.000500	0.005048	0.015100	0.005005	0.110187	
M-07-43-37	0.002502	0.151429	1.370952	0.005021	3.912190	0.000050	0.272190	0.364428	0	0.000500	0.000500	0.005048	0.016000	0.005005	0.124187	
M-07-43-38	0.002502	0.151429	1.450952	0.005021	4.392190	0.000050	0.272190	0.383428	0	0.000500	0.000500	0.005048	0.017200	0.005005	0.136187	
M-07-43-39	0.002502	0.151429	1.470952	0.005021	4.512190	0.000050	0.272190	0.397428	0	0.000500	0.000500	0.005048	0.018900	0.005005	0.142187	
M-07-43-40	0.002502	0.151429	1.460952	0.005021	5.272190	0.000050	0.272190	0.404428	0	0.000500	0.000500	0.005048	0.020600	0.005005	0.164187	
M-07-43-41	0.002502	0.151429	1.440952	0.005021	5.112190	0.000050	0.272190	0.447428	0	0.000500	0.000500	0.005048	0.020700	0.005005	0.185187	
M-07-43-42	0.002502	0.151429	1.530952	0.005021	6.502190	0.000120	0.272190	0.463428	0	0.000500	0.000500	0.005048	0.020800	0.005005	0.204187	
M-07-43-43	0.002502	0.151429	1.580952	0.005021	7.382190	0.000120	0.272190	0.422428	0	0.000500	0.000500	0.005048	0.019900	0.005005	0.206187	
M-07-43-44	0.002502	0.151429	1.630952	0.005021	7.572190	0.000050	0.272190	0.367428	0	0.000500	0.000500	0.005048	0.017700	0.005005	0.199187	
M-07-43-45	0.002502	0.151429	1.470952	0.005021	6.152190	0.000050	0.272190	0.304428	0	0.000500	0.000500	0.005048	0.014900	0.005005	0.193187	
M-07-43-46	0.005102	0.151429	1.880952	0.005021	4.662190	0.000140	0.272190	0.346428	0	0.000500	0.000500	0.005048	0.017600	0.005005	0.247187	
M-07-43-47	0.005302	0.151429	1.780952	0.005021	7.362190	0.000140	0.272190	0.274428	0	0.000500	0.000500	0.005048	0.016000	0.005005	0.236187	
M-07-43-48	0.002502	0.151429	1.540952	0.005021	7.692190	0.000140	0.272190	0.206428	0	0.000500	0.000500	0.005048	0.013800	0.005005	0.218187	
M-07-43-49	0.002502	0.151429	1.640952	0.005021	5.892190	0.000130	0.272190	0.188428	0	0.000500	0.000500	0.005048	0.012300	0.005005	0.215187	
M-07-43-50	0.002502	0.151429	1.510952	0.005021	7.452190	0.000120	0.272190	0.132428	0	0.000500	0.000500	0.005048	0.009860	0.005005	0.179187	
M-07-43-51	0.002502	0.151429	1.360952	0.005021	8.082190	0.000140	0.272190	0.104428	0	0.000500	0.000500	0.005048	0.009030	0.005005	0.178187	
M-07-43-52	0.002502	0.151429	1.270952	0.005021	7.882190	0.000100	0.272190	0.084828	0	0.000500	0.000500	0.005048	0.007210	0.005005	0.153187	
M-07-43-53	0.002502	0.151429	1.340952	0.005021	6.402190	0.000110	0.272190	0.071028	0	0.000500	0.000500	0.005048	0.006880	0.005005	0.143187	
M-07-43-54	0.002502	0.151429	1.310952	0.005021	6.952190	0.000120	0.272190	0.058928	0	0.000500	0.000500	0.005048	0.006310	0.005005	0.138187	
M-07-43-55	0.002502	0.151429	1.150952	0.005021	6.952190	0.000100	0.272190	0.047528	0	0.000500	0.000500	0.005048	0.005510	0.005005	0.133187	
M-07-43-56	0.002502	0.151429	0.980952	0.005021	7.282190	0.000100	0.272190	0.038528	0	0.000500	0.000500	0.005048	0.004990	0.005005	0.127187	
M-07-43-57	0.002502	0.151429	1.130952	0.005021	7.462190	0.000100	0.272190	0.035428	0	0.000500	0.000500	0.005048	0.004670	0.005005	0.123187	
M-07-43-58	0.002502	0.151429	1.060952	0.005021	7.202190	0.000110	0.272190	0.032128	0	0.000500	0.000500	0.005048	0.004150	0.005005	0.112187	
M-07-43-59	0.002502	0.151429	1.020952	0.005021	7.232190	0.000050	0.272190	0.027528	0	0.000500	0.000500	0.005048	0.003800	0.005005	0.114187	
M-07-43-60	0.002502	0.151429	1.040952	0.005021	6.882190	0.000050	0.272190	0.027528	0	0.000500	0.000500	0.005048	0.003540	0.005005	0.106187	
M-07-43-61	0.002502	0.151429	1.020952	0.005021	6.692190	0.000050	0.272190	0.025728	0	0.000500	0.000500	0.005048	0.003180	0.005005	0.102187	
M-07-43-62	0.002502	0.151429	0.970952	0.005021	7.132190	0.000050	0.272190	0.023828	0	0.000500	0.000500	0.005048	0.003100	0.005005	0.099087	
M-07-43-63	0.002502	0.151429	0.970952	0.005021	6.732190	0.000050	0.272190	0.022128	0	0.000500	0.000500	0.005048	0.002670	0.005005	0.096487	
M-07-43-64	0.002502	0.151429	0.870952	0.005021	6.872190	0.000050	0.272190	0.019428	0	0.000500	0.000500	0.005048	0.002480	0.005005	0.098687	
M-07-43-65	0.002502	0.151429	0.840952	0.005021	6.592190	0.000050	0.272190	0.021828	0	0.000500	0.000500	0.005048	0.002620	0.005005	0.091987	
M-07-43-66	0.002502	0.151429	0.720952	0.005021	6.072190	0.000050	0.272190	0.019328	0	0.000500	0.000500	0.005048	0.002070	0.005005	0.084787	
M-07-43-67	0.002502	0.151429	0.870952	0.005021	6.782190	0.000050	0.272190	0.022728	0	0.000500	0.000500	0.005048	0.002160	0.005005	0.089387	
M-07-43-68	0.002502	0.151429	0.770952	0.005021	6.302190	0.000050	0.272190	0.018628	0	0.000500	0.000500	0.005048	0.001800	0.005005	0.082387	
M-07-43-69	0.002502	0.151429	0.790952	0.005021	5.792190	0.000050	0.272190	0.021228	0	0.000500	0.000500	0.005048	0.002110	0.005005	0.082887	
M-07-43-70	0.002502	0.151429	0.760952	0.005021	6.062190	0.000050	0.272190	0.021528	0	0.000500	0.000500	0.005048	0.001660	0.005005	0.081187	
M-07-43-71	0.002502	0.151429	0.770952	0.005021	6.152190	0.000050	0.272190	0.022028	0	0.000500	0.000500	0.005048	0.001740	0.005005	0.081587	
M-07-43-72	0.002502	0.151429	0.740952	0.005021	5.902190	0.000050	0.272190	0.022428	0	0.000500	0.000500	0.005048	0.001710	0.005005	0.083087	
M-07-43-73	0.002502	0.151429	0.760952	0.005021	6.222190	0.000050	0.272190	0.022628	0	0.000500	0.000500	0.005048	0.001640	0.005005	0.082187	
M-07-43-74	0.002502	0.151429	0.750952	0.005021	6.012190	0.000050	0.272190	0.022628	0	0.000500	0.000500	0.005048	0.001620	0.005005	0.080587	
M-07-43-75	0.002502	0.151429	0.740952	0.005021	5.572190	0.000050	0.272190	0.022328	0	0.000500	0.000500	0.005048	0.001520	0.005005	0.078487	
M-07-43-76	0.002502	0.151429	0.790952	0.005021	5.942190	0.000050	0.272190	0.023628	0	0.000500	0.000500	0.005048	0.001620	0.005005	0.084487	
M-07-43-77	0.002502	0.151429	0.740952	0.005021	5.052190	0.000050	0.272190	0.022628	0	0.000500	0.000500	0.005048	0.001460	0.005005	0.080287	
M-07-43-78	0.002502	0.151429	0.680952	0.005021	4.482190	0.000050	0.272190	0.020728	0	0.000500	0.000500	0.005048	0.001160	0.005005	0.071087	
M-07-43-79	0.002502	0.151429	0.720952	0.005021	4.902190	0.000050	0.272190	0.021428	0	0.000500	0.000500	0.005048	0.001120	0.005005	0.066787	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-07-43-80		80	3-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	480	23	355	3.27	72.15	1.01	87.43	
M-07-43-81		81	10-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	480	26	354	3.29	65.95	1.01	87.53	
M-07-43-82		82	17-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	25	352	3.27	68.65	1.01	87.93	
M-07-43-83		83	24-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	455	26	344	3.28	70.45	1.01	87.23	
M-07-43-84		84	1-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	25	362	3.26	73.95	1.01	91.33	
M-07-43-85		85	8-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	475	25	353	3.28	68.05	1.01	89.43	
M-07-43-86		86	15-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	410	25	342	3.31	64.65	1.01	85.93	
M-07-43-87		87	22-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	450	24	342	3.29	77.15	1.01	86.73	
M-07-43-88		88	29-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	475	23	345	3.28	69.25	1.01	86.53	
M-07-43-89		89	5-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	475	22	347	3.25	73.35	1.01	86.53	
M-07-43-90		90	12-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	450	24	355	3.24	75.45	1.01	90.63	
M-07-43-91		91	19-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	475	20	373	3.24	76.15	1.01	86.93	
M-07-43-92		92	26-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	460	21	367	3.25	66.75	1.01	87.23	
M-07-43-93		93	3-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	480	21	370	3.26	65.85	1.01	86.23	
M-07-43-94		94	10-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	450	22	358	3.26	66.55	1.01	85.93	
M-07-43-95		95	17-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	465	21	354	3.26	65.75	1.01	83.03	
M-07-43-96		96	24-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	480	13	214	3.49	44.05	1.01	51.63	
M-07-43-97		97	31-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	460	22	353	3.27	69.85	1.01	85.33	
M-07-43-98		98	7-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	23	356	3.27	68.75	1.01	84.23	
M-07-43-99		99	14-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	465	23	374	3.26	76.05	1.01	91.03	
M-07-43-100		100	21-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	465	23	375	3.26	80.05	1.01	95.63	
M-07-43-101		101	28-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	22	414	3.20	84.95	1.01	103.33	
M-07-43-102		102	4-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	465	23	411	3.19	86.25	1.01	107.33	
M-07-43-103		103	11-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	450	23	427	3.18	95.15	1.01	104.33	
M-07-43-104		104	18-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VALT	IARG	0	QSP	0			Water	500	470	22	408	3.21	83.85	1.01	102.33	
																	21.6539381	368.6	3.259	75.465714	1.009524	90.824286	#N/A
M-07-44 UP Hazelton																							
M-07-44-0		0	20-Feb-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	750	640	419	785	7.5	3.00	20.30	372.00	
M-07-44-1		1	27-Feb-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	500	267	561	7.49	1.80	26.30	230.00	
M-07-44-2		2	6-Mar-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	450	206	429	7.61	3.00	21.60	185.00	
M-07-44-3		3	13-Mar-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	455	158	332	7.75	2.70	18.20	141.00	
M-07-44-4		4	20-Mar-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	136	284	7.76	1.70	16.80	116.00	
M-07-44-5		5	27-Mar-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	450	116	250	7.75	1.90	16.80	98.70	
M-07-44-6		6	3-Apr-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	460	101	220	7.81	1.80	24.10	77.60	
M-07-44-7		7	10-Apr-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	490	79	177	7.76	4.10	26.30	55.90	
M-07-44-8		8	17-Apr-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	455	85	184	7.82	2.00	25.00	61.50	
M-07-44-9		9	24-Apr-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	70	163	7.68	3.60	24.70	50.70	
M-07-44-10		10	1-May-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	495	84	174	7.9	2.70	29.70	54.00	
M-07-44-11		11	8-May-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	67	150	7.74	2.50	23.90	46.00	
M-07-44-12		12	15-May-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	465	66	147	7.85	1.50	22.20	45.50	
M-07-44-13		13	22-May-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	77	162	7.81	3.00	26.70	51.40	
M-07-44-14		14	29-May-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	455	70	154	7.82	1.50	27.20	45.50	
M-07-44-15		15	5-Jun-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	495	66	146	7.72	3.50	27.10	41.70	
M-07-44-16		16	12-Jun-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	445	64	144	7.82	1.60	24.20	42.80	
M-07-44-17		17	19-Jun-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	450	69	144	7.78	1.60	28.10	41.30	
M-07-44-18		18	26-Jun-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	500	63	138	7.82	1.60	29.90	36.10	
M-07-44-19		19	3-Jul-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	57	131	7.85	2.60	23.10	37.90	
M-07-44-20		20	10-Jul-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	61	136	7.83	2.00	26.00	38.50	
M-07-44-21		21	17-Jul-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	65	142	7.78	4.30	25.50	39.90	
M-07-44-22		22	24-Jul-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	61	135	7.79	4.90	25.30	37.80	
M-07-44-23		23	31-Jul-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	67	146	7.67	1.40	26.60	41.60	
M-07-44-24		24	7-Aug-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	470	66	142	7.64	1.60	25.20	39.20	
M-07-44-25		25	14-Aug-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	465	66	143	7.66	3.10	27.70	40.10	
M-07-44-26		26	21-Aug-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	63	137	7.65	1.10	27.20	37.30	
M-07-44-27		27	28-Aug-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	63	134	7.85	2.60	25.90	37.20	
M-07-44-28		28	4-Sep-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	63	132	7.82	2.30	24.60	37.20	
M-07-44-29		29	11-Sep-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	67	146	7.75	3.10	27.70	41.20	
M-07-44-30		30	18-Sep-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	470	64	139	7.73	2.00	27.00	37.30	
M-07-44-31		31	25-Sep-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	67	144	7.79	1.90	28.90	39.30	
M-07-44-32		32	2-Oct-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	490	68	138	7.81	2.60	31.00	41.20	
M-07-44-33		33	9-Oct-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	500	66	139	7.76	0.50	29.60	35.60	
M-07-44-34		34	16-Oct-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	495	64	139	7.76	4.10	28.90	37.70	
M-07-44-35		35	23-Oct-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	495	67	144	7.83	2.50	28.70	38.70	
M-07-44-36		36	30-Oct-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	485	65	141	7.76	4.00	27.10	39.80	
M-07-44-37		37	6-Nov-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	470	63	139	7.71	1.90	25.30	39.10	
M-07-44-38		38	13-Nov-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	460	69	150	7.77	3.50	28.70	42.40	
M-07-44-39		39	20-Nov-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	69	151	7.8	1.20	28.70	42.10	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-07-43-80	0.47	3.722076	0.000500	0.000500	0.028863	0.002502	0.002502	0.050048	0.001462	3.873333	0.002502	0.01081	2.360312	1.861571	0.043212	0.005126	3.258952	0.268114	0.000500	0.000250
M-07-43-81	0.46	4.652076	0.000050	0.000390	0.030263	0.000642	0.000252	0.005048	0.001622	3.923333	0.000252	0.01221	2.770312	1.901571	0.043812	0.008526	4.028952	0.329114	0.000005	0.000025
M-07-43-82	0.41	4.242076	0.000050	0.000380	0.031063	0.000582	0.000252	0.005048	0.001572	3.933333	0.000252	0.01181	2.600312	2.001571	0.041612	0.007426	3.788952	0.315114	0.000005	0.000059
M-07-43-83	0.39	4.872076	0.000050	0.000400	0.028063	0.000692	0.000252	0.005048	0.001602	4.003333	0.000252	0.01221	2.710312	1.881571	0.042712	0.009526	3.958952	0.329114	0.000005	0.000025
M-07-43-84	0.47	4.902076	0.000050	0.000380	0.029863	0.000682	0.000252	0.005048	0.001652	3.813333	0.000252	0.01241	2.810312	1.921571	0.044512	0.008526	3.868952	0.330114	0.000005	0.000025
M-07-43-85	0.46	5.082076	0.000050	0.000380	0.026563	0.000682	0.000252	0.005048	0.001542	3.603333	0.000252	0.01231	2.720312	1.721571	0.038012	0.009626	3.928952	0.320114	0.000005	0.000055
M-07-43-86	0.48	4.582076	0.000050	0.000430	0.028763	0.000612	0.000252	0.005048	0.001472	3.653333	0.000252	0.01101	2.570312	1.591571	0.036912	0.009026	3.758952	0.326114	0.000005	0.000025
M-07-43-87	0.42	5.002076	0.000050	0.000400	0.028763	0.000612	0.000252	0.005048	0.001512	3.613333	0.000252	0.01191	2.740312	1.721571	0.042812	0.007826	3.748952	0.307114	0.000005	0.000025
M-07-43-88	0.45	4.922076	0.000050	0.000400	0.028463	0.000562	0.000252	0.005048	0.001442	3.563333	0.000252	0.01191	2.630312	1.841571	0.042212	0.007826	3.388952	0.289114	0.000005	0.000050
M-07-43-89	0.41	4.892076	0.000050	0.000370	0.029963	0.000532	0.000252	0.005048	0.001422	3.183333	0.000252	0.01201	2.600312	1.881571	0.041312	0.007226	3.338952	0.285114	0.000005	0.000052
M-07-43-90	0.43	5.882076	0.000050	0.000420	0.026363	0.000602	0.000252	0.005048	0.001552	3.563333	0.000252	0.01301	2.730312	1.961571	0.044212	0.008526	3.698952	0.309114	0.000005	0.000025
M-07-43-91	0.37	4.702076	0.000050	0.000390	0.029063	0.000502	0.000252	0.005048	0.001352	3.223333	0.000252	0.01171	2.410312	2.021571	0.037812	0.006526	2.978952	0.267114	0.000005	0.000064
M-07-43-92	0.36	4.792076	0.000050	0.000410	0.029563	0.000252	0.000252	0.005048	0.001372	3.373333	0.000252	0.01141	2.370312	2.001571	0.037512	0.006926	3.118952	0.268114	0.000005	0.000025
M-07-43-93	0.37	4.622076	0.000050	0.000450	0.029363	0.000522	0.000252	0.005048	0.001362	3.423333	0.000252	0.01151	2.400312	2.101571	0.034212	0.007726	3.148952	0.273114	0.000005	0.000025
M-07-43-94	0.37	4.542076	0.000050	0.000510	0.028863	0.000512	0.000252	0.005048	0.001332	3.573333	0.000252	0.01131	2.300312	1.951571	0.034912	0.008326	3.148952	0.273114	0.000005	0.000025
M-07-43-95	0.39	4.542076	0.000050	0.000380	0.029363	0.000252	0.000252	0.005048	0.001362	3.533333	0.000252	0.01151	2.350312	1.821571	0.037512	0.006826	3.008952	0.264114	0.000005	0.000025
M-07-43-96	0.24	2.822076	0.000050	0.000240	0.017963	0.000252	0.000252	0.005048	0.000828	2.173333	0.000252	0.00714	1.410312	1.171571	0.022312	0.002626	1.888952	0.173114	0.000005	0.000025
M-07-43-97	0.37	4.682076	0.000050	0.000360	0.028463	0.000252	0.000252	0.005048	0.001332	3.553333	0.000252	0.01171	2.290312	1.981571	0.035212	0.006826	3.278952	0.276114	0.000005	0.000025
M-07-43-98	0.38	4.992076	0.000050	0.000400	0.027363	0.000252	0.000252	0.005048	0.001352	3.533333	0.000252	0.01141	2.250312	1.921571	0.033012	0.007826	3.428952	0.274114	0.000005	0.000025
M-07-43-99	0.37	4.832076	0.000050	0.000400	0.027263	0.000252	0.000252	0.005048	0.001412	3.713333	0.000252	0.01211	2.300312	1.991571	0.036212	0.006326	3.358952	0.282114	0.000005	0.000025
M-07-43-100	0.39	5.362076	0.000050	0.000420	0.025963	0.000252	0.000252	0.005048	0.001432	3.653333	0.000252	0.01301	2.470312	2.101571	0.038012	0.005326	3.328952	0.293114	0.000005	0.000025
M-07-43-101	0.35	5.722076	0.000050	0.000440	0.024863	0.000522	0.000252	0.005048	0.001412	3.413333	0.000252	0.01321	2.480312	2.101571	0.040412	0.007626	3.328952	0.284114	0.000005	0.000025
M-07-43-102	0.41	6.102076	0.000050	0.000490	0.026463	0.000252	0.000252	0.005048	0.001542	3.603333	0.000252	0.01431	2.550312	2.781571	0.038812	0.007326	3.468952	0.305114	0.000005	0.000025
M-07-43-103	0.30	6.232076	0.000050	0.000430	0.026063	0.000502	0.000252	0.005048	0.001522	3.463333	0.000252	0.01461	2.520312	2.731571	0.038312	0.007726	3.608952	0.313114	0.000005	0.000025
M-07-43-104	0.27	5.772076	0.000050	0.000420	0.025863	0.000252	0.000252	0.005048	0.001502	3.283333	0.000252	0.01351	2.410312	2.561571	0.039112	0.008326	3.428952	0.298114	0.000005	0.000055
	0.346514	5.106076	0.000050	0.000398	0.025963	0.000304	0.000252	0.005048	0.001369	3.392333	0.000252	0.012253	2.303312	2.116571	0.035892	0.006676	3.212952	0.276314	0.000005	0.000028
M-07-44 UP Hazelton																				
M-07-44-0	0.31	0.039	0.0602	0.0012	0.0397	0.0025	0.0025	0.05	0.00025	149	0.0025	0.0023	0.0022	0.015	0.00025	0.005	11.3	0.795	0.0005	0.00317
M-07-44-1	0.42	0.031	0.172	0.0019	0.0263	0.0025	0.0025	0.05	0.00025	96.8	0.0025	0.0014	0.0028	0.015	0.00025	0.005	6.2	0.586	0.0005	0.00379
M-07-44-2	0.31	0.039	0.176	0.0028	0.026	0.0025	0.0025	0.05	0.00025	75.6	0.0025	0.0005	0.0023	0.015	0.00025	0.005	4.21	0.476	0.0005	0.00312
M-07-44-3	0.21	0.066	0.135	0.0034	0.0314	0.0025	0.0025	0.05	0.00025	58.1	0.0025	0.0005	0.0005	0.015	0.00025	0.005	3.04	0.298	0.0005	0.00199
M-07-44-4	0.19	0.076	0.142	0.0046	0.0337	0.0025	0.0025	0.05	0.00025	50.5	0.0025	0.0005	0.0011	0.015	0.00025	0.005	2.45	0.229	0.0005	0.00238
M-07-44-5	0.16	0.075	0.148	0.0062	0.0314	0.0025	0.0025	0.05	0.00025	43.5	0.0025	0.0005	0.0011	0.015	0.00025	0.005	1.72	0.159	0.0005	0.00241
M-07-44-6	0.13	0.063	0.253	0.0083	0.0313	0.0025	0.0025	0.05	0.00025	37.6	0.0025	0.0005	0.0017	0.015	0.00025	0.005	1.8	0.292	0.0005	0.00302
M-07-44-7	0.12	0.054	0.23	0.0077	0.0394	0.0025	0.0025	0.05	0.00025	29.4	0.0025	0.0005	0.0016	0.015	0.00025	0.005	1.32	0.223	0.0005	0.00255
M-07-44-8	0.08	0.058	0.263	0.0094	0.032	0.0025	0.0025	0.05	0.00025	31.9	0.0025	0.0005	0.0018	0.015	0.00025	0.005	1.4	0.231	0.0005	0.00277
M-07-44-9	0.09	0.063	0.248	0.0089	0.0431	0.0025	0.0025	0.05	0.00025	26.2	0.0025	0.0005	0.0022	0.015	0.00025	0.005	1.18	0.245	0.0005	0.00268
M-07-44-10	0.06	0.049	0.241	0.0098	0.0322	0.0025	0.0025	0.05	0.00025	32	0.0025	0.0005	0.0017	0.015	0.00025	0.005	0.996	0.244	0.0005	0.00281
M-07-44-11	0.04	0.061	0.169	0.0092	0.0428	0.0025	0.0025	0.05	0.00025	25.5	0.0025	0.0005	0.0022	0.015	0.00025	0.005	0.885	0.185	0.0005	0.00249
M-07-44-12	0.05	0.071	0.205	0.0093	0.0377	0.0025	0.0025	0.05	0.00025	24.9	0.0025	0.0005	0.0015	0.015	0.00025	0.005	0.966	0.226	0.0005	0.00226
M-07-44-13	0.04	0.046	0.251	0.0091	0.0336	0.0025	0.0025	0.05	0.00025	29.2	0.0025	0.0005	0.0019	0.015	0.00025	0.005	0.99	0.277	0.0005	0.003
M-07-44-14	0.03	0.046	0.255	0.0094	0.0304	0.0025	0.0025	0.05	0.00025	26.6	0.0025	0.0005	0.0019	0.015	0.00025	0.005	0.932	0.237	0.0005	0.00301
M-07-44-15	0.03	0.05	0.214	0.0085	0.0347	0.0025	0.0025	0.05	0.00025	24.7	0.0025	0.0005	0.0023	0.015	0.00025	0.005	0.921	0.239	0.0005	0.00265
M-07-44-16	0.01	0.051	0.228	0.0088	0.0334	0.0025	0.0025	0.05	0.00025	24.4	0.0025	0.0005	0.0025	0.015	0.00025	0.005	0.759	0.23	0.0005	0.00236
M-07-44-17	0.01	0.038	0.225	0.0109	0.0308	0.0025	0.0025	0.05	0.00025	26.5	0.0025	0.0005	0.0031	0.015	0.00025	0.005	0.729	0.248	0.0005	0.00246
M-07-44-18	0.01	0.038	0.232	0.0101	0.044	0.0025	0.0025	0.05	0.00025	24.3	0.0025	0.0005	0.0022	0.015	0.00025	0.005	0.643	0.205	0.0005	0.00225
M-07-44-19	0.01	0.079	0.174	0.0085	0.0325	0.0025	0.0025	0.05	0.00025	21.9	0.0025	0.0005	0.002	0.015	0.00025	0.005	0.66	0.211	0.0005	0.00201
M-07-44-20	0.01	0.051	0.178	0.0092	0.038	0.0025	0.0025	0.05	0.00025	23.5	0.0025	0.0005	0.0015	0.015	0.00025	0.005	0.618	0.195	0.0005	0.00223
M-07-44-21	0.01	0.055	0.224	0.0092	0.0404	0.0025	0.0025	0.05	0.00025	24.8	0.0025	0.0005	0.0021	0.015	0.00025	0.005	0.67	0.244	0.0005	0.00211
M-07-44-22	0.01	0.041	0.198	0.007	0.0331	0.0025	0.0025	0.05	0.00025	23.4	0.0025	0.0005	0.0019	0.015	0.00025	0.005	0.604	0.249	0.0005	0.00201
M-07-44-23	0.01	0.041	0.23	0.009	0.0388	0.0025	0.0025	0.05	0.00025	25.6	0.0025	0.0005	0.0024	0.015	0.00025	0.005	0.644	0.254	0.0005	0.00226
M-07-44-24	0.01	0.041	0.199	0.0085	0.0314	0.0025	0.0025	0.05	0.00025	25.3	0.0025	0.0005	0.002	0.015	0.00025	0.005	0.607	0.229	0.0005	0.00215
M-07-44-25	0.01	0.034	0.218	0.0081	0.0384	0.0025	0.0025	0.05	0.00025	25.4	0.0025	0.0005	0.0021	0.015	0.00025	0.005	0.547	0.241	0.0005	0.00213
M-07-44-26	0.01	0.041	0.209	0.0079	0.0379	0.0025	0.0025	0.05	0.00025	24.2	0.0025	0.0005	0.0023	0.015	0.00025	0.005	0.567	0.255	0.0005	0.00218
M-07-44-27	0.01	0.041	0.197	0.0064	0.0359	0.0025	0.0025	0.05	0.00025	24.2	0.0025	0.0005	0.0021	0.015	0.00025	0.005	0.554	0.264	0.0005	0.00208
M-07-44-28	0.01	0.046	0.19	0.0066	0.0301	0.0025	0.0025	0.05	0.00025	24.4	0.0025	0.0005	0.0018	0.015	0.00025	0.005	0.542	0.262	0.0005	0.00196
M-07-44-29	0.01	0.036	0.199	0.0084	0.0353	0.0025	0.0025	0.05	0.00025	26.1	0.0025	0.0005	0.002	0.015	0.00025	0.005	0.485	0.257	0.0005	0.00211
M-07-44-30	0.01	0.04	0.189	0.0074	0.0359	0.0025	0.0025	0.05	0.00025	24.9	0.0025	0.0005	0.0019	0.015	0.00025	0.005	0.486	0.25	0.0005	0.00193
M-07-44-31	0.01	0.032	0.213	0.0078	0.0383	0.0025	0.0025	0.05	0.00025	25.9	0.0025	0.0005	0.0032	0.015	0.00025	0.005	0.501	0.268	0.0005	0.0022
M-07-44-32	0.01	0.034	0.244	0.0085	0.0473	0.0025	0.0025	0.05	0.00025	26.2	0.0025	0.0005	0.0029	0.015	0.00025	0.005	0.523	0.295	0.0005	0.00237
M-07-44-33	0.01	0.03	0.211	0.0073	0.0392	0.0025	0.0025	0.05	0.00025	25.6	0.0025	0.0005	0.0027	0.015	0.00025	0.005	0.489	0.325	0.0005	0.00203
M-07-44-34	0.02	0.033	0.192	0.0073	0.0363	0.0025	0.0025	0.05	0.00025	24.9	0.0025	0.0005	0.0026	0.015	0.00025	0.005	0.444	0.254	0.0005	0.00212
M-07-44-35	0.01	0.03	0.199	0.0069	0.036	0.0025	0.0025	0.05	0.00025	26	0.0025	0.0005	0.0028	0.015	0.00025	0.005	0.415	0.312	0.0005	0.00227
M-07-44-36	0.01	0.031	0.211	0.0071	0.0323	0.0025	0.0025	0.05	0.00025	25.3	0.0025	0.0005	0.0026	0.015	0.00025	0.005	0.441	0.294	0.0005	0.0022
M-07-44-37	0.01	0.034	0.193	0.0064	0.031	0.0025	0.0025	0.05	0.00025	24.3	0.0025	0.0005	0.002	0.015	0.00025	0.005	0.431	0.311	0.0005	0.00218
M-07-44-38	0.01	0.035	0.21	0.0073	0.0351	0.0025	0.0025	0.05	0.00025	26.8	0.0025	0.0005	0.0027	0.015	0.00025	0.005	0.452	0.299	0.0005	0.00239
M-07-44-39	0.01	0.031	0.217	0.0072	0.0371	0.0025	0.0025	0.05	0.00025	26.8	0.0025	0.0005	0.0026	0.015	0.00025	0.005	0.43	0.302	0.0005	0.00227

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-07-43-80	0.002502	0.151429	0.350952	0.005021	4.592190	0.000050	0.272190	0.019028	0	0.000500	0.000500	0.005048	0.001080	0.005005	0.062787	
M-07-43-81	0.001812	0.151429	0.648952	0.001901	4.642190	0.000030	0.098190	0.022528	29	0.000050	0.000050	0.005048	0.001000	0.000505	0.058287	
M-07-43-82	0.001732	0.151429	0.663952	0.001911	4.432190	0.000036	0.103190	0.022528	29.1	0.000050	0.000050	0.005048	0.000942	0.000505	0.053987	
M-07-43-83	0.001812	0.151429	0.668952	0.002101	4.252190	0.000037	0.110190	0.022628	30.2	0.000050	0.000050	0.005048	0.001020	0.000505	0.055287	
M-07-43-84	0.001802	0.151429	0.685952	0.002111	4.472190	0.000036	0.117190	0.023228	31.7	0.000050	0.000050	0.005048	0.001030	0.000505	0.057587	
M-07-43-85	0.001802	0.151429	0.675952	0.001951	4.232190	0.000029	0.095190	0.021028	32	0.000050	0.000050	0.005048	0.000900	0.000505	0.056787	
M-07-43-86	0.001712	0.151429	0.856952	0.002031	3.202190	0.000037	0.135190	0.022728	30.4	0.000050	0.000050	0.005048	0.000930	0.000505	0.055287	
M-07-43-87	0.001742	0.151429	0.787952	0.002051	4.072190	0.000040	0.128190	0.022728	29.3	0.000050	0.000050	0.005048	0.000893	0.000505	0.055587	
M-07-43-88	0.001612	0.151429	0.719952	0.002021	4.282190	0.000034	0.105190	0.022228	29	0.000050	0.000050	0.005048	0.000951	0.000505	0.053687	
M-07-43-89	0.001862	0.151429	0.679952	0.001901	4.222190	0.000034	0.117190	0.022028	31.4	0.000050	0.000050	0.005048	0.000927	0.000505	0.051287	
M-07-43-90	0.002012	0.151429	0.700952	0.002041	4.222190	0.000036	0.096190	0.022128	31.1	0.000050	0.000050	0.005048	0.000994	0.000505	0.054487	
M-07-43-91	0.001892	0.151429	0.610952	0.001901	4.102190	0.000023	0.082190	0.019128	29.3	0.000050	0.000050	0.005048	0.000883	0.000505	0.049187	
M-07-43-92	0.001672	0.151429	0.621952	0.001831	4.202190	0.000028	0.086190	0.021028	28.4	0.000050	0.000050	0.005048	0.000847	0.000505	0.047187	
M-07-43-93	0.001632	0.151429	0.625952	0.001801	4.072190	0.000027	0.084190	0.018828	28.8	0.000050	0.000050	0.005048	0.000808	0.000505	0.047987	
M-07-43-94	0.001712	0.151429	0.633952	0.001801	4.142190	0.000022	0.118190	0.021028	28.5	0.000050	0.000050	0.005048	0.000804	0.000505	0.047287	
M-07-43-95	0.001722	0.151429	0.647952	0.001811	4.072190	0.000023	0.105190	0.021428	27.9	0.000050	0.000050	0.005048	0.000753	0.000505	0.047787	
M-07-43-96	0.001002	0.151429	0.432952	0.001081	2.592190	0.000012	0.047190	0.012928	17.4	0.000050	0.000050	0.005048	0.000500	0.000505	0.030187	
M-07-43-97	0.001832	0.151429	0.636952	0.001781	4.182190	0.000021	0.101190	0.021728	28.9	0.000050	0.000050	0.005048	0.000813	0.000505	0.050487	
M-07-43-98	0.001722	0.151429	0.714952	0.001841	4.142190	0.000022	0.120190	0.020028	28.4	0.000050	0.000050	0.005048	0.000726	0.000505	0.047687	
M-07-43-99	0.001772	0.151429	0.647952	0.001831	4.222190	0.000021	0.131190	0.022228	29.9	0.000050	0.000050	0.005048	0.000791	0.000505	0.051787	
M-07-43-100	0.001962	0.151429	0.635952	0.001771	4.252190	0.000021	0.089190	0.022928	31.9	0.000050	0.000050	0.005048	0.000890	0.000505	0.051187	
M-07-43-101	0.001922	0.151429	0.674952	0.001871	4.492190	0.000019	0.104190	0.022128	37.5	0.000050	0.000050	0.005048	0.000930	0.000505	0.051487	
M-07-43-102	0.002032	0.151429	0.703952	0.001851	4.642190	0.000020	0.111190	0.021428	35.4	0.000050	0.000050	0.005048	0.000984	0.000505	0.056287	
M-07-43-103	0.002112	0.151429	0.801952	0.001851	4.842190	0.000015	0.151190	0.022028	35.5	0.000050	0.000050	0.005048	0.000988	0.000505	0.059987	
M-07-43-104	0.002112	0.151429	0.730952	0.001651	4.472190	0.000015	0.135190	0.019828	33.9	0.000050	0.000050	0.005048	0.000953	0.000505	0.054987	
	0.001819	0.151429	0.662852	0.001734	4.191190	0.000019	0.109590	0.020668	30.67	0.000050	0.000050	0.005048	0.000833	0.000505	0.050187	
M-07-44 UP Hazelton																
M-07-44-0	0.0025	0.15	17.5	0.042	0.937	0.00005	3.09	2.84	0	0.0005	0.0005	0.005	0.00216	0.005	0.006	
M-07-44-1	0.0025	0.15	10.3	0.018	1.51	0.00027	1.37	1.48	0	0.0005	0.0005	0.005	0.00303	0.005	0.0025	
M-07-44-2	0.0025	0.15	8.04	0.012	1.33	0.00066	0.74	1.08	0	0.0005	0.0005	0.005	0.00222	0.005	0.0025	
M-07-44-3	0.0025	0.15	5.64	0.005	1.09	0.00005	0.25	0.81	0	0.0005	0.0005	0.005	0.0014	0.005	0.0025	
M-07-44-4	0.0025	0.15	4.49	0.011	1.16	0.00005	0.25	0.622	0	0.0005	0.0005	0.005	0.00115	0.005	0.0025	
M-07-44-5	0.0025	0.15	3.91	0.012	1.2	0.00005	0.25	0.469	0	0.0005	0.0005	0.005	0.00084	0.005	0.0025	
M-07-44-6	0.0025	0.15	3.97	0.014	1.48	0.00005	0.25	0.503	0	0.0005	0.0005	0.005	0.00157	0.005	0.0025	
M-07-44-7	0.0025	0.15	3.04	0.011	1.4	0.00005	0.25	0.384	0	0.0005	0.0005	0.005	0.00169	0.005	0.0025	
M-07-44-8	0.0025	0.15	2.78	0.014	1.43	0.00005	0.25	0.407	0	0.0005	0.0005	0.005	0.00157	0.005	0.0025	
M-07-44-9	0.0025	0.15	2.52	0.013	1.29	0.00005	0.25	0.386	0	0.0005	0.0005	0.005	0.00163	0.005	0.0025	
M-07-44-10	0.0025	0.15	2.31	0.014	1.47	0.00005	0.25	0.326	0	0.0005	0.0005	0.005	0.00179	0.005	0.0025	
M-07-44-11	0.0025	0.15	1.91	0.014	1.19	0.00005	0.25	0.286	0	0.0005	0.0005	0.005	0.00154	0.005	0.0025	
M-07-44-12	0.0025	0.15	1.99	0.014	1.13	0.00005	0.25	0.325	0	0.0005	0.0005	0.005	0.00121	0.005	0.0025	
M-07-44-13	0.0025	0.15	1.9	0.015	1.27	0.00005	0.25	0.326	0	0.0005	0.0005	0.005	0.00153	0.005	0.0025	
M-07-44-14	0.0025	0.15	1.61	0.015	1.29	0.00005	0.25	0.308	0	0.0005	0.0005	0.005	0.00138	0.005	0.0025	
M-07-44-15	0.0025	0.15	1.84	0.014	1.15	0.00005	0.25	0.273	0	0.0005	0.0005	0.005	0.00157	0.005	0.0025	
M-07-44-16	0.0025	0.15	1.61	0.014	1.07	0.00005	0.25	0.262	0	0.0005	0.0005	0.005	0.00124	0.005	0.0025	
M-07-44-17	0.0025	0.15	1.61	0.016	1.16	0.00005	0.25	0.262	0	0.0005	0.0005	0.005	0.00143	0.005	0.0025	
M-07-44-18	0.0025	0.15	1.42	0.015	1.12	0.00005	0.25	0.255	0	0.0005	0.0005	0.005	0.00133	0.005	0.0025	
M-07-44-19	0.0025	0.15	1.37	0.013	0.877	0.00005	0.25	0.247	0	0.0005	0.0005	0.005	0.00097	0.005	0.0025	
M-07-44-20	0.0025	0.15	1.47	0.014	0.969	0.00005	0.25	0.226	0	0.0005	0.0005	0.005	0.00117	0.005	0.0025	
M-07-44-21	0.0025	0.15	1.36	0.014	0.981	0.00005	0.25	0.251	0	0.0005	0.0005	0.005	0.00106	0.005	0.0025	
M-07-44-22	0.0025	0.15	1.17	0.011	0.886	0.00005	0.25	0.234	0	0.0005	0.0005	0.005	0.001	0.005	0.0025	
M-07-44-23	0.0025	0.15	1.38	0.014	0.992	0.00005	0.25	0.25	0	0.0005	0.0005	0.005	0.00094	0.005	0.0025	
M-07-44-24	0.0025	0.15	1.28	0.013	0.901	0.00005	0.25	0.223	0	0.0005	0.0005	0.005	0.00091	0.005	0.0025	
M-07-44-25	0.0025	0.15	1.18	0.012	0.944	0.00005	0.25	0.229	0	0.0005	0.0005	0.005	0.00094	0.005	0.0025	
M-07-44-26	0.0025	0.15	1.23	0.012	0.896	0.00005	0.25	0.219	0	0.0005	0.0005	0.005	0.00092	0.005	0.0025	
M-07-44-27	0.0025	0.15	1.18	0.011	0.835	0.00005	0.25	0.232	0	0.0005	0.0005	0.005	0.00096	0.005	0.0025	
M-07-44-28	0.0025	0.15	1.07	0.005	0.795	0.00005	0.25	0.218	0	0.0005	0.0005	0.005	0.00083	0.005	0.0025	
M-07-44-29	0.0025	0.15	1.12	0.012	0.913	0.00005	0.25	0.212	0	0.0005	0.0005	0.005	0.00093	0.005	0.0025	
M-07-44-30	0.0025	0.15	1.13	0.011	0.874	0.00005	0.25	0.199	0	0.0005	0.0005	0.005	0.00069	0.005	0.0025	
M-07-44-31	0.0025	0.15	1.13	0.011	0.858	0.00005	0.25	0.216	0	0.0005	0.0005	0.005	0.00083	0.005	0.0025	
M-07-44-32	0.0025	0.15	1.18	0.011	0.9	0.00005	0.25	0.235	0	0.0005	0.0005	0.005	0.00097	0.005	0.0025	
M-07-44-33	0.0025	0.15	1.05	0.01	0.828	0.00005	0.25	0.208	0	0.0005	0.0005	0.005	0.00076	0.005	0.0053	
M-07-44-34	0.0025	0.15	0.98	0.005	0.814	0.00005	0.25	0.185	0	0.0005	0.0005	0.005	0.0007	0.005	0.0025	
M-07-44-35	0.0025	0.15	0.95	0.005	0.752	0.00005	0.25	0.208	0	0.0005	0.0005	0.005	0.00084	0.005	0.0058	
M-07-44-36	0.0025	0.15	0.99	0.005	0.756	0.00005	0.25	0.197	0	0.0005	0.0005	0.005	0.00066	0.005	0.0054	
M-07-44-37	0.0025	0.15	0.97	0.005	0.711	0.00005	0.25	0.194	0	0.0005	0.0005	0.005	0.00075	0.005	0.0025	
M-07-44-38	0.0025	0.15	1.03	0.01	0.778	0.00005	0.25	0.208	0	0.0005	0.0005	0.005	0.00072	0.005	0.0025	
M-07-44-39	0.0025	0.15	1	0.005	0.773	0.00005	0.25	0.21	0	0.0005	0.0005	0.005	0.00071	0.005	0.0025	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-07-44-40		40	27-Nov-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	66	141	7.8	3.60	24.90	40.30	
M-07-44-41		41	4-Dec-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	460	68	148	7.74	2.30	25.60	43.20	
M-07-44-42		42	11-Dec-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	68	151	7.83	2.30	25.10	44.00	
M-07-44-43		43	18-Dec-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	78	152	7.83	3.60	24.70	46.50	
M-07-44-44		44	24-Dec-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	470	79	161	7.79	4.40	27.60	48.30	
M-07-44-45		45	31-Dec-09	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	430	78	160	7.78	1.90	25.50	49.90	
M-07-44-46		46	8-Jan-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	400	92	186	7.76	5.70	27.30	57.60	
M-07-44-47		47	15-Jan-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	455	89	182	7.81	2.80	25.00	60.40	
M-07-44-48		48	22-Jan-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	455	79	165	7.74	4.20	22.50	54.10	
M-07-44-49		49	29-Jan-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	430	87	178	7.68	3.40	24.40	58.40	
M-07-44-50		50	5-Feb-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	470	82	166	7.81	5.10	24.10	52.70	
M-07-44-51		51	12-Feb-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	89	169	7.87	3.80	25.20	52.80	
M-07-44-52		52	19-Feb-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	83	166	7.79	2.70	24.70	54.70	
M-07-44-53		53	26-Feb-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	470	76	156	7.83	3.10	23.90	48.90	
M-07-44-54		54	5-Mar-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	81	160	7.73	5.00	24.10	49.30	
M-07-44-55		55	12-Mar-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	420	80	167	7.69	5.30	24.40	52.90	
M-07-44-56		56	19-Mar-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	455	81	175	7.68	3.30	23.90	56.00	
M-07-44-57		57	26-Mar-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	415	83	173	7.71	4.00	25.70	55.50	
M-07-44-58		58	2-Apr-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	76	153	7.72	2.60	22.40	48.60	
M-07-44-59		59	9-Apr-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	90	169	7.77	3.00	24.90	53.70	
M-07-44-60		60	16-Apr-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	83	163	7.72	1.90	24.20	49.90	
M-07-44-61		61	23-Apr-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	77	156	7.76	1.90	25.20	47.30	
M-07-44-62		62	30-Apr-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	83	164	7.75	3.90	27.50	50.00	
M-07-44-63		63	7-May-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	470	81	161	7.69	4.30	26.10	49.50	
M-07-44-64		64	14-May-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	102	163	7.7	1.60	28.20	48.80	
M-07-44-65		65	21-May-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	86	167	7.72	2.40	28.50	50.70	
M-07-44-66		66	28-May-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	79	159	7.7	3.60	26.70	48.10	
M-07-44-67		67	4-Jun-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	82	163	7.65	3.30	27.30	47.80	
M-07-44-68		68	11-Jun-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	80	156	7.66	3.00	27.10	47.90	
M-07-44-69		69	18-Jun-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	470	78	162	7.84	4.40	27.00	47.90	
M-07-44-70		70	25-Jun-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	500	74	150	7.82	3.00	24.10	47.10	
M-07-44-71		71	2-Jul-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	79	160	7.78	3.00	24.10	51.60	
M-07-44-72		72	9-Jul-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	490	82	168	7.7	4.40	27.50	53.10	
M-07-44-73		73	16-Jul-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	86	164	7.74	2.70	24.80	52.00	
M-07-44-74		74	23-Jul-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	81	162	7.65	5.30	24.00	52.20	
M-07-44-75		75	30-Jul-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	490	82	165	7.66	4.70	25.00	49.70	
M-07-44-76		76	6-Aug-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	84	167	7.65	3.60	23.70	60.50	
M-07-44-77		77	13-Aug-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	485	81	163	7.61	4.40	24.50	51.80	
M-07-44-78		78	20-Aug-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	77	154	7.63	2.70	25.10	48.30	
M-07-44-79		79	27-Aug-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	485	76	150	7.67	3.40	24.70	46.70	
M-07-44-80		80	3-Sep-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	485	79	143	7.7	5.50	26.10	46.40	
M-07-44-81		81	10-Sep-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	495	75	151	7.73	0.50	25.80	45.00	
M-07-44-82		82	17-Sep-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	79	153	7.71	3.50	26.80	47.20	
M-07-44-83		83	24-Sep-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	470	75	147	7.79	3.70	25.20	45.20	
M-07-44-84		84	1-Oct-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	69	156	7.71	4.40	26.00	47.90	
M-07-44-85		85	8-Oct-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	75	160	7.69	2.20	26.50	49.70	
M-07-44-86		86	15-Oct-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	64	147	7.74	2.10	25.80	43.50	
M-07-44-87		87	22-Oct-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	470	68	140	7.78	3.80	25.40	40.90	
M-07-44-88		88	29-Oct-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	485	77	143	8.01	2.70	25.90	41.70	
M-07-44-89		89	5-Nov-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	490	65	155	7.52	2.30	29.80	44.90	
M-07-44-90		90	12-Nov-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	470	66	138	7.59	2.30	25.10	40.90	
M-07-44-91		91	19-Nov-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	490	66	143	7.62	3.20	25.90	40.60	
M-07-44-92		92	26-Nov-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	68	148	7.71	2.90	28.00	41.70	
M-07-44-93		93	3-Dec-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	490	63	139	7.71	1.40	24.80	40.10	
M-07-44-94		94	10-Dec-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	470	76	148	7.68	1.00	25.10	43.00	
M-07-44-95		95	17-Dec-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	455	64	136	7.72	2.60	21.20	41.90	
M-07-44-96		96	24-Dec-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	430	74	152	7.83	1.20	26.00	46.30	
M-07-44-97		97	31-Dec-10	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	490	66	142	7.84	2.40	24.20	41.90	
M-07-44-98		98	7-Jan-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	75	151	7.8	2.00	26.50	43.60	
M-07-44-99		99	14-Jan-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	460	78	158	7.72	1.90	25.70	48.90	
M-07-44-100		100	21-Jan-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	460	78	152	7.75	2.20	25.40	48.00	
M-07-44-101		101	28-Jan-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	465	78	156	7.68	1.60	26.30	46.20	
M-07-44-102		102	4-Feb-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	485	84	160	7.86	1.50	30.50	47.30	
M-07-44-103		103	11-Feb-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	465	80	157	7.8	4.20	29.30	45.90	
M-07-44-104		104	18-Feb-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	76	149	7.87	1.70	26.80	43.90	
M-07-44-105		105	25-Feb-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	75	146	7.84	2.50	26.38	44.08	
M-07-44-106		106	4-Mar-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	75	146	7.88	3.30	25.95	44.25	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-07-44-40	0.01	0.037	0.18	0.0075	0.0323	0.0025	0.0025	0.05	0.00025	25.7	0.0025	0.0005	0.0027	0.015	0.00025	0.005	0.35	0.237	0.0005	0.00215
M-07-44-41	0.01	0.037	0.227	0.0079	0.0352	0.0025	0.0025	0.05	0.00025	26.5	0.0025	0.0005	0.0025	0.015	0.00025	0.005	0.444	0.297	0.0005	0.00232
M-07-44-42	0.01	0.033	0.195	0.0073	0.0306	0.0025	0.0025	0.05	0.00025	26.4	0.0025	0.0005	0.0029	0.015	0.00025	0.005	0.428	0.259	0.0005	0.00232
M-07-44-43	0.01	0.036	0.22	0.0078	0.0334	0.0025	0.0025	0.05	0.00025	30.3	0.0025	0.0005	0.0029	0.015	0.00025	0.005	0.437	0.289	0.0005	0.00251
M-07-44-44	0.01	0.035	0.244	0.0084	0.0345	0.0025	0.0025	0.05	0.00025	30.9	0.0025	0.0005	0.0035	0.015	0.00025	0.005	0.444	0.314	0.0005	0.0027
M-07-44-45	0.01	0.041	0.209	0.0098	0.043	0.0025	0.0025	0.05	0.00025	30.6	0.0025	0.0005	0.0029	0.015	0.00025	0.005	0.421	0.255	0.0005	0.00239
M-07-44-46	0.01	0.033	0.256	0.0089	0.0366	0.0025	0.0025	0.05	0.00025	35.9	0.0025	0.0005	0.0047	0.015	0.00025	0.005	0.479	0.312	0.0005	0.00323
M-07-44-47	0.01	0.034	0.221	0.0083	0.0312	0.0025	0.0025	0.05	0.00025	34.7	0.0025	0.0005	0.003	0.015	0.00025	0.005	0.459	0.263	0.0005	0.00258
M-07-44-48	0.01	0.036	0.181	0.0075	0.0279	0.0025	0.0025	0.05	0.00025	30.9	0.0025	0.0005	0.0025	0.015	0.00025	0.005	0.423	0.228	0.0005	0.00212
M-07-44-49	0.01	0.031	0.198	0.0078	0.0303	0.0025	0.0025	0.05	0.00025	34.1	0.0025	0.0005	0.0032	0.015	0.00025	0.005	0.448	0.259	0.0005	0.00239
M-07-44-50	0.01	0.033	0.197	0.0071	0.0297	0.0025	0.0025	0.05	0.00025	32.1	0.0025	0.0005	0.0027	0.015	0.00025	0.005	0.457	0.292	0.0005	0.0022
M-07-44-51	0.01	0.034	0.204	0.0071	0.0286	0.0025	0.0025	0.05	0.00025	34.7	0.0025	0.0005	0.0029	0.015	0.00025	0.005	0.483	0.311	0.0005	0.00229
M-07-44-52	0.01	0.029	0.189	0.0065	0.0254	0.0025	0.0025	0.05	0.00025	32.3	0.0025	0.0005	0.0033	0.015	0.00025	0.005	0.441	0.271	0.0005	0.00217
M-07-44-53	0.01	0.031	0.182	0.0062	0.0257	0.0025	0.0025	0.05	0.00025	29.7	0.0025	0.0005	0.0029	0.015	0.00025	0.005	0.416	0.291	0.0005	0.00206
M-07-44-54	0.01	0.03	0.172	0.0062	0.0257	0.0025	0.0025	0.05	0.00025	31.8	0.0025	0.0005	0.0028	0.015	0.00025	0.005	0.435	0.294	0.0005	0.00221
M-07-44-55	0.01	0.034	0.169	0.007	0.0335	0.0025	0.0025	0.05	0.00025	31.3	0.0025	0.0005	0.0028	0.015	0.00025	0.005	0.392	0.255	0.0005	0.0022
M-07-44-56	0.01	0.029	0.183	0.0063	0.0263	0.0025	0.0025	0.05	0.00025	31.8	0.0025	0.0005	0.0028	0.015	0.00025	0.005	0.406	0.286	0.0005	0.00227
M-07-44-57	0.01	0.032	0.195	0.0071	0.0362	0.0025	0.0025	0.05	0.00025	32.5	0.0025	0.0005	0.0029	0.015	0.00025	0.005	0.445	0.268	0.0005	0.00236
M-07-44-58	0.01	0.041	0.16	0.0056	0.0261	0.0025	0.0025	0.05	0.00025	29.9	0.0025	0.0005	0.0019	0.015	0.00025	0.005	0.412	0.267	0.0005	0.00198
M-07-44-59	0.01	0.03	0.206	0.0062	0.0308	0.0025	0.0025	0.05	0.00025	35.4	0.0025	0.0005	0.0024	0.015	0.00025	0.005	0.446	0.323	0.0005	0.00241
M-07-44-60	0.01	0.029	0.195	0.006	0.0265	0.0025	0.0025	0.05	0.00025	32.6	0.0025	0.0005	0.003	0.015	0.00025	0.005	0.447	0.304	0.0005	0.00222
M-07-44-61	0.01	0.032	0.179	0.0053	0.0328	0.0025	0.0025	0.05	0.00025	30.1	0.0025	0.0005	0.0027	0.015	0.00025	0.005	0.429	0.337	0.0005	0.00207
M-07-44-62	0.01	0.031	0.196	0.0057	0.0329	0.0025	0.0025	0.05	0.00025	32.6	0.0025	0.0005	0.0027	0.015	0.00025	0.005	0.426	0.355	0.0005	0.00223
M-07-44-63	0.01	0.03	0.171	0.0057	0.0275	0.0025	0.0025	0.05	0.00025	31.6	0.0025	0.0005	0.0025	0.015	0.00025	0.005	0.403	0.337	0.0005	0.00204
M-07-44-64	0.01	0.027	0.177	0.0056	0.0312	0.0025	0.0025	0.05	0.00025	40.3	0.0025	0.0005	0.0028	0.015	0.00025	0.005	0.421	0.375	0.0005	0.00206
M-07-44-65	0.01	0.024	0.186	0.0054	0.0305	0.0025	0.0025	0.05	0.00025	33.7	0.0025	0.0005	0.0031	0.015	0.00025	0.005	0.405	0.383	0.0005	0.00202
M-07-44-66	0.01	0.027	0.167	0.0051	0.0269	0.0025	0.0025	0.05	0.00025	31.1	0.0025	0.0005	0.003	0.015	0.00025	0.005	0.375	0.331	0.0005	0.00196
M-07-44-67	0.01	0.03	0.182	0.0054	0.0328	0.0025	0.0025	0.05	0.00025	32	0.0025	0.0005	0.0029	0.015	0.00025	0.005	0.401	0.348	0.0005	0.00212
M-07-44-68	0.01	0.026	0.166	0.0051	0.0248	0.0025	0.0025	0.05	0.00025	31.4	0.0025	0.0005	0.0028	0.015	0.00025	0.005	0.378	0.339	0.0005	0.00184
M-07-44-69	0.01	0.027	0.181	0.0054	0.0276	0.0025	0.0025	0.05	0.00025	30.7	0.0025	0.0005	0.0028	0.015	0.00025	0.005	0.376	0.344	0.0005	0.00203
M-07-44-70	0.01	0.031	0.151	0.0054	0.0295	0.0025	0.0025	0.05	0.00025	29	0.0025	0.0005	0.0024	0.015	0.00025	0.005	0.353	0.29	0.0005	0.00191
M-07-44-71	0.01	0.031	0.168	0.0059	0.0281	0.0025	0.0025	0.05	0.00025	31	0.0025	0.0005	0.0027	0.015	0.00025	0.005	0.383	0.322	0.0005	0.00216
M-07-44-72	0.01	0.027	0.161	0.0051	0.029	0.0025	0.0025	0.05	0.00025	32.2	0.0025	0.0005	0.0037	0.015	0.00025	0.005	0.408	0.393	0.0005	0.00208
M-07-44-73	0.01	0.03	0.174	0.0058	0.0285	0.0025	0.0025	0.05	0.00025	33.7	0.0025	0.0005	0.0026	0.015	0.00025	0.005	0.376	0.326	0.0005	0.00223
M-07-44-74	0.01	0.032	0.164	0.0061	0.0307	0.0025	0.0025	0.05	0.00025	31.8	0.0025	0.0005	0.0027	0.015	0.00025	0.005	0.369	0.298	0.0005	0.00223
M-07-44-75	0.01	0.028	0.179	0.0063	0.0342	0.0025	0.0025	0.05	0.00025	32.3	0.0025	0.0005	0.00258	0.015	0.00025	0.005	0.386	0.314	0.0005	0.00223
M-07-44-76	0.01	0.03	0.162	0.0059	0.0266	0.0025	0.0025	0.05	0.00025	32.8	0.0025	0.0005	0.0024	0.015	0.00025	0.005	0.378	0.323	0.0005	0.00223
M-07-44-77	0.01	0.025	0.159	0.0051	0.0248	0.0025	0.0025	0.05	0.00025	31.6	0.0025	0.0005	0.0028	0.015	0.00025	0.005	0.381	0.364	0.0005	0.00207
M-07-44-78	0.01	0.025	0.154	0.0054	0.0283	0.0025	0.0025	0.05	0.00025	30.2	0.0025	0.0005	0.0026	0.015	0.00025	0.005	0.337	0.301	0.0005	0.00184
M-07-44-79	0.01	0.027	0.163	0.0055	0.0277	0.0025	0.0025	0.05	0.00025	29.8	0.0025	0.0005	0.0033	0.015	0.00025	0.005	0.361	0.323	0.0005	0.0019
M-07-44-80	0.01	0.025	0.166	0.0058	0.0305	0.0025	0.0025	0.05	0.00025	30.9	0.0025	0.0005	0.003	0.015	0.00025	0.005	0.324	0.296	0.0005	0.00185
M-07-44-81	0.01	0.0266	0.168	0.00577	0.0315	0.00025	0.00025	0.005	0.000308	29.5	0.00025	0.00021	0.00287	0.015	0.000132	0.0025	0.372	0.339	0.000005	0.0019
M-07-44-82	0.01	0.0258	0.17	0.00587	0.034	0.00025	0.00025	0.005	0.000336	30.9	0.00025	0.00022	0.00266	0.015	0.000135	0.0025	0.366	0.364	0.000005	0.00192
M-07-44-83	0.01	0.0268	0.157	0.00541	0.0291	0.00025	0.00025	0.005	0.000338	29.3	0.00025	0.00021	0.00254	0.015	0.000128	0.0025	0.354	0.371	0.000005	0.0019
M-07-44-84	0.01	0.0263	0.168	0.0055	0.0319	0.00025	0.00025	0.005	0.000359	27	0.00025	0.00023	0.00276	0.015	0.000128	0.0025	0.359	0.39	0.000005	0.00203
M-07-44-85	0.01	0.0278	0.174	0.00556	0.0305	0.00025	0.00025	0.005	0.000361	29.4	0.00025	0.00023	0.00281	0.015	0.000129	0.0025	0.382	0.388	0.000005	0.00208
M-07-44-86	0.01	0.0241	0.164	0.00535	0.0266	0.00025	0.00025	0.005	0.000321	25	0.00025	0.0002	0.00268	0.015	0.00013	0.0025	0.336	0.379	0.000005	0.00179
M-07-44-87	0.01	0.0304	0.173	0.0057	0.0282	0.00025	0.00025	0.005	0.000321	26.7	0.00025	0.0002	0.00267	0.015	0.000134	0.0025	0.323	0.344	0.000005	0.00182
M-07-44-88	0.01	0.0231	0.167	0.00505	0.0284	0.00025	0.00025	0.005	0.000337	30.1	0.00025	0.00022	0.00269	0.015	0.000114	0.0025	0.314	0.359	0.000005	0.00175
M-07-44-89	0.01	0.0232	0.194	0.00528	0.0354	0.00025	0.00025	0.005	0.000393	25.3	0.00025	0.00027	0.00303	0.015	0.000139	0.0025	0.372	0.438	0.000005	0.00191
M-07-44-90	0.01	0.0254	0.152	0.0046	0.0213	0.00025	0.00025	0.005	0.000399	25.7	0.00025	0.00025	0.00306	0.015	0.000143	0.0025	0.322	0.382	0.000005	0.0016
M-07-44-91	0.01	0.0255	0.16	0.00485	0.0283	0.00025	0.00025	0.005	0.00035	25.9	0.00025	0.00024	0.00275	0.015	0.000116	0.0025	0.287	0.357	0.000005	0.00161
M-07-44-92	0.01	0.0206	0.167	0.00514	0.0312	0.00025	0.00025	0.005	0.000342	26.7	0.00025	0.00024	0.00276	0.015	0.000095	0.0025	0.299	0.371	0.000005	0.00172
M-07-44-93	0.01	0.0283	0.144	0.00461	0.0285	0.00025	0.00025	0.005	0.000331	24.9	0.00025	0.00021	0.00224	0.015	0.000096	0.0025	0.272	0.327	0.000005	0.00152
M-07-44-94	0.01	0.023	0.158	0.00518	0.0306	0.00025	0.00025	0.005	0.000356	30	0.00025	0.00023	0.0029	0.015	0.000097	0.0025	0.312	0.371	0.000005	0.00173
M-07-44-95	0.01	0.0344	0.137	0.00466	0.0274	0.00025	0.00025	0.005	0.000295	25	0.00025	0.0002	0.00225	0.015	0.000116	0.0025	0.27	0.306	0.000005	0.00158
M-07-44-96	0.01	0.0257	0.166	0.0054	0.0271	0.00025	0.00025	0.005	0.000328	29.1	0.00025	0.00018	0.00273	0.015	0.000115	0.0025	0.294	0.344	0.000005	0.00188
M-07-44-97	0.01	0.0241	0.158	0.00482	0.0273	0.00025	0.00025	0.005	0.000335	26	0.00025	0.0002	0.00235	0.015	0.000095	0.0025	0.31	0.355	0.000005	0.00169
M-07-44-98	0.01	0.0244	0.203	0.00497	0.0295	0.00025	0.00025	0.005	0.000348	29.4	0.00025	0.00021	0.00274	0.015	0.000108	0.0025	0.29	0.365	0.000005	0.00202
M-07-44-99	0.01	0.0267	0.197	0.00545	0.0297	0.00025	0.00025	0.005	0.000343	30.7	0.00025	0.00018	0.00307	0.015	0.000137	0.0025	0.3	0.358	0.000005	0.00204
M-07-44-100	0.01	0.023	0.211	0.00523	0.026	0.00025	0.00025	0.005	0.000346	30.7	0.00025	0.0002	0.00299	0.015	0.00011	0.0025	0.303	0.358	0.000005	0.00225
M-07-44-101	0.01	0.0233	0.215	0.00524	0.0286	0.00025	0.00025	0.005	0.000405	30.8	0.00025	0.00024	0.00321	0.015	0.000124	0.0025	0.315	0.406	0.000005	0.00226
M-07-44-102	0.01	0.0177	0.229	0.00543	0.0299	0.00025	0.00025	0.005	0.000454	33	0.00025	0.0003	0.00417	0.015	0.00012	0.0025	0.325	0.483	0.000005	0.00235
M-07-44-103	0.01	0.0214	0.215	0.00559	0.0335	0.00025	0.00025	0.005	0.000423	31.3	0.00025	0.00027	0.00385	0.015	0.000118	0.0025	0.328	0.427	0.000005	0.00219
M-07-44-104	0.01	0.0209	0.209	0.00545	0.0304	0.00025	0.00025	0.005	0.00036	30	0.00025	0.00019	0.00292	0.015	0.000114	0.0025	0.284	0.365	0.000005	0.00205
M-07-44-105	0.01	0.0227	0.19825	0.005605	0.03115	0.00025	0.00025	0.005	0.0003755	29.7	0.00025	0.0002025	0.00299	0.015	0.0001085	0.0025	0.293	0.383	0.000005	0.001995
M-07-44-106	0.01	0.0245	0.1875	0.00576	0.0319	0.00025	0.00025	0.005	0.000391	29.4	0.00025	0.000215	0.00306	0.015	0.000103	0.0025	0.302	0.401	0.000005	0.00194

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-07-44-40	0.0025	0.15	0.91	0.005	0.686	0.00005	0.25	0.171	0	0.0005	0.0005	0.005	0.00054	0.005	0.0025	
M-07-44-41	0.0025	0.15	0.98	0.011	0.674	0.00005	0.25	0.214	0	0.0005	0.0005	0.005	0.00053	0.005	0.0025	
M-07-44-42	0.0025	0.15	0.92	0.005	0.713	0.00005	0.25	0.174	0	0.0005	0.0005	0.005	0.00053	0.005	0.0065	
M-07-44-43	0.0025	0.15	0.96	0.01	0.731	0.00005	0.25	0.202	0	0.0005	0.0005	0.005	0.00051	0.005	0.0025	
M-07-44-44	0.0025	0.15	1.02	0.011	0.806	0.00005	0.25	0.22	0	0.0005	0.0005	0.005	0.00056	0.005	0.0055	
M-07-44-45	0.0025	0.15	0.99	0.011	0.761	0.00005	0.25	0.205	0	0.0005	0.0005	0.005	0.00041	0.005	0.0025	
M-07-44-46	0.0025	0.15	1.22	0.011	0.873	0.00005	0.25	0.238	0	0.0005	0.0005	0.005	0.00042	0.005	0.0025	
M-07-44-47	0.0025	0.15	1.07	0.012	0.78	0.00005	0.25	0.208	0	0.0005	0.0005	0.005	0.00043	0.005	0.0103	
M-07-44-48	0.0025	0.15	0.99	0.005	0.699	0.00005	0.25	0.174	0	0.0005	0.0005	0.005	0.00031	0.005	0.0025	
M-07-44-49	0.0025	0.15	1.05	0.01	0.748	0.00005	0.25	0.197	0	0.0005	0.0005	0.005	0.00036	0.005	0.0025	
M-07-44-50	0.0025	0.15	0.97	0.005	0.714	0.00005	0.25	0.196	0	0.0005	0.0005	0.005	0.00039	0.005	0.0025	
M-07-44-51	0.0025	0.15	1.02	0.005	0.725	0.00005	0.25	0.199	0	0.0005	0.0005	0.005	0.00045	0.005	0.005	
M-07-44-52	0.0025	0.15	0.86	0.005	0.678	0.00005	0.25	0.187	0	0.0005	0.0005	0.005	0.00039	0.005	0.0058	
M-07-44-53	0.0025	0.15	0.88	0.005	0.677	0.00005	0.25	0.184	0	0.0005	0.0005	0.005	0.00037	0.005	0.0061	
M-07-44-54	0.0025	0.15	0.9	0.005	0.64	0.00005	0.25	0.18	0	0.0005	0.0005	0.005	0.0004	0.005	0.0057	
M-07-44-55	0.0025	0.15	0.95	0.005	0.645	0.00005	0.25	0.186	0	0.0005	0.0005	0.005	0.00034	0.005	0.0025	
M-07-44-56	0.0025	0.15	0.83	0.005	0.667	0.00005	0.25	0.19	0	0.0005	0.0005	0.005	0.00037	0.005	0.0025	
M-07-44-57	0.0025	0.15	0.97	0.005	0.661	0.00005	0.25	0.215	0	0.0005	0.0005	0.005	0.00031	0.005	0.0025	
M-07-44-58	0.0025	0.15	0.82	0.005	0.541	0.00005	0.25	0.165	0	0.0005	0.0005	0.005	0.00039	0.005	0.0025	
M-07-44-59	0.0025	0.15	0.9	0.005	0.665	0.00005	0.25	0.208	0	0.0005	0.0005	0.005	0.00038	0.005	0.0056	
M-07-44-60	0.0025	0.15	0.87	0.005	0.635	0.00005	0.25	0.204	0	0.0005	0.0005	0.005	0.00035	0.005	0.0056	
M-07-44-61	0.0025	0.15	0.81	0.005	0.576	0.00005	0.25	0.197	0	0.0005	0.0005	0.005	0.00044	0.005	0.005	
M-07-44-62	0.0025	0.15	0.85	0.005	0.662	0.00005	0.25	0.207	0	0.0005	0.0005	0.005	0.00047	0.005	0.0057	
M-07-44-63	0.0025	0.15	0.83	0.005	0.62	0.00005	0.25	0.189	0	0.0005	0.0005	0.005	0.00039	0.005	0.0058	
M-07-44-64	0.0025	0.15	0.8	0.005	0.645	0.00005	0.25	0.204	0	0.0005	0.0005	0.005	0.00044	0.005	0.0065	
M-07-44-65	0.0025	0.15	0.79	0.005	0.652	0.00005	0.25	0.205	0	0.0005	0.0005	0.005	0.00048	0.005	0.007	
M-07-44-66	0.0025	0.15	0.74	0.005	0.579	0.00005	0.25	0.186	0	0.0005	0.0005	0.005	0.00041	0.005	0.0066	
M-07-44-67	0.0025	0.15	0.8	0.005	0.608	0.00005	0.25	0.201	0	0.0005	0.0005	0.005	0.00046	0.005	0.0065	
M-07-44-68	0.0025	0.15	0.76	0.005	0.6	0.00005	0.25	0.183	0	0.0005	0.0005	0.005	0.00036	0.005	0.0066	
M-07-44-69	0.0025	0.15	0.76	0.005	0.587	0.00005	0.25	0.204	0	0.0005	0.0005	0.005	0.00038	0.005	0.0059	
M-07-44-70	0.0025	0.15	0.69	0.005	0.564	0.00005	0.25	0.166	0	0.0005	0.0005	0.005	0.00034	0.005	0.0057	
M-07-44-71	0.0025	0.15	0.76	0.005	0.586	0.00005	0.25	0.194	0	0.0005	0.0005	0.005	0.00034	0.005	0.0061	
M-07-44-72	0.0025	0.15	0.81	0.005	0.601	0.00005	0.25	0.199	0	0.0005	0.0005	0.005	0.0004	0.005	0.0082	
M-07-44-73	0.0025	0.15	0.74	0.005	0.611	0.00005	0.25	0.197	0	0.0005	0.0005	0.005	0.00035	0.005	0.0057	
M-07-44-74	0.0025	0.15	0.76	0.005	0.587	0.00005	0.25	0.188	0	0.0005	0.0005	0.005	0.00035	0.005	0.0025	
M-07-44-75	0.0025	0.15	0.73	0.005	0.584	0.00005	0.25	0.195	0	0.0005	0.0005	0.005	0.00036	0.005	0.0025	
M-07-44-76	0.0025	0.15	0.72	0.005	0.581	0.00005	0.25	0.186	0	0.0005	0.0005	0.005	0.00032	0.005	0.0057	
M-07-44-77	0.0025	0.15	0.67	0.005	0.511	0.00005	0.25	0.185	0	0.0005	0.0005	0.005	0.00038	0.005	0.0082	
M-07-44-78	0.0025	0.15	0.61	0.005	0.472	0.00005	0.25	0.181	0	0.0005	0.0005	0.005	0.00027	0.005	0.0025	
M-07-44-79	0.0025	0.15	0.67	0.005	0.526	0.00005	0.25	0.191	0	0.0005	0.0005	0.005	0.00029	0.005	0.0064	
M-07-44-80	0.0025	0.15	0.63	0.005	0.533	0.00005	0.25	0.182	0	0.0005	0.0005	0.005	0.00033	0.005	0.0059	
M-07-44-81	0.00025	0.15	0.648	0.00456	0.529	0.000048	0.05	0.2	15.2	0.00005	0.00005	0.005	0.000297	0.0005	0.0052	
M-07-44-82	0.00025	0.15	0.666	0.00454	0.516	0.000046	0.052	0.196	15.5	0.00005	0.00005	0.005	0.000311	0.0005	0.0062	
M-07-44-83	0.00025	0.15	0.635	0.00462	0.491	0.000049	0.054	0.179	15.5	0.00005	0.00005	0.005	0.000304	0.0005	0.0066	
M-07-44-84	0.00025	0.15	0.664	0.00443	0.504	0.000052	0.067	0.191	17.2	0.00005	0.00005	0.005	0.000321	0.0005	0.0064	
M-07-44-85	0.00025	0.15	0.67	0.00428	0.516	0.000033	0.051	0.203	18.4	0.00005	0.00005	0.005	0.000327	0.0005	0.0067	
M-07-44-86	0.00025	0.15	0.693	0.00414	0.495	0.000033	0.058	0.184	16.3	0.00005	0.00005	0.005	0.000294	0.0005	0.0063	
M-07-44-87	0.00025	0.15	0.642	0.00417	0.496	0.000045	0.025	0.191	13.7	0.00005	0.00005	0.005	0.000264	0.0005	0.0059	
M-07-44-88	0.00025	0.15	0.596	0.00389	0.496	0.000037	0.025	0.194	14	0.00005	0.00005	0.005	0.000298	0.0005	0.0072	
M-07-44-89	0.00025	0.15	0.68	0.00386	0.506	0.00004	0.114	0.225	16.5	0.00005	0.00005	0.005	0.000356	0.0005	0.0078	
M-07-44-90	0.00025	0.15	0.586	0.00354	0.461	0.00003	0.025	0.175	13.8	0.00005	0.00005	0.005	0.000261	0.0005	0.0091	
M-07-44-91	0.00025	0.15	0.536	0.00373	0.458	0.000028	0.025	0.179	13.3	0.00005	0.00005	0.005	0.000286	0.0005	0.0072	
M-07-44-92	0.00025	0.15	0.565	0.00391	0.477	0.000028	0.025	0.196	13.8	0.00005	0.00005	0.005	0.000301	0.0005	0.0072	
M-07-44-93	0.00025	0.15	0.528	0.00346	0.434	0.000032	0.025	0.163	13.1	0.00005	0.00005	0.005	0.000237	0.0005	0.0068	
M-07-44-94	0.00025	0.15	0.579	0.00362	0.467	0.000034	0.093	0.182	14.4	0.00005	0.00005	0.005	0.000276	0.0005	0.0072	
M-07-44-95	0.00025	0.15	0.552	0.00338	0.431	0.000041	0.025	0.163	13.8	0.00005	0.00005	0.005	0.000229	0.0005	0.0056	
M-07-44-96	0.00025	0.15	0.584	0.00374	0.46	0.000043	0.025	0.181	15.3	0.00005	0.00005	0.005	0.000256	0.0005	0.0066	
M-07-44-97	0.00025	0.15	0.544	0.00312	0.442	0.000032	0.025	0.173	14	0.00005	0.00005	0.005	0.000277	0.0005	0.0062	
M-07-44-98	0.00025	0.15	0.586	0.00375	0.476	0.000044	0.025	0.216	14.6	0.00005	0.00005	0.005	0.000326	0.0005	0.007	
M-07-44-99	0.00025	0.15	0.568	0.00358	0.474	0.000033	0.074	0.184	16	0.00005	0.00005	0.005	0.00025	0.0005	0.0088	
M-07-44-100	0.00025	0.15	0.54	0.00346	0.468	0.000031	0.025	0.181	15.8	0.00005	0.00005	0.005	0.000232	0.0005	0.0075	
M-07-44-101	0.00025	0.15	0.621	0.00245	0.482	0.000034	0.025	0.182	15.4	0.00005	0.00005	0.005	0.000252	0.0005	0.0081	
M-07-44-102	0.00025	0.15	0.624	0.00324	0.541	0.000022	0.025	0.209	15.6	0.00005	0.00005	0.005	0.000304	0.0005	0.0114	
M-07-44-103	0.00025	0.15	0.69	0.00345	0.53	0.000025	0.085	0.197	15.3	0.00005	0.00005	0.005	0.000311	0.0005	0.0096	
M-07-44-104	0.00025	0.15	0.624	0.00323	0.503	0.000039	0.081	0.195	14.5	0.00005	0.00005	0.005	0.000252	0.0005	0.007	
M-07-44-105	0.00025	0.15	0.6555	0.003185	0.4945	0.0000445	0.075	0.18825	14.6	0.00005	0.00005	0.005	0.0002525	0.0005	0.007325	
M-07-44-106	0.00025	0.15	0.687	0.00314	0.486	0.00005	0.069	0.1815	14.7	0.00005	0.00005	0.005	0.000253	0.0005	0.00765	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-07-44-107		107	11-Mar-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	470	74	153	7.8	4.10	25.53	44.43	
M-07-44-108		108	18-Mar-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	73	151	7.75	4.90	25.10	44.60	
M-07-44-109		109	25-Mar-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	74	150	7.78	4.28	25.80	44.90	
M-07-44-110		110	1-Apr-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	465	74	161	7.85	3.65	26.50	45.20	
M-07-44-111		111	8-Apr-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	455	75	166	7.81	3.03	27.20	45.50	
M-07-44-112		112	15-Apr-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	76	152	7.75	2.40	27.90	45.80	
M-07-44-113		113	21-Apr-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	470	76	139	7.64	1.93	27.70	45.93	
M-07-44-114		114	29-Apr-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	455	77	160	7.67	1.45	27.50	46.05	
M-07-44-115		115	6-May-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	78	150	7.85	0.98	27.30	46.18	
M-07-44-116		116	13-May-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	79	152	7.82	0.50	27.10	46.30	
M-07-44-117		117	20-May-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	500	79	159	7.72	1.45	27.35	47.03	
M-07-44-118		118	27-May-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	78	155	7.73	2.40	27.60	47.75	
M-07-44-119		119	3-Jun-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	78	146	7.7	3.35	27.85	48.48	
M-07-44-120		120	10-Jun-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	495	77	156	7.71	4.30	28.10	49.20	
M-07-44-121		121	17-Jun-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	78	151	7.69	4.70	27.70	49.30	
M-07-44-122		122	24-Jun-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	79	146	7.6	5.10	27.30	49.40	
M-07-44-123		123	1-Jul-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	80	149	7.69	5.50	26.90	49.50	
M-07-44-124		124	8-Jul-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	495	81	153	7.71	5.90	26.50	49.60	
M-07-44-125		125	15-Jul-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	490	81	154	7.75	6.30	26.63	49.70	
M-07-44-126		126	22-Jul-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	81	151	7.68	6.70	26.75	49.80	
M-07-44-127		127	29-Jul-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	80	152	7.83	7.10	26.88	49.90	
M-07-44-128		128	5-Aug-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	80	158	7.86	7.50	27.00	50.00	
M-07-44-129		129	12-Aug-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	465	80	166	7.78	6.98	26.55	50.43	
M-07-44-130		130	19-Aug-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	465	80	161	7.83	6.45	26.10	50.85	
M-07-44-131		131	26-Aug-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	465	80	161	7.77	5.93	25.65	51.28	
M-07-44-132		132	2-Sep-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	470	80	158	7.74	5.40	25.20	51.70	
M-07-44-133		133	9-Sep-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	82	178	7.79	5.03	26.23	53.15	
M-07-44-134		134	16-Sep-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	84	151	7.77	4.65	27.25	54.60	
M-07-44-135		135	23-Sep-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	480	86	151	7.78	4.28	28.28	56.05	
M-07-44-136		136	30-Sep-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	470	87	172	7.84	3.90	29.30	57.50	
M-07-44-137		137	7-Oct-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	465	85	160	7.8	3.78	28.60	55.80	
M-07-44-138		138	14-Oct-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	465	83	157	7.75	3.65	27.90	54.10	
M-07-44-139		139	21-Oct-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	500	81	138	7.82	3.53	27.20	52.40	
M-07-44-140		140	28-Oct-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	455	79	155	7.76	3.40	26.50	50.70	
M-07-44-141		141	4-Nov-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	470	80	164	7.77	3.55	27.10	50.55	
M-07-44-142		142	11-Nov-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	450	81	159	7.68	3.70	27.70	50.40	
M-07-44-143		143	18-NOV-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	460	80	143	7.61	3.70	27.80	49.40	
M-07-44-144		144	25-NOV-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	78	152	7.78	3.70	27.90	48.40	
M-07-44-145		145	02-DEC-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	460	81	145	7.6	4.00	27.25	50.75	
M-07-44-146		146	09-DEC-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	81	150	7.73	4.00	27.25	50.75	
M-07-44-147		147	16-DEC-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	460	84	180	7.76	4.30	26.60	53.10	
M-07-44-148		148	23-DEC-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	460	83	171	7.68	4.50	26.05	52.78	
M-07-44-149		149	30-DEC-11	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	460	81	167	7.67	4.70	25.50	52.45	
M-07-44-150		150	06-JAN-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	465	80	172	7.64	4.90	24.95	52.13	
M-07-44-151		151	13-JAN-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	440	79	171	7.5	5.10	24.40	51.80	
M-07-44-152		152	20-JAN-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	475	76	170	7.39	4.95	24.20	50.45	
M-07-44-153		153	27-JAN-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	450	74	185	7.57	4.80	24.00	49.10	
M-07-44-154		154	03-FEB-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	450	71	174	7.76	4.65	23.80	47.75	
M-07-44-155		155	10-FEB-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	460	68	160	7.79	4.50	23.60	46.40	
M-07-44-156		156	17-FEB-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	425	70	148	7.67	3.50	22.98	47.18	
M-07-44-157		157	24-FEB-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	450	71	154	7.64	2.50	22.35	47.95	
M-07-44-158		158	02-MAR-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	465	73	146	7.63	1.50	21.73	48.73	
M-07-44-159		159	09-MAR-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	440	74	166	7.65	0.50	21.10	49.50	
M-07-44-160		160	16-MAR-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	400	78	172	7.71	2.23	20.58	52.60	
M-07-44-161		161	23-MAR-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	440	82	161	7.65	3.95	20.05	55.70	
M-07-44-162		162	30-MAR-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	455	86	171	7.63	5.68	19.53	58.80	
M-07-44-163		163	06-APR-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	435	91	188	7.67	7.40	19.00	61.90	
M-07-44-164		164	13-Apr-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	455	87	186	7.62	6.30	19.18	58.68	
M-07-44-165		165	20-Apr-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	450	84	182	7.78	5.20	19.35	55.45	
M-07-44-166		166	27-Apr-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	440	80	177	7.68	4.10	19.53	52.23	
M-07-44-167		167	4-May-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	420	77	160	7.66	3.00	19.70	49.00	
M-07-44-168		168	11-May-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	450	77	171	7.62	4.73	19.85	49.95	
M-07-44-169		169	18-May-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	430	78	172	7.65	6.45	20.00	50.90	
M-07-44-170		170	25-May-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	425	78	168	7.64	8.18	20.15	51.85	
M-07-44-171		171	1-Jun-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	440	79	167	7.7	9.90	20.30	52.80	
M-07-44-172		172	8-Jun-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	410	80	175	7.69	8.00	20.93	54.08	
M-07-44-173		173	15-Jun-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	450	81	161	7.69	6.10	21.55	55.35	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-07-44-107	0.01	0.0263	0.17675	0.005915	0.03265	0.00025	0.00025	0.005	0.0004065	29.1	0.00025	0.0002275	0.00313	0.015	0.0000975	0.0025	0.311	0.419	0.000005	0.001885
M-07-44-108	0.01	0.0281	0.166	0.00607	0.0334	0.00025	0.00025	0.005	0.000422	28.8	0.00025	0.00024	0.0032	0.015	0.000092	0.0025	0.32	0.437	0.000005	0.00183
M-07-44-109	0.01	0.025775	0.17425	0.0060025	0.032225	0.00025	0.000315	0.005	0.00041475	29.025	0.00025	0.0002325	0.00326	0.015	0.000096	0.0025	0.3175	0.4225	0.000005	0.0018525
M-07-44-110	0.01	0.02345	0.1825	0.005935	0.03105	0.00025	0.00038	0.005	0.0004075	29.25	0.00025	0.000225	0.00332	0.015	0.0001	0.0025	0.315	0.408	0.000005	0.001875
M-07-44-111	0.01	0.021125	0.19075	0.0058675	0.029875	0.00025	0.000445	0.005	0.00040025	29.475	0.00025	0.0002175	0.00338	0.015	0.000104	0.0025	0.3125	0.3935	0.000005	0.0018975
M-07-44-112	0.01	0.0188	0.199	0.0058	0.0287	0.00025	0.00051	0.005	0.000393	29.7	0.00025	0.00021	0.00344	0.015	0.000108	0.0025	0.31	0.379	0.000005	0.00192
M-07-44-113	0.01	0.019725	0.1955	0.0058875	0.030525	0.00025	0.000445	0.005	0.000381	30.075	0.00025	0.0002075	0.0034225	0.015	0.00010725	0.0025	0.30625	0.3715	0.000005	0.00196
M-07-44-114	0.01	0.02065	0.192	0.005975	0.03235	0.00025	0.00038	0.005	0.000369	30.45	0.00025	0.000205	0.003405	0.015	0.0001065	0.0025	0.3025	0.364	0.000005	0.002
M-07-44-115	0.01	0.021575	0.1885	0.0060625	0.034175	0.00025	0.000315	0.005	0.000357	30.825	0.00025	0.0002025	0.0033875	0.015	0.00010575	0.0025	0.29875	0.3565	0.000005	0.00204
M-07-44-116	0.01	0.0225	0.185	0.00615	0.036	0.00025	0.00025	0.005	0.000345	31.2	0.00025	0.0002	0.00337	0.015	0.000105	0.0025	0.295	0.349	0.000005	0.00208
M-07-44-117	0.01	0.02165	0.178	0.00595	0.0346	0.00025	0.00025	0.005	0.0003535	31	0.00025	0.0001975	0.003285	0.015	0.0001	0.0025	0.29625	0.3605	0.000005	0.001975
M-07-44-118	0.01	0.0208	0.171	0.00575	0.0332	0.00025	0.00025	0.005	0.000362	30.8	0.00025	0.000195	0.0032	0.015	0.000095	0.0025	0.2975	0.372	0.000005	0.00187
M-07-44-119	0.01	0.01995	0.164	0.00555	0.0318	0.00025	0.00025	0.005	0.0003705	30.6	0.00025	0.0001925	0.003115	0.015	0.00009	0.0025	0.29875	0.3835	0.000005	0.001765
M-07-44-120	0.01	0.0191	0.157	0.00535	0.0304	0.00025	0.00025	0.005	0.000379	30.4	0.00025	0.00019	0.00303	0.015	0.000085	0.0025	0.3	0.395	0.000005	0.00166
M-07-44-121	0.01	0.01945	0.15525	0.0053725	0.030175	0.0002	0.00025	0.005	0.000377	30.8	0.00025	0.00019	0.00304	0.015	0.000086	0.0019375	0.3015	0.39175	0.000005	0.0016625
M-07-44-122	0.01	0.0198	0.1535	0.005395	0.02995	0.00015	0.00025	0.005	0.000375	31.2	0.00025	0.00019	0.00305	0.015	0.000087	0.001375	0.303	0.3885	0.000005	0.001665
M-07-44-123	0.01	0.02015	0.15175	0.0054175	0.029725	0.0001	0.00025	0.005	0.000373	31.6	0.00025	0.00019	0.00306	0.015	0.000088	0.0008125	0.3045	0.38525	0.000005	0.0016675
M-07-44-124	0.01	0.0205	0.15	0.00544	0.0295	0.00005	0.00025	0.005	0.000371	32	0.00025	0.00019	0.00307	0.015	0.000089	0.00025	0.306	0.382	0.000005	0.00167
M-07-44-125	0.01	0.0206	0.1505	0.00553	0.029825	0.00005	0.00025	0.005	0.000364	31.875	0.00025	0.00018	0.0029675	0.015	0.000087	0.00025	0.30775	0.37725	0.000005	0.0016825
M-07-44-126	0.01	0.0207	0.151	0.00562	0.03015	0.00005	0.00025	0.005	0.000357	31.75	0.00025	0.00017	0.002865	0.015	0.000085	0.00025	0.3095	0.3725	0.000005	0.001695
M-07-44-127	0.01	0.0208	0.1515	0.00571	0.030475	0.00005	0.00025	0.005	0.00035	31.625	0.00025	0.00016	0.0027625	0.015	0.000083	0.00025	0.31125	0.36775	0.000005	0.0017075
M-07-44-128	0.01	0.0209	0.152	0.0058	0.0308	0.00005	0.00025	0.005	0.000343	31.5	0.00025	0.00015	0.00266	0.015	0.000081	0.00025	0.313	0.363	0.000005	0.00172
M-07-44-129	0.01	0.021575	0.1505	0.0059	0.029	0.00005	0.00025	0.005	0.00034925	31.525	0.00025	0.000155	0.00273	0.015	0.00007975	0.00025	0.316	0.364	0.000005	0.001735
M-07-44-130	0.01	0.02225	0.149	0.006	0.0272	0.00005	0.00025	0.005	0.0003555	31.55	0.00025	0.00016	0.0028	0.015	0.0000785	0.00025	0.319	0.365	0.000005	0.00175
M-07-44-131	0.01	0.022925	0.1475	0.0061	0.0254	0.00005	0.00025	0.005	0.00036175	31.575	0.00025	0.000165	0.00287	0.015	0.00007725	0.00025	0.322	0.366	0.000005	0.001765
M-07-44-132	0.01	0.0236	0.146	0.0062	0.0236	0.00005	0.00025	0.005	0.000368	31.6	0.00025	0.00017	0.00294	0.015	0.000076	0.00025	0.325	0.367	0.000005	0.00178
M-07-44-133	0.01	0.0227	0.148	0.00621	0.02655	0.00005	0.00025	0.005	0.00037625	32.275	0.00025	0.0001825	0.00301	0.015	0.0000785	0.00025	0.33375	0.3815	0.000005	0.00178
M-07-44-134	0.01	0.0218	0.15	0.00622	0.0295	0.00005	0.00025	0.005	0.0003845	32.95	0.00025	0.000195	0.00308	0.015	0.000081	0.00025	0.3425	0.396	0.000005	0.00178
M-07-44-135	0.01	0.0209	0.152	0.00623	0.03245	0.00005	0.00025	0.005	0.00039275	33.625	0.00025	0.0002075	0.00315	0.015	0.0000835	0.00025	0.35125	0.4105	0.000005	0.00178
M-07-44-136	0.01	0.02	0.154	0.00624	0.0354	0.00005	0.00025	0.005	0.000401	34.3	0.00025	0.00022	0.00322	0.015	0.000086	0.00025	0.36	0.425	0.000005	0.00178
M-07-44-137	0.01	0.0197	0.15075	0.0059975	0.033875	0.00005	0.00025	0.005	0.000387	33.45	0.00025	0.0002075	0.0031225	0.015	0.00008325	0.00025	0.35375	0.41275	0.000005	0.001755
M-07-44-138	0.01	0.0194	0.1475	0.005755	0.03235	0.00005	0.00025	0.005	0.000373	32.6	0.00025	0.000195	0.003025	0.015	0.0000805	0.00025	0.3475	0.4005	0.000005	0.00173
M-07-44-139	0.01	0.0191	0.14425	0.0055125	0.030825	0.00005	0.00025	0.005	0.000359	31.75	0.00025	0.0001825	0.0029275	0.015	0.00007775	0.00025	0.34125	0.38825	0.000005	0.001705
M-07-44-140	0.01	0.0188	0.141	0.00527	0.0293	0.00005	0.00025	0.005	0.000345	30.9	0.00025	0.00017	0.00283	0.015	0.000075	0.00025	0.335	0.376	0.000005	0.00168
M-07-44-141	0.01	0.01855	0.1535	0.005715	0.0329	0.00005	0.00025	0.005	0.0003445	31.45	0.00025	0.00017	0.00305	0.015	0.000076	0.00025	0.333	0.3675	0.000005	0.00169
M-07-44-142	0.01	0.0183	0.166	0.00616	0.0365	0.00005	0.00025	0.005	0.000344	32	0.00025	0.00017	0.00327	0.015	0.000077	0.00025	0.331	0.359	0.000005	0.0017
M-07-44-143	0.01	0.01995	0.1615	0.00608	0.037	0.00005	0.00025	0.005	0.0003315	31.35	0.00025	0.000155	0.003175	0.015	0.0000855	0.00025	0.323	0.3435	0.000005	0.00176
M-07-44-144	0.01	0.0216	0.157	0.006	0.0375	0.00005	0.00025	0.005	0.000319	30.7	0.00025	0.00014	0.00308	0.015	0.000094	0.00025	0.315	0.328	0.000005	0.00182
M-07-44-145	0.01	0.0203	0.1495	0.0058	0.03295	0.00005	0.00025	0.005	0.000359	31.85	0.00025	0.000165	0.00311	0.015	0.000086	0.00025	0.3325	0.367	0.000005	0.001785
M-07-44-146	0.01	0.0203	0.1495	0.0058	0.03295	0.00005	0.00025	0.005	0.000359	31.85	0.00025	0.000165	0.00311	0.015	0.000086	0.00025	0.3325	0.367	0.000005	0.001785
M-07-44-147	0.01	0.019	0.142	0.0056	0.0284	0.00005	0.00025	0.005	0.000399	33	0.00025	0.00019	0.00314	0.015	0.000078	0.00025	0.35	0.406	0.000005	0.00175
M-07-44-148	0.01	0.0188	0.136	0.0054325	0.02625	0.00005	0.00025	0.005	0.000397	32.5	0.00025	0.00019	0.0031175	0.015	0.00007625	0.00025	0.34625	0.40375	0.000005	0.0016975
M-07-44-149	0.01	0.0186	0.13	0.005265	0.0241	0.00005	0.00025	0.005	0.000395	32	0.00025	0.00019	0.003095	0.015	0.0000745	0.00025	0.3425	0.4015	0.000005	0.001645
M-07-44-150	0.01	0.0184	0.124	0.0050975	0.02195	0.00005	0.00025	0.005	0.000393	31.5	0.00025	0.00019	0.0030725	0.015	0.00007275	0.00025	0.33875	0.39925	0.000005	0.0015925
M-07-44-151	0.01	0.0182	0.118	0.00493	0.0198	0.00005	0.00025	0.005	0.000391	31	0.00025	0.00019	0.00305	0.015	0.000071	0.00025	0.335	0.397	0.000005	0.00154
M-07-44-152	0.01	0.019325	0.1195	0.00516	0.021975	0.00005	0.00025	0.005	0.00037225	29.95	0.00025	0.000175	0.0030275	0.015	0.000071	0.00025	0.328	0.3765	0.000005	0.00152
M-07-44-153	0.01	0.02045	0.121	0.00539	0.02415	0.00005	0.00025	0.005	0.0003535	28.9	0.00025	0.00016	0.003005	0.015	0.000071	0.00025	0.321	0.356	0.000005	0.0015
M-07-44-154	0.01	0.021575	0.1225	0.00562	0.026325	0.00005	0.00025	0.005	0.00033475	27.85	0.00025	0.000145	0.0029825	0.015	0.000071	0.00025	0.314	0.3355	0.000005	0.00148
M-07-44-155	0.01	0.0227	0.124	0.00585	0.0285	0.00005	0.00025	0.005	0.000316	26.8	0.00025	0.00013	0.00296	0.015	0.000071	0.00025	0.307	0.315	0.000005	0.00146
M-07-44-156	0.01	0.02225	0.12125	0.00567	0.029925	0.00005	0.00025	0.005	0.0003165	27.4	0.00025	0.000135	0.0028375	0.025	0.00006775	0.00025	0.314	0.324	0.000005	0.00146
M-07-44-157	0.01	0.0218	0.1185	0.00549	0.03135	0.00005	0.00025	0.005	0.000317	28	0.00025	0.00014	0.002715	0.035	0.0000645	0.00025	0.321	0.333	0.000005	0.00146
M-07-44-158	0.01	0.02135	0.11575	0.00531	0.032775	0.00005	0.00025	0.005	0.0003175	28.6	0.00025	0.000145	0.0025925	0.045	0.00006125	0.00025	0.328	0.342	0.000005	0.00146
M-07-44-159	0.01	0.0209	0.113	0.00513	0.0342	0.00005	0.00025	0.005	0.000318	29.2	0.00025	0.00015	0.00247	0.055	0.000058	0.00025	0.335	0.351	0.000005	0.00146
M-07-44-160	0.01	0.01995	0.13525	0.0053925	0.0321	0.00005	0.00025	0.005	0.00034875	30.8	0.00025	0.000155	0.002505	0.045	0.00005975	0.00025	0.345	0.3655	0.000005	0.00159
M-07-44-161	0.01	0.019	0.1575	0.005655	0.03	0.00005	0.00025	0.005	0.0003795	32.4	0.00025	0.00016	0.00254	0.035	0.0000615	0.00025	0.355	0.38	0.000005	0.00172
M-07-44-162	0.01	0.01805	0.17975	0.0059175	0.0279	0.00005	0.00025	0.005	0.00041025	34	0.00025	0.000165	0.002575	0.025	0.00006325	0.00025	0.365	0.3945	0.000005	0.00185
M-07-44-163	0.01	0.0171	0.202	0.00618	0.0258	0.00005	0.00025	0.005	0.000441	35.6	0.00025	0.00017	0.00261	0.015	0.000065	0.00025	0.375	0.409	0.000005	0.00198
M-07-44-164	0.01	0.0173	0.21475	0.0064075	0.024375	0.00005	0.00025	0.005	0.000416	34.25	0.00025	0.0001625	0.0026525	0.04425	0.00006525	0.00025	0.36275	0.38975	0.000005	0.00212
M-07-44-165	0.01	0.0175	0.2275	0.006635	0.02295	0.00005	0.00025	0.005	0.000391	32.9	0.00025	0.000155	0.002695	0.0735	0.0000655	0.00025	0.3505	0.3705	0.000005	0.00226
M-07-44-166	0.01	0.0177	0.24025	0.0068625	0.021525	0.00005	0.00025	0.005	0.000366	31.55	0.00025	0.0001475	0.0027375	0.10275	0.00006575	0.00025	0.33825	0.35125	0.000005	0.0024
M-07-44-167	0.01	0.0179	0.253	0.00709	0.0201	0.00005	0.00025	0.005	0.000341	30.2	0.00025	0.00014	0.00278	0.132	0.000066	0.00025	0.326	0.332	0.000005	0.00254
M-07-44-168	0.01	0.0181	0.24125	0.007085	0.021025	0.00005	0.00025	0.005	0.0003485	30.4	0.00025	0.0001425	0.0028725	0.10275	0.000069	0.00025	0.33	0.3405	0.000005	0.0024025
M-07-44-169	0.01	0.0183	0.2295	0.00708	0.02195	0.00005	0.00025	0.005	0.000356	30.6	0.00025	0.000145	0.002965	0.0735	0.000072	0.00025	0.334	0.349	0.000005	0.002265
M-07-44-170	0.01	0.0185	0.21775	0.007075	0.022875	0.00005	0.00025	0.005	0.0003635	30.8	0.00025	0.0001475	0.0030575	0.04425	0.000075	0.00025	0.338	0.3575	0.000005	0.0021275
M-07-44-171	0.01	0.0187	0.206	0.00707	0.0238	0.00005	0.00025	0.005	0.000371	31	0.00025	0.00015	0.00315	0.015	0.000078	0.00025	0.342	0.366	0.000005	0.00199
M-07-44-172	0.01	0.0179	0.20475	0.006995	0.02405	0.00005	0.00025	0.005	0.00038025	31.425	0.00025	0.0001475	0.0032	0.015	0.00007525	0.00025	0.356	0.37025	0.000005	0.00195
M-07-44-173	0.01	0.0171	0.2035	0.00692	0.0243	0.00005	0.00025	0.005	0.0003895	31.85	0.00025	0.000145	0.00325	0.015	0.0000725	0.00025	0.37	0.3745	0.000005	0.00191

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-07-44-107	0.00025	0.15	0.7185	0.003095	0.4775	0.0000555	0.063	0.17475	14.8	0.00005	0.00005	0.005	0.0002535	0.0005	0.007975	
M-07-44-108	0.00025	0.15	0.75	0.00305	0.469	0.000061	0.057	0.168	14.9	0.00005	0.00005	0.005	0.000254	0.0005	0.0083	
M-07-44-109	0.00025	0.15	0.72475	0.003105	0.4755	0.000053	0.056	0.17625	14.9	0.00005	0.00005	0.005	0.0002545	0.0005	0.008725	
M-07-44-110	0.00025	0.15	0.6995	0.00316	0.482	0.000045	0.055	0.1845	14.9	0.00005	0.00005	0.005	0.000255	0.0005	0.00915	
M-07-44-111	0.00025	0.15	0.67425	0.003215	0.4885	0.000037	0.054	0.19275	14.9	0.00005	0.00005	0.005	0.0002555	0.0005	0.009575	
M-07-44-112	0.00025	0.15	0.649	0.00327	0.495	0.000029	0.053	0.201	14.9	0.00005	0.00005	0.005	0.000256	0.0005	0.01	
M-07-44-113	0.00025	0.15	0.64025	0.0033725	0.4935	0.000029	0.0525	0.20575	14.975	0.00005	0.0000725	0.005	0.00025825	0.0005	0.00945	
M-07-44-114	0.00025	0.15	0.6315	0.003475	0.492	0.000029	0.052	0.2105	15.05	0.00005	0.000095	0.005	0.0002605	0.0005	0.0089	
M-07-44-115	0.00025	0.15	0.62275	0.0035775	0.4905	0.000029	0.0515	0.21525	15.125	0.00005	0.0001175	0.005	0.00026275	0.0005	0.00835	
M-07-44-116	0.00025	0.15	0.614	0.00368	0.489	0.000029	0.051	0.22	15.2	0.00005	0.00014	0.005	0.000265	0.0005	0.0078	
M-07-44-117	0.00025	0.15	0.6085	0.0035775	0.4905	0.0000335	0.0445	0.212	15.45	0.00005	0.0001175	0.005	0.0002615	0.0005	0.0077	
M-07-44-118	0.00025	0.15	0.603	0.003475	0.492	0.000038	0.038	0.204	15.7	0.00005	0.000095	0.005	0.000258	0.0005	0.0076	
M-07-44-119	0.00025	0.15	0.5975	0.0033725	0.4935	0.0000425	0.0315	0.196	15.95	0.00005	0.0000725	0.005	0.0002545	0.0005	0.0075	
M-07-44-120	0.00025	0.15	0.592	0.00327	0.495	0.000047	0.025	0.188	16.2	0.00005	0.00005	0.005	0.000251	0.0005	0.0074	
M-07-44-121	0.00025	0.15	0.59425	0.003215	0.4915	0.00004475	0.03175	0.18825	16.075	0.00003875	0.00005	0.005	0.00024325	0.0005	0.007425	
M-07-44-122	0.00025	0.15	0.5965	0.00316	0.488	0.0000425	0.0385	0.1885	15.95	0.0000275	0.00005	0.005	0.0002355	0.0005	0.00745	
M-07-44-123	0.00025	0.15	0.59875	0.003105	0.4845	0.00004025	0.04525	0.18875	15.825	0.00001625	0.00005	0.005	0.00022775	0.0005	0.007475	
M-07-44-124	0.00025	0.15	0.601	0.00305	0.481	0.000038	0.052	0.189	15.7	0.000005	0.00005	0.005	0.00022	0.0005	0.0075	
M-07-44-125	0.00025	0.15	0.60125	0.00309	0.48125	0.00003375	0.04525	0.19075	16.025	0.000005	0.00005	0.005	0.00022075	0.0005	0.007225	
M-07-44-126	0.00025	0.15	0.6015	0.00313	0.4815	0.0000295	0.0385	0.1925	16.35	0.000005	0.00005	0.005	0.0002215	0.0005	0.00695	
M-07-44-127	0.00025	0.15	0.60175	0.00317	0.48175	0.00002525	0.03175	0.19425	16.675	0.000005	0.00005	0.005	0.00022225	0.0005	0.006675	
M-07-44-128	0.00025	0.15	0.602	0.00321	0.482	0.000021	0.025	0.196	17	0.000005	0.00005	0.005	0.000223	0.0005	0.0064	
M-07-44-129	0.00025	0.15	0.591	0.0032275	0.476	0.00002525	0.025	0.194	17.025	0.000005	0.00005	0.005	0.00022	0.0005	0.0066	
M-07-44-130	0.00025	0.15	0.58	0.003245	0.47	0.0000295	0.025	0.192	17.05	0.000005	0.00005	0.005	0.000217	0.0005	0.0068	
M-07-44-131	0.00025	0.15	0.569	0.0032625	0.464	0.00003375	0.025	0.19	17.075	0.000005	0.00005	0.005	0.000214	0.0005	0.007	
M-07-44-132	0.00025	0.15	0.558	0.00328	0.458	0.000038	0.025	0.188	17.1	0.000005	0.00005	0.005	0.000211	0.0005	0.0072	
M-07-44-133	0.00025	0.15	0.56125	0.003245	0.456	0.0000335	0.025	0.196	17.475	0.000005	0.00005	0.005	0.00023325	0.0005	0.007475	
M-07-44-134	0.00025	0.15	0.5645	0.00321	0.454	0.000029	0.025	0.204	17.85	0.000005	0.00005	0.005	0.0002555	0.0005	0.00775	
M-07-44-135	0.00025	0.15	0.56775	0.003175	0.452	0.0000245	0.025	0.212	18.225	0.000005	0.00005	0.005	0.00027775	0.0005	0.008025	
M-07-44-136	0.00025	0.15	0.571	0.00314	0.45	0.00002	0.025	0.22	18.6	0.000005	0.00005	0.005	0.0003	0.0005	0.0083	
M-07-44-137	0.00025	0.15	0.563	0.00302	0.44775	0.00002025	0.025	0.21425	18.1	0.000005	0.00005	0.005	0.00027675	0.0005	0.008025	
M-07-44-138	0.00025	0.15	0.555	0.0029	0.4455	0.0000205	0.025	0.2085	17.6	0.000005	0.00005	0.005	0.0002535	0.0005	0.00775	
M-07-44-139	0.00025	0.15	0.547	0.00278	0.44325	0.00002075	0.025	0.20275	17.1	0.000005	0.00005	0.005	0.00023025	0.0005	0.007475	
M-07-44-140	0.00025	0.15	0.539	0.00266	0.441	0.000021	0.025	0.197	16.6	0.000005	0.00005	0.005	0.000207	0.0005	0.0072	
M-07-44-141	0.00025	0.15	0.525	0.002745	0.4395	0.0000225	0.025	0.212	16.5	0.000005	0.00005	0.005	0.0002135	0.0005	0.0074	
M-07-44-142	0.00025	0.15	0.511	0.00283	0.438	0.000024	0.025	0.227	16.4	0.000005	0.00005	0.005	0.00022	0.0005	0.0076	
M-07-44-143	0.00025	0.15	0.505	0.002915	0.4295	0.0000275	0.025	0.2425	16.3	0.000005	0.00005	0.005	0.000222	0.0005	0.0073	
M-07-44-144	0.00025	0.15	0.499	0.003	0.421	0.000031	0.025	0.258	16.2	0.000005	0.00005	0.005	0.000224	0.0005	0.007	
M-07-44-145	0.00025	0.15	0.5015	0.002825	0.432	0.0000285	0.025	0.2405	17.1	0.000005	0.00005	0.005	0.000218	0.0005	0.0077	
M-07-44-146	0.00025	0.15	0.5015	0.002825	0.432	0.0000285	0.025	0.2405	17.1	0.000005	0.00005	0.005	0.000218	0.0005	0.0077	
M-07-44-147	0.00025	0.15	0.504	0.00265	0.443	0.000026	0.025	0.223	18	0.000005	0.00005	0.005	0.000212	0.0005	0.0084	
M-07-44-148	0.00025	0.15	0.49375	0.002585	0.4305	0.0000255	0.025	0.209	17.775	0.000005	0.00005	0.005	0.00020225	0.0005	0.009025	
M-07-44-149	0.00025	0.15	0.4835	0.00252	0.418	0.000025	0.025	0.195	17.55	0.000005	0.00005	0.005	0.0001925	0.0005	0.00965	
M-07-44-150	0.00025	0.15	0.47325	0.002455	0.4055	0.0000245	0.025	0.181	17.325	0.000005	0.00005	0.005	0.00018275	0.0005	0.010275	
M-07-44-151	0.00025	0.15	0.463	0.00239	0.393	0.000024	0.025	0.167	17.1	0.000005	0.00005	0.005	0.000173	0.0005	0.0109	
M-07-44-152	0.00025	0.15	0.45425	0.00243	0.38525	0.0000235	0.025	0.17275	16.6	0.000005	0.00005	0.005	0.000166	0.0005	0.0101	
M-07-44-153	0.00025	0.15	0.4455	0.00247	0.3775	0.000023	0.025	0.1785	16.1	0.000005	0.00005	0.005	0.000159	0.0005	0.0093	
M-07-44-154	0.00025	0.15	0.43675	0.00251	0.36975	0.0000225	0.025	0.18425	15.6	0.000005	0.00005	0.005	0.000152	0.0005	0.0085	
M-07-44-155	0.00025	0.15	0.428	0.00255	0.362	0.000022	0.025	0.19	15.1	0.000005	0.00005	0.005	0.000145	0.0005	0.0077	
M-07-44-156	0.00025	0.15	0.43475	0.0024825	0.36275	0.0000225	0.025	0.18475	15.375	0.000005	0.00005	0.005	0.000142	0.0005	0.00765	
M-07-44-157	0.00025	0.15	0.4415	0.002415	0.3635	0.000023	0.025	0.1795	15.65	0.000005	0.00005	0.005	0.000139	0.0005	0.0076	
M-07-44-158	0.00025	0.15	0.44825	0.0023475	0.36425	0.0000235	0.025	0.17425	15.925	0.000005	0.00005	0.005	0.000136	0.0005	0.00755	
M-07-44-159	0.00025	0.15	0.455	0.00228	0.365	0.000024	0.025	0.169	16.2	0.000005	0.00005	0.005	0.000133	0.0005	0.0075	
M-07-44-160	0.00025	0.15	0.464	0.002245	0.37275	0.0000215	0.025	0.1715	17.5	0.000005	0.00005	0.005	0.000143	0.0005	0.0076	
M-07-44-161	0.00025	0.15	0.473	0.00221	0.3805	0.000019	0.025	0.174	18.8	0.000005	0.00005	0.005	0.000153	0.0005	0.0077	
M-07-44-162	0.00025	0.15	0.482	0.002175	0.38825	0.0000165	0.025	0.1765	20.1	0.000005	0.00005	0.005	0.000163	0.0005	0.0078	
M-07-44-163	0.00025	0.15	0.491	0.00214	0.396	0.000014	0.025	0.179	21.4	0.000005	0.00005	0.005	0.000173	0.0005	0.0079	
M-07-44-164	0.00025	0.15	0.4855	0.0021625	0.39425	0.00001975	0.025	0.17625	0.39425	0.000005	0.00005	0.005	0.00015475	0.0005	0.0079	
M-07-44-165	0.00025	0.15	0.48	0.002185	0.3925	0.0000255	0.025	0.1735	0.3925	0.000005	0.00005	0.005	0.0001365	0.0005	0.0079	
M-07-44-166	0.00025	0.15	0.4745	0.0022075	0.39075	0.00003125	0.025	0.17075	0.39075	0.000005	0.00005	0.005	0.00011825	0.0005	0.0079	
M-07-44-167	0.00025	0.15	0.469	0.00223	0.389	0.000037	0.025	0.168	0.389	0.000005	0.00005	0.005	0.0001	0.0005	0.0079	
M-07-44-168	0.00025	0.15	0.46975	0.002225	0.392	0.00003775	0.025	0.17	0.392	0.000005	0.00005	0.005	0.00010125	0.0005	0.007775	
M-07-44-169	0.00025	0.15	0.4705	0.00222	0.395	0.0000385	0.025	0.172	0.395	0.000005	0.00005	0.005	0.0001025	0.0005	0.00765	
M-07-44-170	0.00025	0.15	0.47125	0.002215	0.398	0.00003925	0.025	0.174	0.398	0.000005	0.00005	0.005	0.00010375	0.0005	0.007525	
M-07-44-171	0.00025	0.15	0.472	0.00221	0.401	0.00004	0.025	0.176	0.401	0.000005	0.00005	0.005	0.000105	0.0005	0.0074	
M-07-44-172	0.00025	0.15	0.4815	0.0022425	0.40925	0.00003625	0.038	0.1815	0.40925	0.000005	0.00005	0.005	0.00011375	0.0005	0.007625	
M-07-44-173	0.00025	0.15	0.491	0.002275	0.4175	0.0000325	0.051	0.187	0.4175	0.000005	0.00005	0.005	0.0001225	0.0005	0.00785	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-07-44-174		174	22-Jun-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	405	82	173	7.7	4.20	22.18	56.63	
M-07-44-175		175	29-Jun-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	450	83	183	7.73	2.30	22.80	57.90	
M-07-44-176		176	6-Jul-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	425	84	173	7.74	2.98	22.58	58.48	
M-07-44-177		177	13-Jul-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	430	85	176	7.7	3.65	22.35	59.05	
M-07-44-178		178	20-Jul-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	425	85	172	7.63	4.33	22.13	59.63	
M-07-44-179		179	27-Jul-12	Mitchell	BELOW MTF	UP Hazelton	VATF	IARG	0	0	0			Water	500	435	86	183	7.71	5.00	21.90	60.20	
																	82.338125	173.1	7.693	5.4625	21.685	56.595	#N/A
NM-05-03 Monzonite																							
NM-05-03-0		0	20-Feb-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	750	670	30	94.9	7.86	2.00	21.47	14.84	
NM-05-03-1		1	27-Feb-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	22	67.1	8.29	1.10	19.77	9.28	
NM-05-03-2		2	6-Mar-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	20	54.4	8.01	1.40	19.37	6.00	
NM-05-03-3		3	13-Mar-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	440	19	47.7	8.01	2.10	19.07	4.52	
NM-05-03-4		4	20-Mar-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	460	20	48.2	7.99	1.40	19.27	4.43	
NM-05-03-5		5	27-Mar-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	500	21	48.1	8	1.20	20.07	3.73	
NM-05-03-6		6	3-Apr-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	485	22	48.8	7.98	1.70	20.97	2.65	
NM-05-03-7		7	10-Apr-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	480	22	49.5	7.76	3.60	22.17	2.82	
NM-05-03-8		8	17-Apr-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	495	22	49.5	7.98	1.70	22.27	2.55	
NM-05-03-9		9	24-Apr-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	450	22	48.2	7.99	3.20	22.37	2.54	
NM-05-03-10		10	1-May-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	480	24	51.2	8.13	3.30	23.67	2.50	
NM-05-03-11		11	8-May-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	490	23	48.3	8.08	2.20	20.17	2.47	
NM-05-03-12		12	15-May-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	495	23	48.7	7.92	1.50	21.87	2.33	
NM-05-03-13		13	22-May-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	23	48.3	7.96	2.60	22.27	2.48	
NM-05-03-14		14	29-May-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	495	22	48.4	7.92	1.30	23.17	1.99	
NM-05-03-15		15	5-Jun-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	480	21	45.5	7.92	3.00	20.97	2.07	
NM-05-03-16		16	12-Jun-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	500	21	43.4	7.96	0.50	20.57	1.67	
NM-05-03-17		17	19-Jun-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	470	21	44.3	8.15	1.50	20.47	1.67	
NM-05-03-18		18	26-Jun-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	21	42.7	7.92	1.40	21.47	1.71	
NM-05-03-19		19	3-Jul-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	460	21	44.3	7.98	3.10	23.07	1.96	
NM-05-03-20		20	10-Jul-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	470	25	54	8	2.00	25.37	1.70	
NM-05-03-21		21	17-Jul-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	485	25	52.8	7.89	4.10	24.57	1.52	
NM-05-03-22		22	24-Jul-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	490	23	48.5	7.88	4.50	23.27	1.72	
NM-05-03-23		23	31-Jul-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	25	52.9	7.73	1.40	25.37	1.67	
NM-05-03-24		24	7-Aug-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	480	23	46.3	7.85	1.80	22.07	1.39	
NM-05-03-25		25	14-Aug-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	480	22	44.9	7.95	2.40	22.17	1.57	
NM-05-03-26		26	21-Aug-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	480	24	50.4	7.96	1.10	24.87	1.65	
NM-05-03-27		27	28-Aug-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	24	47.2	7.94	3.60	23.67	1.40	
NM-05-03-28		28	4-Sep-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	490	24	45.7	7.85	2.60	23.07	1.53	
NM-05-03-29		29	11-Sep-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	480	24	46.5	7.83	3.10	22.87	1.45	
NM-05-03-30		30	18-Sep-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	485	23	46.1	7.86	2.00	23.47	1.28	
NM-05-03-31		31	25-Sep-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	24	47.5	8.01	2.00	25.37	1.61	
NM-05-03-32		32	2-Oct-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	500	24	47.3	7.81	2.60	24.07	1.31	
NM-05-03-33		33	9-Oct-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	500	26	52.6	7.95	5.50	26.07	1.33	
NM-05-03-34		34	16-Oct-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	24	50.2	7.86	3.00	24.77	1.39	
NM-05-03-35		35	23-Oct-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	470	26	50	7.9	2.50	26.07	1.16	
NM-05-03-36		36	30-Oct-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	490	23	46.4	7.94	3.70	21.87	1.48	
NM-05-03-37		37	6-Nov-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	26	51.5	8.05	2.00	25.77	1.60	
NM-05-03-38		38	13-Nov-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	500	26	50.9	7.87	4.90	24.37	1.36	
NM-05-03-39		39	20-Nov-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	490	25	50.8	7.76	1.40	24.67	1.44	
NM-05-03-40		40	27-Nov-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	23	48.1	7.94	3.70	21.87	1.49	
NM-05-03-41		41	4-Dec-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	465	22	48.9	7.77	2.70	22.37	1.16	
NM-05-03-42		42	11-Dec-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	430	26	54	7.92	2.50	26.17	1.20	
NM-05-03-43		43	18-Dec-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	495	24	48.9	7.83	3.20	22.97	1.48	
NM-05-03-44		44	24-Dec-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	23	49.6	7.83	4.30	23.57	1.59	
NM-05-03-45		45	31-Dec-09	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	430	25	52	7.81	2.20	23.87	1.53	
NM-05-03-46		46	8-Jan-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	425	23	48.5	7.69	5.80	22.37	1.46	
NM-05-03-47		47	15-Jan-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	435	22	46	7.86	3.00	21.77	1.57	
NM-05-03-48		48	22-Jan-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	445	21	44.5	7.78	4.90	21.97	1.31	
NM-05-03-49		49	29-Jan-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	425	23	49.3	7.74	4.10	22.77	1.35	
NM-05-03-50		50	5-Feb-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	455	21	45.2	7.83	5.30	20.27	1.30	
NM-05-03-51		51	12-Feb-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	425	30	59	8.04	4.00	28.47	1.58	
NM-05-03-52		52	19-Feb-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	440	26	53	7.94	3.20	26.07	1.40	
NM-05-03-53		53	26-Feb-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	490	21	47.1	7.84	3.40	20.37	1.32	
NM-05-03-54		54	5-Mar-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	470	22	43.4	8.06	3.40	21.07	1.32	
NM-05-03-55		55	12-Mar-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	445	21	43	8.05	6.30	20.87	1.28	
NM-05-03-56		56	19-Mar-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	465	21	43.2	7.88	0.50	20.97	1.29	
NM-05-03-57		57	26-Mar-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	465	21	43.7	7.96	4.80	21.37	1.34	
NM-05-03-58		58	2-Apr-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	470	20	40.7	8	2.90	20.47	1.96	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-07-44-174	0.01	0.0163	0.20225	0.006845	0.02455	0.00005	0.00025	0.005	0.00039875	32.275	0.00025	0.0001425	0.0033	0.015	0.00006975	0.00025	0.384	0.37875	0.000005	0.00187
M-07-44-175	0.01	0.0155	0.201	0.00677	0.0248	0.00005	0.00025	0.005	0.000408	32.7	0.00025	0.00014	0.00335	0.015	0.000067	0.00025	0.398	0.383	0.000005	0.00183
M-07-44-176	0.01	0.016475	0.194	0.0066825	0.024325	0.00005	0.00025	0.005	0.00039875	32.925	0.00025	0.00014	0.0031975	0.015	0.000064	0.00025	0.40125	0.378	0.000005	0.0017825
M-07-44-177	0.01	0.01745	0.187	0.006595	0.02385	0.00005	0.00025	0.005	0.0003895	33.15	0.00025	0.00014	0.003045	0.015	0.000061	0.00025	0.4045	0.373	0.000005	0.001735
M-07-44-178	0.01	0.018425	0.18	0.0065075	0.023375	0.00005	0.00025	0.005	0.00038025	33.375	0.00025	0.00014	0.0028925	0.015	0.000058	0.00025	0.40775	0.368	0.000005	0.0016875
M-07-44-179	0.01	0.0194	0.173	0.00642	0.0229	0.00005	0.00025	0.005	0.000371	33.6	0.00025	0.00014	0.00274	0.015	0.000055	0.00025	0.411	0.363	0.000005	0.00164
	0.01	0.017575	0.196925	0.006788	0.0238825	0.00005	0.00025	0.005	0.00038505	32.31	0.00025	0.00014325	0.00311825	0.017925	0.00006755	0.00025	0.38125	0.3712	0.000005	0.00185225
NM-05-03 Monzonite																				
NM-05-03-0	0.13	0.044429	0.000512	0.000556	0.133152	0.002502	0.002502	0.050048	0.000250	11.257524	0.002502	0.000500	0.002633	0.030143	0.000250	0.005024	0.376552	0.071048	0.000500	0.008364
NM-05-03-1	0.16	0.103429	0.000512	0.001156	0.121152	0.002502	0.002502	0.050048	0.000250	8.507524	0.002502	0.000500	0.002833	0.015143	0.000250	0.005024	0.273552	0.046748	0.000500	0.007604
NM-05-03-2	0.12	0.098429	0.000512	0.001256	0.119152	0.002502	0.002502	0.050048	0.000250	7.827524	0.002502	0.000500	0.002033	0.015143	0.000250	0.005024	0.205552	0.024748	0.000500	0.005684
NM-05-03-3	0.07	0.162429	0.000512	0.001356	0.170152	0.002502	0.002502	0.050048	0.000250	7.447524	0.002502	0.000500	0.002833	0.015143	0.000250	0.005024	0.178552	0.018748	0.000500	0.003694
NM-05-03-4	0.06	0.119429	0.000512	0.001456	0.131152	0.002502	0.002502	0.050048	0.000250	7.787524	0.002502	0.000500	0.001733	0.015143	0.000250	0.005024	0.172552	0.016048	0.000500	0.003514
NM-05-03-5	0.05	0.136429	0.000512	0.001356	0.133152	0.002502	0.002502	0.050048	0.000250	8.057524	0.002502	0.000500	0.002733	0.015143	0.000250	0.005024	0.163552	0.018548	0.000500	0.002734
NM-05-03-6	0.03	0.135429	0.000512	0.001356	0.181152	0.002502	0.002502	0.050048	0.000250	8.457524	0.002502	0.000500	0.001933	0.015143	0.000250	0.005024	0.182552	0.028048	0.000500	0.001824
NM-05-03-7	0.03	0.128429	0.000512	0.001056	0.163152	0.002502	0.002502	0.050048	0.000250	8.517524	0.002502	0.000500	0.002733	0.015143	0.000250	0.005024	0.165552	0.031148	0.000500	0.001404
NM-05-03-8	0.03	0.139429	0.000512	0.000556	0.178152	0.002502	0.002502	0.050048	0.000250	8.607524	0.002502	0.000500	0.002833	0.015143	0.000250	0.005024	0.147552	0.027548	0.000500	0.001304
NM-05-03-9	0.01	0.165429	0.000512	0.001056	0.233152	0.002502	0.002502	0.050048	0.000250	8.597524	0.002502	0.000500	0.004333	0.015143	0.000250	0.005024	0.141552	0.036848	0.000500	0.001194
NM-05-03-10	0.01	0.117429	0.000512	0.000556	0.192152	0.002502	0.002502	0.050048	0.000250	9.197524	0.002502	0.000500	0.002333	0.015143	0.000250	0.005024	0.129552	0.034148	0.000500	0.001254
NM-05-03-11	0.02	0.119429	0.000512	0.000556	0.160152	0.002502	0.002502	0.050048	0.000250	8.987524	0.002502	0.000500	0.003633	0.015143	0.000250	0.005024	0.115552	0.031348	0.000500	0.001054
NM-05-03-12	0.01	0.142429	0.000512	0.000556	0.223152	0.002502	0.002502	0.050048	0.000250	8.937524	0.002502	0.000500	0.004033	0.015143	0.000250	0.005024	0.111552	0.030448	0.000500	0.000894
NM-05-03-13	0.01	0.129429	0.000512	0.000556	0.193152	0.002502	0.002502	0.050048	0.000250	8.877524	0.002502	0.000500	0.002633	0.015143	0.000250	0.005024	0.100552	0.026948	0.000500	0.000874
NM-05-03-14	0.01	0.137429	0.000512	0.000556	0.209152	0.002502	0.002502	0.050048	0.000250	8.717524	0.002502	0.000500	0.003533	0.015143	0.000250	0.005024	0.103552	0.027848	0.001700	0.000774
NM-05-03-15	0.01	0.138429	0.000512	0.000556	0.185152	0.002502	0.002502	0.050048	0.000250	8.377524	0.002502	0.000500	0.003133	0.015143	0.000250	0.005024	0.083552	0.025348	0.000500	0.000654
NM-05-03-16	0.01	0.137429	0.000512	0.000556	0.195152	0.002502	0.002502	0.050048	0.000250	8.197524	0.002502	0.000500	0.002633	0.015143	0.000250	0.005024	0.087552	0.025848	0.000500	0.000674
NM-05-03-17	0.01	0.157429	0.000512	0.000556	0.180152	0.002502	0.002502	0.050048	0.000250	8.417524	0.002502	0.000500	0.002503	0.015143	0.000250	0.005024	0.082552	0.027448	0.000500	0.000574
NM-05-03-18	0.01	0.145429	0.000512	0.000556	0.189152	0.002502	0.002502	0.050048	0.000250	8.107524	0.002502	0.000500	0.002533	0.015143	0.000250	0.005024	0.074552	0.026848	0.000500	0.000254
NM-05-03-19	0.01	0.166429	0.000512	0.000556	0.211152	0.002502	0.002502	0.050048	0.000250	8.317524	0.002502	0.000500	0.003133	0.015143	0.000250	0.005024	0.083552	0.032148	0.000500	0.000254
NM-05-03-20	0.01	0.173429	0.000512	0.000556	0.268152	0.002502	0.002502	0.050048	0.000250	9.997524	0.002502	0.000500	0.004033	0.015143	0.000250	0.005024	0.081552	0.049648	0.000500	0.000254
NM-05-03-21	0.01	0.182429	0.000512	0.000556	0.293152	0.002502	0.002502	0.050048	0.000250	9.887524	0.002502	0.000500	0.005033	0.015143	0.000250	0.005024	0.079552	0.062048	0.000500	0.000254
NM-05-03-22	0.01	0.166429	0.000512	0.000556	0.258152	0.002502	0.002502	0.050048	0.000250	9.257524	0.002502	0.000500	0.004033	0.015143	0.000250	0.005024	0.069552	0.042548	0.000500	0.000254
NM-05-03-23	0.01	0.207429	0.000512	0.000556	0.288152	0.002502	0.002502	0.050048	0.000250	10.037524	0.002502	0.000500	0.003633	0.015143	0.000250	0.005024	0.077552	0.066048	0.000500	0.000254
NM-05-03-24	0.01	0.201429	0.000512	0.000556	0.235152	0.002502	0.002502	0.050048	0.000250	8.917524	0.002502	0.000500	0.003633	0.015143	0.000250	0.005024	0.072552	0.039448	0.000500	0.000254
NM-05-03-25	0.01	0.192429	0.000512	0.000556	0.243152	0.002502	0.002502	0.050048	0.000250	8.877524	0.002502	0.000500	0.004633	0.015143	0.000250	0.005024	0.062552	0.038148	0.000500	0.000254
NM-05-03-26	0.01	0.184429	0.000512	0.000556	0.259152	0.002502	0.002502	0.050048	0.000250	9.597524	0.002502	0.000500	0.004433	0.015143	0.000250	0.005024	0.067552	0.053848	0.000500	0.000254
NM-05-03-27	0.01	0.202429	0.000512	0.000556	0.277152	0.002502	0.002502	0.050048	0.000250	9.387524	0.002502	0.000500	0.006533	0.015143	0.000250	0.005024	0.067552	0.057748	0.000500	0.000254
NM-05-03-28	0.01	0.193429	0.000512	0.000556	0.284152	0.002502	0.002502	0.050048	0.000250	9.387524	0.002502	0.000500	0.003933	0.015143	0.000250	0.005024	0.060552	0.048948	0.000500	0.000254
NM-05-03-29	0.01	0.194429	0.000512	0.000556	0.263152	0.002502	0.002502	0.050048	0.000250	9.337524	0.002502	0.000500	0.003833	0.015143	0.000250	0.005024	0.061552	0.044948	0.000500	0.000254
NM-05-03-30	0.01	0.185429	0.000512	0.000556	0.265152	0.002502	0.002502	0.050048	0.000250	9.197524	0.002502	0.000500	0.004833	0.015143	0.000250	0.005024	0.054552	0.046548	0.000500	0.000254
NM-05-03-31	0.01	0.188429	0.000512	0.000556	0.282152	0.002502	0.002502	0.050048	0.000250	9.497524	0.002502	0.000500	0.006833	0.015143	0.000250	0.005024	0.064552	0.049948	0.000500	0.000254
NM-05-03-32	0.01	0.184429	0.000512	0.000556	0.292152	0.002502	0.002502	0.050048	0.000250	9.437524	0.002502	0.000500	0.003833	0.015143	0.000250	0.005024	0.065552	0.049648	0.000500	0.000254
NM-05-03-33	0.01	0.170429	0.000512	0.000556	0.313152	0.002502	0.002502	0.050048	0.000250	10.257524	0.002502	0.000500	0.003533	0.015143	0.000250	0.005024	0.061552	0.056448	0.000500	0.000254
NM-05-03-34	0.01	0.182429	0.000512	0.000556	0.281152	0.002502	0.002502	0.050048	0.000250	9.417524	0.002502	0.000500	0.004033	0.015143	0.000250	0.005024	0.055552	0.053248	0.000500	0.000254
NM-05-03-35	0.01	0.142429	0.000512	0.000556	0.359152	0.002502	0.002502	0.050048	0.000250	10.257524	0.002502	0.000500	0.004033	0.015143	0.000250	0.005024	0.026552	0.051248	0.000500	0.000254
NM-05-03-36	0.01	0.169429	0.000512	0.000556	0.315152	0.002502	0.002502	0.050048	0.000250	9.077524	0.002502	0.000500	0.003533	0.015143	0.000250	0.005024	0.053552	0.044448	0.000500	0.000254
NM-05-03-37	0.01	0.193429	0.000512	0.000556	0.332152	0.002502	0.002502	0.050048	0.000250	10.257524	0.002502	0.000500	0.004633	0.015143	0.000250	0.005024	0.054552	0.048848	0.000500	0.000254
NM-05-03-38	0.01	0.175429	0.000512	0.000556	0.320152	0.002502	0.002502	0.050048	0.000250	10.357524	0.002502	0.000500	0.003533	0.015143	0.000250	0.005024	0.056552	0.042548	0.000500	0.000254
NM-05-03-39	0.01	0.186429	0.000512	0.000556	0.298152	0.002502	0.002502	0.050048	0.000250	9.787524	0.002502	0.000500	0.003233	0.015143	0.000250	0.005024	0.052552	0.049348	0.000500	0.000254
NM-05-03-40	0.01	0.206429	0.000512	0.000556	0.265152	0.002502	0.002502	0.050048	0.000250	9.327524	0.002502	0.000500	0.004333	0.015143	0.000250	0.005024	0.026552	0.043048	0.000500	0.000254
NM-05-03-41	0.01	0.224429	0.000512	0.000556	0.296152	0.002502	0.002502	0.050048	0.000250	8.947524	0.002502	0.000500	0.004033	0.015143	0.000250	0.005024	0.026552	0.048248	0.000500	0.000254
NM-05-03-42	0.01	0.195429	0.000512	0.000556	0.316152	0.002502	0.002502	0.050048	0.000250	10.257524	0.002502	0.000500	0.003933	0.035143	0.000250	0.005024	0.026552	0.070348	0.000500	0.000254
NM-05-03-43	0.01	0.204429	0.000512	0.000556	0.326152	0.002502	0.002502	0.050048	0.000250	9.357524	0.002502	0.000500	0.003733	0.015143	0.000250	0.005024	0.026552	0.041148	0.000500	0.000254
NM-05-03-44	0.01	0.240429	0.000512	0.000556	0.336152	0.002502	0.002502	0.050048	0.000250	9.347524	0.002502	0.000500	0.004333	0.015143	0.000250	0.005024	0.026552	0.044548	0.000500	0.000254
NM-05-03-45	0.01	0.272429	0.000512	0.000556	0.313152	0.002502	0.002502	0.050048	0.000250	9.817524	0.002502	0.000500	0.004833	0.015143	0.000250	0.005024	0.026552	0.056848	0.000500	0.000254
NM-05-03-46	0.01	0.257429	0.000512	0.000556	0.307152	0.002502	0.002502	0.050048	0.000250	8.987524	0.002502	0.000500	0.003833	0.015143	0.000250	0.005024	0.026552	0.042448	0.000500	0.000254
NM-05-03-47	0.01	0.236429	0.000512	0.000556	0.285152	0.002502	0.002502	0.050048	0.000250	8.557524	0.002502	0.000500	0.003233	0.015143	0.000250	0.005024	0.026552	0.030548	0.000500	0.000254
NM-05-03-48	0.01	0.238429	0.000512	0.000556	0.285152	0.002502	0.002502	0.050048	0.000250	8.427524	0.002502	0.000500	0.003033	0.015143	0.000250	0.005024	0.026552	0.040548	0.000500	0.000254
NM-05-03-49	0.01	0.213429	0.000512	0.000556	0.271152	0.002502	0.002502	0.050048	0.000250	9.227524	0.002502	0.000500	0.003333	0.015143	0.000250	0.005024	0.026552	0.048848	0.000500	0.000254
NM-05-03-50	0.01	0.242429	0.000512	0.000556	0.303152	0.002502	0.002502	0.050048	0.000250	8.287524	0.002502	0.000500	0.002833	0.015143	0.000250	0.005024	0.026552	0.035348	0.000500	0.000254
NM-05-03-51	0.01	0.254429	0.000512	0.000556	0.408152	0.002502	0.002502	0.050048	0.000250	11.957524	0.002502	0.000500	0.004533	0.015143	0.000250	0.005024	0.056552	0.072748	0.000500	0.000254
NM-05-03-52	0.01	0.193429	0.000512	0.000556	0.343152	0.002502	0.002502	0.050048	0.000250	10.257524	0.002502	0.000500	0.003233	0.015143	0.000250	0.005024	0.054552	0.067848	0.000500	0.000254
NM-05-03-53	0.01	0.206429	0.000512	0.000556	0.291152	0.002502	0.002502	0.050048	0.000250	8.317524	0.002502	0.000500	0.003033	0.015143	0.000250	0.005024	0.026552	0.032948	0.000500	0.000254
NM-05-03-54	0.01	0.260429	0.000512	0.001156	0.294152	0.002502	0.002502	0.050048	0.000250	8.557524	0.002502	0.000500	0.004033	0.015143	0.000250	0.005024	0.051552	0.041348	0.000500	0.000254
NM-05-03-55	0.01	0.221429	0.000512	0.000556	0.267152	0.002502	0.002502	0.050048	0.000250	8.387524	0.002502	0.000500	0.003033	0.015143	0.000250	0.005024	0.026552	0.039848	0.000500	0.000254
NM-05-03-56	0.01	0.202429	0.000512	0.000556	0.283152	0.002502	0.002502	0.050048	0.000250	8.457524	0.002502	0.000500	0.002633	0.015143	0.000250	0.005024	0.026552	0.042348	0.000500	0.000254
NM-05-03-57	0.01	0.226429	0.000512	0.000556	0.296152	0.002502	0.002502	0.050048	0.000250	8.517524	0.002502	0.000500	0.003133	0.015143	0.000250	0.005024	0.026552	0.038048	0.000500	0.000254
NM-05-03-58	0.01	0.234429	0.000512	0.000556	0.263152	0.002502	0.002502	0.050048	0.000250	7.967524	0.002502	0.000500	0.002733	0.015143	0.000250	0.005024	0.026552	0.032448	0.000500	0.000254

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-07-44-174	0.00025	0.15	0.5005	0.0023075	0.42575	0.00002875	0.064	0.1925	0.42575	0.000005	0.00005	0.005	0.00013125	0.0005	0.008075	
M-07-44-175	0.00025	0.15	0.51	0.00234	0.434	0.000025	0.077	0.198	0.434	0.000005	0.00005	0.005	0.00014	0.0005	0.0083	
M-07-44-176	0.00025	0.15	0.509	0.0023425	0.42975	0.00003075	0.064	0.197	0.42975	0.000005	0.00005	0.005	0.00013375	0.0005	0.0082	
M-07-44-177	0.00025	0.15	0.508	0.002345	0.4255	0.0000365	0.051	0.196	0.4255	0.000005	0.00005	0.005	0.0001275	0.0005	0.0081	
M-07-44-178	0.00025	0.15	0.507	0.0023475	0.42125	0.00004225	0.038	0.195	0.42125	0.000005	0.00005	0.005	0.00012125	0.0005	0.008	
M-07-44-179	0.00025	0.15	0.506	0.00235	0.417	0.000048	0.025	0.194	0.417	0.000005	0.00005	0.005	0.000115	0.0005	0.0079	
	0.00025	0.15	0.495625	0.0022975	0.4179	0.000035925	0.0458	0.1891	0.4179	0.000005	0.00005	0.005	0.000121375	0.0005	0.0078975	#REF!
NM-05-03 Monzonite																
NM-05-03-0	0.002502	0.151429	4.325429	0.005010	1.058762	0.000050	3.814571	0.291793	0	0.000500	0.000500	0.005048	0.000583	0.005319	0.002514	
NM-05-03-1	0.002502	0.151429	2.825429	0.005010	1.508762	0.000050	1.914571	0.235793	0	0.000500	0.000500	0.005048	0.000953	0.005319	0.002514	
NM-05-03-2	0.002502	0.151429	2.125429	0.005010	1.588762	0.000050	1.124571	0.212793	0	0.000500	0.000500	0.005048	0.001103	0.005319	0.002514	
NM-05-03-3	0.002502	0.151429	1.785429	0.005010	1.538762	0.000050	0.774571	0.186793	0	0.000500	0.000500	0.005048	0.001083	0.005319	0.002514	
NM-05-03-4	0.002502	0.151429	1.495429	0.005010	1.598762	0.000050	0.644571	0.179793	0	0.000500	0.000500	0.005048	0.001643	0.005319	0.002514	
NM-05-03-5	0.002502	0.151429	1.325429	0.005010	1.618762	0.000050	0.534571	0.159793	0	0.000500	0.000500	0.005048	0.001823	0.005319	0.002514	
NM-05-03-6	0.002502	0.151429	1.325429	0.005010	1.398762	0.000050	0.284571	0.192793	0	0.000500	0.000500	0.005048	0.002063	0.005319	0.002514	
NM-05-03-7	0.002502	0.151429	1.185429	0.005010	1.408762	0.000050	0.284571	0.172793	0	0.000500	0.000500	0.005048	0.002293	0.005319	0.002514	
NM-05-03-8	0.002502	0.151429	1.005429	0.005010	1.498762	0.000050	0.284571	0.176793	0	0.000500	0.000500	0.005048	0.002353	0.005319	0.002514	
NM-05-03-9	0.002502	0.151429	0.995429	0.005010	1.428762	0.000050	0.284571	0.172793	0	0.000500	0.000500	0.005048	0.002073	0.005319	0.002514	
NM-05-03-10	0.002502	0.151429	0.875429	0.005010	1.448762	0.000050	0.284571	0.155793	0	0.000500	0.000500	0.005048	0.002983	0.005319	0.002514	
NM-05-03-11	0.002502	0.151429	0.795429	0.005010	1.378762	0.000050	0.284571	0.135793	0	0.000500	0.000500	0.005048	0.002703	0.005319	0.002514	
NM-05-03-12	0.002502	0.151429	0.795429	0.005010	1.348762	0.000050	0.284571	0.159793	0	0.000500	0.000500	0.005048	0.002533	0.005319	0.002514	
NM-05-03-13	0.002502	0.151429	0.705429	0.005010	1.398762	0.000050	0.284571	0.146793	0	0.000500	0.000500	0.005048	0.003123	0.005319	0.002514	
NM-05-03-14	0.002502	0.151429	0.315429	0.005010	1.288762	0.000050	0.284571	0.142793	0	0.000500	0.000500	0.005048	0.002623	0.005319	0.002514	
NM-05-03-15	0.002502	0.151429	0.655429	0.005010	1.268762	0.000050	0.284571	0.116793	0	0.000500	0.000500	0.005048	0.002393	0.005319	0.002514	
NM-05-03-16	0.002502	0.151429	0.645429	0.005010	1.138762	0.000050	0.284571	0.116793	0	0.000500	0.000500	0.005048	0.002653	0.005319	0.002514	
NM-05-03-17	0.002502	0.151429	0.615429	0.005010	1.288762	0.000050	0.284571	0.103793	0	0.000500	0.000500	0.005048	0.002753	0.005319	0.002514	
NM-05-03-18	0.002502	0.151429	0.315429	0.005010	1.128762	0.000050	0.284571	0.094493	0	0.000500	0.000500	0.005048	0.002383	0.005319	0.002514	
NM-05-03-19	0.002502	0.151429	0.615429	0.005010	1.208762	0.000050	0.284571	0.112793	0	0.000500	0.000500	0.005048	0.002353	0.005319	0.002514	
NM-05-03-20	0.002502	0.151429	0.585429	0.005010	1.338762	0.000050	0.284571	0.104793	0	0.000500	0.000500	0.005048	0.002513	0.005319	0.002514	
NM-05-03-21	0.002502	0.151429	0.615429	0.005010	1.258762	0.000050	0.284571	0.114793	0	0.000500	0.000500	0.005048	0.002123	0.005319	0.002514	
NM-05-03-22	0.002502	0.151429	0.315429	0.005010	1.328762	0.000050	0.284571	0.103793	0	0.000500	0.000500	0.005048	0.002083	0.005319	0.002514	
NM-05-03-23	0.002502	0.151429	0.595429	0.005010	1.378762	0.000050	0.284571	0.113793	0	0.000500	0.000500	0.005048	0.002333	0.005319	0.002514	
NM-05-03-24	0.002502	0.151429	0.315429	0.005010	1.218762	0.000050	0.284571	0.091093	0	0.000500	0.000500	0.005048	0.002143	0.005319	0.002514	
NM-05-03-25	0.002502	0.151429	0.315429	0.005010	1.248762	0.000050	0.284571	0.088093	0	0.000500	0.000500	0.005048	0.002103	0.005319	0.002514	
NM-05-03-26	0.002502	0.151429	0.315429	0.005010	1.268762	0.000050	0.284571	0.092693	0	0.000500	0.000500	0.005048	0.002093	0.005319	0.002514	
NM-05-03-27	0.002502	0.151429	0.315429	0.005010	1.178762	0.000050	0.284571	0.094793	0	0.000500	0.000500	0.005048	0.002153	0.005319	0.002514	
NM-05-03-28	0.002502	0.151429	0.315429	0.005010	1.198762	0.000050	0.284571	0.094793	0	0.000500	0.000500	0.005048	0.001873	0.005319	0.002514	
NM-05-03-29	0.002502	0.151429	0.315429	0.005010	1.328762	0.000050	0.284571	0.081493	0	0.000500	0.000500	0.005048	0.001903	0.005319	0.002514	
NM-05-03-30	0.002502	0.151429	0.315429	0.005010	1.168762	0.000050	0.284571	0.073993	0	0.000500	0.000500	0.005048	0.001643	0.005319	0.002514	
NM-05-03-31	0.002502	0.151429	0.315429	0.005010	1.278762	0.000050	0.284571	0.082593	0	0.000500	0.000500	0.005048	0.001833	0.005319	0.002514	
NM-05-03-32	0.002502	0.151429	0.315429	0.005010	1.258762	0.000050	0.284571	0.082793	0	0.000500	0.000500	0.005048	0.001923	0.005319	0.002514	
NM-05-03-33	0.002502	0.151429	0.315429	0.005010	1.268762	0.000050	0.284571	0.087693	0	0.000500	0.000500	0.005048	0.001913	0.005319	0.002514	
NM-05-03-34	0.002502	0.151429	0.315429	0.005010	1.178762	0.000050	0.284571	0.075493	0	0.000500	0.000500	0.005048	0.001663	0.005319	0.002514	
NM-05-03-35	0.002502	0.151429	0.315429	0.005010	1.148762	0.000050	0.284571	0.086393	0	0.000500	0.000500	0.005048	0.001833	0.005319	0.002514	
NM-05-03-36	0.002502	0.151429	0.315429	0.005010	1.158762	0.000050	0.284571	0.079493	0	0.000500	0.000500	0.005048	0.001733	0.005319	0.002514	
NM-05-03-37	0.002502	0.151429	0.315429	0.005010	1.418762	0.000050	0.284571	0.082493	0	0.000500	0.000500	0.005048	0.001733	0.005319	0.002514	
NM-05-03-38	0.002502	0.151429	0.315429	0.005010	1.288762	0.000050	0.284571	0.080293	0	0.000500	0.000500	0.005048	0.001593	0.005319	0.002514	
NM-05-03-39	0.002502	0.151429	0.315429	0.005010	1.168762	0.000050	0.284571	0.072993	0	0.000500	0.000500	0.005048	0.001713	0.005319	0.002514	
NM-05-03-40	0.002502	0.151429	0.315429	0.005010	1.208762	0.000050	0.284571	0.066093	0	0.000500	0.000500	0.005048	0.001733	0.005319	0.002514	
NM-05-03-41	0.002502	0.151429	0.315429	0.005010	1.158762	0.000050	0.284571	0.068893	0	0.000500	0.000500	0.005048	0.001573	0.005319	0.002514	
NM-05-03-42	0.002502	0.151429	0.315429	0.005010	1.188762	0.000050	0.284571	0.076193	0	0.000500	0.000500	0.005048	0.001473	0.005319	0.002514	
NM-05-03-43	0.002502	0.151429	0.315429	0.005010	1.298762	0.000050	0.284571	0.070093	0	0.000500	0.000500	0.005048	0.001373	0.005319	0.002514	
NM-05-03-44	0.002502	0.151429	0.315429	0.005010	1.348762	0.000050	0.284571	0.073693	0	0.000500	0.000500	0.005048	0.001523	0.005319	0.002514	
NM-05-03-45	0.002502	0.151429	0.315429	0.005010	1.468762	0.000050	0.284571	0.070793	0	0.000500	0.000500	0.005048	0.001563	0.005319	0.002514	
NM-05-03-46	0.002502	0.151429	0.315429	0.005010	1.388762	0.000050	0.284571	0.069193	0	0.000500	0.000500	0.005048	0.001493	0.005319	0.002514	
NM-05-03-47	0.002502	0.151429	0.315429	0.005010	1.428762	0.000050	0.284571	0.064393	0	0.000500	0.000500	0.005048	0.001413	0.005319	0.002514	
NM-05-03-48	0.002502	0.151429	0.315429	0.005010	1.198762	0.000050	0.284571	0.060793	0	0.000500	0.000500	0.005048	0.001403	0.005319	0.002514	
NM-05-03-49	0.002502	0.151429	0.315429	0.005010	1.298762	0.000050	0.284571	0.060593	0	0.000500	0.000500	0.005048	0.001463	0.005319	0.002514	
NM-05-03-50	0.002502	0.151429	0.315429	0.005010	1.208762	0.000050	0.284571	0.063593	0	0.000500	0.000500	0.005048	0.001473	0.005319	0.002514	
NM-05-03-51	0.002502	0.151429	0.315429	0.005010	1.438762	0.000050	0.284571	0.081393	0	0.000500	0.000500	0.005048	0.001583	0.005319	0.002514	
NM-05-03-52	0.002502	0.151429	0.315429	0.005010	1.118762	0.000050	0.284571	0.071493	0	0.000500	0.000500	0.005048	0.001303	0.005319	0.002514	
NM-05-03-53	0.002502	0.151429	0.315429	0.005010	1.238762	0.000050	0.284571	0.061593	0	0.000500	0.000500	0.005048	0.001383	0.005319	0.002514	
NM-05-03-54	0.002502	0.151429	0.315429	0.005010	1.238762	0.000050	0.284571	0.063893	0	0.000500	0.000500	0.005048	0.001463	0.005319	0.002514	
NM-05-03-55	0.002502	0.151429	0.315429	0.005010	1.078762	0.000050	0.284571	0.055193	0	0.000500	0.000500	0.005048	0.001293	0.005319	0.002514	
NM-05-03-56	0.002502	0.151429	0.315429	0.005010	1.068762	0.000050	0.284571	0.058893	0	0.000500	0.000500	0.005048	0.001273	0.005319	0.002514	
NM-05-03-57	0.002502	0.151429	0.315429	0.005010	1.218762	0.000050	0.284571	0.058893	0	0.000500	0.000500	0.005048	0.001313	0.005319	0.002514	
NM-05-03-58	0.002502	0.151429	0.315429	0.005010	1.088762	0.000050	0.284571	0.054593	0	0.000500	0.000500	0.005048	0.001273	0.005319	0.002514	

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
NM-05-03-59		59	9-Apr-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	460	22	42.5	8.02	3.90	20.87	1.19	
NM-05-03-60		60	16-Apr-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	465	21	41.4	8.04	4.20	20.47	2.03	
NM-05-03-61		61	23-Apr-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	450	22	45	8.04	2.70	23.77	1.15	
NM-05-03-62		62	30-Apr-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	22	44.1	7.98	4.70	22.27	1.88	
NM-05-03-63		63	7-May-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	20	40	7.9	4.70	19.57	1.20	
NM-05-03-64		64	14-May-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	450	20	38.5	8.05	2.70	19.37	1.00	
NM-05-03-65		65	21-May-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	495	23	42.5	8.02	2.90	22.07	1.20	
NM-05-03-66		66	28-May-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	455	21	41.5	7.9	3.00	21.57	1.12	
NM-05-03-67		67	4-Jun-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	22	40.9	8.04	3.50	20.47	1.54	
NM-05-03-68		68	11-Jun-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	480	21	41	7.83	4.40	21.17	1.06	
NM-05-03-69		69	18-Jun-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	460	21	40.5	7.95	4.50	20.67	1.33	
NM-05-03-70		70	25-Jun-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	490	22	43.8	7.8	2.50	21.37	1.08	
NM-05-03-71		71	2-Jul-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	455	21	40.6	8	3.30	21.67	1.33	
NM-05-03-72		72	9-Jul-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	480	23	43.8	8.05	3.60	21.87	1.10	
NM-05-03-73		73	16-Jul-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	490	24	45.4	8.02	3.10	22.17	1.49	
NM-05-03-74		74	23-Jul-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	490	22	42.9	8.03	5.20	20.87	1.09	
NM-05-03-75		75	30-Jul-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	21	42.2	7.97	5.20	19.77	1.09	
NM-05-03-76		76	6-Aug-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	22	42.8	7.94	4.00	21.17	1.21	
NM-05-03-77		77	13-Aug-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	435	19	40.4	7.93	4.80	19.77	1.35	
NM-05-03-78		78	20-Aug-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	470	22	39.2	8	3.20	22.07	1.01	
NM-05-03-79		79	27-Aug-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	500	20	40.7	8.07	3.30	20.87	0.96	
NM-05-03-80		80	3-Sep-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	23	46	8.01	5.60	24.47	1.40	
NM-05-03-81		81	10-Sep-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	490	21	42.5	7.93	3.00	21.97	0.91	
NM-05-03-82		82	17-Sep-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	465	22	43	7.86	3.90	22.77	1.45	
NM-05-03-83		83	24-Sep-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	445	20	40.6	7.93	4.10	20.37	1.44	
NM-05-03-84		84	1-Oct-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	465	24	48.5	7.87	4.80	25.47	1.08	
NM-05-03-85		85	8-Oct-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	460	18	38.2	8	2.60	19.57	0.79	
NM-05-03-86		86	15-Oct-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	430	21	43.8	7.98	3.00	22.77	0.89	
NM-05-03-87		87	22-Oct-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	23	45.8	7.85	7.70	23.07	0.94	
NM-05-03-88		88	29-Oct-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	500	25	49	7.93	3.10	25.77	1.00	
NM-05-03-89		89	5-Nov-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	485	21	46.1	7.63	1.90	23.07	1.40	
NM-05-03-90		90	12-Nov-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	470	19	38	7.72	1.90	19.37	1.35	
NM-05-03-91		91	19-Nov-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	23	46.1	7.85	2.50	23.17	1.52	
NM-05-03-92		92	26-Nov-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	450	22	45	7.9	3.90	23.77	0.89	
NM-05-03-93		93	3-Dec-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	470	21	43.3	7.92	1.30	22.47	1.62	
NM-05-03-94		94	10-Dec-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	485	21	42.8	7.98	0.50	22.17	0.86	
NM-05-03-95		95	17-Dec-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	21	42.6	7.86	2.40	20.77	1.53	
NM-05-03-96		96	24-Dec-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	430	20	42.5	8.04	1.10	22.07	1.47	
NM-05-03-97		97	31-Dec-10	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	470	21	43	8.15	2.10	21.47	1.68	
NM-05-03-98		98	7-Jan-11	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	465	21	43.4	8.01	1.60	20.67	1.69	
NM-05-03-99		99	14-Jan-11	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	465	20	40.2	8.02	1.50	21.07	0.88	
NM-05-03-100		100	21-Jan-11	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	465	20	41	8.01	1.60	18.67	1.41	
NM-05-03-101		101	28-Jan-11	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	455	20	44.1	8.01	1.20	21.47	0.93	
NM-05-03-102		102	4-Feb-11	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	455	22	43.8	8.01	2.30	22.17	0.93	
NM-05-03-103		103	11-Feb-11	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	475	23	46.8	7.93	1.80	23.47	1.81	
NM-05-03-104		104	18-Feb-11	Mitchell	ABOVE MTF	Monzonite	0	KP	2	0	0			Water	500	470	21	42.6	7.9	1.20	20.57	1.85	
																	20.8126943	43	7.994	1.684762	21.236667	1.418952	#N/A
HC1 LP Hazelton																							
M-09-096 195.5-196.5	1	0	4-Feb-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	405	2	241	6.57	3.5	4.2	127	2.8
M-09-096 195.5-196.5	1	1	11-Feb-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	425	2	263	5.6	4.0	1.2	116	1.6
M-09-096 195.5-196.5	1	2	18-Feb-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	490	8	261	5.42	5.5	1.0	122	0.6
M-09-096 195.5-196.5	1	3	25-Feb-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	445	17	262	5.16	8.3	0.8	118	0.3
M-09-096 195.5-196.5	1	4	4-Mar-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	475	22	197	4.61	13.0	0.3	84	0.3
M-09-096 195.5-196.5	1	5	11-Mar-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	485	25	161	4.82	14.1	0.3	67	0.1
M-09-096 195.5-196.5	1	6	18-Mar-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	515	34	191	4.36	21.1	-1.2	78	0.1
M-09-096 195.5-196.5	1	7	25-Mar-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	470	26	134	4.78	17.2	0.5	56	0.1
M-09-096 195.5-196.5	1	8	1-Apr-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	480	28	151	4.36	20.8	-0.8	66	0.1
M-09-096 195.5-196.5	1	9	8-Apr-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	490	26	152	4.48	19.9	-1.3	61	0.1
M-09-096 195.5-196.5	1	10	15-Apr-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	495	27	162	4.21	23.3	#N/A	74	0.1
M-09-096 195.5-196.5	1	11	22-Apr-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	490	28	179	4.15	26.0	#N/A	72	0.1
M-09-096 195.5-196.5	1	12	29-Apr-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	470	30	214	3.72	15.0	#N/A	79	0.5
M-09-096 195.5-196.5	1	13	6-May-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	475	40	306	3.36	56.2	#N/A	119	0.1
M-09-096 195.5-196.5	1	14	13-May-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	480	41	397	3.15	75.8	#N/A	133	0.5
M-09-096 195.5-196.5	1	15	20-May-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	490	38	454	3	98.7	#N/A	135	0.5
M-09-096 195.5-196.5	1	16	27-May-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	485	36	504	2.96	145.1	#N/A	151	0.5
M-09-096 195.5-196.5	1	17	3-Jun-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	490	31	478	2.99	113.2	#N/A	134	0.5
M-09-096 195.5-196.5	1	18	10-Jun-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	485	28	497	2.95	123.3	#N/A	134	0.5

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
NM-05-03-59	0.01	0.229429	0.000512	0.000556	0.301152	0.002502	0.002502	0.050048	0.000250	8.617524	0.002502	0.000500	0.003433	0.015143	0.000250	0.005024	0.026552	0.040848	0.000500	0.000254
NM-05-03-60	0.01	0.212429	0.000512	0.000556	0.293152	0.002502	0.002502	0.050048	0.000250	8.157524	0.002502	0.000500	0.003233	0.015143	0.000250	0.005024	0.026552	0.040948	0.000500	0.000254
NM-05-03-61	0.01	0.217429	0.000512	0.000556	0.336152	0.002502	0.002502	0.050048	0.000250	8.937524	0.002502	0.000500	0.003333	0.015143	0.000250	0.005024	0.026552	0.049448	0.000500	0.000254
NM-05-03-62	0.01	0.215429	0.000512	0.000556	0.301152	0.002502	0.002502	0.050048	0.000250	8.577524	0.002502	0.000500	0.002633	0.015143	0.000250	0.005024	0.026552	0.040748	0.000500	0.000254
NM-05-03-63	0.01	0.234429	0.000512	0.000556	0.289152	0.002502	0.002502	0.050048	0.000250	8.017524	0.002502	0.000500	0.002733	0.015143	0.000250	0.005024	0.026552	0.029948	0.000500	0.000254
NM-05-03-64	0.01	0.233429	0.000512	0.000556	0.286152	0.002502	0.002502	0.050048	0.000250	8.067524	0.002502	0.000500	0.003733	0.015143	0.000250	0.005024	0.026552	0.025548	0.000500	0.000254
NM-05-03-65	0.01	0.193429	0.000512	0.000556	0.320152	0.002502	0.002502	0.050048	0.000250	9.057524	0.002502	0.000500	0.002633	0.015143	0.000250	0.005024	0.026552	0.039848	0.000500	0.000254
NM-05-03-66	0.01	0.230429	0.000512	0.000556	0.287152	0.002502	0.002502	0.050048	0.000250	8.387524	0.002502	0.000500	0.003433	0.015143	0.000250	0.005024	0.026552	0.027648	0.000500	0.000254
NM-05-03-67	0.01	0.226429	0.000512	0.000556	0.303152	0.002502	0.002502	0.050048	0.000250	8.677524	0.002502	0.000500	0.003233	0.015143	0.000250	0.005024	0.026552	0.035448	0.000500	0.000254
NM-05-03-68	0.01	0.205429	0.000512	0.000556	0.288152	0.002502	0.002502	0.050048	0.000250	8.457524	0.002502	0.000500	0.003233	0.015143	0.000250	0.005024	0.026552	0.026048	0.000500	0.000254
NM-05-03-69	0.01	0.216429	0.000512	0.000556	0.326152	0.002502	0.002502	0.050048	0.000250	8.287524	0.002502	0.000500	0.003333	0.015143	0.000250	0.005024	0.026552	0.036048	0.000500	0.000254
NM-05-03-70	0.01	0.208429	0.000512	0.000556	0.291152	0.002502	0.002502	0.050048	0.000250	8.557524	0.002502	0.000500	0.003233	0.015143	0.000250	0.005024	0.026552	0.036248	0.000500	0.000254
NM-05-03-71	0.01	0.244429	0.000512	0.000556	0.344152	0.002502	0.002502	0.050048	0.000250	8.547524	0.002502	0.000500	0.003833	0.015143	0.000250	0.005024	0.026552	0.037048	0.000500	0.000254
NM-05-03-72	0.01	0.215429	0.000512	0.000556	0.352152	0.002502	0.002502	0.050048	0.000250	9.117524	0.002502	0.000500	0.002833	0.015143	0.000250	0.005024	0.026552	0.037548	0.000500	0.000254
NM-05-03-73	0.01	0.230429	0.000512	0.000556	0.376152	0.002502	0.002502	0.050048	0.000250	9.507524	0.002502	0.000500	0.002733	0.015143	0.000250	0.005024	0.026552	0.033148	0.000500	0.000254
NM-05-03-74	0.01	0.243429	0.000512	0.000556	0.330152	0.002502	0.002502	0.050048	0.000250	8.847524	0.002502	0.000500	0.003133	0.015143	0.000250	0.005024	0.026552	0.031348	0.000500	0.000254
NM-05-03-75	0.01	0.256429	0.000512	0.000556	0.340152	0.002502	0.002502	0.050048	0.000250	8.327524	0.002502	0.000500	0.003873	0.015143	0.000250	0.005024	0.026552	0.036548	0.000500	0.000254
NM-05-03-76	0.01	0.224429	0.000512	0.000556	0.317152	0.002502	0.002502	0.050048	0.000250	8.717524	0.002502	0.000500	0.002833	0.015143	0.000250	0.005024	0.026552	0.038348	0.000500	0.000254
NM-05-03-77	0.01	0.260429	0.000512	0.000556	0.313152	0.002502	0.002502	0.050048	0.000250	7.727524	0.002502	0.000500	0.004033	0.015143	0.000250	0.005024	0.026552	0.035348	0.000500	0.000254
NM-05-03-78	0.01	0.199429	0.000512	0.000556	0.318152	0.002502	0.002502	0.050048	0.000250	8.687524	0.002502	0.000500	0.002633	0.015143	0.000250	0.005024	0.026552	0.037748	0.000500	0.000254
NM-05-03-79	0.01	0.194429	0.000512	0.000556	0.326152	0.002502	0.002502	0.050048	0.000250	8.037524	0.002502	0.000500	0.002733	0.015143	0.000250	0.005024	0.026552	0.034248	0.000500	0.000254
NM-05-03-80	0.01	0.190429	0.000512	0.000556	0.359152	0.002502	0.002502	0.050048	0.000250	9.297524	0.002502	0.000500	0.002933	0.015143	0.000250	0.005024	0.026552	0.043848	0.000500	0.000254
NM-05-03-81	0.01	0.205429	0.000192	0.000326	0.360152	0.000252	0.000252	0.005048	0.000023	8.457524	0.000252	0.000050	0.002833	0.015143	0.000025	0.002524	0.044652	0.039848	0.000005	0.000153
NM-05-03-82	0.01	0.202429	0.000182	0.000326	0.361152	0.000252	0.000252	0.005048	0.000020	8.747524	0.000252	0.000050	0.002683	0.015143	0.000025	0.002524	0.039352	0.044848	0.000005	0.000162
NM-05-03-83	0.01	0.267429	0.000202	0.000396	0.320152	0.000252	0.000252	0.005048	0.000020	7.917524	0.000252	0.000050	0.004063	0.015143	0.000054	0.002524	0.039452	0.038248	0.000005	0.000170
NM-05-03-84	0.01	0.205429	0.000212	0.000366	0.396152	0.000252	0.000252	0.005048	0.000028	9.637524	0.000252	0.000050	0.003033	0.015143	0.000025	0.002524	0.043552	0.057448	0.000005	0.000171
NM-05-03-85	0.01	0.194429	0.000152	0.000276	0.302152	0.000252	0.000252	0.005048	0.000021	7.117524	0.000252	0.000050	0.002373	0.015143	0.000025	0.002524	0.036452	0.037748	0.000005	0.000138
NM-05-03-86	0.01	0.159429	0.000172	0.000286	0.339152	0.000252	0.000252	0.005048	0.000020	8.377524	0.000252	0.000050	0.002073	0.015143	0.000025	0.002524	0.039252	0.050848	0.000005	0.000139
NM-05-03-87	0.01	0.181429	0.000212	0.000296	0.411152	0.000252	0.000252	0.005048	0.000024	9.187524	0.000252	0.000050	0.003123	0.015143	0.000025	0.002524	0.044352	0.042848	0.000005	0.000170
NM-05-03-88	0.01	0.172429	0.000182	0.000316	0.436152	0.000252	0.000252	0.005048	0.000023	10.057524	0.000252	0.000050	0.002043	0.015143	0.000025	0.002524	0.040852	0.061848	0.000005	0.000138
NM-05-03-89	0.01	0.165429	0.000172	0.000266	0.411152	0.000252	0.000252	0.005048	0.000022	8.197524	0.000252	0.000050	0.001863	0.015143	0.000025	0.002524	0.041152	0.044848	0.000005	0.000149
NM-05-03-90	0.01	0.190429	0.000152	0.000336	0.337152	0.000252	0.000252	0.005048	0.000012	7.607524	0.000252	0.000050	0.002653	0.015143	0.000025	0.002524	0.036052	0.019448	0.000005	0.000136
NM-05-03-91	0.01	0.183429	0.000172	0.000306	0.384152	0.000252	0.000252	0.005048	0.000022	8.987524	0.000252	0.000050	0.002263	0.015143	0.000025	0.002524	0.042852	0.043948	0.000005	0.000142
NM-05-03-92	0.01	0.155429	0.000172	0.000326	0.396152	0.000252	0.000252	0.005048	0.000025	8.807524	0.000252	0.000050	0.001873	0.015143	0.000025	0.002524	0.037752	0.047348	0.000005	0.000141
NM-05-03-93	0.01	0.148429	0.000152	0.000236	0.375152	0.000252	0.000252	0.005048	0.000022	8.437524	0.000252	0.000050	0.001923	0.015143	0.000025	0.002524	0.036252	0.045748	0.000005	0.000120
NM-05-03-94	0.01	0.159429	0.000162	0.000336	0.364152	0.000252	0.000252	0.005048	0.000021	8.447524	0.000252	0.000050	0.002113	0.015143	0.000025	0.002524	0.036752	0.038848	0.000005	0.000131
NM-05-03-95	0.01	0.194429	0.000152	0.000306	0.386152	0.000252	0.000252	0.005048	0.000017	8.457524	0.000252	0.000050	0.002413	0.089143	0.000025	0.002524	0.035252	0.039348	0.000005	0.000146
NM-05-03-96	0.01	0.226429	0.000172	0.000336	0.362152	0.000252	0.000252	0.005048	0.000019	8.127524	0.000252	0.000050	0.003963	0.015143	0.000025	0.002524	0.037052	0.036948	0.000005	0.000145
NM-05-03-97	0.01	0.210429	0.000162	0.000276	0.378152	0.000252	0.000252	0.005048	0.000021	8.167524	0.000252	0.000050	0.002943	0.015143	0.000025	0.002524	0.038152	0.037248	0.000005	0.000151
NM-05-03-98	0.01	0.210429	0.000192	0.000376	0.425152	0.000252	0.000252	0.005048	0.000027	8.377524	0.000252	0.000050	0.002913	0.015143	0.000025	0.002524	0.040252	0.047648	0.000005	0.000144
NM-05-03-99	0.01	0.201429	0.000152	0.000336	0.348152	0.000252	0.000252	0.005048	0.000019	7.967524	0.000252	0.000050	0.002553	0.015143	0.000025	0.002524	0.032852	0.039348	0.000005	0.000135
NM-05-03-100	0.01	0.186429	0.000162	0.000286	0.336152	0.000252	0.000252	0.005048	0.000018	7.867524	0.000252	0.000050	0.002393	0.015143	0.000025	0.002524	0.034952	0.036248	0.000005	0.000134
NM-05-03-101	0.01	0.230429	0.000162	0.000306	0.403152	0.000252	0.000252	0.005048	0.000020	7.907524	0.000252	0.000050	0.003863	0.015143	0.000025	0.002524	0.040852	0.043448	0.000005	0.000129
NM-05-03-102	0.01	0.214429	0.000152	0.000306	0.390152	0.000252	0.000252	0.005048	0.000024	8.587524	0.000252	0.000050	0.003603	0.015143	0.000025	0.002524	0.040252	0.044648	0.000005	0.000121
NM-05-03-103	0.01	0.227429	0.000192	0.000326	0.408152	0.000252	0.000252	0.005048	0.000027	8.997524	0.000252	0.000050	0.003463	0.066143	0.000025	0.002524	0.049052	0.047448	0.000005	0.000157
NM-05-03-104	0.01	0.182429	0.000152	0.000316	0.369152	0.000252	0.000252	0.005048	0.000023	8.157524	0.000252	0.000050	0.002983	0.015143	0.000025	0.002524	0.038852	0.039048	0.000005	0.000125
	0.010095	0.208429	0.000165	0.000317	0.380652	0.000252	0.000252	0.005048	0.000022	8.261524	0.000252	0.000050	0.003109	0.027643	0.000025	0.002524	0.038752	0.041138	0.000005	0.000138
HC1 LP Hazelton																				
M-09-096 195.5-196.5	0.23	0.0607	0.0002	0.0032	0.0279	0.0000	0.0000	0.0231	0.00002	0.4763	0.0003	0.0003	0.0248	0.0503	0.00109	0.0030	0.1411	0.0279	0.0000202	0.0019
M-09-096 195.5-196.5	0.25	0.1046	0.0001	0.0026	0.0348	0.0002	0.0000	0.0271	0.00006	0.6363	0.0003	0.0005	0.0351	0.1053	0.00756	0.0030	0.1991	0.0519	0.0000102	0.0013
M-09-096 195.5-196.5	0.14	0.1209	0.0001	0.0014	0.0284	0.0011	0.0000	0.0244	0.00008	2.0563	0.0003	0.0026	0.1166	0.0953	0.02808	0.0100	0.7091	0.2449	0.0000052	0.0001
M-09-096 195.5-196.5	0.21	0.3219	0.0001	0.0013	0.0284	0.0030	0.0000	0.0129	0.00022	4.2363	0.0003	0.0073	0.3705	0.3153	0.08748	0.0120	1.5041	0.6459	0.0000052	0.0001
M-09-096 195.5-196.5	0.23	0.4349	0.0001	0.0014	0.0311	0.0048	0.0000	0.0131	0.00030	5.4463	0.0003	0.0106	0.5955	0.7453	0.13928	0.0080	1.9841	1.0939	0.0000052	0.0000
M-09-096 195.5-196.5	0.26	0.4659	0.0001	0.0008	0.0307	0.0061	0.0000	0.0081	0.00033	6.1663	0.0003	0.0119	0.8085	1.3153	0.18328	0.0050	2.3941	1.6739	0.0000052	0.0000
M-09-096 195.5-196.5	0.29	0.5619	0.0001	0.0009	0.0303	0.0081	0.0000	0.0071	0.00044	8.1663	0.0003	0.0161	1.0815	2.3153	0.22828	0.0030	3.4141	3.1139	0.0000052	0.0000
M-09-096 195.5-196.5	0.21	0.4419	0.0001	0.0006	0.0369	0.0069	0.0000	0.0061	0.00000	5.9563	0.0003	0.0125	0.9565	2.1653	0.23428	0.0020	2.7341	3.4039	0.0000052	0.0000
M-09-096 195.5-196.5	0.20	0.5249	0.0001	0.0007	0.0360	0.0074	0.0000	0.0081	0.00050	5.9163	0.0007	0.0139	1.2115	2.4353	0.31328	0.0010	3.1341	4.9539	0.0000052	0.0000
M-09-096 195.5-196.5	0.19	0.4899	0.0001	0.0010	0.0324	0.0070	0.0000	0.0141	0.00039	5.3363	0.0003	0.0126	1.1815	2.3253	0.28428	0.0010	3.1741	5.8739	0.0000052	0.0002
M-09-096 195.5-196.5	0.21	0.5459	0.0001	0.0011	0.0414	0.0076	0.0000	0.0061	0.00044	4.9963	0.0009	0.0133	1.3515	2.4753	0.31028	0.0010	3.4541	7.2439	0.0000052	0.0003
M-09-096 195.5-196.5	0.19	0.5479	0.0001	0.0011	0.0379	0.0077	0.0000	0.0061	0.00045	4.9363	0.0008	0.0140	1.4615	2.2453	0.37428	0.0020	3.8741	8.9139	0.0000052	0.0006
M-09-096 195.5-196.5	0.20	0.7229	0.0001	0.0007	0.0312	0.0096	0.0000	0.0041	0.00057	4.9163	0.0009	0.0162	1.9515	2.0353	0.55328	0.0005	4.3141	10.5039	0.0000052	0.0000
M-09-096 195.5-196.5	0.23	1.4279	0.0001	0.0009	0.0272	0.0116	0.0000	0.0051	0.00075	6.0563	0.0011	0.0213	3.2315	3.4453	0.75028	0.0005	6.0541	14.9039	0.0000052	0.0000
M-09-096 195.5-196.5	0.24	2.1979	0.0001	0.0007	0.0257	0.0112	0.0000	0.0040	0.00080	5.9363	0.0021	0.0236	3.9015	6.2153	0.87928	0.0005	6.4941	16.2039	0.0000052	0.0004
M-09-096 195.5-196.5	0.26	3.9879	0.0001	0.0009	0.0244	0.0101	0.0000	0.0032	0.00082	5.0863	0.0032	0.0256	4.3015	9.6053	0.79928	0.0005	6.2141	16.4039	0.0000052	0.0000
M-09-096 195.5-196.5	0.21	4.7079	0.0001	0.0012	0.0267	0.0069	0.0000	0.0030	0.00079	4.5063	0.0046	0.0223	4.1415	14.3453	0.57128	0.0005	6.0441	16.3039	0.0000202	0.0003
M-09-096 195.5-196.5	0.18	3.8579	0.0001	0.0009	0.0244	0.0063	0.0000	0.0043	0.00070	3.5763	0.0038	0.0208	4.5415	14.6453	0.96128	0.0005	5.4041	14.3039	0.0000052	0.0002
M-09-096 195.5-196.5	0.17	3.8079	0.0001	0.0013	0.0246	0.0046	0.0000	0.0025	0.00071	3.0763	0.0047	0.0206	4.2815	14.6453	0.92828	0.0005	4.8641	13.4039	0.0000052	0.0001

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
NM-05-03-59	0.002502	0.151429	0.315429	0.005010	1.058762	0.000050	0.284571	0.058593	0	0.000500	0.000500	0.005048	0.001153	0.005319	0.002514	
NM-05-03-60	0.002502	0.151429	0.315429	0.005010	1.027762	0.000050	0.284571	0.058993	0	0.000500	0.000500	0.005048	0.001173	0.005319	0.002514	
NM-05-03-61	0.002502	0.151429	0.315429	0.005010	1.078762	0.000050	0.284571	0.064893	0	0.000500	0.000500	0.005048	0.001123	0.005319	0.002514	
NM-05-03-62	0.002502	0.151429	0.315429	0.005010	1.178762	0.000050	0.284571	0.060893	0	0.000500	0.000500	0.005048	0.001243	0.005319	0.002514	
NM-05-03-63	0.002502	0.151429	0.315429	0.005010	1.178762	0.000050	0.284571	0.054493	0	0.000500	0.000500	0.005048	0.001143	0.005319	0.002514	
NM-05-03-64	0.002502	0.151429	0.315429	0.005010	1.128762	0.000050	0.284571	0.050793	0	0.000500	0.000500	0.005048	0.001023	0.005319	0.002514	
NM-05-03-65	0.002502	0.151429	0.315429	0.005010	1.098762	0.000050	0.284571	0.057093	0	0.000500	0.000500	0.005048	0.001223	0.005319	0.002514	
NM-05-03-66	0.002502	0.151429	0.315429	0.005010	1.188762	0.000050	0.284571	0.052693	0	0.000500	0.000500	0.005048	0.001083	0.005319	0.002514	
NM-05-03-67	0.002502	0.151429	0.315429	0.005010	1.128762	0.000050	0.284571	0.055193	0	0.000500	0.000500	0.005048	0.000983	0.005319	0.002514	
NM-05-03-68	0.002502	0.151429	0.315429	0.005010	1.098762	0.000050	0.284571	0.051493	0	0.000500	0.000500	0.005048	0.000953	0.005319	0.002514	
NM-05-03-69	0.002502	0.151429	0.315429	0.005010	1.026762	0.000050	0.284571	0.057993	0	0.000500	0.000500	0.005048	0.001103	0.005319	0.002514	
NM-05-03-70	0.002502	0.151429	0.315429	0.005010	1.118762	0.000050	0.284571	0.055693	0	0.000500	0.000500	0.005048	0.000983	0.005319	0.002514	
NM-05-03-71	0.002502	0.151429	0.315429	0.005010	1.308762	0.000050	0.284571	0.058693	0	0.000500	0.000500	0.005048	0.000973	0.005319	0.002514	
NM-05-03-72	0.002502	0.151429	0.315429	0.005010	1.078762	0.000050	0.284571	0.057793	0	0.000500	0.000500	0.005048	0.000913	0.005319	0.002514	
NM-05-03-73	0.002502	0.151429	0.315429	0.005010	1.218762	0.000050	0.284571	0.062793	0	0.000500	0.000500	0.005048	0.000993	0.005319	0.002514	
NM-05-03-74	0.002502	0.151429	0.315429	0.005010	1.218762	0.000050	0.284571	0.057593	0	0.000500	0.000500	0.005048	0.000983	0.005319	0.002514	
NM-05-03-75	0.002502	0.151429	0.315429	0.005010	1.188762	0.000050	0.284571	0.057293	0	0.000500	0.000500	0.005048	0.000943	0.005319	0.002514	
NM-05-03-76	0.002502	0.151429	0.315429	0.005010	1.088762	0.000050	0.284571	0.054593	0	0.000500	0.000500	0.005048	0.001003	0.005319	0.002514	
NM-05-03-77	0.002502	0.151429	0.315429	0.005010	1.016762	0.000050	0.284571	0.053693	0	0.000500	0.000500	0.005048	0.001053	0.005319	0.002514	
NM-05-03-78	0.002502	0.151429	0.315429	0.005010	0.923762	0.000050	0.284571	0.054993	0	0.000500	0.000500	0.005048	0.000883	0.005319	0.002514	
NM-05-03-79	0.002502	0.151429	0.315429	0.005010	0.981762	0.000050	0.284571	0.052893	0	0.000500	0.000500	0.005048	0.000883	0.005319	0.002514	
NM-05-03-80	0.002502	0.151429	0.315429	0.005010	1.024762	0.000050	0.284571	0.058693	0	0.000500	0.000500	0.005048	0.000943	0.005319	0.002514	
NM-05-03-81	0.000252	0.151429	0.338429	0.000720	0.954762	0.000005	0.159571	0.055293	0.25	0.000050	0.000050	0.005048	0.000793	0.002219	0.000514	
NM-05-03-82	0.000252	0.151429	0.339429	0.000790	0.976762	0.000005	0.148571	0.055793	0.25	0.000050	0.000050	0.005048	0.000745	0.002219	0.000514	
NM-05-03-83	0.000252	0.151429	0.378429	0.000860	1.118762	0.000005	0.174571	0.051993	0.25	0.000050	0.000050	0.005048	0.000800	0.002619	0.001514	
NM-05-03-84	0.000252	0.151429	0.365429	0.000780	1.045762	0.000005	0.173571	0.063093	0.25	0.000050	0.000050	0.005048	0.000841	0.002119	0.001514	
NM-05-03-85	0.000252	0.151429	0.318429	0.000590	0.787762	0.000005	0.132571	0.047693	0.25	0.000050	0.000050	0.005048	0.000697	0.002019	0.001514	
NM-05-03-86	0.000252	0.151429	0.319429	0.000620	0.864762	0.000005	0.124571	0.055393	0.25	0.000050	0.000050	0.005048	0.000734	0.001719	0.001514	
NM-05-03-87	0.000252	0.151429	0.356429	0.000600	1.033762	0.000005	0.152571	0.061593	0.25	0.000050	0.000050	0.005048	0.000675	0.001819	0.001514	
NM-05-03-88	0.000252	0.151429	0.324429	0.000660	0.939762	0.000005	0.137571	0.063693	0.25	0.000050	0.000050	0.005048	0.000752	0.002019	0.001514	
NM-05-03-89	0.000252	0.151429	0.302429	0.000630	0.829762	0.000005	0.150571	0.060593	0.25	0.000050	0.000050	0.005048	0.000740	0.001819	0.001514	
NM-05-03-90	0.000252	0.151429	0.316429	0.000660	0.848762	0.000005	0.139571	0.050593	0.25	0.000050	0.000050	0.005048	0.000697	0.002019	0.001514	
NM-05-03-91	0.000252	0.151429	0.284429	0.000630	0.923762	0.000005	0.131571	0.055993	0.25	0.000050	0.000050	0.005048	0.000727	0.001819	0.001514	
NM-05-03-92	0.000252	0.151429	0.287429	0.000650	0.848762	0.000005	0.129571	0.058693	0.25	0.000050	0.001090	0.005048	0.000617	0.001919	0.001514	
NM-05-03-93	0.000252	0.151429	0.268429	0.000560	0.787762	0.000005	0.115571	0.052393	0.25	0.000050	0.000050	0.005048	0.000589	0.001619	0.001514	
NM-05-03-94	0.000252	0.151429	0.298429	0.000600	0.844762	0.000005	0.156571	0.054093	0.25	0.000050	0.000050	0.005048	0.000603	0.001819	0.001514	
NM-05-03-95	0.000252	0.151429	0.320429	0.000620	0.920762	0.000005	0.138571	0.053493	0.62	0.000050	0.000050	0.005048	0.000603	0.001819	0.001514	
NM-05-03-96	0.000252	0.151429	0.347429	0.000700	1.042762	0.000005	0.146571	0.053493	0.25	0.000050	0.000050	0.005048	0.000708	0.002219	0.001514	
NM-05-03-97	0.000252	0.151429	0.343429	0.000640	0.962762	0.000005	0.160571	0.056493	0.25	0.000050	0.000050	0.005048	0.000625	0.002019	0.001514	
NM-05-03-98	0.000252	0.151429	0.344429	0.000830	0.965762	0.000005	0.155571	0.056393	0.25	0.000050	0.000050	0.005048	0.000633	0.002119	0.001514	
NM-05-03-99	0.000252	0.151429	0.309429	0.000600	0.951762	0.000005	0.157571	0.049293	0.25	0.000050	0.000050	0.005048	0.000584	0.002019	0.001514	
NM-05-03-100	0.000252	0.151429	0.305429	0.000550	0.901762	0.000005	0.133571	0.050893	0.25	0.000050	0.000050	0.005048	0.000619	0.001819	0.001514	
NM-05-03-101	0.000252	0.151429	0.379429	0.000520	0.969762	0.000005	0.170571	0.055093	0.25	0.000050	0.000050	0.005048	0.000554	0.002119	0.001514	
NM-05-03-102	0.000252	0.151429	0.356429	0.000520	1.046762	0.000005	0.164571	0.053793	0.25	0.000050	0.000050	0.005048	0.000594	0.002019	0.001514	
NM-05-03-103	0.000252	0.151429	0.452429	0.000570	1.168762	0.000005	0.241571	0.056793	0.25	0.000050	0.000050	0.005048	0.000573	0.002219	0.001514	
NM-05-03-104	0.000252	0.151429	0.338429	0.000540	0.963762	0.000005	0.179571	0.053993	0.25	0.000050	0.000050	0.005048	0.000606	0.002119	0.001514	
	0.000252	0.151429	0.349729	0.000609	0.989462	0.000005	0.164871	0.053973	0.287	0.000050	0.000050	0.005048	0.000610	0.002049	0.001514	
HC1 LP Hazelton																
M-09-096 195.5-196.5	0.0006	0.0053	3.7726	0.0430	1.1824	0.0000	77.0255	0.1110	35.4000	0.0001	0.0001	0.0002	0.0008	0.0003	0.0044	0.0001
M-09-096 195.5-196.5	0.0021	0.0053	3.3126	0.0656	2.0124	0.0000	73.9255	0.1520	40.3000	0.0001	0.0004	0.0002	0.0013	0.0003	0.0044	0.0000
M-09-096 195.5-196.5	0.0014	0.0053	6.4526	0.0657	4.1524	0.0000	72.8255	0.5890	40.5000	0.0001	0.0003	0.0002	0.0046	0.0000	0.0074	0.000005
M-09-096 195.5-196.5	0.0029	0.0053	8.7326	0.0539	3.5624	0.0000	36.5255	1.0910	40.0000	0.0002	0.0004	0.0002	0.0149	0.0000	0.0174	0.0000
M-09-096 195.5-196.5	0.0041	0.0053	8.6226	0.0410	3.4624	0.0000	17.7255	1.4110	24.5000	0.0003	0.0005	0.0002	0.0208	0.0000	0.0254	0.0000
M-09-096 195.5-196.5	0.0044	0.0053	7.8426	0.0353	3.5424	0.0000	8.0855	1.5810	21.2000	0.0003	0.0002	0.0002	0.0272	0.0000	0.0274	0.0000
M-09-096 195.5-196.5	0.0065	0.0053	8.2926	0.0376	5.4524	0.0006	5.0355	2.2710	25.2000	0.0003	0.0001	0.0003	0.0285	0.0001	0.0404	0.0000
M-09-096 195.5-196.5	0.0039	0.0053	5.6926	0.0269	3.7224	0.0000	1.6455	1.6910	17.2000	0.0002	0.0001	0.0002	0.0233	0.0000	0.0314	0.0000
M-09-096 195.5-196.5	0.0041	0.0053	5.0826	0.0291	4.1224	0.0000	1.2055	1.7010	20.2000	0.0001	0.0002	0.0002	0.0236	0.0000	0.0424	0.0000
M-09-096 195.5-196.5	0.0037	0.0053	4.1626	0.0272	3.6724	0.0000	0.7755	1.5110	18.4000	0.0001	0.0002	0.0002	0.0217	0.0000	0.0364	0.0000
M-09-096 195.5-196.5	0.0040	0.0053	4.2026	0.0294	3.8124	0.0000	0.5555	1.4210	20.4000	0.0001	0.0002	0.0002	0.0193	0.0000	0.0404	0.0000
M-09-096 195.5-196.5	0.0037	0.0053	3.4426	0.0247	3.6424	0.0000	0.4255	1.3610	20.6000	0.0001	0.0002	0.0001	0.0201	0.0000	0.0424	0.0000
M-09-096 195.5-196.5	0.0041	0.0053	2.7826	0.0218	3.0624	0.0001	0.3655	1.3310	24.0000	0.0001	0.0003	0.0001	0.0248	0.0000	0.0544	0.0000
M-09-096 195.5-196.5	0.0048	0.0503	3.5126	0.0201	4.5024	0.0001	0.4055	1.5310	35.9000	0.0001	0.0002	0.0003	0.0327	0.0000	0.0694	0.0001
M-09-096 195.5-196.5	0.0045	0.0783	3.1226	0.0146	4.9824	0.0001	0.3255	1.2810	44.4000	0.0001	0.0002	0.0004	0.0334	0.0000	0.0734	0.0000
M-09-096 195.5-196.5	0.0045	0.0623	2.6126	0.0104	4.5924	0.0001	0.3455	1.0010	50.6000	0.0001	0.0003	0.0003	0.0273	0.0000	0.1134	0.0000
M-09-096 195.5-196.5	0.0039	0.0913	2.3926	0.0083	4.3724	0.0001	0.3055	0.8090	56.4000	0.0001	0.0002	0.0001	0.0163	0.0000	0.1154	0.0000
M-09-096 195.5-196.5	0.0033	0.0833	1.9626	0.0062	4.0824	0.0001	0.2755	0.6260	54.5000	0.0001	0.0002	0.0003	0.0165	0.0000	0.1054	0.0000
M-09-096 195.5-196.5	0.0037	0.0603	1.5526	0.0056	3.5924	0.0001	0.2855	0.4230	47.7000	0.0003	0.0003	0.0001	0.0137	0.0000	0.0654	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-096 195.5-196.5	1	19	17-Jun-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	490	27	643	2.93	144.3	#N/A	127	0.3
M-09-096 195.5-196.5	1	20	24-Jun-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	485	26	514	3.12	121.0	#N/A	130	0.4
M-09-096 195.5-196.5	1	21	1-Jul-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	490	25	515	2.99	119.2	#N/A	136	0.5
M-09-096 195.5-196.5	1	22	8-Jul-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	510	27	510	2.9	124.7	#N/A	131	0.5
M-09-096 195.5-196.5	1	23	15-Jul-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	465	17	474	3.02	121.3	#N/A	116	0.5
M-09-096 195.5-196.5	1	24	22-Jul-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	510	19	556	2.89	139.8	#N/A	141	0.1
M-09-096 195.5-196.5	1	25	29-Jul-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	470	15	456	3.11	110.0	#N/A	127	0.5
M-09-096 195.5-196.5	1	26	5-Aug-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	440	17	542	3.11	133.7	#N/A	143	0.1
M-09-096 195.5-196.5	1	27	12-Aug-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	505	12	405	3.51	96.3	#N/A	100	0.5
M-09-096 195.5-196.5	1	28	19-Aug-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	470	13	436	3.26	117.3	#N/A	104	0.5
M-09-096 195.5-196.5	1	29	26-Aug-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	455	13	424	3.3	108.0	#N/A	112	0.1
M-09-096 195.5-196.5	1	30	2-Sep-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	455	13	448	3.19	118.2	#N/A	145	0.1
M-09-096 195.5-196.5	1	31	9-Sep-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	485	13	493	3.18	135.8	#N/A	150	0.1
M-09-096 195.5-196.5	1	32	16-Sep-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	445	14	421	2.96	116.7	#N/A	160	0.5
M-09-096 195.5-196.5	1	33	23-Sep-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	460	11	399	3.17	122.1	#N/A	141	0.5
M-09-096 195.5-196.5	1	34	30-Sep-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	470	11	394	2.9	118.9	#N/A	155	0.1
M-09-096 195.5-196.5	1	35	7-Oct-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	455	11	484	3.17	124.8	#N/A	151	0.1
M-09-096 195.5-196.5	1	36	14-Oct-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	460	12	516	3	131.3	#N/A	144	0.1
M-09-096 195.5-196.5	1	37	21-Oct-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	460	9	453	3.03	105.9	#N/A	150	0.5
M-09-096 195.5-196.5	1	38	28-Oct-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	460	9	472	2.92	114.5	#N/A	154	0.5
M-09-096 195.5-196.5	1	39	4-Nov-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	470	9	505	3.19	116.5	#N/A	147	0.1
M-09-096 195.5-196.5	1	40	11-Nov-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	450	12	471	3.1	136.9	#N/A	159	0.5
M-09-096 195.5-196.5	1	41	18-Nov-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	455	9	391	3.35	97.7	#N/A	116	0.5
M-09-096 195.5-196.5	1	42	25-Nov-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	460	8	410	3.09	88.4	#N/A	123	0.5
M-09-096 195.5-196.5	1	43	2-Dec-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	460	8	386	3.19	84.4	#N/A	111	0.1
M-09-096 195.5-196.5	1	44	9-Dec-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	460	7	412	3.15	96.3	#N/A	126	1.4
M-09-096 195.5-196.5	1	45	16-Dec-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	460	8	393	3.17	100.6	#N/A	95	0.5
M-09-096 195.5-196.5	1	46	23-Dec-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	475	7	417	3.07	96.1	#N/A	97	0.5
M-09-096 195.5-196.5	1	47	30-Dec-10	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	470	6	391	3.23	108.6	#N/A	81	0.5
M-09-096 195.5-196.5	1	48	6-Jan-11	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	470	6	313	3.26	96.4	#N/A	85	0.8
M-09-096 195.5-196.5	1	49	13-Jan-11	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	470	6	276	3.37	84.3	#N/A	89	1.0
M-09-096 195.5-196.5	1	50	20-Jan-11	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	465	6	355	3.16	91.3	#N/A	88	0.8
M-09-096 195.5-196.5	1	51	27-Jan-11	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	475	6	344	3.27	98.4	#N/A	87	0.5
M-09-096 195.5-196.5	1	52	3-Feb-11	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	465	5	304	3.26	86.7	#N/A	79	0.5
M-09-096 195.5-196.5	1	53	10-Feb-11	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	470	5	294	3.31	74.9	#N/A	71	0.5
M-09-096 195.5-196.5	1	54	17-Feb-11	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	470	5	328	3.26	72.4	#N/A	77	0.5
M-09-096 195.5-196.5	1	55	24-Feb-11	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	465	5	385	3.37	69.9	#N/A	84	0.5
M-09-096 195.5-196.5	1	56	3-Mar-11	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	465	5	384	3.3	72.9	#N/A	85	0.3
M-09-096 195.5-196.5	1	57	10-Mar-11	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	475	5	388	3.22	75.9	#N/A	86	0.1
M-09-096 195.5-196.5	1	58	17-Mar-11	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	460	5	392	3.18	76.1	#N/A	81	0.2
M-09-096 195.5-196.5	1	59	24-Mar-11	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	455	5	392	3.18	76.4	#N/A	76	0.2
M-09-096 195.5-196.5	1	60	31-Mar-11	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	465	6	450	3.21	94.8	#N/A	101	0.4
M-09-096 195.5-196.5	1	61	7-Apr-11	Mitchell	BELOW MTF	LP Hazelton	IVOL	QSP	3	None	0			Water	500	470	6	597	3.08	113.1	#N/A	126	0.5
																	5.04371645	391.277	3.237	81.310613	#N/A	86.262903	0.36
HC2 UP Hazelton																							
M-09-097 52.5-53.5	2	0	4-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	410	38	113	6.51	3.6	8.7	41	1.3
M-09-097 52.5-53.5	2	1	11-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	460	30	109	6.19	3.7	2.5	38	0.6
M-09-097 52.5-53.5	2	2	18-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	440	24	85	6.11	4.5	2.0	30	0.1
M-09-097 52.5-53.5	2	3	25-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	23	75	6.05	4.7	2.0	34	0.1
M-09-097 52.5-53.5	2	4	4-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	460	18	63	5.75	4.4	1.4	23	0.1
M-09-097 52.5-53.5	2	5	11-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	19	63	5.94	4.5	1.8	24	0.1
M-09-097 52.5-53.5	2	6	18-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	500	18	61	5.92	4.8	1.8	21	0.1
M-09-097 52.5-53.5	2	7	25-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	500	20	64	5.91	5.4	1.8	21	0.1
M-09-097 52.5-53.5	2	8	1-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	505	19	65	5.89	5.0	1.8	29	0.1
M-09-097 52.5-53.5	2	9	8-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	19	68	5.75	5.1	1.8	26	0.1
M-09-097 52.5-53.5	2	10	15-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	495	20	72	5.78	6.2	1.8	28	0.1
M-09-097 52.5-53.5	2	11	22-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	23	85	5.87	7.7	2.1	34	0.1
M-09-097 52.5-53.5	2	12	29-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	21	79	5.56	3.8	1.1	28	0.1
M-09-097 52.5-53.5	2	13	6-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	24	86	5.5	8.6	1.9	37	0.1
M-09-097 52.5-53.5	2	14	13-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	500	26	95	5.31	7.4	1.0	34	0.1
M-09-097 52.5-53.5	2	15	20-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	24	95	5.44	9.3	1.5	30	0.1
M-09-097 52.5-53.5	2	16	27-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	26	101	5.63	13.1	2.5	36	0.1
M-09-097 52.5-53.5	2	17	3-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	505	25	99	5.27	9.5	0.8	35	0.1
M-09-097 52.5-53.5	2	18	10-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	500	24	104	6.07	10.2	3.8	36	0.5
M-09-097 52.5-53.5	2	19	17-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	24	106	5.35	12.8	1.1	37	0.1
M-09-097 52.5-53.5	2	20	24-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	505	25	113	5.2	13.0	0.6	44	0.1
M-09-097 52.5-53.5	2	21	1-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	23	108	5.16	12.9	0.8	38	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-096 195.5-196.5	0.21	3.8979	0.0001	0.0015	0.0228	0.0044	0.0000	0.0028	0.00074	2.9363	0.0055	0.0187	4.0415	15.4453	0.89528	0.0005	4.7141	13.0039	0.0000052	0.0247
M-09-096 195.5-196.5	0.03	3.8179	0.0001	0.0013	0.0206	0.0039	0.0000	0.0049	0.00071	2.8263	0.0060	0.0177	4.6415	17.1453	0.90128	0.0005	4.6441	12.7039	0.0000052	0.0005
M-09-096 195.5-196.5	0.19	3.8179	0.0001	0.0019	0.0196	0.0031	0.0000	0.0031	0.00069	2.7463	0.0054	0.0196	4.0415	16.5453	0.87628	0.0005	4.4941	12.3039	0.0000052	0.0016
M-09-096 195.5-196.5	0.18	2.9579	0.0001	0.0019	0.0216	0.0028	0.0000	0.0079	0.00064	4.8163	0.0074	0.0175	3.7615	16.9453	0.89828	0.0070	3.6441	9.7239	0.0000052	0.0003
M-09-096 195.5-196.5	0.17	3.2179	0.0001	0.0018	0.0205	0.0019	0.0000	0.0019	0.00061	1.8063	0.0062	0.0164	3.7315	18.1453	0.72328	0.0005	2.9841	7.9539	0.0000052	0.0001
M-09-096 195.5-196.5	0.18	3.9279	0.0001	0.0018	0.0171	0.0022	0.0000	0.0023	0.00071	2.0563	0.0066	0.0184	4.1515	23.2453	0.71928	0.0020	3.4141	8.8839	0.0000052	0.0002
M-09-096 195.5-196.5	0.14	2.3879	0.0001	0.0014	0.0210	0.0014	0.0000	0.0039	0.00050	1.6863	0.0051	0.0132	3.1115	19.1453	0.57928	0.0005	2.5641	6.1439	0.0000052	0.0000
M-09-096 195.5-196.5	0.16	2.7679	0.0001	0.0018	0.0224	0.0014	0.0000	0.0040	0.00060	1.9363	0.0052	0.0152	3.7915	24.8453	0.77528	0.0005	3.0441	7.9639	0.0000052	0.0007
M-09-096 195.5-196.5	0.03	1.3379	0.0001	0.0016	0.0219	0.0010	0.0000	0.0022	0.00048	1.4763	0.0031	0.0118	3.0615	14.1453	0.89028	0.0005	1.9141	5.1939	0.0000052	0.0000
M-09-096 195.5-196.5	0.03	1.8579	0.0001	0.0015	0.0208	0.0010	0.0000	0.0023	0.00055	1.8563	0.0042	0.0132	3.4715	14.1453	0.79828	0.0005	2.1041	5.4739	0.0000052	0.0000
M-09-096 195.5-196.5	0.17	1.9979	0.0001	0.0016	0.0212	0.0008	0.0000	0.0023	0.00055	1.9663	0.0050	0.0133	3.5215	15.7453	0.68628	0.0005	1.9141	4.9639	0.0000102	0.0000
M-09-096 195.5-196.5	0.15	2.4579	0.0001	0.0017	0.0212	0.0008	0.0000	0.0018	0.00060	2.0163	0.0053	0.0145	3.9515	17.7453	0.57428	0.0005	1.9441	4.9239	0.0000202	0.0000
M-09-096 195.5-196.5	0.18	2.6179	0.0001	0.0019	0.0188	0.0008	0.0000	0.0033	0.00063	1.9763	0.0055	0.0149	3.9015	20.8453	0.56428	0.0005	1.9041	4.8039	0.0000052	0.0012
M-09-096 195.5-196.5	0.24	2.5679	0.0003	0.0016	0.0186	0.0008	0.0000	0.0015	0.00054	2.8463	0.0048	0.0127	3.5715	19.8453	0.49328	0.0005	1.7941	4.3639	0.0000102	0.0145
M-09-096 195.5-196.5	0.18	2.2479	0.0001	0.0170	0.0184	0.0007	0.0001	0.0016	0.00067	1.9463	0.0061	0.0149	4.1015	19.8453	0.42228	0.0005	1.4841	3.5439	0.0000302	0.0001
M-09-096 195.5-196.5	0.18	1.8679	0.0002	0.0311	0.0168	0.0007	0.0000	0.0027	0.00129	1.9063	0.0066	0.0156	4.2415	22.8453	0.38028	0.0005	1.5941	3.6639	0.0000052	0.0006
M-09-096 195.5-196.5	0.18	1.9879	0.0001	0.0017	0.0162	0.0007	0.0000	0.0029	0.00057	1.8763	0.0053	0.0137	3.7515	22.2453	0.36528	0.0005	1.5041	3.4639	0.0000052	0.0009
M-09-096 195.5-196.5	0.20	2.1279	0.0001	0.0017	0.0169	0.0007	0.0000	0.0043	0.00061	2.2263	0.0057	0.0147	4.1115	26.0453	0.31828	0.0010	1.6641	3.8139	0.0000052	0.0006
M-09-096 195.5-196.5	0.15	1.6279	0.0001	0.0016	0.0172	0.0005	0.0000	0.0023	0.00054	1.5863	0.0045	0.0125	3.7115	19.7453	0.31828	0.0005	1.2341	2.7539	0.0000052	0.0004
M-09-096 195.5-196.5	0.15	1.7679	0.0001	0.0020	0.0206	0.0006	0.0000	0.0021	0.00057	1.5363	0.0041	0.0132	4.1015	19.5453	0.35128	0.0005	1.1941	2.6339	0.0000052	0.0000
M-09-096 195.5-196.5	0.16	1.6979	0.0001	0.0016	0.0199	0.0005	0.0000	0.0019	0.00057	1.6963	0.0038	0.0124	4.1715	20.2453	0.33428	0.0005	1.1941	2.5039	0.0000302	0.0055
M-09-096 195.5-196.5	0.23	1.7279	0.0001	0.0023	0.0186	0.0005	0.0000	0.0019	0.00066	2.7063	0.0046	0.0146	4.5815	23.3453	0.28328	0.0005	1.3541	2.7539	0.0000302	0.0001
M-09-096 195.5-196.5	0.15	1.4279	0.0003	0.0017	0.0205	0.0004	0.0000	0.0022	0.00052	1.8363	0.0036	0.0114	3.6815	18.9453	0.27328	0.0005	0.9981	2.0239	0.0000052	0.0015
M-09-096 195.5-196.5	0.11	1.4879	0.0001	0.0018	0.0211	0.0004	0.0000	0.0022	0.00049	1.6463	0.0034	0.0103	3.9015	17.4453	0.27628	0.0005	0.9181	1.9039	0.0000052	0.0001
M-09-096 195.5-196.5	0.13	1.0979	0.0001	0.0018	0.0212	0.0004	0.0000	0.0022	0.00047	1.6963	0.0034	0.0094	3.4415	20.0453	0.25228	0.0005	0.9371	1.8939	0.0000052	0.0000
M-09-096 195.5-196.5	0.12	1.3579	0.0001	0.0016	0.0190	0.0004	0.0000	0.0028	0.00051	1.5663	0.0033	0.0145	4.0415	19.0453	0.25228	0.0005	0.8331	1.6539	0.0000052	0.0001
M-09-096 195.5-196.5	0.14	1.2279	0.0001	0.0019	0.0239	0.0004	0.0000	0.0011	0.00026	1.8163	0.0034	0.0101	3.7915	19.5453	0.23028	0.0005	0.9471	1.6239	0.0000052	0.0000
M-09-096 195.5-196.5	0.13	1.1379	0.0018	0.0021	0.0203	0.0003	0.0000	0.0022	0.00053	1.4263	0.0029	0.0103	3.8115	19.0453	0.21628	0.0005	0.7961	1.5539	0.0000052	0.0012
M-09-096 195.5-196.5	0.14	1.0279	0.0001	0.0026	0.0202	0.0003	0.0000	0.0017	0.00050	1.3863	0.0028	0.0103	3.7215	18.3453	0.19928	0.0005	0.7371	1.3839	0.0000052	0.0000
M-09-096 195.5-196.5	0.12	0.9149	0.0002	0.0018	0.0219	0.0003	0.0000	0.0020	0.00047	1.3963	0.0024	0.0097	3.5165	17.4453	0.19128	0.0005	0.6946	1.2889	0.0000052	0.0000
M-09-096 195.5-196.5	0.10	0.8019	0.0002	0.0010	0.0237	0.0002	0.0000	0.0023	0.00044	1.4063	0.0020	0.0091	3.3115	16.5453	0.18328	0.0005	0.6521	1.1939	0.0000052	0.0001
M-09-096 195.5-196.5	0.11	0.8104	0.0006	0.0012	0.0226	0.0002	0.0000	0.0021	0.00048	1.3763	0.0019	0.0093	3.5865	16.6953	0.18328	0.0005	0.6391	1.1689	0.0000052	0.0002
M-09-096 195.5-196.5	0.12	0.8189	0.0009	0.0013	0.0215	0.0003	0.0000	0.0020	0.00053	1.3463	0.0017	0.0094	3.8615	16.8453	0.18328	0.0005	0.6261	1.1439	0.0000052	0.0002
M-09-096 195.5-196.5	0.12	0.7909	0.0005	0.0011	0.0209	0.0002	0.0000	0.0020	0.00051	1.2463	0.0017	0.0085	3.5015	14.8953	0.16978	0.0005	0.5511	0.9829	0.0000052	0.0002
M-09-096 195.5-196.5	0.11	0.7629	0.0001	0.0009	0.0203	0.0002	0.0000	0.0021	0.00048	1.1463	0.0017	0.0076	3.1415	12.9453	0.15628	0.0005	0.4761	0.8219	0.0000052	0.0001
M-09-096 195.5-196.5	0.11	0.7554	0.0001	0.0011	0.0192	0.0002	0.0000	0.0021	0.00046	1.1263	0.0017	0.0080	3.1865	13.6953	0.14628	0.0005	0.4626	0.7954	0.0000077	0.0001
M-09-096 195.5-196.5	0.11	0.7479	0.0001	0.0012	0.0181	0.0002	0.0000	0.0021	0.00044	1.1063	0.0017	0.0084	3.2315	14.4453	0.13628	0.0005	0.4491	0.7689	0.0000102	0.0000
M-09-096 195.5-196.5	0.11	0.7859	0.0001	0.0014	0.0176	0.0002	0.0000	0.0017	0.00046	1.1363	0.0018	0.0083	3.5265	14.4453	0.13278	0.0005	0.4371	0.7474	0.0000077	0.0000
M-09-096 195.5-196.5	0.11	0.8239	0.0001	0.0015	0.0172	0.0002	0.0000	0.0013	0.00048	1.1663	0.0018	0.0082	3.8215	14.4453	0.12928	0.0005	0.4251	0.7259	0.0000052	0.0000
M-09-096 195.5-196.5	0.12	0.8169	0.0001	0.0013	0.0177	0.0002	0.0000	0.0014	0.00052	1.2013	0.0019	0.0085	3.7765	15.3453	0.14978	0.0005	0.4331	0.7349	0.0000052	0.0000
M-09-096 195.5-196.5	0.13	0.8099	0.0001	0.0011	0.0182	0.0002	0.0000	0.0016	0.00057	1.2363	0.0020	0.0087	3.7315	16.2453	0.17028	0.0005	0.4411	0.7439	0.0000052	0.0000
M-09-096 195.5-196.5	0.15	1.2389	0.0001	0.0015	0.0173	0.0002	0.0000	0.0016	0.00070	1.4313	0.0028	0.0112	4.1815	20.4453	0.15228	0.0005	0.4976	0.8074	0.0000052	0.0004
M-09-096 195.5-196.5	0.16	1.6679	0.0001	0.0018	0.0165	0.0002	0.0000	0.0017	0.00083	1.6263	0.0035	0.0137	4.6315	24.6453	0.13428	0.0005	0.5541	0.8709	0.0000052	0.0009
	0.125871	0.920085	0.000145	0.001286	0.018300	0.000212	0.000005	0.001743	0.000544	1.242290	0.002054	0.009116	3.672952	16.155323	0.147725	0.000548	0.472681	0.7999855	0.0000062	0.0001781
HC2 UP Hazelton																				
M-09-097 52.5-53.5	1.01	0.0099	0.0002	0.0004	0.0591	0.0000	0.0000	0.0040	0.00011	12.6000	0.0003	0.0031	0.0605	0.0050	0.00003	0.0010	1.5600	0.7000	0.0000050	0.0098
M-09-097 52.5-53.5	1.25	0.0154	0.0001	0.0001	0.0463	0.0000	0.0000	0.0030	0.00006	9.8800	0.0003	0.0018	0.0479	0.0050	0.00027	0.0005	1.2200	0.5930	0.0000050	0.0153
M-09-097 52.5-53.5	1.00	0.0174	0.0001	0.0001	0.0383	0.0000	0.0000	0.0027	0.00006	8.0000	0.0003	0.0020	0.0590	0.0050	0.00012	0.0010	1.0400	0.7160	0.0000050	0.0089
M-09-097 52.5-53.5	1.00	0.0194	0.0001	0.0001	0.0268	0.0000	0.0000	0.0029	0.00008	7.7000	0.0003	0.0028	0.0877	0.0050	0.00011	0.0005	1.0000	0.8740	0.0000050	0.0086
M-09-097 52.5-53.5	0.75	0.0241	0.0001	0.0001	0.0344	0.0000	0.0000	0.0040	0.00007	5.9700	0.0003	0.0030	0.1080	0.0050	0.00017	0.0005	0.7510	0.8310	0.0000050	0.0054
M-09-097 52.5-53.5	0.75	0.0188	0.0001	0.0001	0.0313	0.0000	0.0000	0.0020	0.00009	6.1500	0.0003	0.0035	0.1280	0.0050	0.00036	0.0005	0.8090	1.0300	0.0000050	0.0047
M-09-097 52.5-53.5	0.03	0.0177	0.0001	0.0001	0.0287	0.0000	0.0000	0.0010	0.00010	6.0200	0.0003	0.0044	0.1360	0.0050	0.00004	0.0005	0.7820	1.2400	0.0000050	0.0035
M-09-097 52.5-53.5	0.55	0.0210	0.0001	0.0001	0.0335	0.0001	0.0000	0.0030	0.00010	6.6200	0.0003	0.0062	0.2110	0.0050	0.00163	0.0005	0.8590	1.5300	0.0000050	0.0037
M-09-097 52.5-53.5	0.54	0.0241	0.0001	0.0001	0.0360	0.0001	0.0000	0.0040	0.00014	6.3500	0.0007	0.0073	0.2490	0.0050	0.00006	0.0005	0.8280	1.6400	0.0000050	0.0037
M-09-097 52.5-53.5	0.50	0.0316	0.0001	0.0001	0.0266	0.0001	0.0000	0.0070	0.00015	6.4000	0.0003	0.0084	0.2980	0.0050	0.00001	0.0010	0.8240	1.8600	0.0000050	0.0030
M-09-097 52.5-53.5	0.50	0.0303	0.0001	0.0002	0.0280	0.0001	0.0000	0.0020	0.00018	6.7100	0.0006	0.0109	0.3940	0.0050	0.00087	0.0005	0.8650	2.1900	0.0000050	0.0026
M-09-097 52.5-53.5	0.48	0.0323	0.0001	0.0003	0.0252	0.0001	0.0000	0.0030	0.00024	7.7800	0.0006	0.0159	0.5570	0.0050	0.00359	0.0010	0.9690	2.8500	0.0000050	0.0025
M-09-097 52.5-53.5	0.42	0.0306	0.0001	0.0001	0.0220	0.0001	0.0000	0.0020	0.00027	6.9400	0.0008	0.0179	0.5770	0.0050	0.00109	0.0005	0.8670	2.9600	0.0000050	0.0021
M-09-097 52.5-53.5	0.39	0.0479	0.0001	0.0002	0.0190	0.0001	0.0000	0.0030	0.00033	8.0100	0.0006	0.0229	0.8210	0.0050	0.00473	0.0005	0.9820	3.8000	0.0000050	0.0017
M-09-097 52.5-53.5	0.38	0.0533	0.0001	0.0001	0.0167	0.0002	0.0000	0.0022	0.00043	8.7400	0.0005	0.0284	0.9740	0.0030	0.00372	0.0005	1.0400	4.5900	0.0000050	0.0022
M-09-097 52.5-53.5	0.39	0.0500	0.0001	0.0001	0.0153	0.0002	0.0000	0.0027	0.00050	8.0600	0.0007	0.0360	1.2500	0.0010	0.00007	0.0010	0.9430	4.9000	0.0000100	0.0015
M-09-097 52.5-53.5	0.34	0.0775	0.0001	0.0002	0.0152	0.0001	0.0000	0.0024	0.00060	8.8000	0.0005	0.0383	1.5100	0.0100	0.00122	0.0010	1.0300	6.0400	0.0000050	0.0021
M-09-097 52.5-53.5	0.33	0.0943	0.0001	0.0001	0.0165	0.0002	0.0000	0.0032	0.00066	8.5500	0.0003	0.0445	2.1400	0.0120	0.00017	0.0010	0.9820	6.2200	0.0000050	0.0013
M-09-097 52.5-53.5	0.32	0.1360	0.0001	0.0016	0.0148	0.0001	0.0000	0.0025	0.00076	8.0700	0.0003	0.0568	2.4700	0.0080	0.00658	0.0005	0.9200	6.8000	0.0000050	0.0011
M-09-097 52.5-53.5	0.33	0.1200	0.0001	0.0004	0.0156	0.0002	0.0000	0.0026	0.00092	8.2200	0.0003	0.0638	2.9600	0.0540	0.00739	0.0020	0.9120	7.4500	0.0000050	0.0084
M-09-097 52.5-53.5	0.19	0.1380	0.0001	0.0001	0.0139	0.0002	0.0000	0.0041	0.00101	8.4100	0.0003	0.0618	3.9100	0.0110	0.00310	0.0020	0.9320	8.5100	0.0000050	0.0014
M-09-097 52.5-53.5	0.33	0.1300	0.0001	0.0003	0.0125	0.0002	0.0000	0.0024	0.00098	7.7700	0.0003	0.0690	3.7500	0.0080	0.00425	0.0020	0.8560	8.5900	0.0000200	0.0013

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-096 195.5-196.5	0.0042	0.0763	1.4526	0.0050	3.6024	0.0001	0.3055	0.3280	48.4000	0.0001	0.0002	0.0002	0.0109	0.0001	0.0664	0.0000
M-09-096 195.5-196.5	0.0037	0.0513	1.4726	0.0044	3.7124	0.0001	0.2655	0.2570	50.3000	0.0001	0.0002	0.0005	0.0101	0.0001	0.0634	0.0001
M-09-096 195.5-196.5	0.0041	0.1303	1.3126	0.0049	3.2824	0.0001	0.1855	0.2130	50.8000	0.0001	0.0002	0.0002	0.0086	0.0001	0.0634	0.0000
M-09-096 195.5-196.5	0.0034	0.0863	1.1726	0.0036	3.0024	0.0001	0.2555	0.1650	45.7000	0.0001	0.0003	0.0001	0.0082	0.0003	0.0604	0.0000
M-09-096 195.5-196.5	0.0026	0.0713	0.9556	0.0042	2.6524	0.0001	0.2155	0.1080	41.6000	0.0001	0.0002	0.0001	0.0079	0.0000	0.0604	0.0000
M-09-096 195.5-196.5	0.0025	0.0933	1.1086	0.0049	3.3024	0.0001	0.2155	0.0834	47.3000	0.0001	0.0002	0.0001	0.0079	0.0002	0.0684	0.0000
M-09-096 195.5-196.5	0.0017	0.0823	0.8526	0.0030	2.3424	0.0001	0.1855	0.0863	40.2000	0.0001	0.0000	0.0002	0.0048	0.0002	0.0464	0.0000
M-09-096 195.5-196.5	0.0018	0.1043	1.0716	0.0041	3.1624	0.0001	0.2855	0.0909	48.6000	0.0001	0.0005	0.0001	0.0057	0.0003	0.0564	0.0000
M-09-096 195.5-196.5	0.0016	0.0613	0.7716	0.0041	2.1724	0.0001	0.1655	0.0947	33.6000	0.0001	0.0004	0.0001	0.0034	0.0001	0.0464	0.0000
M-09-096 195.5-196.5	0.0016	0.3323	0.8366	0.0063	2.2724	0.0001	0.8555	0.0766	37.9000	0.0001	0.0002	0.0002	0.0042	0.0000	0.0544	0.0000
M-09-096 195.5-196.5	0.0018	0.0453	0.7036	0.0046	1.7024	0.0001	0.8855	0.0545	37.9000	0.0001	0.0003	0.0001	0.0038	0.0001	0.0494	0.0000
M-09-096 195.5-196.5	0.0016	0.0773	0.7426	0.0046	1.8224	0.0001	0.1455	0.0462	39.9000	0.0001	0.0001	0.0001	0.0038	0.0000	0.0534	0.0000
M-09-096 195.5-196.5	0.0018	0.0953	0.6806	0.0046	2.2924	0.0001	1.7555	0.0392	43.6000	0.0001	0.0007	0.0001	0.0046	0.0003	0.0534	0.0000
M-09-096 195.5-196.5	0.0016	0.0433	0.6206	0.0057	1.5224	0.0001	0.1755	0.0412	41.4000	0.0001	0.0002	0.0001	0.0043	0.0000	0.0454	0.0000
M-09-096 195.5-196.5	0.0019	0.0803	0.5876	0.0049	1.6824	0.0001	0.1955	0.0335	39.3000	0.0015	0.0006	0.0001	0.0029	0.0002	0.0634	0.0000
M-09-096 195.5-196.5	0.0029	0.1273	0.5916	0.0066	2.0224	0.0001	0.2655	0.0341	42.8000	0.0045	0.0003	0.0001	0.0255	0.0004	0.1124	0.0000
M-09-096 195.5-196.5	0.0021	0.1003	0.5656	0.0047	1.8924	0.0001	0.1555	0.0339	42.7000	0.0001	0.0008	0.0003	0.0031	0.0002	0.0484	0.0000
M-09-096 195.5-196.5	0.0023	0.1043	0.5686	0.0054	2.0524	0.0001	0.2055	0.0418	42.2000	0.0001	0.0014	0.0001	0.0267	0.0002	0.0474	0.0000
M-09-096 195.5-196.5	0.0020	0.0863	0.4866	0.0058	1.5724	0.0001	0.1455	0.0346	36.2000	0.0001	0.0001	0.0001	0.0027	0.0001	0.0504	0.0000
M-09-096 195.5-196.5	0.0014	0.1043	0.4876	0.0053	1.7124	0.0001	0.1355	0.0339	37.4000	0.0001	0.0000	0.0001	0.0023	0.0001	0.0484	0.0000
M-09-096 195.5-196.5	0.0016	0.1063	0.4926	0.0062	1.6924	0.0001	0.1355	0.0346	34.2000	0.0001	0.0001	0.0006	0.0020	0.0000	0.0494	0.0000
M-09-096 195.5-196.5	0.0039	0.1443	0.5046	0.0064	1.4924	0.0001	0.1755	0.0411	38.3000	0.0001	0.0003	0.0003	0.0034	0.0002	0.0564	0.0000
M-09-096 195.5-196.5	0.0013	0.0873	0.4526	0.0049	1.5624	0.0001	0.1455	0.0444	31.8000	0.0001	0.0002	0.0001	0.0021	0.0001	0.0484	0.0000
M-09-096 195.5-196.5	0.0014	0.1003	0.4306	0.0050	1.3024	0.0001	0.1155	0.0385	30.6000	0.0001	0.0002	0.0002	0.0015	0.0001	0.0414	0.0000
M-09-096 195.5-196.5	0.0012	0.0433	0.4156	0.0046	1.3724	0.0001	0.1355	0.0357	29.5000	0.0001	0.0001	0.0001	0.0013	0.0000	0.0404	0.0000
M-09-096 195.5-196.5	0.0039	0.0903	0.4246	0.0056	1.4224	0.0001	0.1455	0.0347	28.7000	0.0001	0.0002	0.0001	0.0014	0.0001	0.0454	0.0000
M-09-096 195.5-196.5	0.0013	0.1553	0.4226	0.0028	1.3124	0.0001	0.1555	0.0366	30.0000	0.0001	0.0003	0.0001	0.0016	0.0001	0.0384	0.0000
M-09-096 195.5-196.5	0.0012	0.1383	0.4446	0.0056	1.3824	0.0001	0.1355	0.0327	35.6000	0.0001	0.0003	0.0001	0.0015	0.0001	0.0434	0.0000
M-09-096 195.5-196.5	0.0004	0.0813	0.3996	0.0052	1.3024	0.0001	0.1355	0.0392	29.9000	0.0001	0.0001	0.0001	0.0014	0.0000	0.0454	0.0000
M-09-096 195.5-196.5	0.0007	0.0858	0.4001	0.0051	1.2974	0.0001	0.1455	0.0413	30.4500	0.0001	0.0002	0.0002	0.0008	0.0000	0.0404	0.0000
M-09-096 195.5-196.5	0.0009	0.0903	0.4006	0.0049	1.2924	0.0001	0.1555	0.0434	31.0000	0.0001	0.0002	0.0004	0.0008	0.0000	0.0354	0.0000
M-09-096 195.5-196.5	0.0010	0.0988	0.3976	0.0050	1.2624	0.0001	0.1455	0.0385	36.8500	0.0001	0.0003	0.0002	0.0018	0.0000	0.0364	0.0000
M-09-096 195.5-196.5	0.0011	0.1073	0.3946	0.0051	1.2324	0.0001	0.1355	0.0335	42.7000	0.0001	0.0003	0.0001	0.0018	0.0000	0.0374	0.0000
M-09-096 195.5-196.5	0.0013	0.0913	0.3761	0.0052	1.1174	0.0001	0.1205	0.0299	32.8500	0.0001	0.0002	0.0001	0.0012	0.0000	0.0394	0.0000
M-09-096 195.5-196.5	0.0014	0.0753	0.3576	0.0054	1.0024	0.0001	0.1055	0.0262	23.0000	0.0001	0.0000	0.0001	0.0007	0.0000	0.0414	0.0000
M-09-096 195.5-196.5	0.0013	0.0818	0.3501	0.0050	1.0174	0.0001	0.1105	0.0264	23.8500	0.0001	0.0000	0.0001	0.0028	0.0001	0.0384	0.0000
M-09-096 195.5-196.5	0.0012	0.0883	0.3426	0.0047	1.0324	0.0001	0.1155	0.0265	24.7000	0.0001	0.0000	0.0001	0.0049	0.0002	0.0354	0.0000
M-09-096 195.5-196.5	0.0012	0.0778	0.3436	0.0046	1.0324	0.0001	0.1205	0.0281	24.0000	0.0001	0.0001	0.0001	0.0027	0.0001	0.0369	0.0000
M-09-096 195.5-196.5	0.0012	0.0673	0.3446	0.0046	1.0324	0.0001	0.1255	0.0297	23.3000	0.0000	0.0002	0.0001	0.0005	0.0000	0.0384	0.0000
M-09-096 195.5-196.5	0.0011	0.0583	0.3451	0.0048	0.9724	0.0001	0.1205	0.0295	25.9000	0.0001	0.0001	0.0001	0.0005	0.0000	0.0379	0.0000
M-09-096 195.5-196.5	0.0010	0.0493	0.3456	0.0050	0.9124	0.0001	0.1155	0.0292	28.5000	0.0001	0.0001	0.0001	0.0005	0.0000	0.0374	0.0000
M-09-096 195.5-196.5	0.0012	0.0843	0.3601	0.0049	1.1224	0.0001	0.1255	0.0311	35.6000	0.0001	0.0001	0.0001	0.0027	0.0000	0.0459	0.0000
M-09-096 195.5-196.5	0.0013	0.1193	0.3746	0.0049	1.3324	0.0002	0.1355	0.0329	42.7000	0.0001	0.0002	0.0001	0.0049	0.0000	0.0544	0.0000
	0.0012277	0.0792581	0.3539806	0.0049254	1.0574194	0.0001081	0.1194839	0.0289332	28.44	0.0000836	0.0001069	0.0000836	0.0021395	0.0000432	0.0405694	0.000005
HC2 UP Hazelton																
M-09-097 52.5-53.5	0.0017	0.0050	7.8300	0.0100	2.1200	0.0000	5.9200	0.1280	12.6000	0.0001	0.0002	0.0002	0.0000	0.0002	0.0040	0.0001
M-09-097 52.5-53.5	0.0008	0.0050	5.7000	0.0066	1.9500	0.0000	3.9500	0.0843	13.4000	0.0001	0.0005	0.0002	0.0000	0.0001	0.0020	0.0001
M-09-097 52.5-53.5	0.0008	0.0050	4.3000	0.0040	1.9700	0.0000	2.4300	0.0683	10.3000	0.0001	0.0004	0.0001	0.0001	0.0001	0.0020	0.0000
M-09-097 52.5-53.5	0.0010	0.0050	4.1000	0.0039	2.3700	0.0000	1.8900	0.0687	11.0000	0.0001	0.0004	0.0002	0.0001	0.0001	0.0030	0.0001
M-09-097 52.5-53.5	0.0010	0.0050	3.1500	0.0027	1.6800	0.0000	1.1700	0.0540	7.5300	0.0001	0.0005	0.0001	0.0001	0.0001	0.0020	0.0000
M-09-097 52.5-53.5	0.0010	0.0050	3.2300	0.0026	1.8900	0.0000	0.8800	0.0557	8.1300	0.0001	0.0003	0.0001	0.0001	0.0001	0.0030	0.0001
M-09-097 52.5-53.5	0.0011	0.0050	2.7500	0.0020	2.0000	0.0000	0.7100	0.0563	7.9200	0.0001	0.0003	0.0001	0.0000	0.0000	0.0040	0.0000
M-09-097 52.5-53.5	0.0013	0.0050	3.0500	0.0026	2.2100	0.0000	0.7200	0.0614	8.2700	0.0001	0.0002	0.0001	0.0002	0.0000	0.0040	0.0000
M-09-097 52.5-53.5	0.0015	0.0050	2.8500	0.0027	2.1200	0.0000	0.6600	0.0600	8.9500	0.0001	0.0003	0.0001	0.0002	0.0000	0.0050	0.0001
M-09-097 52.5-53.5	0.0015	0.0050	2.6300	0.0025	2.0200	0.0000	0.5900	0.0603	8.5500	0.0001	0.0002	0.0002	0.0003	0.0000	0.0050	0.0000
M-09-097 52.5-53.5	0.0022	0.0050	2.8700	0.0032	2.1400	0.0000	0.5700	0.0643	9.6000	0.0001	0.0004	0.0001	0.0002	0.0000	0.0060	0.0000
M-09-097 52.5-53.5	0.0028	0.0050	3.0100	0.0036	2.4500	0.0000	0.5900	0.0738	10.4000	0.0001	0.0003	0.0001	0.0003	0.0000	0.0110	0.0000
M-09-097 52.5-53.5	0.0031	0.0050	2.4500	0.0042	2.0200	0.0000	0.4800	0.0678	10.0000	0.0001	0.0004	0.0001	0.0001	0.0000	0.0100	0.0000
M-09-097 52.5-53.5	0.0038	0.0300	2.9100	0.0043	2.4500	0.0000	0.4400	0.0775	11.7000	0.0001	0.0003	0.0001	0.0003	0.0000	0.0120	0.0001
M-09-097 52.5-53.5	0.0044	0.0170	2.9800	0.0040	2.5900	0.0000	0.4100	0.0833	12.6000	0.0001	0.0001	0.0002	0.0004	0.0000	0.0140	0.0000
M-09-097 52.5-53.5	0.0056	0.0045	2.5500	0.0044	2.1500	0.0000	0.4300	0.0769	13.0000	0.0001	0.0003	0.0002	0.0003	0.0000	0.0260	0.0001
M-09-097 52.5-53.5	0.0065	0.0130	2.6400	0.0046	2.3600	0.0000	0.4100	0.0871	14.6000	0.0001	0.0002	0.0001	0.0003	0.0000	0.0340	0.0001
M-09-097 52.5-53.5	0.0070	0.0410	2.5600	0.0044	2.4300	0.0000	0.3600	0.0854	15.2000	0.0001	0.0002	0.0001	0.0003	0.0000	0.0430	0.0000
M-09-097 52.5-53.5	0.0083	0.0200	2.2800	0.0038	2.1800	0.0000	0.3800	0.0807	14.1000	0.0001	0.0003	0.0001	0.0003	0.0000	0.0260	0.0000
M-09-097 52.5-53.5	0.0096	0.5970	2.8600	0.0050	2.2200	0.0000	0.5400	0.0812	14.9000	0.0001	0.0002	0.0008	0.0003	0.0000	0.0310	0.0001
M-09-097 52.5-53.5	0.0100	0.0540	2.4600	0.0049	2.5700	0.0000	0.3600	0.0866	16.3000	0.0001	0.0001	0.0001	0.0003	0.0000	0.0320	0.0000
M-09-097 52.5-53.5	0.0117	0.0840	2.0300	0.0052	2.1300	0.0000	0.2400	0.0790	16.1000	0.0001	0.0001	0.0001	0.0003	0.0000	0.0320	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-097 52.5-53.5	2	22	8-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	495	19	113	4.76	14.5	-0.3	34	0.5
M-09-097 52.5-53.5	2	23	15-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	20	116	4.96	19.9	0.6	37	0.1
M-09-097 52.5-53.5	2	24	22-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	505	19	115	5	17.6	0.5	37	0.1
M-09-097 52.5-53.5	2	25	29-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	20	117	4.76	21.4	0.6	43	0.5
M-09-097 52.5-53.5	2	26	5-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	500	20	140	4.53	25.3	0.1	49	0.1
M-09-097 52.5-53.5	2	27	12-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	500	15	108	4.96	20.4	0.5	36	0.1
M-09-097 52.5-53.5	2	28	19-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	495	16	110	4.96	25.1	0.5	38	0.5
M-09-097 52.5-53.5	2	29	26-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	16	113	4.64	21.6	0.1	41	0.1
M-09-097 52.5-53.5	2	30	2-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	455	15	97	4.92	23.5	0.1	47	0.1
M-09-097 52.5-53.5	2	31	9-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	14	113	4.62	26.7	0.1	47	0.1
M-09-097 52.5-53.5	2	32	16-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	450	15	106	4.41	22.5	#N/A	50	0.1
M-09-097 52.5-53.5	2	33	23-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	11	86	4.39	20.3	#N/A	46	0.1
M-09-097 52.5-53.5	2	34	30-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	11	79	4.47	19.8	#N/A	44	0.1
M-09-097 52.5-53.5	2	35	7-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	460	12	112	4.43	22.8	#N/A	47	0.1
M-09-097 52.5-53.5	2	36	14-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	450	13	109	4.65	22.8	0.1	47	0.1
M-09-097 52.5-53.5	2	37	21-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	10	105	4.61	22.6	0.1	43	0.5
M-09-097 52.5-53.5	2	38	28-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	10	109	4.48	23.9	#N/A	48	0.3
M-09-097 52.5-53.5	2	39	4-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	10	107	4.86	22.3	0.1	48	0.1
M-09-097 52.5-53.5	2	40	11-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	450	11	107	4.8	26.1	0.1	49	0.1
M-09-097 52.5-53.5	2	41	18-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	450	9	77	4.89	23.8	0.1	36	0.1
M-09-097 52.5-53.5	2	42	25-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	460	7	84	4.61	20.1	-1.0	35	0.1
M-09-097 52.5-53.5	2	43	2-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	10	91	4.64	20.3	0.1	34	0.1
M-09-097 52.5-53.5	2	44	9-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	8	93	4.57	22.7	0.1	35	0.1
M-09-097 52.5-53.5	2	45	16-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	455	8	95	4.59	25.4	0.1	44	0.1
M-09-097 52.5-53.5	2	46	23-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	8	93	4.54	25.5	0.1	41	0.1
M-09-097 52.5-53.5	2	47	30-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	7	81	4.72	29.8	0.1	41	0.1
M-09-097 52.5-53.5	2	48	6-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	7	74	4.66	26.6	0.1	39	0.1
M-09-097 52.5-53.5	2	49	13-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	7	71	4.68	23.5	0.1	36	0.1
M-09-097 52.5-53.5	2	50	20-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	460	7	87	4.46	24.6	0.1	37	0.1
M-09-097 52.5-53.5	2	51	27-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	7	76	4.68	25.8	0.1	37	0.1
M-09-097 52.5-53.5	2	52	3-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	460	6	74	4.51	23.3	0.1	37	0.1
M-09-097 52.5-53.5	2	53	10-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	6	74	4.5	20.9	0.1	37	0.1
M-09-097 52.5-53.5	2	54	17-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	6	77	4.48	21.7	0.1	39	0.2
M-09-097 52.5-53.5	2	55	24-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	6	94	4.65	22.5	0.1	40	0.3
M-09-097 52.5-53.5	2	56	3-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	5	86	4.58	22.9	#N/A	40	0.2
M-09-097 52.5-53.5	2	57	10-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	5	88	4.47	23.4	#N/A	40	0.1
M-09-097 52.5-53.5	2	58	17-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	5	93	4.43	22.4	#N/A	36	0.1
M-09-097 52.5-53.5	2	59	24-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	6	93	4.43	21.4	#N/A	31	0.1
M-09-097 52.5-53.5	2	60	31-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	5	91	4.56	23.1	#N/A	33	0.1
M-09-097 52.5-53.5	2	61	7-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	5	90	4.67	24.8	0.1	35	0.1
M-09-097 52.5-53.5	2	62	14-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	5	95	4.91	22.3	0.3	36	0.1
M-09-097 52.5-53.5	2	63	21-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	5	96	5.01	19.8	0.6	36	0.1
M-09-097 52.5-53.5	2	64	28-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	455	5	99	4.99	20.7	0.6	36	0.1
M-09-097 52.5-53.5	2	65	5-May-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	5	90	5.21	21.6	0.6	35	0.1
M-09-097 52.5-53.5	2	66	12-May-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	5	88	5.15	22.5	1.2	37	0.1
M-09-097 52.5-53.5	2	67	19-May-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	5	93	5.43	23.4	1.8	39	0.1
M-09-097 52.5-53.5	2	68	26-May-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	6	91	5.35	29.7	1.5	40	0.1
M-09-097 52.5-53.5	2	69	2-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	6	115	5.2	36.1	1.1	40	0.1
M-09-097 52.5-53.5	2	70	9-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	495	5	91	5	31.2	1.0	35	0.1
M-09-097 52.5-53.5	2	71	16-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	5	90	5.33	26.3	0.8	29	0.1
M-09-097 52.5-53.5	2	72	23-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	5	96	5.28	26.7	0.6	33	0.1
M-09-097 52.5-53.5	2	73	30-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	5	94	5.25	27.0	0.3	36	0.1
M-09-097 52.5-53.5	2	74	7-Jul-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	5	101	5.69	26.9	0.4	37	0.1
M-09-097 52.5-53.5	2	75	14-Jul-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	495	5	96	5.19	26.8	0.5	38	0.1
M-09-097 52.5-53.5	2	76	21-Jul-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	4	93	5.42	27.0	0.4	39	0.1
M-09-097 52.5-53.5	2	77	28-Jul-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	4	90	5.21	27.2	0.3	39	0.1
M-09-097 52.5-53.5	2	78	4-Aug-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	4	95	5.03	26.5	0.6	37	0.1
M-09-097 52.5-53.5	2	79	11-Aug-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	5	91	5.26	25.8	0.9	34	0.1
M-09-097 52.5-53.5	2	80	18-Aug-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	4	92	5.25	27.5	0.9	35	0.1
M-09-097 52.5-53.5	2	81	25-Aug-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	495	4	94	5.18	29.3	1.0	36	0.1
M-09-097 52.5-53.5	2	82	1-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	4	95	5.21	28.6	0.9	38	0.1
M-09-097 52.5-53.5	2	83	8-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	4	91	5.25	28.0	0.8	39	0.1
M-09-097 52.5-53.5	2	84	15-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	495	4	93	5.54	27.0	0.5	40	0.1
M-09-097 52.5-53.5	2	85	22-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	4	96	4.95	25.9	0.2	40	0.1
M-09-097 52.5-53.5	2	86	29-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	495	4	92	5.06	27.8	0.2	42	0.1
M-09-097 52.5-53.5	2	87	6-Oct-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	4	95	5.05	29.6	0.1	43	0.1
M-09-097 52.5-53.5	2	88	13-Oct-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	4	92	5.2	28.2	0.1	42	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-097 52.5-53.5	0.34	0.2100	0.0001	0.0003	0.0120	0.0001	0.0000	0.0037	0.00109	6.1200	0.0006	0.0802	4.6500	0.0500	0.00420	0.0090	0.7960	8.5000	0.0000050	0.0009
M-09-097 52.5-53.5	0.38	0.2070	0.0001	0.0002	0.0116	0.0002	0.0000	0.0024	0.00121	6.6500	0.0007	0.0855	5.4600	0.0400	0.00335	0.0020	0.7590	8.7500	0.0000200	0.0006
M-09-097 52.5-53.5	0.39	0.2500	0.0001	0.0002	0.0124	0.0002	0.0000	0.0019	0.00116	6.2700	0.0005	0.0892	5.9600	0.0520	0.00333	0.0030	0.7160	8.9300	0.0000050	0.0006
M-09-097 52.5-53.5	0.41	0.2420	0.0001	0.0001	0.0106	0.0002	0.0000	0.0024	0.00121	6.8700	0.0003	0.0974	6.3900	0.0470	0.00283	0.0020	0.7340	9.1900	0.0000050	0.0005
M-09-097 52.5-53.5	0.40	0.3770	0.0001	0.0002	0.0165	0.0003	0.0000	0.0033	0.00113	6.5900	0.0003	0.0936	6.9500	1.0600	0.03450	0.0030	0.8240	10.2000	0.0000050	0.0004
M-09-097 52.5-53.5	0.29	0.2380	0.0001	0.0001	0.0147	0.0002	0.0000	0.0017	0.00114	5.2400	0.0007	0.0927	6.5900	0.2170	0.00345	0.0010	0.5750	8.1400	0.0000050	0.0003
M-09-097 52.5-53.5	0.23	0.2590	0.0001	0.0002	0.0129	0.0002	0.0000	0.0017	0.00132	5.4100	0.0003	0.1060	7.3600	0.1820	0.01560	0.0020	0.5630	9.1500	0.0000050	0.0003
M-09-097 52.5-53.5	0.37	0.2700	0.0001	0.0001	0.0108	0.0002	0.0000	0.0013	0.00127	5.3700	0.0007	0.1110	7.5700	0.1860	0.00331	0.0020	0.5340	9.2300	0.0000050	0.0003
M-09-097 52.5-53.5	0.35	0.2950	0.0001	0.0001	0.0122	0.0002	0.0000	0.0015	0.00126	5.2300	0.0003	0.1120	7.9700	0.1510	0.00175	0.0020	0.5090	9.2400	0.0000050	0.0003
M-09-097 52.5-53.5	0.38	0.3060	0.0001	0.0003	0.0119	0.0003	0.0000	0.0021	0.00125	4.7700	0.0005	0.1070	7.9000	0.1480	0.00242	0.0020	0.4580	9.1300	0.0000050	0.0008
M-09-097 52.5-53.5	0.38	0.3190	0.0001	0.0001	0.0136	0.0003	0.0000	0.0015	0.00122	5.2700	0.0003	0.1090	8.3900	0.0180	0.00260	0.0030	0.5350	10.5000	0.0000200	0.0025
M-09-097 52.5-53.5	0.39	0.2740	0.0001	0.0069	0.0171	0.0003	0.0001	0.0019	0.00121	3.9300	0.0010	0.1020	8.3300	0.0360	0.00234	0.0030	0.3980	7.8300	0.0000050	0.0003
M-09-097 52.5-53.5	0.34	0.2960	0.0001	0.0071	0.0145	0.0003	0.0000	0.0022	0.00133	3.8100	0.0007	0.1010	8.2700	0.0240	0.00388	0.0020	0.3860	7.9300	0.0000050	0.0005
M-09-097 52.5-53.5	0.40	0.3040	0.0001	0.0001	0.0144	0.0003	0.0000	0.0024	0.00124	4.1300	0.0003	0.1070	8.5200	0.0070	0.00254	0.0020	0.4170	8.8400	0.0000050	0.0007
M-09-097 52.5-53.5	0.40	0.3800	0.0001	0.0001	0.0132	0.0003	0.0000	0.0032	0.00126	4.2600	0.0006	0.1070	8.3600	0.1760	0.00212	0.0030	0.4540	9.7800	0.0000050	0.0007
M-09-097 52.5-53.5	0.39	0.3210	0.0001	0.0001	0.0157	0.0003	0.0000	0.0022	0.00124	3.5800	0.0003	0.1020	9.0000	0.0160	0.00069	0.0020	0.3520	8.2400	0.0000100	0.0006
M-09-097 52.5-53.5	0.41	0.3460	0.0001	0.0001	0.0144	0.0003	0.0000	0.0020	0.00127	3.5300	0.0003	0.1180	9.6000	0.0100	0.00101	0.0030	0.3440	8.1200	0.0000050	0.0003
M-09-097 52.5-53.5	0.40	0.3980	0.0001	0.0002	0.0135	0.0003	0.0000	0.0020	0.00132	3.4800	0.0003	0.1100	9.5800	0.0150	0.00306	0.0020	0.3480	8.4600	0.0000200	0.0017
M-09-097 52.5-53.5	0.46	0.3830	0.0001	0.0004	0.0145	0.0003	0.0000	0.0020	0.00150	3.6800	0.0006	0.1280	11.3000	0.0180	0.00175	0.0030	0.4060	10.4000	0.0000050	0.0004
M-09-097 52.5-53.5	0.42	0.3310	0.0001	0.0002	0.0152	0.0003	0.0000	0.0017	0.00118	3.0900	0.0003	0.0986	8.9300	0.0100	0.00121	0.0030	0.3070	7.3200	0.0000050	0.0013
M-09-097 52.5-53.5	0.35	0.3050	0.0001	0.0005	0.0166	0.0003	0.0000	0.0025	0.00096	2.5900	0.0007	0.0774	8.3000	0.0090	0.00334	0.0030	0.2380	6.2700	0.0000050	0.0006
M-09-097 52.5-53.5	0.39	0.3230	0.0001	0.0003	0.0152	0.0003	0.0000	0.0021	0.00112	3.3800	0.0005	0.0930	8.6200	0.0410	0.00851	0.0020	0.3210	8.2900	0.0000100	0.0003
M-09-097 52.5-53.5	0.38	0.3370	0.0001	0.0003	0.0137	0.0002	0.0000	0.0022	0.00025	2.6200	0.0009	0.0908	9.3200	0.0870	0.00181	0.0020	0.2630	6.9700	0.0000100	0.0003
M-09-097 52.5-53.5	0.44	0.3530	0.0001	0.0005	0.0144	0.0003	0.0000	0.0007	0.00051	2.8800	0.0003	0.0978	9.6800	0.2270	0.00085	0.0020	0.2870	7.4600	0.0000050	0.0002
M-09-097 52.5-53.5	0.16	0.3780	0.0009	0.0005	0.0139	0.0003	0.0000	0.0018	0.00111	2.6300	0.0003	0.0943	9.6600	0.0140	0.00272	0.0020	0.2630	7.3800	0.0000050	0.0010
M-09-097 52.5-53.5	0.47	0.3510	0.0001	0.0006	0.0126	0.0003	0.0000	0.0014	0.00110	2.5100	0.0006	0.0856	8.9900	0.0160	0.00215	0.0020	0.2520	7.0800	0.0000050	0.0001
M-09-097 52.5-53.5	0.43	0.3415	0.0001	0.0005	0.0128	0.0003	0.0000	0.0018	0.00104	2.4550	0.0004	0.0859	8.8350	0.0310	0.00206	0.0020	0.2450	7.0300	0.0000050	0.0002
M-09-097 52.5-53.5	0.39	0.3320	0.0001	0.0003	0.0130	0.0003	0.0000	0.0021	0.00097	2.4000	0.0003	0.0861	8.6800	0.0460	0.00197	0.0020	0.2380	6.9800	0.0000050	0.0003
M-09-097 52.5-53.5	0.39	0.3345	0.0002	0.0002	0.0128	0.0003	0.0000	0.0019	0.00104	2.3300	0.0003	0.0869	9.0650	0.0270	0.00143	0.0020	0.2285	6.8400	0.0000050	0.0003
M-09-097 52.5-53.5	0.38	0.3370	0.0003	0.0001	0.0126	0.0003	0.0000	0.0016	0.00110	2.2600	0.0003	0.0876	9.4500	0.0080	0.00088	0.0020	0.2190	6.7000	0.0000050	0.0003
M-09-097 52.5-53.5	0.37	0.3600	0.0002	0.0002	0.0126	0.0003	0.0000	0.0018	0.00108	2.1600	0.0003	0.0854	9.5700	0.0125	0.00180	0.0020	0.2060	6.4100	0.0000050	0.0003
M-09-097 52.5-53.5	0.35	0.3830	0.0001	0.0003	0.0126	0.0003	0.0000	0.0019	0.00105	2.0600	0.0003	0.0831	9.6900	0.0170	0.00272	0.0020	0.1930	6.1200	0.0000050	0.0003
M-09-097 52.5-53.5	0.39	0.4005	0.0001	0.0002	0.0128	0.0003	0.0000	0.0019	0.00107	1.9900	0.0003	0.0837	9.6000	0.0145	0.01037	0.0020	0.1900	6.0800	0.0000075	0.0003
M-09-097 52.5-53.5	0.42	0.4180	0.0001	0.0001	0.0129	0.0003	0.0000	0.0018	0.00108	1.9200	0.0003	0.0843	9.5100	0.0120	0.01801	0.0020	0.1870	6.0400	0.0000100	0.0003
M-09-097 52.5-53.5	0.42	0.4235	0.0001	0.0001	0.0130	0.0003	0.0000	0.0014	0.00102	1.8700	0.0003	0.0807	10.0550	0.0210	0.00986	0.0020	0.1780	5.7250	0.0000100	0.0003
M-09-097 52.5-53.5	0.42	0.4290	0.0001	0.0001	0.0131	0.0003	0.0000	0.0010	0.00096	1.8200	0.0003	0.0770	10.6000	0.0300	0.00170	0.0020	0.1690	5.4100	0.0000100	0.0003
M-09-097 52.5-53.5	0.42	0.4005	0.0001	0.0001	0.0132	0.0003	0.0000	0.0012	0.00094	1.8900	0.0003	0.0759	10.2350	0.0240	0.00217	0.0020	0.1730	5.7900	0.0000075	0.0002
M-09-097 52.5-53.5	0.42	0.3720	0.0001	0.0001	0.0133	0.0003	0.0000	0.0013	0.00092	1.9600	0.0003	0.0748	9.8700	0.0180	0.00263	0.0020	0.1770	6.1700	0.0000050	0.0002
M-09-097 52.5-53.5	0.42	0.3860	0.0001	0.0003	0.0136	0.0003	0.0000	0.0013	0.00088	1.8600	0.0003	0.0770	10.0850	0.0765	0.00186	0.0020	0.1800	6.1150	0.0000050	0.0004
M-09-097 52.5-53.5	0.41	0.4000	0.0001	0.0005	0.0138	0.0003	0.0000	0.0012	0.00084	1.7600	0.0003	0.0791	10.3000	0.1350	0.00108	0.0020	0.1830	6.0600	0.0000050	0.0006
M-09-097 52.5-53.5	0.41	0.4300	0.0001	0.0004	0.0130	0.0003	0.0000	0.0021	0.00094	1.8100	0.0003	0.0823	10.6000	0.0730	0.00144	0.0020	0.1780	6.0650	0.0000075	0.0042
M-09-097 52.5-53.5	0.41	0.4600	0.0001	0.0002	0.0121	0.0004	0.0000	0.0030	0.00104	1.8600	0.0003	0.0855	10.9000	0.0110	0.00179	0.0020	0.1730	6.0700	0.0000100	0.0079
M-09-097 52.5-53.5	0.41	0.4405	0.0001	0.0002	0.0124	0.0003	0.0000	0.0023	0.00098	1.7800	0.0003	0.0820	10.8000	0.0085	0.00161	0.0020	0.1685	5.8350	0.0000075	0.0051
M-09-097 52.5-53.5	0.40	0.4210	0.0001	0.0001	0.0127	0.0003	0.0000	0.0016	0.00091	1.7000	0.0003	0.0784	10.7000	0.0060	0.00142	0.0020	0.1640	5.6000	0.0000050	0.0022
M-09-097 52.5-53.5	0.43	0.4520	0.0001	0.0002	0.0134	0.0003	0.0000	0.0017	0.00104	1.7100	0.0003	0.0822	10.8500	0.0075	0.00126	0.0025	0.1625	5.6600	0.0000050	0.0028
M-09-097 52.5-53.5	0.45	0.4830	0.0001	0.0003	0.0141	0.0003	0.0000	0.0017	0.00116	1.7200	0.0003	0.0859	11.0000	0.0090	0.00110	0.0030	0.1610	5.7200	0.0000050	0.0034
M-09-097 52.5-53.5	0.50	0.5385	0.0001	0.0005	0.0151	0.0004	0.0000	0.0022	0.00147	1.9300	0.0003	0.0950	12.6500	0.0120	0.00142	0.0030	0.1795	6.1000	0.0000075	0.0037
M-09-097 52.5-53.5	0.55	0.5940	0.0001	0.0006	0.0161	0.0005	0.0000	0.0027	0.00177	2.1400	0.0003	0.1040	14.3000	0.0150	0.00173	0.0030	0.1980	6.4800	0.0000100	0.0039
M-09-097 52.5-53.5	0.49	0.5160	0.0002	0.0004	0.0144	0.0004	0.0000	0.0034	0.00134	1.8550	0.0005	0.0905	12.3500	0.0145	0.00602	0.0025	0.1710	5.8000	0.0000100	0.0024
M-09-097 52.5-53.5	0.43	0.4380	0.0003	0.0001	0.0126	0.0003	0.0000	0.0041	0.00091	1.5700	0.0008	0.0770	10.4000	0.0140	0.01030	0.0020	0.1440	5.1200	0.0000100	0.0009
M-09-097 52.5-53.5	0.42	0.4990	0.0002	0.0002	0.0164	0.0003	0.0000	0.0057	0.00101	1.5900	0.0005	0.0810	11.2000	0.0130	0.00527	0.0025	0.1470	5.5400	0.0000150	0.0012
M-09-097 52.5-53.5	0.41	0.5600	0.0001	0.0003	0.0201	0.0004	0.0000	0.0072	0.00111	1.6100	0.0003	0.0850	12.0000	0.0120	0.00024	0.0030	0.1500	5.9600	0.0000200	0.0016
M-09-097 52.5-53.5	0.42	0.5405	0.0001	0.0004	0.0160	0.0004	0.0000	0.0051	0.00104	1.6650	0.0003	0.0884	11.9000	0.0115	0.00034	0.0030	0.1540	6.1250	0.0000200	0.0028
M-09-097 52.5-53.5	0.43	0.5210	0.0001	0.0004	0.0119	0.0004	0.0000	0.0030	0.00098	1.7200	0.0003	0.0918	11.8000	0.0110	0.00044	0.0030	0.1580	6.2900	0.0000200	0.0039
M-09-097 52.5-53.5	0.42	0.5220	0.0001	0.0003	0.0122	0.0003	0.0000	0.0336	0.00095	1.4950	0.0003	0.0875	11.6000	0.0175	0.00036	0.0025	0.1545	5.6250	0.0000200	0.0044
M-09-097 52.5-53.5	0.41	0.5230	0.0001	0.0002	0.0125	0.0003	0.0000	0.0642	0.00093	1.2700	0.0003	0.0832	11.4000	0.0240	0.00028	0.0020	0.1510	4.9600	0.0000200	0.0048
M-09-097 52.5-53.5	0.42	0.5490	0.0001	0.0002	0.0120	0.0003	0.0000	0.0330	0.00093	1.4500	0.0004	0.0846	11.2000	0.0190	0.00032	0.0025	0.1485	5.4400	0.0000125	0.0030
M-09-097 52.5-53.5	0.43	0.5750	0.0001	0.0001	0.0114	0.0004	0.0000	0.0017	0.00094	1.6300	0.0006	0.0860	11.0000	0.0140	0.00036	0.0030	0.1460	5.9200	0.0000050	0.0011
M-09-097 52.5-53.5	0.45	0.5650	0.0001	0.0006	0.0125	0.0004	0.0000	0.0043	0.00096	1.5300	0.0008	0.0843	11.2000	0.0170	0.00191	0.0030	0.1415	5.7700	0.0000050	0.0006
M-09-097 52.5-53.5	0.46	0.5550	0.0001	0.0010	0.0135	0.0004	0.0000	0.0069	0.00097	1.4300	0.0009	0.0825	11.4000	0.0200	0.00346	0.0030	0.1370	5.6200	0.0000050	0.0002
M-09-097 52.5-53.5	0.45	0.5715	0.0001	0.0010	0.0131	0.0004	0.0000	0.0049	0.00096	1.3850	0.0008	0.0785	11.9000	0.0155	0.00186	0.0035	0.1300	5.4400	0.0000075	0.0004
M-09-097 52.5-53.5	0.44	0.5880	0.0001	0.0009	0.0126	0.0004	0.0000	0.0029	0.00096	1.3400	0.0007	0.0744	12.4000	0.0110	0.00025	0.0040	0.1230	5.2600	0.0000100	0.0006
M-09-097 52.5-53.5	0.46	0.6015	0.0014	0.0006	0.0122	0.0004	0.0000	0.0030	0.00171	1.4050	0.0019	0.0794	12.0500	0.0180	0.00114	0.0040	0.1315	5.2950	0.0000100	0.0004
M-09-097 52.5-53.5	0.48	0.6150	0.0027	0.0003	0.0118	0.0004	0.0000	0.0030	0.00246	1.4700	0.0031	0.0843	11.7000	0.0250	0.00203	0.0040	0.1400	5.3300	0.0000100	0.0003
M-09-097 52.5-53.5	0.47	0.6455	0.0014	0.0003	0.0121	0.0005	0.0000	0.0067	0.00177	1.4100	0.0017	0.0842	12.2500	0.0200	0.00114	0.0035	0.1370	5.4300	0.0000100	0.0003
M-09-097 52.5-53.5	0.45	0.6760	0.0001	0.0002	0.0123	0.0005	0.0000	0.0103	0.00107	1.3500	0.0003	0.0840	12.8000	0.0150	0.00024	0.0030	0.1340	5.5300	0.0000100	0.0002
M-09-097 52.5-53.5	0.45	0.6765	0.0001	0.0002	0.0129	0.0005	0.0000	0.0062	0.00137	1.3150	0.0005	0.0853	12.0000	0.0135	0.00045	0.0030	0.1340	5.5250	0.0000075	0.0002

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-097 52.5-53.5	0.0138	0.0720	2.1300	0.0062	2.2600	0.0000	0.3200	0.0749	16.1000	0.0001	0.0003	0.0001	0.0003	0.0000	0.0400	0.0000
M-09-097 52.5-53.5	0.0139	0.0930	1.9400	0.0058	2.2900	0.0000	0.3300	0.0731	14.6000	0.0001	0.0002	0.0001	0.0004	0.0000	0.0440	0.0000
M-09-097 52.5-53.5	0.0131	0.0045	1.9200	0.0057	2.3400	0.0000	0.2700	0.0692	15.3000	0.0001	0.0010	0.0001	0.0004	0.0000	0.0410	0.0000
M-09-097 52.5-53.5	0.0145	0.1150	1.9800	0.0059	2.4900	0.0000	0.2800	0.0726	17.1000	0.0001	0.0000	0.0001	0.0004	0.0000	0.0420	0.0000
M-09-097 52.5-53.5	0.0143	0.1000	1.8500	0.0057	2.7000	0.0000	0.2700	0.0748	18.6000	0.0001	0.0159	0.0001	0.0008	0.0000	0.0440	0.0000
M-09-097 52.5-53.5	0.0144	0.1090	1.3700	0.0058	2.1600	0.0000	0.2000	0.0590	15.6000	0.0001	0.0002	0.0001	0.0004	0.0000	0.0410	0.0000
M-09-097 52.5-53.5	0.0154	0.1060	1.4300	0.0065	2.2800	0.0000	0.2300	0.0564	16.5000	0.0001	0.0001	0.0002	0.0004	0.0000	0.0530	0.0000
M-09-097 52.5-53.5	0.0163	0.0960	1.4000	0.0063	1.7800	0.0000	0.2400	0.0552	16.7000	0.0001	0.0007	0.0001	0.0005	0.0000	0.0430	0.0000
M-09-097 52.5-53.5	0.0159	0.1040	1.2700	0.0063	1.6400	0.0000	0.1800	0.0523	16.4000	0.0001	0.0001	0.0001	0.0005	0.0000	0.0410	0.0000
M-09-097 52.5-53.5	0.0159	0.0980	1.2900	0.0057	1.7000	0.0000	0.2700	0.0473	15.8000	0.0001	0.0006	0.0001	0.0007	0.0002	0.0390	0.0000
M-09-097 52.5-53.5	0.0171	0.0980	1.3900	0.0070	1.6100	0.0000	0.2600	0.0572	17.4000	0.0001	0.0002	0.0001	0.0018	0.0000	0.0390	0.0000
M-09-097 52.5-53.5	0.0167	0.1240	1.3000	0.0060	1.6700	0.0000	0.2500	0.0434	13.7000	0.0007	0.0012	0.0001	0.0005	0.0001	0.0440	0.0000
M-09-097 52.5-53.5	0.0173	0.1040	1.2400	0.0060	1.5200	0.0000	0.2200	0.0418	14.1000	0.0012	0.0006	0.0001	0.0076	0.0001	0.0550	0.0000
M-09-097 52.5-53.5	0.0167	0.1420	1.2800	0.0060	1.8000	0.0000	0.2200	0.0455	15.8000	0.0001	0.0006	0.0004	0.0007	0.0000	0.0380	0.0000
M-09-097 52.5-53.5	0.0177	0.1460	1.2400	0.0058	1.7400	0.0000	0.2200	0.0482	15.2000	0.0001	0.0003	0.0001	0.0030	0.0000	0.0360	0.0001
M-09-097 52.5-53.5	0.0184	0.1570	1.0700	0.0065	1.7100	0.0000	0.1900	0.0398	14.2000	0.0001	0.0001	0.0001	0.0007	0.0000	0.0410	0.0000
M-09-097 52.5-53.5	0.0188	0.1210	1.0400	0.0063	1.5100	0.0000	0.1800	0.0391	14.9000	0.0001	0.0000	0.0003	0.0007	0.0000	0.0410	0.0000
M-09-097 52.5-53.5	0.0176	0.1470	1.0800	0.0061	1.4100	0.0000	0.1900	0.0393	14.0000	0.0001	0.0001	0.0002	0.0009	0.0000	0.0390	0.0001
M-09-097 52.5-53.5	0.0206	0.2160	1.2100	0.0068	1.3500	0.0000	0.2400	0.0433	15.7000	0.0001	0.0002	0.0002	0.0008	0.0000	0.0440	0.0000
M-09-097 52.5-53.5	0.0153	0.1260	1.0500	0.0053	1.5800	0.0000	0.1900	0.0347	12.6000	0.0001	0.0002	0.0001	0.0007	0.0000	0.0390	0.0000
M-09-097 52.5-53.5	0.0137	0.1340	0.8210	0.0049	1.3900	0.0000	0.1500	0.0295	10.8000	0.0001	0.0002	0.0003	0.0006	0.0000	0.0320	0.0001
M-09-097 52.5-53.5	0.0148	0.1220	0.9290	0.0051	1.6200	0.0000	0.1900	0.0331	12.7000	0.0001	0.0001	0.0001	0.0027	0.0000	0.0330	0.0001
M-09-097 52.5-53.5	0.0158	0.1030	0.8660	0.0059	1.4500	0.0000	0.1900	0.0301	11.3000	0.0001	0.0001	0.0002	0.0008	0.0000	0.0370	0.0000
M-09-097 52.5-53.5	0.0168	0.1980	0.8820	0.0029	1.5100	0.0000	0.2000	0.0323	12.5000	0.0001	0.0002	0.0002	0.0007	0.0000	0.0300	0.0000
M-09-097 52.5-53.5	0.0164	0.2140	0.8970	0.0055	1.6700	0.0000	0.2000	0.0308	14.1000	0.0001	0.0002	0.0001	0.0007	0.0000	0.0350	0.0000
M-09-097 52.5-53.5	0.0146	0.2030	0.8580	0.0052	1.5000	0.0000	0.1800	0.0282	12.5000	0.0001	0.0001	0.0001	0.0007	0.0000	0.0300	0.0000
M-09-097 52.5-53.5	0.0141	0.1920	0.8585	0.0050	1.4950	0.0000	0.1850	0.0283	13.1500	0.0001	0.0003	0.0001	0.0007	0.0000	0.0285	0.0000
M-09-097 52.5-53.5	0.0136	0.1810	0.8590	0.0048	1.4900	0.0000	0.1900	0.0283	13.8000	0.0001	0.0004	0.0002	0.0007	0.0000	0.0270	0.0000
M-09-097 52.5-53.5	0.0149	0.1775	0.7995	0.0048	1.4350	0.0000	0.1850	0.0271	13.2000	0.0001	0.0003	0.0002	0.0009	0.0000	0.0265	0.0000
M-09-097 52.5-53.5	0.0161	0.1740	0.7400	0.0048	1.3800	0.0000	0.1800	0.0258	12.6000	0.0001	0.0002	0.0001	0.0009	0.0000	0.0260	0.0000
M-09-097 52.5-53.5	0.0153	0.1790	0.7330	0.0052	1.3250	0.0000	0.1750	0.0245	12.1000	0.0001	0.0002	0.0001	0.0009	0.0000	0.0285	0.0000
M-09-097 52.5-53.5	0.0144	0.1840	0.7260	0.0056	1.2700	0.0000	0.1700	0.0232	11.6000	0.0001	0.0002	0.0001	0.0008	0.0000	0.0310	0.0000
M-09-097 52.5-53.5	0.0149	0.1890	0.7000	0.0052	1.3450	0.0000	0.1750	0.0229	11.7500	0.0001	0.0001	0.0002	0.0010	0.0001	0.0335	0.0000
M-09-097 52.5-53.5	0.0154	0.1940	0.6740	0.0049	1.4200	0.0000	0.1800	0.0225	11.9000	0.0001	0.0000	0.0002	0.0012	0.0001	0.0360	0.0000
M-09-097 52.5-53.5	0.0151	0.1780	0.6585	0.0047	1.4300	0.0000	0.1750	0.0218	11.0500	0.0001	0.0001	0.0002	0.0010	0.0001	0.0315	0.0000
M-09-097 52.5-53.5	0.0148	0.1620	0.6430	0.0045	1.4400	0.0000	0.1700	0.0210	10.2000	0.0000	0.0002	0.0002	0.0009	0.0000	0.0270	0.0000
M-09-097 52.5-53.5	0.0142	0.1855	0.6455	0.0044	1.4350	0.0000	0.1750	0.0219	11.1500	0.0001	0.0001	0.0001	0.0009	0.0000	0.0255	0.0000
M-09-097 52.5-53.5	0.0136	0.2090	0.6480	0.0043	1.4300	0.0000	0.1800	0.0228	12.1000	0.0001	0.0001	0.0001	0.0009	0.0000	0.0240	0.0000
M-09-097 52.5-53.5	0.0140	0.1835	0.6380	0.0043	1.4000	0.0000	0.1750	0.0229	11.8500	0.0001	0.0001	0.0001	0.0011	0.0000	0.0245	0.0000
M-09-097 52.5-53.5	0.0143	0.1580	0.6280	0.0043	1.3700	0.0000	0.1700	0.0229	11.6000	0.0001	0.0001	0.0001	0.0014	0.0000	0.0250	0.0000
M-09-097 52.5-53.5	0.0151	0.1770	0.6430	0.0047	1.3650	0.0001	0.1750	0.0221	12.0500	0.0001	0.0001	0.0002	0.0013	0.0000	0.0270	0.0000
M-09-097 52.5-53.5	0.0159	0.1960	0.6580	0.0051	1.3600	0.0001	0.1800	0.0213	12.5000	0.0001	0.0002	0.0003	0.0011	0.0000	0.0290	0.0000
M-09-097 52.5-53.5	0.0153	0.2060	0.6520	0.0028	1.5000	0.0001	0.1800	0.0206	11.9500	0.0001	0.0002	0.0003	0.0011	0.0000	0.0255	0.0000
M-09-097 52.5-53.5	0.0146	0.2160	0.6460	0.0005	1.6400	0.0000	0.1800	0.0199	11.4000	0.0001	0.0002	0.0003	0.0011	0.0000	0.0220	0.0000
M-09-097 52.5-53.5	0.0149	0.2130	0.6605	0.0028	1.8150	0.0000	0.1900	0.0196	11.9500	0.0001	0.0002	0.0003	0.0011	0.0000	0.0270	0.0000
M-09-097 52.5-53.5	0.0151	0.2100	0.6750	0.0051	1.9900	0.0000	0.2000	0.0192	12.5000	0.0000	0.0002	0.0003	0.0011	0.0000	0.0320	0.0000
M-09-097 52.5-53.5	0.0172	0.2355	0.6900	0.0057	2.1450	0.0000	0.2050	0.0214	13.3000	0.0000	0.0002	0.0003	0.0013	0.0000	0.0345	0.0000
M-09-097 52.5-53.5	0.0193	0.2610	0.7050	0.0064	2.3000	0.0000	0.2100	0.0235	14.1000	0.0000	0.0002	0.0003	0.0015	0.0000	0.0370	0.0000
M-09-097 52.5-53.5	0.0168	0.1328	0.6225	0.0052	2.0550	0.0000	0.2350	0.0201	12.8500	0.0000	0.0003	0.0003	0.0013	0.0000	0.0335	0.0000
M-09-097 52.5-53.5	0.0142	0.0045	0.5400	0.0040	1.8100	0.0000	0.2600	0.0167	11.6000	0.0000	0.0004	0.0002	0.0012	0.0000	0.0300	0.0000
M-09-097 52.5-53.5	0.0151	0.0045	0.5910	0.0044	1.7800	0.0000	0.2400	0.0177	11.7500	0.0000	0.0003	0.0001	0.0012	0.0001	0.0270	0.0000
M-09-097 52.5-53.5	0.0159	0.0045	0.6420	0.0048	1.7500	0.0000	0.2200	0.0187	11.9000	0.0000	0.0001	0.0001	0.0013	0.0002	0.0240	0.0000
M-09-097 52.5-53.5	0.0158	0.0045	0.6290	0.0045	1.9750	0.0000	0.2050	0.0187	12.7000	0.0000	0.0001	0.0001	0.0013	0.0001	0.0265	0.0000
M-09-097 52.5-53.5	0.0157	0.0045	0.6160	0.0043	2.2000	0.0000	0.1900	0.0186	13.5000	0.0000	0.0001	0.0002	0.0014	0.0000	0.0290	0.0001
M-09-097 52.5-53.5	0.0152	0.0045	0.5465	0.0043	2.0600	0.0000	0.1600	0.0177	11.9000	0.0000	0.0002	0.0004	0.0014	0.0000	0.0265	0.0000
M-09-097 52.5-53.5	0.0146	0.0045	0.4770	0.0044	1.9200	0.0000	0.1300	0.0168	10.3000	0.0000	0.0003	0.0006	0.0013	0.0000	0.0240	0.0000
M-09-097 52.5-53.5	0.0148	0.0045	0.5405	0.0045	1.9400	0.0000	0.1550	0.0171	11.8500	0.0000	0.0002	0.0004	0.0020	0.0000	0.0240	0.0000
M-09-097 52.5-53.5	0.0150	0.0045	0.6040	0.0047	1.9600	0.0000	0.1800	0.0174	13.4000	0.0000	0.0001	0.0002	0.0028	0.0000	0.0240	0.0000
M-09-097 52.5-53.5	0.0155	0.0045	0.5920	0.0048	2.2500	0.0000	0.1850	0.0167	13.2000	0.0000	0.0006	0.0003	0.0023	0.0000	0.0245	0.0000
M-09-097 52.5-53.5	0.0159	0.0045	0.5800	0.0048	2.5400	0.0000	0.1900	0.0159	13.0000	0.0000	0.0011	0.0003	0.0017	0.0000	0.0250	0.0000
M-09-097 52.5-53.5	0.0152	0.0045	0.5375	0.0102	2.0700	0.0000	0.1450	0.0154	12.6500	0.0000	0.0008	0.0006	0.0016	0.0000	0.0275	0.0000
M-09-097 52.5-53.5	0.0145	0.0045	0.4950	0.0156	1.6000	0.0000	0.1000	0.0149	12.3000	0.0000	0.0006	0.0009	0.0015	0.0000	0.0300	0.0000
M-09-097 52.5-53.5	0.0158	0.0408	0.5035	0.0103	1.6450	0.0000	0.4000	0.0149	14.1500	0.0004	0.0005	0.0006	0.0018	0.0000	0.0335	0.0000
M-09-097 52.5-53.5	0.0171	0.0770	0.5120	0.0050	1.6900	0.0000	0.7000	0.0148	16.0000	0.0008	0.0004	0.0002	0.0020	0.0000	0.0370	0.0000
M-09-097 52.5-53.5	0.0170	0.0408	0.5210	0.0050	1.7600	0.0000	0.4550	0.0146	14.3500	0.0004	0.0002	0.0002	0.0020	0.0000	0.0300	0.0000
M-09-097 52.5-53.5	0.0168	0.0045	0.5300	0.0049	1.8300	0.0000	0.2100	0.0144	12.7000	0.0000	0.0001	0.0002	0.0021	0.0000	0.0230	0.0000
M-09-097 52.5-53.5	0.0171	0.0078	0.5450	0.0048	1.5850	0.0000	0.1950	0.0138	12.7000	0.0000	0.0001	0.0002	0.0022	0.0000	0.0255	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-097 52.5-53.5	2	89	20-Oct-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	455	4	93	5.08	26.9	0.2	40	0.1
M-09-097 52.5-53.5	2	90	27-Oct-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	3	83	4.89	28.0	0.5	38	0.1
M-09-097 52.5-53.5	2	91	3-Nov-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	3	88	5.1	29.2	0.7	36	0.1
M-09-097 52.5-53.5	2	92	10-Nov-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	3	82	5.13	27.4	0.5	37	0.1
M-09-097 52.5-53.5	2	93	17-Nov-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	3	87	5.08	25.6	0.3	38	0.1
M-09-097 52.5-53.5	2	94	24-Nov-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	460	3	82	4.85	26.6	0.2	35	0.1
M-09-097 52.5-53.5	2	95	1-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	3	85	5.08	27.6	0.1	31	0.1
M-09-097 52.5-53.5	2	96	8-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	495	3	83	5.08	27.1	0.2	31	0.1
M-09-097 52.5-53.5	2	97	15-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	3	80	5.05	26.6	0.4	31	0.1
M-09-097 52.5-53.5	2	98	22-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	3	83	5.01	24.9	0.3	31	0.1
M-09-097 52.5-53.5	2	99	29-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	3	87	4.85	23.3	0.2	31	0.1
M-09-097 52.5-53.5	2	100	5-Jan-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	3	82	4.78	21.7	0.1	30	0.1
M-09-097 52.5-53.5	2	101	12-Jan-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	3	85	4.7	20.0	0.1	30	0.1
M-09-097 52.5-53.5	2	102	19-Jan-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	3	80	4.91	21.3	0.1	31	0.1
M-09-097 52.5-53.5	2	103	26-Jan-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	460	3	77	4.77	22.6	0.1	32	0.1
M-09-097 52.5-53.5	2	104	2-Feb-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	505	3	93	4.7	23.9	0.1	33	0.1
M-09-097 52.5-53.5	2	105	9-Feb-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	3	91	4.71	25.2	0.1	34	0.1
M-09-097 52.5-53.5	2	106	16-Feb-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	460	3	92	4.81	25.9	0.1	35	0.1
M-09-097 52.5-53.5	2	107	23-Feb-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	460	3	93	4.72	26.7	0.1	35	0.1
M-09-097 52.5-53.5	2	108	1-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	460	3	91	4.81	27.4	0.1	36	0.1
M-09-097 52.5-53.5	2	109	8-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	435	3	93	4.79	28.2	0.1	36	0.1
M-09-097 52.5-53.5	2	110	15-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	440	3	99	4.7	27.9	0.1	35	0.1
M-09-097 52.5-53.5	2	111	22-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	450	3	94	4.7	27.6	0.1	34	0.1
M-09-097 52.5-53.5	2	112	29-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	450	3	92	4.63	27.4	0.1	33	0.1
M-09-097 52.5-53.5	2	113	5-Apr-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	445	3	90	4.68	27.1	0.1	32	0.1
M-09-097 52.5-53.5	2	114	12-Apr-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	445	3	88	4.57	27.1	0.1	32	0.1
M-09-097 52.5-53.5	2	115	19-Apr-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	450	3	86	4.69	27.1	0.1	32	0.1
M-09-097 52.5-53.5	2	116	26-Apr-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	440	3	91	4.26	24.3	0.1	31	0.1
M-09-097 52.5-53.5	2	117	3-May-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	495	3	82	4.72	23.4	0.1	31	0.1
M-09-097 52.5-53.5	2	118	10-May-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	450	3	90	4.68	25.2	0.1	31	0.1
M-09-097 52.5-53.5	2	119	17-May-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	445	3	89	4.5	27.0	0.1	30	0.1
M-09-097 52.5-53.5	2	120	24-May-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	440	3	83	4.66	28.9	0.1	30	0.1
M-09-097 52.5-53.5	2	121	31-May-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	440	3	88	4.65	30.7	0.1	29	0.1
M-09-097 52.5-53.5	2	122	7-Jun-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	445	3	81	4.51	30.3	0.1	29	0.1
M-09-097 52.5-53.5	2	123	14-Jun-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	3	85	4.59	29.9	0.1	29	0.1
M-09-097 52.5-53.5	2	124	21-Jun-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	450	3	100	4.6	29.5	0.1	29	0.1
M-09-097 52.5-53.5	2	125	28-Jun-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	455	3	86	4.62	29.1	0.1	29	0.1
M-09-097 52.5-53.5	2	126	5-Jul-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	3	89	4.52	29.2	0.1	31	0.1
M-09-097 52.5-53.5	2	127	12-Jul-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	3	96	4.51	29.4	0.1	32	0.1
M-09-097 52.5-53.5	2	128	19-Jul-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	3	95	4.5	29.5	0.1	34	0.1
M-09-097 52.5-53.5	2	129	26-Jul-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	3	98	4.46	29.7	0.1	35	0.1
																	3	90	4.562	29.6	0.1	31	0.1
HC3 UP Hazelton																							
M-09-097 92.5-93.5	3	0	4-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	430	104	225	7.46	2.7	34.6	100	5.1
M-09-097 92.5-93.5	3	1	11-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	450	78	195	7.35	2.5	22.7	67	1.8
M-09-097 92.5-93.5	3	2	18-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	73	163	7.42	3.2	24.1	63	0.3
M-09-097 92.5-93.5	3	3	25-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	49	115	7.32	3.1	21.8	45	0.1
M-09-097 92.5-93.5	3	4	4-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	41	102	7.12	3.3	18.1	27	0.1
M-09-097 92.5-93.5	3	5	11-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	40	90	7.35	3.1	22.8	22	0.1
M-09-097 92.5-93.5	3	6	18-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	495	41	90	7.35	3.1	21.2	21	0.1
M-09-097 92.5-93.5	3	7	25-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	505	41	86	7.36	4.0	23.3	19	0.1
M-09-097 92.5-93.5	3	8	1-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	38	85	7.52	2.9	23.8	19	0.1
M-09-097 92.5-93.5	3	9	8-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	36	82	7.36	3.1	23.8	17	0.1
M-09-097 92.5-93.5	3	10	15-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	36	82	7.43	3.8	24.2	23	0.1
M-09-097 92.5-93.5	3	11	22-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	35	81	7.55	4.5	24.4	20	0.1
M-09-097 92.5-93.5	3	12	29-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	34	79	7.5	2.6	23.4	16	0.1
M-09-097 92.5-93.5	3	13	6-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	495	38	82	7.44	4.9	25.2	13	0.1
M-09-097 92.5-93.5	3	14	13-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	37	79	7.61	3.2	22.9	15	0.1
M-09-097 92.5-93.5	3	15	20-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	35	77	7.69	5.0	23.8	11	0.1
M-09-097 92.5-93.5	3	16	27-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	38	78	7.71	6.9	29.3	11	0.1
M-09-097 92.5-93.5	3	17	3-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	36	69	7.57	3.7	23.6	11	0.1
M-09-097 92.5-93.5	3	18	10-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	33	71	7.72	4.8	24.9	11	0.1
M-09-097 92.5-93.5	3	19	17-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	495	33	71	7.82	3.9	24.0	6	0.1
M-09-097 92.5-93.5	3	20	24-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	34	70	7.72	2.9	24.4	12	0.1
M-09-097 92.5-93.5	3	21	1-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	34	67	7.62	2.7	22.8	7	0.1
M-09-097 92.5-93.5	3	22	8-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	27	68	7.44	2.8	21.0	8	0.1
M-09-097 92.5-93.5	3	23	15-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	29	66	7.65	4.2	22.0	12	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-097 52.5-53.5	0.45	0.6770	0.0001	0.0002	0.0135	0.0004	0.0000	0.0020	0.00167	1.2800	0.0008	0.0866	11.2000	0.0120	0.00066	0.0030	0.1340	5.5200	0.0000050	0.0002
M-09-097 52.5-53.5	0.43	0.6525	0.0001	0.0002	0.0126	0.0004	0.0000	0.0023	0.00133	1.1900	0.0008	0.0809	11.3000	0.0135	0.00044	0.0030	0.1280	5.0100	0.0000075	0.0002
M-09-097 52.5-53.5	0.41	0.6280	0.0001	0.0002	0.0116	0.0005	0.0000	0.0025	0.00099	1.1000	0.0007	0.0752	11.4000	0.0150	0.00022	0.0030	0.1220	4.5000	0.0000100	0.0001
M-09-097 52.5-53.5	0.41	0.6665	0.0001	0.0007	0.0109	0.0004	0.0000	0.0019	0.00098	1.1000	0.0005	0.0766	11.2500	0.0115	0.00097	0.0030	0.1130	4.4700	0.0000100	0.0010
M-09-097 52.5-53.5	0.40	0.7050	0.0001	0.0011	0.0101	0.0004	0.0000	0.0013	0.00097	1.1000	0.0003	0.0780	11.1000	0.0080	0.00171	0.0030	0.1040	4.4400	0.0000100	0.0019
M-09-097 52.5-53.5	0.43	0.7400	0.0001	0.0007	0.0119	0.0004	0.0000	0.0014	0.00098	1.0900	0.0003	0.0748	11.3500	0.0090	0.01251	0.0025	0.1130	4.4150	0.0000075	0.0010
M-09-097 52.5-53.5	0.46	0.7750	0.0001	0.0003	0.0136	0.0005	0.0000	0.0014	0.00099	1.0800	0.0003	0.0715	11.6000	0.0100	0.02330	0.0020	0.1220	4.3900	0.0000050	0.0002
M-09-097 52.5-53.5	0.43	0.7220	0.0001	0.0002	0.0130	0.0004	0.0000	0.0020	0.00090	1.0450	0.0009	0.0634	10.7150	0.0120	0.01188	0.0025	0.1170	4.0800	0.0000075	0.0002
M-09-097 52.5-53.5	0.40	0.6690	0.0001	0.0001	0.0124	0.0004	0.0000	0.0026	0.00081	1.0100	0.0015	0.0553	9.8300	0.0140	0.00045	0.0030	0.1120	3.7700	0.0000100	0.0002
M-09-097 52.5-53.5	0.41	0.6813	0.0001	0.0005	0.0126	0.0004	0.0000	0.0025	0.00081	1.0050	0.0013	0.0571	10.0975	0.0135	0.00047	0.0033	0.1128	3.7775	0.0000100	0.0004
M-09-097 52.5-53.5	0.41	0.6935	0.0001	0.0008	0.0128	0.0004	0.0000	0.0024	0.00081	1.0000	0.0012	0.0589	10.3650	0.0130	0.00048	0.0035	0.1135	3.7850	0.0000100	0.0005
M-09-097 52.5-53.5	0.42	0.7058	0.0001	0.0012	0.0130	0.0004	0.0000	0.0022	0.00081	0.9950	0.0010	0.0606	10.6325	0.0125	0.00050	0.0038	0.1143	3.7925	0.0000100	0.0007
M-09-097 52.5-53.5	0.42	0.7180	0.0001	0.0015	0.0132	0.0004	0.0000	0.0021	0.00082	0.9900	0.0008	0.0624	10.9000	0.0120	0.00051	0.0040	0.1150	3.8000	0.0000100	0.0008
M-09-097 52.5-53.5	0.42	0.7085	0.0001	0.0012	0.0139	0.0004	0.0000	0.0021	0.00089	0.9950	0.0007	0.0606	10.7000	0.0128	0.00348	0.0038	0.1155	3.7200	0.0000088	0.0006
M-09-097 52.5-53.5	0.43	0.6990	0.0002	0.0009	0.0146	0.0004	0.0000	0.0021	0.00097	1.0000	0.0005	0.0588	10.5000	0.0135	0.00646	0.0035	0.1160	3.6400	0.0000075	0.0005
M-09-097 52.5-53.5	0.43	0.6895	0.0002	0.0005	0.0152	0.0005	0.0000	0.0021	0.00105	1.0050	0.0004	0.0570	10.3000	0.0143	0.00943	0.0033	0.1165	3.5600	0.0000063	0.0003
M-09-097 52.5-53.5	0.43	0.6800	0.0002	0.0002	0.0159	0.0005	0.0000	0.0021	0.00113	1.0100	0.0003	0.0552	10.1000	0.0150	0.01240	0.0030	0.1170	3.4800	0.0000050	0.0001
M-09-097 52.5-53.5	0.44	0.7373	0.0033	0.0004	0.0154	0.0005	0.0000	0.0142	0.00104	1.0250	0.0004	0.0555	10.5500	0.0158	0.00943	0.0030	0.1218	3.4775	0.0000063	0.0001
M-09-097 52.5-53.5	0.44	0.7945	0.0065	0.0007	0.0148	0.0005	0.0000	0.0263	0.00096	1.0400	0.0005	0.0559	11.0000	0.0165	0.00646	0.0030	0.1265	3.4750	0.0000075	0.0002
M-09-097 52.5-53.5	0.45	0.8518	0.0096	0.0009	0.0143	0.0005	0.0000	0.0384	0.00087	1.0550	0.0006	0.0562	11.4500	0.0173	0.00348	0.0030	0.1313	3.4725	0.0000088	0.0002
M-09-097 52.5-53.5	0.45	0.9090	0.0127	0.0011	0.0137	0.0005	0.0000	0.0505	0.00079	1.0700	0.0007	0.0565	11.9000	0.0180	0.00051	0.0030	0.1360	3.4700	0.0000100	0.0002
M-09-097 52.5-53.5	0.45	0.8948	0.0096	0.0009	0.0137	0.0005	0.0000	0.0382	0.00076	1.0500	0.0006	0.0557	11.6500	0.0178	0.00062	0.0028	0.1383	3.4100	0.0000100	0.0002
M-09-097 52.5-53.5	0.45	0.8805	0.0064	0.0006	0.0138	0.0005	0.0000	0.0258	0.00074	1.0300	0.0005	0.0548	11.4000	0.0175	0.00074	0.0025	0.1405	3.3500	0.0000100	0.0002
M-09-097 52.5-53.5	0.45	0.8663	0.0033	0.0004	0.0138	0.0005	0.0000	0.0135	0.00072	1.0100	0.0004	0.0540	11.1500	0.0173	0.00085	0.0023	0.1428	3.2900	0.0000100	0.0001
M-09-097 52.5-53.5	0.45	0.8520	0.0001	0.0001	0.0138	0.0005	0.0000	0.0011	0.00069	0.9900	0.0003	0.0531	10.9000	0.0170	0.00096	0.0020	0.1450	3.2300	0.0000100	0.0001
M-09-097 52.5-53.5	0.45	0.8520	0.0001	0.0001	0.0138	0.0005	0.0000	0.0011	0.00069	0.9900	0.0003	0.0531	10.9000	0.0170	0.00096	0.0020	0.1450	3.2300	0.0000100	0.0001
M-09-097 52.5-53.5	0.45	0.8520	0.0001	0.0001	0.0138	0.0005	0.0000	0.0011	0.00069	0.9900	0.0003	0.0531	10.9000	0.0170	0.00096	0.0020	0.1450	3.2300	0.0000100	0.0001
M-09-097 52.5-53.5	0.41	0.7215	0.0001	0.0003	0.0153	0.0005	0.0000	0.0016	0.00075	0.9300	0.0003	0.0501	9.2275	0.0170	0.00113	0.0020	0.1510	3.0425	0.0000063	0.0001
M-09-097 52.5-53.5	0.39	0.6780	0.0001	0.0004	0.0158	0.0005	0.0000	0.0018	0.00077	0.9100	0.0003	0.0491	8.6700	0.0170	0.00118	0.0020	0.1530	2.9800	0.0000050	0.0001
M-09-097 52.5-53.5	0.40	0.7245	0.0001	0.0004	0.0163	0.0005	0.0000	0.0020	0.00100	0.9225	0.0003	0.0493	8.8375	0.0188	0.00172	0.0020	0.1550	3.0650	0.0000088	0.0001
M-09-097 52.5-53.5	0.40	0.7710	0.0001	0.0004	0.0167	0.0005	0.0000	0.0021	0.00122	0.9350	0.0003	0.0494	9.0050	0.0205	0.00226	0.0020	0.1570	3.1500	0.0000125	0.0001
M-09-097 52.5-53.5	0.41	0.8175	0.0001	0.0003	0.0172	0.0006	0.0000	0.0023	0.00145	0.9475	0.0003	0.0496	9.1725	0.0223	0.00279	0.0020	0.1590	3.2350	0.0000163	0.0001
M-09-097 52.5-53.5	0.41	0.8640	0.0001	0.0003	0.0176	0.0006	0.0000	0.0024	0.00167	0.9600	0.0003	0.0497	9.3400	0.0240	0.00333	0.0020	0.1610	3.3200	0.0000200	0.0001
M-09-097 52.5-53.5	0.40	0.8785	0.0001	0.0003	0.0175	0.0006	0.0000	0.0023	0.00145	0.9475	0.0003	0.0492	9.2825	0.0225	0.00333	0.0020	0.1573	3.2825	0.0000200	0.0001
M-09-097 52.5-53.5	0.39	0.8930	0.0001	0.0002	0.0175	0.0006	0.0000	0.0022	0.00123	0.9350	0.0003	0.0487	9.2250	0.0210	0.00333	0.0020	0.1535	3.2450	0.0000200	0.0001
M-09-097 52.5-53.5	0.38	0.9075	0.0001	0.0002	0.0174	0.0005	0.0000	0.0021	0.00101	0.9225	0.0003	0.0482	9.1675	0.0195	0.00332	0.0020	0.1498	3.2075	0.0000200	0.0001
M-09-097 52.5-53.5	0.37	0.9220	0.0001	0.0001	0.0173	0.0005	0.0000	0.0020	0.00080	0.9100	0.0003	0.0477	9.1100	0.0180	0.00332	0.0020	0.1460	3.1700	0.0000200	0.0001
M-09-097 52.5-53.5	0.39	0.9313	0.0002	0.0007	0.0167	0.0006	0.0000	0.0020	0.00081	0.9150	0.0003	0.0500	9.1850	0.0198	0.00294	0.0023	0.1478	3.3150	0.0000163	0.0003
M-09-097 52.5-53.5	0.41	0.9405	0.0003	0.0012	0.0161	0.0006	0.0000	0.0021	0.00083	0.9200	0.0004	0.0524	9.2600	0.0215	0.00255	0.0025	0.1495	3.4600	0.0000125	0.0005
M-09-097 52.5-53.5	0.42	0.9498	0.0004	0.0018	0.0154	0.0006	0.0000	0.0021	0.00085	0.9250	0.0005	0.0547	9.3350	0.0233	0.00217	0.0028	0.1513	3.6050	0.0000088	0.0007
M-09-097 52.5-53.5	0.44	0.9590	0.0005	0.0023	0.0148	0.0007	0.0000	0.0021	0.00087	0.9300	0.0006	0.0570	9.4100	0.0250	0.00178	0.0030	0.1530	3.7500	0.0000050	0.0009
	0.40	0.9063	0.0002	0.0007	0.0167	0.0006	0.0000	0.0022	0.00110	0.9313	0.0003	0.0507	9.2488	0.0217	0.00288	0.0023	0.1528	3.3590	0.0000159	0.0003
HC3 UP Hazelton																				
M-09-097 92.5-93.5	0.45	0.0698	0.0020	0.0010	0.0598	0.0000	0.0000	0.0090	0.00000	38.3000	0.0003	0.0001	0.0042	0.0050	0.00002	0.0100	1.9000	0.0580	0.0000100	0.0017
M-09-097 92.5-93.5	0.37	0.0885	0.0018	0.0013	0.0480	0.0000	0.0000	0.0080	0.00001	28.7000	0.0003	0.0001	0.0015	0.0050	0.00001	0.0060	1.6200	0.0500	0.0000050	0.0044
M-09-097 92.5-93.5	0.34	0.0901	0.0019	0.0009	0.0450	0.0000	0.0000	0.0074	0.00000	26.9000	0.0003	0.0002	0.0019	0.0050	0.00001	0.0070	1.4600	0.0570	0.0000050	0.0032
M-09-097 92.5-93.5	0.28	0.0746	0.0015	0.0008	0.0432	0.0000	0.0000	0.0038	0.00000	18.2000	0.0003	0.0000	0.0015	0.0050	0.00005	0.0040	0.9450	0.0420	0.0000050	0.0019
M-09-097 92.5-93.5	0.23	0.0748	0.0015	0.0007	0.0504	0.0000	0.0000	0.0050	0.00001	15.3000	0.0003	0.0001	0.0021	0.0050	0.00006	0.0030	0.7590	0.0480	0.0000050	0.0012
M-09-097 92.5-93.5	0.20	0.0690	0.0013	0.0007	0.0535	0.0000	0.0000	0.0030	0.00001	14.8000	0.0003	0.0000	0.0031	0.0050	0.00035	0.0030	0.6760	0.0580	0.0000050	0.0008
M-09-097 92.5-93.5	0.16	0.0532	0.0012	0.0007	0.0467	0.0000	0.0000	0.0010	0.00000	15.1000	0.0003	0.0001	0.0148	0.0050	0.00007	0.0020	0.6780	0.0590	0.0000200	0.0007
M-09-097 92.5-93.5	0.16	0.0702	0.0015	0.0005	0.0562	0.0000	0.0000	0.0030	0.00000	15.3000	0.0003	0.0001	0.0026	0.0050	0.00038	0.0020	0.6220	0.0600	0.0000050	0.0006
M-09-097 92.5-93.5	0.14	0.0884	0.0013	0.0005	0.0620	0.0000	0.0000	0.0050	0.00000	14.2000	0.0007	0.0001	0.0030	0.0050	0.00054	0.0020	0.5620	0.0510	0.0000050	0.0005
M-09-097 92.5-93.5	0.12	0.0792	0.0014	0.0005	0.0565	0.0000	0.0000	0.0050	0.00000	13.6000	0.0003	0.0001	0.0075	0.0050	0.00102	0.0020	0.5300	0.0580	0.0000050	0.0005
M-09-097 92.5-93.5	0.13	0.1040	0.0013	0.0006	0.0539	0.0000	0.0000	0.0020	0.00000	13.6000	0.0006	0.0001	0.0014	0.0050	0.00192	0.0020	0.4950	0.0580	0.0000050	0.0004
M-09-097 92.5-93.5	0.12	0.0772	0.0011	0.0006	0.0439	0.0000	0.0000	0.0020	0.00000	13.1000	0.0006	0.0002	0.0094	0.0050	0.00114	0.0020	0.4700	0.0550	0.0000050	0.0005
M-09-097 92.5-93.5	0.10	0.0722	0.0012	0.0005	0.0497	0.0000	0.0000	0.0020	0.00000	12.8000	0.0007	0.0001	0.0021	0.0050	0.00005	0.0010	0.4510	0.0590	0.0000050	0.0004
M-09-097 92.5-93.5	0.11	0.0853	0.0012	0.0005	0.0476	0.0000	0.0000	0.0030	0.00000	14.3000	0.0006	0.0002	0.0119	0.0050	0.00131	0.0010	0.4960	0.0620	0.0000050	0.0004
M-09-097 92.5-93.5	0.10	0.0823	0.0011	0.0004	0.0404	0.0000	0.0000	0.0020	0.00001	13.9000	0.0007	0.0003	0.0017	0.0030	0.00022	0.0010	0.4410	0.0610	0.0000050	0.0019
M-09-097 92.5-93.5	0.10	0.0690	0.0011	0.0004	0.0354	0.0000	0.0000	0.0029	0.00000	13.2000	0.0003	0.0002	0.0033	0.0020	0.00016	0.0020	0.4080	0.0632	0.0000100	0.0004
M-09-097 92.5-93.5	0.08	0.0749	0.0010	0.0006	0.0381	0.0000	0.0000	0.0019	0.00001	14.6000	0.0006	0.0004	0.0015	0.0110	0.00006	0.0010	0.4480	0.0799	0.0000100	0.0053
M-09-097 92.5-93.5	0.07	0.0830	0.0009	0.0007	0.0365	0.0000	0.0000	0.0021	0.00000	13.6000	0.0003	0.0004	0.0012	0.0010	0.00005	0.0010	0.3980	0.0737	0.0000050	0.0003
M-09-097 92.5-93.5	0.06	0.0720	0.0009	0.0005	0.0299	0.0000	0.0001	0.0018	0.00001	12.7000	0.0006	0.0000	0.0011	0.0010	0.00005	0.0020	0.3650	0.0677	0.0000050	0.0005
M-09-097 92.5-93.5	0.08	0.0745	0.0011	0.0005	0.0279	0.0000	0.0000	0.0018	0.00003	12.7000	0.0005	0.0000	0.0014	0.0010	0.00007	0.0010	0.3610	0.0598	0.0000050	0.0008
M-09-097 92.5-93.5	0.08	0.0679	0.0012	0.0002	0.0260	0.0000	0.0000	0.0053	0.00000	12.9000	0.0003	0.0000	0.0045	0.0030	0.00004	0.0020	0.3540	0.0686	0.0000050	0.0006
M-09-097 92.5-93.5	0.06	0.0583	0.0009	0.0005	0.0241	0.0000	0.0000	0.0023	0.00001	13.0000	0.0003	0.0000	0.0014	0.0010	0.00001	0.0010	0.3520	0.0747	0.0000050	0.0003
M-09-097 92.5-93.5	0.06	0.0592	0.0008	0.0004	0.0289	0.0000	0.0000	0.0024	0.00001	10.3000	0.0007	0.0000	0.0017	0.0030	0.00004	0.0010	0.3240	0.0796	0.0000050	0.0005
M-09-097 92.5-93.5	0.06	0.0699	0.0007	0.0003	0.0254	0.0000	0.0000	0.0017	0.00000	11.2000	0.0031	0.0001	0.0016	0.0010	0.00007	0.0020	0.3000	0.0841	0.0000050	0.0004

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-097 52.5-53.5	0.0173	0.0110	0.5600	0.0046	1.3400	0.0000	0.1800	0.0131	12.7000	0.0000	0.0001	0.0002	0.0024	0.0001	0.0280	0.0001
M-09-097 52.5-53.5	0.0164	0.0078	0.5255	0.0045	1.4100	0.0000	0.1750	0.0126	11.6500	0.0000	0.0001	0.0002	0.0021	0.0000	0.0260	0.0000
M-09-097 52.5-53.5	0.0154	0.0045	0.4910	0.0044	1.4800	0.0000	0.1700	0.0121	10.6000	0.0000	0.0001	0.0002	0.0019	0.0000	0.0240	0.0000
M-09-097 52.5-53.5	0.0161	0.0158	0.4765	0.0026	1.4950	0.0000	0.1750	0.0119	10.9500	0.0000	0.0005	0.0005	0.0016	0.0001	0.0235	0.0000
M-09-097 52.5-53.5	0.0168	0.0270	0.4620	0.0009	1.5100	0.0000	0.1800	0.0116	11.3000	0.0000	0.0009	0.0008	0.0014	0.0001	0.0230	0.0000
M-09-097 52.5-53.5	0.0162	0.0210	0.4785	0.0029	1.6400	0.0000	0.4000	0.0119	11.0000	0.0000	0.0005	0.0005	0.0016	0.0002	0.0295	0.0000
M-09-097 52.5-53.5	0.0155	0.0150	0.4950	0.0049	1.7700	0.0000	0.6200	0.0121	10.7000	0.0000	0.0001	0.0002	0.0017	0.0003	0.0360	0.0000
M-09-097 52.5-53.5	0.0139	0.0175	0.4680	0.0039	1.7000	0.0000	0.4150	0.0113	10.4500	0.0000	0.0005	0.0003	0.0019	0.0002	0.0285	0.0000
M-09-097 52.5-53.5	0.0123	0.0200	0.4410	0.0028	1.6300	0.0000	0.2100	0.0104	10.2000	0.0000	0.0010	0.0004	0.0021	0.0001	0.0210	0.0000
M-09-097 52.5-53.5	0.0129	0.0463	0.4468	0.0034	1.6200	0.0000	0.2025	0.0106	10.2750	0.0000	0.0018	0.0004	0.0021	0.0002	0.0225	0.0000
M-09-097 52.5-53.5	0.0135	0.0725	0.4525	0.0039	1.6100	0.0001	0.1950	0.0107	10.3500	0.0000	0.0026	0.0005	0.0021	0.0003	0.0240	0.0000
M-09-097 52.5-53.5	0.0140	0.0988	0.4583	0.0044	1.6000	0.0001	0.1875	0.0109	10.4250	0.0000	0.0035	0.0005	0.0020	0.0004	0.0255	0.0000
M-09-097 52.5-53.5	0.0146	0.1250	0.4640	0.0050	1.5900	0.0001	0.1800	0.0110	10.5000	0.0000	0.0043	0.0005	0.0020	0.0005	0.0270	0.0000
M-09-097 52.5-53.5	0.0134	0.0949	0.4663	0.0048	1.6000	0.0001	0.1875	0.0108	10.3750	0.0001	0.0033	0.0005	0.0021	0.0004	0.1240	0.0000
M-09-097 52.5-53.5	0.0122	0.0648	0.4685	0.0046	1.6100	0.0001	0.1950	0.0106	10.2500	0.0002	0.0022	0.0005	0.0022	0.0004	0.2210	0.0000
M-09-097 52.5-53.5	0.0109	0.0346	0.4708	0.0044	1.6200	0.0000	0.2025	0.0104	10.1250	0.0003	0.0012	0.0004	0.0023	0.0003	0.3180	0.0000
M-09-097 52.5-53.5	0.0097	0.0045	0.4730	0.0043	1.6300	0.0000	0.2100	0.0102	10.0000	0.0004	0.0002	0.0004	0.0024	0.0003	0.4150	0.0000
M-09-097 52.5-53.5	0.0111	0.0151	0.4805	0.0045	1.6500	0.0001	0.2100	0.0103	10.3250	0.0003	0.0002	0.0004	0.0024	0.0002	0.3173	0.0000
M-09-097 52.5-53.5	0.0124	0.0258	0.4880	0.0046	1.6700	0.0001	0.2100	0.0104	10.6500	0.0002	0.0003	0.0003	0.0025	0.0002	0.2195	0.0000
M-09-097 52.5-53.5	0.0138	0.0364	0.4955	0.0048	1.6900	0.0001	0.2100	0.0105	10.9750	0.0001	0.0003	0.0003	0.0025	0.0002	0.1218	0.0000
M-09-097 52.5-53.5	0.0151	0.0470	0.5030	0.0050	1.7100	0.0001	0.2100	0.0106	11.3000	0.0000	0.0003	0.0002	0.0026	0.0002	0.0240	0.0000
M-09-097 52.5-53.5	0.0149	0.0538	0.5143	0.0047	1.6025	0.0001	0.2150	0.0105	11.3250	0.0000	0.0002	0.0002	0.0025	0.0002	0.0295	0.0000
M-09-097 52.5-53.5	0.0147	0.0605	0.5255	0.0045	1.4950	0.0001	0.2200	0.0104	11.3500	0.0000	0.0002	0.0002	0.0025	0.0002	0.0350	0.0000
M-09-097 52.5-53.5	0.0145	0.0673	0.5368	0.0042	1.3875	0.0001	0.2250	0.0102	11.3750	0.0000	0.0001	0.0002	0.0024	0.0002	0.0405	0.0000
M-09-097 52.5-53.5	0.0143	0.0740	0.5480	0.0039	1.2800	0.0001	0.2300	0.0101	11.4000	0.0000	0.0001	0.0002	0.0024	0.0003	0.0460	0.0000
M-09-097 52.5-53.5	0.0143	0.0740	0.5480	0.0039	1.2800	0.0001	0.2300	0.0101	11.4000	0.0000	0.0001	0.0002	0.0024	0.0003	0.0460	0.0000
M-09-097 52.5-53.5	0.0143	0.0740	0.5480	0.0039	1.2800	0.0001	0.2300	0.0101	11.4000	0.0000	0.0001	0.0002	0.0024	0.0003	0.0460	0.0000
M-09-097 52.5-53.5	0.0140	0.0808	0.5960	0.0040	1.3100	0.0001	0.2075	0.0096	10.4250	0.0000	0.0004	0.0004	0.0026	0.0001	0.0318	0.0000
M-09-097 52.5-53.5	0.0139	0.0830	0.6120	0.0041	1.3200	0.0001	0.2000	0.0094	10.1000	0.0000	0.0005	0.0004	0.0027	0.0001	0.0270	0.0000
M-09-097 52.5-53.5	0.0141	0.0634	0.6108	0.0041	1.3200	0.0000	0.2075	0.0094	10.1750	0.0000	0.0004	0.0003	0.0027	0.0001	0.0408	0.0000
M-09-097 52.5-53.5	0.0142	0.0438	0.6095	0.0040	1.3200	0.0000	0.2150	0.0095	10.2500	0.0000	0.0004	0.0003	0.0027	0.0002	0.0545	0.0000
M-09-097 52.5-53.5	0.0144	0.0241	0.6083	0.0040	1.3200	0.0000	0.2225	0.0095	10.3250	0.0000	0.0003	0.0002	0.0027	0.0003	0.0683	0.0000
M-09-097 52.5-53.5	0.0145	0.0045	0.6070	0.0039	1.3200	0.0000	0.2300	0.0095	10.4000	0.0000	0.0002	0.0001	0.0027	0.0003	0.0820	0.0000
M-09-097 52.5-53.5	0.0142	0.0061	0.5968	0.0041	1.3875	0.0000	0.2275	0.0093	10.2975	0.0000	0.0002	0.0001	0.0027	0.0003	0.0683	0.0000
M-09-097 52.5-53.5	0.0139	0.0078	0.5865	0.0042	1.4550	0.0000	0.2250	0.0091	10.1950	0.0000	0.0002	0.0002	0.0027	0.0003	0.0545	0.0000
M-09-097 52.5-53.5	0.0136	0.0094	0.5763	0.0043	1.5225	0.0000	0.2225	0.0088	10.0925	0.0000	0.0002	0.0002	0.0026	0.0002	0.0408	0.0000
M-09-097 52.5-53.5	0.0133	0.0110	0.5660	0.0044	1.5900	0.0000	0.2200	0.0086	9.9900	0.0000	0.0001	0.0002	0.0026	0.0002	0.0270	0.0000
M-09-097 52.5-53.5	0.0135	0.0094	0.5573	0.0044	1.5700	0.0000	0.2225	0.0086	10.3425	0.0000	0.0003	0.0003	0.0027	0.0003	0.0268	0.0000
M-09-097 52.5-53.5	0.0138	0.0078	0.5485	0.0044	1.5500	0.0000	0.2250	0.0086	10.6950	0.0000	0.0005	0.0004	0.0029	0.0003	0.0265	0.0000
M-09-097 52.5-53.5	0.0140	0.0061	0.5398	0.0043	1.5300	0.0000	0.2275	0.0085	11.0475	0.0000	0.0007	0.0004	0.0030	0.0004	0.0263	0.0000
M-09-097 52.5-53.5	0.0142	0.0045	0.5310	0.0043	1.5100	0.0000	0.2300	0.0085	11.4000	0.0000	0.0009	0.0005	0.0031	0.0004	0.0260	0.0000
	0.0139	0.0091	0.5717	0.0042	1.4755	0.0000	0.2253	0.0089	10.4785	0.0000	0.0004	0.0002	0.0028	0.0003	0.0446	0.0000
HC3 UP Hazelton																
M-09-097 92.5-93.5	0.0012	0.0050	8.5800	0.0033	0.8500	0.00002	6.5500	0.1780	27.8000	0.0001	0.0001	0.0002	0.0039	0.0061	0.0010	0.0000
M-09-097 92.5-93.5	0.0003	0.0050	5.3500	0.0036	0.8800	0.00001	3.6500	0.1400	26.9000	0.0001	0.0007	0.0001	0.0101	0.0146	0.0005	0.0000
M-09-097 92.5-93.5	0.0002	0.0050	3.9600	0.0016	1.0300	0.00001	1.9800	0.1240	19.9000	0.0001	0.0005	0.0001	0.0161	0.0137	0.0005	0.0000
M-09-097 92.5-93.5	0.0001	0.0050	2.6500	0.0013	0.8100	0.00001	1.0800	0.0843	13.8000	0.0001	0.0004	0.0001	0.0116	0.0134	0.0005	0.0000
M-09-097 92.5-93.5	0.0004	0.0050	2.0100	0.0012	0.7800	0.00001	0.7300	0.0742	9.0000	0.0001	0.0006	0.0001	0.0120	0.0123	0.0005	0.0000
M-09-097 92.5-93.5	0.0002	0.0050	1.7100	0.0009	0.8200	0.00001	0.5100	0.0697	8.2800	0.0001	0.0002	0.0001	0.0120	0.0108	0.0010	0.0000
M-09-097 92.5-93.5	0.0032	0.0050	1.4500	0.0008	0.8500	0.00041	0.4300	0.0696	8.5100	0.0001	0.0002	0.0001	0.0138	0.0095	0.0005	0.0000
M-09-097 92.5-93.5	0.0002	0.0050	1.4000	0.0009	0.9300	0.00001	0.3800	0.0696	7.5400	0.0001	0.0002	0.0001	0.0149	0.0100	0.0005	0.0000
M-09-097 92.5-93.5	0.0001	0.0050	1.2400	0.0009	0.9100	0.00001	0.3500	0.0672	7.2900	0.0001	0.0003	0.0001	0.0145	0.0104	0.0005	0.0000
M-09-097 92.5-93.5	0.0001	0.0100	1.0500	0.0009	0.8300	0.00001	0.3300	0.0627	6.2700	0.0001	0.0002	0.0001	0.0146	0.0086	0.0005	0.0000
M-09-097 92.5-93.5	0.0002	0.0050	1.1200	0.0008	0.8300	0.00001	0.3200	0.0625	6.3200	0.0001	0.0002	0.0001	0.0140	0.0100	0.0005	0.0000
M-09-097 92.5-93.5	0.0002	0.0050	0.9900	0.0010	0.8800	0.00001	0.2800	0.0595	6.0100	0.0001	0.0001	0.0001	0.0139	0.0094	0.0005	0.0000
M-09-097 92.5-93.5	0.0001	0.0050	0.8400	0.0008	0.8000	0.00001	0.2500	0.0587	5.6700	0.0001	0.0004	0.0001	0.0146	0.0088	0.0005	0.0000
M-09-097 92.5-93.5	0.0002	0.0200	0.9900	0.0010	0.9900	0.00001	0.2200	0.0662	6.4500	0.0001	0.0003	0.0001	0.0160	0.0092	0.0005	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.8980	0.0008	0.9400	0.00001	0.1800	0.0596	5.5000	0.0001	0.0003	0.0002	0.0149	0.0091	0.0005	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.7710	0.0008	0.8200	0.00001	0.2400	0.0553	6.0700	0.0001	0.0003	0.0001	0.0143	0.0091	0.0010	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.8180	0.0009	0.9100	0.00001	0.2200	0.0622	6.3300	0.0001	0.0002	0.0001	0.0140	0.0086	0.0005	0.0000
M-09-097 92.5-93.5	0.0001	0.0120	0.7250	0.0007	0.8700	0.00001	0.1800	0.0562	5.8100	0.0001	0.0003	0.0001	0.0128	0.0084	0.0005	0.0000
M-09-097 92.5-93.5	0.0002	0.0045	0.6180	0.0008	0.7400	0.00007	0.2000	0.0528	5.3400	0.0001	0.0004	0.0001	0.0126	0.0075	0.0005	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.6580	0.0008	0.7800	0.00001	0.1900	0.0525	5.5800	0.0001	0.0006	0.0001	0.0120	0.0079	0.0005	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.6640	0.0004	0.8300	0.00001	0.1900	0.0526	5.5600	0.0001	0.0003	0.0001	0.0122	0.0081	0.0005	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.5710	0.0004	0.7300	0.00001	0.1100	0.0514	5.4200	0.0001	0.0001	0.0002	0.0114	0.0069	0.0005	0.0000
M-09-097 92.5-93.5	0.0001	0.0140	0.5850	0.0000	0.7600	0.00001	0.1700	0.0488	5.0800	0.0001	0.0004	0.0001	0.0112	0.0066	0.0005	0.0000
M-09-097 92.5-93.5	0.0020	0.0045	0.5410	0.0009	0.7300	0.00004	0.1500	0.0444	4.6000	0.0001	0.0002	0.0001	0.0117	0.0064	0.0005	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-097 92.5-93.5	3	24	22-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	29	65	7.52	3.5	22.6	6	0.1
M-09-097 92.5-93.5	3	25	29-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	34	67	7.75	4.4	23.3	12	0.1
M-09-097 92.5-93.5	3	26	5-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	32	65	7.5	3.2	22.0	7	0.1
M-09-097 92.5-93.5	3	27	12-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	31	69	7.66	4.8	25.1	8	0.1
M-09-097 92.5-93.5	3	28	19-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	31	64	7.84	5.5	24.6	12	0.1
M-09-097 92.5-93.5	3	29	26-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	28	61	7.49	2.9	21.5	11	0.1
M-09-097 92.5-93.5	3	30	2-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	28	53	7.55	4.9	22.7	15	0.1
M-09-097 92.5-93.5	3	31	9-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	27	61	7.31	6.0	20.1	12	0.1
M-09-097 92.5-93.5	3	32	16-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	455	29	59	7.27	3.7	17.9	13	0.1
M-09-097 92.5-93.5	3	33	23-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	28	54	7.25	3.9	20.6	14	0.1
M-09-097 92.5-93.5	3	34	30-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	28	49	7.34	3.3	21.5	16	0.1
M-09-097 92.5-93.5	3	35	7-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	460	31	69	7.34	4.0	21.7	17	0.1
M-09-097 92.5-93.5	3	36	14-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	32	64	7.39	3.9	21.2	13	0.1
M-09-097 92.5-93.5	3	37	21-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	30	66	7.37	3.7	22.8	14	0.1
M-09-097 92.5-93.5	3	38	28-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	460	28	63	7.39	4.3	21.8	14	0.1
M-09-097 92.5-93.5	3	39	4-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	29	63	7.5	3.0	21.4	15	0.1
M-09-097 92.5-93.5	3	40	11-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	455	30	61	7.59	2.9	21.6	10	0.1
M-09-097 92.5-93.5	3	41	18-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	30	51	7.67	3.6	24.5	12	0.1
M-09-097 92.5-93.5	3	42	25-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	27	58	7.43	4.1	22.4	13	0.1
M-09-097 92.5-93.5	3	43	2-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	33	60	7.4	4.1	22.6	8	0.1
M-09-097 92.5-93.5	3	44	9-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	26	56	7.44	4.3	20.5	8	0.1
M-09-097 92.5-93.5	3	45	16-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	465	29	59	7.44	5.4	21.3	13	0.1
M-09-097 92.5-93.5	3	46	23-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	29	58	7.51	6.0	24.6	11	0.1
M-09-097 92.5-93.5	3	47	30-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	27	52	7.48	6.0	21.8	13	0.1
M-09-097 92.5-93.5	3	48	6-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	28	49	7.69	5.1	21.6	11	0.1
M-09-097 92.5-93.5	3	49	13-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	28	47	7.56	4.2	21.4	9	0.1
M-09-097 92.5-93.5	3	50	20-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	28	50	7.3	4.5	21.9	8	0.1
M-09-097 92.5-93.5	3	51	27-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	27	47	7.34	4.8	22.3	7	0.1
M-09-097 92.5-93.5	3	52	3-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	26	43	7.33	3.9	19.8	7	0.1
M-09-097 92.5-93.5	3	53	10-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	24	42	7.41	3.0	17.3	7	0.1
M-09-097 92.5-93.5	3	54	17-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	25	44	7.46	3.6	19.0	9	0.1
M-09-097 92.5-93.5	3	55	24-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	26	57	7.5	4.2	20.8	11	0.1
M-09-097 92.5-93.5	3	56	3-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	26	54	7.37	3.8	20.7	11	0.1
M-09-097 92.5-93.5	3	57	10-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	25	56	7.42	3.4	20.7	10	0.1
M-09-097 92.5-93.5	3	58	17-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	26	57	7.36	3.5	19.5	10	0.1
M-09-097 92.5-93.5	3	59	24-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	27	57	7.36	3.7	18.3	9	0.1
M-09-097 92.5-93.5	3	60	31-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	26	57	7.71	4.4	20.5	10	0.1
M-09-097 92.5-93.5	3	61	7-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	25	56	7.62	5.1	22.7	11	0.1
M-09-097 92.5-93.5	3	62	14-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	25	58	7.75	3.8	19.9	11	0.1
M-09-097 92.5-93.5	3	63	21-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	26	58	7.47	2.4	17.1	10	0.1
M-09-097 92.5-93.5	3	64	28-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	27	63	7.79	3.0	20.3	10	0.1
M-09-097 92.5-93.5	3	65	5-May-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	29	63	7.51	3.5	23.4	10	0.1
M-09-097 92.5-93.5	3	66	12-May-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	29	60	7.65	3.2	23.8	12	0.1
M-09-097 92.5-93.5	3	67	19-May-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	30	64	7.67	2.9	24.3	14	0.1
M-09-097 92.5-93.5	3	68	26-May-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	28	59	7.64	4.1	23.3	11	0.1
M-09-097 92.5-93.5	3	69	2-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	26	58	7.71	5.3	22.2	8	0.1
M-09-097 92.5-93.5	3	70	9-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	26	60	7.38	4.7	22.8	9	0.1
M-09-097 92.5-93.5	3	71	16-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	26	60	7.74	4.0	23.3	10	0.1
M-09-097 92.5-93.5	3	72	23-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	27	65	7.6	3.9	23.3	11	0.1
M-09-097 92.5-93.5	3	73	30-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	28	60	7.68	3.8	23.3	12	0.1
M-09-097 92.5-93.5	3	74	7-Jul-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	31	64	7.66	4.4	24.0	12	0.1
M-09-097 92.5-93.5	3	75	14-Jul-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	34	67	7.69	5.0	24.6	12	0.1
M-09-097 92.5-93.5	3	76	21-Jul-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	30	65	7.7	4.6	23.4	13	0.1
M-09-097 92.5-93.5	3	77	28-Jul-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	27	64	7.75	4.1	22.3	13	0.1
M-09-097 92.5-93.5	3	78	4-Aug-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	27	63	7.33	4.1	23.0	12	0.1
M-09-097 92.5-93.5	3	79	11-Aug-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	26	62	7.74	4.0	23.8	10	0.1
M-09-097 92.5-93.5	3	80	18-Aug-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	28	62	7.61	4.8	25.0	12	0.1
M-09-097 92.5-93.5	3	81	25-Aug-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	30	65	7.71	5.7	26.3	13	0.1
M-09-097 92.5-93.5	3	82	1-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	29	67	7.89	5.0	23.9	13	0.1
M-09-097 92.5-93.5	3	83	8-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	29	61	7.56	4.4	21.4	13	0.1
M-09-097 92.5-93.5	3	84	15-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	30	61	7.77	4.1	21.2	14	0.1
M-09-097 92.5-93.5	3	85	22-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	31	65	7.34	3.8	21.1	14	0.1
M-09-097 92.5-93.5	3	86	29-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	500	30	62	7.49	4.4	21.9	14	0.1
M-09-097 92.5-93.5	3	87	6-Oct-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	30	63	7.6	5.0	22.7	14	0.1
M-09-097 92.5-93.5	3	88	13-Oct-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	30	61	7.79	4.5	22.4	14	0.1
M-09-097 92.5-93.5	3	89	20-Oct-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	455	30	61	7.64	3.9	22.1	13	0.1
M-09-097 92.5-93.5	3	90	27-Oct-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	29	66	7.63	5.0	22.7	14	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-097 92.5-93.5	0.06	0.0495	0.0006	0.0004	0.0217	0.0000	0.0000	0.0021	0.00045	11.0000	0.0007	0.0007	0.0023	0.0160	0.00036	0.0005	0.2990	0.0636	0.0000050	0.0005
M-09-097 92.5-93.5	0.06	0.0610	0.0006	0.0001	0.0251	0.0000	0.0000	0.0071	0.00000	12.9000	0.0003	0.0000	0.0036	0.0030	0.00001	0.0020	0.3190	0.1060	0.0000050	0.0021
M-09-097 92.5-93.5	0.06	0.0600	0.0007	0.0003	0.0234	0.0000	0.0000	0.0032	0.00000	12.3000	0.0009	0.0003	0.0019	0.0070	0.00016	0.0010	0.3040	0.0976	0.0000050	0.0007
M-09-097 92.5-93.5	0.06	0.0573	0.0009	0.0003	0.0245	0.0000	0.0000	0.0019	0.00000	11.8000	0.0007	0.0000	0.0011	0.0120	0.00003	0.0010	0.2870	0.2030	0.0000050	0.0004
M-09-097 92.5-93.5	0.03	0.0618	0.0008	0.0003	0.0267	0.0000	0.0000	0.0036	0.00000	12.0000	0.0003	0.0000	0.0016	0.0020	0.00003	0.0010	0.2530	0.1920	0.0000050	0.0002
M-09-097 92.5-93.5	0.03	0.0641	0.0006	0.0001	0.0234	0.0000	0.0000	0.0028	0.00000	10.9000	0.0007	0.0000	0.0016	0.0010	0.00004	0.0005	0.2200	0.1450	0.0000050	0.0002
M-09-097 92.5-93.5	0.03	0.0550	0.0004	0.0003	0.0234	0.0000	0.0000	0.0017	0.00000	10.8000	0.0003	0.0000	0.0016	0.0010	0.00006	0.0010	0.2160	0.1170	0.0000050	0.0004
M-09-097 92.5-93.5	0.03	0.0525	0.0006	0.0003	0.0198	0.0000	0.0000	0.0022	0.00000	10.4000	0.0005	0.0000	0.0020	0.0030	0.00001	0.0010	0.1970	0.0681	0.0000050	0.0006
M-09-097 92.5-93.5	0.03	0.0614	0.0007	0.0002	0.0227	0.0000	0.0000	0.0017	0.00000	11.2000	0.0003	0.0001	0.0046	0.0040	0.00002	0.0010	0.2380	0.0783	0.0000050	0.0003
M-09-097 92.5-93.5	0.06	0.0485	0.0007	0.0002	0.0229	0.0000	0.0000	0.0019	0.00000	11.0000	0.0007	0.0000	0.0012	0.0010	0.00006	0.0010	0.2310	0.0840	0.0000050	0.0004
M-09-097 92.5-93.5	0.03	0.0553	0.0006	0.0011	0.0236	0.0000	0.0000	0.0039	0.00000	11.0000	0.0008	0.0001	0.0022	0.0010	0.00005	0.0010	0.2260	0.0790	0.0000050	0.0003
M-09-097 92.5-93.5	0.03	0.0503	0.0009	0.0005	0.0226	0.0000	0.0000	0.0026	0.00000	12.1000	0.0003	0.0001	0.0018	0.0010	0.00001	0.0005	0.2360	0.0875	0.0000050	0.0004
M-09-097 92.5-93.5	0.03	0.0536	0.0007	0.0011	0.0227	0.0000	0.0000	0.0028	0.00000	12.4000	0.0003	0.0000	0.0022	0.0050	0.00004	0.0010	0.2510	0.1310	0.0000500	0.0006
M-09-097 92.5-93.5	0.03	0.0529	0.0005	0.0001	0.0221	0.0000	0.0000	0.0097	0.00000	11.7000	0.0003	0.0000	0.0009	0.0080	0.00001	0.0010	0.2220	0.0830	0.0000050	0.0009
M-09-097 92.5-93.5	0.03	0.0562	0.0002	0.0002	0.0226	0.0000	0.0000	0.0018	0.00000	10.8000	0.0003	0.0000	0.0010	0.0010	0.00001	0.0010	0.2080	0.0745	0.0000050	0.0003
M-09-097 92.5-93.5	0.03	0.0580	0.0003	0.0003	0.0212	0.0000	0.0001	0.0021	0.00000	11.3000	0.0003	0.0000	0.0022	0.0050	0.00177	0.0005	0.2050	0.0827	0.0000100	0.0004
M-09-097 92.5-93.5	0.03	0.0508	0.0005	0.0006	0.0168	0.0000	0.0000	0.0018	0.00000	11.7000	0.0003	0.0001	0.0011	0.0030	0.00031	0.0005	0.2170	0.0743	0.0000050	0.0002
M-09-097 92.5-93.5	0.03	0.0490	0.0005	0.0001	0.0229	0.0000	0.0000	0.0034	0.00000	11.5000	0.0003	0.0000	0.0006	0.0010	0.00001	0.0020	0.2140	0.0827	0.0000050	0.0003
M-09-097 92.5-93.5	0.03	0.0446	0.0004	0.0003	0.0182	0.0000	0.0001	0.0015	0.00000	10.4000	0.0008	0.0001	0.0012	0.0030	0.00023	0.0010	0.1820	0.0760	0.0000050	0.0003
M-09-097 92.5-93.5	0.03	0.0455	0.0005	0.0003	0.0215	0.0000	0.0000	0.0021	0.00000	13.0000	0.0007	0.0000	0.0017	0.0010	0.00126	0.0010	0.2170	0.0942	0.0000050	0.0002
M-09-097 92.5-93.5	0.03	0.0434	0.0004	0.0004	0.0181	0.0000	0.0000	0.0023	0.00000	10.2000	0.0006	0.0019	0.0028	0.0030	0.00128	0.0005	0.1820	0.0793	0.0000050	0.0002
M-09-097 92.5-93.5	0.06	0.0432	0.0005	0.0003	0.0191	0.0000	0.0000	0.0041	0.00000	11.3000	0.0003	0.0000	0.0019	0.0060	0.00005	0.0005	0.2000	0.1320	0.0000050	0.0005
M-09-097 92.5-93.5	0.03	0.0485	0.0005	0.0002	0.0190	0.0000	0.0000	0.0042	0.00000	11.1000	0.0005	0.0000	0.0013	0.0030	0.00090	0.0005	0.1890	0.0768	0.0000100	0.0001
M-09-097 92.5-93.5	0.03	0.0413	0.0003	0.0003	0.0190	0.0000	0.0000	0.0016	0.00000	10.4000	0.0005	0.0000	0.0010	0.0010	0.00062	0.0005	0.1770	0.0765	0.0000050	0.0003
M-09-097 92.5-93.5	0.22	0.0443	0.0003	0.0003	0.0193	0.0000	0.0000	0.0016	0.00000	10.7500	0.0004	0.0000	0.0010	0.0020	0.00033	0.0005	0.1780	0.0852	0.0000050	0.0003
M-09-097 92.5-93.5	0.40	0.0473	0.0003	0.0003	0.0195	0.0000	0.0000	0.0016	0.00000	11.1000	0.0003	0.0000	0.0009	0.0030	0.00004	0.0005	0.1790	0.0938	0.0000050	0.0002
M-09-097 92.5-93.5	0.22	0.0435	0.0004	0.0003	0.0178	0.0000	0.0000	0.0023	0.00000	10.9000	0.0003	0.0000	0.0008	0.0020	0.00004	0.0005	0.1765	0.0855	0.0000050	0.0006
M-09-097 92.5-93.5	0.03	0.0397	0.0004	0.0002	0.0160	0.0000	0.0000	0.0029	0.00000	10.7000	0.0003	0.0000	0.0007	0.0010	0.00004	0.0005	0.1740	0.0772	0.0000050	0.0009
M-09-097 92.5-93.5	0.03	0.0419	0.0004	0.0003	0.0159	0.0000	0.0000	0.0026	0.00000	10.1000	0.0004	0.0000	0.0018	0.0015	0.00108	0.0005	0.1605	0.0703	0.0000050	0.0006
M-09-097 92.5-93.5	0.03	0.0440	0.0003	0.0003	0.0157	0.0000	0.0000	0.0023	0.00000	9.5000	0.0006	0.0000	0.0029	0.0020	0.00211	0.0005	0.1470	0.0633	0.0000050	0.0002
M-09-097 92.5-93.5	0.03	0.0433	0.0003	0.0002	0.0164	0.0000	0.0000	0.0151	0.00000	9.8000	0.0004	0.0000	0.0022	0.0015	0.00107	0.0005	0.1495	0.0692	0.0000050	0.0003
M-09-097 92.5-93.5	0.03	0.0426	0.0002	0.0001	0.0170	0.0000	0.0000	0.0278	0.00001	10.1000	0.0003	0.0000	0.0014	0.0010	0.00003	0.0005	0.1520	0.0751	0.0000050	0.0005
M-09-097 92.5-93.5	0.03	0.0418	0.0002	0.0001	0.0162	0.0000	0.0000	0.0145	0.00001	10.0000	0.0003	0.0000	0.0011	0.0030	0.00041	0.0005	0.1500	0.0739	0.0000050	0.0003
M-09-097 92.5-93.5	0.03	0.0409	0.0002	0.0001	0.0154	0.0000	0.0000	0.0012	0.00001	9.9000	0.0003	0.0000	0.0008	0.0050	0.00078	0.0005	0.1480	0.0727	0.0000050	0.0002
M-09-097 92.5-93.5	0.03	0.0429	0.0003	0.0002	0.0151	0.0000	0.0000	0.0012	0.00001	10.2500	0.0003	0.0000	0.0010	0.0030	0.00041	0.0005	0.1490	0.0730	0.0000050	0.0002
M-09-097 92.5-93.5	0.03	0.0448	0.0003	0.0002	0.0148	0.0000	0.0000	0.0012	0.00001	10.6000	0.0003	0.0000	0.0011	0.0010	0.00003	0.0005	0.1500	0.0732	0.0000050	0.0002
M-09-097 92.5-93.5	0.03	0.0441	0.0005	0.0003	0.0145	0.0000	0.0000	0.0014	0.00001	10.1750	0.0003	0.0000	0.0013	0.0055	0.00005	0.0005	0.1530	0.0901	0.0000125	0.0021
M-09-097 92.5-93.5	0.03	0.0434	0.0006	0.0004	0.0141	0.0000	0.0000	0.0016	0.00001	9.7500	0.0003	0.0000	0.0014	0.0100	0.00006	0.0005	0.1560	0.1070	0.0000200	0.0040
M-09-097 92.5-93.5	0.03	0.0441	0.0004	0.0003	0.0149	0.0000	0.0000	0.0023	0.00002	9.9250	0.0003	0.0002	0.0184	0.0090	0.00007	0.0005	0.1505	0.0882	0.0000125	0.0122
M-09-097 92.5-93.5	0.03	0.0447	0.0002	0.0002	0.0156	0.0000	0.0000	0.0030	0.00003	10.1000	0.0003	0.0003	0.0353	0.0080	0.00008	0.0005	0.1450	0.0693	0.0000050	0.0203
M-09-097 92.5-93.5	0.03	0.0518	0.0002	0.0003	0.0158	0.0000	0.0000	0.0023	0.00002	10.6500	0.0003	0.0004	0.0207	0.0045	0.00005	0.0005	0.1440	0.0746	0.0000050	0.0105
M-09-097 92.5-93.5	0.03	0.0588	0.0002	0.0003	0.0160	0.0000	0.0000	0.0016	0.00001	11.2000	0.0003	0.0005	0.0060	0.0010	0.00002	0.0005	0.1430	0.0799	0.0000050	0.0006
M-09-097 92.5-93.5	0.03	0.0580	0.0003	0.0003	0.0158	0.0000	0.0000	0.0017	0.00005	11.4000	0.0003	0.0005	0.0458	0.0010	0.00020	0.0005	0.1465	0.0805	0.0000050	0.0009
M-09-097 92.5-93.5	0.03	0.0572	0.0003	0.0002	0.0156	0.0000	0.0000	0.0018	0.00010	11.6000	0.0003	0.0006	0.0855	0.0010	0.00038	0.0005	0.1500	0.0811	0.0000050	0.0011
M-09-097 92.5-93.5	0.03	0.0522	0.0003	0.0003	0.0140	0.0000	0.0000	0.0020	0.00009	10.8500	0.0003	0.0006	0.0878	0.0010	0.00041	0.0005	0.1405	0.0789	0.0000075	0.0011
M-09-097 92.5-93.5	0.03	0.0472	0.0002	0.0004	0.0123	0.0000	0.0000	0.0022	0.00009	10.1000	0.0003	0.0007	0.0901	0.0010	0.00043	0.0005	0.1310	0.0766	0.0000100	0.0010
M-09-097 92.5-93.5	0.03	0.0472	0.0003	0.0003	0.0121	0.0000	0.0000	0.0026	0.00005	10.0500	0.0003	0.0004	0.0452	0.0025	0.00025	0.0005	0.1290	0.0714	0.0000075	0.0008
M-09-097 92.5-93.5	0.03	0.0472	0.0004	0.0002	0.0118	0.0000	0.0000	0.0030	0.00001	10.0000	0.0003	0.0001	0.0003	0.0040	0.00007	0.0005	0.1270	0.0662	0.0000050	0.0005
M-09-097 92.5-93.5	0.03	0.0514	0.0003	0.0003	0.0129	0.0000	0.0000	0.0030	0.00002	10.5000	0.0003	0.0001	0.0015	0.0030	0.00107	0.0005	0.1310	0.0724	0.0000075	0.0004
M-09-097 92.5-93.5	0.03	0.0555	0.0002	0.0004	0.0140	0.0000	0.0000	0.0030	0.00003	11.0000	0.0003	0.0002	0.0028	0.0020	0.00206	0.0005	0.1350	0.0785	0.0000100	0.0002
M-09-097 92.5-93.5	0.03	0.0603	0.0003	0.0004	0.0158	0.0000	0.0000	0.0028	0.00002	12.1000	0.0003	0.0003	0.0273	0.0015	0.00105	0.0005	0.1415	0.0818	0.0000075	0.0006
M-09-097 92.5-93.5	0.03	0.0650	0.0003	0.0004	0.0175	0.0000	0.0000	0.0025	0.00000	13.2000	0.0003	0.0005	0.0518	0.0010	0.00003	0.0005	0.1480	0.0850	0.0000050	0.0010
M-09-097 92.5-93.5	0.03	0.0641	0.0003	0.0004	0.0170	0.0000	0.0000	0.0131	0.00000	11.9000	0.0003	0.0005	0.0558	0.0105	0.00003	0.0005	0.1500	0.1050	0.0000050	0.0010
M-09-097 92.5-93.5	0.03	0.0631	0.0002	0.0003	0.0165	0.0000	0.0000	0.0236	0.00000	10.6000	0.0003	0.0005	0.0597	0.0200	0.00002	0.0005	0.1520	0.1250	0.0000050	0.0010
M-09-097 92.5-93.5	0.03	0.0676	0.0002	0.0002	0.0154	0.0000	0.0000	0.0127	0.00000	10.4500	0.0006	0.0005	0.0579	0.0105	0.00004	0.0005	0.1330	0.0986	0.0000075	0.0008
M-09-097 92.5-93.5	0.03	0.0720	0.0001	0.0001	0.0143	0.0000	0.0000	0.0017	0.00000	10.3000	0.0010	0.0004	0.0561	0.0010	0.00005	0.0005	0.1140	0.0722	0.0000100	0.0007
M-09-097 92.5-93.5	0.03	0.0680	0.0002	0.0003	0.0161	0.0000	0.0000	0.0028	0.00000	11.0000	0.0010	0.0005	0.0600	0.0020	0.00009	0.0005	0.1205	0.0763	0.0000075	0.0004
M-09-097 92.5-93.5	0.03	0.0639	0.0003	0.0005	0.0179	0.0000	0.0000	0.0038	0.00001	11.7000	0.0009	0.0005	0.0639	0.0030	0.00013	0.0005	0.1270	0.0803	0.0000050	0.0002
M-09-097 92.5-93.5	0.03	0.0624	0.0002	0.0008	0.0163	0.0000	0.0000	0.0032	0.00001	11.5000	0.0009	0.0005	0.0736	0.0020	0.00014	0.0005	0.1180	0.0793	0.0000075	0.0003
M-09-097 92.5-93.5	0.03	0.0609	0.0001	0.0010	0.0147	0.0000	0.0000	0.0025	0.00001	11.3000	0.0008	0.0006	0.0833	0.0010	0.00014	0.0005	0.1090	0.0782	0.0000100	0.0004
M-09-097 92.5-93.5	0.03	0.0560	0.0006	0.0006	0.0155	0.0000	0.0000	0.0025	0.00013	11.7000	0.0017	0.0006	0.0765	0.0060	0.00021	0.0005	0.1205	0.0852	0.0000100	0.0003
M-09-097 92.5-93.5	0.03	0.0511	0.0011	0.0002	0.0163	0.0000	0.0000	0.0024	0.00025	12.1000	0.0025	0.0006	0.0697	0.0110	0.00027	0.0005	0.1320	0.0922	0.0000100	0.0002
M-09-097 92.5-93.5	0.03	0.0556	0.0006	0.0002	0.0162	0.0000	0.0000	0.0039	0.00013	11.9500	0.0016	0.0003	0.0373	0.0060	0.00016	0.0005	0.1265	0.0887	0.0000075	0.0002
M-09-097 92.5-93.5	0.03	0.0600	0.0001	0.0001	0.0160	0.0000	0.0000	0.0053	0.00001	11.8000	0.0006	0.0000	0.0048	0.0010	0.00004	0.0005	0.1210	0.0851	0.0000050	0.0002
M-09-097 92.5-93.5	0.03	0.0656	0.0001	0.0002	0.0162	0.0000	0.0000	0.0038	0.00012	11.8500	0.0006	0.0003	0.0332	0.0013	0.00014	0.0005	0.1120	0.0812	0.0000075	0.0002
M-09-097 92.5-93.5	0.03	0.0711	0.0001	0.0003	0.0163	0.0000	0.0000	0.0022	0.00023	11.9000	0.0006	0.0006	0.0616	0.0015	0.00023	0.0005	0.1030	0.0773	0.0000100	0.0002
M-09-097 92.5-93.5	0.03	0.0636	0.0001	0.0003	0.0163	0.0000	0.0000	0.0024	0.00012	11.4000	0.0004	0.0003	0.0323	0.0033	0.00012	0.0005	0.1065	0.0778	0.0000075	0.0002

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-097 92.5-93.5	0.0021	0.0100	0.5370	0.0006	0.7300	0.00001	0.1600	0.0389	4.2600	0.0001	0.0004	0.0001	0.0121	0.0060	0.0510	0.0000
M-09-097 92.5-93.5	0.0002	0.0045	0.5520	0.0002	0.8000	0.00001	0.1700	0.0504	5.1500	0.0001	0.0000	0.0001	0.0103	0.0066	0.0005	0.0000
M-09-097 92.5-93.5	0.0010	0.0220	0.5190	0.0007	0.7600	0.00001	0.1500	0.0489	4.9100	0.0001	0.0002	0.0002	0.0114	0.0063	0.0010	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.5070	0.0008	0.6900	0.00001	0.1300	0.0483	5.4200	0.0001	0.0000	0.0001	0.0121	0.0062	0.0005	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.4770	0.0006	0.7800	0.00001	0.1200	0.0437	5.1700	0.0001	0.0009	0.0001	0.0107	0.0062	0.0005	0.0000
M-09-097 92.5-93.5	0.0003	0.0045	0.4280	0.0007	0.6500	0.00001	0.1100	0.0377	4.8900	0.0001	0.0004	0.0001	0.0088	0.0057	0.0005	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.3870	0.0005	0.6400	0.00001	0.1000	0.0369	4.8000	0.0001	0.0001	0.0001	0.0076	0.0058	0.0005	0.0000
M-09-097 92.5-93.5	0.0002	0.0045	0.3780	0.0000	0.6100	0.00001	0.1100	0.0343	4.3200	0.0001	0.0001	0.0001	0.0076	0.0054	0.0005	0.0000
M-09-097 92.5-93.5	0.0002	0.0045	0.3880	0.0005	0.6000	0.00001	0.1300	0.0403	4.8400	0.0001	0.0003	0.0001	0.0074	0.0052	0.0005	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.4090	0.0006	0.6500	0.00001	0.1200	0.0407	4.4300	0.0001	0.0002	0.0001	0.0072	0.0053	0.0005	0.0000
M-09-097 92.5-93.5	0.0004	0.0045	0.4020	0.0003	0.6200	0.00002	0.1400	0.0393	5.0800	0.0001	0.0054	0.0002	0.0066	0.0052	0.0005	0.0000
M-09-097 92.5-93.5	0.0006	0.0120	0.4040	0.0004	0.6800	0.00001	0.1300	0.0426	5.4600	0.0001	0.0005	0.0001	0.0067	0.0050	0.0005	0.0000
M-09-097 92.5-93.5	0.0004	0.0045	0.3940	0.0003	0.6800	0.00001	0.1400	0.0444	5.0400	0.0001	0.0004	0.0002	0.0084	0.0050	0.0010	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.3770	0.0005	0.6300	0.00001	0.1200	0.0411	5.0600	0.0001	0.0001	0.0001	0.0067	0.0051	0.0010	0.0000
M-09-097 92.5-93.5	0.0003	0.0210	0.3710	0.0000	0.6000	0.00001	0.0900	0.0377	4.9500	0.0001	0.0000	0.0001	0.0064	0.0052	0.0020	0.0000
M-09-097 92.5-93.5	0.0003	0.0045	0.3220	0.0005	0.5700	0.00001	0.1300	0.0390	4.4200	0.0001	0.0001	0.0002	0.0056	0.0046	0.0020	0.0000
M-09-097 92.5-93.5	0.0001	0.0190	0.3680	0.0002	0.5200	0.00001	0.1200	0.0399	4.7600	0.0001	0.0001	0.0001	0.0055	0.0044	0.0020	0.0000
M-09-097 92.5-93.5	0.0002	0.0045	0.3620	0.0001	0.5800	0.00001	0.1000	0.0398	4.5800	0.0001	0.0001	0.0001	0.0057	0.0045	0.0030	0.0000
M-09-097 92.5-93.5	0.0002	0.0045	0.3220	0.0005	0.5200	0.00001	0.0900	0.0365	3.5900	0.0001	0.0002	0.0002	0.0056	0.0041	0.0080	0.0000
M-09-097 92.5-93.5	0.0001	0.0170	0.3210	0.0001	0.5500	0.00001	0.1000	0.0386	4.0800	0.0001	0.0001	0.0001	0.0054	0.0042	0.0030	0.0000
M-09-097 92.5-93.5	0.0006	0.0100	0.3110	0.0002	0.4900	0.00001	0.1100	0.0354	3.6700	0.0001	0.0001	0.0001	0.0051	0.0042	0.0010	0.0000
M-09-097 92.5-93.5	0.0001	0.0500	0.3210	0.0002	0.5300	0.00001	0.1100	0.0386	4.1300	0.0001	0.0004	0.0001	0.0048	0.0041	0.0010	0.0000
M-09-097 92.5-93.5	0.0001	0.0460	0.3430	0.0003	0.6100	0.00001	0.1100	0.0387	4.6300	0.0001	0.0002	0.0001	0.0044	0.0041	0.0010	0.0000
M-09-097 92.5-93.5	0.0002	0.0160	0.2930	0.0001	0.5300	0.00001	0.1000	0.0349	4.0100	0.0001	0.0001	0.0001	0.0042	0.0038	0.0030	0.0000
M-09-097 92.5-93.5	0.0001	0.0255	0.2980	0.0001	0.5500	0.00002	0.1100	0.0362	4.2400	0.0001	0.0002	0.0001	0.0042	0.0037	0.0018	0.0000
M-09-097 92.5-93.5	0.0001	0.0350	0.3030	0.0001	0.5700	0.00003	0.1200	0.0374	4.4700	0.0001	0.0003	0.0001	0.0042	0.0037	0.0005	0.0000
M-09-097 92.5-93.5	0.0002	0.0198	0.2970	0.0002	0.5400	0.00002	0.1150	0.0365	4.2650	0.0001	0.0004	0.0001	0.0041	0.0034	0.0023	0.0000
M-09-097 92.5-93.5	0.0003	0.0045	0.2910	0.0003	0.5100	0.00001	0.1100	0.0355	4.0600	0.0001	0.0005	0.0001	0.0041	0.0032	0.0040	0.0000
M-09-097 92.5-93.5	0.0005	0.0228	0.2750	0.0003	0.4950	0.00001	0.1000	0.0329	3.7950	0.0001	0.0004	0.0001	0.0037	0.0032	0.0030	0.0000
M-09-097 92.5-93.5	0.0006	0.0410	0.2590	0.0003	0.4800	0.00001	0.0900	0.0302	3.5300	0.0001	0.0002	0.0001	0.0034	0.0031	0.0020	0.0000
M-09-097 92.5-93.5	0.0005	0.0320	0.2495	0.0003	0.4750	0.00001	0.1000	0.0314	3.5950	0.0001	0.0003	0.0001	0.0036	0.0031	0.0013	0.0000
M-09-097 92.5-93.5	0.0003	0.0230	0.2400	0.0003	0.4700	0.00001	0.1100	0.0326	3.6600	0.0001	0.0003	0.0001	0.0037	0.0031	0.0005	0.0000
M-09-097 92.5-93.5	0.0003	0.0170	0.2415	0.0002	0.4750	0.00001	0.1050	0.0325	3.5500	0.0001	0.0003	0.0001	0.0037	0.0031	0.0005	0.0000
M-09-097 92.5-93.5	0.0002	0.0110	0.2430	0.0000	0.4800	0.00001	0.1000	0.0324	3.4400	0.0000	0.0004	0.0001	0.0037	0.0032	0.0005	0.0000
M-09-097 92.5-93.5	0.0003	0.0100	0.2440	0.0002	0.4800	0.00001	0.0950	0.0332	3.6600	0.0001	0.0003	0.0001	0.0037	0.0032	0.0005	0.0000
M-09-097 92.5-93.5	0.0003	0.0090	0.2450	0.0003	0.4800	0.00001	0.0900	0.0340	3.8800	0.0001	0.0001	0.0001	0.0037	0.0033	0.0005	0.0000
M-09-097 92.5-93.5	0.0002	0.0068	0.2445	0.0002	0.4650	0.00001	0.0950	0.0331	3.8700	0.0001	0.0002	0.0001	0.0035	0.0031	0.0038	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.2440	0.0001	0.4500	0.00001	0.1000	0.0322	3.8600	0.0001	0.0002	0.0001	0.0033	0.0030	0.0070	0.0000
M-09-097 92.5-93.5	0.0002	0.0103	0.2675	0.0003	0.4550	0.00001	0.4350	0.0320	3.9600	0.0001	0.0002	0.0001	0.0032	0.0029	0.0055	0.0000
M-09-097 92.5-93.5	0.0003	0.0160	0.2910	0.0005	0.4600	0.00001	0.7700	0.0318	4.0600	0.0001	0.0002	0.0001	0.0031	0.0029	0.0040	0.0000
M-09-097 92.5-93.5	0.0004	0.0235	0.2800	0.0003	0.4850	0.00001	0.4300	0.0332	4.0400	0.0001	0.0001	0.0001	0.0032	0.0030	0.0023	0.0000
M-09-097 92.5-93.5	0.0005	0.0310	0.2690	0.0000	0.5100	0.00001	0.0900	0.0346	4.0200	0.0001	0.0001	0.0001	0.0033	0.0031	0.0005	0.0000
M-09-097 92.5-93.5	0.0005	0.0178	0.2770	0.0002	0.5700	0.00001	0.1000	0.0349	4.2700	0.0001	0.0002	0.0002	0.0032	0.0033	0.0018	0.0000
M-09-097 92.5-93.5	0.0004	0.0045	0.2850	0.0004	0.6300	0.00001	0.1100	0.0351	4.5200	0.0000	0.0002	0.0002	0.0032	0.0035	0.0030	0.0000
M-09-097 92.5-93.5	0.0003	0.0223	0.2595	0.0003	0.5450	0.00001	0.1050	0.0323	4.2500	0.0000	0.0002	0.0001	0.0031	0.0032	0.0045	0.0000
M-09-097 92.5-93.5	0.0002	0.0400	0.2340	0.0003	0.4600	0.00001	0.1000	0.0295	3.9800	0.0000	0.0001	0.0001	0.0031	0.0029	0.0060	0.0000
M-09-097 92.5-93.5	0.0004	0.0223	0.2290	0.0002	0.4900	0.00001	0.1200	0.0293	4.1600	0.0000	0.0002	0.0001	0.0031	0.0030	0.0040	0.0000
M-09-097 92.5-93.5	0.0005	0.0045	0.2240	0.0001	0.5200	0.00001	0.1400	0.0290	4.3400	0.0000	0.0002	0.0001	0.0031	0.0031	0.0020	0.0000
M-09-097 92.5-93.5	0.0006	0.0045	0.2485	0.0002	0.5300	0.00001	0.1200	0.0315	4.2800	0.0000	0.0002	0.0001	0.0030	0.0031	0.0040	0.0000
M-09-097 92.5-93.5	0.0006	0.0045	0.2730	0.0002	0.5400	0.00001	0.1000	0.0339	4.2200	0.0000	0.0001	0.0001	0.0030	0.0031	0.0060	0.0000
M-09-097 92.5-93.5	0.0005	0.0088	0.2765	0.0002	0.6000	0.00001	0.0900	0.0364	4.6300	0.0000	0.0002	0.0001	0.0031	0.0033	0.0040	0.0000
M-09-097 92.5-93.5	0.0003	0.0130	0.2800	0.0002	0.6600	0.00001	0.0800	0.0388	5.0400	0.0000	0.0003	0.0001	0.0033	0.0034	0.0020	0.0000
M-09-097 92.5-93.5	0.0005	0.0200	0.2610	0.0003	0.7500	0.00001	0.0700	0.0371	4.6200	0.0000	0.0002	0.0002	0.0032	0.0035	0.0025	0.0000
M-09-097 92.5-93.5	0.0006	0.0270	0.2420	0.0005	0.8400	0.00001	0.0600	0.0354	4.2000	0.0000	0.0002	0.0004	0.0031	0.0035	0.0030	0.0000
M-09-097 92.5-93.5	0.0004	0.0200	0.2390	0.0004	0.6650	0.00001	0.0600	0.0336	4.1800	0.0000	0.0001	0.0002	0.0030	0.0034	0.0030	0.0000
M-09-097 92.5-93.5	0.0001	0.0130	0.2360	0.0003	0.4900	0.00001	0.0600	0.0317	4.1600	0.0000	0.0000	0.0001	0.0030	0.0032	0.0030	0.0000
M-09-097 92.5-93.5	0.0001	0.0088	0.2425	0.0003	0.5300	0.00001	0.0650	0.0338	4.4400	0.0000	0.0002	0.0001	0.0032	0.0033	0.0030	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.2490	0.0004	0.5700	0.00001	0.0700	0.0359	4.7200	0.0000	0.0004	0.0001	0.0033	0.0034	0.0030	0.0000
M-09-097 92.5-93.5	0.0003	0.0045	0.2390	0.0023	0.5250	0.00001	0.0375	0.0352	4.6850	0.0000	0.0004	0.0003	0.0029	0.0032	0.0035	0.0000
M-09-097 92.5-93.5	0.0005	0.0045	0.2290	0.0043	0.4800	0.00001	0.0050	0.0345	4.6500	0.0000	0.0004	0.0005	0.0024	0.0031	0.0040	0.0000
M-09-097 92.5-93.5	0.0006	0.0045	0.2230	0.0023	0.4950	0.00001	0.1475	0.0354	5.2850	0.0001	0.0004	0.0003	0.0030	0.0029	0.0055	0.0000
M-09-097 92.5-93.5	0.0007	0.0045	0.2170	0.0002	0.5100	0.00001	0.2900	0.0362	5.9200	0.0001	0.0004	0.0001	0.0035	0.0027	0.0070	0.0000
M-09-097 92.5-93.5	0.0004	0.0045	0.2255	0.0002	0.5100	0.00001	0.1900	0.0356	5.4100	0.0001	0.0002	0.0001	0.0032	0.0029	0.0040	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.2340	0.0003	0.5100	0.00001	0.0900	0.0349	4.9000	0.0000	0.0001	0.0001	0.0029	0.0031	0.0010	0.0000
M-09-097 92.5-93.5	0.0002	0.0045	0.2175	0.0003	0.4900	0.00001	0.0750	0.0330	4.7850	0.0000	0.0001	0.0001	0.0024	0.0029	0.0030	0.0000
M-09-097 92.5-93.5	0.0004	0.0045	0.2010	0.0003	0.4700	0.00001	0.0600	0.0310	4.6700	0.0000	0.0001	0.0001	0.0020	0.0027	0.0050	0.0000
M-09-097 92.5-93.5	0.0003	0.0045	0.1970	0.0003	0.4450	0.00001	0.0600	0.0312	4.4550	0.0000	0.0001	0.0001	0.0021	0.0028	0.0030	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-097 92.5-93.5	3	91	3-Nov-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	28	61	7.78	6.2	23.3	14	0.1
M-09-097 92.5-93.5	3	92	10-Nov-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	29	61	7.82	5.0	22.7	13	0.1
M-09-097 92.5-93.5	3	93	17-Nov-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	30	61	7.64	3.8	22.1	12	0.1
M-09-097 92.5-93.5	3	94	24-Nov-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	30	57	7.58	4.6	22.5	11	0.1
M-09-097 92.5-93.5	3	95	1-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	30	60	7.55	5.5	23.0	10	0.1
M-09-097 92.5-93.5	3	96	8-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	29	59	7.58	5.8	23.5	10	0.1
M-09-097 92.5-93.5	3	97	15-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	470	28	60	7.6	6.2	23.9	10	0.1
M-09-097 92.5-93.5	3	98	22-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	29	58	7.59	5.9	24.3	10	0.1
M-09-097 92.5-93.5	3	99	29-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	29	55	7.43	5.6	24.7	9	0.1
M-09-097 92.5-93.5	3	100	5-Jan-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	29	62	7.56	5.4	25.1	9	0.1
M-09-097 92.5-93.5	3	101	12-Jan-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	29	59	7.55	5.1	25.5	8	0.1
M-09-097 92.5-93.5	3	102	19-Jan-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	475	29	61	7.39	5.5	25.1	9	0.1
M-09-097 92.5-93.5	3	103	26-Jan-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	29	62	7.62	6.0	24.7	11	0.1
M-09-097 92.5-93.5	3	104	2-Feb-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	480	28	65	7.69	6.4	24.3	12	0.1
M-09-097 92.5-93.5	3	105	9-Feb-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	28	68	7.6	6.9	23.9	13	0.1
M-09-097 92.5-93.5	3	106	16-Feb-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	490	28	68	7.6	6.6	23.2	13	0.1
M-09-097 92.5-93.5	3	107	23-Feb-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	455	28	59	7.33	6.4	22.5	13	0.1
M-09-097 92.5-93.5	3	108	1-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	450	28	60	7.42	6.2	21.8	12	0.1
M-09-097 92.5-93.5	3	109	8-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	450	28	60	7.5	6.0	21.2	12	0.1
M-09-097 92.5-93.5	3	110	15-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	455	28	61	7.46	5.8	21.3	12	0.1
M-09-097 92.5-93.5	3	111	22-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	455	28	64	7.53	5.6	21.4	12	0.1
M-09-097 92.5-93.5	3	112	29-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	440	28	63	7.39	5.4	21.5	11	0.1
M-09-097 92.5-93.5	3	113	5-Apr-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	450	28	61	7.5	5.3	21.6	11	0.1
M-09-097 92.5-93.5	3	114	12-Apr-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	435	28	68	7.42	5.3	21.6	11	0.1
M-09-097 92.5-93.5	3	115	19-Apr-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	460	28	63	7.56	5.3	21.6	11	0.1
M-09-097 92.5-93.5	3	116	26-Apr-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	445	30	69	7.74	6.0	22.5	14	0.1
M-09-097 92.5-93.5	3	117	3-May-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	450	30	64	7.64	6.3	22.8	15	0.1
M-09-097 92.5-93.5	3	118	10-May-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	460	30	63	7.41	6.5	22.6	14	0.1
M-09-097 92.5-93.5	3	119	17-May-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	450	30	70	7.43	6.7	22.3	13	0.1
M-09-097 92.5-93.5	3	120	24-May-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	450	31	62	7.64	6.9	22.1	12	0.1
M-09-097 92.5-93.5	3	121	31-May-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	445	31	67	7.61	7.1	21.8	11	0.1
M-09-097 92.5-93.5	3	122	7-Jun-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	445	31	61	7.31	7.1	22.1	12	0.1
M-09-097 92.5-93.5	3	123	14-Jun-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	485	31	71	7.5	7.1	22.5	13	0.1
M-09-097 92.5-93.5	3	124	21-Jun-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	450	31	68	7.63	7.1	22.8	13	0.1
M-09-097 92.5-93.5	3	125	28-Jun-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	440	31	69	7.57	7.2	23.1	14	0.1
M-09-097 92.5-93.5	3	126	5-Jul-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	445	31	63	7.29	6.7	22.8	13	0.1
M-09-097 92.5-93.5	3	127	12-Jul-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	445	30	70	7.48	6.2	22.5	13	0.2
M-09-097 92.5-93.5	3	128	19-Jul-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	455	30	62	7.58	5.8	22.2	12	0.2
M-09-097 92.5-93.5	3	129	26-Jul-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	KP	2	None	0			Water	500	445	30	68	7.51	5.3	21.9	11	0.2
																	31	66	7.512	6.7	22.4	12	0.1
HC4 UP Hazelton																							
M-09-097 147.5-148.5	4	0	4-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	390	85	198	7.47	2.5	25.4	87	3.2
M-09-097 147.5-148.5	4	1	11-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	71	182	7.37	2.4	23.2	61	1.0
M-09-097 147.5-148.5	4	2	18-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	495	60	135	7.36	3.3	23.0	45	0.2
M-09-097 147.5-148.5	4	3	25-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	43	97	7.23	3.0	21.7	34	0.1
M-09-097 147.5-148.5	4	4	4-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	37	90	7.29	2.8	22.2	24	0.1
M-09-097 147.5-148.5	4	5	11-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	37	83	7.37	2.9	23.0	20	0.1
M-09-097 147.5-148.5	4	6	18-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	495	37	83	7.4	2.9	22.0	14	0.1
M-09-097 147.5-148.5	4	7	25-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	510	37	77	7.32	3.6	20.4	15	0.1
M-09-097 147.5-148.5	4	8	1-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	32	70	7.41	2.9	20.5	19	0.1
M-09-097 147.5-148.5	4	9	8-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	32	72	7.32	2.7	21.8	16	0.1
M-09-097 147.5-148.5	4	10	15-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	32	73	7.34	3.5	21.2	16	0.1
M-09-097 147.5-148.5	4	11	22-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	495	34	79	7.09	5.5	12.8	17	0.1
M-09-097 147.5-148.5	4	12	29-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	480	30	69	7.44	2.6	22.3	14	0.1
M-09-097 147.5-148.5	4	13	6-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	500	32	68	7.3	5.1	21.7	9	0.1
M-09-097 147.5-148.5	4	14	13-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	480	33	69	7.45	3.1	21.1	15	0.1
M-09-097 147.5-148.5	4	15	20-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	28	62	7.44	4.5	20.5	11	0.1
M-09-097 147.5-148.5	4	16	27-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	30	62	7.41	6.3	24.3	6	0.1
M-09-097 147.5-148.5	4	17	3-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	31	59	7.42	3.3	23.5	8	0.1
M-09-097 147.5-148.5	4	18	10-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	27	58	7.44	4.3	22.3	7	0.1
M-09-097 147.5-148.5	4	19	17-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	515	25	53	7.58	3.4	21.3	6	0.1
M-09-097 147.5-148.5	4	20	24-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	520	26	52	7.55	2.5	20.5	9	0.1
M-09-097 147.5-148.5	4	21	1-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	26	52	7.58	2.6	22.0	7	0.1
M-09-097 147.5-148.5	4	22	8-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	20	51	7.37	2.6	17.8	8	0.1
M-09-097 147.5-148.5	4	23	15-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	505	22	49	7.41	3.8	17.6	4	0.1
M-09-097 147.5-148.5	4	24	22-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	495	21	47	7.33	3.4	17.7	2	0.1
M-09-097 147.5-148.5	4	25	29-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	505	24	47	7.49	4.0	18.3	7	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-097 92.5-93.5	0.03	0.0561	0.0001	0.0003	0.0162	0.0000	0.0000	0.0025	0.00000	10.9000	0.0003	0.0000	0.0029	0.0050	0.00001	0.0005	0.1100	0.0782	0.0000050	0.0002
M-09-097 92.5-93.5	0.03	0.0590	0.0002	0.0011	0.0150	0.0000	0.0000	0.0019	0.00002	11.3000	0.0023	0.0001	0.0039	0.0033	0.00002	0.0005	0.1345	0.0830	0.0000050	0.0008
M-09-097 92.5-93.5	0.03	0.0619	0.0002	0.0019	0.0137	0.0000	0.0000	0.0013	0.00003	11.7000	0.0043	0.0001	0.0048	0.0015	0.00003	0.0005	0.1590	0.0877	0.0000050	0.0014
M-09-097 92.5-93.5	0.03	0.0723	0.0003	0.0011	0.0155	0.0000	0.0000	0.0015	0.00004	11.8500	0.0023	0.0004	0.0226	0.0015	0.00270	0.0005	0.1370	0.0936	0.0000050	0.0008
M-09-097 92.5-93.5	0.03	0.0826	0.0003	0.0003	0.0172	0.0000	0.0000	0.0017	0.00005	12.0000	0.0003	0.0007	0.0403	0.0015	0.00536	0.0005	0.1150	0.0995	0.0000050	0.0003
M-09-097 92.5-93.5	0.03	0.0775	0.0002	0.0004	0.0157	0.0000	0.0000	0.0020	0.00003	11.5500	0.0003	0.0005	0.0468	0.0015	0.00273	0.0005	0.1105	0.0952	0.0000075	0.0002
M-09-097 92.5-93.5	0.03	0.0724	0.0001	0.0004	0.0141	0.0000	0.0000	0.0023	0.00002	11.1000	0.0003	0.0004	0.0532	0.0015	0.00009	0.0005	0.1060	0.0909	0.0000100	0.0002
M-09-097 92.5-93.5	0.03	0.0682	0.0002	0.0004	0.0143	0.0000	0.0000	0.0022	0.00002	11.2250	0.0003	0.0003	0.0404	0.0015	0.00009	0.0005	0.1073	0.0918	0.0000088	0.0002
M-09-097 92.5-93.5	0.03	0.0641	0.0002	0.0003	0.0145	0.0000	0.0000	0.0021	0.00001	11.3500	0.0003	0.0002	0.0277	0.0015	0.00009	0.0005	0.1085	0.0927	0.0000075	0.0002
M-09-097 92.5-93.5	0.03	0.0599	0.0003	0.0003	0.0147	0.0000	0.0000	0.0020	0.00001	11.4750	0.0003	0.0001	0.0149	0.0015	0.00008	0.0005	0.1098	0.0935	0.0000063	0.0002
M-09-097 92.5-93.5	0.03	0.0557	0.0003	0.0002	0.0149	0.0000	0.0000	0.0019	0.00001	11.6000	0.0003	0.0000	0.0021	0.0015	0.00008	0.0005	0.1110	0.0944	0.0000050	0.0002
M-09-097 92.5-93.5	0.03	0.0551	0.0004	0.0002	0.0147	0.0000	0.0000	0.0020	0.00001	11.4500	0.0003	0.0000	0.0019	0.0015	0.00018	0.0005	0.1080	0.0926	0.0000050	0.0002
M-09-097 92.5-93.5	0.03	0.0546	0.0006	0.0002	0.0146	0.0000	0.0000	0.0021	0.00001	11.3000	0.0003	0.0000	0.0017	0.0015	0.00027	0.0005	0.1050	0.0908	0.0000050	0.0003
M-09-097 92.5-93.5	0.03	0.0540	0.0007	0.0002	0.0144	0.0000	0.0000	0.0021	0.00001	11.1500	0.0003	0.0000	0.0014	0.0015	0.00037	0.0005	0.1020	0.0890	0.0000050	0.0003
M-09-097 92.5-93.5	0.03	0.0534	0.0008	0.0002	0.0142	0.0000	0.0000	0.0022	0.00002	11.0000	0.0003	0.0000	0.0012	0.0015	0.00046	0.0005	0.0990	0.0872	0.0000050	0.0004
M-09-097 92.5-93.5	0.03	0.0520	0.0006	0.0004	0.0138	0.0000	0.0000	0.0019	0.00141	11.0250	0.0003	0.0000	0.0015	0.0019	0.00136	0.0005	0.0995	0.0857	0.0000050	0.0003
M-09-097 92.5-93.5	0.03	0.0505	0.0005	0.0007	0.0135	0.0000	0.0000	0.0016	0.00281	11.0500	0.0003	0.0000	0.0018	0.0023	0.00226	0.0005	0.1000	0.0842	0.0000050	0.0003
M-09-097 92.5-93.5	0.03	0.0491	0.0003	0.0009	0.0131	0.0000	0.0000	0.0013	0.00420	11.0750	0.0003	0.0001	0.0020	0.0026	0.00315	0.0005	0.1005	0.0827	0.0000050	0.0002
M-09-097 92.5-93.5	0.03	0.0476	0.0001	0.0011	0.0127	0.0000	0.0000	0.0010	0.00560	11.1000	0.0003	0.0001	0.0023	0.0030	0.00405	0.0005	0.1010	0.0812	0.0000050	0.0002
M-09-097 92.5-93.5	0.03	0.0522	0.0002	0.0009	0.0129	0.0000	0.0000	0.0018	0.00420	11.1250	0.0003	0.0001	0.0026	0.0026	0.00305	0.0005	0.0990	0.0828	0.0000138	0.0034
M-09-097 92.5-93.5	0.03	0.0567	0.0003	0.0007	0.0131	0.0000	0.0000	0.0026	0.00280	11.1500	0.0003	0.0001	0.0030	0.0023	0.00204	0.0005	0.0970	0.0844	0.0000225	0.0066
M-09-097 92.5-93.5	0.03	0.0613	0.0003	0.0004	0.0132	0.0000	0.0000	0.0034	0.00140	11.1750	0.0003	0.0002	0.0033	0.0019	0.00104	0.0005	0.0950	0.0860	0.0000313	0.0097
M-09-097 92.5-93.5	0.03	0.0658	0.0004	0.0002	0.0134	0.0000	0.0000	0.0042	0.00000	11.2000	0.0003	0.0002	0.0036	0.0015	0.00003	0.0005	0.0930	0.0876	0.0000400	0.0129
M-09-097 92.5-93.5	0.03	0.0658	0.0004	0.0002	0.0134	0.0000	0.0000	0.0042	0.00000	11.2000	0.0003	0.0002	0.0036	0.0015	0.00003	0.0005	0.0930	0.0876	0.0000400	0.0129
M-09-097 92.5-93.5	0.03	0.0658	0.0004	0.0002	0.0134	0.0000	0.0000	0.0042	0.00000	11.2000	0.0003	0.0002	0.0036	0.0015	0.00003	0.0005	0.0930	0.0876	0.0000400	0.0129
M-09-097 92.5-93.5	0.03	0.0540	0.0002	0.0002	0.0154	0.0000	0.0000	0.0028	0.00000	11.6500	0.0003	0.0004	0.0023	0.0094	0.00027	0.0005	0.1005	0.0899	0.0000250	0.0034
M-09-097 92.5-93.5	0.03	0.0500	0.0001	0.0002	0.0161	0.0000	0.0000	0.0023	0.00000	11.8000	0.0003	0.0004	0.0019	0.0120	0.00035	0.0005	0.1030	0.0907	0.0000200	0.0003
M-09-097 92.5-93.5	0.03	0.0557	0.0001	0.0002	0.0159	0.0000	0.0000	0.0023	0.00000	11.9000	0.0003	0.0003	0.0017	0.0094	0.00027	0.0005	0.1033	0.0905	0.0000175	0.0003
M-09-097 92.5-93.5	0.03	0.0614	0.0002	0.0002	0.0157	0.0000	0.0000	0.0023	0.00000	12.0000	0.0003	0.0002	0.0015	0.0068	0.00018	0.0005	0.1035	0.0903	0.0000150	0.0002
M-09-097 92.5-93.5	0.03	0.0670	0.0002	0.0001	0.0154	0.0000	0.0000	0.0022	0.00000	12.1000	0.0003	0.0001	0.0012	0.0041	0.00010	0.0005	0.1038	0.0901	0.0000125	0.0002
M-09-097 92.5-93.5	0.03	0.0727	0.0002	0.0001	0.0152	0.0000	0.0000	0.0022	0.00000	12.2000	0.0003	0.0000	0.0010	0.0015	0.00001	0.0005	0.1040	0.0899	0.0000100	0.0002
M-09-097 92.5-93.5	0.03	0.0738	0.0002	0.0002	0.0164	0.0000	0.0000	0.0043	0.00000	12.2000	0.0003	0.0000	0.0011	0.0015	0.00002	0.0005	0.1045	0.0896	0.0000100	0.0002
M-09-097 92.5-93.5	0.03	0.0748	0.0002	0.0002	0.0175	0.0000	0.0000	0.0065	0.00000	12.2000	0.0003	0.0000	0.0013	0.0015	0.00002	0.0005	0.1050	0.0893	0.0000100	0.0002
M-09-097 92.5-93.5	0.03	0.0759	0.0001	0.0003	0.0187	0.0000	0.0000	0.0086	0.00000	12.2000	0.0003	0.0000	0.0014	0.0015	0.00003	0.0005	0.1055	0.0890	0.0000100	0.0002
M-09-097 92.5-93.5	0.03	0.0769	0.0001	0.0003	0.0198	0.0000	0.0000	0.0107	0.00000	12.2000	0.0003	0.0000	0.0015	0.0015	0.00003	0.0005	0.1060	0.0887	0.0000100	0.0002
M-09-097 92.5-93.5	0.03	0.0761	0.0001	0.0003	0.0190	0.0000	0.0000	0.0086	0.00000	12.1000	0.0003	0.0000	0.0014	0.0015	0.00003	0.0005	0.1060	0.0890	0.0000088	0.0002
M-09-097 92.5-93.5	0.03	0.0753	0.0001	0.0002	0.0183	0.0000	0.0000	0.0065	0.00000	12.0000	0.0003	0.0000	0.0013	0.0015	0.00003	0.0005	0.1060	0.0892	0.0000075	0.0002
M-09-097 92.5-93.5	0.03	0.0744	0.0001	0.0002	0.0175	0.0000	0.0000	0.0044	0.00000	11.9000	0.0003	0.0000	0.0011	0.0015	0.00003	0.0005	0.1060	0.0895	0.0000063	0.0002
M-09-097 92.5-93.5	0.03	0.0736	0.0001	0.0001	0.0167	0.0000	0.0000	0.0023	0.00000	11.8000	0.0003	0.0000	0.0010	0.0015	0.00003	0.0005	0.1060	0.0897	0.0000050	0.0002
	0.03	0.0740	0.0001	0.0002	0.0174	0.0000	0.0000	0.0056	0.00000	12.0900	0.0003	0.0000	0.0012	0.0018	0.00003	0.0005	0.1053	0.0894	0.0000090	0.0002
HC4 UP Hazelton																				
M-09-097 147.5-148.5	0.56	0.0593	0.0015	0.0012	0.0437	0.0000	0.0000	0.0110	0.00001	31.5000	0.0003	0.0001	0.0063	0.0050	0.00001	0.0050	1.6100	0.0440	0.0000050	0.0027
M-09-097 147.5-148.5	0.48	0.0608	0.0020	0.0010	0.0339	0.0000	0.0000	0.0120	0.00001	25.9000	0.0003	0.0001	0.0027	0.0050	0.00001	0.0040	1.4300	0.0480	0.0000050	0.0094
M-09-097 147.5-148.5	0.51	0.0667	0.0017	0.0008	0.0326	0.0000	0.0000	0.0080	0.00001	22.5000	0.0003	0.0001	0.0023	0.0050	0.00001	0.0040	1.0100	0.0600	0.0000050	0.0061
M-09-097 147.5-148.5	0.48	0.0608	0.0014	0.0006	0.0280	0.0000	0.0000	0.0039	0.00001	16.3000	0.0003	0.0001	0.0025	0.0050	0.00003	0.0020	0.6300	0.0500	0.0000050	0.0037
M-09-097 147.5-148.5	0.42	0.0664	0.0010	0.0005	0.0315	0.0000	0.0000	0.0040	0.00001	13.9000	0.0003	0.0001	0.0024	0.0050	0.00004	0.0010	0.4480	0.0530	0.0000050	0.0024
M-09-097 147.5-148.5	0.42	0.0643	0.0009	0.0005	0.0283	0.0000	0.0000	0.0030	0.00001	14.2000	0.0003	0.0001	0.0023	0.0050	0.00007	0.0020	0.3880	0.0600	0.0000050	0.0019
M-09-097 147.5-148.5	0.40	0.0591	0.0007	0.0005	0.0250	0.0000	0.0000	0.0010	0.00001	14.3000	0.0003	0.0001	0.0128	0.0050	0.00003	0.0010	0.3510	0.0640	0.0000050	0.0017
M-09-097 147.5-148.5	0.48	0.0720	0.0009	0.0002	0.0279	0.0000	0.0000	0.0020	0.00000	14.3000	0.0003	0.0001	0.0028	0.0050	0.00006	0.0005	0.3060	0.0670	0.0000050	0.0017
M-09-097 147.5-148.5	0.38	0.0692	0.0006	0.0001	0.0249	0.0000	0.0000	0.0030	0.00001	12.3000	0.0007	0.0001	0.0033	0.0050	0.00045	0.0005	0.2370	0.0660	0.0000050	0.0014
M-09-097 147.5-148.5	0.40	0.0688	0.0007	0.0001	0.0240	0.0000	0.0000	0.0040	0.00001	12.4000	0.0003	0.0001	0.0060	0.0050	0.00080	0.0010	0.2180	0.0730	0.0000050	0.0014
M-09-097 147.5-148.5	0.47	0.0882	0.0007	0.0002	0.0234	0.0000	0.0000	0.0010	0.00001	12.4000	0.0011	0.0001	0.0076	0.0050	0.00128	0.0010	0.2030	0.0710	0.0000050	0.0016
M-09-097 147.5-148.5	0.47	0.0756	0.0005	0.0004	0.0232	0.0000	0.0000	0.0010	0.00001	13.1000	0.0006	0.0001	0.0080	0.0050	0.00061	0.0005	0.1940	0.0760	0.0000050	0.0019
M-09-097 147.5-148.5	0.44	0.0716	0.0006	0.0003	0.0239	0.0000	0.0000	0.0010	0.00002	11.8000	0.0007	0.0001	0.0037	0.0050	0.00121	0.0005	0.1620	0.0730	0.0000050	0.0018
M-09-097 147.5-148.5	0.44	0.0661	0.0006	0.0002	0.0242	0.0000	0.0000	0.0020	0.00001	12.5000	0.0005	0.0001	0.0064	0.0050	0.00036	0.0005	0.1600	0.0800	0.0000100	0.0018
M-09-097 147.5-148.5	0.46	0.0745	0.0006	0.0002	0.0238	0.0000	0.0000	0.0014	0.00002	12.8000	0.0003	0.0001	0.0035	0.0010	0.00022	0.0005	0.1490	0.0750	0.0000050	0.0029
M-09-097 147.5-148.5	0.47	0.0800	0.0006	0.0003	0.0221	0.0000	0.0000	0.0017	0.00001	11.0000	0.0003	0.0001	0.0033	0.0010	0.00018	0.0005	0.1230	0.0634	0.0000100	0.0023
M-09-097 147.5-148.5	0.42	0.0693	0.0005	0.0004	0.0271	0.0000	0.0000	0.0016	0.00002	11.6000	0.0006	0.0002	0.0036	0.0040	0.00067	0.0005	0.1290	0.0746	0.0000050	0.0045
M-09-097 147.5-148.5	0.42	0.0726	0.0005	0.0004	0.0323	0.0000	0.0000	0.0019	0.00001	12.1000	0.0003	0.0002	0.0036	0.0010	0.00004	0.0005	0.1220	0.0857	0.0000050	0.0021
M-09-097 147.5-148.5	0.42	0.0798	0.0005	0.0003	0.0288	0.0000	0.0000	0.0018	0.00001	10.8000	0.0007	0.0001	0.0034	0.0010	0.00006	0.0005	0.1090	0.0719	0.0000050	0.0022
M-09-097 147.5-148.5	0.45	0.0776	0.0006	0.0006	0.0307	0.0000	0.0000	0.0022	0.00005	9.8900	0.0005	0.0001	0.0041	0.0030	0.00006	0.0005	0.0980	0.0697	0.0000050	0.0021
M-09-097 147.5-148.5	0.50	0.0722	0.0007	0.0001	0.0316	0.0000	0.0000	0.0054	0.00001	10.2000	0.0003	0.0000	0.0027	0.0010	0.00006	0.0005	0.0940	0.0688	0.0000050	0.0024
M-09-097 147.5-148.5	0.40	0.0643	0.0005	0.0003	0.0322	0.0000	0.0000	0.0018	0.00002	10.4000	0.0005	0.0000	0.0033	0.0010	0.00002	0.0005	0.0920	0.0819	0.0000050	0.0019
M-09-097 147.5-148.5	0.40	0.0635	0.0003	0.0003	0.0291	0.0000	0.0000	0.0021	0.00002	7.9500	0.0008	0.0001	0.0039	0.0010	0.00005	0.0005	0.0860	0.0700	0.0000050	0.0023
M-09-097 147.5-148.5	0.41	0.0756	0.0003	0.0003	0.0294	0.0000	0.0000	0.0013	0.00002	8.4800	0.0013	0.0001	0.0045	0.0010	0.00003	0.0005	0.0770	0.0661	0.0000050	0.0022
M-09-097 147.5-148.5	0.42	0.0593	0.0001	0.0002	0.0298	0.0000	0.0000	0.0020	0.00020	8.2100	0.0003	0.0004	0.0032	0.0010	0.00016	0.0005	0.0760	0.0633	0.0000050	0.0021
M-09-097 147.5-148.5	0.47	0.0671	0.0001	0.0001	0.0329	0.0000	0.0000	0.0042	0.00001	9.3800	0.0003	0.0000	0.0028	0.0010	0.00001	0.0005	0.0770	0.0642	0.0000050	0.0028

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-097 92.5-93.5	0.0002	0.0045	0.1930	0.0003	0.4200	0.00001	0.0600	0.0314	4.2400	0.0000	0.0001	0.0001	0.0022	0.0029	0.0010	0.0000
M-09-097 92.5-93.5	0.0005	0.0045	0.1975	0.0004	0.5300	0.00001	0.2800	0.0323	4.3850	0.0000	0.0003	0.0004	0.0021	0.0027	0.0015	0.0000
M-09-097 92.5-93.5	0.0007	0.0045	0.2020	0.0006	0.6400	0.00001	0.5000	0.0331	4.5300	0.0000	0.0006	0.0008	0.0020	0.0026	0.0020	0.0000
M-09-097 92.5-93.5	0.0007	0.0088	0.2045	0.0005	0.5450	0.00001	0.3500	0.0340	4.4050	0.0000	0.0003	0.0005	0.0021	0.0027	0.0035	0.0000
M-09-097 92.5-93.5	0.0006	0.0130	0.2070	0.0004	0.4500	0.00001	0.2000	0.0349	4.2800	0.0000	0.0001	0.0002	0.0022	0.0029	0.0050	0.0000
M-09-097 92.5-93.5	0.0006	0.0088	0.1955	0.0007	0.4450	0.00001	0.1400	0.0328	4.2700	0.0000	0.0003	0.0002	0.0021	0.0026	0.0035	0.0000
M-09-097 92.5-93.5	0.0005	0.0045	0.1840	0.0010	0.4400	0.00001	0.0800	0.0307	4.2600	0.0000	0.0005	0.0002	0.0020	0.0024	0.0020	0.0000
M-09-097 92.5-93.5	0.0004	0.0045	0.1880	0.0008	0.4475	0.00001	0.0825	0.0313	4.3150	0.0000	0.0004	0.0002	0.0020	0.0024	0.0020	0.0000
M-09-097 92.5-93.5	0.0003	0.0045	0.1920	0.0007	0.4550	0.00001	0.0850	0.0319	4.3700	0.0000	0.0003	0.0002	0.0021	0.0024	0.0020	0.0000
M-09-097 92.5-93.5	0.0002	0.0045	0.1960	0.0005	0.4625	0.00001	0.0875	0.0325	4.4250	0.0000	0.0002	0.0001	0.0021	0.0024	0.0020	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.2000	0.0004	0.4700	0.00001	0.0900	0.0331	4.4800	0.0000	0.0001	0.0001	0.0021	0.0024	0.0020	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.1950	0.0003	0.4525	0.00001	0.0925	0.0324	4.4350	0.0000	0.0001	0.0002	0.0021	0.0024	0.0020	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.1900	0.0003	0.4350	0.00001	0.0950	0.0317	4.3900	0.0000	0.0001	0.0002	0.0021	0.0024	0.0020	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.1850	0.0003	0.4175	0.00001	0.0975	0.0309	4.3450	0.0000	0.0001	0.0003	0.0021	0.0024	0.0020	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.1800	0.0003	0.4000	0.00001	0.1000	0.0302	4.3000	0.0000	0.0002	0.0003	0.0021	0.0025	0.0020	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.1780	0.0003	0.4300	0.00001	0.0950	0.0301	4.2900	0.0000	0.0001	0.0003	0.0019	0.0024	0.0023	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.1760	0.0003	0.4600	0.00001	0.0900	0.0299	4.2800	0.0000	0.0001	0.0002	0.0018	0.0023	0.0025	0.0000
M-09-097 92.5-93.5	0.0002	0.0045	0.1740	0.0003	0.4900	0.00001	0.0850	0.0298	4.2700	0.0000	0.0001	0.0002	0.0016	0.0022	0.0028	0.0000
M-09-097 92.5-93.5	0.0002	0.0045	0.1720	0.0002	0.5200	0.00001	0.0800	0.0296	4.2600	0.0000	0.0001	0.0001	0.0015	0.0021	0.0030	0.0000
M-09-097 92.5-93.5	0.0002	0.0045	0.1723	0.0002	0.4725	0.00001	0.0800	0.0296	4.2975	0.0000	0.0001	0.0001	0.0014	0.0021	0.0028	0.0000
M-09-097 92.5-93.5	0.0003	0.0045	0.1725	0.0002	0.4250	0.00001	0.0800	0.0297	4.3350	0.0000	0.0001	0.0001	0.0014	0.0021	0.0025	0.0000
M-09-097 92.5-93.5	0.0003	0.0045	0.1728	0.0002	0.3775	0.00001	0.0800	0.0297	4.3725	0.0000	0.0001	0.0001	0.0013	0.0021	0.0023	0.0000
M-09-097 92.5-93.5	0.0003	0.0045	0.1730	0.0002	0.3300	0.00001	0.0800	0.0297	4.4100	0.0000	0.0001	0.0001	0.0013	0.0022	0.0020	0.0000
M-09-097 92.5-93.5	0.0003	0.0045	0.1730	0.0002	0.3300	0.00001	0.0800	0.0297	4.4100	0.0000	0.0001	0.0001	0.0013	0.0022	0.0020	0.0000
M-09-097 92.5-93.5	0.0003	0.0045	0.1730	0.0002	0.3300	0.00001	0.0800	0.0297	4.4100	0.0000	0.0001	0.0001	0.0013	0.0022	0.0020	0.0000
M-09-097 92.5-93.5	0.0012	0.0045	0.1955	0.0001	0.3450	0.00001	0.0725	0.0311	4.8300	0.0000	0.0004	0.0001	0.0013	0.0021	0.0043	0.0000
M-09-097 92.5-93.5	0.0015	0.0045	0.2030	0.0001	0.3500	0.00001	0.0700	0.0316	4.9700	0.0000	0.0005	0.0001	0.0014	0.0020	0.0050	0.0000
M-09-097 92.5-93.5	0.0012	0.0045	0.2055	0.0001	0.3650	0.00001	0.0775	0.0320	5.0400	0.0000	0.0004	0.0001	0.0014	0.0020	0.0043	0.0000
M-09-097 92.5-93.5	0.0009	0.0045	0.2080	0.0002	0.3800	0.00001	0.0850	0.0323	5.1100	0.0000	0.0003	0.0001	0.0014	0.0020	0.0035	0.0000
M-09-097 92.5-93.5	0.0005	0.0045	0.2105	0.0002	0.3950	0.00001	0.0925	0.0327	5.1800	0.0000	0.0002	0.0001	0.0015	0.0020	0.0028	0.0000
M-09-097 92.5-93.5	0.0002	0.0045	0.2130	0.0003	0.4100	0.00001	0.1000	0.0330	5.2500	0.0000	0.0001	0.0001	0.0015	0.0020	0.0020	0.0000
M-09-097 92.5-93.5	0.0002	0.0045	0.2228	0.0002	0.4050	0.00001	0.0925	0.0338	5.3250	0.0000	0.0002	0.0001	0.0015	0.0020	0.0020	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.2325	0.0002	0.4000	0.00001	0.0850	0.0347	5.4000	0.0000	0.0003	0.0001	0.0015	0.0021	0.0020	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.2423	0.0002	0.3950	0.00001	0.0775	0.0355	5.4750	0.0000	0.0004	0.0001	0.0015	0.0021	0.0020	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.2520	0.0001	0.3900	0.00001	0.0700	0.0363	5.5500	0.0000	0.0005	0.0001	0.0015	0.0022	0.0020	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.2470	0.0001	0.3750	0.00001	0.0725	0.0354	5.4600	0.0000	0.0004	0.0001	0.0015	0.0021	0.0025	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.2420	0.0002	0.3600	0.00001	0.0750	0.0346	5.3700	0.0000	0.0003	0.0001	0.0014	0.0020	0.0030	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.2370	0.0002	0.3450	0.00001	0.0775	0.0337	5.2800	0.0000	0.0002	0.0001	0.0014	0.0019	0.0035	0.0000
M-09-097 92.5-93.5	0.0001	0.0045	0.2320	0.0002	0.3300	0.00001	0.0800	0.0328	5.1900	0.0000	0.0001	0.0001	0.0013	0.0018	0.0040	0.0000
	0.0001	0.0045	0.2331	0.0002	0.3805	0.00001	0.0823	0.0342	5.3480	0.0000	0.0003	0.0001	0.0015	0.0020	0.0026	0.0000
HC4 UP Hazelton																
M-09-097 147.5-148.5	0.0016	0.0050	9.0100	0.0150	1.1400	0.00003	6.2100	0.1650	29.4000	0.0001	0.0003	0.0001	0.0015	0.0101	0.0005	0.0000
M-09-097 147.5-148.5	0.0004	0.0050	5.5900	0.0107	1.2000	0.00001	3.5800	0.1430	23.1000	0.0001	0.0005	0.0001	0.0127	0.0117	0.0005	0.0000
M-09-097 147.5-148.5	0.0003	0.0050	3.4600	0.0056	1.2500	0.00001	1.9000	0.1180	15.2000	0.0001	0.0005	0.0001	0.0133	0.0108	0.0005	0.0000
M-09-097 147.5-148.5	0.0001	0.0050	2.2500	0.0042	1.0500	0.00001	1.0400	0.0869	11.0000	0.0001	0.0003	0.0001	0.0110	0.0100	0.0005	0.0000
M-09-097 147.5-148.5	0.0004	0.0050	1.5800	0.0034	0.9000	0.00001	0.6900	0.0750	7.1400	0.0001	0.0005	0.0001	0.0107	0.0078	0.0005	0.0000
M-09-097 147.5-148.5	0.0002	0.0050	1.3700	0.0028	0.9800	0.00001	0.5000	0.0734	7.1700	0.0001	0.0002	0.0001	0.0108	0.0065	0.0005	0.0000
M-09-097 147.5-148.5	0.0029	0.0050	1.1200	0.0023	0.9800	0.00046	0.4700	0.0718	7.0800	0.0001	0.0001	0.0001	0.0100	0.0054	0.0005	0.0000
M-09-097 147.5-148.5	0.0001	0.0050	1.1100	0.0027	1.0800	0.00001	0.4100	0.0691	6.6100	0.0001	0.0002	0.0001	0.0087	0.0059	0.0005	0.0000
M-09-097 147.5-148.5	0.0002	0.0050	0.8400	0.0013	0.9000	0.00001	0.3600	0.0577	5.7800	0.0001	0.0003	0.0001	0.0066	0.0046	0.0005	0.0001
M-09-097 147.5-148.5	0.0001	0.0050	0.7900	0.0020	0.8800	0.00001	0.3100	0.0579	5.2300	0.0001	0.0002	0.0001	0.0061	0.0040	0.0005	0.0000
M-09-097 147.5-148.5	0.0002	0.0050	0.8000	0.0025	0.9100	0.00001	0.3600	0.0568	5.5900	0.0001	0.0004	0.0001	0.0058	0.0043	0.0005	0.0000
M-09-097 147.5-148.5	0.0002	0.0050	0.7900	0.0027	1.0500	0.00001	0.3000	0.0582	5.3800	0.0001	0.0001	0.0001	0.0056	0.0046	0.0005	0.0000
M-09-097 147.5-148.5	0.0001	0.0050	0.6200	0.0025	0.9000	0.00001	0.2700	0.0526	4.6800	0.0001	0.0004	0.0001	0.0044	0.0043	0.0005	0.0000
M-09-097 147.5-148.5	0.0002	0.0200	0.6900	0.0023	1.0200	0.00001	0.2300	0.0544	5.0100	0.0001	0.0002	0.0001	0.0046	0.0041	0.0005	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.6300	0.0027	1.1100	0.00001	0.2100	0.0538	4.3800	0.0001	0.0003	0.0001	0.0055	0.0047	0.0005	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.5470	0.0026	0.9400	0.00001	0.2400	0.0460	4.6400	0.0001	0.0003	0.0001	0.0051	0.0048	0.0010	0.0001
M-09-097 147.5-148.5	0.0001	0.0045	0.5290	0.0026	0.9900	0.00001	0.2400	0.0494	4.2500	0.0001	0.0002	0.0001	0.0050	0.0045	0.0005	0.0001
M-09-097 147.5-148.5	0.0001	0.0045	0.5080	0.0024	1.0000	0.00001	0.1900	0.0510	4.2000	0.0001	0.0002	0.0001	0.0050	0.0043	0.0005	0.0000
M-09-097 147.5-148.5	0.0002	0.0130	0.4410	0.0022	0.8700	0.00005	0.2000	0.0459	3.6900	0.0001	0.0004	0.0001	0.0048	0.0044	0.0005	0.0001
M-09-097 147.5-148.5	0.0002	0.0045	0.4170	0.0023	0.8800	0.00001	0.1900	0.0413	3.5800	0.0001	0.0002	0.0002	0.0050	0.0046	0.0010	0.0001
M-09-097 147.5-148.5	0.0001	0.0045	0.4250	0.0019	0.9700	0.00001	0.1900	0.0426	3.4500	0.0001	0.0002	0.0001	0.0047	0.0047	0.0020	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.3570	0.0016	0.8000	0.00001	0.1200	0.0424	3.2400	0.0001	0.0002	0.0001	0.0045	0.0041	0.0005	0.0000
M-09-097 147.5-148.5	0.0001	0.0090	0.4020	0.0018	0.8300	0.00001	0.1700	0.0379	2.9000	0.0001	0.0004	0.0001	0.0045	0.0043	0.0005	0.0000
M-09-097 147.5-148.5	0.0006	0.0045	0.3450	0.0019	0.8200	0.00001	0.1700	0.0344	2.6600	0.0001	0.0002	0.0001	0.0047	0.0042	0.0005	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.3320	0.0019	0.8200	0.00001	0.1500	0.0259	2.4900	0.0001	0.0002	0.0001	0.0045	0.0042	0.0220	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.3440	0.0017	0.8600	0.00001	0.1600	0.0374	2.9800	0.0001	0.0000	0.0001	0.0039	0.0045	0.0005	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-097 147.5-148.5	4	26	5-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	24	47	7.44	3.0	20.2	4	0.1
M-09-097 147.5-148.5	4	27	12-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	495	22	48	7.52	3.9	21.8	4	0.1
M-09-097 147.5-148.5	4	28	19-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	500	21	43	7.52	4.8	20.8	10	0.1
M-09-097 147.5-148.5	4	29	26-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	20	43	7.42	2.6	16.1	5	0.1
M-09-097 147.5-148.5	4	30	2-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	470	20	38	7.39	3.8	16.7	9	0.1
M-09-097 147.5-148.5	4	31	9-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	480	19	43	7.11	5.7	15.8	6	0.1
M-09-097 147.5-148.5	4	32	16-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	460	19	40	7.18	3.2	15.2	7	0.1
M-09-097 147.5-148.5	4	33	23-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	470	20	36	7.27	3.1	16.6	10	0.1
M-09-097 147.5-148.5	4	34	30-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	500	21	34	7.28	2.9	17.5	11	0.1
M-09-097 147.5-148.5	4	35	7-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	22	46	7.26	3.6	16.9	9	0.1
M-09-097 147.5-148.5	4	36	14-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	23	45	7.27	3.5	16.9	8	0.1
M-09-097 147.5-148.5	4	37	21-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	22	46	7.3	3.1	17.6	8	0.1
M-09-097 147.5-148.5	4	38	28-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	19	41	7.26	3.4	16.6	7	0.1
M-09-097 147.5-148.5	4	39	4-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	495	20	41	7.43	2.4	16.6	8	0.1
M-09-097 147.5-148.5	4	40	11-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	500	22	43	7.5	2.6	20.7	2	0.1
M-09-097 147.5-148.5	4	41	18-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	20	35	7.62	3.2	16.7	3	0.1
M-09-097 147.5-148.5	4	42	25-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	495	19	41	7.22	3.7	16.9	4	0.1
M-09-097 147.5-148.5	4	43	2-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	495	25	43	7.31	3.7	21.3	5	0.1
M-09-097 147.5-148.5	4	44	9-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	20	41	7.3	4.2	17.3	4	0.1
M-09-097 147.5-148.5	4	45	16-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	22	41	7.26	4.7	17.6	8	0.1
M-09-097 147.5-148.5	4	46	23-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	495	21	40	7.49	5.4	21.3	4	0.1
M-09-097 147.5-148.5	4	47	30-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	20	36	7.31	5.2	17.2	5	0.1
M-09-097 147.5-148.5	4	48	6-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	500	20	32	7.49	4.5	16.6	5	0.1
M-09-097 147.5-148.5	4	49	13-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	21	33	7.38	3.9	16.0	5	0.1
M-09-097 147.5-148.5	4	50	20-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	20	35	7.32	4.2	15.9	5	0.1
M-09-097 147.5-148.5	4	51	27-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	19	33	7.42	4.5	15.8	4	0.1
M-09-097 147.5-148.5	4	52	3-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	19	30	7.24	3.5	14.9	3	0.1
M-09-097 147.5-148.5	4	53	10-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	495	18	30	7.33	2.6	13.9	2	0.1
M-09-097 147.5-148.5	4	54	17-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	18	31	7.31	3.3	14.9	5	0.1
M-09-097 147.5-148.5	4	55	24-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	480	18	41	7.38	4.0	15.9	8	0.1
M-09-097 147.5-148.5	4	56	3-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	480	18	37	7.3	3.4	16.1	8	0.1
M-09-097 147.5-148.5	4	57	10-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	18	40	7.38	2.9	16.3	8	0.1
M-09-097 147.5-148.5	4	58	17-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	19	39	7.3	3.0	15.8	8	0.1
M-09-097 147.5-148.5	4	59	24-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	19	39	7.3	3.2	15.2	7	0.1
M-09-097 147.5-148.5	4	60	31-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	480	18	37	7.53	4.1	15.6	7	0.1
M-09-097 147.5-148.5	4	61	7-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	18	38	7.51	5.0	16.1	6	0.1
M-09-097 147.5-148.5	4	62	14-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	18	39	7.64	3.6	15.6	6	0.1
M-09-097 147.5-148.5	4	63	21-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	470	18	39	7.41	2.2	15.2	5	0.1
M-09-097 147.5-148.5	4	64	28-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	505	18	40	7.59	2.6	15.5	6	0.1
M-09-097 147.5-148.5	4	65	5-May-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	19	40	7.39	3.1	15.8	7	0.1
M-09-097 147.5-148.5	4	66	12-May-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	470	19	39	7.42	2.8	16.4	7	0.1
M-09-097 147.5-148.5	4	67	19-May-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	460	20	42	7.65	2.6	17.0	7	0.1
M-09-097 147.5-148.5	4	68	26-May-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	465	19	38	7.61	3.8	16.2	6	0.1
M-09-097 147.5-148.5	4	69	2-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	17	38	7.25	4.9	15.5	4	0.1
M-09-097 147.5-148.5	4	70	9-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	470	17	39	7.3	4.4	15.0	5	0.1
M-09-097 147.5-148.5	4	71	16-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	465	17	37	7.59	4.0	14.5	5	0.1
M-09-097 147.5-148.5	4	72	23-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	470	18	40	7.47	3.7	14.8	5	0.1
M-09-097 147.5-148.5	4	73	30-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	19	39	7.56	3.5	15.1	5	0.1
M-09-097 147.5-148.5	4	74	7-Jul-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	20	39	7.44	4.0	15.9	5	0.1
M-09-097 147.5-148.5	4	75	14-Jul-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	21	42	7.56	4.6	16.6	5	0.1
M-09-097 147.5-148.5	4	76	21-Jul-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	480	19	42	7.54	4.1	15.9	5	0.1
M-09-097 147.5-148.5	4	77	28-Jul-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	480	17	39	7.65	3.7	15.2	4	0.1
M-09-097 147.5-148.5	4	78	4-Aug-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	17	42	7.28	3.6	15.2	4	0.1
M-09-097 147.5-148.5	4	79	11-Aug-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	18	39	7.63	3.5	15.3	4	0.1
M-09-097 147.5-148.5	4	80	18-Aug-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	480	19	41	7.6	4.2	16.3	5	0.1
M-09-097 147.5-148.5	4	81	25-Aug-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	480	20	42	7.63	5.0	17.4	5	0.1
M-09-097 147.5-148.5	4	82	1-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	19	43	7.78	4.4	16.3	5	0.1
M-09-097 147.5-148.5	4	83	8-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	19	39	7.59	3.7	15.3	5	0.1
M-09-097 147.5-148.5	4	84	15-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	20	41	7.52	3.6	15.5	5	0.1
M-09-097 147.5-148.5	4	85	22-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	495	21	42	7.3	3.5	15.8	5	0.1
M-09-097 147.5-148.5	4	86	29-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	495	21	38	7.33	4.1	15.7	6	0.1
M-09-097 147.5-148.5	4	87	6-Oct-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	480	20	43	7.47	4.6	15.6	6	0.1
M-09-097 147.5-148.5	4	88	13-Oct-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	20	42	7.72	4.3	15.3	7	0.1
M-09-097 147.5-148.5	4	89	20-Oct-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	20	40	7.49	3.9	14.9	7	0.1
M-09-097 147.5-148.5	4	90	27-Oct-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	20	42	7.25	4.6	15.4	7	0.1
M-09-097 147.5-148.5	4	91	3-Nov-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	19	41	7.62	5.4	16.0	7	0.1
M-09-097 147.5-148.5	4	92	10-Nov-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	20	41	7.68	4.4	15.7	6	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-097 147.5-148.5	0.43	0.0735	0.0003	0.0001	0.0342	0.0000	0.0000	0.0020	0.00001	9.3200	0.0006	0.0002	0.0033	0.0040	0.00004	0.0005	0.0730	0.0691	0.0000050	0.0021
M-09-097 147.5-148.5	0.51	0.0660	0.0005	0.0001	0.0332	0.0000	0.0000	0.0017	0.00001	8.6600	0.0007	0.0001	0.0041	0.0010	0.00001	0.0005	0.0630	0.0781	0.0000050	0.0021
M-09-097 147.5-148.5	0.40	0.0682	0.0004	0.0001	0.0303	0.0000	0.0000	0.0018	0.00002	8.4000	0.0003	0.0000	0.0046	0.0010	0.00005	0.0005	0.0400	0.0531	0.0000050	0.0020
M-09-097 147.5-148.5	0.39	0.0799	0.0003	0.0001	0.0275	0.0000	0.0000	0.0022	0.00001	7.9700	0.0009	0.0000	0.0028	0.0010	0.00008	0.0005	0.0350	0.0454	0.0000050	0.0021
M-09-097 147.5-148.5	0.09	0.0768	0.0001	0.0001	0.0249	0.0000	0.0000	0.0014	0.00001	7.9600	0.0003	0.0000	0.0037	0.0010	0.00003	0.0005	0.0410	0.0457	0.0000050	0.0019
M-09-097 147.5-148.5	0.41	0.0768	0.0003	0.0003	0.0228	0.0000	0.0000	0.0019	0.00002	7.6000	0.0006	0.0000	0.0044	0.0010	0.00004	0.0005	0.0260	0.0613	0.0000050	0.0023
M-09-097 147.5-148.5	0.46	0.0782	0.0004	0.0002	0.0215	0.0000	0.0000	0.0014	0.00001	7.5300	0.0003	0.0000	0.0030	0.0010	0.00003	0.0005	0.0560	0.0572	0.0000050	0.0021
M-09-097 147.5-148.5	0.44	0.0759	0.0003	0.0001	0.0275	0.0000	0.0000	0.0017	0.00001	7.8200	0.0008	0.0000	0.0034	0.0020	0.00006	0.0005	0.0580	0.0600	0.0000050	0.0020
M-09-097 147.5-148.5	0.46	0.0800	0.0003	0.0006	0.0270	0.0000	0.0000	0.0035	0.00000	8.1100	0.0005	0.0001	0.0032	0.0010	0.00003	0.0005	0.0580	0.0632	0.0000050	0.0024
M-09-097 147.5-148.5	0.50	0.0801	0.0005	0.0004	0.0260	0.0000	0.0000	0.0027	0.00001	8.5500	0.0007	0.0001	0.0029	0.0010	0.00004	0.0005	0.0560	0.0667	0.0000050	0.0027
M-09-097 147.5-148.5	0.46	0.0835	0.0004	0.0005	0.0270	0.0000	0.0000	0.0024	0.00001	9.0300	0.0003	0.0001	0.0034	0.0010	0.00004	0.0005	0.0630	0.0757	0.0000050	0.0028
M-09-097 147.5-148.5	0.47	0.0804	0.0002	0.0001	0.0300	0.0000	0.0000	0.0067	0.00001	8.5400	0.0007	0.0000	0.0028	0.0040	0.00002	0.0005	0.0500	0.0700	0.0000050	0.0030
M-09-097 147.5-148.5	0.44	0.0847	0.0001	0.0002	0.0279	0.0000	0.0000	0.0017	0.00001	7.4100	0.0003	0.0001	0.0027	0.0010	0.00001	0.0005	0.0470	0.0589	0.0000050	0.0023
M-09-097 147.5-148.5	0.40	0.0866	0.0001	0.0003	0.0266	0.0000	0.0000	0.0017	0.00001	7.9200	0.0003	0.0000	0.0027	0.0030	0.00048	0.0005	0.0500	0.0646	0.0000050	0.0025
M-09-097 147.5-148.5	0.43	0.0692	0.0004	0.0005	0.0272	0.0000	0.0000	0.0017	0.00001	8.6400	0.0005	0.0001	0.0024	0.0020	0.00049	0.0005	0.0590	0.0712	0.0000050	0.0032
M-09-097 147.5-148.5	0.41	0.0793	0.0003	0.0001	0.0253	0.0000	0.0000	0.0031	0.00001	8.0700	0.0003	0.0000	0.0020	0.0010	0.00003	0.0005	0.0500	0.0665	0.0000050	0.0030
M-09-097 147.5-148.5	0.37	0.0667	0.0001	0.0003	0.0256	0.0000	0.0000	0.0015	0.00001	7.6600	0.0007	0.0001	0.0026	0.0010	0.00001	0.0005	0.0330	0.0681	0.0000050	0.0024
M-09-097 147.5-148.5	0.42	0.0716	0.0002	0.0002	0.0298	0.0000	0.0000	0.0018	0.00001	9.8000	0.0008	0.0001	0.0033	0.0010	0.00111	0.0005	0.0550	0.0859	0.0000050	0.0023
M-09-097 147.5-148.5	0.41	0.0723	0.0002	0.0002	0.0283	0.0000	0.0000	0.0019	0.00002	7.8200	0.0007	0.0060	0.1960	0.0010	0.00124	0.0005	0.0460	0.0641	0.0000050	0.0023
M-09-097 147.5-148.5	0.46	0.0775	0.0003	0.0002	0.0286	0.0000	0.0000	0.0030	0.00001	8.5900	0.0003	0.0001	0.0034	0.0030	0.00003	0.0005	0.0500	0.0765	0.0000050	0.0024
M-09-097 147.5-148.5	0.47	0.0865	0.0002	0.0003	0.0288	0.0000	0.0000	0.0030	0.00001	8.1300	0.0003	0.0000	0.0033	0.0010	0.00083	0.0005	0.0460	0.0664	0.0000100	0.0022
M-09-097 147.5-148.5	0.49	0.0737	0.0001	0.0002	0.0288	0.0000	0.0000	0.0015	0.00001	7.8300	0.0007	0.0000	0.0026	0.0010	0.00055	0.0005	0.0460	0.0667	0.0000050	0.0025
M-09-097 147.5-148.5	0.45	0.0674	0.0001	0.0003	0.0304	0.0000	0.0000	0.0015	0.00002	8.0900	0.0005	0.0001	0.0030	0.0010	0.00030	0.0005	0.0455	0.0736	0.0000050	0.0024
M-09-097 147.5-148.5	0.41	0.0611	0.0001	0.0003	0.0320	0.0000	0.0000	0.0015	0.00002	8.3500	0.0003	0.0001	0.0034	0.0010	0.00004	0.0005	0.0450	0.0804	0.0000050	0.0024
M-09-097 147.5-148.5	0.42	0.0632	0.0002	0.0002	0.0284	0.0000	0.0000	0.0020	0.00001	7.9250	0.0003	0.0000	0.0026	0.0010	0.00004	0.0005	0.0430	0.0739	0.0000050	0.0025
M-09-097 147.5-148.5	0.42	0.0653	0.0002	0.0001	0.0247	0.0000	0.0000	0.0024	0.00001	7.5000	0.0003	0.0000	0.0018	0.0010	0.00003	0.0005	0.0410	0.0673	0.0000050	0.0027
M-09-097 147.5-148.5	0.43	0.0650	0.0002	0.0001	0.0279	0.0000	0.0000	0.0023	0.00001	7.3550	0.0003	0.0000	0.0022	0.0010	0.00022	0.0005	0.0395	0.0655	0.0000050	0.0023
M-09-097 147.5-148.5	0.43	0.0647	0.0001	0.0001	0.0310	0.0000	0.0000	0.0022	0.00000	7.2100	0.0003	0.0001	0.0026	0.0010	0.00041	0.0005	0.0380	0.0636	0.0000050	0.0019
M-09-097 147.5-148.5	0.42	0.0657	0.0001	0.0002	0.0305	0.0000	0.0000	0.0058	0.00001	7.1900	0.0003	0.0001	0.0029	0.0010	0.00023	0.0005	0.0365	0.0656	0.0000050	0.0019
M-09-097 147.5-148.5	0.41	0.0666	0.0001	0.0003	0.0299	0.0000	0.0000	0.0093	0.00001	7.1700	0.0003	0.0001	0.0032	0.0010	0.00004	0.0005	0.0350	0.0675	0.0000050	0.0019
M-09-097 147.5-148.5	0.43	0.0672	0.0001	0.0002	0.0304	0.0000	0.0000	0.0052	0.00006	7.1800	0.0003	0.0001	0.0027	0.0020	0.00049	0.0005	0.0365	0.0652	0.0000050	0.0017
M-09-097 147.5-148.5	0.45	0.0678	0.0001	0.0001	0.0309	0.0000	0.0000	0.0011	0.00011	7.1900	0.0003	0.0000	0.0021	0.0030	0.00093	0.0005	0.0380	0.0629	0.0000050	0.0016
M-09-097 147.5-148.5	0.46	0.0707	0.0001	0.0001	0.0297	0.0000	0.0000	0.0012	0.00006	7.3650	0.0003	0.0000	0.0025	0.0035	0.00050	0.0005	0.0375	0.0646	0.0000050	0.0016
M-09-097 147.5-148.5	0.46	0.0736	0.0001	0.0001	0.0284	0.0000	0.0000	0.0012	0.00002	7.5400	0.0003	0.0000	0.0029	0.0040	0.00007	0.0005	0.0370	0.0662	0.0000050	0.0016
M-09-097 147.5-148.5	0.46	0.0717	0.0001	0.0002	0.0294	0.0000	0.0000	0.0012	0.00001	7.2600	0.0003	0.0000	0.0026	0.0075	0.00007	0.0005	0.0410	0.0706	0.0000050	0.0021
M-09-097 147.5-148.5	0.45	0.0698	0.0001	0.0003	0.0304	0.0000	0.0000	0.0012	0.00001	6.9800	0.0003	0.0000	0.0023	0.0110	0.00006	0.0005	0.0450	0.0750	0.0000050	0.0026
M-09-097 147.5-148.5	0.45	0.0791	0.0001	0.0002	0.0292	0.0000	0.0000	0.0014	0.00001	7.0200	0.0003	0.0001	0.0026	0.0060	0.00005	0.0005	0.0405	0.0678	0.0000050	0.0031
M-09-097 147.5-148.5	0.44	0.0883	0.0001	0.0001	0.0279	0.0000	0.0000	0.0015	0.00001	7.0600	0.0003	0.0001	0.0029	0.0010	0.00003	0.0005	0.0360	0.0606	0.0000050	0.0037
M-09-097 147.5-148.5	0.43	0.0865	0.0001	0.0001	0.0289	0.0000	0.0000	0.0015	0.00001	7.2250	0.0003	0.0001	0.0123	0.0010	0.00006	0.0005	0.0365	0.0636	0.0000050	0.0028
M-09-097 147.5-148.5	0.41	0.0846	0.0001	0.0001	0.0298	0.0000	0.0000	0.0014	0.00001	7.3900	0.0003	0.0002	0.0217	0.0010	0.00008	0.0005	0.0370	0.0665	0.0000050	0.0018
M-09-097 147.5-148.5	0.42	0.1153	0.0001	0.0001	0.0315	0.0000	0.0000	0.0021	0.00003	7.7100	0.0003	0.0002	0.0122	0.0010	0.00011	0.0005	0.0400	0.0689	0.0000075	0.0020
M-09-097 147.5-148.5	0.42	0.1460	0.0001	0.0001	0.0331	0.0000	0.0000	0.0028	0.00004	8.0300	0.0003	0.0002	0.0027	0.0010	0.00013	0.0005	0.0430	0.0712	0.0000100	0.0021
M-09-097 147.5-148.5	0.40	0.1076	0.0001	0.0001	0.0298	0.0000	0.0000	0.0022	0.00002	7.3950	0.0003	0.0001	0.0024	0.0010	0.00008	0.0005	0.0385	0.0666	0.0000100	0.0025
M-09-097 147.5-148.5	0.38	0.0691	0.0001	0.0001	0.0264	0.0000	0.0000	0.0016	0.00001	6.7600	0.0003	0.0001	0.0021	0.0010	0.00002	0.0005	0.0340	0.0620	0.0000100	0.0029
M-09-097 147.5-148.5	0.39	0.0748	0.0001	0.0002	0.0255	0.0000	0.0000	0.0018	0.00004	6.7050	0.0003	0.0001	0.0018	0.0035	0.00003	0.0005	0.0350	0.0592	0.0000075	0.0025
M-09-097 147.5-148.5	0.39	0.0805	0.0001	0.0003	0.0246	0.0000	0.0000	0.0020	0.00007	6.6500	0.0003	0.0000	0.0015	0.0060	0.00004	0.0005	0.0360	0.0564	0.0000050	0.0021
M-09-097 147.5-148.5	0.39	0.0813	0.0001	0.0002	0.0279	0.0000	0.0000	0.0029	0.00004	6.9950	0.0003	0.0003	0.0024	0.0080	0.00007	0.0005	0.0370	0.0623	0.0000075	0.0022
M-09-097 147.5-148.5	0.39	0.0820	0.0001	0.0001	0.0312	0.0000	0.0000	0.0038	0.00002	7.3400	0.0003	0.0005	0.0032	0.0100	0.00010	0.0005	0.0380	0.0682	0.0000100	0.0023
M-09-097 147.5-148.5	0.40	0.0816	0.0001	0.0002	0.0312	0.0000	0.0000	0.0032	0.00001	7.9000	0.0003	0.0003	0.0028	0.0055	0.00007	0.0005	0.0385	0.0725	0.0000075	0.0025
M-09-097 147.5-148.5	0.40	0.0811	0.0001	0.0002	0.0312	0.0000	0.0000	0.0026	0.00001	8.4600	0.0003	0.0001	0.0024	0.0010	0.00003	0.0005	0.0390	0.0768	0.0000050	0.0026
M-09-097 147.5-148.5	0.46	0.0807	0.0001	0.0008	0.0320	0.0000	0.0000	0.0050	0.00000	7.5050	0.0003	0.0001	0.0022	0.0070	0.00002	0.0005	0.0515	0.0899	0.0000050	0.0022
M-09-097 147.5-148.5	0.51	0.0802	0.0001	0.0013	0.0328	0.0000	0.0000	0.0074	0.00000	6.5500	0.0003	0.0002	0.0020	0.0130	0.00001	0.0005	0.0640	0.1030	0.0000050	0.0018
M-09-097 147.5-148.5	0.45	0.0759	0.0001	0.0010	0.0343	0.0000	0.0000	0.0064	0.00000	6.8200	0.0004	0.0001	0.0022	0.0070	0.00003	0.0005	0.0475	0.0862	0.0000050	0.0022
M-09-097 147.5-148.5	0.39	0.0715	0.0001	0.0006	0.0357	0.0000	0.0000	0.0053	0.00001	7.0900	0.0006	0.0001	0.0023	0.0010	0.00004	0.0005	0.0310	0.0694	0.0000050	0.0025
M-09-097 147.5-148.5	0.43	0.0819	0.0001	0.0007	0.0380	0.0000	0.0000	0.0094	0.00001	7.4400	0.0007	0.0001	0.0025	0.0020	0.00003	0.0005	0.0330	0.0717	0.0000050	0.0023
M-09-097 147.5-148.5	0.46	0.0923	0.0001	0.0008	0.0402	0.0000	0.0000	0.0134	0.00001	7.7900	0.0008	0.0000	0.0026	0.0030	0.00002	0.0005	0.0350	0.0740	0.0000050	0.0021
M-09-097 147.5-148.5	0.43	0.0917	0.0001	0.0006	0.0375	0.0000	0.0000	0.0084	0.00001	7.6450	0.0009	0.0000	0.0032	0.0020	0.00006	0.0013	0.0305	0.0718	0.0000075	0.0021
M-09-097 147.5-148.5	0.39	0.0910	0.0001	0.0003	0.0347	0.0000	0.0000	0.0034	0.00000	7.5000	0.0010	0.0001	0.0038	0.0010	0.00010	0.0020	0.0260	0.0696	0.0000100	0.0021
M-09-097 147.5-148.5	0.43	0.0858	0.0015	0.0004	0.0355	0.0000	0.0000	0.0037	0.00003	7.9150	0.0014	0.0005	0.0033	0.0050	0.00031	0.0015	0.0335	0.0757	0.0000075	0.0023
M-09-097 147.5-148.5	0.46	0.0806	0.0028	0.0004	0.0363	0.0000	0.0000	0.0039	0.00006	8.3300	0.0018	0.0010	0.0027	0.0090	0.00051	0.0010	0.0410	0.0818	0.0000050	0.0024
M-09-097 147.5-148.5	0.43	0.0846	0.0015	0.0026	0.0356	0.0000	0.0000	0.0029	0.00004	8.2150	0.0013	0.0005	0.0031	0.0055	0.00033	0.0008	0.0395	0.0814	0.0000075	0.0022
M-09-097 147.5-148.5	0.40	0.0885	0.0002	0.0047	0.0348	0.0000	0.0000	0.0019	0.00002	8.1000	0.0007	0.0001	0.0034	0.0020	0.00015	0.0005	0.0380	0.0810	0.0000100	0.0020
M-09-097 147.5-148.5	0.42	0.0836	0.0002	0.0026	0.0342	0.0000	0.0000	0.0026	0.00001	8.0950	0.0005	0.0001	0.0031	0.0018	0.00013	0.0005	0.0370	0.0791	0.0000075	0.0024
M-09-097 147.5-148.5	0.43	0.0787	0.0001	0.0004	0.0335	0.0000	0.0000	0.0032	0.00001	8.0900	0.0003	0.0001	0.0027	0.0015	0.00010	0.0005	0.0360	0.0772	0.0000050	0.0027
M-09-097 147.5-148.5	0.43	0.0780	0.0001	0.0003	0.0351	0.0000	0.0000	0.0027	0.00001	7.9150	0.0004	0.0001	0.0026	0.0028	0.00006	0.0005	0.0350	0.0779	0.0000050	0.0025
M-09-097 147.5-148.5	0.43	0.0772	0.0001	0.0002	0.0366	0.0000	0.0000	0.0021	0.00002	7.7400	0.0006	0.0001	0.0025	0.0040	0.00001	0.0005	0.0340	0.0785	0.0000050	0.0023
M-09-097 147.5-148.5	0.45	0.0824	0.0001	0.0002	0.0361	0.0000	0.0000	0.0025	0.00002	8.0700	0.0004	0.0001	0.0027	0.0028	0.00004	0.0005	0.0295	0.0838	0.0000050	0.0023

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-097 147.5-148.5	0.0003	0.0190	0.3330	0.0017	0.7900	0.00001	0.1400	0.0362	2.5600	0.0001	0.0001	0.0001	0.0042	0.0044	0.0005	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.2950	0.0019	0.7200	0.00001	0.1200	0.0347	2.8600	0.0001	0.0001	0.0001	0.0043	0.0043	0.0005	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.2870	0.0016	0.8000	0.00001	0.1200	0.0295	2.6700	0.0001	0.0001	0.0001	0.0033	0.0042	0.0005	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.2720	0.0017	0.7300	0.00001	0.1100	0.0269	2.4900	0.0001	0.0002	0.0001	0.0032	0.0047	0.0005	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.2340	0.0017	0.7000	0.00001	0.1000	0.0254	2.4600	0.0001	0.0001	0.0001	0.0027	0.0044	0.0005	0.0000
M-09-097 147.5-148.5	0.0003	0.0045	0.2310	0.0013	0.7000	0.00001	0.1100	0.0225	2.2400	0.0001	0.0001	0.0001	0.0024	0.0044	0.0010	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.2510	0.0016	0.7400	0.00001	0.1100	0.0259	2.5400	0.0001	0.0002	0.0001	0.0028	0.0043	0.0005	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.2660	0.0016	0.7100	0.00001	0.1700	0.0278	2.0000	0.0001	0.0013	0.0001	0.0027	0.0046	0.0005	0.0000
M-09-097 147.5-148.5	0.0003	0.0130	0.2620	0.0013	0.7600	0.00001	0.1400	0.0283	2.6200	0.0001	0.0031	0.0001	0.0029	0.0045	0.0005	0.0000
M-09-097 147.5-148.5	0.0004	0.0100	0.2470	0.0016	0.8000	0.00001	0.2000	0.0294	2.7300	0.0001	0.0004	0.0002	0.0029	0.0049	0.0005	0.0000
M-09-097 147.5-148.5	0.0003	0.0045	0.2570	0.0013	0.8300	0.00001	0.1300	0.0318	2.5400	0.0001	0.0004	0.0002	0.0036	0.0048	0.0010	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.2530	0.0014	0.7700	0.00001	0.1100	0.0294	2.5700	0.0001	0.0001	0.0001	0.0030	0.0047	0.0020	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.2170	0.0013	0.6800	0.00001	0.1000	0.0251	2.3400	0.0001	0.0000	0.0001	0.0026	0.0049	0.0005	0.0000
M-09-097 147.5-148.5	0.0006	0.0160	0.1590	0.0010	0.6300	0.00001	0.1500	0.0265	2.2000	0.0001	0.0001	0.0001	0.0022	0.0040	0.0050	0.0000
M-09-097 147.5-148.5	0.0001	0.0440	0.2340	0.0012	0.6700	0.00001	0.1400	0.0285	2.4800	0.0001	0.0002	0.0001	0.0028	0.0039	0.0010	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.2190	0.0013	0.6900	0.00001	0.1000	0.0253	2.3000	0.0001	0.0001	0.0001	0.0023	0.0041	0.0010	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.1900	0.0013	0.5900	0.00001	0.0800	0.0244	1.5500	0.0001	0.0002	0.0003	0.0021	0.0037	0.0010	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.2040	0.0011	0.6700	0.00001	0.1100	0.0271	2.0600	0.0001	0.0001	0.0001	0.0022	0.0039	0.0020	0.0000
M-09-097 147.5-148.5	0.0015	0.0045	0.1930	0.0011	0.6000	0.00001	0.1100	0.0252	1.8600	0.0001	0.0001	0.0001	0.0021	0.0039	0.0050	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.2040	0.0009	0.6300	0.00001	0.1100	0.0272	1.9900	0.0001	0.0004	0.0001	0.0019	0.0039	0.0005	0.0000
M-09-097 147.5-148.5	0.0001	0.0320	0.2150	0.0011	0.7300	0.00001	0.1100	0.0266	2.2400	0.0001	0.0001	0.0001	0.0018	0.0041	0.0005	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.1910	0.0011	0.6700	0.00001	0.1000	0.0247	2.0700	0.0001	0.0001	0.0001	0.0018	0.0040	0.0020	0.0000
M-09-097 147.5-148.5	0.0001	0.0183	0.1945	0.0008	0.6750	0.00001	0.1100	0.0257	2.2700	0.0001	0.0003	0.0001	0.0018	0.0035	0.0013	0.0000
M-09-097 147.5-148.5	0.0001	0.0320	0.1980	0.0004	0.6800	0.00001	0.1200	0.0266	2.4700	0.0001	0.0005	0.0001	0.0018	0.0030	0.0005	0.0000
M-09-097 147.5-148.5	0.0001	0.0265	0.1820	0.0006	0.6350	0.00001	0.1100	0.0248	2.2350	0.0001	0.0005	0.0001	0.0015	0.0031	0.0013	0.0000
M-09-097 147.5-148.5	0.0002	0.0210	0.1660	0.0008	0.5900	0.00001	0.1000	0.0229	2.0000	0.0001	0.0005	0.0001	0.0015	0.0032	0.0020	0.0000
M-09-097 147.5-148.5	0.0004	0.0245	0.1675	0.0009	0.5900	0.00001	0.0950	0.0222	1.9000	0.0001	0.0003	0.0001	0.0015	0.0030	0.0013	0.0000
M-09-097 147.5-148.5	0.0005	0.0280	0.1690	0.0010	0.5900	0.00001	0.0900	0.0214	1.8000	0.0001	0.0001	0.0001	0.0015	0.0028	0.0005	0.0000
M-09-097 147.5-148.5	0.0004	0.0260	0.1600	0.0006	0.5600	0.00001	0.1000	0.0215	1.7700	0.0001	0.0001	0.0001	0.0015	0.0029	0.0005	0.0000
M-09-097 147.5-148.5	0.0002	0.0240	0.1510	0.0002	0.5300	0.00001	0.1100	0.0215	1.7400	0.0001	0.0000	0.0001	0.0014	0.0029	0.0005	0.0000
M-09-097 147.5-148.5	0.0002	0.0143	0.1535	0.0003	0.5450	0.00001	0.1000	0.0215	1.6850	0.0001	0.0002	0.0001	0.0013	0.0031	0.0008	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.1560	0.0005	0.5600	0.00001	0.0900	0.0215	1.6300	0.0000	0.0004	0.0001	0.0013	0.0032	0.0010	0.0000
M-09-097 147.5-148.5	0.0003	0.0045	0.1530	0.0007	0.5550	0.00001	0.1000	0.0223	1.7500	0.0001	0.0003	0.0001	0.0013	0.0032	0.0010	0.0000
M-09-097 147.5-148.5	0.0003	0.0045	0.1500	0.0008	0.5500	0.00001	0.1100	0.0230	1.8700	0.0001	0.0001	0.0001	0.0013	0.0032	0.0010	0.0000
M-09-097 147.5-148.5	0.0002	0.0093	0.1530	0.0004	0.5450	0.00001	0.1050	0.0231	1.9150	0.0001	0.0001	0.0001	0.0013	0.0031	0.0020	0.0000
M-09-097 147.5-148.5	0.0001	0.0140	0.1560	0.0000	0.5400	0.00001	0.1000	0.0232	1.9600	0.0001	0.0001	0.0001	0.0013	0.0030	0.0030	0.0000
M-09-097 147.5-148.5	0.0001	0.0093	0.1545	0.0008	0.5250	0.00001	0.0950	0.0220	1.9300	0.0001	0.0001	0.0001	0.0013	0.0032	0.0035	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.1530	0.0015	0.5100	0.00001	0.0900	0.0207	1.9000	0.0001	0.0002	0.0001	0.0012	0.0033	0.0040	0.0000
M-09-097 147.5-148.5	0.0003	0.0103	0.1600	0.0008	0.5300	0.00001	0.0850	0.0210	1.8850	0.0001	0.0001	0.0001	0.0012	0.0033	0.0035	0.0000
M-09-097 147.5-148.5	0.0003	0.0160	0.1670	0.0001	0.5500	0.00001	0.0800	0.0212	1.8700	0.0001	0.0001	0.0001	0.0012	0.0032	0.0030	0.0000
M-09-097 147.5-148.5	0.0003	0.0103	0.1765	0.0007	0.6200	0.00001	0.0900	0.0216	1.9900	0.0001	0.0001	0.0001	0.0024	0.0033	0.0040	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.1860	0.0012	0.6900	0.00001	0.1000	0.0220	2.1100	0.0000	0.0001	0.0001	0.0036	0.0034	0.0050	0.0000
M-09-097 147.5-148.5	0.0001	0.0268	0.1670	0.0011	0.5850	0.00001	0.1000	0.0202	1.9850	0.0000	0.0002	0.0001	0.0024	0.0031	0.0035	0.0000
M-09-097 147.5-148.5	0.0001	0.0490	0.1480	0.0009	0.4800	0.00001	0.1000	0.0184	1.8600	0.0000	0.0003	0.0001	0.0012	0.0028	0.0020	0.0000
M-09-097 147.5-148.5	0.0002	0.0268	0.1430	0.0008	0.5250	0.00001	0.1150	0.0179	1.9250	0.0000	0.0003	0.0001	0.0011	0.0029	0.0020	0.0009
M-09-097 147.5-148.5	0.0004	0.0045	0.1380	0.0008	0.5700	0.00001	0.1300	0.0173	1.9900	0.0000	0.0003	0.0001	0.0011	0.0031	0.0020	0.0018
M-09-097 147.5-148.5	0.0004	0.0045	0.1535	0.0008	0.5600	0.00001	0.1100	0.0187	1.9450	0.0000	0.0002	0.0001	0.0011	0.0031	0.0020	0.0009
M-09-097 147.5-148.5	0.0003	0.0045	0.1690	0.0008	0.5500	0.00001	0.0900	0.0201	1.9000	0.0000	0.0002	0.0001	0.0011	0.0030	0.0020	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.1875	0.0006	0.6000	0.00001	0.0850	0.0209	2.0450	0.0000	0.0001	0.0001	0.0012	0.0030	0.0030	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.2060	0.0004	0.6500	0.00001	0.0800	0.0217	2.1900	0.0000	0.0001	0.0001	0.0012	0.0030	0.0040	0.0000
M-09-097 147.5-148.5	0.0004	0.0118	0.1690	0.0007	0.6850	0.00001	0.0650	0.0212	1.9550	0.0000	0.0001	0.0001	0.0012	0.0029	0.0030	0.0000
M-09-097 147.5-148.5	0.0007	0.0190	0.1320	0.0011	0.7200	0.00001	0.0500	0.0206	1.7200	0.0000	0.0001	0.0001	0.0011	0.0029	0.0020	0.0000
M-09-097 147.5-148.5	0.0004	0.0118	0.1395	0.0009	0.6150	0.00001	0.0550	0.0197	1.8350	0.0000	0.0002	0.0001	0.0011	0.0028	0.0020	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1470	0.0007	0.5100	0.00001	0.0600	0.0188	1.9500	0.0000	0.0002	0.0001	0.0011	0.0028	0.0020	0.0000
M-09-097 147.5-148.5	0.0003	0.0045	0.1495	0.0008	0.5400	0.00001	0.0650	0.0199	2.0400	0.0000	0.0005	0.0001	0.0012	0.0030	0.0020	0.0000
M-09-097 147.5-148.5	0.0004	0.0045	0.1520	0.0008	0.5700	0.00001	0.0700	0.0210	2.1300	0.0000	0.0008	0.0001	0.0012	0.0032	0.0020	0.0000
M-09-097 147.5-148.5	0.0005	0.0045	0.1535	0.0004	0.5300	0.00001	0.0375	0.0205	2.1450	0.0000	0.0006	0.0003	0.0011	0.0031	0.0025	0.0000
M-09-097 147.5-148.5	0.0005	0.0045	0.1550	0.0000	0.4900	0.00001	0.0050	0.0199	2.1600	0.0000	0.0004	0.0006	0.0009	0.0030	0.0030	0.0000
M-09-097 147.5-148.5	0.0005	0.0088	0.1510	0.0005	0.5200	0.00003	0.0975	0.0206	2.5400	0.0002	0.0004	0.0003	0.0010	0.0028	0.0045	0.0000
M-09-097 147.5-148.5	0.0004	0.0130	0.1470	0.0009	0.5500	0.00005	0.1900	0.0212	2.9200	0.0003	0.0003	0.0001	0.0012	0.0027	0.0060	0.0000
M-09-097 147.5-148.5	0.0002	0.0088	0.1535	0.0008	0.5500	0.00003	0.1350	0.0207	2.5950	0.0002	0.0002	0.0001	0.0011	0.0029	0.0045	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1600	0.0007	0.5500	0.00001	0.0800	0.0202	2.2700	0.0000	0.0000	0.0001	0.0011	0.0030	0.0030	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1575	0.0006	0.5400	0.00001	0.0750	0.0194	2.2800	0.0000	0.0001	0.0001	0.0011	0.0028	0.0025	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1550	0.0004	0.5300	0.00001	0.0700	0.0186	2.2900	0.0000	0.0001	0.0001	0.0010	0.0027	0.0020	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1430	0.0004	0.5050	0.00002	0.0650	0.0187	2.2450	0.0000	0.0001	0.0001	0.0011	0.0027	0.0020	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.1310	0.0003	0.4800	0.00003	0.0600	0.0188	2.2000	0.0000	0.0001	0.0001	0.0012	0.0027	0.0020	0.0000
M-09-097 147.5-148.5	0.0003	0.0045	0.1335	0.0002	0.5600	0.00002	0.0950	0.0193	2.2150	0.0000	0.0002	0.0001	0.0011	0.0026	0.0020	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-097 147.5-148.5	4	93	17-Nov-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	480	21	43	7.51	3.4	15.4	5	0.1
M-09-097 147.5-148.5	4	94	24-Nov-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	21	42	7.53	4.4	16.3	4	0.1
M-09-097 147.5-148.5	4	95	1-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	495	22	43	7.54	5.3	17.1	3	0.1
M-09-097 147.5-148.5	4	96	8-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	21	41	7.52	5.2	18.6	4	0.1
M-09-097 147.5-148.5	4	97	15-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	480	20	42	7.55	5.0	20.0	4	0.1
M-09-097 147.5-148.5	4	98	22-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	20	43	7.57	4.7	20.1	4	0.1
M-09-097 147.5-148.5	4	99	29-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	500	20	43	7.51	4.3	20.1	4	0.1
M-09-097 147.5-148.5	4	100	5-Jan-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	495	20	40	7.37	3.9	20.2	3	0.1
M-09-097 147.5-148.5	4	101	12-Jan-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	20	43	7.43	3.6	20.2	3	0.1
M-09-097 147.5-148.5	4	102	19-Jan-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	495	20	43	7.47	4.3	19.6	3	0.3
M-09-097 147.5-148.5	4	103	26-Jan-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	20	41	7.32	5.1	19.0	4	0.4
M-09-097 147.5-148.5	4	104	2-Feb-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	20	42	7.55	5.8	18.4	4	0.6
M-09-097 147.5-148.5	4	105	9-Feb-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	490	20	44	7.68	6.6	17.8	4	0.7
M-09-097 147.5-148.5	4	106	16-Feb-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	480	19	44	7.56	6.4	17.2	5	0.6
M-09-097 147.5-148.5	4	107	23-Feb-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	485	19	41	7.29	6.3	16.7	5	0.4
M-09-097 147.5-148.5	4	108	1-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	465	19	39	7.31	6.1	16.1	6	0.3
M-09-097 147.5-148.5	4	109	8-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	19	40	7.46	5.9	15.5	6	0.1
M-09-097 147.5-148.5	4	110	15-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	445	19	39	7.35	5.7	15.1	6	0.1
M-09-097 147.5-148.5	4	111	22-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	450	19	41	7.43	5.4	14.7	6	0.1
M-09-097 147.5-148.5	4	112	29-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	445	19	42	7.36	5.1	14.3	5	0.1
M-09-097 147.5-148.5	4	113	5-Apr-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	455	19	39	7.35	4.9	13.8	5	0.1
M-09-097 147.5-148.5	4	114	12-Apr-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	440	19	41	7.37	4.9	13.8	5	0.1
M-09-097 147.5-148.5	4	115	19-Apr-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	455	19	41	7.44	4.9	13.8	5	0.1
M-09-097 147.5-148.5	4	116	26-Apr-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	445	19	45	7.01	5.5	14.9	7	0.1
M-09-097 147.5-148.5	4	117	3-May-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	445	19	41	7.68	5.7	15.3	8	0.1
M-09-097 147.5-148.5	4	118	10-May-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	445	19	41	7.47	5.9	14.9	8	0.1
M-09-097 147.5-148.5	4	119	17-May-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	450	19	43	7.36	6.2	14.6	7	0.1
M-09-097 147.5-148.5	4	120	24-May-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	460	19	41	7.54	6.4	14.3	7	0.1
M-09-097 147.5-148.5	4	121	31-May-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	450	19	38	7.59	6.7	14.0	6	0.1
M-09-097 147.5-148.5	4	122	7-Jun-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	435	19	39	7.41	6.5	14.4	6	0.1
M-09-097 147.5-148.5	4	123	14-Jun-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	475	20	47	7.49	6.4	14.8	7	0.1
M-09-097 147.5-148.5	4	124	21-Jun-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	445	20	42	7.48	6.3	15.2	7	0.1
M-09-097 147.5-148.5	4	125	28-Jun-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	445	20	44	7.52	6.1	15.7	7	0.1
M-09-097 147.5-148.5	4	126	5-Jul-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	440	20	41	7.42	5.9	15.3	7	0.1
M-09-097 147.5-148.5	4	127	12-Jul-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	455	20	43	7.39	5.6	15.0	6	0.1
M-09-097 147.5-148.5	4	128	19-Jul-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	455	20	39	7.37	5.4	14.7	6	0.1
M-09-097 147.5-148.5	4	129	26-Jul-12	Mitchell	ABOVE MTF	UP Hazelton	PMON	PR	3	MTH	1			Water	500	450	20	43	7.4	5.1	14.3	5	0.1
																	20	42	7.461	6.0	14.8	6	0.1
HC5 LP Hazelton																							
M-09-102 120.5-121.5	5	0	4-Feb-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	420	75	192	7.60	2.3	32.5	60	1.6
M-09-102 120.5-121.5	5	1	11-Feb-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	470	53	149	7.34	2.3	21.4	50	0.4
M-09-102 120.5-121.5	5	2	18-Feb-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	45	115	7.42	2.9	22.4	39	0.1
M-09-102 120.5-121.5	5	3	25-Feb-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	500	36	89	7.41	2.7	23.1	27	0.1
M-09-102 120.5-121.5	5	4	4-Mar-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	25	67	7.07	2.8	15.8	15	0.1
M-09-102 120.5-121.5	5	5	11-Mar-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	495	27	66	7.36	2.9	21.6	15	0.1
M-09-102 120.5-121.5	5	6	18-Mar-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	26	62	7.40	2.6	20.4	9	0.1
M-09-102 120.5-121.5	5	7	25-Mar-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	505	28	62	7.31	3.5	21.6	13	0.1
M-09-102 120.5-121.5	5	8	1-Apr-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	480	24	55	7.41	2.9	20.9	13	0.1
M-09-102 120.5-121.5	5	9	8-Apr-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	23	52	7.29	2.8	17.6	9	0.1
M-09-102 120.5-121.5	5	10	15-Apr-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	500	25	57	7.36	3.1	22.0	10	0.1
M-09-102 120.5-121.5	5	11	22-Apr-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	485	24	57	7.30	4.5	18.4	8	0.1
M-09-102 120.5-121.5	5	12	29-Apr-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	485	24	57	7.42	2.8	20.2	13	0.1
M-09-102 120.5-121.5	5	13	6-May-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	495	23	56	7.25	4.9	18.3	11	0.1
M-09-102 120.5-121.5	5	14	13-May-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	500	27	59	7.44	2.9	17.6	11	0.1
M-09-102 120.5-121.5	5	15	20-May-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	485	25	59	7.48	4.4	21.8	9	0.1
M-09-102 120.5-121.5	5	16	27-May-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	485	24	50	7.43	5.8	21.6	5	0.1
M-09-102 120.5-121.5	5	17	3-Jun-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	485	25	50	7.35	3.3	18.1	9	0.1
M-09-102 120.5-121.5	5	18	10-Jun-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	21	47	7.38	4.4	18.3	5	0.1
M-09-102 120.5-121.5	5	19	17-Jun-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	480	21	45	7.54	3.2	17.3	6	0.1
M-09-102 120.5-121.5	5	20	24-Jun-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	500	24	49	7.53	2.4	21.3	7	0.1
M-09-102 120.5-121.5	5	21	1-Jul-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	485	22	44	7.52	2.5	17.8	6	0.1
M-09-102 120.5-121.5	5	22	8-Jul-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	495	19	47	7.34	2.6	17.3	7	0.1
M-09-102 120.5-121.5	5	23	15-Jul-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	19	45	7.30	4.1	17.2	5	0.1
M-09-102 120.5-121.5	5	24	22-Jul-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	495	20	45	7.32	3.3	17.5	5	0.1
M-09-102 120.5-121.5	5	25	29-Jul-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	22	42	7.41	4.0	18.3	8	0.1
M-09-102 120.5-121.5	5	26	5-Aug-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	22	45	7.43	2.9	20.7	3	0.1
M-09-102 120.5-121.5	5	27	12-Aug-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	495	20	44	7.46	4.0	20.5	7	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-097 147.5-148.5	0.47	0.0875	0.0001	0.0001	0.0355	0.0000	0.0000	0.0028	0.00002	8.4000	0.0003	0.0001	0.0029	0.0015	0.00007	0.0005	0.0250	0.0890	0.0000050	0.0023
M-09-097 147.5-148.5	0.48	0.0983	0.0003	0.0003	0.0402	0.0000	0.0000	0.0025	0.00004	8.5050	0.0003	0.0004	0.0063	0.0015	0.00090	0.0005	0.0300	0.0924	0.0000050	0.0024
M-09-097 147.5-148.5	0.48	0.1090	0.0004	0.0004	0.0449	0.0000	0.0000	0.0021	0.00006	8.6100	0.0003	0.0007	0.0097	0.0015	0.00173	0.0005	0.0350	0.0957	0.0000050	0.0024
M-09-097 147.5-148.5	0.49	0.1070	0.0003	0.0003	0.0435	0.0000	0.0000	0.0018	0.00003	8.3650	0.0003	0.0004	0.0062	0.0033	0.00087	0.0005	0.0345	0.0919	0.0000050	0.0021
M-09-097 147.5-148.5	0.49	0.1050	0.0001	0.0001	0.0420	0.0000	0.0000	0.0014	0.00001	8.1200	0.0003	0.0001	0.0026	0.0050	0.00001	0.0005	0.0340	0.0881	0.0000050	0.0019
M-09-097 147.5-148.5	0.49	0.1024	0.0001	0.0001	0.0425	0.0000	0.0000	0.0014	0.00001	8.1125	0.0003	0.0001	0.0046	0.0048	0.00017	0.0005	0.0340	0.0883	0.0000050	0.0019
M-09-097 147.5-148.5	0.49	0.0999	0.0001	0.0001	0.0430	0.0000	0.0000	0.0014	0.00002	8.1050	0.0003	0.0001	0.0066	0.0045	0.00033	0.0005	0.0340	0.0884	0.0000050	0.0019
M-09-097 147.5-148.5	0.48	0.0973	0.0001	0.0001	0.0435	0.0000	0.0000	0.0013	0.00002	8.0975	0.0003	0.0001	0.0086	0.0043	0.00048	0.0005	0.0340	0.0886	0.0000050	0.0019
M-09-097 147.5-148.5	0.48	0.0947	0.0001	0.0001	0.0440	0.0000	0.0000	0.0013	0.00002	8.0900	0.0003	0.0001	0.0106	0.0040	0.00064	0.0005	0.0340	0.0887	0.0000050	0.0018
M-09-097 147.5-148.5	0.47	0.0901	0.0002	0.0001	0.0427	0.0000	0.0000	0.0015	0.00002	8.0225	0.0003	0.0001	0.0086	0.0034	0.00051	0.0005	0.0333	0.0892	0.0000050	0.0019
M-09-097 147.5-148.5	0.47	0.0855	0.0003	0.0001	0.0414	0.0000	0.0000	0.0016	0.00002	7.9550	0.0003	0.0001	0.0067	0.0028	0.00038	0.0005	0.0325	0.0897	0.0000050	0.0020
M-09-097 147.5-148.5	0.46	0.0809	0.0003	0.0001	0.0400	0.0000	0.0000	0.0018	0.00002	7.8875	0.0003	0.0001	0.0047	0.0021	0.00025	0.0005	0.0318	0.0902	0.0000050	0.0020
M-09-097 147.5-148.5	0.45	0.0763	0.0004	0.0001	0.0387	0.0000	0.0000	0.0019	0.00002	7.8200	0.0003	0.0001	0.0027	0.0015	0.00012	0.0005	0.0310	0.0907	0.0000050	0.0021
M-09-097 147.5-148.5	0.44	0.0772	0.0003	0.0003	0.0358	0.0000	0.0000	0.0016	0.00081	7.7300	0.0003	0.0001	0.0030	0.0015	0.00095	0.0005	0.0313	0.0857	0.0000063	0.0020
M-09-097 147.5-148.5	0.44	0.0782	0.0003	0.0004	0.0328	0.0000	0.0000	0.0013	0.00160	7.6400	0.0003	0.0001	0.0032	0.0015	0.00178	0.0005	0.0315	0.0808	0.0000075	0.0020
M-09-097 147.5-148.5	0.43	0.0791	0.0002	0.0006	0.0299	0.0000	0.0000	0.0009	0.00239	7.5500	0.0003	0.0001	0.0035	0.0015	0.00260	0.0005	0.0318	0.0758	0.0000088	0.0019
M-09-097 147.5-148.5	0.42	0.0800	0.0001	0.0007	0.0269	0.0000	0.0000	0.0006	0.00318	7.4600	0.0003	0.0001	0.0037	0.0015	0.00343	0.0005	0.0320	0.0708	0.0000100	0.0018
M-09-097 147.5-148.5	0.43	0.0831	0.0001	0.0006	0.0254	0.0000	0.0000	0.0010	0.00239	7.4475	0.0003	0.0001	0.0035	0.0015	0.00258	0.0005	0.0318	0.0691	0.0000150	0.0024
M-09-097 147.5-148.5	0.44	0.0863	0.0001	0.0004	0.0239	0.0000	0.0000	0.0015	0.00159	7.4350	0.0003	0.0001	0.0033	0.0015	0.00173	0.0005	0.0315	0.0675	0.0000200	0.0030
M-09-097 147.5-148.5	0.44	0.0894	0.0001	0.0003	0.0224	0.0000	0.0000	0.0019	0.00080	7.4225	0.0003	0.0001	0.0030	0.0015	0.00088	0.0005	0.0313	0.0658	0.0000250	0.0035
M-09-097 147.5-148.5	0.45	0.0925	0.0001	0.0001	0.0209	0.0000	0.0000	0.0023	0.00000	7.4100	0.0003	0.0001	0.0028	0.0015	0.00003	0.0005	0.0310	0.0641	0.0000300	0.0041
M-09-097 147.5-148.5	0.45	0.0925	0.0001	0.0001	0.0209	0.0000	0.0000	0.0023	0.00000	7.4100	0.0003	0.0001	0.0028	0.0015	0.00003	0.0005	0.0310	0.0641	0.0000300	0.0041
M-09-097 147.5-148.5	0.45	0.0925	0.0001	0.0001	0.0209	0.0000	0.0000	0.0023	0.00000	7.4100	0.0003	0.0001	0.0028	0.0015	0.00003	0.0005	0.0310	0.0641	0.0000300	0.0041
M-09-097 147.5-148.5	0.46	0.0777	0.0001	0.0001	0.0203	0.0000	0.0000	0.0020	0.00000	7.6275	0.0003	0.0001	0.0021	0.0015	0.00122	0.0005	0.0325	0.0614	0.0000150	0.0024
M-09-097 147.5-148.5	0.46	0.0727	0.0001	0.0001	0.0201	0.0000	0.0000	0.0019	0.00000	7.7000	0.0003	0.0001	0.0018	0.0015	0.00162	0.0005	0.0330	0.0605	0.0000100	0.0018
M-09-097 147.5-148.5	0.45	0.0795	0.0001	0.0001	0.0193	0.0000	0.0000	0.0020	0.00000	7.6725	0.0003	0.0001	0.0018	0.0015	0.00122	0.0005	0.0333	0.0608	0.0000100	0.0018
M-09-097 147.5-148.5	0.44	0.0864	0.0001	0.0001	0.0185	0.0000	0.0000	0.0021	0.00000	7.6450	0.0003	0.0001	0.0018	0.0015	0.00082	0.0005	0.0335	0.0612	0.0000100	0.0018
M-09-097 147.5-148.5	0.43	0.0932	0.0001	0.0001	0.0177	0.0000	0.0000	0.0022	0.00000	7.6175	0.0003	0.0000	0.0017	0.0015	0.00041	0.0005	0.0338	0.0615	0.0000100	0.0018
M-09-097 147.5-148.5	0.42	0.1000	0.0001	0.0001	0.0169	0.0000	0.0000	0.0023	0.00000	7.5900	0.0003	0.0000	0.0017	0.0015	0.00001	0.0005	0.0340	0.0618	0.0000100	0.0017
M-09-097 147.5-148.5	0.41	0.1013	0.0001	0.0001	0.0180	0.0000	0.0000	0.0028	0.00000	7.7025	0.0003	0.0000	0.0019	0.0015	0.00001	0.0005	0.0338	0.0624	0.0000125	0.0018
M-09-097 147.5-148.5	0.40	0.1025	0.0001	0.0002	0.0191	0.0000	0.0000	0.0032	0.00000	7.8150	0.0003	0.0000	0.0021	0.0015	0.00001	0.0005	0.0335	0.0630	0.0000150	0.0018
M-09-097 147.5-148.5	0.39	0.1038	0.0001	0.0002	0.0201	0.0000	0.0000	0.0037	0.00000	7.9275	0.0003	0.0000	0.0023	0.0015	0.00001	0.0005	0.0333	0.0636	0.0000175	0.0018
M-09-097 147.5-148.5	0.38	0.1050	0.0001	0.0002	0.0212	0.0000	0.0000	0.0041	0.00000	8.0400	0.0003	0.0000	0.0025	0.0015	0.00001	0.0005	0.0330	0.0642	0.0000200	0.0018
M-09-097 147.5-148.5	0.38	0.1017	0.0001	0.0002	0.0208	0.0000	0.0000	0.0035	0.00000	7.9975	0.0003	0.0000	0.0023	0.0015	0.00001	0.0005	0.0328	0.0655	0.0000163	0.0017
M-09-097 147.5-148.5	0.38	0.0985	0.0001	0.0002	0.0205	0.0000	0.0000	0.0028	0.00000	7.9550	0.0003	0.0000	0.0021	0.0015	0.00001	0.0005	0.0325	0.0667	0.0000125	0.0017
M-09-097 147.5-148.5	0.37	0.0952	0.0001	0.0001	0.0201	0.0000	0.0000	0.0022	0.00000	7.9125	0.0003	0.0000	0.0019	0.0015	0.00001	0.0005	0.0323	0.0680	0.0000088	0.0016
M-09-097 147.5-148.5	0.37	0.0919	0.0001	0.0001	0.0197	0.0000	0.0000	0.0015	0.00000	7.8700	0.0003	0.0000	0.0017	0.0015	0.00001	0.0005	0.0320	0.0692	0.0000050	0.0016
	0.39	0.0993	0.0001	0.0001	0.0194	0.0000	0.0000	0.0028	0.00000	7.8428	0.0003	0.0000	0.0020	0.0015	0.00005	0.0005	0.0331	0.0646	0.0000128	0.0017
HC5 LP Hazelton																				
M-09-102 120.5-121.5	1.16	0.0944	0.0086	0.0024	0.0533	0.0000	0.0000	0.0070	0.00002	18.4000	0.0003	0.0002	0.0019	0.0050	0.00006	0.0060	7.1800	0.0510	0.0000050	0.0338
M-09-102 120.5-121.5	0.81	0.0808	0.0121	0.0020	0.0521	0.0000	0.0000	0.0060	0.00002	12.1000	0.0003	0.0001	0.0012	0.0050	0.00004	0.0030	5.5400	0.0560	0.0000050	0.0259
M-09-102 120.5-121.5	0.66	0.0826	0.0144	0.0020	0.0585	0.0000	0.0000	0.0063	0.00001	10.3000	0.0003	0.0001	0.0013	0.0050	0.00005	0.0040	4.7400	0.0570	0.0000050	0.0208
M-09-102 120.5-121.5	0.55	0.0686	0.0144	0.0019	0.0568	0.0000	0.0000	0.0051	0.00000	8.2800	0.0003	0.0001	0.0003	0.0050	0.00007	0.0020	3.7600	0.0470	0.0000050	0.0198
M-09-102 120.5-121.5	0.35	0.0758	0.0109	0.0015	0.0648	0.0000	0.0000	0.0050	0.00000	5.8100	0.0003	0.0001	0.0013	0.0050	0.00019	0.0010	2.5000	0.0420	0.0000050	0.0147
M-09-102 120.5-121.5	0.31	0.0616	0.0118	0.0012	0.0654	0.0000	0.0000	0.0040	0.00001	6.3700	0.0003	0.0000	0.0010	0.0050	0.00016	0.0010	2.7000	0.0500	0.0000050	0.0142
M-09-102 120.5-121.5	0.22	0.0499	0.0107	0.0011	0.0701	0.0000	0.0000	0.0020	0.00001	6.2000	0.0003	0.0001	0.0083	0.0050	0.00010	0.0005	2.5000	0.0530	0.0000050	0.0133
M-09-102 120.5-121.5	0.24	0.0564	0.0131	0.0009	0.0661	0.0000	0.0000	0.0040	0.00000	6.6600	0.0003	0.0000	0.0003	0.0050	0.00030	0.0005	2.6700	0.0540	0.0000050	0.0154
M-09-102 120.5-121.5	0.16	0.0602	0.0099	0.0009	0.0654	0.0000	0.0000	0.0040	0.00002	5.8100	0.0006	0.0000	0.0006	0.0050	0.00016	0.0005	2.3400	0.0510	0.0000050	0.0138
M-09-102 120.5-121.5	0.14	0.0630	0.0112	0.0010	0.0682	0.0000	0.0000	0.0050	0.00001	5.5100	0.0003	0.0001	0.0018	0.0050	0.00054	0.0010	2.1500	0.0490	0.0000050	0.0138
M-09-102 120.5-121.5	0.15	0.0695	0.0115	0.0012	0.0600	0.0000	0.0000	0.0030	0.00001	6.0800	0.0006	0.0000	0.0007	0.0050	0.00011	0.0005	2.3800	0.0520	0.0000050	0.0147
M-09-102 120.5-121.5	0.12	0.0712	0.0119	0.0010	0.0578	0.0000	0.0000	0.0030	0.00000	5.9700	0.0006	0.0001	0.0013	0.0050	0.00047	0.0005	2.2700	0.0530	0.0000050	0.0153
M-09-102 120.5-121.5	0.10	0.0618	0.0142	0.0011	0.0563	0.0000	0.0000	0.0030	0.00001	5.9100	0.0005	0.0000	0.0010	0.0050	0.00150	0.0005	2.2100	0.0580	0.0000050	0.0153
M-09-102 120.5-121.5	0.10	0.0477	0.0153	0.0009	0.0418	0.0000	0.0000	0.0030	0.00000	5.8000	0.0007	0.0001	0.0019	0.0050	0.00130	0.0005	2.1600	0.0590	0.0000050	0.0147
M-09-102 120.5-121.5	0.09	0.0593	0.0166	0.0009	0.0449	0.0000	0.0000	0.0031	0.00001	6.9100	0.0006	0.0001	0.0003	0.0030	0.00005	0.0005	2.4400	0.0630	0.0000050	0.0187
M-09-102 120.5-121.5	0.10	0.0780	0.0151	0.0014	0.0502	0.0000	0.0000	0.0029	0.00001	6.4300	0.0003	0.0001	0.0024	0.0010	0.00024	0.0005	2.2200	0.0552	0.0000050	0.0196
M-09-102 120.5-121.5	0.08	0.0603	0.0139	0.0013	0.0509	0.0000	0.0000	0.0031	0.00001	6.0100	0.0006	0.0001	0.0003	0.0020	0.00030	0.0005	2.0900	0.0579	0.0000050	0.0193
M-09-102 120.5-121.5	0.07	0.0590	0.0134	0.0010	0.0552	0.0000	0.0000	0.0031	0.00000	6.3100	0.0003	0.0001	0.0003	0.0010	0.00009	0.0005	2.1800	0.0611	0.0000050	0.0188
M-09-102 120.5-121.5	0.03	0.0627	0.0116	0.0012	0.0396	0.0000	0.0000	0.0032	0.00001	5.4400	0.0003	0.0000	0.0009	0.0010	0.00012	0.0005	1.8800	0.0525	0.0000050	0.0185
M-09-102 120.5-121.5	0.06	0.0600	0.0146	0.0010	0.0424	0.0000	0.0000	0.0028	0.00004	5.2500	0.0003	0.0000	0.0006	0.0010	0.00011	0.0005	1.8100	0.0497	0.0000050	0.0157
M-09-102 120.5-121.5	0.06	0.0450	0.0148	0.0008	0.0435	0.0000	0.0000	0.0055	0.00001	6.0700	0.0003	0.0000	0.0007	0.0010	0.00008	0.0005	2.1000	0.0594	0.0000050	0.0174
M-09-102 120.5-121.5	0.03	0.0413	0.0119	0.0007	0.0443	0.0000	0.0000	0.0029	0.00001	5.5300	0.0005	0.0000	0.0003	0.0010	0.00006	0.0005	1.9100	0.0588	0.0000050	0.0171
M-09-102 120.5-121.5	0.06	0.0401	0.0110	0.0009	0.0481	0.0000	0.0000	0.0033	0.00001	4.6400	0.0007	0.0000	0.0007	0.0020	0.00012	0.0005	1.8300	0.0547	0.0000050	0.0196
M-09-102 120.5-121.5	0.03	0.0425	0.0098	0.0007	0.0404	0.0000	0.0000	0.0025	0.00001	4.9300	0.0010	0.0000	0.0007	0.0010	0.00012	0.0005	1.7200	0.0486	0.0000050	0.0178
M-09-102 120.5-121.5	0.03	0.0338	0.0091	0.0007	0.0395	0.0000	0.0000	0.0029	0.00009	5.0800	0.0007	0.0002	0.0010	0.0040	0.00014	0.0005	1.8000	0.0551	0.0000050	0.0166
M-09-102 120.5-121.5	0.03	0.0414	0.0101	0.0006	0.0419	0.0000	0.0000	0.0033	0.00001	5.6300	0.0003	0.0000	0.0010	0.0010	0.00003	0.0005	1.8400	0.0499	0.0000050	0.0167
M-09-102 120.5-121.5	0.49	0.0508	0.0093	0.0006	0.0423	0.0000	0.0000	0.0027	0.00001	5.6900	0.0006	0.0001	0.0006	0.0020	0.00009	0.0005	1.8800	0.0573	0.0000050	0.0172
M-09-102 120.5-121.5	0.03	0.0356	0.0093	0.0006	0.0403	0.0000	0.0000	0.0027	0.00001	5.1600	0.0007	0.0000	0.0003	0.0010	0.00007	0.0005	1.6900	0.0545	0.0000050	0.0172

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-097 147.5-148.5	0.0003	0.0045	0.1360	0.0000	0.6400	0.00001	0.1300	0.0197	2.2300	0.0000	0.0003	0.0001	0.0010	0.0025	0.0020	0.0000
M-09-097 147.5-148.5	0.0004	0.0045	0.1390	0.0003	0.5850	0.00001	0.1300	0.0204	2.1050	0.0000	0.0002	0.0002	0.0010	0.0027	0.0040	0.0000
M-09-097 147.5-148.5	0.0005	0.0045	0.1420	0.0006	0.5300	0.00001	0.1300	0.0210	1.9800	0.0000	0.0001	0.0002	0.0010	0.0029	0.0060	0.0001
M-09-097 147.5-148.5	0.0003	0.0045	0.1395	0.0006	0.5350	0.00001	0.1200	0.0200	2.0150	0.0000	0.0001	0.0002	0.0010	0.0027	0.0040	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1370	0.0006	0.5400	0.00001	0.1100	0.0189	2.0500	0.0000	0.0000	0.0001	0.0010	0.0025	0.0020	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1355	0.0006	0.5300	0.00001	0.1050	0.0192	2.0475	0.0000	0.0036	0.0001	0.0010	0.0025	0.0055	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.1340	0.0007	0.5200	0.00001	0.1000	0.0195	2.0450	0.0000	0.0072	0.0001	0.0009	0.0025	0.0090	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.1325	0.0008	0.5100	0.00001	0.0950	0.0197	2.0425	0.0000	0.0107	0.0001	0.0009	0.0024	0.0125	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.1310	0.0008	0.5000	0.00001	0.0900	0.0200	2.0400	0.0000	0.0143	0.0001	0.0009	0.0024	0.0160	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.1300	0.0008	0.4825	0.00001	0.0900	0.0197	2.0300	0.0000	0.0107	0.0002	0.0009	0.0024	0.0125	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1290	0.0007	0.4650	0.00001	0.0900	0.0194	2.0200	0.0000	0.0072	0.0002	0.0009	0.0024	0.0090	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1280	0.0007	0.4475	0.00001	0.0900	0.0191	2.0100	0.0000	0.0036	0.0003	0.0009	0.0023	0.0055	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1270	0.0007	0.4300	0.00001	0.0900	0.0188	2.0000	0.0000	0.0000	0.0003	0.0009	0.0023	0.0020	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1253	0.0007	0.4425	0.00001	0.0875	0.0184	2.0025	0.0000	0.0001	0.0003	0.0009	0.0024	0.0060	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.1235	0.0007	0.4550	0.00001	0.0850	0.0179	2.0050	0.0000	0.0001	0.0003	0.0009	0.0025	0.0100	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.1218	0.0007	0.4675	0.00001	0.0825	0.0175	2.0075	0.0000	0.0001	0.0003	0.0008	0.0025	0.0140	0.0000
M-09-097 147.5-148.5	0.0003	0.0045	0.1200	0.0007	0.4800	0.00001	0.0800	0.0170	2.0100	0.0000	0.0001	0.0003	0.0008	0.0026	0.0180	0.0000
M-09-097 147.5-148.5	0.0003	0.0045	0.1185	0.0007	0.4675	0.00001	0.0775	0.0171	2.0800	0.0000	0.0001	0.0003	0.0007	0.0026	0.0140	0.0000
M-09-097 147.5-148.5	0.0003	0.0045	0.1170	0.0006	0.4550	0.00001	0.0750	0.0173	2.1500	0.0000	0.0001	0.0002	0.0007	0.0025	0.0100	0.0000
M-09-097 147.5-148.5	0.0003	0.0045	0.1155	0.0006	0.4425	0.00001	0.0725	0.0174	2.2200	0.0000	0.0001	0.0002	0.0006	0.0025	0.0060	0.0000
M-09-097 147.5-148.5	0.0003	0.0045	0.1140	0.0006	0.4300	0.00001	0.0700	0.0175	2.2900	0.0000	0.0001	0.0001	0.0006	0.0025	0.0020	0.0000
M-09-097 147.5-148.5	0.0003	0.0045	0.1140	0.0006	0.4300	0.00001	0.0700	0.0175	2.2900	0.0000	0.0001	0.0001	0.0006	0.0025	0.0020	0.0000
M-09-097 147.5-148.5	0.0003	0.0045	0.1140	0.0006	0.4300	0.00001	0.0700	0.0175	2.2900	0.0000	0.0001	0.0001	0.0006	0.0025	0.0020	0.0000
M-09-097 147.5-148.5	0.0003	0.0045	0.1230	0.0006	0.4150	0.00001	0.0625	0.0181	2.3950	0.0000	0.0003	0.0001	0.0006	0.0024	0.0020	0.0000
M-09-097 147.5-148.5	0.0003	0.0045	0.1260	0.0006	0.4100	0.00001	0.0600	0.0183	2.4300	0.0000	0.0003	0.0001	0.0006	0.0023	0.0020	0.0000
M-09-097 147.5-148.5	0.0003	0.0045	0.1225	0.0006	0.4150	0.00001	0.0675	0.0182	2.4500	0.0000	0.0003	0.0001	0.0006	0.0023	0.0018	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.1190	0.0007	0.4200	0.00001	0.0750	0.0181	2.4700	0.0000	0.0003	0.0001	0.0006	0.0022	0.0015	0.0000
M-09-097 147.5-148.5	0.0002	0.0045	0.1155	0.0007	0.4250	0.00001	0.0825	0.0179	2.4900	0.0000	0.0002	0.0001	0.0006	0.0022	0.0013	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1120	0.0008	0.4300	0.00001	0.0900	0.0178	2.5100	0.0000	0.0002	0.0001	0.0006	0.0022	0.0010	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1175	0.0008	0.4300	0.00001	0.0825	0.0183	2.5925	0.0000	0.0002	0.0001	0.0006	0.0023	0.0010	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1230	0.0008	0.4300	0.00002	0.0750	0.0188	2.6750	0.0000	0.0002	0.0001	0.0006	0.0024	0.0010	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1285	0.0008	0.4300	0.00002	0.0675	0.0192	2.7575	0.0000	0.0002	0.0001	0.0006	0.0025	0.0010	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1340	0.0008	0.4300	0.00002	0.0600	0.0197	2.8400	0.0000	0.0002	0.0001	0.0006	0.0026	0.0010	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1308	0.0008	0.4225	0.00002	0.0625	0.0194	2.8150	0.0000	0.0002	0.0001	0.0006	0.0025	0.0013	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1275	0.0007	0.4150	0.00002	0.0650	0.0192	2.7900	0.0000	0.0001	0.0001	0.0006	0.0024	0.0015	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1243	0.0007	0.4075	0.00002	0.0675	0.0189	2.7650	0.0000	0.0001	0.0001	0.0006	0.0023	0.0018	0.0000
M-09-097 147.5-148.5	0.0001	0.0045	0.1210	0.0007	0.4000	0.00002	0.0700	0.0186	2.7400	0.0000	0.0000	0.0001	0.0006	0.0022	0.0020	0.0000
	0.0001	0.0045	0.1234	0.0008	0.4220	0.00002	0.0723	0.0188	2.6975	0.0000	0.0002	0.0001	0.0006	0.0023	0.0013	0.0000
HC5 LP Hazelton																
M-09-102 120.5-121.5	0.0007	0.0050	14.1000	0.0263	1.0200	0.00001	6.4800	0.3340	26.7000	0.0001	0.0002	0.0001	0.0084	0.0009	0.0005	0.0001
M-09-102 120.5-121.5	0.0002	0.0050	7.9500	0.0306	0.9200	0.00001	3.3700	0.2120	16.9000	0.0001	0.0005	0.0001	0.0186	0.0007	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0050	6.0600	0.0224	0.9600	0.00001	2.0600	0.1750	11.5000	0.0001	0.0003	0.0001	0.0189	0.0006	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0050	4.6400	0.0187	0.8900	0.00001	1.3500	0.1400	9.1400	0.0001	0.0003	0.0001	0.0214	0.0007	0.0005	0.0000
M-09-102 120.5-121.5	0.0003	0.0050	3.0500	0.0133	0.7000	0.00001	0.7700	0.1010	4.7400	0.0001	0.0005	0.0001	0.0145	0.0006	0.0005	0.0002
M-09-102 120.5-121.5	0.0001	0.0050	2.9200	0.0123	0.7800	0.00001	0.5800	0.1070	4.8700	0.0001	0.0002	0.0001	0.0173	0.0004	0.0010	0.0000
M-09-102 120.5-121.5	0.0024	0.0050	2.2800	0.0099	0.7400	0.00044	0.4700	0.1020	4.2200	0.0001	0.0001	0.0001	0.0137	0.0005	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0050	2.3900	0.0108	0.8600	0.00001	0.4600	0.1080	3.9900	0.0001	0.0001	0.0001	0.0152	0.0005	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0050	1.9000	0.0089	0.7300	0.00001	0.4000	0.0940	3.7100	0.0001	0.0002	0.0001	0.0125	0.0004	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0050	1.6400	0.0084	0.6800	0.00001	0.3400	0.0917	3.1300	0.0001	0.0002	0.0001	0.0116	0.0004	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0050	1.7800	0.0098	0.7200	0.00001	0.3300	0.0998	3.5100	0.0001	0.0002	0.0001	0.0133	0.0004	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0050	1.6400	0.0095	0.7900	0.00001	0.3100	0.0968	3.4400	0.0001	0.0001	0.0001	0.0101	0.0005	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0050	1.3200	0.0078	0.6800	0.00001	0.2600	0.0897	3.5600	0.0001	0.0002	0.0001	0.0102	0.0004	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0100	1.3300	0.0080	0.6900	0.00001	0.2100	0.0839	3.7400	0.0001	0.0003	0.0001	0.0091	0.0003	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	1.3400	0.0089	0.8300	0.00001	0.2600	0.1010	3.8200	0.0001	0.0001	0.0001	0.0092	0.0004	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	1.2700	0.0093	0.7900	0.00001	0.2600	0.0955	4.1300	0.0001	0.0002	0.0001	0.0084	0.0006	0.0010	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	1.1300	0.0077	0.7600	0.00001	0.2200	0.0917	3.5000	0.0001	0.0002	0.0001	0.0068	0.0005	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0220	1.1000	0.0069	0.7800	0.00001	0.2100	0.0964	3.4900	0.0001	0.0002	0.0001	0.0074	0.0005	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.9520	0.0068	0.6800	0.00006	0.2000	0.0842	2.9100	0.0001	0.0003	0.0001	0.0062	0.0005	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.9020	0.0068	0.6600	0.00001	0.1900	0.0797	2.9700	0.0001	0.0001	0.0001	0.0060	0.0005	0.0005	0.0001
M-09-102 120.5-121.5	0.0001	0.0045	1.0700	0.0062	0.7800	0.00001	0.2100	0.0932	3.2100	0.0001	0.0000	0.0001	0.0068	0.0004	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.8780	0.0052	0.6200	0.00001	0.1200	0.0840	2.8100	0.0001	0.0001	0.0001	0.0058	0.0003	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0220	0.8220	0.0062	0.6600	0.00001	0.1700	0.0850	2.7800	0.0001	0.0003	0.0001	0.0060	0.0003	0.0005	0.0000
M-09-102 120.5-121.5	0.0003	0.0130	0.7790	0.0057	0.6500	0.00001	0.1900	0.0786	2.4000	0.0001	0.0011	0.0001	0.0062	0.0003	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.7930	0.0049	0.6600	0.00001	0.1600	0.0813	2.3100	0.0001	0.0003	0.0001	0.0060	0.0003	0.0090	0.0000
M-09-102 120.5-121.5	0.0002	0.0180	0.8080	0.0065	0.6900	0.00001	0.1700	0.0845	2.5700	0.0001	0.0001	0.0001	0.0047	0.0003	0.0005	0.0000
M-09-102 120.5-121.5	0.0002	0.0045	0.7740	0.0056	0.6700	0.00001	0.1500	0.0847	2.4700	0.0001	0.0001	0.0001	0.0056	0.0004	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0230	0.6810	0.0054	0.5600	0.00001	0.1300	0.0810	2.5000	0.0001	0.0000	0.0001	0.0051	0.0002	0.0005	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-102 120.5-121.5	5	28	19-Aug-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	500	21	42	7.48	5.0	20.1	5	0.1
M-09-102 120.5-121.5	5	29	26-Aug-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	500	19	40	7.38	2.6	16.2	5	0.1
M-09-102 120.5-121.5	5	30	2-Sep-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	495	19	37	7.40	4.3	16.6	9	0.1
M-09-102 120.5-121.5	5	31	9-Sep-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	500	18	42	7.11	5.2	16.5	7	0.1
M-09-102 120.5-121.5	5	32	16-Sep-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	470	18	37	7.14	3.2	15.2	7	0.1
M-09-102 120.5-121.5	5	33	23-Sep-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	19	36	7.21	3.1	15.8	9	0.1
M-09-102 120.5-121.5	5	34	30-Sep-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	470	18	30	7.22	2.8	15.0	12	0.1
M-09-102 120.5-121.5	5	35	7-Oct-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	460	20	45	7.23	3.6	16.3	10	0.1
M-09-102 120.5-121.5	5	36	14-Oct-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	460	21	43	7.18	3.5	15.6	8	0.1
M-09-102 120.5-121.5	5	37	21-Oct-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	470	20	44	7.23	3.4	16.0	10	0.1
M-09-102 120.5-121.5	5	38	28-Oct-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	470	18	41	7.18	3.4	15.2	10	0.1
M-09-102 120.5-121.5	5	39	4-Nov-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	465	19	42	7.30	2.5	14.4	5	0.1
M-09-102 120.5-121.5	5	40	11-Nov-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	495	33	49	7.43	2.8	20.3	5	0.1
M-09-102 120.5-121.5	5	41	18-Nov-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	470	23	31	7.52	3.4	14.5	7	0.1
M-09-102 120.5-121.5	5	42	25-Nov-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	465	19	40	7.17	3.6	15.2	6	0.1
M-09-102 120.5-121.5	5	43	2-Dec-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	475	18	44	7.24	3.7	15.8	5	0.1
M-09-102 120.5-121.5	5	44	9-Dec-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	465	18	39	7.23	4.2	14.3	5	0.1
M-09-102 120.5-121.5	5	45	16-Dec-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	470	21	42	7.22	4.6	15.9	8	0.1
M-09-102 120.5-121.5	5	46	23-Dec-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	470	21	41	7.44	5.1	16.8	6	0.1
M-09-102 120.5-121.5	5	47	30-Dec-10	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	470	20	38	7.25	5.4	16.4	7	0.1
M-09-102 120.5-121.5	5	48	6-Jan-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	21	34	7.42	4.6	16.6	7	0.1
M-09-102 120.5-121.5	5	49	13-Jan-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	495	23	37	7.34	3.7	16.7	7	0.1
M-09-102 120.5-121.5	5	50	20-Jan-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	475	21	37	7.09	4.2	16.6	7	0.1
M-09-102 120.5-121.5	5	51	27-Jan-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	480	19	38	7.33	4.8	16.5	7	0.1
M-09-102 120.5-121.5	5	52	3-Feb-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	475	20	33	7.20	3.7	15.6	6	0.1
M-09-102 120.5-121.5	5	53	10-Feb-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	500	20	35	7.32	2.7	14.7	5	0.1
M-09-102 120.5-121.5	5	54	17-Feb-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	485	20	35	7.28	3.4	14.7	7	0.1
M-09-102 120.5-121.5	5	55	24-Feb-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	475	19	42	7.27	4.1	14.6	9	0.1
M-09-102 120.5-121.5	5	56	3-Mar-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	480	19	41	7.23	3.5	14.7	9	0.1
M-09-102 120.5-121.5	5	57	10-Mar-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	475	19	43	7.33	3.0	14.8	9	0.1
M-09-102 120.5-121.5	5	58	17-Mar-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	470	20	44	7.23	3.3	15.6	8	0.1
M-09-102 120.5-121.5	5	59	24-Mar-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	20	45	7.23	3.6	16.3	7	0.1
M-09-102 120.5-121.5	5	60	31-Mar-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	475	21	43	7.55	4.0	16.4	7	0.1
M-09-102 120.5-121.5	5	61	7-Apr-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	475	21	44	7.41	4.5	16.5	7	0.1
M-09-102 120.5-121.5	5	62	14-Apr-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	480	20	45	7.60	3.3	15.9	7	0.1
M-09-102 120.5-121.5	5	63	21-Apr-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	20	45	7.34	2.2	15.3	7	0.1
M-09-102 120.5-121.5	5	64	28-Apr-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	505	20	47	7.49	2.8	16.1	8	0.1
M-09-102 120.5-121.5	5	65	5-May-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	21	45	7.32	3.3	16.8	9	0.1
M-09-102 120.5-121.5	5	66	12-May-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	475	20	41	7.37	3.0	16.2	9	0.1
M-09-102 120.5-121.5	5	67	19-May-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	470	20	43	7.60	2.6	15.7	8	0.1
M-09-102 120.5-121.5	5	68	26-May-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	460	19	43	7.57	3.6	15.3	7	0.1
M-09-102 120.5-121.5	5	69	2-Jun-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	470	18	41	7.49	4.5	14.9	6	0.1
M-09-102 120.5-121.5	5	70	9-Jun-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	475	18	45	7.12	4.3	14.6	7	0.1
M-09-102 120.5-121.5	5	71	16-Jun-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	485	18	41	7.26	4.1	14.3	7	0.1
M-09-102 120.5-121.5	5	72	23-Jun-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	475	19	45	7.44	4.0	14.7	8	0.1
M-09-102 120.5-121.5	5	73	30-Jun-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	485	20	44	7.29	3.9	15.1	8	0.1
M-09-102 120.5-121.5	5	74	7-Jul-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	475	23	45	7.41	4.1	15.5	8	0.1
M-09-102 120.5-121.5	5	75	14-Jul-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	25	49	7.49	4.3	16.0	7	0.1
M-09-102 120.5-121.5	5	76	21-Jul-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	485	22	45	7.50	4.1	15.9	7	0.1
M-09-102 120.5-121.5	5	77	28-Jul-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	480	19	45	7.37	3.9	15.8	6	0.1
M-09-102 120.5-121.5	5	78	4-Aug-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	480	19	45	7.25	3.7	16.1	6	0.1
M-09-102 120.5-121.5	5	79	11-Aug-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	480	18	45	7.64	3.5	16.3	6	0.1
M-09-102 120.5-121.5	5	80	18-Aug-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	475	20	46	7.41	4.3	17.0	6	0.1
M-09-102 120.5-121.5	5	81	25-Aug-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	485	21	47	7.55	5.1	17.7	6	0.1
M-09-102 120.5-121.5	5	82	1-Sep-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	480	21	48	7.73	4.8	16.2	7	0.1
M-09-102 120.5-121.5	5	83	8-Sep-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	21	45	7.40	4.4	14.8	8	0.1
M-09-102 120.5-121.5	5	84	15-Sep-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	485	22	46	7.50	4.1	15.9	8	0.1
M-09-102 120.5-121.5	5	85	22-Sep-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	22	47	7.25	3.8	17.1	8	0.1
M-09-102 120.5-121.5	5	86	29-Sep-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	500	22	43	7.30	4.1	16.6	8	0.1
M-09-102 120.5-121.5	5	87	6-Oct-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	22	47	7.43	4.4	16.1	7	0.1
M-09-102 120.5-121.5	5	88	13-Oct-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	24	44	7.65	4.4	17.0	8	0.1
M-09-102 120.5-121.5	5	89	20-Oct-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	495	25	50	7.46	4.3	17.9	8	0.1
M-09-102 120.5-121.5	5	90	27-Oct-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	23	50	7.36	4.8	17.7	8	0.1
M-09-102 120.5-121.5	5	91	3-Nov-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	22	47	7.25	5.3	17.5	7	0.1
M-09-102 120.5-121.5	5	92	10-Nov-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	505	23	48	7.63	4.4	17.6	6	0.1
M-09-102 120.5-121.5	5	93	17-Nov-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	495	24	49	7.45	3.4	17.7	5	0.1
M-09-102 120.5-121.5	5	94	24-Nov-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	485	24	47	7.51	4.5	19.7	4	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-102 120.5-121.5	0.03	0.0330	0.0090	0.0004	0.0429	0.0000	0.0000	0.0029	0.00002	5.3500	0.0003	0.0001	0.0006	0.0010	0.00015	0.0005	1.7400	0.0428	0.0000050	0.0190
M-09-102 120.5-121.5	0.03	0.0413	0.0081	0.0006	0.0404	0.0000	0.0000	0.0030	0.00001	4.9800	0.0008	0.0000	0.0009	0.0010	0.00012	0.0005	1.5500	0.0393	0.0000050	0.0173
M-09-102 120.5-121.5	0.03	0.0399	0.0076	0.0006	0.0387	0.0000	0.0000	0.0027	0.00001	5.1100	0.0005	0.0000	0.0006	0.0010	0.00008	0.0005	1.5900	0.0363	0.0000050	0.0175
M-09-102 120.5-121.5	0.03	0.0456	0.0080	0.0006	0.0376	0.0000	0.0000	0.0032	0.00001	4.8700	0.0006	0.0001	0.0012	0.0100	0.00011	0.0005	1.5400	0.0577	0.0000050	0.0176
M-09-102 120.5-121.5	0.03	0.0483	0.0072	0.0006	0.0333	0.0000	0.0000	0.0022	0.00001	4.6100	0.0003	0.0001	0.0018	0.0010	0.00010	0.0005	1.5500	0.0533	0.0000050	0.0152
M-09-102 120.5-121.5	0.03	0.0378	0.0074	0.0006	0.0360	0.0000	0.0000	0.0031	0.00001	4.9500	0.0006	0.0001	0.0014	0.0030	0.00008	0.0005	1.6600	0.0567	0.0000050	0.0172
M-09-102 120.5-121.5	0.03	0.0448	0.0064	0.0008	0.0311	0.0000	0.0000	0.0039	0.00000	4.5900	0.0005	0.0001	0.0010	0.0010	0.00012	0.0005	1.6000	0.0500	0.0000050	0.0169
M-09-102 120.5-121.5	0.03	0.0404	0.0078	0.0009	0.0310	0.0000	0.0000	0.0037	0.00001	5.2500	0.0007	0.0001	0.0011	0.0010	0.00007	0.0005	1.7900	0.0599	0.0000050	0.0190
M-09-102 120.5-121.5	0.03	0.0409	0.0078	0.0007	0.0305	0.0000	0.0000	0.0035	0.00002	5.3800	0.0003	0.0001	0.0014	0.0020	0.00006	0.0005	1.9200	0.0650	0.0000050	0.0188
M-09-102 120.5-121.5	0.03	0.0374	0.0077	0.0005	0.0300	0.0000	0.0000	0.0064	0.00001	5.1400	0.0003	0.0000	0.0003	0.0040	0.00004	0.0005	1.7700	0.0606	0.0000050	0.0181
M-09-102 120.5-121.5	0.03	0.0401	0.0072	0.0004	0.0275	0.0000	0.0000	0.0027	0.00001	4.6000	0.0003	0.0000	0.0003	0.0010	0.00010	0.0005	1.6200	0.0530	0.0000050	0.0155
M-09-102 120.5-121.5	0.03	0.0349	0.0063	0.0005	0.0292	0.0000	0.0000	0.0028	0.00002	4.7900	0.0003	0.0000	0.0007	0.0060	0.00075	0.0005	1.7400	0.0584	0.0000050	0.0171
M-09-102 120.5-121.5	0.03	0.0441	0.0016	0.0007	0.0167	0.0000	0.0000	0.0023	0.00004	10.6000	0.0003	0.0002	0.0009	0.0040	0.00081	0.0005	1.5400	0.1130	0.0000050	0.0337
M-09-102 120.5-121.5	0.03	0.0292	0.0082	0.0006	0.0257	0.0000	0.0000	0.0027	0.00002	5.8600	0.0003	0.0001	0.0022	0.0010	0.00049	0.0005	1.9500	0.0646	0.0000050	0.0196
M-09-102 120.5-121.5	0.03	0.0339	0.0069	0.0004	0.0243	0.0000	0.0000	0.0038	0.00002	4.9200	0.0003	0.0001	0.0019	0.0010	0.00006	0.0005	1.7000	0.0515	0.0000050	0.0178
M-09-102 120.5-121.5	0.03	0.0301	0.0066	0.0003	0.0223	0.0000	0.0000	0.0022	0.00002	4.6900	0.0006	0.0001	0.0019	0.0020	0.00009	0.0005	1.6100	0.0511	0.0000050	0.0148
M-09-102 120.5-121.5	0.03	0.0329	0.0066	0.0003	0.0235	0.0000	0.0000	0.0025	0.00002	4.6200	0.0009	0.0009	0.0290	0.0010	0.00288	0.0005	1.6300	0.0454	0.0000050	0.0157
M-09-102 120.5-121.5	0.03	0.0317	0.0065	0.0005	0.0237	0.0000	0.0000	0.0037	0.00001	5.2700	0.0003	0.0000	0.0005	0.0030	0.00026	0.0005	1.8300	0.0514	0.0000050	0.0169
M-09-102 120.5-121.5	0.03	0.0380	0.0067	0.0004	0.0231	0.0000	0.0000	0.0035	0.00001	5.2400	0.0003	0.0000	0.0032	0.0060	0.00159	0.0005	1.8400	0.0474	0.0000050	0.0163
M-09-102 120.5-121.5	0.03	0.0306	0.0060	0.0004	0.0219	0.0000	0.0000	0.0022	0.00001	4.9900	0.0003	0.0000	0.0008	0.0010	0.00053	0.0005	1.8300	0.0434	0.0000050	0.0178
M-09-102 120.5-121.5	0.03	0.0274	0.0063	0.0004	0.0230	0.0000	0.0000	0.0022	0.00001	5.4650	0.0003	0.0000	0.0005	0.0010	0.00029	0.0005	1.8950	0.0456	0.0000050	0.0174
M-09-102 120.5-121.5	0.03	0.0241	0.0066	0.0004	0.0241	0.0000	0.0000	0.0022	0.00001	5.9400	0.0003	0.0000	0.0003	0.0010	0.00005	0.0005	1.9600	0.0478	0.0000050	0.0170
M-09-102 120.5-121.5	0.03	0.0246	0.0062	0.0004	0.0216	0.0000	0.0000	0.0026	0.00001	5.4300	0.0003	0.0000	0.0009	0.0010	0.00004	0.0005	1.8450	0.0436	0.0000075	0.0172
M-09-102 120.5-121.5	0.03	0.0251	0.0058	0.0004	0.0190	0.0000	0.0000	0.0029	0.00002	4.9200	0.0003	0.0000	0.0016	0.0010	0.00003	0.0005	1.7300	0.0394	0.0000100	0.0173
M-09-102 120.5-121.5	0.03	0.0346	0.0058	0.0004	0.0199	0.0000	0.0000	0.0030	0.00001	5.0950	0.0003	0.0001	0.0020	0.0020	0.00057	0.0005	1.7350	0.0390	0.0000075	0.0165
M-09-102 120.5-121.5	0.03	0.0441	0.0058	0.0003	0.0208	0.0000	0.0000	0.0030	0.00001	5.2700	0.0003	0.0001	0.0023	0.0030	0.00110	0.0005	1.7400	0.0385	0.0000050	0.0156
M-09-102 120.5-121.5	0.03	0.0361	0.0053	0.0004	0.0201	0.0000	0.0000	0.0053	0.00001	5.1200	0.0003	0.0000	0.0016	0.0020	0.00057	0.0005	1.7300	0.0388	0.0000050	0.0146
M-09-102 120.5-121.5	0.03	0.0281	0.0047	0.0004	0.0194	0.0000	0.0000	0.0076	0.00001	4.9700	0.0003	0.0000	0.0009	0.0010	0.00003	0.0005	1.7200	0.0390	0.0000050	0.0136
M-09-102 120.5-121.5	0.03	0.0272	0.0049	0.0003	0.0195	0.0000	0.0000	0.0047	0.00001	4.9450	0.0003	0.0000	0.0009	0.0015	0.00045	0.0005	1.7200	0.0383	0.0000050	0.0138
M-09-102 120.5-121.5	0.03	0.0262	0.0050	0.0001	0.0195	0.0000	0.0000	0.0017	0.00001	4.9200	0.0003	0.0000	0.0009	0.0020	0.00087	0.0005	1.7200	0.0375	0.0000050	0.0139
M-09-102 120.5-121.5	0.03	0.0267	0.0048	0.0002	0.0201	0.0000	0.0000	0.0018	0.00001	5.1000	0.0003	0.0000	0.0008	0.0025	0.00046	0.0005	1.7450	0.0385	0.0000050	0.0143
M-09-102 120.5-121.5	0.03	0.0271	0.0046	0.0003	0.0206	0.0000	0.0000	0.0018	0.00000	5.2800	0.0003	0.0000	0.0007	0.0030	0.00004	0.0005	1.7700	0.0395	0.0000050	0.0147
M-09-102 120.5-121.5	0.03	0.0262	0.0046	0.0004	0.0198	0.0000	0.0000	0.0017	0.00001	5.2100	0.0003	0.0000	0.0007	0.0050	0.00004	0.0005	1.8600	0.0424	0.0000050	0.0151
M-09-102 120.5-121.5	0.03	0.0252	0.0045	0.0004	0.0190	0.0000	0.0000	0.0015	0.00001	5.1400	0.0003	0.0000	0.0007	0.0070	0.00004	0.0005	1.9500	0.0453	0.0000050	0.0154
M-09-102 120.5-121.5	0.03	0.0293	0.0045	0.0003	0.0191	0.0000	0.0000	0.0018	0.00007	5.1400	0.0003	0.0000	0.0005	0.0040	0.00004	0.0005	1.8450	0.0405	0.0000125	0.0166
M-09-102 120.5-121.5	0.03	0.0334	0.0045	0.0001	0.0192	0.0000	0.0000	0.0021	0.00012	5.1400	0.0003	0.0000	0.0003	0.0010	0.00004	0.0005	1.7400	0.0357	0.0000200	0.0177
M-09-102 120.5-121.5	0.03	0.0328	0.0054	0.0002	0.0200	0.0000	0.0000	0.0021	0.00006	5.2300	0.0003	0.0001	0.0041	0.0010	0.00004	0.0005	1.7650	0.0359	0.0000125	0.0174
M-09-102 120.5-121.5	0.03	0.0322	0.0063	0.0003	0.0208	0.0000	0.0000	0.0020	0.00001	5.3200	0.0003	0.0001	0.0079	0.0010	0.00003	0.0005	1.7900	0.0361	0.0000050	0.0171
M-09-102 120.5-121.5	0.03	0.0315	0.0054	0.0004	0.0195	0.0000	0.0000	0.0021	0.00000	5.2150	0.0003	0.0001	0.0041	0.0010	0.00002	0.0005	1.7950	0.0349	0.0000050	0.0166
M-09-102 120.5-121.5	0.03	0.0307	0.0044	0.0004	0.0182	0.0000	0.0000	0.0022	0.00000	5.1100	0.0003	0.0000	0.0003	0.0010	0.00001	0.0005	1.8000	0.0337	0.0000050	0.0161
M-09-102 120.5-121.5	0.03	0.0275	0.0040	0.0003	0.0170	0.0000	0.0000	0.0022	0.00001	4.7700	0.0003	0.0001	0.0016	0.0010	0.00003	0.0005	1.7250	0.0334	0.0000075	0.0161
M-09-102 120.5-121.5	0.03	0.0243	0.0035	0.0001	0.0157	0.0000	0.0000	0.0022	0.00001	4.4300	0.0003	0.0001	0.0029	0.0010	0.00004	0.0005	1.6500	0.0331	0.0000100	0.0160
M-09-102 120.5-121.5	0.03	0.0269	0.0036	0.0003	0.0158	0.0000	0.0000	0.0025	0.00001	4.5250	0.0003	0.0001	0.0024	0.0055	0.00007	0.0005	1.6250	0.0312	0.0000075	0.0157
M-09-102 120.5-121.5	0.03	0.0295	0.0037	0.0004	0.0159	0.0000	0.0000	0.0027	0.00001	4.6200	0.0003	0.0000	0.0019	0.0100	0.00009	0.0005	1.6000	0.0293	0.0000050	0.0153
M-09-102 120.5-121.5	0.03	0.0296	0.0038	0.0004	0.0172	0.0000	0.0000	0.0032	0.00001	4.9050	0.0003	0.0001	0.0012	0.0065	0.00006	0.0005	1.7150	0.0320	0.0000075	0.0160
M-09-102 120.5-121.5	0.03	0.0296	0.0039	0.0003	0.0184	0.0000	0.0000	0.0037	0.00001	5.1900	0.0003	0.0001	0.0005	0.0030	0.00003	0.0005	1.8300	0.0346	0.0000100	0.0166
M-09-102 120.5-121.5	0.03	0.0319	0.0040	0.0004	0.0194	0.0000	0.0000	0.0035	0.00000	5.7050	0.0003	0.0001	0.0004	0.0020	0.00003	0.0005	2.0200	0.0391	0.0000075	0.0167
M-09-102 120.5-121.5	0.03	0.0341	0.0040	0.0004	0.0204	0.0000	0.0000	0.0032	0.00000	6.2200	0.0003	0.0000	0.0003	0.0010	0.00003	0.0005	2.2100	0.0436	0.0000050	0.0167
M-09-102 120.5-121.5	0.03	0.0335	0.0038	0.0005	0.0204	0.0000	0.0000	0.0038	0.00000	5.4950	0.0003	0.0001	0.0003	0.0080	0.00004	0.0005	1.9500	0.0583	0.0000050	0.0160
M-09-102 120.5-121.5	0.03	0.0328	0.0036	0.0005	0.0204	0.0000	0.0000	0.0043	0.00001	4.7700	0.0003	0.0001	0.0003	0.0150	0.00004	0.0005	1.6900	0.0730	0.0000050	0.0153
M-09-102 120.5-121.5	0.03	0.0325	0.0037	0.0005	0.0200	0.0000	0.0000	0.0038	0.00000	4.6850	0.0004	0.0001	0.0003	0.0085	0.00005	0.0005	1.6650	0.0523	0.0000050	0.0151
M-09-102 120.5-121.5	0.03	0.0321	0.0038	0.0004	0.0195	0.0000	0.0000	0.0032	0.00000	4.6000	0.0005	0.0001	0.0003	0.0020	0.00005	0.0005	1.6400	0.0316	0.0000050	0.0149
M-09-102 120.5-121.5	0.03	0.0325	0.0038	0.0005	0.0199	0.0000	0.0000	0.0045	0.00000	5.0150	0.0007	0.0000	0.0003	0.0020	0.00005	0.0005	1.7800	0.0327	0.0000050	0.0158
M-09-102 120.5-121.5	0.03	0.0328	0.0037	0.0006	0.0203	0.0000	0.0000	0.0058	0.00001	5.4300	0.0008	0.0000	0.0003	0.0020	0.00004	0.0005	1.9200	0.0337	0.0000050	0.0167
M-09-102 120.5-121.5	0.03	0.0335	0.0036	0.0006	0.0191	0.0000	0.0000	0.0043	0.00000	5.3950	0.0009	0.0000	0.0018	0.0015	0.00011	0.0005	1.8900	0.0323	0.0000050	0.0162
M-09-102 120.5-121.5	0.03	0.0341	0.0035	0.0006	0.0179	0.0000	0.0000	0.0028	0.00000	5.3600	0.0009	0.0001	0.0033	0.0010	0.00017	0.0005	1.8600	0.0309	0.0000050	0.0156
M-09-102 120.5-121.5	0.03	0.0314	0.0039	0.0005	0.0189	0.0000	0.0000	0.0030	0.00001	5.5150	0.0016	0.0001	0.0021	0.0070	0.00017	0.0005	1.9100	0.0325	0.0000075	0.0157
M-09-102 120.5-121.5	0.03	0.0286	0.0043	0.0004	0.0199	0.0000	0.0000	0.0031	0.00001	5.6700	0.0023	0.0002	0.0008	0.0130	0.00016	0.0005	1.9600	0.0340	0.0000100	0.0157
M-09-102 120.5-121.5	0.03	0.0288	0.0042	0.0010	0.0202	0.0000	0.0000	0.0030	0.00001	5.6550	0.0016	0.0001	0.0008	0.0070	0.00012	0.0005	1.9700	0.0345	0.0000075	0.0157
M-09-102 120.5-121.5	0.03	0.0290	0.0041	0.0015	0.0205	0.0000	0.0000	0.0029	0.00000	5.6400	0.0009	0.0000	0.0008	0.0010	0.00007	0.0005	1.9800	0.0350	0.0000050	0.0157
M-09-102 120.5-121.5	0.03	0.0275	0.0037	0.0010	0.0223	0.0000	0.0000	0.0032	0.00000	6.0150	0.0006	0.0000	0.0005	0.0013	0.00010	0.0005	2.0900	0.0368	0.0000050	0.0155
M-09-102 120.5-121.5	0.03	0.0260	0.0032	0.0005	0.0241	0.0000	0.0000	0.0035	0.00000	6.3900	0.0003	0.0000	0.0003	0.0015	0.00013	0.0005	2.2000	0.0386	0.0000050	0.0153
M-09-102 120.5-121.5	0.03	0.0261	0.0030	0.0004	0.0219	0.0000	0.0000	0.0028	0.00001	5.9800	0.0003	0.0000	0.0003	0.0015	0.00017	0.0005	2.0600	0.0353	0.0000075	0.0156
M-09-102 120.5-121.5	0.03	0.0262	0.0028	0.0003	0.0196	0.0000	0.0000	0.0021	0.00001	5.5700	0.0003	0.0000	0.0003	0.0015	0.00021	0.0005	1.9200	0.0319	0.0000100	0.0158
M-09-102 120.5-121.5	0.03	0.0304	0.0031	0.0003	0.0210	0.0000	0.0000	0.0030	0.00001	5.9450	0.0003	0.0000	0.0005	0.0053	0.00014	0.0005	1.9950	0.0363	0.0000075	0.0149
M-09-102 120.5-121.5	0.03	0.0346	0.0034	0.0002	0.0224	0.0000	0.0000	0.0038	0.00002	6.3200	0.0003	0.0001	0.0008	0.0090	0.00007	0.0005	2.0700	0.0406	0.0000050	0.0140
M-09-102 120.5-121.5	0.03	0.0360	0.0037	0.0003	0.0228	0.0000	0.0000	0.0034	0.00002	6.3050	0.0003	0.0001	0.0017	0.0053	0.00087	0.0005	2.1050	0.0390	0.0000050	0.0154

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-102 120.5-121.5	0.0001	0.0045	0.6980	0.0052	0.6600	0.00001	0.1200	0.0780	2.6200	0.0001	0.0000	0.0001	0.0044	0.0002	0.0005	0.0000
M-09-102 120.5-121.5	0.0002	0.0045	0.6350	0.0046	0.6300	0.00001	0.1100	0.0711	2.3700	0.0001	0.0002	0.0001	0.0042	0.0003	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.5990	0.0051	0.6300	0.00001	0.1100	0.0694	2.5700	0.0001	0.0001	0.0001	0.0039	0.0003	0.0005	0.0000
M-09-102 120.5-121.5	0.0002	0.0045	0.5940	0.0040	0.6400	0.00001	0.1200	0.0655	2.2600	0.0001	0.0001	0.0001	0.0035	0.0003	0.0020	0.0000
M-09-102 120.5-121.5	0.0002	0.0200	0.6190	0.0049	0.6200	0.00001	0.1200	0.0633	2.4000	0.0001	0.0002	0.0001	0.0031	0.0002	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.6500	0.0049	0.6300	0.00001	0.1700	0.0690	2.1800	0.0001	0.0003	0.0001	0.0031	0.0002	0.0005	0.0000
M-09-102 120.5-121.5	0.0002	0.0045	0.6070	0.0044	0.5700	0.00001	0.1800	0.0603	2.6700	0.0001	0.0017	0.0001	0.0024	0.0003	0.0010	0.0000
M-09-102 120.5-121.5	0.0002	0.0045	0.6180	0.0043	0.6300	0.00001	0.4000	0.0684	3.0200	0.0001	0.0008	0.0001	0.0025	0.0002	0.0005	0.0000
M-09-102 120.5-121.5	0.0002	0.0045	0.6230	0.0043	0.6300	0.00001	0.1400	0.0704	2.8500	0.0001	0.0007	0.0002	0.0024	0.0002	0.0020	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.5810	0.0045	0.5600	0.00001	0.1300	0.0649	2.9000	0.0001	0.0000	0.0001	0.0023	0.0002	0.0010	0.0000
M-09-102 120.5-121.5	0.0002	0.0120	0.5440	0.0045	0.5200	0.00001	0.1000	0.0583	2.7900	0.0001	0.0000	0.0001	0.0022	0.0002	0.0020	0.0000
M-09-102 120.5-121.5	0.0007	0.0190	0.5420	0.0038	0.5200	0.00001	0.1200	0.0609	2.6800	0.0001	0.0001	0.0001	0.0018	0.0001	0.0030	0.0000
M-09-102 120.5-121.5	0.0009	0.0240	0.4210	0.0040	0.5400	0.00001	0.1100	0.0845	7.7700	0.0001	0.0003	0.0001	0.0033	0.0001	0.0030	0.0000
M-09-102 120.5-121.5	0.0001	0.0200	0.5730	0.0041	0.5600	0.00001	0.1400	0.0745	2.9500	0.0001	0.0001	0.0001	0.0028	0.0002	0.0020	0.0000
M-09-102 120.5-121.5	0.0006	0.0045	0.5260	0.0039	0.5300	0.00001	0.1200	0.0599	2.7700	0.0001	0.0001	0.0001	0.0023	0.0002	0.0020	0.0000
M-09-102 120.5-121.5	0.0003	0.0045	0.4600	0.0040	0.4500	0.00001	0.0800	0.0571	2.0200	0.0001	0.0002	0.0001	0.0022	0.0002	0.0040	0.0000
M-09-102 120.5-121.5	0.0004	0.0045	0.4540	0.0036	0.4200	0.00001	0.1200	0.0564	2.3300	0.0001	0.0002	0.0001	0.0019	0.0002	0.0050	0.0000
M-09-102 120.5-121.5	0.0001	0.0280	0.4840	0.0037	0.4700	0.00001	0.1200	0.0620	2.6100	0.0001	0.0004	0.0001	0.0019	0.0001	0.0010	0.0000
M-09-102 120.5-121.5	0.0002	0.0460	0.5340	0.0039	0.5500	0.00001	0.1200	0.0637	3.1300	0.0001	0.0001	0.0001	0.0022	0.0002	0.0020	0.0000
M-09-102 120.5-121.5	0.0002	0.0045	0.4800	0.0038	0.4900	0.00001	0.1100	0.0602	2.8500	0.0001	0.0001	0.0001	0.0018	0.0002	0.0020	0.0000
M-09-102 120.5-121.5	0.0001	0.0188	0.4725	0.0035	0.5150	0.00001	0.1150	0.0665	3.1550	0.0001	0.0003	0.0001	0.0022	0.0001	0.0013	0.0000
M-09-102 120.5-121.5	0.0001	0.0330	0.4650	0.0033	0.5400	0.00001	0.1200	0.0728	3.4600	0.0001	0.0005	0.0001	0.0022	0.0001	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0295	0.4315	0.0033	0.4750	0.00001	0.1150	0.0644	3.0900	0.0001	0.0004	0.0001	0.0018	0.0001	0.0013	0.0000
M-09-102 120.5-121.5	0.0002	0.0260	0.3980	0.0034	0.4100	0.00001	0.1100	0.0559	2.7200	0.0001	0.0003	0.0001	0.0018	0.0001	0.0020	0.0000
M-09-102 120.5-121.5	0.0003	0.0330	0.3940	0.0035	0.4400	0.00001	0.1000	0.0580	2.6650	0.0001	0.0003	0.0003	0.0018	0.0001	0.0020	0.0000
M-09-102 120.5-121.5	0.0004	0.0400	0.3900	0.0037	0.4700	0.00001	0.0900	0.0600	2.6100	0.0001	0.0003	0.0005	0.0019	0.0000	0.0020	0.0001
M-09-102 120.5-121.5	0.0004	0.0395	0.3700	0.0032	0.4550	0.00001	0.1050	0.0578	2.5500	0.0001	0.0001	0.0003	0.0017	0.0001	0.0013	0.0000
M-09-102 120.5-121.5	0.0003	0.0390	0.3500	0.0028	0.4400	0.00001	0.1200	0.0556	2.4900	0.0001	0.0000	0.0001	0.0014	0.0001	0.0005	0.0000
M-09-102 120.5-121.5	0.0003	0.0355	0.3545	0.0029	0.4400	0.00001	0.1650	0.0557	2.3800	0.0001	0.0002	0.0001	0.0015	0.0001	0.0013	0.0000
M-09-102 120.5-121.5	0.0002	0.0320	0.3590	0.0030	0.4400	0.00001	0.2100	0.0557	2.2700	0.0000	0.0004	0.0001	0.0015	0.0001	0.0020	0.0000
M-09-102 120.5-121.5	0.0002	0.0183	0.3475	0.0029	0.4200	0.00001	0.1550	0.0581	2.4400	0.0001	0.0002	0.0001	0.0015	0.0001	0.0013	0.0000
M-09-102 120.5-121.5	0.0002	0.0045	0.3360	0.0029	0.4000	0.00001	0.1000	0.0604	2.6100	0.0001	0.0001	0.0001	0.0014	0.0001	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.3480	0.0024	0.3950	0.00001	0.1000	0.0594	2.6650	0.0001	0.0001	0.0001	0.0014	0.0001	0.0013	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.3600	0.0020	0.3900	0.00001	0.1000	0.0584	2.7200	0.0001	0.0001	0.0001	0.0014	0.0001	0.0020	0.0000
M-09-102 120.5-121.5	0.0001	0.0128	0.3485	0.0028	0.4000	0.00001	0.0950	0.0585	2.7350	0.0001	0.0001	0.0001	0.0014	0.0001	0.0020	0.0000
M-09-102 120.5-121.5	0.0002	0.0210	0.3370	0.0037	0.4100	0.00001	0.0900	0.0586	2.7500	0.0001	0.0001	0.0001	0.0014	0.0001	0.0020	0.0000
M-09-102 120.5-121.5	0.0002	0.0128	0.3485	0.0020	0.4250	0.00001	0.0900	0.0594	2.7450	0.0001	0.0001	0.0001	0.0014	0.0001	0.0013	0.0000
M-09-102 120.5-121.5	0.0002	0.0045	0.3600	0.0003	0.4400	0.00001	0.0900	0.0602	2.7400	0.0001	0.0001	0.0001	0.0013	0.0001	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0093	0.3670	0.0016	0.4600	0.00001	0.0900	0.0571	2.7600	0.0001	0.0001	0.0001	0.0012	0.0001	0.0008	0.0000
M-09-102 120.5-121.5	0.0001	0.0140	0.3740	0.0029	0.4800	0.00001	0.0900	0.0540	2.7800	0.0000	0.0001	0.0001	0.0010	0.0001	0.0010	0.0000
M-09-102 120.5-121.5	0.0001	0.0175	0.3335	0.0026	0.4100	0.00001	0.1000	0.0504	2.6500	0.0000	0.0001	0.0001	0.0009	0.0001	0.0015	0.0000
M-09-102 120.5-121.5	0.0001	0.0210	0.2930	0.0024	0.3400	0.00001	0.1100	0.0468	2.5200	0.0000	0.0002	0.0001	0.0009	0.0001	0.0020	0.0000
M-09-102 120.5-121.5	0.0002	0.0128	0.2885	0.0025	0.3750	0.00001	0.1300	0.0465	2.6450	0.0000	0.0002	0.0001	0.0009	0.0001	0.0025	0.0000
M-09-102 120.5-121.5	0.0003	0.0045	0.2840	0.0026	0.4100	0.00001	0.1500	0.0461	2.7700	0.0000	0.0003	0.0001	0.0009	0.0001	0.0030	0.0000
M-09-102 120.5-121.5	0.0003	0.0045	0.3070	0.0026	0.4100	0.00001	0.1250	0.0507	2.7650	0.0000	0.0002	0.0001	0.0010	0.0001	0.0018	0.0000
M-09-102 120.5-121.5	0.0002	0.0045	0.3300	0.0026	0.4100	0.00001	0.1000	0.0552	2.7600	0.0000	0.0001	0.0001	0.0010	0.0001	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0073	0.3400	0.0027	0.4500	0.00001	0.0950	0.0596	2.9850	0.0000	0.0001	0.0001	0.0011	0.0001	0.0008	0.0000
M-09-102 120.5-121.5	0.0001	0.0100	0.3500	0.0027	0.4900	0.00001	0.0900	0.0639	3.2100	0.0000	0.0001	0.0001	0.0012	0.0001	0.0010	0.0000
M-09-102 120.5-121.5	0.0002	0.0235	0.3190	0.0026	0.5200	0.00001	0.0800	0.0585	2.8000	0.0000	0.0001	0.0001	0.0012	0.0001	0.0015	0.0000
M-09-102 120.5-121.5	0.0003	0.0370	0.2880	0.0024	0.5500	0.00001	0.0700	0.0530	2.3900	0.0000	0.0001	0.0001	0.0012	0.0001	0.0020	0.0000
M-09-102 120.5-121.5	0.0002	0.0208	0.2855	0.0023	0.4500	0.00001	0.0700	0.0509	2.4050	0.0000	0.0001	0.0001	0.0011	0.0001	0.0015	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2830	0.0022	0.3500	0.00001	0.0700	0.0488	2.4200	0.0000	0.0001	0.0001	0.0010	0.0001	0.0010	0.0000
M-09-102 120.5-121.5	0.0003	0.0045	0.2940	0.0023	0.3800	0.00001	0.0750	0.0534	2.6550	0.0000	0.0002	0.0001	0.0011	0.0001	0.0015	0.0000
M-09-102 120.5-121.5	0.0004	0.0045	0.3050	0.0023	0.4100	0.00001	0.0800	0.0579	2.8900	0.0000	0.0003	0.0001	0.0011	0.0001	0.0020	0.0000
M-09-102 120.5-121.5	0.0004	0.0045	0.3055	0.0021	0.3800	0.00001	0.0750	0.0571	2.8900	0.0000	0.0003	0.0003	0.0010	0.0001	0.0065	0.0000
M-09-102 120.5-121.5	0.0003	0.0045	0.3060	0.0018	0.3500	0.00001	0.0700	0.0562	2.8900	0.0000	0.0003	0.0005	0.0009	0.0001	0.0110	0.0000
M-09-102 120.5-121.5	0.0004	0.0045	0.2905	0.0021	0.3650	0.00001	0.1050	0.0575	3.1150	0.0000	0.0003	0.0003	0.0010	0.0001	0.0070	0.0000
M-09-102 120.5-121.5	0.0004	0.0045	0.2750	0.0023	0.3800	0.00001	0.1400	0.0587	3.3400	0.0001	0.0004	0.0001	0.0011	0.0001	0.0030	0.0000
M-09-102 120.5-121.5	0.0002	0.0045	0.2830	0.0026	0.3800	0.00001	0.1200	0.0592	3.1500	0.0000	0.0003	0.0001	0.0011	0.0001	0.0025	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2910	0.0029	0.3800	0.00001	0.1000	0.0596	2.9600	0.0000	0.0002	0.0001	0.0010	0.0001	0.0020	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.3060	0.0024	0.3900	0.00001	0.0850	0.0626	3.0250	0.0000	0.0001	0.0001	0.0012	0.0001	0.0020	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.3210	0.0019	0.4000	0.00001	0.0700	0.0656	3.0900	0.0000	0.0001	0.0001	0.0013	0.0001	0.0020	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2940	0.0022	0.3600	0.00001	0.0700	0.0621	2.9250	0.0000	0.0001	0.0001	0.0013	0.0001	0.0015	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2670	0.0024	0.3200	0.00001	0.0700	0.0586	2.7600	0.0000	0.0001	0.0001	0.0012	0.0001	0.0010	0.0000
M-09-102 120.5-121.5	0.0002	0.0073	0.2640	0.0021	0.3900	0.00001	0.0900	0.0621	2.7600	0.0000	0.0002	0.0001	0.0012	0.0001	0.0035	0.0000
M-09-102 120.5-121.5	0.0003	0.0100	0.2610	0.0018	0.4600	0.00001	0.1100	0.0655	2.7600	0.0000	0.0003	0.0002	0.0011	0.0002	0.0060	0.0000
M-09-102 120.5-121.5	0.0003	0.0073	0.2670	0.0019	0.4050	0.00001	0.1100	0.0667	2.6650	0.0000	0.0002	0.0002	0.0012	0.0003	0.0050	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-102 120.5-121.5	5	95	1-Dec-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	24	48	7.45	5.5	21.7	3	0.1
M-09-102 120.5-121.5	5	96	8-Dec-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	23	48	7.43	5.3	21.5	5	0.1
M-09-102 120.5-121.5	5	97	15-Dec-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	21	45	7.46	5.1	21.3	6	0.1
M-09-102 120.5-121.5	5	98	22-Dec-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	495	22	49	7.28	4.8	21.8	6	0.1
M-09-102 120.5-121.5	5	99	29-Dec-11	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	485	22	47	7.47	4.6	22.3	5	0.1
M-09-102 120.5-121.5	5	100	5-Jan-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	22	44	7.31	4.3	22.7	5	0.1
M-09-102 120.5-121.5	5	101	12-Jan-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	485	22	47	7.38	4.0	23.2	4	0.1
M-09-102 120.5-121.5	5	102	19-Jan-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	23	46	7.42	4.1	23.5	5	0.1
M-09-102 120.5-121.5	5	103	26-Jan-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	485	23	43	7.31	4.2	23.7	5	0.1
M-09-102 120.5-121.5	5	104	2-Feb-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	24	48	7.37	4.3	24.0	6	0.1
M-09-102 120.5-121.5	5	105	9-Feb-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	460	24	55	7.60	4.3	24.2	6	0.1
M-09-102 120.5-121.5	5	106	16-Feb-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	495	24	52	7.49	4.8	22.2	7	0.1
M-09-102 120.5-121.5	5	107	23-Feb-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	505	24	76	7.22	5.2	20.2	7	0.1
M-09-102 120.5-121.5	5	108	1-Mar-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	24	49	7.25	5.6	18.2	8	0.1
M-09-102 120.5-121.5	5	109	8-Mar-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	490	24	51	7.42	6.0	16.1	8	0.1
M-09-102 120.5-121.5	5	110	15-Mar-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	470	23	47	7.27	5.7	16.2	8	0.1
M-09-102 120.5-121.5	5	111	22-Mar-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	465	22	44	7.40	5.3	16.3	8	0.1
M-09-102 120.5-121.5	5	112	29-Mar-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	450	22	45	7.29	4.9	16.3	8	0.1
M-09-102 120.5-121.5	5	113	5-Apr-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	450	21	45	7.32	4.6	16.4	8	0.1
M-09-102 120.5-121.5	5	114	12-Apr-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	455	21	49	7.30	4.6	16.4	8	0.1
M-09-102 120.5-121.5	5	115	19-Apr-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	460	21	45	7.39	4.6	16.4	8	0.1
M-09-102 120.5-121.5	5	116	26-Apr-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	460	22	50	7.15	5.6	17.1	9	0.1
M-09-102 120.5-121.5	5	117	3-May-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	450	22	46	7.59	6.0	17.4	9	0.1
M-09-102 120.5-121.5	5	118	10-May-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	470	22	45	7.09	6.1	17.0	9	0.1
M-09-102 120.5-121.5	5	119	17-May-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	455	22	50	7.33	6.1	16.6	8	0.1
M-09-102 120.5-121.5	5	120	24-May-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	465	22	50	7.54	6.2	16.2	8	0.1
M-09-102 120.5-121.5	5	121	31-May-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	440	21	43	7.50	6.2	15.8	7	0.1
M-09-102 120.5-121.5	5	122	7-Jun-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	460	22	46	7.32	6.3	16.1	7	0.1
M-09-102 120.5-121.5	5	123	14-Jun-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	480	22	58	7.45	6.3	16.5	8	0.1
M-09-102 120.5-121.5	5	124	21-Jun-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	450	22	51	7.45	6.3	16.8	8	0.1
M-09-102 120.5-121.5	5	125	28-Jun-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	445	22	49	7.43	6.3	17.2	8	0.1
M-09-102 120.5-121.5	5	126	5-Jul-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	450	23	49	7.31	6.0	17.2	8	0.2
M-09-102 120.5-121.5	5	127	12-Jul-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	455	23	52	7.31	5.7	17.2	8	0.3
M-09-102 120.5-121.5	5	128	19-Jul-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	455	23	49	7.34	5.4	17.2	7	0.3
M-09-102 120.5-121.5	5	129	26-Jul-12	Mitchell	BELOW MTF	LP Hazelton	0	SI	5	QSP	1			Water	500	455	24	51	7.39	5.1	17.2	7	0.4
																	22	50	7.40	6.0	16.7	7	0.2
HC6 LP Hazelton																							
M-09-102A 125.5-126.5	6	0	4-Feb-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	420	192	376	7.50	2.7	32.1	206	1.5
M-09-102A 125.5-126.5	6	1	11-Feb-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	475	131	283	7.27	2.3	16.3	110	0.6
M-09-102A 125.5-126.5	6	2	18-Feb-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	480	90	191	7.28	3.2	17.1	79	0.1
M-09-102A 125.5-126.5	6	3	25-Feb-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	485	76	177	7.29	2.8	17.0	80	0.1
M-09-102A 125.5-126.5	6	4	4-Mar-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	485	59	140	7.17	2.7	14.9	46	0.1
M-09-102A 125.5-126.5	6	5	11-Mar-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	500	61	136	7.27	3.0	17.3	49	0.1
M-09-102A 125.5-126.5	6	6	18-Mar-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	500	56	124	7.30	2.7	17.1	41	0.1
M-09-102A 125.5-126.5	6	7	25-Mar-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	500	60	121	7.22	3.5	18.2	38	0.1
M-09-102A 125.5-126.5	6	8	1-Apr-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	500	45	101	7.35	3.0	17.9	38	0.1
M-09-102A 125.5-126.5	6	9	8-Apr-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	42	98	7.24	2.9	16.6	31	0.1
M-09-102A 125.5-126.5	6	10	15-Apr-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	44	102	7.24	3.3	18.2	32	0.1
M-09-102A 125.5-126.5	6	11	22-Apr-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	490	43	98	7.27	4.4	16.2	32	0.1
M-09-102A 125.5-126.5	6	12	29-Apr-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	490	36	91	7.35	2.5	16.0	27	0.1
M-09-102A 125.5-126.5	6	13	6-May-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	34	93	7.20	4.8	17.2	32	0.1
M-09-102A 125.5-126.5	6	14	13-May-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	490	46	98	7.38	3.0	16.5	31	0.1
M-09-102A 125.5-126.5	6	15	20-May-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	485	44	104	7.36	4.3	17.7	27	0.1
M-09-102A 125.5-126.5	6	16	27-May-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	43	93	7.31	6.2	21.5	17	0.1
M-09-102A 125.5-126.5	6	17	3-Jun-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	46	92	7.29	3.5	17.4	26	0.1
M-09-102A 125.5-126.5	6	18	10-Jun-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	485	40	89	7.32	4.7	17.9	23	0.1
M-09-102A 125.5-126.5	6	19	17-Jun-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	40	87	7.45	3.4	16.2	20	0.1
M-09-102A 125.5-126.5	6	20	24-Jun-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	41	92	7.41	3.0	16.7	26	0.1
M-09-102A 125.5-126.5	6	21	1-Jul-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	41	86	7.42	2.7	15.2	21	0.1
M-09-102A 125.5-126.5	6	22	8-Jul-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	490	34	89	7.25	2.7	14.1	21	0.1
M-09-102A 125.5-126.5	6	23	15-Jul-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	37	89	7.19	4.1	15.6	16	0.1
M-09-102A 125.5-126.5	6	24	22-Jul-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	490	36	84	7.18	3.5	14.7	11	0.1
M-09-102A 125.5-126.5	6	25	29-Jul-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	41	85	7.28	4.2	16.4	27	0.1
M-09-102A 125.5-126.5	6	26	5-Aug-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	38	84	7.33	3.0	14.4	14	0.1
M-09-102A 125.5-126.5	6	27	12-Aug-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	500	37	88	7.41	4.1	16.6	22	0.1
M-09-102A 125.5-126.5	6	28	19-Aug-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	39	86	7.43	5.2	15.8	21	0.1
M-09-102A 125.5-126.5	6	29	26-Aug-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	450	33	75	7.31	2.6	13.3	21	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-102 120.5-121.5	0.03	0.0373	0.0040	0.0003	0.0232	0.0000	0.0000	0.0030	0.00002	6.2900	0.0003	0.0002	0.0026	0.0015	0.00167	0.0005	2.1400	0.0373	0.0000050	0.0167
M-09-102 120.5-121.5	0.03	0.0390	0.0036	0.0003	0.0229	0.0000	0.0000	0.0028	0.00001	5.9300	0.0003	0.0001	0.0021	0.0015	0.00084	0.0005	1.9800	0.0381	0.0000050	0.0151
M-09-102 120.5-121.5	0.03	0.0406	0.0031	0.0002	0.0226	0.0000	0.0000	0.0026	0.00001	5.5700	0.0003	0.0000	0.0015	0.0015	0.00001	0.0005	1.8200	0.0388	0.0000050	0.0135
M-09-102 120.5-121.5	0.03	0.0387	0.0032	0.0002	0.0225	0.0000	0.0000	0.0025	0.00001	5.6100	0.0003	0.0000	0.0014	0.0021	0.00003	0.0005	1.8400	0.0376	0.0000050	0.0136
M-09-102 120.5-121.5	0.03	0.0367	0.0034	0.0003	0.0224	0.0000	0.0000	0.0024	0.00001	5.6500	0.0003	0.0000	0.0013	0.0028	0.00005	0.0005	1.8600	0.0363	0.0000050	0.0137
M-09-102 120.5-121.5	0.03	0.0348	0.0035	0.0003	0.0222	0.0000	0.0000	0.0023	0.00001	5.6900	0.0003	0.0000	0.0012	0.0034	0.00007	0.0005	1.8800	0.0351	0.0000050	0.0137
M-09-102 120.5-121.5	0.03	0.0328	0.0036	0.0003	0.0221	0.0000	0.0000	0.0022	0.00001	5.7300	0.0003	0.0000	0.0011	0.0040	0.00009	0.0005	1.9000	0.0338	0.0000050	0.0138
M-09-102 120.5-121.5	0.03	0.0338	0.0036	0.0003	0.0223	0.0000	0.0000	0.0023	0.00001	5.8975	0.0003	0.0000	0.0011	0.0034	0.00008	0.0005	1.9425	0.0346	0.0000050	0.0144
M-09-102 120.5-121.5	0.03	0.0349	0.0036	0.0003	0.0224	0.0000	0.0000	0.0023	0.00001	6.0650	0.0003	0.0000	0.0011	0.0028	0.00007	0.0005	1.9850	0.0354	0.0000050	0.0150
M-09-102 120.5-121.5	0.03	0.0359	0.0036	0.0003	0.0226	0.0000	0.0000	0.0024	0.00002	6.2325	0.0003	0.0000	0.0011	0.0021	0.00005	0.0005	2.0275	0.0362	0.0000050	0.0155
M-09-102 120.5-121.5	0.03	0.0369	0.0036	0.0003	0.0227	0.0000	0.0000	0.0024	0.00002	6.4000	0.0003	0.0000	0.0011	0.0015	0.00004	0.0005	2.0700	0.0370	0.0000050	0.0161
M-09-102 120.5-121.5	0.03	0.0342	0.0034	0.0004	0.0219	0.0000	0.0000	0.0021	0.00032	6.2800	0.0003	0.0000	0.0010	0.0015	0.00026	0.0005	2.1025	0.0361	0.0000063	0.0159
M-09-102 120.5-121.5	0.03	0.0316	0.0033	0.0005	0.0211	0.0000	0.0000	0.0018	0.00061	6.1600	0.0003	0.0000	0.0009	0.0015	0.00048	0.0005	2.1350	0.0352	0.0000075	0.0156
M-09-102 120.5-121.5	0.03	0.0289	0.0031	0.0005	0.0203	0.0000	0.0000	0.0015	0.00091	6.0400	0.0003	0.0000	0.0008	0.0015	0.00069	0.0005	2.1675	0.0342	0.0000088	0.0154
M-09-102 120.5-121.5	0.03	0.0262	0.0029	0.0006	0.0195	0.0000	0.0000	0.0012	0.00121	5.9200	0.0003	0.0000	0.0007	0.0015	0.00091	0.0005	2.2000	0.0333	0.0000100	0.0151
M-09-102 120.5-121.5	0.03	0.0329	0.0028	0.0005	0.0192	0.0000	0.0000	0.0015	0.00091	5.7450	0.0003	0.0000	0.0007	0.0015	0.00070	0.0005	2.1375	0.0347	0.0000150	0.0151
M-09-102 120.5-121.5	0.03	0.0396	0.0027	0.0004	0.0189	0.0000	0.0000	0.0018	0.00061	5.5700	0.0003	0.0000	0.0008	0.0015	0.00048	0.0005	2.0750	0.0360	0.0000200	0.0150
M-09-102 120.5-121.5	0.03	0.0462	0.0025	0.0002	0.0185	0.0000	0.0000	0.0021	0.00030	5.3950	0.0003	0.0000	0.0008	0.0015	0.00027	0.0005	2.0125	0.0374	0.0000250	0.0150
M-09-102 120.5-121.5	0.03	0.0529	0.0024	0.0001	0.0182	0.0000	0.0000	0.0024	0.00000	5.2200	0.0003	0.0000	0.0008	0.0015	0.00005	0.0005	1.9500	0.0387	0.0000300	0.0149
M-09-102 120.5-121.5	0.03	0.0529	0.0024	0.0001	0.0182	0.0000	0.0000	0.0024	0.00000	5.2200	0.0003	0.0000	0.0008	0.0015	0.00005	0.0005	1.9500	0.0387	0.0000300	0.0149
M-09-102 120.5-121.5	0.03	0.0529	0.0024	0.0001	0.0182	0.0000	0.0000	0.0024	0.00000	5.2200	0.0003	0.0000	0.0008	0.0015	0.00005	0.0005	1.9500	0.0387	0.0000300	0.0149
M-09-102 120.5-121.5	0.03	0.0381	0.0026	0.0002	0.0180	0.0000	0.0000	0.0026	0.00001	5.2575	0.0003	0.0000	0.0010	0.0015	0.00007	0.0005	2.0850	0.0319	0.0000150	0.0139
M-09-102 120.5-121.5	0.03	0.0331	0.0026	0.0002	0.0179	0.0000	0.0000	0.0026	0.00001	5.2700	0.0003	0.0000	0.0011	0.0015	0.00008	0.0005	2.1300	0.0296	0.0000100	0.0135
M-09-102 120.5-121.5	0.03	0.0380	0.0025	0.0002	0.0173	0.0000	0.0000	0.0027	0.00001	5.2025	0.0003	0.0000	0.0011	0.0015	0.00007	0.0005	2.1425	0.0294	0.0000088	0.0136
M-09-102 120.5-121.5	0.03	0.0429	0.0024	0.0002	0.0168	0.0000	0.0000	0.0028	0.00001	5.1350	0.0003	0.0000	0.0011	0.0015	0.00007	0.0005	2.1550	0.0291	0.0000075	0.0138
M-09-102 120.5-121.5	0.03	0.0477	0.0023	0.0001	0.0162	0.0000	0.0000	0.0029	0.00000	5.0675	0.0003	0.0000	0.0011	0.0015	0.00006	0.0005	2.1675	0.0289	0.0000063	0.0139
M-09-102 120.5-121.5	0.03	0.0526	0.0022	0.0001	0.0156	0.0000	0.0000	0.0030	0.00000	5.0000	0.0003	0.0000	0.0011	0.0015	0.00005	0.0005	2.1800	0.0286	0.0000050	0.0140
M-09-102 120.5-121.5	0.03	0.0536	0.0022	0.0001	0.0162	0.0000	0.0000	0.0033	0.00000	5.0675	0.0003	0.0000	0.0012	0.0015	0.00005	0.0005	2.1950	0.0270	0.0000063	0.0143
M-09-102 120.5-121.5	0.03	0.0545	0.0023	0.0001	0.0167	0.0000	0.0000	0.0036	0.00000	5.1350	0.0003	0.0000	0.0012	0.0015	0.00004	0.0005	2.2100	0.0253	0.0000075	0.0146
M-09-102 120.5-121.5	0.03	0.0555	0.0023	0.0001	0.0173	0.0000	0.0000	0.0038	0.00000	5.2025	0.0003	0.0000	0.0013	0.0015	0.00004	0.0005	2.2250	0.0237	0.0000088	0.0149
M-09-102 120.5-121.5	0.03	0.0564	0.0023	0.0001	0.0178	0.0000	0.0000	0.0041	0.00000	5.2700	0.0003	0.0000	0.0013	0.0015	0.00003	0.0005	2.2400	0.0220	0.0000100	0.0152
M-09-102 120.5-121.5	0.03	0.0554	0.0023	0.0001	0.0178	0.0000	0.0000	0.0037	0.00000	5.3250	0.0003	0.0000	0.0010	0.0015	0.00004	0.0005	2.2775	0.0219	0.0000088	0.0149
M-09-102 120.5-121.5	0.03	0.0543	0.0023	0.0001	0.0178	0.0000	0.0000	0.0033	0.00000	5.3800	0.0003	0.0000	0.0008	0.0015	0.00005	0.0005	2.3150	0.0219	0.0000075	0.0146
M-09-102 120.5-121.5	0.03	0.0533	0.0023	0.0001	0.0178	0.0000	0.0000	0.0028	0.00000	5.4350	0.0003	0.0000	0.0005	0.0015	0.00005	0.0005	2.3525	0.0218	0.0000063	0.0143
M-09-102 120.5-121.5	0.03	0.0522	0.0023	0.0001	0.0178	0.0000	0.0000	0.0024	0.00000	5.4900	0.0003	0.0000	0.0003	0.0015	0.00006	0.0005	2.3900	0.0217	0.0000050	0.0140
	0.03	0.0535	0.0023	0.0001	0.0171	0.0000	0.0000	0.0033	0.00000	5.2373	0.0003	0.0000	0.0010	0.0015	0.00005	0.0005	2.2553	0.0243	0.0000071	0.0145
HC6 LP Hazelton																				
M-09-102A 125.5-126.5	0.67	0.0431	0.0088	0.0014	0.0349	0.0000	0.0000	0.0060	0.00003	48.1000	0.0003	0.0037	0.0025	0.0050	0.00008	0.0040	17.4000	0.2270	0.0000100	0.0397
M-09-102A 125.5-126.5	0.52	0.0478	0.0074	0.0023	0.0322	0.0000	0.0000	0.0050	0.00001	31.2000	0.0003	0.0011	0.0010	0.0050	0.00008	0.0020	13.0000	0.1230	0.0000050	0.0136
M-09-102A 125.5-126.5	0.39	0.0578	0.0064	0.0016	0.0346	0.0000	0.0000	0.0045	0.00001	22.7000	0.0003	0.0007	0.0005	0.0050	0.00008	0.0020	8.2200	0.1240	0.0000050	0.0118
M-09-102A 125.5-126.5	0.31	0.0437	0.0064	0.0013	0.0313	0.0000	0.0000	0.0035	0.00001	20.0000	0.0003	0.0007	0.0006	0.0050	0.00009	0.0005	6.2700	0.1380	0.0000050	0.0117
M-09-102A 125.5-126.5	0.22	0.0484	0.0052	0.0012	0.0332	0.0000	0.0000	0.0040	0.00001	15.7000	0.0003	0.0005	0.0010	0.0050	0.00013	0.0005	4.7300	0.1160	0.0000050	0.0123
M-09-102A 125.5-126.5	0.22	0.0504	0.0055	0.0010	0.0345	0.0000	0.0000	0.0030	0.00002	16.7000	0.0003	0.0005	0.0003	0.0050	0.00010	0.0010	4.6400	0.1340	0.0000050	0.0134
M-09-102A 125.5-126.5	0.16	0.0425	0.0048	0.0010	0.0352	0.0000	0.0000	0.0010	0.00002	15.6000	0.0003	0.0004	0.0071	0.0050	0.00009	0.0005	4.0600	0.1380	0.0000050	0.0139
M-09-102A 125.5-126.5	0.19	0.0514	0.0062	0.0008	0.0361	0.0000	0.0000	0.0030	0.00000	16.9000	0.0003	0.0004	0.0003	0.0050	0.00038	0.0005	4.2400	0.1590	0.0000050	0.0176
M-09-102A 125.5-126.5	0.13	0.0597	0.0046	0.0008	0.0364	0.0000	0.0000	0.0030	0.00002	13.0000	0.0003	0.0003	0.0011	0.0050	0.00060	0.0005	3.1600	0.1220	0.0000050	0.0163
M-09-102A 125.5-126.5	0.12	0.0513	0.0049	0.0008	0.0318	0.0000	0.0000	0.0040	0.00002	12.1000	0.0003	0.0003	0.0019	0.0050	0.00065	0.0005	2.8700	0.1220	0.0000050	0.0164
M-09-102A 125.5-126.5	0.12	0.0554	0.0048	0.0010	0.0305	0.0000	0.0000	0.0020	0.00001	12.8000	0.0006	0.0003	0.0006	0.0050	0.00010	0.0005	2.9900	0.1300	0.0000050	0.0185
M-09-102A 125.5-126.5	0.10	0.0477	0.0041	0.0009	0.0278	0.0000	0.0000	0.0020	0.00001	12.5000	0.0006	0.0003	0.0009	0.0050	0.00038	0.0005	2.7700	0.1290	0.0000050	0.0180
M-09-102A 125.5-126.5	0.09	0.0519	0.0041	0.0008	0.0374	0.0000	0.0000	0.0020	0.00001	10.9000	0.0005	0.0002	0.0008	0.0050	0.00174	0.0005	2.2300	0.1200	0.0000050	0.0174
M-09-102A 125.5-126.5	0.09	0.0446	0.0040	0.0010	0.0324	0.0000	0.0000	0.0020	0.00001	10.2000	0.0006	0.0002	0.0011	0.0050	0.00145	0.0005	2.0100	0.1130	0.0000050	0.0167
M-09-102A 125.5-126.5	0.08	0.0567	0.0043	0.0008	0.0274	0.0000	0.0000	0.0021	0.00001	14.2000	0.0006	0.0002	0.0003	0.0010	0.00008	0.0005	2.6000	0.1430	0.0000050	0.0204
M-09-102A 125.5-126.5	0.09	0.0540	0.0045	0.0011	0.0217	0.0000	0.0000	0.0021	0.00001	13.7000	0.0003	0.0003	0.0008	0.0010	0.00036	0.0005	2.4500	0.1360	0.0000050	0.0231
M-09-102A 125.5-126.5	0.07	0.0465	0.0041	0.0010	0.0255	0.0000	0.0000	0.0019	0.00001	13.5000	0.0003	0.0003	0.0015	0.0010	0.00112	0.0005	2.2600	0.1490	0.0000050	0.0219
M-09-102A 125.5-126.5	0.07	0.0476	0.0041	0.0009	0.0280	0.0000	0.0000	0.0022	0.00001	14.6000	0.0003	0.0002	0.0009	0.0010	0.00010	0.0005	2.3500	0.1580	0.0000050	0.0225
M-09-102A 125.5-126.5	0.03	0.0534	0.0035	0.0008	0.0256	0.0000	0.0000	0.0019	0.00001	12.7000	0.0005	0.0002	0.0005	0.0010	0.00013	0.0005	2.0000	0.1420	0.0000050	0.0213
M-09-102A 125.5-126.5	0.06	0.0510	0.0049	0.0009	0.0249	0.0000	0.0000	0.0023	0.00005	12.8000	0.0003	0.0002	0.0006	0.0010	0.00010	0.0005	1.9800	0.1450	0.0000050	0.0159
M-09-102A 125.5-126.5	0.06	0.0433	0.0043	0.0006	0.0211	0.0000	0.0000	0.0046	0.00002	13.3000	0.0003	0.0002	0.0005	0.0010	0.00010	0.0005	1.9900	0.1520	0.0000050	0.0244
M-09-102A 125.5-126.5	0.03	0.0417	0.0038	0.0008	0.0242	0.0000	0.0000	0.0020	0.00002	13.4000	0.0003	0.0002	0.0003	0.0010	0.00011	0.0005	1.9000	0.1560	0.0000050	0.0214
M-09-102A 125.5-126.5	0.03	0.0367	0.0033	0.0008	0.0203	0.0000	0.0000	0.0023	0.00001	10.7000	0.0007	0.0002	0.0008	0.0010	0.00011	0.0005	1.8100	0.1500	0.0000050	0.0224
M-09-102A 125.5-126.5	0.03	0.0387	0.0033	0.0007	0.0177	0.0000	0.0000	0.0003	0.00003	12.0000	0.0008	0.0002	0.0007	0.0010	0.00010	0.0005	1.7400	0.1490	0.0000050	0.0242
M-09-102A 125.5-126.5	0.03	0.0328	0.0030	0.0008	0.0166	0.0000	0.0000	0.0022	0.00005	11.7000	0.0005	0.0003	0.0031	0.0080	0.00013	0.0005	1.6600	0.1480	0.0000050	0.0231
M-09-102A 125.5-126.5	0.03	0.0358	0.0033	0.0006	0.0174	0.0000	0.0000	0.0025	0.00002	13.3000	0.0003	0.0002	0.0009	0.0010	0.00008	0.0005	1.7700	0.1490	0.0000050	0.0254
M-09-102A 125.5-126.5	0.03	0.0456	0.0029	0.0006	0.0153	0.0000	0.0000	0.0020	0.00002	12.6000	0.0006	0.0003	0.0031	0.0010	0.00007	0.0005	1.6700	0.1580	0.0000050	0.0245
M-09-102A 125.5-126.5	0.03	0.0384	0.0033	0.0006	0.0213	0.0000	0.0000	0.0018	0.00003	12.2000	0.0006	0.0002	0.0005	0.0010	0.00010	0.0005	1.6000	0.1590	0.0000050	0.0264
M-09-102A 125.5-126.5	0.03	0.0345	0.0033	0.0006	0.0181	0.0000	0.0000	0.0023	0.00004	12.8000	0.0003	0.0003	0.0005	0.0010	0.00011	0.0005	1.6400	0.1500	0.0000050	0.0298
M-09-102A 125.5-126.5	0.03	0.0498	0.0023	0.0006	0.0215	0.0000	0.0000	0.0019	0.00002	10.8000	0.0007	0.0001	0.0011	0.0010	0.00020	0.0005	1.3700	0.1060	0.0000200	0.0246

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-102 120.5-121.5	0.0003	0.0045	0.2730	0.0020	0.3500	0.00001	0.1100	0.0679	2.5700	0.0000	0.0001	0.0001	0.0013	0.0003	0.0040	0.0000
M-09-102 120.5-121.5	0.0004	0.0045	0.2520	0.0018	0.3500	0.00001	0.1050	0.0628	2.4750	0.0000	0.0001	0.0002	0.0011	0.0003	0.0030	0.0000
M-09-102 120.5-121.5	0.0004	0.0045	0.2310	0.0016	0.3500	0.00001	0.1000	0.0576	2.3800	0.0000	0.0001	0.0003	0.0010	0.0003	0.0020	0.0000
M-09-102 120.5-121.5	0.0003	0.0045	0.2365	0.0016	0.3450	0.00001	0.0950	0.0585	2.3900	0.0000	0.0001	0.0003	0.0010	0.0003	0.0020	0.0000
M-09-102 120.5-121.5	0.0003	0.0045	0.2420	0.0016	0.3400	0.00001	0.0900	0.0595	2.4000	0.0000	0.0001	0.0002	0.0010	0.0003	0.0020	0.0000
M-09-102 120.5-121.5	0.0002	0.0045	0.2475	0.0016	0.3350	0.00001	0.0850	0.0604	2.4100	0.0000	0.0001	0.0002	0.0010	0.0002	0.0020	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2530	0.0016	0.3300	0.00001	0.0800	0.0613	2.4200	0.0000	0.0001	0.0001	0.0010	0.0002	0.0020	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2563	0.0016	0.3325	0.00001	0.0875	0.0627	2.4700	0.0000	0.0001	0.0001	0.0010	0.0002	0.0016	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2595	0.0017	0.3350	0.00001	0.0950	0.0641	2.5200	0.0000	0.0001	0.0001	0.0011	0.0003	0.0013	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2628	0.0017	0.3375	0.00001	0.1025	0.0655	2.5700	0.0000	0.0001	0.0001	0.0011	0.0003	0.0009	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2660	0.0017	0.3400	0.00001	0.1100	0.0669	2.6200	0.0000	0.0000	0.0001	0.0012	0.0003	0.0005	0.0000
M-09-102 120.5-121.5	0.0001	0.0061	0.2680	0.0016	0.3375	0.00001	0.1100	0.0681	2.5850	0.0000	0.0005	0.0001	0.0012	0.0003	0.0034	0.0000
M-09-102 120.5-121.5	0.0001	0.0078	0.2700	0.0016	0.3350	0.00001	0.1100	0.0692	2.5500	0.0000	0.0009	0.0002	0.0013	0.0003	0.0063	0.0000
M-09-102 120.5-121.5	0.0002	0.0094	0.2720	0.0015	0.3325	0.00001	0.1100	0.0704	2.5150	0.0000	0.0014	0.0002	0.0013	0.0003	0.0091	0.0000
M-09-102 120.5-121.5	0.0002	0.0110	0.2740	0.0014	0.3300	0.00001	0.1100	0.0715	2.4800	0.0000	0.0018	0.0002	0.0013	0.0002	0.0120	0.0000
M-09-102 120.5-121.5	0.0002	0.0094	0.2585	0.0015	0.3175	0.00001	0.1050	0.0663	2.5525	0.0000	0.0015	0.0005	0.0011	0.0004	0.0095	0.0000
M-09-102 120.5-121.5	0.0002	0.0078	0.2430	0.0015	0.3050	0.00001	0.1000	0.0611	2.6250	0.0000	0.0012	0.0009	0.0010	0.0005	0.0070	0.0000
M-09-102 120.5-121.5	0.0002	0.0061	0.2275	0.0016	0.2925	0.00001	0.0950	0.0559	2.6975	0.0000	0.0009	0.0012	0.0008	0.0006	0.0045	0.0000
M-09-102 120.5-121.5	0.0002	0.0045	0.2120	0.0017	0.2800	0.00001	0.0900	0.0507	2.7700	0.0000	0.0006	0.0015	0.0006	0.0008	0.0020	0.0000
M-09-102 120.5-121.5	0.0002	0.0045	0.2120	0.0017	0.2800	0.00001	0.0900	0.0507	2.7700	0.0000	0.0006	0.0015	0.0006	0.0008	0.0020	0.0000
M-09-102 120.5-121.5	0.0002	0.0045	0.2120	0.0017	0.2800	0.00001	0.0900	0.0507	2.7700	0.0000	0.0006	0.0015	0.0006	0.0008	0.0020	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2225	0.0017	0.2725	0.00001	0.0750	0.0513	2.7625	0.0000	0.0007	0.0004	0.0006	0.0003	0.0020	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2260	0.0017	0.2700	0.00001	0.0700	0.0515	2.7600	0.0000	0.0007	0.0001	0.0006	0.0002	0.0020	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2260	0.0016	0.2700	0.00001	0.0750	0.0505	2.8050	0.0000	0.0006	0.0001	0.0005	0.0002	0.0020	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2260	0.0015	0.2700	0.00001	0.0800	0.0496	2.8500	0.0000	0.0005	0.0001	0.0005	0.0003	0.0020	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2260	0.0013	0.2700	0.00001	0.0850	0.0486	2.8950	0.0000	0.0004	0.0001	0.0005	0.0003	0.0020	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2260	0.0012	0.2700	0.00001	0.0900	0.0476	2.9400	0.0000	0.0003	0.0001	0.0004	0.0003	0.0020	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2265	0.0012	0.2700	0.00001	0.0875	0.0487	3.0200	0.0000	0.0003	0.0001	0.0005	0.0003	0.0023	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2270	0.0012	0.2700	0.00001	0.0850	0.0498	3.1000	0.0000	0.0003	0.0001	0.0005	0.0003	0.0025	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2275	0.0012	0.2700	0.00001	0.0825	0.0509	3.1800	0.0000	0.0003	0.0001	0.0005	0.0003	0.0028	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2280	0.0012	0.2700	0.00001	0.0800	0.0520	3.2600	0.0000	0.0003	0.0001	0.0005	0.0003	0.0030	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2265	0.0013	0.2700	0.00001	0.0800	0.0522	3.2500	0.0000	0.0003	0.0001	0.0005	0.0003	0.0028	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2250	0.0014	0.2700	0.00001	0.0800	0.0524	3.2400	0.0000	0.0002	0.0001	0.0005	0.0003	0.0025	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2235	0.0015	0.2700	0.00001	0.0800	0.0526	3.2300	0.0000	0.0002	0.0001	0.0005	0.0003	0.0023	0.0000
M-09-102 120.5-121.5	0.0001	0.0045	0.2220	0.0016	0.2700	0.00001	0.0800	0.0528	3.2200	0.0000	0.0001	0.0001	0.0005	0.0003	0.0020	0.0000
	0.0001	0.0045	0.2258	0.0013	0.2700	0.00001	0.0830	0.0508	3.1335	0.0000	0.0003	0.0001	0.0005	0.0003	0.0024	0.0000
HC6 LP Hazelton																
M-09-102A 125.5-126.5	0.0034	0.0050	13.5000	0.0249	0.7900	0.00003	5.1900	0.7400	61.3000	0.0001	0.0002	0.0001	0.0130	0.0004	0.0020	0.0000
M-09-102A 125.5-126.5	0.0009	0.0050	8.2900	0.0416	0.8800	0.00002	3.0100	0.5150	52.8000	0.0001	0.0007	0.0001	0.0204	0.0004	0.0005	0.0000
M-09-102A 125.5-126.5	0.0004	0.0050	4.6900	0.0211	0.7900	0.00001	1.5300	0.3270	29.9000	0.0001	0.0006	0.0001	0.0224	0.0004	0.0005	0.0000
M-09-102A 125.5-126.5	0.0004	0.0050	3.2900	0.0160	0.7800	0.00001	0.9700	0.2710	24.5000	0.0001	0.0006	0.0001	0.0252	0.0004	0.0005	0.0000
M-09-102A 125.5-126.5	0.0005	0.0050	2.4100	0.0136	0.6800	0.00001	0.6800	0.2020	15.9000	0.0001	0.0006	0.0001	0.0210	0.0003	0.0005	0.0000
M-09-102A 125.5-126.5	0.0003	0.0050	2.2700	0.0134	0.8000	0.00001	0.5600	0.2020	16.4000	0.0001	0.0003	0.0001	0.0278	0.0004	0.0005	0.0000
M-09-102A 125.5-126.5	0.0022	0.0050	1.7900	0.0103	0.8400	0.00040	0.4600	0.1840	14.7000	0.0001	0.0002	0.0001	0.0221	0.0003	0.0005	0.0000
M-09-102A 125.5-126.5	0.0003	0.0050	1.9300	0.0114	0.9500	0.00001	0.4400	0.1940	14.3000	0.0001	0.0001	0.0001	0.0243	0.0004	0.0005	0.0000
M-09-102A 125.5-126.5	0.0002	0.0050	1.4100	0.0091	0.7800	0.00001	0.3500	0.1460	11.5000	0.0001	0.0002	0.0001	0.0205	0.0004	0.0005	0.0000
M-09-102A 125.5-126.5	0.0001	0.0050	1.1800	0.0072	0.7000	0.00001	0.3100	0.1340	9.7500	0.0001	0.0002	0.0001	0.0195	0.0003	0.0005	0.0000
M-09-102A 125.5-126.5	0.0002	0.0050	1.2900	0.0084	0.7400	0.00001	0.3200	0.1390	10.9000	0.0001	0.0002	0.0001	0.0203	0.0004	0.0005	0.0000
M-09-102A 125.5-126.5	0.0002	0.0050	1.1500	0.0078	0.7800	0.00001	0.2600	0.1300	10.0000	0.0001	0.0002	0.0001	0.0161	0.0004	0.0005	0.0000
M-09-102A 125.5-126.5	0.0001	0.0050	0.8600	0.0069	0.6700	0.00001	0.2200	0.1130	8.3700	0.0001	0.0002	0.0001	0.0162	0.0004	0.0005	0.0000
M-09-102A 125.5-126.5	0.0002	0.0200	0.8500	0.0065	0.6400	0.00001	0.1600	0.1020	8.0400	0.0001	0.0004	0.0001	0.0155	0.0003	0.0020	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	1.0100	0.0074	0.8800	0.00001	0.2000	0.1340	10.2000	0.0001	0.0002	0.0001	0.0168	0.0004	0.0005	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.9630	0.0073	0.8300	0.00001	0.2500	0.1280	11.1000	0.0001	0.0002	0.0001	0.0159	0.0005	0.0010	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.8690	0.0067	0.8300	0.00001	0.2000	0.1280	9.9200	0.0001	0.0002	0.0001	0.0140	0.0004	0.0005	0.0000
M-09-102A 125.5-126.5	0.0001	0.0150	0.8610	0.0061	0.9000	0.00001	0.2200	0.1350	11.0000	0.0001	0.0002	0.0001	0.0147	0.0004	0.0005	0.0000
M-09-102A 125.5-126.5	0.0002	0.0140	0.7160	0.0058	0.7200	0.00004	0.1900	0.1170	8.9900	0.0001	0.0003	0.0001	0.0123	0.0004	0.0010	0.0000
M-09-102A 125.5-126.5	0.0002	0.0140	0.7430	0.0062	0.7800	0.00001	0.1900	0.1160	9.5700	0.0001	0.0000	0.0001	0.0120	0.0004	0.0005	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.7670	0.0055	0.8300	0.00001	0.1900	0.1200	9.7200	0.0001	0.0002	0.0001	0.0118	0.0004	0.0005	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.6720	0.0047	0.7300	0.00001	0.1100	0.1180	9.5200	0.0001	0.0001	0.0001	0.0115	0.0004	0.0005	0.0000
M-09-102A 125.5-126.5	0.0002	0.0250	0.6790	0.0044	0.7500	0.00001	0.1600	0.1180	9.2300	0.0001	0.0003	0.0001	0.0103	0.0003	0.0005	0.0000
M-09-102A 125.5-126.5	0.0004	0.0045	0.6520	0.0050	0.7500	0.00001	0.1600	0.1140	8.5100	0.0001	0.0005	0.0001	0.0112	0.0003	0.0005	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.6270	0.0048	0.7500	0.00001	0.1400	0.0796	8.1000	0.0001	0.0002	0.0001	0.0095	0.0003	0.0020	0.0000
M-09-102A 125.5-126.5	0.0001	0.0120	0.6180	0.0054	0.7700	0.00001	0.1600	0.1120	9.1900	0.0001	0.0001	0.0001	0.0091	0.0003	0.0005	0.0000
M-09-102A 125.5-126.5	0.0003	0.0045	0.5830	0.0046	0.7400	0.00001	0.1400	0.1070	8.6400	0.0001	0.0001	0.0001	0.0094	0.0004	0.0005	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.5280	0.0046	0.6400	0.00001	0.1200	0.1120	9.2600	0.0001	0.0001	0.0001	0.0099	0.0003	0.0005	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.5420	0.0049	0.7500	0.00001	0.1100	0.1090	9.6800	0.0001	0.0000	0.0001	0.0085	0.0002	0.0010	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.4980	0.0044	0.5800	0.00001	0.1100	0.0870	8.0900	0.0001	0.0003	0.0001	0.0061	0.0004	0.0005	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-102A 125.5-126.5	6	30	2-Sep-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	455	34	68	7.26	4.4	13.5	30	0.1
M-09-102A 125.5-126.5	6	31	9-Sep-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	455	34	80	7.00	5.1	14.4	27	0.1
M-09-102A 125.5-126.5	6	32	16-Sep-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	445	33	73	7.03	3.4	13.2	25	0.1
M-09-102A 125.5-126.5	6	33	23-Sep-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	455	33	67	7.13	3.1	12.5	32	0.1
M-09-102A 125.5-126.5	6	34	30-Sep-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	505	38	68	7.17	2.9	14.1	31	0.1
M-09-102A 125.5-126.5	6	35	7-Oct-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	450	38	89	7.13	3.8	14.2	30	0.1
M-09-102A 125.5-126.5	6	36	14-Oct-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	460	42	88	7.12	3.8	14.1	26	0.1
M-09-102A 125.5-126.5	6	37	21-Oct-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	490	39	89	7.16	3.3	14.8	29	0.1
M-09-102A 125.5-126.5	6	38	28-Oct-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	34	82	7.11	3.3	15.3	26	0.1
M-09-102A 125.5-126.5	6	39	4-Nov-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	490	33	83	7.25	2.8	11.5	25	0.1
M-09-102A 125.5-126.5	6	40	11-Nov-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	430	35	81	7.33	2.9	11.7	21	0.1
M-09-102A 125.5-126.5	6	41	18-Nov-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	475	35	61	7.41	3.5	14.0	23	0.1
M-09-102A 125.5-126.5	6	42	25-Nov-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	480	33	77	7.10	3.4	14.1	24	0.1
M-09-102A 125.5-126.5	6	43	2-Dec-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	500	40	77	7.19	3.6	14.6	18	0.1
M-09-102A 125.5-126.5	6	44	9-Dec-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	485	32	73	7.14	4.4	12.4	19	0.1
M-09-102A 125.5-126.5	6	45	16-Dec-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	480	35	75	7.18	4.5	14.6	22	0.1
M-09-102A 125.5-126.5	6	46	23-Dec-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	500	36	73	7.35	5.3	14.9	20	0.1
M-09-102A 125.5-126.5	6	47	30-Dec-10	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	500	34	68	7.25	5.6	15.4	25	0.1
M-09-102A 125.5-126.5	6	48	6-Jan-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	460	34	54	7.33	4.7	13.9	23	0.1
M-09-102A 125.5-126.5	6	49	13-Jan-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	34	58	7.29	3.8	12.4	21	0.1
M-09-102A 125.5-126.5	6	50	20-Jan-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	450	31	59	6.99	4.4	12.3	21	0.1
M-09-102A 125.5-126.5	6	51	27-Jan-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	460	27	56	7.09	5.0	12.3	20	0.1
M-09-102A 125.5-126.5	6	52	3-Feb-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	455	28	52	7.10	3.9	11.5	20	0.1
M-09-102A 125.5-126.5	6	53	10-Feb-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	470	28	52	7.21	2.8	10.6	19	0.1
M-09-102A 125.5-126.5	6	54	17-Feb-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	450	31	55	7.15	3.6	11.6	23	0.1
M-09-102A 125.5-126.5	6	55	24-Feb-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	490	35	79	7.18	4.5	12.5	27	0.1
M-09-102A 125.5-126.5	6	56	3-Mar-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	455	32	64	7.16	3.9	11.9	26	0.1
M-09-102A 125.5-126.5	6	57	10-Mar-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	450	28	67	7.22	3.3	11.3	24	0.1
M-09-102A 125.5-126.5	6	58	17-Mar-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	475	29	75	7.13	3.5	12.7	21	0.1
M-09-102A 125.5-126.5	6	59	24-Mar-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	465	30	89	7.13	3.8	14.2	17	0.1
M-09-102A 125.5-126.5	6	60	31-Mar-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	465	31	69	7.42	4.4	13.4	18	0.1
M-09-102A 125.5-126.5	6	61	7-Apr-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	470	32	75	7.35	5.0	12.7	19	0.1
M-09-102A 125.5-126.5	6	62	14-Apr-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	500	31	77	7.54	3.6	12.4	19	0.1
M-09-102A 125.5-126.5	6	63	21-Apr-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	470	30	71	7.21	2.3	12.2	19	0.1
M-09-102A 125.5-126.5	6	64	28-Apr-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	480	29	69	7.48	2.9	12.1	21	0.1
M-09-102A 125.5-126.5	6	65	5-May-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	470	29	69	7.18	3.6	12.1	22	0.1
M-09-102A 125.5-126.5	6	66	12-May-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	480	30	72	7.25	3.2	12.3	21	0.1
M-09-102A 125.5-126.5	6	67	19-May-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	500	31	73	7.51	2.8	12.5	20	0.1
M-09-102A 125.5-126.5	6	68	26-May-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	475	29	70	7.44	3.7	12.5	18	0.1
M-09-102A 125.5-126.5	6	69	2-Jun-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	465	27	69	7.34	4.7	12.5	16	0.1
M-09-102A 125.5-126.5	6	70	9-Jun-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	480	28	75	7.20	4.3	12.3	17	0.1
M-09-102A 125.5-126.5	6	71	16-Jun-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	480	28	71	7.37	4.0	12.1	17	0.1
M-09-102A 125.5-126.5	6	72	23-Jun-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	475	30	76	7.33	4.0	12.0	19	0.2
M-09-102A 125.5-126.5	6	73	30-Jun-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	475	31	71	7.35	4.0	12.0	20	0.2
M-09-102A 125.5-126.5	6	74	7-Jul-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	475	35	74	7.26	4.1	13.6	20	0.2
M-09-102A 125.5-126.5	6	75	14-Jul-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	490	38	80	7.46	4.3	15.2	20	0.1
M-09-102A 125.5-126.5	6	76	21-Jul-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	485	34	79	7.40	4.2	14.3	21	0.1
M-09-102A 125.5-126.5	6	77	28-Jul-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	470	29	76	7.52	4.1	13.4	22	0.1
M-09-102A 125.5-126.5	6	78	4-Aug-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	485	32	78	7.16	3.9	13.8	21	0.1
M-09-102A 125.5-126.5	6	79	11-Aug-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	475	35	74	7.54	3.7	14.2	20	0.1
M-09-102A 125.5-126.5	6	80	18-Aug-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	425	35	78	7.45	4.4	15.0	21	0.1
M-09-102A 125.5-126.5	6	81	25-Aug-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	485	34	76	7.49	5.1	15.8	21	0.1
M-09-102A 125.5-126.5	6	82	1-Sep-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	33	81	7.60	4.6	14.7	21	0.1
M-09-102A 125.5-126.5	6	83	8-Sep-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	475	31	72	7.41	4.2	13.7	21	0.1
M-09-102A 125.5-126.5	6	84	15-Sep-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	485	34	76	7.40	3.8	13.9	22	0.1
M-09-102A 125.5-126.5	6	85	22-Sep-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	490	37	79	7.19	3.4	14.2	23	0.1
M-09-102A 125.5-126.5	6	86	29-Sep-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	490	36	74	7.24	4.0	13.9	24	0.1
M-09-102A 125.5-126.5	6	87	6-Oct-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	34	77	7.34	4.7	13.5	24	0.1
M-09-102A 125.5-126.5	6	88	13-Oct-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	34	73	7.25	4.4	13.1	24	0.1
M-09-102A 125.5-126.5	6	89	20-Oct-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	500	35	74	7.34	4.2	12.6	23	0.1
M-09-102A 125.5-126.5	6	90	27-Oct-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	490	34	77	7.31	4.9	13.7	24	0.1
M-09-102A 125.5-126.5	6	91	3-Nov-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	34	77	7.49	5.6	14.7	25	0.1
M-09-102A 125.5-126.5	6	92	10-Nov-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	500	35	73	7.56	4.6	14.8	24	0.1
M-09-102A 125.5-126.5	6	93	17-Nov-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	36	77	7.23	3.7	14.9	22	0.1
M-09-102A 125.5-126.5	6	94	24-Nov-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	500	34	71	7.38	4.6	15.1	21	0.1
M-09-102A 125.5-126.5	6	95	1-Dec-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	490	33	71	7.36	5.6	15.2	20	0.1
M-09-102A 125.5-126.5	6	96	8-Dec-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	32	72	7.37	5.3	15.7	20	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-102A 125.5-126.5	0.03	0.0484	0.0021	0.0007	0.0188	0.0000	0.0000	0.0018	0.00002	11.2000	0.0003	0.0002	0.0010	0.0010	0.00017	0.0005	1.4500	0.1030	0.0000050	0.0258
M-09-102A 125.5-126.5	0.03	0.0491	0.0023	0.0008	0.0170	0.0000	0.0000	0.0024	0.00002	11.1000	0.0006	0.0002	0.0020	0.0020	0.00016	0.0005	1.4500	0.1230	0.0000050	0.0240
M-09-102A 125.5-126.5	0.03	0.0538	0.0023	0.0006	0.0152	0.0000	0.0000	0.0019	0.00001	10.7000	0.0003	0.0002	0.0010	0.0010	0.00022	0.0005	1.4200	0.1120	0.0000050	0.0223
M-09-102A 125.5-126.5	0.03	0.0417	0.0022	0.0006	0.0152	0.0000	0.0000	0.0024	0.00002	10.8000	0.0008	0.0002	0.0011	0.0010	0.00013	0.0005	1.4700	0.1140	0.0000100	0.0232
M-09-102A 125.5-126.5	0.03	0.0685	0.0024	0.0009	0.0189	0.0000	0.0000	0.0055	0.00000	12.6000	0.0003	0.0002	0.0011	0.0010	0.00011	0.0005	1.4800	0.1360	0.0000050	0.0224
M-09-102A 125.5-126.5	0.03	0.0444	0.0026	0.0006	0.0170	0.0000	0.0000	0.0031	0.00003	12.6000	0.0006	0.0002	0.0013	0.0010	0.00011	0.0005	1.6800	0.1320	0.0000100	0.0286
M-09-102A 125.5-126.5	0.03	0.0419	0.0028	0.0009	0.0162	0.0000	0.0000	0.0039	0.00003	13.7000	0.0003	0.0002	0.0012	0.0010	0.00011	0.0005	1.9000	0.1580	0.0000050	0.0293
M-09-102A 125.5-126.5	0.03	0.0406	0.0025	0.0006	0.0186	0.0000	0.0000	0.0063	0.00003	13.1000	0.0005	0.0002	0.0006	0.0040	0.00011	0.0005	1.6100	0.1480	0.0000050	0.0303
M-09-102A 125.5-126.5	0.03	0.0405	0.0022	0.0005	0.0184	0.0000	0.0000	0.0029	0.00003	11.3000	0.0003	0.0002	0.0003	0.0010	0.00009	0.0005	1.4200	0.1300	0.0000050	0.0289
M-09-102A 125.5-126.5	0.03	0.0441	0.0016	0.0007	0.0167	0.0000	0.0000	0.0023	0.00004	10.6000	0.0003	0.0002	0.0009	0.0040	0.00081	0.0005	1.5400	0.1130	0.0000050	0.0337
M-09-102A 125.5-126.5	0.03	0.0432	0.0017	0.0007	0.0126	0.0000	0.0000	0.0019	0.00004	11.4000	0.0003	0.0002	0.0007	0.0030	0.00067	0.0005	1.6900	0.1100	0.0000100	0.0356
M-09-102A 125.5-126.5	0.03	0.0344	0.0022	0.0006	0.0184	0.0000	0.0000	0.0042	0.00001	11.5000	0.0003	0.0002	0.0003	0.0010	0.00048	0.0005	1.5700	0.1300	0.0000050	0.0337
M-09-102A 125.5-126.5	0.03	0.0319	0.0019	0.0007	0.0163	0.0000	0.0000	0.0026	0.00003	10.9000	0.0006	0.0002	0.0006	0.0010	0.00010	0.0005	1.4400	0.1330	0.0000050	0.0290
M-09-102A 125.5-126.5	0.03	0.0315	0.0021	0.0006	0.0173	0.0000	0.0000	0.0027	0.00003	13.2000	0.0006	0.0002	0.0009	0.0010	0.00200	0.0005	1.7200	0.1520	0.0000050	0.0305
M-09-102A 125.5-126.5	0.03	0.0337	0.0021	0.0005	0.0158	0.0000	0.0000	0.0024	0.00003	10.6000	0.0009	0.0046	0.1440	0.0010	0.00130	0.0005	1.4400	0.1210	0.0000050	0.0312
M-09-102A 125.5-126.5	0.03	0.0307	0.0020	0.0005	0.0163	0.0000	0.0000	0.0034	0.00000	11.2000	0.0003	0.0002	0.0008	0.0010	0.00008	0.0005	1.5900	0.1280	0.0000050	0.0315
M-09-102A 125.5-126.5	0.03	0.0385	0.0021	0.0007	0.0160	0.0000	0.0000	0.0034	0.00002	11.8000	0.0003	0.0001	0.0008	0.0010	0.00059	0.0005	1.6100	0.1340	0.0000050	0.0315
M-09-102A 125.5-126.5	0.03	0.0247	0.0021	0.0005	0.0139	0.0000	0.0000	0.0020	0.00002	11.0000	0.0003	0.0002	0.0009	0.0010	0.00055	0.0005	1.6100	0.1330	0.0000050	0.0313
M-09-102A 125.5-126.5	0.03	0.0265	0.0020	0.0005	0.0146	0.0000	0.0000	0.0021	0.00003	11.0500	0.0003	0.0002	0.0008	0.0010	0.00032	0.0005	1.5850	0.1345	0.0000050	0.0284
M-09-102A 125.5-126.5	0.03	0.0283	0.0018	0.0005	0.0153	0.0000	0.0000	0.0021	0.00003	11.1000	0.0003	0.0002	0.0006	0.0010	0.00008	0.0005	1.5600	0.1360	0.0000050	0.0254
M-09-102A 125.5-126.5	0.03	0.0269	0.0017	0.0005	0.0135	0.0000	0.0000	0.0023	0.00003	9.9200	0.0003	0.0001	0.0004	0.0010	0.00007	0.0005	1.4350	0.1177	0.0000050	0.0254
M-09-102A 125.5-126.5	0.03	0.0255	0.0015	0.0004	0.0117	0.0000	0.0000	0.0024	0.00003	8.7400	0.0003	0.0001	0.0003	0.0010	0.00006	0.0005	1.3100	0.0994	0.0000050	0.0253
M-09-102A 125.5-126.5	0.03	0.0264	0.0015	0.0004	0.0120	0.0000	0.0000	0.0024	0.00002	8.8800	0.0003	0.0001	0.0005	0.0010	0.00005	0.0005	1.3550	0.0975	0.0000050	0.0228
M-09-102A 125.5-126.5	0.03	0.0273	0.0014	0.0004	0.0123	0.0000	0.0000	0.0024	0.00001	9.0200	0.0003	0.0001	0.0007	0.0010	0.00003	0.0005	1.4000	0.0956	0.0000050	0.0202
M-09-102A 125.5-126.5	0.03	0.0268	0.0015	0.0005	0.0132	0.0000	0.0000	0.0044	0.00001	10.1600	0.0003	0.0001	0.0007	0.0010	0.00003	0.0005	1.4750	0.1143	0.0000050	0.0212
M-09-102A 125.5-126.5	0.03	0.0263	0.0016	0.0005	0.0141	0.0000	0.0000	0.0063	0.00001	11.3000	0.0003	0.0002	0.0006	0.0010	0.00003	0.0005	1.5500	0.1330	0.0000050	0.0222
M-09-102A 125.5-126.5	0.03	0.0268	0.0015	0.0004	0.0126	0.0000	0.0000	0.0038	0.00001	10.1900	0.0003	0.0001	0.0006	0.0015	0.00059	0.0005	1.4700	0.1156	0.0000050	0.0222
M-09-102A 125.5-126.5	0.03	0.0272	0.0013	0.0003	0.0111	0.0000	0.0000	0.0013	0.00002	9.0800	0.0003	0.0001	0.0005	0.0020	0.00114	0.0005	1.3900	0.0982	0.0000050	0.0222
M-09-102A 125.5-126.5	0.03	0.0272	0.0013	0.0003	0.0110	0.0000	0.0000	0.0014	0.00002	9.4250	0.0003	0.0001	0.0012	0.0015	0.00060	0.0005	1.3950	0.1031	0.0000050	0.0224
M-09-102A 125.5-126.5	0.03	0.0271	0.0013	0.0003	0.0108	0.0000	0.0000	0.0014	0.00001	9.7700	0.0003	0.0001	0.0018	0.0010	0.00005	0.0005	1.4000	0.1080	0.0000050	0.0225
M-09-102A 125.5-126.5	0.03	0.0273	0.0014	0.0004	0.0115	0.0000	0.0000	0.0016	0.00001	10.0350	0.0003	0.0001	0.0019	0.0035	0.00005	0.0005	1.5050	0.1190	0.0000050	0.0233
M-09-102A 125.5-126.5	0.03	0.0274	0.0015	0.0005	0.0121	0.0000	0.0000	0.0017	0.00001	10.3000	0.0003	0.0001	0.0019	0.0060	0.00004	0.0005	1.6100	0.1300	0.0000050	0.0240
M-09-102A 125.5-126.5	0.03	0.0288	0.0014	0.0003	0.0114	0.0000	0.0000	0.0017	0.00001	9.9700	0.0003	0.0001	0.0013	0.0035	0.00005	0.0005	1.4900	0.1175	0.0000075	0.0252
M-09-102A 125.5-126.5	0.03	0.0301	0.0013	0.0001	0.0106	0.0000	0.0000	0.0017	0.00001	9.6400	0.0003	0.0001	0.0007	0.0010	0.00005	0.0005	1.3700	0.1050	0.0000100	0.0263
M-09-102A 125.5-126.5	0.03	0.0289	0.0016	0.0002	0.0101	0.0000	0.0000	0.0016	0.00001	9.4850	0.0003	0.0002	0.0025	0.0010	0.00005	0.0005	1.3950	0.1035	0.0000075	0.0256
M-09-102A 125.5-126.5	0.03	0.0276	0.0018	0.0003	0.0096	0.0000	0.0000	0.0015	0.00000	9.3300	0.0003	0.0002	0.0043	0.0010	0.00004	0.0005	1.4200	0.1020	0.0000050	0.0249
M-09-102A 125.5-126.5	0.03	0.0280	0.0017	0.0004	0.0101	0.0000	0.0000	0.0017	0.00001	9.7150	0.0003	0.0002	0.0032	0.0010	0.00003	0.0005	1.4350	0.1035	0.0000050	0.0256
M-09-102A 125.5-126.5	0.03	0.0284	0.0016	0.0004	0.0107	0.0000	0.0000	0.0018	0.00001	10.1000	0.0003	0.0001	0.0020	0.0010	0.00001	0.0005	1.4500	0.1050	0.0000050	0.0263
M-09-102A 125.5-126.5	0.03	0.0257	0.0014	0.0004	0.0099	0.0000	0.0000	0.0018	0.00001	9.4300	0.0003	0.0001	0.0013	0.0010	0.00003	0.0005	1.4000	0.1018	0.0011025	0.0257
M-09-102A 125.5-126.5	0.03	0.0230	0.0012	0.0003	0.0091	0.0000	0.0000	0.0017	0.00001	8.7600	0.0003	0.0002	0.0006	0.0010	0.00005	0.0005	1.3500	0.0986	0.0022000	0.0251
M-09-102A 125.5-126.5	0.03	0.0249	0.0013	0.0003	0.0095	0.0000	0.0000	0.0019	0.00001	8.9750	0.0005	0.0001	0.0004	0.0025	0.00006	0.0005	1.3350	0.0980	0.0011050	0.0252
M-09-102A 125.5-126.5	0.03	0.0268	0.0014	0.0003	0.0098	0.0000	0.0000	0.0021	0.00001	9.1900	0.0007	0.0001	0.0003	0.0040	0.00007	0.0005	1.3200	0.0973	0.0000100	0.0253
M-09-102A 125.5-126.5	0.03	0.0258	0.0014	0.0003	0.0099	0.0000	0.0000	0.0026	0.00001	9.4850	0.0005	0.0001	0.0004	0.0025	0.00005	0.0005	1.4300	0.1042	0.0000100	0.0263
M-09-102A 125.5-126.5	0.03	0.0247	0.0014	0.0003	0.0099	0.0000	0.0000	0.0031	0.00001	9.7800	0.0003	0.0001	0.0005	0.0010	0.00002	0.0005	1.5400	0.1110	0.0000100	0.0272
M-09-102A 125.5-126.5	0.03	0.0375	0.0015	0.0004	0.0110	0.0000	0.0000	0.0030	0.00001	11.0900	0.0003	0.0001	0.0006	0.0010	0.00006	0.0005	1.6750	0.1175	0.0000075	0.0281
M-09-102A 125.5-126.5	0.03	0.0503	0.0016	0.0005	0.0120	0.0000	0.0000	0.0028	0.00001	12.4000	0.0003	0.0001	0.0006	0.0010	0.00009	0.0005	1.8100	0.1240	0.0000050	0.0290
M-09-102A 125.5-126.5	0.03	0.0441	0.0015	0.0005	0.0118	0.0000	0.0000	0.0029	0.00002	10.8850	0.0003	0.0001	0.0004	0.0070	0.00008	0.0005	1.6300	0.1330	0.0000050	0.0279
M-09-102A 125.5-126.5	0.03	0.0379	0.0014	0.0005	0.0116	0.0000	0.0000	0.0030	0.00002	9.3700	0.0003	0.0001	0.0003	0.0130	0.00006	0.0005	1.4500	0.1420	0.0000050	0.0267
M-09-102A 125.5-126.5	0.03	0.0363	0.0015	0.0005	0.0119	0.0000	0.0000	0.0026	0.00001	10.3350	0.0004	0.0001	0.0003	0.0070	0.00008	0.0005	1.5850	0.1330	0.0000050	0.0269
M-09-102A 125.5-126.5	0.03	0.0347	0.0015	0.0004	0.0121	0.0000	0.0000	0.0022	0.00001	11.3000	0.0006	0.0001	0.0003	0.0010	0.00010	0.0005	1.7200	0.1240	0.0000050	0.0271
M-09-102A 125.5-126.5	0.03	0.0358	0.0016	0.0005	0.0122	0.0000	0.0000	0.0029	0.00001	11.0500	0.0009	0.0001	0.0004	0.0025	0.00009	0.0005	1.7100	0.1210	0.0000050	0.0290
M-09-102A 125.5-126.5	0.03	0.0368	0.0016	0.0005	0.0122	0.0000	0.0000	0.0035	0.00001	10.8000	0.0012	0.0001	0.0006	0.0040	0.00008	0.0005	1.7000	0.1180	0.0000050	0.0309
M-09-102A 125.5-126.5	0.03	0.0387	0.0016	0.0005	0.0120	0.0000	0.0000	0.0031	0.00001	10.4000	0.0010	0.0001	0.0013	0.0025	0.00010	0.0005	1.6050	0.1110	0.0000075	0.0298
M-09-102A 125.5-126.5	0.03	0.0405	0.0015	0.0005	0.0118	0.0000	0.0000	0.0026	0.00001	10.0000	0.0007	0.0001	0.0020	0.0010	0.00012	0.0005	1.5100	0.1040	0.0000100	0.0286
M-09-102A 125.5-126.5	0.03	0.0360	0.0017	0.0005	0.0121	0.0000	0.0000	0.0025	0.00002	10.9000	0.0010	0.0001	0.0025	0.0035	0.00011	0.0005	1.6700	0.1160	0.0000100	0.0295
M-09-102A 125.5-126.5	0.03	0.0315	0.0019	0.0005	0.0123	0.0000	0.0000	0.0023	0.00003	11.8000	0.0012	0.0002	0.0030	0.0060	0.00009	0.0005	1.8300	0.1280	0.0000100	0.0304
M-09-102A 125.5-126.5	0.03	0.0314	0.0019	0.0008	0.0127	0.0000	0.0000	0.0024	0.00003	11.3500	0.0009	0.0001	0.0020	0.0035	0.00009	0.0005	1.7750	0.1255	0.0000100	0.0303
M-09-102A 125.5-126.5	0.03	0.0312	0.0018	0.0010	0.0131	0.0000	0.0000	0.0024	0.00002	10.9000	0.0006	0.0001	0.0009	0.0010	0.00009	0.0005	1.7200	0.1230	0.0000100	0.0302
M-09-102A 125.5-126.5	0.03	0.0310	0.0016	0.0008	0.0136	0.0000	0.0000	0.0027	0.00002	10.9500	0.0004	0.0001	0.0008	0.0013	0.00012	0.0005	1.7350	0.1210	0.0000100	0.0291
M-09-102A 125.5-126.5	0.03	0.0308	0.0013	0.0005	0.0140	0.0000	0.0000	0.0030	0.00001	11.0000	0.0003	0.0001	0.0007	0.0015	0.00014	0.0005	1.7500	0.1190	0.0000100	0.0279
M-09-102A 125.5-126.5	0.03	0.0281	0.0013	0.0005	0.0134	0.0000	0.0000	0.0023	0.00002	10.8500	0.0004	0.0001	0.0006	0.1363	0.00010	0.0005	1.7800	0.1195	0.0000075	0.0302
M-09-102A 125.5-126.5	0.03	0.0253	0.0012	0.0004	0.0127	0.0000	0.0000	0.0016	0.00002	10.7000	0.0006	0.0001	0.0005	0.2710	0.00005	0.0005	1.8100	0.1200	0.0000050	0.0324
M-09-102A 125.5-126.5	0.03	0.0298	0.0014	0.0004	0.0133	0.0000	0.0000	0.0021	0.00002	11.0000	0.0004	0.0001	0.0011	0.1363	0.00004	0.0005	1.8150	0.1265	0.0000050	0.0314
M-09-102A 125.5-126.5	0.03	0.0342	0.0016	0.0003	0.0138	0.0000	0.0000	0.0026	0.00002	11.3000	0.0003	0.0001	0.0016	0.0015	0.00003	0.0005	1.8200	0.1330	0.0000050	0.0304
M-09-102A 125.5-126.5	0.03	0.0380	0.0017	0.0004	0.0147	0.0000	0.0000	0.0025	0.00002	10.8500	0.0003	0.0002	0.0014	0.0015	0.00028	0.0005	1.7450	0.1275	0.0000050	0.0313
M-09-102A 125.5-126.5	0.03	0.0418	0.0017	0.0004	0.0156	0.0000	0.0000	0.0024	0.00002	10.4000	0.0003	0.0002	0.0011	0.0015	0.00052	0.0005	1.6700	0.1220	0.0000050	0.0322
M-09-102A 125.5-126.5	0.03	0.0429	0.0016	0.0004	0.0154	0.0000	0.0000	0.0022	0.00002	10.3000	0.0003	0.0001	0.0009	0.0023	0.00028	0.0005	1.6100	0.1235	0.0000050	0.0315

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-102A 125.5-126.5	0.0001	0.0140	0.4790	0.0045	0.6000	0.00001	0.1000	0.0898	8.4500	0.0001	0.0001	0.0001	0.0058	0.0003	0.0005	0.0000
M-09-102A 125.5-126.5	0.0003	0.0045	0.4670	0.0043	0.5800	0.00001	0.1200	0.0870	8.3200	0.0001	0.0002	0.0001	0.0051	0.0003	0.0005	0.0000
M-09-102A 125.5-126.5	0.0002	0.0100	0.4870	0.0046	0.6000	0.00001	0.1300	0.0856	8.3900	0.0001	0.0003	0.0001	0.0051	0.0003	0.0005	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.4810	0.0048	0.5800	0.00001	0.1500	0.0872	8.0200	0.0001	0.0002	0.0001	0.0043	0.0003	0.0005	0.0000
M-09-102A 125.5-126.5	0.0004	0.0045	0.4680	0.0041	0.7300	0.00001	0.2000	0.0966	9.8100	0.0001	0.0015	0.0002	0.0046	0.0003	0.0005	0.0000
M-09-102A 125.5-126.5	0.0007	0.0045	0.5080	0.0052	0.6400	0.00001	0.1400	0.0932	10.1000	0.0001	0.0006	0.0002	0.0045	0.0003	0.0010	0.0000
M-09-102A 125.5-126.5	0.0004	0.0160	0.4920	0.0045	0.7500	0.00001	0.1300	0.1060	9.6900	0.0001	0.0005	0.0002	0.0042	0.0003	0.0010	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.4380	0.0043	0.7000	0.00001	0.1200	0.1030	9.6500	0.0001	0.0003	0.0001	0.0048	0.0003	0.0020	0.0000
M-09-102A 125.5-126.5	0.0004	0.0100	0.4040	0.0035	0.6400	0.00001	0.1000	0.0889	8.5600	0.0001	0.0000	0.0001	0.0051	0.0003	0.0010	0.0000
M-09-102A 125.5-126.5	0.0009	0.0240	0.4210	0.0040	0.5400	0.00001	0.1100	0.0845	7.7700	0.0001	0.0003	0.0001	0.0033	0.0001	0.0030	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.4230	0.0038	0.4900	0.00001	0.1400	0.0864	8.1600	0.0001	0.0006	0.0002	0.0034	0.0002	0.0040	0.0000
M-09-102A 125.5-126.5	0.0003	0.0045	0.3940	0.0035	0.6300	0.00001	0.1000	0.0909	8.2200	0.0001	0.0024	0.0001	0.0048	0.0002	0.0030	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.3520	0.0036	0.5800	0.00001	0.0700	0.0874	7.0100	0.0001	0.0002	0.0002	0.0048	0.0002	0.0060	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.3540	0.0035	0.6000	0.00001	0.1000	0.0925	7.5100	0.0001	0.0002	0.0001	0.0048	0.0002	0.0020	0.0000
M-09-102A 125.5-126.5	0.0011	0.0045	0.3510	0.0036	0.5600	0.00001	0.1100	0.0847	6.8300	0.0001	0.0002	0.0001	0.0041	0.0002	0.0040	0.0000
M-09-102A 125.5-126.5	0.0001	0.0300	0.3480	0.0032	0.5800	0.00001	0.1100	0.0882	7.2300	0.0001	0.0005	0.0001	0.0040	0.0002	0.0005	0.0000
M-09-102A 125.5-126.5	0.0002	0.0260	0.4090	0.0036	0.7400	0.00001	0.1200	0.0969	8.8200	0.0001	0.0002	0.0001	0.0041	0.0002	0.0010	0.0000
M-09-102A 125.5-126.5	0.0003	0.0045	0.3590	0.0036	0.6200	0.00001	0.1000	0.0926	7.7500	0.0001	0.0003	0.0001	0.0052	0.0002	0.0020	0.0000
M-09-102A 125.5-126.5	0.0002	0.0253	0.3550	0.0034	0.6300	0.00001	0.1050	0.0920	8.1400	0.0001	0.0004	0.0001	0.0039	0.0002	0.0013	0.0000
M-09-102A 125.5-126.5	0.0001	0.0460	0.3510	0.0031	0.6400	0.00001	0.1100	0.0913	8.5300	0.0001	0.0005	0.0001	0.0039	0.0002	0.0005	0.0000
M-09-102A 125.5-126.5	0.0002	0.0325	0.3165	0.0030	0.5250	0.00001	0.1000	0.0795	7.5250	0.0001	0.0004	0.0001	0.0030	0.0002	0.0008	0.0000
M-09-102A 125.5-126.5	0.0003	0.0190	0.2820	0.0030	0.4100	0.00001	0.0900	0.0676	6.5200	0.0001	0.0003	0.0001	0.0030	0.0001	0.0010	0.0000
M-09-102A 125.5-126.5	0.0005	0.0220	0.2980	0.0030	0.4400	0.00001	0.0900	0.0685	6.3350	0.0001	0.0002	0.0001	0.0022	0.0001	0.0008	0.0000
M-09-102A 125.5-126.5	0.0006	0.0250	0.3140	0.0029	0.4700	0.00001	0.0900	0.0693	6.1500	0.0001	0.0000	0.0001	0.0014	0.0001	0.0005	0.0000
M-09-102A 125.5-126.5	0.0005	0.0420	0.2995	0.0029	0.5250	0.00001	0.1050	0.0773	7.0850	0.0001	0.0002	0.0001	0.0026	0.0001	0.0005	0.0000
M-09-102A 125.5-126.5	0.0003	0.0590	0.2850	0.0028	0.5800	0.00001	0.1200	0.0853	8.0200	0.0001	0.0003	0.0001	0.0037	0.0002	0.0005	0.0000
M-09-102A 125.5-126.5	0.0003	0.0440	0.2850	0.0027	0.5150	0.00001	0.1050	0.0780	7.0350	0.0001	0.0003	0.0001	0.0033	0.0002	0.0038	0.0000
M-09-102A 125.5-126.5	0.0003	0.0290	0.2850	0.0025	0.4500	0.00001	0.0900	0.0706	6.0500	0.0000	0.0003	0.0001	0.0028	0.0001	0.0070	0.0001
M-09-102A 125.5-126.5	0.0003	0.0260	0.2780	0.0025	0.4450	0.00001	0.0900	0.0732	6.4350	0.0001	0.0002	0.0001	0.0028	0.0001	0.0038	0.0000
M-09-102A 125.5-126.5	0.0003	0.0230	0.2710	0.0025	0.4400	0.00001	0.0900	0.0757	6.8200	0.0001	0.0002	0.0001	0.0027	0.0002	0.0005	0.0000
M-09-102A 125.5-126.5	0.0002	0.0175	0.2765	0.0025	0.4800	0.00001	0.0900	0.0765	7.3950	0.0001	0.0002	0.0001	0.0027	0.0001	0.0013	0.0000
M-09-102A 125.5-126.5	0.0001	0.0120	0.2820	0.0025	0.5200	0.00001	0.0900	0.0773	7.9700	0.0001	0.0002	0.0001	0.0027	0.0001	0.0020	0.0001
M-09-102A 125.5-126.5	0.0001	0.0190	0.2655	0.0028	0.5000	0.00001	0.0900	0.0747	7.4800	0.0001	0.0002	0.0001	0.0028	0.0002	0.0030	0.0000
M-09-102A 125.5-126.5	0.0002	0.0260	0.2490	0.0031	0.4800	0.00001	0.0900	0.0720	6.9900	0.0001	0.0001	0.0001	0.0029	0.0002	0.0040	0.0000
M-09-102A 125.5-126.5	0.0003	0.0270	0.2630	0.0016	0.4550	0.00001	0.0850	0.0720	6.7950	0.0001	0.0001	0.0001	0.0028	0.0001	0.0023	0.0000
M-09-102A 125.5-126.5	0.0004	0.0280	0.2770	0.0002	0.4300	0.00001	0.0800	0.0719	6.6000	0.0001	0.0001	0.0001	0.0027	0.0001	0.0005	0.0000
M-09-102A 125.5-126.5	0.0003	0.0163	0.2750	0.0016	0.5000	0.00001	0.0900	0.0736	7.1150	0.0001	0.0002	0.0001	0.0026	0.0001	0.0005	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.2730	0.0031	0.5700	0.00002	0.1000	0.0752	7.6300	0.0000	0.0002	0.0001	0.0024	0.0002	0.0005	0.0000
M-09-102A 125.5-126.5	0.0001	0.0173	0.2595	0.0028	0.4800	0.00001	0.1000	0.0698	7.0050	0.0000	0.0002	0.0001	0.0024	0.0001	0.0013	0.0000
M-09-102A 125.5-126.5	0.0001	0.0300	0.2460	0.0025	0.3900	0.00001	0.1000	0.0644	6.3800	0.0000	0.0001	0.0001	0.0023	0.0001	0.0020	0.0000
M-09-102A 125.5-126.5	0.0003	0.0173	0.2350	0.0023	0.4550	0.00001	0.1250	0.0653	6.7000	0.0000	0.0002	0.0001	0.0023	0.0002	0.0025	0.0000
M-09-102A 125.5-126.5	0.0005	0.0045	0.2240	0.0021	0.5200	0.00001	0.1500	0.0662	7.0200	0.0000	0.0003	0.0001	0.0024	0.0002	0.0030	0.0000
M-09-102A 125.5-126.5	0.0004	0.0045	0.2450	0.0023	0.4950	0.00001	0.1150	0.0707	6.9600	0.0000	0.0002	0.0001	0.0025	0.0002	0.0018	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.2660	0.0024	0.4700	0.00001	0.0800	0.0751	6.9000	0.0000	0.0001	0.0001	0.0026	0.0001	0.0005	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.2800	0.0028	0.5650	0.00001	0.0900	0.0823	7.5850	0.0000	0.0001	0.0001	0.0029	0.0002	0.0008	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.2940	0.0031	0.6600	0.00001	0.1000	0.0894	8.2700	0.0000	0.0001	0.0001	0.0032	0.0002	0.0010	0.0000
M-09-102A 125.5-126.5	0.0004	0.0123	0.2690	0.0028	0.6250	0.00001	0.0800	0.0813	7.3150	0.0000	0.0001	0.0001	0.0031	0.0002	0.0010	0.0000
M-09-102A 125.5-126.5	0.0005	0.0200	0.2440	0.0025	0.5900	0.00001	0.0600	0.0731	6.3600	0.0000	0.0001	0.0001	0.0030	0.0002	0.0010	0.0000
M-09-102A 125.5-126.5	0.0003	0.0123	0.2770	0.0027	0.5750	0.00001	0.0650	0.0806	7.2350	0.0000	0.0001	0.0001	0.0030	0.0002	0.0025	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.3100	0.0028	0.5600	0.00001	0.0700	0.0880	8.1100	0.0000	0.0002	0.0001	0.0029	0.0003	0.0040	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.2950	0.0027	0.5450	0.00001	0.0900	0.0862	7.9700	0.0000	0.0002	0.0001	0.0030	0.0002	0.0045	0.0000
M-09-102A 125.5-126.5	0.0003	0.0045	0.2800	0.0026	0.5300	0.00001	0.1100	0.0844	7.8300	0.0000	0.0002	0.0002	0.0031	0.0002	0.0050	0.0000
M-09-102A 125.5-126.5	0.0004	0.0045	0.2660	0.0026	0.5000	0.00001	0.0900	0.0796	7.5300	0.0000	0.0002	0.0003	0.0027	0.0002	0.0050	0.0000
M-09-102A 125.5-126.5	0.0004	0.0045	0.2520	0.0027	0.4700	0.00001	0.0700	0.0748	7.2300	0.0000	0.0002	0.0004	0.0023	0.0001	0.0050	0.0000
M-09-102A 125.5-126.5	0.0005	0.0045	0.2515	0.0026	0.4900	0.00001	0.1000	0.0813	8.0200	0.0000	0.0003	0.0002	0.0026	0.0001	0.0040	0.0000
M-09-102A 125.5-126.5	0.0005	0.0045	0.2510	0.0025	0.5100	0.00001	0.1300	0.0877	8.8100	0.0000	0.0003	0.0001	0.0029	0.0001	0.0030	0.0000
M-09-102A 125.5-126.5	0.0003	0.0045	0.2510	0.0027	0.5000	0.00001	0.1050	0.0859	8.3550	0.0000	0.0002	0.0001	0.0029	0.0001	0.0025	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.2510	0.0028	0.4900	0.00001	0.0800	0.0840	7.9000	0.0000	0.0001	0.0001	0.0028	0.0002	0.0020	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.2505	0.0024	0.4950	0.00001	0.0750	0.0828	7.9550	0.0000	0.0001	0.0001	0.0029	0.0002	0.0020	0.0001
M-09-102A 125.5-126.5	0.0001	0.0045	0.2500	0.0020	0.5000	0.00001	0.0700	0.0816	8.0100	0.0000	0.0001	0.0002	0.0029	0.0002	0.0020	0.0002
M-09-102A 125.5-126.5	0.0002	0.0045	0.2360	0.0023	0.4750	0.00001	0.0650	0.0825	7.9400	0.0000	0.0001	0.0001	0.0031	0.0002	0.0020	0.0001
M-09-102A 125.5-126.5	0.0003	0.0045	0.2220	0.0027	0.4500	0.00001	0.0600	0.0834	7.8700	0.0000	0.0001	0.0001	0.0033	0.0001	0.0020	0.0000
M-09-102A 125.5-126.5	0.0004	0.0045	0.2200	0.0022	0.4950	0.00001	0.0750	0.0851	7.7650	0.0000	0.0001	0.0001	0.0034	0.0002	0.0015	0.0000
M-09-102A 125.5-126.5	0.0004	0.0045	0.2180	0.0018	0.5400	0.00001	0.0900	0.0867	7.6600	0.0000	0.0001	0.0001	0.0035	0.0002	0.0010	0.0000
M-09-102A 125.5-126.5	0.0005	0.0045	0.2180	0.0019	0.4950	0.00001	0.0800	0.0843	7.1350	0.0000	0.0001	0.0001	0.0032	0.0003	0.0020	0.0000
M-09-102A 125.5-126.5	0.0006	0.0045	0.2180	0.0020	0.4500	0.00001	0.0700	0.0819	6.6100	0.0000	0.0001	0.0002	0.0030	0.0004	0.0030	0.0000
M-09-102A 125.5-126.5	0.0004	0.0045	0.2150	0.0020	0.4600	0.00001	0.0750	0.0794	6.6850	0.0000	0.0000	0.0002	0.0031	0.0004	0.0025	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-102A 125.5-126.5	6	97	15-Dec-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	500	32	72	7.46	5.1	16.2	19	0.1
M-09-102A 125.5-126.5	6	98	22-Dec-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	32	72	7.46	4.8	16.2	19	0.1
M-09-102A 125.5-126.5	6	99	29-Dec-11	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	505	32	74	7.41	4.5	16.3	18	0.1
M-09-102A 125.5-126.5	6	100	5-Jan-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	500	32	70	7.23	4.1	16.3	18	0.1
M-09-102A 125.5-126.5	6	101	12-Jan-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	490	32	72	7.29	3.8	16.3	17	0.1
M-09-102A 125.5-126.5	6	102	19-Jan-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	490	32	69	7.37	4.5	16.5	18	0.1
M-09-102A 125.5-126.5	6	103	26-Jan-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	33	70	7.21	5.2	16.7	19	0.1
M-09-102A 125.5-126.5	6	104	2-Feb-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	495	33	73	7.44	5.8	16.9	20	0.1
M-09-102A 125.5-126.5	6	105	9-Feb-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	500	33	79	7.59	6.5	17.1	21	0.1
M-09-102A 125.5-126.5	6	106	16-Feb-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	485	33	80	7.46	6.1	16.2	21	0.1
M-09-102A 125.5-126.5	6	107	23-Feb-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	490	34	48	7.33	5.6	15.3	22	0.1
M-09-102A 125.5-126.5	6	108	1-Mar-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	480	34	74	7.19	5.2	14.4	22	0.1
M-09-102A 125.5-126.5	6	109	8-Mar-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	485	35	77	7.33	4.7	13.5	22	0.1
M-09-102A 125.5-126.5	6	110	15-Mar-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	460	34	71	7.20	4.6	13.3	21	0.1
M-09-102A 125.5-126.5	6	111	22-Mar-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	465	33	75	7.31	4.6	13.1	21	0.1
M-09-102A 125.5-126.5	6	112	29-Mar-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	455	32	73	7.18	4.5	12.9	20	0.1
M-09-102A 125.5-126.5	6	113	5-Apr-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	440	31	70	7.22	4.4	12.7	19	0.1
M-09-102A 125.5-126.5	6	114	12-Apr-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	470	31	84	7.14	4.4	12.7	19	0.1
M-09-102A 125.5-126.5	6	115	19-Apr-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	475	31	85	7.36	4.4	12.7	19	0.1
M-09-102A 125.5-126.5	6	116	26-Apr-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	450	35	88	7.14	5.7	15.8	24	0.1
M-09-102A 125.5-126.5	6	117	3-May-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	475	37	84	7.57	6.1	16.8	26	0.1
M-09-102A 125.5-126.5	6	118	10-May-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	450	37	91	7.31	6.1	16.2	25	0.1
M-09-102A 125.5-126.5	6	119	17-May-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	395	36	93	7.27	6.1	15.6	23	0.1
M-09-102A 125.5-126.5	6	120	24-May-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	465	36	81	7.47	6.1	15.0	22	0.1
M-09-102A 125.5-126.5	6	121	31-May-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	470	36	79	7.42	6.1	14.4	20	0.1
M-09-102A 125.5-126.5	6	122	7-Jun-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	470	36	86	7.19	6.2	14.4	20	0.1
M-09-102A 125.5-126.5	6	123	14-Jun-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	465	36	87	7.35	6.2	14.4	20	0.1
M-09-102A 125.5-126.5	6	124	21-Jun-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	460	36	84	7.37	6.3	14.4	20	0.1
M-09-102A 125.5-126.5	6	125	28-Jun-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	445	36	81	7.35	6.3	14.4	20	0.1
M-09-102A 125.5-126.5	6	126	5-Jul-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	450	35	92	7.19	6.1	14.5	20	0.1
M-09-102A 125.5-126.5	6	127	12-Jul-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	450	35	81	7.13	5.8	14.5	21	0.1
M-09-102A 125.5-126.5	6	128	19-Jul-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	460	35	77	7.21	5.6	14.6	21	0.1
M-09-102A 125.5-126.5	6	129	26-Jul-12	Mitchell	BELOW MTF	LP Hazelton	PSBX	SI	2	None	0			Water	500	455	35	80	7.32	5.3	14.7	21	0.1
																	36	83	7.30	6.0	14.5	20	0.1
HC7 LP Hazelton																							
M-09-102A 133.5-134.5	7	0	4-Feb-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	390	63	162	7.69	2.3	39.6	56	1.0
M-09-102A 133.5-134.5	7	1	11-Feb-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	495	50	134	7.64	2.0	35.3	33	0.4
M-09-102A 133.5-134.5	7	2	18-Feb-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	500	44	108	7.41	3.5	30.1	21	0.1
M-09-102A 133.5-134.5	7	3	25-Feb-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	445	28	67	7.48	2.4	23.5	17	0.1
M-09-102A 133.5-134.5	7	4	4-Mar-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	465	26	64	7.38	2.4	22.2	8	0.1
M-09-102A 133.5-134.5	7	5	11-Mar-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	465	26	59	7.44	2.5	22.7	9	0.1
M-09-102A 133.5-134.5	7	6	18-Mar-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	490	26	58	7.49	2.6	23.8	5	0.1
M-09-102A 133.5-134.5	7	7	25-Mar-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	505	32	62	7.44	3.4	27.8	4	0.1
M-09-102A 133.5-134.5	7	8	1-Apr-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	500	25	54	7.5	2.7	24.0	8	0.1
M-09-102A 133.5-134.5	7	9	8-Apr-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	495	25	57	7.41	2.5	24.2	8	0.1
M-09-102A 133.5-134.5	7	10	15-Apr-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	490	24	53	7.41	2.7	23.5	9	0.1
M-09-102A 133.5-134.5	7	11	22-Apr-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	500	26	58	7.46	4.5	24.5	5	0.1
M-09-102A 133.5-134.5	7	12	29-Apr-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	490	25	56	7.47	2.3	22.8	9	0.1
M-09-102A 133.5-134.5	7	13	6-May-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	510	25	53	7.33	4.3	22.7	4	0.1
M-09-102A 133.5-134.5	7	14	13-May-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	490	26	53	7.5	2.7	20.7	7	0.1
M-09-102A 133.5-134.5	7	15	20-May-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	500	23	51	7.5	4.0	20.7	3	0.1
M-09-102A 133.5-134.5	7	16	27-May-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	505	26	54	7.49	5.7	25.5	4	0.1
M-09-102A 133.5-134.5	7	17	3-Jun-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	505	25	49	7.46	3.2	21.4	6	0.1
M-09-102A 133.5-134.5	7	18	10-Jun-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	500	23	51	7.35	4.9	18.1	5	0.1
M-09-102A 133.5-134.5	7	19	17-Jun-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	505	23	48	7.59	3.5	21.7	3	0.1
M-09-102A 133.5-134.5	7	20	24-Jun-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	505	24	49	7.56	2.5	22.5	5	0.1
M-09-102A 133.5-134.5	7	21	1-Jul-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	505	23	45	7.59	2.5	20.1	2	0.1
M-09-102A 133.5-134.5	7	22	8-Jul-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	500	20	57	7.71	2.0	23.7	4	0.1
M-09-102A 133.5-134.5	7	23	15-Jul-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	485	20	46	7.42	4.0	17.4	4	0.1
M-09-102A 133.5-134.5	7	24	22-Jul-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	495	22	48	7.32	3.5	18.0	2	0.1
M-09-102A 133.5-134.5	7	25	29-Jul-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	505	23	47	7.46	3.9	16.4	8	0.1
M-09-102A 133.5-134.5	7	26	5-Aug-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	490	24	49	7.45	2.5	16.8	5	0.1
M-09-102A 133.5-134.5	7	27	12-Aug-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	495	25	56	7.51	3.7	21.4	2	0.1
M-09-102A 133.5-134.5	7	28	19-Aug-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	500	26	52	7.6	5.3	20.7	5	0.1
M-09-102A 133.5-134.5	7	29	26-Aug-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	465	21	46	7.22	2.5	15.2	9	0.1
M-09-102A 133.5-134.5	7	30	2-Sep-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	465	21	41	7.37	4.3	15.3	10	0.1
M-09-102A 133.5-134.5	7	31	9-Sep-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	455	20	45	7.08	4.7	15.1	11	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-102A 125.5-126.5	0.03	0.0440	0.0014	0.0004	0.0152	0.0000	0.0000	0.0020	0.00001	10.2000	0.0003	0.0001	0.0006	0.0030	0.00003	0.0005	1.5500	0.1250	0.0000050	0.0308
M-09-102A 125.5-126.5	0.03	0.0412	0.0014	0.0004	0.0152	0.0000	0.0000	0.0020	0.00001	10.2000	0.0003	0.0001	0.0008	0.0026	0.00003	0.0005	1.5700	0.1253	0.0000050	0.0305
M-09-102A 125.5-126.5	0.03	0.0383	0.0015	0.0004	0.0152	0.0000	0.0000	0.0019	0.00002	10.2000	0.0003	0.0001	0.0010	0.0023	0.00003	0.0005	1.5900	0.1255	0.0000050	0.0303
M-09-102A 125.5-126.5	0.03	0.0355	0.0015	0.0003	0.0152	0.0000	0.0000	0.0019	0.00002	10.2000	0.0003	0.0001	0.0012	0.0019	0.00003	0.0005	1.6100	0.1258	0.0000050	0.0300
M-09-102A 125.5-126.5	0.03	0.0326	0.0015	0.0003	0.0152	0.0000	0.0000	0.0018	0.00003	10.2000	0.0003	0.0001	0.0014	0.0015	0.00003	0.0005	1.6300	0.1260	0.0000050	0.0297
M-09-102A 125.5-126.5	0.03	0.0323	0.0015	0.0003	0.0148	0.0000	0.0000	0.0019	0.00003	10.2750	0.0003	0.0001	0.0014	0.0015	0.00003	0.0005	1.6350	0.1275	0.0000050	0.0306
M-09-102A 125.5-126.5	0.03	0.0319	0.0016	0.0003	0.0145	0.0000	0.0000	0.0019	0.00003	10.3500	0.0003	0.0001	0.0014	0.0015	0.00003	0.0005	1.6400	0.1290	0.0000050	0.0315
M-09-102A 125.5-126.5	0.03	0.0316	0.0016	0.0003	0.0141	0.0000	0.0000	0.0020	0.00003	10.4250	0.0003	0.0001	0.0014	0.0015	0.00002	0.0005	1.6450	0.1305	0.0000050	0.0324
M-09-102A 125.5-126.5	0.03	0.0312	0.0016	0.0003	0.0137	0.0000	0.0000	0.0020	0.00003	10.5000	0.0003	0.0001	0.0014	0.0015	0.00002	0.0005	1.6500	0.1320	0.0000050	0.0333
M-09-102A 125.5-126.5	0.03	0.0305	0.0015	0.0004	0.0138	0.0000	0.0000	0.0017	0.00017	10.6250	0.0003	0.0001	0.0012	0.0015	0.00013	0.0005	1.6850	0.1310	0.0000050	0.0332
M-09-102A 125.5-126.5	0.03	0.0297	0.0014	0.0004	0.0139	0.0000	0.0000	0.0014	0.00031	10.7500	0.0003	0.0001	0.0010	0.0015	0.00024	0.0005	1.7200	0.1300	0.0000050	0.0331
M-09-102A 125.5-126.5	0.03	0.0290	0.0013	0.0005	0.0140	0.0000	0.0000	0.0011	0.00046	10.8750	0.0003	0.0001	0.0008	0.0015	0.00035	0.0005	1.7550	0.1290	0.0000050	0.0329
M-09-102A 125.5-126.5	0.03	0.0282	0.0012	0.0005	0.0141	0.0000	0.0000	0.0008	0.00060	11.0000	0.0003	0.0001	0.0006	0.0015	0.00046	0.0005	1.7900	0.1280	0.0000050	0.0328
M-09-102A 125.5-126.5	0.03	0.0360	0.0012	0.0004	0.0131	0.0000	0.0000	0.0011	0.00045	10.6050	0.0003	0.0001	0.0007	0.0015	0.00037	0.0005	1.7750	0.1167	0.0000138	0.0324
M-09-102A 125.5-126.5	0.03	0.0439	0.0011	0.0004	0.0122	0.0000	0.0000	0.0013	0.00030	10.2100	0.0003	0.0001	0.0009	0.0015	0.00028	0.0005	1.7600	0.1054	0.0000225	0.0319
M-09-102A 125.5-126.5	0.03	0.0517	0.0011	0.0003	0.0112	0.0000	0.0000	0.0016	0.00015	9.8150	0.0003	0.0001	0.0010	0.0015	0.00018	0.0005	1.7450	0.0940	0.0000313	0.0315
M-09-102A 125.5-126.5	0.03	0.0595	0.0010	0.0002	0.0102	0.0000	0.0000	0.0018	0.00000	9.4200	0.0003	0.0001	0.0011	0.0015	0.00009	0.0005	1.7300	0.0827	0.0000400	0.0310
M-09-102A 125.5-126.5	0.03	0.0595	0.0010	0.0002	0.0102	0.0000	0.0000	0.0018	0.00000	9.4200	0.0003	0.0001	0.0011	0.0015	0.00009	0.0005	1.7300	0.0827	0.0000400	0.0310
M-09-102A 125.5-126.5	0.03	0.0595	0.0010	0.0002	0.0102	0.0000	0.0000	0.0018	0.00000	9.4200	0.0003	0.0001	0.0011	0.0015	0.00009	0.0005	1.7300	0.0827	0.0000400	0.0310
M-09-102A 125.5-126.5	0.03	0.0465	0.0012	0.0003	0.0133	0.0000	0.0000	0.0022	0.00001	10.9800	0.0003	0.0001	0.0009	0.0015	0.00008	0.0005	1.9100	0.1054	0.0000175	0.0316
M-09-102A 125.5-126.5	0.03	0.0422	0.0013	0.0003	0.0143	0.0000	0.0000	0.0023	0.00002	11.5000	0.0003	0.0001	0.0008	0.0015	0.00007	0.0005	1.9700	0.1130	0.0000100	0.0318
M-09-102A 125.5-126.5	0.03	0.0478	0.0013	0.0003	0.0141	0.0000	0.0000	0.0024	0.00001	11.3750	0.0003	0.0001	0.0008	0.0015	0.00007	0.0005	2.0025	0.1120	0.0000088	0.0322
M-09-102A 125.5-126.5	0.03	0.0534	0.0013	0.0003	0.0139	0.0000	0.0000	0.0026	0.00001	11.2500	0.0003	0.0001	0.0007	0.0015	0.00006	0.0005	2.0350	0.1110	0.0000075	0.0325
M-09-102A 125.5-126.5	0.03	0.0589	0.0012	0.0003	0.0136	0.0000	0.0000	0.0027	0.00001	11.1250	0.0003	0.0001	0.0007	0.0015	0.00006	0.0005	2.0675	0.1100	0.0000063	0.0329
M-09-102A 125.5-126.5	0.03	0.0645	0.0012	0.0003	0.0134	0.0000	0.0000	0.0028	0.00000	11.0000	0.0003	0.0001	0.0006	0.0015	0.00005	0.0005	2.1000	0.1090	0.0000050	0.0332
M-09-102A 125.5-126.5	0.03	0.0654	0.0012	0.0003	0.0133	0.0000	0.0000	0.0029	0.00000	10.9250	0.0003	0.0001	0.0006	0.0015	0.00005	0.0005	2.1125	0.1047	0.0000138	0.0329
M-09-102A 125.5-126.5	0.03	0.0662	0.0012	0.0003	0.0132	0.0000	0.0000	0.0030	0.00000	10.8500	0.0003	0.0001	0.0007	0.0015	0.00004	0.0005	2.1250	0.1004	0.0000225	0.0327
M-09-102A 125.5-126.5	0.03	0.0671	0.0011	0.0003	0.0131	0.0000	0.0000	0.0031	0.00000	10.7750	0.0003	0.0001	0.0007	0.0015	0.00004	0.0005	2.1375	0.0960	0.0000313	0.0324
M-09-102A 125.5-126.5	0.03	0.0679	0.0011	0.0003	0.0130	0.0000	0.0000	0.0032	0.00000	10.7000	0.0003	0.0001	0.0007	0.0015	0.00003	0.0005	2.1500	0.0917	0.0000400	0.0321
M-09-102A 125.5-126.5	0.03	0.0669	0.0012	0.0003	0.0126	0.0000	0.0000	0.0029	0.00000	10.5075	0.0003	0.0001	0.0006	0.0015	0.00003	0.0005	2.2150	0.0920	0.0000325	0.0325
M-09-102A 125.5-126.5	0.03	0.0659	0.0012	0.0003	0.0122	0.0000	0.0000	0.0026	0.00000	10.3150	0.0003	0.0001	0.0005	0.0015	0.00004	0.0005	2.2800	0.0923	0.0000250	0.0330
M-09-102A 125.5-126.5	0.03	0.0649	0.0013	0.0003	0.0117	0.0000	0.0000	0.0022	0.00000	10.1225	0.0003	0.0001	0.0004	0.0015	0.00004	0.0005	2.3450	0.0925	0.0000175	0.0334
M-09-102A 125.5-126.5	0.03	0.0639	0.0013	0.0003	0.0113	0.0000	0.0000	0.0019	0.00001	9.9300	0.0003	0.0001	0.0003	0.0015	0.00004	0.0005	2.4100	0.0928	0.0000100	0.0338
	0.03	0.0652	0.0012	0.0003	0.0127	0.0000	0.0000	0.0027	0.00000	10.6250	0.0003	0.0001	0.0006	0.0015	0.00004	0.0005	2.1943	0.0981	0.0000204	0.0329
HC7 LP Hazelton																				
M-09-102A 133.5-134.5	2.06	0.0741	0.0093	0.0043	0.0267	0.0000	0.0000	0.0050	0.00001	13.0000	0.0003	0.0000	0.0015	0.0050	0.00005	0.0100	7.3500	0.0340	0.0000050	0.0189
M-09-102A 133.5-134.5	1.53	0.0556	0.0371	0.0065	0.0162	0.0000	0.0000	0.0060	0.00002	8.8800	0.0003	0.0000	0.0010	0.0050	0.00031	0.0080	6.7300	0.0440	0.0000050	0.0255
M-09-102A 133.5-134.5	1.32	0.0637	0.0417	0.0056	0.0134	0.0000	0.0000	0.0049	0.00002	8.4900	0.0003	0.0000	0.0008	0.0050	0.00013	0.0070	5.5500	0.0520	0.0000050	0.0162
M-09-102A 133.5-134.5	1.09	0.0710	0.0293	0.0050	0.0095	0.0000	0.0000	0.0026	0.00001	5.5500	0.0003	0.0000	0.0008	0.0050	0.00010	0.0040	3.4200	0.0360	0.0000050	0.0099
M-09-102A 133.5-134.5	1.06	0.0756	0.0288	0.0042	0.0107	0.0000	0.0000	0.0040	0.00001	5.4000	0.0003	0.0000	0.0010	0.0050	0.00012	0.0030	3.0100	0.0400	0.0000050	0.0088
M-09-102A 133.5-134.5	1.04	0.0660	0.0259	0.0036	0.0109	0.0000	0.0000	0.0020	0.00002	5.5700	0.0007	0.0000	0.0015	0.0050	0.00019	0.0020	2.8600	0.0450	0.0000050	0.0075
M-09-102A 133.5-134.5	0.86	0.0472	0.0248	0.0030	0.0104	0.0000	0.0000	0.0010	0.00003	6.0400	0.0003	0.0000	0.0037	0.0050	0.00011	0.0020	2.7100	0.0500	0.0000050	0.0067
M-09-102A 133.5-134.5	0.98	0.0555	0.0299	0.0029	0.0156	0.0000	0.0000	0.0020	0.00002	7.4900	0.0003	0.0000	0.0006	0.0050	0.00012	0.0020	3.1600	0.0640	0.0000050	0.0080
M-09-102A 133.5-134.5	0.86	0.0623	0.0209	0.0028	0.0156	0.0000	0.0000	0.0030	0.00004	6.2000	0.0008	0.0000	0.0011	0.0050	0.00016	0.0010	2.3900	0.0560	0.0000050	0.0067
M-09-102A 133.5-134.5	0.86	0.0647	0.0248	0.0026	0.0179	0.0000	0.0000	0.0040	0.00004	6.2800	0.0003	0.0000	0.0011	0.0050	0.00025	0.0020	2.3800	0.0580	0.0000050	0.0071
M-09-102A 133.5-134.5	0.90	0.0677	0.0247	0.0029	0.0184	0.0000	0.0000	0.0010	0.00003	6.0700	0.0010	0.0000	0.0011	0.0050	0.00019	0.0020	2.1600	0.0540	0.0000050	0.0075
M-09-102A 133.5-134.5	0.90	0.0592	0.0373	0.0033	0.0218	0.0000	0.0000	0.0010	0.00003	6.6800	0.0010	0.0000	0.0010	0.0050	0.00039	0.0020	2.2600	0.0640	0.0000050	0.0090
M-09-102A 133.5-134.5	0.90	0.0575	0.0439	0.0035	0.0219	0.0000	0.0000	0.0010	0.00005	6.6600	0.0003	0.0000	0.0017	0.0050	0.00408	0.0005	2.0600	0.0690	0.0000050	0.0089
M-09-102A 133.5-134.5	0.81	0.0525	0.0507	0.0036	0.0210	0.0000	0.0000	0.0020	0.00005	6.6100	0.0006	0.0000	0.0012	0.0050	0.00027	0.0010	2.0200	0.0700	0.0000050	0.0088
M-09-102A 133.5-134.5	0.82	0.0624	0.0541	0.0037	0.0193	0.0000	0.0000	0.0016	0.00006	6.9900	0.0005	0.0000	0.0007	0.0010	0.00032	0.0005	1.9600	0.0670	0.0000050	0.0114
M-09-102A 133.5-134.5	0.31	0.0640	0.0534	0.0040	0.0199	0.0000	0.0000	0.0017	0.00006	6.2900	0.0003	0.0000	0.0011	0.0010	0.00012	0.0010	1.7300	0.0608	0.0000050	0.0127
M-09-102A 133.5-134.5	0.79	0.0575	0.0530	0.0042	0.0217	0.0000	0.0000	0.0020	0.00007	7.4300	0.0003	0.0000	0.0012	0.0040	0.00016	0.0010	1.9200	0.0771	0.0000050	0.0120
M-09-102A 133.5-134.5	0.74	0.0614	0.0485	0.0041	0.0223	0.0000	0.0000	0.0019	0.00007	7.1800	0.0003	0.0000	0.0009	0.0010	0.00012	0.0005	1.7800	0.0733	0.0000050	0.0115
M-09-102A 133.5-134.5	0.78	0.0616	0.0428	0.0037	0.0226	0.0000	0.0000	0.0023	0.00008	6.6700	0.0006	0.0000	0.0011	0.0010	0.00016	0.0005	1.5400	0.0792	0.0000050	0.0108
M-09-102A 133.5-134.5	0.81	0.0630	0.0646	0.0038	0.0235	0.0000	0.0000	0.0021	0.00012	6.6300	0.0003	0.0000	0.0013	0.0010	0.00020	0.0010	1.5500	0.0745	0.0000050	0.0126
M-09-102A 133.5-134.5	0.89	0.0527	0.0593	0.0035	0.0256	0.0000	0.0000	0.0044	0.00009	6.8900	0.0003	0.0000	0.0014	0.0010	0.00020	0.0005	1.5900	0.0811	0.0000050	0.0133
M-09-102A 133.5-134.5	0.70	0.0488	0.0572	0.0035	0.0239	0.0000	0.0000	0.0015	0.00010	6.5900	0.0003	0.0000	0.0010	0.0030	0.00019	0.0005	1.5200	0.0805	0.0000050	0.0117
M-09-102A 133.5-134.5	0.79	0.0481	0.0552	0.0040	0.0237	0.0000	0.0000	0.0026	0.00010	5.5700	0.0007	0.0000	0.0015	0.0030	0.00015	0.0005	1.4700	0.0802	0.0000050	0.0122
M-09-102A 133.5-134.5	0.76	0.0504	0.0577	0.0039	0.0237	0.0000	0.0000	0.0035	0.00010	5.9200	0.0008	0.0000	0.0011	0.0010	0.00013	0.0005	1.3900	0.0710	0.0000050	0.0139
M-09-102A 133.5-134.5	0.71	0.0389	0.0589	0.0035	0.0254	0.0000	0.0000	0.0020	0.00011	6.2600	0.0003	0.0000	0.0009	0.0010	0.00013	0.0005	1.4700	0.0785	0.0000050	0.0150
M-09-102A 133.5-134.5	0.68	0.0425	0.0611	0.0036	0.0229	0.0000	0.0000	0.0020	0.00009	6.8500	0.0003	0.0000	0.0010	0.0010	0.00015	0.0005	1.5200	0.0691	0.0000050	0.0167
M-09-102A 133.5-134.5	0.73	0.0471	0.0535	0.0032	0.0239	0.0000	0.0000	0.0017	0.00011	7.0600	0.0003	0.0000	0.0025	0.0010	0.00010	0.0005	1.4900	0.0773	0.0000050	0.0159
M-09-102A 133.5-134.5	0.77	0.0425	0.0594	0.0032	0.0258	0.0000	0.0000	0.0015	0.00014	7.3600	0.0007	0.0000	0.0011	0.0010	0.00011	0.0005	1.5800	0.0856	0.0000050	0.0190
M-09-102A 133.5-134.5	0.40	0.0362	0.0551	0.0023	0.0234	0.0000	0.0000	0.0018	0.00015	7.6900	0.0005	0.0000	0.0010	0.0010	0.00024	0.0005	1.6600	0.0776	0.0000050	0.0188
M-09-102A 133.5-134.5	0.66	0.0523	0.0441	0.0028	0.0179	0.0000	0.0000	0.0016	0.00010	6.1600	0.0008	0.0000	0.0013	0.0010	0.00013	0.0005	1.3500	0.0383	0.0000050	0.0170
M-09-102A 133.5-134.5	0.67	0.0489	0.0403	0.0030	0.0182	0.0000	0.0000	0.0017	0.00009	6.3300	0.0005	0.0000	0.0009	0.0010	0.00015	0.0005	1.3700	0.0340	0.0000050	0.0170
M-09-102A 133.5-134.5	0.69	0.0504	0.0341	0.0026	0.0160	0.0000	0.0000	0.0021	0.00010	5.8000	0.0006	0.0000	0.0014	0.0010	0.00013	0.0005	1.3000	0.0566	0.0000050	0.0167

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-102A 125.5-126.5	0.0002	0.0045	0.2120	0.0019	0.4700	0.00001	0.0800	0.0769	6.7600	0.0000	0.0000	0.0002	0.0032	0.0004	0.0020	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.2090	0.0019	0.4600	0.00001	0.0775	0.0779	6.7400	0.0000	0.0000	0.0002	0.0031	0.0003	0.0023	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.2060	0.0019	0.4500	0.00001	0.0750	0.0789	6.7200	0.0000	0.0000	0.0002	0.0031	0.0003	0.0025	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.2030	0.0020	0.4400	0.00001	0.0725	0.0798	6.7000	0.0000	0.0000	0.0001	0.0030	0.0003	0.0028	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.2000	0.0020	0.4300	0.00001	0.0700	0.0808	6.6800	0.0000	0.0000	0.0001	0.0029	0.0002	0.0030	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.1990	0.0020	0.4225	0.00001	0.0775	0.0806	6.6950	0.0000	0.0000	0.0001	0.0030	0.0002	0.0028	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.1980	0.0020	0.4150	0.00001	0.0850	0.0804	6.7100	0.0000	0.0000	0.0002	0.0031	0.0003	0.0025	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.1970	0.0019	0.4075	0.00001	0.0925	0.0801	6.7250	0.0000	0.0000	0.0002	0.0032	0.0003	0.0023	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.1960	0.0019	0.4000	0.00001	0.1000	0.0799	6.7400	0.0000	0.0000	0.0002	0.0033	0.0003	0.0020	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.1965	0.0018	0.4075	0.00001	0.0975	0.0808	6.8650	0.0000	0.0000	0.0002	0.0033	0.0003	0.0033	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.1970	0.0017	0.4150	0.00001	0.0950	0.0816	6.9900	0.0000	0.0000	0.0003	0.0032	0.0003	0.0045	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.1975	0.0016	0.4225	0.00001	0.0925	0.0825	7.1150	0.0000	0.0000	0.0003	0.0032	0.0003	0.0058	0.0000
M-09-102A 125.5-126.5	0.0003	0.0045	0.1980	0.0015	0.4300	0.00001	0.0900	0.0833	7.2400	0.0000	0.0001	0.0003	0.0032	0.0003	0.0070	0.0000
M-09-102A 125.5-126.5	0.0003	0.0045	0.1930	0.0016	0.4000	0.00001	0.0875	0.0779	7.1475	0.0000	0.0001	0.0003	0.0028	0.0003	0.0058	0.0000
M-09-102A 125.5-126.5	0.0003	0.0045	0.1880	0.0017	0.3700	0.00001	0.0850	0.0725	7.0550	0.0000	0.0001	0.0004	0.0024	0.0004	0.0045	0.0000
M-09-102A 125.5-126.5	0.0003	0.0045	0.1830	0.0017	0.3400	0.00001	0.0825	0.0671	6.9625	0.0000	0.0001	0.0004	0.0020	0.0004	0.0033	0.0000
M-09-102A 125.5-126.5	0.0003	0.0045	0.1780	0.0018	0.3100	0.00001	0.0800	0.0617	6.8700	0.0000	0.0001	0.0004	0.0016	0.0005	0.0020	0.0000
M-09-102A 125.5-126.5	0.0003	0.0045	0.1780	0.0018	0.3100	0.00001	0.0800	0.0617	6.8700	0.0000	0.0001	0.0004	0.0016	0.0005	0.0020	0.0000
M-09-102A 125.5-126.5	0.0003	0.0045	0.1780	0.0018	0.3100	0.00001	0.0800	0.0617	6.8700	0.0000	0.0001	0.0004	0.0016	0.0005	0.0020	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.1968	0.0019	0.3850	0.00001	0.0725	0.0750	7.6500	0.0000	0.0002	0.0001	0.0020	0.0003	0.0020	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.2030	0.0020	0.4100	0.00001	0.0700	0.0794	7.9100	0.0000	0.0003	0.0001	0.0021	0.0002	0.0020	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.2035	0.0019	0.4225	0.00001	0.0750	0.0790	7.9800	0.0000	0.0003	0.0001	0.0020	0.0003	0.0020	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.2040	0.0018	0.4350	0.00001	0.0800	0.0787	8.0500	0.0000	0.0003	0.0001	0.0020	0.0003	0.0020	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.2045	0.0018	0.4475	0.00001	0.0850	0.0783	8.1200	0.0000	0.0003	0.0001	0.0019	0.0003	0.0020	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.2050	0.0017	0.4600	0.00001	0.0900	0.0779	8.1900	0.0000	0.0002	0.0001	0.0018	0.0003	0.0020	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.2038	0.0017	0.4450	0.00001	0.0900	0.0768	8.2850	0.0000	0.0003	0.0001	0.0018	0.0003	0.0018	0.0000
M-09-102A 125.5-126.5	0.0002	0.0045	0.2025	0.0017	0.4300	0.00001	0.0900	0.0758	8.3800	0.0000	0.0003	0.0001	0.0017	0.0004	0.0015	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.2013	0.0017	0.4150	0.00001	0.0900	0.0747	8.4750	0.0000	0.0004	0.0001	0.0016	0.0004	0.0013	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.2000	0.0017	0.4000	0.00001	0.0900	0.0736	8.5700	0.0000	0.0004	0.0001	0.0015	0.0004	0.0010	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.2020	0.0018	0.3850	0.00001	0.0875	0.0736	8.3850	0.0000	0.0003	0.0001	0.0016	0.0004	0.0010	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.2040	0.0019	0.3700	0.00001	0.0850	0.0735	8.2000	0.0000	0.0002	0.0001	0.0017	0.0004	0.0010	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.2060	0.0020	0.3550	0.00001	0.0825	0.0735	8.0150	0.0000	0.0002	0.0001	0.0018	0.0004	0.0010	0.0000
M-09-102A 125.5-126.5	0.0001	0.0045	0.2080	0.0021	0.3400	0.00001	0.0800	0.0734	7.8300	0.0000	0.0001	0.0001	0.0019	0.0004	0.0010	0.0000
	0.0001	0.0045	0.2037	0.0018	0.4048	0.00001	0.0870	0.0751	8.2450	0.0000	0.0003	0.0001	0.0017	0.0004	0.0014	0.0000
HC7 LP Hazelton																
M-09-102A 133.5-134.5	0.0010	0.0050	7.3000	0.0160	1.1600	0.00001	9.5700	0.1970	19.0000	0.0001	0.0002	0.0001	0.0148	0.0023	0.0005	0.0001
M-09-102A 133.5-134.5	0.0005	0.0050	4.5100	0.0339	1.3600	0.00005	6.2900	0.1330	14.2000	0.0001	0.0007	0.0001	0.0951	0.0020	0.0005	0.0000
M-09-102A 133.5-134.5	0.0004	0.0050	3.1800	0.0195	1.3000	0.00001	3.5400	0.1170	7.6800	0.0001	0.0005	0.0001	0.1040	0.0017	0.0005	0.0000
M-09-102A 133.5-134.5	0.0002	0.0050	1.9400	0.0150	0.9400	0.00001	2.0300	0.0731	5.3400	0.0001	0.0004	0.0001	0.0599	0.0017	0.0005	0.0000
M-09-102A 133.5-134.5	0.0003	0.0050	1.5900	0.0144	0.8900	0.00001	1.4300	0.0692	3.5500	0.0001	0.0005	0.0001	0.0624	0.0015	0.0005	0.0000
M-09-102A 133.5-134.5	0.0019	0.0050	1.4100	0.0125	0.8900	0.00001	1.0400	0.0682	3.2000	0.0001	0.0003	0.0001	0.0660	0.0013	0.0005	0.0000
M-09-102A 133.5-134.5	0.0010	0.0050	1.1200	0.0088	0.9300	0.00025	0.8700	0.0725	2.7600	0.0001	0.0003	0.0001	0.0615	0.0011	0.0010	0.0000
M-09-102A 133.5-134.5	0.0002	0.0050	1.3100	0.0103	1.2000	0.00001	0.9900	0.0888	2.8300	0.0001	0.0001	0.0001	0.0731	0.0011	0.0010	0.0000
M-09-102A 133.5-134.5	0.0003	0.0050	0.9600	0.0081	0.9700	0.00001	0.7700	0.0706	2.3100	0.0001	0.0002	0.0001	0.0596	0.0011	0.0010	0.0001
M-09-102A 133.5-134.5	0.0001	0.0050	0.9300	0.0072	0.9400	0.00001	0.7200	0.0717	2.0800	0.0001	0.0002	0.0003	0.0600	0.0010	0.0010	0.0000
M-09-102A 133.5-134.5	0.0002	0.0050	0.9100	0.0074	0.9000	0.00001	0.6200	0.0682	2.2100	0.0001	0.0003	0.0001	0.0555	0.0010	0.0020	0.0002
M-09-102A 133.5-134.5	0.0002	0.0050	0.9100	0.0067	1.0800	0.00001	0.6600	0.0732	2.5300	0.0001	0.0001	0.0001	0.0520	0.0010	0.0020	0.0001
M-09-102A 133.5-134.5	0.0001	0.0050	0.7500	0.0065	0.9500	0.00001	0.5500	0.0697	2.4200	0.0001	0.0002	0.0001	0.0442	0.0009	0.0030	0.0000
M-09-102A 133.5-134.5	0.0002	0.0200	0.7700	0.0051	1.0300	0.00001	0.4900	0.0687	2.5300	0.0001	0.0002	0.0001	0.0412	0.0009	0.0020	0.0001
M-09-102A 133.5-134.5	0.0001	0.0045	0.7400	0.0055	1.1000	0.00001	0.4600	0.0674	2.1400	0.0001	0.0002	0.0001	0.0373	0.0009	0.0030	0.0001
M-09-102A 133.5-134.5	0.0001	0.0045	0.6540	0.0052	0.9700	0.00001	0.4900	0.0603	2.6900	0.0001	0.0002	0.0001	0.0342	0.0010	0.0010	0.0001
M-09-102A 133.5-134.5	0.0001	0.0045	0.6720	0.0051	1.0800	0.00001	0.4900	0.0703	2.7300	0.0001	0.0002	0.0001	0.0301	0.0010	0.0030	0.0001
M-09-102A 133.5-134.5	0.0001	0.0290	0.6070	0.0045	1.0600	0.00001	0.4100	0.0648	2.4700	0.0001	0.0002	0.0001	0.0279	0.0009	0.0010	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.5070	0.0043	0.8900	0.00004	0.3800	0.0591	2.2800	0.0001	0.0004	0.0001	0.0235	0.0008	0.0030	0.0001
M-09-102A 133.5-134.5	0.0001	0.0045	0.5330	0.0045	0.9600	0.00001	0.3900	0.0588	2.7500	0.0001	0.0003	0.0001	0.0242	0.0008	0.0040	0.0002
M-09-102A 133.5-134.5	0.0001	0.0045	0.5490	0.0038	1.0500	0.00001	0.4100	0.0606	2.4000	0.0001	0.0002	0.0001	0.0214	0.0008	0.0030	0.0001
M-09-102A 133.5-134.5	0.0001	0.0045	0.4630	0.0038	0.9000	0.00001	0.2900	0.0572	2.2200	0.0001	0.0001	0.0001	0.0199	0.0007	0.0040	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.5250	0.0040	0.9600	0.00001	0.3100	0.0558	2.3100	0.0001	0.0003	0.0001	0.0179	0.0007	0.0030	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.4670	0.0034	0.9000	0.00001	0.3300	0.0527	2.1100	0.0001	0.0002	0.0001	0.0181	0.0006	0.0030	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.4720	0.0032	0.9500	0.00001	0.3100	0.0546	2.2500	0.0001	0.0010	0.0001	0.0178	0.0006	0.0040	0.0001
M-09-102A 133.5-134.5	0.0001	0.0045	0.4520	0.0027	0.9600	0.00001	0.3200	0.0569	3.0900	0.0001	0.0000	0.0001	0.0155	0.0007	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.4200	0.0029	0.9000	0.00001	0.3100	0.0552	2.7900	0.0001	0.0002	0.0001	0.0148	0.0006	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.4250	0.0033	0.8600	0.00001	0.2700	0.0608	3.5200	0.0001	0.0001	0.0001	0.0166	0.0006	0.0050	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.4260	0.0030	0.9700	0.00001	0.2700	0.0571	3.6900	0.0001	0.0001	0.0001	0.0137	0.0004	0.0060	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.3710	0.0030	0.7600	0.00001	0.2300	0.0444	3.1500	0.0001	0.0004	0.0001	0.0105	0.0005	0.0030	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.3420	0.0029	0.7800	0.00001	0.2300	0.0439	3.3400	0.0001	0.0001	0.0001	0.0098	0.0005	0.0030	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.3270	0.0021	0.7200	0.00001	0.2200	0.0384	2.7600	0.0001	0.0001	0.0001	0.0081	0.0006	0.0040	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-102A 133.5-134.5	7	32	16-Sep-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	465	21	44	7.14	3.3	15.7	10	0.1
M-09-102A 133.5-134.5	7	33	23-Sep-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	470	19	36	7.23	2.8	14.8	13	0.1
M-09-102A 133.5-134.5	7	34	30-Sep-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	465	19	31	7.24	2.6	14.2	10	0.1
M-09-102A 133.5-134.5	7	35	7-Oct-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	455	20	44	7.21	3.4	16.3	9	0.1
M-09-102A 133.5-134.5	7	36	14-Oct-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	460	21	41	7.23	3.2	14.1	7	0.1
M-09-102A 133.5-134.5	7	37	21-Oct-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	460	20	43	7.23	3.4	15.6	7	0.1
M-09-102A 133.5-134.5	7	38	28-Oct-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	470	17	39	7.22	3.0	14.8	10	0.1
M-09-102A 133.5-134.5	7	39	4-Nov-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	465	17	39	7.33	2.7	12.6	13	0.1
M-09-102A 133.5-134.5	7	40	11-Nov-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	450	17	31	7.4	2.8	12.6	1	0.1
M-09-102A 133.5-134.5	7	41	18-Nov-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	460	18	31	7.52	3.3	14.7	3	0.1
M-09-102A 133.5-134.5	7	42	25-Nov-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	455	2	38	7.18	3.4	14.7	5	0.1
M-09-102A 133.5-134.5	7	43	2-Dec-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	480	22	39	7.25	3.4	15.2	4	0.1
M-09-102A 133.5-134.5	7	44	9-Dec-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	470	18	37	7.24	4.0	14.1	3	0.1
M-09-102A 133.5-134.5	7	45	16-Dec-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	460	18	35	7.27	4.4	14.1	5	0.1
M-09-102A 133.5-134.5	7	46	23-Dec-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	460	18	36	7.46	5.1	15.2	3	0.1
M-09-102A 133.5-134.5	7	47	30-Dec-10	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	495	21	38	7.34	5.8	16.7	7	0.1
M-09-102A 133.5-134.5	7	48	6-Jan-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	475	20	27	7.52	4.8	15.2	6	0.1
M-09-102A 133.5-134.5	7	49	13-Jan-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	480	19	30	7.35	3.8	13.7	5	0.1
M-09-102A 133.5-134.5	7	50	20-Jan-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	505	18	33	7.15	4.3	14.1	5	0.1
M-09-102A 133.5-134.5	7	51	27-Jan-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	490	16	30	7.38	4.8	14.6	5	0.1
M-09-102A 133.5-134.5	7	52	3-Feb-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	480	16	29	7.21	3.6	13.7	4	0.1
M-09-102A 133.5-134.5	7	53	10-Feb-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	475	16	26	7.32	2.5	12.8	3	0.1
M-09-102A 133.5-134.5	7	54	17-Feb-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	480	16	30	7.26	3.4	12.6	3	0.1
M-09-102A 133.5-134.5	7	55	24-Feb-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	465	17	36	7.27	4.3	12.3	2	0.1
M-09-102A 133.5-134.5	7	56	3-Mar-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	480	17	35	7.25	3.8	12.7	2	0.1
M-09-102A 133.5-134.5	7	57	10-Mar-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	470	16	36	7.29	3.3	13.1	2	0.1
M-09-102A 133.5-134.5	7	58	17-Mar-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	480	18	38	7.28	3.3	14.7	3	0.1
M-09-102A 133.5-134.5	7	59	24-Mar-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	485	19	44	7.21	3.4	16.3	3	0.1
M-09-102A 133.5-134.5	7	60	31-Mar-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	470	19	37	7.6	4.1	16.5	4	0.3
M-09-102A 133.5-134.5	7	61	7-Apr-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	475	19	40	7.53	4.8	16.6	5	0.5
M-09-102A 133.5-134.5	7	62	14-Apr-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	510	19	44	7.61	3.5	15.8	6	0.3
M-09-102A 133.5-134.5	7	63	21-Apr-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	475	19	40	7.33	2.2	15.0	7	0.1
M-09-102A 133.5-134.5	7	64	28-Apr-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	465	19	37	7.57	2.7	14.7	7	0.1
M-09-102A 133.5-134.5	7	65	5-May-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	480	19	42	7.26	3.2	14.4	7	0.1
M-09-102A 133.5-134.5	7	66	12-May-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	475	19	38	7.45	2.9	14.9	7	0.1
M-09-102A 133.5-134.5	7	67	19-May-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	465	18	39	7.63	2.7	15.5	6	0.1
M-09-102A 133.5-134.5	7	68	26-May-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	480	17	40	7.59	3.6	15.0	5	0.1
M-09-102A 133.5-134.5	7	69	2-Jun-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	465	16	37	7.47	4.5	14.4	4	0.1
M-09-102A 133.5-134.5	7	70	9-Jun-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	505	16	43	7.31	4.2	14.6	4	0.1
M-09-102A 133.5-134.5	7	71	16-Jun-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	470	17	38	7.53	4.0	14.8	4	0.1
M-09-102A 133.5-134.5	7	72	23-Jun-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	470	18	41	7.43	4.1	15.6	5	0.1
M-09-102A 133.5-134.5	7	73	30-Jun-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	490	20	42	7.51	4.1	16.5	6	0.1
M-09-102A 133.5-134.5	7	74	7-Jul-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	470	21	40	7.34	4.2	16.1	6	0.1
M-09-102A 133.5-134.5	7	75	14-Jul-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	490	22	44	7.54	4.2	15.7	5	0.1
M-09-102A 133.5-134.5	7	76	21-Jul-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	475	20	40	7.49	4.1	15.3	4	0.1
M-09-102A 133.5-134.5	7	77	28-Jul-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	490	18	41	7.59	4.0	14.9	3	0.1
M-09-102A 133.5-134.5	7	78	4-Aug-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	475	19	40	7.27	4.0	14.8	4	0.1
M-09-102A 133.5-134.5	7	79	11-Aug-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	485	19	37	7.63	3.9	14.7	4	0.1
M-09-102A 133.5-134.5	7	80	18-Aug-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	470	19	38	7.53	4.3	15.1	4	0.1
M-09-102A 133.5-134.5	7	81	25-Aug-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	485	19	39	7.61	4.7	15.4	4	0.1
M-09-102A 133.5-134.5	7	82	1-Sep-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	475	19	40	7.77	4.3	15.0	4	0.1
M-09-102A 133.5-134.5	7	83	8-Sep-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	480	19	39	7.52	3.8	14.5	4	0.1
M-09-102A 133.5-134.5	7	84	15-Sep-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	485	20	40	7.49	3.6	14.5	4	0.1
M-09-102A 133.5-134.5	7	85	22-Sep-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	485	20	41	7.41	3.4	14.6	4	0.1
M-09-102A 133.5-134.5	7	86	29-Sep-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	485	20	38	7.26	3.8	14.7	5	0.1
M-09-102A 133.5-134.5	7	87	6-Oct-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	480	20	42	7.39	4.3	14.9	5	0.1
M-09-102A 133.5-134.5	7	88	13-Oct-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	480	19	41	7.7	4.1	13.7	5	0.1
M-09-102A 133.5-134.5	7	89	20-Oct-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	455	18	36	7.43	3.9	12.5	5	0.1
M-09-102A 133.5-134.5	7	90	27-Oct-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	485	19	43	7.39	4.6	14.4	6	0.1
M-09-102A 133.5-134.5	7	91	3-Nov-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	495	20	43	7.59	5.4	16.3	7	0.1
M-09-102A 133.5-134.5	7	92	10-Nov-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	500	21	41	7.7	4.4	15.7	6	0.1
M-09-102A 133.5-134.5	7	93	17-Nov-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	485	21	42	7.46	3.5	15.1	5	0.1
M-09-102A 133.5-134.5	7	94	24-Nov-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	495	20	41	7.54	4.3	15.7	4	0.1
M-09-102A 133.5-134.5	7	95	1-Dec-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	495	19	40	7.5	5.2	16.3	3	0.1
M-09-102A 133.5-134.5	7	96	8-Dec-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	485	19	40	7.49	5.0	16.4	3	0.1
M-09-102A 133.5-134.5	7	97	15-Dec-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	475	19	43	7.55	4.8	16.6	3	0.1
M-09-102A 133.5-134.5	7	98	22-Dec-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	510	19	44	7.58	4.6	16.7	3	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-102A 133.5-134.5	0.77	0.0521	0.0357	0.0027	0.0174	0.0000	0.0000	0.0027	0.00010	6.0100	0.0003	0.0000	0.0013	0.0010	0.00015	0.0005	1.3500	0.0651	0.0000050	0.0152
M-09-102A 133.5-134.5	0.83	0.0493	0.0285	0.0027	0.0157	0.0000	0.0000	0.0020	0.00009	5.6200	0.0005	0.0000	0.0009	0.0030	0.00015	0.0010	1.2900	0.0518	0.0000050	0.0139
M-09-102A 133.5-134.5	0.75	0.0567	0.0251	0.0028	0.0151	0.0000	0.0000	0.0030	0.00008	5.4100	0.0003	0.0000	0.0012	0.0010	0.00013	0.0005	1.2800	0.0471	0.0000050	0.0152
M-09-102A 133.5-134.5	0.83	0.0571	0.0252	0.0027	0.0152	0.0000	0.0000	0.0024	0.00009	5.7000	0.0008	0.0000	0.0023	0.0010	0.00013	0.0005	1.3400	0.0528	0.0000100	0.0164
M-09-102A 133.5-134.5	0.79	0.0593	0.0240	0.0025	0.0147	0.0000	0.0000	0.0025	0.00012	5.8800	0.0003	0.0000	0.0015	0.0010	0.00010	0.0005	1.4500	0.0565	0.0000050	0.0155
M-09-102A 133.5-134.5	0.81	0.0529	0.0222	0.0020	0.0154	0.0000	0.0000	0.0043	0.00012	5.7000	0.0005	0.0000	0.0007	0.0030	0.00008	0.0005	1.3400	0.0590	0.0000050	0.0152
M-09-102A 133.5-134.5	0.78	0.0607	0.0198	0.0021	0.0142	0.0000	0.0000	0.0019	0.00010	5.0100	0.0003	0.0000	0.0006	0.0010	0.00013	0.0005	1.2000	0.0459	0.0000050	0.0141
M-09-102A 133.5-134.5	0.70	0.0543	0.0152	0.0019	0.0130	0.0000	0.0000	0.0020	0.00011	4.7300	0.0003	0.0000	0.0012	0.0030	0.00058	0.0005	1.1500	0.0476	0.0000050	0.0138
M-09-102A 133.5-134.5	0.72	0.0549	0.0130	0.0018	0.0120	0.0000	0.0000	0.0014	0.00009	4.7400	0.0003	0.0000	0.0010	0.0040	0.00058	0.0005	1.1600	0.0465	0.0000200	0.0121
M-09-102A 133.5-134.5	0.78	0.0503	0.0148	0.0017	0.0134	0.0000	0.0000	0.0028	0.00009	5.1200	0.0003	0.0000	0.0003	0.0010	0.00015	0.0005	1.2600	0.0496	0.0000050	0.0131
M-09-102A 133.5-134.5	0.71	10.6000	0.0001	0.0012	0.0232	0.0001	0.0000	0.0008	0.06950	0.4300	0.0028	0.0213	2.1500	5.2200	0.71200	0.0005	0.2400	0.0428	0.0000050	0.0007
M-09-102A 133.5-134.5	0.80	0.0435	0.0171	0.0015	0.0148	0.0000	0.0000	0.0025	0.00010	6.3400	0.0003	0.0000	0.0011	0.0010	0.00135	0.0005	1.4300	0.0652	0.0000050	0.0120
M-09-102A 133.5-134.5	0.76	0.0452	0.0157	0.0016	0.0142	0.0000	0.0000	0.0019	0.00008	5.0900	0.0007	0.0002	0.0056	0.0010	0.00192	0.0005	1.2100	0.0516	0.0000050	0.0107
M-09-102A 133.5-134.5	0.87	0.0470	0.0127	0.0015	0.0135	0.0000	0.0000	0.0026	0.00009	5.1600	0.0003	0.0000	0.0012	0.0090	0.00014	0.0005	1.2100	0.0525	0.0000050	0.0103
M-09-102A 133.5-134.5	0.84	0.0562	0.0130	0.0016	0.0135	0.0000	0.0000	0.0027	0.00008	5.1800	0.0003	0.0000	0.0011	0.0010	0.00187	0.0005	1.2300	0.0492	0.0000050	0.0108
M-09-102A 133.5-134.5	0.90	0.0372	0.0160	0.0014	0.0171	0.0000	0.0000	0.0029	0.00011	6.0600	0.0005	0.0000	0.0020	0.0010	0.00081	0.0005	1.3700	0.0654	0.0000050	0.0124
M-09-102A 133.5-134.5	0.83	0.0384	0.0150	0.0013	0.0162	0.0000	0.0000	0.0025	0.00011	5.7900	0.0004	0.0000	0.0014	0.0010	0.00047	0.0005	1.3150	0.0643	0.0000050	0.0113
M-09-102A 133.5-134.5	0.75	0.0395	0.0140	0.0012	0.0152	0.0000	0.0000	0.0020	0.00010	5.5200	0.0003	0.0000	0.0008	0.0010	0.00013	0.0005	1.2600	0.0632	0.0000050	0.0102
M-09-102A 133.5-134.5	0.79	0.0383	0.0127	0.0011	0.0155	0.0000	0.0000	0.0024	0.00010	5.1650	0.0003	0.0000	0.0007	0.0010	0.00009	0.0005	1.1700	0.0608	0.0000050	0.0097
M-09-102A 133.5-134.5	0.83	0.0370	0.0114	0.0010	0.0157	0.0000	0.0000	0.0028	0.00009	4.8100	0.0003	0.0000	0.0005	0.0010	0.00005	0.0005	1.0800	0.0584	0.0000050	0.0093
M-09-102A 133.5-134.5	0.80	0.0366	0.0107	0.0011	0.0155	0.0000	0.0000	0.0026	0.00009	4.6750	0.0003	0.0000	0.0007	0.0010	0.00018	0.0005	1.0500	0.0537	0.0000050	0.0094
M-09-102A 133.5-134.5	0.77	0.0362	0.0099	0.0011	0.0153	0.0000	0.0000	0.0023	0.00009	4.5400	0.0003	0.0000	0.0008	0.0010	0.00030	0.0005	1.0200	0.0490	0.0000050	0.0095
M-09-102A 133.5-134.5	0.78	0.0381	0.0092	0.0011	0.0152	0.0000	0.0000	0.0036	0.00009	4.7300	0.0003	0.0000	0.0009	0.0010	0.00056	0.0005	1.0700	0.0519	0.0000050	0.0089
M-09-102A 133.5-134.5	0.78	0.0400	0.0084	0.0011	0.0150	0.0000	0.0000	0.0048	0.00010	4.9200	0.0003	0.0000	0.0010	0.0010	0.00082	0.0005	1.1200	0.0548	0.0000050	0.0084
M-09-102A 133.5-134.5	0.81	0.0392	0.0086	0.0010	0.0159	0.0000	0.0000	0.0030	0.00010	4.8900	0.0003	0.0000	0.0009	0.0030	0.00085	0.0005	1.0900	0.0541	0.0000050	0.0084
M-09-102A 133.5-134.5	0.83	0.0383	0.0087	0.0009	0.0167	0.0000	0.0000	0.0011	0.00011	4.8600	0.0003	0.0000	0.0007	0.0050	0.00087	0.0005	1.0600	0.0533	0.0000050	0.0085
M-09-102A 133.5-134.5	0.80	0.0374	0.0086	0.0010	0.0166	0.0000	0.0000	0.0011	0.00009	5.2250	0.0003	0.0000	0.0008	0.0030	0.00047	0.0005	1.0850	0.0547	0.0000050	0.0089
M-09-102A 133.5-134.5	0.77	0.0364	0.0084	0.0010	0.0165	0.0000	0.0000	0.0011	0.00008	5.5900	0.0003	0.0000	0.0009	0.0010	0.00006	0.0005	1.1100	0.0560	0.0000050	0.0093
M-09-102A 133.5-134.5	0.79	0.0353	0.0089	0.0010	0.0181	0.0000	0.0000	0.0012	0.00010	5.5300	0.0003	0.0000	0.0009	0.0040	0.00007	0.0005	1.2150	0.0638	0.0000050	0.0099
M-09-102A 133.5-134.5	0.80	0.0341	0.0093	0.0010	0.0196	0.0000	0.0000	0.0012	0.00011	5.4700	0.0003	0.0000	0.0008	0.0070	0.00007	0.0005	1.3200	0.0716	0.0000050	0.0106
M-09-102A 133.5-134.5	0.79	0.0361	0.0094	0.0009	0.0195	0.0000	0.0000	0.0012	0.00010	5.4800	0.0003	0.0000	0.0007	0.0040	0.00007	0.0005	1.2600	0.0664	0.0000050	0.0115
M-09-102A 133.5-134.5	0.78	0.0381	0.0094	0.0007	0.0194	0.0000	0.0000	0.0012	0.00010	5.4900	0.0003	0.0000	0.0005	0.0010	0.00007	0.0005	1.2000	0.0611	0.0000050	0.0124
M-09-102A 133.5-134.5	0.82	0.0397	0.0113	0.0009	0.0204	0.0000	0.0000	0.0014	0.00009	5.5250	0.0003	0.0000	0.0011	0.0010	0.00006	0.0005	1.2050	0.0604	0.0000050	0.0120
M-09-102A 133.5-134.5	0.85	0.0412	0.0132	0.0010	0.0213	0.0000	0.0000	0.0015	0.00009	5.5600	0.0003	0.0000	0.0016	0.0010	0.00004	0.0005	1.2100	0.0596	0.0000050	0.0116
M-09-102A 133.5-134.5	0.80	0.0404	0.0110	0.0010	0.0204	0.0000	0.0000	0.0015	0.00009	5.5100	0.0003	0.0000	0.0009	0.0010	0.00003	0.0005	1.1850	0.0578	0.0000050	0.0110
M-09-102A 133.5-134.5	0.75	0.0395	0.0087	0.0010	0.0194	0.0000	0.0000	0.0014	0.00009	5.4600	0.0003	0.0000	0.0003	0.0010	0.00001	0.0005	1.1600	0.0560	0.0000050	0.0104
M-09-102A 133.5-134.5	0.71	0.0360	0.0084	0.0009	0.0193	0.0000	0.0000	0.0014	0.00009	5.1300	0.0003	0.0000	0.0004	0.0010	0.00003	0.0005	1.1000	0.0553	0.0000050	0.0107
M-09-102A 133.5-134.5	0.66	0.0325	0.0081	0.0007	0.0192	0.0000	0.0000	0.0013	0.00010	4.8000	0.0003	0.0000	0.0006	0.0010	0.00005	0.0005	1.0400	0.0545	0.0000050	0.0110
M-09-102A 133.5-134.5	0.70	0.0351	0.0081	0.0009	0.0187	0.0000	0.0000	0.0015	0.00009	4.8850	0.0003	0.0000	0.0004	0.0025	0.00009	0.0005	1.0350	0.0524	0.0000050	0.0108
M-09-102A 133.5-134.5	0.74	0.0377	0.0081	0.0010	0.0181	0.0000	0.0000	0.0017	0.00009	4.9700	0.0003	0.0000	0.0003	0.0040	0.00013	0.0005	1.0300	0.0502	0.0000050	0.0105
M-09-102A 133.5-134.5	0.76	0.0369	0.0085	0.0009	0.0198	0.0000	0.0000	0.0023	0.00009	5.4100	0.0003	0.0000	0.0006	0.0025	0.00009	0.0005	1.1650	0.0562	0.0000075	0.0114
M-09-102A 133.5-134.5	0.77	0.0361	0.0089	0.0008	0.0214	0.0000	0.0000	0.0029	0.00010	5.8500	0.0003	0.0000	0.0010	0.0010	0.00004	0.0005	1.3000	0.0622	0.0000100	0.0122
M-09-102A 133.5-134.5	0.78	0.0384	0.0088	0.0009	0.0215	0.0000	0.0000	0.0030	0.00010	6.2450	0.0003	0.0000	0.0010	0.0010	0.00013	0.0005	1.3600	0.0639	0.0000075	0.0122
M-09-102A 133.5-134.5	0.79	0.0406	0.0087	0.0010	0.0215	0.0000	0.0000	0.0030	0.00011	6.6400	0.0003	0.0000	0.0010	0.0010	0.00022	0.0005	1.4200	0.0655	0.0000050	0.0121
M-09-102A 133.5-134.5	0.80	0.0390	0.0082	0.0010	0.0214	0.0000	0.0000	0.0028	0.00011	5.9200	0.0003	0.0000	0.0009	0.0085	0.00015	0.0005	1.2950	0.0795	0.0000050	0.0117
M-09-102A 133.5-134.5	0.80	0.0374	0.0077	0.0009	0.0212	0.0000	0.0000	0.0026	0.00012	5.2000	0.0003	0.0000	0.0008	0.0160	0.00008	0.0005	1.1700	0.0934	0.0000050	0.0113
M-09-102A 133.5-134.5	0.78	0.0393	0.0078	0.0009	0.0204	0.0000	0.0000	0.0022	0.00011	5.4250	0.0004	0.0000	0.0005	0.0085	0.00011	0.0005	1.2100	0.0722	0.0000075	0.0117
M-09-102A 133.5-134.5	0.75	0.0412	0.0079	0.0009	0.0195	0.0000	0.0000	0.0018	0.00009	5.6500	0.0006	0.0000	0.0003	0.0010	0.00013	0.0005	1.2500	0.0509	0.0000100	0.0120
M-09-102A 133.5-134.5	0.78	0.0446	0.0077	0.0010	0.0200	0.0000	0.0000	0.0022	0.00009	5.5900	0.0007	0.0000	0.0004	0.0035	0.00013	0.0005	1.2450	0.0496	0.0000075	0.0120
M-09-102A 133.5-134.5	0.81	0.0480	0.0075	0.0010	0.0205	0.0000	0.0000	0.0026	0.00009	5.5300	0.0008	0.0000	0.0006	0.0060	0.00012	0.0005	1.2400	0.0482	0.0000050	0.0120
M-09-102A 133.5-134.5	0.79	0.0480	0.0077	0.0010	0.0204	0.0000	0.0000	0.0024	0.00009	5.5950	0.0008	0.0000	0.0011	0.0035	0.00013	0.0005	1.2600	0.0486	0.0000050	0.0127
M-09-102A 133.5-134.5	0.76	0.0479	0.0079	0.0010	0.0202	0.0000	0.0000	0.0022	0.00009	5.6600	0.0007	0.0000	0.0016	0.0010	0.00013	0.0005	1.2800	0.0489	0.0000050	0.0134
M-09-102A 133.5-134.5	0.79	0.0432	0.0079	0.0009	0.0203	0.0000	0.0000	0.0021	0.00009	5.8000	0.0013	0.0000	0.0014	0.0045	0.00011	0.0005	1.3250	0.0505	0.0000050	0.0127
M-09-102A 133.5-134.5	0.82	0.0385	0.0079	0.0008	0.0204	0.0000	0.0000	0.0019	0.00010	5.9400	0.0018	0.0000	0.0011	0.0080	0.00009	0.0005	1.3700	0.0520	0.0000050	0.0120
M-09-102A 133.5-134.5	0.79	0.0379	0.0089	0.0010	0.0204	0.0000	0.0000	0.0021	0.00011	5.8550	0.0014	0.0000	0.0016	0.0045	0.00010	0.0005	1.3600	0.0513	0.0000050	0.0128
M-09-102A 133.5-134.5	0.76	0.0373	0.0098	0.0012	0.0204	0.0000	0.0000	0.0022	0.00012	5.7700	0.0010	0.0000	0.0020	0.0010	0.00010	0.0005	1.3500	0.0505	0.0000050	0.0135
M-09-102A 133.5-134.5	0.79	0.0415	0.0079	0.0010	0.0193	0.0000	0.0000	0.0023	0.00010	5.4350	0.0006	0.0000	0.0015	0.0013	0.00017	0.0005	1.3000	0.0480	0.0000050	0.0117
M-09-102A 133.5-134.5	0.82	0.0457	0.0059	0.0008	0.0181	0.0000	0.0000	0.0024	0.00008	5.1000	0.0003	0.0000	0.0010	0.0015	0.00024	0.0005	1.2500	0.0455	0.0000050	0.0099
M-09-102A 133.5-134.5	0.81	0.0404	0.0071	0.0008	0.0197	0.0000	0.0000	0.0018	0.00010	5.4950	0.0005	0.0000	0.0006	0.0043	0.00016	0.0005	1.3150	0.0468	0.0000075	0.0116
M-09-102A 133.5-134.5	0.79	0.0351	0.0082	0.0008	0.0212	0.0000	0.0000	0.0011	0.00012	5.8900	0.0008	0.0000	0.0003	0.0070	0.00007	0.0005	1.3800	0.0481	0.0000100	0.0133
M-09-102A 133.5-134.5	0.79	0.0414	0.0088	0.0007	0.0208	0.0000	0.0000	0.0015	0.00011	5.9650	0.0005	0.0000	0.0009	0.0043	0.00006	0.0005	1.3750	0.0489	0.0000075	0.0126
M-09-102A 133.5-134.5	0.79	0.0477	0.0094	0.0006	0.0204	0.0000	0.0000	0.0019	0.00011	6.0400	0.0003	0.0000	0.0015	0.0015	0.00004	0.0005	1.3700	0.0497	0.0000050	0.0118
M-09-102A 133.5-134.5	0.82	0.0483	0.0098	0.0007	0.0211	0.0000	0.0000	0.0019	0.00011	5.8250	0.0003	0.0000	0.0014	0.0015	0.00012	0.0005	1.3350	0.0477	0.0000075	0.0125
M-09-102A 133.5-134.5	0.84	0.0489	0.0101	0.0007	0.0218	0.0000	0.0000	0.0018	0.00012	5.6100	0.0003	0.0000	0.0012	0.0015	0.00019	0.0005	1.3000	0.0456	0.0000100	0.0131
M-09-102A 133.5-134.5	0.84	0.0487	0.0098	0.0007	0.0214	0.0000	0.0000	0.0015	0.00012	5.5800	0.0003	0.0000	0.0011	0.0015	0.00010	0.0005	1.2750	0.0450	0.0000075	0.0126
M-09-102A 133.5-134.5	0.84	0.0485	0.0094	0.0006	0.0209	0.0000	0.0000	0.0012	0.00012	5.5500	0.0003	0.0000	0.0010	0.0015	0.00001	0.0005	1.2500	0.0444	0.0000050	0.0121
M-09-102A 133.5-134.5	0.85	0.0476	0.0094	0.0006	0.0209	0.0000	0.0000	0.0013	0.00012	5.5675	0.0003	0.0000	0.0010	0.0015	0.00003	0.0005	1.2650	0.0446	0.0000050	0.0119

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-102A 133.5-134.5	0.0002	0.0100	0.3460	0.0026	0.8400	0.00001	0.2300	0.0431	2.9500	0.0001	0.0002	0.0001	0.0097	0.0005	0.0030	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.3500	0.0027	0.7900	0.00001	0.2600	0.0402	2.1600	0.0001	0.0001	0.0001	0.0078	0.0006	0.0030	0.0000
M-09-102A 133.5-134.5	0.0002	0.0230	0.3370	0.0026	0.7700	0.00001	0.2500	0.0388	2.6200	0.0001	0.0007	0.0001	0.0072	0.0006	0.0030	0.0000
M-09-102A 133.5-134.5	0.0004	0.0170	0.3510	0.0024	0.8100	0.00001	0.2500	0.0408	2.6800	0.0001	0.0006	0.0002	0.0073	0.0006	0.0030	0.0001
M-09-102A 133.5-134.5	0.0002	0.0045	0.3250	0.0025	0.8200	0.00001	0.2400	0.0430	2.4100	0.0001	0.0003	0.0002	0.0065	0.0006	0.0030	0.0000
M-09-102A 133.5-134.5	0.0001	0.0140	0.3000	0.0029	0.7200	0.00001	0.2300	0.0398	2.4500	0.0001	0.0001	0.0001	0.0069	0.0005	0.0050	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.2860	0.0022	0.6900	0.00001	0.2000	0.0351	2.2200	0.0001	0.0000	0.0001	0.0066	0.0006	0.0050	0.0000
M-09-102A 133.5-134.5	0.0009	0.0045	0.2750	0.0023	0.6100	0.00001	0.2000	0.0335	2.0800	0.0001	0.0001	0.0001	0.0052	0.0003	0.0040	0.0001
M-09-102A 133.5-134.5	0.0001	0.0310	0.2570	0.0025	0.5500	0.00001	0.2200	0.0329	1.8700	0.0001	0.0008	0.0002	0.0049	0.0004	0.0050	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.2750	0.0020	0.6500	0.00001	0.2100	0.0354	2.1300	0.0001	0.0002	0.0001	0.0060	0.0004	0.0030	0.0001
M-09-102A 133.5-134.5	0.0119	0.0210	0.6160	0.0060	1.1200	0.00001	0.0700	0.0018	32.4000	0.0002	0.0001	0.0002	0.0183	0.0001	6.3500	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.2560	0.0020	0.6800	0.00001	0.2000	0.0378	1.8500	0.0001	0.0002	0.0001	0.0075	0.0004	0.0060	0.0000
M-09-102A 133.5-134.5	0.0003	0.0110	0.2580	0.0018	0.6200	0.00001	0.2100	0.0351	1.6400	0.0001	0.0002	0.0001	0.0063	0.0005	0.0030	0.0001
M-09-102A 133.5-134.5	0.0001	0.0380	0.2460	0.0021	0.6100	0.00001	0.2000	0.0350	1.6800	0.0001	0.0004	0.0001	0.0052	0.0004	0.0020	0.0000
M-09-102A 133.5-134.5	0.0001	0.0130	0.2720	0.0016	0.7000	0.00001	0.2100	0.0360	2.1000	0.0001	0.0002	0.0001	0.0049	0.0005	0.0030	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.2670	0.0022	0.7800	0.00001	0.2000	0.0407	2.1100	0.0001	0.0002	0.0001	0.0076	0.0004	0.0050	0.0000
M-09-102A 133.5-134.5	0.0001	0.0103	0.2555	0.0018	0.7650	0.00001	0.2100	0.0393	2.1000	0.0001	0.0004	0.0001	0.0055	0.0004	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0160	0.2440	0.0014	0.7500	0.00001	0.2200	0.0378	2.0900	0.0001	0.0005	0.0001	0.0055	0.0004	0.0030	0.0000
M-09-102A 133.5-134.5	0.0001	0.0140	0.2215	0.0014	0.6900	0.00001	0.1900	0.0350	1.7700	0.0001	0.0004	0.0001	0.0054	0.0004	0.0035	0.0000
M-09-102A 133.5-134.5	0.0002	0.0120	0.1990	0.0014	0.6300	0.00001	0.1600	0.0321	1.4500	0.0001	0.0003	0.0001	0.0054	0.0004	0.0040	0.0000
M-09-102A 133.5-134.5	0.0003	0.0160	0.2030	0.0016	0.6300	0.00001	0.1600	0.0312	1.4100	0.0001	0.0002	0.0001	0.0054	0.0003	0.0025	0.0000
M-09-102A 133.5-134.5	0.0003	0.0200	0.2070	0.0018	0.6300	0.00001	0.1600	0.0303	1.3700	0.0001	0.0001	0.0002	0.0055	0.0003	0.0010	0.0000
M-09-102A 133.5-134.5	0.0003	0.0355	0.2035	0.0014	0.6150	0.00001	0.1750	0.0315	1.4450	0.0001	0.0001	0.0001	0.0051	0.0003	0.0020	0.0000
M-09-102A 133.5-134.5	0.0002	0.0510	0.2000	0.0011	0.6000	0.00001	0.1900	0.0326	1.5200	0.0001	0.0001	0.0001	0.0047	0.0004	0.0030	0.0000
M-09-102A 133.5-134.5	0.0002	0.0435	0.2010	0.0013	0.6050	0.00001	0.1850	0.0325	1.4650	0.0001	0.0003	0.0001	0.0047	0.0004	0.0060	0.0002
M-09-102A 133.5-134.5	0.0002	0.0360	0.2020	0.0014	0.6100	0.00001	0.1800	0.0324	1.4100	0.0000	0.0005	0.0001	0.0047	0.0003	0.0090	0.0005
M-09-102A 133.5-134.5	0.0002	0.0280	0.2445	0.0015	0.5900	0.00001	0.2100	0.0338	1.7750	0.0001	0.0003	0.0001	0.0047	0.0003	0.0060	0.0003
M-09-102A 133.5-134.5	0.0002	0.0200	0.2870	0.0015	0.5700	0.00001	0.2400	0.0352	2.1400	0.0001	0.0001	0.0001	0.0047	0.0004	0.0030	0.0000
M-09-102A 133.5-134.5	0.0001	0.0165	0.2530	0.0015	0.6050	0.00001	0.2050	0.0349	1.9950	0.0001	0.0001	0.0001	0.0051	0.0003	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0130	0.2190	0.0015	0.6400	0.00001	0.1700	0.0345	1.8500	0.0001	0.0001	0.0001	0.0054	0.0003	0.0050	0.0000
M-09-102A 133.5-134.5	0.0001	0.0125	0.2145	0.0019	0.6200	0.00001	0.1700	0.0352	1.8500	0.0001	0.0001	0.0001	0.0054	0.0003	0.0060	0.0000
M-09-102A 133.5-134.5	0.0002	0.0120	0.2100	0.0023	0.6000	0.00001	0.1700	0.0359	1.8500	0.0001	0.0002	0.0002	0.0054	0.0003	0.0070	0.0000
M-09-102A 133.5-134.5	0.0003	0.0180	0.2195	0.0012	0.6350	0.00001	0.1700	0.0363	1.8250	0.0001	0.0002	0.0001	0.0055	0.0003	0.0050	0.0000
M-09-102A 133.5-134.5	0.0003	0.0240	0.2290	0.0001	0.6700	0.00001	0.1700	0.0366	1.8000	0.0001	0.0001	0.0001	0.0056	0.0004	0.0030	0.0000
M-09-102A 133.5-134.5	0.0002	0.0143	0.2235	0.0009	0.6950	0.00001	0.1800	0.0352	1.8050	0.0001	0.0001	0.0001	0.0050	0.0004	0.0035	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.2180	0.0017	0.7200	0.00001	0.1900	0.0338	1.8100	0.0000	0.0001	0.0001	0.0043	0.0004	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0213	0.2010	0.0015	0.6400	0.00001	0.1800	0.0319	1.7450	0.0000	0.0001	0.0001	0.0044	0.0004	0.0045	0.0000
M-09-102A 133.5-134.5	0.0001	0.0380	0.1840	0.0014	0.5600	0.00001	0.1700	0.0299	1.6800	0.0000	0.0001	0.0001	0.0044	0.0003	0.0050	0.0000
M-09-102A 133.5-134.5	0.0002	0.0213	0.1830	0.0013	0.5950	0.00001	0.1800	0.0295	1.7650	0.0000	0.0002	0.0001	0.0043	0.0003	0.0060	0.0002
M-09-102A 133.5-134.5	0.0004	0.0045	0.1820	0.0012	0.6300	0.00001	0.1900	0.0291	1.8500	0.0000	0.0002	0.0001	0.0042	0.0004	0.0070	0.0003
M-09-102A 133.5-134.5	0.0003	0.0045	0.1975	0.0013	0.6400	0.00001	0.1800	0.0325	1.8800	0.0000	0.0002	0.0001	0.0045	0.0003	0.0055	0.0001
M-09-102A 133.5-134.5	0.0002	0.0045	0.2130	0.0014	0.6500	0.00001	0.1700	0.0358	1.9100	0.0000	0.0003	0.0001	0.0047	0.0003	0.0040	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.2170	0.0012	0.7200	0.00001	0.1750	0.0368	2.0300	0.0000	0.0002	0.0001	0.0047	0.0003	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.2210	0.0010	0.7900	0.00001	0.1800	0.0377	2.1500	0.0000	0.0002	0.0001	0.0047	0.0003	0.0040	0.0000
M-09-102A 133.5-134.5	0.0003	0.0153	0.2005	0.0012	0.7500	0.00001	0.1500	0.0359	1.8800	0.0000	0.0001	0.0001	0.0047	0.0003	0.0045	0.0000
M-09-102A 133.5-134.5	0.0004	0.0260	0.1800	0.0015	0.7100	0.00001	0.1200	0.0340	1.6100	0.0000	0.0001	0.0001	0.0046	0.0003	0.0050	0.0000
M-09-102A 133.5-134.5	0.0002	0.0175	0.1935	0.0015	0.6950	0.00001	0.1350	0.0337	1.7900	0.0000	0.0001	0.0001	0.0042	0.0003	0.0055	0.0000
M-09-102A 133.5-134.5	0.0001	0.0090	0.2070	0.0014	0.6800	0.00001	0.1500	0.0333	1.9700	0.0000	0.0001	0.0001	0.0038	0.0003	0.0060	0.0001
M-09-102A 133.5-134.5	0.0002	0.0100	0.1995	0.0013	0.6600	0.00001	0.1500	0.0330	1.9800	0.0000	0.0001	0.0003	0.0038	0.0003	0.0055	0.0000
M-09-102A 133.5-134.5	0.0003	0.0110	0.1920	0.0013	0.6400	0.00001	0.1500	0.0327	1.9900	0.0000	0.0002	0.0004	0.0038	0.0003	0.0050	0.0000
M-09-102A 133.5-134.5	0.0003	0.0078	0.1920	0.0015	0.6150	0.00001	0.1500	0.0326	2.0450	0.0000	0.0002	0.0004	0.0038	0.0003	0.0055	0.0000
M-09-102A 133.5-134.5	0.0003	0.0045	0.1920	0.0016	0.5900	0.00001	0.1500	0.0324	2.1000	0.0000	0.0002	0.0003	0.0037	0.0003	0.0060	0.0000
M-09-102A 133.5-134.5	0.0004	0.0045	0.1845	0.0015	0.5900	0.00001	0.1700	0.0332	2.2450	0.0000	0.0003	0.0002	0.0039	0.0003	0.0060	0.0000
M-09-102A 133.5-134.5	0.0004	0.0045	0.1770	0.0014	0.5900	0.00001	0.1900	0.0339	2.3900	0.0000	0.0003	0.0001	0.0041	0.0003	0.0060	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.1825	0.0014	0.5850	0.00001	0.1700	0.0334	2.2850	0.0000	0.0002	0.0001	0.0041	0.0003	0.0055	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1880	0.0014	0.5800	0.00001	0.1500	0.0329	2.1800	0.0000	0.0001	0.0001	0.0041	0.0003	0.0050	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1750	0.0013	0.5450	0.00001	0.1350	0.0303	2.0700	0.0000	0.0001	0.0001	0.0037	0.0003	0.0055	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.1620	0.0012	0.5100	0.00001	0.1200	0.0277	1.9600	0.0000	0.0002	0.0001	0.0032	0.0002	0.0060	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.1605	0.0013	0.5300	0.00001	0.1300	0.0303	2.0800	0.0000	0.0001	0.0001	0.0042	0.0003	0.0050	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.1590	0.0014	0.5500	0.00001	0.1400	0.0329	2.2000	0.0000	0.0001	0.0001	0.0051	0.0003	0.0040	0.0000
M-09-102A 133.5-134.5	0.0003	0.0045	0.1575	0.0013	0.5900	0.00001	0.1450	0.0326	2.1600	0.0000	0.0001	0.0001	0.0046	0.0003	0.0045	0.0000
M-09-102A 133.5-134.5	0.0003	0.0045	0.1560	0.0011	0.6300	0.00001	0.1500	0.0323	2.1200	0.0000	0.0001	0.0001	0.0042	0.0004	0.0050	0.0000
M-09-102A 133.5-134.5	0.0003	0.0108	0.1530	0.0012	0.5750	0.00001	0.1400	0.0314	1.8950	0.0000	0.0001	0.0002	0.0043	0.0004	0.0055	0.0000
M-09-102A 133.5-134.5	0.0003	0.0170	0.1500	0.0014	0.5200	0.00001	0.1300	0.0305	1.6700	0.0000	0.0001	0.0002	0.0045	0.0004	0.0060	0.0000
M-09-102A 133.5-134.5	0.0003	0.0108	0.1420	0.0014	0.5350	0.00001	0.1300	0.0298	1.7500	0.0000	0.0001	0.0002	0.0045	0.0004	0.0060	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.1340	0.0014	0.5500	0.00001	0.1300	0.0290	1.8300	0.0000	0.0002	0.0001	0.0045	0.0004	0.0060	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.1373	0.0013	0.5450	0.00001	0.1250	0.0294	1.8050	0.0000	0.0002	0.0001	0.0043	0.0004	0.0058	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-102A 133.5-134.5	7	99	29-Dec-11	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	495	19	40	7.46	4.4	16.9	3	0.1
M-09-102A 133.5-134.5	7	100	5-Jan-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	485	19	39	7.37	4.2	17.0	3	0.1
M-09-102A 133.5-134.5	7	101	12-Jan-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	485	19	40	7.4	4.0	17.1	3	0.1
M-09-102A 133.5-134.5	7	102	19-Jan-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	500	20	43	7.43	4.1	18.0	3	0.1
M-09-102A 133.5-134.5	7	103	26-Jan-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	480	20	38	7.31	4.3	18.8	4	0.1
M-09-102A 133.5-134.5	7	104	2-Feb-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	490	20	42	7.55	4.5	19.7	4	0.1
M-09-102A 133.5-134.5	7	105	9-Feb-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	495	20	45	7.73	4.7	20.6	4	0.1
M-09-102A 133.5-134.5	7	106	16-Feb-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	500	20	45	7.63	5.0	19.2	5	0.1
M-09-102A 133.5-134.5	7	107	23-Feb-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	480	20	40	7.27	5.3	17.9	5	0.1
M-09-102A 133.5-134.5	7	108	1-Mar-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	520	20	28	7.28	5.6	16.5	6	0.1
M-09-102A 133.5-134.5	7	109	8-Mar-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	480	20	41	7.5	5.9	15.2	6	0.1
M-09-102A 133.5-134.5	7	110	15-Mar-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	455	19	37	7.28	5.5	14.3	6	0.1
M-09-102A 133.5-134.5	7	111	22-Mar-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	450	19	37	7.45	5.2	13.5	6	0.1
M-09-102A 133.5-134.5	7	112	29-Mar-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	445	18	35	7.24	4.8	12.6	5	0.1
M-09-102A 133.5-134.5	7	113	5-Apr-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	465	17	36	7.29	4.4	11.7	5	0.1
M-09-102A 133.5-134.5	7	114	12-Apr-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	495	17	45	7.39	4.4	11.7	5	0.1
M-09-102A 133.5-134.5	7	115	19-Apr-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	450	17	34	7.42	4.4	11.7	5	0.1
M-09-102A 133.5-134.5	7	116	26-Apr-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	460	17	41	7.17	5.2	13.8	4	0.1
M-09-102A 133.5-134.5	7	117	3-May-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	445	17	37	7.68	5.4	14.5	4	0.1
M-09-102A 133.5-134.5	7	118	10-May-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	450	17	33	7.41	5.7	14.2	4	0.1
M-09-102A 133.5-134.5	7	119	17-May-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	440	17	39	7.33	5.9	13.9	5	0.1
M-09-102A 133.5-134.5	7	120	24-May-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	450	17	35	7.61	6.1	13.6	5	0.1
M-09-102A 133.5-134.5	7	121	31-May-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	425	17	33	7.55	6.4	13.3	5	0.1
M-09-102A 133.5-134.5	7	122	7-Jun-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	450	18	31	7.41	6.4	13.5	5	0.1
M-09-102A 133.5-134.5	7	123	14-Jun-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	470	18	42	7.51	6.4	13.7	5	0.1
M-09-102A 133.5-134.5	7	124	21-Jun-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	445	18	37	7.47	6.4	13.8	4	0.1
M-09-102A 133.5-134.5	7	125	28-Jun-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	455	18	39	7.51	6.4	14.0	4	0.1
M-09-102A 133.5-134.5	7	126	5-Jul-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	460	18	33	7.39	6.0	14.2	4	0.1
M-09-102A 133.5-134.5	7	127	12-Jul-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	460	18	40	7.36	5.6	14.5	4	0.1
M-09-102A 133.5-134.5	7	128	19-Jul-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	465	19	39	7.36	5.2	14.7	4	0.1
M-09-102A 133.5-134.5	7	129	26-Jul-12	Mitchell	BELOW MTF	LP Hazelton	SARG	SIH	3	CL	1			Water	500	465	19	40	7.41	4.8	15.0	4	0.1
																	18	37	7.458	6.0	14.0	4	0.1
HC8 LP Hazelton																							
M-09-106 34.5-35.5	8	0	4-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	350	68	206	7.50	2.5	25.6	87	7.3
M-09-106 34.5-35.5	8	1	11-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	500	74	217	7.44	2.2	22.3	68	4.0
M-09-106 34.5-35.5	8	2	18-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	500	58	156	7.13	3.7	14.8	53	1.5
M-09-106 34.5-35.5	8	3	25-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	490	47	129	7.42	2.7	21.3	48	0.6
M-09-106 34.5-35.5	8	4	4-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	515	43	120	7.35	2.4	20.5	40	0.3
M-09-106 34.5-35.5	8	5	11-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	520	43	106	7.36	2.7	20.6	36	0.1
M-09-106 34.5-35.5	8	6	18-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	500	45	114	7.49	2.6	21.3	36	0.1
M-09-106 34.5-35.5	8	7	25-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	490	60	134	7.31	3.5	21.3	42	0.1
M-09-106 34.5-35.5	8	8	1-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	500	60	131	7.38	2.9	20.7	55	0.1
M-09-106 34.5-35.5	8	9	8-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	510	76	174	7.30	2.7	20.8	61	0.1
M-09-106 34.5-35.5	8	10	15-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	490	90	199	7.28	3.4	17.1	85	0.1
M-09-106 34.5-35.5	8	11	22-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	490	92	200	7.31	4.8	22.2	82	0.1
M-09-106 34.5-35.5	8	12	29-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	510	73	168	7.40	2.3	21.2	57	0.1
M-09-106 34.5-35.5	8	13	6-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	495	60	133	7.22	4.4	18.1	51	0.1
M-09-106 34.5-35.5	8	14	13-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	480	65	138	7.43	3.0	17.8	43	0.1
M-09-106 34.5-35.5	8	15	20-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	505	57	136	7.38	4.4	21.0	41	0.1
M-09-106 34.5-35.5	8	16	27-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	485	54	114	7.37	6.5	23.9	25	0.1
M-09-106 34.5-35.5	8	17	3-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	490	48	106	7.36	3.4	20.6	22	0.1
M-09-106 34.5-35.5	8	18	10-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	485	42	95	7.36	4.5	21.7	20	0.1
M-09-106 34.5-35.5	8	19	17-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	500	42	97	7.48	3.9	20.8	19	0.1
M-09-106 34.5-35.5	8	20	24-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	495	44	100	7.53	2.6	22.2	21	0.1
M-09-106 34.5-35.5	8	21	1-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	495	41	92	7.48	2.4	17.7	18	0.1
M-09-106 34.5-35.5	8	22	8-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	500	37	95	7.37	2.5	17.5	19	0.1
M-09-106 34.5-35.5	8	23	15-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	485	37	90	7.31	4.4	17.1	16	0.1
M-09-106 34.5-35.5	8	24	22-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	495	38	90	7.29	3.5	20.3	20	0.1
M-09-106 34.5-35.5	8	25	29-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	490	41	84	7.37	4.4	17.9	23	0.1
M-09-106 34.5-35.5	8	26	5-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	485	43	93	7.47	2.6	21.2	19	0.1
M-09-106 34.5-35.5	8	27	12-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	490	38	93	7.46	4.1	23.0	24	0.1
M-09-106 34.5-35.5	8	28	19-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	490	38	87	7.48	5.3	20.0	31	0.1
M-09-106 34.5-35.5	8	29	26-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	490	39	91	7.40	2.7	21.5	21	0.1
M-09-106 34.5-35.5	8	30	2-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	455	39	78	7.34	4.3	20.0	32	0.1
M-09-106 34.5-35.5	8	31	9-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	455	36	85	7.08	5.1	17.3	25	0.1
M-09-106 34.5-35.5	8	32	16-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	445	39	87	7.23	3.3	20.5	27	0.1
M-09-106 34.5-35.5	8	33	23-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	34	67	7.32	2.7	17.7	26	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-102A 133.5-134.5	0.85	0.0467	0.0094	0.0006	0.0208	0.0000	0.0000	0.0013	0.00012	5.5850	0.0003	0.0000	0.0010	0.0015	0.00004	0.0005	1.2800	0.0447	0.0000050	0.0118
M-09-102A 133.5-134.5	0.86	0.0458	0.0094	0.0005	0.0208	0.0000	0.0000	0.0014	0.00012	5.6025	0.0003	0.0000	0.0009	0.0015	0.00006	0.0005	1.2950	0.0449	0.0000050	0.0116
M-09-102A 133.5-134.5	0.86	0.0449	0.0094	0.0005	0.0207	0.0000	0.0000	0.0014	0.00012	5.6200	0.0003	0.0000	0.0009	0.0015	0.00007	0.0005	1.3100	0.0450	0.0000050	0.0114
M-09-102A 133.5-134.5	0.85	0.0449	0.0092	0.0006	0.0207	0.0000	0.0000	0.0015	0.00011	5.6850	0.0003	0.0000	0.0009	0.0015	0.00006	0.0005	1.3250	0.0449	0.0000050	0.0118
M-09-102A 133.5-134.5	0.85	0.0448	0.0090	0.0006	0.0207	0.0000	0.0000	0.0015	0.00011	5.7500	0.0003	0.0000	0.0008	0.0015	0.00006	0.0005	1.3400	0.0448	0.0000050	0.0122
M-09-102A 133.5-134.5	0.84	0.0448	0.0088	0.0007	0.0206	0.0000	0.0000	0.0016	0.00010	5.8150	0.0003	0.0000	0.0008	0.0015	0.00005	0.0005	1.3550	0.0446	0.0000050	0.0125
M-09-102A 133.5-134.5	0.83	0.0447	0.0086	0.0007	0.0206	0.0000	0.0000	0.0016	0.00010	5.8800	0.0003	0.0000	0.0007	0.0015	0.00004	0.0005	1.3700	0.0445	0.0000050	0.0129
M-09-102A 133.5-134.5	0.84	0.0463	0.0082	0.0008	0.0202	0.0000	0.0000	0.0017	0.00016	5.8575	0.0003	0.0000	0.0009	0.0015	0.00009	0.0005	1.3625	0.0441	0.0000063	0.0125
M-09-102A 133.5-134.5	0.84	0.0478	0.0078	0.0008	0.0198	0.0000	0.0000	0.0018	0.00023	5.8350	0.0003	0.0000	0.0010	0.0015	0.00015	0.0005	1.3550	0.0437	0.0000075	0.0121
M-09-102A 133.5-134.5	0.85	0.0494	0.0074	0.0009	0.0194	0.0000	0.0000	0.0018	0.00030	5.8125	0.0003	0.0000	0.0012	0.0015	0.00020	0.0005	1.3475	0.0432	0.0000088	0.0117
M-09-102A 133.5-134.5	0.85	0.0509	0.0070	0.0009	0.0190	0.0000	0.0000	0.0019	0.00036	5.7900	0.0003	0.0000	0.0013	0.0015	0.00025	0.0005	1.3400	0.0428	0.0000100	0.0113
M-09-102A 133.5-134.5	0.85	0.0546	0.0066	0.0008	0.0181	0.0000	0.0000	0.0018	0.00028	5.5325	0.0003	0.0000	0.0012	0.0015	0.00020	0.0005	1.3275	0.0418	0.0000100	0.0114
M-09-102A 133.5-134.5	0.84	0.0583	0.0062	0.0007	0.0172	0.0000	0.0000	0.0017	0.00021	5.2750	0.0003	0.0000	0.0011	0.0015	0.00016	0.0005	1.3150	0.0408	0.0000100	0.0115
M-09-102A 133.5-134.5	0.84	0.0619	0.0057	0.0006	0.0163	0.0000	0.0000	0.0016	0.00013	5.0175	0.0003	0.0000	0.0009	0.0015	0.00011	0.0005	1.3025	0.0398	0.0000100	0.0116
M-09-102A 133.5-134.5	0.83	0.0656	0.0053	0.0005	0.0154	0.0000	0.0000	0.0015	0.00005	4.7600	0.0003	0.0000	0.0008	0.0015	0.00006	0.0005	1.2900	0.0388	0.0000100	0.0117
M-09-102A 133.5-134.5	0.83	0.0656	0.0053	0.0005	0.0154	0.0000	0.0000	0.0015	0.00005	4.7600	0.0003	0.0000	0.0008	0.0015	0.00006	0.0005	1.2900	0.0388	0.0000100	0.0117
M-09-102A 133.5-134.5	0.83	0.0656	0.0053	0.0005	0.0154	0.0000	0.0000	0.0015	0.00005	4.7600	0.0003	0.0000	0.0008	0.0015	0.00006	0.0005	1.2900	0.0388	0.0000100	0.0117
M-09-102A 133.5-134.5	0.91	0.0619	0.0052	0.0005	0.0151	0.0000	0.0000	0.0017	0.00006	4.7600	0.0003	0.0000	0.0010	0.0015	0.00029	0.0005	1.3125	0.0373	0.0000100	0.0105
M-09-102A 133.5-134.5	0.93	0.0606	0.0052	0.0005	0.0150	0.0000	0.0000	0.0017	0.00007	4.7600	0.0003	0.0000	0.0010	0.0015	0.00037	0.0005	1.3200	0.0368	0.0000100	0.0101
M-09-102A 133.5-134.5	0.91	0.0678	0.0050	0.0005	0.0149	0.0000	0.0000	0.0019	0.00006	4.7450	0.0003	0.0000	0.0010	0.0015	0.00035	0.0005	1.3300	0.0367	0.0000100	0.0100
M-09-102A 133.5-134.5	0.89	0.0750	0.0047	0.0005	0.0147	0.0000	0.0000	0.0020	0.00006	4.7300	0.0003	0.0000	0.0010	0.0015	0.00033	0.0005	1.3400	0.0366	0.0000100	0.0099
M-09-102A 133.5-134.5	0.86	0.0821	0.0045	0.0005	0.0146	0.0000	0.0000	0.0022	0.00006	4.7150	0.0003	0.0000	0.0010	0.0015	0.00030	0.0005	1.3500	0.0364	0.0000100	0.0098
M-09-102A 133.5-134.5	0.84	0.0893	0.0042	0.0005	0.0144	0.0000	0.0000	0.0023	0.00005	4.7000	0.0003	0.0000	0.0010	0.0015	0.00028	0.0005	1.3600	0.0363	0.0000100	0.0097
M-09-102A 133.5-134.5	0.83	0.0857	0.0044	0.0005	0.0147	0.0000	0.0000	0.0025	0.00006	4.7575	0.0003	0.0000	0.0010	0.0015	0.00023	0.0005	1.3700	0.0367	0.0000088	0.0103
M-09-102A 133.5-134.5	0.81	0.0820	0.0046	0.0005	0.0150	0.0000	0.0000	0.0027	0.00006	4.8150	0.0003	0.0000	0.0010	0.0015	0.00018	0.0005	1.3800	0.0371	0.0000075	0.0109
M-09-102A 133.5-134.5	0.80	0.0784	0.0048	0.0005	0.0153	0.0000	0.0000	0.0029	0.00007	4.8725	0.0003	0.0000	0.0010	0.0015	0.00012	0.0005	1.3900	0.0374	0.0000063	0.0114
M-09-102A 133.5-134.5	0.78	0.0747	0.0050	0.0005	0.0156	0.0000	0.0000	0.0031	0.00008	4.9300	0.0003	0.0000	0.0010	0.0015	0.00007	0.0005	1.4000	0.0378	0.0000050	0.0120
M-09-102A 133.5-134.5	0.79	0.0728	0.0051	0.0005	0.0158	0.0000	0.0000	0.0027	0.00008	4.9675	0.0003	0.0000	0.0009	0.0015	0.00007	0.0005	1.4200	0.0376	0.0000050	0.0118
M-09-102A 133.5-134.5	0.81	0.0710	0.0053	0.0005	0.0160	0.0000	0.0000	0.0023	0.00008	5.0050	0.0003	0.0000	0.0008	0.0015	0.00006	0.0005	1.4400	0.0373	0.0000050	0.0115
M-09-102A 133.5-134.5	0.82	0.0691	0.0054	0.0004	0.0161	0.0000	0.0000	0.0019	0.00008	5.0425	0.0003	0.0000	0.0006	0.0015	0.00006	0.0005	1.4600	0.0371	0.0000050	0.0113
M-09-102A 133.5-134.5	0.83	0.0672	0.0055	0.0004	0.0163	0.0000	0.0000	0.0015	0.00008	5.0800	0.0003	0.0000	0.0005	0.0015	0.00005	0.0005	1.4800	0.0368	0.0000050	0.0110
	0.82	0.0772	0.0049	0.0005	0.0154	0.0000	0.0000	0.0024	0.00007	4.8885	0.0003	0.0000	0.0009	0.0015	0.00014	0.0005	1.4050	0.0370	0.0000068	0.0110
HC8 LP Hazelton																				
M-09-106 34.5-35.5	0.64	0.115	0.001	0.004	0.063	0.000	0.000	0.006	0.00001	25.500	0.000	0.000	0.004	0.005	0.00003	0.006	0.938	0.038	0.0000050	0.018
M-09-106 34.5-35.5	0.52	0.117	0.002	0.004	0.087	0.000	0.000	0.006	0.00001	28.000	0.000	0.000	0.002	0.005	0.00015	0.005	1.030	0.054	0.0000050	0.022
M-09-106 34.5-35.5	0.41	0.132	0.001	0.003	0.098	0.000	0.000	0.005	0.00000	21.700	0.000	0.000	0.002	0.005	0.00004	0.005	0.821	0.059	0.0000200	0.015
M-09-106 34.5-35.5	0.35	0.107	0.002	0.003	0.118	0.000	0.000	0.004	0.00000	17.500	0.000	0.000	0.001	0.005	0.00005	0.004	0.719	0.038	0.0000050	0.013
M-09-106 34.5-35.5	0.29	0.121	0.002	0.003	0.127	0.000	0.000	0.005	0.00001	16.200	0.000	0.000	0.001	0.005	0.00004	0.003	0.643	0.046	0.0000050	0.012
M-09-106 34.5-35.5	0.25	0.105	0.002	0.003	0.135	0.000	0.000	0.004	0.00001	16.000	0.000	0.000	0.001	0.005	0.00005	0.003	0.612	0.058	0.0000050	0.010
M-09-106 34.5-35.5	0.18	0.078	0.002	0.003	0.091	0.000	0.000	0.003	0.00001	17.000	0.000	0.000	0.001	0.005	0.00005	0.003	0.678	0.054	0.0000050	0.011
M-09-106 34.5-35.5	0.19	0.073	0.004	0.005	0.067	0.000	0.000	0.004	0.00000	22.700	0.000	0.000	0.002	0.005	0.00021	0.004	0.893	0.060	0.0000050	0.017
M-09-106 34.5-35.5	0.14	0.070	0.004	0.005	0.071	0.000	0.000	0.004	0.00003	22.700	0.001	0.000	0.002	0.005	0.00047	0.003	0.880	0.061	0.0000050	0.019
M-09-106 34.5-35.5	0.16	0.073	0.006	0.007	0.067	0.000	0.000	0.005	0.00003	28.600	0.000	0.000	0.002	0.005	0.00037	0.004	1.070	0.060	0.0000050	0.030
M-09-106 34.5-35.5	0.16	0.079	0.005	0.008	0.075	0.000	0.000	0.003	0.00002	34.100	0.001	0.000	0.019	0.005	0.00006	0.004	1.170	0.067	0.0000050	0.044
M-09-106 34.5-35.5	0.12	0.067	0.005	0.007	0.059	0.000	0.000	0.003	0.00002	34.800	0.001	0.000	0.003	0.005	0.00028	0.004	1.130	0.068	0.0000050	0.057
M-09-106 34.5-35.5	0.12	0.056	0.005	0.007	0.056	0.000	0.000	0.003	0.00003	27.900	0.000	0.000	0.002	0.005	0.00005	0.003	0.849	0.054	0.0000050	0.067
M-09-106 34.5-35.5	0.10	0.054	0.004	0.006	0.068	0.000	0.000	0.003	0.00002	23.000	0.001	0.000	0.002	0.005	0.00211	0.002	0.671	0.053	0.0000050	0.056
M-09-106 34.5-35.5	0.11	0.059	0.004	0.006	0.058	0.000	0.000	0.003	0.00003	24.700	0.001	0.000	0.002	0.001	0.00024	0.002	0.684	0.050	0.0000050	0.069
M-09-106 34.5-35.5	0.11	0.059	0.004	0.006	0.057	0.000	0.000	0.003	0.00003	21.800	0.000	0.000	0.002	0.001	0.00174	0.003	0.589	0.043	0.0000050	0.072
M-09-106 34.5-35.5	0.09	0.050	0.004	0.005	0.064	0.000	0.000	0.002	0.00002	20.800	0.001	0.000	0.001	0.004	0.00003	0.002	0.557	0.049	0.0000050	0.056
M-09-106 34.5-35.5	0.08	0.055	0.004	0.005	0.065	0.000	0.000	0.003	0.00001	18.500	0.000	0.000	0.001	0.001	0.00001	0.002	0.479	0.037	0.0000050	0.056
M-09-106 34.5-35.5	0.06	0.053	0.003	0.004	0.076	0.000	0.000	0.002	0.00002	16.200	0.000	0.000	0.003	0.001	0.00004	0.002	0.430	0.041	0.0000050	0.046
M-09-106 34.5-35.5	0.08	0.057	0.004	0.004	0.065	0.000	0.000	0.003	0.00004	16.300	0.000	0.000	0.002	0.004	0.00003	0.002	0.418	0.040	0.0000050	0.043
M-09-106 34.5-35.5	0.06	0.043	0.004	0.003	0.067	0.000	0.000	0.005	0.00002	17.000	0.000	0.000	0.002	0.001	0.00002	0.002	0.439	0.044	0.0000050	0.049
M-09-106 34.5-35.5	0.03	0.037	0.003	0.003	0.068	0.000	0.000	0.002	0.00002	15.900	0.000	0.000	0.001	0.001	0.00003	0.002	0.402	0.038	0.0000050	0.048
M-09-106 34.5-35.5	0.06	0.041	0.003	0.004	0.061	0.000	0.000	0.003	0.00002	14.000	0.001	0.000	0.003	0.005	0.00003	0.002	0.435	0.039	0.0000050	0.049
M-09-106 34.5-35.5	0.03	0.047	0.003	0.004	0.063	0.000	0.000	0.004	0.00003	14.200	0.001	0.000	0.001	0.001	0.00003	0.002	0.363	0.032	0.0000050	0.045
M-09-106 34.5-35.5	0.03	0.037	0.003	0.004	0.059	0.000	0.000	0.002	0.00002	14.400	0.000	0.000	0.002	0.004	0.00003	0.001	0.374	0.033	0.0000050	0.046
M-09-106 34.5-35.5	0.03	0.040	0.003	0.003	0.063	0.000	0.000	0.003	0.00002	15.600	0.000	0.000	0.001	0.002	0.00001	0.001	0.367	0.036	0.0000050	0.043
M-09-106 34.5-35.5	0.03	0.040	0.003	0.003	0.063	0.000	0.000	0.002	0.00002	16.600	0.000	0.000	0.003	0.001	0.00004	0.002	0.396	0.042	0.0000050	0.049
M-09-106 34.5-35.5	0.06	0.030	0.003	0.003	0.064	0.000	0.000	0.002	0.00003	14.600	0.001	0.000	0.001	0.001	0.00003	0.002	0.365	0.045	0.0000050	0.051
M-09-106 34.5-35.5	0.06	0.036	0.002	0.003	0.061	0.000	0.000	0.002	0.00004	14.800	0.000	0.000	0.002	0.001	0.00005	0.002	0.338	0.019	0.0000050	0.052
M-09-106 34.5-35.5	0.03	0.037	0.002	0.003	0.057	0.000	0.000	0.002	0.00003	15.000	0.001	0.000	0.002	0.001	0.00010	0.002	0.349	0.022	0.0000050	0.051
M-09-106 34.5-35.5	0.03	0.042	0.002	0.003	0.069	0.000	0.000	0.002	0.00003	15.200	0.000	0.000	0.002	0.001	0.00007	0.002	0.325	0.025	0.0000050	0.050
M-09-106 34.5-35.5	0.03	0.045	0.002	0.003	0.072	0.000	0.000	0.002	0.00002	13.800	0.001	0.000	0.002	0.003	0.00003	0.002	0.279	0.042	0.0000050	0.044
M-09-106 34.5-35.5	0.03	0.043	0.003	0.003	0.066	0.000	0.000	0.002	0.00003	14.900	0.000	0.000	0.002	0.001	0.00003	0.002	0.342	0.037	0.0000050	0.044
M-09-106 34.5-35.5	0.03	0.040	0.002	0.003	0.073	0.000	0.000	0.002	0.00002	13.100	0.000	0.000	0.002	0.020	0.00003	0.002	0.277	0.036	0.0000050	0.034

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-102A 133.5-134.5	0.0001	0.0045	0.1405	0.0013	0.5400	0.00001	0.1200	0.0299	1.7800	0.0000	0.0001	0.0001	0.0041	0.0004	0.0055	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1438	0.0013	0.5350	0.00001	0.1150	0.0303	1.7550	0.0000	0.0001	0.0001	0.0040	0.0004	0.0053	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1470	0.0013	0.5300	0.00001	0.1100	0.0307	1.7300	0.0000	0.0001	0.0001	0.0038	0.0004	0.0050	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1470	0.0013	0.5250	0.00001	0.1225	0.0311	1.7350	0.0000	0.0001	0.0001	0.0040	0.0004	0.0048	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1470	0.0012	0.5200	0.00001	0.1350	0.0315	1.7400	0.0000	0.0001	0.0002	0.0042	0.0004	0.0045	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1470	0.0011	0.5150	0.00001	0.1475	0.0319	1.7450	0.0000	0.0001	0.0002	0.0044	0.0004	0.0043	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1470	0.0011	0.5100	0.00001	0.1600	0.0323	1.7500	0.0000	0.0001	0.0002	0.0046	0.0004	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1435	0.0011	0.5275	0.00001	0.1550	0.0319	1.7050	0.0000	0.0001	0.0002	0.0043	0.0004	0.0043	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1400	0.0012	0.5450	0.00001	0.1500	0.0314	1.6600	0.0000	0.0001	0.0001	0.0041	0.0004	0.0045	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.1365	0.0013	0.5625	0.00001	0.1450	0.0310	1.6150	0.0000	0.0002	0.0001	0.0038	0.0004	0.0048	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.1330	0.0014	0.5800	0.00001	0.1400	0.0305	1.5700	0.0000	0.0002	0.0001	0.0035	0.0004	0.0050	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.1298	0.0013	0.5375	0.00001	0.1400	0.0293	1.6325	0.0000	0.0002	0.0001	0.0032	0.0004	0.0048	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.1265	0.0012	0.4950	0.00001	0.1400	0.0282	1.6950	0.0000	0.0001	0.0001	0.0030	0.0004	0.0045	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.1233	0.0011	0.4525	0.00001	0.1400	0.0270	1.7575	0.0000	0.0001	0.0001	0.0027	0.0005	0.0043	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.1200	0.0010	0.4100	0.00001	0.1400	0.0258	1.8200	0.0000	0.0001	0.0001	0.0024	0.0005	0.0040	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.1200	0.0010	0.4100	0.00001	0.1400	0.0258	1.8200	0.0000	0.0001	0.0001	0.0024	0.0005	0.0040	0.0000
M-09-102A 133.5-134.5	0.0002	0.0045	0.1200	0.0010	0.4100	0.00001	0.1400	0.0258	1.8200	0.0000	0.0001	0.0001	0.0024	0.0005	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1320	0.0012	0.4325	0.00001	0.1400	0.0261	1.7600	0.0000	0.0002	0.0001	0.0021	0.0004	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1360	0.0012	0.4400	0.00001	0.1400	0.0262	1.7400	0.0000	0.0003	0.0001	0.0020	0.0003	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1373	0.0013	0.4425	0.00001	0.1425	0.0261	1.7525	0.0000	0.0002	0.0001	0.0020	0.0004	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1385	0.0013	0.4450	0.00001	0.1450	0.0261	1.7650	0.0000	0.0002	0.0001	0.0019	0.0004	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1398	0.0013	0.4475	0.00001	0.1475	0.0260	1.7775	0.0000	0.0001	0.0001	0.0019	0.0004	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1410	0.0014	0.4500	0.00001	0.1500	0.0259	1.7900	0.0000	0.0001	0.0001	0.0019	0.0004	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1405	0.0013	0.4400	0.00001	0.1475	0.0265	1.8775	0.0000	0.0001	0.0001	0.0020	0.0005	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1400	0.0012	0.4300	0.00001	0.1450	0.0271	1.9650	0.0000	0.0002	0.0001	0.0021	0.0006	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1395	0.0011	0.4200	0.00001	0.1425	0.0276	2.0525	0.0000	0.0003	0.0002	0.0023	0.0007	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1390	0.0010	0.4100	0.00001	0.1400	0.0282	2.1400	0.0000	0.0003	0.0002	0.0024	0.0008	0.0040	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1415	0.0010	0.4200	0.00001	0.1400	0.0283	2.1000	0.0000	0.0003	0.0002	0.0024	0.0007	0.0038	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1440	0.0010	0.4300	0.00001	0.1400	0.0284	2.0600	0.0000	0.0002	0.0001	0.0025	0.0006	0.0035	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1465	0.0010	0.4400	0.00001	0.1400	0.0284	2.0200	0.0000	0.0002	0.0001	0.0026	0.0005	0.0033	0.0000
M-09-102A 133.5-134.5	0.0001	0.0045	0.1490	0.0010	0.4500	0.00001	0.1400	0.0285	1.9800	0.0000	0.0001	0.0001	0.0026	0.0004	0.0030	0.0000
	0.0001	0.0045	0.1421	0.0011	0.4338	0.00001	0.1433	0.0275	1.9763	0.0000	0.0002	0.0001	0.0023	0.0006	0.0038	0.0000
HC8 LP Hazelton																
M-09-106 34.5-35.5	0.001	0.005	15.900	0.005	1.170	0.00001	9.960	0.372	25.600	0.000	0.000	0.000	0.002	0.001	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	11.900	0.003	1.380	0.00005	7.160	0.412	25.800	0.000	0.001	0.000	0.005	0.001	0.005	0.000
M-09-106 34.5-35.5	0.000	0.005	8.190	0.002	1.180	0.00001	3.840	0.324	17.000	0.000	0.001	0.000	0.005	0.001	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	6.730	0.001	1.040	0.00001	2.430	0.275	15.300	0.000	0.001	0.000	0.006	0.001	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	5.410	0.001	1.010	0.00001	1.450	0.249	11.500	0.000	0.001	0.000	0.005	0.001	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	4.540	0.001	1.040	0.00001	0.810	0.235	11.200	0.000	0.000	0.000	0.004	0.001	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	3.910	0.001	1.000	0.00001	0.590	0.234	11.900	0.000	0.000	0.000	0.006	0.001	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	4.470	0.001	1.160	0.00001	0.520	0.287	15.200	0.000	0.000	0.000	0.009	0.001	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	3.690	0.001	1.050	0.00001	0.440	0.270	16.600	0.000	0.000	0.000	0.009	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	3.720	0.001	1.070	0.00001	0.390	0.318	21.100	0.000	0.000	0.000	0.009	0.000	0.001	0.000
M-09-106 34.5-35.5	0.001	0.005	3.840	0.001	1.070	0.00001	0.360	0.343	27.400	0.000	0.000	0.000	0.007	0.001	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	3.240	0.001	1.140	0.00001	0.390	0.322	25.000	0.000	0.000	0.000	0.008	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	2.510	0.001	0.960	0.00001	0.210	0.277	19.800	0.000	0.001	0.000	0.006	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.020	2.210	0.001	0.930	0.00001	0.150	0.234	15.700	0.000	0.001	0.000	0.004	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	2.070	0.001	0.960	0.00001	0.150	0.235	16.100	0.000	0.000	0.000	0.005	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.011	1.880	0.001	0.890	0.00001	0.180	0.217	15.300	0.000	0.000	0.000	0.004	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	1.550	0.001	0.880	0.00001	0.260	0.213	13.300	0.000	0.000	0.000	0.003	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	1.530	0.001	0.870	0.00001	0.140	0.198	11.900	0.000	0.000	0.000	0.003	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	1.270	0.000	0.700	0.00003	0.130	0.181	9.340	0.000	0.001	0.000	0.003	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	1.280	0.001	0.740	0.00001	0.140	0.185	9.910	0.000	0.000	0.000	0.003	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	1.300	0.000	0.750	0.00001	0.150	0.191	9.960	0.000	0.000	0.000	0.003	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	1.050	0.001	0.610	0.00001	0.060	0.179	9.450	0.000	0.000	0.000	0.002	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.011	1.190	0.000	0.760	0.00001	0.140	0.189	9.980	0.000	0.001	0.000	0.003	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	1.010	0.001	0.630	0.00001	0.120	0.169	8.060	0.000	0.000	0.000	0.003	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	1.010	0.000	0.670	0.00001	0.110	0.178	7.960	0.000	0.001	0.000	0.003	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.952	0.000	0.650	0.00001	0.120	0.182	8.610	0.000	0.000	0.000	0.002	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.011	0.979	0.001	0.620	0.00001	0.100	0.189	8.970	0.000	0.000	0.000	0.003	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.800	0.000	0.460	0.00001	0.090	0.176	9.050	0.000	0.000	0.000	0.003	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.801	0.000	0.580	0.00001	0.070	0.164	9.540	0.000	0.000	0.000	0.002	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.815	0.000	0.560	0.00001	0.090	0.168	9.120	0.000	0.001	0.001	0.002	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.714	0.000	0.520	0.00001	0.080	0.162	9.400	0.000	0.000	0.000	0.002	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.711	0.000	0.500	0.00001	0.080	0.156	8.030	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.867	0.000	0.620	0.00001	0.100	0.180	8.980	0.000	0.000	0.000	0.002	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.779	0.000	0.520	0.00001	0.120	0.164	7.200	0.000	0.000	0.000	0.001	0.000	0.001	0.000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-106 34.5-35.5	8	34	30-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	455	33	60	7.28	3.0	17.1	23	0.1
M-09-106 34.5-35.5	8	35	7-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	445	33	78	7.21	3.2	16.4	24	0.1
M-09-106 34.5-35.5	8	36	14-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	445	39	82	7.23	3.6	17.0	20	0.1
M-09-106 34.5-35.5	8	37	21-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	455	37	83	7.23	3.5	21.0	22	0.1
M-09-106 34.5-35.5	8	38	28-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	445	38	90	7.25	3.3	21.5	26	0.1
M-09-106 34.5-35.5	8	39	4-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	32	79	7.40	2.5	16.4	26	0.1
M-09-106 34.5-35.5	8	40	11-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	440	38	103	7.42	2.9	21.4	21	0.1
M-09-106 34.5-35.5	8	41	18-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	435	37	63	7.52	3.4	21.7	18	0.1
M-09-106 34.5-35.5	8	42	25-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	32	71	7.14	3.7	20.5	19	0.1
M-09-106 34.5-35.5	8	43	2-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	445	38	71	7.23	3.5	17.2	15	0.1
M-09-106 34.5-35.5	8	44	9-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	455	30	67	7.19	3.7	15.4	14	0.1
M-09-106 34.5-35.5	8	45	16-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	445	33	67	7.21	4.5	16.3	17	0.1
M-09-106 34.5-35.5	8	46	23-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	490	34	72	7.38	5.5	22.0	16	0.1
M-09-106 34.5-35.5	8	47	30-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	455	31	61	7.31	5.7	16.9	18	0.1
M-09-106 34.5-35.5	8	48	6-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	470	32	57	7.40	4.6	16.1	16	0.1
M-09-106 34.5-35.5	8	49	13-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	465	32	53	7.36	3.5	15.2	14	0.1
M-09-106 34.5-35.5	8	50	20-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	30	57	7.13	4.2	15.6	14	0.1
M-09-106 34.5-35.5	8	51	27-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	28	56	7.30	4.9	15.9	14	0.1
M-09-106 34.5-35.5	8	52	3-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	27	52	7.20	3.8	15.2	13	0.1
M-09-106 34.5-35.5	8	53	10-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	455	25	47	7.29	2.6	14.5	12	0.1
M-09-106 34.5-35.5	8	54	17-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	455	27	54	7.20	3.5	14.7	15	0.1
M-09-106 34.5-35.5	8	55	24-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	29	65	7.25	4.3	14.8	18	0.1
M-09-106 34.5-35.5	8	56	3-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	28	60	7.20	3.7	14.5	19	0.1
M-09-106 34.5-35.5	8	57	10-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	455	26	62	7.25	3.2	14.3	19	0.1
M-09-106 34.5-35.5	8	58	17-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	455	27	73	7.26	3.2	15.3	16	0.1
M-09-106 34.5-35.5	8	59	24-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	470	28	78	7.21	3.2	16.4	13	0.1
M-09-106 34.5-35.5	8	60	31-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	28	60	7.44	4.0	16.6	14	0.1
M-09-106 34.5-35.5	8	61	7-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	29	65	7.41	4.7	16.7	14	0.1
M-09-106 34.5-35.5	8	62	14-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	30	70	7.53	3.5	16.6	15	0.1
M-09-106 34.5-35.5	8	63	21-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	32	74	7.37	2.3	16.5	16	0.1
M-09-106 34.5-35.5	8	64	28-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	455	30	65	7.49	2.8	15.9	16	0.1
M-09-106 34.5-35.5	8	65	5-May-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	29	67	7.31	3.4	15.3	16	0.1
M-09-106 34.5-35.5	8	66	12-May-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	29	69	7.37	3.0	15.5	15	0.1
M-09-106 34.5-35.5	8	67	19-May-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	470	29	66	7.60	2.7	15.8	14	0.1
M-09-106 34.5-35.5	8	68	26-May-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	27	67	7.52	3.7	15.4	13	0.1
M-09-106 34.5-35.5	8	69	2-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	25	62	7.43	4.7	14.9	11	0.1
M-09-106 34.5-35.5	8	70	9-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	27	69	7.28	4.5	15.8	12	0.1
M-09-106 34.5-35.5	8	71	16-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	28	67	7.47	4.3	16.6	12	0.1
M-09-106 34.5-35.5	8	72	23-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	29	72	7.39	4.1	16.4	15	0.1
M-09-106 34.5-35.5	8	73	30-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	465	29	66	7.44	4.0	16.1	17	0.1
M-09-106 34.5-35.5	8	74	7-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	475	32	69	7.28	4.2	15.6	19	0.1
M-09-106 34.5-35.5	8	75	14-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	485	35	75	7.38	4.5	15.1	21	0.1
M-09-106 34.5-35.5	8	76	21-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	500	33	81	7.40	4.4	15.7	21	0.1
M-09-106 34.5-35.5	8	77	28-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	500	31	79	7.46	4.3	16.4	21	0.1
M-09-106 34.5-35.5	8	78	4-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	480	29	74	7.23	4.0	15.8	18	0.1
M-09-106 34.5-35.5	8	79	11-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	475	27	68	7.51	3.8	15.3	15	0.1
M-09-106 34.5-35.5	8	80	18-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	475	29	70	7.48	4.5	15.9	16	0.1
M-09-106 34.5-35.5	8	81	25-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	485	31	68	7.51	5.2	16.4	17	0.1
M-09-106 34.5-35.5	8	82	1-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	470	31	73	7.66	4.6	16.0	18	0.1
M-09-106 34.5-35.5	8	83	8-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	30	67	7.46	4.0	15.6	18	0.1
M-09-106 34.5-35.5	8	84	15-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	475	32	84	7.51	6.1	18.0	18	0.1
M-09-106 34.5-35.5	8	85	22-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	480	34	72	7.60	8.1	20.4	18	0.1
M-09-106 34.5-35.5	8	86	29-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	32	71	7.23	5.7	18.2	18	0.1
M-09-106 34.5-35.5	8	87	6-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	465	31	65	7.28	3.4	16.1	17	0.1
M-09-106 34.5-35.5	8	88	13-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	32	70	7.32	3.7	16.6	17	0.1
M-09-106 34.5-35.5	8	89	20-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	455	33	70	7.38	3.9	17.1	17	0.1
M-09-106 34.5-35.5	8	90	27-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	470	32	66	7.32	4.7	16.8	19	0.1
M-09-106 34.5-35.5	8	91	3-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	490	31	71	7.54	5.5	16.6	20	0.1
M-09-106 34.5-35.5	8	92	10-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	480	31	69	7.61	4.6	17.0	18	0.1
M-09-106 34.5-35.5	8	93	17-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	475	31	67	7.39	3.7	17.5	16	0.1
M-09-106 34.5-35.5	8	94	24-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	480	30	71	7.47	4.4	17.4	14	0.1
M-09-106 34.5-35.5	8	95	1-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	480	30	66	7.39	5.2	17.4	12	0.1
M-09-106 34.5-35.5	8	96	8-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	475	29	65	7.40	5.0	17.4	11	0.1
M-09-106 34.5-35.5	8	97	15-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	475	29	63	7.47	4.8	17.4	10	0.1
M-09-106 34.5-35.5	8	98	22-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	475	28	62	7.45	4.4	17.2	11	0.1
M-09-106 34.5-35.5	8	99	29-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	475	28	62	7.39	4.0	17.0	12	0.1
M-09-106 34.5-35.5	8	100	5-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	475	28	59	7.24	3.6	16.8	12	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-106 34.5-35.5	0.03	0.048	0.002	0.003	0.069	0.000	0.000	0.003	0.00001	12.800	0.000	0.000	0.002	0.001	0.00003	0.002	0.279	0.037	0.0000050	0.030
M-09-106 34.5-35.5	0.03	0.037	0.002	0.002	0.062	0.000	0.000	0.003	0.00003	12.800	0.001	0.000	0.002	0.001	0.00005	0.001	0.262	0.036	0.0000050	0.028
M-09-106 34.5-35.5	0.03	0.041	0.002	0.003	0.061	0.000	0.000	0.002	0.00003	15.000	0.000	0.000	0.003	0.001	0.00002	0.002	0.319	0.043	0.0000050	0.029
M-09-106 34.5-35.5	0.03	0.044	0.002	0.002	0.084	0.000	0.000	0.005	0.00003	14.300	0.001	0.000	0.002	0.005	0.00003	0.002	0.274	0.050	0.0000050	0.028
M-09-106 34.5-35.5	0.03	0.048	0.002	0.003	0.070	0.000	0.000	0.002	0.00003	14.700	0.000	0.000	0.002	0.001	0.00004	0.002	0.302	0.041	0.0000050	0.030
M-09-106 34.5-35.5	0.03	0.043	0.001	0.002	0.084	0.000	0.000	0.002	0.00003	12.400	0.000	0.000	0.002	0.004	0.00060	0.001	0.250	0.039	0.0000050	0.028
M-09-106 34.5-35.5	0.03	0.042	0.002	0.002	0.065	0.000	0.000	0.002	0.00003	14.700	0.000	0.000	0.002	0.005	0.00035	0.002	0.315	0.040	0.0000050	0.031
M-09-106 34.5-35.5	0.03	0.043	0.002	0.002	0.059	0.000	0.000	0.003	0.00002	14.400	0.000	0.000	0.001	0.003	0.00002	0.002	0.300	0.037	0.0000100	0.028
M-09-106 34.5-35.5	0.03	0.047	0.001	0.002	0.070	0.000	0.000	0.001	0.00011	12.300	0.001	0.000	0.005	0.005	0.00122	0.002	0.242	0.041	0.0000050	0.022
M-09-106 34.5-35.5	0.03	0.038	0.001	0.002	0.068	0.000	0.000	0.002	0.00002	14.600	0.001	0.000	0.002	0.001	0.00193	0.002	0.270	0.045	0.0000050	0.022
M-09-106 34.5-35.5	0.03	0.030	0.001	0.002	0.069	0.000	0.000	0.002	0.00002	11.500	0.001	0.000	0.004	0.001	0.00200	0.001	0.238	0.035	0.0000050	0.022
M-09-106 34.5-35.5	0.03	0.032	0.001	0.002	0.066	0.000	0.000	0.002	0.00002	12.800	0.000	0.000	0.002	0.001	0.00027	0.001	0.242	0.040	0.0000050	0.020
M-09-106 34.5-35.5	0.03	0.024	0.001	0.002	0.057	0.000	0.000	0.003	0.00002	13.300	0.000	0.000	0.002	0.001	0.00055	0.001	0.251	0.051	0.0000050	0.022
M-09-106 34.5-35.5	0.03	0.030	0.001	0.001	0.069	0.000	0.000	0.002	0.00002	12.100	0.001	0.000	0.002	0.001	0.00083	0.001	0.222	0.043	0.0000050	0.022
M-09-106 34.5-35.5	0.03	0.030	0.001	0.001	0.070	0.000	0.000	0.002	0.00001	12.350	0.000	0.000	0.002	0.001	0.00043	0.001	0.225	0.044	0.0000050	0.021
M-09-106 34.5-35.5	0.03	0.030	0.001	0.001	0.071	0.000	0.000	0.002	0.00001	12.600	0.000	0.000	0.001	0.001	0.00003	0.001	0.227	0.045	0.0000050	0.021
M-09-106 34.5-35.5	0.03	0.027	0.001	0.001	0.064	0.000	0.000	0.002	0.00002	11.750	0.000	0.000	0.001	0.001	0.00004	0.001	0.215	0.043	0.0000050	0.021
M-09-106 34.5-35.5	0.03	0.024	0.001	0.001	0.057	0.000	0.000	0.002	0.00002	10.900	0.000	0.000	0.001	0.001	0.00004	0.001	0.202	0.040	0.0000050	0.021
M-09-106 34.5-35.5	0.03	0.025	0.001	0.001	0.059	0.000	0.000	0.002	0.00001	10.395	0.000	0.000	0.002	0.002	0.00042	0.001	0.189	0.038	0.0000050	0.021
M-09-106 34.5-35.5	0.03	0.026	0.001	0.001	0.061	0.000	0.000	0.002	0.00001	9.890	0.000	0.000	0.002	0.003	0.00080	0.001	0.176	0.035	0.0000050	0.020
M-09-106 34.5-35.5	0.03	0.028	0.001	0.001	0.062	0.000	0.000	0.003	0.00000	10.495	0.000	0.000	0.002	0.002	0.00056	0.001	0.185	0.041	0.0000050	0.020
M-09-106 34.5-35.5	0.03	0.029	0.001	0.001	0.064	0.000	0.000	0.004	0.00000	11.100	0.000	0.000	0.002	0.001	0.00032	0.001	0.193	0.046	0.0000050	0.020
M-09-106 34.5-35.5	0.03	0.025	0.001	0.001	0.061	0.000	0.000	0.003	0.00001	10.700	0.000	0.000	0.002	0.002	0.00061	0.001	0.185	0.044	0.0000050	0.020
M-09-106 34.5-35.5	0.03	0.021	0.001	0.001	0.059	0.000	0.000	0.001	0.00002	10.300	0.000	0.000	0.002	0.002	0.00090	0.001	0.177	0.042	0.0000050	0.021
M-09-106 34.5-35.5	0.03	0.024	0.001	0.001	0.059	0.000	0.000	0.001	0.00001	10.550	0.000	0.000	0.002	0.002	0.00046	0.001	0.177	0.043	0.0000050	0.022
M-09-106 34.5-35.5	0.03	0.027	0.001	0.001	0.059	0.000	0.000	0.001	0.00001	10.800	0.000	0.000	0.002	0.001	0.00002	0.001	0.176	0.044	0.0000050	0.023
M-09-106 34.5-35.5	0.03	0.027	0.001	0.001	0.063	0.000	0.000	0.001	0.00001	10.950	0.000	0.000	0.002	0.004	0.00002	0.001	0.191	0.053	0.0000050	0.023
M-09-106 34.5-35.5	0.03	0.027	0.001	0.001	0.067	0.000	0.000	0.001	0.00001	11.100	0.000	0.000	0.002	0.006	0.00001	0.001	0.206	0.062	0.0000050	0.022
M-09-106 34.5-35.5	0.03	0.032	0.001	0.001	0.061	0.000	0.000	0.001	0.00001	11.800	0.000	0.000	0.002	0.004	0.00001	0.001	0.202	0.056	0.0000075	0.023
M-09-106 34.5-35.5	0.03	0.036	0.001	0.001	0.056	0.000	0.000	0.002	0.00001	12.500	0.000	0.000	0.002	0.001	0.00001	0.001	0.197	0.050	0.0000100	0.025
M-09-106 34.5-35.5	0.03	0.033	0.001	0.001	0.054	0.000	0.000	0.001	0.00001	11.850	0.000	0.000	0.002	0.001	0.00001	0.001	0.184	0.047	0.0000075	0.023
M-09-106 34.5-35.5	0.03	0.029	0.001	0.001	0.051	0.000	0.000	0.001	0.00000	11.200	0.000	0.000	0.002	0.001	0.00001	0.001	0.170	0.045	0.0000050	0.020
M-09-106 34.5-35.5	0.03	0.030	0.001	0.001	0.055	0.000	0.000	0.001	0.00000	11.250	0.000	0.000	0.002	0.001	0.00001	0.001	0.171	0.045	0.0000050	0.019
M-09-106 34.5-35.5	0.03	0.031	0.001	0.001	0.060	0.000	0.000	0.002	0.00000	11.300	0.000	0.000	0.002	0.001	0.00001	0.001	0.172	0.046	0.0000050	0.018
M-09-106 34.5-35.5	0.03	0.037	0.001	0.001	0.059	0.000	0.000	0.001	0.00001	10.580	0.000	0.000	0.002	0.001	0.00002	0.001	0.159	0.045	0.0000075	0.017
M-09-106 34.5-35.5	0.03	0.043	0.001	0.001	0.059	0.000	0.000	0.001	0.00001	9.860	0.000	0.000	0.002	0.001	0.00002	0.001	0.146	0.044	0.0000100	0.015
M-09-106 34.5-35.5	0.03	0.037	0.001	0.001	0.054	0.000	0.000	0.002	0.00001	10.430	0.000	0.000	0.002	0.005	0.00003	0.001	0.154	0.044	0.0000075	0.015
M-09-106 34.5-35.5	0.03	0.031	0.001	0.001	0.050	0.000	0.000	0.002	0.00001	11.000	0.000	0.000	0.002	0.008	0.00004	0.001	0.162	0.045	0.0000050	0.015
M-09-106 34.5-35.5	0.03	0.028	0.001	0.001	0.052	0.000	0.000	0.002	0.00001	11.150	0.000	0.000	0.002	0.007	0.00003	0.001	0.162	0.049	0.0000075	0.015
M-09-106 34.5-35.5	0.03	0.026	0.001	0.001	0.054	0.000	0.000	0.002	0.00001	11.300	0.000	0.000	0.002	0.005	0.00001	0.001	0.162	0.053	0.0000100	0.014
M-09-106 34.5-35.5	0.03	0.028	0.001	0.001	0.053	0.000	0.000	0.003	0.00001	12.600	0.000	0.000	0.002	0.003	0.00001	0.001	0.167	0.056	0.0000075	0.014
M-09-106 34.5-35.5	0.03	0.030	0.001	0.001	0.053	0.000	0.000	0.003	0.00001	13.900	0.000	0.000	0.002	0.001	0.00001	0.001	0.172	0.059	0.0000050	0.014
M-09-106 34.5-35.5	0.03	0.029	0.001	0.001	0.050	0.000	0.000	0.003	0.00001	13.050	0.000	0.000	0.002	0.006	0.00001	0.001	0.179	0.075	0.0000050	0.014
M-09-106 34.5-35.5	0.03	0.028	0.001	0.001	0.046	0.000	0.000	0.003	0.00002	12.200	0.000	0.000	0.001	0.011	0.00001	0.001	0.186	0.091	0.0000050	0.013
M-09-106 34.5-35.5	0.03	0.029	0.001	0.001	0.053	0.000	0.000	0.002	0.00001	11.400	0.000	0.000	0.002	0.007	0.00002	0.001	0.156	0.068	0.0000050	0.013
M-09-106 34.5-35.5	0.03	0.031	0.001	0.001	0.060	0.000	0.000	0.002	0.00000	10.600	0.001	0.000	0.002	0.002	0.00003	0.001	0.126	0.045	0.0000050	0.012
M-09-106 34.5-35.5	0.03	0.030	0.001	0.001	0.058	0.000	0.000	0.002	0.00001	11.400	0.001	0.000	0.002	0.007	0.00004	0.001	0.136	0.050	0.0000050	0.012
M-09-106 34.5-35.5	0.03	0.030	0.001	0.001	0.056	0.000	0.000	0.002	0.00002	12.200	0.001	0.000	0.003	0.011	0.00005	0.001	0.146	0.055	0.0000050	0.012
M-09-106 34.5-35.5	0.03	0.030	0.001	0.001	0.052	0.000	0.000	0.002	0.00001	12.050	0.001	0.000	0.003	0.006	0.00005	0.001	0.146	0.053	0.0000050	0.013
M-09-106 34.5-35.5	0.03	0.031	0.001	0.001	0.049	0.000	0.000	0.002	0.00001	11.900	0.001	0.000	0.003	0.001	0.00005	0.001	0.146	0.051	0.0000050	0.013
M-09-106 34.5-35.5	0.03	0.032	0.001	0.001	0.050	0.000	0.000	0.002	0.00001	12.550	0.001	0.000	0.002	0.004	0.00005	0.001	0.152	0.053	0.0000075	0.012
M-09-106 34.5-35.5	0.03	0.033	0.001	0.001	0.052	0.000	0.000	0.002	0.00001	13.200	0.001	0.000	0.002	0.006	0.00004	0.001	0.158	0.055	0.0000100	0.012
M-09-106 34.5-35.5	0.03	0.031	0.001	0.001	0.054	0.000	0.000	0.002	0.00001	12.750	0.001	0.000	0.002	0.004	0.00007	0.001	0.151	0.054	0.0000075	0.012
M-09-106 34.5-35.5	0.03	0.030	0.001	0.001	0.055	0.000	0.000	0.002	0.00001	12.300	0.001	0.000	0.002	0.001	0.00009	0.001	0.144	0.053	0.0000050	0.012
M-09-106 34.5-35.5	0.03	0.028	0.001	0.001	0.059	0.000	0.000	0.002	0.00001	12.600	0.001	0.000	0.002	0.001	0.00012	0.001	0.148	0.054	0.0000075	0.011
M-09-106 34.5-35.5	0.03	0.027	0.001	0.001	0.063	0.000	0.000	0.002	0.00001	12.900	0.000	0.000	0.002	0.002	0.00014	0.001	0.151	0.055	0.0000100	0.010
M-09-106 34.5-35.5	0.03	0.025	0.000	0.001	0.056	0.000	0.000	0.002	0.00000	12.600	0.000	0.000	0.002	0.004	0.00008	0.001	0.147	0.054	0.0000075	0.011
M-09-106 34.5-35.5	0.03	0.024	0.000	0.001	0.049	0.000	0.000	0.001	0.00000	12.300	0.000	0.000	0.002	0.006	0.00001	0.001	0.143	0.053	0.0000050	0.012
M-09-106 34.5-35.5	0.03	0.029	0.001	0.001	0.047	0.000	0.000	0.001	0.00001	12.200	0.000	0.000	0.002	0.004	0.00002	0.001	0.132	0.055	0.0000050	0.011
M-09-106 34.5-35.5	0.03	0.035	0.001	0.001	0.044	0.000	0.000	0.002	0.00001	12.100	0.000	0.000	0.002	0.002	0.00002	0.001	0.121	0.057	0.0000050	0.010
M-09-106 34.5-35.5	0.03	0.030	0.001	0.001	0.048	0.000	0.000	0.002	0.00001	11.950	0.000	0.000	0.002	0.002	0.00002	0.001	0.129	0.058	0.0000075	0.011
M-09-106 34.5-35.5	0.03	0.024	0.001	0.001	0.052	0.000	0.000	0.001	0.00001	11.800	0.000	0.000	0.002	0.002	0.00001	0.001	0.136	0.058	0.0000100	0.011
M-09-106 34.5-35.5	0.03	0.031	0.001	0.001	0.049	0.000	0.000	0.001	0.00001	11.550	0.000	0.000	0.002	0.002	0.00001	0.001	0.133	0.058	0.0000075	0.010
M-09-106 34.5-35.5	0.03	0.037	0.001	0.001	0.047	0.000	0.000	0.001	0.00001	11.300	0.000	0.000	0.002	0.002	0.00001	0.001	0.130	0.058	0.0000050	0.010
M-09-106 34.5-35.5	0.03	0.036	0.001	0.001	0.047	0.000	0.000	0.001	0.00001	11.175	0.000	0.000	0.002	0.002	0.00001	0.001	0.128	0.057	0.0000050	0.010
M-09-106 34.5-35.5	0.03	0.035	0.001	0.001	0.048	0.000	0.000	0.001	0.00001	11.050	0.000	0.000	0.002	0.002	0.00001	0.001	0.125	0.057	0.0000050	0.010
M-09-106 34.5-35.5	0.03	0.034	0.001	0.001	0.048	0.000	0.000	0.001	0.00001	10.925	0.000	0.000	0.002	0.002	0.00001	0.001	0.123	0.056	0.0000050	0.010

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-106 34.5-35.5	0.000	0.005	0.722	0.000	0.530	0.00001	0.110	0.161	7.600	0.000	0.001	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.001	0.005	0.691	0.000	0.470	0.00001	0.100	0.156	7.600	0.000	0.001	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.014	0.740	0.000	0.550	0.00001	0.100	0.189	7.820	0.000	0.001	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.639	0.000	0.520	0.00001	0.130	0.174	7.750	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.001	0.012	0.704	0.000	0.550	0.00001	0.090	0.181	8.670	0.000	0.000	0.000	0.002	0.000	0.002	0.000
M-09-106 34.5-35.5	0.001	0.030	0.600	0.000	0.440	0.00001	0.120	0.158	6.590	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.712	0.000	0.470	0.00001	0.120	0.188	7.360	0.000	0.001	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.709	0.000	0.520	0.00001	0.090	0.183	7.370	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.572	0.000	0.390	0.00001	0.060	0.162	5.480	0.000	0.000	0.000	0.001	0.000	0.011	0.000
M-09-106 34.5-35.5	0.000	0.024	0.559	0.000	0.410	0.00001	0.080	0.163	6.250	0.000	0.000	0.000	0.001	0.000	0.005	0.000
M-09-106 34.5-35.5	0.000	0.026	0.523	0.001	0.370	0.00001	0.090	0.151	5.480	0.000	0.000	0.000	0.001	0.000	0.004	0.000
M-09-106 34.5-35.5	0.000	0.005	0.540	0.000	0.380	0.00001	0.090	0.164	6.080	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.042	0.560	0.000	0.480	0.00001	0.080	0.166	7.050	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.024	0.499	0.000	0.390	0.00001	0.090	0.154	6.150	0.000	0.000	0.000	0.001	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.028	0.501	0.000	0.410	0.00001	0.085	0.158	6.535	0.000	0.000	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.031	0.503	0.000	0.430	0.00001	0.080	0.161	6.920	0.000	0.001	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.029	0.474	0.000	0.380	0.00001	0.075	0.148	6.250	0.000	0.000	0.000	0.001	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.026	0.444	0.000	0.330	0.00001	0.070	0.134	5.580	0.000	0.000	0.000	0.001	0.000	0.006	0.000
M-09-106 34.5-35.5	0.000	0.029	0.428	0.000	0.335	0.00001	0.070	0.129	5.205	0.000	0.000	0.000	0.001	0.000	0.004	0.000
M-09-106 34.5-35.5	0.001	0.032	0.412	0.000	0.340	0.00001	0.070	0.123	4.830	0.000	0.000	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.028	0.404	0.000	0.335	0.00001	0.080	0.130	5.145	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.023	0.395	0.000	0.330	0.00001	0.090	0.136	5.460	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.022	0.387	0.000	0.325	0.00001	0.085	0.134	5.125	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.020	0.379	0.000	0.320	0.00001	0.080	0.132	4.790	0.000	0.000	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.012	0.372	0.000	0.310	0.00001	0.075	0.133	4.985	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.364	0.000	0.300	0.00001	0.070	0.133	5.180	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.377	0.000	0.310	0.00001	0.070	0.131	5.505	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.389	0.000	0.320	0.00001	0.070	0.129	5.830	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.407	0.000	0.335	0.00001	0.180	0.137	6.055	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.424	0.001	0.350	0.00001	0.290	0.145	6.280	0.000	0.000	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.411	0.000	0.340	0.00001	0.180	0.139	5.915	0.000	0.000	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.397	0.000	0.330	0.00001	0.070	0.132	5.550	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.007	0.393	0.000	0.355	0.00001	0.080	0.131	5.660	0.000	0.000	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.010	0.388	0.000	0.380	0.00001	0.090	0.130	5.770	0.000	0.000	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.043	0.349	0.000	0.325	0.00001	0.080	0.119	5.305	0.000	0.000	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.075	0.310	0.000	0.270	0.00001	0.070	0.108	4.840	0.000	0.000	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.040	0.323	0.000	0.310	0.00001	0.095	0.113	5.320	0.000	0.000	0.000	0.001	0.000	0.003	0.000
M-09-106 34.5-35.5	0.001	0.005	0.336	0.000	0.350	0.00001	0.120	0.118	5.800	0.000	0.000	0.000	0.001	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.005	0.353	0.000	0.345	0.00001	0.100	0.121	5.605	0.000	0.000	0.000	0.001	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.005	0.369	0.000	0.340	0.00001	0.080	0.124	5.410	0.000	0.000	0.000	0.001	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.005	0.360	0.000	0.365	0.00001	0.080	0.132	6.505	0.000	0.000	0.000	0.001	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.005	0.351	0.000	0.390	0.00001	0.080	0.139	7.600	0.000	0.000	0.000	0.001	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.014	0.330	0.000	0.425	0.00001	0.060	0.135	6.980	0.000	0.000	0.000	0.001	0.000	0.003	0.000
M-09-106 34.5-35.5	0.001	0.024	0.309	0.000	0.460	0.00001	0.040	0.130	6.360	0.000	0.000	0.000	0.001	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.014	0.299	0.000	0.385	0.00001	0.045	0.123	5.955	0.000	0.000	0.000	0.001	0.000	0.004	0.000
M-09-106 34.5-35.5	0.000	0.005	0.289	0.000	0.310	0.00001	0.050	0.115	5.550	0.000	0.000	0.000	0.001	0.000	0.004	0.000
M-09-106 34.5-35.5	0.000	0.005	0.296	0.000	0.330	0.00001	0.055	0.122	6.040	0.000	0.000	0.000	0.001	0.000	0.004	0.000
M-09-106 34.5-35.5	0.000	0.005	0.302	0.000	0.350	0.00001	0.060	0.128	6.530	0.000	0.000	0.000	0.001	0.000	0.004	0.000
M-09-106 34.5-35.5	0.000	0.005	0.310	0.000	0.325	0.00001	0.045	0.127	6.385	0.000	0.000	0.000	0.001	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.005	0.318	0.001	0.300	0.00001	0.030	0.125	6.240	0.000	0.000	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.010	0.322	0.000	0.330	0.00001	0.055	0.130	6.585	0.000	0.000	0.000	0.001	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.015	0.326	0.000	0.360	0.00001	0.080	0.135	6.930	0.000	0.000	0.000	0.001	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.010	0.315	0.000	0.340	0.00001	0.080	0.130	6.750	0.000	0.000	0.000	0.001	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.005	0.303	0.000	0.320	0.00001	0.080	0.125	6.570	0.000	0.000	0.000	0.000	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.005	0.315	0.000	0.335	0.00001	0.070	0.131	6.455	0.000	0.000	0.000	0.001	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.005	0.326	0.000	0.350	0.00001	0.060	0.137	6.340	0.000	0.000	0.000	0.001	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.005	0.312	0.000	0.325	0.00001	0.070	0.132	6.325	0.000	0.000	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.297	0.000	0.300	0.00001	0.080	0.127	6.310	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.287	0.000	0.320	0.00001	0.075	0.126	5.925	0.000	0.000	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.277	0.000	0.340	0.00001	0.070	0.125	5.540	0.000	0.000	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.272	0.000	0.320	0.00001	0.060	0.127	5.260	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.001	0.005	0.267	0.000	0.300	0.00001	0.050	0.128	4.980	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.269	0.000	0.295	0.00001	0.060	0.122	5.020	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.270	0.000	0.290	0.00001	0.070	0.116	5.060	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.263	0.000	0.283	0.00001	0.063	0.115	5.028	0.000	0.000	0.000	0.001	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.255	0.000	0.275	0.00001	0.055	0.114	4.995	0.000	0.000	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.248	0.000	0.268	0.00001	0.048	0.112	4.963	0.000	0.000	0.000	0.000	0.000	0.002	0.000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-106 34.5-35.5	8	101	12-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	480	27	64	7.34	3.2	16.5	13	0.1
M-09-106 34.5-35.5	8	102	19-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	480	27	61	7.39	3.6	16.5	13	0.1
M-09-106 34.5-35.5	8	103	26-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	485	27	59	7.20	4.1	16.5	13	0.1
M-09-106 34.5-35.5	8	104	2-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	490	27	64	7.43	4.5	16.4	13	0.1
M-09-106 34.5-35.5	8	105	9-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	480	27	65	7.59	4.9	16.4	13	0.1
M-09-106 34.5-35.5	8	106	16-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	475	27	61	7.51	5.3	15.9	14	0.1
M-09-106 34.5-35.5	8	107	23-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	470	27	58	7.21	5.7	15.3	14	0.1
M-09-106 34.5-35.5	8	108	1-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	480	28	58	7.31	6.1	14.7	15	0.1
M-09-106 34.5-35.5	8	109	8-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	475	28	63	7.39	6.5	14.2	15	0.1
M-09-106 34.5-35.5	8	110	15-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	28	66	7.24	6.0	14.3	15	0.1
M-09-106 34.5-35.5	8	111	22-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	28	79	7.33	5.6	14.5	15	0.1
M-09-106 34.5-35.5	8	112	29-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	445	28	71	7.28	5.1	14.7	15	0.1
M-09-106 34.5-35.5	8	113	5-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	28	64	7.26	4.7	14.9	15	0.1
M-09-106 34.5-35.5	8	114	12-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	440	28	77	7.28	4.7	14.9	15	0.1
M-09-106 34.5-35.5	8	115	19-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	28	65	7.34	4.7	14.9	15	0.1
M-09-106 34.5-35.5	8	116	26-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	31	76	7.14	4.9	17.2	16	0.1
M-09-106 34.5-35.5	8	117	3-May-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	31	70	7.54	4.9	17.9	16	0.1
M-09-106 34.5-35.5	8	118	10-May-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	32	83	7.21	5.4	17.8	16	0.1
M-09-106 34.5-35.5	8	119	17-May-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	32	68	7.25	5.8	17.6	15	0.1
M-09-106 34.5-35.5	8	120	24-May-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	455	32	69	7.44	6.2	17.5	15	0.1
M-09-106 34.5-35.5	8	121	31-May-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	435	33	71	7.43	6.6	17.3	14	0.1
M-09-106 34.5-35.5	8	122	7-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	445	32	61	7.26	6.8	17.0	14	0.1
M-09-106 34.5-35.5	8	123	14-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	475	31	68	7.42	6.9	16.7	15	0.1
M-09-106 34.5-35.5	8	124	21-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	465	30	72	7.33	7.0	16.4	15	0.1
M-09-106 34.5-35.5	8	125	28-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	30	69	7.37	7.2	16.1	15	0.1
M-09-106 34.5-35.5	8	126	5-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	465	30	64	7.21	6.6	15.9	15	0.1
M-09-106 34.5-35.5	8	127	12-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	30	68	7.24	6.1	15.6	15	0.1
M-09-106 34.5-35.5	8	128	19-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	470	30	69	7.27	5.5	15.4	15	0.1
M-09-106 34.5-35.5	8	129	26-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	465	30	69	7.31	5.0	15.1	15	0.1
																	31	68	7.33	6.4	16.3	15	0.1
HC9 LP Hazelton																							
M-09-106 58.5-59.5	9	0	4-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	370	135	292	7.46	2.7	25.6	154	3.3
M-09-106 58.5-59.5	9	1	11-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	123	292	7.36	2.4	21.3	113	1.6
M-09-106 58.5-59.5	9	2	18-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	505	92	200	7.38	3.1	23.2	87	0.4
M-09-106 58.5-59.5	9	3	25-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	465	58	139	7.4	2.7	21.7	50	0.1
M-09-106 58.5-59.5	9	4	4-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	480	50	124	7.34	2.7	22.2	38	0.1
M-09-106 58.5-59.5	9	5	11-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	45	105	7.37	2.8	21.5	26	0.1
M-09-106 58.5-59.5	9	6	18-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	455	44	102	7.43	2.7	18.8	22	0.1
M-09-106 58.5-59.5	9	7	25-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	465	46	97	7.37	3.4	21.0	24	0.1
M-09-106 58.5-59.5	9	8	1-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	490	47	102	7.5	2.6	23.0	32	0.1
M-09-106 58.5-59.5	9	9	8-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	500	45	101	7.43	2.8	22.8	26	0.1
M-09-106 58.5-59.5	9	10	15-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	485	46	104	7.41	3.2	23.0	29	0.1
M-09-106 58.5-59.5	9	11	22-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	480	45	105	7.47	4.3	23.4	25	0.1
M-09-106 58.5-59.5	9	12	29-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	500	42	99	7.51	2.4	23.9	25	0.1
M-09-106 58.5-59.5	9	13	6-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	495	43	94	7.36	4.5	22.6	23	0.1
M-09-106 58.5-59.5	9	14	13-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	485	49	102	7.48	3.0	21.0	27	0.1
M-09-106 58.5-59.5	9	15	20-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	495	43	99	7.48	4.2	20.9	19	0.1
M-09-106 58.5-59.5	9	16	27-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	485	47	102	7.44	6.2	24.3	18	0.1
M-09-106 58.5-59.5	9	17	3-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	480	45	95	7.35	3.4	21.4	23	0.1
M-09-106 58.5-59.5	9	18	10-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	485	43	96	7.35	4.6	21.0	24	0.1
M-09-106 58.5-59.5	9	19	17-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	480	44	98	7.52	3.7	22.0	17	0.1
M-09-106 58.5-59.5	9	20	24-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	500	45	98	7.51	2.7	20.9	22	0.1
M-09-106 58.5-59.5	9	21	1-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	490	43	90	7.49	2.3	21.3	19	0.1
M-09-106 58.5-59.5	9	22	8-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	480	36	91	7.31	2.5	17.0	19	0.1
M-09-106 58.5-59.5	9	23	15-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	495	39	94	7.33	4.1	17.5	15	0.1
M-09-106 58.5-59.5	9	24	22-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	500	37	86	7.28	3.4	17.3	11	0.1
M-09-106 58.5-59.5	9	25	29-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	495	45	94	7.45	4.2	21.6	28	0.1
M-09-106 58.5-59.5	9	26	5-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	490	43	90	7.48	2.8	21.6	21	0.1
M-09-106 58.5-59.5	9	27	12-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	495	39	92	7.46	4.0	22.6	23	0.1
M-09-106 58.5-59.5	9	28	19-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	500	40	88	7.49	5.1	21.9	22	0.1
M-09-106 58.5-59.5	9	29	26-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	455	37	84	7.41	2.5	17.0	17	0.1
M-09-106 58.5-59.5	9	30	2-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	39	77	7.42	4.3	18.1	33	0.1
M-09-106 58.5-59.5	9	31	9-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	37	88	7.19	5.1	17.7	22	0.1
M-09-106 58.5-59.5	9	32	16-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	37	82	7.17	3.2	16.8	25	0.1
M-09-106 58.5-59.5	9	33	23-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	465	40	78	7.3	2.7	17.8	31	0.1
M-09-106 58.5-59.5	9	34	30-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	445	40	71	7.25	3.0	17.4	27	0.1
M-09-106 58.5-59.5	9	35	7-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	455	50	112	7.31	3.7	22.3	38	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-106 34.5-35.5	0.03	0.033	0.001	0.001	0.049	0.000	0.000	0.002	0.00001	10.800	0.000	0.000	0.002	0.002	0.00001	0.001	0.120	0.056	0.0000050	0.011
M-09-106 34.5-35.5	0.03	0.032	0.001	0.001	0.049	0.000	0.000	0.002	0.00001	10.750	0.000	0.000	0.002	0.002	0.00002	0.001	0.118	0.057	0.0000050	0.010
M-09-106 34.5-35.5	0.03	0.032	0.001	0.001	0.049	0.000	0.000	0.002	0.00001	10.700	0.000	0.000	0.002	0.002	0.00002	0.001	0.117	0.058	0.0000050	0.010
M-09-106 34.5-35.5	0.03	0.031	0.001	0.001	0.049	0.000	0.000	0.002	0.00001	10.650	0.000	0.000	0.002	0.002	0.00003	0.001	0.115	0.059	0.0000050	0.010
M-09-106 34.5-35.5	0.03	0.031	0.001	0.001	0.049	0.000	0.000	0.002	0.00001	10.600	0.000	0.000	0.002	0.002	0.00003	0.001	0.113	0.061	0.0000050	0.010
M-09-106 34.5-35.5	0.03	0.030	0.001	0.001	0.050	0.000	0.000	0.001	0.00006	10.700	0.000	0.000	0.002	0.002	0.00021	0.001	0.114	0.061	0.0000050	0.010
M-09-106 34.5-35.5	0.03	0.029	0.001	0.001	0.050	0.000	0.000	0.001	0.00012	10.800	0.000	0.000	0.002	0.002	0.00039	0.001	0.116	0.062	0.0000050	0.010
M-09-106 34.5-35.5	0.03	0.028	0.000	0.001	0.050	0.000	0.000	0.001	0.00018	10.900	0.000	0.000	0.002	0.003	0.00057	0.001	0.117	0.063	0.0000050	0.010
M-09-106 34.5-35.5	0.03	0.027	0.000	0.001	0.050	0.000	0.000	0.000	0.00024	11.000	0.000	0.000	0.002	0.003	0.00075	0.001	0.118	0.064	0.0000050	0.010
M-09-106 34.5-35.5	0.03	0.033	0.000	0.001	0.051	0.000	0.000	0.001	0.00018	11.050	0.000	0.000	0.002	0.003	0.00057	0.001	0.117	0.062	0.0000088	0.010
M-09-106 34.5-35.5	0.03	0.038	0.000	0.001	0.051	0.000	0.000	0.001	0.00012	11.100	0.000	0.000	0.002	0.002	0.00039	0.001	0.116	0.060	0.0000125	0.010
M-09-106 34.5-35.5	0.03	0.044	0.000	0.001	0.051	0.000	0.000	0.001	0.00006	11.150	0.000	0.000	0.002	0.002	0.00021	0.001	0.115	0.058	0.0000163	0.010
M-09-106 34.5-35.5	0.03	0.050	0.001	0.001	0.051	0.000	0.000	0.001	0.00000	11.200	0.000	0.000	0.002	0.002	0.00003	0.001	0.114	0.056	0.0000200	0.011
M-09-106 34.5-35.5	0.03	0.050	0.001	0.001	0.051	0.000	0.000	0.001	0.00000	11.200	0.000	0.000	0.002	0.002	0.00003	0.001	0.114	0.056	0.0000200	0.011
M-09-106 34.5-35.5	0.03	0.050	0.001	0.001	0.051	0.000	0.000	0.001	0.00000	11.200	0.000	0.000	0.002	0.002	0.00003	0.001	0.114	0.056	0.0000200	0.011
M-09-106 34.5-35.5	0.03	0.039	0.000	0.001	0.052	0.000	0.000	0.002	0.00000	12.025	0.000	0.000	0.003	0.002	0.00012	0.001	0.125	0.063	0.0000200	0.011
M-09-106 34.5-35.5	0.03	0.036	0.000	0.001	0.053	0.000	0.000	0.002	0.00001	12.300	0.000	0.000	0.003	0.002	0.00015	0.001	0.128	0.065	0.0000200	0.011
M-09-106 34.5-35.5	0.03	0.041	0.000	0.001	0.056	0.000	0.000	0.002	0.00000	12.450	0.000	0.000	0.003	0.002	0.00012	0.001	0.130	0.065	0.0000163	0.011
M-09-106 34.5-35.5	0.03	0.046	0.000	0.001	0.058	0.000	0.000	0.002	0.00000	12.600	0.000	0.000	0.003	0.002	0.00008	0.001	0.131	0.066	0.0000125	0.011
M-09-106 34.5-35.5	0.03	0.051	0.000	0.001	0.061	0.000	0.000	0.002	0.00000	12.750	0.000	0.000	0.002	0.002	0.00005	0.001	0.133	0.066	0.0000088	0.011
M-09-106 34.5-35.5	0.03	0.056	0.000	0.001	0.064	0.000	0.000	0.002	0.00000	12.900	0.000	0.000	0.002	0.002	0.00001	0.001	0.134	0.067	0.0000050	0.012
M-09-106 34.5-35.5	0.03	0.058	0.000	0.001	0.060	0.000	0.000	0.003	0.00000	12.600	0.000	0.000	0.002	0.002	0.00002	0.001	0.128	0.065	0.0000063	0.011
M-09-106 34.5-35.5	0.03	0.060	0.000	0.001	0.056	0.000	0.000	0.003	0.00000	12.300	0.000	0.000	0.002	0.002	0.00002	0.001	0.121	0.063	0.0000075	0.011
M-09-106 34.5-35.5	0.03	0.062	0.000	0.001	0.052	0.000	0.000	0.004	0.00000	12.000	0.000	0.000	0.002	0.002	0.00003	0.001	0.115	0.061	0.0000088	0.011
M-09-106 34.5-35.5	0.03	0.064	0.000	0.001	0.048	0.000	0.000	0.005	0.00000	11.700	0.000	0.000	0.002	0.002	0.00003	0.001	0.108	0.060	0.0000100	0.011
M-09-106 34.5-35.5	0.03	0.060	0.000	0.001	0.048	0.000	0.000	0.004	0.00000	11.700	0.000	0.000	0.002	0.002	0.00003	0.001	0.108	0.061	0.0000088	0.010
M-09-106 34.5-35.5	0.03	0.055	0.000	0.001	0.048	0.000	0.000	0.003	0.00000	11.700	0.000	0.000	0.002	0.002	0.00002	0.001	0.108	0.062	0.0000075	0.010
M-09-106 34.5-35.5	0.03	0.051	0.000	0.001	0.048	0.000	0.000	0.002	0.00000	11.700	0.000	0.000	0.002	0.002	0.00002	0.001	0.107	0.063	0.0000063	0.010
M-09-106 34.5-35.5	0.03	0.047	0.000	0.001	0.048	0.000	0.000	0.002	0.00000	11.700	0.000	0.000	0.002	0.002	0.00001	0.001	0.107	0.064	0.0000050	0.009
	0.03	0.056	0.000	0.001	0.053	0.000	0.000	0.003	0.00000	12.105	0.000	0.000	0.002	0.002	0.00002	0.001	0.117	0.063	0.0000074	0.011
HC9 LP Hazelton																				
M-09-106 58.5-59.5	0.49	0.0673	0.0008	0.0027	0.0442	0.0000	0.0000	0.0051	0.00002	51.3484	0.0003	0.0002	0.0021	0.0050	0.00026	0.0030	1.7216	0.0792	0.0000051	0.0179
M-09-106 58.5-59.5	0.50	0.0880	0.0008	0.0032	0.0588	0.0000	0.0000	0.0051	0.00002	46.4484	0.0003	0.0001	0.0013	0.0050	0.00049	0.0020	1.7116	0.0562	0.0000051	0.0111
M-09-106 58.5-59.5	0.38	0.0833	0.0009	0.0029	0.0649	0.0000	0.0000	0.0052	0.00003	34.5484	0.0003	0.0001	0.0033	0.0050	0.00262	0.0030	1.2916	0.0672	0.0000051	0.0096
M-09-106 58.5-59.5	0.34	0.0673	0.0008	0.0022	0.0606	0.0000	0.0000	0.0035	0.00002	21.7484	0.0003	0.0001	0.0009	0.0050	0.00049	0.0020	0.8696	0.0522	0.0000051	0.0088
M-09-106 58.5-59.5	0.29	0.0831	0.0008	0.0022	0.0784	0.0000	0.0000	0.0041	0.00002	18.6484	0.0003	0.0000	0.0017	0.0050	0.00060	0.0010	0.7496	0.0442	0.0000201	0.0093
M-09-106 58.5-59.5	0.23	0.0756	0.0007	0.0016	0.0780	0.0000	0.0000	0.0031	0.00002	16.7484	0.0003	0.0000	0.0011	0.0050	0.00054	0.0020	0.7106	0.0492	0.0000101	0.0088
M-09-106 58.5-59.5	0.16	0.0728	0.0007	0.0016	0.0808	0.0000	0.0000	0.0031	0.00002	16.4484	0.0003	0.0000	0.0005	0.0050	0.00038	0.0010	0.6916	0.0462	0.0000051	0.0082
M-09-106 58.5-59.5	0.17	0.0762	0.0009	0.0015	0.0791	0.0000	0.0000	0.0031	0.00000	17.0484	0.0007	0.0000	0.0008	0.0050	0.00034	0.0010	0.7126	0.0512	0.0000051	0.0094
M-09-106 58.5-59.5	0.15	0.0767	0.0008	0.0017	0.0817	0.0000	0.0000	0.0041	0.00003	17.7484	0.0007	0.0000	0.0013	0.0050	0.00052	0.0010	0.7276	0.0552	0.0000051	0.0099
M-09-106 58.5-59.5	0.13	0.0707	0.0010	0.0016	0.0806	0.0000	0.0000	0.0041	0.00003	16.7484	0.0003	0.0000	0.0009	0.0050	0.00046	0.0020	0.6696	0.0632	0.0000051	0.0093
M-09-106 58.5-59.5	0.13	0.0775	0.0011	0.0017	0.0835	0.0000	0.0000	0.0031	0.00003	17.1484	0.0003	0.0000	0.0013	0.0050	0.00048	0.0010	0.6926	0.0582	0.0000051	0.0114
M-09-106 58.5-59.5	0.10	0.0674	0.0009	0.0017	0.0750	0.0000	0.0000	0.0031	0.00003	17.0484	0.0006	0.0000	0.0012	0.0050	0.00069	0.0010	0.6756	0.0622	0.0000051	0.0119
M-09-106 58.5-59.5	0.09	0.0517	0.0009	0.0015	0.0819	0.0000	0.0000	0.0031	0.00004	15.9484	0.0003	0.0000	0.0016	0.0050	0.00049	0.0005	0.6316	0.0682	0.0000051	0.0109
M-09-106 58.5-59.5	0.09	0.0468	0.0009	0.0015	0.0771	0.0000	0.0000	0.0031	0.00003	16.2484	0.0006	0.0000	0.0013	0.0050	0.00050	0.0005	0.6366	0.0752	0.0000051	0.0101
M-09-106 58.5-59.5	0.08	0.0554	0.0009	0.0012	0.0707	0.0000	0.0000	0.0026	0.00004	18.6484	0.0003	0.0000	0.0013	0.0010	0.00057	0.0010	0.6906	0.0732	0.0000051	0.0129
M-09-106 58.5-59.5	0.07	0.0375	0.0008	0.0014	0.0718	0.0000	0.0000	0.0025	0.00004	16.2484	0.0003	0.0000	0.0016	0.0010	0.00037	0.0010	0.6056	0.0731	0.0000051	0.0129
M-09-106 58.5-59.5	0.03	0.0416	0.0009	0.0014	0.0700	0.0000	0.0000	0.0026	0.00005	17.8484	0.0005	0.0001	0.0015	0.0010	0.00130	0.0010	0.6576	0.0853	0.0000051	0.0123
M-09-106 58.5-59.5	0.03	0.0396	0.0007	0.0014	0.0714	0.0000	0.0000	0.0021	0.00004	17.1484	0.0003	0.0000	0.0012	0.0010	0.00026	0.0010	0.6136	0.0820	0.0000051	0.0096
M-09-106 58.5-59.5	0.08	0.0390	0.0008	0.0013	0.0665	0.0000	0.0000	0.0030	0.00006	16.3484	0.0007	0.0001	0.0015	0.0050	0.00041	0.0010	0.5886	0.0848	0.0000051	0.0109
M-09-106 58.5-59.5	0.03	0.0396	0.0010	0.0013	0.0632	0.0000	0.0000	0.0026	0.00009	16.7484	0.0003	0.0001	0.0022	0.0020	0.00031	0.0010	0.5986	0.0811	0.0000051	0.0123
M-09-106 58.5-59.5	0.03	0.0356	0.0010	0.0008	0.0619	0.0000	0.0000	0.0047	0.00006	17.1484	0.0003	0.0000	0.0020	0.0010	0.00028	0.0010	0.5886	0.0867	0.0000051	0.0122
M-09-106 58.5-59.5	0.03	0.0308	0.0009	0.0009	0.0653	0.0000	0.0000	0.0022	0.00007	16.4484	0.0003	0.0001	0.0014	0.0010	0.00023	0.0005	0.5606	0.0931	0.0000051	0.0105
M-09-106 58.5-59.5	0.03	0.0327	0.0007	0.0010	0.0666	0.0000	0.0000	0.0027	0.00006	13.6484	0.0006	0.0001	0.0016	0.0010	0.00028	0.0010	0.5276	0.0871	0.0000051	0.0089
M-09-106 58.5-59.5	0.03	0.0313	0.0006	0.0007	0.0601	0.0000	0.0000	0.0041	0.00007	14.8484	0.0006	0.0001	0.0017	0.0070	0.00027	0.0010	0.5096	0.0863	0.0000051	0.0093
M-09-106 58.5-59.5	0.03	0.0271	0.0007	0.0011	0.0610	0.0000	0.0000	0.0026	0.00007	14.0484	0.0006	0.0001	0.0016	0.0010	0.00022	0.0005	0.4606	0.0879	0.0000051	0.0087
M-09-106 58.5-59.5	0.03	0.0359	0.0007	0.0006	0.0646	0.0000	0.0000	0.0026	0.00007	17.1484	0.0003	0.0001	0.0021	0.0010	0.00027	0.0005	0.5346	0.0983	0.0000051	0.0090
M-09-106 58.5-59.5	0.03	0.0327	0.0007	0.0007	0.0604	0.0000	0.0000	0.0022	0.00007	16.2484	0.0005	0.0001	0.0027	0.0010	0.00031	0.0010	0.4946	0.1002	0.0000051	0.0091
M-09-106 58.5-59.5	0.03	0.0276	0.0007	0.0007	0.0544	0.0000	0.0000	0.0024	0.00008	14.9484	0.0006	0.0001	0.0020	0.0010	0.00025	0.0005	0.4546	0.1022	0.0000051	0.0093
M-09-106 58.5-59.5	0.03	0.0268	0.0006	0.0006	0.0575	0.0000	0.0000	0.0028	0.00009	15.4484	0.0003	0.0001	0.0024	0.0010	0.00058	0.0005	0.4356	0.0885	0.0000051	0.0096
M-09-106 58.5-59.5	0.03	0.0317	0.0005	0.0007	0.0593	0.0000	0.0000	0.0018	0.00006	14.2484	0.0006	0.0001	0.0020	0.0010	0.00025	0.0010	0.3736	0.0689	0.0000051	0.0078
M-09-106 58.5-59.5	0.03	0.0344	0.0002	0.0007	0.0612	0.0000	0.0000	0.0019	0.00007	15.0484	0.0003	0.0001	0.0020	0.0010	0.00025	0.0010	0.4056	0.0728	0.0000051	0.0088
M-09-106 58.5-59.5	0.03	0.0335	0.0005	0.0007	0.0579	0.0000	0.0000	0.0025	0.00007	14.3484	0.0007	0.0001	0.0027	0.0010	0.00026	0.0010	0.3736	0.0964	0.0000101	0.0084
M-09-106 58.5-59.5	0.03	0.0320	0.0007	0.0005	0.0540	0.0000	0.0000	0.0018	0.00007	14.1484	0.0003	0.0001	0.0021	0.0010	0.00025	0.0010	0.3836	0.0932	0.0000051	0.0080
M-09-106 58.5-59.5	0.03	0.0302	0.0006	0.0007	0.0546	0.0000	0.0000	0.0021	0.00008	15.3484	0.0003	0.0001	0.0019	0.0010	0.00023	0.0010	0.4046	0.0920	0.0000051	0.0082
M-09-106 58.5-59.5	0.03	0.0333	0.0005	0.0006	0.0544	0.0000	0.0000	0.0031	0.00007	15.2484	0.0003	0.0001	0.0025	0.0010	0.00023	0.0010	0.3916	0.0892	0.0000051	0.0081
M-09-106 58.5-59.5	0.03	0.0410	0.0008	0.0007	0.0599	0.0000	0.0000	0.0028	0.00009	19.2484	0.0005	0.0002	0.0027	0.0010	0.00030	0.0005	0.4936	0.1122	0.0000051	0.0101

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-106 34.5-35.5	0.000	0.005	0.240	0.000	0.260	0.00001	0.040	0.111	4.930	0.000	0.000	0.000	0.000	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.237	0.000	0.250	0.00001	0.050	0.108	4.920	0.000	0.000	0.000	0.000	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.234	0.000	0.240	0.00001	0.060	0.105	4.910	0.000	0.000	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.231	0.000	0.230	0.00001	0.070	0.102	4.900	0.000	0.000	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.228	0.000	0.220	0.00001	0.080	0.099	4.890	0.000	0.000	0.000	0.001	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.228	0.000	0.228	0.00001	0.083	0.099	4.983	0.000	0.000	0.000	0.001	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.005	0.229	0.000	0.235	0.00001	0.085	0.099	5.075	0.000	0.000	0.000	0.000	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.005	0.229	0.000	0.243	0.00001	0.088	0.099	5.168	0.000	0.000	0.000	0.000	0.000	0.004	0.000
M-09-106 34.5-35.5	0.000	0.005	0.229	0.000	0.250	0.00001	0.090	0.099	5.260	0.000	0.000	0.000	0.000	0.000	0.004	0.000
M-09-106 34.5-35.5	0.000	0.005	0.233	0.000	0.248	0.00001	0.083	0.100	5.308	0.000	0.000	0.000	0.000	0.000	0.004	0.000
M-09-106 34.5-35.5	0.000	0.005	0.237	0.000	0.245	0.00001	0.075	0.101	5.355	0.000	0.000	0.000	0.000	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.005	0.241	0.000	0.243	0.00001	0.068	0.102	5.403	0.000	0.000	0.000	0.000	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.005	0.245	0.000	0.240	0.00001	0.060	0.103	5.450	0.000	0.000	0.000	0.000	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.245	0.000	0.240	0.00001	0.060	0.103	5.450	0.000	0.000	0.000	0.000	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.245	0.000	0.240	0.00001	0.060	0.103	5.450	0.000	0.000	0.000	0.000	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.259	0.000	0.263	0.00001	0.060	0.110	5.938	0.000	0.000	0.000	0.000	0.000	0.005	0.000
M-09-106 34.5-35.5	0.000	0.005	0.264	0.001	0.270	0.00001	0.060	0.112	6.100	0.000	0.000	0.000	0.000	0.000	0.006	0.000
M-09-106 34.5-35.5	0.000	0.005	0.267	0.000	0.278	0.00001	0.063	0.113	6.145	0.000	0.000	0.000	0.000	0.000	0.005	0.000
M-09-106 34.5-35.5	0.000	0.005	0.270	0.000	0.285	0.00001	0.065	0.114	6.190	0.000	0.000	0.000	0.000	0.000	0.003	0.000
M-09-106 34.5-35.5	0.000	0.005	0.273	0.000	0.293	0.00001	0.068	0.114	6.235	0.000	0.000	0.000	0.000	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.276	0.000	0.300	0.00001	0.070	0.115	6.280	0.000	0.000	0.000	0.000	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.263	0.000	0.280	0.00001	0.068	0.110	6.270	0.000	0.000	0.000	0.000	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.250	0.000	0.260	0.00001	0.065	0.106	6.260	0.000	0.000	0.000	0.000	0.000	0.001	0.000
M-09-106 34.5-35.5	0.000	0.005	0.237	0.000	0.240	0.00001	0.063	0.101	6.250	0.000	0.000	0.000	0.000	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.224	0.000	0.220	0.00001	0.060	0.097	6.240	0.000	0.001	0.000	0.000	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.221	0.000	0.223	0.00001	0.060	0.096	6.263	0.000	0.000	0.000	0.000	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.218	0.000	0.225	0.00002	0.060	0.094	6.285	0.000	0.000	0.000	0.000	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.215	0.000	0.228	0.00002	0.060	0.093	6.308	0.000	0.000	0.000	0.000	0.000	0.002	0.000
M-09-106 34.5-35.5	0.000	0.005	0.212	0.000	0.230	0.00003	0.060	0.092	6.330	0.000	0.000	0.000	0.000	0.000	0.002	0.000
	0.000	0.005	0.239	0.000	0.250	0.00001	0.063	0.102	6.272	0.000	0.000	0.000	0.000	0.000	0.002	0.000
HC9 LP Hazelton																
M-09-106 58.5-59.5	0.0013	0.0051	14.4376	0.0612	1.3289	0.00005	5.4476	0.4427	45.8000	0.0001	0.0004	0.0001	0.0016	0.0005	0.0005	0.0000
M-09-106 58.5-59.5	0.0003	0.0051	11.9376	0.0744	1.2289	0.00007	3.8176	0.4037	49.0000	0.0001	0.0007	0.0001	0.0026	0.0004	0.0005	0.0000
M-09-106 58.5-59.5	0.0002	0.0051	7.3576	0.0377	1.8089	0.00004	1.6076	0.2917	31.5000	0.0001	0.0004	0.0001	0.0037	0.0004	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0051	5.0676	0.0235	0.9189	0.00003	0.7876	0.1887	20.8000	0.0001	0.0006	0.0001	0.0019	0.0004	0.0005	0.0000
M-09-106 58.5-59.5	0.0004	0.0051	4.1676	0.0211	0.9089	0.00003	0.5076	0.1737	14.1000	0.0001	0.0007	0.0001	0.0019	0.0004	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0051	3.4676	0.0177	0.8589	0.00003	0.3076	0.1507	12.2000	0.0001	0.0003	0.0001	0.0016	0.0003	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0051	2.8376	0.0145	0.8189	0.00003	0.2476	0.1497	11.6000	0.0001	0.0003	0.0001	0.0012	0.0003	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0051	2.7576	0.0150	0.8689	0.00003	0.2276	0.1527	10.6000	0.0001	0.0003	0.0001	0.0017	0.0003	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0051	2.4076	0.0150	0.9489	0.00003	0.2076	0.1587	12.0000	0.0001	0.0004	0.0001	0.0022	0.0003	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0051	1.9776	0.0136	0.8489	0.00003	0.1676	0.1467	9.9600	0.0001	0.0002	0.0001	0.0025	0.0002	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0051	2.0576	0.0165	0.8289	0.00004	0.1776	0.1507	11.1000	0.0001	0.0003	0.0001	0.0023	0.0003	0.0005	0.0000
M-09-106 58.5-59.5	0.0002	0.0051	1.8576	0.0174	0.8489	0.00003	0.1676	0.1447	10.2000	0.0001	0.0003	0.0001	0.0022	0.0003	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0051	1.4576	0.0154	0.7089	0.00005	0.1576	0.1357	9.5600	0.0001	0.0005	0.0001	0.0023	0.0002	0.0005	0.0000
M-09-106 58.5-59.5	0.0002	0.0301	1.5676	0.0150	0.7489	0.00005	0.0976	0.1357	10.0000	0.0001	0.0004	0.0001	0.0016	0.0002	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0046	1.5476	0.0182	0.7789	0.00005	0.0976	0.1457	10.8000	0.0001	0.0003	0.0001	0.0018	0.0002	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0046	1.2776	0.0174	0.6289	0.00006	0.1376	0.1247	10.9000	0.0001	0.0004	0.0001	0.0016	0.0002	0.0010	0.0000
M-09-106 58.5-59.5	0.0001	0.0151	1.2176	0.0169	0.6389	0.00008	0.1276	0.1367	11.4000	0.0001	0.0004	0.0001	0.0016	0.0002	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0046	1.1676	0.0148	0.6189	0.00008	0.0976	0.1267	11.0000	0.0001	0.0004	0.0001	0.0013	0.0001	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.5361	1.6276	0.0150	0.5489	0.00014	0.3176	0.1227	10.5000	0.0001	0.0005	0.0001	0.0013	0.0001	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0046	1.0636	0.0177	0.5689	0.00009	0.1376	0.1237	11.0000	0.0001	0.0009	0.0001	0.0014	0.0001	0.0010	0.0000
M-09-106 58.5-59.5	0.0001	0.0046	1.0686	0.0158	0.6089	0.00011	0.1276	0.1267	11.0000	0.0001	0.0005	0.0001	0.0011	0.0001	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0046	0.9226	0.0128	0.4789	0.00010	0.0476	0.1177	10.1000	0.0001	0.0003	0.0001	0.0010	0.0001	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0201	0.9156	0.0145	0.5189	0.00011	0.1076	0.1207	10.2000	0.0001	0.0005	0.0001	0.0009	0.0001	0.0005	0.0000
M-09-106 58.5-59.5	0.0003	0.0046	0.8546	0.0138	0.4989	0.00013	0.1076	0.1137	9.0600	0.0001	0.0008	0.0001	0.0011	0.0001	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0046	0.8076	0.0121	0.4689	0.00012	0.0976	0.1057	8.2200	0.0001	0.0005	0.0001	0.0009	0.0001	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0251	0.8646	0.0125	0.5189	0.00009	0.1076	0.1187	10.2000	0.0001	0.0002	0.0001	0.0010	0.0001	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0046	0.8046	0.0122	0.4689	0.00008	0.0876	0.1107	9.4200	0.0001	0.0003	0.0001	0.0011	0.0001	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0101	0.7396	0.0117	0.3889	0.00012	0.0776	0.1127	9.6400	0.0001	0.0002	0.0001	0.0009	0.0001	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0046	0.7236	0.0109	0.4789	0.00019	0.0676	0.1077	10.0000	0.0001	0.0002	0.0001	0.0008	0.0001	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0046	0.6816	0.0111	0.3889	0.00007	0.0676	0.0949	9.2000	0.0001	0.0007	0.0001	0.0006	0.0001	0.0020	0.0000
M-09-106 58.5-59.5	0.0001	0.0046	0.6786	0.0116	0.3989	0.00008	0.0676	0.0999	9.7500	0.0001	0.0003	0.0001	0.0005	0.0001	0.0005	0.0000
M-09-106 58.5-59.5	0.0002	0.0046	0.6536	0.0099	0.3789	0.00007	0.0676	0.0935	8.9800	0.0001	0.0004	0.0002	0.0005	0.0001	0.0010	0.0000
M-09-106 58.5-59.5	0.0001	0.0046	0.6486	0.0104	0.4089	0.00010	0.0876	0.0945	9.2600	0.0001	0.0004	0.0001	0.0007	0.0001	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0046	0.7286	0.0114	0.3889	0.00011	0.0976	0.0975	9.8300	0.0001	0.0003	0.0001	0.0006	0.0001	0.0005	0.0000
M-09-106 58.5-59.5	0.0001	0.0046	0.6706	0.0103	0.3589	0.00007	0.1076	0.0931	10.4000	0.0001	0.0007	0.0001	0.0004	0.0001	0.0005	0.0000
M-09-106 58.5-59.5	0.0009	0.0121	0.8146	0.0127	0.4689	0.00005	0.4776	0.1177	12.8000	0.0001	0.0005	0.0001	0.0006	0.0001	0.0005	0.0001

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-106 58.5-59.5	9	36	14-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	465	48	102	7.27	3.8	21.0	30	0.1
M-09-106 58.5-59.5	9	37	21-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	43	99	7.26	3.5	21.3	24	0.1
M-09-106 58.5-59.5	9	38	28-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	465	40	94	7.23	3.2	18.5	27	0.1
M-09-106 58.5-59.5	9	39	4-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	470	40	92	7.43	2.5	17.2	32	0.1
M-09-106 58.5-59.5	9	40	11-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	45	91	7.41	2.9	20.6	24	0.1
M-09-106 58.5-59.5	9	41	18-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	42	73	7.52	3.6	17.0	24	0.1
M-09-106 58.5-59.5	9	42	25-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	470	41	92	7.14	3.7	18.3	23	0.1
M-09-106 58.5-59.5	9	43	2-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	45	86	7.27	3.5	18.0	21	0.1
M-09-106 58.5-59.5	9	44	9-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	475	39	87	7.23	3.8	17.1	21	0.1
M-09-106 58.5-59.5	9	45	16-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	450	45	87	7.24	4.6	16.6	28	0.1
M-09-106 58.5-59.5	9	46	23-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	465	43	90	7.42	5.6	20.9	27	0.1
M-09-106 58.5-59.5	9	47	30-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	470	43	82	7.14	5.9	17.1	29	0.1
M-09-106 58.5-59.5	9	48	6-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	475	43	71	7.4	4.8	16.3	26	0.1
M-09-106 58.5-59.5	9	49	13-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	470	42	71	7.33	3.8	15.4	23	0.1
M-09-106 58.5-59.5	9	50	20-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	465	40	83	7.16	4.2	16.4	23	0.1
M-09-106 58.5-59.5	9	51	27-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	39	74	7.33	4.7	17.3	22	0.1
M-09-106 58.5-59.5	9	52	3-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	470	38	69	7.23	3.7	16.0	22	0.1
M-09-106 58.5-59.5	9	53	10-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	36	66	7.32	2.7	14.7	22	0.1
M-09-106 58.5-59.5	9	54	17-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	33	70	7.22	3.5	15.1	22	0.1
M-09-106 58.5-59.5	9	55	24-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	460	29	88	7.23	4.4	15.5	22	0.1
M-09-106 58.5-59.5	9	56	3-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	465	34	85	7.25	3.8	16.5	25	0.1
M-09-106 58.5-59.5	9	57	10-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	465	38	88	7.3	3.2	17.5	27	0.1
M-09-106 58.5-59.5	9	58	17-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	475	39	90	7.27	3.4	19.9	23	0.1
M-09-106 58.5-59.5	9	59	24-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	470	40	112	7.31	3.7	22.3	18	0.1
M-09-106 58.5-59.5	9	60	31-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	465	40	79	7.49	4.3	21.8	20	0.1
M-09-106 58.5-59.5	9	61	7-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VU	CL	4	QSP	3			Water	500	475	40	94	7.4	4.9	21.3	22	0.1
																	36.7717595	84.046	7.302	3.762242	18.073403	22.490323	0.1
HC10 UP Hazelton																							
M-09-108 56.5-57.5	10	0	4-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	400	189	383	7.33	3.4	27.4	218	1.4
M-09-108 56.5-57.5	10	1	11-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	450	118	278	7.25	2.4	16.6	113	0.8
M-09-108 56.5-57.5	10	2	18-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	510	83	180	7.32	2.9	20.5	70	0.1
M-09-108 56.5-57.5	10	3	25-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	58	141	7.26	2.8	16.7	60	0.1
M-09-108 56.5-57.5	10	4	4-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	465	48	122	7.14	3.0	14.8	41	0.1
M-09-108 56.5-57.5	10	5	11-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	515	49	116	7.23	2.6	15.9	41	0.1
M-09-108 56.5-57.5	10	6	18-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	485	53	125	7.34	2.7	16.3	37	0.1
M-09-108 56.5-57.5	10	7	25-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	50	108	7.21	3.5	16.5	32	0.1
M-09-108 56.5-57.5	10	8	1-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	490	46	106	7.29	2.8	16.8	38	0.1
M-09-108 56.5-57.5	10	9	8-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	485	44	104	7.2	2.7	15.5	33	0.1
M-09-108 56.5-57.5	10	10	15-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	490	44	105	7.24	3.2	16.1	35	0.1
M-09-108 56.5-57.5	10	11	22-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	485	46	111	7.02	5.0	12.2	34	0.1
M-09-108 56.5-57.5	10	12	29-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	480	42	101	7.31	2.3	15.8	32	0.1
M-09-108 56.5-57.5	10	13	6-May-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	490	44	98	7.21	4.6	16.4	29	0.1
M-09-108 56.5-57.5	10	14	13-May-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	480	43	97	7.35	3.0	15.6	27	0.1
M-09-108 56.5-57.5	10	15	20-May-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	485	38	92	7.38	4.1	16.3	25	0.1
M-09-108 56.5-57.5	10	16	27-May-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	490	40	88	7.33	6.2	17.5	15	0.1
M-09-108 56.5-57.5	10	17	3-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	485	40	85	7.24	3.2	15.1	21	0.1
M-09-108 56.5-57.5	10	18	10-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	495	38	85	7.35	4.4	15.5	18	0.1
M-09-108 56.5-57.5	10	19	17-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	495	38	85	7.42	3.9	16.0	14	0.1
M-09-108 56.5-57.5	10	20	24-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	510	37	82	7.41	2.8	15.8	18	0.1
M-09-108 56.5-57.5	10	21	1-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	490	36	77	7.39	2.5	14.6	15	0.2
M-09-108 56.5-57.5	10	22	8-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	510	30	81	7.24	2.4	14.4	16	0.1
M-09-108 56.5-57.5	10	23	15-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	500	33	82	7.26	3.8	14.8	16	0.1
M-09-108 56.5-57.5	10	24	22-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	505	31	76	7.15	3.4	13.4	10	0.1
M-09-108 56.5-57.5	10	25	29-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	485	36	74	7.36	4.0	15.6	19	0.1
M-09-108 56.5-57.5	10	26	5-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	490	33	73	7.34	2.9	14.8	16	0.1
M-09-108 56.5-57.5	10	27	12-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	495	33	78	7.44	3.4	17.4	16	0.1
M-09-108 56.5-57.5	10	28	19-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	500	34	74	7.46	4.8	15.9	18	0.1
M-09-108 56.5-57.5	10	29	26-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	465	29	65	7.27	2.6	14.6	12	0.1
M-09-108 56.5-57.5	10	30	2-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	460	29	58	7.38	3.7	14.7	23	0.1
M-09-108 56.5-57.5	10	31	9-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	460	29	67	7.06	5.0	14.7	14	0.1
M-09-108 56.5-57.5	10	32	16-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	455	28	63	7.11	3.2	14.2	18	0.1
M-09-108 56.5-57.5	10	33	23-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	460	30	57	7.21	2.8	14.4	19	0.1
M-09-108 56.5-57.5	10	34	30-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	460	29	52	7.2	2.7	14.5	21	0.1
M-09-108 56.5-57.5	10	35	7-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	455	31	74	7.19	3.7	15.1	20	0.1
M-09-108 56.5-57.5	10	36	14-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	455	33	70	7.17	3.5	14.2	19	0.1
M-09-108 56.5-57.5	10	37	21-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	455	30	69	7.19	3.3	14.9	19	0.1
M-09-108 56.5-57.5	10	38	28-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	455	28	66	7.15	3.0	14.2	20	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-106 58.5-59.5	0.03	0.0397	0.0007	0.0008	0.0547	0.0000	0.0000	0.0027	0.00008	18.2484	0.0003	0.0001	0.0032	0.0010	0.00029	0.0010	0.4736	0.1112	0.0000051	0.0096
M-09-106 58.5-59.5	0.03	0.0355	0.0005	0.0004	0.0499	0.0000	0.0000	0.0040	0.00009	16.6484	0.0005	0.0001	0.0021	0.0030	0.00025	0.0010	0.4006	0.1052	0.0000051	0.0094
M-09-106 58.5-59.5	0.03	0.0341	0.0002	0.0005	0.0520	0.0000	0.0000	0.0022	0.00008	15.5484	0.0003	0.0001	0.0023	0.0010	0.00026	0.0010	0.3716	0.0977	0.0000051	0.0096
M-09-106 58.5-59.5	0.03	0.0329	0.0002	0.0007	0.0541	0.0000	0.0000	0.0022	0.00009	15.5484	0.0003	0.0001	0.0020	0.0020	0.00083	0.0005	0.3536	0.0983	0.0000051	0.0088
M-09-106 58.5-59.5	0.03	0.0270	0.0004	0.0006	0.0443	0.0000	0.0000	0.0020	0.00008	17.1484	0.0006	0.0001	0.0027	0.0040	0.00074	0.0005	0.4076	0.1062	0.0000101	0.0091
M-09-106 58.5-59.5	0.03	0.0276	0.0005	0.0005	0.0462	0.0000	0.0000	0.0032	0.00009	16.2484	0.0003	0.0001	0.0018	0.0010	0.00022	0.0010	0.3666	0.1082	0.0000051	0.0091
M-09-106 58.5-59.5	0.03	0.0326	0.0004	0.0006	0.0431	0.0000	0.0000	0.0018	0.00013	15.7484	0.0005	0.0001	0.0031	0.0010	0.00066	0.0010	0.3366	0.1112	0.0000051	0.0074
M-09-106 58.5-59.5	0.03	0.0278	0.0005	0.0006	0.0499	0.0000	0.0000	0.0019	0.00008	17.5484	0.0006	0.0001	0.0023	0.0010	0.00188	0.0010	0.3636	0.1172	0.0000051	0.0080
M-09-106 58.5-59.5	0.03	0.0256	0.0005	0.0005	0.0522	0.0000	0.0000	0.0020	0.00008	15.1484	0.0008	0.0001	0.0036	0.0010	0.00145	0.0005	0.3126	0.1062	0.0000051	0.0083
M-09-106 58.5-59.5	0.03	0.0252	0.0005	0.0005	0.0444	0.0000	0.0000	0.0026	0.00006	17.3484	0.0003	0.0001	0.0032	0.0010	0.00024	0.0005	0.3556	0.1092	0.0000051	0.0079
M-09-106 58.5-59.5	0.03	0.0251	0.0005	0.0004	0.0432	0.0000	0.0000	0.0027	0.00009	16.6484	0.0003	0.0001	0.0024	0.0010	0.00066	0.0005	0.3356	0.1172	0.0000101	0.0086
M-09-106 58.5-59.5	0.03	0.0255	0.0004	0.0006	0.0401	0.0000	0.0000	0.0020	0.00008	16.7484	0.0006	0.0001	0.0021	0.0010	0.00069	0.0005	0.3216	0.1082	0.0000051	0.0090
M-09-106 58.5-59.5	0.03	0.0241	0.0005	0.0005	0.0419	0.0000	0.0000	0.0019	0.00008	16.4984	0.0004	0.0001	0.0020	0.0010	0.00044	0.0005	0.3171	0.1167	0.0000051	0.0087
M-09-106 58.5-59.5	0.03	0.0227	0.0005	0.0004	0.0436	0.0000	0.0000	0.0018	0.00009	16.2484	0.0003	0.0001	0.0020	0.0010	0.00018	0.0005	0.3126	0.1252	0.0000051	0.0084
M-09-106 58.5-59.5	0.03	0.0232	0.0005	0.0004	0.0433	0.0000	0.0000	0.0019	0.00009	15.6984	0.0003	0.0001	0.0022	0.0010	0.00018	0.0005	0.2966	0.1207	0.0000051	0.0084
M-09-106 58.5-59.5	0.03	0.0236	0.0004	0.0003	0.0429	0.0000	0.0000	0.0020	0.00009	15.1484	0.0003	0.0001	0.0024	0.0010	0.00017	0.0005	0.2806	0.1162	0.0000051	0.0083
M-09-106 58.5-59.5	0.03	0.0233	0.0004	0.0004	0.0426	0.0000	0.0000	0.0022	0.00008	14.6484	0.0003	0.0001	0.0026	0.0010	0.00042	0.0005	0.2636	0.1087	0.0000051	0.0080
M-09-106 58.5-59.5	0.03	0.0230	0.0004	0.0004	0.0423	0.0000	0.0000	0.0024	0.00007	14.1484	0.0003	0.0001	0.0028	0.0010	0.00066	0.0005	0.2466	0.1012	0.0000051	0.0078
M-09-106 58.5-59.5	0.03	0.0287	0.0007	0.0009	0.0545	0.0000	0.0000	0.0034	0.00004	12.7484	0.0003	0.0001	0.0024	0.0010	0.00049	0.0008	0.2256	0.0735	0.0000051	0.0139
M-09-106 58.5-59.5	0.03	0.0344	0.0009	0.0013	0.0666	0.0000	0.0000	0.0045	0.00000	11.3484	0.0003	0.0000	0.0021	0.0010	0.00032	0.0010	0.2046	0.0458	0.0000051	0.0200
M-09-106 58.5-59.5	0.03	0.0280	0.0006	0.0008	0.0536	0.0000	0.0000	0.0028	0.00005	13.1484	0.0003	0.0001	0.0023	0.0015	0.00061	0.0008	0.2231	0.0820	0.0000051	0.0138
M-09-106 58.5-59.5	0.03	0.0216	0.0003	0.0003	0.0405	0.0000	0.0000	0.0011	0.00009	14.9484	0.0003	0.0001	0.0025	0.0020	0.00090	0.0005	0.2416	0.1182	0.0000051	0.0076
M-09-106 58.5-59.5	0.03	0.0225	0.0004	0.0004	0.0416	0.0000	0.0000	0.0014	0.00008	15.3484	0.0003	0.0001	0.0027	0.0015	0.00054	0.0005	0.2431	0.1212	0.0000051	0.0079
M-09-106 58.5-59.5	0.03	0.0233	0.0004	0.0004	0.0427	0.0000	0.0000	0.0018	0.00008	15.7484	0.0003	0.0001	0.0029	0.0010	0.00017	0.0005	0.2446	0.1242	0.0000051	0.0081
M-09-106 58.5-59.5	0.03	0.0236	0.0004	0.0005	0.0421	0.0000	0.0000	0.0018	0.00008	15.5984	0.0003	0.0001	0.0027	0.0040	0.00017	0.0005	0.2541	0.1337	0.0000051	0.0082
M-09-106 58.5-59.5	0.03	0.0238	0.0004	0.0005	0.0415	0.0000	0.0000	0.0019	0.00009	15.4484	0.0003	0.0001	0.0026	0.0070	0.00016	0.0005	0.2636	0.1432	0.0000051	0.0083
	0.033387	0.025242	0.000527	0.000596	0.046803	0.000010	0.000005	0.002295	0.000065	14.313387	0.000254	0.000082	0.002536	0.002116	0.000446	0.000608	0.241047	0.105157	0.000005	0.010359
HC10 UP Hazelton																				
M-09-108 56.5-57.5	1.83	0.0159	0.0006	0.0010	0.0574	0.0000	0.0000	0.0050	0.01390	69.2000	0.0003	0.0050	0.0130	0.0050	0.00212	0.0140	3.9500	1.4100	0.0001200	0.0108
M-09-108 56.5-57.5	1.30	0.0336	0.0005	0.0007	0.0462	0.0000	0.0000	0.0050	0.00479	42.6000	0.0003	0.0005	0.0046	0.0050	0.00309	0.0080	2.9000	0.5420	0.0000050	0.0065
M-09-108 56.5-57.5	1.09	0.0347	0.0004	0.0006	0.0386	0.0000	0.0000	0.0052	0.00392	30.8000	0.0003	0.0004	0.0055	0.0050	0.00516	0.0060	1.4600	0.4510	0.0000050	0.0047
M-09-108 56.5-57.5	0.97	0.0311	0.0004	0.0007	0.0360	0.0000	0.0000	0.0027	0.00333	21.6000	0.0003	0.0002	0.0031	0.0050	0.00407	0.0040	1.0400	0.2980	0.0000050	0.0034
M-09-108 56.5-57.5	0.88	0.0358	0.0003	0.0006	0.0313	0.0000	0.0000	0.0030	0.00289	17.8000	0.0003	0.0002	0.0032	0.0050	0.00446	0.0030	0.7620	0.2480	0.0000050	0.0028
M-09-108 56.5-57.5	0.86	0.0313	0.0003	0.0006	0.0339	0.0000	0.0000	0.0030	0.00306	18.6000	0.0003	0.0002	0.0040	0.0050	0.00476	0.0030	0.6530	0.2950	0.0000050	0.0027
M-09-108 56.5-57.5	0.80	0.0293	0.0003	0.0005	0.0241	0.0000	0.0000	0.0020	0.00283	20.0000	0.0003	0.0002	0.0029	0.0050	0.00433	0.0030	0.6420	0.3010	0.0000050	0.0023
M-09-108 56.5-57.5	2.34	0.0311	0.0004	0.0003	0.0294	0.0000	0.0000	0.0010	0.00320	19.1000	0.0003	0.0002	0.0034	0.0050	0.00451	0.0020	0.5660	0.2780	0.0000050	0.0026
M-09-108 56.5-57.5	0.79	0.0303	0.0003	0.0003	0.0250	0.0000	0.0000	0.0030	0.00309	17.5000	0.0008	0.0002	0.0044	0.0050	0.00497	0.0020	0.4800	0.2620	0.0000050	0.0023
M-09-108 56.5-57.5	0.80	0.0293	0.0004	0.0006	0.0241	0.0000	0.0000	0.0030	0.00303	16.9000	0.0003	0.0002	0.0043	0.0050	0.00550	0.0020	0.4270	0.2610	0.0000050	0.0022
M-09-108 56.5-57.5	0.85	0.0302	0.0004	0.0007	0.0208	0.0000	0.0000	0.0010	0.00294	17.0000	0.0009	0.0002	0.0043	0.0050	0.00524	0.0020	0.3980	0.2380	0.0000050	0.0027
M-09-108 56.5-57.5	0.80	0.0252	0.0002	0.0006	0.0225	0.0000	0.0000	0.0010	0.00305	17.7000	0.0007	0.0002	0.0042	0.0050	0.00477	0.0020	0.3780	0.2380	0.0000050	0.0027
M-09-108 56.5-57.5	0.79	0.0251	0.0003	0.0005	0.0247	0.0000	0.0000	0.0020	0.00293	16.4000	0.0005	0.0002	0.0050	0.0050	0.00431	0.0020	0.3310	0.2260	0.0000050	0.0021
M-09-108 56.5-57.5	0.76	0.0224	0.0003	0.0006	0.0204	0.0000	0.0000	0.0010	0.00299	17.0000	0.0005	0.0001	0.0045	0.0050	0.00654	0.0010	0.3290	0.2380	0.0000100	0.0021
M-09-108 56.5-57.5	0.77	0.0264	0.0003	0.0003	0.0204	0.0000	0.0000	0.0015	0.00275	16.9000	0.0005	0.0001	0.0040	0.0010	0.00528	0.0010	0.2940	0.1950	0.0000050	0.0028
M-09-108 56.5-57.5	0.72	0.0170	0.0003	0.0006	0.0176	0.0000	0.0000	0.0016	0.00247	14.9000	0.0003	0.0001	0.0037	0.0010	0.00426	0.0020	0.2490	0.1640	0.0000050	0.0026
M-09-108 56.5-57.5	0.78	0.0231	0.0003	0.0006	0.0192	0.0000	0.0000	0.0017	0.00273	15.7000	0.0005	0.0001	0.0043	0.0010	0.00508	0.0010	0.2500	0.1840	0.0000200	0.0027
M-09-108 56.5-57.5	0.70	0.0258	0.0002	0.0005	0.0182	0.0000	0.0000	0.0014	0.00263	15.7000	0.0003	0.0001	0.0040	0.0010	0.00422	0.0010	0.2420	0.1770	0.0000050	0.0021
M-09-108 56.5-57.5	0.69	0.0281	0.0003	0.0005	0.0182	0.0000	0.0000	0.0022	0.00236	14.8000	0.0005	0.0001	0.0034	0.0010	0.00427	0.0020	0.2150	0.1610	0.0000050	0.0023
M-09-108 56.5-57.5	0.72	0.0233	0.0003	0.0005	0.0179	0.0000	0.0000	0.0019	0.00251	14.7000	0.0003	0.0001	0.0040	0.0010	0.00390	0.0010	0.2110	0.1560	0.0000050	0.0030
M-09-108 56.5-57.5	0.79	0.0236	0.0004	0.0001	0.0179	0.0000	0.0000	0.0038	0.00221	14.6000	0.0003	0.0001	0.0032	0.0010	0.00431	0.0010	0.2000	0.1460	0.0000050	0.0032
M-09-108 56.5-57.5	0.60	0.0226	0.0004	0.0003	0.0178	0.0000	0.0000	0.0015	0.00262	13.9000	0.0003	0.0001	0.0040	0.0140	0.00373	0.0005	0.1880	0.1600	0.0000050	0.0028
M-09-108 56.5-57.5	0.69	0.0218	0.0002	0.0004	0.0198	0.0000	0.0000	0.0024	0.00236	11.7000	0.0006	0.0001	0.0040	0.0010	0.00421	0.0010	0.1780	0.1510	0.0000050	0.0024
M-09-108 56.5-57.5	0.71	0.0212	0.0001	0.0004	0.0182	0.0000	0.0000	0.0034	0.00254	12.9000	0.0006	0.0001	0.0040	0.0010	0.00412	0.0010	0.1680	0.1400	0.0000050	0.0023
M-09-108 56.5-57.5	0.63	0.0173	0.0001	0.0004	0.0152	0.0000	0.0000	0.0018	0.00235	12.2000	0.0006	0.0001	0.0040	0.0030	0.00364	0.0005	0.1580	0.1310	0.0000050	0.0022
M-09-108 56.5-57.5	0.74	0.0199	0.0001	0.0001	0.0150	0.0000	0.0000	0.0018	0.00232	14.0000	0.0003	0.0001	0.0042	0.0010	0.00388	0.0005	0.1720	0.1320	0.0000050	0.0021
M-09-108 56.5-57.5	0.74	0.0191	0.0002	0.0001	0.0145	0.0000	0.0000	0.0014	0.00266	13.1000	0.0003	0.0001	0.0056	0.0010	0.00521	0.0005	0.1600	0.1440	0.0000050	0.0021
M-09-108 56.5-57.5	0.87	0.0253	0.0002	0.0003	0.0166	0.0000	0.0000	0.0016	0.00254	12.9000	0.0003	0.0001	0.0038	0.0010	0.00379	0.0005	0.1470	0.1480	0.0000050	0.0022
M-09-108 56.5-57.5	0.70	0.0240	0.0002	0.0003	0.0157	0.0000	0.0000	0.0019	0.00273	13.3000	0.0003	0.0001	0.0079	0.0050	0.00726	0.0010	0.1360	0.1200	0.0000050	0.0022
M-09-108 56.5-57.5	0.72	0.0281	0.0001	0.0002	0.0151	0.0000	0.0000	0.0014	0.00192	11.3000	0.0007	0.0001	0.0037	0.0010	0.00455	0.0010	0.1040	0.0945	0.0000050	0.0019
M-09-108 56.5-57.5	0.68	0.0294	0.0001	0.0003	0.0134	0.0000	0.0000	0.0013	0.00193	11.5000	0.0003	0.0001	0.0040	0.0010	0.00490	0.0005	0.1120	0.0811	0.0000050	0.0021
M-09-108 56.5-57.5	0.69	0.0270	0.0001	0.0002	0.0133	0.0000	0.0000	0.0017	0.00211	11.3000	0.0006	0.0001	0.0053	0.0020	0.00513	0.0010	0.0970	0.1030	0.0000050	0.0021
M-09-108 56.5-57.5	0.78	0.0307	0.0003	0.0003	0.0141	0.0000	0.0000	0.0012	0.00194	11.1000	0.0003	0.0001	0.0044	0.0010	0.00483	0.0005	0.1220	0.0958	0.0000050	0.0019
M-09-108 56.5-57.5	0.84	0.0255	0.0002	0.0001	0.0148	0.0000	0.0000	0.0015	0.00185	11.6000	0.0003	0.0001	0.0043	0.0010	0.00427	0.0010	0.1250	0.0901	0.0000050	0.0019
M-09-108 56.5-57.5	0.71	0.0281	0.0001	0.0003	0.0138	0.0000	0.0000	0.0025	0.00183	11.5000	0.0003	0.0001	0.0041	0.0010	0.00436	0.0010	0.1220	0.0860	0.0000050	0.0021
M-09-108 56.5-57.5	0.81	0.0272	0.0003	0.0002	0.0136	0.0000	0.0000	0.0022	0.00189	12.2000	0.0003	0.0001	0.0045	0.0010	0.00492	0.0005	0.1270	0.0899	0.0000050	0.0025
M-09-108 56.5-57.5	0.73	0.0313	0.0002	0.0002	0.0133	0.0000	0.0000	0.0021	0.00193	12.8000	0.0003	0.0001	0.0049	0.0010	0.00483	0.0005	0.1380	0.0992	0.0000050	0.0024
M-09-108 56.5-57.5	0.74	0.0231	0.0004	0.0001	0.0130	0.0000	0.0000	0.0025	0.00212	11.7000	0.0005	0.0001	0.0048	0.0030	0.00447	0.0010	0.1170	0.0931	0.0000050	0.0017
M-09-108 56.5-57.5	0.72	0.0275	0.0001	0.0001	0.0131	0.0000	0.0000	0.0016	0.00203	10.9000	0.0003	0.0001	0.0042	0.0010	0.00491	0.0005	0.1120	0.0827	0.0000050	0.0026

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-106 58.5-59.5	0.0006	0.0121	0.7486	0.0111	0.4589	0.00009	0.1176	0.1147	10.6000	0.0001	0.0005	0.0001	0.0007	0.0001	0.0010	0.0000
M-09-106 58.5-59.5	0.0001	0.0046	0.6686	0.0112	0.3889	0.00010	0.0976	0.1037	10.2000	0.0001	0.0002	0.0001	0.0004	0.0001	0.0010	0.0000
M-09-106 58.5-59.5	0.0005	0.0121	0.6396	0.0102	0.3689	0.00006	0.0576	0.0955	10.2000	0.0001	0.0001	0.0001	0.0005	0.0001	0.0030	0.0000
M-09-106 58.5-59.5	0.0010	0.0151	0.5836	0.0088	0.3389	0.00009	0.0976	0.0919	9.0700	0.0001	0.0008	0.0002	0.0003	0.0000	0.0010	0.0000
M-09-106 58.5-59.5	0.0001	0.0046	0.6296	0.0089	0.3289	0.00008	0.0976	0.0988	9.7200	0.0001	0.0003	0.0001	0.0004	0.0001	0.0020	0.0000
M-09-106 58.5-59.5	0.0003	0.0046	0.5836	0.0085	0.3689	0.00008	0.0876	0.0935	9.7700	0.0001	0.0003	0.0001	0.0004	0.0000	0.0010	0.0000
M-09-106 58.5-59.5	0.0002	0.0046	0.5726	0.0088	0.3189	0.00007	0.0476	0.0918	8.5500	0.0001	0.0001	0.0001	0.0004	0.0001	0.0050	0.0000
M-09-106 58.5-59.5	0.0002	0.0046	0.5346	0.0076	0.3189	0.00008	0.0776	0.0873	8.3800	0.0001	0.0002	0.0001	0.0003	0.0000	0.0010	0.0000
M-09-106 58.5-59.5	0.0002	0.0181	0.5116	0.0073	0.2989	0.00007	0.0876	0.0858	8.0800	0.0001	0.0002	0.0001	0.0003	0.0001	0.0020	0.0000
M-09-106 58.5-59.5	0.0001	0.0046	0.5416	0.0074	0.2989	0.00008	0.0776	0.0961	9.3900	0.0001	0.0004	0.0001	0.0003	0.0000	0.0010	0.0000
M-09-106 58.5-59.5	0.0001	0.0311	0.5696	0.0074	0.3489	0.00007	0.0776	0.0934	10.5000	0.0001	0.0003	0.0001	0.0003	0.0001	0.0040	0.0000
M-09-106 58.5-59.5	0.0003	0.0141	0.5276	0.0079	0.3489	0.00007	0.0876	0.0915	10.0000	0.0001	0.0002	0.0001	0.0004	0.0001	0.0010	0.0000
M-09-106 58.5-59.5	0.0002	0.0136	0.5086	0.0070	0.3389	0.00006	0.0826	0.0890	10.0500	0.0001	0.0004	0.0001	0.0003	0.0000	0.0008	0.0000
M-09-106 58.5-59.5	0.0001	0.0131	0.4896	0.0061	0.3289	0.00005	0.0776	0.0866	10.1000	0.0001	0.0005	0.0001	0.0003	0.0000	0.0005	0.0000
M-09-106 58.5-59.5	0.0002	0.0251	0.4831	0.0060	0.3039	0.00004	0.0776	0.0829	9.4200	0.0001	0.0004	0.0001	0.0003	0.0000	0.0018	0.0000
M-09-106 58.5-59.5	0.0004	0.0371	0.4766	0.0058	0.2789	0.00004	0.0776	0.0793	8.7400	0.0001	0.0004	0.0001	0.0003	0.0001	0.0030	0.0000
M-09-106 58.5-59.5	0.0005	0.0208	0.4706	0.0058	0.2839	0.00003	0.0726	0.0756	8.3150	0.0001	0.0004	0.0001	0.0003	0.0000	0.0020	0.0000
M-09-106 58.5-59.5	0.0006	0.0046	0.4646	0.0058	0.2889	0.00003	0.0676	0.0720	7.8900	0.0001	0.0004	0.0001	0.0003	0.0000	0.0010	0.0000
M-09-106 58.5-59.5	0.0005	0.0138	0.4986	0.0030	0.3189	0.00003	0.0826	0.1053	6.6750	0.0001	0.0002	0.0001	0.0005	0.0001	0.0008	0.0000
M-09-106 58.5-59.5	0.0003	0.0231	0.5326	0.0002	0.3489	0.00003	0.0976	0.1387	5.4600	0.0001	0.0001	0.0001	0.0007	0.0002	0.0005	0.0000
M-09-106 58.5-59.5	0.0003	0.0286	0.4916	0.0026	0.3189	0.00004	0.0826	0.1083	6.5100	0.0001	0.0003	0.0001	0.0005	0.0001	0.0018	0.0000
M-09-106 58.5-59.5	0.0003	0.0341	0.4506	0.0050	0.2889	0.00005	0.0676	0.0780	7.5600	0.0000	0.0005	0.0001	0.0002	0.0001	0.0030	0.0000
M-09-106 58.5-59.5	0.0004	0.0193	0.4511	0.0051	0.2989	0.00005	0.0676	0.0820	8.0600	0.0001	0.0004	0.0001	0.0002	0.0001	0.0018	0.0000
M-09-106 58.5-59.5	0.0004	0.0046	0.4516	0.0052	0.3089	0.00005	0.0676	0.0860	8.5600	0.0001	0.0003	0.0001	0.0002	0.0001	0.0005	0.0000
M-09-106 58.5-59.5	0.0002	0.0133	0.4526	0.0047	0.3039	0.00005	0.0676	0.0819	8.7600	0.0001	0.0003	0.0001	0.0003	0.0001	0.0013	0.0000
M-09-106 58.5-59.5	0.0001	0.0221	0.4536	0.0041	0.2989	0.00006	0.0676	0.0779	8.9600	0.0001	0.0002	0.0001	0.0003	0.0001	0.0020	0.0000
	0.000357	0.018423	0.471731	0.004160	0.305871	0.000040	0.074081	0.090567	7.675	0.000084	0.000313	0.000056	0.000350	0.000074	0.001466	0.000006
HC10 UP Hazelton																
M-09-108 56.5-57.5	0.0028	0.0050	18.6000	0.0349	1.0700	0.00006	1.4200	0.3170	59.2000	0.0001	0.0002	0.0001	0.0008	0.0003	0.0690	0.0000
M-09-108 56.5-57.5	0.0005	0.0050	13.0000	0.0347	1.1900	0.00002	0.9800	0.2140	44.0000	0.0001	0.0007	0.0001	0.0006	0.0002	0.0080	0.0000
M-09-108 56.5-57.5	0.0003	0.0050	7.3000	0.0214	1.2400	0.00001	0.5000	0.1580	25.5000	0.0001	0.0007	0.0001	0.0006	0.0002	0.0070	0.0000
M-09-108 56.5-57.5	0.0005	0.0050	5.7000	0.0180	1.0200	0.00001	0.2800	0.1160	16.3000	0.0001	0.0004	0.0001	0.0002	0.0002	0.0060	0.0000
M-09-108 56.5-57.5	0.0004	0.0050	4.2600	0.0163	0.9300	0.00001	0.1900	0.0974	12.6000	0.0001	0.0004	0.0001	0.0003	0.0002	0.0050	0.0000
M-09-108 56.5-57.5	0.0002	0.0050	3.4100	0.0153	1.0800	0.00001	0.1400	0.1020	13.0000	0.0001	0.0006	0.0001	0.0004	0.0002	0.0060	0.0000
M-09-108 56.5-57.5	0.0002	0.0050	2.9900	0.0141	1.0800	0.00001	0.1400	0.1040	14.3000	0.0001	0.0003	0.0001	0.0002	0.0001	0.0060	0.0001
M-09-108 56.5-57.5	0.0002	0.0050	3.0300	0.0155	1.1700	0.00001	0.1100	0.1010	11.9000	0.0001	0.0002	0.0001	0.0002	0.0002	0.0060	0.0001
M-09-108 56.5-57.5	0.0002	0.0050	2.3400	0.0140	1.0800	0.00001	0.1100	0.0931	12.0000	0.0001	0.0003	0.0001	0.0004	0.0001	0.0070	0.0001
M-09-108 56.5-57.5	0.0001	0.0050	2.0500	0.0128	1.0500	0.00001	0.0900	0.0915	10.6000	0.0001	0.0002	0.0002	0.0003	0.0001	0.0090	0.0000
M-09-108 56.5-57.5	0.0002	0.0050	2.0400	0.0146	1.0600	0.00001	0.1500	0.0958	11.3000	0.0001	0.0002	0.0001	0.0005	0.0001	0.0080	0.0001
M-09-108 56.5-57.5	0.0002	0.0050	1.9200	0.0150	1.1800	0.00001	0.1700	0.0962	10.9000	0.0001	0.0002	0.0001	0.0003	0.0001	0.0080	0.0001
M-09-108 56.5-57.5	0.0001	0.0050	1.5000	0.0141	1.0200	0.00001	0.1200	0.0896	10.2000	0.0001	0.0002	0.0001	0.0002	0.0002	0.0090	0.0000
M-09-108 56.5-57.5	0.0002	0.0200	1.7100	0.0136	1.1600	0.00001	0.0600	0.0935	10.5000	0.0001	0.0004	0.0001	0.0003	0.0001	0.0100	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	1.5100	0.0143	1.1100	0.00001	0.0600	0.0914	9.4600	0.0001	0.0002	0.0001	0.0002	0.0001	0.0090	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	1.3000	0.0148	0.9900	0.00001	0.1000	0.0807	9.3400	0.0001	0.0003	0.0001	0.0002	0.0001	0.0070	0.0001
M-09-108 56.5-57.5	0.0001	0.0045	1.2500	0.0142	1.0300	0.00001	0.0600	0.0866	9.2900	0.0001	0.0002	0.0001	0.0002	0.0001	0.0110	0.0001
M-09-108 56.5-57.5	0.0001	0.0045	1.1900	0.0136	1.0600	0.00001	0.0500	0.0851	9.4200	0.0001	0.0003	0.0001	0.0001	0.0001	0.0110	0.0001
M-09-108 56.5-57.5	0.0001	0.0045	1.0400	0.0130	0.9400	0.00005	0.0700	0.0827	8.6100	0.0001	0.0003	0.0001	0.0002	0.0001	0.0090	0.0001
M-09-108 56.5-57.5	0.0002	0.0045	1.0200	0.0129	0.9500	0.00001	0.1000	0.0811	8.9100	0.0001	0.0000	0.0001	0.0002	0.0001	0.0110	0.0001
M-09-108 56.5-57.5	0.0001	0.0045	1.0500	0.0118	1.0400	0.00001	0.0700	0.0827	8.3000	0.0001	0.0002	0.0001	0.0002	0.0001	0.0090	0.0000
M-09-108 56.5-57.5	0.0001	0.0100	0.9170	0.0101	0.8400	0.00001	0.0050	0.0768	7.8400	0.0001	0.0003	0.0001	0.0002	0.0001	0.0130	0.0000
M-09-108 56.5-57.5	0.0001	0.0100	0.8860	0.0113	0.9100	0.00001	0.0700	0.0792	7.6500	0.0001	0.0003	0.0001	0.0003	0.0001	0.0110	0.0000
M-09-108 56.5-57.5	0.0003	0.0045	0.8100	0.0113	0.9000	0.00001	0.0600	0.0746	7.1800	0.0001	0.0002	0.0001	0.0002	0.0001	0.0120	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.7590	0.0110	0.8600	0.00001	0.0600	0.0517	6.5400	0.0001	0.0003	0.0001	0.0002	0.0001	0.0130	0.0000
M-09-108 56.5-57.5	0.0001	0.0180	0.8700	0.0110	0.9400	0.00001	0.0600	0.0774	7.2700	0.0001	0.0001	0.0001	0.0002	0.0001	0.0140	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.8020	0.0101	0.9000	0.00001	0.0500	0.0748	6.6100	0.0001	0.0004	0.0001	0.0002	0.0001	0.0170	0.0000
M-09-108 56.5-57.5	0.0001	0.0100	0.7210	0.0110	0.7700	0.00001	0.0400	0.0759	6.9500	0.0001	0.0001	0.0001	0.0001	0.0001	0.0130	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.7400	0.0110	0.9300	0.00002	0.0300	0.0735	7.3200	0.0001	0.0001	0.0002	0.0002	0.0002	0.0210	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.6550	0.0100	0.7700	0.00001	0.0400	0.0621	5.8800	0.0001	0.0004	0.0001	0.0001	0.0001	0.0100	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.6340	0.0108	0.7500	0.00001	0.0300	0.0609	6.0600	0.0001	0.0002	0.0001	0.0001	0.0001	0.0120	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.6340	0.0098	0.7200	0.00001	0.0400	0.0591	5.8100	0.0001	0.0001	0.0002	0.0001	0.0001	0.0150	0.0000
M-09-108 56.5-57.5	0.0001	0.0140	0.6680	0.0108	0.7800	0.00001	0.0500	0.0613	5.9500	0.0001	0.0002	0.0001	0.0001	0.0001	0.0130	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.7080	0.0110	0.7900	0.00001	0.0700	0.0635	5.7600	0.0001	0.0002	0.0001	0.0002	0.0001	0.0110	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.6740	0.0099	0.7600	0.00001	0.0700	0.0632	6.3700	0.0001	0.0009	0.0001	0.0001	0.0001	0.0110	0.0000
M-09-108 56.5-57.5	0.0007	0.0045	0.6980	0.0104	0.8000	0.00001	0.0600	0.0674	7.1000	0.0001	0.0004	0.0002	0.0002	0.0001	0.0130	0.0001
M-09-108 56.5-57.5	0.0005	0.0045	0.6760	0.0098	0.8100	0.00001	0.1000	0.0720	6.2800	0.0001	0.0006	0.0002	0.0001	0.0001	0.0140	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.6130	0.0098	0.7100	0.00001	0.0800	0.0647	6.1000	0.0001	0.0002	0.0001	0.0001	0.0001	0.0210	0.0001
M-09-108 56.5-57.5	0.0003	0.0045	0.5940	0.0090	0.7000	0.00001	0.0300	0.0603	5.9700	0.0001	0.0000	0.0001	0.0001	0.0001	0.0150	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-108 56.5-57.5	10	39	4-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	465	27	81	7.38	2.4	13.7	19	0.1
M-09-108 56.5-57.5	10	40	11-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	450	28	79	7.51	2.3	15.2	12	0.1
M-09-108 56.5-57.5	10	41	18-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	450	28	61	7.48	3.6	14.7	10	0.1
M-09-108 56.5-57.5	10	42	25-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	450	25	58	7.11	3.4	12.6	10	0.4
M-09-108 56.5-57.5	10	43	2-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	460	31	58	7.24	3.3	15.1	10	0.1
M-09-108 56.5-57.5	10	44	9-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	460	24	56	7.25	3.8	13.5	9	0.1
M-09-108 56.5-57.5	10	45	16-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	460	29	58	7.23	4.6	14.6	14	0.1
M-09-108 56.5-57.5	10	46	23-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	460	27	58	7.44	6.8	16.2	12	0.1
M-09-108 56.5-57.5	10	47	30-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	465	26	52	7.31	5.3	16.3	14	0.1
M-09-108 56.5-57.5	10	48	6-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	475	26	46	7.28	4.6	14.8	13	0.1
M-09-108 56.5-57.5	10	49	13-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	25	44	7.33	3.8	13.3	11	0.1
M-09-108 56.5-57.5	10	50	20-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	455	25	51	7.05	4.2	13.7	11	0.1
M-09-108 56.5-57.5	10	51	27-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	460	24	47	7.32	4.5	14.2	11	0.1
M-09-108 56.5-57.5	10	52	3-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	465	23	45	7.36	3.5	13.0	11	0.1
M-09-108 56.5-57.5	10	53	10-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	22	42	7.27	2.5	11.8	10	0.1
M-09-108 56.5-57.5	10	54	17-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	465	24	45	7.23	3.4	12.6	12	0.1
M-09-108 56.5-57.5	10	55	24-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	465	25	56	7.23	4.3	13.3	14	0.1
M-09-108 56.5-57.5	10	56	3-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	24	56	7.33	3.7	13.3	13	0.1
M-09-108 56.5-57.5	10	57	10-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	465	24	56	7.26	3.1	13.2	12	0.1
M-09-108 56.5-57.5	10	58	17-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	455	25	58	7.24	3.4	14.2	12	0.1
M-09-108 56.5-57.5	10	59	24-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	26	74	7.19	3.7	15.1	11	0.1
M-09-108 56.5-57.5	10	60	31-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	475	25	58	7.53	4.1	15.0	12	0.1
M-09-108 56.5-57.5	10	61	7-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	25	57	7.46	4.6	14.9	12	0.1
M-09-108 56.5-57.5	10	62	14-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	460	25	56	7.61	3.6	14.2	12	0.1
M-09-108 56.5-57.5	10	63	21-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	25	59	7.29	2.6	13.5	11	0.1
M-09-108 56.5-57.5	10	64	28-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	465	26	57	7.62	2.9	14.0	12	0.1
M-09-108 56.5-57.5	10	65	5-May-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	26	61	7.27	3.1	14.6	12	0.1
M-09-108 56.5-57.5	10	66	12-May-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	460	26	57	7.33	2.9	14.5	12	0.1
M-09-108 56.5-57.5	10	67	19-May-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	455	27	60	7.56	2.7	14.4	12	0.1
M-09-108 56.5-57.5	10	68	26-May-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	415	24	91	7.56	3.7	14.2	10	0.1
M-09-108 56.5-57.5	10	69	2-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	480	22	55	7.41	4.7	14.0	8	0.1
M-09-108 56.5-57.5	10	70	9-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	23	58	7.24	4.4	13.6	9	0.1
M-09-108 56.5-57.5	10	71	16-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	465	23	56	7.5	4.0	13.3	9	0.1
M-09-108 56.5-57.5	10	72	23-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	25	60	7.35	4.0	13.4	12	0.1
M-09-108 56.5-57.5	10	73	30-Jun-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	26	58	7.43	3.9	13.5	15	0.1
M-09-108 56.5-57.5	10	74	7-Jul-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	28	60	7.27	4.2	13.9	15	0.1
M-09-108 56.5-57.5	10	75	14-Jul-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	475	31	64	7.44	4.5	14.2	14	0.1
M-09-108 56.5-57.5	10	76	21-Jul-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	28	61	7.4	4.2	14.1	14	0.1
M-09-108 56.5-57.5	10	77	28-Jul-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	24	60	7.55	3.9	14.0	13	0.1
M-09-108 56.5-57.5	10	78	4-Aug-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	24	63	7.19	4.0	13.7	14	0.1
M-09-108 56.5-57.5	10	79	11-Aug-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	24	62	7.56	4.1	13.5	14	0.1
M-09-108 56.5-57.5	10	80	18-Aug-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	25	61	7.46	4.6	14.2	13	0.1
M-09-108 56.5-57.5	10	81	25-Aug-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	475	27	61	7.56	5.0	14.9	12	0.1
M-09-108 56.5-57.5	10	82	1-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	465	27	63	7.69	4.5	14.0	14	0.1
M-09-108 56.5-57.5	10	83	8-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	27	61	7.45	3.9	13.1	16	0.1
M-09-108 56.5-57.5	10	84	15-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	28	64	7.35	3.6	13.3	15	0.1
M-09-108 56.5-57.5	10	85	22-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	475	29	62	7.16	3.4	13.6	14	0.1
M-09-108 56.5-57.5	10	86	29-Sep-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	465	28	61	7.23	4.1	13.1	15	0.1
M-09-108 56.5-57.5	10	87	6-Oct-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	445	28	62	7.31	4.9	12.6	15	0.1
M-09-108 56.5-57.5	10	88	13-Oct-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	445	27	60	7.67	4.3	12.6	13	0.1
M-09-108 56.5-57.5	10	89	20-Oct-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	455	26	56	7.34	3.8	12.5	11	0.1
M-09-108 56.5-57.5	10	90	27-Oct-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	26	58	7.31	4.6	12.7	13	0.1
M-09-108 56.5-57.5	10	91	3-Nov-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	475	26	57	7.55	5.5	12.9	15	0.1
M-09-108 56.5-57.5	10	92	10-Nov-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	480	27	55	7.64	4.5	12.7	15	0.1
M-09-108 56.5-57.5	10	93	17-Nov-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	475	27	59	7.37	3.5	12.5	14	0.1
M-09-108 56.5-57.5	10	94	24-Nov-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	485	26	55	7.44	4.3	12.9	12	0.1
M-09-108 56.5-57.5	10	95	1-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	475	25	56	7.39	5.2	13.2	10	0.1
M-09-108 56.5-57.5	10	96	8-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	475	25	55	7.39	4.9	13.3	10	0.1
M-09-108 56.5-57.5	10	97	15-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	475	25	56	7.44	4.6	13.4	9	0.1
M-09-108 56.5-57.5	10	98	22-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	485	25	58	7.43	4.4	13.9	10	0.1
M-09-108 56.5-57.5	10	99	29-Dec-11	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	475	25	60	7.39	4.3	14.4	10	0.1
M-09-108 56.5-57.5	10	100	5-Jan-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	480	26	55	7.22	4.1	14.9	11	0.1
M-09-108 56.5-57.5	10	101	12-Jan-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	475	26	58	7.27	4.0	15.4	11	0.1
M-09-108 56.5-57.5	10	102	19-Jan-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	480	26	55	7.34	4.5	15.8	11	0.1
M-09-108 56.5-57.5	10	103	26-Jan-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	480	26	55	7.22	5.0	16.3	12	0.1
M-09-108 56.5-57.5	10	104	2-Feb-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	475	26	58	7.46	5.6	16.8	12	0.1
M-09-108 56.5-57.5	10	105	9-Feb-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	480	26	62	7.61	6.1	17.2	12	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-108 56.5-57.5	0.66	0.0337	0.0001	0.0005	0.0144	0.0000	0.0000	0.0018	0.00200	10.6000	0.0003	0.0001	0.0041	0.0040	0.00493	0.0005	0.1060	0.0925	0.0000050	0.0020
M-09-108 56.5-57.5	0.68	0.0282	0.0001	0.0001	0.0119	0.0000	0.0000	0.0013	0.00192	11.2000	0.0003	0.0001	0.0048	0.0030	0.00528	0.0005	0.1210	0.0829	0.0000050	0.0019
M-09-108 56.5-57.5	0.77	0.0250	0.0001	0.0002	0.0151	0.0000	0.0000	0.0026	0.00181	11.1000	0.0005	0.0001	0.0032	0.0010	0.00418	0.0010	0.1190	0.0866	0.0000050	0.0022
M-09-108 56.5-57.5	0.61	0.0203	0.0001	0.0004	0.0104	0.0000	0.0000	0.0011	0.00205	9.9600	0.0003	0.0001	0.0053	0.0010	0.00500	0.0010	0.0930	0.0620	0.0000050	0.0017
M-09-108 56.5-57.5	0.77	0.0221	0.0001	0.0001	0.0159	0.0000	0.0000	0.0018	0.00193	12.3000	0.0007	0.0001	0.0042	0.0010	0.00551	0.0010	0.1160	0.0981	0.0000050	0.0018
M-09-108 56.5-57.5	0.65	0.0181	0.0002	0.0001	0.0131	0.0000	0.0000	0.0016	0.00176	9.6000	0.0008	0.0001	0.0047	0.0010	0.00480	0.0005	0.0950	0.0767	0.0000050	0.0019
M-09-108 56.5-57.5	0.80	0.0183	0.0001	0.0002	0.0126	0.0000	0.0000	0.0022	0.00198	11.6000	0.0003	0.0001	0.0044	0.0010	0.00435	0.0005	0.1110	0.0799	0.0000050	0.0018
M-09-108 56.5-57.5	0.90	0.0206	0.0001	0.0001	0.0136	0.0000	0.0000	0.0023	0.00190	10.8000	0.0005	0.0001	0.0041	0.0010	0.00440	0.0005	0.1060	0.0826	0.0000050	0.0019
M-09-108 56.5-57.5	0.79	0.0178	0.0001	0.0002	0.0135	0.0000	0.0000	0.0016	0.00202	10.4000	0.0003	0.0001	0.0040	0.0010	0.00411	0.0005	0.1020	0.0787	0.0000050	0.0019
M-09-108 56.5-57.5	0.72	0.0190	0.0001	0.0002	0.0136	0.0000	0.0000	0.0016	0.00190	10.1450	0.0003	0.0001	0.0037	0.0010	0.00356	0.0005	0.0970	0.0789	0.0000050	0.0018
M-09-108 56.5-57.5	0.65	0.0202	0.0001	0.0002	0.0136	0.0000	0.0000	0.0016	0.00178	9.8900	0.0003	0.0001	0.0034	0.0010	0.00301	0.0005	0.0920	0.0791	0.0000050	0.0016
M-09-108 56.5-57.5	0.70	0.0182	0.0001	0.0003	0.0125	0.0000	0.0000	0.0017	0.00185	9.6700	0.0003	0.0001	0.0043	0.0010	0.00343	0.0005	0.0905	0.0769	0.0000050	0.0017
M-09-108 56.5-57.5	0.74	0.0161	0.0001	0.0003	0.0114	0.0000	0.0000	0.0018	0.00192	9.4500	0.0003	0.0001	0.0051	0.0010	0.00384	0.0005	0.0890	0.0747	0.0000050	0.0017
M-09-108 56.5-57.5	0.72	0.0167	0.0001	0.0002	0.0117	0.0000	0.0000	0.0019	0.00176	9.1250	0.0003	0.0001	0.0047	0.0010	0.00395	0.0005	0.0835	0.0692	0.0000050	0.0017
M-09-108 56.5-57.5	0.69	0.0173	0.0001	0.0001	0.0119	0.0000	0.0000	0.0020	0.00159	8.8000	0.0003	0.0001	0.0043	0.0010	0.00405	0.0005	0.0780	0.0636	0.0000050	0.0017
M-09-108 56.5-57.5	0.70	0.0179	0.0002	0.0004	0.0117	0.0000	0.0000	0.0024	0.00170	9.2700	0.0003	0.0001	0.0044	0.0010	0.00394	0.0005	0.0820	0.0656	0.0000050	0.0015
M-09-108 56.5-57.5	0.71	0.0184	0.0002	0.0006	0.0114	0.0000	0.0000	0.0027	0.00181	9.7400	0.0003	0.0001	0.0044	0.0010	0.00383	0.0005	0.0860	0.0675	0.0000050	0.0013
M-09-108 56.5-57.5	0.76	0.0178	0.0002	0.0004	0.0117	0.0000	0.0000	0.0018	0.00188	9.6300	0.0003	0.0001	0.0048	0.0010	0.00458	0.0005	0.0850	0.0679	0.0000050	0.0014
M-09-108 56.5-57.5	0.80	0.0171	0.0001	0.0001	0.0119	0.0000	0.0000	0.0009	0.00194	9.5200	0.0003	0.0001	0.0052	0.0010	0.00533	0.0005	0.0840	0.0683	0.0000050	0.0015
M-09-108 56.5-57.5	0.77	0.0169	0.0001	0.0001	0.0119	0.0000	0.0000	0.0010	0.00176	9.8100	0.0003	0.0001	0.0044	0.0010	0.00430	0.0005	0.0840	0.0683	0.0000050	0.0016
M-09-108 56.5-57.5	0.73	0.0167	0.0001	0.0001	0.0118	0.0000	0.0000	0.0011	0.00158	10.1000	0.0003	0.0001	0.0035	0.0010	0.00326	0.0005	0.0840	0.0682	0.0000050	0.0016
M-09-108 56.5-57.5	0.73	0.0160	0.0001	0.0003	0.0117	0.0000	0.0000	0.0011	0.00162	9.9250	0.0003	0.0001	0.0040	0.0035	0.00351	0.0005	0.0905	0.0725	0.0000050	0.0017
M-09-108 56.5-57.5	0.73	0.0153	0.0001	0.0004	0.0116	0.0000	0.0000	0.0010	0.00165	9.7500	0.0003	0.0001	0.0045	0.0060	0.00375	0.0005	0.0970	0.0768	0.0000050	0.0018
M-09-108 56.5-57.5	0.75	0.0182	0.0001	0.0003	0.0114	0.0000	0.0000	0.0011	0.00166	9.8750	0.0003	0.0001	0.0041	0.0035	0.00366	0.0005	0.0900	0.0713	0.0000075	0.0023
M-09-108 56.5-57.5	0.77	0.0210	0.0001	0.0001	0.0111	0.0000	0.0000	0.0012	0.00166	10.0000	0.0003	0.0001	0.0037	0.0010	0.00356	0.0005	0.0830	0.0658	0.0000100	0.0029
M-09-108 56.5-57.5	0.79	0.0199	0.0001	0.0001	0.0115	0.0000	0.0000	0.0012	0.00170	10.2000	0.0003	0.0001	0.0040	0.0010	0.00380	0.0005	0.0825	0.0647	0.0000075	0.0026
M-09-108 56.5-57.5	0.81	0.0188	0.0001	0.0001	0.0119	0.0000	0.0000	0.0011	0.00173	10.4000	0.0003	0.0001	0.0043	0.0010	0.00403	0.0005	0.0820	0.0635	0.0000050	0.0023
M-09-108 56.5-57.5	0.76	0.0194	0.0001	0.0002	0.0119	0.0000	0.0000	0.0012	0.00164	10.4500	0.0003	0.0001	0.0038	0.0010	0.00375	0.0005	0.0825	0.0634	0.0000050	0.0022
M-09-108 56.5-57.5	0.70	0.0199	0.0001	0.0003	0.0119	0.0000	0.0000	0.0013	0.00155	10.5000	0.0003	0.0001	0.0032	0.0010	0.00347	0.0005	0.0830	0.0632	0.0000050	0.0020
M-09-108 56.5-57.5	0.64	0.0173	0.0001	0.0002	0.0116	0.0000	0.0000	0.0014	0.00157	9.6250	0.0003	0.0001	0.0033	0.0010	0.00317	0.0005	0.0775	0.0603	0.0000075	0.0021
M-09-108 56.5-57.5	0.58	0.0147	0.0001	0.0001	0.0113	0.0000	0.0000	0.0015	0.00159	8.7500	0.0003	0.0001	0.0033	0.0010	0.00287	0.0005	0.0720	0.0573	0.0000100	0.0021
M-09-108 56.5-57.5	0.60	0.0149	0.0001	0.0001	0.0106	0.0000	0.0000	0.0016	0.00145	9.0050	0.0003	0.0001	0.0030	0.0040	0.00270	0.0005	0.0735	0.0557	0.0000100	0.0020
M-09-108 56.5-57.5	0.62	0.0151	0.0001	0.0001	0.0100	0.0000	0.0000	0.0016	0.00130	9.2600	0.0003	0.0001	0.0026	0.0070	0.00253	0.0005	0.0750	0.0540	0.0000100	0.0018
M-09-108 56.5-57.5	0.65	0.0144	0.0001	0.0002	0.0104	0.0000	0.0000	0.0019	0.00149	9.6800	0.0003	0.0001	0.0040	0.0040	0.00293	0.0005	0.0775	0.0557	0.0000100	0.0019
M-09-108 56.5-57.5	0.68	0.0137	0.0001	0.0002	0.0108	0.0000	0.0000	0.0022	0.00167	10.1000	0.0003	0.0001	0.0054	0.0010	0.00333	0.0005	0.0800	0.0573	0.0000100	0.0020
M-09-108 56.5-57.5	0.69	0.0144	0.0001	0.0002	0.0112	0.0000	0.0000	0.0022	0.00167	11.2000	0.0003	0.0001	0.0044	0.0010	0.00335	0.0005	0.0860	0.0617	0.0000075	0.0021
M-09-108 56.5-57.5	0.70	0.0151	0.0001	0.0002	0.0116	0.0000	0.0000	0.0022	0.00167	12.3000	0.0003	0.0001	0.0034	0.0010	0.00337	0.0005	0.0920	0.0661	0.0000050	0.0021
M-09-108 56.5-57.5	0.75	0.0143	0.0001	0.0002	0.0113	0.0000	0.0000	0.0023	0.00171	10.8650	0.0003	0.0001	0.0034	0.0075	0.00334	0.0005	0.0975	0.0796	0.0000050	0.0021
M-09-108 56.5-57.5	0.79	0.0135	0.0001	0.0001	0.0109	0.0000	0.0000	0.0023	0.00174	9.4300	0.0003	0.0001	0.0034	0.0140	0.00330	0.0005	0.1030	0.0931	0.0000050	0.0021
M-09-108 56.5-57.5	0.75	0.0152	0.0001	0.0001	0.0113	0.0000	0.0000	0.0020	0.00164	9.4650	0.0004	0.0001	0.0033	0.0075	0.00298	0.0005	0.0845	0.0704	0.0000125	0.0024
M-09-108 56.5-57.5	0.70	0.0168	0.0001	0.0001	0.0117	0.0000	0.0000	0.0017	0.00154	9.5000	0.0006	0.0001	0.0032	0.0010	0.00265	0.0005	0.0660	0.0476	0.0000200	0.0027
M-09-108 56.5-57.5	0.71	0.0158	0.0001	0.0002	0.0116	0.0000	0.0000	0.0019	0.00164	10.0000	0.0010	0.0001	0.0035	0.0020	0.00291	0.0005	0.0710	0.0488	0.0000150	0.0024
M-09-108 56.5-57.5	0.71	0.0148	0.0001	0.0003	0.0115	0.0000	0.0000	0.0021	0.00173	10.5000	0.0013	0.0001	0.0037	0.0030	0.00316	0.0005	0.0760	0.0500	0.0000100	0.0020
M-09-108 56.5-57.5	0.70	0.0167	0.0001	0.0002	0.0114	0.0000	0.0000	0.0020	0.00165	10.6500	0.0009	0.0001	0.0038	0.0020	0.00301	0.0005	0.0750	0.0484	0.0000075	0.0026
M-09-108 56.5-57.5	0.68	0.0186	0.0001	0.0001	0.0112	0.0000	0.0000	0.0019	0.00156	10.8000	0.0005	0.0000	0.0039	0.0010	0.00285	0.0005	0.0740	0.0468	0.0000050	0.0031
M-09-108 56.5-57.5	0.72	0.0164	0.0002	0.0002	0.0113	0.0000	0.0000	0.0018	0.00164	11.0500	0.0010	0.0001	0.0038	0.0035	0.00306	0.0005	0.0770	0.0491	0.0000075	0.0024
M-09-108 56.5-57.5	0.76	0.0141	0.0002	0.0003	0.0114	0.0000	0.0000	0.0016	0.00172	11.3000	0.0015	0.0001	0.0037	0.0060	0.00327	0.0005	0.0800	0.0514	0.0000100	0.0018
M-09-108 56.5-57.5	0.78	0.0158	0.0002	0.0004	0.0109	0.0000	0.0000	0.0017	0.00172	11.1000	0.0012	0.0001	0.0039	0.0035	0.00328	0.0005	0.0745	0.0509	0.0000100	0.0019
M-09-108 56.5-57.5	0.80	0.0174	0.0001	0.0005	0.0104	0.0000	0.0000	0.0018	0.00171	10.9000	0.0009	0.0001	0.0041	0.0010	0.00329	0.0005	0.0690	0.0504	0.0000100	0.0021
M-09-108 56.5-57.5	0.80	0.0202	0.0001	0.0003	0.0110	0.0000	0.0000	0.0020	0.00153	10.6000	0.0006	0.0001	0.0039	0.0013	0.00336	0.0005	0.0650	0.0475	0.0000100	0.0018
M-09-108 56.5-57.5	0.80	0.0230	0.0001	0.0001	0.0115	0.0000	0.0000	0.0021	0.00135	10.3000	0.0003	0.0000	0.0037	0.0015	0.00343	0.0005	0.0610	0.0446	0.0000100	0.0014
M-09-108 56.5-57.5	0.74	0.0176	0.0001	0.0001	0.0107	0.0000	0.0000	0.0016	0.00145	10.3500	0.0005	0.0000	0.0037	0.0043	0.00321	0.0005	0.0660	0.0452	0.0000100	0.0014
M-09-108 56.5-57.5	0.68	0.0122	0.0001	0.0001	0.0100	0.0000	0.0000	0.0010	0.00155	10.4000	0.0008	0.0001	0.0036	0.0070	0.00298	0.0005	0.0710	0.0458	0.0000100	0.0015
M-09-108 56.5-57.5	0.72	0.0191	0.0001	0.0001	0.0101	0.0000	0.0000	0.0013	0.00161	10.5000	0.0005	0.0001	0.0037	0.0043	0.00288	0.0005	0.0615	0.0472	0.0000075	0.0014
M-09-108 56.5-57.5	0.76	0.0260	0.0001	0.0001	0.0102	0.0000	0.0000	0.0016	0.00167	10.6000	0.0003	0.0001	0.0038	0.0015	0.00278	0.0005	0.0520	0.0485	0.0000050	0.0014
M-09-108 56.5-57.5	0.77	0.0229	0.0001	0.0002	0.0106	0.0000	0.0000	0.0015	0.00173	10.3000	0.0003	0.0001	0.0038	0.0015	0.00276	0.0005	0.0575	0.0477	0.0000050	0.0015
M-09-108 56.5-57.5	0.78	0.0198	0.0001	0.0002	0.0110	0.0000	0.0000	0.0014	0.00179	10.0000	0.0003	0.0001	0.0038	0.0015	0.00273	0.0005	0.0630	0.0469	0.0000050	0.0016
M-09-108 56.5-57.5	0.77	0.0259	0.0001	0.0002	0.0105	0.0000	0.0000	0.0014	0.00176	9.8650	0.0003	0.0001	0.0038	0.0015	0.00271	0.0005	0.0625	0.0480	0.0000225	0.0015
M-09-108 56.5-57.5	0.76	0.0319	0.0001	0.0001	0.0100	0.0000	0.0000	0.0013	0.00173	9.7300	0.0003	0.0001	0.0037	0.0015	0.00269	0.0005	0.0620	0.0491	0.0000400	0.0014
M-09-108 56.5-57.5	0.77	0.0296	0.0001	0.0001	0.0103	0.0000	0.0000	0.0013	0.00178	9.8975	0.0003	0.0001	0.0038	0.0015	0.00272	0.0005	0.0623	0.0494	0.0000313	0.0014
M-09-108 56.5-57.5	0.79	0.0272	0.0001	0.0002	0.0107	0.0000	0.0000	0.0013	0.00184	10.0650	0.0003	0.0001	0.0040	0.0015	0.00276	0.0005	0.0625	0.0496	0.0000225	0.0014
M-09-108 56.5-57.5	0.80	0.0249	0.0001	0.0002	0.0110	0.0000	0.0000	0.0012	0.00189	10.2325	0.0003	0.0001	0.0041	0.0015	0.00279	0.0005	0.0628	0.0499	0.0000138	0.0015
M-09-108 56.5-57.5	0.81	0.0225	0.0001	0.0002	0.0113	0.0000	0.0000	0.0012	0.00194	10.4000	0.0003	0.0001	0.0042	0.0015	0.00282	0.0005	0.0630	0.0501	0.0000050	0.0015
M-09-108 56.5-57.5	0.79	0.0229	0.0001	0.0002	0.0111	0.0000	0.0000	0.0013	0.00190	10.3500	0.0003	0.0001	0.0040	0.0015	0.00281	0.0005	0.0625	0.0499	0.0000050	0.0015
M-09-108 56.5-57.5	0.77	0.0233	0.0002	0.0003	0.0109	0.0000	0.0000	0.0014	0.00186	10.3000	0.0003	0.0001	0.0039	0.0015	0.00280	0.0005	0.0620	0.0497	0.0000050	0.0016
M-09-108 56.5-57.5	0.75	0.0236	0.0002	0.0003	0.0106	0.0000	0.0000	0.0014	0.00181	10.2500	0.0003	0.0001	0.0037	0.0015	0.00279	0.0005	0.0615	0.0495	0.0000050	0.0016
M-09-108 56.5-57.5	0.73	0.0240	0.0002	0.0003	0.0104	0.0000	0.0000	0.0015	0.00177	10.2000	0.0003	0.0001	0.0035	0.0015	0.00278	0.0005	0.0610	0.0493	0.0000050	0.0016

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-108 56.5-57.5	0.0008	0.0340	0.5520	0.0078	0.6600	0.00001	0.0600	0.0593	5.2100	0.0001	0.0003	0.0001	0.0001	0.0000	0.0170	0.0001
M-09-108 56.5-57.5	0.0001	0.0210	0.6000	0.0089	0.6300	0.00001	0.0700	0.0624	5.4000	0.0001	0.0003	0.0002	0.0001	0.0001	0.0160	0.0000
M-09-108 56.5-57.5	0.0003	0.0170	0.5760	0.0089	0.6800	0.00001	0.0600	0.0612	5.2000	0.0001	0.0002	0.0001	0.0001	0.0000	0.0140	0.0001
M-09-108 56.5-57.5	0.0001	0.0045	0.4860	0.0079	0.5700	0.00001	0.0200	0.0563	4.3400	0.0001	0.0001	0.0002	0.0001	0.0001	0.0190	0.0000
M-09-108 56.5-57.5	0.0001	0.0200	0.5050	0.0077	0.6500	0.00001	0.0400	0.0599	4.4700	0.0001	0.0002	0.0001	0.0001	0.0001	0.0140	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.4510	0.0074	0.5400	0.00001	0.0600	0.0543	4.0000	0.0001	0.0002	0.0001	0.0001	0.0001	0.0130	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.4970	0.0077	0.6200	0.00001	0.0600	0.0643	4.9100	0.0001	0.0004	0.0001	0.0001	0.0000	0.0150	0.0000
M-09-108 56.5-57.5	0.0002	0.0110	0.5190	0.0079	0.6700	0.00001	0.0500	0.0615	5.2200	0.0001	0.0001	0.0001	0.0001	0.0001	0.0140	0.0000
M-09-108 56.5-57.5	0.0002	0.0220	0.4600	0.0078	0.6200	0.00001	0.0600	0.0582	4.6900	0.0001	0.0001	0.0001	0.0001	0.0000	0.0200	0.0000
M-09-108 56.5-57.5	0.0001	0.0133	0.4315	0.0071	0.5950	0.00001	0.0500	0.0565	4.9050	0.0001	0.0002	0.0001	0.0001	0.0000	0.0170	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.4030	0.0064	0.5700	0.00001	0.0400	0.0548	5.1200	0.0001	0.0002	0.0001	0.0001	0.0001	0.0140	0.0000
M-09-108 56.5-57.5	0.0002	0.0143	0.3965	0.0065	0.5400	0.00001	0.0450	0.0536	4.6850	0.0001	0.0003	0.0001	0.0001	0.0001	0.0160	0.0000
M-09-108 56.5-57.5	0.0003	0.0240	0.3900	0.0066	0.5100	0.00001	0.0500	0.0524	4.2500	0.0001	0.0003	0.0001	0.0001	0.0001	0.0180	0.0000
M-09-108 56.5-57.5	0.0004	0.0235	0.3770	0.0066	0.5050	0.00001	0.0450	0.0501	4.0650	0.0001	0.0002	0.0001	0.0001	0.0000	0.0150	0.0000
M-09-108 56.5-57.5	0.0004	0.0230	0.3640	0.0066	0.5000	0.00001	0.0400	0.0478	3.8800	0.0001	0.0002	0.0001	0.0001	0.0000	0.0120	0.0000
M-09-108 56.5-57.5	0.0004	0.0275	0.3725	0.0064	0.5200	0.00001	0.0450	0.0511	3.9950	0.0001	0.0001	0.0001	0.0001	0.0001	0.0140	0.0000
M-09-108 56.5-57.5	0.0003	0.0320	0.3810	0.0062	0.5400	0.00001	0.0500	0.0544	4.1100	0.0001	0.0001	0.0001	0.0001	0.0001	0.0160	0.0000
M-09-108 56.5-57.5	0.0003	0.0183	0.3630	0.0059	0.5250	0.00001	0.0500	0.0533	3.9450	0.0001	0.0002	0.0001	0.0001	0.0001	0.0190	0.0000
M-09-108 56.5-57.5	0.0003	0.0045	0.3450	0.0056	0.5100	0.00001	0.0500	0.0522	3.7800	0.0000	0.0004	0.0001	0.0001	0.0001	0.0220	0.0000
M-09-108 56.5-57.5	0.0003	0.0078	0.3380	0.0057	0.4950	0.00001	0.0450	0.0536	4.0350	0.0001	0.0003	0.0001	0.0001	0.0001	0.0165	0.0000
M-09-108 56.5-57.5	0.0003	0.0110	0.3310	0.0058	0.4800	0.00001	0.0400	0.0550	4.2900	0.0001	0.0002	0.0001	0.0001	0.0001	0.0110	0.0000
M-09-108 56.5-57.5	0.0002	0.0078	0.3390	0.0055	0.4750	0.00001	0.0400	0.0545	4.3800	0.0001	0.0002	0.0001	0.0001	0.0001	0.0135	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.3470	0.0053	0.4700	0.00001	0.0400	0.0539	4.4700	0.0001	0.0001	0.0001	0.0001	0.0001	0.0160	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.3390	0.0058	0.4700	0.00001	0.1100	0.0544	4.4550	0.0001	0.0002	0.0001	0.0001	0.0001	0.0150	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.3310	0.0062	0.4700	0.00001	0.1800	0.0548	4.4400	0.0001	0.0002	0.0001	0.0001	0.0001	0.0140	0.0000
M-09-108 56.5-57.5	0.0003	0.0103	0.3420	0.0034	0.4850	0.00001	0.1100	0.0558	4.4550	0.0001	0.0002	0.0001	0.0001	0.0001	0.0150	0.0000
M-09-108 56.5-57.5	0.0004	0.0160	0.3530	0.0006	0.5000	0.00001	0.0400	0.0567	4.4700	0.0001	0.0003	0.0001	0.0001	0.0000	0.0160	0.0000
M-09-108 56.5-57.5	0.0003	0.0150	0.3485	0.0031	0.5250	0.00001	0.0450	0.0559	4.5950	0.0001	0.0002	0.0001	0.0001	0.0000	0.0150	0.0000
M-09-108 56.5-57.5	0.0002	0.0140	0.3440	0.0056	0.5500	0.00002	0.0500	0.0551	4.7200	0.0000	0.0002	0.0001	0.0001	0.0001	0.0140	0.0000
M-09-108 56.5-57.5	0.0001	0.0175	0.3275	0.0052	0.4900	0.00001	0.0500	0.0513	4.2500	0.0000	0.0002	0.0001	0.0001	0.0001	0.0135	0.0000
M-09-108 56.5-57.5	0.0001	0.0210	0.3110	0.0048	0.4300	0.00001	0.0500	0.0474	3.7800	0.0000	0.0003	0.0001	0.0001	0.0000	0.0130	0.0000
M-09-108 56.5-57.5	0.0003	0.0128	0.3035	0.0048	0.4650	0.00001	0.0750	0.0479	4.0900	0.0000	0.0005	0.0001	0.0001	0.0001	0.0120	0.0001
M-09-108 56.5-57.5	0.0005	0.0045	0.2960	0.0047	0.5000	0.00001	0.1000	0.0484	4.4000	0.0000	0.0007	0.0001	0.0001	0.0001	0.0110	0.0002
M-09-108 56.5-57.5	0.0004	0.0045	0.3115	0.0049	0.4950	0.00002	0.0750	0.0517	4.3850	0.0000	0.0005	0.0001	0.0001	0.0001	0.0130	0.0001
M-09-108 56.5-57.5	0.0003	0.0045	0.3270	0.0051	0.4900	0.00002	0.0500	0.0549	4.3700	0.0000	0.0003	0.0001	0.0001	0.0001	0.0150	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.3375	0.0052	0.5400	0.00001	0.0450	0.0583	4.9850	0.0000	0.0002	0.0001	0.0001	0.0000	0.0145	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.3480	0.0053	0.5900	0.00001	0.0400	0.0616	5.6000	0.0000	0.0001	0.0001	0.0001	0.0000	0.0140	0.0000
M-09-108 56.5-57.5	0.0003	0.0138	0.3080	0.0051	0.5500	0.00001	0.0250	0.0569	4.8950	0.0000	0.0002	0.0001	0.0001	0.0000	0.0145	0.0000
M-09-108 56.5-57.5	0.0005	0.0230	0.2680	0.0049	0.5100	0.00001	0.0100	0.0522	4.1900	0.0000	0.0003	0.0001	0.0001	0.0001	0.0150	0.0000
M-09-108 56.5-57.5	0.0003	0.0195	0.2720	0.0050	0.4650	0.00001	0.0150	0.0515	4.3500	0.0000	0.0003	0.0001	0.0001	0.0001	0.0155	0.0000
M-09-108 56.5-57.5	0.0001	0.0160	0.2760	0.0051	0.4200	0.00001	0.0200	0.0508	4.5100	0.0000	0.0003	0.0001	0.0001	0.0001	0.0160	0.0000
M-09-108 56.5-57.5	0.0001	0.0103	0.2780	0.0049	0.4400	0.00001	0.0300	0.0537	4.7450	0.0000	0.0003	0.0001	0.0001	0.0001	0.0165	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.2800	0.0047	0.4600	0.00001	0.0400	0.0566	4.9800	0.0000	0.0003	0.0001	0.0001	0.0000	0.0170	0.0000
M-09-108 56.5-57.5	0.0003	0.0045	0.2790	0.0051	0.4450	0.00001	0.0250	0.0570	5.0900	0.0000	0.0002	0.0002	0.0001	0.0000	0.0175	0.0002
M-09-108 56.5-57.5	0.0004	0.0045	0.2780	0.0054	0.4300	0.00001	0.0100	0.0573	5.2000	0.0000	0.0002	0.0002	0.0001	0.0000	0.0180	0.0003
M-09-108 56.5-57.5	0.0004	0.0045	0.2690	0.0051	0.4300	0.00001	0.0400	0.0590	5.3050	0.0000	0.0003	0.0001	0.0001	0.0000	0.0175	0.0003
M-09-108 56.5-57.5	0.0003	0.0045	0.2600	0.0048	0.4300	0.00001	0.0700	0.0607	5.4100	0.0000	0.0003	0.0001	0.0001	0.0000	0.0170	0.0004
M-09-108 56.5-57.5	0.0002	0.0045	0.2600	0.0051	0.4150	0.00001	0.0550	0.0593	5.2650	0.0000	0.0002	0.0001	0.0001	0.0000	0.0175	0.0002
M-09-108 56.5-57.5	0.0001	0.0045	0.2600	0.0054	0.4000	0.00002	0.0400	0.0578	5.1200	0.0000	0.0001	0.0001	0.0001	0.0001	0.0180	0.0001
M-09-108 56.5-57.5	0.0001	0.0045	0.2605	0.0049	0.4150	0.00002	0.0300	0.0563	4.8950	0.0000	0.0001	0.0001	0.0001	0.0001	0.0165	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.2610	0.0044	0.4300	0.00001	0.0200	0.0547	4.6700	0.0000	0.0001	0.0001	0.0001	0.0001	0.0150	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.2510	0.0044	0.4000	0.00001	0.0250	0.0558	4.7000	0.0000	0.0001	0.0001	0.0001	0.0001	0.0150	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.2410	0.0045	0.3700	0.00001	0.0300	0.0568	4.7300	0.0000	0.0002	0.0001	0.0001	0.0000	0.0150	0.0000
M-09-108 56.5-57.5	0.0003	0.0045	0.2330	0.0041	0.4050	0.00001	0.0400	0.0563	4.7600	0.0000	0.0002	0.0010	0.0001	0.0004	0.0160	0.0000
M-09-108 56.5-57.5	0.0004	0.0045	0.2250	0.0037	0.4400	0.00001	0.0500	0.0558	4.7900	0.0000	0.0002	0.0020	0.0001	0.0007	0.0170	0.0000
M-09-108 56.5-57.5	0.0004	0.0045	0.2235	0.0043	0.4000	0.00001	0.0275	0.0549	4.5000	0.0000	0.0002	0.0010	0.0001	0.0005	0.0170	0.0000
M-09-108 56.5-57.5	0.0004	0.0045	0.2220	0.0049	0.3600	0.00001	0.0050	0.0539	4.2100	0.0000	0.0001	0.0001	0.0001	0.0002	0.0170	0.0000
M-09-108 56.5-57.5	0.0003	0.0045	0.2160	0.0043	0.3650	0.00001	0.0325	0.0519	4.3100	0.0000	0.0001	0.0001	0.0001	0.0002	0.0170	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.2100	0.0038	0.3700	0.00001	0.0600	0.0499	4.4100	0.0000	0.0001	0.0002	0.0001	0.0003	0.0170	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.2118	0.0038	0.3725	0.00001	0.0525	0.0516	4.4800	0.0000	0.0001	0.0002	0.0001	0.0002	0.0178	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.2135	0.0038	0.3750	0.00001	0.0450	0.0532	4.5500	0.0000	0.0001	0.0002	0.0001	0.0002	0.0185	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.2153	0.0039	0.3775	0.00001	0.0375	0.0549	4.6200	0.0000	0.0001	0.0001	0.0001	0.0002	0.0193	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.2170	0.0039	0.3800	0.00001	0.0300	0.0565	4.6900	0.0000	0.0002	0.0001	0.0001	0.0002	0.0200	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.2145	0.0039	0.3725	0.00001	0.0400	0.0562	4.6300	0.0000	0.0002	0.0002	0.0001	0.0002	0.0193	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.2120	0.0039	0.3650	0.00001	0.0500	0.0560	4.5700	0.0000	0.0002	0.0004	0.0001	0.0003	0.0185	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.2095	0.0038	0.3575	0.00001	0.0600	0.0557	4.5100	0.0000	0.0002	0.0005	0.0001	0.0004	0.0178	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.2070	0.0038	0.3500	0.00001	0.0700	0.0554	4.4500	0.0000	0.0002	0.0006	0.0001	0.0004	0.0170	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-108 56.5-57.5	10	106	16-Feb-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	475	26	63	7.48	6.2	16.5	13	0.1
M-09-108 56.5-57.5	10	107	23-Feb-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	26	61	7.18	6.2	15.8	14	0.1
M-09-108 56.5-57.5	10	108	1-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	465	27	57	7.17	6.3	15.0	14	0.1
M-09-108 56.5-57.5	10	109	8-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	470	27	59	7.36	6.3	14.3	15	0.1
M-09-108 56.5-57.5	10	110	15-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	460	26	54	7.21	5.9	13.6	14	0.1
M-09-108 56.5-57.5	10	111	22-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	450	26	59	7.35	5.5	13.0	14	0.1
M-09-108 56.5-57.5	10	112	29-Mar-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	445	25	53	7.18	5.1	12.4	13	0.1
M-09-108 56.5-57.5	10	113	5-Apr-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	455	24	54	7.21	4.7	11.7	12	0.1
M-09-108 56.5-57.5	10	114	12-Apr-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	440	24	59	7.23	4.7	11.7	12	0.1
M-09-108 56.5-57.5	10	115	19-Apr-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	455	24	54	7.29	4.7	11.7	12	0.1
M-09-108 56.5-57.5	10	116	26-Apr-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	445	25	61	7.06	5.4	13.6	13	0.1
M-09-108 56.5-57.5	10	117	3-May-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	450	26	56	7.67	5.6	14.2	13	0.1
M-09-108 56.5-57.5	10	118	10-May-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	450	25	61	7.27	5.9	13.7	13	0.1
M-09-108 56.5-57.5	10	119	17-May-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	450	25	59	7.21	6.3	13.2	12	0.1
M-09-108 56.5-57.5	10	120	24-May-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	445	25	53	7.54	6.7	12.7	12	0.1
M-09-108 56.5-57.5	10	121	31-May-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	435	24	53	7.52	7.1	12.2	11	0.1
M-09-108 56.5-57.5	10	122	7-Jun-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	445	24	51	7.19	7.0	12.5	11	0.1
M-09-108 56.5-57.5	10	123	14-Jun-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	475	24	61	7.42	6.8	12.9	11	0.1
M-09-108 56.5-57.5	10	124	21-Jun-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	460	25	59	7.36	6.7	13.2	11	0.1
M-09-108 56.5-57.5	10	125	28-Jun-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	450	25	57	7.43	6.5	13.5	11	0.1
M-09-108 56.5-57.5	10	126	5-Jul-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	460	25	59	7.18	6.2	13.4	11	0.2
M-09-108 56.5-57.5	10	127	12-Jul-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	455	25	56	7.21	5.9	13.2	10	0.3
M-09-108 56.5-57.5	10	128	19-Jul-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	465	25	56	7.27	5.5	13.0	10	0.3
M-09-108 56.5-57.5	10	129	26-Jul-12	Mitchell	ABOVE MTF	UP Hazelton	VU	SIH	2	PSBX	1			Water	500	465	25	59	7.32	5.2	12.9	9	0.4
																	25	56	7.344	6.4	12.9	11	0.2
HC11 LP Hazelton																							
M-09-108 118.5-119.5	11	0	4-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	410	101	242	7.17	3.3	23.0	121	1.7
M-09-108 118.5-119.5	11	1	11-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	455	67	183	7.52	2.0	23.8	55	0.6
M-09-108 118.5-119.5	11	2	18-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	59	142	7.49	2.7	23.0	51	0.1
M-09-108 118.5-119.5	11	3	25-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	450	47	117	7.45	2.5	21.8	44	0.1
M-09-108 118.5-119.5	11	4	4-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	480	42	109	7.39	2.5	18.3	34	0.1
M-09-108 118.5-119.5	11	5	11-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	40	98	7.43	2.6	20.7	27	0.1
M-09-108 118.5-119.5	11	6	18-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	525	42	98	7.56	2.6	22.8	21	0.1
M-09-108 118.5-119.5	11	7	25-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	490	45	99	7.44	3.2	23.1	26	0.1
M-09-108 118.5-119.5	11	8	1-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	500	38	87	7.56	2.4	22.5	26	0.1
M-09-108 118.5-119.5	11	9	8-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	490	37	87	7.45	2.5	22.0	21	0.1
M-09-108 118.5-119.5	11	10	15-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	500	36	87	7.43	3.2	23.2	24	0.1
M-09-108 118.5-119.5	11	11	22-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	35	88	7.44	3.8	21.2	23	0.1
M-09-108 118.5-119.5	11	12	29-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	30	86	7.46	2.2	20.3	20	0.2
M-09-108 118.5-119.5	11	13	6-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	38	85	7.23	4.9	20.6	18	0.1
M-09-108 118.5-119.5	11	14	13-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	480	41	91	7.5	3.0	20.4	25	0.1
M-09-108 118.5-119.5	11	15	20-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	39	90	7.46	4.1	20.6	25	0.1
M-09-108 118.5-119.5	11	16	27-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	40	85	7.4	6.0	22.5	16	0.1
M-09-108 118.5-119.5	11	17	3-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	495	40	82	7.4	3.1	18.7	19	0.1
M-09-108 118.5-119.5	11	18	10-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	36	82	7.42	4.2	18.4	17	0.1
M-09-108 118.5-119.5	11	19	17-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	490	38	85	7.52	3.4	17.3	16	0.1
M-09-108 118.5-119.5	11	20	24-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	500	42	92	7.52	2.7	21.1	19	0.1
M-09-108 118.5-119.5	11	21	1-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	495	47	97	7.55	2.4	20.6	21	0.1
M-09-108 118.5-119.5	11	22	8-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	39	101	7.35	2.6	16.4	18	0.1
M-09-108 118.5-119.5	11	23	15-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	490	43	105	7.34	3.8	18.3	22	0.1
M-09-108 118.5-119.5	11	24	22-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	510	44	102	7.3	3.1	16.9	20	0.1
M-09-108 118.5-119.5	11	25	29-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	45	94	7.39	4.0	17.5	27	0.1
M-09-108 118.5-119.5	11	26	5-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	41	89	7.44	2.7	16.9	18	0.1
M-09-108 118.5-119.5	11	27	12-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	40	93	7.58	3.5	20.2	23	0.1
M-09-108 118.5-119.5	11	28	19-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	495	39	87	7.46	4.6	17.3	21	0.1
M-09-108 118.5-119.5	11	29	26-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	37	83	7.43	2.3	15.4	18	0.1
M-09-108 118.5-119.5	11	30	2-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	35	69	7.37	4.0	15.6	28	0.1
M-09-108 118.5-119.5	11	31	9-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	500	36	84	7.15	5.2	21.2	22	0.1
M-09-108 118.5-119.5	11	32	16-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	460	29	67	7.21	2.8	15.6	20	0.1
M-09-108 118.5-119.5	11	33	23-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	32	65	7.34	2.6	14.5	27	0.1
M-09-108 118.5-119.5	11	34	30-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	32	58	7.28	2.6	15.0	21	0.1
M-09-108 118.5-119.5	11	35	7-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	465	34	82	7.27	3.4	16.0	27	0.1
M-09-108 118.5-119.5	11	36	14-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	455	33	70	7.17	3.5	14.2	19	0.1
M-09-108 118.5-119.5	11	37	21-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	455	30	69	7.19	3.3	14.9	19	0.1
M-09-108 118.5-119.5	11	38	28-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	455	28	66	7.15	3.0	14.2	20	0.1
M-09-108 118.5-119.5	11	39	4-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	465	27	81	7.38	2.4	13.7	19	0.1
M-09-108 118.5-119.5	11	40	11-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	450	28	79	7.51	2.3	15.2	12	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-108 56.5-57.5	0.73	0.0238	0.0002	0.0003	0.0101	0.0000	0.0000	0.0013	0.00175	10.3000	0.0017	0.0001	0.0035	0.0821	0.00270	0.0005	0.0613	0.0497	0.0000063	0.0018
M-09-108 56.5-57.5	0.72	0.0236	0.0002	0.0004	0.0098	0.0000	0.0000	0.0010	0.00173	10.4000	0.0031	0.0001	0.0035	0.1628	0.00262	0.0005	0.0615	0.0500	0.0000075	0.0019
M-09-108 56.5-57.5	0.72	0.0234	0.0001	0.0004	0.0095	0.0000	0.0000	0.0008	0.00171	10.5000	0.0045	0.0001	0.0034	0.2434	0.00254	0.0005	0.0618	0.0504	0.0000088	0.0020
M-09-108 56.5-57.5	0.71	0.0232	0.0001	0.0004	0.0092	0.0000	0.0000	0.0005	0.00169	10.6000	0.0059	0.0001	0.0034	0.3240	0.00246	0.0005	0.0620	0.0507	0.0000100	0.0022
M-09-108 56.5-57.5	0.73	0.0283	0.0001	0.0003	0.0092	0.0000	0.0000	0.0007	0.00159	10.3550	0.0045	0.0001	0.0034	0.2434	0.00248	0.0005	0.0600	0.0471	0.0000100	0.0020
M-09-108 56.5-57.5	0.75	0.0334	0.0001	0.0003	0.0093	0.0000	0.0000	0.0009	0.00148	10.1100	0.0031	0.0001	0.0034	0.1628	0.00250	0.0005	0.0580	0.0435	0.0000100	0.0019
M-09-108 56.5-57.5	0.76	0.0384	0.0001	0.0002	0.0094	0.0000	0.0000	0.0011	0.00138	9.8650	0.0017	0.0001	0.0033	0.0821	0.00251	0.0005	0.0560	0.0398	0.0000100	0.0018
M-09-108 56.5-57.5	0.78	0.0435	0.0001	0.0001	0.0095	0.0000	0.0000	0.0013	0.00127	9.6200	0.0003	0.0000	0.0033	0.0015	0.00253	0.0005	0.0540	0.0362	0.0000100	0.0017
M-09-108 56.5-57.5	0.78	0.0435	0.0001	0.0001	0.0095	0.0000	0.0000	0.0013	0.00127	9.6200	0.0003	0.0000	0.0033	0.0015	0.00253	0.0005	0.0540	0.0362	0.0000100	0.0017
M-09-108 56.5-57.5	0.78	0.0435	0.0001	0.0001	0.0095	0.0000	0.0000	0.0013	0.00127	9.6200	0.0003	0.0000	0.0033	0.0015	0.00253	0.0005	0.0540	0.0362	0.0000100	0.0017
M-09-108 56.5-57.5	0.87	0.0292	0.0001	0.0001	0.0097	0.0000	0.0000	0.0015	0.00125	10.0550	0.0003	0.0000	0.0126	0.0015	0.00279	0.0005	0.0570	0.0354	0.0000325	0.0015
M-09-108 56.5-57.5	0.90	0.0244	0.0001	0.0001	0.0098	0.0000	0.0000	0.0015	0.00124	10.2000	0.0003	0.0001	0.0157	0.0015	0.00287	0.0005	0.0580	0.0351	0.0000400	0.0014
M-09-108 56.5-57.5	0.87	0.0290	0.0001	0.0001	0.0097	0.0000	0.0000	0.0015	0.00122	10.0475	0.0003	0.0001	0.0127	0.0015	0.00284	0.0005	0.0568	0.0345	0.0000313	0.0015
M-09-108 56.5-57.5	0.84	0.0336	0.0001	0.0001	0.0096	0.0000	0.0000	0.0016	0.00121	9.8950	0.0003	0.0001	0.0097	0.0015	0.00281	0.0005	0.0555	0.0338	0.0000225	0.0015
M-09-108 56.5-57.5	0.81	0.0382	0.0001	0.0001	0.0095	0.0000	0.0000	0.0016	0.00119	9.7425	0.0003	0.0001	0.0066	0.0015	0.00278	0.0005	0.0543	0.0332	0.0000138	0.0015
M-09-108 56.5-57.5	0.78	0.0428	0.0001	0.0001	0.0094	0.0000	0.0000	0.0016	0.00117	9.5900	0.0003	0.0001	0.0036	0.0015	0.00275	0.0005	0.0530	0.0325	0.0000050	0.0016
M-09-108 56.5-57.5	0.77	0.0435	0.0001	0.0001	0.0095	0.0000	0.0000	0.0018	0.00120	9.6400	0.0003	0.0001	0.0036	0.0015	0.00271	0.0005	0.0538	0.0335	0.0000063	0.0015
M-09-108 56.5-57.5	0.75	0.0442	0.0001	0.0001	0.0097	0.0000	0.0000	0.0020	0.00123	9.6900	0.0003	0.0001	0.0037	0.0015	0.00266	0.0005	0.0545	0.0344	0.0000075	0.0015
M-09-108 56.5-57.5	0.74	0.0449	0.0001	0.0001	0.0098	0.0000	0.0000	0.0022	0.00126	9.7400	0.0003	0.0001	0.0037	0.0015	0.00262	0.0005	0.0553	0.0354	0.0000088	0.0015
M-09-108 56.5-57.5	0.72	0.0456	0.0001	0.0001	0.0099	0.0000	0.0000	0.0024	0.00129	9.7900	0.0003	0.0001	0.0037	0.0015	0.00257	0.0005	0.0560	0.0363	0.0000100	0.0014
M-09-108 56.5-57.5	0.74	0.0466	0.0001	0.0001	0.0099	0.0000	0.0000	0.0022	0.00134	9.8425	0.0003	0.0000	0.0039	0.0015	0.00260	0.0005	0.0560	0.0365	0.0000088	0.0014
M-09-108 56.5-57.5	0.76	0.0477	0.0001	0.0001	0.0099	0.0000	0.0000	0.0020	0.00139	9.8950	0.0003	0.0000	0.0040	0.0015	0.00262	0.0005	0.0560	0.0366	0.0000075	0.0014
M-09-108 56.5-57.5	0.77	0.0487	0.0001	0.0001	0.0100	0.0000	0.0000	0.0017	0.00143	9.9475	0.0003	0.0000	0.0042	0.0015	0.00265	0.0005	0.0560	0.0368	0.0000063	0.0014
M-09-108 56.5-57.5	0.79	0.0497	0.0001	0.0001	0.0100	0.0000	0.0000	0.0015	0.00148	10.0000	0.0003	0.0000	0.0043	0.0015	0.00267	0.0005	0.0560	0.0369	0.0000050	0.0015
	0.76	0.0452	0.0001	0.0001	0.0098	0.0000	0.0000	0.0019	0.00130	9.7878	0.0003	0.0000	0.0041	0.0015	0.00266	0.0005	0.0551	0.0352	0.0000079	0.0015
HC11 LP Hazelton																				
M-09-108 118.5-119.5	0.99	0.0681	0.0054	0.0042	0.0419	0.0000	0.0000	0.0080	0.00031	29.3000	0.0003	0.0002	0.0023	0.0050	0.00004	0.0060	6.8200	0.0460	0.0000100	0.0061
M-09-108 118.5-119.5	0.86	0.0968	0.0056	0.0052	0.0415	0.0000	0.0000	0.0070	0.00002	19.4000	0.0003	0.0001	0.0008	0.0050	0.00005	0.0040	4.6100	0.0340	0.0000050	0.0095
M-09-108 118.5-119.5	0.60	0.0925	0.0048	0.0034	0.0355	0.0000	0.0000	0.0070	0.00000	17.4000	0.0003	0.0001	0.0006	0.0050	0.00006	0.0040	3.6800	0.0520	0.0000050	0.0058
M-09-108 118.5-119.5	0.45	0.0749	0.0044	0.0028	0.0301	0.0000	0.0000	0.0042	0.00000	13.9000	0.0003	0.0000	0.0003	0.0050	0.00007	0.0020	3.0500	0.0370	0.0000050	0.0045
M-09-108 118.5-119.5	0.32	0.0750	0.0042	0.0024	0.0294	0.0000	0.0000	0.0060	0.00004	12.7000	0.0003	0.0000	0.0007	0.0050	0.00009	0.0020	2.5900	0.0470	0.0000050	0.0038
M-09-108 118.5-119.5	0.25	0.0626	0.0039	0.0019	0.0291	0.0000	0.0000	0.0040	0.00000	12.2000	0.0005	0.0000	0.0006	0.0050	0.00030	0.0020	2.4200	0.0470	0.0000050	0.0031
M-09-108 118.5-119.5	0.20	0.0674	0.0033	0.0017	0.0343	0.0000	0.0000	0.0040	0.00000	13.1000	0.0003	0.0000	0.0006	0.0050	0.00008	0.0020	2.2200	0.0690	0.0000050	0.0026
M-09-108 118.5-119.5	0.24	0.0784	0.0053	0.0020	0.0316	0.0000	0.0000	0.0040	0.00000	13.7000	0.0003	0.0000	0.0003	0.0050	0.00043	0.0020	2.6000	0.0530	0.0000050	0.0034
M-09-108 118.5-119.5	0.17	0.0685	0.0041	0.0016	0.0297	0.0000	0.0000	0.0040	0.00011	11.6000	0.0007	0.0000	0.0013	0.0050	0.00048	0.0010	2.0800	0.0520	0.0000300	0.0029
M-09-108 118.5-119.5	0.15	0.0642	0.0045	0.0017	0.0289	0.0000	0.0000	0.0040	0.00002	11.4000	0.0003	0.0000	0.0003	0.0050	0.00009	0.0020	1.9900	0.0520	0.0000050	0.0030
M-09-108 118.5-119.5	0.13	0.0725	0.0043	0.0017	0.0271	0.0000	0.0000	0.0030	0.00001	11.4000	0.0007	0.0000	0.0008	0.0050	0.00009	0.0010	1.9200	0.0520	0.0000050	0.0033
M-09-108 118.5-119.5	0.10	0.0626	0.0035	0.0017	0.0258	0.0000	0.0000	0.0030	0.00003	11.2000	0.0007	0.0001	0.0009	0.0050	0.00031	0.0010	1.7700	0.0530	0.0000050	0.0034
M-09-108 118.5-119.5	0.10	0.0588	0.0036	0.0015	0.0291	0.0000	0.0000	0.0030	0.00000	9.7300	0.0003	0.0000	0.0007	0.0050	0.00118	0.0005	1.5000	0.0480	0.0000050	0.0033
M-09-108 118.5-119.5	0.08	0.0476	0.0035	0.0014	0.0269	0.0000	0.0000	0.0030	0.00002	12.2000	0.0005	0.0000	0.0010	0.0050	0.00218	0.0005	1.7900	0.0630	0.0000050	0.0032
M-09-108 118.5-119.5	0.76	0.0532	0.0036	0.0014	0.0219	0.0000	0.0000	0.0027	0.00002	13.4000	0.0008	0.0000	0.0006	0.0020	0.00009	0.0010	1.8700	0.0610	0.0000050	0.0039
M-09-108 118.5-119.5	0.07	0.0392	0.0034	0.0016	0.0227	0.0000	0.0000	0.0023	0.00002	12.9000	0.0006	0.0000	0.0003	0.0010	0.00008	0.0005	1.6500	0.0695	0.0000050	0.0041
M-09-108 118.5-119.5	0.03	0.0441	0.0031	0.0013	0.0227	0.0000	0.0000	0.0028	0.00002	13.2000	0.0003	0.0000	0.0003	0.0010	0.00004	0.0005	1.6100	0.0728	0.0000050	0.0034
M-09-108 118.5-119.5	0.03	0.0441	0.0031	0.0013	0.0227	0.0000	0.0000	0.0028	0.00002	13.2000	0.0003	0.0000	0.0003	0.0010	0.00004	0.0005	1.6100	0.0728	0.0000050	0.0034
M-09-108 118.5-119.5	0.03	0.0497	0.0028	0.0014	0.0217	0.0000	0.0000	0.0025	0.00004	12.2000	0.0006	0.0000	0.0007	0.0010	0.00012	0.0005	1.4600	0.0638	0.0000050	0.0036
M-09-108 118.5-119.5	0.03	0.0459	0.0037	0.0014	0.0205	0.0000	0.0000	0.0024	0.00005	12.7000	0.0003	0.0000	0.0009	0.0010	0.00016	0.0005	1.4700	0.0695	0.0000100	0.0042
M-09-108 118.5-119.5	0.03	0.0417	0.0034	0.0011	0.0218	0.0000	0.0000	0.0042	0.00002	14.4000	0.0003	0.0000	0.0009	0.0010	0.00007	0.0005	1.5800	0.0825	0.0000050	0.0041
M-09-108 118.5-119.5	0.03	0.0426	0.0031	0.0014	0.0192	0.0000	0.0000	0.0022	0.00002	15.8000	0.0003	0.0000	0.0006	0.0010	0.00005	0.0005	1.7100	0.0882	0.0000050	0.0037
M-09-108 118.5-119.5	0.03	0.0410	0.0026	0.0014	0.0192	0.0000	0.0000	0.0026	0.00002	12.9000	0.0006	0.0001	0.0011	0.0030	0.00008	0.0010	1.5700	0.0896	0.0000050	0.0038
M-09-108 118.5-119.5	0.03	0.0416	0.0025	0.0013	0.0191	0.0000	0.0000	0.0045	0.00004	14.6000	0.0007	0.0001	0.0006	0.0010	0.00012	0.0005	1.5200	0.0894	0.0000050	0.0039
M-09-108 118.5-119.5	0.03	0.0346	0.0024	0.0014	0.0176	0.0000	0.0000	0.0023	0.00002	15.1000	0.0003	0.0000	0.0005	0.0080	0.00008	0.0005	1.5000	0.0942	0.0000050	0.0037
M-09-108 118.5-119.5	0.03	0.0431	0.0022	0.0010	0.0193	0.0000	0.0000	0.0022	0.00002	15.8000	0.0003	0.0000	0.0007	0.0010	0.00004	0.0005	1.3800	0.0889	0.0000050	0.0035
M-09-108 118.5-119.5	0.03	0.0384	0.0022	0.0011	0.0185	0.0000	0.0000	0.0019	0.00001	14.3000	0.0003	0.0000	0.0007	0.0020	0.00007	0.0005	1.2500	0.0948	0.0000050	0.0035
M-09-108 118.5-119.5	0.03	0.0472	0.0025	0.0013	0.0178	0.0000	0.0000	0.0017	0.00001	13.9000	0.0006	0.0000	0.0003	0.0010	0.00011	0.0005	1.2100	0.0930	0.0000050	0.0038
M-09-108 118.5-119.5	0.03	0.0420	0.0024	0.0010	0.0194	0.0000	0.0000	0.0023	0.00001	13.9000	0.0003	0.0000	0.0006	0.0010	0.00024	0.0005	1.1400	0.0783	0.0000050	0.0038
M-09-108 118.5-119.5	0.03	0.0413	0.0021	0.0010	0.0181	0.0000	0.0000	0.0014	0.00001	13.0000	0.0008	0.0000	0.0009	0.0010	0.00010	0.0005	1.0200	0.0653	0.0000300	0.0034
M-09-108 118.5-119.5	0.03	0.0403	0.0017	0.0010	0.0171	0.0000	0.0000	0.0019	0.00001	12.4000	0.0003	0.0000	0.0009	0.0010	0.00009	0.0005	0.9420	0.0618	0.0000050	0.0032
M-09-108 118.5-119.5	0.03	0.0321	0.0021	0.0009	0.0174	0.0000	0.0000	0.0024	0.00003	12.6000	0.0006	0.0001	0.0013	0.0010	0.00006	0.0005	0.9910	0.0968	0.0000050	0.0033
M-09-108 118.5-119.5	0.03	0.0500	0.0018	0.0011	0.0167	0.0000	0.0000	0.0015	0.00001	10.5000	0.0003	0.0000	0.0005	0.0010	0.00008	0.0005	0.7890	0.0696	0.0000050	0.0027
M-09-108 118.5-119.5	0.03	0.0422	0.0018	0.0012	0.0185	0.0000	0.0000	0.0019	0.00002	11.4000	0.0005	0.0000	0.0008	0.0020	0.00010	0.0005	0.8500	0.0696	0.0000700	0.0028
M-09-108 118.5-119.5	0.03	0.0470	0.0015	0.0012	0.0173	0.0000	0.0000	0.0026	0.00002	11.6000	0.0003	0.0000	0.0011	0.0010	0.00013	0.0005	0.8270	0.0718	0.0000050	0.0028
M-09-108 118.5-119.5	0.03	0.0424	0.0018	0.0011	0.0174	0.0000	0.0000	0.0024	0.00001	12.3000	0.0005	0.0001	0.0011	0.0010	0.00007	0.0005	0.8870	0.0784	0.0000050	0.0033
M-09-108 118.5-119.5	0.73	0.0313	0.0002	0.0002	0.0133	0.0000	0.0000	0.0021	0.00193	12.8000	0.0003	0.0001	0.0049	0.0010	0.00483	0.0005	0.1380	0.0992	0.0000050	0.0024
M-09-108 118.5-119.5	0.74	0.0231	0.0004	0.0001	0.0130	0.0000	0.0000	0.0025	0.00212	11.7000	0.0005	0.0001	0.0048	0.0030	0.00447	0.0010	0.1170	0.0931	0.0000050	0.0017
M-09-108 118.5-119.5	0.72	0.0275	0.0001	0.0001	0.0131	0.0000	0.0000	0.0016	0.00203	10.9000	0.0003	0.0001	0.0042	0.0010	0.00491	0.0005	0.1120	0.0827	0.0000050	0.0026
M-09-108 118.5-119.5	0.66	0.0337	0.0001	0.0005	0.0144	0.0000	0.0000	0.0018	0.00200	10.6000	0.0003	0.0001	0.0041	0.0040	0.00493	0.0005	0.1060	0.0925	0.0000050	0.0020
M-09-108 118.5-119.5	0.68	0.0282	0.0001	0.0001	0.0119	0.0000	0.0000	0.0013	0.00192	11.2000	0.0003	0.0001	0.0048	0.0030	0.00528	0.0005	0.1210	0.0829	0.0000050	0.0019

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-108 56.5-57.5	0.0007	0.0045	0.2060	0.0037	0.3625	0.00001	0.0675	0.0556	4.4850	0.0000	0.0002	0.0005	0.0001	0.0004	0.0168	0.0000
M-09-108 56.5-57.5	0.0013	0.0045	0.2050	0.0036	0.3750	0.00001	0.0650	0.0558	4.5200	0.0000	0.0002	0.0004	0.0001	0.0003	0.0165	0.0000
M-09-108 56.5-57.5	0.0019	0.0045	0.2040	0.0036	0.3875	0.00001	0.0625	0.0560	4.5550	0.0000	0.0001	0.0003	0.0001	0.0003	0.0163	0.0000
M-09-108 56.5-57.5	0.0025	0.0045	0.2030	0.0035	0.4000	0.00001	0.0600	0.0562	4.5900	0.0000	0.0001	0.0002	0.0001	0.0002	0.0160	0.0000
M-09-108 56.5-57.5	0.0019	0.0045	0.1985	0.0035	0.3775	0.00001	0.0575	0.0552	4.5225	0.0000	0.0001	0.0002	0.0001	0.0002	0.0155	0.0000
M-09-108 56.5-57.5	0.0014	0.0045	0.1940	0.0035	0.3550	0.00001	0.0550	0.0542	4.4550	0.0000	0.0001	0.0002	0.0001	0.0003	0.0150	0.0000
M-09-108 56.5-57.5	0.0008	0.0045	0.1895	0.0035	0.3325	0.00001	0.0525	0.0531	4.3875	0.0000	0.0001	0.0002	0.0001	0.0003	0.0145	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.1850	0.0036	0.3100	0.00001	0.0500	0.0521	4.3200	0.0000	0.0001	0.0002	0.0001	0.0003	0.0140	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.1850	0.0036	0.3100	0.00001	0.0500	0.0521	4.3200	0.0000	0.0001	0.0002	0.0001	0.0003	0.0140	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.1850	0.0036	0.3100	0.00001	0.0500	0.0521	4.3200	0.0000	0.0001	0.0002	0.0001	0.0003	0.0140	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.2015	0.0041	0.3175	0.00002	0.0350	0.0543	4.3950	0.0000	0.0007	0.0001	0.0001	0.0002	0.0163	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.2070	0.0043	0.3200	0.00002	0.0300	0.0550	4.4200	0.0000	0.0009	0.0001	0.0001	0.0002	0.0170	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.2023	0.0041	0.3175	0.00002	0.0350	0.0543	4.4050	0.0000	0.0008	0.0001	0.0001	0.0002	0.0165	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.1975	0.0039	0.3150	0.00002	0.0400	0.0535	4.3900	0.0000	0.0006	0.0001	0.0001	0.0002	0.0160	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.1928	0.0037	0.3125	0.00002	0.0450	0.0528	4.3750	0.0000	0.0004	0.0001	0.0001	0.0002	0.0155	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.1880	0.0036	0.3100	0.00002	0.0500	0.0520	4.3600	0.0000	0.0002	0.0001	0.0001	0.0002	0.0150	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.1885	0.0036	0.3100	0.00002	0.0475	0.0525	4.4525	0.0000	0.0002	0.0001	0.0001	0.0003	0.0153	0.0000
M-09-108 56.5-57.5	0.0002	0.0045	0.1890	0.0036	0.3100	0.00001	0.0450	0.0529	4.5450	0.0000	0.0002	0.0001	0.0001	0.0003	0.0155	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.1895	0.0035	0.3100	0.00001	0.0425	0.0534	4.6375	0.0000	0.0002	0.0001	0.0001	0.0003	0.0158	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.1900	0.0035	0.3100	0.00001	0.0400	0.0538	4.7300	0.0000	0.0002	0.0001	0.0001	0.0004	0.0160	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.1900	0.0036	0.3125	0.00001	0.0400	0.0541	4.6875	0.0000	0.0002	0.0001	0.0001	0.0003	0.0168	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.1900	0.0037	0.3150	0.00001	0.0400	0.0544	4.6450	0.0000	0.0001	0.0001	0.0001	0.0003	0.0175	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.1900	0.0038	0.3175	0.00001	0.0400	0.0547	4.6025	0.0000	0.0001	0.0001	0.0001	0.0003	0.0183	0.0000
M-09-108 56.5-57.5	0.0001	0.0045	0.1900	0.0039	0.3200	0.00001	0.0400	0.0550	4.5600	0.0000	0.0001	0.0001	0.0001	0.0002	0.0190	0.0000
	0.0001	0.0045	0.1898	0.0036	0.3128	0.00001	0.0430	0.0535	4.5595	0.0000	0.0002	0.0001	0.0001	0.0003	0.0165	0.0000
HC11 LP Hazelton																
M-09-108 118.5-119.5	0.0004	0.0050	14.5000	0.0111	1.2500	0.00001	6.7000	1.3500	37.0000	0.0001	0.0001	0.0002	0.0040	0.0017	0.0020	0.0000
M-09-108 118.5-119.5	0.0002	0.0050	9.1800	0.0190	1.5600	0.00002	3.7700	1.0100	25.1000	0.0001	0.0008	0.0002	0.0087	0.0021	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0050	6.5000	0.0063	1.3900	0.00002	1.8900	0.8160	15.7000	0.0001	0.0009	0.0001	0.0075	0.0017	0.0005	0.0000
M-09-108 118.5-119.5	0.0003	0.0050	4.9600	0.0055	1.1400	0.00001	1.1200	0.6870	12.6000	0.0001	0.0005	0.0002	0.0092	0.0015	0.0005	0.0000
M-09-108 118.5-119.5	0.0003	0.0050	4.0700	0.0048	1.1000	0.00002	0.7800	0.5780	10.6000	0.0001	0.0007	0.0002	0.0084	0.0014	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0050	3.5600	0.0038	1.1000	0.00001	0.5500	0.5270	10.0000	0.0001	0.0005	0.0002	0.0100	0.0012	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0050	2.7500	0.0026	1.2100	0.00001	0.4400	0.5080	9.3600	0.0001	0.0007	0.0001	0.0081	0.0011	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0050	3.3400	0.0034	1.4300	0.00002	0.4700	0.5460	9.4500	0.0001	0.0001	0.0001	0.0116	0.0015	0.0005	0.0000
M-09-108 118.5-119.5	0.0002	0.0050	2.6100	0.0027	1.2500	0.00002	0.3800	0.4490	8.2300	0.0001	0.0003	0.0002	0.0109	0.0013	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0050	2.3200	0.0027	1.1500	0.00001	0.3400	0.4290	7.4000	0.0001	0.0002	0.0001	0.0107	0.0012	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0050	2.3400	0.0029	1.1800	0.00001	0.3200	0.4160	7.7500	0.0001	0.0003	0.0002	0.0100	0.0014	0.0005	0.0001
M-09-108 118.5-119.5	0.0002	0.0050	2.0200	0.0030	1.2000	0.00001	0.2800	0.3770	7.2100	0.0001	0.0001	0.0002	0.0077	0.0013	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0050	1.9100	0.0024	1.1900	0.00001	0.2300	0.3260	6.1300	0.0001	0.0002	0.0002	0.0088	0.0012	0.0005	0.0000
M-09-108 118.5-119.5	0.0002	0.0200	1.8700	0.0025	1.1700	0.00002	0.2100	0.3920	7.7400	0.0001	0.0004	0.0001	0.0077	0.0011	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0100	1.7800	0.0026	1.2500	0.00001	0.2200	0.3900	8.3600	0.0001	0.0002	0.0001	0.0074	0.0011	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	1.4000	0.0026	1.1000	0.00001	0.2100	0.3520	8.7400	0.0001	0.0002	0.0001	0.0056	0.0011	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	1.3500	0.0023	1.1400	0.00002	0.1900	0.3480	8.7100	0.0001	0.0002	0.0001	0.0066	0.0009	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	1.3500	0.0023	1.1400	0.00002	0.1900	0.3480	8.7100	0.0001	0.0002	0.0001	0.0066	0.0009	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	1.1700	0.0024	0.9800	0.00007	0.1900	0.3120	8.1400	0.0001	0.0003	0.0001	0.0043	0.0010	0.0005	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	1.1500	0.0027	0.9900	0.00002	0.1900	0.3070	8.6000	0.0001	0.0003	0.0002	0.0044	0.0010	0.0010	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	1.2600	0.0022	1.0800	0.00002	0.2000	0.3340	9.6800	0.0001	0.0002	0.0002	0.0044	0.0010	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	1.1300	0.0023	0.9900	0.00002	0.1300	0.3570	10.4000	0.0001	0.0001	0.0002	0.0065	0.0008	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0260	1.1000	0.0015	0.9600	0.00001	0.1800	0.3350	10.9000	0.0001	0.0002	0.0001	0.0050	0.0008	0.0005	0.0000
M-09-108 118.5-119.5	0.0003	0.0045	1.0300	0.0022	0.9700	0.00001	0.1800	0.3250	10.4000	0.0001	0.0002	0.0001	0.0054	0.0007	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	1.0500	0.0021	1.0100	0.00001	0.1700	0.3210	10.2000	0.0001	0.0010	0.0001	0.0053	0.0007	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0140	0.9720	0.0010	0.9900	0.00001	0.1700	0.3000	10.5000	0.0001	0.0000	0.0001	0.0036	0.0007	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0100	0.9270	0.0020	0.9300	0.00001	0.1500	0.2730	8.9900	0.0001	0.0001	0.0002	0.0047	0.0007	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.8380	0.0021	0.8600	0.00002	0.1400	0.2800	9.7700	0.0001	0.0000	0.0001	0.0048	0.0008	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.8310	0.0019	0.9300	0.00002	0.1300	0.2600	9.7200	0.0001	0.0001	0.0001	0.0042	0.0007	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.7900	0.0015	0.8700	0.00001	0.1200	0.2320	8.8700	0.0001	0.0006	0.0001	0.0036	0.0007	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0090	0.7120	0.0017	0.8700	0.00001	0.1000	0.2140	8.2100	0.0001	0.0001	0.0001	0.0033	0.0007	0.0005	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.7030	0.0012	0.8800	0.00001	0.1500	0.2300	7.6100	0.0001	0.0001	0.0001	0.0048	0.0006	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0130	0.6620	0.0020	0.8500	0.00001	0.1300	0.1800	6.8600	0.0001	0.0002	0.0002	0.0030	0.0006	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.7460	0.0019	0.8500	0.00001	0.1400	0.1880	7.2500	0.0001	0.0001	0.0001	0.0023	0.0007	0.0005	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.6880	0.0015	0.8400	0.00001	0.1400	0.1830	7.7100	0.0001	0.0009	0.0001	0.0019	0.0006	0.0005	0.0000
M-09-108 118.5-119.5	0.0006	0.0210	0.6960	0.0017	0.8600	0.00001	0.1500	0.1890	8.4100	0.0001	0.0006	0.0002	0.0021	0.0006	0.0005	0.0000
M-09-108 118.5-119.5	0.0005	0.0045	0.6760	0.0098	0.8100	0.00001	0.1000	0.0720	6.2800	0.0001	0.0006	0.0002	0.0001	0.0001	0.0140	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.6130	0.0098	0.7100	0.00001	0.0800	0.0647	6.1000	0.0001	0.0002	0.0001	0.0001	0.0001	0.0210	0.0001
M-09-108 118.5-119.5	0.0003	0.0045	0.5940	0.0090	0.7000	0.00001	0.0300	0.0603	5.9700	0.0001	0.0000	0.0001	0.0001	0.0001	0.0150	0.0000
M-09-108 118.5-119.5	0.0008	0.0340	0.5520	0.0078	0.6600	0.00001	0.0600	0.0593	5.2100	0.0001	0.0003	0.0001	0.0001	0.0000	0.0170	0.0001
M-09-108 118.5-119.5	0.0001	0.0210	0.6000	0.0089	0.6300	0.00001	0.0700	0.0624	5.4000	0.0001	0.0003	0.0002	0.0001	0.0001	0.0160	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-108 118.5-119.5	11	41	18-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	450	28	61	7.48	3.6	14.7	10	0.1
M-09-108 118.5-119.5	11	42	25-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	450	25	58	7.11	3.4	12.6	10	0.4
M-09-108 118.5-119.5	11	43	2-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	460	36	69	7.35	3.0	16.6	14	0.1
M-09-108 118.5-119.5	11	44	9-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	29	66	7.31	3.6	14.4	13	0.1
M-09-108 118.5-119.5	11	45	16-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	450	34	69	7.26	4.6	16.3	18	0.1
M-09-108 118.5-119.5	11	46	23-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	34	71	7.52	5.3	16.4	19	0.1
M-09-108 118.5-119.5	11	47	30-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	32	63	7.33	5.4	16.0	18	0.1
M-09-108 118.5-119.5	11	48	6-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	31	49	7.38	4.6	15.1	17	0.1
M-09-108 118.5-119.5	11	49	13-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	30	55	7.33	3.8	14.2	15	0.1
M-09-108 118.5-119.5	11	50	20-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	29	61	7.1	4.2	14.4	15	0.1
M-09-108 118.5-119.5	11	51	27-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	28	55	7.32	4.5	14.7	15	0.1
M-09-108 118.5-119.5	11	52	3-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	465	27	50	7.23	3.4	13.2	15	0.1
M-09-108 118.5-119.5	11	53	10-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	465	26	49	7.34	2.2	11.7	14	0.1
M-09-108 118.5-119.5	11	54	17-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	27	56	7.22	3.2	12.8	16	0.1
M-09-108 118.5-119.5	11	55	24-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	460	28	67	7.29	4.1	13.9	17	0.1
M-09-108 118.5-119.5	11	56	3-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	455	28	60	7.17	3.5	13.4	16	0.1
M-09-108 118.5-119.5	11	57	10-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	29	69	7.31	2.8	13.0	15	0.1
M-09-108 118.5-119.5	11	58	17-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	480	29	68	7.27	3.1	14.5	16	0.1
M-09-108 118.5-119.5	11	59	24-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	480	30	82	7.27	3.4	16.0	17	0.1
M-09-108 118.5-119.5	11	60	31-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	29	68	7.52	3.9	15.8	15	0.1
M-09-108 118.5-119.5	11	61	7-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	29	69	7.45	4.5	15.6	13	0.1
M-09-108 118.5-119.5	11	62	14-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	495	29	72	7.59	3.4	15.2	14	0.1
M-09-108 118.5-119.5	11	63	21-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	500	29	70	7.37	2.3	14.8	14	0.1
M-09-108 118.5-119.5	11	64	28-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	495	28	66	7.47	2.6	15.2	16	0.1
M-09-108 118.5-119.5	11	65	5-May-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	26	71	7.32	2.9	15.5	17	0.1
M-09-108 118.5-119.5	11	66	12-May-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	480	28	67	7.36	2.7	15.2	17	0.1
M-09-108 118.5-119.5	11	67	19-May-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	460	31	71	7.6	2.4	14.9	16	0.1
M-09-108 118.5-119.5	11	68	26-May-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	465	29	69	7.59	3.6	14.5	15	0.1
M-09-108 118.5-119.5	11	69	2-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	460	27	68	7.44	4.7	14.2	13	0.1
M-09-108 118.5-119.5	11	70	9-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	28	73	7.27	4.3	14.1	15	0.1
M-09-108 118.5-119.5	11	71	16-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	29	71	7.48	3.9	14.1	17	0.1
M-09-108 118.5-119.5	11	72	23-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	490	29	74	7.44	3.8	14.3	16	0.1
M-09-108 118.5-119.5	11	73	30-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	480	30	69	7.43	3.7	14.5	14	0.1
M-09-108 118.5-119.5	11	74	7-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	32	71	7.31	4.2	13.9	17	0.1
M-09-108 118.5-119.5	11	75	14-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	34	71	7.44	4.7	13.3	19	0.1
M-09-108 118.5-119.5	11	76	21-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	30	70	7.4	4.4	13.5	19	0.1
M-09-108 118.5-119.5	11	77	28-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	480	27	70	7.53	4.1	13.8	19	0.1
M-09-108 118.5-119.5	11	78	4-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	30	69	7.23	3.9	14.1	18	0.1
M-09-108 118.5-119.5	11	79	11-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	33	69	7.6	3.8	14.5	17	0.1
M-09-108 118.5-119.5	11	80	18-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	480	33	74	7.52	4.3	15.0	17	0.1
M-09-108 118.5-119.5	11	81	25-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	32	70	7.53	4.8	15.5	17	0.1
M-09-108 118.5-119.5	11	82	1-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	32	76	7.68	4.3	15.8	19	0.1
M-09-108 118.5-119.5	11	83	8-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	31	72	7.51	3.9	16.1	20	0.1
M-09-108 118.5-119.5	11	84	15-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	32	73	7.48	3.6	15.3	20	0.1
M-09-108 118.5-119.5	11	85	22-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	34	73	7.25	3.3	14.5	19	0.1
M-09-108 118.5-119.5	11	86	29-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	500	32	69	7.28	3.9	13.8	18	0.1
M-09-108 118.5-119.5	11	87	6-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	29	66	7.35	4.6	13.1	17	0.1
M-09-108 118.5-119.5	11	88	13-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	465	31	65	7.63	4.2	13.0	19	0.1
M-09-108 118.5-119.5	11	89	20-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	495	32	69	7.36	3.7	12.8	21	0.1
M-09-108 118.5-119.5	11	90	27-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	465	32	71	7.3	4.5	13.7	22	0.1
M-09-108 118.5-119.5	11	91	3-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	480	32	73	7.46	5.3	14.5	23	0.1
M-09-108 118.5-119.5	11	92	10-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	490	33	69	7.61	4.4	14.6	22	0.1
M-09-108 118.5-119.5	11	93	17-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	33	71	7.44	3.4	14.7	20	0.1
M-09-108 118.5-119.5	11	94	24-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	31	67	7.46	4.2	14.6	20	0.1
M-09-108 118.5-119.5	11	95	1-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	29	66	7.43	5.0	14.6	19	0.1
M-09-108 118.5-119.5	11	96	8-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	29	70	7.44	4.9	15.2	17	0.1
M-09-108 118.5-119.5	11	97	15-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	29	65	7.24	4.8	15.8	14	0.1
M-09-108 118.5-119.5	11	98	22-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	29	69	7.44	4.5	15.9	14	0.1
M-09-108 118.5-119.5	11	99	29-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	480	29	65	7.38	4.3	16.0	14	0.2
M-09-108 118.5-119.5	11	100	5-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	480	29	63	7.23	4.1	16.1	14	0.2
M-09-108 118.5-119.5	11	101	12-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	29	66	7.32	3.8	16.2	14	0.2
M-09-108 118.5-119.5	11	102	19-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	29	63	7.41	4.5	16.5	15	0.2
M-09-108 118.5-119.5	11	103	26-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	490	28	65	7.28	5.1	16.8	15	0.2
M-09-108 118.5-119.5	11	104	2-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	495	28	67	7.44	5.7	17.0	16	0.1
M-09-108 118.5-119.5	11	105	9-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	28	68	7.65	6.3	17.3	16	0.1
M-09-108 118.5-119.5	11	106	16-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	29	73	7.52	6.3	16.4	16	0.1
M-09-108 118.5-119.5	11	107	23-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	29	65	7.21	6.2	15.5	16	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-108 118.5-119.5	0.77	0.0250	0.0001	0.0002	0.0151	0.0000	0.0000	0.0026	0.00181	11.1000	0.0005	0.0001	0.0032	0.0010	0.00418	0.0010	0.1190	0.0866	0.0000050	0.0022
M-09-108 118.5-119.5	0.61	0.0203	0.0001	0.0004	0.0104	0.0000	0.0000	0.0011	0.00205	9.9600	0.0003	0.0001	0.0053	0.0010	0.00500	0.0010	0.0930	0.0620	0.0000050	0.0017
M-09-108 118.5-119.5	0.03	0.0390	0.0014	0.0009	0.0179	0.0000	0.0000	0.0017	0.00001	12.8000	0.0008	0.0001	0.0013	0.0010	0.00123	0.0005	0.8960	0.0902	0.0000050	0.0027
M-09-108 118.5-119.5	0.03	0.0334	0.0014	0.0007	0.0173	0.0000	0.0000	0.0017	0.00001	10.3000	0.0010	0.0001	0.0018	0.0010	0.00311	0.0005	0.7300	0.0730	0.0000050	0.0029
M-09-108 118.5-119.5	0.03	0.0307	0.0014	0.0008	0.0180	0.0000	0.0000	0.0021	0.00001	12.1000	0.0003	0.0000	0.0008	0.0010	0.00006	0.0005	0.8550	0.0793	0.0000050	0.0028
M-09-108 118.5-119.5	0.03	0.0323	0.0014	0.0008	0.0199	0.0000	0.0000	0.0023	0.00001	12.1000	0.0003	0.0000	0.0008	0.0010	0.00089	0.0005	0.8700	0.0838	0.0000050	0.0030
M-09-108 118.5-119.5	0.03	0.0324	0.0013	0.0007	0.0163	0.0000	0.0000	0.0016	0.00003	11.4000	0.0003	0.0000	0.0009	0.0010	0.00067	0.0005	0.8330	0.0784	0.0000300	0.0030
M-09-108 118.5-119.5	0.03	0.0300	0.0012	0.0007	0.0162	0.0000	0.0000	0.0016	0.00002	11.1500	0.0003	0.0000	0.0006	0.0010	0.00038	0.0005	0.7970	0.0797	0.0000175	0.0028
M-09-108 118.5-119.5	0.03	0.0276	0.0011	0.0007	0.0160	0.0000	0.0000	0.0016	0.00002	10.9000	0.0003	0.0000	0.0003	0.0010	0.00009	0.0005	0.7610	0.0809	0.0000050	0.0026
M-09-108 118.5-119.5	0.03	0.0270	0.0011	0.0006	0.0149	0.0000	0.0000	0.0017	0.00001	10.4050	0.0003	0.0000	0.0006	0.0010	0.00010	0.0005	0.7200	0.0772	0.0000050	0.0026
M-09-108 118.5-119.5	0.03	0.0264	0.0011	0.0005	0.0138	0.0000	0.0000	0.0018	0.00001	9.9100	0.0003	0.0000	0.0010	0.0010	0.00010	0.0005	0.6790	0.0735	0.0000050	0.0026
M-09-108 118.5-119.5	0.03	0.0271	0.0011	0.0006	0.0141	0.0000	0.0000	0.0020	0.00001	9.6700	0.0003	0.0000	0.0008	0.0010	0.00018	0.0005	0.6600	0.0710	0.0000050	0.0025
M-09-108 118.5-119.5	0.03	0.0278	0.0010	0.0006	0.0143	0.0000	0.0000	0.0021	0.00001	9.4300	0.0003	0.0000	0.0006	0.0010	0.00025	0.0005	0.6410	0.0684	0.0000050	0.0023
M-09-108 118.5-119.5	0.03	0.0266	0.0011	0.0007	0.0146	0.0000	0.0000	0.0025	0.00002	9.7000	0.0003	0.0000	0.0008	0.0010	0.00017	0.0005	0.6635	0.0738	0.0000050	0.0023
M-09-108 118.5-119.5	0.03	0.0253	0.0011	0.0007	0.0148	0.0000	0.0000	0.0029	0.00004	9.9700	0.0003	0.0000	0.0010	0.0010	0.00008	0.0005	0.6860	0.0791	0.0000050	0.0023
M-09-108 118.5-119.5	0.03	0.0257	0.0011	0.0006	0.0149	0.0000	0.0000	0.0020	0.00003	10.2350	0.0003	0.0000	0.0012	0.0020	0.00077	0.0005	0.6945	0.0779	0.0000050	0.0024
M-09-108 118.5-119.5	0.03	0.0260	0.0010	0.0005	0.0149	0.0000	0.0000	0.0011	0.00001	10.5000	0.0003	0.0000	0.0013	0.0030	0.00146	0.0005	0.7030	0.0766	0.0000050	0.0026
M-09-108 118.5-119.5	0.03	0.0288	0.0010	0.0005	0.0151	0.0000	0.0000	0.0011	0.00001	10.6000	0.0003	0.0000	0.0011	0.0020	0.00076	0.0005	0.6995	0.0780	0.0000125	0.0026
M-09-108 118.5-119.5	0.03	0.0315	0.0010	0.0005	0.0153	0.0000	0.0000	0.0011	0.00001	10.7000	0.0003	0.0000	0.0009	0.0010	0.00006	0.0005	0.6960	0.0794	0.0000200	0.0026
M-09-108 118.5-119.5	0.03	0.0288	0.0010	0.0006	0.0158	0.0000	0.0000	0.0014	0.00002	10.5500	0.0003	0.0000	0.0006	0.0035	0.00006	0.0005	0.7285	0.0888	0.0000125	0.0027
M-09-108 118.5-119.5	0.03	0.0260	0.0010	0.0007	0.0162	0.0000	0.0000	0.0016	0.00002	10.4000	0.0003	0.0000	0.0003	0.0060	0.00005	0.0005	0.7610	0.0982	0.0000050	0.0027
M-09-108 118.5-119.5	0.03	0.0295	0.0010	0.0005	0.0162	0.0000	0.0000	0.0015	0.00001	10.5000	0.0003	0.0000	0.0005	0.0035	0.00005	0.0005	0.7200	0.0916	0.0000050	0.0030
M-09-108 118.5-119.5	0.03	0.0330	0.0009	0.0003	0.0161	0.0000	0.0000	0.0014	0.00001	10.6000	0.0003	0.0001	0.0007	0.0010	0.00004	0.0005	0.6790	0.0849	0.0000050	0.0032
M-09-108 118.5-119.5	0.42	0.0259	0.0005	0.0002	0.0140	0.0000	0.0000	0.0013	0.00087	10.5000	0.0003	0.0001	0.0025	0.0010	0.00204	0.0005	0.3805	0.0742	0.0000050	0.0028
M-09-108 118.5-119.5	0.81	0.0188	0.0001	0.0001	0.0119	0.0000	0.0000	0.0011	0.00173	10.4000	0.0003	0.0001	0.0043	0.0010	0.00403	0.0005	0.0820	0.0635	0.0000050	0.0023
M-09-108 118.5-119.5	0.44	0.0300	0.0005	0.0004	0.0132	0.0000	0.0000	0.0013	0.00087	10.7500	0.0003	0.0001	0.0023	0.0010	0.00203	0.0005	0.3830	0.0714	0.0000075	0.0026
M-09-108 118.5-119.5	0.06	0.0411	0.0009	0.0006	0.0144	0.0000	0.0000	0.0014	0.00000	11.1000	0.0003	0.0000	0.0003	0.0010	0.00003	0.0005	0.6840	0.0793	0.0000100	0.0028
M-09-108 118.5-119.5	0.05	0.0342	0.0010	0.0005	0.0140	0.0000	0.0000	0.0013	0.00001	10.4500	0.0003	0.0001	0.0005	0.0025	0.00004	0.0005	0.6575	0.0790	0.0000100	0.0028
M-09-108 118.5-119.5	0.03	0.0273	0.0011	0.0004	0.0136	0.0000	0.0001	0.0012	0.00002	9.8000	0.0003	0.0001	0.0007	0.0040	0.00005	0.0005	0.6310	0.0786	0.0000100	0.0028
M-09-108 118.5-119.5	0.03	0.0296	0.0010	0.0005	0.0136	0.0000	0.0000	0.0015	0.00001	10.1000	0.0003	0.0001	0.0006	0.0050	0.00008	0.0005	0.6310	0.0793	0.0000075	0.0029
M-09-108 118.5-119.5	0.03	0.0318	0.0008	0.0006	0.0135	0.0000	0.0000	0.0017	0.00001	10.4000	0.0003	0.0001	0.0005	0.0060	0.00011	0.0005	0.6310	0.0800	0.0000050	0.0029
M-09-108 118.5-119.5	0.03	0.0303	0.0009	0.0007	0.0144	0.0000	0.0000	0.0019	0.00002	10.7000	0.0003	0.0001	0.0004	0.0050	0.00009	0.0005	0.6545	0.0866	0.0000050	0.0030
M-09-108 118.5-119.5	0.03	0.0287	0.0009	0.0007	0.0152	0.0000	0.0000	0.0021	0.00002	11.0000	0.0003	0.0000	0.0003	0.0040	0.00006	0.0005	0.6780	0.0931	0.0000050	0.0030
M-09-108 118.5-119.5	0.03	0.0283	0.0009	0.0007	0.0152	0.0000	0.0000	0.0020	0.00001	11.6000	0.0003	0.0000	0.0004	0.0025	0.00006	0.0005	0.7065	0.0956	0.0000050	0.0030
M-09-108 118.5-119.5	0.03	0.0279	0.0009	0.0006	0.0151	0.0000	0.0000	0.0019	0.00001	12.2000	0.0003	0.0000	0.0006	0.0010	0.00005	0.0005	0.7350	0.0981	0.0000050	0.0030
M-09-108 118.5-119.5	0.03	0.0300	0.0009	0.0006	0.0160	0.0000	0.0000	0.0019	0.00001	11.0450	0.0003	0.0001	0.0004	0.0050	0.00006	0.0005	0.6815	0.1106	0.0000075	0.0030
M-09-108 118.5-119.5	0.03	0.0320	0.0009	0.0005	0.0169	0.0000	0.0000	0.0018	0.00002	9.8900	0.0003	0.0001	0.0003	0.0090	0.00007	0.0005	0.6280	0.1230	0.0000100	0.0029
M-09-108 118.5-119.5	0.03	0.0331	0.0009	0.0006	0.0164	0.0000	0.0000	0.0016	0.00001	10.9950	0.0006	0.0001	0.0004	0.0055	0.00007	0.0005	0.6790	0.1112	0.0000075	0.0030
M-09-108 118.5-119.5	0.03	0.0341	0.0008	0.0006	0.0159	0.0000	0.0000	0.0013	0.00001	12.1000	0.0010	0.0001	0.0005	0.0020	0.00006	0.0005	0.7300	0.0993	0.0000050	0.0031
M-09-108 118.5-119.5	0.05	0.0324	0.0009	0.0006	0.0166	0.0000	0.0000	0.0016	0.00001	11.9500	0.0012	0.0001	0.0004	0.0030	0.00006	0.0005	0.7210	0.0992	0.0000050	0.0031
M-09-108 118.5-119.5	0.06	0.0306	0.0009	0.0006	0.0172	0.0000	0.0000	0.0019	0.00002	11.8000	0.0013	0.0000	0.0003	0.0040	0.00006	0.0005	0.7120	0.0990	0.0000050	0.0030
M-09-108 118.5-119.5	0.05	0.0378	0.0009	0.0007	0.0163	0.0000	0.0000	0.0018	0.00002	11.5500	0.0009	0.0000	0.0007	0.0030	0.00009	0.0005	0.7000	0.0950	0.0000050	0.0032
M-09-108 118.5-119.5	0.03	0.0450	0.0008	0.0007	0.0153	0.0000	0.0000	0.0017	0.00001	11.3000	0.0005	0.0000	0.0012	0.0020	0.00012	0.0005	0.6880	0.0910	0.0000050	0.0034
M-09-108 118.5-119.5	0.03	0.0373	0.0009	0.0006	0.0168	0.0000	0.0000	0.0017	0.00002	11.8000	0.0008	0.0000	0.0011	0.0055	0.00010	0.0005	0.7165	0.0995	0.0000075	0.0031
M-09-108 118.5-119.5	0.03	0.0295	0.0010	0.0005	0.0182	0.0000	0.0000	0.0017	0.00002	12.3000	0.0010	0.0000	0.0009	0.0090	0.00007	0.0005	0.7450	0.1080	0.0000100	0.0029
M-09-108 118.5-119.5	0.03	0.0309	0.0010	0.0007	0.0167	0.0000	0.0000	0.0018	0.00002	11.5000	0.0010	0.0000	0.0009	0.0050	0.00009	0.0005	0.6885	0.0999	0.0000075	0.0028
M-09-108 118.5-119.5	0.03	0.0323	0.0009	0.0008	0.0151	0.0000	0.0000	0.0019	0.00001	10.7000	0.0010	0.0000	0.0009	0.0010	0.00011	0.0005	0.6320	0.0918	0.0000050	0.0028
M-09-108 118.5-119.5	0.03	0.0300	0.0008	0.0007	0.0166	0.0000	0.0000	0.0022	0.00002	11.1500	0.0006	0.0000	0.0008	0.0013	0.00013	0.0005	0.6520	0.0964	0.0000075	0.0027
M-09-108 118.5-119.5	0.03	0.0276	0.0007	0.0006	0.0180	0.0000	0.0000	0.0024	0.00002	11.6000	0.0003	0.0000	0.0006	0.0015	0.00014	0.0005	0.6720	0.1010	0.0000100	0.0025
M-09-108 118.5-119.5	0.03	0.0259	0.0007	0.0009	0.0176	0.0000	0.0000	0.0017	0.00001	11.7000	0.0003	0.0000	0.0004	0.0033	0.00010	0.0005	0.6855	0.1030	0.0000075	0.0027
M-09-108 118.5-119.5	0.03	0.0241	0.0007	0.0012	0.0171	0.0000	0.0000	0.0010	0.00001	11.8000	0.0003	0.0000	0.0003	0.0050	0.00005	0.0005	0.6990	0.1050	0.0000050	0.0028
M-09-108 118.5-119.5	0.03	0.0296	0.0008	0.0008	0.0163	0.0000	0.0000	0.0013	0.00002	11.9500	0.0003	0.0001	0.0006	0.0033	0.00007	0.0005	0.6965	0.1085	0.0000050	0.0027
M-09-108 118.5-119.5	0.03	0.0351	0.0009	0.0004	0.0155	0.0000	0.0000	0.0015	0.00004	12.1000	0.0003	0.0001	0.0009	0.0015	0.00009	0.0005	0.6940	0.1120	0.0000050	0.0026
M-09-108 118.5-119.5	0.03	0.0354	0.0010	0.0005	0.0166	0.0000	0.0000	0.0015	0.00003	11.3000	0.0003	0.0001	0.0008	0.0015	0.00008	0.0005	0.6535	0.1060	0.0000075	0.0026
M-09-108 118.5-119.5	0.03	0.0357	0.0010	0.0005	0.0176	0.0000	0.0000	0.0014	0.00002	10.5000	0.0003	0.0001	0.0007	0.0015	0.00007	0.0005	0.6130	0.1000	0.0000100	0.0026
M-09-108 118.5-119.5	0.03	0.0396	0.0009	0.0005	0.0165	0.0000	0.0000	0.0014	0.00003	10.5500	0.0003	0.0001	0.0008	0.0015	0.00005	0.0005	0.5990	0.1005	0.0000075	0.0024
M-09-108 118.5-119.5	0.03	0.0434	0.0008	0.0004	0.0154	0.0000	0.0000	0.0013	0.00005	10.6000	0.0003	0.0000	0.0008	0.0015	0.00002	0.0005	0.5850	0.1010	0.0000050	0.0023
M-09-108 118.5-119.5	0.03	0.0415	0.0008	0.0004	0.0157	0.0000	0.0000	0.0013	0.00004	10.6000	0.0003	0.0000	0.0008	0.0015	0.00002	0.0005	0.5870	0.1020	0.0000050	0.0023
M-09-108 118.5-119.5	0.03	0.0396	0.0009	0.0004	0.0160	0.0000	0.0000	0.0013	0.00003	10.6000	0.0003	0.0000	0.0007	0.0015	0.00003	0.0005	0.5890	0.1030	0.0000050	0.0023
M-09-108 118.5-119.5	0.03	0.0377	0.0009	0.0004	0.0163	0.0000	0.0000	0.0013	0.00003	10.6000	0.0003	0.0000	0.0007	0.0015	0.00003	0.0005	0.5910	0.1040	0.0000050	0.0023
M-09-108 118.5-119.5	0.03	0.0358	0.0009	0.0004	0.0166	0.0000	0.0000	0.0013	0.00002	10.6000	0.0003	0.0000	0.0006	0.0015	0.00003	0.0005	0.5930	0.1050	0.0000050	0.0023
M-09-108 118.5-119.5	0.03	0.0353	0.0009	0.0004	0.0164	0.0000	0.0000	0.0014	0.00002	10.5250	0.0003	0.0000	0.0006	0.0015	0.00003	0.0005	0.5830	0.1040	0.0000050	0.0023
M-09-108 118.5-119.5	0.03	0.0347	0.0009	0.0004	0.0161	0.0000	0.0000	0.0014	0.00002	10.4500	0.0003	0.0000	0.0007	0.0015	0.00004	0.0005	0.5730	0.1030	0.0000050	0.0024
M-09-108 118.5-119.5	0.03	0.0342	0.0009	0.0004	0.0159	0.0000	0.0000	0.0015	0.00002	10.3750	0.0003	0.0000	0.0007	0.0015	0.00004	0.0005	0.5630	0.1020	0.0000050	0.0024
M-09-108 118.5-119.5	0.03	0.0336	0.0009	0.0004	0.0156	0.0000	0.0000	0.0015	0.00002	10.3000	0.0003	0.0000	0.0007	0.0015	0.00004	0.0005	0.5530	0.1010	0.0000050	0.0024
M-09-108 118.5-119.5	0.03	0.0338	0.0009	0.0005	0.0155	0.0000	0.0000	0.0013	0.00002	10.5000	0.0003	0.0000	0.0007	0.0015	0.00005	0.0005	0.5658	0.1018	0.0000050	0.0024
M-09-108 118.5-119.5	0.03	0.0341	0.0008	0.0005	0.0153	0.0000	0.0000	0.0010	0.00003	10.7000	0.0003	0.0000	0.0007	0.0015	0.00006	0.0005	0.5785	0.1025	0.0000050	0.0024

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-108 118.5-119.5	0.0003	0.0170	0.5760	0.0089	0.6800	0.00001	0.0600	0.0612	5.2000	0.0001	0.0002	0.0001	0.0001	0.0000	0.0140	0.0001
M-09-108 118.5-119.5	0.0001	0.0045	0.4860	0.0079	0.5700	0.00001	0.0200	0.0563	4.3400	0.0001	0.0001	0.0002	0.0001	0.0001	0.0190	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.5480	0.0012	0.7000	0.00002	0.1200	0.1630	5.8800	0.0001	0.0002	0.0001	0.0027	0.0004	0.0110	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.4790	0.0006	0.6000	0.00001	0.1200	0.1510	5.5400	0.0001	0.0003	0.0002	0.0021	0.0004	0.0080	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.5320	0.0012	0.7000	0.00002	0.1300	0.1670	6.7000	0.0001	0.0004	0.0001	0.0023	0.0004	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.5860	0.0013	0.7600	0.00001	0.1300	0.1760	8.0400	0.0001	0.0002	0.0001	0.0020	0.0004	0.0040	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.5380	0.0013	0.7100	0.00002	0.1200	0.1620	6.8900	0.0001	0.0001	0.0001	0.0022	0.0004	0.0020	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.4905	0.0011	0.6800	0.00002	0.1200	0.1570	6.9850	0.0001	0.0004	0.0001	0.0021	0.0004	0.0013	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.4430	0.0009	0.6500	0.00001	0.1200	0.1520	7.0800	0.0001	0.0007	0.0001	0.0021	0.0003	0.0005	0.0000
M-09-108 118.5-119.5	0.0002	0.0103	0.4320	0.0009	0.6200	0.00002	0.1200	0.1415	6.4750	0.0001	0.0006	0.0001	0.0018	0.0003	0.0008	0.0000
M-09-108 118.5-119.5	0.0003	0.0160	0.4210	0.0010	0.5900	0.00002	0.1200	0.1310	5.8700	0.0001	0.0005	0.0001	0.0018	0.0003	0.0010	0.0000
M-09-108 118.5-119.5	0.0004	0.0180	0.4165	0.0010	0.5750	0.00001	0.1100	0.1285	5.6450	0.0001	0.0003	0.0001	0.0018	0.0003	0.0008	0.0000
M-09-108 118.5-119.5	0.0005	0.0200	0.4120	0.0010	0.5600	0.00001	0.1000	0.1260	5.4200	0.0001	0.0001	0.0001	0.0017	0.0002	0.0005	0.0000
M-09-108 118.5-119.5	0.0004	0.0123	0.4085	0.0010	0.5800	0.00001	0.1000	0.1290	5.4300	0.0001	0.0001	0.0001	0.0019	0.0003	0.0008	0.0000
M-09-108 118.5-119.5	0.0003	0.0045	0.4050	0.0009	0.6000	0.00001	0.1000	0.1320	5.4400	0.0001	0.0000	0.0001	0.0020	0.0003	0.0010	0.0000
M-09-108 118.5-119.5	0.0003	0.0045	0.4030	0.0009	0.5950	0.00001	0.1050	0.1355	5.5950	0.0001	0.0001	0.0001	0.0019	0.0003	0.0035	0.0000
M-09-108 118.5-119.5	0.0003	0.0045	0.4010	0.0008	0.5900	0.00001	0.1100	0.1390	5.7500	0.0000	0.0003	0.0001	0.0018	0.0003	0.0060	0.0000
M-09-108 118.5-119.5	0.0003	0.0045	0.3890	0.0009	0.5650	0.00002	0.1050	0.1385	6.0000	0.0001	0.0002	0.0001	0.0018	0.0003	0.0033	0.0000
M-09-108 118.5-119.5	0.0003	0.0045	0.3770	0.0010	0.5400	0.00002	0.1000	0.1380	6.2500	0.0001	0.0001	0.0001	0.0018	0.0003	0.0005	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.3870	0.0010	0.5400	0.00002	0.1000	0.1350	6.3100	0.0001	0.0001	0.0001	0.0018	0.0003	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.3970	0.0009	0.5400	0.00001	0.1000	0.1320	6.3700	0.0001	0.0001	0.0001	0.0018	0.0003	0.0005	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.3900	0.0012	0.5450	0.00001	0.3100	0.1305	6.2850	0.0001	0.0002	0.0001	0.0017	0.0003	0.0013	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.3830	0.0015	0.5500	0.00001	0.5200	0.1290	6.2000	0.0001	0.0003	0.0001	0.0017	0.0003	0.0020	0.0000
M-09-108 118.5-119.5	0.0003	0.0103	0.3680	0.0010	0.5250	0.00001	0.2800	0.0929	5.3350	0.0001	0.0003	0.0001	0.0009	0.0002	0.0090	0.0000
M-09-108 118.5-119.5	0.0004	0.0160	0.3530	0.0006	0.5000	0.00001	0.0400	0.0567	4.4700	0.0001	0.0003	0.0001	0.0001	0.0000	0.0160	0.0000
M-09-108 118.5-119.5	0.0003	0.0140	0.3670	0.0008	0.5650	0.00001	0.0800	0.0899	5.5450	0.0001	0.0002	0.0001	0.0007	0.0002	0.0100	0.0000
M-09-108 118.5-119.5	0.0002	0.0120	0.3810	0.0010	0.6300	0.00002	0.1200	0.1230	6.6200	0.0000	0.0001	0.0001	0.0013	0.0003	0.0040	0.0000
M-09-108 118.5-119.5	0.0001	0.0300	0.3555	0.0010	0.5300	0.00003	0.1100	0.1140	6.1550	0.0000	0.0002	0.0001	0.0014	0.0003	0.0030	0.0000
M-09-108 118.5-119.5	0.0001	0.0480	0.3300	0.0009	0.4300	0.00003	0.1000	0.1050	5.6900	0.0000	0.0002	0.0001	0.0014	0.0002	0.0020	0.0000
M-09-108 118.5-119.5	0.0003	0.0263	0.3285	0.0007	0.4850	0.00003	0.1200	0.1065	6.1400	0.0000	0.0003	0.0001	0.0014	0.0002	0.0030	0.0000
M-09-108 118.5-119.5	0.0006	0.0045	0.3270	0.0005	0.5400	0.00003	0.1400	0.1080	6.5900	0.0000	0.0003	0.0001	0.0014	0.0003	0.0040	0.0000
M-09-108 118.5-119.5	0.0005	0.0045	0.3455	0.0006	0.5400	0.00003	0.1250	0.1110	6.4400	0.0000	0.0002	0.0001	0.0014	0.0003	0.0023	0.0000
M-09-108 118.5-119.5	0.0003	0.0045	0.3640	0.0008	0.5400	0.00002	0.1100	0.1140	6.2900	0.0000	0.0001	0.0001	0.0014	0.0003	0.0005	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.3650	0.0007	0.5650	0.00002	0.1000	0.1185	6.7800	0.0000	0.0001	0.0001	0.0014	0.0002	0.0008	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.3660	0.0007	0.5900	0.00002	0.0900	0.1230	7.2700	0.0000	0.0001	0.0001	0.0015	0.0002	0.0010	0.0000
M-09-108 118.5-119.5	0.0003	0.0173	0.3300	0.0007	0.5650	0.00002	0.0800	0.1140	6.5350	0.0000	0.0001	0.0001	0.0015	0.0002	0.0015	0.0000
M-09-108 118.5-119.5	0.0005	0.0300	0.2940	0.0007	0.5400	0.00002	0.0700	0.1050	5.8000	0.0000	0.0001	0.0001	0.0016	0.0002	0.0020	0.0000
M-09-108 118.5-119.5	0.0003	0.0173	0.3135	0.0009	0.5500	0.00002	0.0850	0.1130	6.4650	0.0000	0.0000	0.0001	0.0014	0.0002	0.0020	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.3330	0.0010	0.5600	0.00002	0.1000	0.1210	7.1300	0.0000	0.0000	0.0001	0.0013	0.0003	0.0020	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.3215	0.0009	0.5350	0.00003	0.0950	0.1185	7.1650	0.0000	0.0001	0.0002	0.0013	0.0002	0.0025	0.0000
M-09-108 118.5-119.5	0.0003	0.0045	0.3100	0.0009	0.5100	0.00003	0.0900	0.1160	7.2000	0.0000	0.0001	0.0002	0.0014	0.0002	0.0030	0.0000
M-09-108 118.5-119.5	0.0004	0.0045	0.3090	0.0012	0.4850	0.00003	0.0850	0.1130	6.9550	0.0000	0.0001	0.0003	0.0014	0.0002	0.0025	0.0000
M-09-108 118.5-119.5	0.0004	0.0045	0.3080	0.0016	0.4600	0.00003	0.0800	0.1100	6.7100	0.0000	0.0001	0.0003	0.0014	0.0002	0.0020	0.0000
M-09-108 118.5-119.5	0.0004	0.0088	0.3080	0.0011	0.4650	0.00003	0.0950	0.1140	7.0400	0.0000	0.0002	0.0002	0.0015	0.0002	0.0020	0.0000
M-09-108 118.5-119.5	0.0003	0.0130	0.3080	0.0007	0.4700	0.00003	0.1100	0.1180	7.3700	0.0000	0.0003	0.0001	0.0016	0.0002	0.0020	0.0000
M-09-108 118.5-119.5	0.0002	0.0088	0.2980	0.0009	0.4550	0.00003	0.1000	0.1075	6.8200	0.0000	0.0002	0.0001	0.0013	0.0002	0.0025	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.2880	0.0010	0.4400	0.00003	0.0900	0.0969	6.2700	0.0000	0.0001	0.0001	0.0011	0.0002	0.0030	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.2765	0.0008	0.4450	0.00003	0.0900	0.0977	6.6450	0.0000	0.0001	0.0001	0.0011	0.0002	0.0035	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.2650	0.0005	0.4500	0.00002	0.0900	0.0985	7.0200	0.0000	0.0001	0.0001	0.0011	0.0002	0.0040	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.2595	0.0007	0.4200	0.00002	0.0900	0.1018	7.0150	0.0000	0.0002	0.0001	0.0012	0.0002	0.0025	0.0000
M-09-108 118.5-119.5	0.0003	0.0045	0.2540	0.0009	0.3900	0.00002	0.0900	0.1050	7.0100	0.0000	0.0002	0.0001	0.0013	0.0002	0.0010	0.0000
M-09-108 118.5-119.5	0.0004	0.0073	0.2600	0.0006	0.4200	0.00003	0.0900	0.1060	6.9450	0.0000	0.0001	0.0001	0.0015	0.0002	0.0015	0.0000
M-09-108 118.5-119.5	0.0004	0.0100	0.2660	0.0002	0.4500	0.00003	0.0900	0.1070	6.8800	0.0000	0.0001	0.0002	0.0017	0.0003	0.0020	0.0000
M-09-108 118.5-119.5	0.0005	0.0073	0.2520	0.0004	0.4150	0.00003	0.1050	0.1013	6.2950	0.0000	0.0001	0.0004	0.0017	0.0004	0.0030	0.0000
M-09-108 118.5-119.5	0.0005	0.0045	0.2380	0.0006	0.3800	0.00002	0.1200	0.0956	5.7100	0.0000	0.0001	0.0006	0.0017	0.0005	0.0040	0.0000
M-09-108 118.5-119.5	0.0003	0.0045	0.2380	0.0005	0.3900	0.00002	0.1050	0.0936	5.7750	0.0000	0.0001	0.0004	0.0016	0.0004	0.0035	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.2380	0.0005	0.4000	0.00002	0.0900	0.0916	5.8400	0.0000	0.0000	0.0002	0.0015	0.0004	0.0030	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.2363	0.0005	0.3925	0.00002	0.0975	0.0922	5.8600	0.0000	0.0000	0.0002	0.0015	0.0003	0.0025	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.2345	0.0005	0.3850	0.00002	0.1050	0.0928	5.8800	0.0000	0.0000	0.0002	0.0014	0.0003	0.0020	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.2328	0.0005	0.3775	0.00002	0.1125	0.0934	5.9000	0.0000	0.0000	0.0002	0.0014	0.0003	0.0015	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.2310	0.0006	0.3700	0.00002	0.1200	0.0940	5.9200	0.0000	0.0000	0.0002	0.0013	0.0003	0.0010	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.2300	0.0006	0.3600	0.00002	0.1150	0.0914	5.8875	0.0000	0.0000	0.0002	0.0013	0.0003	0.0013	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.2290	0.0006	0.3500	0.00002	0.1100	0.0887	5.8550	0.0000	0.0000	0.0002	0.0012	0.0003	0.0015	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.2280	0.0007	0.3400	0.00002	0.1050	0.0861	5.8225	0.0000	0.0000	0.0002	0.0011	0.0003	0.0018	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.2270	0.0007	0.3300	0.00002	0.1000	0.0834	5.7900	0.0000	0.0000	0.0002	0.0011	0.0003	0.0020	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.2285	0.0007	0.3425	0.00002	0.1000	0.0847	5.8825	0.0000	0.0000	0.0002	0.0011	0.0003	0.0023	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.2300	0.0006	0.3550	0.00002	0.1000	0.0859	5.9750	0.0000	0.0000	0.0002	0.0012	0.0003	0.0025	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-108 118.5-119.5	11	108	1-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	30	65	7.21	6.2	14.5	16	0.1
M-09-108 118.5-119.5	11	109	8-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	30	68	7.39	6.1	13.6	16	0.1
M-09-108 118.5-119.5	11	110	15-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	465	30	64	7.2	5.7	13.4	17	0.1
M-09-108 118.5-119.5	11	111	22-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	465	30	68	7.31	5.4	13.2	17	0.1
M-09-108 118.5-119.5	11	112	29-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	455	29	67	7.2	5.0	13.0	18	0.1
M-09-108 118.5-119.5	11	113	5-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	29	65	7.2	4.7	12.8	18	0.1
M-09-108 118.5-119.5	11	114	12-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	465	29	71	7.22	4.7	12.8	18	0.1
M-09-108 118.5-119.5	11	115	19-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	29	70	7.34	4.7	12.8	18	0.1
M-09-108 118.5-119.5	11	116	26-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	30	74	7	5.3	13.5	21	0.1
M-09-108 118.5-119.5	11	117	3-May-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	465	30	67	7.54	5.5	13.7	22	0.1
M-09-108 118.5-119.5	11	118	10-May-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	465	30	82	7.31	5.8	13.4	20	0.1
M-09-108 118.5-119.5	11	119	17-May-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	460	30	70	7.21	6.1	13.0	19	0.1
M-09-108 118.5-119.5	11	120	24-May-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	465	30	70	7.26	6.5	12.7	17	0.1
M-09-108 118.5-119.5	11	121	31-May-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	455	30	69	7.45	6.8	12.4	15	0.1
M-09-108 118.5-119.5	11	122	7-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	475	30	79	7.21	6.7	12.5	16	0.1
M-09-108 118.5-119.5	11	123	14-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	490	30	75	7.36	6.5	12.6	17	0.1
M-09-108 118.5-119.5	11	124	21-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	455	30	70	7.32	6.3	12.6	17	0.1
M-09-108 118.5-119.5	11	125	28-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	30	71	7.34	6.2	12.7	18	0.1
M-09-108 118.5-119.5	11	126	5-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	485	29	83	7.29	5.9	12.3	17	0.1
M-09-108 118.5-119.5	11	127	12-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	29	70	7.25	5.6	12.0	17	0.1
M-09-108 118.5-119.5	11	128	19-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	470	28	69	7.22	5.3	11.6	16	0.1
M-09-108 118.5-119.5	11	129	26-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VU	SIL	3	PSBX	2			Water	500	455	28	65	7.28	4.9	11.3	15	0.1
																	29	72	7.298	6.1	12.3	16	0.1
HC12 LP Hazelton																							
M-09-108 162.5-163.5	12	0	4-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	405	87	230	7.34	2.7	26.1	117	1.5
M-09-108 162.5-163.5	12	1	11-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	520	84	226	7.45	2.1	23.6	71	0.6
M-09-108 162.5-163.5	12	2	18-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	505	64	161	7.47	2.8	22.0	60	0.1
M-09-108 162.5-163.5	12	3	25-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	515	53	139	7.44	2.7	22.1	51	0.1
M-09-108 162.5-163.5	12	4	4-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	515	48	128	7.4	2.5	21.6	40	0.1
M-09-108 162.5-163.5	12	5	11-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	505	43	108	7.43	2.7	20.9	32	0.1
M-09-108 162.5-163.5	12	6	18-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	495	39	96	7.43	2.6	17.3	24	0.1
M-09-108 162.5-163.5	12	7	25-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	505	43	97	7.24	3.8	16.7	25	0.1
M-09-108 162.5-163.5	12	8	1-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	38	92	7.47	2.6	20.2	30	0.1
M-09-108 162.5-163.5	12	9	8-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	510	38	92	7.38	2.4	18.0	21	0.1
M-09-108 162.5-163.5	12	10	15-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	520	34	83	7.34	3.2	17.3	23	0.1
M-09-108 162.5-163.5	12	11	22-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	35	88	7.39	4.1	18.4	24	0.1
M-09-108 162.5-163.5	12	12	29-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	520	29	83	7.48	2.1	16.2	20	0.1
M-09-108 162.5-163.5	12	13	6-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	505	38	89	7.27	4.9	20.1	23	0.1
M-09-108 162.5-163.5	12	14	13-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	510	36	84	7.42	3.1	15.9	21	0.1
M-09-108 162.5-163.5	12	15	20-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	520	32	79	7.41	4.2	15.5	17	0.1
M-09-108 162.5-163.5	12	16	27-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	520	36	78	7.4	5.8	20.1	14	0.1
M-09-108 162.5-163.5	12	17	3-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	520	34	75	7.34	3.2	15.8	13	0.1
M-09-108 162.5-163.5	12	18	10-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	520	33	74	7.33	4.2	16.5	14	0.1
M-09-108 162.5-163.5	12	19	17-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	510	34	76	7.52	3.2	15.9	13	0.1
M-09-108 162.5-163.5	12	20	24-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	501	35	79	7.46	2.6	16.3	18	0.1
M-09-108 162.5-163.5	12	21	1-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	500	35	77	7.51	2.5	16.3	16	0.1
M-09-108 162.5-163.5	12	22	8-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	520	29	78	7.33	2.6	15.2	11	0.1
M-09-108 162.5-163.5	12	23	15-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	520	28	70	7.33	3.5	14.9	14	0.1
M-09-108 162.5-163.5	12	24	22-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	520	29	69	7.26	3.0	14.3	14	0.1
M-09-108 162.5-163.5	12	25	29-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	520	31	66	7.38	3.5	14.9	16	0.1
M-09-108 162.5-163.5	12	26	5-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	500	31	69	7.41	2.8	15.2	12	0.1
M-09-108 162.5-163.5	12	27	12-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	515	32	75	7.63	3.3	20.9	15	0.1
M-09-108 162.5-163.5	12	28	19-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	520	31	69	7.56	4.5	20.1	12	0.1
M-09-108 162.5-163.5	12	29	26-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	510	29	67	7.44	2.3	16.5	17	0.1
M-09-108 162.5-163.5	12	30	2-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	505	29	59	7.37	4.2	17.1	21	0.1
M-09-108 162.5-163.5	12	31	9-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	500	29	70	7.13	4.8	17.3	19	0.1
M-09-108 162.5-163.5	12	32	16-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	26	60	7.19	2.6	14.6	15	0.1
M-09-108 162.5-163.5	12	33	23-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	29	58	7.3	2.6	15.0	24	0.1
M-09-108 162.5-163.5	12	34	30-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	505	30	54	7.25	2.7	14.5	19	0.1
M-09-108 162.5-163.5	12	35	7-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	515	30	73	7.22	3.5	15.7	22	0.1
M-09-108 162.5-163.5	12	36	14-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	500	33	72	7.22	3.2	14.5	20	0.1
M-09-108 162.5-163.5	12	37	21-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	515	30	71	7.24	3.0	15.6	22	0.1
M-09-108 162.5-163.5	12	38	28-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	29	70	7.18	3.3	15.3	17	0.1
M-09-108 162.5-163.5	12	39	4-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	30	75	7.35	2.4	14.2	17	0.1
M-09-108 162.5-163.5	12	40	11-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	495	31	69	7.34	2.7	13.9	18	0.1
M-09-108 162.5-163.5	12	41	18-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	500	32	57	7.41	3.4	16.0	16	0.1
M-09-108 162.5-163.5	12	42	25-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	505	27	65	7.11	3.6	14.9	14	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-108 118.5-119.5	0.03	0.0343	0.0008	0.0006	0.0152	0.0000	0.0000	0.0008	0.00004	10.9000	0.0003	0.0000	0.0007	0.0015	0.00006	0.0005	0.5913	0.1033	0.0000050	0.0025
M-09-108 118.5-119.5	0.03	0.0345	0.0007	0.0006	0.0150	0.0000	0.0000	0.0005	0.00004	11.1000	0.0003	0.0000	0.0007	0.0015	0.00007	0.0005	0.6040	0.1040	0.0000050	0.0025
M-09-108 118.5-119.5	0.03	0.0376	0.0007	0.0005	0.0147	0.0000	0.0000	0.0007	0.00003	10.9750	0.0003	0.0000	0.0008	0.0015	0.00007	0.0005	0.5938	0.1021	0.0000113	0.0025
M-09-108 118.5-119.5	0.03	0.0408	0.0007	0.0005	0.0143	0.0000	0.0000	0.0010	0.00002	10.8500	0.0003	0.0000	0.0008	0.0015	0.00007	0.0005	0.5835	0.1002	0.0000175	0.0024
M-09-108 118.5-119.5	0.03	0.0439	0.0006	0.0004	0.0140	0.0000	0.0000	0.0012	0.00001	10.7250	0.0003	0.0001	0.0009	0.0015	0.00006	0.0005	0.5733	0.0983	0.0000238	0.0024
M-09-108 118.5-119.5	0.03	0.0470	0.0006	0.0003	0.0136	0.0000	0.0000	0.0014	0.00000	10.6000	0.0003	0.0001	0.0009	0.0015	0.00006	0.0005	0.5630	0.0964	0.0000300	0.0024
M-09-108 118.5-119.5	0.03	0.0470	0.0006	0.0003	0.0136	0.0000	0.0000	0.0014	0.00000	10.6000	0.0003	0.0001	0.0009	0.0015	0.00006	0.0005	0.5630	0.0964	0.0000300	0.0024
M-09-108 118.5-119.5	0.03	0.0470	0.0006	0.0003	0.0136	0.0000	0.0000	0.0014	0.00000	10.6000	0.0003	0.0001	0.0009	0.0015	0.00006	0.0005	0.5630	0.0964	0.0000300	0.0024
M-09-108 118.5-119.5	0.03	0.0338	0.0007	0.0004	0.0136	0.0000	0.0000	0.0016	0.00000	10.9000	0.0003	0.0000	0.0008	0.0015	0.00008	0.0005	0.5878	0.0963	0.0000113	0.0022
M-09-108 118.5-119.5	0.03	0.0294	0.0007	0.0004	0.0136	0.0000	0.0000	0.0017	0.00000	11.0000	0.0003	0.0000	0.0007	0.0015	0.00008	0.0005	0.5960	0.0962	0.0000050	0.0022
M-09-108 118.5-119.5	0.03	0.0355	0.0007	0.0004	0.0134	0.0000	0.0000	0.0017	0.00000	11.0250	0.0003	0.0000	0.0008	0.0015	0.00007	0.0005	0.6020	0.0948	0.0000050	0.0022
M-09-108 118.5-119.5	0.03	0.0416	0.0007	0.0004	0.0133	0.0000	0.0000	0.0017	0.00000	11.0500	0.0003	0.0000	0.0009	0.0015	0.00006	0.0005	0.6080	0.0934	0.0000050	0.0022
M-09-108 118.5-119.5	0.03	0.0476	0.0006	0.0004	0.0131	0.0000	0.0000	0.0016	0.00000	11.0750	0.0003	0.0000	0.0010	0.0015	0.00004	0.0005	0.6140	0.0920	0.0000050	0.0023
M-09-108 118.5-119.5	0.03	0.0537	0.0006	0.0004	0.0129	0.0000	0.0000	0.0016	0.00000	11.1000	0.0003	0.0000	0.0011	0.0015	0.00003	0.0005	0.6200	0.0906	0.0000050	0.0023
M-09-108 118.5-119.5	0.03	0.0560	0.0006	0.0004	0.0130	0.0000	0.0000	0.0018	0.00001	11.0750	0.0003	0.0000	0.0010	0.0015	0.00004	0.0005	0.6213	0.0906	0.0000188	0.0023
M-09-108 118.5-119.5	0.03	0.0583	0.0006	0.0004	0.0132	0.0000	0.0000	0.0021	0.00001	11.0500	0.0003	0.0000	0.0010	0.0015	0.00004	0.0005	0.6225	0.0906	0.0000325	0.0023
M-09-108 118.5-119.5	0.03	0.0606	0.0006	0.0003	0.0133	0.0000	0.0000	0.0023	0.00002	11.0250	0.0003	0.0000	0.0009	0.0015	0.00005	0.0005	0.6238	0.0905	0.0000463	0.0022
M-09-108 118.5-119.5	0.03	0.0629	0.0006	0.0003	0.0134	0.0000	0.0000	0.0025	0.00002	11.0000	0.0003	0.0000	0.0008	0.0015	0.00005	0.0005	0.6250	0.0905	0.0000600	0.0022
M-09-108 118.5-119.5	0.03	0.0612	0.0006	0.0003	0.0132	0.0000	0.0000	0.0022	0.00002	10.7500	0.0003	0.0000	0.0007	0.0015	0.00004	0.0005	0.6215	0.0886	0.0000475	0.0022
M-09-108 118.5-119.5	0.03	0.0595	0.0006	0.0003	0.0130	0.0000	0.0000	0.0020	0.00001	10.5000	0.0003	0.0000	0.0005	0.0015	0.00004	0.0005	0.6180	0.0868	0.0000350	0.0021
M-09-108 118.5-119.5	0.03	0.0578	0.0006	0.0003	0.0127	0.0000	0.0000	0.0017	0.00001	10.2500	0.0003	0.0000	0.0004	0.0015	0.00003	0.0005	0.6145	0.0849	0.0000225	0.0021
M-09-108 118.5-119.5	0.03	0.0561	0.0006	0.0003	0.0125	0.0000	0.0000	0.0014	0.00000	10.0000	0.0003	0.0000	0.0003	0.0015	0.00002	0.0005	0.6110	0.0830	0.0000100	0.0020
	0.03	0.0574	0.0006	0.0003	0.0130	0.0000	0.0000	0.0019	0.00001	10.7825	0.0003	0.0000	0.0008	0.0015	0.00004	0.0005	0.6192	0.0888	0.0000283	0.0022
HC12 LP Hazelton																				
M-09-108 162.5-163.5	0.58	0.0731	0.0023	0.0022	0.0526	0.0000	0.0000	0.0070	0.00002	30.8000	0.0003	0.0001	0.0020	0.0050	0.00005	0.0050	2.4200	0.0720	0.0000050	0.0210
M-09-108 162.5-163.5	0.55	0.0767	0.0034	0.0022	0.0571	0.0000	0.0000	0.0070	0.00006	29.5000	0.0003	0.0001	0.0012	0.0050	0.00007	0.0040	2.5500	0.1010	0.0000050	0.0207
M-09-108 162.5-163.5	0.45	0.1220	0.0031	0.0018	0.0609	0.0000	0.0000	0.0077	0.00001	22.7000	0.0003	0.0001	0.0014	0.0050	0.00004	0.0050	1.8200	0.0940	0.0000050	0.0145
M-09-108 162.5-163.5	0.35	0.0873	0.0029	0.0015	0.0552	0.0000	0.0000	0.0056	0.00005	18.8000	0.0003	0.0001	0.0009	0.0050	0.00006	0.0030	1.5200	0.0930	0.0000050	0.0132
M-09-108 162.5-163.5	0.31	0.0964	0.0029	0.0014	0.0612	0.0000	0.0000	0.0060	0.00001	17.0000	0.0003	0.0000	0.0010	0.0050	0.00005	0.0030	1.3400	0.0970	0.0000050	0.0142
M-09-108 162.5-163.5	0.26	0.0932	0.0026	0.0014	0.0694	0.0000	0.0000	0.0050	0.00001	15.3000	0.0003	0.0001	0.0011	0.0050	0.00011	0.0030	1.1400	0.1010	0.0000050	0.0123
M-09-108 162.5-163.5	0.18	0.1030	0.0021	0.0011	0.0680	0.0000	0.0000	0.0040	0.00006	13.8000	0.0003	0.0000	0.0007	0.0050	0.00005	0.0020	1.0000	0.1020	0.0000050	0.0112
M-09-108 162.5-163.5	0.18	0.0775	0.0027	0.0011	0.0692	0.0000	0.0000	0.0040	0.00000	15.3000	0.0003	0.0000	0.0008	0.0050	0.00005	0.0020	1.0500	0.1240	0.0000050	0.0143
M-09-108 162.5-163.5	0.14	0.0864	0.0021	0.0010	0.0727	0.0000	0.0000	0.0040	0.00002	13.8000	0.0006	0.0000	0.0012	0.0050	0.00009	0.0020	0.9460	0.1180	0.0000050	0.0138
M-09-108 162.5-163.5	0.12	0.0735	0.0025	0.0010	0.0685	0.0000	0.0000	0.0050	0.00003	13.6000	0.0003	0.0000	0.0011	0.0050	0.00011	0.0020	0.8770	0.1300	0.0000100	0.0136
M-09-108 162.5-163.5	0.10	0.0956	0.0019	0.0012	0.0814	0.0000	0.0000	0.0040	0.00002	12.3000	0.0005	0.0000	0.0018	0.0050	0.00037	0.0020	0.7220	0.1170	0.0000050	0.0117
M-09-108 162.5-163.5	0.09	0.0672	0.0017	0.0010	0.0667	0.0000	0.0000	0.0030	0.00002	12.9000	0.0007	0.0001	0.0014	0.0050	0.00008	0.0020	0.7640	0.1250	0.0000050	0.0146
M-09-108 162.5-163.5	0.71	0.0676	0.0018	0.0008	0.0717	0.0000	0.0000	0.0040	0.00002	10.6000	0.0006	0.0000	0.0017	0.0050	0.00129	0.0010	0.6070	0.1110	0.0000050	0.0149
M-09-108 162.5-163.5	0.08	0.0568	0.0020	0.0009	0.0601	0.0000	0.0000	0.0030	0.00002	14.0000	0.0006	0.0001	0.0018	0.0050	0.00188	0.0020	0.8040	0.1660	0.0000050	0.0153
M-09-108 162.5-163.5	0.67	0.0705	0.0018	0.0007	0.0572	0.0000	0.0000	0.0029	0.00002	13.2000	0.0007	0.0001	0.0026	0.0040	0.00040	0.0020	0.6820	0.1260	0.0000050	0.0170
M-09-108 162.5-163.5	0.06	0.0500	0.0017	0.0008	0.0557	0.0000	0.0000	0.0032	0.00004	11.9000	0.0003	0.0001	0.0012	0.0010	0.00005	0.0020	0.6070	0.1250	0.0000050	0.0183
M-09-108 162.5-163.5	0.06	0.0420	0.0017	0.0007	0.0556	0.0000	0.0000	0.0038	0.00002	13.4000	0.0003	0.0001	0.0012	0.0010	0.00004	0.0020	0.6740	0.1580	0.0000050	0.0176
M-09-108 162.5-163.5	0.03	0.0496	0.0016	0.0008	0.0589	0.0000	0.0000	0.0035	0.00001	12.5000	0.0003	0.0000	0.0010	0.0010	0.00001	0.0010	0.6060	0.1430	0.0000050	0.0175
M-09-108 162.5-163.5	0.03	0.0476	0.0015	0.0006	0.0540	0.0000	0.0000	0.0036	0.00010	12.4000	0.0003	0.0001	0.0013	0.0010	0.00005	0.0010	0.5800	0.1510	0.0000050	0.0185
M-09-108 162.5-163.5	0.03	0.0489	0.0021	0.0007	0.0578	0.0000	0.0000	0.0026	0.00013	12.5000	0.0003	0.0001	0.0016	0.0010	0.00007	0.0010	0.5900	0.1480	0.0000050	0.0184
M-09-108 162.5-163.5	0.03	0.0379	0.0019	0.0004	0.0554	0.0000	0.0000	0.0043	0.00008	13.2000	0.0003	0.0001	0.0016	0.0010	0.00004	0.0010	0.5950	0.1710	0.0000050	0.0218
M-09-108 162.5-163.5	0.03	0.0397	0.0017	0.0007	0.0568	0.0000	0.0000	0.0023	0.00003	13.2000	0.0003	0.0001	0.0013	0.0010	0.00004	0.0010	0.5810	0.1820	0.0000050	0.0203
M-09-108 162.5-163.5	0.03	0.0477	0.0016	0.0006	0.0594	0.0000	0.0000	0.0037	0.00003	10.7000	0.0007	0.0001	0.0022	0.0030	0.00007	0.0020	0.5540	0.1640	0.0000050	0.0218
M-09-108 162.5-163.5	0.03	0.0402	0.0012	0.0006	0.0585	0.0000	0.0000	0.0053	0.00007	10.6000	0.0006	0.0001	0.0016	0.0010	0.00006	0.0010	0.4560	0.1510	0.0000050	0.0194
M-09-108 162.5-163.5	0.03	0.0326	0.0012	0.0005	0.0501	0.0000	0.0000	0.0034	0.00009	10.8000	0.0003	0.0001	0.0018	0.0010	0.00008	0.0010	0.4560	0.1600	0.0000050	0.0192
M-09-108 162.5-163.5	0.03	0.0353	0.0012	0.0001	0.0561	0.0000	0.0000	0.0032	0.00002	11.6000	0.0005	0.0001	0.0016	0.0010	0.00001	0.0010	0.4530	0.1560	0.0000050	0.0193
M-09-108 162.5-163.5	0.03	0.0420	0.0012	0.0005	0.0568	0.0000	0.0000	0.0021	0.00002	11.8000	0.0003	0.0001	0.0018	0.0010	0.00013	0.0020	0.4510	0.1820	0.0000050	0.0199
M-09-108 162.5-163.5	0.03	0.0662	0.0015	0.0005	0.0720	0.0000	0.0000	0.0029	0.00003	12.0000	0.0007	0.0000	0.0014	0.0010	0.00002	0.0010	0.4490	0.1730	0.0000050	0.0228
M-09-108 162.5-163.5	0.03	0.0524	0.0014	0.0004	0.0682	0.0000	0.0000	0.0031	0.00003	11.8000	0.0003	0.0001	0.0024	0.0010	0.00010	0.0020	0.4140	0.1480	0.0000050	0.0232
M-09-108 162.5-163.5	0.03	0.0424	0.0013	0.0004	0.0629	0.0000	0.0000	0.0023	0.00006	11.1000	0.0008	0.0001	0.0017	0.0010	0.00009	0.0010	0.3760	0.1560	0.0000050	0.0238
M-09-108 162.5-163.5	0.03	0.0373	0.0009	0.0004	0.0526	0.0000	0.0000	0.0025	0.00005	11.1000	0.0005	0.0001	0.0024	0.0010	0.00008	0.0010	0.3750	0.1600	0.0000050	0.0220
M-09-108 162.5-163.5	0.03	0.0384	0.0011	0.0004	0.0466	0.0000	0.0000	0.0025	0.00003	11.1000	0.0007	0.0001	0.0019	0.0010	0.00015	0.0010	0.3590	0.1790	0.0000050	0.0236
M-09-108 162.5-163.5	0.03	0.0604	0.0011	0.0005	0.0560	0.0000	0.0000	0.0016	0.00002	9.9400	0.0003	0.0000	0.0018	0.0030	0.00005	0.0010	0.3360	0.1280	0.0000050	0.0213
M-09-108 162.5-163.5	0.03	0.0393	0.0012	0.0005	0.0548	0.0000	0.0000	0.0026	0.00003	11.2000	0.0003	0.0001	0.0021	0.0020	0.00004	0.0020	0.3590	0.1610	0.0000050	0.0236
M-09-108 162.5-163.5	0.03	0.0389	0.0012	0.0005	0.0492	0.0000	0.0000	0.0040	0.00002	11.3000	0.0003	0.0001	0.0024	0.0010	0.00004	0.0020	0.3550	0.1730	0.0000050	0.0260
M-09-108 162.5-163.5	0.03	0.0378	0.0013	0.0004	0.0450	0.0000	0.0000	0.0038	0.00011	11.6000	0.0008	0.0001	0.0024	0.0010	0.00011	0.0005	0.3440	0.1740	0.0000050	0.0281
M-09-108 162.5-163.5	0.03	0.0374	0.0012	0.0004	0.0482	0.0000	0.0000	0.0032	0.00005	12.7000	0.0003	0.0001	0.0029	0.0010	0.00012	0.0010	0.3950	0.2080	0.0000050	0.0280
M-09-108 162.5-163.5	0.03	0.0394	0.0013	0.0002	0.0469	0.0000	0.0000	0.0036	0.00004	11.5000	0.0003	0.0001	0.0020	0.0030	0.00003	0.0010	0.3260	0.1800	0.0000050	0.0275
M-09-108 162.5-163.5	0.03	0.0351	0.0008	0.0003	0.0505	0.0000	0.0000	0.0024	0.00003	11.0000	0.0003	0.0001	0.0018	0.0010	0.00004	0.0020	0.3130	0.1830	0.0000050	0.0262
M-09-108 162.5-163.5	0.03	0.0406	0.0007	0.0005	0.0542	0.0000	0.0000	0.0024	0.00003	11.4000	0.0003	0.0001	0.0016	0.0020	0.00059	0.0010	0.3160	0.1940	0.0000600	0.0267
M-09-108 162.5-163.5	0.03	0.0358	0.0009	0.0004	0.0369	0.0000	0.0000	0.0019	0.00004	11.7000	0.0003	0.0001	0.0018	0.0010	0.00063	0.0010	0.3240	0.1850	0.0000050	0.0286
M-09-108 162.5-163.5	0.03	0.0312	0.0010	0.0002	0.0476	0.0000	0.0000	0.0041	0.00004	12.4000	0.0003	0.0001	0.0016	0.0010	0.00002	0.0020	0.3350	0.2110	0.0000050	0.0284
M-09-108 162.5-163.5	0.03	0.0258	0.0009	0.0004	0.0396	0.0000	0.0000	0.0020	0.00003	10.5000	0.0007	0.0001	0.0026	0.0010	0.00018	0.0010	0.2620	0.1980	0.0000050	0.0227

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-108 118.5-119.5	0.0002	0.0045	0.2315	0.0006	0.3675	0.00002	0.1000	0.0872	6.0675	0.0000	0.0000	0.0001	0.0012	0.0003	0.0028	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.2330	0.0005	0.3800	0.00002	0.1000	0.0884	6.1600	0.0000	0.0000	0.0001	0.0013	0.0003	0.0030	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.2258	0.0005	0.3625	0.00002	0.0950	0.0857	6.2125	0.0000	0.0000	0.0001	0.0012	0.0003	0.0028	0.0000
M-09-108 118.5-119.5	0.0003	0.0045	0.2185	0.0005	0.3450	0.00003	0.0900	0.0830	6.2650	0.0000	0.0001	0.0002	0.0011	0.0003	0.0025	0.0000
M-09-108 118.5-119.5	0.0003	0.0045	0.2113	0.0005	0.3275	0.00003	0.0850	0.0802	6.3175	0.0000	0.0001	0.0002	0.0010	0.0004	0.0023	0.0000
M-09-108 118.5-119.5	0.0003	0.0045	0.2040	0.0004	0.3100	0.00003	0.0800	0.0775	6.3700	0.0000	0.0001	0.0002	0.0009	0.0004	0.0020	0.0000
M-09-108 118.5-119.5	0.0003	0.0045	0.2040	0.0004	0.3100	0.00003	0.0800	0.0775	6.3700	0.0000	0.0001	0.0002	0.0009	0.0004	0.0020	0.0000
M-09-108 118.5-119.5	0.0003	0.0045	0.2040	0.0004	0.3100	0.00003	0.0800	0.0775	6.3700	0.0000	0.0001	0.0002	0.0009	0.0004	0.0020	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.2040	0.0004	0.3250	0.00002	0.0725	0.0771	6.4450	0.0000	0.0002	0.0001	0.0008	0.0003	0.0009	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.2040	0.0004	0.3300	0.00002	0.0700	0.0769	6.4700	0.0000	0.0002	0.0001	0.0008	0.0002	0.0005	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.2040	0.0005	0.3350	0.00002	0.0775	0.0768	6.5550	0.0000	0.0002	0.0001	0.0008	0.0003	0.0009	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.2040	0.0005	0.3400	0.00002	0.0850	0.0767	6.6400	0.0000	0.0002	0.0001	0.0008	0.0003	0.0013	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.2040	0.0005	0.3450	0.00002	0.0925	0.0765	6.7250	0.0000	0.0002	0.0001	0.0007	0.0003	0.0016	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.2040	0.0006	0.3500	0.00002	0.1000	0.0764	6.8100	0.0000	0.0002	0.0001	0.0007	0.0004	0.0020	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.2050	0.0006	0.3400	0.00002	0.0950	0.0763	6.9300	0.0000	0.0002	0.0001	0.0007	0.0004	0.0025	0.0000
M-09-108 118.5-119.5	0.0002	0.0045	0.2060	0.0005	0.3300	0.00002	0.0900	0.0762	7.0500	0.0000	0.0002	0.0001	0.0007	0.0004	0.0030	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.2070	0.0005	0.3200	0.00002	0.0850	0.0760	7.1700	0.0000	0.0002	0.0001	0.0006	0.0004	0.0035	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.2080	0.0005	0.3100	0.00002	0.0800	0.0759	7.2900	0.0000	0.0002	0.0001	0.0006	0.0004	0.0040	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.2020	0.0005	0.3050	0.00002	0.0775	0.0740	7.0950	0.0000	0.0001	0.0001	0.0006	0.0004	0.0035	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.1960	0.0005	0.3000	0.00002	0.0750	0.0720	6.9000	0.0000	0.0001	0.0001	0.0006	0.0004	0.0030	0.0000
M-09-108 118.5-119.5	0.0001	0.0045	0.1900	0.0005	0.2950	0.00002	0.0725	0.0701	6.7050	0.0000	0.0001	0.0001	0.0006	0.0004	0.0025	0.0001
M-09-108 118.5-119.5	0.0001	0.0045	0.1840	0.0005	0.2900	0.00002	0.0700	0.0681	6.5100	0.0000	0.0000	0.0001	0.0006	0.0004	0.0020	0.0001
	0.0001	0.0045	0.2006	0.0005	0.3185	0.00002	0.0838	0.0741	6.9185	0.0000	0.0001	0.0001	0.0006	0.0004	0.0028	0.0000
HC12 LP Hazelton																
M-09-108 162.5-163.5	0.0004	0.0050	20.2000	0.0050	1.3200	0.00001	5.4400	0.5100	33.3000	0.0001	0.0002	0.0002	0.0006	0.0008	0.0005	0.0000
M-09-108 162.5-163.5	0.0002	0.0050	15.1000	0.0066	1.6700	0.00002	3.7200	0.4670	33.6000	0.0001	0.0000	0.0002	0.0036	0.0008	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0050	9.9300	0.0023	1.4700	0.00001	1.7700	0.3550	19.3000	0.0001	0.0001	0.0003	0.0024	0.0008	0.0005	0.0000
M-09-108 162.5-163.5	0.0004	0.0050	7.9400	0.0021	1.2600	0.00001	1.0900	0.2800	15.2000	0.0001	0.0001	0.0002	0.0029	0.0007	0.0005	0.0000
M-09-108 162.5-163.5	0.0003	0.0050	6.3900	0.0017	1.2700	0.00001	0.7900	0.2460	12.8000	0.0001	0.0001	0.0002	0.0028	0.0007	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0050	5.1600	0.0014	1.3000	0.00001	0.5200	0.2170	11.3000	0.0001	0.0003	0.0002	0.0020	0.0007	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0050	3.8000	0.0011	1.1500	0.00006	0.3700	0.1860	9.8800	0.0001	0.0001	0.0002	0.0016	0.0005	0.0005	0.0243
M-09-108 162.5-163.5	0.0001	0.0050	3.8000	0.0012	1.2600	0.00001	0.3700	0.1950	9.9600	0.0001	0.0000	0.0001	0.0022	0.0005	0.0005	0.0000
M-09-108 162.5-163.5	0.0003	0.0050	3.1700	0.0010	1.1400	0.00001	0.3400	0.1750	9.4700	0.0001	0.0003	0.0002	0.0021	0.0006	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0050	2.6000	0.0011	1.1000	0.00001	0.3300	0.1690	8.4800	0.0001	0.0003	0.0001	0.0023	0.0005	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0050	2.3500	0.0011	1.0200	0.00001	0.2500	0.1560	7.6800	0.0001	0.0003	0.0001	0.0015	0.0005	0.0005	0.0000
M-09-108 162.5-163.5	0.0004	0.0050	2.2800	0.0011	1.0800	0.00001	0.2600	0.1520	7.8500	0.0001	0.0002	0.0002	0.0019	0.0005	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0050	2.0300	0.0009	1.1000	0.00001	0.1900	0.1230	6.6300	0.0001	0.0003	0.0002	0.0020	0.0005	0.0005	0.0000
M-09-108 162.5-163.5	0.0002	0.0050	2.1600	0.0016	1.1800	0.00001	0.1900	0.1550	8.7300	0.0001	0.0003	0.0001	0.0022	0.0005	0.0010	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	1.7700	0.0009	1.1000	0.00001	0.1900	0.1440	7.4800	0.0001	0.0004	0.0002	0.0017	0.0005	0.0020	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	1.4600	0.0009	0.8800	0.00001	0.1600	0.1270	7.6900	0.0001	0.0002	0.0001	0.0018	0.0004	0.0010	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	1.4700	0.0008	0.9800	0.00001	0.1800	0.1400	8.3200	0.0001	0.0001	0.0001	0.0017	0.0003	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	1.3100	0.0008	0.9600	0.00001	0.1600	0.1290	7.9200	0.0001	0.0002	0.0001	0.0016	0.0003	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	1.2200	0.0008	0.8600	0.00003	0.1700	0.1240	7.5100	0.0001	0.0002	0.0002	0.0014	0.0003	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	1.2200	0.0012	0.8800	0.00001	0.1700	0.1250	7.8000	0.0001	0.0002	0.0001	0.0016	0.0003	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	1.2800	0.0006	0.9200	0.00001	0.1700	0.1280	7.8300	0.0001	0.0001	0.0002	0.0015	0.0003	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	1.1200	0.0009	0.8400	0.00001	0.1000	0.1230	7.8100	0.0001	0.0001	0.0001	0.0014	0.0003	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0230	1.1300	0.0005	0.9000	0.00001	0.1700	0.1300	7.6100	0.0001	0.0002	0.0002	0.0014	0.0003	0.0005	0.0000
M-09-108 162.5-163.5	0.0003	0.0045	0.9150	0.0008	0.7700	0.00001	0.1400	0.0847	5.7200	0.0001	0.0002	0.0001	0.0012	0.0002	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.9340	0.0008	0.7900	0.00001	0.1300	0.1130	5.8800	0.0001	0.0002	0.0001	0.0011	0.0002	0.0010	0.0000
M-09-108 162.5-163.5	0.0001	0.0100	0.9130	0.0007	0.7800	0.00001	0.1500	0.1110	6.5400	0.0001	0.0001	0.0001	0.0009	0.0002	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.9100	0.0007	0.7700	0.00001	0.1100	0.1100	6.3400	0.0001	0.0001	0.0001	0.0011	0.0002	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0100	0.8780	0.0009	0.7700	0.00001	0.1300	0.1230	7.1600	0.0001	0.0000	0.0001	0.0010	0.0003	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.8840	0.0010	0.8400	0.00001	0.1100	0.1180	6.9100	0.0001	0.0001	0.0001	0.0009	0.0003	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.8100	0.0008	0.7600	0.00001	0.1100	0.1070	6.2200	0.0001	0.0008	0.0001	0.0009	0.0002	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.7620	0.0010	0.7500	0.00001	0.1000	0.1030	6.3200	0.0001	0.0001	0.0002	0.0009	0.0002	0.0020	0.0000
M-09-108 162.5-163.5	0.0002	0.0045	0.7680	0.0001	0.7500	0.00001	0.1500	0.0991	6.1200	0.0001	0.0001	0.0002	0.0008	0.0002	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.7820	0.0009	0.7200	0.00001	0.1300	0.0946	5.9900	0.0001	0.0002	0.0002	0.0006	0.0002	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.7940	0.0008	0.7400	0.00001	0.1300	0.0975	6.4200	0.0001	0.0001	0.0001	0.0006	0.0001	0.0020	0.0000
M-09-108 162.5-163.5	0.0004	0.0045	0.7510	0.0006	0.7400	0.00001	0.1400	0.0984	7.1000	0.0001	0.0007	0.0001	0.0006	0.0002	0.0005	0.0000
M-09-108 162.5-163.5	0.0006	0.0045	0.7280	0.0006	0.7200	0.00001	0.1300	0.0994	7.3700	0.0001	0.0004	0.0002	0.0006	0.0001	0.0010	0.0000
M-09-108 162.5-163.5	0.0004	0.0045	0.7280	0.0006	0.7500	0.00001	0.1500	0.1070	7.0400	0.0001	0.0008	0.0001	0.0006	0.0002	0.0005	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.6880	0.0006	0.6800	0.00001	0.1200	0.0998	6.9400	0.0001	0.0001	0.0001	0.0006	0.0002	0.0040	0.0002
M-09-108 162.5-163.5	0.0003	0.0190	0.6280	0.0003	0.6400	0.00001	0.1100	0.0933	6.8300	0.0001	0.0000	0.0002	0.0006	0.0002	0.0020	0.0000
M-09-108 162.5-163.5	0.0008	0.0045	0.6450	0.0006	0.6400	0.00001	0.1400	0.0952	6.3400	0.0001	0.0001	0.0001	0.0005	0.0000	0.0030	0.0000
M-09-108 162.5-163.5	0.0001	0.0230	0.6380	0.0002	0.5600	0.00001	0.1400	0.0964	6.2700	0.0001	0.0002	0.0002	0.0006	0.0001	0.0020	0.0000
M-09-108 162.5-163.5	0.0002	0.0130	0.6410	0.0003	0.6600	0.00001	0.1200	0.1050	6.8900	0.0001	0.0001	0.0001	0.0006	0.0001	0.0020	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.5290	0.0007	0.5300	0.00001	0.0900	0.0899	5.1600	0.0001	0.0002	0.0002	0.0006	0.0001	0.0070	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-108 162.5-163.5	12	43	2-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	510	31	61	7.28	3.3	14.1	13	0.1
M-09-108 162.5-163.5	12	44	9-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	495	27	62	7.27	3.7	13.6	13	0.1
M-09-108 162.5-163.5	12	45	16-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	32	66	7.2	4.3	14.5	21	0.1
M-09-108 162.5-163.5	12	46	23-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	495	30	65	7.44	5.0	16.4	17	0.1
M-09-108 162.5-163.5	12	47	30-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	505	30	60	7.38	5.3	16.2	17	0.1
M-09-108 162.5-163.5	12	48	6-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	475	30	51	7.34	4.4	15.8	15	0.1
M-09-108 162.5-163.5	12	49	13-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	520	30	53	7.37	3.5	15.4	13	0.1
M-09-108 162.5-163.5	12	50	20-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	520	28	56	7.16	4.0	14.7	13	0.1
M-09-108 162.5-163.5	12	51	27-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	500	27	52	7.34	4.4	13.9	13	0.1
M-09-108 162.5-163.5	12	52	3-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	495	26	49	7.2	3.5	13.3	13	0.1
M-09-108 162.5-163.5	12	53	10-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	26	49	7.31	2.6	12.6	13	0.1
M-09-108 162.5-163.5	12	54	17-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	475	27	54	7.24	3.2	12.4	17	0.1
M-09-108 162.5-163.5	12	55	24-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	440	28	63	7.27	3.8	12.1	20	0.1
M-09-108 162.5-163.5	12	56	3-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	495	26	56	7.11	3.3	12.8	19	0.1
M-09-108 162.5-163.5	12	57	10-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	24	59	7.31	2.8	13.5	17	0.1
M-09-108 162.5-163.5	12	58	17-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	24	62	7.26	3.1	14.6	15	0.1
M-09-108 162.5-163.5	12	59	24-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	23	73	7.22	3.5	15.7	12	0.1
M-09-108 162.5-163.5	12	60	31-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	510	23	54	7.48	3.9	14.9	12	0.1
M-09-108 162.5-163.5	12	61	7-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	505	23	55	7.49	4.3	14.1	11	0.1
M-09-108 162.5-163.5	12	62	14-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	460	24	55	7.65	3.2	13.4	12	0.1
M-09-108 162.5-163.5	12	63	21-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	25	62	7.29	2.1	12.6	13	0.1
M-09-108 162.5-163.5	12	64	28-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	505	23	45	7.5	2.5	11.8	13	0.1
M-09-108 162.5-163.5	12	65	5-May-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	520	21	51	7.22	2.9	11.1	12	0.1
M-09-108 162.5-163.5	12	66	12-May-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	22	52	7.33	2.9	14.1	13	0.1
M-09-108 162.5-163.5	12	67	19-May-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	24	65	7.91	2.8	17.0	13	0.1
M-09-108 162.5-163.5	12	68	26-May-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	23	65	7.48	3.8	14.2	12	0.1
M-09-108 162.5-163.5	12	69	2-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	475	22	55	7.4	4.7	11.5	11	0.1
M-09-108 162.5-163.5	12	70	9-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	22	59	7.14	4.3	11.4	12	0.1
M-09-108 162.5-163.5	12	71	16-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	23	57	7.44	4.0	11.4	12	0.1
M-09-108 162.5-163.5	12	72	23-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	24	59	7.29	4.0	11.7	14	0.1
M-09-108 162.5-163.5	12	73	30-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	26	61	7.3	4.1	12.1	16	0.1
M-09-108 162.5-163.5	12	74	7-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	475	29	67	7.27	4.3	11.8	18	0.1
M-09-108 162.5-163.5	12	75	14-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	31	68	7.4	4.6	11.5	19	0.1
M-09-108 162.5-163.5	12	76	21-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	28	64	7.37	4.2	11.0	19	0.1
M-09-108 162.5-163.5	12	77	28-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	26	66	7.54	3.8	10.4	19	0.1
M-09-108 162.5-163.5	12	78	4-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	475	27	66	7.18	3.7	11.0	17	0.1
M-09-108 162.5-163.5	12	79	11-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	29	62	7.54	3.7	11.5	15	0.1
M-09-108 162.5-163.5	12	80	18-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	29	66	7.45	4.1	12.4	16	0.1
M-09-108 162.5-163.5	12	81	25-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	500	29	66	7.39	4.6	13.3	16	0.1
M-09-108 162.5-163.5	12	82	1-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	29	70	7.67	4.2	12.9	19	0.1
M-09-108 162.5-163.5	12	83	8-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	500	28	65	7.45	3.8	12.5	21	0.1
M-09-108 162.5-163.5	12	84	15-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	29	67	7.36	3.7	12.5	20	0.1
M-09-108 162.5-163.5	12	85	22-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	30	65	7.12	3.7	12.5	19	0.1
M-09-108 162.5-163.5	12	86	29-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	505	28	66	7.23	4.3	11.9	19	0.1
M-09-108 162.5-163.5	12	87	6-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	26	61	7.29	4.9	11.3	18	0.1
M-09-108 162.5-163.5	12	88	13-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	27	64	7.59	4.4	10.8	19	0.1
M-09-108 162.5-163.5	12	89	20-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	460	28	63	7.29	4.0	10.4	20	0.1
M-09-108 162.5-163.5	12	90	27-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	430	28	61	7.33	4.5	10.4	20	0.1
M-09-108 162.5-163.5	12	91	3-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	27	62	7.51	5.1	10.4	20	0.1
M-09-108 162.5-163.5	12	92	10-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	460	27	57	7.55	4.3	9.9	18	0.6
M-09-108 162.5-163.5	12	93	17-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	450	26	60	7.31	3.6	9.4	15	1.0
M-09-108 162.5-163.5	12	94	24-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	25	54	7.39	4.3	9.9	14	0.6
M-09-108 162.5-163.5	12	95	1-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	460	23	54	7.35	5.0	10.4	13	0.1
M-09-108 162.5-163.5	12	96	8-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	24	54	7.25	4.9	10.6	14	0.1
M-09-108 162.5-163.5	12	97	15-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	24	57	7.39	4.9	10.7	15	0.1
M-09-108 162.5-163.5	12	98	22-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	460	24	57	7.42	4.5	10.7	15	0.1
M-09-108 162.5-163.5	12	99	29-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	460	24	59	7.19	4.2	10.7	14	0.1
M-09-108 162.5-163.5	12	100	5-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	460	24	54	7.11	3.9	10.7	14	0.1
M-09-108 162.5-163.5	12	101	12-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	24	57	7.26	3.6	10.7	13	0.1
M-09-108 162.5-163.5	12	102	19-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	475	24	59	7.37	4.3	10.9	15	0.1
M-09-108 162.5-163.5	12	103	26-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	25	55	7.16	4.9	11.1	16	0.1
M-09-108 162.5-163.5	12	104	2-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	25	61	7.39	5.6	11.2	18	0.1
M-09-108 162.5-163.5	12	105	9-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	475	25	64	7.57	6.3	11.4	19	0.1
M-09-108 162.5-163.5	12	106	16-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	460	25	63	7.5	6.1	10.9	19	0.1
M-09-108 162.5-163.5	12	107	23-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	25	58	7.21	6.0	10.5	19	0.1
M-09-108 162.5-163.5	12	108	1-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	25	55	7.09	5.9	10.0	18	0.1
M-09-108 162.5-163.5	12	109	8-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	450	25	59	7.38	5.8	9.5	18	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-108 162.5-163.5	0.03	0.0353	0.0009	0.0003	0.0434	0.0000	0.0000	0.0021	0.00003	12.1000	0.0007	0.0001	0.0026	0.0010	0.00183	0.0020	0.2970	0.2020	0.0000050	0.0228
M-09-108 162.5-163.5	0.03	0.0314	0.0010	0.0003	0.0453	0.0000	0.0000	0.0023	0.00003	10.3000	0.0009	0.0001	0.0031	0.0010	0.00181	0.0005	0.2550	0.1760	0.0000050	0.0244
M-09-108 162.5-163.5	0.03	0.0305	0.0009	0.0003	0.0416	0.0000	0.0000	0.0026	0.00000	12.2000	0.0003	0.0001	0.0032	0.0010	0.00006	0.0010	0.3020	0.1980	0.0000050	0.0256
M-09-108 162.5-163.5	0.03	0.0321	0.0009	0.0003	0.0450	0.0000	0.0000	0.0031	0.00009	11.7000	0.0003	0.0001	0.0021	0.0010	0.00067	0.0005	0.2730	0.2110	0.0000050	0.0231
M-09-108 162.5-163.5	0.03	0.0468	0.0008	0.0004	0.0515	0.0000	0.0000	0.0021	0.00003	11.4000	0.0003	0.0001	0.0020	0.0010	0.00078	0.0005	0.2650	0.1910	0.0000050	0.0235
M-09-108 162.5-163.5	0.03	0.0406	0.0008	0.0005	0.0580	0.0000	0.0000	0.0029	0.00003	11.4500	0.0003	0.0001	0.0019	0.0010	0.00041	0.0005	0.2525	0.2120	0.0000050	0.0214
M-09-108 162.5-163.5	0.03	0.0343	0.0007	0.0005	0.0645	0.0000	0.0000	0.0036	0.00003	11.5000	0.0003	0.0001	0.0017	0.0010	0.00004	0.0005	0.2400	0.2330	0.0000050	0.0192
M-09-108 162.5-163.5	0.03	0.0312	0.0008	0.0004	0.0540	0.0000	0.0000	0.0029	0.00003	10.9500	0.0003	0.0001	0.0023	0.0015	0.00006	0.0005	0.2370	0.2180	0.0000050	0.0203
M-09-108 162.5-163.5	0.03	0.0280	0.0008	0.0003	0.0435	0.0000	0.0000	0.0022	0.00003	10.4000	0.0003	0.0001	0.0028	0.0020	0.00008	0.0005	0.2340	0.2030	0.0000050	0.0214
M-09-108 162.5-163.5	0.03	0.0308	0.0008	0.0003	0.0457	0.0000	0.0000	0.0024	0.00002	10.1850	0.0003	0.0001	0.0022	0.0015	0.00061	0.0005	0.2250	0.1950	0.0000050	0.0206
M-09-108 162.5-163.5	0.03	0.0336	0.0007	0.0002	0.0478	0.0000	0.0000	0.0025	0.00001	9.9700	0.0003	0.0001	0.0016	0.0010	0.00113	0.0005	0.2160	0.1870	0.0000050	0.0198
M-09-108 162.5-163.5	0.03	0.0295	0.0009	0.0005	0.0313	0.0000	0.0000	0.0027	0.00003	9.9700	0.0003	0.0001	0.0013	0.0010	0.00061	0.0005	0.4510	0.1331	0.0000050	0.0110
M-09-108 162.5-163.5	0.03	0.0253	0.0011	0.0007	0.0148	0.0000	0.0000	0.0029	0.00004	9.9700	0.0003	0.0000	0.0010	0.0010	0.00008	0.0005	0.6860	0.0791	0.0000050	0.0023
M-09-108 162.5-163.5	0.03	0.0320	0.0008	0.0005	0.0362	0.0000	0.0000	0.0024	0.00003	9.7300	0.0003	0.0001	0.0019	0.0045	0.00046	0.0005	0.4350	0.1246	0.0000050	0.0074
M-09-108 162.5-163.5	0.03	0.0387	0.0005	0.0002	0.0575	0.0000	0.0000	0.0018	0.00002	9.4900	0.0003	0.0001	0.0028	0.0080	0.00083	0.0005	0.1840	0.1700	0.0000050	0.0126
M-09-108 162.5-163.5	0.03	0.0384	0.0005	0.0002	0.0540	0.0000	0.0000	0.0019	0.00003	9.2800	0.0003	0.0001	0.0026	0.0065	0.00045	0.0005	0.1810	0.1610	0.0000050	0.0135
M-09-108 162.5-163.5	0.03	0.0380	0.0005	0.0002	0.0504	0.0000	0.0000	0.0020	0.00003	9.0700	0.0003	0.0001	0.0024	0.0050	0.00007	0.0005	0.1780	0.1520	0.0000050	0.0143
M-09-108 162.5-163.5	0.03	0.0368	0.0005	0.0003	0.0520	0.0000	0.0000	0.0022	0.00002	8.9750	0.0003	0.0001	0.0024	0.0095	0.00007	0.0005	0.1890	0.1670	0.0000050	0.0141
M-09-108 162.5-163.5	0.03	0.0356	0.0005	0.0004	0.0535	0.0000	0.0000	0.0024	0.00002	8.8800	0.0003	0.0001	0.0023	0.0140	0.00006	0.0005	0.2000	0.1820	0.0000050	0.0139
M-09-108 162.5-163.5	0.03	0.0386	0.0006	0.0003	0.0533	0.0000	0.0000	0.0021	0.00001	9.3400	0.0003	0.0001	0.0021	0.0085	0.00005	0.0005	0.1955	0.1725	0.0000050	0.0154
M-09-108 162.5-163.5	0.03	0.0416	0.0006	0.0001	0.0530	0.0000	0.0000	0.0018	0.00001	9.8000	0.0003	0.0001	0.0019	0.0030	0.00004	0.0005	0.1910	0.1630	0.0000050	0.0169
M-09-108 162.5-163.5	0.03	0.0374	0.0009	0.0001	0.0480	0.0000	0.0000	0.0021	0.00002	8.8800	0.0003	0.0001	0.0019	0.0020	0.00004	0.0005	0.1755	0.1570	0.0000050	0.0157
M-09-108 162.5-163.5	0.03	0.0331	0.0011	0.0001	0.0429	0.0000	0.0000	0.0023	0.00003	7.9600	0.0003	0.0001	0.0018	0.0010	0.00004	0.0005	0.1600	0.1510	0.0000050	0.0144
M-09-108 162.5-163.5	0.03	0.0316	0.0009	0.0001	0.0409	0.0000	0.0000	0.0019	0.00004	8.5850	0.0003	0.0001	0.0018	0.0010	0.00007	0.0005	0.1750	0.1535	0.0000050	0.0159
M-09-108 162.5-163.5	0.03	0.0300	0.0006	0.0001	0.0389	0.0000	0.0000	0.0015	0.00006	9.2100	0.0003	0.0001	0.0017	0.0010	0.00009	0.0005	0.1900	0.1560	0.0000050	0.0174
M-09-108 162.5-163.5	0.03	0.0257	0.0007	0.0001	0.0342	0.0000	0.0000	0.0014	0.00003	8.7850	0.0003	0.0001	0.0019	0.0010	0.00006	0.0005	0.1805	0.1545	0.0000075	0.0176
M-09-108 162.5-163.5	0.03	0.0214	0.0007	0.0001	0.0294	0.0000	0.0000	0.0013	0.00001	8.3600	0.0003	0.0001	0.0020	0.0010	0.00003	0.0005	0.1710	0.1530	0.0000100	0.0178
M-09-108 162.5-163.5	0.03	0.0229	0.0007	0.0001	0.0308	0.0000	0.0000	0.0016	0.00005	8.6000	0.0004	0.0001	0.0020	0.0040	0.00005	0.0005	0.1725	0.1535	0.0000075	0.0176
M-09-108 162.5-163.5	0.03	0.0243	0.0007	0.0001	0.0321	0.0000	0.0000	0.0018	0.00008	8.8400	0.0005	0.0001	0.0020	0.0070	0.00007	0.0005	0.1740	0.1540	0.0000050	0.0173
M-09-108 162.5-163.5	0.03	0.0254	0.0007	0.0001	0.0327	0.0000	0.0000	0.0021	0.00005	9.4700	0.0004	0.0001	0.0018	0.0055	0.00005	0.0005	0.1830	0.1785	0.0000050	0.0187
M-09-108 162.5-163.5	0.03	0.0265	0.0006	0.0001	0.0332	0.0000	0.0000	0.0023	0.00002	10.1000	0.0003	0.0001	0.0016	0.0040	0.00002	0.0005	0.1920	0.2030	0.0000050	0.0200
M-09-108 162.5-163.5	0.03	0.0278	0.0006	0.0002	0.0334	0.0000	0.0000	0.0027	0.00003	11.1000	0.0003	0.0001	0.0018	0.0025	0.00003	0.0005	0.1990	0.2105	0.0000050	0.0200
M-09-108 162.5-163.5	0.03	0.0290	0.0006	0.0002	0.0335	0.0000	0.0000	0.0030	0.00005	12.1000	0.0003	0.0001	0.0019	0.0010	0.00003	0.0005	0.2060	0.2180	0.0000050	0.0200
M-09-108 162.5-163.5	0.03	0.0290	0.0006	0.0003	0.0319	0.0000	0.0000	0.0028	0.00003	11.0300	0.0003	0.0001	0.0017	0.0090	0.00004	0.0005	0.2035	0.2190	0.0000050	0.0195
M-09-108 162.5-163.5	0.03	0.0289	0.0006	0.0003	0.0303	0.0000	0.0000	0.0025	0.00002	9.9600	0.0003	0.0001	0.0015	0.0170	0.00004	0.0005	0.2010	0.2200	0.0000050	0.0189
M-09-108 162.5-163.5	0.03	0.0297	0.0006	0.0002	0.0288	0.0000	0.0000	0.0023	0.00001	10.5300	0.0004	0.0001	0.0018	0.0125	0.00006	0.0005	0.1955	0.2170	0.0000050	0.0190
M-09-108 162.5-163.5	0.03	0.0305	0.0006	0.0001	0.0272	0.0000	0.0000	0.0021	0.00001	11.1000	0.0006	0.0001	0.0021	0.0080	0.00008	0.0005	0.1900	0.2140	0.0000050	0.0191
M-09-108 162.5-163.5	0.03	0.0268	0.0006	0.0002	0.0302	0.0000	0.0000	0.0025	0.00002	11.2500	0.0007	0.0001	0.0021	0.0050	0.00006	0.0005	0.1910	0.2275	0.0000050	0.0209
M-09-108 162.5-163.5	0.03	0.0230	0.0006	0.0003	0.0331	0.0000	0.0000	0.0028	0.00002	11.4000	0.0007	0.0001	0.0021	0.0020	0.00004	0.0005	0.1920	0.2410	0.0000050	0.0226
M-09-108 162.5-163.5	0.08	0.0274	0.0006	0.0002	0.0313	0.0000	0.0000	0.0029	0.00002	11.1500	0.0006	0.0001	0.0021	0.0015	0.00006	0.0005	0.1825	0.2275	0.0000050	0.0225
M-09-108 162.5-163.5	0.13	0.0317	0.0005	0.0001	0.0294	0.0000	0.0000	0.0029	0.00002	10.9000	0.0005	0.0001	0.0021	0.0010	0.00008	0.0005	0.1730	0.2140	0.0000050	0.0223
M-09-108 162.5-163.5	0.08	0.0271	0.0006	0.0001	0.0315	0.0000	0.0000	0.0027	0.00006	11.3000	0.0009	0.0001	0.0020	0.0065	0.00009	0.0005	0.1790	0.2340	0.0000075	0.0223
M-09-108 162.5-163.5	0.03	0.0224	0.0006	0.0001	0.0336	0.0000	0.0000	0.0024	0.00009	11.7000	0.0013	0.0001	0.0019	0.0120	0.00009	0.0005	0.1850	0.2540	0.0000100	0.0222
M-09-108 162.5-163.5	0.03	0.0219	0.0006	0.0002	0.0339	0.0000	0.0000	0.0025	0.00006	11.0000	0.0010	0.0001	0.0019	0.0065	0.00008	0.0005	0.1720	0.2445	0.0000075	0.0216
M-09-108 162.5-163.5	0.03	0.0214	0.0006	0.0003	0.0342	0.0000	0.0000	0.0026	0.00003	10.3000	0.0006	0.0001	0.0019	0.0010	0.00007	0.0005	0.1590	0.2350	0.0000050	0.0209
M-09-108 162.5-163.5	0.03	0.0206	0.0006	0.0003	0.0342	0.0000	0.0000	0.0028	0.00002	10.6500	0.0004	0.0001	0.0022	0.0013	0.00010	0.0005	0.1510	0.2210	0.0000075	0.0196
M-09-108 162.5-163.5	0.03	0.0197	0.0005	0.0003	0.0341	0.0000	0.0000	0.0029	0.00001	11.0000	0.0003	0.0001	0.0024	0.0015	0.00013	0.0005	0.1430	0.2070	0.0000100	0.0182
M-09-108 162.5-163.5	0.03	0.0194	0.0004	0.0002	0.0316	0.0000	0.0000	0.0021	0.00001	10.8500	0.0006	0.0001	0.0022	0.0043	0.00021	0.0005	0.1485	0.1990	0.0000075	0.0190
M-09-108 162.5-163.5	0.03	0.0191	0.0003	0.0001	0.0291	0.0000	0.0000	0.0013	0.00001	10.7000	0.0009	0.0001	0.0020	0.0070	0.00029	0.0005	0.1540	0.1910	0.0000050	0.0198
M-09-108 162.5-163.5	0.03	0.0269	0.0004	0.0001	0.0269	0.0000	0.0000	0.0015	0.00001	10.4500	0.0006	0.0001	0.0023	0.0043	0.00016	0.0005	0.1395	0.1835	0.0000050	0.0192
M-09-108 162.5-163.5	0.03	0.0347	0.0005	0.0001	0.0246	0.0000	0.0000	0.0017	0.00002	10.2000	0.0003	0.0001	0.0025	0.0015	0.00003	0.0005	0.1250	0.1760	0.0000050	0.0186
M-09-108 162.5-163.5	0.03	0.0329	0.0006	0.0002	0.0298	0.0000	0.0000	0.0017	0.00002	9.6000	0.0003	0.0001	0.0023	0.0015	0.00003	0.0005	0.1350	0.1730	0.0000050	0.0200
M-09-108 162.5-163.5	0.03	0.0311	0.0006	0.0002	0.0349	0.0000	0.0000	0.0016	0.00002	9.0000	0.0003	0.0001	0.0021	0.0015	0.00003	0.0005	0.1450	0.1700	0.0000050	0.0214
M-09-108 162.5-163.5	0.03	0.0348	0.0005	0.0003	0.0334	0.0000	0.0000	0.0018	0.00002	9.2400	0.0003	0.0001	0.0021	0.0015	0.00002	0.0005	0.1425	0.1835	0.0000050	0.0209
M-09-108 162.5-163.5	0.03	0.0384	0.0004	0.0003	0.0319	0.0000	0.0000	0.0020	0.00001	9.4800	0.0003	0.0001	0.0021	0.0015	0.00001	0.0005	0.1400	0.1970	0.0000050	0.0204
M-09-108 162.5-163.5	0.03	0.0362	0.0004	0.0003	0.0314	0.0000	0.0000	0.0019	0.00001	9.4575	0.0003	0.0001	0.0022	0.0015	0.00001	0.0005	0.1398	0.1980	0.0000050	0.0200
M-09-108 162.5-163.5	0.03	0.0340	0.0005	0.0002	0.0309	0.0000	0.0000	0.0019	0.00001	9.4350	0.0003	0.0001	0.0023	0.0015	0.00001	0.0005	0.1395	0.1990	0.0000050	0.0197
M-09-108 162.5-163.5	0.03	0.0317	0.0005	0.0002	0.0303	0.0000	0.0000	0.0018	0.00001	9.4125	0.0003	0.0001	0.0024	0.0015	0.00001	0.0005	0.1393	0.2000	0.0000050	0.0193
M-09-108 162.5-163.5	0.03	0.0295	0.0005	0.0001	0.0298	0.0000	0.0000	0.0017	0.00002	9.3900	0.0003	0.0001	0.0025	0.0015	0.00001	0.0005	0.1390	0.2010	0.0000050	0.0189
M-09-108 162.5-163.5	0.03	0.0288	0.0005	0.0001	0.0287	0.0000	0.0000	0.0017	0.00003	9.4900	0.0003	0.0001	0.0024	0.0015	0.00002	0.0005	0.1393	0.2038	0.0000050	0.0191
M-09-108 162.5-163.5	0.03	0.0281	0.0006	0.0002	0.0275	0.0000	0.0000	0.0018	0.00004	9.5900	0.0003	0.0001	0.0024	0.0015	0.00003	0.0005	0.1395	0.2065	0.0000050	0.0192
M-09-108 162.5-163.5	0.03	0.0273	0.0006	0.0002	0.0264	0.0000	0.0000	0.0018	0.00005	9.6900	0.0003	0.0001	0.0023	0.0015	0.00003	0.0005	0.1398	0.2093	0.0000050	0.0194
M-09-108 162.5-163.5	0.03	0.0266	0.0006	0.0002	0.0252	0.0000	0.0000	0.0018	0.00007	9.7900	0.0003	0.0001	0.0022	0.0015	0.00004	0.0005	0.1400	0.2120	0.0000050	0.0195
M-09-108 162.5-163.5	0.03	0.0320	0.0006	0.0002	0.0253	0.0000	0.0000	0.0015	0.00005	9.8225	0.0003	0.0001	0.0023	0.0015	0.00004	0.0005	0.1415	0.2030	0.0000050	0.0195
M-09-108 162.5-163.5	0.03	0.0375	0.0006	0.0003	0.0254	0.0000	0.0000	0.0011	0.00004	9.8550	0.0003	0.0001	0.0024	0.0015	0.00003	0.0005	0.1430	0.1940	0.0000050	0.0196
M-09-108 162.5-163.5	0.03	0.0429	0.0005	0.0003	0.0255	0.0000	0.0000	0.0008	0.00003	9.8875	0.0003	0.0001	0.0025	0.0015	0.00003	0.0005	0.1445	0.1850	0.0000050	0.0196
M-09-108 162.5-163.5	0.03	0.0483	0.0005	0.0003	0.0256	0.0000	0.0000	0.0004	0.00002	9.9200	0.0003	0.0001	0.0026	0.0015	0.00002	0.0005	0.1460	0.1760	0.0000050	0.0196

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-108 162.5-163.5	0.0001	0.0045	0.5310	0.0003	0.5500	0.00001	0.1000	0.0893	5.4900	0.0001	0.0001	0.0001	0.0004	0.0001	0.0120	0.0000
M-09-108 162.5-163.5	0.0002	0.0045	0.5250	0.0000	0.5100	0.00001	0.1100	0.0882	5.2400	0.0001	0.0001	0.0001	0.0004	0.0001	0.0050	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.5670	0.0004	0.5800	0.00001	0.1200	0.1020	6.4300	0.0001	0.0004	0.0001	0.0004	0.0001	0.0010	0.0000
M-09-108 162.5-163.5	0.0001	0.0380	0.5810	0.0004	0.6400	0.00001	0.1100	0.1000	7.0300	0.0001	0.0001	0.0001	0.0004	0.0001	0.0030	0.0000
M-09-108 162.5-163.5	0.0002	0.0130	0.5410	0.0005	0.5900	0.00001	0.1100	0.0963	6.1000	0.0001	0.0001	0.0001	0.0004	0.0001	0.0020	0.0000
M-09-108 162.5-163.5	0.0001	0.0235	0.4935	0.0005	0.5700	0.00001	0.1050	0.0964	6.1700	0.0001	0.0002	0.0001	0.0005	0.0001	0.0013	0.0000
M-09-108 162.5-163.5	0.0001	0.0340	0.4460	0.0004	0.5500	0.00001	0.1000	0.0965	6.2400	0.0001	0.0003	0.0001	0.0005	0.0001	0.0005	0.0000
M-09-108 162.5-163.5	0.0002	0.0290	0.4635	0.0004	0.5250	0.00001	0.1050	0.0892	5.9650	0.0001	0.0003	0.0001	0.0004	0.0001	0.0028	0.0000
M-09-108 162.5-163.5	0.0003	0.0240	0.4810	0.0003	0.5000	0.00001	0.1100	0.0818	5.6900	0.0001	0.0003	0.0001	0.0004	0.0001	0.0050	0.0000
M-09-108 162.5-163.5	0.0004	0.0240	0.4790	0.0006	0.5050	0.00001	0.1000	0.0793	5.5100	0.0001	0.0002	0.0001	0.0003	0.0001	0.0050	0.0000
M-09-108 162.5-163.5	0.0005	0.0240	0.4770	0.0008	0.5100	0.00001	0.0900	0.0767	5.3300	0.0001	0.0002	0.0001	0.0003	0.0000	0.0050	0.0000
M-09-108 162.5-163.5	0.0004	0.0143	0.4410	0.0008	0.5550	0.00001	0.0950	0.1044	5.3850	0.0001	0.0001	0.0001	0.0012	0.0002	0.0030	0.0000
M-09-108 162.5-163.5	0.0003	0.0045	0.4050	0.0009	0.6000	0.00001	0.1000	0.1320	5.4400	0.0001	0.0000	0.0001	0.0020	0.0003	0.0010	0.0000
M-09-108 162.5-163.5	0.0003	0.0243	0.4200	0.0006	0.5550	0.00001	0.1050	0.1054	5.0050	0.0001	0.0001	0.0002	0.0011	0.0002	0.0030	0.0000
M-09-108 162.5-163.5	0.0003	0.0440	0.4350	0.0004	0.5100	0.00001	0.1100	0.0788	4.5700	0.0000	0.0002	0.0003	0.0002	0.0001	0.0050	0.0000
M-09-108 162.5-163.5	0.0003	0.0243	0.4210	0.0004	0.4850	0.00001	0.1000	0.0764	4.6600	0.0001	0.0002	0.0003	0.0002	0.0001	0.0028	0.0000
M-09-108 162.5-163.5	0.0003	0.0045	0.4070	0.0004	0.4600	0.00001	0.0900	0.0739	4.7500	0.0001	0.0001	0.0002	0.0002	0.0001	0.0005	0.0000
M-09-108 162.5-163.5	0.0002	0.0045	0.4050	0.0003	0.4450	0.00001	0.0950	0.0712	4.8500	0.0001	0.0001	0.0002	0.0002	0.0001	0.0013	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.4030	0.0002	0.4300	0.00001	0.1000	0.0685	4.9500	0.0001	0.0001	0.0002	0.0002	0.0001	0.0020	0.0000
M-09-108 162.5-163.5	0.0001	0.0153	0.4480	0.0008	0.4600	0.00001	0.1200	0.0737	5.5300	0.0001	0.0001	0.0003	0.0002	0.0001	0.0025	0.0000
M-09-108 162.5-163.5	0.0002	0.0260	0.4930	0.0013	0.4900	0.00001	0.1400	0.0788	6.1100	0.0001	0.0001	0.0003	0.0002	0.0002	0.0030	0.0000
M-09-108 162.5-163.5	0.0003	0.0210	0.4550	0.0007	0.4400	0.00002	0.1150	0.0702	5.2100	0.0001	0.0002	0.0003	0.0002	0.0001	0.0030	0.0000
M-09-108 162.5-163.5	0.0003	0.0160	0.4170	0.0000	0.3900	0.00003	0.0900	0.0616	4.3100	0.0001	0.0002	0.0003	0.0002	0.0001	0.0030	0.0001
M-09-108 162.5-163.5	0.0003	0.0225	0.4430	0.0003	0.4200	0.00004	0.1000	0.0635	4.8550	0.0001	0.0002	0.0002	0.0002	0.0001	0.0025	0.0000
M-09-108 162.5-163.5	0.0002	0.0290	0.4690	0.0005	0.4500	0.00004	0.1100	0.0653	5.4000	0.0000	0.0001	0.0001	0.0001	0.0001	0.0020	0.0000
M-09-108 162.5-163.5	0.0001	0.0615	0.4165	0.0004	0.3800	0.00003	0.1000	0.0601	5.1700	0.0000	0.0001	0.0001	0.0002	0.0001	0.0020	0.0000
M-09-108 162.5-163.5	0.0001	0.0940	0.3640	0.0004	0.3100	0.00002	0.0900	0.0548	4.9400	0.0000	0.0002	0.0001	0.0002	0.0001	0.0020	0.0000
M-09-108 162.5-163.5	0.0003	0.0493	0.3520	0.0004	0.3450	0.00002	0.1250	0.0555	5.1850	0.0000	0.0002	0.0001	0.0002	0.0001	0.0020	0.0000
M-09-108 162.5-163.5	0.0005	0.0045	0.3400	0.0004	0.3800	0.00002	0.1600	0.0561	5.4300	0.0000	0.0003	0.0001	0.0002	0.0001	0.0020	0.0000
M-09-108 162.5-163.5	0.0004	0.0045	0.3670	0.0003	0.3850	0.00002	0.1250	0.0621	5.5900	0.0000	0.0003	0.0001	0.0002	0.0001	0.0030	0.0000
M-09-108 162.5-163.5	0.0002	0.0045	0.3940	0.0002	0.3900	0.00002	0.0900	0.0681	5.7500	0.0000	0.0003	0.0001	0.0002	0.0001	0.0040	0.0000
M-09-108 162.5-163.5	0.0002	0.0088	0.3985	0.0001	0.4300	0.00002	0.0900	0.0724	6.4800	0.0000	0.0003	0.0001	0.0002	0.0001	0.0025	0.0000
M-09-108 162.5-163.5	0.0001	0.0130	0.4030	0.0000	0.4700	0.00001	0.0900	0.0767	7.2100	0.0000	0.0003	0.0001	0.0002	0.0001	0.0010	0.0000
M-09-108 162.5-163.5	0.0003	0.0125	0.3640	0.0000	0.4550	0.00001	0.0750	0.0721	6.6450	0.0000	0.0002	0.0001	0.0002	0.0001	0.0015	0.0000
M-09-108 162.5-163.5	0.0005	0.0120	0.3250	0.0000	0.4400	0.00001	0.0600	0.0675	6.0800	0.0000	0.0001	0.0002	0.0002	0.0001	0.0020	0.0000
M-09-108 162.5-163.5	0.0003	0.0083	0.3635	0.0002	0.4400	0.00001	0.0700	0.0709	6.4950	0.0000	0.0001	0.0002	0.0002	0.0001	0.0015	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.4020	0.0005	0.4400	0.00001	0.0800	0.0743	6.9100	0.0000	0.0001	0.0002	0.0002	0.0001	0.0010	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.3775	0.0004	0.4250	0.00002	0.0850	0.0764	6.9950	0.0000	0.0002	0.0002	0.0002	0.0001	0.0030	0.0000
M-09-108 162.5-163.5	0.0002	0.0045	0.3530	0.0003	0.4100	0.00002	0.0900	0.0784	7.0800	0.0000	0.0002	0.0002	0.0002	0.0001	0.0050	0.0000
M-09-108 162.5-163.5	0.0003	0.0045	0.3490	0.0004	0.3900	0.00002	0.0700	0.0771	6.9500	0.0000	0.0002	0.0002	0.0002	0.0001	0.0040	0.0000
M-09-108 162.5-163.5	0.0004	0.0045	0.3450	0.0005	0.3700	0.00002	0.0500	0.0757	6.8200	0.0000	0.0003	0.0002	0.0002	0.0001	0.0030	0.0000
M-09-108 162.5-163.5	0.0004	0.0108	0.3345	0.0003	0.3750	0.00002	0.0850	0.0770	6.9050	0.0000	0.0003	0.0001	0.0002	0.0001	0.0030	0.0000
M-09-108 162.5-163.5	0.0003	0.0170	0.3240	0.0002	0.3800	0.00001	0.1200	0.0782	6.9900	0.0000	0.0004	0.0001	0.0002	0.0001	0.0030	0.0000
M-09-108 162.5-163.5	0.0002	0.0108	0.3125	0.0002	0.3650	0.00002	0.1000	0.0739	6.5150	0.0000	0.0002	0.0001	0.0002	0.0001	0.0025	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.3010	0.0001	0.3500	0.00002	0.0800	0.0695	6.0400	0.0000	0.0001	0.0001	0.0002	0.0001	0.0020	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2830	0.0001	0.3500	0.00002	0.0750	0.0686	6.3750	0.0000	0.0001	0.0001	0.0002	0.0001	0.0025	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2650	0.0002	0.3500	0.00001	0.0700	0.0676	6.7100	0.0000	0.0002	0.0001	0.0002	0.0001	0.0030	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2580	0.0002	0.3300	0.00002	0.0700	0.0673	6.6600	0.0000	0.0002	0.0001	0.0002	0.0001	0.0030	0.0000
M-09-108 162.5-163.5	0.0002	0.0045	0.2510	0.0003	0.3100	0.00002	0.0700	0.0669	6.6100	0.0000	0.0002	0.0001	0.0001	0.0001	0.0030	0.0000
M-09-108 162.5-163.5	0.0003	0.0045	0.2475	0.0004	0.3150	0.00003	0.0800	0.0654	6.4600	0.0000	0.0001	0.0001	0.0001	0.0001	0.0020	0.0000
M-09-108 162.5-163.5	0.0003	0.0045	0.2440	0.0004	0.3200	0.00004	0.0900	0.0639	6.3100	0.0000	0.0000	0.0002	0.0001	0.0002	0.0010	0.0000
M-09-108 162.5-163.5	0.0004	0.0045	0.2465	0.0004	0.3000	0.00003	0.0700	0.0628	5.6750	0.0000	0.0000	0.0003	0.0001	0.0002	0.0010	0.0000
M-09-108 162.5-163.5	0.0004	0.0045	0.2490	0.0005	0.2800	0.00002	0.0500	0.0616	5.0400	0.0000	0.0001	0.0003	0.0002	0.0003	0.0010	0.0000
M-09-108 162.5-163.5	0.0004	0.0045	0.2390	0.0003	0.3000	0.00002	0.0650	0.0610	5.3650	0.0000	0.0001	0.0003	0.0002	0.0003	0.0020	0.0000
M-09-108 162.5-163.5	0.0004	0.0045	0.2290	0.0000	0.3200	0.00001	0.0800	0.0603	5.6900	0.0000	0.0002	0.0002	0.0002	0.0003	0.0030	0.0000
M-09-108 162.5-163.5	0.0003	0.0045	0.2280	0.0001	0.3125	0.00001	0.0775	0.0610	5.6875	0.0000	0.0001	0.0003	0.0001	0.0003	0.0025	0.0000
M-09-108 162.5-163.5	0.0002	0.0045	0.2270	0.0002	0.3050	0.00001	0.0750	0.0617	5.6850	0.0000	0.0001	0.0003	0.0001	0.0003	0.0020	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2260	0.0002	0.2975	0.00001	0.0725	0.0624	5.6825	0.0000	0.0001	0.0004	0.0001	0.0003	0.0015	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2250	0.0003	0.2900	0.00001	0.0700	0.0631	5.6800	0.0000	0.0001	0.0004	0.0001	0.0003	0.0010	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2255	0.0003	0.2875	0.00001	0.0775	0.0637	5.7025	0.0000	0.0001	0.0006	0.0001	0.0003	0.0013	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2260	0.0003	0.2850	0.00002	0.0850	0.0642	5.7250	0.0000	0.0001	0.0008	0.0001	0.0004	0.0015	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2265	0.0003	0.2825	0.00002	0.0925	0.0648	5.7475	0.0000	0.0001	0.0009	0.0002	0.0004	0.0018	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2270	0.0003	0.2800	0.00002	0.1000	0.0653	5.7700	0.0000	0.0001	0.0011	0.0002	0.0005	0.0020	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2328	0.0003	0.2900	0.00002	0.0975	0.0658	5.7600	0.0000	0.0001	0.0010	0.0002	0.0004	0.0020	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2385	0.0003	0.3000	0.00003	0.0950	0.0664	5.7500	0.0000	0.0000	0.0008	0.0001	0.0004	0.0020	0.0000
M-09-108 162.5-163.5	0.0002	0.0045	0.2443	0.0003	0.3100	0.00003	0.0925	0.0669	5.7400	0.0000	0.0000	0.0007	0.0001	0.0003	0.0020	0.0000
M-09-108 162.5-163.5	0.0002	0.0045	0.2500	0.0003	0.3200	0.00003	0.0900	0.0674	5.7300	0.0000	0.0000	0.0005	0.0001	0.0003	0.0020	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-108 162.5-163.5	12	110	15-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	25	56	7.14	5.5	9.4	19	0.1
M-09-108 162.5-163.5	12	111	22-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	25	59	7.29	5.3	9.2	19	0.1
M-09-108 162.5-163.5	12	112	29-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	445	25	55	7.11	5.0	9.0	20	0.1
M-09-108 162.5-163.5	12	113	5-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	24	57	7.14	4.7	8.9	20	0.1
M-09-108 162.5-163.5	12	114	12-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	450	24	57	7.18	4.7	8.9	20	0.1
M-09-108 162.5-163.5	12	115	19-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	475	24	58	7.32	4.7	8.9	20	0.1
M-09-108 162.5-163.5	12	116	26-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	24	62	7.02	5.6	10.2	19	0.1
M-09-108 162.5-163.5	12	117	3-May-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	24	57	7.56	5.9	10.6	19	0.1
M-09-108 162.5-163.5	12	118	10-May-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	25	63	7.18	6.1	10.9	18	0.1
M-09-108 162.5-163.5	12	119	17-May-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	25	58	7.16	6.2	11.1	17	0.1
M-09-108 162.5-163.5	12	120	24-May-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	25	60	7.45	6.4	11.4	15	0.1
M-09-108 162.5-163.5	12	121	31-May-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	26	58	7.46	6.5	11.6	14	0.1
M-09-108 162.5-163.5	12	122	7-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	475	26	51	7.18	6.5	11.5	15	0.1
M-09-108 162.5-163.5	12	123	14-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	26	67	7.32	6.6	11.4	15	0.1
M-09-108 162.5-163.5	12	124	21-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	26	70	7.15	6.6	11.2	16	0.1
M-09-108 162.5-163.5	12	125	28-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	26	63	7.39	6.6	11.1	16	0.1
M-09-108 162.5-163.5	12	126	5-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	460	26	53	7.21	6.3	11.1	16	0.1
M-09-108 162.5-163.5	12	127	12-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	26	63	7.2	6.0	11.1	16	0.1
M-09-108 162.5-163.5	12	128	19-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	26	59	7.19	5.7	11.2	15	0.1
M-09-108 162.5-163.5	12	129	26-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	27	64	7.25	5.4	11.2	15	0.1
																	26	61	7.28	6.3	11.3	15	0.1
HC26 LP Hazelton																							
M-09-108 184.5-185.5	26	0	11-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	390	63	217	7.63	2.4	26.2	70	2.1
M-09-108 184.5-185.5	26	1	18-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	520	55	185	7.6	2.7	26.3	47	0.9
M-09-108 184.5-185.5	26	2	25-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	49	141	7.43	3.5	22.3	45	0.1
M-09-108 184.5-185.5	26	3	1-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	52	140	7.66	2.6	23.9	51	0.1
M-09-108 184.5-185.5	26	4	8-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	495	43	122	7.49	2.5	22.2	37	0.1
M-09-108 184.5-185.5	26	5	15-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	42	120	7.54	3.0	23.6	32	0.1
M-09-108 184.5-185.5	26	6	22-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	43	117	7.46	4.2	23.1	30	0.1
M-09-108 184.5-185.5	26	7	29-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	500	35	110	7.57	2.5	22.8	29	0.1
M-09-108 184.5-185.5	26	8	6-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	495	37	98	7.32	4.3	20.4	29	0.1
M-09-108 184.5-185.5	26	9	13-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	43	103	7.46	3.1	18.0	32	0.1
M-09-108 184.5-185.5	26	10	20-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	42	104	7.52	3.7	16.7	30	0.1
M-09-108 184.5-185.5	26	11	27-May-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	45	104	7.43	6.1	23.3	21	0.1
M-09-108 184.5-185.5	26	12	3-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	42	97	7.39	3.7	17.3	26	0.1
M-09-108 184.5-185.5	26	13	10-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	42	108	7.39	5.2	16.6	26	0.1
M-09-108 184.5-185.5	26	14	17-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	39	92	7.56	3.9	17.1	17	0.1
M-09-108 184.5-185.5	26	15	24-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	40	94	7.47	2.8	20.6	22	0.1
M-09-108 184.5-185.5	26	16	1-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	37	86	7.47	2.5	16.2	14	0.1
M-09-108 184.5-185.5	26	17	8-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	30	86	7.3	2.8	16.0	12	0.1
M-09-108 184.5-185.5	26	18	15-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	32	81	7.35	3.6	15.4	16	0.1
M-09-108 184.5-185.5	26	19	22-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	31	76	7.24	3.2	16.7	17	0.1
M-09-108 184.5-185.5	26	20	29-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	34	74	7.44	3.9	16.0	21	0.1
M-09-108 184.5-185.5	26	21	5-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	32	73	7.41	2.6	15.1	17	0.1
M-09-108 184.5-185.5	26	22	12-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	500	33	76	7.56	3.6	20.2	19	0.1
M-09-108 184.5-185.5	26	23	19-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	33	76	7.54	5.0	21.1	15	0.1
M-09-108 184.5-185.5	26	24	26-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	33	73	7.35	2.8	17.3	16	0.1
M-09-108 184.5-185.5	26	25	2-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	30	61	7.4	4.0	16.2	19	0.1
M-09-108 184.5-185.5	26	26	9-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	445	28	69	7.18	4.4	15.0	15	0.1
M-09-108 184.5-185.5	26	27	16-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	445	30	63	7.23	3.1	15.8	15	0.5
M-09-108 184.5-185.5	26	28	23-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	29	59	7.32	2.8	15.4	25	0.1
M-09-108 184.5-185.5	26	29	30-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	450	32	56	7.23	2.9	15.9	18	0.1
M-09-108 184.5-185.5	26	30	7-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	450	32	77	7.25	3.2	17.1	22	0.1
M-09-108 184.5-185.5	26	31	14-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	33	72	7.22	2.9	15.4	19	0.1
M-09-108 184.5-185.5	26	32	21-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	30	74	7.29	3.2	16.2	20	0.1
M-09-108 184.5-185.5	26	33	28-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	450	28	69	7.24	3.1	16.2	22	0.1
M-09-108 184.5-185.5	26	34	4-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	29	71	7.41	2.4	13.6	18	0.1
M-09-108 184.5-185.5	26	35	11-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	445	32	63	7.46	2.5	15.4	14	0.1
M-09-108 184.5-185.5	26	36	18-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	450	29	57	7.51	3.5	15.4	14	0.1
M-09-108 184.5-185.5	26	37	25-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	445	28	67	7.23	4.0	17.4	13	0.1
M-09-108 184.5-185.5	26	38	2-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	450	34	65	7.28	3.4	16.0	12	0.1
M-09-108 184.5-185.5	26	39	9-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	450	28	62	7.21	3.7	15.2	12	0.1
M-09-108 184.5-185.5	26	40	16-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	32	63	7.24	4.4	15.8	16	0.1
M-09-108 184.5-185.5	26	41	23-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	29	62	7.5	5.0	16.5	13	0.1
M-09-108 184.5-185.5	26	42	30-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	27	55	7.26	5.7	16.4	16	0.1
M-09-108 184.5-185.5	26	43	6-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	495	27	53	7.44	4.9	16.0	16	0.1
M-09-108 184.5-185.5	26	44	13-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	500	27	53	7.24	4.2	15.5	16	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-108 162.5-163.5	0.03	0.0464	0.0005	0.0003	0.0252	0.0000	0.0000	0.0007	0.00002	9.8325	0.0003	0.0001	0.0025	0.0015	0.00003	0.0005	0.1430	0.1830	0.0000113	0.0197
M-09-108 162.5-163.5	0.03	0.0446	0.0005	0.0002	0.0248	0.0000	0.0000	0.0010	0.00001	9.7450	0.0003	0.0001	0.0024	0.0015	0.00004	0.0005	0.1400	0.1900	0.0000175	0.0198
M-09-108 162.5-163.5	0.03	0.0427	0.0004	0.0002	0.0244	0.0000	0.0000	0.0013	0.00001	9.6575	0.0003	0.0001	0.0022	0.0015	0.00004	0.0005	0.1370	0.1970	0.0000238	0.0199
M-09-108 162.5-163.5	0.03	0.0408	0.0004	0.0001	0.0240	0.0000	0.0000	0.0016	0.00000	9.5700	0.0003	0.0001	0.0021	0.0015	0.00005	0.0005	0.1340	0.2040	0.0000300	0.0200
M-09-108 162.5-163.5	0.03	0.0408	0.0004	0.0001	0.0240	0.0000	0.0000	0.0016	0.00000	9.5700	0.0003	0.0001	0.0021	0.0015	0.00005	0.0005	0.1340	0.2040	0.0000300	0.0200
M-09-108 162.5-163.5	0.03	0.0408	0.0004	0.0001	0.0240	0.0000	0.0000	0.0016	0.00000	9.5700	0.0003	0.0001	0.0021	0.0015	0.00005	0.0005	0.1340	0.2040	0.0000300	0.0200
M-09-108 162.5-163.5	0.03	0.0277	0.0004	0.0001	0.0247	0.0000	0.0000	0.0020	0.00001	9.5325	0.0003	0.0001	0.0023	0.0015	0.00027	0.0005	0.1318	0.2085	0.0000150	0.0184
M-09-108 162.5-163.5	0.03	0.0233	0.0004	0.0001	0.0249	0.0000	0.0000	0.0021	0.00001	9.5200	0.0003	0.0001	0.0023	0.0015	0.00034	0.0005	0.1310	0.2100	0.0000100	0.0179
M-09-108 162.5-163.5	0.03	0.0298	0.0004	0.0001	0.0251	0.0000	0.0000	0.0021	0.00001	9.6650	0.0003	0.0001	0.0023	0.0015	0.00026	0.0005	0.1333	0.2110	0.0000088	0.0185
M-09-108 162.5-163.5	0.03	0.0363	0.0004	0.0001	0.0253	0.0000	0.0000	0.0020	0.00001	9.8100	0.0003	0.0001	0.0023	0.0015	0.00018	0.0005	0.1355	0.2120	0.0000075	0.0191
M-09-108 162.5-163.5	0.03	0.0428	0.0004	0.0001	0.0255	0.0000	0.0000	0.0020	0.00002	9.9550	0.0003	0.0001	0.0022	0.0015	0.00010	0.0005	0.1378	0.2130	0.0000063	0.0196
M-09-108 162.5-163.5	0.03	0.0493	0.0004	0.0001	0.0257	0.0000	0.0000	0.0019	0.00002	10.1000	0.0003	0.0001	0.0022	0.0015	0.00002	0.0005	0.1400	0.2140	0.0000050	0.0202
M-09-108 162.5-163.5	0.03	0.0499	0.0004	0.0001	0.0252	0.0000	0.0000	0.0022	0.00002	10.0750	0.0003	0.0001	0.0021	0.0015	0.00002	0.0005	0.1378	0.2130	0.0000063	0.0205
M-09-108 162.5-163.5	0.03	0.0505	0.0004	0.0001	0.0248	0.0000	0.0000	0.0024	0.00001	10.0500	0.0003	0.0001	0.0021	0.0015	0.00002	0.0005	0.1355	0.2120	0.0000075	0.0208
M-09-108 162.5-163.5	0.03	0.0511	0.0004	0.0001	0.0243	0.0000	0.0000	0.0027	0.00001	10.0250	0.0003	0.0001	0.0020	0.0015	0.00001	0.0005	0.1333	0.2110	0.0000088	0.0210
M-09-108 162.5-163.5	0.03	0.0517	0.0004	0.0001	0.0238	0.0000	0.0000	0.0029	0.00000	10.0000	0.0003	0.0001	0.0019	0.0015	0.00001	0.0005	0.1310	0.2100	0.0000100	0.0213
M-09-108 162.5-163.5	0.03	0.0509	0.0004	0.0001	0.0247	0.0000	0.0000	0.0027	0.00000	10.1000	0.0003	0.0001	0.0019	0.0015	0.00002	0.0005	0.1323	0.2223	0.0000100	0.0211
M-09-108 162.5-163.5	0.03	0.0501	0.0005	0.0001	0.0256	0.0000	0.0000	0.0024	0.00001	10.2000	0.0003	0.0001	0.0018	0.0015	0.00002	0.0005	0.1335	0.2345	0.0000100	0.0208
M-09-108 162.5-163.5	0.03	0.0493	0.0005	0.0001	0.0264	0.0000	0.0000	0.0022	0.00001	10.3000	0.0003	0.0001	0.0018	0.0015	0.00003	0.0005	0.1348	0.2468	0.0000100	0.0206
M-09-108 162.5-163.5	0.03	0.0485	0.0005	0.0001	0.0273	0.0000	0.0000	0.0019	0.00001	10.4000	0.0003	0.0001	0.0017	0.0015	0.00003	0.0005	0.1360	0.2590	0.0000100	0.0203
	0.03	0.0494	0.0004	0.0001	0.0253	0.0000	0.0000	0.0023	0.00001	10.1205	0.0003	0.0001	0.0020	0.0015	0.00003	0.0005	0.1352	0.2236	0.0000084	0.0206
HC26 LP Hazelton																				
M-09-108 184.5-185.5	0.64	0.0517	0.0018	0.0016	0.0371	0.0000	0.0000	0.0150	0.00001	22.6000	0.0008	0.0001	0.0017	0.0050	0.00039	0.0050	1.6100	0.0610	0.0000050	0.0098
M-09-108 184.5-185.5	0.66	0.0876	0.0028	0.0025	0.0457	0.0000	0.0000	0.0220	0.00001	19.8000	0.0007	0.0000	0.0013	0.0050	0.00032	0.0050	1.4400	0.0730	0.0000050	0.0114
M-09-108 184.5-185.5	0.51	0.1110	0.0028	0.0019	0.0324	0.0000	0.0000	0.0180	0.00000	17.7000	0.0007	0.0000	0.0011	0.0050	0.00038	0.0030	1.2100	0.0830	0.0000050	0.0065
M-09-108 184.5-185.5	0.46	0.1200	0.0025	0.0017	0.0369	0.0000	0.0000	0.0170	0.00000	18.9000	0.0007	0.0000	0.0010	0.0050	0.00045	0.0030	1.2600	0.1020	0.0000100	0.0053
M-09-108 184.5-185.5	0.34	0.0958	0.0024	0.0014	0.0260	0.0000	0.0000	0.0150	0.00000	15.7000	0.0003	0.0000	0.0006	0.0050	0.00033	0.0030	0.9960	0.1080	0.0000050	0.0040
M-09-108 184.5-185.5	0.30	0.1200	0.0021	0.0013	0.0218	0.0000	0.0000	0.0140	0.00000	15.2000	0.0007	0.0001	0.0009	0.0050	0.00033	0.0020	0.9300	0.1100	0.0000050	0.0039
M-09-108 184.5-185.5	0.21	0.0899	0.0019	0.0013	0.0194	0.0000	0.0000	0.0130	0.00000	15.6000	0.0006	0.0000	0.0012	0.0050	0.00133	0.0020	0.9140	0.1150	0.0000050	0.0040
M-09-108 184.5-185.5	0.20	0.0820	0.0020	0.0011	0.0245	0.0000	0.0000	0.0130	0.00002	12.9000	0.0005	0.0000	0.0011	0.0050	0.00168	0.0020	0.7450	0.1090	0.0000050	0.0039
M-09-108 184.5-185.5	0.16	0.0722	0.0018	0.0011	0.0252	0.0000	0.0000	0.0110	0.00000	13.6000	0.0005	0.0000	0.0019	0.0050	0.00150	0.0010	0.7550	0.1220	0.0000050	0.0037
M-09-108 184.5-185.5	0.13	0.0681	0.0017	0.0009	0.0174	0.0000	0.0000	0.0102	0.00000	15.9000	0.0008	0.0000	0.0009	0.0030	0.00005	0.0020	0.8330	0.1290	0.0000050	0.0058
M-09-108 184.5-185.5	0.12	0.0560	0.0018	0.0010	0.0172	0.0000	0.0000	0.0105	0.00000	15.6000	0.0003	0.0000	0.0012	0.0010	0.00097	0.0020	0.7930	0.1410	0.0000050	0.0103
M-09-108 184.5-185.5	0.10	0.0472	0.0018	0.0010	0.0188	0.0000	0.0000	0.0098	0.00001	16.6000	0.0006	0.0000	0.0011	0.0020	0.00077	0.0020	0.8220	0.1670	0.0000050	0.0121
M-09-108 184.5-185.5	0.11	0.0517	0.0017	0.0009	0.0157	0.0000	0.0000	0.0088	0.00000	15.5000	0.0003	0.0000	0.0013	0.0010	0.00006	0.0010	0.7530	0.1500	0.0000050	0.0126
M-09-108 184.5-185.5	0.08	0.0495	0.0017	0.0008	0.0156	0.0000	0.0000	0.0081	0.00001	15.5000	0.0005	0.0000	0.0012	0.0030	0.00005	0.0020	0.7480	0.1660	0.0000050	0.0130
M-09-108 184.5-185.5	0.08	0.0403	0.0022	0.0008	0.0157	0.0000	0.0000	0.0075	0.00004	14.3000	0.0003	0.0000	0.0013	0.0010	0.00004	0.0010	0.6730	0.1600	0.0000100	0.0122
M-09-108 184.5-185.5	0.08	0.0450	0.0021	0.0006	0.0146	0.0000	0.0000	0.0086	0.00001	14.7000	0.0003	0.0000	0.0023	0.0010	0.00006	0.0020	0.6710	0.1660	0.0000050	0.0131
M-09-108 184.5-185.5	0.06	0.0348	0.0018	0.0006	0.0145	0.0000	0.0000	0.0064	0.00001	13.9000	0.0006	0.0000	0.0012	0.0020	0.00007	0.0010	0.6040	0.1730	0.0000200	0.0112
M-09-108 184.5-185.5	0.06	0.0443	0.0016	0.0006	0.0145	0.0000	0.0000	0.0079	0.00003	11.1000	0.0007	0.0001	0.0015	0.0030	0.00008	0.0010	0.5730	0.1640	0.0000050	0.0107
M-09-108 184.5-185.5	0.03	0.0379	0.0013	0.0007	0.0133	0.0000	0.0000	0.0069	0.00001	11.9000	0.0005	0.0000	0.0012	0.0060	0.00005	0.0010	0.5300	0.1530	0.0000050	0.0105
M-09-108 184.5-185.5	0.03	0.0292	0.0012	0.0006	0.0118	0.0000	0.0000	0.0063	0.00001	11.5000	0.0007	0.0000	0.0022	0.0010	0.00007	0.0010	0.5040	0.1640	0.0000100	0.0096
M-09-108 184.5-185.5	0.03	0.0304	0.0014	0.0005	0.0125	0.0000	0.0000	0.0058	0.00001	12.9000	0.0003	0.0000	0.0013	0.0010	0.00005	0.0005	0.5290	0.1570	0.0000050	0.0095
M-09-108 184.5-185.5	0.06	0.0349	0.0014	0.0005	0.0129	0.0000	0.0000	0.0056	0.00001	12.2000	0.0003	0.0000	0.0013	0.0010	0.00007	0.0010	0.4800	0.1660	0.0000050	0.0089
M-09-108 184.5-185.5	0.03	0.0471	0.0014	0.0007	0.0135	0.0000	0.0000	0.0060	0.00000	12.4000	0.0008	0.0000	0.0017	0.0010	0.00006	0.0010	0.4730	0.1600	0.0000050	0.0095
M-09-108 184.5-185.5	0.03	0.0546	0.0015	0.0006	0.0159	0.0000	0.0000	0.0058	0.00000	12.5000	0.0003	0.0000	0.0015	0.0010	0.00006	0.0010	0.4810	0.1530	0.0000050	0.0092
M-09-108 184.5-185.5	0.03	0.0390	0.0014	0.0006	0.0133	0.0000	0.0000	0.0055	0.00001	12.5000	0.0003	0.0001	0.0015	0.0080	0.00005	0.0005	0.4580	0.1770	0.0000050	0.0077
M-09-108 184.5-185.5	0.03	0.0436	0.0008	0.0008	0.0174	0.0000	0.0000	0.0048	0.00001	11.5000	0.0003	0.0000	0.0013	0.0010	0.00005	0.0010	0.3970	0.1340	0.0000050	0.0077
M-09-108 184.5-185.5	0.03	0.0564	0.0009	0.0005	0.0123	0.0000	0.0000	0.0046	0.00001	10.7000	0.0003	0.0000	0.0024	0.0050	0.00006	0.0010	0.3490	0.1160	0.0000050	0.0073
M-09-108 184.5-185.5	0.03	0.0358	0.0014	0.0005	0.0145	0.0000	0.0000	0.0044	0.00001	11.4000	0.0003	0.0000	0.0013	0.0010	0.00005	0.0010	0.4260	0.1750	0.0000050	0.0067
M-09-108 184.5-185.5	0.03	0.0452	0.0011	0.0005	0.0137	0.0000	0.0000	0.0050	0.00000	11.0000	0.0005	0.0000	0.0022	0.0040	0.00007	0.0020	0.3790	0.1280	0.0000050	0.0065
M-09-108 184.5-185.5	0.03	0.0399	0.0010	0.0007	0.0135	0.0000	0.0000	0.0055	0.00001	12.0000	0.0007	0.0000	0.0018	0.0010	0.00006	0.0020	0.4000	0.1510	0.0000050	0.0069
M-09-108 184.5-185.5	0.03	0.0377	0.0012	0.0005	0.0120	0.0000	0.0000	0.0053	0.00000	12.2000	0.0007	0.0001	0.0020	0.0010	0.00007	0.0005	0.4000	0.1530	0.0000050	0.0074
M-09-108 184.5-185.5	0.06	0.0359	0.0011	0.0003	0.0115	0.0000	0.0000	0.0056	0.00001	12.6000	0.0003	0.0001	0.0015	0.0010	0.00004	0.0010	0.4190	0.1690	0.0000050	0.0067
M-09-108 184.5-185.5	0.03	0.0381	0.0011	0.0003	0.0123	0.0000	0.0000	0.0054	0.00001	11.4000	0.0005	0.0000	0.0015	0.0090	0.00006	0.0010	0.3720	0.1460	0.0000050	0.0067
M-09-108 184.5-185.5	0.03	0.0360	0.0006	0.0003	0.0125	0.0000	0.0000	0.0046	0.00000	10.8000	0.0006	0.0000	0.0014	0.0010	0.00004	0.0010	0.3410	0.1470	0.0000050	0.0061
M-09-108 184.5-185.5	0.03	0.0420	0.0006	0.0004	0.0123	0.0000	0.0000	0.0047	0.00001	11.0000	0.0003	0.0000	0.0016	0.0050	0.00088	0.0010	0.3440	0.1470	0.0000050	0.0064
M-09-108 184.5-185.5	0.03	0.0468	0.0007	0.0005	0.0103	0.0000	0.0000	0.0039	0.00001	12.2000	0.0005	0.0001	0.0031	0.0070	0.00055	0.0010	0.3800	0.1490	0.0000050	0.0062
M-09-108 184.5-185.5	0.03	0.0413	0.0008	0.0003	0.0138	0.0000	0.0000	0.0047	0.00001	11.1000	0.0005	0.0001	0.0016	0.0040	0.00010	0.0020	0.3500	0.1470	0.0000050	0.0059
M-09-108 184.5-185.5	0.03	0.0455	0.0008	0.0004	0.0108	0.0000	0.0000	0.0035	0.00001	10.7000	0.0010	0.0001	0.0023	0.0040	0.00011	0.0010	0.3250	0.1450	0.0000300	0.0052
M-09-108 184.5-185.5	0.03	0.0449	0.0010	0.0003	0.0116	0.0000	0.0000	0.0042	0.00001	12.9000	0.0006	0.0000	0.0027	0.0040	0.00205	0.0020	0.3840	0.1700	0.0000050	0.0053
M-09-108 184.5-185.5	0.03	0.0359	0.0009	0.0003	0.0099	0.0000	0.0000	0.0034	0.00001	10.6000	0.0009	0.0001	0.0028	0.0010	0.00119	0.0005	0.3420	0.1440	0.0000050	0.0059
M-09-108 184.5-185.5	0.03	0.0349	0.0009	0.0003	0.0125	0.0000	0.0000	0.0043	0.00001	12.2000	0.0003	0.0000	0.0023	0.0010	0.00007	0.0005	0.3660	0.1700	0.0000050	0.0053
M-09-108 184.5-185.5	0.03	0.0355	0.0009	0.0003	0.0120	0.0000	0.0000	0.0044	0.00002	11.2000	0.0003	0.0005	0.0024	0.0030	0.00077	0.0005	0.3370	0.1610	0.0000050	0.0055
M-09-108 184.5-185.5	0.03	0.0383	0.0009	0.0006	0.0121	0.0000	0.0000	0.0038	0.00001	10.4000	0.0003	0.0001	0.0027	0.0030	0.00089	0.0005	0.3150	0.1540	0.0000050	0.0056
M-09-108 184.5-185.5	0.03	0.0318	0.0010	0.0004	0.0130	0.0000	0.0000	0.0038	0.00001	10.3500	0.0003	0.0001	0.0025	0.0020	0.00047	0.0005	0.3150	0.1765	0.0000050	0.0055
M-09-108 184.5-185.5	0.03	0.0253	0.0010	0.0002	0.0139	0.0000	0.0000	0.0038	0.00001	10.3000	0.0003	0.0000	0.0022	0.0010	0.00004	0.0005	0.3150	0.1990	0.0000050	0.0054

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-108 162.5-163.5	0.0002	0.0045	0.2400	0.0003	0.3075	0.00003	0.0875	0.0656	5.7900	0.0000	0.0000	0.0005	0.0001	0.0003	0.0020	0.0000
M-09-108 162.5-163.5	0.0003	0.0045	0.2300	0.0003	0.2950	0.00003	0.0850	0.0638	5.8500	0.0000	0.0000	0.0005	0.0001	0.0003	0.0020	0.0000
M-09-108 162.5-163.5	0.0003	0.0045	0.2200	0.0003	0.2825	0.00002	0.0825	0.0620	5.9100	0.0000	0.0000	0.0004	0.0001	0.0003	0.0020	0.0000
M-09-108 162.5-163.5	0.0003	0.0045	0.2100	0.0003	0.2700	0.00002	0.0800	0.0602	5.9700	0.0000	0.0001	0.0004	0.0001	0.0004	0.0020	0.0000
M-09-108 162.5-163.5	0.0003	0.0045	0.2100	0.0003	0.2700	0.00002	0.0800	0.0602	5.9700	0.0000	0.0001	0.0004	0.0001	0.0004	0.0020	0.0000
M-09-108 162.5-163.5	0.0003	0.0045	0.2100	0.0003	0.2700	0.00002	0.0800	0.0602	5.9700	0.0000	0.0001	0.0004	0.0001	0.0004	0.0020	0.0000
M-09-108 162.5-163.5	0.0002	0.0045	0.2093	0.0002	0.2700	0.00002	0.0650	0.0601	5.8950	0.0000	0.0002	0.0001	0.0001	0.0002	0.0013	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2090	0.0001	0.2700	0.00002	0.0600	0.0601	5.8700	0.0000	0.0003	0.0001	0.0001	0.0002	0.0010	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2153	0.0002	0.2775	0.00002	0.0675	0.0610	5.8800	0.0000	0.0002	0.0001	0.0001	0.0002	0.0015	0.0000
M-09-108 162.5-163.5	0.0002	0.0045	0.2215	0.0002	0.2850	0.00002	0.0750	0.0619	5.8900	0.0000	0.0002	0.0001	0.0001	0.0002	0.0020	0.0000
M-09-108 162.5-163.5	0.0002	0.0045	0.2278	0.0003	0.2925	0.00002	0.0825	0.0627	5.9000	0.0000	0.0002	0.0001	0.0001	0.0002	0.0025	0.0000
M-09-108 162.5-163.5	0.0002	0.0045	0.2340	0.0003	0.3000	0.00002	0.0900	0.0636	5.9100	0.0000	0.0002	0.0001	0.0001	0.0003	0.0030	0.0000
M-09-108 162.5-163.5	0.0002	0.0045	0.2293	0.0003	0.2900	0.00002	0.0900	0.0635	6.0875	0.0000	0.0002	0.0001	0.0001	0.0003	0.0028	0.0000
M-09-108 162.5-163.5	0.0002	0.0045	0.2245	0.0002	0.2800	0.00002	0.0900	0.0634	6.2650	0.0000	0.0002	0.0001	0.0001	0.0003	0.0025	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2198	0.0002	0.2700	0.00002	0.0900	0.0632	6.4425	0.0000	0.0002	0.0001	0.0001	0.0003	0.0023	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2150	0.0001	0.2600	0.00002	0.0900	0.0631	6.6200	0.0000	0.0002	0.0001	0.0001	0.0003	0.0020	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2168	0.0001	0.2675	0.00002	0.0850	0.0646	6.6225	0.0000	0.0002	0.0001	0.0001	0.0003	0.0023	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2185	0.0002	0.2750	0.00002	0.0800	0.0660	6.6250	0.0000	0.0002	0.0001	0.0001	0.0003	0.0025	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2203	0.0002	0.2825	0.00001	0.0750	0.0675	6.6275	0.0000	0.0001	0.0001	0.0001	0.0003	0.0028	0.0000
M-09-108 162.5-163.5	0.0001	0.0045	0.2220	0.0002	0.2900	0.00001	0.0700	0.0689	6.6300	0.0000	0.0001	0.0001	0.0001	0.0003	0.0030	0.0000
	0.0001	0.0045	0.2228	0.0002	0.2808	0.00002	0.0843	0.0646	6.3730	0.0000	0.0002	0.0001	0.0001	0.0003	0.0026	0.0000
HC26 LP Hazelton																
M-09-108 184.5-185.5	0.0007	0.0050	24.5000	0.0029	1.0300	0.00001	4.2300	0.3990	26.4000	0.0001	0.0004	0.0002	0.0004	0.0007	0.0005	0.0000
M-09-108 184.5-185.5	0.0002	0.0050	16.6000	0.0048	1.6100	0.00001	2.9000	0.3250	23.3000	0.0001	0.0004	0.0002	0.0015	0.0010	0.0005	0.0001
M-09-108 184.5-185.5	0.0002	0.0050	12.4000	0.0022	1.5200	0.00001	1.4000	0.2560	15.1000	0.0001	0.0004	0.0002	0.0014	0.0011	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0050	10.8000	0.0018	1.6500	0.00001	1.0100	0.2560	16.5000	0.0001	0.0006	0.0002	0.0018	0.0011	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0050	7.8100	0.0013	1.2800	0.00001	0.5700	0.1960	11.9000	0.0001	0.0004	0.0001	0.0018	0.0009	0.0005	0.0000
M-09-108 184.5-185.5	0.0002	0.0050	7.2400	0.0011	1.2600	0.00001	0.3800	0.1830	11.7000	0.0001	0.0005	0.0001	0.0016	0.0010	0.0005	0.0000
M-09-108 184.5-185.5	0.0002	0.0050	6.2700	0.0013	1.3700	0.00001	0.3300	0.1760	10.8000	0.0001	0.0006	0.0001	0.0018	0.0009	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0050	5.7600	0.0020	1.4100	0.00001	0.2200	0.1450	8.7400	0.0001	0.0005	0.0001	0.0019	0.0008	0.0005	0.0000
M-09-108 184.5-185.5	0.0002	0.0200	4.6200	0.0013	1.1900	0.00003	0.1800	0.1480	9.3100	0.0001	0.0004	0.0001	0.0014	0.0007	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	4.2100	0.0010	1.2100	0.00001	0.1800	0.1580	10.1000	0.0001	0.0003	0.0002	0.0018	0.0006	0.0005	0.0001
M-09-108 184.5-185.5	0.0001	0.0045	3.5800	0.0011	1.0300	0.00001	0.1700	0.1470	11.6000	0.0001	0.0004	0.0001	0.0019	0.0006	0.0010	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	3.4100	0.0011	1.0900	0.00002	0.1600	0.1550	11.4000	0.0001	0.0002	0.0001	0.0019	0.0006	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0290	3.0700	0.0008	1.0600	0.00001	0.1500	0.1370	11.0000	0.0001	0.0003	0.0001	0.0017	0.0005	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0200	2.8200	0.0010	0.9800	0.00004	1.3900	0.1360	10.6000	0.0001	0.0004	0.0001	0.0016	0.0005	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	2.4900	0.0009	0.9100	0.00001	0.1200	0.1220	9.8000	0.0001	0.0001	0.0001	0.0013	0.0004	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	2.7000	0.0007	1.0000	0.00001	0.1400	0.1240	9.8700	0.0001	0.0005	0.0001	0.0013	0.0005	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	2.1500	0.0008	0.8300	0.00001	0.0900	0.1120	8.7700	0.0001	0.0005	0.0001	0.0012	0.0004	0.0005	0.0000
M-09-108 184.5-185.5	0.0003	0.0130	2.1500	0.0014	0.8900	0.00003	0.1200	0.1140	8.2200	0.0001	0.0004	0.0003	0.0011	0.0004	0.0005	0.0001
M-09-108 184.5-185.5	0.0001	0.0045	1.9100	0.0008	0.8500	0.00001	0.0900	0.1060	7.2900	0.0001	0.0002	0.0001	0.0011	0.0003	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	1.8300	0.0009	0.8400	0.00001	0.1000	0.1000	6.6200	0.0001	0.0005	0.0001	0.0011	0.0003	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	1.7900	0.0002	0.8500	0.00001	0.1200	0.1040	7.3400	0.0001	0.0002	0.0001	0.0010	0.0003	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	1.7300	0.0008	0.8500	0.00001	0.0800	0.0966	6.9200	0.0001	0.0003	0.0001	0.0009	0.0003	0.0005	0.0000
M-09-108 184.5-185.5	0.0002	0.0045	1.7200	0.0011	0.8800	0.00001	0.1200	0.0958	9.5500	0.0001	0.0011	0.0001	0.0010	0.0003	0.0005	0.0000
M-09-108 184.5-185.5	0.0002	0.0045	1.7400	0.0007	0.8800	0.00001	0.1100	0.0977	9.6900	0.0001	0.0010	0.0002	0.0010	0.0005	0.0005	0.0000
M-09-108 184.5-185.5	0.0002	0.0045	1.6200	0.0009	0.8200	0.00001	0.1100	0.0935	6.9900	0.0001	0.0005	0.0001	0.0009	0.0003	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	1.3500	0.0009	0.7200	0.00001	0.0700	0.0860	6.6800	0.0001	0.0004	0.0001	0.0006	0.0003	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	1.2900	0.0001	0.6700	0.00001	0.0800	0.0783	6.3200	0.0001	0.0004	0.0003	0.0005	0.0003	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	1.4100	0.0008	0.8100	0.00001	0.0700	0.0888	6.6400	0.0001	0.0007	0.0001	0.0008	0.0002	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	1.3700	0.0009	0.6900	0.00001	0.1000	0.0799	6.2400	0.0001	0.0018	0.0001	0.0005	0.0003	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	1.3300	0.0007	0.6900	0.00001	0.1200	0.0858	7.3800	0.0001	0.0016	0.0001	0.0005	0.0003	0.0005	0.0000
M-09-108 184.5-185.5	0.0006	0.0160	1.3200	0.0008	0.7000	0.00001	0.1000	0.0859	7.5700	0.0001	0.0011	0.0001	0.0005	0.0002	0.0005	0.0000
M-09-108 184.5-185.5	0.0003	0.0045	1.2400	0.0001	0.6700	0.00001	0.1100	0.0891	6.8500	0.0001	0.0013	0.0001	0.0004	0.0002	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	1.1700	0.0007	0.6000	0.00001	0.1000	0.0793	6.7900	0.0001	0.0005	0.0001	0.0005	0.0002	0.0030	0.0000
M-09-108 184.5-185.5	0.0004	0.0230	1.0600	0.0006	0.5700	0.00001	0.0900	0.0744	6.6000	0.0001	0.0009	0.0001	0.0005	0.0002	0.0020	0.0000
M-09-108 184.5-185.5	0.0006	0.0110	1.0200	0.0007	0.5400	0.00001	0.1000	0.0742	6.1300	0.0001	0.0007	0.0002	0.0004	0.0001	0.0010	0.0000
M-09-108 184.5-185.5	0.0001	0.0120	1.0700	0.0005	0.5400	0.00001	0.1100	0.0811	6.5500	0.0001	0.0009	0.0003	0.0004	0.0002	0.0030	0.0000
M-09-108 184.5-185.5	0.0003	0.0045	1.0300	0.0003	0.5500	0.00001	0.0800	0.0730	6.2100	0.0001	0.0006	0.0001	0.0004	0.0002	0.0040	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.9240	0.0010	0.5100	0.00001	0.0600	0.0708	5.1000	0.0001	0.0004	0.0003	0.0005	0.0002	0.0080	0.0000
M-09-108 184.5-185.5	0.0001	0.0180	0.9850	0.0006	0.5400	0.00001	0.0800	0.0722	5.7300	0.0001	0.0004	0.0001	0.0004	0.0002	0.0020	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.9430	0.0001	0.4700	0.00001	0.0900	0.0702	5.2700	0.0001	0.0008	0.0001	0.0004	0.0002	0.0020	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.9420	0.0005	0.5300	0.00001	0.0900	0.0778	6.1100	0.0001	0.0010	0.0001	0.0004	0.0001	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0290	0.9820	0.0004	0.5600	0.00001	0.0700	0.0729	6.6100	0.0001	0.0007	0.0001	0.0004	0.0002	0.0010	0.0000
M-09-108 184.5-185.5	0.0009	0.0045	0.9100	0.0006	0.5000	0.00001	0.0700	0.0674	5.5300	0.0001	0.0008	0.0005	0.0004	0.0002	0.0010	0.0000
M-09-108 184.5-185.5	0.0005	0.0045	0.8430	0.0006	0.5200	0.00001	0.0700	0.0664	5.7650	0.0001	0.0007	0.0003	0.0006	0.0001	0.0008	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.7760	0.0007	0.5400	0.00001	0.0700	0.0653	6.0000	0.0001	0.0006	0.0001	0.0006	0.0001	0.0005	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-108 184.5-185.5	26	45	20-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	28	54	7.19	4.4	15.3	16	0.1
M-09-108 184.5-185.5	26	46	27-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	460	29	51	7.32	4.7	15.0	16	0.1
M-09-108 184.5-185.5	26	47	3-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	27	47	7.24	3.8	14.5	15	0.1
M-09-108 184.5-185.5	26	48	10-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	25	45	7.24	3.0	14.0	13	0.1
M-09-108 184.5-185.5	26	49	17-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	460	25	48	7.49	3.9	14.9	15	0.1
M-09-108 184.5-185.5	26	50	24-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	26	62	7.44	4.8	15.9	17	0.1
M-09-108 184.5-185.5	26	51	3-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	25	55	7.31	4.4	15.4	17	0.1
M-09-108 184.5-185.5	26	52	10-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	460	25	59	7.34	4.0	15.0	16	0.1
M-09-108 184.5-185.5	26	53	17-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	24	60	7.38	3.6	16.1	14	0.1
M-09-108 184.5-185.5	26	54	24-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	24	77	7.25	3.2	17.1	12	0.1
M-09-108 184.5-185.5	26	55	31-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	460	24	57	7.69	5.0	17.0	12	0.1
M-09-108 184.5-185.5	26	56	7-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	24	58	7.66	6.9	17.0	12	0.1
M-09-108 184.5-185.5	26	57	14-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	450	25	61	7.6	4.5	15.3	12	0.1
M-09-108 184.5-185.5	26	58	21-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	25	61	7.33	2.1	13.7	12	0.1
M-09-108 184.5-185.5	26	59	28-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	475	26	67	7.53	2.6	15.3	13	0.1
M-09-108 184.5-185.5	26	60	5-May-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	28	65	7.34	3.1	17.0	13	0.1
M-09-108 184.5-185.5	26	61	12-May-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	28	64	7.41	2.8	16.2	15	0.1
M-09-108 184.5-185.5	26	62	19-May-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	28	67	7.62	2.5	15.5	17	0.1
M-09-108 184.5-185.5	26	63	26-May-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	26	75	7.21	3.5	15.0	14	0.1
M-09-108 184.5-185.5	26	64	2-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	24	63	7.49	4.4	14.5	11	0.1
M-09-108 184.5-185.5	26	65	9-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	475	24	63	7.31	4.2	14.5	12	0.1
M-09-108 184.5-185.5	26	66	16-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	24	58	7.46	4.0	14.6	13	0.1
M-09-108 184.5-185.5	26	67	23-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	475	25	63	7.5	3.8	14.6	13	0.1
M-09-108 184.5-185.5	26	68	30-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	26	61	7.56	3.5	14.6	13	0.1
M-09-108 184.5-185.5	26	69	7-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	29	64	7.39	4.0	15.3	14	0.1
M-09-108 184.5-185.5	26	70	14-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	32	68	7.47	4.4	16.0	15	0.1
M-09-108 184.5-185.5	26	71	21-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	28	65	7.45	4.1	15.0	15	0.1
M-09-108 184.5-185.5	26	72	28-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	23	59	7.61	3.7	14.0	14	0.1
M-09-108 184.5-185.5	26	73	4-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	495	28	73	7.32	3.7	15.2	16	0.1
M-09-108 184.5-185.5	26	74	11-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	500	33	71	7.6	3.7	16.5	18	0.1
M-09-108 184.5-185.5	26	75	18-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	495	31	70	7.42	4.1	16.9	17	0.1
M-09-108 184.5-185.5	26	76	25-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	29	69	7.47	4.5	17.4	15	0.1
M-09-108 184.5-185.5	26	77	1-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	30	75	7.66	4.3	16.9	15	0.1
M-09-108 184.5-185.5	26	78	8-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	31	68	7.46	4.2	16.4	14	0.1
M-09-108 184.5-185.5	26	79	15-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	495	30	69	7.2	4.1	16.3	16	0.1
M-09-108 184.5-185.5	26	80	22-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	495	30	66	7.18	4.1	16.3	18	0.1
M-09-108 184.5-185.5	26	81	29-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	500	29	65	7.32	4.5	16.6	17	0.1
M-09-108 184.5-185.5	26	82	6-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	510	29	65	7.37	4.8	17.0	15	0.1
M-09-108 184.5-185.5	26	83	13-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	495	29	65	7.45	4.5	16.3	17	0.1
M-09-108 184.5-185.5	26	84	20-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	29	62	7.36	4.2	15.7	19	0.1
M-09-108 184.5-185.5	26	85	27-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	450	28	66	7.41	4.6	15.9	18	0.1
M-09-108 184.5-185.5	26	86	3-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	475	26	62	7.51	5.0	16.1	17	0.1
M-09-108 184.5-185.5	26	87	10-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	25	56	7.63	4.2	14.7	15	0.1
M-09-108 184.5-185.5	26	88	17-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	445	24	53	7.4	3.5	13.3	12	0.1
M-09-108 184.5-185.5	26	89	24-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	24	53	7.49	4.3	13.1	11	0.1
M-09-108 184.5-185.5	26	90	1-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	23	50	7.4	5.2	13.0	10	0.1
M-09-108 184.5-185.5	26	91	8-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	25	51	7.42	4.9	13.9	10	0.1
M-09-108 184.5-185.5	26	92	15-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	26	61	7.51	4.6	14.8	10	0.1
M-09-108 184.5-185.5	26	93	22-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	26	55	7.5	4.4	15.0	11	0.1
M-09-108 184.5-185.5	26	94	29-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	455	26	57	7.46	4.1	15.2	12	0.1
M-09-108 184.5-185.5	26	95	5-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	25	58	7.24	3.8	15.3	12	0.1
M-09-108 184.5-185.5	26	96	12-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	25	58	7.32	3.5	15.5	13	0.1
M-09-108 184.5-185.5	26	97	19-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	25	51	7.42	4.1	15.8	13	0.1
M-09-108 184.5-185.5	26	98	26-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	460	25	54	7.25	4.7	16.0	14	0.1
M-09-108 184.5-185.5	26	99	2-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	25	55	7.48	5.3	16.2	14	0.1
M-09-108 184.5-185.5	26	100	9-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	24	59	7.63	5.9	16.5	14	0.1
M-09-108 184.5-185.5	26	101	16-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	25	61	7.59	5.9	15.5	14	0.1
M-09-108 184.5-185.5	26	102	23-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	450	25	53	7.3	5.8	14.6	14	0.1
M-09-108 184.5-185.5	26	103	1-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	445	25	50	7.2	5.8	13.7	14	0.1
M-09-108 184.5-185.5	26	104	8-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	450	25	57	7.37	5.8	12.7	14	0.1
M-09-108 184.5-185.5	26	105	15-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	25	54	7.24	5.5	12.6	14	0.1
M-09-108 184.5-185.5	26	106	22-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	450	25	55	7.35	5.2	12.5	15	0.1
M-09-108 184.5-185.5	26	107	29-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	460	25	63	7.17	5.0	12.5	15	0.1
M-09-108 184.5-185.5	26	108	5-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	25	58	7.25	4.7	12.4	15	0.1
M-09-108 184.5-185.5	26	109	12-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	445	25	56	7.25	4.7	12.4	15	0.1
M-09-108 184.5-185.5	26	110	19-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	25	61	7.34	4.7	12.4	15	0.1
M-09-108 184.5-185.5	26	116	31-May-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	465	24	52	7.44	6.5	13.4	10	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-108 184.5-185.5	0.03	0.0273	0.0009	0.0003	0.0128	0.0000	0.0000	0.0036	0.00001	10.6500	0.0003	0.0000	0.0020	0.0010	0.00005	0.0005	0.3210	0.1905	0.0000050	0.0052
M-09-108 184.5-185.5	0.03	0.0292	0.0008	0.0004	0.0117	0.0000	0.0000	0.0034	0.00001	11.0000	0.0003	0.0000	0.0017	0.0010	0.00005	0.0005	0.3270	0.1820	0.0000050	0.0051
M-09-108 184.5-185.5	0.05	0.0298	0.0008	0.0003	0.0118	0.0000	0.0000	0.0038	0.00001	10.2700	0.0003	0.0000	0.0017	0.0020	0.00044	0.0005	0.2890	0.1700	0.0000050	0.0049
M-09-108 184.5-185.5	0.06	0.0304	0.0007	0.0002	0.0119	0.0000	0.0000	0.0041	0.00000	9.5400	0.0003	0.0000	0.0017	0.0030	0.00082	0.0005	0.2510	0.1580	0.0000050	0.0046
M-09-108 184.5-185.5	0.05	0.0292	0.0007	0.0003	0.0116	0.0000	0.0000	0.0040	0.00001	9.7450	0.0003	0.0000	0.0018	0.0020	0.00043	0.0005	0.2575	0.1655	0.0000050	0.0047
M-09-108 184.5-185.5	0.03	0.0279	0.0007	0.0003	0.0113	0.0000	0.0000	0.0039	0.00001	9.9500	0.0003	0.0000	0.0018	0.0010	0.00003	0.0005	0.2640	0.1730	0.0000050	0.0048
M-09-108 184.5-185.5	0.03	0.0265	0.0007	0.0002	0.0114	0.0000	0.0000	0.0032	0.00001	9.6950	0.0003	0.0000	0.0023	0.0035	0.00057	0.0005	0.2565	0.1710	0.0000050	0.0048
M-09-108 184.5-185.5	0.03	0.0250	0.0006	0.0001	0.0114	0.0000	0.0000	0.0024	0.00002	9.4400	0.0003	0.0000	0.0028	0.0060	0.00111	0.0005	0.2490	0.1690	0.0000050	0.0048
M-09-108 184.5-185.5	0.03	0.0238	0.0006	0.0001	0.0110	0.0000	0.0000	0.0026	0.00001	9.2800	0.0003	0.0000	0.0024	0.0035	0.00057	0.0005	0.2355	0.1700	0.0000125	0.0048
M-09-108 184.5-185.5	0.03	0.0226	0.0006	0.0001	0.0106	0.0000	0.0000	0.0027	0.00001	9.1200	0.0003	0.0000	0.0019	0.0010	0.00003	0.0005	0.2220	0.1710	0.0000200	0.0047
M-09-108 184.5-185.5	0.03	0.0239	0.0006	0.0003	0.0108	0.0000	0.0000	0.0027	0.00001	9.2450	0.0003	0.0000	0.0017	0.0090	0.00003	0.0005	0.2410	0.1865	0.0000125	0.0049
M-09-108 184.5-185.5	0.03	0.0251	0.0006	0.0004	0.0109	0.0000	0.0000	0.0026	0.00001	9.3700	0.0003	0.0000	0.0015	0.0170	0.00003	0.0005	0.2600	0.2020	0.0000050	0.0050
M-09-108 184.5-185.5	0.03	0.0252	0.0006	0.0003	0.0111	0.0000	0.0000	0.0026	0.00009	9.4850	0.0003	0.0000	0.0017	0.0090	0.00005	0.0005	0.2425	0.1945	0.0000050	0.0057
M-09-108 184.5-185.5	0.03	0.0253	0.0006	0.0001	0.0112	0.0000	0.0000	0.0025	0.00018	9.6000	0.0003	0.0001	0.0018	0.0010	0.00007	0.0005	0.2250	0.1870	0.0000050	0.0064
M-09-108 184.5-185.5	0.05	0.0318	0.0008	0.0002	0.0123	0.0000	0.0000	0.0025	0.00010	10.2000	0.0003	0.0001	0.0022	0.0010	0.00006	0.0005	0.2340	0.2055	0.0000050	0.0061
M-09-108 184.5-185.5	0.06	0.0382	0.0009	0.0002	0.0134	0.0000	0.0000	0.0024	0.00002	10.8000	0.0003	0.0000	0.0025	0.0010	0.00004	0.0005	0.2430	0.2240	0.0000050	0.0058
M-09-108 184.5-185.5	0.06	0.0345	0.0008	0.0002	0.0130	0.0000	0.0000	0.0024	0.00002	10.8500	0.0003	0.0000	0.0021	0.0010	0.00004	0.0005	0.2445	0.2245	0.0000050	0.0059
M-09-108 184.5-185.5	0.06	0.0308	0.0007	0.0002	0.0125	0.0000	0.0000	0.0023	0.00002	10.9000	0.0003	0.0000	0.0016	0.0010	0.00004	0.0005	0.2460	0.2250	0.0000050	0.0060
M-09-108 184.5-185.5	0.05	0.0281	0.0007	0.0002	0.0114	0.0000	0.0000	0.0023	0.00002	10.0050	0.0003	0.0000	0.0025	0.0010	0.00004	0.0005	0.2190	0.2090	0.0000075	0.0057
M-09-108 184.5-185.5	0.03	0.0253	0.0006	0.0002	0.0102	0.0000	0.0000	0.0022	0.00001	9.1100	0.0003	0.0001	0.0033	0.0010	0.00004	0.0005	0.1920	0.1930	0.0000100	0.0054
M-09-108 184.5-185.5	0.03	0.0270	0.0006	0.0002	0.0097	0.0000	0.0000	0.0024	0.00001	9.2850	0.0003	0.0000	0.0029	0.0010	0.00005	0.0005	0.1960	0.1935	0.0000075	0.0052
M-09-108 184.5-185.5	0.03	0.0287	0.0006	0.0002	0.0093	0.0000	0.0000	0.0025	0.00002	9.4600	0.0003	0.0000	0.0025	0.0010	0.00006	0.0005	0.2000	0.1940	0.0000050	0.0051
M-09-108 184.5-185.5	0.03	0.0338	0.0006	0.0002	0.0100	0.0000	0.0000	0.0028	0.00002	9.8300	0.0003	0.0000	0.0024	0.0010	0.00005	0.0005	0.2045	0.2010	0.0000050	0.0053
M-09-108 184.5-185.5	0.03	0.0388	0.0006	0.0002	0.0108	0.0000	0.0000	0.0030	0.00002	10.2000	0.0003	0.0000	0.0022	0.0010	0.00003	0.0005	0.2090	0.2080	0.0000050	0.0054
M-09-108 184.5-185.5	0.03	0.0368	0.0007	0.0002	0.0112	0.0000	0.0000	0.0031	0.00002	11.2500	0.0003	0.0001	0.0023	0.0010	0.00003	0.0005	0.2220	0.2320	0.0000050	0.0056
M-09-108 184.5-185.5	0.03	0.0347	0.0007	0.0001	0.0115	0.0000	0.0000	0.0031	0.00001	12.3000	0.0003	0.0001	0.0023	0.0010	0.00003	0.0005	0.2350	0.2560	0.0000050	0.0058
M-09-108 184.5-185.5	0.03	0.0330	0.0007	0.0003	0.0118	0.0000	0.0000	0.0028	0.00002	10.6650	0.0003	0.0001	0.0031	0.0095	0.00004	0.0005	0.2200	0.2485	0.0000050	0.0055
M-09-108 184.5-185.5	0.03	0.0313	0.0006	0.0004	0.0121	0.0000	0.0000	0.0025	0.00002	9.0300	0.0003	0.0001	0.0038	0.0180	0.00004	0.0005	0.2050	0.2410	0.0000050	0.0052
M-09-108 184.5-185.5	0.03	0.0295	0.0006	0.0003	0.0126	0.0000	0.0000	0.0027	0.00002	10.8650	0.0003	0.0001	0.0032	0.0095	0.00006	0.0005	0.2090	0.2705	0.0000050	0.0056
M-09-108 184.5-185.5	0.03	0.0277	0.0006	0.0001	0.0131	0.0000	0.0000	0.0028	0.00001	12.7000	0.0003	0.0001	0.0026	0.0010	0.00007	0.0005	0.2130	0.3000	0.0000050	0.0061
M-09-108 184.5-185.5	0.03	0.0268	0.0007	0.0002	0.0143	0.0000	0.0000	0.0030	0.00002	11.9000	0.0006	0.0001	0.0031	0.0025	0.00007	0.0005	0.1995	0.2885	0.0000050	0.0059
M-09-108 184.5-185.5	0.03	0.0258	0.0007	0.0003	0.0155	0.0000	0.0000	0.0032	0.00004	11.1000	0.0010	0.0001	0.0036	0.0040	0.00006	0.0005	0.1860	0.2770	0.0000050	0.0058
M-09-108 184.5-185.5	0.03	0.0303	0.0007	0.0002	0.0156	0.0000	0.0000	0.0030	0.00003	11.5000	0.0008	0.0000	0.0036	0.0030	0.00009	0.0005	0.1860	0.2790	0.0000050	0.0065
M-09-108 184.5-185.5	0.03	0.0347	0.0006	0.0001	0.0156	0.0000	0.0000	0.0028	0.00002	11.9000	0.0005	0.0000	0.0036	0.0020	0.00012	0.0005	0.1860	0.2810	0.0000050	0.0072
M-09-108 184.5-185.5	0.03	0.0304	0.0006	0.0002	0.0155	0.0000	0.0000	0.0032	0.00002	11.7000	0.0011	0.0000	0.0040	0.0040	0.00009	0.0005	0.1860	0.2880	0.0000075	0.0064
M-09-108 184.5-185.5	0.03	0.0261	0.0006	0.0002	0.0154	0.0000	0.0000	0.0035	0.00003	11.5000	0.0017	0.0001	0.0044	0.0060	0.00006	0.0005	0.1860	0.2950	0.0000100	0.0055
M-09-108 184.5-185.5	0.03	0.0308	0.0008	0.0003	0.0154	0.0000	0.0000	0.0032	0.00002	11.4000	0.0012	0.0000	0.0033	0.0035	0.00007	0.0005	0.1800	0.2935	0.0000075	0.0057
M-09-108 184.5-185.5	0.03	0.0354	0.0009	0.0003	0.0153	0.0000	0.0000	0.0028	0.00002	11.3000	0.0007	0.0000	0.0022	0.0010	0.00007	0.0005	0.1740	0.2920	0.0000050	0.0059
M-09-108 184.5-185.5	0.03	0.0316	0.0008	0.0003	0.0166	0.0000	0.0000	0.0033	0.00001	11.3000	0.0005	0.0000	0.0027	0.0013	0.00009	0.0005	0.1710	0.2860	0.0000050	0.0055
M-09-108 184.5-185.5	0.03	0.0277	0.0006	0.0003	0.0179	0.0000	0.0000	0.0038	0.00001	11.3000	0.0003	0.0000	0.0031	0.0015	0.00011	0.0005	0.1680	0.2800	0.0000050	0.0051
M-09-108 184.5-185.5	0.03	0.0273	0.0006	0.0003	0.0176	0.0000	0.0000	0.0040	0.00002	10.7500	0.0005	0.0000	0.0027	0.0028	0.00007	0.0005	0.1610	0.2655	0.0000050	0.0053
M-09-108 184.5-185.5	0.03	0.0269	0.0005	0.0003	0.0172	0.0000	0.0000	0.0042	0.00002	10.2000	0.0008	0.0000	0.0022	0.0040	0.00003	0.0005	0.1540	0.2510	0.0000050	0.0055
M-09-108 184.5-185.5	0.03	0.0359	0.0005	0.0002	0.0142	0.0000	0.0000	0.0033	0.00002	9.8250	0.0005	0.0000	0.0036	0.0028	0.00003	0.0005	0.1380	0.2285	0.0000050	0.0048
M-09-108 184.5-185.5	0.03	0.0449	0.0005	0.0001	0.0112	0.0000	0.0000	0.0024	0.00002	9.4500	0.0003	0.0000	0.0049	0.0015	0.00003	0.0005	0.1220	0.2060	0.0000050	0.0042
M-09-108 184.5-185.5	0.03	0.0386	0.0006	0.0002	0.0118	0.0000	0.0000	0.0024	0.00002	9.2550	0.0003	0.0000	0.0042	0.0015	0.00003	0.0005	0.1285	0.2100	0.0000050	0.0046
M-09-108 184.5-185.5	0.03	0.0322	0.0006	0.0003	0.0123	0.0000	0.0000	0.0023	0.00002	9.0600	0.0003	0.0000	0.0034	0.0015	0.00003	0.0005	0.1350	0.2140	0.0000050	0.0050
M-09-108 184.5-185.5	0.03	0.0396	0.0006	0.0003	0.0125	0.0000	0.0000	0.0028	0.00002	9.5800	0.0003	0.0001	0.0029	0.0043	0.00003	0.0005	0.1415	0.2310	0.0000075	0.0050
M-09-108 184.5-185.5	0.03	0.0469	0.0005	0.0002	0.0127	0.0000	0.0000	0.0033	0.00002	10.1000	0.0003	0.0001	0.0023	0.0070	0.00002	0.0005	0.1480	0.2480	0.0000100	0.0051
M-09-108 184.5-185.5	0.03	0.0441	0.0005	0.0002	0.0127	0.0000	0.0000	0.0031	0.00004	10.0375	0.0003	0.0001	0.0023	0.0056	0.00004	0.0005	0.1450	0.2505	0.0000088	0.0049
M-09-108 184.5-185.5	0.03	0.0412	0.0005	0.0003	0.0126	0.0000	0.0000	0.0029	0.00006	9.9750	0.0003	0.0001	0.0024	0.0043	0.00005	0.0005	0.1420	0.2530	0.0000075	0.0048
M-09-108 184.5-185.5	0.03	0.0384	0.0005	0.0003	0.0126	0.0000	0.0000	0.0027	0.00008	9.9125	0.0003	0.0000	0.0024	0.0029	0.00007	0.0005	0.1390	0.2555	0.0000063	0.0047
M-09-108 184.5-185.5	0.03	0.0355	0.0005	0.0003	0.0125	0.0000	0.0000	0.0025	0.00011	9.8500	0.0003	0.0000	0.0024	0.0015	0.00008	0.0005	0.1360	0.2580	0.0000050	0.0046
M-09-108 184.5-185.5	0.03	0.0361	0.0005	0.0003	0.0121	0.0000	0.0000	0.0025	0.00010	9.7675	0.0003	0.0000	0.0025	0.0015	0.00012	0.0005	0.1340	0.2500	0.0000050	0.0046
M-09-108 184.5-185.5	0.03	0.0367	0.0006	0.0003	0.0117	0.0000	0.0000	0.0025	0.00010	9.6850	0.0003	0.0000	0.0027	0.0015	0.00015	0.0005	0.1320	0.2420	0.0000050	0.0047
M-09-108 184.5-185.5	0.03	0.0373	0.0006	0.0003	0.0112	0.0000	0.0000	0.0024	0.00009	9.6025	0.0003	0.0000	0.0028	0.0015	0.00019	0.0005	0.1300	0.2340	0.0000050	0.0047
M-09-108 184.5-185.5	0.03	0.0379	0.0006	0.0003	0.0108	0.0000	0.0000	0.0024	0.00009	9.5200	0.0003	0.0000	0.0029	0.0015	0.00022	0.0005	0.1280	0.2260	0.0000050	0.0048
M-09-108 184.5-185.5	0.03	0.0370	0.0006	0.0003	0.0106	0.0000	0.0000	0.0021	0.00007	9.6100	0.0003	0.0000	0.0030	0.0021	0.00019	0.0005	0.1300	0.2258	0.0000063	0.0048
M-09-108 184.5-185.5	0.03	0.0362	0.0005	0.0003	0.0104	0.0000	0.0000	0.0018	0.00005	9.7000	0.0003	0.0000	0.0030	0.0028	0.00016	0.0005	0.1320	0.2255	0.0000075	0.0048
M-09-108 184.5-185.5	0.03	0.0353	0.0005	0.0003	0.0102	0.0000	0.0000	0.0015	0.00003	9.7900	0.0003	0.0000	0.0031	0.0034	0.00012	0.0005	0.1340	0.2253	0.0000088	0.0047
M-09-108 184.5-185.5	0.03	0.0344	0.0004	0.0003	0.0100	0.0000	0.0000	0.0012	0.00002	9.8800	0.0003	0.0000	0.0031	0.0040	0.00009	0.0005	0.1360	0.2250	0.0000100	0.0047
M-09-108 184.5-185.5	0.03	0.0379	0.0004	0.0003	0.0099	0.0000	0.0000	0.0015	0.00001	9.8375	0.0003	0.0000	0.0036	0.0034	0.00008	0.0005	0.1325	0.2273	0.0000125	0.0048
M-09-108 184.5-185.5	0.03	0.0415	0.0005	0.0002	0.0099	0.0000	0.0000	0.0018	0.00001	9.7950	0.0003	0.0000	0.0040	0.0028	0.00008	0.0005	0.1290	0.2295	0.0000150	0.0049
M-09-108 184.5-185.5	0.03	0.0450	0.0005	0.0002	0.0098	0.0000	0.0000	0.0020	0.00000	9.7525	0.0003	0.0000	0.0045	0.0021	0.00007	0.0005	0.1255	0.2318	0.0000175	0.0049
M-09-108 184.5-185.5	0.03	0.0485	0.0005	0.0001	0.0098	0.0000	0.0000	0.0023	0.00000	9.7100	0.0003	0.0000	0.0049	0.0015	0.00006	0.0005	0.1220	0.2340	0.0000200	0.0050
M-09-108 184.5-185.5	0.03	0.0485	0.0005	0.0001	0.0098	0.0000	0.0000	0.0023	0.00000	9.7100	0.0003	0.0000	0.0049	0.0015	0.00006	0.0005	0.1220	0.2340	0.0000200	0.0050
M-09-108 184.5-185.5	0.03	0.0485	0.0005	0.0001	0.0098	0.0000	0.0000	0.0023	0.00000	9.7100	0.0003	0.0000	0.0049	0.0015	0.00006	0.0005	0.1220	0.2340	0.0000200	0.0050
M-09-108 184.5-185.5	0.03	0.0533	0.0004	0.0001	0.0096	0.0000	0.0000	0.0024	0.00000	9.4400	0.0003	0.0000	0.0023	0.0015	0.00002	0.0005	0.1110	0.2190	0.0000050	0.0046

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-108 184.5-185.5	0.0002	0.0133	0.8185	0.0006	0.5100	0.00001	0.0900	0.0664	5.9100	0.0001	0.0006	0.0001	0.0004	0.0001	0.0018	0.0000
M-09-108 184.5-185.5	0.0003	0.0220	0.8610	0.0006	0.4800	0.00001	0.1100	0.0674	5.8200	0.0001	0.0005	0.0001	0.0004	0.0001	0.0030	0.0000
M-09-108 184.5-185.5	0.0004	0.0230	0.7945	0.0006	0.4750	0.00001	0.0900	0.0613	5.3250	0.0001	0.0008	0.0001	0.0003	0.0001	0.0025	0.0000
M-09-108 184.5-185.5	0.0004	0.0240	0.7280	0.0007	0.4700	0.00001	0.0700	0.0552	4.8300	0.0001	0.0010	0.0001	0.0003	0.0001	0.0020	0.0000
M-09-108 184.5-185.5	0.0004	0.0195	0.7355	0.0004	0.4650	0.00001	0.0700	0.0568	4.9100	0.0001	0.0007	0.0001	0.0004	0.0001	0.0013	0.0000
M-09-108 184.5-185.5	0.0003	0.0150	0.7430	0.0001	0.4600	0.00001	0.0700	0.0584	4.9900	0.0001	0.0004	0.0001	0.0004	0.0001	0.0005	0.0000
M-09-108 184.5-185.5	0.0003	0.0098	0.7025	0.0002	0.4250	0.00001	0.0700	0.0557	4.7700	0.0001	0.0005	0.0001	0.0003	0.0001	0.0008	0.0000
M-09-108 184.5-185.5	0.0003	0.0045	0.6620	0.0003	0.3900	0.00001	0.0700	0.0530	4.5500	0.0000	0.0005	0.0001	0.0003	0.0001	0.0010	0.0000
M-09-108 184.5-185.5	0.0003	0.0045	0.6040	0.0002	0.3700	0.00001	0.0600	0.0516	4.6500	0.0001	0.0005	0.0001	0.0003	0.0001	0.0008	0.0000
M-09-108 184.5-185.5	0.0002	0.0045	0.5460	0.0002	0.3500	0.00001	0.0500	0.0502	4.7500	0.0001	0.0006	0.0001	0.0003	0.0001	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0078	0.5790	0.0001	0.3600	0.00001	0.0550	0.0517	4.9600	0.0001	0.0005	0.0001	0.0003	0.0001	0.0008	0.0000
M-09-108 184.5-185.5	0.0001	0.0110	0.6120	0.0001	0.3700	0.00001	0.0600	0.0532	5.1700	0.0001	0.0004	0.0001	0.0003	0.0001	0.0010	0.0000
M-09-108 184.5-185.5	0.0001	0.0145	0.5895	0.0005	0.3650	0.00001	0.0600	0.0516	5.1300	0.0001	0.0005	0.0001	0.0003	0.0001	0.0055	0.0000
M-09-108 184.5-185.5	0.0001	0.0180	0.5670	0.0009	0.3600	0.00002	0.0600	0.0499	5.0900	0.0001	0.0007	0.0001	0.0003	0.0002	0.0100	0.0000
M-09-108 184.5-185.5	0.0003	0.0113	0.6075	0.0004	0.3800	0.00001	0.0650	0.0523	5.0650	0.0001	0.0005	0.0002	0.0003	0.0001	0.0060	0.0000
M-09-108 184.5-185.5	0.0004	0.0045	0.6480	0.0000	0.4000	0.00001	0.0700	0.0547	5.0400	0.0001	0.0004	0.0002	0.0003	0.0001	0.0020	0.0000
M-09-108 184.5-185.5	0.0004	0.0103	0.6580	0.0003	0.4250	0.00001	0.0750	0.0540	5.4250	0.0001	0.0004	0.0002	0.0003	0.0001	0.0020	0.0000
M-09-108 184.5-185.5	0.0003	0.0160	0.6680	0.0005	0.4500	0.00001	0.0800	0.0533	5.8100	0.0000	0.0004	0.0001	0.0003	0.0001	0.0020	0.0000
M-09-108 184.5-185.5	0.0002	0.0385	0.5980	0.0004	0.3850	0.00001	0.0700	0.0483	5.2700	0.0000	0.0004	0.0001	0.0003	0.0001	0.0020	0.0000
M-09-108 184.5-185.5	0.0001	0.0610	0.5280	0.0003	0.3200	0.00001	0.0600	0.0433	4.7300	0.0000	0.0004	0.0001	0.0003	0.0001	0.0020	0.0000
M-09-108 184.5-185.5	0.0003	0.0328	0.5440	0.0002	0.3500	0.00001	0.0750	0.0440	4.8650	0.0000	0.0006	0.0001	0.0002	0.0001	0.0025	0.0000
M-09-108 184.5-185.5	0.0005	0.0045	0.5600	0.0001	0.3800	0.00001	0.0900	0.0447	5.0000	0.0000	0.0009	0.0001	0.0002	0.0001	0.0030	0.0000
M-09-108 184.5-185.5	0.0004	0.0045	0.5750	0.0002	0.3850	0.00001	0.0750	0.0467	5.0550	0.0000	0.0006	0.0001	0.0002	0.0001	0.0018	0.0000
M-09-108 184.5-185.5	0.0002	0.0045	0.5900	0.0002	0.3900	0.00001	0.0600	0.0487	5.1100	0.0000	0.0004	0.0001	0.0002	0.0001	0.0005	0.0000
M-09-108 184.5-185.5	0.0002	0.0045	0.6090	0.0001	0.4250	0.00001	0.0600	0.0518	5.6950	0.0000	0.0003	0.0001	0.0003	0.0001	0.0005	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.6280	0.0000	0.4600	0.00001	0.0600	0.0548	6.2800	0.0000	0.0003	0.0001	0.0003	0.0001	0.0005	0.0000
M-09-108 184.5-185.5	0.0003	0.0183	0.5460	0.0002	0.4100	0.00001	0.0500	0.0502	5.3800	0.0000	0.0002	0.0003	0.0003	0.0001	0.0008	0.0000
M-09-108 184.5-185.5	0.0005	0.0320	0.4640	0.0003	0.3600	0.00001	0.0400	0.0455	4.4800	0.0000	0.0002	0.0006	0.0003	0.0001	0.0010	0.0000
M-09-108 184.5-185.5	0.0003	0.0225	0.5315	0.0003	0.4000	0.00001	0.0450	0.0523	5.6750	0.0000	0.0003	0.0003	0.0003	0.0001	0.0025	0.0000
M-09-108 184.5-185.5	0.0001	0.0130	0.5990	0.0004	0.4400	0.00001	0.0500	0.0590	6.8700	0.0000	0.0005	0.0001	0.0004	0.0001	0.0040	0.0000
M-09-108 184.5-185.5	0.0001	0.0088	0.5515	0.0003	0.4100	0.00001	0.0550	0.0563	6.3400	0.0000	0.0004	0.0001	0.0004	0.0001	0.0035	0.0000
M-09-108 184.5-185.5	0.0002	0.0045	0.5040	0.0002	0.3800	0.00001	0.0600	0.0535	5.8100	0.0000	0.0003	0.0002	0.0004	0.0001	0.0030	0.0000
M-09-108 184.5-185.5	0.0003	0.0045	0.5760	0.0003	0.3800	0.00001	0.0400	0.0543	7.4600	0.0000	0.0003	0.0002	0.0004	0.0001	0.0035	0.0000
M-09-108 184.5-185.5	0.0004	0.0045	0.6480	0.0005	0.3800	0.00001	0.0200	0.0550	9.1100	0.0000	0.0002	0.0002	0.0003	0.0001	0.0040	0.0000
M-09-108 184.5-185.5	0.0003	0.0093	0.5615	0.0003	0.3800	0.00001	0.0700	0.0539	7.4350	0.0000	0.0005	0.0001	0.0003	0.0001	0.0040	0.0000
M-09-108 184.5-185.5	0.0002	0.0140	0.4750	0.0001	0.3800	0.00001	0.1200	0.0528	5.7600	0.0000	0.0007	0.0001	0.0003	0.0001	0.0040	0.0000
M-09-108 184.5-185.5	0.0001	0.0093	0.4910	0.0003	0.3800	0.00002	0.0900	0.0521	5.6150	0.0000	0.0005	0.0001	0.0004	0.0001	0.0035	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.5070	0.0005	0.3800	0.00002	0.0600	0.0513	5.4700	0.0000	0.0003	0.0001	0.0004	0.0001	0.0030	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.5040	0.0004	0.3800	0.00002	0.0600	0.0495	5.5400	0.0000	0.0003	0.0001	0.0003	0.0001	0.0030	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.5010	0.0002	0.3800	0.00001	0.0600	0.0477	5.6100	0.0000	0.0003	0.0001	0.0003	0.0001	0.0030	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.4550	0.0002	0.3450	0.00001	0.0500	0.0453	5.4900	0.0000	0.0003	0.0001	0.0003	0.0001	0.0020	0.0000
M-09-108 184.5-185.5	0.0002	0.0045	0.4090	0.0002	0.3100	0.00001	0.0400	0.0429	5.3700	0.0000	0.0003	0.0001	0.0003	0.0001	0.0010	0.0000
M-09-108 184.5-185.5	0.0003	0.0045	0.3895	0.0003	0.3200	0.00001	0.0450	0.0395	5.0200	0.0000	0.0003	0.0001	0.0002	0.0001	0.0010	0.0000
M-09-108 184.5-185.5	0.0004	0.0045	0.3700	0.0003	0.3300	0.00001	0.0500	0.0360	4.6700	0.0000	0.0002	0.0002	0.0002	0.0001	0.0010	0.0000
M-09-108 184.5-185.5	0.0004	0.0045	0.3700	0.0003	0.3100	0.00001	0.0350	0.0357	4.4000	0.0000	0.0002	0.0002	0.0002	0.0001	0.0008	0.0000
M-09-108 184.5-185.5	0.0003	0.0045	0.3700	0.0004	0.2900	0.00001	0.0200	0.0354	4.1300	0.0000	0.0001	0.0001	0.0002	0.0002	0.0005	0.0000
M-09-108 184.5-185.5	0.0003	0.0045	0.3605	0.0003	0.3100	0.00001	0.0500	0.0367	4.7000	0.0000	0.0005	0.0002	0.0002	0.0002	0.0013	0.0000
M-09-108 184.5-185.5	0.0003	0.0045	0.3510	0.0003	0.3300	0.00001	0.0800	0.0379	5.2700	0.0000	0.0008	0.0002	0.0003	0.0003	0.0020	0.0000
M-09-108 184.5-185.5	0.0003	0.0045	0.3478	0.0003	0.3225	0.00001	0.0725	0.0380	5.2075	0.0000	0.0007	0.0002	0.0003	0.0003	0.0025	0.0000
M-09-108 184.5-185.5	0.0002	0.0045	0.3445	0.0004	0.3150	0.00002	0.0650	0.0381	5.1450	0.0000	0.0005	0.0002	0.0002	0.0003	0.0030	0.0000
M-09-108 184.5-185.5	0.0002	0.0045	0.3413	0.0004	0.3075	0.00002	0.0575	0.0382	5.0825	0.0000	0.0004	0.0002	0.0002	0.0003	0.0035	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.3380	0.0004	0.3000	0.00002	0.0500	0.0383	5.0200	0.0000	0.0002	0.0002	0.0002	0.0002	0.0040	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.3380	0.0004	0.2900	0.00002	0.0550	0.0374	4.9275	0.0000	0.0002	0.0002	0.0002	0.0003	0.0040	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.3380	0.0004	0.2800	0.00002	0.0600	0.0364	4.8350	0.0000	0.0002	0.0002	0.0002	0.0003	0.0040	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.3380	0.0004	0.2700	0.00001	0.0650	0.0355	4.7425	0.0000	0.0002	0.0002	0.0002	0.0003	0.0040	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.3380	0.0004	0.2600	0.00001	0.0700	0.0345	4.6500	0.0000	0.0002	0.0002	0.0002	0.0003	0.0040	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.3375	0.0003	0.2675	0.00001	0.0700	0.0346	4.7175	0.0000	0.0002	0.0002	0.0002	0.0003	0.0043	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.3370	0.0003	0.2750	0.00001	0.0700	0.0346	4.7850	0.0000	0.0002	0.0002	0.0002	0.0003	0.0045	0.0000
M-09-108 184.5-185.5	0.0002	0.0045	0.3365	0.0002	0.2825	0.00001	0.0700	0.0347	4.8525	0.0000	0.0002	0.0002	0.0002	0.0003	0.0048	0.0000
M-09-108 184.5-185.5	0.0002	0.0045	0.3360	0.0002	0.2900	0.00001	0.0700	0.0347	4.9200	0.0000	0.0001	0.0002	0.0002	0.0002	0.0050	0.0000
M-09-108 184.5-185.5	0.0002	0.0045	0.3325	0.0002	0.2800	0.00001	0.0675	0.0346	4.9675	0.0000	0.0001	0.0002	0.0002	0.0003	0.0043	0.0000
M-09-108 184.5-185.5	0.0003	0.0045	0.3290	0.0002	0.2700	0.00001	0.0650	0.0345	5.0150	0.0000	0.0002	0.0003	0.0002	0.0003	0.0035	0.0000
M-09-108 184.5-185.5	0.0003	0.0045	0.3255	0.0002	0.2600	0.00001	0.0625	0.0343	5.0625	0.0000	0.0002	0.0003	0.0002	0.0003	0.0028	0.0000
M-09-108 184.5-185.5	0.0003	0.0045	0.3220	0.0002	0.2500	0.00001	0.0600	0.0342	5.1100	0.0000	0.0002	0.0003	0.0002	0.0004	0.0020	0.0000
M-09-108 184.5-185.5	0.0003	0.0045	0.3220	0.0002	0.2500	0.00001	0.0600	0.0342	5.1100	0.0000	0.0002	0.0003	0.0002	0.0004	0.0020	0.0000
M-09-108 184.5-185.5	0.0003	0.0045	0.3220	0.0002	0.2500	0.00001	0.0600	0.0342	5.1100	0.0000	0.0002	0.0003	0.0002	0.0004	0.0020	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.3040	0.0003	0.2700	0.00001	0.0600	0.0301	4.7400	0.0000	0.0002	0.0001	0.0001	0.0002	0.0010	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-108 184.5-185.5	26	117	7-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	25	62	7.25	6.6	13.9	11	0.1
M-09-108 184.5-185.5	26	118	14-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	490	26	62	7.38	6.7	14.4	12	0.1
M-09-108 184.5-185.5	26	119	21-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	26	63	7.35	6.7	14.9	12	0.1
M-09-108 184.5-185.5	26	120	28-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	470	27	63	7.46	6.8	15.4	13	0.1
M-09-108 184.5-185.5	26	121	5-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	480	27	63	7.21	6.3	15.3	14	0.1
M-09-108 184.5-185.5	26	122	12-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	475	27	66	7.3	5.8	15.1	15	0.1
M-09-108 184.5-185.5	26	123	19-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	495	28	62	7.28	5.2	15.0	15	0.1
M-09-108 184.5-185.5	26	124	26-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VU	IARG	4	CL	1			Water	500	485	28	66	7.34	4.7	14.8	16	0.1
																	26	62	7.353	6.2	14.6	13	0.1
HC13 UP Hazelton																							
M-09-110 34.5-35.5	13	0	4-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	385	57	131	7.61	2.4	40.6	36	1.0
M-09-110 34.5-35.5	13	1	11-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	495	45	118	7.54	2.2	31.5	27	0.4
M-09-110 34.5-35.5	13	2	18-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	510	38	96	7.5	2.7	27.7	20	0.1
M-09-110 34.5-35.5	13	3	25-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	510	33	75	7.5	2.7	27.0	16	0.1
M-09-110 34.5-35.5	13	4	4-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	500	29	75	7.41	2.4	25.6	12	0.1
M-09-110 34.5-35.5	13	5	11-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	500	31	73	7.47	2.7	26.3	13	0.1
M-09-110 34.5-35.5	13	6	18-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	515	30	72	7.49	2.7	24.2	12	0.1
M-09-110 34.5-35.5	13	7	25-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	505	32	68	7.37	3.6	23.4	9	0.1
M-09-110 34.5-35.5	13	8	1-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	480	29	67	7.44	2.7	22.3	16	0.1
M-09-110 34.5-35.5	13	9	8-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	480	29	67	7.4	2.4	23.4	11	0.1
M-09-110 34.5-35.5	13	10	15-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	480	28	65	7.35	3.2	21.7	14	0.1
M-09-110 34.5-35.5	13	11	22-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	460	27	64	7.39	3.7	22.5	13	0.1
M-09-110 34.5-35.5	13	12	29-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	505	24	63	7.53	2.3	22.6	11	0.1
M-09-110 34.5-35.5	13	13	6-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	480	27	59	7.22	4.6	18.3	8	0.1
M-09-110 34.5-35.5	13	14	13-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	465	27	60	7.47	3.0	19.1	10	0.1
M-09-110 34.5-35.5	13	15	20-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	480	25	57	7.49	4.0	21.4	9	0.1
M-09-110 34.5-35.5	13	16	27-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	495	25	55	7.42	5.9	22.4	5	0.1
M-09-110 34.5-35.5	13	17	3-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	495	27	53	7.38	3.1	18.3	7	0.1
M-09-110 34.5-35.5	13	18	10-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	515	33	53	7.45	4.1	21.1	7	0.1
M-09-110 34.5-35.5	13	19	17-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	505	23	51	7.57	3.2	21.5	7	0.1
M-09-110 34.5-35.5	13	20	24-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	510	24	50	7.56	2.5	21.2	8	0.1
M-09-110 34.5-35.5	13	21	1-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	495	23	49	7.52	2.4	21.2	7	0.1
M-09-110 34.5-35.5	13	22	8-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	505	18	49	7.38	2.5	17.8	5	0.1
M-09-110 34.5-35.5	13	23	15-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	485	19	45	7.39	3.5	17.3	4	0.1
M-09-110 34.5-35.5	13	24	22-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	495	20	45	7.32	2.9	19.0	5	0.1
M-09-110 34.5-35.5	13	25	29-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	500	23	44	7.45	3.7	18.6	9	0.1
M-09-110 34.5-35.5	13	26	5-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	485	19	46	7.5	2.6	21.6	3	0.1
M-09-110 34.5-35.5	13	27	12-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	455	20	43	7.54	3.4	21.3	3	0.1
M-09-110 34.5-35.5	13	28	19-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	495	19	40	7.6	4.3	21.9	7	0.1
M-09-110 34.5-35.5	13	29	26-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	490	19	40	7.38	2.1	20.8	7	0.1
M-09-110 34.5-35.5	13	30	2-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	495	19	36	7.37	3.7	21.0	7	0.1
M-09-110 34.5-35.5	13	31	9-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	480	18	40	7.2	4.5	17.9	6	0.1
M-09-110 34.5-35.5	13	32	16-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	490	18	36	7.24	2.8	17.5	7	0.1
M-09-110 34.5-35.5	13	33	23-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	465	16	29	7.36	2.5	17.1	7	0.1
M-09-110 34.5-35.5	13	34	30-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	480	19	30	7.36	2.6	21.0	9	0.1
M-09-110 34.5-35.5	13	35	7-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	495	20	44	7.34	3.6	21.9	7	0.1
M-09-110 34.5-35.5	13	36	14-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	470	20	40	7.33	2.9	18.3	7	0.1
M-09-110 34.5-35.5	13	37	21-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	485	19	40	7.35	2.9	21.7	6	0.1
M-09-110 34.5-35.5	13	38	28-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	465	18	40	7.28	3.2	20.9	6	0.1
M-09-110 34.5-35.5	13	39	4-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	470	19	40	7.46	2.2	21.0	5	0.1
M-09-110 34.5-35.5	13	40	11-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	485	20	41	7.56	2.2	22.4	2	0.1
M-09-110 34.5-35.5	13	41	18-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	465	19	31	7.58	3.3	21.2	2	0.1
M-09-110 34.5-35.5	13	42	25-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	480	19	39	7.23	3.3	21.1	3	0.1
M-09-110 34.5-35.5	13	43	2-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	485	22	40	7.38	2.9	22.3	3	0.1
M-09-110 34.5-35.5	13	44	9-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	495	19	39	7.25	3.7	21.3	3	0.1
M-09-110 34.5-35.5	13	45	16-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	485	21	39	7.36	3.9	20.8	5	0.1
M-09-110 34.5-35.5	13	46	23-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	475	19	37	7.49	4.8	21.3	4	0.1
M-09-110 34.5-35.5	13	47	30-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	495	18	34	7.41	5.3	21.5	4	0.1
M-09-110 34.5-35.5	13	48	6-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	510	18	31	7.42	4.4	19.7	4	0.1
M-09-110 34.5-35.5	13	49	13-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	505	18	31	7.41	3.4	17.9	4	0.1
M-09-110 34.5-35.5	13	50	20-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	485	17	32	7.23	3.6	17.7	4	0.1
M-09-110 34.5-35.5	13	51	27-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	475	17	31	7.41	3.9	17.6	4	0.1
M-09-110 34.5-35.5	13	52	3-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	475	17	30	7.3	3.1	17.3	3	0.1
M-09-110 34.5-35.5	13	53	10-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	520	18	29	7.47	2.4	17.1	2	0.1
M-09-110 34.5-35.5	13	54	17-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	500	18	29	7.35	2.9	17.4	4	0.1
M-09-110 34.5-35.5	13	55	24-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	485	18	40	7.36	3.4	17.7	6	0.1
M-09-110 34.5-35.5	13	56	3-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	485	18	35	7.28	3.1	17.6	5	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-108 184.5-185.5	0.03	0.0548	0.0004	0.0001	0.0098	0.0000	0.0000	0.0026	0.00002	9.7300	0.0003	0.0000	0.0022	0.0015	0.00003	0.0005	0.1128	0.2280	0.0000063	0.0049
M-09-108 184.5-185.5	0.03	0.0563	0.0005	0.0001	0.0100	0.0000	0.0000	0.0028	0.00004	10.0200	0.0003	0.0000	0.0021	0.0015	0.00003	0.0005	0.1145	0.2370	0.0000075	0.0051
M-09-108 184.5-185.5	0.03	0.0577	0.0005	0.0001	0.0101	0.0000	0.0000	0.0029	0.00006	10.3100	0.0003	0.0000	0.0020	0.0015	0.00004	0.0005	0.1163	0.2460	0.0000088	0.0054
M-09-108 184.5-185.5	0.03	0.0592	0.0005	0.0001	0.0103	0.0000	0.0000	0.0031	0.00008	10.6000	0.0003	0.0000	0.0019	0.0015	0.00004	0.0005	0.1180	0.2550	0.0000100	0.0057
M-09-108 184.5-185.5	0.03	0.0580	0.0005	0.0001	0.0106	0.0000	0.0000	0.0029	0.00006	10.7000	0.0003	0.0000	0.0018	0.0015	0.00006	0.0005	0.1180	0.2685	0.0000088	0.0058
M-09-108 184.5-185.5	0.03	0.0567	0.0005	0.0001	0.0109	0.0000	0.0000	0.0028	0.00004	10.8000	0.0003	0.0000	0.0018	0.0015	0.00009	0.0005	0.1180	0.2820	0.0000075	0.0058
M-09-108 184.5-185.5	0.03	0.0555	0.0005	0.0001	0.0112	0.0000	0.0000	0.0026	0.00002	10.9000	0.0003	0.0000	0.0017	0.0015	0.00011	0.0005	0.1180	0.2955	0.0000063	0.0059
M-09-108 184.5-185.5	0.03	0.0542	0.0005	0.0001	0.0115	0.0000	0.0000	0.0024	0.00001	11.0000	0.0003	0.0000	0.0016	0.0015	0.00013	0.0005	0.1180	0.3090	0.0000050	0.0059
	0.03	0.0553	0.0005	0.0001	0.0104	0.0000	0.0000	0.0027	0.00003	10.3058	0.0003	0.0000	0.0020	0.0015	0.00006	0.0005	0.1158	0.2568	0.0000074	0.0054
HC13 UP Hazelton																				
M-09-110 34.5-35.5	0.70	0.0270	0.0007	0.0004	0.0925	0.0000	0.0000	0.0040	0.00007	20.9434	0.0003	0.0000	0.0103	0.0051	0.00019	0.0040	1.1516	0.0130	0.0000050	0.0468
M-09-110 34.5-35.5	0.58	0.0285	0.0006	0.0005	0.0782	0.0000	0.0000	0.0040	0.00007	16.3434	0.0003	0.0000	0.0069	0.0051	0.00014	0.0010	0.9356	0.0190	0.0000050	0.0322
M-09-110 34.5-35.5	0.48	0.0308	0.0005	0.0004	0.0859	0.0000	0.0000	0.0037	0.00016	14.1434	0.0003	0.0000	0.0067	0.0051	0.00025	0.0020	0.7386	0.0220	0.0000050	0.0285
M-09-110 34.5-35.5	0.37	0.0274	0.0005	0.0004	0.0819	0.0000	0.0000	0.0022	0.00004	12.0434	0.0003	0.0000	0.0048	0.0051	0.00013	0.0005	0.5956	0.0200	0.0000050	0.0237
M-09-110 34.5-35.5	0.26	0.0326	0.0004	0.0003	0.0808	0.0000	0.0000	0.0030	0.00005	10.8434	0.0003	0.0000	0.0051	0.0051	0.00020	0.0005	0.4986	0.0190	0.0000050	0.0216
M-09-110 34.5-35.5	0.26	0.0385	0.0004	0.0004	0.0900	0.0000	0.0000	0.0030	0.00014	11.7434	0.0006	0.0000	0.0052	0.0051	0.00019	0.0005	0.4846	0.0180	0.0000050	0.0209
M-09-110 34.5-35.5	0.18	0.0311	0.0004	0.0003	0.0761	0.0000	0.0000	0.0010	0.00007	11.4434	0.0003	0.0000	0.0036	0.0051	0.00012	0.0005	0.4456	0.0160	0.0000050	0.0174
M-09-110 34.5-35.5	0.17	0.0336	0.0005	0.0002	0.0709	0.0000	0.0000	0.0010	0.00004	12.0434	0.0008	0.0000	0.0043	0.0051	0.00025	0.0005	0.4236	0.0150	0.0000050	0.0180
M-09-110 34.5-35.5	0.14	0.0323	0.0003	0.0001	0.0684	0.0000	0.0000	0.0020	0.00006	10.9434	0.0008	0.0000	0.0055	0.0051	0.00015	0.0005	0.4056	0.0150	0.0000050	0.0161
M-09-110 34.5-35.5	0.15	0.0345	0.0004	0.0002	0.0740	0.0000	0.0000	0.0030	0.00006	11.0434	0.0003	0.0000	0.0051	0.0051	0.00019	0.0010	0.3776	0.0160	0.0000050	0.0159
M-09-110 34.5-35.5	0.14	0.0401	0.0004	0.0003	0.0684	0.0000	0.0000	0.0010	0.00007	10.6434	0.0006	0.0000	0.0049	0.0051	0.00023	0.0005	0.3406	0.0150	0.0000050	0.0155
M-09-110 34.5-35.5	0.13	0.0311	0.0002	0.0003	0.0656	0.0000	0.0000	0.0010	0.00003	10.4434	0.0008	0.0000	0.0044	0.0051	0.00050	0.0005	0.3116	0.0140	0.0000050	0.0159
M-09-110 34.5-35.5	0.12	0.0305	0.0004	0.0003	0.0732	0.0000	0.0000	0.0010	0.00017	9.0734	0.0005	0.0000	0.0056	0.0051	0.00015	0.0005	0.2646	0.0110	0.0003400	0.0171
M-09-110 34.5-35.5	0.11	0.0269	0.0004	0.0003	0.0662	0.0000	0.0000	0.0010	0.00009	10.4434	0.0007	0.0000	0.0043	0.0051	0.00019	0.0005	0.2746	0.0140	0.0000050	0.0138
M-09-110 34.5-35.5	0.11	0.0418	0.0004	0.0001	0.0683	0.0000	0.0000	0.0014	0.00003	10.5434	0.0009	0.0000	0.0044	0.0041	0.00052	0.0005	0.2546	0.0100	0.0000050	0.0159
M-09-110 34.5-35.5	0.11	0.0252	0.0004	0.0003	0.0632	0.0000	0.0000	0.0019	0.00003	9.5034	0.0003	0.0000	0.0047	0.0011	0.00014	0.0005	0.2196	0.0104	0.0000500	0.0152
M-09-110 34.5-35.5	0.10	0.0276	0.0003	0.0004	0.0641	0.0000	0.0000	0.0016	0.00004	9.6634	0.0007	0.0000	0.0043	0.0291	0.00102	0.0005	0.2346	0.0110	0.0000050	0.0153
M-09-110 34.5-35.5	0.08	0.0293	0.0003	0.0003	0.0700	0.0000	0.0000	0.0020	0.00003	10.2434	0.0003	0.0000	0.0036	0.0011	0.00007	0.0005	0.2196	0.0117	0.0000050	0.0151
M-09-110 34.5-35.5	0.03	0.0488	0.0015	0.0006	0.0556	0.0000	0.0000	0.0036	0.00010	12.4434	0.0003	0.0001	0.0014	0.0011	0.00005	0.0010	0.5816	0.1510	0.0000050	0.0190
M-09-110 34.5-35.5	0.10	0.0285	0.0003	0.0003	0.0669	0.0000	0.0000	0.0017	0.00006	9.1034	0.0003	0.0000	0.0038	0.0011	0.00012	0.0005	0.1806	0.0107	0.0000050	0.0129
M-09-110 34.5-35.5	0.10	0.0310	0.0005	0.0001	0.0685	0.0000	0.0000	0.0033	0.00003	9.3734	0.0003	0.0000	0.0039	0.0011	0.00012	0.0005	0.1746	0.0089	0.0000050	0.0158
M-09-110 34.5-35.5	0.08	0.0270	0.0004	0.0002	0.0720	0.0000	0.0000	0.0017	0.00004	9.0034	0.0003	0.0000	0.0041	0.0011	0.00015	0.0005	0.1686	0.0099	0.0000050	0.0132
M-09-110 34.5-35.5	0.09	0.0291	0.0003	0.0003	0.0712	0.0000	0.0000	0.0021	0.00003	7.1134	0.0008	0.0000	0.0038	0.0011	0.00013	0.0005	0.1526	0.0115	0.0000050	0.0142
M-09-110 34.5-35.5	0.08	0.0262	0.0001	0.0001	0.0685	0.0000	0.0000	0.0032	0.00004	7.5634	0.0005	0.0000	0.0039	0.0011	0.00009	0.0005	0.1356	0.0102	0.0000050	0.0132
M-09-110 34.5-35.5	0.08	0.0231	0.0001	0.0003	0.0655	0.0000	0.0000	0.0017	0.00004	7.6834	0.0007	0.0000	0.0041	0.0011	0.00009	0.0005	0.1396	0.0109	0.0000050	0.0139
M-09-110 34.5-35.5	0.08	0.0234	0.0001	0.0001	0.0702	0.0000	0.0000	0.0022	0.00009	8.7734	0.0003	0.0000	0.0040	0.0011	0.00007	0.0005	0.1416	0.0106	0.0000050	0.0131
M-09-110 34.5-35.5	0.08	0.0395	0.0003	0.0002	0.0855	0.0000	0.0000	0.0020	0.00003	7.5734	0.0009	0.0000	0.0049	0.0011	0.00021	0.0005	0.1086	0.0132	0.0000050	0.0124
M-09-110 34.5-35.5	0.09	0.0285	0.0003	0.0002	0.0743	0.0000	0.0000	0.0027	0.00005	7.7234	0.0003	0.0000	0.0104	0.0011	0.00073	0.0005	0.0956	0.0001	0.0000050	0.0141
M-09-110 34.5-35.5	0.07	0.0271	0.0002	0.0001	0.0815	0.0000	0.0000	0.0031	0.00003	7.2934	0.0008	0.0000	0.0047	0.0011	0.00014	0.0005	0.0826	0.0001	0.0000050	0.0125
M-09-110 34.5-35.5	0.07	0.0271	0.0002	0.0001	0.0815	0.0000	0.0000	0.0031	0.00003	7.2934	0.0008	0.0000	0.0047	0.0011	0.00014	0.0005	0.0826	0.0001	0.0000050	0.0125
M-09-110 34.5-35.5	0.06	0.0264	0.0001	0.0001	0.0724	0.0000	0.0000	0.0019	0.00003	7.4834	0.0003	0.0000	0.0047	0.0011	0.00011	0.0005	0.0896	0.0001	0.0000050	0.0127
M-09-110 34.5-35.5	0.07	0.0269	0.0001	0.0002	0.0691	0.0000	0.0000	0.0021	0.00003	7.0634	0.0006	0.0000	0.0048	0.0021	0.00011	0.0005	0.0696	0.0089	0.0000050	0.0127
M-09-110 34.5-35.5	0.07	0.0258	0.0004	0.0002	0.0644	0.0000	0.0000	0.0015	0.00008	6.8834	0.0003	0.0000	0.0045	0.0011	0.00009	0.0005	0.0946	0.0075	0.0000050	0.0119
M-09-110 34.5-35.5	0.06	0.0346	0.0003	0.0001	0.0714	0.0000	0.0000	0.0017	0.00007	6.3334	0.0006	0.0000	0.0038	0.0011	0.00013	0.0005	0.0746	0.0066	0.0000100	0.0101
M-09-110 34.5-35.5	0.07	0.0290	0.0004	0.0003	0.0796	0.0000	0.0000	0.0026	0.00002	7.4434	0.0003	0.0000	0.0045	0.0011	0.00012	0.0005	0.0936	0.0058	0.0000050	0.0129
M-09-110 34.5-35.5	0.08	0.0291	0.0004	0.0003	0.0738	0.0000	0.0000	0.0026	0.00004	7.7334	0.0003	0.0001	0.0048	0.0011	0.00011	0.0005	0.0936	0.0081	0.0000050	0.0146
M-09-110 34.5-35.5	0.07	0.0322	0.0003	0.0001	0.0753	0.0000	0.0000	0.0025	0.00004	7.9234	0.0003	0.0000	0.0044	0.0011	0.00011	0.0005	0.0976	0.0086	0.0000050	0.0130
M-09-110 34.5-35.5	0.07	0.0297	0.0004	0.0001	0.0716	0.0000	0.0000	0.0026	0.00008	7.3034	0.0005	0.0000	0.0042	0.0061	0.00012	0.0005	0.0796	0.0079	0.0000050	0.0128
M-09-110 34.5-35.5	0.07	0.0292	0.0001	0.0001	0.0717	0.0000	0.0000	0.0020	0.00003	7.0534	0.0006	0.0000	0.0045	0.0011	0.00010	0.0005	0.0826	0.0075	0.0000050	0.0128
M-09-110 34.5-35.5	0.07	0.0361	0.0001	0.0003	0.0817	0.0000	0.0000	0.0016	0.00004	7.3734	0.0003	0.0000	0.0043	0.0041	0.00042	0.0005	0.0836	0.0093	0.0000300	0.0127
M-09-110 34.5-35.5	0.07	0.0321	0.0001	0.0002	0.0686	0.0000	0.0000	0.0014	0.00004	7.7034	0.0005	0.0000	0.0042	0.0041	0.00070	0.0005	0.0876	0.0072	0.0000050	0.0124
M-09-110 34.5-35.5	0.07	0.0284	0.0002	0.0001	0.0656	0.0000	0.0000	0.0030	0.00003	7.4834	0.0003	0.0000	0.0037	0.0011	0.00011	0.0005	0.0846	0.0069	0.0001000	0.0123
M-09-110 34.5-35.5	0.03	0.0238	0.0002	0.0005	0.0667	0.0000	0.0000	0.0016	0.00004	7.3034	0.0005	0.0000	0.0044	0.0011	0.00010	0.0005	0.0636	0.0074	0.0000050	0.0097
M-09-110 34.5-35.5	0.06	0.0311	0.0003	0.0001	0.0778	0.0000	0.0000	0.0019	0.00003	8.8134	0.0008	0.0000	0.0044	0.0011	0.00185	0.0005	0.0866	0.0088	0.0000050	0.0116
M-09-110 34.5-35.5	0.06	0.0255	0.0003	0.0001	0.0742	0.0000	0.0000	0.0018	0.00004	7.4634	0.0009	0.0000	0.0042	0.0011	0.00116	0.0005	0.0766	0.0073	0.0000050	0.0127
M-09-110 34.5-35.5	0.07	0.0302	0.0002	0.0001	0.0744	0.0000	0.0000	0.0024	0.00005	8.4334	0.0003	0.0000	0.0042	0.0011	0.00015	0.0005	0.0796	0.0032	0.0000050	0.0117
M-09-110 34.5-35.5	0.07	0.0318	0.0003	0.0002	0.0725	0.0000	0.0000	0.0026	0.00003	7.3634	0.0003	0.0000	0.0039	0.0011	0.00075	0.0005	0.0686	0.0060	0.0000050	0.0120
M-09-110 34.5-35.5	0.06	0.0242	0.0001	0.0001	0.0736	0.0000	0.0000	0.0018	0.00003	7.1834	0.0005	0.0000	0.0039	0.0011	0.00112	0.0005	0.0686	0.0059	0.0000050	0.0115
M-09-110 34.5-35.5	0.05	0.0246	0.0001	0.0001	0.0757	0.0000	0.0000	0.0020	0.00003	7.1834	0.0004	0.0000	0.0038	0.0011	0.00061	0.0005	0.0661	0.0068	0.0000050	0.0109
M-09-110 34.5-35.5	0.03	0.0250	0.0001	0.0001	0.0778	0.0000	0.0000	0.0021	0.00003	7.1834	0.0003	0.0000	0.0038	0.0011	0.00009	0.0005	0.0636	0.0076	0.0000050	0.0103
M-09-110 34.5-35.5	0.03	0.0243	0.0002	0.0001	0.0722	0.0000	0.0000	0.0021	0.00003	6.8934	0.0003	0.0000	0.0037	0.0011	0.00009	0.0005	0.0611	0.0071	0.0000050	0.0098
M-09-110 34.5-35.5	0.03	0.0236	0.0003	0.0001	0.0667	0.0000	0.0000	0.0020	0.00003	6.6034	0.0003	0.0000	0.0036	0.0011	0.00009	0.0005	0.0586	0.0065	0.0000050	0.0093
M-09-110 34.5-35.5	0.03	0.0245	0.0002	0.0001	0.0700	0.0000	0.0000	0.0026	0.00002	6.7584	0.0004	0.0000	0.0034	0.0011	0.00048	0.0005	0.0586	0.0063	0.0000050	0.0099
M-09-110 34.5-35.5	0.03	0.0255	0.0001	0.0001	0.0734	0.0000	0.0000	0.0031	0.00002	6.9134	0.0006	0.0000	0.0032	0.0011	0.00086	0.0005	0.0586	0.0060	0.0000050	0.0105
M-09-110 34.5-35.5	0.03	0.0267	0.0002	0.0002	0.0735	0.0000	0.0000	0.0030	0.00003	7.0884	0.0004	0.0000	0.0037	0.0011	0.00048	0.0005	0.0576	0.0060	0.0000050	0.0101
M-09-110 34.5-35.5	0.03	0.0279	0.0002	0.0002	0.0737	0.0000	0.0000	0.0028	0.00003	7.2634	0.0003	0.0000	0.0043	0.0011	0.00010	0.0005	0.0566	0.0059	0.0000050	0.0097
M-09-110 34.5-35.5	0.03	0.0260	0.0002	0.0002	0.0718	0.0000	0.0000	0.0021	0.00003	7.0934	0.0003	0.0000	0.0041	0.0016	0.00084	0.0005	0.0561	0.0062	0.0000050	0.0095

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-108 184.5-185.5	0.0001	0.0045	0.3120	0.0003	0.2675	0.00001	0.0575	0.0313	5.0275	0.0000	0.0002	0.0001	0.0002	0.0003	0.0015	0.0000
M-09-108 184.5-185.5	0.0002	0.0045	0.3200	0.0002	0.2650	0.00001	0.0550	0.0326	5.3150	0.0000	0.0002	0.0001	0.0002	0.0003	0.0020	0.0000
M-09-108 184.5-185.5	0.0002	0.0045	0.3280	0.0002	0.2625	0.00001	0.0525	0.0338	5.6025	0.0000	0.0002	0.0001	0.0002	0.0004	0.0025	0.0000
M-09-108 184.5-185.5	0.0002	0.0045	0.3360	0.0002	0.2600	0.00001	0.0500	0.0350	5.8900	0.0000	0.0002	0.0001	0.0002	0.0004	0.0030	0.0000
M-09-108 184.5-185.5	0.0002	0.0045	0.3305	0.0002	0.2600	0.00001	0.0500	0.0354	5.8875	0.0000	0.0002	0.0001	0.0002	0.0004	0.0025	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.3250	0.0003	0.2600	0.00001	0.0500	0.0359	5.8850	0.0000	0.0002	0.0001	0.0002	0.0004	0.0020	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.3195	0.0003	0.2600	0.00001	0.0500	0.0363	5.8825	0.0000	0.0001	0.0001	0.0002	0.0003	0.0015	0.0000
M-09-108 184.5-185.5	0.0001	0.0045	0.3140	0.0004	0.2600	0.00001	0.0500	0.0367	5.8800	0.0000	0.0001	0.0001	0.0002	0.0003	0.0010	0.0000
	0.0001	0.0045	0.3201	0.0003	0.2630	0.00001	0.0530	0.0338	5.4930	0.0000	0.0002	0.0001	0.0002	0.0003	0.0018	0.0000
HC13 UP Hazelton																
M-09-110 34.5-35.5	0.0006	0.0051	7.0247	0.0053	1.3547	0.00001	4.6102	0.1285	9.7500	0.0001	0.0002	0.0002	0.0001	0.0007	0.0005	0.0000
M-09-110 34.5-35.5	0.0003	0.0051	4.6947	0.0064	1.8347	0.00001	2.9902	0.1025	9.9900	0.0001	0.0001	0.0002	0.0002	0.0007	0.0005	0.0000
M-09-110 34.5-35.5	0.0002	0.0051	3.7247	0.0048	1.7947	0.00001	1.9802	0.0934	7.2400	0.0001	0.0000	0.0001	0.0001	0.0007	0.0005	0.0000
M-09-110 34.5-35.5	0.0003	0.0051	2.8847	0.0042	1.5847	0.00001	1.2202	0.0849	5.3700	0.0001	0.0001	0.0001	0.0001	0.0006	0.0005	0.0000
M-09-110 34.5-35.5	0.0003	0.0051	2.3847	0.0042	1.4547	0.00001	0.8602	0.0782	4.6000	0.0001	0.0002	0.0001	0.0001	0.0007	0.0005	0.0000
M-09-110 34.5-35.5	0.0002	0.0051	2.2847	0.0046	1.6947	0.00001	0.6902	0.0851	5.0500	0.0001	0.0003	0.0002	0.0001	0.0007	0.0010	0.0000
M-09-110 34.5-35.5	0.0001	0.0051	1.8447	0.0038	1.5447	0.00001	0.5402	0.0817	4.8500	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0012
M-09-110 34.5-35.5	0.0002	0.0051	1.8447	0.0036	1.6247	0.00001	0.5802	0.0842	4.8500	0.0001	0.0003	0.0001	0.0001	0.0005	0.0010	0.0000
M-09-110 34.5-35.5	0.0002	0.0051	1.6547	0.0034	1.3747	0.00001	0.5302	0.0776	5.1100	0.0001	0.0003	0.0001	0.0001	0.0005	0.0005	0.0000
M-09-110 34.5-35.5	0.0001	0.0051	1.4747	0.0025	1.3647	0.00001	0.4802	0.0793	4.5500	0.0001	0.0002	0.0001	0.0001	0.0004	0.0005	0.0000
M-09-110 34.5-35.5	0.0001	0.0051	1.4547	0.0034	1.3547	0.00001	0.4102	0.0775	4.5600	0.0001	0.0002	0.0001	0.0003	0.0005	0.0005	0.0000
M-09-110 34.5-35.5	0.0002	0.0051	1.4147	0.0033	1.4347	0.00001	0.4102	0.0757	4.2400	0.0001	0.0002	0.0001	0.0001	0.0005	0.0005	0.0000
M-09-110 34.5-35.5	0.0001	0.0051	1.3947	0.0039	1.5547	0.00001	0.3202	0.0687	3.5500	0.0001	0.0002	0.0001	0.0001	0.0005	0.0010	0.0000
M-09-110 34.5-35.5	0.0002	0.0201	1.2347	0.0031	1.4247	0.00001	0.2902	0.0772	3.9400	0.0001	0.0004	0.0001	0.0001	0.0004	0.0010	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	1.1747	0.0035	1.4647	0.00001	0.3002	0.0770	3.7000	0.0001	0.0002	0.0002	0.0001	0.0005	0.0005	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	1.0087	0.0030	1.2647	0.00001	0.3002	0.0691	3.8700	0.0001	0.0002	0.0001	0.0001	0.0005	0.0010	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	0.9327	0.0033	1.2747	0.00001	0.2502	0.0707	3.9000	0.0001	0.0002	0.0001	0.0001	0.0005	0.0005	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	0.9587	0.0028	1.3347	0.00001	0.2402	0.0739	4.2600	0.0001	0.0002	0.0001	0.0001	0.0004	0.0005	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	1.2447	0.0008	0.8747	0.00003	0.1802	0.1245	7.5100	0.0001	0.0002	0.0002	0.0014	0.0003	0.0005	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	0.8207	0.0029	1.2047	0.00001	0.2602	0.0678	3.5500	0.0001	0.0006	0.0001	0.0001	0.0004	0.0005	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	0.8767	0.0028	1.3447	0.00001	0.2702	0.0706	3.4200	0.0001	0.0002	0.0001	0.0001	0.0005	0.0005	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	0.7737	0.0023	1.1147	0.00001	0.1602	0.0673	3.0400	0.0001	0.0001	0.0001	0.0001	0.0004	0.0005	0.0001
M-09-110 34.5-35.5	0.0001	0.0161	0.7697	0.0012	1.1447	0.00001	0.2602	0.0639	2.8000	0.0001	0.0003	0.0001	0.0001	0.0004	0.0005	0.0000
M-09-110 34.5-35.5	0.0002	0.0046	0.6917	0.0023	1.0747	0.00001	0.2102	0.0438	2.3400	0.0001	0.0002	0.0001	0.0001	0.0003	0.0005	0.0001
M-09-110 34.5-35.5	0.0001	0.0046	0.7007	0.0025	1.1347	0.00001	0.2002	0.0459	2.2600	0.0001	0.0002	0.0001	0.0001	0.0003	0.0005	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	0.6887	0.0026	1.1447	0.00001	0.2102	0.0671	2.6700	0.0001	0.0001	0.0001	0.0001	0.0003	0.0005	0.0000
M-09-110 34.5-35.5	0.0001	0.0141	0.6027	0.0026	0.9947	0.00001	0.1702	0.0622	2.4400	0.0001	0.0001	0.0001	0.0001	0.0004	0.0010	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	0.6017	0.0026	1.1347	0.00001	0.1702	0.0594	2.2700	0.0001	0.0002	0.0002	0.0001	0.0004	0.0010	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	0.5797	0.0022	1.0247	0.00001	0.1502	0.0571	2.0200	0.0001	0.0007	0.0001	0.0001	0.0003	0.0020	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	0.5797	0.0022	1.0247	0.00001	0.1502	0.0571	2.0200	0.0001	0.0007	0.0001	0.0001	0.0003	0.0020	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	0.5607	0.0022	1.0947	0.00001	0.1502	0.0572	2.1100	0.0001	0.0001	0.0001	0.0001	0.0004	0.0005	0.0000
M-09-110 34.5-35.5	0.0002	0.0046	0.5387	0.0010	1.0647	0.00001	0.1702	0.0529	1.8000	0.0001	0.0001	0.0001	0.0001	0.0004	0.0010	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	0.5587	0.0027	1.0847	0.00001	0.1702	0.0552	1.9000	0.0001	0.0001	0.0002	0.0001	0.0003	0.0010	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	0.5637	0.0027	1.0847	0.00001	0.1502	0.0525	1.0100	0.0001	0.0001	0.0001	0.0001	0.0004	0.0005	0.0000
M-09-110 34.5-35.5	0.0002	9.0001	0.5987	0.0021	1.1247	0.00002	0.1802	0.0616	1.9200	0.0001	0.0007	0.0001	0.0001	0.0004	0.0010	0.0000
M-09-110 34.5-35.5	0.0006	0.0231	0.6177	0.0022	1.1547	0.00001	0.1902	0.0635	2.0200	0.0001	0.0009	0.0004	0.0001	0.0004	0.0005	0.0000
M-09-110 34.5-35.5	0.0003	0.0046	0.6117	0.0025	1.2047	0.00001	0.1802	0.0656	1.8800	0.0001	0.0003	0.0002	0.0001	0.0004	0.0005	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	0.5547	0.0021	1.0447	0.00001	0.1802	0.0590	1.8200	0.0001	0.0001	0.0001	0.0001	0.0004	0.0040	0.0001
M-09-110 34.5-35.5	0.0003	0.0046	0.5367	0.0016	1.0147	0.00001	0.1702	0.0574	1.9400	0.0001	0.0000	0.0002	0.0001	0.0003	0.0040	0.0000
M-09-110 34.5-35.5	0.0009	0.0301	0.5807	0.0022	1.0047	0.00001	0.1402	0.0602	1.7900	0.0001	0.0001	0.0001	0.0001	0.0002	0.0030	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	0.5417	0.0023	0.9547	0.00001	0.1802	0.0612	1.8100	0.0001	0.0002	0.0002	0.0001	0.0003	0.0020	0.0000
M-09-110 34.5-35.5	0.0002	0.0211	0.5347	0.0018	1.0447	0.00001	0.1702	0.0587	1.8400	0.0001	0.0001	0.0001	0.0001	0.0003	0.0020	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	0.4707	0.0014	0.8947	0.00001	0.1202	0.0580	1.1800	0.0001	0.0006	0.0002	0.0001	0.0003	0.0020	0.0000
M-09-110 34.5-35.5	0.0002	0.0121	0.4867	0.0017	0.9647	0.00001	0.1502	0.0604	1.7100	0.0001	0.0002	0.0001	0.0001	0.0003	0.0080	0.0000
M-09-110 34.5-35.5	0.0001	0.0141	0.4847	0.0012	0.9447	0.00001	0.1502	0.0602	1.6000	0.0001	0.0001	0.0002	0.0001	0.0003	0.0020	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	0.5157	0.0015	1.0447	0.00001	0.1702	0.0665	1.8100	0.0001	0.0003	0.0001	0.0001	0.0003	0.0010	0.0000
M-09-110 34.5-35.5	0.0001	0.0191	0.4977	0.0013	1.0847	0.00001	0.1502	0.0597	1.8100	0.0001	0.0002	0.0001	0.0001	0.0004	0.0010	0.0000
M-09-110 34.5-35.5	0.0002	0.0046	0.4567	0.0013	0.9547	0.00001	0.1402	0.0579	1.5700	0.0001	0.0001	0.0001	0.0001	0.0003	0.0020	0.0000
M-09-110 34.5-35.5	0.0001	0.0133	0.4427	0.0012	0.9397	0.00001	0.1352	0.0574	1.6400	0.0001	0.0002	0.0001	0.0001	0.0003	0.0013	0.0000
M-09-110 34.5-35.5	0.0001	0.0221	0.4287	0.0012	0.9247	0.00001	0.1302	0.0569	1.7100	0.0001	0.0003	0.0001	0.0001	0.0003	0.0005	0.0000
M-09-110 34.5-35.5	0.0001	0.0221	0.4117	0.0013	0.8647	0.00001	0.1252	0.0543	1.5300	0.0001	0.0003	0.0001	0.0001	0.0003	0.0023	0.0000
M-09-110 34.5-35.5	0.0002	0.0221	0.3947	0.0014	0.8047	0.00001	0.1202	0.0518	1.3500	0.0001	0.0002	0.0001	0.0001	0.0002	0.0040	0.0000
M-09-110 34.5-35.5	0.0003	0.0251	0.4007	0.0014	0.8447	0.00001	0.1252	0.0526	1.3650	0.0001	0.0002	0.0001	0.0001	0.0002	0.0045	0.0000
M-09-110 34.5-35.5	0.0004	0.0281	0.4067	0.0014	0.8847	0.00001	0.1302	0.0535	1.3800	0.0001	0.0002	0.0001	0.0001	0.0002	0.0050	0.0000
M-09-110 34.5-35.5	0.0003	0.0163	0.4097	0.0014	0.9247	0.00001	0.1302	0.0556	1.3750	0.0001	0.0001	0.0001	0.0001	0.0002	0.0028	0.0000
M-09-110 34.5-35.5	0.0002	0.0046	0.4127	0.0014	0.9647	0.00001	0.1302	0.0577	1.3700	0.0001	0.0000	0.0002	0.0001	0.0002	0.0005	0.0000
M-09-110 34.5-35.5	0.0002	0.0083	0.3952	0.0013	0.9097	0.00001	0.1302	0.0555	1.3250	0.0001	0.0002	0.0001	0.0001	0.0003	0.0018	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-110 34.5-35.5	13	57	10-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	495	18	38	7.44	2.7	17.4	4	0.1
M-09-110 34.5-35.5	13	58	17-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	480	17	39	7.38	3.1	19.7	4	0.1
M-09-110 34.5-35.5	13	59	24-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	485	17	44	7.34	3.6	21.9	4	0.1
M-09-110 34.5-35.5	13	60	31-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	485	17	36	7.54	3.8	21.9	4	0.1
M-09-110 34.5-35.5	13	61	7-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	3	HEM	3			Water	500	475	17	35	7.53	4.0	21.8	3	0.1
																	17.339049	35.535	7.399	3.208	18.967468	3.893011	0.1
HC14 UP Hazelton																							
M-09-110 88.5-89.5	14	0	4-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	415	89	199	7.55	2.3	34.0	82	1.4
M-09-110 88.5-89.5	14	1	11-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	520	64	162	7.49	2.1	25.0	49	0.4
M-09-110 88.5-89.5	14	2	18-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	520	23	55	7.53	2.4	22.3	6	0.1
M-09-110 88.5-89.5	14	3	25-Feb-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	505	31	72	7.49	2.5	24.7	14	0.1
M-09-110 88.5-89.5	14	4	4-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	510	29	73	7.34	2.5	21.7	14	0.1
M-09-110 88.5-89.5	14	5	11-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	475	30	72	7.47	2.5	23.5	12	0.1
M-09-110 88.5-89.5	14	6	18-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	505	30	70	7.48	2.6	21.8	11	0.1
M-09-110 88.5-89.5	14	7	25-Mar-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	505	31	70	7.40	3.3	22.9	10	0.1
M-09-110 88.5-89.5	14	8	1-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	480	28	64	7.49	2.5	22.1	15	0.1
M-09-110 88.5-89.5	14	9	8-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	475	29	66	7.45	2.3	22.0	11	0.1
M-09-110 88.5-89.5	14	10	15-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	495	29	65	7.40	3.0	22.2	13	0.1
M-09-110 88.5-89.5	14	11	22-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	450	28	66	7.43	3.7	21.5	10	0.1
M-09-110 88.5-89.5	14	12	29-Apr-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	495	25	68	7.47	2.4	22.2	10	0.1
M-09-110 88.5-89.5	14	13	6-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	505	30	66	7.36	4.5	22.9	11	0.1
M-09-110 88.5-89.5	14	14	13-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	470	28	60	7.47	2.8	18.1	14	0.1
M-09-110 88.5-89.5	14	15	20-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	485	29	66	7.49	3.8	21.7	17	0.1
M-09-110 88.5-89.5	14	16	27-May-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	505	30	62	7.45	6.1	24.8	6	0.1
M-09-110 88.5-89.5	14	17	3-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	520	28	58	7.45	2.8	21.7	10	0.1
M-09-110 88.5-89.5	14	18	10-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	500	28	60	7.40	4.3	21.7	9	0.1
M-09-110 88.5-89.5	14	19	17-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	500	27	58	7.55	3.5	21.8	4	0.1
M-09-110 88.5-89.5	14	20	24-Jun-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	500	29	60	7.57	2.6	22.5	7	0.1
M-09-110 88.5-89.5	14	21	1-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	495	28	56	7.56	2.5	21.7	6	0.1
M-09-110 88.5-89.5	14	22	8-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	500	23	58	7.39	2.6	17.8	9	0.1
M-09-110 88.5-89.5	14	23	15-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	505	23	55	7.41	3.8	17.8	4	0.1
M-09-110 88.5-89.5	14	24	22-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	505	23	53	7.34	3.1	18.6	3	0.1
M-09-110 88.5-89.5	14	25	29-Jul-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	510	28	55	7.47	4.0	19.3	11	0.1
M-09-110 88.5-89.5	14	26	5-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	480	26	54	7.47	2.8	18.0	3	0.1
M-09-110 88.5-89.5	14	27	12-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	480	23	54	7.58	3.7	20.9	3	0.1
M-09-110 88.5-89.5	14	28	19-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	495	25	54	7.50	4.9	21.0	4	0.1
M-09-110 88.5-89.5	14	29	26-Aug-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	450	22	50	7.47	2.1	17.5	5	0.1
M-09-110 88.5-89.5	14	30	2-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	450	23	44	7.44	3.9	17.8	11	0.1
M-09-110 88.5-89.5	14	31	9-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	445	23	52	7.18	4.3	17.5	8	0.1
M-09-110 88.5-89.5	14	32	16-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	455	21	46	7.24	2.9	16.4	11	0.1
M-09-110 88.5-89.5	14	33	23-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	450	22	43	7.35	2.6	17.5	10	0.1
M-09-110 88.5-89.5	14	34	30-Sep-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	455	23	39	7.33	2.5	17.2	10	0.1
M-09-110 88.5-89.5	14	35	7-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	475	25	58	7.31	3.3	18.6	12	0.1
M-09-110 88.5-89.5	14	36	14-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	475	27	56	7.34	3.1	17.7	11	0.1
M-09-110 88.5-89.5	14	37	21-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	515	25	56	7.35	2.9	17.7	11	0.1
M-09-110 88.5-89.5	14	38	28-Oct-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	475	23	53	7.25	3.4	18.2	13	0.1
M-09-110 88.5-89.5	14	39	4-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	470	22	56	7.42	2.4	16.2	14	0.1
M-09-110 88.5-89.5	14	40	11-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	445	24	57	7.50	2.3	16.8	6	0.1
M-09-110 88.5-89.5	14	41	18-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	495	24	39	7.55	3.1	17.6	7	0.1
M-09-110 88.5-89.5	14	42	25-Nov-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	495	23	51	7.21	3.2	18.7	6	0.1
M-09-110 88.5-89.5	14	43	2-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	505	28	51	7.38	3.0	21.3	6	0.1
M-09-110 88.5-89.5	14	44	9-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	495	23	50	7.23	3.9	17.9	8	0.1
M-09-110 88.5-89.5	14	45	16-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	490	26	51	7.31	3.8	18.4	9	0.1
M-09-110 88.5-89.5	14	46	23-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	490	24	48	7.44	4.9	21.0	9	0.1
M-09-110 88.5-89.5	14	47	30-Dec-10	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	510	23	43	7.35	5.2	17.3	9	0.1
M-09-110 88.5-89.5	14	48	6-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	460	22	37	7.35	4.2	16.3	7	0.1
M-09-110 88.5-89.5	14	49	13-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	515	21	38	7.41	3.2	15.3	5	0.1
M-09-110 88.5-89.5	14	50	20-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	510	21	43	7.20	3.8	15.4	5	0.1
M-09-110 88.5-89.5	14	51	27-Jan-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	455	21	38	7.36	4.3	15.5	5	0.1
M-09-110 88.5-89.5	14	52	3-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	490	21	36	7.26	3.4	15.3	5	0.1
M-09-110 88.5-89.5	14	53	10-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	495	21	36	7.38	2.4	15.0	5	0.1
M-09-110 88.5-89.5	14	54	17-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	480	22	38	7.27	2.9	15.9	9	0.1
M-09-110 88.5-89.5	14	55	24-Feb-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	465	23	50	7.33	3.5	16.8	12	0.1
M-09-110 88.5-89.5	14	56	3-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	495	22	44	7.20	3.1	16.4	11	0.1
M-09-110 88.5-89.5	14	57	10-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	505	21	47	7.39	2.7	16.0	10	0.1
M-09-110 88.5-89.5	14	58	17-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	460	20	45	7.30	3.0	17.3	9	0.1
M-09-110 88.5-89.5	14	59	24-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	465	19	58	7.31	3.3	18.6	8	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-110 34.5-35.5	0.03	0.0241	0.0001	0.0001	0.0700	0.0000	0.0000	0.0013	0.00003	6.9234	0.0003	0.0000	0.0040	0.0021	0.00157	0.0005	0.0556	0.0064	0.0000050	0.0093
M-09-110 34.5-35.5	0.03	0.0255	0.0001	0.0001	0.0686	0.0000	0.0000	0.0014	0.00002	6.7284	0.0003	0.0000	0.0043	0.0016	0.00085	0.0005	0.0521	0.0055	0.0000050	0.0097
M-09-110 34.5-35.5	0.03	0.0270	0.0001	0.0001	0.0672	0.0000	0.0000	0.0014	0.00002	6.5334	0.0003	0.0000	0.0046	0.0011	0.00013	0.0005	0.0486	0.0046	0.0000050	0.0100
M-09-110 34.5-35.5	0.03	0.0259	0.0001	0.0001	0.0695	0.0000	0.0000	0.0016	0.00002	6.5584	0.0003	0.0000	0.0041	0.0036	0.00011	0.0005	0.0536	0.0082	0.0000050	0.0098
M-09-110 34.5-35.5	0.03	0.0249	0.0001	0.0001	0.0718	0.0000	0.0000	0.0018	0.00003	6.5834	0.0003	0.0000	0.0037	0.0061	0.00009	0.0005	0.0586	0.0118	0.0000050	0.0095
	0.031183	0.025803	0.000179	0.000130	0.070940	0.000010	0.000005	0.002094	0.000026	6.844441	0.000321	0.000015	0.003906	0.002020	0.000553	0.000516	0.055597	0.006696	0.000005	0.009792
HC14 UP Hazelton																				
M-09-110 88.5-89.5	1.10	0.073294	0.006158	0.006985	0.035216	0.000010	0.000005	0.005011	0.00001	31.928548	0.000251	0.000606	0.001834	0.005081	0.00003	0.017065	2.356597	0.067076	0.000005	0.007059
M-09-110 88.5-89.5	0.80	0.067494	0.009258	0.007585	0.018316	0.000010	0.000005	0.005011	0.00001	22.628548	0.000251	0.000603	0.001534	0.005081	0.00004	0.015065	1.736597	0.070076	0.000005	0.012359
M-09-110 88.5-89.5	0.38	0.103594	0.004458	0.005485	0.007116	0.000010	0.000005	0.002211	0.00000	8.198548	0.000251	0.000109	0.001534	0.005081	0.00017	0.006065	0.544597	0.034076	0.000005	0.002539
M-09-110 88.5-89.5	0.38	0.074094	0.006258	0.005185	0.011516	0.000010	0.000005	0.001911	0.00002	11.228548	0.000251	0.000331	0.001234	0.005081	0.00007	0.007065	0.754597	0.063076	0.000005	0.003139
M-09-110 88.5-89.5	0.29	0.082494	0.005558	0.004385	0.009956	0.000010	0.000005	0.003011	0.00002	10.328548	0.000251	0.000285	0.001534	0.005081	0.00010	0.006065	0.666597	0.061076	0.000005	0.002649
M-09-110 88.5-89.5	0.25	0.075094	0.005158	0.003885	0.010216	0.000010	0.000005	0.001011	0.00001	10.928548	0.000601	0.000544	0.001434	0.005081	0.00060	0.005065	0.687597	0.076076	0.000005	0.002189
M-09-110 88.5-89.5	0.21	0.065394	0.004558	0.003085	0.009386	0.000010	0.000005	0.001011	0.00001	10.728548	0.000901	0.000398	0.001134	0.005081	0.00007	0.005065	0.669597	0.068076	0.000005	0.002179
M-09-110 88.5-89.5	0.22	0.071494	0.005458	0.002985	0.008916	0.000010	0.000005	0.001011	0.00000	11.428548	0.000801	0.000394	0.001234	0.005081	0.00010	0.005065	0.679597	0.078076	0.000005	0.002449
M-09-110 88.5-89.5	0.20	0.069594	0.003958	0.002585	0.008476	0.000010	0.000005	0.001011	0.00001	10.328548	0.000601	0.000486	0.001834	0.005081	0.00045	0.003065	0.616597	0.074076	0.000005	0.002229
M-09-110 88.5-89.5	0.20	0.072194	0.004558	0.002685	0.007786	0.000010	0.000005	0.001011	0.00001	10.728548	0.000251	0.000266	0.001334	0.005081	0.00009	0.004065	0.608597	0.082076	0.000005	0.001909
M-09-110 88.5-89.5	0.20	0.081294	0.003858	0.002685	0.008836	0.000010	0.000005	0.001011	0.00001	10.528548	0.000601	0.000355	0.001634	0.005081	0.00042	0.003065	0.591597	0.072076	0.000005	0.002509
M-09-110 88.5-89.5	0.19	0.082194	0.002658	0.002685	0.007456	0.000010	0.000005	0.001011	0.00004	10.328548	0.000251	0.002121	0.002034	0.005081	0.00115	0.003065	0.537597	0.076076	0.000005	0.001579
M-09-110 88.5-89.5	0.19	0.067794	0.003758	0.002385	0.008956	0.000010	0.000005	0.001011	0.00001	9.318548	0.000601	0.000468	0.001534	0.005081	0.00007	0.003065	0.497597	0.070076	0.000500	0.002199
M-09-110 88.5-89.5	0.19	0.061994	0.003758	0.002185	0.008936	0.000010	0.000005	0.001011	0.00001	11.128548	0.000601	0.000452	0.001634	0.005081	0.00006	0.003065	0.575597	0.082076	0.000005	0.002119
M-09-110 88.5-89.5	0.17	0.088994	0.002858	0.002085	0.006826	0.000010	0.000005	0.001011	0.00001	10.228548	0.000701	0.000894	0.007934	0.008081	0.00046	0.002065	0.491597	0.068076	0.000005	0.002489
M-09-110 88.5-89.5	0.19	0.053694	0.003458	0.001985	0.008026	0.000010	0.000005	0.001611	0.00003	10.828548	0.000251	0.000623	0.004134	0.001081	0.00135	0.003065	0.515597	0.079176	0.000020	0.002989
M-09-110 88.5-89.5	0.19	0.052594	0.003058	0.001885	0.007536	0.000010	0.000005	0.001511	0.00001	11.028548	0.000251	0.000543	0.001234	0.001081	0.00004	0.003065	0.514597	0.085476	0.000005	0.002459
M-09-110 88.5-89.5	0.13	0.062394	0.002858	0.001985	0.006956	0.000010	0.000005	0.002711	0.00000	10.528548	0.000251	0.000379	0.001534	0.001081	0.00002	0.002065	0.457597	0.073576	0.000005	0.002419
M-09-110 88.5-89.5	0.18	0.058294	0.002658	0.001685	0.008546	0.000010	0.000005	0.001711	0.00002	10.528548	0.000251	0.000613	0.001334	0.001081	0.00004	0.003065	0.456597	0.082276	0.000005	0.002409
M-09-110 88.5-89.5	0.19	0.057494	0.003358	0.001685	0.007646	0.000010	0.000005	0.001311	0.00006	9.978548	0.000251	0.000702	0.001734	0.001081	0.00005	0.002065	0.429597	0.073876	0.000005	0.004139
M-09-110 88.5-89.5	0.19	0.053294	0.003158	0.001285	0.007106	0.000010	0.000005	0.003011	0.00002	10.728548	0.000251	0.000555	0.001434	0.001081	0.00004	0.002065	0.446597	0.082676	0.000005	0.003639
M-09-110 88.5-89.5	0.16	0.047094	0.002658	0.001685	0.006506	0.000010	0.000005	0.001311	0.00002	10.328548	0.000251	0.000568	0.001234	0.001081	0.00004	0.002065	0.411597	0.085376	0.000005	0.003559
M-09-110 88.5-89.5	0.17	0.053594	0.002458	0.001685	0.007436	0.000010	0.000005	0.001711	0.00001	8.508548	0.000601	0.000557	0.001734	0.004081	0.00004	0.002065	0.387597	0.078876	0.000010	0.003369
M-09-110 88.5-89.5	0.16	0.047494	0.001958	0.001385	0.007556	0.000010	0.000005	0.002611	0.00002	8.748548	0.000501	0.000676	0.001534	0.001081	0.00003	0.002065	0.347597	0.073976	0.000005	0.003119
M-09-110 88.5-89.5	0.15	0.044494	0.001858	0.001485	0.006416	0.000010	0.000005	0.001711	0.00002	8.748548	0.000251	0.000823	0.001734	0.001081	0.00007	0.002065	0.344597	0.075776	0.000005	0.003169
M-09-110 88.5-89.5	0.17	0.044594	0.001958	0.001085	0.007316	0.000010	0.000005	0.002011	0.00001	10.428548	0.000251	0.000728	0.001534	0.004081	0.00003	0.002065	0.376597	0.082976	0.000005	0.003109
M-09-110 88.5-89.5	0.15	0.048794	0.001758	0.001285	0.006066	0.000010	0.000005	0.001511	0.00002	9.668548	0.000501	0.001431	0.003534	0.006081	0.00012	0.002065	0.329597	0.081676	0.000005	0.002729
M-09-110 88.5-89.5	0.15	0.055994	0.001758	0.001385	0.005826	0.000010	0.000005	0.001711	0.00002	8.828548	0.000701	0.001771	0.001634	0.003081	0.00005	0.002065	0.305597	0.080176	0.000005	0.002509
M-09-110 88.5-89.5	0.17	0.052494	0.002058	0.001485	0.006326	0.000010	0.000005	0.001911	0.00002	9.678548	0.000251	0.001781	0.002234	0.001081	0.00012	0.002065	0.317597	0.062576	0.000005	0.002999
M-09-110 88.5-89.5	0.13	0.065294	0.001558	0.001485	0.006586	0.000010	0.000005	0.002811	0.00003	8.518548	0.001001	0.001391	0.002834	0.001081	0.00014	0.002065	0.265597	0.053776	0.000005	0.001779
M-09-110 88.5-89.5	0.10	0.065594	0.001258	0.001485	0.006176	0.000010	0.000005	0.002011	0.00002	8.568548	0.000251	0.003811	0.004434	0.001081	0.00018	0.002065	0.274597	0.054076	0.000005	0.002059
M-09-110 88.5-89.5	0.11	0.060394	0.001358	0.001385	0.005786	0.000010	0.000005	0.002111	0.00001	8.648548	0.000501	0.008631	0.004534	0.016081	0.00021	0.002065	0.258597	0.089576	0.000005	0.001999
M-09-110 88.5-89.5	0.12	0.087594	0.001558	0.001285	0.006086	0.000010	0.000005	0.001411	0.00001	7.938548	0.000251	0.012501	0.005934	0.022081	0.00026	0.002065	0.274597	0.076876	0.000005	0.001669
M-09-110 88.5-89.5	0.10	0.072194	0.001458	0.001485	0.007046	0.000010	0.000005	0.001611	0.00004	8.508548	0.000601	0.013601	0.005134	0.019081	0.00021	0.002065	0.282597	0.071976	0.000005	0.001489
M-09-110 88.5-89.5	0.14	0.068294	0.001358	0.001085	0.005996	0.000010	0.000005	0.002511	0.00001	8.568548	0.000251	0.012201	0.003534	0.007081	0.00017	0.002065	0.274597	0.075676	0.000005	0.001759
M-09-110 88.5-89.5	0.12	0.054994	0.001758	0.001385	0.006816	0.000010	0.000005	0.003011	0.00001	9.638548	0.000601	0.015501	0.002834	0.005081	0.00010	0.001065	0.284597	0.091276	0.000005	0.002379
M-09-110 88.5-89.5	0.11	0.061894	0.001858	0.001385	0.006166	0.000010	0.000010	0.002611	0.00002	10.228548	0.000251	0.013801	0.002334	0.008081	0.00011	0.002065	0.307597	0.093276	0.000005	0.001819
M-09-110 88.5-89.5	0.12	0.057894	0.001758	0.000885	0.005786	0.000010	0.000005	0.002611	0.00002	9.488548	0.000251	0.014701	0.001934	0.012081	0.00012	0.002065	0.260597	0.085576	0.000005	0.002449
M-09-110 88.5-89.5	0.10	0.056994	0.001158	0.000985	0.005926	0.000010	0.000005	0.001711	0.00001	8.678548	0.000251	0.018101	0.001934	0.006081	0.00014	0.002065	0.244597	0.084376	0.000005	0.002659
M-09-110 88.5-89.5	0.10	0.057094	0.000858	0.000985	0.004946	0.000010	0.000005	0.001611	0.00002	8.438548	0.000251	0.016001	0.001734	0.008081	0.00063	0.001065	0.230597	0.080776	0.000020	0.002129
M-09-110 88.5-89.5	0.12	0.063894	0.001058	0.000985	0.005766	0.000010	0.000005	0.001411	0.00001	9.268548	0.000601	0.014201	0.003034	0.012081	0.00030	0.002065	0.269597	0.078676	0.000005	0.001819
M-09-110 88.5-89.5	0.11	0.053194	0.001358	0.000985	0.005566	0.000010	0.000005	0.002911	0.00002	9.098548	0.000251	0.016301	0.001734	0.007081	0.00008	0.002065	0.247597	0.084076	0.000005	0.002339
M-09-110 88.5-89.5	0.09	0.046894	0.001258	0.001085	0.005216	0.000010	0.000005	0.001411	0.00002	8.958548	0.000251	0.016601	0.001934	0.006081	0.00009	0.002065	0.222597	0.095876	0.000005	0.001999
M-09-110 88.5-89.5	0.10	0.055294	0.001358	0.000885	0.008446	0.000010	0.000005	0.001711	0.00002	10.648548	0.000601	0.014501	0.002534	0.007081	0.00173	0.002065	0.261597	0.104576	0.000005	0.001759
M-09-110 88.5-89.5	0.10	0.051794	0.001358	0.000885	0.004906	0.000010	0.000005	0.001711	0.00008	8.728548	0.000901	0.015101	0.002534	0.003081	0.00270	0.001065	0.222597	0.083776	0.000005	0.001959
M-09-110 88.5-89.5	0.12	0.059194	0.001258	0.001085	0.005306	0.000010	0.000005	0.002211	0.00000	10.068548	0.000251	0.017101	0.001834	0.003081	0.00009	0.001065	0.248597	0.087176	0.000005	0.001719
M-09-110 88.5-89.5	0.13	0.055294	0.001258	0.000985	0.005256	0.000010	0.000005	0.002311	0.00003	9.098548	0.000251	0.012001	0.001834	0.003081	0.00059	0.001065	0.225597	0.083776	0.000010	0.001819
M-09-110 88.5-89.5	0.11	0.045694	0.001158	0.000785	0.005166	0.000010	0.000005	0.001711	0.00002	8.718548	0.000601	0.009012	0.001734	0.002081	0.00098	0.001065	0.217597	0.080976	0.000005	0.001949
M-09-110 88.5-89.5	0.10	0.043244	0.001158	0.000785	0.005026	0.000010	0.000005	0.001811	0.00002	8.458548	0.000426	0.008352	0.001384	0.002081	0.00052	0.001065	0.205597	0.081426	0.000005	0.001784
M-09-110 88.5-89.5	0.09	0.040794	0.001158	0.000785	0.004886	0.000010	0.000005	0.001911	0.00001	8.198548	0.000251	0.007691	0.001034	0.002081	0.00006	0.001065	0.193597	0.081876	0.000005	0.001619
M-09-110 88.5-89.5	0.10	0.042494	0.001058	0.000735	0.004666	0.000010	0.000005	0.001861	0.00001	8.108548	0.000251	0.011496	0.001334	0.004081	0.00007	0.001065	0.190597	0.080976	0.000005	0.001429
M-09-110 88.5-89.5	0.10	0.044194	0.000958	0.000685	0.004446	0.000010	0.000005	0.001811	0.00002	8.018548	0.000251	0.015301	0.001634	0.006081	0.00008	0.001065	0.187597	0.080076	0.000005	0.001239
M-09-110 88.5-89.5	0.10	0.043044	0.000958	0.000735	0.004431	0.000010	0.000005	0.002061	0.00002	8.018548	0.000251	0.012896	0.001384	0.003581	0.00006	0.001065	0.182097	0.079176	0.000005	0.001354
M-09-110 88.5-89.5	0.10	0.041894	0.000958	0.000785	0.004416	0.000010	0.000005	0.002311	0.00002	8.018548	0.000251	0.010491	0.001134	0.001081	0.00004	0.001065	0.176597	0.078276	0.000005	0.001469
M-09-110 88.5-89.5	0.11	0.044194	0.000958	0.000735	0.004636	0.000010	0.000005	0.002511	0.00002	8.368548	0.000251	0.012321	0.001434	0.001081	0.00016	0.001065	0.183597	0.083776	0.000005	0.001474
M-09-110 88.5-89.5	0.11	0.046494	0.000958	0.000685	0.004856	0.000010	0.000005	0.002711	0.00002	8.718548	0.000251	0.014151	0.001734	0.001081	0.00028	0.001065	0.190597	0.089276	0.000005	0.001479
M-09-110 88.5-89.5	0.11	0.042744	0.000908	0.000635	0.004531	0.000010	0.000005	0.001911	0.00002	8.373548	0.000251	0.012426	0.001734	0.002081	0.00054	0.000815	0.178097	0.085876	0.000005	0.001474
M-09-110 88.5-89.5	0.11	0.038994	0.000858	0.000585	0.004206	0.000010	0.000005	0.001111	0.00002	8.028548	0.000251	0.010701	0.001734	0.003081	0.00079	0.000565	0.165597	0.082476	0.000005	0.001469
M-09-110 88.5-89.5	0.12	0.039644	0.000808	0.000585	0.004131	0.000010	0.000005	0.001111	0.00002	7.753548	0.000251	0.011101	0.001584	0.002581	0.00042	0.000565	0.160597	0.076726	0.000005	0.001419
M-09-110 88.5-89.5	0.12	0.040294	0.000758	0.000585	0.004056	0.000010	0.000005	0.001111	0.00002	7.478548	0.000251	0.011501	0.001434	0.002081	0.00004	0.000565	0.155597	0.070976	0.000005	0.001369

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-110 34.5-35.5	0.0002	0.0121	0.3777	0.0012	0.8547	0.00001	0.1302	0.0534	1.2800	0.0000	0.0004	0.0001	0.0001	0.0003	0.0030	0.0000
M-09-110 34.5-35.5	0.0003	0.0083	0.3627	0.0013	0.7897	0.00001	0.1202	0.0518	1.2650	0.0001	0.0003	0.0001	0.0001	0.0003	0.0020	0.0000
M-09-110 34.5-35.5	0.0003	0.0046	0.3477	0.0013	0.7247	0.00001	0.1102	0.0502	1.2500	0.0001	0.0001	0.0001	0.0001	0.0003	0.0010	0.0000
M-09-110 34.5-35.5	0.0002	0.0046	0.3592	0.0010	0.7447	0.00001	0.1102	0.0508	1.2800	0.0001	0.0001	0.0001	0.0001	0.0003	0.0020	0.0000
M-09-110 34.5-35.5	0.0001	0.0046	0.3707	0.0007	0.7647	0.00001	0.1102	0.0514	1.3100	0.0001	0.0001	0.0001	0.0001	0.0002	0.0030	0.0000
	0.000239	0.011640	0.384331	0.001245	0.840731	0.000006	0.122661	0.053255	1.32	0.000083	0.000178	0.000086	0.000072	0.000252	0.002561	0.000005
HC14 UP Hazelton																
M-09-110 88.5-89.5	0.000705	0.007323	11.089516	0.031542	1.199355	0.00001	4.107419	0.434035	24.2	0.000101	0.000161	0.000111	0.016725	0.050792	0.000516	0.000020
M-09-110 88.5-89.5	0.000405	0.007323	7.429516	0.026742	1.489355	0.00001	2.367419	0.300035	19.6	0.000101	0.000011	0.000211	0.050725	0.042892	0.000516	0.000010
M-09-110 88.5-89.5	0.000105	0.007323	2.989516	0.010842	1.059355	0.00001	0.617419	0.104035	3.36	0.000101	0.000006	0.000211	0.003865	0.024592	0.000516	0.000005
M-09-110 88.5-89.5	0.000305	0.007323	3.249516	0.011942	1.189355	0.00001	0.597419	0.145035	5.79	0.000101	0.000101	0.000211	0.029425	0.029492	0.000516	0.000005
M-09-110 88.5-89.5	0.000405	0.007323	2.649516	0.010542	1.119355	0.00001	0.477419	0.131035	5.12	0.000101	0.000351	0.000211	0.028125	0.023792	0.000516	0.000020
M-09-110 88.5-89.5	0.000205	0.007323	2.509516	0.009742	1.179355	0.00001	0.367419	0.135035	5.25	0.000101	0.000101	0.000211	0.035525	0.022392	0.000516	0.000010
M-09-110 88.5-89.5	0.000205	0.007323	2.049516	0.007992	1.119355	0.00001	0.397419	0.129035	5.14	0.000101	0.000181	0.000111	0.032725	0.018292	0.000516	0.000640
M-09-110 88.5-89.5	0.000305	0.007323	2.119516	0.008842	1.209355	0.00001	0.367419	0.133035	4.92	0.000101	0.000301	0.000111	0.034325	0.018592	0.000516	0.000005
M-09-110 88.5-89.5	0.000205	0.007323	1.789516	0.007672	1.039355	0.00001	0.307419	0.118035	4.76	0.000101	0.000241	0.000211	0.032225	0.015692	0.000516	0.000005
M-09-110 88.5-89.5	0.000055	0.007323	1.609516	0.007072	1.019355	0.00001	0.297419	0.121035	4.3	0.000101	0.000331	0.000111	0.030925	0.014792	0.000516	0.000030
M-09-110 88.5-89.5	0.000205	0.007323	1.639516	0.008082	0.989355	0.00001	0.257419	0.120035	4.5	0.000101	0.000311	0.000211	0.027425	0.015492	0.000516	0.000005
M-09-110 88.5-89.5	0.000305	0.007323	1.549516	0.007922	1.039355	0.00001	0.267419	0.113035	4.42	0.000101	0.000211	0.000311	0.017325	0.014292	0.000516	0.000030
M-09-110 88.5-89.5	0.000105	0.007323	1.529516	0.007382	1.129355	0.00001	0.197419	0.103035	3.87	0.000101	0.000281	0.000111	0.033725	0.013692	0.000516	0.000005
M-09-110 88.5-89.5	0.000205	0.072323	1.439516	0.007332	1.119355	0.00001	0.187419	0.121035	4.5	0.000101	0.000411	0.000211	0.033525	0.013692	0.000516	0.000005
M-09-110 88.5-89.5	0.000105	0.039323	1.309516	0.006402	1.049355	0.00001	0.177419	0.109035	3.67	0.000101	0.000141	0.000111	0.017425	0.013292	0.000516	0.000005
M-09-110 88.5-89.5	0.000055	0.047323	1.189516	0.006832	0.989355	0.00001	0.167419	0.112035	5.01	0.000101	0.000261	0.000061	0.026525	0.012792	0.001016	0.000020
M-09-110 88.5-89.5	0.000055	0.051323	1.129516	0.005812	0.999355	0.00001	0.167419	0.113035	4.52	0.000101	0.000191	0.000061	0.026125	0.011682	0.000516	0.000005
M-09-110 88.5-89.5	0.000055	0.075323	1.067516	0.005282	1.019355	0.00001	0.157419	0.107035	4.32	0.000101	0.000311	0.000061	0.022225	0.011392	0.000516	0.000005
M-09-110 88.5-89.5	0.000105	0.055323	0.988516	0.005212	0.899355	0.00002	0.177419	0.104035	4.31	0.000101	0.000291	0.000061	0.020125	0.010762	0.000516	0.000010
M-09-110 88.5-89.5	0.000105	0.064323	0.977516	0.005642	0.929355	0.00001	0.177419	0.098535	4.35	0.000101	0.000621	0.000111	0.020025	0.010842	0.000516	0.000030
M-09-110 88.5-89.5	0.000205	0.043323	1.047516	0.004822	1.049355	0.00001	0.187419	0.106035	4.38	0.000101	0.000201	0.000111	0.019425	0.011392	0.000516	0.000020
M-09-110 88.5-89.5	0.000105	0.054323	0.885516	0.004752	0.859355	0.00001	0.117419	0.101035	4.03	0.000101	0.000061	0.000061	0.019025	0.009782	0.001016	0.000005
M-09-110 88.5-89.5	0.000105	0.076323	0.908516	0.003862	0.959355	0.00001	0.157419	0.100335	3.83	0.000101	0.000221	0.000061	0.017625	0.010122	0.000516	0.000005
M-09-110 88.5-89.5	0.000305	0.053323	0.808516	0.004182	0.839355	0.00001	0.147419	0.091135	3.37	0.000101	0.000251	0.000061	0.018625	0.008632	0.000516	0.000005
M-09-110 88.5-89.5	0.000055	0.053323	0.822516	0.004662	0.879355	0.00001	0.137419	0.088035	3.14	0.000101	0.000891	0.000061	0.015325	0.009072	0.000516	0.000005
M-09-110 88.5-89.5	0.000055	0.067323	0.846516	0.004032	0.909355	0.00001	0.157419	0.096335	3.95	0.000101	0.000041	0.000061	0.014925	0.008582	0.000516	0.000005
M-09-110 88.5-89.5	0.000205	0.064323	0.785516	0.003832	0.859355	0.00001	0.147419	0.087035	3.46	0.000101	0.000131	0.000061	0.013325	0.008322	0.000516	0.000005
M-09-110 88.5-89.5	0.000205	0.061323	0.724516	0.004502	0.739355	0.00001	0.127419	0.089135	3.5	0.000101	0.000041	0.000061	0.011925	0.008722	0.000516	0.000005
M-09-110 88.5-89.5	0.000055	0.044323	0.776516	0.004572	0.919355	0.00001	0.107419	0.090935	3.92	0.000101	0.000051	0.000211	0.014125	0.009522	0.000516	0.000005
M-09-110 88.5-89.5	0.000105	0.006823	0.885516	0.004662	0.779355	0.00001	0.127419	0.080035	3.22	0.000101	0.000551	0.000211	0.007715	0.009722	0.000516	0.000005
M-09-110 88.5-89.5	0.000205	0.078323	0.899516	0.004992	0.819355	0.00001	0.107419	0.077535	3.45	0.000101	0.000081	0.000311	0.006315	0.008072	0.000516	0.000005
M-09-110 88.5-89.5	0.000305	0.110323	0.846516	0.004252	0.739355	0.00001	0.107419	0.076335	3.18	0.000101	0.000006	0.000311	0.005855	0.007172	0.000516	0.000005
M-09-110 88.5-89.5	0.000505	0.131323	0.851516	0.005322	0.819355	0.00002	0.117419	0.073135	3.15	0.000101	0.000111	0.000811	0.005555	0.007022	0.000516	0.000020
M-09-110 88.5-89.5	0.000405	0.123323	0.903516	0.004582	0.839355	0.00001	0.157419	0.078435	3.23	0.000101	0.000131	0.000411	0.004765	0.008152	0.000516	0.000005
M-09-110 88.5-89.5	0.000605	0.100323	0.825516	0.004412	0.769355	0.00001	0.137419	0.077635	3.77	0.000101	0.000791	0.000511	0.004555	0.006122	0.000516	0.000010
M-09-110 88.5-89.5	0.000905	0.077323	0.805516	0.003992	0.879355	0.00001	0.147419	0.086435	4.24	0.000101	0.000661	0.000411	0.006185	0.005822	0.000516	0.000020
M-09-110 88.5-89.5	0.000805	0.078323	0.806516	0.003462	0.929355	0.00001	0.147419	0.093035	4.11	0.000101	0.000401	0.000311	0.005495	0.006562	0.001016	0.000020
M-09-110 88.5-89.5	0.000405	0.061323	0.748516	0.003712	0.829355	0.00001	0.127419	0.083835	3.94	0.000101	0.000211	0.000111	0.007235	0.006202	0.003016	0.000020
M-09-110 88.5-89.5	0.000805	0.074323	0.679516	0.002812	0.769355	0.00001	0.127419	0.077135	3.73	0.000101	0.000006	0.000311	0.006055	0.006062	0.005016	0.000005
M-09-110 88.5-89.5	0.001105	0.107323	0.691516	0.002982	0.669355	0.00001	0.107419	0.075035	3.34	0.000101	0.000081	0.000211	0.003705	0.007152	0.001016	0.000005
M-09-110 88.5-89.5	0.000405	0.118323	0.785516	0.003752	0.719355	0.00001	0.147419	0.084735	3.67	0.000101	0.000181	0.000711	0.004435	0.007292	0.003016	0.000030
M-09-110 88.5-89.5	0.000605	0.090323	0.715516	0.003242	0.789355	0.00001	0.117419	0.079735	3.55	0.000101	0.000141	0.000311	0.005775	0.005742	0.001016	0.000005
M-09-110 88.5-89.5	0.000405	0.039323	0.659516	0.002962	0.699355	0.00001	0.087419	0.077135	2.68	0.000101	0.000051	0.000411	0.006475	0.005502	0.001016	0.000005
M-09-110 88.5-89.5	0.000505	0.042323	0.645516	0.002492	0.749355	0.00001	0.117419	0.079335	3.1	0.000101	0.000121	0.000311	0.007215	0.006862	0.002016	0.000005
M-09-110 88.5-89.5	0.000605	0.053323	0.629516	0.002262	0.709355	0.00001	0.127419	0.075235	2.94	0.000101	0.000121	0.000311	0.005555	0.006562	0.004016	0.000010
M-09-110 88.5-89.5	0.000405	0.077323	0.668516	0.002292	0.799355	0.00001	0.137419	0.085435	3.44	0.000101	0.000351	0.000311	0.005545	0.006822	0.000516	0.001100
M-09-110 88.5-89.5	0.000405	0.076323	0.666516	0.002152	0.829355	0.00001	0.127419	0.079335	3.62	0.000101	0.000111	0.000111	0.004995	0.006892	0.001016	0.000005
M-09-110 88.5-89.5	0.000405	0.049323	0.605516	0.002272	0.749355	0.00001	0.117419	0.075435	3.34	0.000101	0.000121	0.000111	0.005985	0.006392	0.001016	0.000005
M-09-110 88.5-89.5	0.000255	0.051323	0.562516	0.002062	0.709355	0.00001	0.107419	0.072485	3.345	0.000101	0.000261	0.000111	0.006030	0.005962	0.000766	0.000008
M-09-110 88.5-89.5	0.000105	0.053323	0.519516	0.001852	0.669355	0.00001	0.097419	0.069535	3.35	0.000101	0.000401	0.000111	0.006075	0.005532	0.000516	0.000010
M-09-110 88.5-89.5	0.000355	0.057823	0.521016	0.001892	0.634355	0.00001	0.102419	0.068735	3.155	0.000101	0.000306	0.000161	0.004925	0.005437	0.000766	0.000015
M-09-110 88.5-89.5	0.000605	0.062323	0.522516	0.001932	0.599355	0.00001	0.107419	0.067935	2.96	0.000101	0.000211	0.000211	0.003775	0.005342	0.001016	0.000020
M-09-110 88.5-89.5	0.000705	0.076823	0.529016	0.001977	0.624355	0.00001	0.102419	0.066835	2.82	0.000101	0.000116	0.000136	0.002935	0.005002	0.000766	0.000013
M-09-110 88.5-89.5	0.000805	0.091323	0.535516	0.002022	0.649355	0.00001	0.097419	0.065735	2.68	0.000101	0.000021	0.000061	0.002095	0.004662	0.000516	0.000005
M-09-110 88.5-89.5	0.000705	0.071323	0.533516	0.001782	0.679355	0.00001	0.102419	0.070135	2.815	0.000101	0.000014	0.000136	0.003290	0.005077	0.000516	0.000005
M-09-110 88.5-89.5	0.000605	0.051323	0.531516	0.001542	0.709355	0.00001	0.107419	0.074535	2.95	0.000101	0.000006	0.000211	0.004485	0.005492	0.000516	0.000005
M-09-110 88.5-89.5	0.000555	0.045823	0.499516	0.001547	0.669355	0.00001	0.107419	0.070135	2.77	0.000056	0.000094	0.000136	0.004235	0.005332	0.001266	0.000005
M-09-110 88.5-89.5	0.000505	0.040323	0.467516	0.001552	0.629355	0.00001	0.107419	0.065735	2.59	0.000011	0.000181	0.000061	0.003985	0.005172	0.002016	0.000005
M-09-110 88.5-89.5	0.000555	0.030823	0.457016	0.001592	0.569355	0.00001	0.097419	0.063635	2.64	0.000056	0.000116	0.000061	0.003480	0.005232	0.001266	0.000005
M-09-110 88.5-89.5	0.000605	0.021323	0.446516	0.001632	0.509355	0.00001	0.087419	0.061535	2.69	0.000101	0.000051	0.000061	0.002975	0.005292	0.000516	0.000005

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-110 88.5-89.5	14	60	31-Mar-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	460	19	42	7.46	3.9	17.0	7	0.1
M-09-110 88.5-89.5	14	61	7-Apr-11	Mitchell	ABOVE MTF	UP Hazelton	PMON	SIH	5	0	0			Water	500	460	19	44	7.45	4.5	15.5	6	0.1
																	20.6247977	44.037	7.335	3.2705	16.389419	8.182258	0.1
HC15 Leach breccia/bornite breccia																							
M-09-110 342.5-343.5	15	0	4-Feb-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	370	87	636	3.85	138.3	#N/A	403	10.0
M-09-110 342.5-343.5	15	1	11-Feb-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	495	72	602	3.64	113.4	#N/A	269	6.5
M-09-110 342.5-343.5	15	2	18-Feb-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	500	39	372	3.55	117.3	#N/A	167	2.3
M-09-110 342.5-343.5	15	3	25-Feb-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	500	27	361	3.37	107.3	#N/A	133	0.7
M-09-110 342.5-343.5	15	4	4-Mar-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	510	23	343	3.28	109.6	#N/A	123	0.6
M-09-110 342.5-343.5	15	5	11-Mar-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	495	24	362	3.23	112.6	#N/A	116	0.5
M-09-110 342.5-343.5	15	6	18-Mar-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	490	22	387	3.22	117.0	#N/A	114	0.4
M-09-110 342.5-343.5	15	7	25-Mar-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	505	21	381	3.14	117.2	#N/A	114	0.5
M-09-110 342.5-343.5	15	8	1-Apr-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	475	20	387	3.1	122.2	#N/A	122	1.0
M-09-110 342.5-343.5	15	9	8-Apr-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	490	18	413	3.05	129.8	#N/A	121	1.0
M-09-110 342.5-343.5	15	10	15-Apr-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	490	17	451	3.01	146.6	#N/A	144	0.5
M-09-110 342.5-343.5	15	11	22-Apr-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	470	16	478	2.98	161.5	#N/A	141	0.5
M-09-110 342.5-343.5	15	12	29-Apr-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	480	13	488	2.97	64.7	#N/A	127	0.5
M-09-110 342.5-343.5	15	13	6-May-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	480	14	471	2.98	148.0	#N/A	149	0.5
M-09-110 342.5-343.5	15	14	13-May-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	480	15	526	2.92	150.3	#N/A	139	0.5
M-09-110 342.5-343.5	15	15	20-May-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	495	14	546	2.87	172.7	#N/A	151	0.5
M-09-110 342.5-343.5	15	16	27-May-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	495	14	702	2.76	259.8	#N/A	183	0.5
M-09-110 342.5-343.5	15	17	3-Jun-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	505	16	968	2.61	366.0	#N/A	280	0.5
M-09-110 342.5-343.5	15	18	10-Jun-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	495	24	1620	2.42	666.9	#N/A	537	1.2
M-09-110 342.5-343.5	15	19	17-Jun-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	510	28	2038	2.45	939.0	#N/A	706	1.0
M-09-110 342.5-343.5	15	20	24-Jun-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	505	49	2760	2.23	1134.0	#N/A	1069	1.0
M-09-110 342.5-343.5	15	21	1-Jul-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	500	74	3110	2.46	1284.0	#N/A	1373	1.0
M-09-110 342.5-343.5	15	22	8-Jul-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	500	344	3880	2.34	1959.0	#N/A	1470	2.5
M-09-110 342.5-343.5	15	23	15-Jul-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	505	138	3570	2.37	1734.0	#N/A	1668	2.5
M-09-110 342.5-343.5	15	24	22-Jul-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	500	146	4010	2.17	2134.0	#N/A	1479	1.0
M-09-110 342.5-343.5	15	25	29-Jul-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	505	215	5090	2.48	2659.0	#N/A	2750	5.0
M-09-110 342.5-343.5	15	26	5-Aug-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	500	191	5080	2.31	2209.0	#N/A	1925	10.0
M-09-110 342.5-343.5	15	27	12-Aug-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	490	185	5250	2.33	2359.0	#N/A	2649	2.5
M-09-110 342.5-343.5	15	28	19-Aug-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	495	140	4790	2.24	2259.0	#N/A	1989	5.0
M-09-110 342.5-343.5	15	29	26-Aug-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	485	203	4890	2.35	2259.0	#N/A	2876	2.5
M-09-110 342.5-343.5	15	30	2-Sep-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	455	286	5300	2.23	2309.0	#N/A	3277	5.0
M-09-110 342.5-343.5	15	31	9-Sep-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	495	173	4460	2.51	1909.0	#N/A	2395	2.5
M-09-110 342.5-343.5	15	32	16-Sep-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	485	231	4890	2.19	2209.0	#N/A	2959	1.0
M-09-110 342.5-343.5	15	33	23-Sep-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	485	228	5490	2.2	2459.0	#N/A	2889	15.0
M-09-110 342.5-343.5	15	34	30-Sep-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	470	229	5050	2.15	2409.0	#N/A	2955	2.5
M-09-110 342.5-343.5	15	35	7-Oct-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	510	144	4410	2.31	2359.0	#N/A	2533	1.0
M-09-110 342.5-343.5	15	36	14-Oct-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	485	250	5560	2.61	2409.0	#N/A	3148	1.0
M-09-110 342.5-343.5	15	37	21-Oct-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	475	232	5350	2.24	2359.0	#N/A	2993	10.0
M-09-110 342.5-343.5	15	38	28-Oct-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	480	163	5140	2.23	2659.0	#N/A	2752	5.0
M-09-110 342.5-343.5	15	39	4-Nov-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	485	189	5210	2.36	2559.0	#N/A	3308	5.0
M-09-110 342.5-343.5	15	40	11-Nov-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	465	310	5820	2.48	2459.0	#N/A	3221	1.0
M-09-110 342.5-343.5	15	41	18-Nov-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	480	173	4730	2.36	2159.0	#N/A	2229	5.0
M-09-110 342.5-343.5	15	42	25-Nov-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	495	121	4320	2.55	2109.0	#N/A	2275	5.0
M-09-110 342.5-343.5	15	43	2-Dec-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	500	191	4890	2.33	2159.0	#N/A	2366	2.5
M-09-110 342.5-343.5	15	44	9-Dec-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	490	185	5180	2.31	2959.0	#N/A	2612	5.0
M-09-110 342.5-343.5	15	45	16-Dec-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	490	196	5290	2.23	2859.0	#N/A	3130	5.0
M-09-110 342.5-343.5	15	46	23-Dec-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	480	187	5450	2.41	2909.0	#N/A	3189	5.0
M-09-110 342.5-343.5	15	47	30-Dec-10	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	515	143	4890	2.43	2809.0	#N/A	2072	7.5
M-09-110 342.5-343.5	15	48	6-Jan-11	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	500	147	5390	2.33	2784.0	#N/A	2363	6.3
M-09-110 342.5-343.5	15	49	13-Jan-11	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	495	152	4810	2.24	2759.0	#N/A	2653	5.0
M-09-110 342.5-343.5	15	50	20-Jan-11	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	495	130	4800	2.48	2759.0	#N/A	2418	5.0
M-09-110 342.5-343.5	15	51	27-Jan-11	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	495	108	4570	2.44	2759.0	#N/A	2182	5.0
M-09-110 342.5-343.5	15	52	3-Feb-11	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	520	193	4540	2.53	2609.0	#N/A	2450	3.8
M-09-110 342.5-343.5	15	53	10-Feb-11	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	445	277	5160	2.41	2459.0	#N/A	2718	2.5
M-09-110 342.5-343.5	15	54	17-Feb-11	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	460	258	5280	2.29	2309.0	#N/A	2560	6.3
M-09-110 342.5-343.5	15	55	24-Feb-11	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	460	239	4720	2.16	2159.0	#N/A	2401	10.0
M-09-110 342.5-343.5	15	56	3-Mar-11	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	440	201	4560	2.39	2059.0	#N/A	2172	7.5
M-09-110 342.5-343.5	15	57	10-Mar-11	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	460	163	4490	2.31	1959.0	#N/A	1943	5.0
M-09-110 342.5-343.5	15	58	17-Mar-11	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	455	168	4450	2.3	1909.0	#N/A	2044	5.0
M-09-110 342.5-343.5	15	59	24-Mar-11	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	465	174	4670	2.41	1859.0	#N/A	2144	5.0
M-09-110 342.5-343.5	15	60	31-Mar-11	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	470	192	4810	2.59	2059.0	#N/A	2238	5.0
M-09-110 342.5-343.5	15	61	7-Apr-11	Mitchell	BELOW MTF	Leach breccia/bornite breccia	VU	QSP	5	None	0			Water	500	465	210	5210	2.24	2259.0	#N/A	2331	5.0
																	207.535368	4789	2.363	2164.022903	#N/A	2299.966129	5.5

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-110 88.5-89.5	0.11	0.040394	0.000758	0.000735	0.004046	0.000010	0.000005	0.001161	0.00002	7.458548	0.000251	0.011701	0.001484	0.005081	0.00005	0.000565	0.165597	0.078026	0.000005	0.001459
M-09-110 88.5-89.5	0.09	0.040494	0.000758	0.000885	0.004036	0.000010	0.000005	0.001211	0.00003	7.438548	0.000251	0.011901	0.001534	0.008081	0.00005	0.000565	0.175597	0.085076	0.000005	0.001549
	0.108973	0.041819	0.000868	0.000695	0.004335	0.000010	0.000005	0.001721	0.000022	7.965548	0.000251	0.011919	0.001519	0.002981	0.000242145	0.000790	0.173397	0.080966	0.000005	0.001452
HC15 Leach breccia/borni																				
M-09-110 342.5-343.5	0.27	6.50613	0.00062	0.00675	0.07388	0.00574	0.00001	0.00307	0.00215	25.50000	0.04041	0.06306	0.56134	31.61290	0.18615	0.05108	5.70871	0.69369	0.0000050	0.00046
M-09-110 342.5-343.5	0.31	4.48613	0.00022	0.00395	0.03708	0.00797	0.00001	0.00607	0.00098	20.30000	0.02961	0.05746	0.55834	27.71290	0.07275	0.03708	5.07871	0.65569	0.0000050	0.00042
M-09-110 342.5-343.5	0.25	2.56613	0.00012	0.00505	0.01778	0.00584	0.00001	0.00537	0.00052	11.00000	0.02181	0.03571	0.49734	27.71290	0.05145	0.01308	2.77871	0.34869	0.0000050	0.00056
M-09-110 342.5-343.5	0.31	2.50613	0.00012	0.00585	0.01878	0.00433	0.00001	0.00387	0.00041	7.98000	0.02101	0.02526	0.54334	27.41290	0.02345	0.00508	1.75871	0.21869	0.0000050	0.00026
M-09-110 342.5-343.5	0.44	2.61613	0.00012	0.00965	0.01638	0.00342	0.00001	0.00407	0.00045	7.20000	0.01801	0.02076	0.52234	25.91290	0.00782	0.00308	1.20871	0.15269	0.0000050	0.00025
M-09-110 342.5-343.5	0.56	2.61613	0.00012	0.01005	0.00933	0.00287	0.00001	0.00407	0.00030	7.75000	0.01881	0.01756	0.61234	27.91290	0.00464	0.00208	1.00671	0.12569	0.0000050	0.00022
M-09-110 342.5-343.5	0.53	2.38613	0.00012	0.00745	0.01098	0.00213	0.00001	0.00307	0.00028	7.58000	0.01651	0.01416	0.59434	29.61290	0.01015	0.00208	0.86271	0.11569	0.0000050	0.00028
M-09-110 342.5-343.5	0.55	2.40613	0.00012	0.01135	0.00891	0.00178	0.00001	0.00307	0.00017	7.23000	0.01661	0.01266	0.68734	30.31290	0.00587	0.00208	0.74671	0.09169	0.0000050	0.00028
M-09-110 342.5-343.5	0.59	2.76613	0.00012	0.00675	0.01318	0.00157	0.00001	0.00307	0.00030	7.02000	0.01621	0.01256	0.91434	28.71290	0.01988	0.00208	0.67771	0.09169	0.0000050	0.00032
M-09-110 342.5-343.5	0.51	2.53613	0.00012	0.00695	0.01170	0.00127	0.00001	0.00307	0.00026	6.08000	0.01451	0.01096	0.95734	29.81290	0.01010	0.00208	0.60971	0.07169	0.0000050	0.00027
M-09-110 342.5-343.5	0.48	3.01613	0.00012	0.00825	0.01208	0.00119	0.00001	0.00307	0.00034	5.86000	0.01741	0.01246	1.25034	33.81290	0.01285	0.00208	0.63671	0.07169	0.0000050	0.00056
M-09-110 342.5-343.5	0.45	3.04613	0.00012	0.00655	0.01116	0.00101	0.00001	0.00207	0.00032	5.41000	0.02071	0.01266	1.25034	37.11290	0.01715	0.00208	0.68071	0.06769	0.0000050	0.00051
M-09-110 342.5-343.5	0.42	2.56613	0.00012	0.00795	0.01083	0.00087	0.00001	0.00307	0.00067	4.11000	0.01821	0.01246	1.29034	32.91290	0.01775	0.00208	0.59671	0.05369	0.0000050	0.00037
M-09-110 342.5-343.5	0.40	2.16613	0.00012	0.00925	0.00910	0.00070	0.00001	0.00307	0.00025	4.54000	0.01321	0.01106	1.27034	37.71290	0.01065	0.00208	0.67571	0.10269	0.0000050	0.00039
M-09-110 342.5-343.5	0.41	2.32613	0.00012	0.00865	0.00903	0.00062	0.00001	0.00267	0.00025	4.83000	0.01341	0.01126	1.28034	38.31290	0.01225	0.00208	0.72371	0.10169	0.0000050	0.00040
M-09-110 342.5-343.5	0.41	3.08613	0.00012	0.00385	0.00878	0.00064	0.00001	0.00297	0.00026	4.33000	0.01841	0.01396	1.45034	40.21290	0.01395	0.00208	0.73971	0.10509	0.0000200	0.00057
M-09-110 342.5-343.5	0.37	4.56613	0.00012	0.00475	0.00853	0.00048	0.00001	0.00267	0.00027	4.42000	0.02651	0.01706	1.60034	59.31290	0.01785	0.00208	0.83471	0.13569	0.0000050	0.00091
M-09-110 342.5-343.5	0.31	5.91613	0.00012	0.01095	0.00820	0.00053	0.00001	0.00317	0.00030	4.77000	0.03631	0.02346	1.88034	82.61290	0.02155	0.00208	1.01471	0.17069	0.0000050	0.00121
M-09-110 342.5-343.5	0.48	10.46613	0.00012	0.03715	0.01093	0.00058	0.00002	0.00307	0.00049	6.79000	0.07791	0.04376	2.40034	153.61290	0.03625	0.00208	1.59871	0.30969	0.0000050	0.00249
M-09-110 342.5-343.5	0.56	10.76613	0.00022	0.07255	0.01228	0.00057	0.00001	0.00317	0.00053	8.09000	0.08931	0.05706	1.72034	220.61290	0.03379	0.00308	1.95871	0.38569	0.0000050	0.00842
M-09-110 342.5-343.5	0.04	11.96613	0.00032	0.12005	0.00780	0.00060	0.00004	0.00427	0.00059	15.20000	0.11001	0.07546	1.45034	289.61290	0.02678	0.00508	2.71871	0.58769	0.0000050	0.00850
M-09-110 342.5-343.5	1.67	11.16613	0.00032	0.18605	0.00695	0.00054	0.00004	0.00387	0.00055	24.70000	0.06831	0.10956	0.93534	393.61290	0.02185	0.00608	3.08871	0.72369	0.0000050	0.01244
M-09-110 342.5-343.5	1.05	11.36613	0.00042	0.32505	0.00718	0.00064	0.00010	0.00477	0.00064	130.00000	0.07931	0.13656	0.76134	585.61290	0.01935	0.01708	4.61871	1.02569	0.0000050	0.01544
M-09-110 342.5-343.5	0.66	11.16613	0.00012	0.21805	0.00619	0.00067	0.00005	0.00317	0.00064	46.60000	0.04631	0.14656	0.55934	627.61290	0.01295	0.01008	5.13871	1.05569	0.0000050	0.01534
M-09-110 342.5-343.5	1.20	10.86613	0.00042	0.18505	0.00988	0.00066	0.00008	0.00327	0.00059	49.40000	0.03181	0.14956	0.45534	641.61290	0.01006	0.00908	5.51871	1.10569	0.0000050	0.01374
M-09-110 342.5-343.5	1.38	10.25613	0.00032	0.18805	0.00745	0.00083	0.00009	0.00467	0.00065	74.10000	0.02431	0.15556	0.38634	724.61290	0.01295	0.01908	7.15871	1.20569	0.0000050	0.01444
M-09-110 342.5-343.5	1.16	10.46613	0.00042	0.16505	0.00619	0.00056	0.00008	0.00397	0.00054	65.30000	0.01491	0.16356	0.32334	736.61290	0.00918	0.01708	6.69871	1.35569	0.0000050	0.01384
M-09-110 342.5-343.5	0.65	10.56613	0.00072	0.16305	0.00591	0.00073	0.00007	0.00407	0.00053	62.30000	0.01331	0.17956	0.16534	719.61290	0.00653	0.02408	7.13871	1.35569	0.0000200	0.01054
M-09-110 342.5-343.5	2.08	9.33613	0.00052	0.13805	0.00604	0.00065	0.00003	0.00397	0.00054	44.80000	0.00971	0.15656	0.27034	632.61290	0.00459	0.02308	6.86871	1.14569	0.0000050	0.00853
M-09-110 342.5-343.5	0.79	10.56613	0.00062	0.16105	0.00767	0.00067	0.00013	0.00487	0.00050	69.30000	0.01081	0.18256	0.30234	742.61290	0.00878	0.02608	7.32871	1.40569	0.0000100	0.01104
M-09-110 342.5-343.5	1.00	14.46613	0.00082	0.16905	0.00810	0.00063	0.00030	0.00337	0.00051	99.30000	0.00981	0.20956	0.28934	849.61290	0.01625	0.02608	9.15871	1.66569	0.0000050	0.01034
M-09-110 342.5-343.5	1.19	10.36613	0.00042	0.11905	0.00562	0.00049	0.00008	0.00327	0.00044	56.80000	0.00691	0.16656	0.21134	728.61290	0.00651	0.01908	7.58871	1.32569	0.0000050	0.00815
M-09-110 342.5-343.5	1.40	12.56613	0.00092	0.15405	0.00605	0.00043	0.00011	0.00237	0.00048	78.80000	0.00561	0.17256	0.24434	799.61290	0.00750	0.01508	8.30871	1.50569	0.0000050	0.00961
M-09-110 342.5-343.5	0.89	12.96613	0.00062	0.16005	0.00804	0.00049	0.00015	0.00277	0.00058	74.20000	0.00641	0.18856	0.30934	819.61290	0.00793	0.02108	10.34871	1.56569	0.0000050	0.00834
M-09-110 342.5-343.5	0.96	13.06613	0.00072	0.14405	0.00648	0.00041	0.00011	0.00287	0.00054	74.80000	0.00571	0.19156	0.29634	896.61290	0.00781	0.02008	10.14871	1.65569	0.0000050	0.00864
M-09-110 342.5-343.5	0.86	9.68613	0.00062	0.10205	0.00527	0.00034	0.00005	0.00297	0.00039	44.30000	0.00391	0.15256	0.19734	672.61290	0.00453	0.01408	8.08871	1.23569	0.0000050	0.00562
M-09-110 342.5-343.5	0.92	12.36613	0.00072	0.13505	0.00568	0.00039	0.00010	0.00327	0.00046	81.80000	0.00491	0.18656	0.25534	594.61290	0.00601	0.02208	11.04871	1.80569	0.0000050	0.00744
M-09-110 342.5-343.5	0.92	11.96613	0.00072	0.14105	0.00510	0.00030	0.00009	0.00237	0.00045	76.30000	0.00401	0.14956	0.19134	823.61290	0.00533	0.01608	10.14871	1.62569	0.0000300	0.00696
M-09-110 342.5-343.5	0.54	10.86613	0.00072	0.12205	0.00544	0.00025	0.00007	0.00187	0.00042	51.90000	0.00311	0.18556	0.18934	875.61290	0.00530	0.01308	8.16871	1.40569	0.0001400	0.00585
M-09-110 342.5-343.5	0.74	12.86613	0.00082	0.13505	0.00558	0.00032	0.00010	0.00297	0.00043	60.90000	0.00401	0.14456	0.17634	347.61290	0.00613	0.02308	9.00871	1.50569	0.0000200	0.00665
M-09-110 342.5-343.5	1.25	14.66613	0.00072	0.14205	0.00632	0.00028	0.00014	0.00247	0.00046	104.00000	0.00421	0.18956	0.22134	7.34290	0.00939	0.02008	12.24871	1.81569	0.0000200	0.00694
M-09-110 342.5-343.5	0.59	11.06613	0.00062	0.11505	0.00484	0.00040	0.00031	0.00277	0.00086	53.90000	0.00331	0.13356	0.14434	732.61290	0.01255	0.02308	9.27871	1.33569	0.0000050	0.00655
M-09-110 342.5-343.5	0.39	9.42613	0.00072	0.10805	0.00635	0.00024	0.00007	0.00257	0.00031	38.20000	0.00271	0.11056	0.10834	733.61290	0.00560	0.01808	6.20871	1.13569	0.0000100	0.00393
M-09-110 342.5-343.5	0.95	9.69613	0.00072	0.12205	0.00768	0.00025	0.00010	0.00307	0.00038	63.00000	0.00301	0.16556	0.15834	878.61290	0.00810	0.01808	8.26871	1.57569	0.0000400	0.00461
M-09-110 342.5-343.5	0.87	11.06613	0.00072	0.13005	0.00579	0.00018	0.00010	0.00237	0.00040	59.70000	0.00291	0.17456	0.14834	841.61290	0.00901	0.01308	8.59871	1.50569	0.0000300	0.00563
M-09-110 342.5-343.5	0.92	10.46613	0.00072	0.12705	0.00546	0.00028	0.00009	0.00187	0.00038	62.50000	0.00251	0.17256	0.12534	890.61290	0.00682	0.02208	9.65871	1.56569	0.0000050	0.00666
M-09-110 342.5-343.5	0.77	11.16613	0.00122	0.13505	0.00654	0.00023	0.00011	0.00277	0.00038	60.20000	0.00271	0.13256	0.17434	854.61290	0.00979	0.01708	8.91871	1.50569	0.0000200	0.00674
M-09-110 342.5-343.5	0.90	8.13613	0.00072	0.09955	0.00484	0.00019	0.00004	0.00237	0.00032	43.00000	0.00201	0.10656	0.12434	699.61290	0.00677	0.01308	8.58871	1.80569	0.0000700	0.00492
M-09-110 342.5-343.5	1.03	7.83613	0.00077	0.10880	0.00488	0.00017	0.00007	0.00232	0.00031	46.35000	0.00176	0.11206	0.14684	736.11290	0.00659	0.01158	7.69371	1.54569	0.0000375	0.00552
M-09-110 342.5-343.5	1.16	7.53613	0.00082	0.11805	0.00493	0.00015	0.00009	0.00227	0.00030	49.70000	0.00151	0.11756	0.16934	772.61290	0.00641	0.01008	6.79871	1.28569	0.0000050	0.00612
M-09-110 342.5-343.5	0.79	7.29113	0.00107	0.13555	0.00636	0.00015	0.00011	0.00222	0.00042	41.65000	0.00126	0.13406	0.15634	696.11290	0.00938	0.01158	6.31871	1.17069	0.0000050	0.00772
M-09-110 342.5-343.5	0.42	7.04613	0.00132	0.15305	0.00780	0.00014	0.00013	0.00217	0.00053	33.60000	0.00101	0.15056	0.14334	619.61290	0.01235	0.01308	5.83871	1.05569	0.0000050	0.00932
M-09-110 342.5-343.5	0.87	9.65613	0.00112	0.14205	0.00714	0.00016	0.00019	0.00212	0.00058	64.20000	0.00141	0.13606	0.14234	669.11290	0.01420	0.01458	7.80871	1.30569	0.0000050	0.00810
M-09-110 342.5-343.5	1.33	12.26613	0.00092	0.13105	0.00649	0.00018	0.00024	0.00207	0.00064	94.80000	0.00181	0.12156	0.14134	718.61290	0.01605	0.01608	9.77871	1.55569	0.0000050	0.00688
M-09-110 342.5-343.5	1.64	11.51613	0.00097	0.11525	0.00608	0.00019	0.00019	0.00202	0.00056	86.55000	0.00161	0.11406	0.15584	692.61290	0.01450	0.01608	10.16371	1.48569	0.0000475	0.00575
M-09-110 342.5-343.5	1.95	10.76613	0.00102	0.09945	0.00568	0.00019	0.00014	0.00197	0.00048	78.30000	0.00141	0.10656	0.17034	666.61290	0.01295	0.01608	10.54871	1.41569	0.0000900	0.00462
M-09-110 342.5-343.5	1.43	10.45613	0.00082	0.09955	0.00535	0.00017	0.00015	0.00187	0.00047	64.70000	0.00186	0.10331	0.16584	661.11290	0.01223	0.01508	9.51871	1.30069	0.0000600	0.00469
M-09-110 342.5-343.5	0.92	10.14613	0.00062	0.09965	0.00503	0.00015	0.00015	0.00177	0.00046	51.10000	0.00231	0.10006	0.16134	655.61290	0.01150	0.01408	8.48871	1.18569	0.0000300	0.00476
M-09-110 342.5-343.5	0.78	9.11613	0.00067	0.10235	0.00533	0.00015	0.00017	0.00187	0.00044	53.95000	0.00176	0.09911	0.17934	703.61290	0.01178	0.01358	8.18871	1.24069	0.0000175	0.00517
M-09-110 342.5-343.5	0.65	8.08613	0.00072	0.10505	0.00564	0.00015	0.00018	0.00197	0.00043	56.80000	0.00121	0.09816	0.19734	751.61290	0.01205	0.01308	7.88871	1.29569	0.0000050	0.00559
M-09-110 342.5-343.5	0.62	9.32613	0.00092	0.11905	0.00567	0.00013	0.00018	0.00177	0.00040	62.05000	0.00126	0.12336	0.19484	761.61290	0.01193	0.01308	9.06871	1.49569	0.0000050	0.00586
M-09-110 342.5-343.5	0.60	10.56613	0.00112	0.13305	0.00570	0.00010	0.00018	0.00157	0.00037	67.30000	0.00131	0.14856	0.19234	771.61290	0.01181	0.01308	10.24871	1.69569	0.0000050	0.00613
	1.077667	10.190129	0.000889	0.114645	0.005810	0.000157	0.000176	0.001899	0.000482	67.975003	0.001593	0.115081	0.170089	705.212903	0.012900	0.014481	9.170210	1.397694	0.000027	0.005754

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-110 88.5-89.5	0.000455	0.028323	0.461016	0.001697	0.514355	0.00001	0.092419	0.061985	2.815	0.000101	0.000051	0.000136	0.002780	0.005047	0.001266	0.000005
M-09-110 88.5-89.5	0.000305	0.035323	0.475516	0.001762	0.519355	0.00001	0.097419	0.062435	2.94	0.000101	0.000051	0.000211	0.002585	0.004802	0.002016	0.000005
	0.000580	0.049273	0.493666	0.001711	0.607355	0.000006	0.099919	0.066270	2.771	0.000083	0.000070	0.000121	0.003285	0.005111	0.001066	0.000006
HC15 Leach breccia/borni																
M-09-110 342.5-343.5	0.05496	0.01439	9.55968	0.03098	0.68258	0.00002	76.22984	0.36946	96.50000	0.00060	0.00029	0.00024	0.06181	0.00066	0.08673	0.00067
M-09-110 342.5-343.5	0.04976	0.01439	8.01968	0.03828	6.33258	0.00004	71.12984	0.35046	89.50000	0.00050	0.00018	0.00044	0.06071	0.00150	0.06973	0.00023
M-09-110 342.5-343.5	0.02636	0.01439	4.82968	0.02548	5.92258	0.00005	13.72984	0.22346	47.70000	0.00030	0.00005	0.00034	0.03391	0.00349	0.04273	0.00008
M-09-110 342.5-343.5	0.01636	0.03939	3.10968	0.01748	4.85258	0.00006	4.32984	0.15246	38.00000	0.00020	0.00009	0.00034	0.01891	0.00362	0.03173	0.00004
M-09-110 342.5-343.5	0.01106	0.09939	2.23968	0.01398	4.01258	0.00007	1.40984	0.10546	33.40000	0.00010	0.00029	0.00034	0.01131	0.00490	0.03773	0.00003
M-09-110 342.5-343.5	0.00716	0.15939	1.97968	0.01248	3.90258	0.00006	0.65984	0.08546	37.70000	0.00010	0.00014	0.00044	0.00825	0.00510	0.01873	0.00003
M-09-110 342.5-343.5	0.00486	0.15939	1.58968	0.00975	3.52258	0.00006	0.44984	0.07276	38.80000	0.00010	0.00020	0.00034	0.00624	0.00496	0.01573	0.00068
M-09-110 342.5-343.5	0.00366	0.30939	1.49968	0.01028	3.57258	0.00008	0.48984	0.05466	36.20000	0.00010	0.00003	0.00044	0.00406	0.00518	0.01473	0.00003
M-09-110 342.5-343.5	0.00326	0.17939	1.26968	0.01038	2.87258	0.00011	0.36984	0.04576	39.20000	0.00010	0.00046	0.00034	0.00416	0.00456	0.01473	0.00003
M-09-110 342.5-343.5	0.00206	0.19939	1.16968	0.00987	2.52258	0.00012	0.31984	0.03616	36.80000	0.00010	0.00047	0.00034	0.00354	0.00430	0.01173	0.00004
M-09-110 342.5-343.5	0.00236	0.20939	1.19968	0.01188	2.61258	0.00014	0.30984	0.03086	42.00000	0.00010	0.00032	0.00024	0.00308	0.00473	0.01373	0.00003
M-09-110 342.5-343.5	0.00226	0.16939	1.08968	0.01028	2.75258	0.00011	0.29984	0.02596	42.60000	0.00010	0.00031	0.00024	0.00297	0.00494	0.01573	0.00005
M-09-110 342.5-343.5	0.00186	0.18939	1.07968	0.01118	3.01258	0.00015	0.23984	0.01856	37.60000	0.00010	0.00027	0.00024	0.00195	0.00439	0.01673	0.00001
M-09-110 342.5-343.5	0.00166	0.30939	1.00968	0.01168	3.93258	0.00011	0.24984	0.01876	42.20000	0.00010	0.00047	0.00044	0.00161	0.00372	0.01273	0.00004
M-09-110 342.5-343.5	0.00146	0.29939	0.96568	0.01218	3.68258	0.00020	0.22984	0.01726	43.70000	0.00010	0.00017	0.00044	0.00126	0.00352	0.01373	0.00012
M-09-110 342.5-343.5	0.00156	0.12839	0.88868	0.01158	3.56258	0.00013	0.21984	0.01446	49.80000	0.00010	0.00024	0.00054	0.00168	0.00386	0.02573	0.00008
M-09-110 342.5-343.5	0.00176	0.24439	0.89868	0.01188	3.85258	0.00017	0.20984	0.01466	73.40000	0.00010	0.00019	0.00024	0.00229	0.00275	0.02973	0.00007
M-09-110 342.5-343.5	0.00236	0.60539	0.95568	0.01298	4.73258	0.00021	0.20984	0.01426	108.00000	0.00010	0.00019	0.00044	0.00312	0.00384	0.03273	0.00006
M-09-110 342.5-343.5	0.00586	1.74939	1.09668	0.02138	7.11258	0.00040	0.28984	0.01876	182.00000	0.00010	0.00024	0.00114	0.00718	0.00566	0.03173	0.00006
M-09-110 342.5-343.5	0.00596	2.95939	1.09768	0.02675	8.77258	0.00047	0.29984	0.01966	241.00000	0.00010	0.00057	0.00194	0.00758	0.00571	0.03973	0.00030
M-09-110 342.5-343.5	0.00806	7.42939	1.17968	0.05418	13.32258	0.00059	0.33984	0.03126	392.00000	0.00010	0.00024	0.00304	0.01111	0.00578	0.04773	0.00026
M-09-110 342.5-343.5	0.01256	11.90939	1.04068	0.09298	13.22258	0.00051	0.27984	0.04596	450.00000	0.00010	0.00031	0.00404	0.01331	0.00662	0.05473	0.00036
M-09-110 342.5-343.5	0.01726	20.30939	1.13968	0.14618	21.72258	0.00071	0.36984	0.07306	625.00000	0.00010	0.00041	0.00674	0.02211	0.01273	0.09373	0.00061
M-09-110 342.5-343.5	0.01296	22.60939	0.99368	0.16518	22.72258	0.00060	0.33984	0.07756	520.00000	0.00010	0.00075	0.01184	0.01931	0.01194	0.09473	0.00038
M-09-110 342.5-343.5	0.01496	24.20939	0.95868	0.16018	23.72258	0.00059	0.31984	0.08176	661.00000	0.00010	0.00050	0.00694	0.01821	0.01303	0.09673	0.00036
M-09-110 342.5-343.5	0.01436	33.70939	1.05568	0.15318	23.42258	0.00055	0.34984	0.11046	797.00000	0.00010	0.00038	0.00604	0.01741	0.01293	0.10673	0.00045
M-09-110 342.5-343.5	0.01316	30.80939	0.93868	0.15918	29.52258	0.00050	0.28984	0.09446	792.00000	0.00010	0.00046	0.00684	0.01611	0.01203	0.10873	0.00030
M-09-110 342.5-343.5	0.01116	28.70939	0.89268	0.17918	28.32258	0.00061	0.30984	0.10246	889.00000	0.00010	0.00040	0.00884	0.01421	0.01313	0.12873	0.00037
M-09-110 342.5-343.5	0.00986	22.60939	0.85968	0.14918	25.42258	0.00056	0.27984	0.06996	775.00000	0.00010	0.00027	0.00794	0.01091	0.01273	0.12473	0.00025
M-09-110 342.5-343.5	0.01236	33.40939	0.90868	0.19118	27.32258	0.00061	0.32984	0.10446	923.00000	0.00010	0.00120	0.01124	0.01121	0.01483	0.12873	0.00059
M-09-110 342.5-343.5	0.01296	45.40939	1.02468	0.25018	31.82258	0.00063	0.33984	0.13446	979.00000	0.00010	0.00074	0.01224	0.01231	0.01583	0.16473	0.00074
M-09-110 342.5-343.5	0.01426	28.40939	0.74368	0.19818	26.62258	0.00068	0.25984	0.07956	835.00000	0.00010	0.00293	0.00974	0.00728	0.01313	0.12673	0.00026
M-09-110 342.5-343.5	0.01706	35.90939	0.81768	0.19618	28.12258	0.00100	0.27984	0.10746	909.00000	0.00010	0.00050	0.01034	0.00950	0.01203	0.14473	0.00036
M-09-110 342.5-343.5	0.01496	36.50939	0.84068	0.23618	38.32258	0.00072	0.30984	0.09676	959.00000	0.00040	0.00073	0.01284	0.00812	0.01423	0.20973	0.00033
M-09-110 342.5-343.5	0.02076	36.50939	0.78468	0.18818	39.02258	0.00090	0.33984	0.09616	1022.00000	0.00050	0.00104	0.01364	0.01021	0.01363	0.18373	0.00032
M-09-110 342.5-343.5	0.01506	22.60939	0.64968	0.16718	28.02258	0.00068	0.25984	0.06046	748.00000	0.00010	0.00056	0.04494	0.00406	0.01103	0.13773	0.00018
M-09-110 342.5-343.5	0.02026	38.90939	0.77768	0.19418	33.82258	0.00092	0.31984	0.10446	1020.00000	0.00010	0.00076	0.07234	0.00705	0.01333	0.15673	0.00031
M-09-110 342.5-343.5	0.01766	35.50939	0.71168	0.24118	30.62258	0.00111	0.27984	0.09776	822.00000	0.00010	0.00036	0.01934	0.00477	0.01243	0.17773	0.00085
M-09-110 342.5-343.5	0.01836	26.30939	0.61868	0.17818	38.72258	0.00103	0.21984	0.06896	895.00000	0.00010	0.00033	0.05364	0.00389	0.01265	0.15473	0.00019
M-09-110 342.5-343.5	0.01456	29.90939	0.66968	0.23918	33.42258	0.00115	0.24984	0.07896	364.00000	0.00010	0.00050	0.01524	0.00394	0.01293	0.13173	0.00040
M-09-110 342.5-343.5	0.01586	47.10939	0.76968	0.19118	0.41258	0.00106	0.38984	0.12746	4.98000	0.00010	0.00069	0.02534	0.00490	0.01533	0.19873	0.00052
M-09-110 342.5-343.5	0.01386	26.20939	0.63768	0.18518	30.92258	0.00102	0.32984	0.06776	775.00000	0.00040	0.00165	0.01284	0.00454	0.01243	0.15673	0.00028
M-09-110 342.5-343.5	0.01136	19.40939	0.51568	0.14118	25.62258	0.00080	0.14984	0.04906	802.00000	0.00010	0.00028	0.03994	0.00479	0.00935	0.11173	0.00019
M-09-110 342.5-343.5	0.01306	24.70939	0.57068	0.17618	29.42258	0.00096	0.22984	0.06686	818.00000	0.00010	0.00028	0.01664	0.00248	0.01012	0.10773	0.00024
M-09-110 342.5-343.5	0.01356	28.10939	0.59168	0.18318	32.62258	0.00121	0.22984	0.07506	843.00000	0.00010	0.00040	0.03194	0.00310	0.01143	0.14173	0.00022
M-09-110 342.5-343.5	0.01766	29.10939	0.60768	0.19018	32.82258	0.00112	0.21984	0.07836	1080.00000	0.00010	0.00033	0.01474	0.00284	0.01313	0.13573	0.00022
M-09-110 342.5-343.5	0.01396	27.70939	0.60368	0.22518	41.92258	0.00093	0.22984	0.07606	1050.00000	0.00010	0.00042	0.01474	0.00377	0.01203	0.13073	0.00016
M-09-110 342.5-343.5	0.01046	20.70939	0.38868	0.13318	24.82258	0.00077	0.12984	0.04546	749.00000	0.00010	0.00019	0.01904	0.00232	0.00999	0.11773	0.00010
M-09-110 342.5-343.5	0.01101	22.30939	0.45968	0.16718	25.22258	0.00094	0.15984	0.05361	780.50000	0.00010	0.00024	0.01509	0.00186	0.00974	0.10723	0.00013
M-09-110 342.5-343.5	0.01156	23.90939	0.53068	0.20118	25.62258	0.00110	0.18984	0.06176	812.00000	0.00010	0.00029	0.01114	0.00186	0.00950	0.09673	0.00015
M-09-110 342.5-343.5	0.01426	20.15939	0.51268	0.16868	24.82258	0.00123	0.18484	0.05206	764.50000	0.00010	0.00043	0.01049	0.00279	0.00859	0.11573	0.00017
M-09-110 342.5-343.5	0.01696	16.40939	0.49468	0.13618	24.02258	0.00136	0.17984	0.04236	717.00000	0.00010	0.00056	0.00984	0.00279	0.00769	0.13473	0.00019
M-09-110 342.5-343.5	0.01541	29.90939	0.63518	0.19068	26.77258	0.00121	0.19984	0.07891	756.00000	0.00010	0.00055	0.01744	0.00254	0.01001	0.13273	0.00045
M-09-110 342.5-343.5	0.01386	43.40939	0.77568	0.24518	29.52258	0.00105	0.21984	0.11546	795.00000	0.00010	0.00054	0.02504	0.00229	0.01233	0.13073	0.00071
M-09-110 342.5-343.5	0.01286	41.05939	0.69468	0.21068	28.52258	0.00102	0.22484	0.10691	765.50000	0.00010	0.00046	0.01884	0.00199	0.01213	0.14873	0.00059
M-09-110 342.5-343.5	0.01186	38.70939	0.61368	0.17618	27.52258	0.00099	0.22984	0.09836	736.00000	0.00010	0.00037	0.01264	0.00168	0.01193	0.16673	0.00047
M-09-110 342.5-343.5	0.01156	31.85939	0.57718	0.17318	26.62258	0.00112	0.22484	0.07836	706.00000	0.00008	0.00059	0.01394	0.00140	0.01087	0.14923	0.00035
M-09-110 342.5-343.5	0.01126	25.00939	0.54068	0.17018	25.72258	0.00124	0.21984	0.05836	676.00000	0.00005	0.00081	0.01524	0.00112	0.00982	0.13173	0.00023
M-09-110 342.5-343.5	0.01101	25.40939	0.54418	0.16218	23.17258	0.00108	0.19484	0.06291	755.50000	0.00008	0.00053	0.01489	0.00128	0.00919	0.12273	0.00021
M-09-110 342.5-343.5	0.01076	25.80939	0.54768	0.15418	20.62258	0.00092	0.16984	0.06746	835.00000	0.00010	0.00024	0.01454	0.00144	0.00857	0.11373	0.00019
M-09-110 342.5-343.5	0.01311	28.10939	0.56968	0.16818	23.92258	0.00113	0.17984	0.07266	874.50000	0.00010	0.00032	0.01589	0.00177	0.01005	0.12373	0.00022
M-09-110 342.5-343.5	0.01546	30.40939	0.59168	0.18218	27.22258	0.00133	0.18984	0.07786	914.00000	0.00010	0.00039	0.01724	0.00209	0.01153	0.13373	0.00025
	0.012718	31.969387	0.609027	0.183281	25.962581	0.001108	0.205339	0.081728	781.35	0.000091	0.000482	0.016569	0.001764	0.010640	0.135376	0.000367

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
HC16 LP Hazelton																							
M-09-112 224.5-225.5	16	0	4-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	390	705	1300	6.92	4.4	15.1	882	11.0
M-09-112 224.5-225.5	16	1	11-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	480	657	1258	6.86	3.8	12.2	755	4.4
M-09-112 224.5-225.5	16	2	18-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	520	600	931	6.67	5.5	10.2	626	0.5
M-09-112 224.5-225.5	16	3	25-Feb-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	515	592	1140	6.85	4.8	13.7	673	0.4
M-09-112 224.5-225.5	16	4	4-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	500	519	952	6.73	4.5	10.6	598	0.5
M-09-112 224.5-225.5	16	5	11-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	565	958	6.73	4.7	11.5	575	0.5
M-09-112 224.5-225.5	16	6	18-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	510	567	970	6.63	5.1	4.3	606	0.1
M-09-112 224.5-225.5	16	7	25-Mar-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	510	595	961	6.72	5.7	11.1	616	0.5
M-09-112 224.5-225.5	16	8	1-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	475	537	908	6.66	5.0	9.7	558	0.1
M-09-112 224.5-225.5	16	9	8-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	475	569	969	6.56	4.1	9.1	612	0.1
M-09-112 224.5-225.5	16	10	15-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	500	554	945	6.66	5.7	10.4	579	0.5
M-09-112 224.5-225.5	16	11	22-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	559	945	6.51	6.7	9.6	609	0.5
M-09-112 224.5-225.5	16	12	29-Apr-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	465	451	898	6.63	3.2	8.2	508	0.5
M-09-112 224.5-225.5	16	13	6-May-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	495	576	937	6.4	6.7	8.6	591	0.4
M-09-112 224.5-225.5	16	14	13-May-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	480	561	910	6.56	5.0	8.2	576	0.1
M-09-112 224.5-225.5	16	15	20-May-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	506	877	6.66	5.9	9.0	560	0.3
M-09-112 224.5-225.5	16	16	27-May-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	500	583	908	6.61	9.9	11.7	439	0.5
M-09-112 224.5-225.5	16	17	3-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	510	561	894	6.37	5.6	8.1	432	0.5
M-09-112 224.5-225.5	16	18	10-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	505	536	877	6.31	7.6	8.5	461	0.5
M-09-112 224.5-225.5	16	19	17-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	506	857	6.32	7.3	8.4	363	0.4
M-09-112 224.5-225.5	16	20	24-Jun-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	495	533	869	6.59	3.5	10.8	434	0.4
M-09-112 224.5-225.5	16	21	1-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	495	551	874	6.99	3.6	10.1	459	0.5
M-09-112 224.5-225.5	16	22	8-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	510	438	866	6.95	3.4	9.6	424	0.5
M-09-112 224.5-225.5	16	23	15-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	510	458	813	6.94	5.0	9.6	398	0.1
M-09-112 224.5-225.5	16	24	22-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	495	446	799	6.85	4.1	9.0	332	0.5
M-09-112 224.5-225.5	16	25	29-Jul-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	520	698	1021	7	5.6	12.4	650	0.5
M-09-112 224.5-225.5	16	26	5-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	500	518	846	6.65	4.2	6.9	511	0.1
M-09-112 224.5-225.5	16	27	12-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	483	878	7	5.5	10.2	584	0.1
M-09-112 224.5-225.5	16	28	19-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	495	493	829	7.01	6.9	10.3	461	0.5
M-09-112 224.5-225.5	16	29	26-Aug-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	495	471	833	6.88	3.2	8.7	454	0.1
M-09-112 224.5-225.5	16	30	2-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	480	488	852	6.95	6.0	9.5	605	0.1
M-09-112 224.5-225.5	16	31	9-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	485	873	6.7	5.6	9.3	574	0.1
M-09-112 224.5-225.5	16	32	16-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	480	493	816	6.74	3.8	8.1	605	0.1
M-09-112 224.5-225.5	16	33	23-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	535	776	6.89	3.7	9.4	650	0.5
M-09-112 224.5-225.5	16	34	30-Sep-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	535	678	6.87	3.6	9.5	590	0.1
M-09-112 224.5-225.5	16	35	7-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	538	906	6.82	4.5	9.4	657	0.1
M-09-112 224.5-225.5	16	36	14-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	536	850	6.86	4.2	9.0	646	0.1
M-09-112 224.5-225.5	16	37	21-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	495	503	870	6.89	4.2	9.9	580	0.5
M-09-112 224.5-225.5	16	38	28-Oct-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	500	470	841	6.8	4.2	9.5	555	0.3
M-09-112 224.5-225.5	16	39	4-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	453	0	0	0.0	0.0	546	0.5
M-09-112 224.5-225.5	16	40	11-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	508	821	7.02	3.2	9.5	530	0.5
M-09-112 224.5-225.5	16	41	18-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	515	515	678	7.09	4.4	9.2	610	0.5
M-09-112 224.5-225.5	16	42	25-Nov-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	475	478	869	6.81	4.3	8.5	556	0.5
M-09-112 224.5-225.5	16	43	2-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	500	643	949	6.92	4.5	10.2	712	0.1
M-09-112 224.5-225.5	16	44	9-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	505	540	917	6.91	5.4	9.5	679	0.5
M-09-112 224.5-225.5	16	45	16-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	583	941	6.88	5.5	10.1	557	0.1
M-09-112 224.5-225.5	16	46	23-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	495	563	910	6.99	6.3	11.0	547	0.5
M-09-112 224.5-225.5	16	47	30-Dec-10	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	505	538	951	6.95	7.5	10.8	523	0.5
M-09-112 224.5-225.5	16	48	6-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	500	504	855	7.02	6.1	10.3	492	0.8
M-09-112 224.5-225.5	16	49	13-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	470	677	6.93	4.7	9.8	461	1.0
M-09-112 224.5-225.5	16	50	20-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	480	471	824	6.85	5.4	10.0	492	0.8
M-09-112 224.5-225.5	16	51	27-Jan-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	473	774	6.98	6.0	10.3	522	0.5
M-09-112 224.5-225.5	16	52	3-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	515	465	726	6.88	4.7	9.5	491	0.5
M-09-112 224.5-225.5	16	53	10-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	458	684	6.96	3.5	8.7	460	0.5
M-09-112 224.5-225.5	16	54	17-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	495	506	805	6.9	4.1	9.6	551	0.5
M-09-112 224.5-225.5	16	55	24-Feb-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	515	555	1005	6.97	4.8	10.5	642	0.5
M-09-112 224.5-225.5	16	56	3-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	475	531	900	6.8	4.2	10.5	590	0.3
M-09-112 224.5-225.5	16	57	10-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	505	508	941	6.99	3.7	10.4	538	0.1
M-09-112 224.5-225.5	16	58	17-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	510	503	1014	6.95	4.1	9.9	493	0.2
M-09-112 224.5-225.5	16	59	24-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	498	906	6.82	4.5	9.4	447	0.2
M-09-112 224.5-225.5	16	60	31-Mar-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	500	482	922	7.08	5.4	10.0	420	0.2
M-09-112 224.5-225.5	16	61	7-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	465	876	7.1	6.4	10.6	393	0.1
M-09-112 224.5-225.5	16	62	14-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	498	907	7.22	5.0	10.6	432	0.1
M-09-112 224.5-225.5	16	63	21-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	530	981	7.01	3.6	10.6	471	0.1
M-09-112 224.5-225.5	16	64	28-Apr-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	500	496	871	7.12	4.0	9.3	448	0.1
M-09-112 224.5-225.5	16	65	5-May-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	463	863	6.93	4.3	8.1	424	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
HC16 LP Hazelton																				
M-09-112 224.5-225.5	0.33	0.0397	0.0009	0.0044	0.0298	0.0000	0.0000	0.0120	0.00004	278.0000	0.0003	0.0009	0.0043	0.0050	0.00033	0.0580	2.4000	0.1040	0.0000050	0.0063
M-09-112 224.5-225.5	0.32	0.0307	0.0011	0.0039	0.0277	0.0000	0.0000	0.0130	0.00007	259.0000	0.0003	0.0007	0.0019	0.0050	0.00043	0.0330	2.3800	0.1170	0.0000050	0.0067
M-09-112 224.5-225.5	0.19	0.0304	0.0008	0.0024	0.0266	0.0000	0.0000	0.0116	0.00003	238.0000	0.0003	0.0005	0.0049	0.0100	0.00023	0.0160	1.2800	0.1070	0.0000050	0.0033
M-09-112 224.5-225.5	0.18	0.0252	0.0011	0.0028	0.0284	0.0000	0.0000	0.0117	0.00012	235.0000	0.0003	0.0006	0.0014	0.0100	0.00029	0.0130	1.1800	0.1350	0.0000050	0.0039
M-09-112 224.5-225.5	0.15	0.0250	0.0010	0.0022	0.0328	0.0000	0.0000	0.0120	0.00004	206.0000	0.0003	0.0005	0.0021	0.0100	0.00039	0.0090	0.8600	0.1170	0.0000050	0.0037
M-09-112 224.5-225.5	0.13	0.0269	0.0010	0.0022	0.0283	0.0000	0.0000	0.0110	0.00004	225.0000	0.0003	0.0005	0.0009	0.0300	0.00029	0.0080	0.7280	0.1300	0.0000050	0.0035
M-09-112 224.5-225.5	0.11	0.0270	0.0009	0.0017	0.0284	0.0000	0.0000	0.0090	0.00004	226.0000	0.0003	0.0004	0.0015	0.0050	0.00022	0.0050	0.6040	0.1290	0.0000050	0.0032
M-09-112 224.5-225.5	0.13	0.0224	0.0011	0.0017	0.0258	0.0000	0.0000	0.0090	0.00000	237.0000	0.0007	0.0006	0.0046	0.0050	0.00067	0.0050	0.5420	0.1410	0.0000050	0.0039
M-09-112 224.5-225.5	0.08	0.0266	0.0008	0.0014	0.0271	0.0000	0.0000	0.0070	0.00018	214.0000	0.0008	0.0005	0.0028	0.0100	0.00080	0.0030	0.4280	0.1210	0.0000050	0.0036
M-09-112 224.5-225.5	0.08	0.0290	0.0010	0.0012	0.0228	0.0000	0.0000	0.0060	0.00004	227.0000	0.0003	0.0005	0.0067	0.0050	0.00028	0.0040	0.3780	0.1300	0.0000050	0.0034
M-09-112 224.5-225.5	0.08	0.0193	0.0009	0.0014	0.0305	0.0000	0.0000	0.0060	0.00011	221.0000	0.0007	0.0005	0.0019	0.0300	0.00030	0.0030	0.3200	0.1260	0.0000050	0.0035
M-09-112 224.5-225.5	0.06	0.0403	0.0008	0.0013	0.0260	0.0000	0.0000	0.0050	0.00004	223.0000	0.0008	0.0006	0.0149	0.0200	0.00053	0.0030	0.3130	0.1240	0.0000050	0.0039
M-09-112 224.5-225.5	0.06	0.0163	0.0008	0.0012	0.0295	0.0000	0.0000	0.0050	0.00005	180.0000	0.0005	0.0005	0.0029	0.0300	0.00029	0.0020	0.2240	0.1090	0.0000050	0.0036
M-09-112 224.5-225.5	0.06	0.0220	0.0009	0.0013	0.0260	0.0000	0.0000	0.0050	0.00005	230.0000	0.0007	0.0007	0.0106	0.0300	0.00030	0.0030	0.2610	0.1540	0.0000050	0.0037
M-09-112 224.5-225.5	0.03	0.0179	0.0009	0.0010	0.0251	0.0000	0.0000	0.0046	0.00005	224.0000	0.0009	0.0006	0.0028	0.0070	0.00026	0.0030	0.2440	0.1300	0.0000050	0.0043
M-09-112 224.5-225.5	0.03	0.0120	0.0009	0.0011	0.0246	0.0000	0.0000	0.0045	0.00005	202.0000	0.0003	0.0007	0.0040	0.0040	0.00098	0.0030	0.2090	0.1330	0.0000050	0.0045
M-09-112 224.5-225.5	0.03	0.0249	0.0009	0.0013	0.0244	0.0000	0.0000	0.0038	0.00006	233.0000	0.0007	0.0008	0.0024	0.0240	0.00121	0.0020	0.2170	0.1640	0.0000050	0.0044
M-09-112 224.5-225.5	0.03	0.0398	0.0008	0.0011	0.0237	0.0000	0.0000	0.0038	0.00005	224.0000	0.0003	0.0006	0.0018	0.0620	0.00019	0.0020	0.1910	0.1530	0.0000050	0.0042
M-09-112 224.5-225.5	0.03	0.0109	0.0008	0.0010	0.0268	0.0000	0.0000	0.0035	0.00006	214.0000	0.0003	0.0006	0.0053	0.0500	0.00025	0.0020	0.1740	0.1560	0.0000050	0.0042
M-09-112 224.5-225.5	0.03	0.0112	0.0013	0.0014	0.0247	0.0000	0.0000	0.0031	0.00008	202.0000	0.0003	0.0007	0.0056	0.0520	0.00023	0.0020	0.1660	0.1560	0.0000050	0.0053
M-09-112 224.5-225.5	0.03	0.0099	0.0010	0.0009	0.0227	0.0000	0.0000	0.0049	0.00007	213.0000	0.0003	0.0007	0.0052	0.0950	0.00023	0.0020	0.1680	0.1750	0.0000050	0.0055
M-09-112 224.5-225.5	0.03	0.0096	0.0009	0.0011	0.0260	0.0000	0.0000	0.0029	0.00005	220.0000	0.0006	0.0007	0.0029	0.2100	0.00024	0.0010	0.1560	0.1800	0.0000050	0.0049
M-09-112 224.5-225.5	0.03	0.0111	0.0007	0.0010	0.0257	0.0000	0.0000	0.0042	0.00007	175.0000	0.0008	0.0008	0.0054	0.7070	0.00019	0.0020	0.1540	0.1750	0.0000050	0.0049
M-09-112 224.5-225.5	0.03	0.0097	0.0005	0.0008	0.0215	0.0000	0.0000	0.0034	0.00008	183.0000	0.0007	0.0008	0.0044	1.5700	0.00020	0.0020	0.1440	0.1730	0.0000050	0.0058
M-09-112 224.5-225.5	0.03	0.0068	0.0006	0.0008	0.0206	0.0000	0.0000	0.0031	0.00007	178.0000	0.0005	0.0008	0.0061	2.1900	0.00022	0.0005	0.1400	0.1740	0.0000050	0.0066
M-09-112 224.5-225.5	0.03	0.0093	0.0008	0.0006	0.0189	0.0000	0.0000	0.0030	0.00008	279.0000	0.0003	0.0009	0.0049	1.7900	0.00024	0.0010	0.1520	0.2100	0.0000050	0.0069
M-09-112 224.5-225.5	0.03	0.0084	0.0006	0.0006	0.0224	0.0000	0.0000	0.0023	0.00007	207.0000	0.0003	0.0007	0.0041	2.1800	0.00026	0.0010	0.1100	0.1810	0.0000050	0.0071
M-09-112 224.5-225.5	0.03	0.0074	0.0007	0.0007	0.0204	0.0000	0.0000	0.0026	0.00008	193.0000	0.0003	0.0010	0.0041	11.0000	0.00027	0.0010	0.1930	0.2020	0.0000050	0.0085
M-09-112 224.5-225.5	0.03	0.0088	0.0007	0.0006	0.0251	0.0000	0.0000	0.0028	0.00007	197.0000	0.0003	0.0009	0.0041	7.5400	0.00042	0.0020	0.1580	0.1780	0.0000050	0.0085
M-09-112 224.5-225.5	0.03	0.0095	0.0007	0.0006	0.0198	0.0000	0.0000	0.0021	0.00007	188.0000	0.0007	0.0009	0.0044	8.4000	0.00023	0.0010	0.1480	0.1730	0.0000050	0.0078
M-09-112 224.5-225.5	0.03	0.0081	0.0003	0.0006	0.0194	0.0000	0.0000	0.0023	0.00008	195.0000	0.0003	0.0009	0.0062	0.0010	0.00022	0.0010	0.0770	0.1640	0.0000050	0.0071
M-09-112 224.5-225.5	0.03	0.0072	0.0006	0.0006	0.0183	0.0000	0.0000	0.0027	0.00007	194.0000	0.0003	0.0010	0.0046	5.2300	0.00020	0.0010	0.1170	0.2000	0.0000050	0.0071
M-09-112 224.5-225.5	0.09	0.0089	0.0008	0.0007	0.0238	0.0000	0.0000	0.0020	0.00007	197.0000	0.0003	0.0010	0.0056	0.8650	0.00022	0.0005	0.0950	0.1730	0.0000050	0.0066
M-09-112 224.5-225.5	0.03	0.0085	0.0008	0.0007	0.0231	0.0000	0.0000	0.0029	0.00008	214.0000	0.0003	0.0011	0.0043	1.0600	0.00018	0.0020	0.0980	0.1930	0.0000050	0.0063
M-09-112 224.5-225.5	0.03	0.0094	0.0007	0.0006	0.0216	0.0000	0.0000	0.0032	0.00006	214.0000	0.0003	0.0010	0.0066	0.2180	0.00019	0.0020	0.0960	0.1950	0.0000050	0.0067
M-09-112 224.5-225.5	0.03	0.0105	0.0008	0.0006	0.0233	0.0000	0.0000	0.0034	0.00015	215.0000	0.0003	0.0019	0.0052	0.1220	0.00028	0.0005	0.0890	0.1910	0.0000100	0.0070
M-09-112 224.5-225.5	0.03	0.0108	0.0010	0.0004	0.0238	0.0000	0.0000	0.0034	0.00008	214.0000	0.0003	0.0014	0.0066	2.7100	0.00028	0.0010	0.1270	0.2080	0.0000050	0.0065
M-09-112 224.5-225.5	0.03	0.0095	0.0008	0.0004	0.0203	0.0000	0.0000	0.0031	0.00008	201.0000	0.0003	0.0011	0.0059	0.1540	0.00021	0.0010	0.0760	0.1930	0.0000050	0.0064
M-09-112 224.5-225.5	0.03	0.0094	0.0004	0.0004	0.0225	0.0000	0.0000	0.0025	0.00008	188.0000	0.0005	0.0023	0.0050	0.1160	0.00013	0.0010	0.0780	0.1920	0.0000050	0.0059
M-09-112 224.5-225.5	0.03	0.0107	0.0004	0.0005	0.0198	0.0000	0.0000	0.0027	0.00008	181.0000	0.0003	0.0011	0.0056	0.0060	0.00071	0.0005	0.0770	0.1830	0.0000050	0.0059
M-09-112 224.5-225.5	0.09	0.0078	0.0005	0.0005	0.0192	0.0000	0.0000	0.0022	0.00008	203.0000	0.0003	0.0012	0.0049	0.1090	0.00060	0.0005	0.0850	0.2050	0.0000050	0.0059
M-09-112 224.5-225.5	0.03	0.0083	0.0006	0.0005	0.0199	0.0000	0.0000	0.0032	0.00008	206.0000	0.0003	0.0011	0.0058	0.0650	0.00017	0.0020	0.0800	0.2020	0.0000050	0.0062
M-09-112 224.5-225.5	0.03	0.0068	0.0006	0.0006	0.0182	0.0000	0.0000	0.0020	0.00008	191.0000	0.0007	0.0015	0.0056	0.0810	0.00034	0.0020	0.0510	0.1980	0.0000050	0.0048
M-09-112 224.5-225.5	0.03	0.0086	0.0006	0.0006	0.0213	0.0000	0.0000	0.0025	0.00008	257.0000	0.0008	0.0011	0.0065	0.5070	0.00128	0.0020	0.0780	0.2410	0.0000050	0.0050
M-09-112 224.5-225.5	0.03	0.0084	0.0007	0.0005	0.0201	0.0000	0.0000	0.0022	0.00009	216.0000	0.0008	0.0016	0.0060	0.2030	0.00236	0.0005	0.0670	0.2030	0.0000050	0.0051
M-09-112 224.5-225.5	0.03	0.0078	0.0006	0.0006	0.0202	0.0000	0.0000	0.0026	0.00010	233.0000	0.0003	0.0011	0.0082	6.8700	0.00031	0.0005	0.1320	0.2270	0.0000050	0.0054
M-09-112 224.5-225.5	0.03	0.0087	0.0007	0.0004	0.0208	0.0000	0.0000	0.0030	0.00008	225.0000	0.0003	0.0011	0.0070	0.1740	0.00061	0.0005	0.0690	0.2150	0.0000050	0.0053
M-09-112 224.5-225.5	0.03	0.0080	0.0006	0.0005	0.0200	0.0000	0.0000	0.0019	0.00008	215.0000	0.0006	0.0009	0.0061	0.3090	0.00198	0.0005	0.0670	0.2020	0.0000100	0.0056
M-09-112 224.5-225.5	0.03	0.0082	0.0006	0.0005	0.0186	0.0000	0.0000	0.0018	0.00007	201.5000	0.0004	0.0009	0.0063	0.7995	0.00109	0.0005	0.0640	0.1920	0.0000075	0.0049
M-09-112 224.5-225.5	0.03	0.0084	0.0005	0.0005	0.0171	0.0000	0.0000	0.0017	0.00006	188.0000	0.0003	0.0009	0.0064	1.2900	0.00019	0.0005	0.0610	0.1820	0.0000050	0.0043
M-09-112 224.5-225.5	0.03	0.0077	0.0006	0.0005	0.0175	0.0000	0.0000	0.0021	0.00007	188.5000	0.0003	0.0010	0.0070	0.6820	0.00020	0.0005	0.0565	0.1880	0.0000050	0.0046
M-09-112 224.5-225.5	0.03	0.0069	0.0006	0.0004	0.0178	0.0000	0.0000	0.0024	0.00008	189.0000	0.0003	0.0011	0.0075	0.0740	0.00021	0.0005	0.0520	0.1940	0.0000050	0.0049
M-09-112 224.5-225.5	0.03	0.0070	0.0006	0.0004	0.0182	0.0000	0.0000	0.0025	0.00009	186.0000	0.0003	0.0012	0.0078	0.0870	0.00047	0.0005	0.0505	0.1885	0.0000050	0.0048
M-09-112 224.5-225.5	0.03	0.0071	0.0005	0.0004	0.0185	0.0000	0.0000	0.0026	0.00009	183.0000	0.0003	0.0013	0.0080	0.1000	0.00073	0.0005	0.0490	0.1830	0.0000050	0.0048
M-09-112 224.5-225.5	0.03	0.0086	0.0005	0.0005	0.0174	0.0000	0.0000	0.0029	0.00009	202.5000	0.0003	0.0012	0.0067	0.1385	0.00057	0.0005	0.0500	0.1945	0.0000050	0.0044
M-09-112 224.5-225.5	0.03	0.0100	0.0005	0.0006	0.0163	0.0000	0.0000	0.0032	0.00009	222.0000	0.0003	0.0011	0.0054	0.1770	0.00040	0.0005	0.0510	0.2060	0.0000050	0.0041
M-09-112 224.5-225.5	0.03	0.0089	0.0005	0.0005	0.0157	0.0000	0.0000	0.0024	0.00009	212.5000	0.0003	0.0011	0.0061	0.2435	0.00094	0.0005	0.0490	0.1990	0.0000050	0.0041
M-09-112 224.5-225.5	0.03	0.0078	0.0004	0.0004	0.0150	0.0000	0.0000	0.0016	0.00008	203.0000	0.0003	0.0010	0.0068	0.3100	0.00147	0.0005	0.0470	0.1920	0.0000050	0.0042
M-09-112 224.5-225.5	0.03	0.0075	0.0004	0.0004	0.0147	0.0000	0.0000	0.0015	0.00008	201.0000	0.0003	0.0011	0.0068	0.2570	0.00083	0.0005	0.0465	0.1860	0.0000050	0.0043
M-09-112 224.5-225.5	0.03	0.0072	0.0004	0.0004	0.0144	0.0000	0.0000	0.0014	0.00008	199.0000	0.0003	0.0011	0.0067	0.2040	0.00018	0.0005	0.0460	0.1800	0.0000050	0.0044
M-09-112 224.5-225.5	0.03	0.0075	0.0005	0.0005	0.0146	0.0000	0.0000	0.0014	0.00007	192.5000	0.0003	0.0011	0.0065	2.6320	0.00018	0.0005	0.0740	0.1960	0.0000050	0.0044
M-09-112 224.5-225.5	0.03	0.0078	0.0005	0.0006	0.0147	0.0000	0.0000	0.0014	0.00007	186.0000	0.0003	0.0011	0.0063	5.0600	0.00017	0.0005	0.1020	0.2120	0.0000050	0.0044
M-09-112 224.5-225.5	0.03	0.0085	0.0005	0.0005	0.0147	0.0000	0.0000	0.0016	0.00013	199.0000	0.0003	0.0013	0.0067	2.5305	0.00022	0.0005	0.0755	0.2025	0.0000050	0.0052
M-09-112 224.5-225.5	0.03	0.0091	0.0004	0.0004	0.0147	0.0000	0.0000	0.0017	0.00019	212.0000	0.0003	0.0016	0.0070	0.0010	0.00027	0.0005	0.0490	0.1930	0.0000050	0.0059
M-09-112 224.5-225.5	0.03	0.0074	0.0006	0.0004	0.0163	0.0000	0.0000	0.0016	0.00016	198.5000	0.0003	0.0014	0.0076	0.0010	0.00026	0.0005	0.0465	0.1810	0.0000050	0.0055
M-09-112 224.5-225.5	0.03	0.0057	0.0007	0.0003	0.0178	0.0000	0.0000	0.0015	0.00014	185.0000	0.0003	0.0013	0.0082	0.0010	0.00025	0.0005	0.0440	0.1690	0.0000050	0.0051

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
HC16 LP Hazelton																
M-09-112 224.5-225.5	0.0025	0.0050	25.7000	0.0045	0.6700	0.00003	80.6000	1.6200	240.0000	0.0001	0.0002	0.0002	0.0008	0.0004	0.0020	0.0001
M-09-112 224.5-225.5	0.0010	0.0050	18.1000	0.0100	1.0500	0.00002	31.5000	2.4100	258.0000	0.0001	0.0005	0.0001	0.0018	0.0003	0.0010	0.0000
M-09-112 224.5-225.5	0.0005	0.0050	8.5600	0.0037	0.7700	0.00001	8.5300	2.4300	199.0000	0.0001	0.0001	0.0001	0.0014	0.0005	0.0005	0.0000
M-09-112 224.5-225.5	0.0005	0.0050	7.8900	0.0034	0.9400	0.00001	6.0000	2.8100	202.0000	0.0001	0.0001	0.0001	0.0017	0.0003	0.0005	0.0000
M-09-112 224.5-225.5	0.0035	0.0050	5.5600	0.0029	0.8400	0.00001	2.8700	2.7000	174.0000	0.0001	0.0003	0.0001	0.0014	0.0002	0.0005	0.0000
M-09-112 224.5-225.5	0.0004	0.0050	4.8900	0.0029	0.9500	0.00001	1.5200	2.9900	195.0000	0.0001	0.0003	0.0001	0.0014	0.0002	0.0005	0.0000
M-09-112 224.5-225.5	0.0003	0.0050	3.7300	0.0027	0.9000	0.00001	1.0000	3.0500	194.0000	0.0001	0.0002	0.0001	0.0012	0.0002	0.0005	0.0002
M-09-112 224.5-225.5	0.0004	0.0050	3.6100	0.0027	0.9600	0.00001	0.9000	3.1600	188.0000	0.0001	0.0000	0.0001	0.0012	0.0003	0.0005	0.0000
M-09-112 224.5-225.5	0.0004	0.0050	2.8300	0.0023	0.7700	0.00001	0.6300	2.8800	191.0000	0.0001	0.0003	0.0001	0.0010	0.0002	0.0020	0.0000
M-09-112 224.5-225.5	0.0001	0.0050	2.5600	0.0023	0.7800	0.00001	0.5300	2.9700	189.0000	0.0001	0.0002	0.0001	0.0010	0.0002	0.0005	0.0000
M-09-112 224.5-225.5	0.0004	0.0050	2.5000	0.0024	0.7300	0.00001	0.5000	2.8600	190.0000	0.0001	0.0002	0.0001	0.0009	0.0002	0.0005	0.0000
M-09-112 224.5-225.5	0.0002	0.0050	2.2000	0.0021	0.7500	0.00001	0.4000	2.8400	178.0000	0.0001	0.0004	0.0001	0.0007	0.0002	0.0050	0.0002
M-09-112 224.5-225.5	0.0002	0.0050	2.0100	0.0029	0.7500	0.00001	0.2800	2.3400	149.0000	0.0001	0.0003	0.0001	0.0006	0.0002	0.0010	0.0000
M-09-112 224.5-225.5	0.0013	0.0050	1.9600	0.0025	0.8200	0.00001	0.2900	2.9600	189.0000	0.0001	0.0002	0.0001	0.0008	0.0002	0.0010	0.0000
M-09-112 224.5-225.5	0.0003	0.0130	1.6800	0.0030	0.7200	0.00009	0.2700	2.7700	182.0000	0.0001	0.0002	0.0001	0.0005	0.0001	0.0005	0.0000
M-09-112 224.5-225.5	0.0002	0.0045	1.3900	0.0024	0.6400	0.00001	0.2200	2.5400	173.0000	0.0001	0.0002	0.0001	0.0005	0.0002	0.0010	0.0000
M-09-112 224.5-225.5	0.0001	0.0045	1.4300	0.0023	0.7000	0.00001	0.2400	2.8500	197.0000	0.0001	0.0002	0.0001	0.0006	0.0002	0.0005	0.0000
M-09-112 224.5-225.5	0.0001	0.0250	1.2900	0.0022	0.6600	0.00001	0.2000	2.6900	197.0000	0.0001	0.0002	0.0001	0.0005	0.0001	0.0005	0.0000
M-09-112 224.5-225.5	0.0003	0.0045	1.1300	0.0022	0.5700	0.00002	0.2100	2.5400	173.0000	0.0001	0.0002	0.0001	0.0005	0.0002	0.0010	0.0000
M-09-112 224.5-225.5	0.0005	0.0045	1.1000	0.0020	0.5600	0.00001	0.2200	2.4300	167.0000	0.0001	0.0003	0.0001	0.0005	0.0002	0.0010	0.0000
M-09-112 224.5-225.5	0.0003	0.0045	1.1900	0.0023	0.6200	0.00001	0.2100	2.5800	174.0000	0.0001	0.0009	0.0001	0.0005	0.0001	0.0010	0.0000
M-09-112 224.5-225.5	0.0015	0.0045	1.0300	0.0024	0.5300	0.00001	0.1300	2.5700	181.0000	0.0001	0.0001	0.0001	0.0004	0.0001	0.0005	0.0000
M-09-112 224.5-225.5	0.0004	0.0540	1.0200	0.0019	0.5600	0.00001	0.2100	2.5500	168.0000	0.0001	0.0004	0.0001	0.0004	0.0001	0.0005	0.0000
M-09-112 224.5-225.5	0.0015	0.0770	0.8740	0.0018	0.5500	0.00001	0.1800	2.3400	146.0000	0.0001	0.0002	0.0001	0.0005	0.0001	0.0010	0.0000
M-09-112 224.5-225.5	0.0001	0.1050	0.8600	0.0018	0.5600	0.00001	0.1600	2.2700	143.0000	0.0001	0.0002	0.0001	0.0004	0.0001	0.0010	0.0000
M-09-112 224.5-225.5	0.0002	0.0980	1.1500	0.0014	0.6600	0.00001	0.1900	2.8800	227.0000	0.0001	0.0001	0.0021	0.0004	0.0001	0.0010	0.0000
M-09-112 224.5-225.5	0.0001	0.1040	0.8120	0.0013	0.5400	0.00001	0.1300	2.1700	166.0000	0.0001	0.0001	0.0001	0.0003	0.0001	0.0005	0.0000
M-09-112 224.5-225.5	0.0002	0.4640	0.7570	0.0020	0.7300	0.00001	0.1100	2.2900	185.0000	0.0001	0.0000	0.0001	0.0003	0.0001	0.0005	0.0000
M-09-112 224.5-225.5	0.0001	0.2720	0.7940	0.0019	0.7400	0.00001	0.1300	2.2700	182.0000	0.0001	0.0001	0.0001	0.0003	0.0001	0.0020	0.0000
M-09-112 224.5-225.5	0.0002	0.3540	0.7370	0.0017	0.6800	0.00001	0.1200	2.1800	175.0000	0.0001	0.0012	0.0001	0.0003	0.0001	0.0010	0.0000
M-09-112 224.5-225.5	0.0003	0.0045	0.7100	0.0016	0.4200	0.00001	0.1300	2.2200	170.0000	0.0001	0.0001	0.0001	0.0003	0.0001	0.0010	0.0000
M-09-112 224.5-225.5	0.0002	0.2430	0.7110	0.0012	0.6400	0.00001	0.1200	2.2200	175.0000	0.0001	0.0001	0.0001	0.0003	0.0001	0.0010	0.0000
M-09-112 224.5-225.5	0.0003	0.0680	0.7430	0.0018	0.4500	0.00001	0.1500	2.1600	177.0000	0.0001	0.0004	0.0001	0.0003	0.0002	0.0005	0.0000
M-09-112 224.5-225.5	0.0002	0.0640	0.8140	0.0020	0.5000	0.00001	0.1300	2.2000	189.0000	0.0001	0.0001	0.0001	0.0002	0.0001	0.0005	0.0000
M-09-112 224.5-225.5	0.0004	0.0170	0.7880	0.0017	0.4900	0.00001	0.1600	2.2000	190.0000	0.0001	0.0008	0.0001	0.0002	0.0001	0.0010	0.0000
M-09-112 224.5-225.5	0.0094	0.0140	0.7470	0.0019	0.4600	0.00001	0.1500	2.1600	190.0000	0.0001	0.0006	0.0001	0.0003	0.0002	0.0020	0.0000
M-09-112 224.5-225.5	0.0060	0.1460	0.7060	0.0016	0.5600	0.00001	0.1500	2.2000	170.0000	0.0001	0.0003	0.0001	0.0002	0.0001	0.0010	0.0000
M-09-112 224.5-225.5	0.0001	0.0045	0.6600	0.0017	0.4000	0.00001	0.1300	2.0300	174.0000	0.0001	0.0001	0.0001	0.0002	0.0000	0.0020	0.0000
M-09-112 224.5-225.5	0.0063	0.0250	0.5970	0.0013	0.4000	0.00001	0.1200	1.9300	174.0000	0.0001	0.0000	0.0001	0.0003	0.0001	0.0030	0.0000
M-09-112 224.5-225.5	0.0036	0.0045	0.5740	0.0014	0.3900	0.00001	0.1600	1.8800	147.0000	0.0001	0.0001	0.0043	0.0002	0.0000	0.0040	0.0002
M-09-112 224.5-225.5	0.0003	0.0600	0.5980	0.0014	0.3700	0.00001	0.1700	2.0400	157.0000	0.0001	0.0002	0.0001	0.0003	0.0001	0.0030	0.0000
M-09-112 224.5-225.5	0.0035	0.0045	0.5960	0.0013	0.3900	0.00001	0.1100	2.0700	169.0000	0.0001	0.0002	0.0001	0.0002	0.0000	0.0020	0.0000
M-09-112 224.5-225.5	0.0002	0.0045	0.5190	0.0015	0.3200	0.00001	0.0800	1.9000	157.0000	0.0001	0.0002	0.0002	0.0003	0.0001	0.0020	0.0000
M-09-112 224.5-225.5	0.0007	0.0320	0.5620	0.0015	0.3800	0.00001	0.1100	2.1200	178.0000	0.0001	0.0001	0.0001	0.0002	0.0001	0.0030	0.0000
M-09-112 224.5-225.5	0.0005	0.0130	0.5470	0.0008	0.3400	0.00001	0.1200	2.0600	165.0000	0.0001	0.0002	0.0001	0.0002	0.0001	0.0030	0.0001
M-09-112 224.5-225.5	0.0033	0.2730	0.5480	0.0009	0.5600	0.00001	0.1200	2.2000	188.0000	0.0001	0.0003	0.0001	0.0002	0.0000	0.0010	0.0001
M-09-112 224.5-225.5	0.0002	0.0320	0.6080	0.0014	0.4100	0.00001	0.1200	2.1700	207.0000	0.0001	0.0001	0.0001	0.0002	0.0001	0.0020	0.0000
M-09-112 224.5-225.5	0.0024	0.0280	0.5670	0.0016	0.3700	0.00001	0.1100	2.0900	180.0000	0.0001	0.0001	0.0001	0.0002	0.0001	0.0060	0.0000
M-09-112 224.5-225.5	0.0013	0.0520	0.5095	0.0014	0.3650	0.00001	0.1150	1.9500	175.0000	0.0001	0.0003	0.0001	0.0002	0.0001	0.0033	0.0000
M-09-112 224.5-225.5	0.0001	0.0760	0.4520	0.0011	0.3600	0.00001	0.1200	1.8100	170.0000	0.0001	0.0006	0.0001	0.0002	0.0001	0.0005	0.0000
M-09-112 224.5-225.5	0.0019	0.0450	0.4540	0.0010	0.3300	0.00001	0.1150	1.7900	166.5000	0.0001	0.0004	0.0001	0.0002	0.0001	0.0018	0.0000
M-09-112 224.5-225.5	0.0037	0.0140	0.4560	0.0008	0.3000	0.00001	0.1100	1.7700	163.0000	0.0001	0.0002	0.0001	0.0002	0.0001	0.0030	0.0000
M-09-112 224.5-225.5	0.0052	0.0200	0.4390	0.0010	0.3150	0.00001	0.1000	1.7600	157.0000	0.0001	0.0002	0.0001	0.0004	0.0001	0.0020	0.0000
M-09-112 224.5-225.5	0.0066	0.0260	0.4220	0.0011	0.3300	0.00001	0.0900	1.7500	151.0000	0.0001	0.0002	0.0001	0.0006	0.0002	0.0010	0.0000
M-09-112 224.5-225.5	0.0057	0.0275	0.4465	0.0012	0.3450	0.00001	0.0900	1.9000	166.0000	0.0001	0.0001	0.0001	0.0004	0.0001	0.0008	0.0000
M-09-112 224.5-225.5	0.0047	0.0290	0.4710	0.0013	0.3600	0.00001	0.0900	2.0500	181.0000	0.0001	0.0000	0.0001	0.0002	0.0001	0.0005	0.0000
M-09-112 224.5-225.5	0.0042	0.0335	0.4325	0.0010	0.3350	0.00001	0.0800	1.9450	170.0000	0.0001	0.0001	0.0001	0.0002	0.0001	0.0023	0.0000
M-09-112 224.5-225.5	0.0036	0.0380	0.3940	0.0006	0.3100	0.00001	0.0700	1.8400	159.0000	0.0000	0.0002	0.0001	0.0002	0.0000	0.0040	0.0000
M-09-112 224.5-225.5	0.0039	0.0213	0.3830	0.0008	0.2900	0.00001	0.0750	1.8750	161.5000	0.0001	0.0002	0.0001	0.0002	0.0001	0.0023	0.0000
M-09-112 224.5-225.5	0.0041	0.0045	0.3720	0.0010	0.2700	0.00001	0.0800	1.9100	164.0000	0.0001	0.0001	0.0001	0.0002	0.0001	0.0005	0.0000
M-09-112 224.5-225.5	0.0031	0.0893	0.3755	0.0007	0.3500	0.00002	0.0850	1.8650	166.0000	0.0001	0.0001	0.0001	0.0002	0.0001	0.0023	0.0000
M-09-112 224.5-225.5	0.0020	0.1740	0.3790	0.0004	0.4300	0.00002	0.0900	1.8200	168.0000	0.0001	0.0001	0.0001	0.0002	0.0001	0.0040	0.0000
M-09-112 224.5-225.5	0.0013	0.0935	0.3940	0.0010	0.3650	0.00001	0.0900	1.8450	174.0000	0.0001	0.0001	0.0001	0.0002	0.0001	0.0035	0.0000
M-09-112 224.5-225.5	0.0005	0.0130	0.4090	0.0015	0.3000	0.00001	0.0900	1.8700	180.0000	0.0001	0.0001	0.0001	0.0002	0.0001	0.0030	0.0000
M-09-112 224.5-225.5	0.0003	0.0185	0.3800	0.0008	0.2800	0.00001	0.0850	1.8100	165.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0025	0.0000
M-09-112 224.5-225.5	0.0001	0.0240	0.3510	0.0001	0.2600	0.00001	0.0800	1.7500	150.0000	0.0001	0.0002	0.0001	0.0001	0.0000	0.0020	0.0000

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	Time	ALS Id	Matrix	Total Volume In (mL)	Total Volume Out (mL)	Calculated Hardness (mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Alkalinity, Total ($CaCO_3$ mg/L)	Sulfate (mg/L)	Chloride (Cl) (mg/L)
M-09-112 224.5-225.5	16	66	12-May-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	480	454	837	6.99	4.3	8.0	406	0.1
M-09-112 224.5-225.5	16	67	19-May-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	445	829	6.87	4.3	7.9	388	0.1
M-09-112 224.5-225.5	16	68	26-May-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	495	383	811	7.17	5.1	8.7	372	0.1
M-09-112 224.5-225.5	16	69	2-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	495	320	681	7.1	6.0	9.6	356	0.1
M-09-112 224.5-225.5	16	70	9-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	370	840	6.88	5.9	9.5	356	0.1
M-09-112 224.5-225.5	16	71	16-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	420	785	7.09	5.8	9.4	356	0.1
M-09-112 224.5-225.5	16	72	23-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	480	423	812	7.02	5.6	9.5	392	0.1
M-09-112 224.5-225.5	16	73	30-Jun-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	425	797	7.07	5.4	9.6	428	0.1
M-09-112 224.5-225.5	16	74	7-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	485	818	7	5.6	9.4	473	0.1
M-09-112 224.5-225.5	16	75	14-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	510	545	902	7.14	5.9	9.3	518	0.1
M-09-112 224.5-225.5	16	76	21-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	465	475	810	7.09	5.3	8.8	492	0.1
M-09-112 224.5-225.5	16	77	28-Jul-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	480	405	825	7.24	4.8	8.4	465	0.1
M-09-112 224.5-225.5	16	78	4-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	438	830	6.88	5.2	8.8	421	0.1
M-09-112 224.5-225.5	16	79	11-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	470	806	7.18	5.6	9.2	377	0.1
M-09-112 224.5-225.5	16	80	18-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	495	463	838	7.16	6.0	10.4	420	0.1
M-09-112 224.5-225.5	16	81	25-Aug-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	495	455	828	7.22	6.5	11.5	463	0.1
M-09-112 224.5-225.5	16	82	1-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	449	836	7.34	5.9	10.7	475	0.1
M-09-112 224.5-225.5	16	83	8-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	443	845	6.96	5.4	9.9	487	0.1
M-09-112 224.5-225.5	16	84	15-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	475	444	794	7.09	5.1	9.5	452	0.1
M-09-112 224.5-225.5	16	85	22-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	495	445	806	7.02	4.8	9.1	416	0.1
M-09-112 224.5-225.5	16	86	29-Sep-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	500	424	806	6.99	5.4	9.0	401	0.1
M-09-112 224.5-225.5	16	87	6-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	403	762	7.12	6.0	9.0	386	0.1
M-09-112 224.5-225.5	16	88	13-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	500	404	797	7.34	5.5	8.6	386	0.1
M-09-112 224.5-225.5	16	89	20-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	455	405	748	7.05	5.0	8.2	386	0.1
M-09-112 224.5-225.5	16	90	27-Oct-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	445	389	768	7.04	5.6	8.2	394	0.1
M-09-112 224.5-225.5	16	91	3-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	455	373	731	7.21	6.3	8.2	402	0.1
M-09-112 224.5-225.5	16	92	10-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	470	373	647	7.32	5.4	8.0	386	0.1
M-09-112 224.5-225.5	16	93	17-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	460	373	711	7.06	4.5	7.9	369	0.1
M-09-112 224.5-225.5	16	94	24-Nov-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	465	363	699	7.08	5.6	8.0	360	0.1
M-09-112 224.5-225.5	16	95	1-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	470	353	690	7.08	6.8	8.1	350	0.1
M-09-112 224.5-225.5	16	96	8-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	480	366	732	7.04	6.5	8.2	343	0.1
M-09-112 224.5-225.5	16	97	15-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	465	380	738	7.15	6.2	8.4	336	0.1
M-09-112 224.5-225.5	16	98	22-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	455	376	716	7.16	5.8	8.7	339	0.1
M-09-112 224.5-225.5	16	99	29-Dec-11	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	460	373	740	7.06	5.3	9.0	341	0.1
M-09-112 224.5-225.5	16	100	5-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	460	369	667	6.89	4.8	9.2	344	0.1
M-09-112 224.5-225.5	16	101	12-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	470	365	708	7.04	4.4	9.5	346	0.1
M-09-112 224.5-225.5	16	102	19-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	470	363	683	7.06	5.0	9.9	354	0.1
M-09-112 224.5-225.5	16	103	26-Jan-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	465	361	655	7.02	5.7	10.4	362	0.1
M-09-112 224.5-225.5	16	104	2-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	470	360	691	7.16	6.3	10.9	370	0.1
M-09-112 224.5-225.5	16	105	9-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	480	358	738	7.07	7.0	11.3	378	0.1
M-09-112 224.5-225.5	16	106	16-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	480	366	711	7.22	7.2	10.5	387	0.1
M-09-112 224.5-225.5	16	107	23-Feb-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	465	375	690	6.91	7.3	9.8	396	0.1
M-09-112 224.5-225.5	16	108	1-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	465	384	668	6.83	7.5	9.0	404	0.1
M-09-112 224.5-225.5	16	109	8-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	455	393	743	7.07	7.6	8.2	413	0.1
M-09-112 224.5-225.5	16	110	15-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	470	378	640	6.94	7.2	7.9	397	0.1
M-09-112 224.5-225.5	16	111	22-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	460	364	694	7.03	6.7	7.7	381	0.1
M-09-112 224.5-225.5	16	112	29-Mar-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	460	350	700	6.83	6.3	7.4	365	0.1
M-09-112 224.5-225.5	16	113	5-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	335	654	6.93	5.8	7.2	349	0.1
M-09-112 224.5-225.5	16	114	12-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	475	335	674	6.9	5.8	7.2	349	0.1
M-09-112 224.5-225.5	16	115	19-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	335	705	7.01	5.8	7.2	349	0.1
M-09-112 224.5-225.5	16	116	26-Apr-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	346	702	6.61	7.1	9.3	347	0.1
M-09-112 224.5-225.5	16	117	3-May-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	350	676	7.32	7.5	10.0	346	0.1
M-09-112 224.5-225.5	16	118	10-May-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	510	353	784	6.91	8.3	9.9	339	0.1
M-09-112 224.5-225.5	16	119	17-May-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	495	356	733	6.75	9.1	9.7	332	0.1
M-09-112 224.5-225.5	16	120	24-May-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	505	360	704	7.25	10.0	9.5	324	0.1
M-09-112 224.5-225.5	16	121	31-May-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	363	720	7.24	10.8	9.3	317	0.1
M-09-112 224.5-225.5	16	122	7-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	356	706	7.12	10.2	9.6	313	0.1
M-09-112 224.5-225.5	16	123	14-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	505	349	697	7.14	9.7	9.9	309	0.1
M-09-112 224.5-225.5	16	124	21-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	505	342	682	7.07	9.1	10.2	305	0.1
M-09-112 224.5-225.5	16	125	28-Jun-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	335	683	7.17	8.6	10.4	301	0.1
M-09-112 224.5-225.5	16	126	5-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	485	338	712	7.12	8.0	10.2	310	0.1
M-09-112 224.5-225.5	16	127	12-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	340	671	7	7.3	9.9	318	0.1
M-09-112 224.5-225.5	16	128	19-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	490	343	677	6.95	6.7	9.6	327	0.1
M-09-112 224.5-225.5	16	129	26-Jul-12	Mitchell	BELOW MTF	LP Hazelton	VUTF	IARG	2	CL	1			Water	500	510	345	683	7.06	6.1	9.3	335	0.1
																	347	699	7.081	8.9	9.8	316	0.1

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Fluoride (F) (mg/L)	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	Manganese (Mn)-Dissolved (mg/L)	Mercury (Hg)-Dissolved (mg/L)	Molybdenum (Mo)-Dissolved (mg/L)
M-09-112 224.5-225.5	0.03	0.0056	0.0006	0.0004	0.0181	0.0000	0.0000	0.0016	0.00011	181.5000	0.0003	0.0012	0.0071	0.0010	0.00021	0.0005	0.0460	0.1665	0.0000050	0.0051
M-09-112 224.5-225.5	0.03	0.0054	0.0005	0.0004	0.0183	0.0000	0.0000	0.0017	0.00007	178.0000	0.0003	0.0011	0.0060	0.0010	0.00016	0.0005	0.0480	0.1640	0.0000050	0.0052
M-09-112 224.5-225.5	0.03	0.0056	0.0005	0.0004	0.0187	0.0000	0.0000	0.0017	0.00008	153.0000	0.0003	0.0010	0.0064	0.0010	0.00019	0.0005	0.0430	0.1495	0.0000075	0.0050
M-09-112 224.5-225.5	0.03	0.0058	0.0005	0.0003	0.0190	0.0000	0.0000	0.0017	0.00010	128.0000	0.0003	0.0010	0.0068	0.0010	0.00022	0.0005	0.0380	0.1350	0.0000100	0.0049
M-09-112 224.5-225.5	0.03	0.0058	0.0005	0.0004	0.0170	0.0000	0.0000	0.0018	0.00009	148.0000	0.0003	0.0010	0.0073	0.0025	0.00022	0.0005	0.0420	0.1480	0.0000075	0.0048
M-09-112 224.5-225.5	0.03	0.0058	0.0005	0.0004	0.0150	0.0000	0.0000	0.0019	0.00008	168.0000	0.0003	0.0011	0.0077	0.0040	0.00022	0.0005	0.0460	0.1610	0.0000050	0.0048
M-09-112 224.5-225.5	0.03	0.0053	0.0005	0.0004	0.0180	0.0000	0.0000	0.0019	0.00008	169.0000	0.0003	0.0011	0.0077	0.0025	0.00022	0.0005	0.0475	0.1730	0.0000050	0.0052
M-09-112 224.5-225.5	0.03	0.0048	0.0004	0.0004	0.0209	0.0000	0.0000	0.0018	0.00007	170.0000	0.0003	0.0011	0.0076	0.0010	0.00021	0.0005	0.0490	0.1850	0.0000050	0.0055
M-09-112 224.5-225.5	0.03	0.0055	0.0004	0.0005	0.0220	0.0000	0.0000	0.0026	0.00007	194.0000	0.0003	0.0010	0.0072	0.0030	0.00020	0.0005	0.0505	0.1915	0.0000050	0.0058
M-09-112 224.5-225.5	0.03	0.0062	0.0004	0.0005	0.0231	0.0000	0.0000	0.0033	0.00007	218.0000	0.0003	0.0010	0.0068	0.0050	0.00018	0.0005	0.0520	0.1980	0.0000050	0.0061
M-09-112 224.5-225.5	0.03	0.0059	0.0004	0.0005	0.0218	0.0000	0.0000	0.0027	0.00010	190.0000	0.0003	0.0012	0.0068	0.0095	0.00017	0.0005	0.0620	0.1970	0.0000050	0.0058
M-09-112 224.5-225.5	0.03	0.0055	0.0004	0.0005	0.0205	0.0000	0.0000	0.0020	0.00014	162.0000	0.0003	0.0014	0.0067	0.0140	0.00016	0.0005	0.0720	0.1960	0.0000050	0.0055
M-09-112 224.5-225.5	0.03	0.0061	0.0004	0.0005	0.0179	0.0000	0.0000	0.0023	0.00010	175.0000	0.0004	0.0012	0.0059	0.0075	0.00017	0.0005	0.0575	0.1825	0.0000075	0.0059
M-09-112 224.5-225.5	0.03	0.0067	0.0004	0.0004	0.0152	0.0000	0.0000	0.0025	0.00007	188.0000	0.0005	0.0010	0.0050	0.0010	0.00017	0.0005	0.0430	0.1690	0.0000100	0.0062
M-09-112 224.5-225.5	0.03	0.0064	0.0004	0.0005	0.0164	0.0000	0.0000	0.0027	0.00008	185.0000	0.0007	0.0010	0.0056	0.0020	0.00021	0.0005	0.0435	0.1750	0.0000075	0.0062
M-09-112 224.5-225.5	0.03	0.0061	0.0004	0.0006	0.0175	0.0000	0.0000	0.0028	0.00008	182.0000	0.0009	0.0009	0.0061	0.0030	0.00024	0.0005	0.0440	0.1810	0.0000050	0.0061
M-09-112 224.5-225.5	0.03	0.0077	0.0004	0.0006	0.0159	0.0000	0.0000	0.0026	0.00009	179.5000	0.0006	0.0009	0.0069	0.0020	0.00020	0.0005	0.0430	0.1775	0.0000050	0.0070
M-09-112 224.5-225.5	0.03	0.0092	0.0004	0.0006	0.0143	0.0000	0.0000	0.0024	0.00009	177.0000	0.0003	0.0008	0.0076	0.0010	0.00016	0.0005	0.0420	0.1740	0.0000050	0.0078
M-09-112 224.5-225.5	0.03	0.0076	0.0004	0.0006	0.0201	0.0000	0.0000	0.0023	0.00008	177.5000	0.0008	0.0009	0.0072	0.0050	0.00016	0.0005	0.0455	0.1740	0.0000075	0.0068
M-09-112 224.5-225.5	0.03	0.0059	0.0004	0.0005	0.0258	0.0000	0.0000	0.0021	0.00007	178.0000	0.0013	0.0009	0.0068	0.0090	0.00015	0.0005	0.0490	0.1740	0.0000100	0.0058
M-09-112 224.5-225.5	0.03	0.0059	0.0004	0.0005	0.0208	0.0000	0.0000	0.0034	0.00010	169.5000	0.0010	0.0009	0.0076	0.0055	0.00020	0.0005	0.0440	0.1745	0.0000075	0.0051
M-09-112 224.5-225.5	0.03	0.0059	0.0004	0.0004	0.0158	0.0000	0.0000	0.0046	0.00014	161.0000	0.0007	0.0009	0.0084	0.0020	0.00025	0.0005	0.0390	0.1750	0.0000050	0.0045
M-09-112 224.5-225.5	0.03	0.0067	0.0004	0.0005	0.0161	0.0000	0.0000	0.0035	0.00014	161.5000	0.0005	0.0010	0.0159	0.0018	0.00027	0.0005	0.0365	0.1655	0.0000050	0.0045
M-09-112 224.5-225.5	0.03	0.0074	0.0003	0.0005	0.0163	0.0000	0.0000	0.0023	0.00015	162.0000	0.0003	0.0011	0.0234	0.0015	0.00029	0.0005	0.0340	0.1560	0.0000050	0.0045
M-09-112 224.5-225.5	0.03	0.0054	0.0003	0.0005	0.0170	0.0000	0.0000	0.0023	0.00013	155.5000	0.0006	0.0012	0.0194	0.0043	0.00032	0.0005	0.0400	0.1500	0.0000050	0.0047
M-09-112 224.5-225.5	0.03	0.0033	0.0002	0.0005	0.0176	0.0000	0.0000	0.0022	0.00012	149.0000	0.0010	0.0013	0.0154	0.0070	0.00035	0.0005	0.0460	0.1440	0.0000050	0.0049
M-09-112 224.5-225.5	0.03	0.0097	0.0003	0.0005	0.0178	0.0000	0.0000	0.0020	0.00010	149.0000	0.0006	0.0011	0.0121	0.0043	0.00024	0.0005	0.0340	0.1510	0.0000050	0.0048
M-09-112 224.5-225.5	0.03	0.0160	0.0004	0.0005	0.0180	0.0000	0.0000	0.0018	0.00007	149.0000	0.0003	0.0009	0.0087	0.0015	0.00012	0.0005	0.0220	0.1580	0.0000050	0.0047
M-09-112 224.5-225.5	0.03	0.0141	0.0005	0.0005	0.0184	0.0000	0.0000	0.0018	0.00008	145.0000	0.0003	0.0010	0.0084	0.0015	0.00013	0.0005	0.0285	0.1520	0.0000050	0.0049
M-09-112 224.5-225.5	0.03	0.0121	0.0005	0.0005	0.0188	0.0000	0.0000	0.0018	0.00010	141.0000	0.0003	0.0010	0.0081	0.0015	0.00014	0.0005	0.0350	0.1460	0.0000050	0.0051
M-09-112 224.5-225.5	0.03	0.0169	0.0004	0.0005	0.0178	0.0000	0.0000	0.0017	0.00009	146.5000	0.0004	0.0010	0.0076	0.0015	0.00016	0.0005	0.0365	0.1510	0.0000050	0.0049
M-09-112 224.5-225.5	0.03	0.0216	0.0003	0.0004	0.0167	0.0000	0.0000	0.0016	0.00009	152.0000	0.0006	0.0009	0.0071	0.0015	0.00017	0.0005	0.0380	0.1560	0.0000050	0.0048
M-09-112 224.5-225.5	0.03	0.0194	0.0003	0.0004	0.0171	0.0000	0.0000	0.0016	0.00008	150.5000	0.0005	0.0009	0.0073	0.0015	0.00015	0.0005	0.0373	0.1560	0.0000050	0.0047
M-09-112 224.5-225.5	0.03	0.0172	0.0004	0.0005	0.0175	0.0000	0.0000	0.0016	0.00008	149.0000	0.0004	0.0009	0.0076	0.0015	0.00014	0.0005	0.0365	0.1560	0.0000050	0.0047
M-09-112 224.5-225.5	0.03	0.0150	0.0004	0.0005	0.0178	0.0000	0.0000	0.0015	0.00008	147.5000	0.0003	0.0009	0.0078	0.0015	0.00012	0.0005	0.0358	0.1560	0.0000050	0.0046
M-09-112 224.5-225.5	0.03	0.0128	0.0004	0.0005	0.0182	0.0000	0.0000	0.0015	0.00008	146.0000	0.0003	0.0009	0.0080	0.0015	0.00010	0.0005	0.0350	0.1560	0.0000050	0.0046
M-09-112 224.5-225.5	0.03	0.0137	0.0004	0.0005	0.0178	0.0000	0.0000	0.0016	0.00008	145.2500	0.0003	0.0009	0.0079	0.0024	0.00011	0.0005	0.0368	0.1543	0.0000050	0.0048
M-09-112 224.5-225.5	0.03	0.0147	0.0005	0.0005	0.0174	0.0000	0.0000	0.0016	0.00008	144.5000	0.0003	0.0009	0.0078	0.0033	0.00012	0.0005	0.0385	0.1525	0.0000050	0.0050
M-09-112 224.5-225.5	0.03	0.0156	0.0005	0.0005	0.0169	0.0000	0.0000	0.0017	0.00008	143.7500	0.0003	0.0009	0.0076	0.0041	0.00012	0.0005	0.0403	0.1508	0.0000050	0.0053
M-09-112 224.5-225.5	0.03	0.0165	0.0005	0.0005	0.0165	0.0000	0.0000	0.0017	0.00008	143.0000	0.0003	0.0009	0.0075	0.0050	0.00013	0.0005	0.0420	0.1490	0.0000050	0.0055
M-09-112 224.5-225.5	0.03	0.0164	0.0005	0.0006	0.0169	0.0000	0.0000	0.0014	0.00009	146.5000	0.0003	0.0008	0.0075	0.0041	0.00013	0.0005	0.0415	0.1493	0.0000050	0.0053
M-09-112 224.5-225.5	0.03	0.0164	0.0005	0.0006	0.0173	0.0000	0.0000	0.0012	0.00011	150.0000	0.0003	0.0008	0.0076	0.0033	0.00014	0.0005	0.0410	0.1495	0.0000050	0.0052
M-09-112 224.5-225.5	0.03	0.0163	0.0004	0.0007	0.0177	0.0000	0.0000	0.0009	0.00012	153.5000	0.0003	0.0007	0.0076	0.0024	0.00014	0.0005	0.0405	0.1498	0.0000050	0.0051
M-09-112 224.5-225.5	0.03	0.0162	0.0004	0.0007	0.0181	0.0000	0.0000	0.0006	0.00014	157.0000	0.0003	0.0007	0.0076	0.0015	0.00014	0.0005	0.0400	0.1500	0.0000050	0.0049
M-09-112 224.5-225.5	0.03	0.0198	0.0004	0.0006	0.0177	0.0000	0.0000	0.0009	0.00012	151.2500	0.0003	0.0007	0.0076	0.0015	0.00020	0.0005	0.0383	0.1478	0.0000063	0.0049
M-09-112 224.5-225.5	0.03	0.0234	0.0004	0.0006	0.0174	0.0000	0.0000	0.0011	0.00010	145.5000	0.0003	0.0007	0.0075	0.0015	0.00025	0.0005	0.0365	0.1455	0.0000075	0.0049
M-09-112 224.5-225.5	0.03	0.0269	0.0004	0.0005	0.0170	0.0000	0.0000	0.0014	0.00008	139.7500	0.0003	0.0007	0.0075	0.0015	0.00031	0.0005	0.0348	0.1433	0.0000088	0.0049
M-09-112 224.5-225.5	0.03	0.0305	0.0004	0.0004	0.0166	0.0000	0.0000	0.0016	0.00006	134.0000	0.0003	0.0007	0.0074	0.0015	0.00036	0.0005	0.0330	0.1410	0.0000100	0.0048
M-09-112 224.5-225.5	0.03	0.0305	0.0004	0.0004	0.0166	0.0000	0.0000	0.0016	0.00006	134.0000	0.0003	0.0007	0.0074	0.0015	0.00036	0.0005	0.0330	0.1410	0.0000100	0.0048
M-09-112 224.5-225.5	0.03	0.0305	0.0004	0.0004	0.0166	0.0000	0.0000	0.0016	0.00006	134.0000	0.0003	0.0007	0.0074	0.0015	0.00036	0.0005	0.0330	0.1410	0.0000100	0.0048
M-09-112 224.5-225.5	0.03	0.0161	0.0004	0.0005	0.0149	0.0000	0.0000	0.0018	0.00005	138.5000	0.0003	0.0007	0.0072	0.0034	0.00033	0.0005	0.0353	0.1568	0.0000325	0.0048
M-09-112 224.5-225.5	0.03	0.0113	0.0004	0.0005	0.0143	0.0000	0.0000	0.0019	0.00005	140.0000	0.0003	0.0008	0.0071	0.0040	0.00032	0.0005	0.0360	0.1620	0.0000400	0.0048
M-09-112 224.5-225.5	0.03	0.0166	0.0004	0.0006	0.0146	0.0000	0.0000	0.0019	0.00004	141.2500	0.0003	0.0007	0.0071	0.0034	0.00027	0.0005	0.0363	0.1593	0.0000325	0.0049
M-09-112 224.5-225.5	0.03	0.0220	0.0004	0.0006	0.0150	0.0000	0.0000	0.0019	0.00004	142.5000	0.0003	0.0007	0.0070	0.0028	0.00021	0.0005	0.0365	0.1565	0.0000250	0.0050
M-09-112 224.5-225.5	0.03	0.0273	0.0004	0.0007	0.0153	0.0000	0.0000	0.0019	0.00004	143.7500	0.0003	0.0006	0.0070	0.0021	0.00016	0.0005	0.0368	0.1538	0.0000175	0.0050
M-09-112 224.5-225.5	0.03	0.0326	0.0004	0.0007	0.0156	0.0000	0.0000	0.0019	0.00004	145.0000	0.0003	0.0006	0.0069	0.0015	0.00010	0.0005	0.0370	0.1510	0.0000100	0.0051
M-09-112 224.5-225.5	0.03	0.0334	0.0004	0.0006	0.0152	0.0000	0.0000	0.0020	0.00005	142.2500	0.0003	0.0006	0.0070	0.0015	0.00010	0.0005	0.0370	0.1520	0.0000088	0.0052
M-09-112 224.5-225.5	0.03	0.0343	0.0004	0.0006	0.0149	0.0000	0.0000	0.0022	0.00006	139.5000	0.0003	0.0006	0.0071	0.0015	0.00011	0.0005	0.0370	0.1530	0.0000075	0.0052
M-09-112 224.5-225.5	0.03	0.0351	0.0004	0.0005	0.0145	0.0000	0.0000	0.0023	0.00007	136.7500	0.0003	0.0006	0.0072	0.0015	0.00011	0.0005	0.0370	0.1540	0.0000063	0.0052
M-09-112 224.5-225.5	0.03	0.0359	0.0004	0.0004	0.0141	0.0000	0.0000	0.0024	0.00008	134.0000	0.0003	0.0006	0.0073	0.0015	0.00011	0.0005	0.0370	0.1550	0.0000050	0.0052
M-09-112 224.5-225.5	0.03	0.0349	0.0004	0.0004	0.0139	0.0000	0.0000	0.0022	0.00007	135.0000	0.0003	0.0007	0.0074	0.0015	0.00017	0.0005	0.0368	0.1593	0.0000063	0.0052
M-09-112 224.5-225.5	0.03	0.0339	0.0004	0.0004	0.0137	0.0000	0.0000	0.0019	0.00007	136.0000	0.0003	0.0007	0.0076	0.0015	0.00024	0.0005	0.0365	0.1635	0.0000075	0.0051
M-09-112 224.5-225.5	0.03	0.0329	0.0004	0.0003	0.0135	0.0000	0.0000	0.0017	0.00007	137.0000	0.0003	0.0007	0.0077	0.0015	0.00030	0.0005	0.0363	0.1678	0.0000088	0.0050
M-09-112 224.5-225.5	0.03	0.0319	0.0004	0.0003	0.0133	0.0000	0.0000	0.0014	0.00007	138.0000	0.0003	0.0007	0.0078	0.0015	0.00036	0.0005	0.0360	0.1720	0.0000100	0.0049
	0.03	0.0332	0.0004	0.0005	0.0144	0.0000	0.0000	0.0020	0.00006	138.7250	0.0003	0.0006	0.0073	0.0016	0.00017	0.0005	0.0367	0.1581	0.0000088	0.0051

Appendix 5.2-5. Humidity Cell Leachate Concentrations: Mitchell Deposit

Sample ID	Nickel (Ni)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Sulphur (S)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
M-09-112 224.5-225.5	0.0029	0.0200	0.3450	0.0005	0.2950	0.00002	0.0950	1.6800	151.0000	0.0001	0.0002	0.0001	0.0001	0.0000	0.0020	0.0000
M-09-112 224.5-225.5	0.0058	0.0160	0.3390	0.0010	0.3300	0.00003	0.1100	1.6100	152.0000	0.0000	0.0001	0.0001	0.0001	0.0001	0.0020	0.0000
M-09-112 224.5-225.5	0.0030	0.0440	0.2990	0.0009	0.2750	0.00003	0.0950	1.4500	127.0000	0.0000	0.0002	0.0001	0.0001	0.0001	0.0025	0.0000
M-09-112 224.5-225.5	0.0002	0.0720	0.2590	0.0008	0.2200	0.00002	0.0800	1.2900	102.0000	0.0000	0.0002	0.0001	0.0001	0.0001	0.0030	0.0000
M-09-112 224.5-225.5	0.0037	0.0383	0.2845	0.0008	0.2500	0.00003	0.1150	1.4150	119.0000	0.0000	0.0004	0.0001	0.0001	0.0001	0.0035	0.0000
M-09-112 224.5-225.5	0.0071	0.0045	0.3100	0.0008	0.2800	0.00003	0.1500	1.5400	136.0000	0.0000	0.0006	0.0001	0.0001	0.0001	0.0040	0.0000
M-09-112 224.5-225.5	0.0036	0.0045	0.3220	0.0008	0.2850	0.00003	0.1200	1.5700	138.0000	0.0000	0.0003	0.0001	0.0001	0.0000	0.0025	0.0000
M-09-112 224.5-225.5	0.0001	0.0045	0.3340	0.0008	0.2900	0.00002	0.0900	1.6000	140.0000	0.0000	0.0001	0.0001	0.0002	0.0000	0.0010	0.0000
M-09-112 224.5-225.5	0.0001	0.0103	0.3485	0.0004	0.3100	0.00002	0.0900	1.7200	160.5000	0.0000	0.0001	0.0001	0.0001	0.0000	0.0015	0.0000
M-09-112 224.5-225.5	0.0002	0.0160	0.3630	0.0001	0.3300	0.00001	0.0900	1.8400	181.0000	0.0000	0.0001	0.0001	0.0001	0.0000	0.0020	0.0000
M-09-112 224.5-225.5	0.0040	0.0200	0.3155	0.0003	0.3050	0.00001	0.0700	1.6600	157.0000	0.0000	0.0001	0.0001	0.0002	0.0000	0.0020	0.0000
M-09-112 224.5-225.5	0.0077	0.0240	0.2680	0.0006	0.2800	0.00001	0.0500	1.4800	133.0000	0.0000	0.0001	0.0002	0.0002	0.0000	0.0020	0.0000
M-09-112 224.5-225.5	0.0040	0.0180	0.3175	0.0008	0.2850	0.00001	0.0650	1.6250	146.0000	0.0000	0.0001	0.0001	0.0001	0.0000	0.0020	0.0000
M-09-112 224.5-225.5	0.0002	0.0120	0.3670	0.0010	0.2900	0.00002	0.0800	1.7700	159.0000	0.0000	0.0001	0.0001	0.0001	0.0000	0.0020	0.0000
M-09-112 224.5-225.5	0.0003	0.0083	0.3375	0.0009	0.2900	0.00003	0.0800	1.6750	158.0000	0.0000	0.0001	0.0017	0.0001	0.0000	0.0025	0.0000
M-09-112 224.5-225.5	0.0003	0.0045	0.3080	0.0009	0.2900	0.00003	0.0800	1.5800	157.0000	0.0000	0.0001	0.0033	0.0002	0.0001	0.0030	0.0000
M-09-112 224.5-225.5	0.0025	0.0045	0.3070	0.0013	0.2750	0.00002	0.0650	1.5450	154.5000	0.0000	0.0001	0.0018	0.0002	0.0001	0.0045	0.0000
M-09-112 224.5-225.5	0.0047	0.0045	0.3060	0.0017	0.2600	0.00001	0.0500	1.5100	152.0000	0.0000	0.0001	0.0002	0.0002	0.0001	0.0060	0.0000
M-09-112 224.5-225.5	0.0026	0.0045	0.2850	0.0013	0.2650	0.00002	0.0850	1.5000	151.5000	0.0000	0.0002	0.0001	0.0002	0.0001	0.0050	0.0000
M-09-112 224.5-225.5	0.0004	0.0045	0.2640	0.0009	0.2700	0.00004	0.1200	1.4900	151.0000	0.0000	0.0003	0.0001	0.0002	0.0001	0.0040	0.0000
M-09-112 224.5-225.5	0.0003	0.0045	0.2690	0.0006	0.2550	0.00003	0.0950	1.4350	143.5000	0.0000	0.0002	0.0001	0.0002	0.0001	0.0035	0.0000
M-09-112 224.5-225.5	0.0002	0.0045	0.2740	0.0004	0.2400	0.00002	0.0700	1.3800	136.0000	0.0000	0.0001	0.0001	0.0002	0.0001	0.0030	0.0000
M-09-112 224.5-225.5	0.0008	0.0045	0.2710	0.0006	0.2450	0.00002	0.0700	1.3600	137.0000	0.0000	0.0001	0.0001	0.0002	0.0000	0.0040	0.0000
M-09-112 224.5-225.5	0.0014	0.0045	0.2680	0.0007	0.2500	0.00002	0.0700	1.3400	138.0000	0.0000	0.0001	0.0001	0.0002	0.0000	0.0050	0.0000
M-09-112 224.5-225.5	0.0027	0.0045	0.2585	0.0004	0.2600	0.00002	0.0700	1.3550	134.0000	0.0000	0.0002	0.0001	0.0001	0.0000	0.0100	0.0000
M-09-112 224.5-225.5	0.0040	0.0045	0.2490	0.0000	0.2700	0.00001	0.0700	1.3700	130.0000	0.0000	0.0003	0.0001	0.0001	0.0000	0.0150	0.0000
M-09-112 224.5-225.5	0.0038	0.0045	0.2315	0.0001	0.2600	0.00002	0.0850	1.3550	127.5000	0.0000	0.0002	0.0001	0.0001	0.0001	0.0090	0.0000
M-09-112 224.5-225.5	0.0036	0.0045	0.2140	0.0002	0.2500	0.00003	0.1000	1.3400	125.0000	0.0000	0.0001	0.0001	0.0001	0.0001	0.0030	0.0000
M-09-112 224.5-225.5	0.0022	0.0045	0.2250	0.0005	0.2250	0.00003	0.0750	1.3400	120.5000	0.0000	0.0001	0.0001	0.0001	0.0002	0.0030	0.0000
M-09-112 224.5-225.5	0.0007	0.0045	0.2360	0.0009	0.2000	0.00003	0.0500	1.3400	116.0000	0.0000	0.0001	0.0001	0.0001	0.0002	0.0030	0.0000
M-09-112 224.5-225.5	0.0005	0.0045	0.2280	0.0008	0.2200	0.00003	0.0900	1.3350	121.5000	0.0000	0.0001	0.0002	0.0001	0.0002	0.0025	0.0000
M-09-112 224.5-225.5	0.0002	0.0045	0.2200	0.0007	0.2400	0.00002	0.1300	1.3300	127.0000	0.0000	0.0001	0.0003	0.0002	0.0003	0.0020	0.0000
M-09-112 224.5-225.5	0.0002	0.0045	0.2185	0.0007	0.2325	0.00002	0.1125	1.3225	125.5000	0.0000	0.0001	0.0002	0.0001	0.0002	0.0018	0.0000
M-09-112 224.5-225.5	0.0002	0.0045	0.2170	0.0007	0.2250	0.00002	0.0950	1.3150	124.0000	0.0000	0.0001	0.0002	0.0001	0.0002	0.0015	0.0000
M-09-112 224.5-225.5	0.0002	0.0045	0.2155	0.0007	0.2175	0.00002	0.0775	1.3075	122.5000	0.0000	0.0001	0.0001	0.0001	0.0002	0.0013	0.0000
M-09-112 224.5-225.5	0.0002	0.0045	0.2140	0.0007	0.2100	0.00002	0.0600	1.3000	121.0000	0.0000	0.0001	0.0001	0.0001	0.0002	0.0010	0.0000
M-09-112 224.5-225.5	0.0002	0.0056	0.2180	0.0007	0.2075	0.00003	0.0775	1.2800	120.0000	0.0000	0.0000	0.0001	0.0001	0.0002	0.0015	0.0000
M-09-112 224.5-225.5	0.0002	0.0068	0.2220	0.0007	0.2050	0.00003	0.0950	1.2600	119.0000	0.0000	0.0000	0.0001	0.0001	0.0002	0.0020	0.0000
M-09-112 224.5-225.5	0.0002	0.0079	0.2260	0.0008	0.2025	0.00004	0.1125	1.2400	118.0000	0.0000	0.0000	0.0001	0.0001	0.0002	0.0025	0.0000
M-09-112 224.5-225.5	0.0002	0.0090	0.2300	0.0008	0.2000	0.00004	0.1300	1.2200	117.0000	0.0000	0.0000	0.0001	0.0001	0.0002	0.0030	0.0000
M-09-112 224.5-225.5	0.0004	0.0079	0.2310	0.0008	0.2100	0.00004	0.1250	1.2325	120.5000	0.0000	0.0000	0.0001	0.0001	0.0002	0.0033	0.0000
M-09-112 224.5-225.5	0.0006	0.0068	0.2320	0.0007	0.2200	0.00004	0.1200	1.2450	124.0000	0.0000	0.0000	0.0002	0.0001	0.0002	0.0035	0.0000
M-09-112 224.5-225.5	0.0008	0.0056	0.2330	0.0007	0.2300	0.00003	0.1150	1.2575	127.5000	0.0000	0.0000	0.0002	0.0001	0.0003	0.0038	0.0000
M-09-112 224.5-225.5	0.0010	0.0045	0.2340	0.0007	0.2400	0.00003	0.1100	1.2700	131.0000	0.0000	0.0001	0.0002	0.0001	0.0003	0.0040	0.0000
M-09-112 224.5-225.5	0.0012	0.0045	0.2255	0.0007	0.2300	0.00003	0.1025	1.2425	126.7500	0.0000	0.0001	0.0002	0.0001	0.0003	0.0060	0.0000
M-09-112 224.5-225.5	0.0014	0.0045	0.2170	0.0006	0.2200	0.00003	0.0950	1.2150	122.5000	0.0000	0.0001	0.0002	0.0001	0.0003	0.0080	0.0000
M-09-112 224.5-225.5	0.0015	0.0045	0.2085	0.0006	0.2100	0.00003	0.0875	1.1875	118.2500	0.0000	0.0001	0.0001	0.0001	0.0003	0.0100	0.0000
M-09-112 224.5-225.5	0.0017	0.0045	0.2000	0.0006	0.2000	0.00003	0.0800	1.1600	114.0000	0.0000	0.0001	0.0001	0.0001	0.0003	0.0120	0.0000
M-09-112 224.5-225.5	0.0017	0.0045	0.2000	0.0006	0.2000	0.00003	0.0800	1.1600	114.0000	0.0000	0.0001	0.0001	0.0001	0.0003	0.0120	0.0000
M-09-112 224.5-225.5	0.0017	0.0045	0.2000	0.0006	0.2000	0.00003	0.0800	1.1600	114.0000	0.0000	0.0001	0.0001	0.0001	0.0003	0.0120	0.0000
M-09-112 224.5-225.5	0.0019	0.0045	0.2120	0.0004	0.2000	0.00004	0.0650	1.1225	115.5000	0.0000	0.0003	0.0001	0.0001	0.0002	0.0045	0.0000
M-09-112 224.5-225.5	0.0020	0.0045	0.2160	0.0004	0.2000	0.00004	0.0600	1.1100	116.0000	0.0000	0.0004	0.0001	0.0001	0.0002	0.0020	0.0000
M-09-112 224.5-225.5	0.0020	0.0045	0.2183	0.0004	0.2075	0.00005	0.0675	1.1050	116.7500	0.0000	0.0003	0.0001	0.0001	0.0002	0.0020	0.0000
M-09-112 224.5-225.5	0.0020	0.0045	0.2205	0.0005	0.2150	0.00005	0.0750	1.1000	117.5000	0.0000	0.0003	0.0001	0.0001	0.0003	0.0020	0.0000
M-09-112 224.5-225.5	0.0020	0.0045	0.2228	0.0005	0.2225	0.00006	0.0825	1.0950	118.2500	0.0000	0.0002	0.0001	0.0001	0.0003	0.0020	0.0000
M-09-112 224.5-225.5	0.0020	0.0045	0.2250	0.0006	0.2300	0.00006	0.0900	1.0900	119.0000	0.0000	0.0002	0.0001	0.0001	0.0004	0.0020	0.0000
M-09-112 224.5-225.5	0.0019	0.0045	0.2238	0.0005	0.2250	0.00006	0.0875	1.0700	117.0000	0.0000	0.0002	0.0001	0.0001	0.0003	0.0023	0.0000
M-09-112 224.5-225.5	0.0018	0.0045	0.2225	0.0005	0.2200	0.00007	0.0850	1.0500	115.0000	0.0000	0.0002	0.0001	0.0001	0.0003	0.0025	0.0000
M-09-112 224.5-225.5	0.0016	0.0045	0.2213	0.0004	0.2150	0.00007	0.0825	1.0300	113.0000	0.0000	0.0002	0.0001	0.0001	0.0003	0.0028	0.0000
M-09-112 224.5-225.5	0.0015	0.0045	0.2200	0.0004	0.2100	0.00007	0.0800	1.0100	111.0000	0.0000	0.0002	0.0001	0.0001	0.0003	0.0030	0.0000
M-09-112 224.5-225.5	0.0013	0.0045	0.2170	0.0004	0.2125	0.00006	0.0750	1.0075	112.0000	0.0000	0.0002	0.0001	0.0001	0.0003	0.0030	0.0000
M-09-112 224.5-225.5	0.0012	0.0045	0.2140	0.0005	0.2150	0.00005	0.0700	1.0050	113.0000	0.0000	0.0002	0.0001	0.0001	0.0002	0.0030	0.0000
M-09-112 224.5-225.5	0.0010	0.0045	0.2110	0.0005	0.2175	0.00004	0.0650	1.0025	114.0000	0.0000	0.0002	0.0001	0.0001	0.0002	0.0030	0.0000
M-09-112 224.5-225.5	0.0008	0.0045	0.2080	0.0006	0.2200	0.00003	0.0600	1.0000	115.0000	0.0000	0.0002	0.0001	0.0001	0.0002	0.0030	0.0000
	0.0015	0.0045	0.2185	0.0005	0.2188	0.00006	0.0778	1.0360	114.7250	0.0000	0.0002	0.0001	0.0001	0.0003	0.0027	0.0000

Appendix 5.2-6

Humidity Cell Leachate Concentrations: Iron Cap Deposit

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Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	TYPE	Time Sampled	Sample ID	Matrix	Total Volume In (mL)	Volume Out (mL)	ORP mV	Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Acidity (as $CaCO_3$) ($CaCO_3$ mg/L)	Alkalinity, Total (as $CaCO_3$) ($CaCO_3$ mg/L)	Sulfate (SO_4) (mg/L)	Chloride (Cl) (mg/L)	Fluoride (F) (mg/L)
HCT-1 IRON CAP																											
	HCT-1	0	28-Feb-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	750	415	140	202	635	8.12	0.25	3.2	33	220	4.6	0.70
	HCT-1	1	7-Mar-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	500	350	130	94.6	315	8.11	0.25	1	31	110	1.3	0.61
	HCT-1	2	14-Mar-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	330	150	63.6	211	8.11	0.25	0.25	34	59	0.6	0.61
	HCT-1	3	21-Mar-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	315	160	52.4	165	8.23	0.25	0.25	29	40	0.25	0.37
	HCT-1	4	28-Mar-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	145	41.4	138	8.18	0.25	0.7	26	33	0.25	0.27
	HCT-1	5	4-Apr-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	325	120	45	130	7.9	0.25	0.5	20	28	0.9	0.19
	HCT-1	6	11-Apr-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	325	135	47.2	133	7.75	0.25	4.4	23	34	0.25	0.18
	HCT-1	7	18-Apr-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	310	140	46	118	8.12	0.25	0.25	18	30	0.25	0.13
	HCT-1	8	25-Apr-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	335	120	64.7	173	8.05	0.25	0.25	28	41	0.25	0.18
	HCT-1	9	2-May-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	310	130	46.5	116	8.1	0.25	4	18	27	0.25	0.11
	HCT-1	10	9-May-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	210	55.9	160	8.21	0.25	0.25	24	39	0.25	0.12
	HCT-1	11	16-May-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	325	130	58.2	145	8.11	0.25	1.2	26	35	0.25	0.12
	HCT-1	12	23-May-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	140	53.4	145	8.02	0.25	5	22	36	0.25	0.13
	HCT-1	13	30-May-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	325	130	54.1	139	8.01	0.25	1.7	22	40	0.25	0.12
	HCT-1	14	6-Jun-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	175	43.1	117	7.83	0.25	0.25	17	30	0.25	0.09
	HCT-1	15	13-Jun-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	140	34.7	91	8.35	0.25	0.9	15	20	0.25	0.05
	HCT-1	16	20-Jun-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	155	38.2	104	8	0.25	3.3	16	25	0.25	0.06
	HCT-1	17	27-Jun-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	350	155	44.7	114	7.73	0.25	2	23	24	0.8	0.05
	HCT-1	18	4-Jul-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	310	180	37.3	99	7.87	0.25	0.25	17	21	0.7	0.06
	HCT-1	19	11-Jul-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	325	175	45.4	116	8.25	0.25	0.25	22	27	0.25	0.06
	HCT-1	20	18-Jul-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	340	185	45.95	114	7.91	0.25	0.25	23.5	28	0.625	0.07
	HCT-1	21	25-Jul-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	160	46.5	119	8.19	0.25	0.25	25	28	1	0.08
	HCT-1	22	1-Aug-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	335	150	46.45	129	7.88	0.25	0.25	25	26	1.1	0.07
	HCT-1	23	8-Aug-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	350	155	46.4	120	8.17	0.25	0.25	25	23	1.2	0.06
	HCT-1	24	15-Aug-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	350	170	43.65	122	7.71	0.25	0.25	23.5	22	1.05	0.06
	HCT-1	25	22-Aug-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	335	170	40.9	101	8.13	0.25	0.25	22	21	0.9	0.05
	HCT-1	26	29-Aug-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	140	42	111	8.24	0.25	0.25	22.5	21	0.9	0.05
	HCT-1	27	5-Sep-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	345	150	43.1	127	8.25	0.25	0.25	23	21	0.9	0.05
	HCT-1	28	12-Sep-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	350	155	41	103	7.72	0.25	0.25	22.5	21	0.85	0.05
	HCT-1	29	19-Sep-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	330	360	38.9	103	7.82	0.25	0.25	22	21	0.8	0.05
	HCT-1	30	26-Sep-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	325	165	39.3	99	7.99	0.25	0.25	22.5	19	0.9	0.05
	HCT-1	31	3-Oct-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	330	150	39.7	98	7.99	0.25	0.25	23	16	1	0.05
	HCT-1	32	10-Oct-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	325	215	40.7	116	8.11	0.25	0.25	25	17	0.9	0.05
	HCT-1	33	17-Oct-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	315	210	41.7	101	8.1	0.25	0.25	27	18	0.8	0.04
	HCT-1	34	24-Oct-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	340	220	41.6	106	7.83	0.25	0.25	25.5	17	0.75	0.04
	HCT-1	35	31-Oct-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	345	225	41.5	106	7.62	0.25	0.25	24	16	0.7	0.03
	HCT-1	36	7-Nov-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	330	200	40.55	82	7.95	0.25	0.25	24.45	17	0.95	0.03
	HCT-1	37	14-Nov-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	330	225	39.6	107	8.04	0.25	0.25	24.9	18	1.2	0.03
	HCT-1	38	21-Nov-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	335	235	36.5	107	7.83	0.25	0.25	20.8	17	1.05	0.03
	HCT-1	39	28-Nov-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	310	250	33.4	89	7.93	0.25	0.25	16.7	17	0.9	0.03
	HCT-1	40	5-Dec-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	145	35.7	90	7.62	0.25	0.25	18.175	18	0.7375	0.03
	HCT-1	41	12-Dec-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	330	135	38	110	7.57	0.25	0.25	19.65	20	0.575	0.03
	HCT-1	42	19-Dec-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	315	140	40.3	87	7.73	0.25	0.25	21.125	22	0.4125	0.03
	HCT-1	43	26-Dec-11	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	325	140	42.6	115	7.76	0.25	0.25	22.6	24	0.25	0.03
	HCT-1	44	2-Jan-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	115	42.425	115	7.82	0.25	0.25	20.975	24	0.25	0.03
	HCT-1	45	9-Jan-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	125	42.25	107	7.76	0.25	0.25	19.35	25	0.25	0.03
	HCT-1	46	16-Jan-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	115	42.075	107	7.88	0.25	0.25	17.725	25	0.25	0.03
	HCT-1	47	23-Jan-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	310	120	41.9	102	7.67	0.25	0.25	16.1	26	0.25	0.03
	HCT-1	48	30-Jan-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	335	125	45.775	97	7.67	0.25	0.7375	18.325	28	0.3875	0.03
	HCT-1	49	6-Feb-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	310	120	49.65	79	7.81	0.25	1.225	20.55	31	0.525	0.03
	HCT-1	50	13-Feb-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	125	53.525	98	7.85	0.25	1.7125	22.775	33	0.6625	0.03
	HCT-1	51	20-Feb-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	310	130	57.4	140	7.84	0.25	2.2	25	36	0.8	0.03
	HCT-1	52	27-Feb-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	345	130	51.125	112	7.85	0.25	1.7125	22.3	31	0.6625	0.03
	HCT-1	53	5-Mar-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	325	125	44.85	106	7.85	0.25	1.225	19.6	26	0.525	0.02
	HCT-1	54	12-Mar-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	135	38.575	89	7.8	0.25	0.7375	16.9	21	0.3875	0.02
	HCT-1	55	19-Mar-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	300	135	32.3	78	7.84	0.25	0.25	14.2	17	0.25	0.02
	HCT-1	56	26-Mar-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	325	125	33.2	95	7.8	0.25	0.25	14.875	17	0.25	0.02
	HCT-1	57	2-Apr-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	130	34.1	101	7.72	0.25	0.25	15.55	18	0.25	0.02
	HCT-1	58	9-Apr-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	330	125	35	109	7.78	0.25	0.25	16.225	18	0.25	0.02
	HCT-1	59	16-Apr-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	130	35.9	83	7.61	0.25	0.25	16.9	19	0.25	0.02

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cesium (Cs)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	(La)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	(Mn)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)
HCT-1 IRON CAP																					
	HCT-1	0.0519	0.0033	0.00425	0.0778	0.000005	0.0000025	0.025	0.00627	0.000057	70.8	0.0002	0.000247	0.00446	0.000025	0.004	0.000176	0.0148	6.08	0.135	0.025
	HCT-1	0.0709	0.00401	0.00517	0.0425	0.000005	0.0000025	0.025	0.00289	0.000026	32.6	0.00005	0.000143	0.00214	0.000025	0.005	0.000187	0.0114	3.19	0.0702	0.039
	HCT-1	0.1	0.00437	0.00449	0.0399	0.000005	0.0000025	0.025	0.00203	0.000008	21.5	0.00005	0.000079	0.00169	0.000025	0.004	0.000181	0.0095	2.43	0.0534	0.022
	HCT-1	0.118	0.00383	0.00384	0.0365	0.000005	0.0000025	0.025	0.00153	0.000009	17.7	0.00005	0.000038	0.00127	0.000025	0.004	0.000193	0.0065	1.99	0.0535	0.025
	HCT-1	0.112	0.00273	0.00261	0.0256	0.000005	0.0000025	0.025	0.0012	0.000011	14.1	0.00005	0.00003	0.00114	0.000025	0.008	0.000207	0.0043	1.51	0.0401	0.012
	HCT-1	0.127	0.00258	0.00239	0.0284	0.000005	0.0000025	0.025	0.00092	0.000012	15.4	0.00005	0.000033	0.0013	0.000025	0.007	0.000225	0.0042	1.62	0.0424	0.017
	HCT-1	0.126	0.00268	0.00208	0.0352	0.000005	0.0000025	0.025	0.00071	0.000014	16.1	0.00005	0.000029	0.00118	0.000025	0.005	0.000203	0.004	1.72	0.0603	0.011
	HCT-1	0.114	0.00206	0.00177	0.0247	0.000005	0.0000025	0.025	0.0006	0.000043	15.8	0.00005	0.000147	0.00122	0.000025	0.01	0.000271	0.003	1.56	0.0567	0.013
	HCT-1	0.104	0.0035	0.00215	0.0275	0.000005	0.0000025	0.025	0.00087	0.000025	21.7	0.00005	0.000082	0.0019	0.000025	0.007	0.000246	0.0055	2.53	0.093	0.015
	HCT-1	0.133	0.00199	0.00175	0.0206	0.000005	0.0000025	0.025	0.00063	0.000012	16.3	0.00005	0.000033	0.00145	0.000025	0.011	0.000271	0.0027	1.38	0.0638	0.015
	HCT-1	0.102	0.00297	0.00186	0.0224	0.000005	0.0000025	0.025	0.00065	0.000033	19.4	0.00005	0.000088	0.00166	0.000025	0.007	0.000222	0.0037	1.83	0.0854	0.008
	HCT-1	0.123	0.00288	0.00172	0.0262	0.000005	0.0000025	0.025	0.00064	0.000032	20.1	0.00005	0.000057	0.0018	0.000025	0.032	0.000234	0.0035	1.94	0.101	0.013
	HCT-1	0.0964	0.00275	0.00173	0.0257	0.000005	0.0000025	0.025	0.00054	0.00003	18.7	0.00005	0.000033	0.00148	0.000025	0.005	0.000205	0.0034	1.65	0.0929	0.013
	HCT-1	0.0956	0.00296	0.0016	0.0244	0.000005	0.0000025	0.025	0.00045	0.000019	18.7	0.00005	0.000045	0.00154	0.000025	0.004	0.000244	0.0034	1.8	0.0878	0.007
	HCT-1	0.118	0.00227	0.00161	0.0235	0.000005	0.0000025	0.025	0.00034	0.00002	14.9	0.00005	0.000024	0.0153	0.000025	0.01	0.000419	0.0025	1.4	0.0629	0.005
	HCT-1	0.118	0.00146	0.00108	0.0169	0.000005	0.0000025	0.025	0.00039	0.000014	12.4	0.00005	0.000032	0.00242	0.000025	0.031	0.000749	0.0017	0.91	0.062	0.049
	HCT-1	0.0831	0.00173	0.00097	0.0195	0.000005	0.0000025	0.025	0.00036	0.000021	13.6	0.00005	0.000038	0.00166	0.000025	0.006	0.000221	0.0021	1.06	0.0762	0.01
	HCT-1	0.0737	0.00195	0.00101	0.0275	0.000005	0.0000025	0.025	0.00043	0.000031	15.8	0.00005	0.0001	0.00222	0.000025	0.006	0.000255	0.0023	1.27	0.116	0.018
	HCT-1	0.0943	0.00136	0.00081	0.0237	0.000005	0.0000025	0.025	0.00029	0.000021	13.4	0.00005	0.000019	0.0015	0.000025	0.006	0.000211	0.0016	0.91	0.0767	0.009
	HCT-1	0.0835	0.00192	0.00106	0.0274	0.000005	0.0000025	0.025	0.00035	0.000034	16.2	0.00005	0.000038	0.00156	0.000025	0.004	0.000177	0.0022	1.22	0.104	0.003
	HCT-1	0.19775	0.001945	0.00131	0.03635	0.0000075	0.00000825	0.025	0.00043	0.000033	16.4	0.00005	0.000072	0.004785	0.000025	0.0455	0.0011835	0.00225	1.225	0.144	0.0425
	HCT-1	0.312	0.00197	0.00156	0.0453	0.00001	0.000014	0.025	0.00051	0.000032	16.6	0.00005	0.000106	0.00801	0.000025	0.087	0.00219	0.0023	1.23	0.184	0.082
	HCT-1	0.2015	0.00212	0.001415	0.03675	0.0000075	0.00000825	0.025	0.000445	0.000029	16.55	0.00005	0.0000815	0.005185	0.000025	0.049	0.001267	0.0023	1.25	0.1705	0.0465
	HCT-1	0.091	0.00227	0.00127	0.0282	0.000005	0.0000025	0.025	0.00038	0.000026	16.5	0.00005	0.000057	0.00236	0.000025	0.011	0.000344	0.0023	1.27	0.157	0.011
	HCT-1	0.08515	0.002155	0.001145	0.0276	0.000005	0.0000025	0.025	0.000375	0.000027	15.6	0.000075	0.0000545	0.002265	0.000025	0.0125	0.0003705	0.00225	1.145	0.137	0.04
	HCT-1	0.0793	0.00204	0.00102	0.027	0.000005	0.0000025	0.025	0.00037	0.000028	14.7	0.0001	0.000052	0.00217	0.000025	0.014	0.000397	0.0022	1.02	0.117	0.069
	HCT-1	0.0771	0.00218	0.001065	0.0312	0.000005	0.0000025	0.025	0.000365	0.00003	15.1	0.000075	0.0000525	0.00239	0.000025	0.0195	0.0004495	0.0022	1.04	0.1315	0.035
	HCT-1	0.0749	0.00232	0.00111	0.0354	0.000005	0.0000025	0.025	0.00036	0.000032	15.5	0.00005	0.000053	0.00261	0.000025	0.025	0.000502	0.0022	1.06	0.146	0.001
	HCT-1	0.08105	0.002135	0.001165	0.032	0.000005	0.0000025	0.025	0.00035	0.0000295	14.8	0.00005	0.000048	0.00225	0.000025	0.016	0.000743	0.0021	0.985	0.132	0.0045
	HCT-1	0.0872	0.00195	0.00122	0.0286	0.000005	0.0000025	0.025	0.00034	0.000027	14.1	0.00005	0.000043	0.00189	0.000025	0.007	0.000984	0.002	0.91	0.118	0.008
	HCT-1	0.0819	0.00187	0.001115	0.0304	0.000005	0.0000025	0.025	0.0003	0.000025	14.25	0.00005	0.00004	0.001915	0.000025	0.008	0.000609	0.002	0.91	0.113	0.008
	HCT-1	0.0766	0.00179	0.00101	0.0322	0.000005	0.0000025	0.025	0.00026	0.000023	14.4	0.00005	0.000037	0.00194	0.000025	0.009	0.000234	0.002	0.91	0.108	0.008
	HCT-1	0.0858	0.0018	0.00111	0.0334	0.000005	0.0000025	0.025	0.000285	0.0000235	14.8	0.00005	0.0000365	0.00229	0.000025	0.0095	0.000248	0.0019	0.905	0.107	0.0075
	HCT-1	0.095	0.00181	0.00121	0.0346	0.000005	0.0000025	0.025	0.00031	0.000024	15.2	0.00005	0.000036	0.00264	0.000025	0.01	0.000262	0.0018	0.9	0.106	0.007
	HCT-1	0.0836	0.001675	0.00105	0.03495	0.000005	0.0000025	0.025	0.00029	0.000023	15.25	0.00005	0.000043	0.00237	0.000025	0.009	0.000261	0.00175	0.84	0.1075	0.009
	HCT-1	0.0722	0.00154	0.00089	0.0353	0.000005	0.0000025	0.025	0.00027	0.000022	15.3	0.00005	0.00005	0.0021	0.000025	0.008	0.00026	0.0017	0.78	0.109	0.011
	HCT-1	0.0743	0.00143	0.000855	0.037	0.000005	0.0000025	0.025	0.000285	0.000023	14.9	0.00005	0.0000495	0.002345	0.000025	0.016	0.0003455	0.00175	0.8	0.1155	0.0125
	HCT-1	0.0764	0.00132	0.00082	0.0387	0.000005	0.0000025	0.025	0.0003	0.000024	14.5	0.00005	0.000049	0.00259	0.000025	0.024	0.000431	0.0018	0.82	0.122	0.014
	HCT-1	0.07515	0.0012	0.000825	0.03295	0.000005	0.0000025	0.025	0.000295	0.0000195	13.4	0.00005	0.0000335	0.002555	0.000025	0.016	0.0003795	0.00155	0.73	0.10195	0.014
	HCT-1	0.0739	0.00108	0.00083	0.0272	0.000005	0.0000025	0.025	0.00029	0.000015	12.3	0.00005	0.000018	0.00252	0.000025	0.008	0.000328	0.0013	0.64	0.0819	0.014
	HCT-1	0.0714	0.0010925	0.00079	0.028025	0.000005	0.0000025	0.025	0.00028	0.00001475	13.15	0.00005	0.000022	0.0024375	0.000025	0.00775	0.00028875	0.001375	0.685	0.085875	0.01125
	HCT-1	0.0689	0.001105	0.00075	0.02885	0.000005	0.0000025	0.025	0.00027	0.0000145	14	0.00005	0.000026	0.002355	0.000025	0.0075	0.0002495	0.00145	0.73	0.08985	0.0085
	HCT-1	0.0664	0.0011175	0.00071	0.029675	0.000005	0.0000025	0.025	0.00026	0.00001425	14.85	0.00005	0.00003	0.0022725	0.000025	0.00725	0.00021025	0.001525	0.775	0.093825	0.00575
	HCT-1	0.0639	0.00113	0.00067	0.0305	0.000005	0.0000025	0.025	0.00025	0.000014	15.7	0.00005	0.000034	0.00219	0.000025	0.007	0.000171	0.0016	0.82	0.0978	0.003
	HCT-1	0.0649	0.0011325	0.000705	0.030375	0.000005	0.0000025	0.025	0.00024	0.00001475	15.65	0.00005	0.00003275	0.00213	0.000025	0.007	0.00019125	0.001525	0.8125	0.094775	0.00475
	HCT-1	0.0659	0.001135	0.00074	0.03025	0.000005	0.0000025	0.025	0.00023	0.0000155	15.6	0.00005	0.0000315	0.00207	0.000025	0.007	0.0002115	0.00145	0.805	0.09175	0.0065
	HCT-1	0.0669	0.0011375	0.000775	0.030125	0.000005	0.0000025	0.025	0.00022	0.00001625	15.55	0.00005	0.00003025	0.00201	0.000025	0.007	0.00023175	0.001375	0.7975	0.088725	0.00825
	HCT-1	0.0679	0.00114	0.00081	0.03	0.000005	0.0000025	0.025	0.00021	0.000017	15.5	0.00005	0.000029	0.00195	0.000025	0.007	0.000252	0.0013	0.79	0.0857	0.01
	HCT-1	0.065475	0.001145	0.0007825	0.03195	0.000005	0.0000025	0.025	0.00022	0.00001725	16.9	0.00005	0.00003575	0.0023875	0.000025	0.0065	0.00023	0.00145	0.88	0.086325	0.01075
	HCT-1	0.06305	0.00115	0.000755	0.0339	0.000005	0.0000025	0.025	0.00023	0.0000175	18.3	0.00005	0.0000425	0.002825	0.000025	0.006	0.000208	0.0016	0.97	0.08695	0.0115
	HCT-1	0.060625	0.001155	0.0007275	0.03585	0.000005	0.0000025	0.025	0.00024	0.00001775	19.7	0.00005	0.00004925	0.0032625	0.000025	0.0055	0.000186	0.00175	1.06	0.087575	0.01225
	HCT-1	0.0582	0.00116	0.0007	0.0378	0.000005	0.0000025	0.025	0.00025	0.000018	21.1	0.00005	0.000056	0.0037	0.000025	0.005	0.000164	0.0019	1.15	0.0882	0.013
	HCT-1	0.0631	0.00106	0.0007	0.03405	0.000005	0.0000025	0.025	0.000235	0.0000165	18.8	0.00005	0.00004575	0.0032675	0.000025	0.00525	0.00015825	0.00165	1.02	0.0813	0.01425
	HCT-1	0.068	0.00096	0.0007	0.0303	0.000005	0.0000025	0.025	0.00022	0.000015	16.5	0.00005	0.0000355	0.002835	0.000025	0.0055	0.0001525	0.0014	0.89	0.0744	0.0155
	HCT-1	0.0729	0.00086	0.0007	0.02655	0.000005	0.0000025	0.025	0.000205	0.0000135	14.2	0.00005	0.00002525	0.0024025	0.000025	0.00575	0.00014675	0.00115	0.76	0.0675	0.01675
	HCT-1	0.0778	0.00076	0.0007	0.0228	0.000005	0.0000025	0.025	0.00019	0.000012	11.9	0.00005	0.000015	0.00197	0.000025	0.006	0.000141	0.0009	0.63	0.0606	0.018
	HCT-1	0.071175	0.0007425	0.0006375	0.023325	0.000005	0.0000025	0.025	0.0001875	0.00001275	12.25	0.00005	0.000018	0.0018925	0.000025	0.0055	0.000128	0.0009	0.635	0.061975	0.0145
	HCT-1	0.06455	0.000725	0.000575	0.02385	0.000005	0.0000025	0.025	0.000185	0.0000135	12.6	0.00005	0.000021	0.001815	0.000025	0.005	0.000115	0.0009	0.64	0.06335	0.011
	HCT-1	0.057925	0.0007075	0.0005125	0.024375	0.000005	0.0000025	0.025	0.0001825	0.00001425	12.95	0.00005	0.000024	0.0017375	0.000025	0.0045	0.000102	0.0009	0.645	0.064725	0.0075
	HCT-1	0.0513	0.00069	0.00045	0.0249	0.000005	0.0000025	0.025	0.00018	0.000015	13.3	0.00005	0.000027	0.00166	0.000025	0.004	0.000089	0.0009	0.65	0.0661	0.004

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Mercury (Hg)-Dissolved (mg/L)	(Mo)-Dissolved (mg/L)	Nickel (Ni)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Rubidium (Rb)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Tellurium (Te)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Thorium (Th)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Tungsten (W)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
HCT-1 IRON CAP																					
	HCT-1	0.00001	0.00366	0.00088	44	0.0567	0.0145	1.5	0.0001	14.8	0.942	0.00001	0.000143	0.000025	0.00009	0.00025	0.00105	0.00516	0.0005	0.007	0.0002
	HCT-1	0.000001	0.00517	0.00027	20.7	0.0266	0.0117	1.9	0.000007	6.83	0.457	0.00004	0.000095	0.0000025	0.00003	0.0006	0.00078	0.00699	0.0011	0.001	0.0001
	HCT-1	0.00001	0.00222	0.00008	15.7	0.0191	0.0113	2	0.0000025	3.66	0.338	0.00004	0.000052	0.0000025	0.000005	0.00025	0.00068	0.0049	0.0017	0.0002	0.00005
	HCT-1	0.00001	0.00207	0.00007	11.3	0.0139	0.00944	1.8	0.0000025	2.03	0.269	0.00004	0.000037	0.0000025	0.00002	0.00025	0.00074	0.00429	0.0017	0.0008	0.00005
	HCT-1	0.00001	0.00131	0.00011	7.32	0.00931	0.00758	1.5	0.0000025	1.06	0.197	0.00004	0.00003	0.0000025	0.00001	0.00025	0.00056	0.00314	0.0013	0.0015	0.00005
	HCT-1	0.000001	0.00161	0.00008	6.34	0.00886	0.00767	1.4	0.0000025	0.91	0.213	0.00004	0.00003	0.0000025	0.00027	0.00025	0.00098	0.00335	0.0016	0.0006	0.00005
	HCT-1	0.000004	0.00076	0.00005	5.73	0.00753	0.00764	1.5	0.0000025	0.77	0.228	0.00002	0.000028	0.0000025	0.000005	0.00025	0.00045	0.00339	0.0012	0.0059	0.00005
	HCT-1	0.000001	0.00115	0.00014	4.64	0.00651	0.00568	1.3	0.000015	0.59	0.186	0.00002	0.000129	0.0000025	0.00002	0.00025	0.00044	0.00336	0.0011	0.0054	0.00005
	HCT-1	0.000001	0.00151	0.00014	6.37	0.00859	0.00829	1.8	0.0000025	0.85	0.282	0.00004	0.000057	0.0000025	0.00001	0.00025	0.00067	0.00717	0.0013	0.0021	0.00005
	HCT-1	0.000001	0.00106	0.00024	3.99	0.00568	0.00517	1.5	0.0000025	0.46	0.176	0.00001	0.000023	0.0000025	0.00013	0.0006	0.00051	0.00266	0.0012	0.0018	0.00005
	HCT-1	0.000001	0.00155	0.00023	4.42	0.00657	0.00645	1.7	0.000006	0.55	0.224	0.00003	0.000026	0.0000025	0.000005	0.00025	0.00069	0.00461	0.0012	0.0041	0.00005
	HCT-1	0.000001	0.00134	0.00015	4.52	0.00617	0.00562	1.9	0.000005	0.55	0.219	0.00001	0.000026	0.0000025	0.00018	0.00025	0.00145	0.00494	0.0011	0.0034	0.00005
	HCT-1	0.000001	0.00157	0.00003	3.79	0.00561	0.00457	1.6	0.0000025	0.44	0.217	0.00002	0.000022	0.0000025	0.000005	0.00025	0.00068	0.00403	0.0012	0.0015	0.00005
	HCT-1	0.000001	0.00076	0.00001	3.87	0.00519	0.00451	1.6	0.0000025	0.49	0.218	0.00002	0.000023	0.0000025	0.000005	0.00025	0.00047	0.00247	0.0009	0.0011	0.00005
	HCT-1	0.000001	0.00134	0.00009	3.22	0.00411	0.00346	1.2	0.000009	0.33	0.18	0.00003	0.00002	0.0000025	0.00003	0.00025	0.00087	0.00313	0.0011	0.0012	0.00005
	HCT-1	0.000001	0.00092	0.00009	2.19	0.00324	0.00278	1.1	0.000008	0.27	0.129	0.00002	0.000016	0.0000025	0.000005	0.00025	0.00064	0.00173	0.001	0.001	0.00005
	HCT-1	0.000001	0.00196	0.00005	2.21	0.00345	0.00286	1	0.0000025	0.24	0.151	0.00001	0.000016	0.0000025	0.00002	0.00025	0.00074	0.00265	0.0011	0.0015	0.00005
	HCT-1	0.000001	0.00117	0.00015	2.55	0.00416	0.00314	1.3	0.000009	0.3	0.174	0.00001	0.000019	0.0000025	0.00004	0.00025	0.00058	0.00359	0.0008	0.0038	0.00005
	HCT-1	0.000001	0.00101	0.00004	1.97	0.00316	0.00234	1	0.0000025	0.21	0.128	0.00002	0.000014	0.0000025	0.00001	0.00025	0.00059	0.00157	0.0008	0.001	0.00005
	HCT-1	0.000001	0.00137	0.00009	2.31	0.0037	0.00287	1.4	0.0000025	0.28	0.166	0.00002	0.000021	0.0000025	0.00003	0.00025	0.0007	0.00334	0.0009	0.0073	0.00005
	HCT-1	0.000001	0.00138	0.000065	2.61	0.003995	0.002995	1.5	0.00000725	0.3	0.1685	0.00003	0.0000255	0.00000475	0.000035	0.001225	0.000685	0.00298	0.0012	0.0048	0.00005
	HCT-1	0.000001	0.00139	0.00004	2.91	0.00429	0.00312	1.6	0.000012	0.32	0.171	0.00004	0.00003	0.000007	0.00004	0.0022	0.00067	0.00262	0.0015	0.0023	0.00005
	HCT-1	0.000001	0.00149	0.000045	2.66	0.00413	0.0033	1.55	0.00000725	0.32	0.174	0.000025	0.000026	0.0000065	0.0000225	0.001225	0.00068	0.00265	0.0013	0.0019	0.00005
	HCT-1	0.000001	0.00159	0.00005	2.41	0.00397	0.00348	1.5	0.0000025	0.32	0.177	0.00001	0.000022	0.000006	0.000005	0.00025	0.00069	0.00268	0.0011	0.0015	0.00005
	HCT-1	0.000001	0.00155	0.00019	2.215	0.00373	0.0031	1.4	0.0000025	0.3	0.165	0.000015	0.00002	0.00000425	0.000005	0.000675	0.00066	0.00264	0.001	0.0026	0.00005
	HCT-1	0.000001	0.00151	0.00033	2.02	0.00349	0.00272	1.3	0.0000025	0.28	0.153	0.00002	0.000018	0.0000025	0.000005	0.0011	0.00063	0.0026	0.0009	0.0037	0.00005
	HCT-1	0.000001	0.00158	0.00018	2.045	0.003675	0.002745	1.35	0.0000025	0.255	0.1635	0.000015	0.0000185	0.0000025	0.000005	0.000675	0.00058	0.00278	0.00065	0.00235	0.00005
	HCT-1	0.000001	0.00165	0.00003	2.07	0.00386	0.00277	1.4	0.0000025	0.23	0.174	0.00001	0.000019	0.0000025	0.000005	0.00025	0.00053	0.00296	0.0004	0.001	0.00005
	HCT-1	0.000001	0.00183	0.000035	1.975	0.0037	0.00274	1.35	0.0000025	0.235	0.161	0.00002	0.000019	0.0000025	0.0000875	0.000425	0.000465	0.00265	0.00065	0.001	0.00005
	HCT-1	0.000001	0.00201	0.00004	1.88	0.00354	0.00271	1.3	0.0000025	0.24	0.148	0.00003	0.000019	0.0000025	0.00017	0.0006	0.0004	0.00234	0.0009	0.001	0.00005
	HCT-1	0.000001	0.002215	0.00012	1.84	0.00336	0.0027	1.25	0.0000025	0.225	0.148	0.00002	0.0000175	0.0000025	0.0000875	0.000425	0.000315	0.00223	0.00105	0.00175	0.00005
	HCT-1	0.000001	0.00242	0.0002	1.8	0.00318	0.00269	1.2	0.0000025	0.21	0.148	0.00001	0.000016	0.0000025	0.000005	0.00025	0.00023	0.00212	0.0012	0.0025	0.00005
	HCT-1	0.000001	0.0029	0.00013	1.86	0.00312	0.002695	1.3	0.0000025	0.23	0.1485	0.00001	0.0000175	0.0000025	0.0001325	0.00025	0.0002	0.002055	0.0012	0.0016	0.00005
	HCT-1	0.000001	0.00338	0.00006	1.92	0.00306	0.0027	1.4	0.0000025	0.25	0.149	0.00001	0.000019	0.0000025	0.00026	0.00025	0.00017	0.00199	0.0012	0.0007	0.00005
	HCT-1	0.000001	0.003495	0.00008	1.72	0.002835	0.0026	1.3	0.0000025	0.22	0.1455	0.00002	0.0000175	0.0000025	0.000235	0.00025	0.00014	0.00195	0.00095	0.0013	0.00005
	HCT-1	0.000001	0.00361	0.0001	1.52	0.00261	0.0025	1.2	0.0000025	0.19	0.142	0.00003	0.000016	0.0000025	0.00021	0.00025	0.00011	0.00191	0.0007	0.0019	0.00005
	HCT-1	0.000002	0.004315	0.00009	1.49	0.00262	0.002345	1.15	0.00000525	0.215	0.1405	0.00003	0.000018	0.0000025	0.000275	0.00025	0.0001	0.00197	0.00065	0.0017	0.00005
	HCT-1	0.000003	0.00502	0.00008	1.46	0.00263	0.00219	1.1	0.000008	0.24	0.139	0.00003	0.00002	0.0000025	0.00034	0.00025	0.00009	0.00203	0.0006	0.0015	0.00005
	HCT-1	0.000002	0.005525	0.000125	1.345	0.00259	0.002155	1	0.00000525	0.205	0.131	0.00002	0.0000185	0.0000025	0.00038	0.00025	0.000075	0.001625	0.00065	0.00125	0.00005
	HCT-1	0.000001	0.00603	0.00017	1.23	0.00255	0.00212	0.9	0.0000025	0.17	0.123	0.00001	0.000017	0.0000025	0.00042	0.00025	0.00006	0.00122	0.0007	0.001	0.00005
	HCT-1	0.000001	0.006695	0.00015	1.2125	0.00252	0.00206	0.925	0.0000025	0.1825	0.129	0.00001	0.00001625	0.0000025	0.000375	0.00025	0.0000625	0.0013675	0.000625	0.001025	0.00005
	HCT-1	0.000001	0.00736	0.00013	1.195	0.00249	0.002	0.95	0.0000025	0.195	0.135	0.00001	0.0000155	0.0000025	0.00033	0.00025	0.000065	0.001515	0.00055	0.00105	0.00005
	HCT-1	0.000001	0.008025	0.00011	1.1775	0.00246	0.00194	0.975	0.0000025	0.2075	0.141	0.00001	0.00001475	0.0000025	0.000285	0.00025	0.0000675	0.0016625	0.000475	0.001075	0.00005
	HCT-1	0.000001	0.00869	0.00009	1.16	0.00243	0.00188	1	0.0000025	0.22	0.147	0.00001	0.000014	0.0000025	0.00024	0.00025	0.00007	0.00181	0.0004	0.0011	0.00005
	HCT-1	0.000001	0.0088025	0.000085	1.185	0.0024175	0.0019375	1	0.0000025	0.21	0.14525	0.00001	0.00001375	0.0000025	0.00023	0.00025	0.000065	0.001695	0.000425	0.00105	0.00005
	HCT-1	0.000001	0.008915	0.00008	1.21	0.002405	0.001995	1	0.0000025	0.2	0.1435	0.00001	0.0000135	0.0000025	0.00022	0.00025	0.00006	0.00158	0.00045	0.001	0.00005
	HCT-1	0.000001	0.0090275	0.000075	1.235	0.0023925	0.0020525	1	0.0000025	0.19	0.14175	0.00001	0.00001325	0.0000025	0.00021	0.00025	0.000055	0.001465	0.000475	0.00095	0.00005
	HCT-1	0.000001	0.00914	0.00007	1.26	0.00238	0.00211	1	0.0000025	0.18	0.14	0.00001	0.000013	0.0000025	0.0002	0.00025	0.00005	0.00135	0.0005	0.0009	0.00005
	HCT-1	0.000001	0.0090825	0.00008	1.2975	0.002485	0.0022125	1.05	0.0000025	0.1975	0.15025	0.00001	0.00001425	0.0000025	0.000175	0.00025	0.0000475	0.0014725	0.000475	0.0009	0.00005
	HCT-1	0.000001	0.009025	0.00009	1.335	0.00259	0.002315	1.1	0.0000025	0.215	0.1605	0.00001	0.0000155	0.0000025	0.00015	0.00025	0.000045	0.001595	0.00045	0.0009	0.00005
	HCT-1	0.000001	0.0089675	0.0001	1.3725	0.002695	0.0024175	1.15	0.0000025	0.2325	0.17075	0.00001	0.00001675	0.0000025	0.000125	0.00025	0.0000425	0.0017175	0.000425	0.0009	0.00005
	HCT-1	0.000001	0.00891	0.00011	1.41	0.0028	0.00252	1.2	0.0000025	0.25	0.181	0.00001	0.000018	0.0000025	0.0001	0.00025	0.00004	0.00184	0.0004	0.0009	0.00005
	HCT-1	0.000001	0.0081825	0.0001	1.28	0.0025025	0.002265	1.075	0.0000025	0.2225	0.16175	0.00001	0.000016	0.0000025	0.0001	0.00025	0.00004	0.001576	0.00035	0.0009	0.00005
	HCT-1	0.000001	0.007455	0.00009	1.15	0.002205	0.00201	0.95	0.0000025	0.195	0.1425	0.00001	0.000014	0.0000025	0.0001	0.00025	0.00004	0.001312	0.0003	0.0009	0.00005
	HCT-1	0.000001	0.0067275	0.00008	1.02	0.0019075	0.001755	0.825	0.0000025	0.1675	0.12325	0.00001	0.000012	0.0000025	0.0001	0.00025	0.00004	0.001048	0.00025	0.0009	0.00005
	HCT-1	0.000001	0.006	0.00007	0.89	0.00161	0.0015	0.7	0.0000025	0.14	0.104	0.00001	0.00001	0.0000025	0.0001	0.00025	0.00004	0.000784	0.0002	0.0009	0.00005
	HCT-1	0.000001	0.005815	0.0000625	0.845	0.001575	0.0015175	0.725	0.0000025	0.1375	0.1045	0.00001	0.0000095	0.0000025	0.00015	0.00025	0.000035	0.00081925	0.000225	0.0008	0.00005
	HCT-1	0.000001	0.00563	0.000055	0.8	0.00154	0.001535	0.75	0.0000025	0.135	0.105	0.00001	0.000009	0.0000025	0.0002	0.00025	0.00003	0.0008545	0.00025	0.0007	0.00005
	HCT-1	0.000001	0.005445	0.0000475	0.755	0.001505	0.0015525	0.775	0.0000025	0.1325	0.1055	0.00001	0.0000085	0.0000025	0.00025	0.00025	0.000025	0.00088975	0.000275	0.0006	0.00005
	HCT-1	0.000001	0.00526	0.00004	0.71	0.00147	0.00157	0.8	0.0000025	0.13	0.106	0.00001	0.000008	0.0000025	0.0003	0.00025	0.00002	0.000925	0.0003	0.0005	0.00005

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	TYPE	Time Sampled	Sample ID	Matrix	Total Volume In (mL)	Volume Out (mL)	ORP mV	Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Acidity (as $CaCO_3$) ($CaCO_3$ mg/L)	Alkalinity, Total (as $CaCO_3$) ($CaCO_3$ mg/L)	Sulfate (SO_4) (mg/L)	Chloride (Cl) (mg/L)	Fluoride (F) (mg/L)
	HCT-1	60	23-Apr-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	130	36.75	76	7.72	0.25	0.25	16.85	20	0.25	0.02
	HCT-1	61	30-Apr-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	325	110	37.6	79	7.67	0.25	0.25	16.8	20	0.25	0.02
	HCT-1	62	7-May-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	130	38.45	78	7.72	0.25	0.25	16.75	21	0.25	0.02
	HCT-1	63	14-May-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	310	130	39.3	102	7.68	0.25	0.25	16.7	22	0.25	0.03
	HCT-1	64	21-May-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	330	130	39.8	116	7.79	0.25	0.5475	18.275	22	0.25	0.02
	HCT-1	65	28-May-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	320	125	40.3	97	7.87	0.25	0.845	19.85	22	0.25	0.02
	HCT-1	66	4-Jun-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	335	140	40.8	114	7.79	0.25	1.1425	21.425	22	0.25	0.02
	HCT-1	67	11-Jun-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	345	135	41.3	102	7.76	0.25	1.44	23	21	0.25	0.02
	HCT-1	68	18-Jun-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	315	145	41.25	88	7.7	0.25	2.0125	23.25	21	0.3875	0.02
	HCT-1	69	25-Jun-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	325	140	41.2	113	7.97	0.25	2.585	23.5	20	0.525	0.02
	HCT-1	70	2-Jul-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	340	140	41.15	107	7.95	0.25	3.1575	23.75	19	0.6625	0.03
	HCT-1	71	9-Jul-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	335	140	41.1	100	7.96	0.25	3.73	24	19	0.8	0.03
	HCT-1	72	16-Jul-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	325	145	38.45	100	7.76	0.25	3.37	20.975	17	0.6625	0.03
	HCT-1	73	23-Jul-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	325	145	35.8	94	7.98	0.25	3.01	17.95	16	0.525	0.03
	HCT-1	74	30-Jul-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	340	140	33.15	101	7.93	0.25	2.65	14.925	15	0.3875	0.02
	HCT-1	75	6-Aug-12	Iron Cap	0	IRON CAP	0	CL	0	CARB	0	Drillcore			Water	350	315	150	30.5	86	7.63	0.25	2.29	11.9	14	0.25	0.02
Mean last 10	10																	142	38.47	100.5	7.843	0.25	2.53875	20.4675	18.4375	0.47	0.024225
HCT-2 IRON CAP																											
	HCT-2	0	28-Feb-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	750	485	140	164	534	8.08	0.25	1	43	190	2.3	0.57
	HCT-2	1	7-Mar-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	500	370	150	189	556	7.85	0.25	1.2	27	230	1.9	0.63
	HCT-2	2	14-Mar-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	375	150	115	375	7.86	0.25	0.25	25	130	0.7	0.71
	HCT-2	3	21-Mar-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	410	165	94	285	8.16	0.25	0.25	25	98	0.25	0.55
	HCT-2	4	28-Mar-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	380	155	73.9	208	8.12	0.25	1.4	25	76	0.25	0.55
	HCT-2	5	4-Apr-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	375	125	71.3	212	7.82	0.25	0.25	22	62	0.25	0.43
	HCT-2	6	11-Apr-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	400	130	80.8	220	7.71	0.25	0.7	27	63	0.25	0.42
	HCT-2	7	18-Apr-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	390	140	70.6	192	7.93	0.25	0.25	27	56	0.25	0.41
	HCT-2	8	25-Apr-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	385	130	65.3	184	8	0.25	0.25	24	49	0.25	0.38
	HCT-2	9	2-May-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	380	150	63.1	165	7.93	0.25	0.9	25	42	0.25	0.34
	HCT-2	10	9-May-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	380	210	60.9	175	8.22	0.25	0.25	24	46	0.25	0.30
	HCT-2	11	16-May-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	390	140	58.7	155	8.1	0.25	0.25	26	39	0.25	0.24
	HCT-2	12	23-May-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	380	145	70.7	187	7.89	0.25	2	22	50	0.6	0.28
	HCT-2	13	30-May-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	400	140	52.7	138	7.89	0.25	0.9	23	40	2	0.20
	HCT-2	14	6-Jun-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	360	190	49.9	128	7.86	0.25	0.25	17	29	0.7	0.14
	HCT-2	15	13-Jun-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	390	150	59.2	154	7.99	0.25	0.25	21	41	0.25	0.14
	HCT-2	16	20-Jun-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	380	150	54.4	145	7.78	0.25	1	21	41	0.25	0.13
	HCT-2	17	27-Jun-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	395	145	54.2	145	7.62	0.25	1.9	20	35	0.9	0.12
	HCT-2	18	4-Jul-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	375	150	53.8	139	7.83	0.25	0.6	17	37	0.7	0.12
	HCT-2	19	11-Jul-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	400	145	46.4	124	7.78	0.25	1.1	16	27	0.7	0.09
	HCT-2	20	18-Jul-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	400	210	47.35	126	7.85	0.25	1	19	28	1.15	0.10
	HCT-2	21	25-Jul-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	395	170	48.3	126	7.76	0.25	0.9	22	29	1.6	0.10
	HCT-2	22	1-Aug-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	385	210	48.15	130	7.71	0.25	0.575	21.5	29	1.6	0.09
	HCT-2	23	8-Aug-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	400	175	48	125	7.92	0.25	0.25	21	28	1.6	0.08
	HCT-2	24	15-Aug-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	400	175	46.5	126	7.63	0.25	0.25	20.5	27	3.8	0.08
	HCT-2	25	22-Aug-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	390	180	45	112	7.98	0.25	0.25	20	25	6	0.08
	HCT-2	26	29-Aug-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	390	130	46	112	7.95	0.25	0.25	20	28	3.55	0.09
	HCT-2	27	5-Sep-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	385	160	47	136	8.18	0.25	0.25	20	30	1.1	0.09
	HCT-2	28	12-Sep-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	400	175	43.35	109	7.16	0.25	0.25	18	26	1.2	0.09
	HCT-2	29	19-Sep-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	370	320	39.7	104	7.69	0.25	0.25	16	21	1.3	0.08
	HCT-2	30	26-Sep-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	400	190	41	100	7.76	0.25	0.25	15.5	23	1.35	0.08
	HCT-2	31	3-Oct-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	380	140	42.3	105	7.72	0.25	0.25	15	25	1.4	0.07
	HCT-2	32	10-Oct-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	390	200	43.15	116	7.89	0.25	0.25	16	24	1.25	0.07
	HCT-2	33	17-Oct-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	375	225	44	98	7.78	0.25	0.25	17	22	1.1	0.07
	HCT-2	34	24-Oct-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	390	225	43.4	117	7.55	0.25	0.25	16.5	22	1.6	0.08
	HCT-2	35	31-Oct-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	370	245	42.8	117	7.45	0.25	0.25	16	21	2.1	0.08
	HCT-2	36	7-Nov-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	385	210	41	100	7.5	0.25	0.525	16.25	21	2.3	0.07
	HCT-2	37	14-Nov-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	390	215	39.2	112	7.78	0.25	0.8	16.5	22	2.5	0.07
	HCT-2	38	21-Nov-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	360	270	38.35	110	7.54	0.25	0.525	15.95	21	3.15	0.06
	HCT-2	39	28-Nov-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	350	255	37.5	99	7.66	0.25	0.25	15.4	20	3.8	0.06
	HCT-2	40	5-Dec-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	380	150	37.625	116	7.54	0.25	0.25	15.05	20	3.4	0.06
	HCT-2	41	12-Dec-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	380	130	37.75	110	7.49	0.25	0.25	14.7	20	3	0.06
	HCT-2	42	19-Dec-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	375	145	37.875	90	7.55	0.25	0.25	14.35	20	2.6	0.06

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cesium (Cs)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	(La)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	(Mn)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)
	HCT-1	0.05615	0.0006795	0.0004655	0.027125	0.000005	0.0000025	0.025	0.00017275	0.0000155	13.575	0.00005	0.000027	0.001985	0.000025	0.0056	0.00011175	0.0009475	0.68225	0.071625	0.00445
	HCT-1	0.061	0.000669	0.000481	0.02935	0.000005	0.0000025	0.025	0.0001655	0.000016	13.85	0.00005	0.000027	0.00231	0.000025	0.0072	0.0001345	0.000995	0.7145	0.07715	0.0049
	HCT-1	0.06585	0.0006585	0.0004965	0.031575	0.000005	0.0000025	0.025	0.00015825	0.0000165	14.125	0.00005	0.000027	0.002635	0.000025	0.0088	0.00015725	0.0010425	0.74675	0.082675	0.00535
	HCT-1	0.0707	0.000648	0.000512	0.0338	0.000005	0.0000025	0.025	0.000151	0.000017	14.4	0.00005	0.000027	0.00296	0.000025	0.0104	0.00018	0.00109	0.779	0.0882	0.0058
	HCT-1	0.06745	0.00068375	0.00051275	0.032125	0.000005	0.0000025	0.025	0.00018925	0.000015975	14.625	0.00005	0.000026825	0.0027675	0.000025	0.008775	0.00015965	0.001105	0.77775	0.08125	0.0046
	HCT-1	0.0642	0.0007195	0.0005135	0.03045	0.000005	0.0000025	0.025	0.0002275	0.00001495	14.85	0.00005	0.00002665	0.002575	0.000025	0.00715	0.0001393	0.00112	0.7765	0.0743	0.0034
	HCT-1	0.06095	0.00075525	0.00051425	0.028775	0.000005	0.0000025	0.025	0.00026575	0.000013925	15.075	0.00005	0.000026475	0.0023825	0.000025	0.005525	0.00011895	0.001135	0.77525	0.06735	0.0022
	HCT-1	0.0577	0.000791	0.000515	0.0271	0.000005	0.0000025	0.025	0.000304	0.0000129	15.3	0.00005	0.0000263	0.00219	0.000025	0.0039	0.0000986	0.00115	0.774	0.0604	0.001
	HCT-1	0.05785	0.0007705	0.00052475	0.02655	0.000005	0.0000025	0.025	0.00028925	0.000013225	15.25	0.00005	0.000026375	0.0028825	0.000025	0.0039	0.00010095	0.001195	0.7835	0.06	0.001925
	HCT-1	0.058	0.00075	0.0005345	0.026	0.000005	0.0000025	0.025	0.0002745	0.00001355	15.2	0.00005	0.00002645	0.003575	0.000025	0.0039	0.0001033	0.00124	0.793	0.0596	0.00285
	HCT-1	0.05815	0.0007295	0.00054425	0.02545	0.000005	0.0000025	0.025	0.00025975	0.000013875	15.15	0.00005	0.000026525	0.0042675	0.000025	0.0039	0.00010565	0.001285	0.8025	0.0592	0.003775
	HCT-1	0.0583	0.000709	0.000554	0.0249	0.000005	0.0000025	0.025	0.000245	0.0000142	15.1	0.00005	0.0000266	0.00496	0.000025	0.0039	0.000108	0.00133	0.812	0.0588	0.0047
	HCT-1	0.06575	0.0006205	0.0005255	0.023775	0.000005	0.0000025	0.025	0.00021975	0.00001415	14.125	0.00005	0.0000252	0.0047075	0.000025	0.006325	0.00013525	0.00118	0.757	0.0595	0.006125
	HCT-1	0.0732	0.000532	0.000497	0.02265	0.000005	0.0000025	0.025	0.0001945	0.0000141	13.15	0.00005	0.0000238	0.004455	0.000025	0.00875	0.0001625	0.00103	0.702	0.0602	0.00755
	HCT-1	0.08065	0.0004435	0.0004685	0.021525	0.000005	0.0000025	0.025	0.00016925	0.00001405	12.175	0.00005	0.0000224	0.0042025	0.000025	0.011175	0.00018975	0.00088	0.647	0.0609	0.008975
	HCT-1	0.0881	0.000355	0.00044	0.0204	0.000005	0.0000025	0.025	0.000144	0.000014	11.2	0.00005	0.000021	0.00395	0.000025	0.0136	0.000217	0.00073	0.592	0.0616	0.0104
Mean last 10	10	0.065865	0.000645625	0.000511775	0.0247125	0.000005	0.0000025	0.025	0.000236575	1.37975E-05	14.1725	0.00005	2.51125E-05	0.00375725	0.000025	0.0064875	0.000133995	0.0011155	0.743825	0.060755	0.00495
HCT-2 IRON CAP																					
	HCT-2	0.0542	0.00098	0.00101	0.0647	0.000005	0.0000025	0.025	0.00233	0.000187	58.7	0.0002	0.000794	0.0058	0.000025	0.003	0.000115	0.0135	4.22	0.195	0.021
	HCT-2	0.0477	0.00118	0.00133	0.0456	0.000005	0.0000025	0.025	0.00217	0.000229	67.3	0.00005	0.000929	0.00333	0.000025	0.005	0.000062	0.0158	5.06	0.262	0.029
	HCT-2	0.0637	0.00123	0.00138	0.0473	0.000005	0.0000025	0.025	0.00149	0.000107	40.9	0.00005	0.00034	0.00235	0.000025	0.002	0.000055	0.0119	3.06	0.128	0.021
	HCT-2	0.0681	0.00126	0.00164	0.0546	0.000005	0.0000025	0.025	0.00124	0.00011	33.8	0.00005	0.00031	0.00272	0.000025	0.003	0.000039	0.0089	2.35	0.117	0.026
	HCT-2	0.081	0.00106	0.00164	0.0599	0.000005	0.0000025	0.025	0.00098	0.000079	26.9	0.00005	0.000178	0.00387	0.000025	0.004	0.000053	0.0067	1.62	0.0864	0.017
	HCT-2	0.0916	0.00108	0.00164	0.0539	0.000005	0.0000025	0.025	0.00076	0.000082	26.1	0.00005	0.000187	0.00315	0.000025	0.004	0.000061	0.0064	1.48	0.0917	0.018
	HCT-2	0.0777	0.00127	0.0015	0.047	0.000005	0.0000025	0.025	0.00075	0.000144	29.7	0.00005	0.000328	0.00431	0.000025	0.002	0.000041	0.0064	1.65	0.149	0.018
	HCT-2	0.0736	0.00134	0.00147	0.0474	0.000005	0.0000025	0.025	0.00067	0.000125	25.9	0.00005	0.000324	0.00392	0.000025	0.004	0.000076	0.0057	1.45	0.13	0.015
	HCT-2	0.0797	0.00139	0.0016	0.045	0.000005	0.0000025	0.025	0.00059	0.00012	24.2	0.00005	0.000327	0.00416	0.000025	0.007	0.000196	0.0054	1.21	0.129	0.018
	HCT-2	0.0839	0.0012	0.00146	0.0487	0.000005	0.0000025	0.025	0.00053	0.000096	23.6	0.00005	0.000227	0.00352	0.000025	0.015	0.000067	0.0043	1.03	0.112	0.019
	HCT-2	0.0756	0.00123	0.00144	0.0408	0.000005	0.0000025	0.025	0.00048	0.000105	22.8	0.00005	0.000278	0.00383	0.000025	0.005	0.000054	0.0038	0.98	0.113	0.008
	HCT-2	0.0864	0.00118	0.00131	0.0411	0.000005	0.0000025	0.025	0.0004	0.000095	22	0.00005	0.00018	0.00384	0.000025	0.004	0.000066	0.0036	0.92	0.12	0.008
	HCT-2	0.066	0.00135	0.00158	0.0444	0.000005	0.0000025	0.025	0.00046	0.000106	26.7	0.00005	0.000254	0.00465	0.000025	0.004	0.000065	0.0041	0.96	0.142	0.015
	HCT-2	0.0781	0.00113	0.00132	0.0353	0.000005	0.0000025	0.025	0.00029	0.000075	19.9	0.00005	0.00016	0.0035	0.000025	0.004	0.000056	0.003	0.74	0.109	0.008
	HCT-2	0.0885	0.00096	0.00111	0.0331	0.000005	0.0000025	0.025	0.00029	0.000088	18.9	0.0008	0.000179	0.0222	0.000025	0.019	0.00045	0.0024	0.62	0.0922	0.003
	HCT-2	0.0721	0.00107	0.0011	0.0349	0.000005	0.0000025	0.025	0.00032	0.000086	22.6	0.00005	0.000186	0.00433	0.000025	0.008	0.000104	0.0027	0.67	0.114	0.019
	HCT-2	0.0699	0.00097	0.00112	0.0293	0.000005	0.0000025	0.025	0.00028	0.000085	20.7	0.00005	0.000169	0.00385	0.000025	0.005	0.000064	0.0026	0.63	0.114	0.015
	HCT-2	0.0673	0.00105	0.00091	0.0288	0.000005	0.0000025	0.025	0.00025	0.000096	20.6	0.00005	0.000195	0.00389	0.000025	0.005	0.000072	0.0026	0.68	0.132	0.021
	HCT-2	0.0679	0.00088	0.00082	0.0321	0.000005	0.0000025	0.025	0.00026	0.000075	20.7	0.00005	0.000142	0.00366	0.000025	0.005	0.000061	0.002	0.55	0.113	0.017
	HCT-2	0.0637	0.00082	0.00085	0.0342	0.000005	0.0000025	0.025	0.00026	0.000083	17.7	0.00005	0.000164	0.00336	0.000025	0.004	0.000041	0.0019	0.5	0.123	0.006
	HCT-2	0.17035	0.000815	0.00096	0.0477	0.0000075	0.00000675	0.025	0.00027	0.0000945	18.15	0.00005	0.0002105	0.00843	0.0000525	0.0395	0.00025	0.0019	0.48	0.1535	0.041
	HCT-2	0.277	0.00081	0.00107	0.0612	0.00001	0.000011	0.025	0.00028	0.000106	18.6	0.00005	0.000257	0.0135	0.00008	0.075	0.000459	0.0019	0.46	0.184	0.076
	HCT-2	0.16955	0.000825	0.00094	0.049	0.0000075	0.00000675	0.025	0.000235	0.000099	18.5	0.00005	0.000228	0.008685	0.0000525	0.04	0.0002605	0.0019	0.46	0.1735	0.055
	HCT-2	0.0621	0.00084	0.00081	0.0368	0.000005	0.0000025	0.025	0.00019	0.000092	18.4	0.00005	0.000199	0.00387	0.000025	0.005	0.000062	0.0019	0.46	0.163	0.034
	HCT-2	0.0627	0.000845	0.0008	0.0347	0.000005	0.00000375	0.025	0.000215	0.000083	17.9	0.000075	0.0002055	0.004575	0.000025	0.009	0.0000975	0.0018	0.425	0.147	0.0485
	HCT-2	0.0633	0.00085	0.00079	0.0326	0.000005	0.000005	0.025	0.00024	0.000074	17.4	0.0001	0.000212	0.00528	0.000025	0.013	0.000133	0.0017	0.39	0.131	0.063
	HCT-2	0.05745	0.00084	0.00076	0.0348	0.000005	0.00000375	0.025	0.00024	0.0000795	17.8	0.000075	0.0001915	0.00449	0.000025	0.0085	0.000088	0.0017	0.375	0.137	0.032
	HCT-2	0.0516	0.00083	0.00073	0.037	0.000005	0.0000025	0.025	0.00024	0.000085	18.2	0.00005	0.000171	0.0037	0.000025	0.004	0.000043	0.0017	0.36	0.143	0.001
	HCT-2	0.05695	0.000725	0.000735	0.0359	0.000005	0.0000025	0.025	0.00021	0.000073	16.8	0.00005	0.000137	0.003815	0.000025	0.0045	0.000051	0.00155	0.335	0.128	0.004
	HCT-2	0.0623	0.00062	0.00074	0.0348	0.000005	0.0000025	0.025	0.00018	0.000061	15.4	0.00005	0.000103	0.00393	0.000025	0.005	0.000059	0.0014	0.31	0.113	0.007
	HCT-2	0.0542	0.000635	0.000665	0.03325	0.000005	0.0000025	0.025	0.00017	0.0000665	15.9	0.00005	0.0001245	0.003725	0.000025	0.006	0.0000675	0.0015	0.31	0.12	0.0075
	HCT-2	0.0461	0.00065	0.00059	0.0317	0.000005	0.0000025	0.025	0.00016	0.000072	16.4	0.00005	0.000146	0.00352	0.000025	0.007	0.000076	0.0016	0.31	0.127	0.008
	HCT-2	0.05235	0.00063	0.00058	0.0343	0.000005	0.0000025	0.025	0.00016	0.0000725	16.75	0.00005	0.000136	0.003365	0.000025	0.0065	0.00006	0.0015	0.295	0.128	0.007
	HCT-2	0.0586	0.00061	0.00057	0.0369	0.000005	0.0000025	0.025	0.00016	0.000073	17.1	0.00005	0.000126	0.00321	0.000025	0.006	0.000044	0.0014	0.28	0.129	0.006
	HCT-2	0.0649	0.00062	0.0007	0.0389	0.000005	0.0000025	0.025	0.000165	0.000072	16.9	0.00005	0.000132	0.004305	0.000025	0.0115	0.000085	0.0013	0.275	0.1235	0.011
	HCT-2	0.0712	0.00063	0.00083	0.0409	0.000005	0.0000025	0.025	0.00017	0.000071	16.7	0.00005	0.000138	0.0054	0.000025	0.017	0.000126	0.0012	0.27	0.118	0.016
	HCT-2	0.0652	0.000595	0.00075	0.03795	0.000005	0.0000025	0.025	0.00017	0.000072	16	0.00005	0.0001545	0.0052	0.000025	0.017	0.0002395	0.00135	0.26	0.125	0.0135
	HCT-2	0.0592	0.00056	0.00067	0.035	0.000005	0.0000025	0.025	0.00017	0.000073	15.3	0.00005	0.000171	0.005	0.000025	0.017	0.000353	0.0015	0.25	0.132	0.011
	HCT-2	0.05975	0.00052	0.000625	0.0332	0.000005	0.0000025	0.025	0.00017	0.0000665	15	0.00005	0.000143	0.004875	0.000025	0.013	0.0002715	0.0013	0.235	0.1185	0.0125
	HCT-2	0.0603	0.00048	0.00058	0.0314	0.000005	0.0000025	0.025	0.00017	0.00006	14.7	0.00005	0.000115	0.00475	0.000025	0.009	0.00019	0.0011	0.22	0.105	0.014
	HCT-2	0.064025	0.000465	0.000565	0.032525	0.000005	0.0000025	0.025	0.00016	0.00006	14.75	0.00005	0.0001145	0.004545	0.000025	0.00975	0.000161	0.0011	0.215	0.109	0.0115
	HCT-2	0.06775	0.00045	0.00055	0.03365	0.000005	0.0000025	0.025	0.00015	0.00006	14.8	0.00005	0.000114	0.00434	0.000025	0.0105	0.000132	0.0011	0.21	0.113	0.009
	HCT-2	0.071475	0.000435	0.000535	0.034775	0.000005	0.0000025	0.025	0.00014	0.00006	14.85	0.00005	0.0001135	0.004135	0.000025	0.01125	0.000103	0.0011	0.205	0.117	0.0065

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Mercury (Hg)-Dissolved (mg/L)	(Mo)-Dissolved (mg/L)	Nickel (Ni)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Rubidium (Rb)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Tellurium (Te)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Thorium (Th)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Tungsten (W)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
	HCT-1	0.000001	0.0055575	0.0000545	0.73175	0.0015125	0.00157	0.7875	0.0000025	0.13625	0.11125	0.00001	0.0000085	0.000003375	0.0003025	0.00025	0.00002275	0.00089125	0.000285	0.000535	0.00005
	HCT-1	0.000001	0.005855	0.000069	0.7535	0.001555	0.00157	0.775	0.0000025	0.1425	0.1165	0.00001	0.000009	0.00000425	0.000305	0.00025	0.0000255	0.0008575	0.00027	0.00057	0.00005
	HCT-1	0.000001	0.0061525	0.0000835	0.77525	0.0015975	0.00157	0.7625	0.0000025	0.14875	0.12175	0.00001	0.0000095	0.000005125	0.0003075	0.00025	0.00002825	0.00082375	0.000255	0.000605	0.00005
	HCT-1	0.000001	0.00645	0.000098	0.797	0.00164	0.00157	0.75	0.0000025	0.155	0.127	0.00001	0.00001	0.000006	0.00031	0.00025	0.000031	0.00079	0.00024	0.00064	0.00005
	HCT-1	0.000001	0.006295	0.00010025	0.804	0.00162	0.0015675	0.785	0.0000025	0.15125	0.12875	0.00001	0.000010325	0.000005125	0.0003	0.00025	0.00003025	0.000855	0.0002475	0.000665	0.00005
	HCT-1	0.000001	0.00614	0.0001025	0.811	0.0016	0.001565	0.82	0.0000025	0.1475	0.1305	0.00001	0.00001065	0.00000425	0.00029	0.00025	0.0000295	0.00092	0.000255	0.00069	0.00005
	HCT-1	0.000001	0.005985	0.00010475	0.818	0.00158	0.0015625	0.855	0.0000025	0.14375	0.13225	0.00001	0.000010975	0.000003375	0.00028	0.00025	0.00002875	0.000985	0.0002625	0.000715	0.00005
	HCT-1	0.000001	0.00583	0.000107	0.825	0.00156	0.00156	0.89	0.0000025	0.14	0.134	0.00001	0.0000113	0.0000025	0.00027	0.00025	0.000028	0.00105	0.00027	0.00074	0.00005
	HCT-1	0.000001	0.0055825	0.00010375	0.82	0.00168	0.00157	0.9	0.0000025	0.1395	0.1335	0.00001	0.000011575	0.0000025	0.0002275	0.00025	0.00002675	0.00099975	0.0002975	0.000925	0.00005
	HCT-1	0.000001	0.005335	0.0001005	0.815	0.0018	0.00158	0.91	0.0000025	0.139	0.133	0.00001	0.00001185	0.0000025	0.000185	0.00025	0.0000255	0.0009495	0.000325	0.00111	0.00005
	HCT-1	0.000001	0.0050875	0.00009725	0.81	0.00192	0.00159	0.92	0.0000025	0.1385	0.1325	0.00001	0.000012125	0.0000025	0.0001425	0.00025	0.00002425	0.00089925	0.0003525	0.001295	0.00005
	HCT-1	0.000001	0.00484	0.000094	0.805	0.00204	0.0016	0.93	0.0000025	0.138	0.132	0.00001	0.0000124	0.0000025	0.0001	0.00025	0.000023	0.000849	0.00038	0.00148	0.00005
	HCT-1	0.000001	0.0044975	0.000159	0.756	0.0018725	0.0014495	0.85	0.0000025	0.15975	0.1227	0.00001	0.0000118	0.0000025	0.00017	0.00025	0.00002225	0.00073675	0.00037	0.0014575	0.00005
	HCT-1	0.000001	0.004155	0.000224	0.707	0.001705	0.001299	0.77	0.0000025	0.1815	0.1134	0.00001	0.0000112	0.0000025	0.00024	0.00025	0.0000215	0.0006245	0.00036	0.001435	0.00005
	HCT-1	0.000001	0.0038125	0.000289	0.658	0.0015375	0.0011485	0.69	0.0000025	0.20325	0.1041	0.00001	0.0000106	0.0000025	0.00031	0.00025	0.00002075	0.00051225	0.00035	0.0014125	0.00005
	HCT-1	0.000001	0.00347	0.000354	0.609	0.00137	0.000998	0.61	0.0000025	0.225	0.0948	0.00001	0.00001	0.0000025	0.00038	0.00025	0.00002	0.0004	0.00034	0.00139	0.00005
Mean last 10	10	0.000001	0.0048595	0.000163325	0.7623	0.0017065	0.00143575	0.8325	0.0000025	0.160825	0.123225	0.00001	1.13825E-05	2.5875E-06	0.0002305	0.00025	0.000024075	0.0008006	0.00033075	0.001196	0.00005
HCT-2 IRON CAP																					
	HCT-2	0.00005	0.0102	0.00061	27.3	0.0354	0.0119	1.1	0.000006	18.8	0.889	0.00001	0.000158	0.000025	0.00003	0.00025	0.00105	0.00682	0.0001	0.0093	0.00005
	HCT-2	0.000001	0.0134	0.0003	25.5	0.0316	0.015	1.7	0.0000025	18.6	0.851	0.00001	0.000171	0.0000025	0.00002	0.00025	0.00064	0.014	0.0003	0.0023	0.00005
	HCT-2	0.000005	0.011	0.00006	18	0.0205	0.00931	1.6	0.0000025	9.63	0.605	0.00001	0.000097	0.0000025	0.000005	0.00025	0.00047	0.00766	0.0004	0.0007	0.00005
	HCT-2	0.000005	0.0129	0.00009	14.1	0.0174	0.00605	1.9	0.0000025	5.74	0.492	0.00001	0.000087	0.0000025	0.00003	0.00025	0.00054	0.00659	0.0006	0.0011	0.00005
	HCT-2	0.000005	0.00796	0.00031	10.6	0.0126	0.00379	1.7	0.0000025	2.93	0.371	0.00001	0.000068	0.0000025	0.000005	0.00025	0.00038	0.00423	0.0006	0.0021	0.00005
	HCT-2	0.000001	0.00987	0.00013	8.41	0.0109	0.00305	1.5	0.0000025	1.99	0.362	0.00001	0.000067	0.0000025	0.000005	0.00025	0.0004	0.00415	0.0008	0.0011	0.00005
	HCT-2	0.000003	0.00727	0.00003	8.38	0.0104	0.0029	1.8	0.0000025	1.66	0.387	0.00001	0.000073	0.0000025	0.000005	0.00025	0.00028	0.00698	0.0006	0.0029	0.00005
	HCT-2	0.000001	0.00961	0.00019	6.83	0.00948	0.00208	1.8	0.000008	1.19	0.35	0.00001	0.000064	0.0000025	0.00001	0.00025	0.00035	0.00856	0.0006	0.01	0.00005
	HCT-2	0.000001	0.00833	0.00009	6.08	0.00779	0.00214	1.9	0.0000025	0.88	0.331	0.00001	0.000067	0.0000025	0.00001	0.00025	0.0003	0.00733	0.0007	0.0031	0.00005
	HCT-2	0.000001	0.0082	0.00033	5.45	0.00755	0.00193	1.8	0.0000025	0.68	0.303	0.00001	0.000049	0.0000025	0.00002	0.00025	0.00031	0.0054	0.0006	0.0073	0.00005
	HCT-2	0.000001	0.00856	0.0002	4.72	0.00669	0.00187	1.8	0.0000025	0.58	0.288	0.00001	0.00004	0.0000025	0.000005	0.00025	0.00029	0.00572	0.0007	0.0118	0.00005
	HCT-2	0.000001	0.00845	0.00004	4.33	0.00599	0.00167	1.8	0.000006	0.51	0.282	0.00001	0.000046	0.00001	0.00006	0.00025	0.00062	0.00571	0.0007	0.0026	0.00005
	HCT-2	0.000001	0.00914	0.00009	4.45	0.00647	0.00173	2	0.0000025	0.49	0.349	0.00001	0.000055	0.0000025	0.000005	0.00025	0.00032	0.0063	0.0007	0.0025	0.00005
	HCT-2	0.000001	0.00401	0.00001	3.49	0.00474	0.00132	1.6	0.0000025	0.38	0.261	0.00001	0.000039	0.0000025	0.000005	0.00025	0.00014	0.00255	0.0005	0.0017	0.00005
	HCT-2	0.000001	0.0082	0.00241	2.94	0.00404	0.00112	1.3	0.000006	0.3	0.234	0.00001	0.000034	0.0000025	0.00002	0.00025	0.00026	0.00385	0.0005	0.0116	0.00005
	HCT-2	0.000001	0.00839	0.00007	2.95	0.00431	0.00128	1.6	0.000005	0.33	0.263	0.00002	0.00004	0.000006	0.00001	0.00025	0.00024	0.00507	0.0005	0.002	0.00005
	HCT-2	0.000001	0.00872	0.00006	2.64	0.00406	0.00117	1.4	0.0000025	0.27	0.237	0.00001	0.000036	0.0000025	0.00002	0.00025	0.0002	0.00385	0.0006	0.0022	0.00005
	HCT-2	0.000001	0.00909	0.00003	2.79	0.00415	0.00115	1.4	0.0000025	0.31	0.243	0.00001	0.000033	0.0000025	0.00002	0.00025	0.00012	0.00444	0.0004	0.0027	0.00005
	HCT-2	0.000001	0.0081	0.00003	2.39	0.00351	0.00094	1.3	0.0000025	0.25	0.223	0.00001	0.000035	0.0000025	0.000005	0.00025	0.00017	0.00315	0.0005	0.0011	0.00005
	HCT-2	0.000001	0.00664	0.00009	2.05	0.00309	0.0008	1.2	0.0000025	0.21	0.204	0.00001	0.00003	0.0000025	0.000005	0.00025	0.00013	0.00359	0.0004	0.0011	0.00005
	HCT-2	0.000001	0.00723	0.000085	2.06	0.00344	0.0008	1.4	0.00000575	0.23	0.203	0.00002	0.000035	0.00000575	0.0000175	0.001025	0.000145	0.003385	0.0007	0.0022	0.00005
	HCT-2	0.000001	0.00782	0.00008	2.07	0.00379	0.0008	1.6	0.000009	0.25	0.202	0.00003	0.00004	0.000009	0.00003	0.0018	0.00016	0.00318	0.001	0.0033	0.00005
	HCT-2	0.000001	0.00816	0.00013	1.965	0.00332	0.000915	1.4	0.00000575	0.255	0.2085	0.00002	0.000035	0.00000575	0.0000175	0.001025	0.000165	0.003205	0.0007	0.0078	0.00005
	HCT-2	0.000001	0.0085	0.00018	1.86	0.00285	0.00103	1.2	0.0000025	0.26	0.215	0.00001	0.00003	0.0000025	0.000005	0.00025	0.00017	0.00323	0.0004	0.0123	0.00005
	HCT-2	0.000001	0.008375	0.00037	1.77	0.0029	0.00093	1.2	0.0000025	0.25	0.2045	0.00001	0.000029	0.0000025	0.000005	0.000625	0.000165	0.003155	0.00035	0.0152	0.00005
	HCT-2	0.000001	0.00825	0.00056	1.68	0.00295	0.00083	1.2	0.0000025	0.24	0.194	0.00001	0.000028	0.0000025	0.000005	0.001	0.00016	0.00308	0.0003	0.0181	0.00005
	HCT-2	0.000001	0.00757	0.000295	1.625	0.00304	0.000805	1.2	0.0000025	0.205	0.198	0.00001	0.0000285	0.0000025	0.0000075	0.000625	0.000135	0.002915	0.0002	0.0097	0.00005
	HCT-2	0.000001	0.00689	0.00003	1.57	0.00313	0.00078	1.2	0.0000025	0.17	0.202	0.00001	0.000029	0.0000025	0.00001	0.00025	0.00011	0.00275	0.0001	0.0013	0.00005
	HCT-2	0.000001	0.007185	0.000035	1.47	0.002755	0.000715	1.1	0.0000025	0.175	0.1825	0.00001	0.000026	0.0000025	0.00009	0.00025	0.000115	0.0023	0.00015	0.00115	0.00005
	HCT-2	0.000001	0.00748	0.00004	1.37	0.00238	0.00065	1	0.0000025	0.18	0.163	0.00001	0.000023	0.0000025	0.00017	0.00025	0.00012	0.00185	0.0002	0.001	0.00005
	HCT-2	0.000001	0.007675	0.00009	1.345	0.00232	0.000645	1	0.0000025	0.175	0.167	0.00001	0.0000225	0.0000025	0.0000875	0.00025	0.000115	0.0021	0.0003	0.0017	0.00005
	HCT-2	0.000001	0.00787	0.00014	1.32	0.00226	0.00064	1	0.0000025	0.17	0.171	0.00001	0.000022	0.0000025	0.000005	0.00025	0.00011	0.00235	0.0004	0.0024	0.00005
	HCT-2	0.000001	0.0077	0.000095	1.325	0.002275	0.00062	1.05	0.0000025	0.18	0.167	0.00001	0.0000215	0.0000025	0.0000625	0.00025	0.000105	0.002215	0.0004	0.0016	0.00005
	HCT-2	0.000001	0.00753	0.00005	1.33	0.00229	0.0006	1.1	0.0000025	0.19	0.163	0.00001	0.000021	0.0000025	0.00012	0.00025	0.0001	0.00208	0.0004	0.0008	0.00005
	HCT-2	0.000001	0.007265	0.00004	1.325	0.002245	0.000665	1.1	0.0000025	0.175	0.168	0.000015	0.000021	0.0000025	0.00014	0.00025	0.00011	0.001775	0.0004	0.00105	0.00005
	HCT-2	0.000001	0.007	0.00003	1.32	0.0022	0.00073	1.1	0.0000025	0.16	0.173	0.00002	0.000021	0.0000025	0.00016	0.00025	0.00012	0.00147	0.0004	0.0013	0.00005
	HCT-2	0.000001	0.006905	0.00004	1.3	0.002165	0.00067	1	0.00000475	0.18	0.1685	0.000015	0.000023	0.0000025	0.00013	0.00025	0.00011	0.001595	0.00035	0.00165	0.00005
	HCT-2	0.000001	0.00681	0.00005	1.28	0.00213	0.00061	0.9	0.000007	0.2	0.164	0.00001	0.000025	0.0000025	0.0001	0.00025	0.0001	0.00172	0.0003	0.002	0.00005
	HCT-2	0.000001	0.006585	0.000085	1.175	0.002075	0.000565	0.85	0.00000475	0.175	0.156	0.00001	0.000023	0.0000025	0.00026	0.00025	0.000095	0.0014	0.00035	0.00255	0.00005
	HCT-2	0.000001	0.00636	0.00012	1.07	0.00202	0.00052	0.8	0.0000025	0.15	0.148	0.00001	0.000021	0.0000025	0.00042	0.00025	0.00009	0.00108	0.0004	0.0031	0.00005
	HCT-2	0.000001	0.006415	0.0001125	1.025	0.00194	0.0005	0.8	0.0000025	0.1625	0.148	0.00001	0.00002075	0.0000025	0.0004075	0.00025	0.00009	0.0011125	0.000375	0.0026	0.00005
	HCT-2	0.000001	0.00647	0.000105	0.98	0.00186	0.00048	0.8	0.0000025	0.175	0.148	0.00001	0.0000205	0.0000025	0.000395	0.00025	0.00009	0.001145	0.00035	0.0021	0.00005
	HCT-2	0.000001	0.006525	0.0000975	0.935	0.00178	0.00046	0.8	0.0000025	0.1875	0.148	0.00001	0.00002025	0.0000025	0.0003825	0.00025	0.00009	0.0011775	0.000325	0.0016	0.00005

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	TYPE	Time Sampled	Sample ID	Matrix	Total Volume In (mL)	Volume Out (mL)	ORP mV	Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Acidity (as $CaCO_3$) ($CaCO_3$ mg/L)	Alkalinity, Total (as $CaCO_3$) ($CaCO_3$ mg/L)	Sulfate (SO_4) (mg/L)	Chloride (Cl) (mg/L)	Fluoride (F) (mg/L)
	HCT-2	43	26-Dec-11	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	370	140	38	102	7.65	0.25	0.25	14	20	2.2	0.06
	HCT-2	44	2-Jan-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	370	120	38.75	110	7.74	0.25	0.25	14.575	21	2.225	0.06
	HCT-2	45	9-Jan-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	375	130	39.5	107	7.71	0.25	0.25	15.15	21	2.25	0.06
	HCT-2	46	16-Jan-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	370	120	40.25	105	7.8	0.25	0.25	15.725	22	2.275	0.06
	HCT-2	47	23-Jan-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	370	120	41	98	7.72	0.25	0.25	16.3	23	2.3	0.06
	HCT-2	48	30-Jan-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	380	115	42.375	99	7.63	0.25	1.4625	16.55	24	2.55	0.06
	HCT-2	49	6-Feb-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	375	120	43.75	99	7.63	0.25	2.675	16.8	26	2.8	0.07
	HCT-2	50	13-Feb-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	380	120	45.125	101	7.66	0.25	3.8875	17.05	28	3.05	0.07
	HCT-2	51	20-Feb-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	365	120	46.5	126	7.73	0.25	5.1	17.3	29	3.3	0.08
	HCT-2	52	27-Feb-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	350	390	130	44.125	102	7.64	0.25	3.8875	16.525	26	3.425	0.07
	HCT-2	53	5-Mar-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	350	375	130	41.75	94	7.63	0.25	2.675	15.75	23	3.55	0.06
	HCT-2	54	12-Mar-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	350	360	130	39.375	93	7.73	0.25	1.4625	14.975	20	3.675	0.05
	HCT-2	55	19-Mar-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	350	345	130	37	89	7.57	0.25	0.25	14.2	17	3.8	0.04
	HCT-2	56	26-Mar-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	350	360	130	36.625	98	7.57	0.25	0.3125	14.25	18	3.1	0.04
	HCT-2	57	2-Apr-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	385	135	36.25	89	7.62	0.25	0.375	14.3	19	2.4	0.04
	HCT-2	58	9-Apr-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	365	135	35.875	102	7.63	0.25	0.4375	14.35	19	1.7	0.04
	HCT-2	59	16-Apr-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	370	135	35.5	91	7.56	0.25	0.5	14.4	20	1	0.04
	HCT-2	60	23-Apr-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	355	135	34.475	84	7.68	0.25	0.4375	13.675	19	1.325	0.04
	HCT-2	61	30-Apr-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	365	135	33.45	92	7.75	0.25	0.375	12.95	18	1.65	0.03
	HCT-2	62	7-May-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	375	125	32.425	95	7.67	0.25	0.3125	12.225	17	1.975	0.03
	HCT-2	63	14-May-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	365	135	31.4	84	7.53	0.25	0.25	11.5	15	2.3	0.03
	HCT-2	64	21-May-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	365	135	33.125	99	7.55	0.25	0.495	12.325	16	2.2	0.03
	HCT-2	65	28-May-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	375	130	34.85	86	7.56	0.25	0.74	13.15	17	2.1	0.03
	HCT-2	66	4-Jun-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	375	135	36.575	98	7.72	0.25	0.985	13.975	18	2	0.03
	HCT-2	67	11-Jun-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	395	135	38.3	94	7.59	0.25	1.23	14.8	19	1.9	0.03
	HCT-2	68	18-Jun-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	365	150	39.1	93	7.7	0.25	1.415	15.325	21	2.025	0.03
	HCT-2	69	25-Jun-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	360	140	39.9	96	7.74	0.25	1.6	15.85	22	2.15	0.04
	HCT-2	70	2-Jul-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	375	145	40.7	99	7.66	0.25	1.785	16.375	23	2.275	0.04
	HCT-2	71	9-Jul-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	375	135	41.5	99	7.8	0.25	1.97	16.9	24	2.4	0.04
	HCT-2	72	16-Jul-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	370	140	39.4	85	7.61	0.25	1.8825	15.55	23	2.45	0.04
	HCT-2	73	23-Jul-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	370	145	37.3	78	7.58	0.25	1.795	14.2	21	2.5	0.04
	HCT-2	74	30-Jul-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	375	140	35.2	73	7.65	0.25	1.7075	12.85	20	2.55	0.04
	HCT-2	75	6-Aug-12	Iron Cap	0	IRON CAP	0	CL	0	0	0	Drillcore			Water	400	375	150	33.1	84	7.44	0.25	1.62	11.5	18	2.6	0.04
Mean last 10	10																	141.5	38.1075	89.9	7.649	0.25	1.599	14.7325	20.8375	2.285	0.037175
HCT-3 IRON CAP																											
	HCT-3	0	28-Feb-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	750	600	310	226	656	5.52	12.90	51.6	1.10	270.00	1.9	12.90
	HCT-3	1	7-Mar-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	470	240	231	617	6.03	5.04	17.7	1.90	250.00	4.1	5.04
	HCT-3	2	14-Mar-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	485	240	176	483	5.96	4.95	17.3	0.25	180.00	3.7	4.95
	HCT-3	3	21-Mar-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	460	260	100	301	5.57	6.95	23.7	0.25	120.00	0.25	6.95
	HCT-3	4	28-Mar-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	495	275	71.8	245	5.56	9.22	37.1	0.25	100.00	0.25	9.22
	HCT-3	5	4-Apr-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	470	300	79.6	255	5.32	13.00	47.1	0.25	96.00	0.25	13.00
	HCT-3	6	11-Apr-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	475	320	84.7	278	5.36	18.00	66.6	0.25	110.00	0.25	18.00
	HCT-3	7	18-Apr-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	470	310	73.1	248	5.19	17.80	61.9	0.25	100.00	0.25	17.80
	HCT-3	8	25-Apr-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	480	285	71.2	264	4.95	21.60	66.2	0.25	100.00	2.2	21.60
	HCT-3	9	2-May-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	465	295	69.2	235	5.01	18.40	66.6	0.25	88.00	0.25	18.40
	HCT-3	10	9-May-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	470	320	77.9	286	4.56	21.70	70.7	0.25	110.00	0.25	21.70
	HCT-3	11	16-May-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	460	295	65.5	233	4.9	18.20	62.4	0.25	96.00	0.25	18.20
	HCT-3	12	23-May-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	480	275	67.9	268	4.67	19.80	70.2	0.25	100.00	0.25	19.80
	HCT-3	13	30-May-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	480	290	68.3	240	4.54	18.60	65.9	0.25	98.00	0.25	18.60
	HCT-3	14	6-Jun-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	470	240	60	233	4.39	19.00	65.4	0.25	91.00	0.25	19.00
	HCT-3	15	13-Jun-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	480	280	66.3	257	4.31	17.10	57.4	0.25	97.00	0.25	17.10
	HCT-3	16	20-Jun-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	480	200	71.8	276	4.3	18.10	74.5	0.25	110.00	0.25	18.10
	HCT-3	17	27-Jun-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	475	180	56.4	251	4.15	10.60	69.1	0.25	86.00	0.7	10.60
	HCT-3	18	4-Jul-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	465	250	71	284	4.06	16.50	69	0.25	100.00	0.25	16.50
	HCT-3	19	11-Jul-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	475	290	57.5	265	3.91	1.50	59.8	0.25	88.00	0.25	1.50
	HCT-3	20	18-Jul-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	470	330	57.7	259	3.92	7.25	61.7	0.25	93.50	0.525	7.25
	HCT-3	21	25-Jul-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	480	360	57.9	290	3.81	13.00	63.6	0.25	99.00	0.8	13.00
	HCT-3	22	1-Aug-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	485	395	56.75	311	3.71	12.50	61.55	0.25	94.00	0.8	12.50
	HCT-3	23	8-Aug-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	470	400	55.6	287	3.71	12.00	59.5	0.25	89.00	0.8	12.00
	HCT-3	24	15-Aug-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	490	370	51.75	306	3.73	12.00	59.8	0.25	86.50	0.8	12.00
	HCT-3	25	22-Aug-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	495	395	47.9	269	3.68	12.00	60.1	0.25	84.00	0.8	12.00

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cesium (Cs)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	(La)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	(Mn)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)
	HCT-2	0.0752	0.00042	0.00052	0.0359	0.000005	0.0000025	0.025	0.00013	0.00006	14.9	0.00005	0.000113	0.00393	0.000025	0.012	0.000074	0.0011	0.2	0.121	0.004
	HCT-2	0.069975	0.0004275	0.0005425	0.036125	0.000005	0.0000025	0.025	0.0001375	0.00006075	15.2	0.00005	0.000113	0.00378	0.000025	0.01025	0.000069	0.001125	0.2	0.123	0.00525
	HCT-2	0.06475	0.000435	0.000565	0.03635	0.000005	0.0000025	0.025	0.000145	0.0000615	15.5	0.00005	0.000113	0.00363	0.000025	0.0085	0.000064	0.00115	0.2	0.125	0.0065
	HCT-2	0.059525	0.0004425	0.0005875	0.036575	0.000005	0.0000025	0.025	0.0001525	0.00006225	15.8	0.00005	0.000113	0.00348	0.000025	0.00675	0.000059	0.001175	0.2	0.127	0.00775
	HCT-2	0.0543	0.00045	0.00061	0.0368	0.000005	0.0000025	0.025	0.00016	0.000063	16.1	0.00005	0.000113	0.00333	0.000025	0.005	0.000054	0.0012	0.2	0.129	0.009
	HCT-2	0.05365	0.00047	0.0006075	0.0385	0.000005	0.0000025	0.025	0.000175	0.0001085	16.625	0.00005	0.00011775	0.00351	0.000025	0.0045	0.0000475	0.001225	0.2075	0.131	0.00975
	HCT-2	0.053	0.00049	0.000605	0.0402	0.000005	0.0000025	0.025	0.00019	0.000154	17.15	0.00005	0.0001225	0.00369	0.000025	0.004	0.000041	0.00125	0.215	0.133	0.0105
	HCT-2	0.05235	0.00051	0.0006025	0.0419	0.000005	0.0000025	0.025	0.000205	0.0001995	17.675	0.00005	0.00012725	0.00387	0.000025	0.0035	0.0000345	0.001275	0.2225	0.135	0.01125
	HCT-2	0.0517	0.00053	0.0006	0.0436	0.000005	0.0000025	0.025	0.00022	0.000245	18.2	0.00005	0.000132	0.00405	0.000025	0.003	0.000028	0.0013	0.23	0.137	0.012
	HCT-2	0.053425	0.00048	0.0005625	0.040275	0.000005	0.0000025	0.025	0.000205	0.00019425	17.3	0.00005	0.000126	0.00396	0.000025	0.004	0.0000315	0.0012	0.215	0.127575	0.01075
	HCT-2	0.05515	0.00043	0.000525	0.03695	0.000005	0.0000025	0.025	0.00019	0.0001435	16.4	0.00005	0.00012	0.00387	0.000025	0.005	0.000035	0.0011	0.2	0.11815	0.0095
	HCT-2	0.056875	0.00038	0.0004875	0.033625	0.000005	0.0000025	0.025	0.000175	0.00009275	15.5	0.00005	0.000114	0.00378	0.000025	0.006	0.0000385	0.001	0.185	0.108725	0.00825
	HCT-2	0.0586	0.00033	0.00045	0.0303	0.000005	0.0000025	0.025	0.00016	0.000042	14.6	0.00005	0.000108	0.00369	0.000025	0.007	0.000042	0.0009	0.17	0.0993	0.007
	HCT-2	0.054525	0.0003325	0.00047	0.030125	0.000005	0.0000025	0.025	0.00016	0.0000475	14.45	0.00005	0.0001165	0.00349	0.000025	0.00625	0.000038	0.000925	0.1675	0.106225	0.007
	HCT-2	0.05045	0.000335	0.00049	0.02995	0.000005	0.0000025	0.025	0.00016	0.000053	14.3	0.00005	0.000125	0.00329	0.000025	0.0055	0.000034	0.00095	0.165	0.11315	0.007
	HCT-2	0.046375	0.0003375	0.00051	0.029775	0.000005	0.0000025	0.025	0.00016	0.0000585	14.15	0.00005	0.0001335	0.00309	0.000025	0.00475	0.00003	0.000975	0.1625	0.120075	0.007
	HCT-2	0.0423	0.00034	0.00053	0.0296	0.000005	0.0000025	0.025	0.00016	0.000064	14	0.00005	0.000142	0.00289	0.000025	0.004	0.000026	0.001	0.16	0.127	0.007
	HCT-2	0.04265	0.00031675	0.0004735	0.030025	0.000005	0.0000025	0.025	0.00014375	0.00005925	13.6	0.00005	0.00013325	0.0029525	0.000025	0.00435	0.000027	0.000945	0.15125	0.1225	0.006575
	HCT-2	0.043	0.0002935	0.000417	0.03045	0.000005	0.0000025	0.025	0.0001275	0.0000545	13.2	0.00005	0.0001245	0.003015	0.000025	0.0047	0.000028	0.00089	0.1425	0.118	0.00615
	HCT-2	0.04335	0.00027025	0.0003605	0.030875	0.000005	0.0000025	0.025	0.00011125	0.00004975	12.8	0.00005	0.00011575	0.0030775	0.000025	0.00505	0.000029	0.000835	0.13375	0.1135	0.005725
	HCT-2	0.0437	0.000247	0.000304	0.0313	0.000005	0.0000025	0.025	0.000095	0.000045	12.4	0.00005	0.000107	0.00314	0.000025	0.0054	0.00003	0.00078	0.125	0.109	0.0053
	HCT-2	0.04435	0.0002615	0.0003375	0.0323	0.00002125	0.0000025	0.025	0.0001135	0.00006475	13.075	0.00005	0.000128	0.004045	0.000025	0.0051	0.00004775	0.00084	0.134	0.1145	0.004475
	HCT-2	0.045	0.000276	0.000371	0.0333	0.0000375	0.0000025	0.025	0.000132	0.0000845	13.75	0.00005	0.000149	0.00495	0.000025	0.0048	0.0000655	0.0009	0.143	0.12	0.00365
	HCT-2	0.04565	0.0002905	0.0004045	0.0343	0.00005375	0.0000025	0.025	0.0001505	0.00010425	14.425	0.00005	0.00017	0.005855	0.000025	0.0045	0.00008325	0.00096	0.152	0.1255	0.002825
	HCT-2	0.0463	0.000305	0.000438	0.0353	0.00007	0.0000025	0.025	0.000169	0.000124	15.1	0.00005	0.000191	0.00676	0.000025	0.0042	0.000101	0.00102	0.161	0.131	0.002
	HCT-2	0.045725	0.00030875	0.00043175	0.035275	0.00005375	0.0000025	0.025	0.000133	0.000109725	15.425	0.00005	0.00018725	0.00619	0.000025	0.004275	0.0000871	0.0010275	0.15775	0.138	0.00175
	HCT-2	0.04515	0.0003125	0.0004255	0.03525	0.0000375	0.0000025	0.025	0.000097	0.00009545	15.75	0.00005	0.0001835	0.00562	0.000025	0.00435	0.0000732	0.001035	0.1545	0.145	0.0015
	HCT-2	0.044575	0.00031625	0.00041925	0.035225	0.00002125	0.0000025	0.025	0.000061	0.000081175	16.075	0.00005	0.00017975	0.00505	0.000025	0.004425	0.0000593	0.0010425	0.15125	0.152	0.00125
	HCT-2	0.044	0.00032	0.000413	0.0352	0.000005	0.0000025	0.025	0.000025	0.0000669	16.4	0.00005	0.000176	0.00448	0.000025	0.0045	0.0000454	0.00105	0.148	0.159	0.001
	HCT-2	0.043875	0.000288	0.000386	0.03555	0.000005	0.0000025	0.025	0.00004325	0.000064425	15.575	0.00005	0.00017125	0.0042025	0.000025	0.004625	0.00005305	0.000955	0.1395	0.1545	0.001
	HCT-2	0.04375	0.000256	0.000359	0.0359	0.000005	0.0000025	0.025	0.0000615	0.00006195	14.75	0.00005	0.0001665	0.003925	0.000025	0.00475	0.0000607	0.00086	0.131	0.15	0.001
	HCT-2	0.043625	0.000224	0.000332	0.03625	0.000005	0.0000025	0.025	0.00007975	0.000059475	13.925	0.00005	0.00016175	0.0036475	0.000025	0.004875	0.00006835	0.000765	0.1225	0.1455	0.001
	HCT-2	0.0435	0.000192	0.000305	0.0366	0.000005	0.0000025	0.025	0.000098	0.000057	13.1	0.00005	0.000157	0.00337	0.000025	0.005	0.000076	0.00067	0.114	0.141	0.001
Mean last 10	10	0.044615	0.0002813	0.0003914	0.035485	0.000026125	0.0000025	0.025	0.0000918	0.000082435	15.0525	0.00005	0.0001744	0.00491	0.000025	0.00455	0.000070735	0.0009385	0.14315	0.14415	0.0014325
HCT-3 IRON CAP																					
	HCT-3	8.8	0.00875	0.0017	0.0329	0.00491	0.0000025	0.025	0.0022	0.0166	83.5	0.0002	0.152	2.71	0.0175	0.027	0.0378	0.0084	4.35	1.97	0.005
	HCT-3	1.93	0.00991	0.00122	0.0277	0.00239	0.0000025	0.025	0.0014	0.011	86.1	0.00005	0.147	0.637	0.00731	0.005	0.0142	0.005	3.77	2.2	0.019
	HCT-3	2.58	0.0113	0.0011	0.0276	0.00351	0.0000025	0.025	0.0015	0.00808	66	0.00005	0.111	0.59	0.00525	0.005	0.0185	0.0053	2.74	1.74	0.003
	HCT-3	3.91	0.00681	0.00077	0.0378	0.00391	0.0000025	0.025	0.00093	0.00543	37.7	0.00005	0.0756	0.733	0.00404	0.013	0.0205	0.0036	1.45	1.13	0.004
	HCT-3	5.2	0.00469	0.00064	0.0465	0.00426	0.0000025	0.025	0.00069	0.004	27.2	0.00005	0.0551	0.711	0.00312	0.02	0.0195	0.0029	0.94	0.784	0.012
	HCT-3	8.04	0.00402	0.0007	0.0479	0.0075	0.0000025	0.025	0.00054	0.00458	30.4	0.00005	0.0705	1.28	0.00423	0.04	0.0275	0.003	0.91	0.881	0.014
	HCT-3	10.9	0.0044	0.0011	0.0398	0.00976	0.000015	0.15	0.0006	0.00502	32.3	0.00025	0.0781	1.78	0.0061	0.075	0.0365	0.0015	1	0.978	0.005
	HCT-3	11.9	0.00354	0.00063	0.0401	0.00948	0.0000025	0.025	0.00051	0.00432	27.9	0.00005	0.0732	1.84	0.00528	0.088	0.0408	0.0021	0.83	0.813	0.012
	HCT-3	12.9	0.00368	0.00086	0.0335	0.0119	0.0000025	0.025	0.00053	0.00436	27.3	0.00005	0.0804	2.27	0.00554	0.136	0.0467	0.002	0.74	0.842	0.003
	HCT-3	11.7	0.0029	0.0008	0.0423	0.0113	0.000015	0.15	0.0005	0.00375	26.7	0.00025	0.064	2.07	0.0051	0.177	0.0476	0.0015	0.6	0.67	0.02
	HCT-3	12.7	0.0029	0.0009	0.0303	0.0122	0.000015	0.15	0.0006	0.00442	30.3	0.00025	0.0757	2.77	0.0061	0.302	0.0595	0.0015	0.6	0.722	0.005
	HCT-3	12.8	0.00255	0.00064	0.0417	0.0123	0.0000025	0.025	0.00043	0.00393	25.4	0.00005	0.0672	2.62	0.00529	0.314	0.0585	0.0012	0.5	0.588	0.011
	HCT-3	11.7	0.00227	0.00064	0.0417	0.0135	0.0000025	0.025	0.0004	0.00433	26.5	0.00005	0.0688	3.02	0.00734	0.459	0.0717	0.0013	0.44	0.631	0.013
	HCT-3	11.4	0.0022	0.0009	0.0441	0.0121	0.000015	0.15	0.0004	0.00402	26.6	0.00025	0.0687	3.35	0.0066	0.608	0.0726	0.0015	0.4	0.59	0.005
	HCT-3	11	0.0019	0.00078	0.044	0.0111	0.0000025	0.025	0.00038	0.00403	23.4	0.00005	0.0656	3.21	0.00652	0.628	0.07	0.001	0.39	0.544	0.005
	HCT-3	9.86	0.0017	0.0007	0.0555	0.0106	0.000015	0.15	0.0004	0.0041	26	0.00025	0.0641	3.61	0.008	0.897	0.0784	0.0015	0.3	0.506	0.005
	HCT-3	11.3	0.0019	0.001	0.0388	0.0111	0.000015	0.15	0.0005	0.00471	28.2	0.00025	0.0703	4.46	0.0099	1.16	0.0898	0.0015	0.3	0.563	0.01
	HCT-3	8.87	0.00163	0.00687	0.0447	0.0105	0.0000025	0.025	0.00034	0.00429	22.1	0.0002	0.0606	4.11	0.00804	1.23	0.0731	0.001	0.29	0.449	0.006
	HCT-3	10.1	0.00167	0.00096	0.0415	0.00893	0.0000025	0.025	0.00045	0.00494	28	0.00005	0.0634	4.59	0.00993	1.88	0.0816	0.00025	0.28	0.47	0.015
	HCT-3	8.23	0.0015	0.0009	0.0398	0.00689	0.000015	0.15	0.0004	0.00451	22.6	0.00025	0.0572	4.61	0.0086	1.89	0.0674	0.0015	0.15	0.402	0.005
	HCT-3	8.38	0.0015	0.00125	0.0373	0.006385	0.000015	0.15	0.00045	0.004685	22.9	0.00025	0.0592	4.89	0.0096	2.34	0.0634	0.0015	0.15	0.41	0.005
	HCT-3	8.53	0.0015	0.0016	0.0348	0.00588	0.000015	0.15	0.0005	0.00486	23.2	0.00025	0.0612	5.17	0.0106	2.79	0.0594	0.0015	0.15	0.418	0.005
	HCT-3	8.015	0.00145	0.0022	0.03325	0.005185	0.000015	0.15	0.0005	0.00492	22.75	0.00025	0.0601	5.295	0.0102	3.075	0.0565	0.0015	0.15	0.392	0.005
	HCT-3	7.5	0.0014	0.0028	0.0317	0.00449	0.000015	0.15	0.0005	0.00498	22.3	0.00025	0.059	5.42	0.0098	3.36	0.0536	0.0015	0.15	0.366	0.005
	HCT-3	6.76	0.0014	0.00275	0.03325	0.00391	0.000015	0.15	0.00045	0.004785	20.75	0.00025	0.05435	5.27	0.00995	3.56	0.04975	0.0015	0.15	0.3425	0.0175
	HCT-3	6.02	0.0014	0.0027	0.0348	0.00333	0.000015	0.15	0.0004	0.00459	19.2	0.00025	0.0497	5.12	0.0101	3.76	0.0459	0.0015	0.15	0.319	0.03

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Mercury (Hg)-Dissolved (mg/L)	(Mo)-Dissolved (mg/L)	Nickel (Ni)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Rubidium (Rb)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Tellurium (Te)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Thorium (Th)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Tungsten (W)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
	HCT-2	0.000001	0.00658	0.00009	0.89	0.0017	0.00044	0.8	0.0000025	0.2	0.148	0.00001	0.00002	0.0000025	0.00037	0.00025	0.00009	0.00121	0.0003	0.0011	0.00005
	HCT-2	0.000001	0.006645	0.0000775	0.9375	0.0017775	0.000455	0.825	0.0000025	0.1875	0.14875	0.00001	0.0000195	0.0000025	0.0003275	0.00025	0.00009	0.00123	0.0003	0.001125	0.00005
	HCT-2	0.000001	0.00671	0.000065	0.985	0.001855	0.00047	0.85	0.0000025	0.175	0.1495	0.00001	0.000019	0.0000025	0.000285	0.00025	0.00009	0.00125	0.0003	0.00115	0.00005
	HCT-2	0.000001	0.006775	0.0000525	1.0325	0.0019325	0.000485	0.875	0.0000025	0.1625	0.15025	0.00001	0.0000185	0.0000025	0.0002425	0.00025	0.00009	0.00127	0.0003	0.001175	0.00005
	HCT-2	0.000001	0.00684	0.00004	1.08	0.00201	0.0005	0.9	0.0000025	0.15	0.151	0.00001	0.000018	0.0000025	0.0002	0.00025	0.00009	0.00129	0.0003	0.0012	0.00005
	HCT-2	0.000001	0.0068925	0.00005	1.095	0.00217	0.0004925	0.925	0.0000025	0.16	0.1595	0.00001	0.00002025	0.0000025	0.000175	0.00025	0.00009	0.00134	0.0003	0.001625	0.00005
	HCT-2	0.000001	0.006945	0.00006	1.11	0.00233	0.000485	0.95	0.0000025	0.17	0.168	0.00001	0.0000225	0.0000025	0.00015	0.00025	0.00009	0.00139	0.0003	0.00205	0.00005
	HCT-2	0.000001	0.0069975	0.00007	1.125	0.00249	0.0004775	0.975	0.0000025	0.18	0.1765	0.00001	0.00002475	0.0000025	0.000125	0.00025	0.00009	0.00144	0.0003	0.002475	0.00005
	HCT-2	0.000001	0.00705	0.00008	1.14	0.00265	0.00047	1	0.0000025	0.19	0.185	0.00001	0.000027	0.0000025	0.0001	0.00025	0.00009	0.00149	0.0003	0.0029	0.00005
	HCT-2	0.000001	0.0068075	0.0000775	1.075	0.0024675	0.0004525	0.925	0.0000025	0.1725	0.1725	0.00001	0.000025	0.0000025	0.000125	0.00025	0.000085	0.001357	0.00025	0.002425	0.00005
	HCT-2	0.000001	0.006565	0.000075	1.01	0.002285	0.000435	0.85	0.0000025	0.155	0.16	0.00001	0.000023	0.0000025	0.00015	0.00025	0.00008	0.001224	0.0002	0.00195	0.00005
	HCT-2	0.000001	0.0063225	0.0000725	0.945	0.0021025	0.0004175	0.775	0.0000025	0.1375	0.1475	0.00001	0.000021	0.0000025	0.000175	0.00025	0.000075	0.001091	0.00015	0.001475	0.00005
	HCT-2	0.000001	0.00608	0.00007	0.88	0.00192	0.0004	0.7	0.0000025	0.12	0.135	0.00001	0.000019	0.0000025	0.0002	0.00025	0.00007	0.000958	0.0001	0.001	0.00005
	HCT-2	0.000001	0.006155	0.000065	0.855	0.0018625	0.0003975	0.7	0.0000025	0.12	0.13375	0.00001	0.000019	0.0000025	0.000225	0.00025	0.0000675	0.0010535	0.0001	0.001	0.00005
	HCT-2	0.000001	0.00623	0.00006	0.83	0.001805	0.000395	0.7	0.0000025	0.12	0.1325	0.00001	0.000019	0.0000025	0.00025	0.00025	0.000065	0.001149	0.0001	0.001	0.00005
	HCT-2	0.000001	0.006305	0.000055	0.805	0.0017475	0.0003925	0.7	0.0000025	0.12	0.13125	0.00001	0.000019	0.0000025	0.000275	0.00025	0.0000625	0.0012445	0.0001	0.001	0.00005
	HCT-2	0.000001	0.00638	0.00005	0.78	0.00169	0.00039	0.7	0.0000025	0.12	0.13	0.00001	0.000019	0.0000025	0.0003	0.00025	0.00006	0.00134	0.0001	0.001	0.00005
	HCT-2	0.000001	0.00626	0.00006375	0.74425	0.00157	0.000369	0.675	0.0000025	0.11575	0.1275	0.00001	0.000018	0.0000025	0.000275	0.00025	0.0000575	0.00117925	0.0001	0.0009475	0.00005
	HCT-2	0.000001	0.00614	0.0000775	0.7085	0.00145	0.000348	0.65	0.0000025	0.1115	0.125	0.00001	0.000017	0.0000025	0.00025	0.00025	0.000055	0.0010185	0.0001	0.000895	0.00005
	HCT-2	0.000001	0.00602	0.00009125	0.67275	0.00133	0.000327	0.625	0.0000025	0.10725	0.1225	0.00001	0.000016	0.0000025	0.000225	0.00025	0.0000525	0.00085775	0.0001	0.0008425	0.00005
	HCT-2	0.000001	0.0059	0.000105	0.637	0.00121	0.000306	0.6	0.0000025	0.103	0.12	0.00001	0.000015	0.0000025	0.0002	0.00025	0.00005	0.000697	0.0001	0.00079	0.00005
	HCT-2	0.000001	0.00613	0.00011425	0.667	0.0012725	0.000332	0.6325	0.000003775	0.106	0.12475	0.000014	0.00001685	0.0000025	0.000175	0.00025	0.0000545	0.00079525	0.0001	0.0008775	0.00005
	HCT-2	0.000001	0.00636	0.0001235	0.697	0.001335	0.000358	0.665	0.00000505	0.109	0.1295	0.000018	0.0000187	0.0000025	0.00015	0.00025	0.000059	0.0008935	0.0001	0.000965	0.00005
	HCT-2	0.000001	0.00659	0.00013275	0.727	0.0013975	0.000384	0.6975	0.000006325	0.112	0.13425	0.000022	0.00002055	0.0000025	0.000125	0.00025	0.0000635	0.00099175	0.0001	0.0010525	0.00005
	HCT-2	0.000001	0.00682	0.000142	0.757	0.00146	0.00041	0.73	0.0000076	0.115	0.139	0.000026	0.0000224	0.0000025	0.0001	0.00025	0.000068	0.00109	0.0001	0.00114	0.00005
	HCT-2	0.000001	0.0068	0.000122	0.7485	0.0015675	0.0003935	0.765	0.000006325	0.1145	0.14	0.000022	0.000021475	0.0000025	0.0001	0.00025	0.000063	0.001038	0.0001	0.00126	0.00005
	HCT-2	0.000001	0.00678	0.000102	0.74	0.001675	0.000377	0.8	0.00000505	0.114	0.141	0.000018	0.00002055	0.0000025	0.0001	0.00025	0.000058	0.000986	0.0001	0.00138	0.00005
	HCT-2	0.000001	0.00676	0.000082	0.7315	0.0017825	0.0003605	0.835	0.000003775	0.1135	0.142	0.000014	0.000019625	0.0000025	0.0001	0.00025	0.000053	0.000934	0.0001	0.0015	0.00005
	HCT-2	0.000001	0.00674	0.000062	0.723	0.00189	0.000344	0.87	0.0000025	0.113	0.143	0.00001	0.0000187	0.0000025	0.0001	0.00025	0.000048	0.000882	0.0001	0.00162	0.00005
	HCT-2	0.000001	0.0065475	0.000068	0.67	0.001725	0.00030725	0.7875	0.000003375	0.106	0.13425	0.00001	0.000017775	0.0000025	0.00018	0.00025	0.0000445	0.00084625	0.0001	0.001555	0.00005
	HCT-2	0.000001	0.006355	0.000074	0.617	0.00156	0.0002705	0.705	0.00000425	0.099	0.1255	0.00001	0.00001685	0.0000025	0.00026	0.00025	0.000041	0.0008105	0.0001	0.00149	0.00005
	HCT-2	0.000001	0.0061625	0.00008	0.564	0.001395	0.00023375	0.6225	0.000005125	0.092	0.11675	0.00001	0.000015925	0.0000025	0.00034	0.00025	0.0000375	0.00077475	0.0001	0.001425	0.00005
	HCT-2	0.000001	0.00597	0.000086	0.511	0.00123	0.000197	0.54	0.000006	0.085	0.108	0.00001	0.000015	0.0000025	0.00042	0.00025	0.000034	0.000739	0.0001	0.00136	0.00005
Mean last 10	10	0.000001	0.0065525	0.000095075	0.6789	0.00156825	0.00032775	0.73525	5.0325E-06	0.1064	0.132375	0.0000152	0.000018885	0.0000025	0.0001825	0.00025	0.00005105	0.000909225	0.0001	0.00137825	0.00005
HCT-3 IRON CAP																					
	HCT-3	0.00005	0.00042	0.0113	35.3	0.0505	0.0318	1.4	0.000009	6.17	0.885	0.00021	0.00114	0.000033	0.00003	0.00025	0.00016	0.0357	0.0001	1.07	0.0007
	HCT-3	0.000003	0.00084	0.00983	23.7	0.0324	0.041	3.7	0.0000025	3.97	0.739	0.00006	0.00074	0.000008	0.00002	0.00025	0.00003	0.00835	0.0001	0.66	0.0003
	HCT-3	0.000005	0.00042	0.00705	22.3	0.0296	0.0337	5.5	0.0000025	2.36	0.659	0.00007	0.000689	0.000012	0.00001	0.00025	0.00001	0.00913	0.0001	0.488	0.0005
	HCT-3	0.000005	0.00042	0.00511	14.4	0.0191	0.0214	5.3	0.0000025	0.95	0.415	0.00009	0.000434	0.000024	0.00001	0.00025	0.00002	0.0138	0.0001	0.379	0.0003
	HCT-3	0.000005	0.00044	0.00381	10.4	0.0135	0.0179	4.9	0.0000025	0.47	0.302	0.00009	0.000315	0.000013	0.000005	0.00025	0.00003	0.0172	0.0001	0.298	0.00005
	HCT-3	0.000001	0.00015	0.00483	9.09	0.0125	0.0213	5.2	0.0000025	0.38	0.325	0.00016	0.000324	0.000061	0.0001	0.00025	0.00012	0.0289	0.0002	0.391	0.00005
	HCT-3	0.000002	0.0019	0.0051	9.6	0.0127	0.0256	6.8	0.000015	1.2	0.356	0.0002	0.00036	0.00006	0.000025	0.0015	0.00012	0.0438	0.0005	0.449	0.00025
	HCT-3	0.000001	0.00024	0.00508	7.93	0.0108	0.021	6.5	0.0000025	0.31	0.294	0.00012	0.000332	0.00012	0.00002	0.00025	0.000005	0.0486	0.0001	0.39	0.00005
	HCT-3	0.000001	0.00021	0.00542	8.04	0.0109	0.024	7.1	0.0000025	0.28	0.29	0.00019	0.00033	0.000155	0.000005	0.00025	0.00001	0.0621	0.0001	0.434	0.0001
	HCT-3	0.000003	0.001	0.0044	6.9	0.0091	0.0213	7	0.000015	0.6	0.249	0.0001	0.00027	0.00013	0.0001	0.0015	0.00006	0.0666	0.0005	0.365	0.00025
	HCT-3	0.000001	0.00015	0.0051	6.7	0.0093	0.0244	8.7	0.000015	0.15	0.275	0.0002	0.0003	0.00023	0.000025	0.0015	0.000025	0.0869	0.0005	0.434	0.00025
	HCT-3	0.000001	0.00013	0.00425	6.02	0.00846	0.0223	7.2	0.000005	0.24	0.225	0.00016	0.000285	0.000481	0.00002	0.00025	0.00013	0.0933	0.0001	0.379	0.00005
	HCT-3	0.000001	0.00034	0.00442	5.18	0.0078	0.0232	7.5	0.000007	0.24	0.238	0.00019	0.000291	0.000696	0.000005	0.00025	0.00002	0.116	0.0001	0.411	0.00005
	HCT-3	0.000001	0.00015	0.005	5.8	0.0088	0.02	7.8	0.000015	0.4	0.218	0.0001	0.0003	0.00106	0.000025	0.0015	0.000025	0.134	0.017	0.417	0.00025
	HCT-3	0.000001	0.00014	0.00411	5.19	0.00777	0.0207	6.1	0.000014	0.25	0.188	0.00017	0.000288	0.00125	0.00004	0.00025	0.00002	0.135	0.0001	0.391	0.0028
	HCT-3	0.000001	0.0008	0.0039	4.6	0.0074	0.0191	7.6	0.000015	0.3	0.198	0.0003	0.00029	0.00117	0.000025	0.0015	0.000025	0.153	0.0005	0.412	0.00025
	HCT-3	0.000001	0.0006	0.0043	5.1	0.0094	0.0222	8.4	0.000015	0.3	0.21	0.0002	0.00031	0.00126	0.000025	0.0015	0.000025	0.166	0.0005	0.509	0.00025
	HCT-3	0.000001	0.000025	0.00356	4.37	0.00744	0.0175	7	0.000025	0.33	0.179	0.00024	0.000243	0.00192	0.00002	0.001	0.000005	0.158	0.0013	0.498	0.0001
	HCT-3	0.000001	0.00032	0.0038	4.44	0.00811	0.0183	8.2	0.000017	0.33	0.188	0.00021	0.000305	0.0028	0.00002	0.0009	0.00002	0.182	0.0001	0.498	0.00005
	HCT-3	0.000001	0.00015	0.0035	3.8	0.006	0.0155	7.4	0.000015	0.3	0.157	0.0003	0.0003	0.00227	0.000025	0.0015	0.000025	0.166	0.0005	0.508	0.00025
	HCT-3	0.000001	0.000475	0.00345	3.9	0.00645	0.0155	7.75	0.000015	0.35	0.159	0.0003	0.00032	0.002355	0.0000475	0.0015	0.000025	0.1615	0.0005	0.549	0.00025
	HCT-3	0.000001	0.0008	0.0034	4	0.0069	0.0155	8.1	0.000015	0.4	0.161	0.0003	0.00034	0.00244	0.00007	0.0015	0.000025	0.157	0.0005	0.59	0.00025
	HCT-3	0.000001	0.000475	0.00335	3.85	0.0068	0.01485	8	0.0000275	0.45	0.1485	0.00035	0.000335	0.003365	0.0000475	0.0015	0.000025	0.147	0.0005	0.586	0.00025
	HCT-3	0.000001	0.00015	0.0033	3.7	0.0067	0.0142	7.9	0.00004	0.5	0.136	0.0004	0.00033	0.00429	0.000025	0.0015	0.000025	0.137	0.0005	0.582	0.00025
	HCT-3	0.000001	0.00015	0.00325	3.25	0.006	0.01225	7.35	0.0000275	0.5	0.128	0.0004	0.000305	0.00436	0.000025	0.0015	0.000025	0.134	0.0005	0.5785	0.00025
	HCT-3	0.000001	0.00015	0.0032	2.8	0.0053	0.0103	6.8	0.000015	0.5	0.12	0.0004	0.00028	0.00443	0.000025	0.0015	0.000025	0.131	0.0005	0.575	0.00025

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	TYPE	Time Sampled	Sample ID	Matrix	Total Volume In (mL)	Volume Out (mL)	ORP mV	Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Acidity (as $CaCO_3$) ($CaCO_3$ mg/L)	Alkalinity, Total (as $CaCO_3$) ($CaCO_3$ mg/L)	Sulfate (SO_4) (mg/L)	Chloride (Cl) (mg/L)	Fluoride (F) (mg/L)
	HCT-3	26	29-Aug-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	470	300	45.9	285	3.66	10.25	56	0.25	83.00	0.525	10.25
	HCT-3	27	5-Sep-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	485	340	43.9	280	3.73	8.50	51.9	0.25	82.00	0.25	8.50
	HCT-3	28	12-Sep-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	490	250	49.3	287	3.65	9.75	58.9	0.25	89.50	0.425	9.75
	HCT-3	29	19-Sep-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	470	460	54.7	353	3.36	11.00	65.9	0.25	97.00	0.6	11.00
	HCT-3	30	26-Sep-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	475	475	78.85	475	3.3	14.50	106.95	0.25	139.50	0.425	14.50
	HCT-3	31	3-Oct-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	470	440	103	699	3.11	18.00	148	0.25	182.00	0.25	18.00
	HCT-3	32	10-Oct-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	465	470	114	1157	2.89	21.50	194	0.25	220.50	0.25	21.50
	HCT-3	33	17-Oct-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	475	460	125	1040	2.98	25.00	240	0.25	259.00	0.25	25.00
	HCT-3	34	24-Oct-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	475	470	126	1048	2.92	23.50	256	0.25	250.50	0.25	23.50
	HCT-3	35	31-Oct-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	480	430	127	1015	2.86	22.00	272	0.25	242.00	0.25	22.00
	HCT-3	36	7-Nov-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	475	460	100.15	936	3.02	20.50	242	0.25	186.50	0.25	20.50
	HCT-3	37	14-Nov-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	480	450	73.3	876	3.01	19.00	212	0.25	131.00	0.25	19.00
	HCT-3	38	21-Nov-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	475	460	65.8	850	3.01	18.50	171	0.25	152.00	0.25	18.50
	HCT-3	39	28-Nov-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	445	445	58.3	715	3.01	18.00	130	0.25	173.00	0.25	18.00
	HCT-3	40	5-Dec-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	480	456.25	59.9	706	3.08	18.75	135	0.25	166.00	0.25	18.75
	HCT-3	41	12-Dec-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	470	467.5	61.5	762	3.02	19.50	140	0.25	159.00	0.25	19.50
	HCT-3	42	19-Dec-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	475	478.75	63.1	657	3.03	20.25	145	0.25	152.00	0.25	20.25
	HCT-3	43	26-Dec-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	475	490	64.7	815	2.93	21.00	150	0.25	145.00	0.25	21.00
	HCT-3	44	2-Jan-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	470	485	62.475	785	2.99	20.00	158	0.25	155.75	0.25	20.00
	HCT-3	45	9-Jan-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	465	480	60.25	721	3.03	19.00	166	0.25	166.50	0.25	19.00
	HCT-3	46	16-Jan-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	450	475	58.025	778	2.99	18.00	174	0.25	177.25	0.25	18.00
	HCT-3	47	23-Jan-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	460	470	55.8	737	2.91	17.00	182	0.25	188.00	0.25	17.00
	HCT-3	48	30-Jan-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	435	470	61.15	965	2.99	13.58	199	0.25	193.50	0.25	13.58
	HCT-3	49	6-Feb-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	465	470	66.5	830	2.98	10.15	216	0.25	199.00	0.25	10.15
	HCT-3	50	13-Feb-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	475	470	71.85	903	2.95	6.73	233	0.25	204.50	0.25	6.73
	HCT-3	51	20-Feb-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	450	470	77.2	894	2.98	3.30	250	0.25	210.00	0.25	3.30
	HCT-3	52	27-Feb-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	465	463.75	65.45	716	3.02	5.23	215.25	0.25	186.50	0.25	5.23
	HCT-3	53	5-Mar-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	480	457.5	53.7	702	3.06	7.15	180.5	0.25	163.00	0.25	7.15
	HCT-3	54	12-Mar-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	495	451.25	41.95	666	3.09	9.08	145.75	0.25	139.50	0.25	9.08
	HCT-3	55	19-Mar-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	460	445	30.2	493	3.19	11.00	111	0.25	116.00	0.25	11.00
	HCT-3	56	26-Mar-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	465	452.5	35.675	642	3.07	12.25	122.75	0.25	128.25	0.25	12.25
	HCT-3	57	2-Apr-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	475	460	41.15	703	3.04	13.50	134.5	0.25	140.50	0.25	13.50
	HCT-3	58	9-Apr-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	460	467.5	46.625	750	3.04	14.75	146.25	0.25	152.75	0.25	14.75
	HCT-3	59	16-Apr-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	440	475	52.1	728	3.01	16.00	158	0.25	165.00	0.25	16.00
	HCT-3	60	23-Apr-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	445	473.75	51.025	754	2.99	16.00	165.25	0.25	169.25	0.25	16.00
	HCT-3	61	30-Apr-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	445	472.5	49.95	647	3.09	16.00	172.5	0.25	173.50	0.25	16.00
	HCT-3	62	7-May-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	470	471.25	48.875	734	3.04	16.00	179.75	0.25	177.75	0.25	16.00
	HCT-3	63	14-May-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	460	470	47.8	715	3.08	16.00	187	0.25	182.00	0.25	16.00
	HCT-3	64	21-May-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	475	470	47.65	871	2.99	16.00	180	0.25	177.50	0.25	16.00
	HCT-3	65	28-May-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	465	470	47.5	728	3.06	16.00	173	0.25	173.00	0.25	16.00
	HCT-3	66	4-Jun-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	480	470	47.35	735	3.04	16.00	166	0.25	168.50	0.25	16.00
	HCT-3	67	11-Jun-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	495	470	47.2	687	3.04	16.00	159	0.25	164.00	0.25	16.00
	HCT-3	68	18-Jun-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	470	468.75	46.9	651	3.05	15.25	159.75	0.25	161.00	0.3875	15.25
	HCT-3	69	25-Jun-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	480	467.5	46.6	675	3.04	14.50	160.5	0.25	158.00	0.525	14.50
	HCT-3	70	2-Jul-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	470	466.25	46.3	691	3.05	13.75	161.25	0.25	155.00	0.6625	13.75
	HCT-3	71	9-Jul-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	475	465	46	678	3.06	13.00	162	0.25	152.00	0.8	13.00
	HCT-3	72	16-Jul-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	465	442.5	45.8	582	3.07	13.50	163.5	0.25	152.00	0.6625	13.50
	HCT-3	73	23-Jul-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	475	420	45.6	644	3.06	14.00	165	0.25	152.00	0.525	14.00
	HCT-3	74	30-Jul-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	485	397.5	45.4	699	3.01	14.50	166.5	0.25	152.00	0.3875	14.50
	HCT-3	75	6-Aug-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	500	475	375	45.2	662	3.04	15.00	168	0.25	152.00	0.25	15.00
Mean last 10	10																	444.25	46.235	670.4	3.046	14.55	163.15	0.25	156.65	0.47	14.55
HCT-4 IRON CAP																											
	HCT-4	0	28-Feb-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	750	420	160	39.3	201	6.5	0.76	2.2	4.60	64.00	2	0.76
	HCT-4	1	7-Mar-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	325	180	24.6	140	6.67	1.14	2.3	2.50	42.00	1.1	1.14
	HCT-4	2	14-Mar-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	330	96	15.3	180	6.99	1.05	0.25	2.70	26.00	0.25	1.05
	HCT-4	3	21-Mar-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	340	64	9.9	190	6.65	0.90	0.9	4.30	17.00	0.25	0.90
	HCT-4	4	28-Mar-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	330	50	9.4	190	6.62	0.87	1.9	1.50	13.00	0.25	0.87
	HCT-4	5	4-Apr-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	330	175	9.2	51	6.54	0.70	1.1	0.60	13.00	0.25	0.70
	HCT-4	6	11-Apr-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	335	155	10.6	45	6.38	1.35	2.9	0.60	14.00	0.25	1.35
	HCT-4	7	18-Apr-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	330	170	10.7	49	6.16	0.74	1.4	0.25	14.00	0.25	0.74
	HCT-4	8	25-Apr-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	320	200	11.2	50	6.13	0.77	2.4	0.25	14.00	0.8	0.77

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cesium (Cs)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	(La)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	(Mn)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)
	HCT-3	5.585	0.00135	0.0026	0.0343	0.00301	0.000015	0.15	0.0004	0.004395	18.4	0.00025	0.0464	4.94	0.00955	3.835	0.0405	0.0015	0.15	0.302	0.0175
	HCT-3	5.15	0.0013	0.0025	0.0338	0.00269	0.000015	0.15	0.0004	0.0042	17.6	0.00025	0.0431	4.76	0.009	3.91	0.0351	0.0015	0.15	0.285	0.005
	HCT-3	5.71	0.0015	0.00385	0.03515	0.002685	0.000015	0.15	0.00035	0.00489	19.75	0.000725	0.0514	5.69	0.0144	4.565	0.04015	0.0015	0.15	0.307	0.0075
	HCT-3	6.27	0.0017	0.0052	0.0365	0.00268	0.000015	0.15	0.0003	0.00558	21.9	0.0012	0.0597	6.62	0.0198	5.22	0.0452	0.0015	0.15	0.329	0.01
	HCT-3	7.52	0.00285	0.00845	0.02995	0.00311	0.000015	0.15	0.0003	0.00864	31.4	0.0028	0.09085	9.41	0.0498	12.86	0.05335	0.0015	0.15	0.4445	0.01
	HCT-3	8.77	0.004	0.0117	0.0234	0.00354	0.000015	0.15	0.0003	0.0117	40.9	0.0044	0.122	12.2	0.0798	20.5	0.0615	0.0015	0.15	0.56	0.01
	HCT-3	10.335	0.0065	0.01615	0.0196	0.00337	0.00002	0.2	0.000275	0.01295	45.4	0.0057	0.1375	12.25	0.1004	32.25	0.04905	0.002	0.2	0.583	0.015
	HCT-3	11.9	0.009	0.0206	0.0158	0.0032	0.000025	0.25	0.00025	0.0142	49.9	0.007	0.153	12.3	0.121	44	0.0366	0.0025	0.25	0.606	0.02
	HCT-3	11	0.0103	0.0221	0.0148	0.0032	0.000025	0.25	0.000425	0.0131	50.35	0.007	0.1485	11.3	0.111	51.05	0.0288	0.0025	0.25	0.5395	0.04
	HCT-3	10.1	0.0116	0.0236	0.0138	0.0032	0.000025	0.25	0.0006	0.012	50.8	0.007	0.144	10.3	0.101	58.1	0.021	0.0025	0.25	0.473	0.06
	HCT-3	9.385	0.01115	0.02105	0.01545	0.002735	0.00002	0.2	0.0005	0.010755	40.05	0.0061	0.125	8.905	0.0858	46.45	0.0171	0.002	0.2	0.4055	0.045
	HCT-3	8.67	0.0107	0.0185	0.0171	0.00227	0.000015	0.15	0.0004	0.00951	29.3	0.0052	0.106	7.51	0.0706	34.8	0.0132	0.0015	0.15	0.338	0.03
	HCT-3	8.025	0.0104	0.0187	0.01905	0.002195	0.000015	0.15	0.00035	0.00902	26.35	0.0053	0.10195	7.42	0.06195	33.3	0.01132	0.0015	0.15	0.3045	0.03
	HCT-3	7.38	0.0101	0.0189	0.021	0.00212	0.000015	0.15	0.0003	0.00853	23.4	0.0054	0.0979	7.33	0.0533	31.8	0.00944	0.0015	0.15	0.271	0.03
	HCT-3	7.37	0.010675	0.0189	0.02085	0.00198	0.000011875	0.11875	0.000315	0.0087225	23.95	0.005525	0.097775	7.715	0.05255	32.225	0.0085025	0.001275	0.1525	0.26175	0.02775
	HCT-3	7.36	0.01125	0.0189	0.0207	0.00184	0.00000875	0.0875	0.00033	0.008915	24.5	0.00565	0.09765	8.1	0.0518	32.65	0.007565	0.00105	0.155	0.2525	0.0255
	HCT-3	7.35	0.011825	0.0189	0.02055	0.0017	0.000005625	0.05625	0.000345	0.0091075	25.05	0.005775	0.097525	8.485	0.05105	33.075	0.0066275	0.000825	0.1575	0.24325	0.02325
	HCT-3	7.34	0.0124	0.0189	0.0204	0.00156	0.0000025	0.025	0.00036	0.0093	25.6	0.0059	0.0974	8.87	0.0503	33.5	0.00569	0.0006	0.16	0.234	0.021
	HCT-3	6.9625	0.0129	0.019275	0.021475	0.0014175	0.000005625	0.05625	0.00037	0.009015	24.8	0.005775	0.09485	8.4225	0.051625	34.025	0.0052925	0.000825	0.1575	0.21375	0.02325
	HCT-3	6.585	0.0134	0.01965	0.02255	0.001275	0.00000875	0.0875	0.00038	0.00873	24	0.00565	0.0923	7.975	0.05295	34.55	0.004895	0.00105	0.155	0.1935	0.0255
	HCT-3	6.2075	0.0139	0.020025	0.023625	0.0011325	0.000011875	0.11875	0.00039	0.008445	23.2	0.005525	0.08975	7.5275	0.054275	35.075	0.0044975	0.001275	0.1525	0.17325	0.02775
	HCT-3	5.83	0.0144	0.0204	0.0247	0.00099	0.000015	0.15	0.0004	0.00816	22.4	0.0054	0.0872	7.08	0.0556	35.6	0.0041	0.0015	0.15	0.153	0.03
	HCT-3	5.985	0.01525	0.020625	0.024325	0.0009975	0.000015	0.15	0.0004	0.0084275	24.475	0.00585	0.0929	7.5175	0.060225	38.4	0.0041425	0.0015	0.15	0.14875	0.03
	HCT-3	6.14	0.0161	0.02085	0.02395	0.001005	0.000015	0.15	0.0004	0.008695	26.55	0.0063	0.0986	7.955	0.06485	41.2	0.004185	0.0015	0.15	0.1445	0.03
	HCT-3	6.295	0.01695	0.021075	0.023575	0.0010125	0.000015	0.15	0.0004	0.0089625	28.625	0.00675	0.1043	8.3925	0.069475	44	0.0042275	0.0015	0.15	0.14025	0.03
	HCT-3	6.45	0.0178	0.0213	0.0232	0.00102	0.000015	0.15	0.0004	0.00923	30.7	0.0072	0.11	8.83	0.0741	46.8	0.00427	0.0015	0.15	0.136	0.03
	HCT-3	5.7975	0.015825	0.02015	0.0292	0.0008725	0.000015	0.15	0.0003375	0.007885	26.05	0.006025	0.09445	7.69	0.0609	39.85	0.003645	0.0015	0.15	0.116375	0.02375
	HCT-3	5.145	0.01385	0.019	0.0352	0.000725	0.000015	0.15	0.000275	0.00654	21.4	0.00485	0.0789	6.55	0.0477	32.9	0.00302	0.0015	0.15	0.09675	0.0175
	HCT-3	4.4925	0.011875	0.01785	0.0412	0.0005775	0.000015	0.15	0.0002125	0.005195	16.75	0.003675	0.06335	5.41	0.0345	25.95	0.002395	0.0015	0.15	0.077125	0.01125
	HCT-3	3.84	0.0099	0.0167	0.0472	0.00043	0.000015	0.15	0.00015	0.00385	12.1	0.0025	0.0478	4.27	0.0213	19	0.00177	0.0015	0.15	0.0575	0.005
	HCT-3	4.2425	0.011	0.01605	0.041175	0.000505	0.000015	0.15	0.0002125	0.0046625	14.3	0.002875	0.053825	4.8175	0.02735	22.475	0.0016575	0.0015	0.15	0.066425	0.00875
	HCT-3	4.645	0.0121	0.0154	0.03515	0.00058	0.000015	0.15	0.000275	0.005475	16.5	0.00325	0.05985	5.365	0.0334	25.95	0.001545	0.0015	0.15	0.07535	0.0125
	HCT-3	5.0475	0.0132	0.01475	0.029125	0.000655	0.000015	0.15	0.0003375	0.0062875	18.7	0.003625	0.065875	5.9125	0.03945	29.425	0.0014325	0.0015	0.15	0.084275	0.01625
	HCT-3	5.45	0.0143	0.0141	0.0231	0.00073	0.000015	0.15	0.0004	0.0071	20.9	0.004	0.0719	6.46	0.0455	32.9	0.00132	0.0015	0.15	0.0932	0.02
	HCT-3	5.47	0.015	0.014925	0.02595	0.00070575	0.000014375	0.14375	0.0003725	0.00701	20.45	0.0041675	0.073325	6.6675	0.044075	33.375	0.0012235	0.0014375	0.14375	0.08945	0.0195
	HCT-3	5.49	0.0157	0.01575	0.0288	0.0006815	0.00001375	0.1375	0.000345	0.00692	20	0.004335	0.07475	6.875	0.04265	33.85	0.001127	0.001375	0.1375	0.0857	0.019
	HCT-3	5.51	0.0164	0.016575	0.03165	0.00065725	0.000013125	0.13125	0.0003175	0.00683	19.55	0.0045025	0.076175	7.0825	0.041225	34.325	0.0010305	0.0013125	0.13125	0.08195	0.0185
	HCT-3	5.53	0.0171	0.0174	0.0345	0.000633	0.0000125	0.125	0.00029	0.00674	19.1	0.00467	0.0776	7.29	0.0398	34.8	0.000934	0.00125	0.125	0.0782	0.018
	HCT-3	5.365	0.01835	0.0175	0.034925	0.000606	0.0000125	0.125	0.00037	0.0063775	19.05	0.00427	0.074275	6.9325	0.03755	33.525	0.000998	0.00125	0.125	0.078075	0.01475
	HCT-3	5.2	0.0196	0.0176	0.03535	0.000579	0.0000125	0.125	0.00045	0.006015	19	0.00387	0.07095	6.575	0.0353	32.25	0.001062	0.00125	0.125	0.07795	0.0115
	HCT-3	5.035	0.02085	0.0177	0.035775	0.000552	0.0000125	0.125	0.00053	0.0056525	18.95	0.00347	0.067625	6.2175	0.03305	30.975	0.001126	0.00125	0.125	0.077825	0.00825
	HCT-3	4.87	0.0221	0.0178	0.0362	0.000525	0.0000125	0.125	0.00061	0.00529	18.9	0.00307	0.0643	5.86	0.0308	29.7	0.00119	0.00125	0.125	0.0777	0.005
	HCT-3	4.76	0.022475	0.0182	0.0341	0.00050175	0.0000125	0.125	0.00048875	0.0052625	18.775	0.0030125	0.06345	5.765	0.0294	29.225	0.00121	0.00125	0.125	0.0702	0.005
	HCT-3	4.65	0.02285	0.0186	0.032	0.0004785	0.0000125	0.125	0.0003675	0.005235	18.65	0.002955	0.0626	5.67	0.028	28.75	0.00123	0.00125	0.125	0.0627	0.005
	HCT-3	4.54	0.023225	0.019	0.0299	0.00045525	0.0000125	0.125	0.00024625	0.0052075	18.525	0.0028975	0.06175	5.575	0.0266	28.275	0.00125	0.00125	0.125	0.0552	0.005
	HCT-3	4.43	0.0236	0.0194	0.0278	0.000432	0.0000125	0.125	0.000125	0.00518	18.4	0.00284	0.0609	5.48	0.0252	27.8	0.00127	0.00125	0.125	0.0477	0.005
	HCT-3	4.495	0.02305	0.018425	0.027475	0.0004215	0.00001	0.1	0.00018	0.0050225	18.3	0.0028275	0.0608	5.455	0.02525	28.15	0.0011615	0.001	0.10725	0.045325	0.008075
	HCT-3	4.56	0.0225	0.01745	0.02715	0.000411	0.0000075	0.075	0.000235	0.004865	18.2	0.002815	0.0607	5.43	0.0253	28.5	0.001053	0.00075	0.0895	0.04295	0.01115
	HCT-3	4.625	0.02195	0.016475	0.026825	0.0004005	0.000005	0.05	0.00029	0.0047075	18.1	0.0028025	0.0606	5.405	0.02535	28.85	0.0009445	0.0005	0.07175	0.040575	0.014225
	HCT-3	4.69	0.0214	0.0155	0.0265	0.00039	0.0000025	0.025	0.000345	0.00455	18	0.00279	0.0605	5.38	0.0254	29.2	0.000836	0.00025	0.054	0.0382	0.0173
Mean last 10	10	4.6655	0.0224	0.017855	0.0303725	0.00045675	0.00001	0.1	0.00034175	0.00509725	18.48	0.002948	0.0623225	5.62375	0.027435	28.9425	0.0011271	0.001	0.10725	0.0558375	0.0084
HCT-4 IRON CAP																					
	HCT-4	0.0204	0.0214	0.00343	0.0581	0.00003	0.0000025	0.025	0.00121	0.000407	14.1	0.0002	0.00587	0.0158	0.00009	0.001	0.0011	0.0023	1	0.271	0.019
	HCT-4	0.0308	0.0228	0.003	0.0553	0.00003	0.0000025	0.025	0.00069	0.000226	8.81	0.00005	0.00256	0.00551	0.000025	0.001	0.000626	0.0016	0.62	0.215	0.021
	HCT-4	0.0274	0.0325	0.00333	0.0904	0.00005	0.0000025	0.025	0.00064	0.000152	5.49	0.00005	0.0016	0.00369	0.000025	0.0005	0.000679	0.0013	0.39	0.153	0.023
	HCT-4	0.0242	0.0271	0.00374	0.089	0.00004	0.0000025	0.025	0.00038	0.000118	3.53	0.00005	0.00126	0.00334	0.000025	0.003	0.000642	0.0008	0.27	0.127	0.022
	HCT-4	0.0264	0.0274	0.00422	0.11	0.00004	0.0000025	0.025	0.00038	0.000148	3.37	0.00005	0.00114	0.0031	0.000025	0.002	0.000752	0.0007	0.23	0.114	0.014
	HCT-4	0.0378	0.0286	0.00417	0.105	0.00007	0.0000025	0.025	0.00032	0.000173	3.31	0.00005	0.00149	0.00613	0.000025	0.001	0.000955	0.0006	0.24	0.134	0.013
	HCT-4	0.0403	0.0342	0.00373	0.0994	0.0001	0.0000025	0.025	0.00033	0.000241	3.77	0.00005	0.00199	0.00581	0.000025	0.002	0.00122	0.0005	0.29	0.178	0.016
	HCT-4	0.0461	0.0259	0.0033	0.0902	0.00015	0.0000025	0.025	0.00031	0.000275	3.8	0.00005	0.00234	0.00795	0.000025	0.001	0.00148	0.00025	0.29	0.18	0.012
	HCT-4	0.0609	0.0251	0.00338	0.0936	0.00023	0.000006	0.025	0.00031	0.000339	3.97	0.00005	0.00292	0.0121	0.000025	0.001	0.00218	0.00025	0.3	0.205	0.016

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Mercury (Hg)-Dissolved (mg/L)	(Mo)-Dissolved (mg/L)	Nickel (Ni)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Rubidium (Rb)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Tellurium (Te)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Thorium (Th)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Tungsten (W)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
	HCT-3	0.000001	0.00015	0.00265	2.5	0.00495	0.00885	7.4	0.000015	0.5	0.114	0.0004	0.000255	0.003015	0.000025	0.0015	0.000025	0.11105	0.0005	0.553	0.00025
	HCT-3	0.000001	0.00015	0.0021	2.2	0.0046	0.0074	8	0.000015	0.5	0.108	0.0004	0.00023	0.0016	0.000025	0.0015	0.000025	0.0911	0.0005	0.531	0.00025
	HCT-3	0.000001	0.000275	0.00265	2.25	0.0047	0.00725	7.4	0.000015	0.6	0.1145	0.0005	0.000245	0.004355	0.0000875	0.0015	0.000025	0.10505	0.0005	0.6055	0.00025
	HCT-3	0.000001	0.0004	0.0032	2.3	0.0048	0.0071	6.8	0.000015	0.7	0.121	0.0006	0.00026	0.00711	0.00015	0.0015	0.000025	0.119	0.0005	0.68	0.00025
	HCT-3	0.000001	0.000275	0.00495	2.5	0.0055	0.00695	7.8	0.0000375	0.8	0.1585	0.0014	0.00033	0.025155	0.00069	0.0015	0.000025	0.1475	0.0005	1.01	0.001025
	HCT-3	0.000001	0.00015	0.0067	2.7	0.0062	0.0068	8.8	0.00006	0.9	0.196	0.0022	0.0004	0.0432	0.00123	0.0015	0.000025	0.176	0.0005	1.34	0.0018
	HCT-3	0.000006	0.0002	0.00765	2.8	0.00595	0.006	10.4	0.00011	1	0.1935	0.0026	0.00043	0.0555	0.000665	0.002	0.0000375	0.1825	0.00125	1.43	0.0029
	HCT-3	0.000011	0.00025	0.0086	2.9	0.0057	0.0052	12	0.00016	1.1	0.191	0.003	0.00046	0.0678	0.0001	0.0025	0.00005	0.189	0.002	1.52	0.004
	HCT-3	0.000009	0.00025	0.0081	2.7	0.0058	0.0048	13.5	0.00016	1.25	0.1685	0.0029	0.00045	0.06835	0.00015	0.0025	0.00005	0.161	0.0025	1.475	0.0075
	HCT-3	0.000007	0.00025	0.0076	2.5	0.0059	0.0044	15	0.00016	1.4	0.146	0.0028	0.00044	0.0689	0.0002	0.0025	0.00005	0.133	0.003	1.43	0.011
	HCT-3	0.00000645	0.0002	0.00675	2.15	0.0053	0.0035	12.85	0.00014	1.35	0.124	0.0024	0.0004	0.0594	0.00019	0.00275	0.0000375	0.1195	0.002	1.24	0.0103
	HCT-3	0.0000059	0.00015	0.0059	1.8	0.0047	0.0026	10.7	0.00012	1.3	0.102	0.002	0.00036	0.0499	0.00018	0.003	0.000025	0.106	0.001	1.05	0.0096
	HCT-3	0.0000049	0.001675	0.0058	1.75	0.00445	0.0028	9.75	0.00012	1.45	0.09255	0.0018	0.00035	0.04615	0.00142	0.004	0.0000525	0.0966	0.0015	0.9945	0.00895
	HCT-3	0.0000039	0.0032	0.0057	1.7	0.0042	0.003	8.8	0.00012	1.6	0.0831	0.0016	0.00034	0.0424	0.00266	0.005	0.00008	0.0872	0.002	0.939	0.0083
	HCT-3	0.000004375	0.002445	0.0056475	1.645	0.0041775	0.00293	8.95	0.000126	1.57	0.0848	0.001495	0.000368	0.044525	0.002065	0.0045	0.0000675	0.083025	0.001775	0.94575	0.01085
	HCT-3	0.00000485	0.00169	0.005595	1.59	0.004155	0.00286	9.1	0.000132	1.54	0.0865	0.00139	0.000396	0.04665	0.00147	0.004	0.000055	0.07885	0.00155	0.9525	0.0134
	HCT-3	0.000005325	0.000935	0.0055425	1.535	0.0041325	0.00279	9.25	0.000138	1.51	0.0882	0.001285	0.000424	0.048775	0.000875	0.0035	0.0000425	0.074675	0.001325	0.95925	0.01595
	HCT-3	0.0000058	0.00018	0.00549	1.48	0.00411	0.00272	9.4	0.000144	1.48	0.0899	0.00118	0.000452	0.0509	0.00028	0.003	0.00003	0.0705	0.0011	0.966	0.0185
	HCT-3	0.000005925	0.0001725	0.0053425	1.51	0.0041825	0.00264	9.175	0.0001505	1.435	0.0851	0.001035	0.000454	0.04825	0.000335	0.0035	0.00002875	0.06405	0.00095	0.927	0.0185
	HCT-3	0.00000605	0.000165	0.005195	1.54	0.004255	0.00256	8.95	0.000157	1.39	0.0803	0.00089	0.000456	0.0456	0.00039	0.004	0.0000275	0.0576	0.0008	0.888	0.0185
	HCT-3	0.000006175	0.0001575	0.0050475	1.57	0.0043275	0.00248	8.725	0.0001635	1.345	0.0755	0.000745	0.000458	0.04295	0.000445	0.0045	0.00002625	0.05115	0.00065	0.849	0.0185
	HCT-3	0.0000063	0.00015	0.0049	1.6	0.0044	0.0024	8.5	0.00017	1.3	0.0707	0.0006	0.00046	0.0403	0.0005	0.005	0.000025	0.0447	0.0005	0.81	0.0185
	HCT-3	0.000006925	0.0001875	0.0053	1.55	0.0044	0.00235	8.625	0.00017	1.35	0.074325	0.000625	0.00047	0.041625	0.0005	0.005	0.000025	0.04325	0.0005	0.85125	0.019875
	HCT-3	0.00000755	0.000225	0.0057	1.5	0.0044	0.0023	8.75	0.00017	1.4	0.07795	0.00065	0.00048	0.04295	0.0005	0.005	0.000025	0.0418	0.0005	0.8925	0.02125
	HCT-3	0.000008175	0.0002625	0.0061	1.45	0.0044	0.00225	8.875	0.00017	1.45	0.081575	0.000675	0.00049	0.044275	0.0005	0.005	0.000025	0.04035	0.0005	0.93375	0.022625
	HCT-3	0.0000088	0.0003	0.0065	1.4	0.0044	0.0022	9	0.00017	1.5	0.0852	0.0007	0.0005	0.0456	0.0005	0.005	0.000025	0.0389	0.0005	0.975	0.024
	HCT-3	0.00000775	0.0002625	0.00555	1.35	0.004075	0.002	7.925	0.0001475	1.425	0.072925	0.0006	0.00047	0.0379	0.0005	0.0045	0.00004625	0.03375	0.0005	0.8305	0.020675
	HCT-3	0.0000067	0.000225	0.0046	1.3	0.00375	0.0018	6.85	0.000125	1.35	0.06065	0.0005	0.00044	0.0302	0.0005	0.004	0.0000675	0.0286	0.0005	0.686	0.01735
	HCT-3	0.00000565	0.0001875	0.00365	1.25	0.003425	0.0016	5.775	0.0001025	1.275	0.048375	0.0004	0.00041	0.0225	0.0005	0.0035	0.00008875	0.02345	0.0005	0.5415	0.014025
	HCT-3	0.0000046	0.00015	0.0027	1.2	0.0031	0.0014	4.7	0.00008	1.2	0.0361	0.0003	0.00038	0.0148	0.0005	0.003	0.00011	0.0183	0.0005	0.397	0.0107
	HCT-3	0.0000053	0.00015	0.003075	1.1	0.0031	0.0016	5.025	0.000095	1.175	0.039875	0.000375	0.00038	0.0177	0.0005	0.00325	0.00008875	0.0206	0.0005	0.46225	0.01285
	HCT-3	0.000006	0.00015	0.00345	1	0.0031	0.0018	5.35	0.00011	1.15	0.04365	0.00045	0.00038	0.0206	0.0005	0.0035	0.0000675	0.0229	0.0005	0.5275	0.015
	HCT-3	0.0000067	0.00015	0.003825	0.9	0.0031	0.002	5.675	0.000125	1.125	0.047425	0.000525	0.00038	0.0235	0.0005	0.00375	0.00004625	0.0252	0.0005	0.59275	0.01715
	HCT-3	0.0000074	0.00015	0.0042	0.8	0.0031	0.0022	6	0.00014	1.1	0.0512	0.0006	0.00038	0.0264	0.0005	0.004	0.000025	0.0275	0.0005	0.658	0.0193
	HCT-3	0.0000067	0.00014375	0.00423	0.8175	0.003035	0.0020475	6.5425	0.0001415	1.135	0.0503	0.0005625	0.000385	0.02605	0.0005	0.00365	0.000025	0.026375	0.0005	0.658	0.02075
	HCT-3	0.000006	0.0001375	0.00426	0.835	0.00297	0.001895	7.085	0.000143	1.17	0.0494	0.000525	0.00039	0.0257	0.0005	0.0033	0.000025	0.02525	0.0005	0.658	0.0222
	HCT-3	0.0000053	0.00013125	0.00429	0.8525	0.002905	0.0017425	7.6275	0.0001445	1.205	0.0485	0.0004875	0.000395	0.02535	0.0005	0.00295	0.000025	0.024125	0.0005	0.658	0.02365
	HCT-3	0.0000046	0.000125	0.00432	0.87	0.00284	0.00159	8.17	0.000146	1.24	0.0476	0.00045	0.0004	0.025	0.0005	0.0026	0.000025	0.023	0.0005	0.658	0.0251
	HCT-3	0.0000053	0.00019125	0.0048325	0.9475	0.0030125	0.0016525	8.7275	0.0001515	1.2375	0.04765	0.0005125	0.000435	0.0225	0.0005	0.002875	0.000025	0.021725	0.0005	0.627	0.024175
	HCT-3	0.000006	0.0002575	0.005345	1.025	0.003185	0.001715	9.285	0.000157	1.235	0.0477	0.000575	0.00047	0.02	0.0005	0.00315	0.000025	0.02045	0.0005	0.596	0.02325
	HCT-3	0.0000067	0.00032375	0.0058575	1.1025	0.0033575	0.0017775	9.8425	0.0001625	1.2325	0.04775	0.0006375	0.000505	0.0175	0.0005	0.003425	0.000025	0.019175	0.0005	0.565	0.022325
	HCT-3	0.0000074	0.00039	0.00637	1.18	0.00353	0.00184	10.4	0.000168	1.23	0.0478	0.0007	0.00054	0.015	0.0005	0.0037	0.000025	0.0179	0.0005	0.534	0.0214
	HCT-3	0.00000635	0.0003625	0.005625	1.19	0.00367	0.001845	10.8	0.00016675	1.21	0.047025	0.000645	0.00055275	0.014175	0.0005	0.003625	0.000025	0.01685	0.00065	0.52325	0.0212
	HCT-3	0.0000053	0.000335	0.00488	1.2	0.00381	0.00185	11.2	0.0001655	1.19	0.04625	0.00059	0.0005655	0.01335	0.0005	0.00355	0.000025	0.0158	0.0008	0.5125	0.021
	HCT-3	0.00000425	0.0003075	0.004135	1.21	0.00395	0.001855	11.6	0.00016425	1.17	0.045475	0.000535	0.00057825	0.012525	0.0005	0.003475	0.000025	0.01475	0.00095	0.50175	0.0208
	HCT-3	0.0000032	0.00028	0.00339	1.22	0.00409	0.00186	12	0.000163	1.15	0.0447	0.00048	0.000591	0.0117	0.0005	0.0034	0.000025	0.0137	0.0011	0.491	0.0206
	HCT-3	0.000002975	0.000555	0.0034425	1.225	0.0039425	0.001745	11.48	0.00017325	1.175	0.0447	0.0004265	0.00059125	0.01185	0.0005425	0.00339	0.00002375	0.01355	0.000935	0.47225	0.022075
	HCT-3	0.00000275	0.00083	0.003495	1.23	0.003795	0.00163	10.96	0.0001835	1.2	0.0447	0.000373	0.0005915	0.012	0.000585	0.00338	0.0000225	0.0134	0.00077	0.4535	0.02355
	HCT-3	0.000002525	0.001105	0.0035475	1.235	0.0036475	0.001515	10.44	0.00019375	1.225	0.0447	0.0003195	0.00059175	0.01215	0.0006275	0.00337	0.00002125	0.01325	0.000605	0.43475	0.025025
	HCT-3	0.0000023	0.00138	0.0036	1.24	0.0035	0.0014	9.92	0.000204	1.25	0.0447	0.000266	0.000592	0.0123	0.00067	0.00336	0.00002	0.0131	0.00044	0.416	0.0265
Mean last 10	10	0.000004375	0.000586875	0.00443425	1.20325	0.00372925	0.00173175	10.86425	0.00017445	1.20325	0.04578	0.00049725	0.0005699	0.013255	0.0005425	0.0034675	0.00002375	0.0151475	0.000725	0.4904	0.0224475
HCT-4 IRON CAP																					
	HCT-4	0.00005	0.0058	0.00096	20.1	0.024	0.0135	1.2	0.0000025	4.15	0.42	0.00005	0.000234	0.000025	0.00001	0.00025	0.00036	0.00047	0.0003	0.0296	0.00005
	HCT-4	0.000001	0.0035	0.00063	11.9	0.0143	0.00865	2.3	0.0000025	2.78	0.246	0.00005	0.000154	0.000025	0.000005	0.00025	0.00052	0.000635	0.0005	0.0109	0.00005
	HCT-4	0.000005	0.0029	0.00026	9.81	0.0105	0.00532	2.8	0.0000025	1.68	0.189	0.00004	0.000129	0.000025	0.000005	0.00025	0.00047	0.000501	0.0006	0.0066	0.00005
	HCT-4	0.000005	0.00242	0.00038	6.72	0.00738	0.00318	3.4	0.0000025	0.93	0.126	0.00003	0.000087	0.000014	0.000005	0.00025	0.00038	0.000411	0.0006	0.0057	0.00005
	HCT-4	0.000005	0.00174	0.00021	6.12	0.00688	0.00329	2.7	0.0000025	0.61	0.118	0.00007	0.000076	0.000025	0.000005	0.00025	0.00024	0.000352	0.0006	0.0061	0.00005
	HCT-4	0.000001	0.00166	0.00021	5.03	0.00641	0.00398	2.4	0.0000025	0.52	0.123	0.00005	0.000075	0.000025	0.00005	0.00025	0.00024	0.000462	0.0007	0.0083	0.00005
	HCT-4	0.000002	0.00132	0.00054	5.32	0.00645	0.0048	3.3	0.0000025	0.5	0.137	0.00008	0.000077	0.000025	0.000005	0.00025	0.00014	0.000455	0.0006	0.0124	0.00005
	HCT-4	0.000001	0.00113	0.00023	4.88	0.00626	0.00418	2.9	0.0000025	0.41	0.13	0.00009	0.00007	0.000025	0.000005	0.00025	0.00009	0.000608	0.0004	0.0139	0.00005
	HCT-4	0.000001	0.00097	0.00032	4.62	0.00586	0.00508	2.8	0.0000025	0.36	0.136	0.00014	0.000083	0.000025	0.000005	0.00025	0.00007	0.000904	0.0004	0.0177	0.00005

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	TYPE	Time Sampled	Sample ID	Matrix	Total Volume In (mL)	Volume Out (mL)	ORP mV	Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Acidity (as $CaCO_3$) ($CaCO_3$ mg/L)	Alkalinity, Total (as $CaCO_3$) ($CaCO_3$ mg/L)	Sulfate (SO_4) (mg/L)	Chloride (Cl) (mg/L)	Fluoride (F) (mg/L)
	HCT-4	9	2-May-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	310	175	10.6	46	6.06	0.94	7.2	0.25	14.00	0.25	0.94
	HCT-4	10	9-May-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	325	190	13.3	58	5.91	0.84	2	1.40	16.00	0.25	0.84
	HCT-4	11	16-May-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	330	170	13.9	54	6.03	0.82	2.5	0.25	18.00	0.25	0.82
	HCT-4	12	23-May-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	325	190	12.9	54	5.89	0.92	7.5	0.25	18.00	0.25	0.92
	HCT-4	13	30-May-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	330	160	13.9	56	5.58	1.01	7.6	0.25	20.00	0.25	1.01
	HCT-4	14	6-Jun-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	350	240	8.5	40	5.66	0.76	2.8	1.20	10.00	0.25	0.76
	HCT-4	15	13-Jun-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	370	170	13	52	5.59	1.08	4.7	0.25	17.00	0.25	1.08
	HCT-4	16	20-Jun-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	320	200	13.2	54	5.55	1.22	10.7	0.25	18.00	0.25	1.22
	HCT-4	17	27-Jun-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	340	195	13.8	58	5.46	1.28	9.2	0.25	18.00	0.25	1.28
	HCT-4	18	4-Jul-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	320	210	15	51	5.5	1.25	4.8	0.25	17.00	0.25	1.25
	HCT-4	19	11-Jul-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	320	210	13	56	5.14	1.40	7.8	0.25	17.00	0.25	1.40
	HCT-4	20	18-Jul-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	300	230	13.05	68	5.36	1.40	8.25	0.25	18.00	0.575	1.40
	HCT-4	21	25-Jul-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	325	255	13.1	61	5.14	1.40	8.7	0.25	19.00	0.9	1.40
	HCT-4	22	1-Aug-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	325	300	12.95	70	4.96	1.30	6.4	0.25	18.00	0.85	1.30
	HCT-4	23	8-Aug-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	335	315	12.8	55	5.01	1.20	4.1	0.25	17.00	0.8	1.20
	HCT-4	24	15-Aug-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	330	265	12.35	62	5	1.20	4.25	0.25	17.00	0.65	1.20
	HCT-4	25	22-Aug-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	325	275	11.9	53	5.01	1.20	4.4	0.25	17.00	0.5	1.20
	HCT-4	26	29-Aug-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	310	250	12.85	53	5.36	1.20	4.9	0.25	18.50	0.375	1.20
	HCT-4	27	5-Sep-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	335	300	13.8	69	4.95	1.20	5.4	0.25	20.00	0.25	1.20
	HCT-4	28	12-Sep-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	340	300	12.3	59	5.04	1.10	4.95	0.25	17.00	0.25	1.10
	HCT-4	29	19-Sep-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	320	340	10.8	54	4.85	0.99	4.5	0.25	14.00	0.25	0.99
	HCT-4	30	26-Sep-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	320	390	10.85	54	4.84	0.97	4.45	0.25	14.50	0.25	0.97
	HCT-4	31	3-Oct-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	335	300	10.9	46	4.92	0.94	4.4	0.25	15.00	0.25	0.94
	HCT-4	32	10-Oct-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	325	340	11.1	63	4.54	0.91	4.45	0.25	14.55	0.25	0.91
	HCT-4	33	17-Oct-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	340	350	11.3	55	4.82	0.88	4.5	0.25	14.10	0.25	0.88
	HCT-4	34	24-Oct-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	340	325	10.65	55	4.86	0.79	6.2	0.25	13.70	0.25	0.79
	HCT-4	35	31-Oct-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	320	320	10	55	4.79	0.69	7.9	0.25	13.30	0.25	0.69
	HCT-4	36	7-Nov-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	325	300	10.15	50	5.06	0.73	5.6	0.25	13.95	0.25	0.73
	HCT-4	37	14-Nov-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	330	300	10.3	58	4.72	0.76	3.3	0.25	14.60	0.25	0.76
	HCT-4	38	21-Nov-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	320	345	9	60	4.76	0.70	3.3	0.25	13.40	0.25	0.70
	HCT-4	39	28-Nov-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	315	305	7.7	50	4.66	0.64	3.3	0.25	12.20	0.25	0.64
	HCT-4	40	5-Dec-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	310	293.75	8	66	4.72	0.68	4.4	0.25	13.28	0.25	0.68
	HCT-4	41	12-Dec-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	310	282.5	8.3	58	4.53	0.72	5.5	0.25	14.35	0.25	0.72
	HCT-4	42	19-Dec-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	315	271.25	8.6	48	4.57	0.75	6.6	0.25	15.43	0.25	0.75
	HCT-4	43	26-Dec-11	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	325	260	8.9	59	4.53	0.79	7.7	0.25	16.50	0.25	0.79
	HCT-4	44	2-Jan-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	320	265	8.5	56	4.48	0.73	8	0.25	15.35	0.25	0.73
	HCT-4	45	9-Jan-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	320	270	8.1	52	4.6	0.66	8.3	0.25	14.20	0.25	0.66
	HCT-4	46	16-Jan-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	305	275	7.7	47	4.48	0.60	8.6	0.25	13.05	0.25	0.60
	HCT-4	47	23-Jan-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	320	280	7.3	52	4.22	0.53	8.9	0.25	11.90	0.25	0.53
	HCT-4	48	30-Jan-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	310	290	7.85	54	4.41	0.54	9.225	0.25	13.50	0.3625	0.54
	HCT-4	49	6-Feb-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	315	300	8.4	61	4.4	0.54	9.55	0.25	15.10	0.475	0.54
	HCT-4	50	13-Feb-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	325	310	8.95	60	4.4	0.55	9.875	0.25	16.70	0.5875	0.55
	HCT-4	51	20-Feb-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	315	320	9.5	66	4.4	0.55	10.2	0.25	18.30	0.7	0.55
	HCT-4	52	27-Feb-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	325	316.25	9.05	71	4.31	0.56	11.825	0.25	18.70	0.65	0.56
	HCT-4	53	5-Mar-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	315	312.5	8.6	68	4.29	0.57	13.45	0.25	19.10	0.6	0.57
	HCT-4	54	12-Mar-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	315	308.75	8.15	74	4.25	0.57	15.075	0.25	19.50	0.55	0.57
	HCT-4	55	19-Mar-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	300	305	7.7	86	4.16	0.58	16.7	0.25	19.90	0.5	0.58
	HCT-4	56	26-Mar-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	310	323.75	8	89	4.16	0.62	22	0.25	25.38	0.5	0.62
	HCT-4	57	2-Apr-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	310	342.5	8.3	111	3.97	0.66	27.3	0.25	30.85	0.5	0.66
	HCT-4	58	9-Apr-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	310	361.25	8.6	155	3.81	0.70	32.6	0.25	36.33	0.5	0.70
	HCT-4	59	16-Apr-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	315	380	8.9	188	3.69	0.74	37.9	0.25	41.80	0.5	0.74
	HCT-4	60	23-Apr-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	310	405	10.05	184	3.66	0.77	48.175	0.25	54.68	0.4375	0.77
	HCT-4	61	30-Apr-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	310	430	11.2	267	3.52	0.81	58.45	0.25	67.55	0.375	0.81
	HCT-4	62	7-May-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	320	455	12.35	310	3.39	0.84	68.725	0.25	80.43	0.3125	0.84
	HCT-4	63	14-May-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	310	480	13.5	420	3.31	0.87	79	0.25	93.30	0.25	0.87
	HCT-4	64	21-May-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	310	487.5	13.05	539	3.17	0.87	89.5	0.25	103.48	0.25	0.87
	HCT-4	65	28-May-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	325	495	12.6	486	3.19	0.87	100	0.25	113.65	0.25	0.87
	HCT-4	66	4-Jun-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	320	502.5	12.15	603	3.09	0.86	110.5	0.25	123.83	0.25	0.86
	HCT-4	67	11-Jun-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	345	510	11.7	650	3.01	0.86	121	0.25	134.00	0.25	0.86
	HCT-4	68	18-Jun-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	310	516.25	10.9825	707	2.93	0.86	146.75	0.25	147.25	0.3225	0.86
	HCT-4	69	25-Jun-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	315	522.5	10.265	773	2.91	0.87	172.5	0.25	160.50	0.395	0.87

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cesium (Cs)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	(La)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	(Mn)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)
	HCT-4	0.0968	0.0172	0.00294	0.0942	0.00033	0.0000025	0.025	0.00027	0.000356	3.8	0.00005	0.00313	0.0153	0.000025	0.001	0.00245	0.00025	0.28	0.205	0.017
	HCT-4	0.168	0.0201	0.00249	0.0835	0.00056	0.0000025	0.025	0.00032	0.000502	4.78	0.00005	0.00486	0.025	0.000025	0.01	0.00325	0.0005	0.33	0.274	0.016
	HCT-4	0.247	0.0184	0.00205	0.081	0.00071	0.0000025	0.025	0.00029	0.000578	4.98	0.00005	0.00535	0.0294	0.000025	0.007	0.00376	0.00025	0.36	0.286	0.011
	HCT-4	0.294	0.014	0.00187	0.079	0.00096	0.0000025	0.025	0.00029	0.000655	4.66	0.00005	0.00603	0.0392	0.0001	0.002	0.00477	0.00025	0.31	0.298	0.01
	HCT-4	0.425	0.0128	0.00184	0.0663	0.00113	0.0000025	0.025	0.00025	0.000702	4.99	0.00005	0.00711	0.0542	0.00012	0.002	0.00549	0.00025	0.34	0.323	0.006
	HCT-4	0.291	0.00671	0.00158	0.0783	0.00077	0.0000025	0.025	0.00019	0.000469	3.03	0.00005	0.00465	0.0544	0.00007	0.007	0.00572	0.00025	0.22	0.21	0.003
	HCT-4	0.527	0.00855	0.00145	0.0873	0.00128	0.0000025	0.025	0.00021	0.000709	4.69	0.00005	0.00755	0.0747	0.00025	0.006	0.0073	0.00025	0.31	0.31	0.014
	HCT-4	0.637	0.00757	0.00151	0.0655	0.00155	0.0000025	0.025	0.00023	0.000804	4.77	0.00005	0.00865	0.0946	0.00027	0.007	0.00823	0.00025	0.31	0.337	0.009
	HCT-4	0.766	0.00721	0.00127	0.0561	0.00178	0.0000025	0.025	0.0002	0.000827	4.93	0.00005	0.00988	0.119	0.00037	0.01	0.00899	0.00025	0.36	0.356	0.01
	HCT-4	0.707	0.00633	0.00126	0.0708	0.00163	0.0000025	0.025	0.00027	0.000792	5.53	0.00005	0.00867	0.117	0.00037	0.014	0.0101	0.00025	0.29	0.317	0.013
	HCT-4	0.8	0.00574	0.00128	0.0702	0.00182	0.0000025	0.025	0.00031	0.00085	4.69	0.00005	0.0101	0.15	0.00044	0.014	0.0106	0.00025	0.31	0.348	0.006
	HCT-4	0.8725	0.00532	0.0012	0.0616	0.00195	0.0000025	0.025	0.000315	0.0009035	4.71	0.00005	0.0106	0.1795	0.00055	0.0175	0.0115	0.00025	0.31	0.354	0.006
	HCT-4	0.945	0.0049	0.00112	0.053	0.00208	0.0000025	0.025	0.00032	0.000957	4.73	0.00005	0.0111	0.209	0.00066	0.021	0.0124	0.00025	0.31	0.36	0.006
	HCT-4	0.923	0.00496	0.00122	0.0648	0.00212	0.00000425	0.025	0.000275	0.0009405	4.67	0.00005	0.0113	0.21	0.000605	0.027	0.0129	0.00025	0.31	0.345	0.008
	HCT-4	0.901	0.00502	0.00132	0.0766	0.00216	0.000006	0.025	0.00023	0.000924	4.61	0.00005	0.0115	0.211	0.00055	0.033	0.0134	0.00025	0.31	0.33	0.01
	HCT-4	0.8365	0.00464	0.00122	0.0676	0.002165	0.00000425	0.025	0.000255	0.0009235	4.465	0.00005	0.0112	0.244	0.000625	0.038	0.01435	0.00025	0.285	0.32	0.033
	HCT-4	0.772	0.00426	0.00112	0.0586	0.00217	0.0000025	0.025	0.00028	0.000923	4.32	0.00005	0.0109	0.277	0.0007	0.043	0.0153	0.00025	0.26	0.31	0.056
	HCT-4	0.7905	0.00412	0.00107	0.05885	0.00238	0.0000025	0.025	0.00032	0.0010165	4.695	0.00005	0.01195	0.3235	0.00088	0.056	0.0189	0.00025	0.27	0.333	0.029
	HCT-4	0.809	0.00398	0.00102	0.0591	0.00259	0.0000025	0.025	0.00036	0.00111	5.07	0.00005	0.013	0.37	0.00106	0.069	0.0225	0.00025	0.28	0.356	0.002
	HCT-4	0.78	0.00362	0.00101	0.0599	0.00243	0.0000025	0.025	0.00031	0.001019	4.5	0.00005	0.0121	0.369	0.000975	0.068	0.0217	0.00025	0.255	0.3155	0.005
	HCT-4	0.751	0.00326	0.001	0.0607	0.00227	0.0000025	0.025	0.00026	0.000928	3.93	0.00005	0.0112	0.368	0.00089	0.067	0.0209	0.00025	0.23	0.275	0.008
	HCT-4	0.71	0.003045	0.00093	0.05835	0.002185	0.0000025	0.025	0.000235	0.000942	3.96	0.00005	0.01145	0.3955	0.00108	0.0765	0.02195	0.00025	0.23	0.277	0.009
	HCT-4	0.669	0.00283	0.00086	0.056	0.0021	0.0000025	0.025	0.00021	0.000956	3.99	0.00005	0.0117	0.423	0.00127	0.086	0.023	0.00025	0.23	0.279	0.01
	HCT-4	0.739	0.00299	0.000925	0.05815	0.002045	0.0000025	0.025	0.000255	0.0009765	4.065	0.00005	0.0117	0.4375	0.00145	0.1005	0.0262	0.00025	0.23	0.2755	0.0065
	HCT-4	0.809	0.00315	0.00099	0.0603	0.00199	0.0000025	0.025	0.0003	0.000997	4.14	0.00005	0.0117	0.452	0.00163	0.115	0.0294	0.00025	0.23	0.272	0.003
	HCT-4	0.7235	0.002975	0.000965	0.06375	0.0022	0.0000025	0.025	0.000275	0.0009875	3.91	0.00005	0.01125	0.463	0.00159	0.122	0.03085	0.00025	0.21	0.2535	0.006
	HCT-4	0.638	0.0028	0.00094	0.0672	0.00241	0.0000025	0.025	0.00025	0.000978	3.68	0.00005	0.0108	0.474	0.00155	0.129	0.0323	0.00025	0.19	0.235	0.009
	HCT-4	0.6665	0.002715	0.00086	0.0568	0.00235	0.0000025	0.025	0.000275	0.001044	3.735	0.00005	0.01165	0.546	0.0023	0.142	0.0348	0.00025	0.195	0.246	0.006
	HCT-4	0.695	0.00263	0.00078	0.0464	0.00229	0.0000025	0.025	0.0003	0.00111	3.79	0.00005	0.0125	0.618	0.00305	0.155	0.0373	0.00025	0.2	0.257	0.003
	HCT-4	0.6105	0.00241	0.00089	0.0504	0.00217	0.0000025	0.025	0.000285	0.00103	3.325	0.00005	0.0112	0.5785	0.00253	0.1315	0.0367	0.00025	0.17	0.228	0.005
	HCT-4	0.526	0.00219	0.001	0.0544	0.00205	0.0000025	0.025	0.00027	0.00095	2.86	0.00005	0.0099	0.539	0.00201	0.108	0.0361	0.00025	0.14	0.199	0.007
	HCT-4	0.55875	0.0020875	0.0009925	0.0543	0.002155	0.0000025	0.025	0.0002775	0.0010225	2.965	0.00005	0.01065	0.61975	0.00281	0.131	0.0401	0.00025	0.1475	0.205	0.0055
	HCT-4	0.5915	0.001985	0.000985	0.0542	0.00226	0.0000025	0.025	0.000285	0.001095	3.07	0.00005	0.0114	0.7005	0.00361	0.154	0.0441	0.00025	0.155	0.211	0.004
	HCT-4	0.62425	0.0018825	0.0009775	0.0541	0.002365	0.0000025	0.025	0.0002925	0.0011675	3.175	0.00005	0.01215	0.78125	0.00441	0.177	0.0481	0.00025	0.1625	0.217	0.0025
	HCT-4	0.657	0.00178	0.00097	0.054	0.00247	0.0000025	0.025	0.0003	0.00124	3.28	0.00005	0.0129	0.862	0.00521	0.2	0.0521	0.00025	0.17	0.223	0.001
	HCT-4	0.63975	0.0017175	0.00092	0.0534	0.0023975	0.0000025	0.025	0.0002875	0.0012225	3.1375	0.00005	0.0124	0.86625	0.00528	0.19425	0.052225	0.00025	0.16	0.20975	0.00225
	HCT-4	0.6225	0.001655	0.00087	0.0528	0.002325	0.0000025	0.025	0.000275	0.001205	2.995	0.00005	0.0119	0.8705	0.00535	0.1885	0.05235	0.00025	0.15	0.1965	0.0035
	HCT-4	0.60525	0.0015925	0.00082	0.0522	0.0022525	0.0000025	0.025	0.0002625	0.0011875	2.8525	0.00005	0.0114	0.87475	0.00542	0.18275	0.052475	0.00025	0.14	0.18325	0.00475
	HCT-4	0.588	0.00153	0.00077	0.0516	0.00218	0.0000025	0.025	0.00025	0.00117	2.71	0.00005	0.0109	0.879	0.00549	0.177	0.0526	0.00025	0.13	0.17	0.006
	HCT-4	0.61525	0.001455	0.0007775	0.0498	0.00228	0.0000025	0.025	0.00028	0.001275	2.9225	0.00005	0.0115	0.99925	0.0074925	0.17225	0.062975	0.00025	0.1325	0.16975	0.006
	HCT-4	0.6425	0.00138	0.000785	0.048	0.00238	0.0000025	0.025	0.00031	0.00138	3.135	0.00005	0.0121	1.1195	0.009495	0.1675	0.07335	0.00025	0.135	0.1695	0.006
	HCT-4	0.66975	0.001305	0.0007925	0.0462	0.00248	0.0000025	0.025	0.00034	0.001485	3.3475	0.00005	0.0127	1.23975	0.0114975	0.16275	0.083725	0.00025	0.1375	0.16925	0.006
	HCT-4	0.697	0.00123	0.0008	0.0444	0.00258	0.0000025	0.025	0.00037	0.00159	3.56	0.00005	0.0133	1.36	0.0135	0.158	0.0941	0.00025	0.14	0.169	0.006
	HCT-4	0.82775	0.0012325	0.000975	0.046	0.00281	0.0000025	0.025	0.000365	0.001645	3.38	0.00005	0.013875	1.515	0.0188	0.1615	0.106075	0.00025	0.14	0.168	0.00725
	HCT-4	0.9585	0.001235	0.00115	0.0476	0.00304	0.0000025	0.025	0.00036	0.0017	3.2	0.00005	0.01445	1.67	0.0241	0.165	0.11805	0.00025	0.14	0.167	0.0085
	HCT-4	1.08925	0.0012375	0.001325	0.0492	0.00327	0.0000025	0.025	0.000355	0.001755	3.02	0.00005	0.015025	1.825	0.0294	0.1685	0.130025	0.00025	0.14	0.166	0.00975
	HCT-4	1.22	0.00124	0.0015	0.0508	0.0035	0.0000025	0.025	0.00035	0.00181	2.84	0.00005	0.0156	1.98	0.0347	0.172	0.142	0.00025	0.14	0.165	0.011
	HCT-4	1.925	0.00118	0.002275	0.04755	0.004035	0.000005625	0.05625	0.0003625	0.0022475	3.03	0.0002375	0.0189	2.3625	0.072025	0.3345	0.18725	0.0005625	0.1425	0.174	0.0095
	HCT-4	2.63	0.00112	0.00305	0.0443	0.00457	0.00000875	0.0875	0.000375	0.002685	3.22	0.000425	0.0222	2.745	0.10935	0.497	0.2325	0.000875	0.145	0.183	0.008
	HCT-4	3.335	0.00106	0.003825	0.04105	0.005105	0.000011875	0.11875	0.0003875	0.0031225	3.41	0.0006125	0.0255	3.1275	0.146675	0.6595	0.27775	0.0011875	0.1475	0.192	0.0065
	HCT-4	4.04	0.001	0.0046	0.0378	0.00564	0.000015	0.15	0.0004	0.00356	3.6	0.0008	0.0288	3.51	0.184	0.822	0.323	0.0015	0.15	0.201	0.005
	HCT-4	4.4625	0.00099	0.004815	0.037325	0.00556	0.000014375	0.14375	0.0004075	0.00395	4.055	0.00156	0.0334	3.835	0.223	1.9315	0.33425	0.0014375	0.14375	0.1985	0.01025
	HCT-4	4.885	0.00098	0.00503	0.03685	0.00548	0.00001375	0.1375	0.000415	0.00434	4.51	0.00232	0.038	4.16	0.262	3.041	0.3455	0.001375	0.1375	0.196	0.0155
	HCT-4	5.3075	0.00097	0.005245	0.036375	0.0054	0.000013125	0.13125	0.0004225	0.00473	4.965	0.00308	0.0426	4.485	0.301	4.1505	0.35675	0.0013125	0.13125	0.1935	0.02075
	HCT-4	5.73	0.00096	0.00546	0.0359	0.00532	0.0000125	0.125	0.00043	0.00512	5.42	0.00384	0.0472	4.81	0.34	5.26	0.368	0.00125	0.125	0.191	0.026
	HCT-4	5.655	0.00113	0.008395	0.032725	0.0051	0.0000125	0.125	0.000505	0.0056175	5.2375	0.0041975	0.048975	4.78	0.37625	6.3725	0.36825	0.00125	0.125	0.171	0.02325
	HCT-4	5.58	0.0013	0.01133	0.02955	0.00488	0.0000125	0.125	0.00058	0.006115	5.055	0.004555	0.05075	4.75	0.4125	7.485	0.3685	0.00125	0.125	0.151	0.0205
	HCT-4	5.505	0.00147	0.014265	0.026375	0.00466	0.0000125	0.125	0.000655	0.0066125	4.8725	0.0049125	0.052525	4.72	0.44875	8.5975	0.36875	0.00125	0.125	0.131	0.01775
	HCT-4	5.43	0.00164	0.0172	0.0232	0.00444	0.0000125	0.125	0.00073	0.00711	4.69	0.00527	0.0543	4.69	0.485	9.71	0.369	0.00125	0.125	0.111	0.015
	HCT-4	5.78	0.0019225	0.0252	0.01969	0.0041625	0.0000125	0.125	0.00057875	0.0080325	4.4025	0.005955	0.061375	4.9425	0.5405	15.9575	0.314	0.00125	0.125	0.09875	0.075
	HCT-4	6.13	0.002205	0.0332	0.01618	0.003885	0.0000125	0.125	0.0004275	0.008955	4.115	0.00664	0.06845	5.195	0.596	22.205	0.259	0.00125	0.125	0.0865	0.135

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Mercury (Hg)-Dissolved (mg/L)	(Mo)-Dissolved (mg/L)	Nickel (Ni)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Rubidium (Rb)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Tellurium (Te)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Thorium (Th)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Tungsten (W)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
	HCT-4	0.000001	0.00068	0.00028	4.17	0.0054	0.00498	2.2	0.0000025	0.28	0.132	0.00016	0.000067	0.000025	0.00001	0.00025	0.00005	0.00104	0.0004	0.0213	0.00005
	HCT-4	0.000001	0.00068	0.00043	4.26	0.00543	0.00634	3.4	0.0000025	0.31	0.149	0.00024	0.000061	0.0000025	0.00001	0.00025	0.00003	0.00148	0.0003	0.0304	0.00005
	HCT-4	0.000001	0.00057	0.00039	4.15	0.00581	0.00685	3.5	0.0000025	0.29	0.15	0.00024	0.000074	0.000006	0.00002	0.00025	0.00009	0.00197	0.0002	0.0357	0.00005
	HCT-4	0.000001	0.00044	0.00042	3.44	0.00497	0.00673	2.8	0.0000025	0.22	0.155	0.00024	0.000067	0.0000025	0.000005	0.00025	0.00001	0.00273	0.0002	0.0428	0.00005
	HCT-4	0.000001	0.00042	0.00049	3.69	0.00491	0.00708	3.1	0.0000025	0.24	0.156	0.00024	0.000076	0.0000025	0.000005	0.00025	0.00002	0.00209	0.0001	0.0522	0.00005
	HCT-4	0.000001	0.00026	0.00051	2.46	0.00354	0.00446	1.5	0.0000025	0.14	0.0973	0.00018	0.000052	0.000006	0.00001	0.00025	0.000005	0.00292	0.0003	0.037	0.00005
	HCT-4	0.000001	0.00024	0.00064	2.96	0.00387	0.00705	2.4	0.0000025	0.2	0.146	0.00028	0.000058	0.000007	0.00003	0.00025	0.000005	0.00456	0.0001	0.0587	0.00005
	HCT-4	0.000001	0.0002	0.00074	2.9	0.00425	0.00767	2.4	0.0000025	0.17	0.148	0.00025	0.000064	0.000005	0.00001	0.00025	0.000005	0.00543	0.0002	0.0737	0.00005
	HCT-4	0.000001	0.00032	0.0008	3.05	0.00435	0.00773	2.8	0.0000025	0.2	0.154	0.00028	0.00006	0.0000025	0.000005	0.00025	0.000005	0.00647	0.0004	0.0836	0.00005
	HCT-4	0.000001	0.00015	0.00081	2.87	0.00477	0.00795	2.6	0.0000025	0.16	0.141	0.00022	0.000074	0.000007	0.000005	0.00025	0.000005	0.00619	0.0001	0.0762	0.00005
	HCT-4	0.000001	0.00036	0.00105	2.77	0.00456	0.00753	2.4	0.0000025	0.16	0.145	0.00025	0.000074	0.0000025	0.00001	0.00025	0.000005	0.00756	0.0001	0.0913	0.00005
	HCT-4	0.000001	0.000215	0.00101	2.64	0.00464	0.00786	2.4	0.0000025	0.16	0.146	0.000275	0.000072	0.00000425	0.000015	0.00025	0.000005	0.00847	0.0001	0.09915	0.00005
	HCT-4	0.000001	0.00007	0.00097	2.51	0.00472	0.00819	2.4	0.0000025	0.16	0.147	0.0003	0.00007	0.000006	0.00002	0.00025	0.000005	0.00938	0.0001	0.107	0.00005
	HCT-4	0.000001	0.000165	0.001005	2.385	0.00421	0.00799	2.4	0.00000375	0.17	0.1455	0.000285	0.000068	0.00000425	0.0000125	0.00025	0.0000275	0.00933	0.0001	0.1095	0.00005
	HCT-4	0.000001	0.00026	0.00104	2.26	0.0037	0.00779	2.4	0.000005	0.18	0.144	0.00027	0.000066	0.0000025	0.000005	0.00025	0.00005	0.00928	0.0001	0.112	0.00005
	HCT-4	0.000001	0.000235	0.001135	2.18	0.00383	0.00735	2.3	0.00000375	0.19	0.1355	0.000265	0.0000635	0.0000025	0.000005	0.000425	0.0000275	0.01089	0.00025	0.1115	0.00005
	HCT-4	0.000001	0.00021	0.00123	2.1	0.00396	0.00691	2.2	0.0000025	0.2	0.127	0.00026	0.000061	0.0000025	0.000005	0.0006	0.000005	0.0125	0.0004	0.111	0.00005
	HCT-4	0.000001	0.000135	0.00119	2.11	0.00418	0.00705	2.4	0.0000025	0.165	0.14	0.00024	0.0000685	0.0000025	0.000005	0.000425	0.000005	0.0132	0.00025	0.1255	0.00005
	HCT-4	0.000001	0.00006	0.00115	2.12	0.0044	0.00719	2.6	0.0000025	0.13	0.153	0.00022	0.000076	0.0000025	0.000005	0.00025	0.000005	0.0139	0.0001	0.14	0.00005
	HCT-4	0.000001	0.0000425	0.00111	1.965	0.00392	0.006325	2.3	0.0000025	0.135	0.135	0.0002	0.000066	0.00001075	0.0000725	0.00025	0.000005	0.0141	0.0001	0.1285	0.00005
	HCT-4	0.000001	0.000025	0.00107	1.81	0.00344	0.00546	2	0.0000025	0.14	0.117	0.00018	0.000056	0.000019	0.00014	0.00025	0.000005	0.0143	0.0001	0.117	0.00005
	HCT-4	0.000001	0.0000975	0.001145	1.76	0.0033	0.00555	2.05	0.0000025	0.14	0.116	0.00017	0.0000535	0.00001075	0.0000725	0.00025	0.000005	0.0146	0.00025	0.1245	0.00005
	HCT-4	0.000001	0.00017	0.00122	1.71	0.00316	0.00564	2.1	0.0000025	0.14	0.115	0.00016	0.000051	0.0000025	0.000005	0.00025	0.000005	0.0149	0.0004	0.132	0.00005
	HCT-4	0.000001	0.000185	0.001175	1.78	0.00319	0.005425	2.2	0.00000475	0.145	0.1175	0.00017	0.000055	0.0000025	0.0001775	0.00025	0.000005	0.01645	0.00035	0.131	0.00005
	HCT-4	0.000001	0.0002	0.00113	1.85	0.00322	0.00521	2.3	0.000007	0.15	0.12	0.00018	0.000059	0.0000025	0.00035	0.00025	0.000005	0.018	0.0003	0.13	0.00005
	HCT-4	0.000001	0.000175	0.00109	1.725	0.00314	0.00495	1.9	0.00000475	0.16	0.1125	0.00018	0.000056	0.0000025	0.000275	0.00025	0.000005	0.0174	0.0002	0.1285	0.00005
	HCT-4	0.000001	0.00015	0.00105	1.6	0.00306	0.00469	1.5	0.0000025	0.17	0.105	0.00018	0.000053	0.0000025	0.0002	0.00025	0.000005	0.0168	0.0001	0.127	0.00005
	HCT-4	0.000001	0.00013	0.00112	1.665	0.003095	0.00483	1.75	0.00000875	0.16	0.1075	0.000175	0.000055	0.0000025	0.000145	0.00025	0.000005	0.0182	0.0001	0.139	0.00005
	HCT-4	0.000001	0.00011	0.00119	1.73	0.00313	0.00497	2	0.000015	0.15	0.11	0.00017	0.000057	0.0000025	0.00009	0.00025	0.000005	0.0196	0.0001	0.151	0.00005
	HCT-4	0.000001	0.000095	0.00114	1.575	0.00315	0.00446	1.45	0.000011	0.14	0.09895	0.00014	0.000057	0.0000025	0.00025	0.00025	0.000005	0.0177	0.0001	0.1385	0.00005
	HCT-4	0.000001	0.00008	0.00109	1.42	0.00317	0.00395	0.9	0.000007	0.13	0.0879	0.00011	0.000057	0.0000025	0.00041	0.00025	0.000005	0.0158	0.0001	0.126	0.00005
	HCT-4	0.000001	0.00006625	0.0012375	1.405	0.003065	0.003945	1.025	0.00000925	0.135	0.091925	0.0001175	0.00005725	0.000012375	0.0003425	0.00025	0.000005	0.0175	0.0001	0.13875	0.00005
	HCT-4	0.000001	0.0000525	0.001385	1.39	0.00296	0.00394	1.15	0.0000115	0.14	0.09595	0.000125	0.0000575	0.00002225	0.000275	0.00025	0.000005	0.0192	0.0001	0.1515	0.00005
	HCT-4	0.000001	0.00003875	0.0015325	1.375	0.002855	0.003935	1.275	0.00001375	0.145	0.099975	0.0001325	0.00005775	0.000032125	0.0002075	0.00025	0.000005	0.0209	0.0001	0.16425	0.00005
	HCT-4	0.000001	0.000025	0.00168	1.36	0.00275	0.00393	1.4	0.000016	0.15	0.104	0.00014	0.000058	0.000042	0.00014	0.00025	0.000005	0.0226	0.0001	0.177	0.00005
	HCT-4	0.000001	0.000025	0.00152	1.3025	0.00269	0.003675	1.375	0.00001525	0.1575	0.0968	0.000135	0.0000565	0.000032125	0.00013	0.00025	0.000005	0.022375	0.000125	0.1725	0.00005
	HCT-4	0.000001	0.000025	0.00136	1.245	0.00263	0.00342	1.35	0.0000145	0.165	0.0896	0.00013	0.000055	0.00002225	0.00012	0.00025	0.000005	0.02215	0.00015	0.168	0.00005
	HCT-4	0.000001	0.000025	0.0012	1.1875	0.00257	0.003165	1.325	0.00001375	0.1725	0.0824	0.000125	0.0000535	0.000012375	0.00011	0.00025	0.000005	0.021925	0.000175	0.1635	0.00005
	HCT-4	0.000001	0.000025	0.00104	1.13	0.00251	0.00291	1.3	0.000013	0.18	0.0752	0.00012	0.000052	0.0000025	0.0001	0.00025	0.000005	0.0217	0.0002	0.159	0.00005
	HCT-4	0.000001	0.000025	0.001105	1.1325	0.0026075	0.002795	1.275	0.00001375	0.18	0.0819	0.0001175	0.000057	0.0000025	0.0001	0.00025	0.000005	0.022875	0.000175	0.17275	0.00005
	HCT-4	0.000001	0.000025	0.00117	1.135	0.002705	0.00268	1.25	0.0000145	0.18	0.0886	0.000115	0.000062	0.0000025	0.0001	0.00025	0.000005	0.02405	0.00015	0.1865	0.00005
	HCT-4	0.000001	0.000025	0.001235	1.1375	0.0028025	0.002565	1.225	0.00001525	0.18	0.0953	0.0001125	0.000067	0.0000025	0.0001	0.00025	0.000005	0.025225	0.000125	0.20025	0.00005
	HCT-4	0.000001	0.000025	0.0013	1.14	0.0029	0.00245	1.2	0.000016	0.18	0.102	0.00011	0.000072	0.0000025	0.0001	0.00025	0.000005	0.0264	0.0001	0.214	0.00005
	HCT-4	0.000001	0.00003625	0.00142	1.2325	0.0029025	0.002375	1.15	0.00001825	0.1875	0.0947	0.00012	0.000078	0.000004875	0.000125	0.00025	0.000005	0.0292	0.0001	0.22375	0.0000625
	HCT-4	0.000001	0.0000475	0.00154	1.325	0.002905	0.0023	1.1	0.0000205	0.195	0.0874	0.00013	0.000084	0.00000725	0.00015	0.00025	0.000005	0.032	0.0001	0.2335	0.000075
	HCT-4	0.000001	0.00005875	0.00166	1.4175	0.0029075	0.002225	1.05	0.00002275	0.2025	0.0801	0.00014	0.00009	0.000009625	0.000175	0.00025	0.000005	0.0348	0.0001	0.24325	0.0000875
	HCT-4	0.000001	0.00007	0.00178	1.51	0.00291	0.00215	1	0.000025	0.21	0.0728	0.00015	0.000096	0.000012	0.0002	0.00025	0.000005	0.0376	0.0001	0.253	0.0001
	HCT-4	0.000001275	0.0001275	0.002085	1.5575	0.0029825	0.0022375	1.35	0.00002875	0.2325	0.078575	0.0001875	0.0001045	0.0001365	0.000275	0.0005625	0.00001	0.046025	0.0002	0.31	0.0001375
	HCT-4	0.00000155	0.000185	0.00239	1.605	0.003055	0.002325	1.7	0.0000325	0.255	0.08435	0.000225	0.000113	0.000261	0.00035	0.000875	0.000015	0.05445	0.0003	0.367	0.000175
	HCT-4	0.000001825	0.0002425	0.002695	1.6525	0.0031275	0.0024125	2.05	0.00003625	0.2775	0.090125	0.0002625	0.0001215	0.0003855	0.000425	0.0011875	0.00002	0.062875	0.0004	0.424	0.0002125
	HCT-4	0.0000021	0.0003	0.003	1.7	0.0032	0.0025	2.4	0.00004	0.3	0.0959	0.0003	0.00013	0.00051	0.0005	0.0015	0.000025	0.0713	0.0005	0.481	0.00025
	HCT-4	0.000001825	0.00025625	0.00364	1.775	0.00348	0.002295	2.4125	0.00004075	0.3325	0.09645	0.0004375	0.0002265	0.0018425	0.0005	0.0014375	0.000025	0.0684	0.0005	0.53875	0.00025
	HCT-4	0.00000155	0.0002125	0.00428	1.85	0.00376	0.00209	2.425	0.0000415	0.365	0.097	0.000575	0.000323	0.003175	0.0005	0.001375	0.000025	0.0655	0.0005	0.5965	0.00025
	HCT-4	0.000001275	0.00016875	0.00492	1.925	0.00404	0.001885	2.4375	0.00004225	0.3975	0.09755	0.0007125	0.0004195	0.0045075	0.0005	0.0013125	0.000025	0.0626	0.0005	0.65425	0.00025
	HCT-4	0.000001	0.000125	0.00556	2	0.00432	0.00168	2.45	0.000043	0.43	0.0981	0.00085	0.000516	0.00584	0.0005	0.00125	0.000025	0.0597	0.0005	0.712	0.00025
	HCT-4	0.00000245	0.00016375	0.0056775	1.925	0.0045925	0.0019225	2.6275	0.00005875	0.4475	0.098325	0.00097	0.00044175	0.0063375	0.0005	0.00125	0.000025	0.056775	0.0005	0.75825	0.00025
	HCT-4	0.0000039	0.0002025	0.005795	1.85	0.004865	0.002165	2.805	0.0000745	0.465	0.09855	0.00109	0.0003675	0.006835	0.0005	0.00125	0.000025	0.05385	0.0005	0.8045	0.00025
	HCT-4	0.00000535	0.00024125	0.0059125	1.775	0.0051375	0.0024075	2.9825	0.00009025	0.4825	0.098775	0.00121	0.00029325	0.0073325	0.0005	0.00125	0.000025	0.050925	0.0005	0.85075	0.00025
	HCT-4	0.0000068	0.00028	0.00603	1.7	0.00541	0.00265	3.16	0.000106	0.5	0.099	0.00133	0.000219	0.00783	0.0005	0.00125	0.000025	0.048	0.0005	0.897	0.00025
	HCT-4	0.000006875	0.0004125	0.006765	1.555	0.00517	0.00318	3.765	0.0001225	0.5275	0.090875	0.0013325	0.00020025	0.0117725	0.0005	0.00125	0.000025	0.0447	0.0005	1.00025	0.00025
	HCT-4	0.00000695	0.000545	0.0075	1.41	0.00493	0.00371	4.37	0.000139	0.555	0.08275	0.001335	0.0001815	0.015715	0.0005	0.00125	0.000025	0.0414	0.0005	1.1035	0.00025

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	TYPE	Time Sampled	Sample ID	Matrix	Total Volume In (mL)	Volume Out (mL)	ORP mV	Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Acidity (as $CaCO_3$) ($CaCO_3$ mg/L)	Alkalinity, Total (as $CaCO_3$) ($CaCO_3$ mg/L)	Sulfate (SO_4) (mg/L)	Chloride (Cl) (mg/L)	Fluoride (F) (mg/L)
	HCT-4	70	2-Jul-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	315	528.75	9.5475	839	2.9	0.87	198.25	0.25	173.75	0.4675	0.87
	HCT-4	71	9-Jul-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	320	535	8.83	901	2.86	0.87	224	0.25	187.00	0.54	0.87
	HCT-4	72	16-Jul-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	310	540	8.8275	840	2.82	0.86	227.25	0.25	184.25	0.4675	0.86
	HCT-4	73	23-Jul-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	305	545	8.825	884	2.85	0.84	230.5	0.25	181.50	0.395	0.84
	HCT-4	74	30-Jul-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	320	550	8.8225	936	2.8	0.83	233.75	0.25	178.75	0.3225	0.83
	HCT-4	75	6-Aug-12	Iron Cap	0	IRON CAP	IBX	QSP	5	IARG	4	Drillcore			Water	350	320	555	8.82	907	2.81	0.81	237	0.25	176.00	0.25	0.81
Mean last 10	10																	530.5	9.877	804	2.898	0.85175	190.15	0.25	164.6825	0.366	0.85175
HCT-5 IRON CAP																											
	HCT-5	0	28-Feb-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	750	500	150	116	351	8.13	0.30	1.7	22.00	120.00	2.5	0.30
	HCT-5	1	7-Mar-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	375	155	117	361	7.93	0.34	1.6	22.00	130.00	2.5	0.34
	HCT-5	2	14-Mar-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	400	294	101	165	7.6	0.33	0.25	22.00	98.00	1.8	0.33
	HCT-5	3	21-Mar-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	400	219	71.4	170	8.19	0.28	0.25	20.00	70.00	0.8	0.28
	HCT-5	4	28-Mar-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	380	147	45.7	160	7.96	0.22	1.4	14.00	42.00	0.25	0.22
	HCT-5	5	4-Apr-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	375	150	43.6	129	7.52	0.20	0.25	14.00	34.00	0.25	0.20
	HCT-5	6	11-Apr-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	390	150	47.9	137	7.52	0.19	1.4	16.00	37.00	0.25	0.19
	HCT-5	7	18-Apr-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	385	155	42.9	115	7.91	0.18	0.25	14.00	32.00	0.25	0.18
	HCT-5	8	25-Apr-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	395	180	37.9	109	7.66	0.15	0.7	15.00	29.00	0.25	0.15
	HCT-5	9	2-May-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	390	165	35.9	97	7.52	0.13	4.1	12.00	25.00	0.5	0.13
	HCT-5	10	9-May-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	380	200	37.5	107	7.9	0.16	0.25	12.00	27.00	0.25	0.16
	HCT-5	11	16-May-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	395	210	38.8	103	7.45	0.14	0.25	14.00	29.00	0.25	0.14
	HCT-5	12	23-May-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	390	150	34.1	96	7.39	0.13	2.1	12.00	25.00	0.25	0.13
	HCT-5	13	30-May-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	390	150	32.4	90	7.6	0.11	2.1	13.00	24.00	0.25	0.11
	HCT-5	14	6-Jun-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	350	200	30	84	7.48	0.11	0.25	11.00	22.00	0.25	0.11
	HCT-5	15	13-Jun-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	390	150	31.9	86	7.49	0.07	0.9	13.00	21.00	0.25	0.07
	HCT-5	16	20-Jun-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	360	145	25.8	74	7.32	0.07	5	9.80	19.00	0.25	0.07
	HCT-5	17	27-Jun-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	380	160	29.7	82	7.29	0.06	2.8	11.00	20.00	0.7	0.06
	HCT-5	18	4-Jul-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	360	180	28.2	76	7.34	0.07	0.25	9.70	18.00	0.25	0.07
	HCT-5	19	11-Jul-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	390	185	29.1	77	7.55	0.06	0.9	9.80	17.00	0.25	0.06
	HCT-5	20	18-Jul-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	390	205	27.75	81	7.34	0.06	0.75	10.40	17.50	0.425	0.06
	HCT-5	21	25-Jul-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	390	185	26.4	75	7.41	0.06	0.6	11.00	18.00	0.6	0.06
	HCT-5	22	1-Aug-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	390	175	26.35	96	7.36	0.06	0.425	10.20	17.00	0.8	0.06
	HCT-5	23	8-Aug-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	385	185	26.3	70	7.41	0.05	0.25	9.40	16.00	1	0.05
	HCT-5	24	15-Aug-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	395	185	26.85	78	7.15	0.05	0.25	9.60	16.00	1.15	0.05
	HCT-5	25	22-Aug-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	395	205	27.4	72	7.65	0.05	0.25	9.80	16.00	1.3	0.05
	HCT-5	26	29-Aug-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	375	200	26.95	64	7.22	0.05	0.25	10.40	17.50	1	0.05
	HCT-5	27	5-Sep-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	385	170	26.5	79	7.16	0.05	0.25	11.00	19.00	0.7	0.05
	HCT-5	28	12-Sep-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	380	195	24.5	65	7.21	0.04	0.25	9.65	16.00	0.65	0.04
	HCT-5	29	19-Sep-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	370	240	22.5	62	7.05	0.03	0.25	8.30	13.00	0.6	0.03
	HCT-5	30	26-Sep-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	380	220	22.55	69	7.17	0.04	0.25	8.70	13.60	0.65	0.04
	HCT-5	31	3-Oct-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	380	170	22.6	55	6.95	0.04	0.25	9.10	14.20	0.7	0.04
	HCT-5	32	10-Oct-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	370	245	25.75	72	7.41	0.05	0.25	10.55	15.80	0.475	0.05
	HCT-5	33	17-Oct-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	400	250	28.9	73	6.93	0.05	0.25	12.00	17.40	0.25	0.05
	HCT-5	34	24-Oct-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	380	215	27.45	67	6.81	0.04	0.25	10.65	15.45	0.525	0.04
	HCT-5	35	31-Oct-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	385	220	26	72	6.84	0.03	0.25	9.30	13.50	0.8	0.03
	HCT-5	36	7-Nov-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	375	210	24.15	67	7.03	0.03	0.25	9.75	13.60	0.7	0.03
	HCT-5	37	14-Nov-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	385	210	22.3	69	7.34	0.03	0.25	10.20	13.70	0.6	0.03
	HCT-5	38	21-Nov-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	385	260	23	70	7.13	0.03	0.25	8.85	14.35	0.425	0.03
	HCT-5	39	28-Nov-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	370	235	23.7	68	7.28	0.04	0.25	7.50	15.00	0.25	0.04
	HCT-5	40	5-Dec-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	360	160	23.45	68	7.13	0.03	0.25	7.47	15.05	0.25	0.03
	HCT-5	41	12-Dec-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	370	205	23.2	65	7.02	0.03	0.25	7.43	15.10	0.25	0.03
	HCT-5	42	19-Dec-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	355	160	22.95	56	7.2	0.03	0.25	7.40	15.15	0.25	0.03
	HCT-5	43	26-Dec-11	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	380	145	22.7	66	7.03	0.03	0.25	7.36	15.20	0.25	0.03
	HCT-5	44	2-Jan-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	365	150	22.7	62	7.26	0.03	0.4125	6.97	14.80	0.3875	0.03
	HCT-5	45	9-Jan-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	370	250	22.7	57	7.17	0.03	0.575	6.58	14.40	0.525	0.03
	HCT-5	46	16-Jan-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	355	245	22.7	55	7.15	0.03	0.7375	6.18	14.00	0.6625	0.03
	HCT-5	47	23-Jan-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	365	220	22.7	57	7.08	0.03	0.9	5.79	13.60	0.8	0.03
	HCT-5	48	30-Jan-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	370	250	24.075	55	6.97	0.03	1.3	6.21	14.80	0.95	0.03
	HCT-5	49	6-Feb-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	370	240	25.45	54	6.98	0.03	1.7	6.63	16.00	1.1	0.03
	HCT-5	50	13-Feb-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	380	250	26.825	49	7.08	0.03	2.1	7.05	17.20	1.25	0.03
	HCT-5	51	20-Feb-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	360	240	28.2	75	7.33	0.03	2.5	7.47	18.40	1.4	0.03
	HCT-5	52	27-Feb-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	365	250	27.925	60	7.29	0.02	2.125	7.04	18.05	1.35	0.02

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cesium (Cs)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	(La)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	(Mn)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)
	HCT-4	6.48	0.0024875	0.0412	0.01267	0.0036075	0.0000125	0.125	0.00027625	0.0098775	3.8275	0.007325	0.075525	5.4475	0.6515	28.4525	0.204	0.00125	0.125	0.07425	0.195
	HCT-4	6.83	0.00277	0.0492	0.00916	0.00333	0.0000125	0.125	0.000125	0.0108	3.54	0.00801	0.0826	5.7	0.707	34.7	0.149	0.00125	0.125	0.062	0.255
	HCT-4	6.5675	0.0027025	0.04505	0.011095	0.0030075	0.00001	0.1	0.00017475	0.010725	3.4975	0.00758	0.083025	5.5975	0.6555	35.6	0.125675	0.001	0.11875	0.054375	0.25675
	HCT-4	6.305	0.002635	0.0409	0.01303	0.002685	0.0000075	0.075	0.0002245	0.01065	3.455	0.00715	0.08345	5.495	0.604	36.5	0.10235	0.00075	0.1125	0.04675	0.2585
	HCT-4	6.0425	0.0025675	0.03675	0.014965	0.0023625	0.000005	0.05	0.00027425	0.010575	3.4125	0.00672	0.083875	5.3925	0.5525	37.4	0.079025	0.0005	0.10625	0.039125	0.26025
	HCT-4	5.78	0.0025	0.0326	0.0169	0.00204	0.0000025	0.025	0.000324	0.0105	3.37	0.00629	0.0843	5.29	0.501	38.3	0.0557	0.00025	0.1	0.0315	0.262
Mean last 10	10	6.085	0.00229	0.0335565	0.0163265	0.003418	0.00001	0.1	0.000379	0.00938375	3.91825	0.00658525	0.0729425	5.247	0.574175	26.74225	0.20265	0.001	0.11875	0.073525	0.173025
HCT-5 IRON CAP																					
	HCT-5	0.104	0.00253	0.00202	0.0302	0.000005	0.0000025	0.025	0.00148	0.000083	41.4	0.0001	0.000398	0.00689	0.000025	0.002	0.000365	0.0052	3.14	0.248	0.016
	HCT-5	0.0531	0.00309	0.00362	0.0208	0.000005	0.0000025	0.025	0.00119	0.000142	40.9	0.00005	0.000714	0.00422	0.000025	0.003	0.000502	0.0068	3.65	0.275	0.037
	HCT-5	0.0625	0.00367	0.0026	0.0185	0.000005	0.0000025	0.025	0.00101	0.000104	35.1	0.00005	0.000471	0.00361	0.000025	0.001	0.000724	0.0065	3.12	0.249	0.023
	HCT-5	0.0663	0.00326	0.00208	0.0149	0.000005	0.000006	0.025	0.00069	0.000078	25	0.00005	0.000293	0.00421	0.000025	0.001	0.000879	0.0044	2.17	0.213	0.022
	HCT-5	0.0881	0.00241	0.00149	0.00988	0.000005	0.0000025	0.025	0.00049	0.000052	16.2	0.00005	0.00024	0.00277	0.000025	0.003	0.00068	0.0024	1.28	0.124	0.011
	HCT-5	0.0986	0.00234	0.00136	0.0113	0.000005	0.000006	0.025	0.00043	0.000071	15.6	0.00005	0.000208	0.0043	0.000025	0.006	0.0011	0.0022	1.13	0.154	0.012
	HCT-5	0.087	0.00299	0.00126	0.0128	0.000005	0.0000025	0.025	0.00042	0.000113	17.2	0.00005	0.000315	0.00509	0.000025	0.003	0.000892	0.002	1.23	0.214	0.01
	HCT-5	0.0674	0.00241	0.00088	0.0104	0.000005	0.0000025	0.025	0.00036	0.000091	15.5	0.00005	0.000202	0.00463	0.000025	0.003	0.000885	0.0015	1.03	0.19	0.011
	HCT-5	0.0766	0.00245	0.00088	0.0102	0.000005	0.0000025	0.025	0.00033	0.000111	13.7	0.00005	0.000234	0.00549	0.000025	0.007	0.000863	0.0013	0.9	0.223	0.01
	HCT-5	0.0651	0.00208	0.00078	0.00858	0.000005	0.0000025	0.025	0.00029	0.000109	13.1	0.00005	0.000195	0.00424	0.000025	0.003	0.000817	0.0012	0.77	0.188	0.013
	HCT-5	0.0534	0.00233	0.00074	0.0087	0.000005	0.0000025	0.025	0.00026	0.000093	13.7	0.00005	0.000257	0.00461	0.000025	0.003	0.000726	0.0011	0.79	0.205	0.013
	HCT-5	0.053	0.00249	0.00071	0.00882	0.000005	0.0000025	0.025	0.00029	0.000134	14.2	0.00005	0.00026	0.0053	0.000025	0.002	0.000694	0.0013	0.8	0.227	0.011
	HCT-5	0.0426	0.00223	0.00061	0.00763	0.000005	0.0000025	0.025	0.00024	0.000132	12.6	0.00005	0.000174	0.00448	0.000025	0.002	0.000719	0.001	0.62	0.206	0.008
	HCT-5	0.0515	0.00216	0.00071	0.00735	0.000005	0.0000025	0.025	0.00022	0.00011	11.9	0.00005	0.000128	0.00249	0.000025	0.003	0.000707	0.001	0.63	0.191	0.005
	HCT-5	0.0608	0.00188	0.0007	0.00644	0.000005	0.000005	0.025	0.0002	0.000086	11.1	0.00005	0.00011	0.0125	0.000025	0.004	0.000912	0.0009	0.56	0.144	0.004
	HCT-5	0.0508	0.00196	0.00065	0.0071	0.000005	0.0000025	0.025	0.00023	0.000122	11.9	0.00005	0.000197	0.00554	0.000025	0.003	0.000841	0.0008	0.52	0.193	0.01
	HCT-5	0.0513	0.00147	0.00056	0.0062	0.000005	0.000006	0.025	0.0002	0.000114	9.62	0.00005	0.00011	0.00387	0.000025	0.002	0.00072	0.0007	0.43	0.157	0.006
	HCT-5	0.0445	0.0019	0.00056	0.00691	0.000005	0.0000025	0.025	0.0002	0.000153	11	0.00005	0.000155	0.00403	0.000025	0.002	0.000794	0.0008	0.55	0.199	0.008
	HCT-5	0.0417	0.00143	0.00045	0.00662	0.000005	0.0000025	0.025	0.00021	0.000125	10.6	0.00005	0.000117	0.0042	0.000025	0.004	0.000698	0.00025	0.43	0.166	0.01
	HCT-5	0.037	0.00171	0.00044	0.00695	0.000005	0.0000025	0.025	0.00022	0.000159	10.9	0.00005	0.000185	0.00601	0.000025	0.006	0.000611	0.0006	0.45	0.192	0.005
	HCT-5	0.03605	0.00172	0.00045	0.006705	0.000005	0.0000025	0.025	0.000225	0.000156	10.4	0.00005	0.000166	0.005145	0.000025	0.0045	0.0006165	0.00055	0.425	0.1875	0.0045
	HCT-5	0.0351	0.00173	0.00046	0.00646	0.000005	0.0000025	0.025	0.00023	0.000153	9.9	0.00005	0.000147	0.00428	0.000025	0.003	0.000622	0.0005	0.4	0.183	0.004
	HCT-5	0.0316	0.00177	0.00047	0.00635	0.000005	0.0000025	0.025	0.0002	0.000169	9.865	0.00005	0.0001465	0.00369	0.000025	0.002	0.000537	0.0005	0.41	0.1925	0.0025
	HCT-5	0.0281	0.00181	0.00048	0.00624	0.000005	0.0000025	0.025	0.00017	0.000185	9.83	0.00005	0.000146	0.0031	0.000025	0.001	0.000452	0.0005	0.42	0.202	0.001
	HCT-5	0.0298	0.00189	0.00048	0.00659	0.000005	0.0000025	0.025	0.00018	0.000195	10.115	0.00005	0.0001265	0.00323	0.000025	0.0015	0.0005365	0.00055	0.4	0.204	0.015
	HCT-5	0.0315	0.00197	0.00048	0.00694	0.000005	0.0000025	0.025	0.00019	0.000205	10.4	0.00005	0.000107	0.00336	0.000025	0.002	0.000621	0.0006	0.38	0.206	0.029
	HCT-5	0.0316	0.001865	0.000465	0.00709	0.000005	0.0000025	0.025	0.00019	0.0002225	10.25	0.00005	0.0001095	0.00319	0.000025	0.0015	0.0005445	0.000425	0.355	0.2095	0.015
	HCT-5	0.0317	0.00176	0.00045	0.00724	0.000005	0.0000025	0.025	0.00019	0.00024	10.1	0.00005	0.000112	0.00302	0.000025	0.001	0.000468	0.00025	0.33	0.213	0.001
	HCT-5	0.03335	0.00157	0.000455	0.00615	0.000005	0.0000025	0.025	0.000175	0.0002155	9.33	0.00005	0.000101	0.00288	0.000025	0.002	0.0004555	0.00025	0.3	0.1905	0.005
	HCT-5	0.035	0.00138	0.00046	0.00506	0.000005	0.0000025	0.025	0.00016	0.000191	8.56	0.00005	0.00009	0.00274	0.000025	0.003	0.000443	0.00025	0.27	0.168	0.009
	HCT-5	0.02905	0.0014	0.00044	0.00519	0.000005	0.0000025	0.025	0.000155	0.000214	8.57	0.00005	0.0001005	0.00303	0.000025	0.0035	0.000399	0.000375	0.28	0.1785	0.0075
	HCT-5	0.0231	0.00142	0.00042	0.00532	0.000005	0.0000025	0.025	0.00015	0.000237	8.58	0.00005	0.000111	0.00332	0.000025	0.004	0.000355	0.0005	0.29	0.189	0.006
	HCT-5	0.0276	0.001595	0.000495	0.006255	0.000005	0.0000025	0.025	0.000175	0.000278	9.84	0.00005	0.0001225	0.00344	0.000025	0.003	0.0004555	0.00055	0.305	0.22	0.005
	HCT-5	0.0321	0.00177	0.00057	0.00719	0.000005	0.0000025	0.025	0.0002	0.000319	11.1	0.00005	0.000134	0.00356	0.000025	0.002	0.000556	0.0006	0.32	0.251	0.004
	HCT-5	0.0279	0.001665	0.000515	0.00643	0.000005	0.0000025	0.025	0.00017	0.000299	10.53	0.00005	0.0001285	0.003555	0.000025	0.0025	0.0004735	0.000425	0.3	0.235	0.0035
	HCT-5	0.0237	0.00156	0.00046	0.00567	0.000005	0.0000025	0.025	0.00014	0.000279	9.96	0.00005	0.000123	0.00355	0.000025	0.003	0.000391	0.00025	0.28	0.219	0.003
	HCT-5	0.02265	0.00152	0.000435	0.00564	0.000005	0.0000025	0.025	0.00013	0.000288	9.255	0.00005	0.000113	0.00358	0.000025	0.0035	0.000459	0.00025	0.26	0.2195	0.007
	HCT-5	0.0216	0.00148	0.00041	0.00561	0.000005	0.0000025	0.025	0.00012	0.000297	8.55	0.00005	0.000103	0.00361	0.000025	0.004	0.000527	0.00025	0.24	0.22	0.011
	HCT-5	0.02385	0.00152	0.000435	0.005535	0.000005	0.0000025	0.025	0.000125	0.00029	8.83	0.00005	0.000108	0.003455	0.000025	0.003	0.000498	0.00025	0.23	0.2105	0.009
	HCT-5	0.0261	0.00156	0.00046	0.00546	0.000005	0.0000025	0.025	0.00013	0.000283	9.11	0.00005	0.000113	0.0033	0.000025	0.002	0.000469	0.00025	0.22	0.201	0.007
	HCT-5	0.02595	0.001485	0.0004375	0.0054225	0.000005	0.0000025	0.025	0.0001225	0.00028275	9.02	0.00005	0.00010575	0.00319	0.000025	0.00225	0.00042975	0.00025	0.2175	0.19725	0.0055
	HCT-5	0.0258	0.00141	0.000415	0.005385	0.000005	0.0000025	0.025	0.000115	0.0002825	8.93	0.00005	0.0000985	0.00308	0.000025	0.0025	0.0003905	0.00025	0.215	0.1935	0.004
	HCT-5	0.02565	0.001335	0.0003925	0.0053475	0.000005	0.0000025	0.025	0.0001075	0.00028225	8.84	0.00005	0.00009125	0.00297	0.000025	0.00275	0.00035125	0.00025	0.2125	0.18975	0.0025
	HCT-5	0.0255	0.00126	0.00037	0.00531	0.000005	0.0000025	0.025	0.0001	0.000282	8.75	0.00005	0.000084	0.00286	0.000025	0.003	0.000312	0.00025	0.21	0.186	0.001
	HCT-5	0.024325	0.00124	0.0003725	0.0051525	0.000005	0.0000025	0.025	0.0001025	0.000275	8.7575	0.00005	0.000082	0.0028875	0.000025	0.00275	0.000324	0.00025	0.2025	0.18025	0.0025
	HCT-5	0.02315	0.00122	0.000375	0.004995	0.000005	0.0000025	0.025	0.000105	0.000268	8.765	0.00005	0.00008	0.002915	0.000025	0.0025	0.000336	0.00025	0.195	0.1745	0.004
	HCT-5	0.021975	0.0012	0.0003775	0.0048375	0.000005	0.0000025	0.025	0.0001075	0.000261	8.7725	0.00005	0.000078	0.0029425	0.000025	0.00225	0.000348	0.00025	0.1875	0.16875	0.0055
	HCT-5	0.0208	0.00118	0.00038	0.00468	0.000005	0.0000025	0.025	0.00011	0.000254	8.78	0.00005	0.000076	0.00297	0.000025	0.002	0.00036	0.00025	0.18	0.163	0.007
	HCT-5	0.02125	0.0011275	0.000375	0.00574	0.000005	0.0000025	0.025	0.00011	0.000253	9.335	0.00005	0.000096	0.003095	0.000025	0.00225	0.0003605	0.00025	0.18	0.16325	0.00825
	HCT-5	0.0217	0.001075	0.00037	0.0068	0.000005	0.0000025	0.025	0.00011	0.000252	9.89	0.00005	0.000116	0.00322	0.000025	0.0025	0.000361	0.00025	0.18	0.1635	0.0095
	HCT-5	0.02215	0.0010225	0.000365	0.00786	0.000005	0.0000025	0.025	0.00011	0.000251	10.445	0.00005	0.000136	0.003345	0.000025	0.00275	0.0003615	0.00025	0.18	0.16375	0.01075
	HCT-5	0.0226	0.00097	0.00036	0.00892	0.000005	0.0000025	0.025	0.00011	0.00025	11	0.00005	0.000156	0.00347	0.000025	0.003	0.000362	0.00025	0.18	0.164	0.012
	HCT-5	0.023625	0.000965	0.000365	0.0079675	0.000005	0.0000025	0.025	0.0001025	0.000237	10.9	0.00005	0.00013475	0.00356	0.000025	0.00275	0.0003915	0.00025	0.1825	0.154	0.01075

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Mercury (Hg)-Dissolved (mg/L)	(Mo)-Dissolved (mg/L)	Nickel (Ni)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Rubidium (Rb)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Tellurium (Te)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Thorium (Th)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Tungsten (W)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
	HCT-4	0.000007025	0.0006775	0.008235	1.265	0.00469	0.00424	4.975	0.0001555	0.5825	0.074625	0.0013375	0.00016275	0.0196575	0.0005	0.00125	0.000025	0.0381	0.0005	1.20675	0.00025
	HCT-4	0.0000071	0.00081	0.00897	1.12	0.00445	0.00477	5.58	0.000172	0.61	0.0665	0.00134	0.000144	0.0236	0.0005	0.00125	0.000025	0.0348	0.0005	1.31	0.00025
	HCT-4	0.0000099	0.0008675	0.008825	1.05475	0.0039825	0.0040175	5.5	0.0001945	0.63425	0.0653	0.0011785	0.000127	0.024175	0.0004725	0.0011125	0.00002375	0.032375	0.000425	1.265	0.0002175
	HCT-4	0.0000127	0.000925	0.00868	0.9895	0.003515	0.003265	5.42	0.000217	0.6585	0.0641	0.001017	0.00011	0.02475	0.000445	0.000975	0.0000225	0.02995	0.00035	1.22	0.000185
	HCT-4	0.0000155	0.0009825	0.008535	0.92425	0.0030475	0.0025125	5.34	0.0002395	0.68275	0.0629	0.0008555	0.000093	0.025325	0.0004175	0.0008375	0.00002125	0.027525	0.000275	1.175	0.0001525
	HCT-4	0.0000183	0.00104	0.00839	0.859	0.00258	0.00176	5.26	0.000262	0.707	0.0617	0.000694	0.000076	0.0259	0.00039	0.0007	0.00002	0.0251	0.0002	1.13	0.00012
Mean last 10	10	0.00000965	0.000678125	0.00778425	1.26525	0.00429125	0.00325125	4.63525	0.000169825	0.594	0.0766525	0.001163	0.000160675	0.01860575	0.0004725	0.0011125	0.00002375	0.0372875	0.000425	1.115825	0.0002175
HCT-5 IRON CAP																					
	HCT-5	0.000005	0.00326	0.00065	19.3	0.0239	0.00947	1	0.000007	6.8	0.745	0.00013	0.000106	0.000025	0.00001	0.0011	0.00022	0.00443	0.0002	0.0024	0.00005
	HCT-5	0.000001	0.00352	0.00049	16.6	0.0193	0.0133	1.4	0.000013	6.78	0.757	0.00046	0.00009	0.000025	0.00001	0.0006	0.00024	0.00972	0.0004	0.0048	0.00005
	HCT-5	0.000005	0.00274	0.00024	13.3	0.0149	0.0123	1.6	0.0000025	4.64	0.694	0.0004	0.000069	0.000025	0.000005	0.00025	0.00022	0.0118	0.0005	0.0018	0.00005
	HCT-5	0.000005	0.00273	0.00012	10.1	0.0112	0.00983	1.4	0.0000025	2.78	0.514	0.00042	0.00005	0.000025	0.000005	0.00025	0.00025	0.00896	0.0006	0.0019	0.00005
	HCT-5	0.000005	0.00159	0.0001	6.37	0.00742	0.00757	1.1	0.0000025	1.25	0.31	0.00054	0.000036	0.000025	0.000005	0.00025	0.00015	0.00512	0.0005	0.0035	0.00005
	HCT-5	0.000001	0.00195	0.0001	5.2	0.00672	0.0072	1	0.0000025	0.93	0.298	0.00049	0.000034	0.0000025	0.00003	0.0006	0.00019	0.00488	0.0006	0.0029	0.00005
	HCT-5	0.000002	0.00194	0.00011	5.32	0.00638	0.00734	1.2	0.0000025	0.79	0.322	0.00035	0.000037	0.0000025	0.000005	0.00025	0.00016	0.00688	0.0004	0.0049	0.00005
	HCT-5	0.000001	0.00175	0.0001	4.26	0.00525	0.00569	1	0.0000025	0.56	0.266	0.00035	0.000041	0.0000025	0.000005	0.00025	0.00015	0.0055	0.0003	0.0024	0.00005
	HCT-5	0.000001	0.00167	0.00093	3.6	0.00457	0.00572	1	0.0000025	0.43	0.243	0.00029	0.000035	0.0000025	0.00001	0.00025	0.00013	0.00471	0.0003	0.0037	0.00005
	HCT-5	0.000001	0.0015	0.00009	3.39	0.00459	0.00526	0.9	0.0000025	0.33	0.213	0.00033	0.000026	0.0000025	0.000005	0.00025	0.00012	0.00337	0.0003	0.0028	0.00005
	HCT-5	0.000001	0.00221	0.00012	3.23	0.00428	0.00529	1	0.0000025	0.31	0.226	0.0003	0.00002	0.0000025	0.000005	0.00025	0.00014	0.00382	0.0003	0.0044	0.00005
	HCT-5	0.000001	0.00206	0.00009	3.16	0.00417	0.00563	1.1	0.0000025	0.29	0.226	0.00023	0.000027	0.0000025	0.00002	0.00025	0.00017	0.0042	0.0002	0.0035	0.00005
	HCT-5	0.000001	0.00194	0.00003	2.49	0.00364	0.00484	0.9	0.0000025	0.21	0.21	0.00026	0.000022	0.0000025	0.000005	0.00025	0.00011	0.0035	0.0003	0.0033	0.00005
	HCT-5	0.000001	0.00104	0.00001	2.6	0.00341	0.00548	1	0.0000025	0.2	0.193	0.0003	0.000024	0.0000025	0.000005	0.00025	0.00008	0.00159	0.0001	0.0017	0.00005
	HCT-5	0.000001	0.00199	0.00006	2.36	0.00315	0.005	0.8	0.0000025	0.16	0.177	0.00034	0.000022	0.0000025	0.00001	0.00025	0.00013	0.00257	0.0002	0.0018	0.00005
	HCT-5	0.000001	0.00191	0.00007	2.1	0.00282	0.00526	0.9	0.0000025	0.16	0.176	0.00028	0.000022	0.0000025	0.00006	0.00025	0.00011	0.00294	0.0001	0.0032	0.00005
	HCT-5	0.000001	0.00163	0.0001	1.74	0.00275	0.0044	0.7	0.000006	0.12	0.149	0.00026	0.000018	0.0000025	0.00001	0.00025	0.00009	0.00168	0.0003	0.0033	0.00005
	HCT-5	0.000001	0.00193	0.00003	1.99	0.00292	0.00515	0.9	0.0000025	0.14	0.169	0.00029	0.00002	0.0000025	0.000005	0.00025	0.00002	0.00238	0.0002	0.0039	0.00005
	HCT-5	0.000001	0.00187	0.00003	1.74	0.00286	0.00398	0.7	0.0000025	0.11	0.156	0.00021	0.00002	0.0000025	0.00002	0.00025	0.00008	0.0015	0.0002	0.0028	0.00005
	HCT-5	0.000001	0.00177	0.00008	1.73	0.00297	0.00424	0.9	0.0000025	0.12	0.155	0.00021	0.000019	0.0000025	0.000005	0.00025	0.00009	0.00221	0.0001	0.0086	0.00005
	HCT-5	0.000001	0.001895	0.000145	1.615	0.002835	0.00428	0.9	0.0000025	0.11	0.1485	0.000205	0.0000195	0.0000025	0.0000175	0.00025	0.00009	0.00207	0.0001	0.0066	0.00005
	HCT-5	0.000001	0.00202	0.00021	1.5	0.0027	0.00432	0.9	0.0000025	0.1	0.142	0.0002	0.00002	0.0000025	0.00003	0.00025	0.00009	0.00193	0.0001	0.0046	0.00005
	HCT-5	0.000001	0.001955	0.000155	1.53	0.00258	0.004645	0.9	0.0000025	0.1	0.14	0.00018	0.0000185	0.0000025	0.0000175	0.00025	0.000085	0.001695	0.0001	0.0048	0.00005
	HCT-5	0.000001	0.00189	0.0001	1.56	0.00246	0.00497	0.9	0.0000025	0.1	0.138	0.00016	0.000017	0.0000025	0.000005	0.00025	0.00008	0.00146	0.0001	0.005	0.00005
	HCT-5	0.0000015	0.00199	0.00024	1.495	0.002445	0.004725	0.9	0.0000025	0.105	0.14	0.000175	0.0000175	0.0000025	0.000005	0.00025	0.00008	0.00163	0.0001	0.005	0.00005
	HCT-5	0.000002	0.00209	0.00038	1.43	0.00243	0.00448	0.9	0.0000025	0.11	0.142	0.00019	0.000018	0.0000025	0.000005	0.00025	0.00008	0.0018	0.0001	0.005	0.00005
	HCT-5	0.0000015	0.00201	0.00021	1.355	0.002515	0.004205	0.9	0.00000375	0.09	0.1395	0.00016	0.000019	0.0000025	0.000005	0.00025	0.00007	0.001595	0.0001	0.00535	0.00005
	HCT-5	0.000001	0.00193	0.00004	1.28	0.0026	0.00393	0.9	0.000005	0.07	0.137	0.00013	0.00002	0.0000025	0.000005	0.00025	0.00006	0.00139	0.0001	0.0057	0.00005
	HCT-5	0.000001	0.001905	0.000035	1.185	0.00226	0.003605	0.8	0.000006	0.075	0.1235	0.00014	0.0000175	0.0000025	0.0001575	0.00025	0.00006	0.001148	0.0001	0.0047	0.00005
	HCT-5	0.000001	0.00188	0.00003	1.09	0.00192	0.00328	0.7	0.000007	0.08	0.11	0.00015	0.000015	0.0000025	0.00031	0.00025	0.00006	0.000906	0.0001	0.0037	0.00005
	HCT-5	0.000001	0.001905	0.000085	1.075	0.001885	0.003155	0.65	0.00000475	0.09	0.11	0.000125	0.0000135	0.0000025	0.0001575	0.00025	0.00006	0.000944	0.0002	0.00465	0.00005
	HCT-5	0.000001	0.00193	0.00014	1.06	0.00185	0.00303	0.6	0.0000025	0.1	0.11	0.0001	0.000012	0.0000025	0.000005	0.00025	0.00006	0.000982	0.0003	0.0056	0.00005
	HCT-5	0.000001	0.00203	0.000105	1.165	0.002035	0.003265	0.75	0.00000375	0.11	0.1205	0.000115	0.0000165	0.0000025	0.0000575	0.00025	0.000065	0.001156	0.0003	0.00665	0.00005
	HCT-5	0.000001	0.00213	0.00007	1.27	0.00222	0.0035	0.9	0.000005	0.12	0.131	0.00013	0.000021	0.0000025	0.00011	0.00025	0.00007	0.00133	0.0003	0.0077	0.00005
	HCT-5	0.000001	0.002095	0.00004	1.205	0.002135	0.00346	0.85	0.00000375	0.1	0.121	0.000125	0.0000175	0.0000025	0.0001	0.00025	0.000065	0.0011415	0.0002	0.00715	0.00005
	HCT-5	0.000001	0.00206	0.00001	1.14	0.00205	0.00342	0.8	0.0000025	0.08	0.111	0.00012	0.000014	0.0000025	0.00009	0.00025	0.00006	0.000953	0.0001	0.0066	0.00005
	HCT-5	0.0000016	0.002105	0.00003	1.07	0.0018	0.0032	0.75	0.00000475	0.08	0.1065	0.00011	0.000013	0.0000025	0.00026	0.00025	0.00006	0.0009305	0.0001	0.0066	0.00005
	HCT-5	0.0000022	0.00215	0.00005	1	0.00155	0.00298	0.7	0.000007	0.08	0.102	0.0001	0.000012	0.0000025	0.00043	0.00025	0.00006	0.000908	0.0001	0.0066	0.00005
	HCT-5	0.0000016	0.002265	0.00007	0.98	0.00164	0.00306	0.7	0.0000085	0.08	0.1065	0.000095	0.0000145	0.0000025	0.000535	0.00025	0.000055	0.0008705	0.0001	0.00625	0.00005
	HCT-5	0.000001	0.00238	0.00009	0.96	0.00173	0.00314	0.7	0.00001	0.08	0.111	0.00009	0.000017	0.0000025	0.00064	0.00025	0.00005	0.000833	0.0001	0.0059	0.00005
	HCT-5	0.000001	0.0024025	0.0000775	0.9275	0.0016475	0.0029675	0.675	0.0000095	0.0775	0.1095	0.0000925	0.00001575	0.0000025	0.000545	0.00025	0.0000475	0.00076075	0.0001	0.00575	0.00005
	HCT-5	0.000001	0.002425	0.000065	0.895	0.001565	0.002795	0.65	0.000009	0.075	0.108	0.000095	0.0000145	0.0000025	0.00045	0.00025	0.000045	0.0006885	0.0001	0.0056	0.00005
	HCT-5	0.000001	0.0024475	0.0000525	0.8625	0.0014825	0.0026225	0.625	0.0000085	0.0725	0.1065	0.0000975	0.00001325	0.0000025	0.000355	0.00025	0.0000425	0.00061625	0.0001	0.00545	0.00005
	HCT-5	0.000001	0.00247	0.00004	0.83	0.0014	0.00245	0.6	0.000008	0.07	0.105	0.0001	0.000012	0.0000025	0.00026	0.00025	0.00004	0.000544	0.0001	0.0053	0.00005
	HCT-5	0.000001	0.00244	0.0000525	0.8275	0.0013925	0.002415	0.6	0.000006625	0.0725	0.101625	0.0001	0.00001175	0.0000025	0.00027	0.00025	0.00004	0.00050525	0.0001	0.005225	0.00005
	HCT-5	0.000001	0.00241	0.000065	0.825	0.001385	0.00238	0.6	0.00000525	0.075	0.09825	0.0001	0.0000115	0.0000025	0.00028	0.00025	0.00004	0.0004665	0.0001	0.00515	0.00005
	HCT-5	0.000001	0.00238	0.0000775	0.8225	0.0013775	0.002345	0.6	0.000003875	0.0775	0.094875	0.0001	0.00001125	0.0000025	0.00029	0.00025	0.00004	0.00042775	0.0001	0.005075	0.00005
	HCT-5	0.000001	0.00235	0.00009	0.82	0.00137	0.00231	0.6	0.0000025	0.08	0.0915	0.0001	0.000011	0.0000025	0.0003	0.00025	0.00004	0.000389	0.0001	0.005	0.00005
	HCT-5	0.000001	0.00231	0.000085	0.8075	0.0013625	0.002335	0.575	0.000003375	0.08	0.098625	0.0000925	0.000011	0.0000025	0.00025	0.00025	0.00004	0.00037675	0.0001	0.005725	0.00005
	HCT-5	0.000001	0.00227	0.00008	0.795	0.001355	0.00236	0.55	0.00000425	0.08	0.10575	0.000085	0.000011	0.0000025	0.0002	0.00025	0.00004	0.0003645	0.0001	0.00645	0.00005
	HCT-5	0.000001	0.00223	0.000075	0.7825	0.0013475	0.002385	0.525	0.000005125	0.08	0.112875	0.0000775	0.000011	0.0000025	0.00015	0.00025	0.00004	0.00035225	0.0001	0.007175	0.00005
	HCT-5	0.000001	0.00219	0.00007	0.77	0.00134	0.00241	0.5	0.000006	0.08	0.12	0.00007	0.000011	0.0000025	0.0001	0.00025	0.00004	0.00034	0.0001	0.0079	0.00005
	HCT-5	0.000001	0.0023175	0.0000725	0.77	0.0013225	0.0023325	0.525	0.00000625	0.075	0.1134	0.000075	0.000011	0.0000025	0.0001	0.00025	0.00004	0.00033725	0.0001	0.007225	0.00005

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	TYPE	Time Sampled	Sample ID	Matrix	Total Volume In (mL)	Volume Out (mL)	ORP mV	Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Acidity (as $CaCO_3$) ($CaCO_3$ mg/L)	Alkalinity, Total (as $CaCO_3$) ($CaCO_3$ mg/L)	Sulfate (SO_4) (mg/L)	Chloride (Cl) (mg/L)	Fluoride (F) (mg/L)
	HCT-5	53	5-Mar-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	350	380	250	27.65	57	7.28	0.02	1.75	6.60	17.70	1.3	0.02
	HCT-5	54	12-Mar-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	350	355	265	27.375	46	7.24	0.02	1.375	6.17	17.35	1.25	0.02
	HCT-5	55	19-Mar-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	350	345	255	27.1	63	7.13	0.02	1	5.73	17.00	1.2	0.02
	HCT-5	56	26-Mar-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	350	365	265	25	43	6.91	0.02	1	5.79	16.70	1.025	0.02
	HCT-5	57	2-Apr-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	370	270	22.9	61	7.2	0.02	1	5.85	16.40	0.85	0.02
	HCT-5	58	9-Apr-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	370	230	20.8	55	7.2	0.02	1	5.91	16.10	0.675	0.02
	HCT-5	59	16-Apr-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	365	250	18.7	50	7.15	0.02	1	5.97	15.80	0.5	0.02
	HCT-5	60	23-Apr-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	345	265	18.45	63	7.27	0.02	0.8125	5.96	14.28	0.4375	0.02
	HCT-5	61	30-Apr-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	350	270	18.2	55	7.26	0.02	0.625	5.94	12.75	0.375	0.02
	HCT-5	62	7-May-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	370	280	17.95	49	7.17	0.02	0.4375	5.93	11.23	0.3125	0.02
	HCT-5	63	14-May-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	375	230	17.7	47	7.21	0.02	0.25	5.91	9.70	0.25	0.02
	HCT-5	64	21-May-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	375	260	18.175	49	7.15	0.02	0.25	6.44	10.23	0.25	0.02
	HCT-5	65	28-May-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	370	250	18.65	64	6.96	0.02	0.25	6.98	10.75	0.25	0.02
	HCT-5	66	4-Jun-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	385	250	19.125	55	7.29	0.02	0.25	7.51	11.28	0.25	0.02
	HCT-5	67	11-Jun-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	395	255	19.6	53	7.25	0.01	0.25	8.04	11.80	0.25	0.01
	HCT-5	68	18-Jun-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	360	250	19.425	54	7.25	0.02	0.7825	7.80	12.35	0.36	0.02
	HCT-5	69	25-Jun-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	380	250	19.25	53	7.28	0.02	1.315	7.55	12.90	0.47	0.02
	HCT-5	70	2-Jul-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	385	250	19.075	60	7.26	0.02	1.8475	7.31	13.45	0.58	0.02
	HCT-5	71	9-Jul-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	370	255	18.9	52	7.26	0.02	2.38	7.06	14.00	0.69	0.02
	HCT-5	72	16-Jul-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	370	270	20.025	56	7.2	0.02	2.17	7.28	13.90	0.58	0.02
	HCT-5	73	23-Jul-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	370	250	21.15	60	7.35	0.02	1.96	7.50	13.80	0.47	0.02
	HCT-5	74	30-Jul-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	375	270	22.275	54	7.31	0.02	1.75	7.72	13.70	0.36	0.02
	HCT-5	75	6-Aug-12	Iron Cap	0	IRON CAP	SEDS	SIL	4	CL	1	Drillcore			Water	400	385	260	23.4	66	7.28	0.02	1.54	7.94	13.60	0.25	0.02
Mean last 10	10																	256	20.2225	56.3	7.273	0.0182	1.4245	7.56975	13.0775	0.426	0.0182
HCT-6 IRON CAP																											
	HCT-6	0	28-Feb-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	750	495	150	168	525	6.86	0.25	2.2	6.2	200	1.7	0.97
	HCT-6	1	7-Mar-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	385	180	199	596	6.84	0.25	2	3.9	250	9.5	1.18
	HCT-6	2	14-Mar-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	380	180	163	470	6.68	0.25	0.25	2.5	180	0.8	1.27
	HCT-6	3	21-Mar-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	400	195	85.8	258	6.46	0.25	0.7	2	100	0.25	0.94
	HCT-6	4	28-Mar-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	375	185	79.5	235	6.51	0.25	2.4	1.3	89	0.5	1.19
	HCT-6	5	4-Apr-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	370	160	77	240	6.26	0.25	1.6	0.25	91	0.25	1.24
	HCT-6	6	11-Apr-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	375	150	78.1	227	6.28	0.25	4.2	0.5	90	0.25	1.45
	HCT-6	7	18-Apr-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	370	195	72.6	215	5.86	0.25	3.5	0.25	87	0.25	1.68
	HCT-6	8	25-Apr-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	375	185	75.6	231	5.9	0.25	5.5	0.25	86	0.25	2.19
	HCT-6	9	2-May-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	380	190	72.4	220	5.69	0.25	18.4	0.25	84	0.25	2.65
	HCT-6	10	9-May-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	370	250	75.6	240	5.34	0.25	11	0.9	91	0.25	3.33
	HCT-6	11	16-May-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	380	265	74.5	227	5.5	0.25	14.1	0.25	93	0.25	3.80
	HCT-6	12	23-May-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	375	220	79.8	239	5.26	0.25	24.1	0.25	91	0.25	4.44
	HCT-6	13	30-May-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	385	275	71.3	215	5.03	0.25	21.1	0.25	96	0.25	4.55
	HCT-6	14	6-Jun-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	375	275	72	220	5.01	0.25	20.9	0.25	85	0.25	5.83
	HCT-6	15	13-Jun-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	380	285	76.4	239	4.95	0.25	24.8	0.25	97	0.25	5.72
	HCT-6	16	20-Jun-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	370	240	72.7	232	4.93	0.25	30.5	0.25	94	0.25	5.98
	HCT-6	17	27-Jun-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	385	280	74	240	4.68	0.25	33.2	0.25	91	0.25	5.30
	HCT-6	18	4-Jul-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	400	260	76.8	243	4.69	0.25	31	0.25	90	0.25	6.72
	HCT-6	19	11-Jul-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	390	255	66.5	226	4.46	0.25	28.1	0.25	83	0.5	2.90
	HCT-6	20	18-Jul-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	390	272	62.45	228	4.53	0.25	29.5	0.25	84	0.6	3.80
	HCT-6	21	25-Jul-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	390	280	58.4	215	4.42	0.25	30.9	0.25	84	0.7	4.70
	HCT-6	22	1-Aug-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	390	275	57.85	237	4.31	0.25	27.35	0.25	82	0.7	4.65
	HCT-6	23	8-Aug-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	390	275	57.3	210	4.3	0.25	23.8	0.25	79	0.7	4.60
	HCT-6	24	15-Aug-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	390	280	58	236	4.34	0.25	24.85	0.25	83	1.15	4.60
	HCT-6	25	22-Aug-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	395	295	58.7	213	4.15	0.25	25.9	0.25	86	1.6	4.60
	HCT-6	26	29-Aug-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	370	290	61.9	236	4.18	1.88	30.55	0.25	93	1.2	4.50
	HCT-6	27	5-Sep-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	395	305	65.1	275	4.19	3.50	35.2	0.25	100	0.8	4.40
	HCT-6	28	12-Sep-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	390	320	61.85	232	4.16	3.80	35.35	0.25	97	0.7	4.15
	HCT-6	29	19-Sep-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	370	400	58.6	256	3.83	4.10	35.5	0.25	94	0.6	3.90
	HCT-6	30	26-Sep-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	385	400	64.8	276	3.76	7.40	43.2	0.25	106	0.425	4.20
	HCT-6	31	3-Oct-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	385	310	71	342	3.63	10.70	50.9	0.25	118	0.25	4.50
	HCT-6	32	10-Oct-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	375	400	74.25	457	3.65	13.80	55.75	0.25	124	0.25	4.35
	HCT-6	33	17-Oct-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	390	440	77.5	425	3.48	16.90	60.6	0.25	129	0.25	4.20
	HCT-6	34	24-Oct-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	390	440	78.9	519	3.36	28.00	76.45	0.25	141	0.25	4.20
	HCT-6	35	31-Oct-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	380	440	80.3	563	3.2	39.10	92.3	0.25	152	0.25	4.20

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cesium (Cs)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	(La)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	(Mn)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)
	HCT-5	0.02465	0.00096	0.00037	0.007015	0.000005	0.0000025	0.025	0.000095	0.000224	10.8	0.00005	0.0001135	0.00365	0.000025	0.0025	0.000421	0.00025	0.185	0.144	0.0095
	HCT-5	0.025675	0.000955	0.000375	0.0060625	0.000005	0.0000025	0.025	0.0000875	0.000211	10.7	0.00005	0.00009225	0.00374	0.000025	0.00225	0.0004505	0.00025	0.1875	0.134	0.00825
	HCT-5	0.0267	0.00095	0.00038	0.00511	0.000005	0.0000025	0.025	0.00008	0.000198	10.6	0.00005	0.000071	0.00383	0.000025	0.002	0.00048	0.00025	0.19	0.124	0.007
	HCT-5	0.02385	0.00091	0.0003575	0.0047525	0.000005	0.0000025	0.025	0.0000775	0.00021075	9.765	0.00005	0.000073	0.003605	0.000025	0.002	0.0004305	0.00025	0.175	0.12925	0.00775
	HCT-5	0.021	0.00087	0.000335	0.004395	0.000005	0.0000025	0.025	0.000075	0.0002235	8.93	0.00005	0.000075	0.00338	0.000025	0.002	0.000381	0.00025	0.16	0.1345	0.0085
	HCT-5	0.01815	0.00083	0.0003125	0.0040375	0.000005	0.0000025	0.025	0.0000725	0.00023625	8.095	0.00005	0.000077	0.003155	0.000025	0.002	0.0003315	0.00025	0.145	0.13975	0.00925
	HCT-5	0.0153	0.00079	0.00029	0.00368	0.000005	0.0000025	0.025	0.00007	0.000249	7.26	0.00005	0.000079	0.00293	0.000025	0.002	0.000282	0.00025	0.13	0.145	0.01
	HCT-5	0.01505	0.00076625	0.000282	0.0035525	0.000005	0.0000025	0.025	0.0000655	0.00024	7.17	0.00005	0.00007625	0.003375	0.000025	0.001875	0.00028	0.00025	0.1255	0.14325	0.010025
	HCT-5	0.0148	0.0007425	0.000274	0.003425	0.000005	0.0000025	0.025	0.000061	0.000231	7.08	0.00005	0.0000735	0.00382	0.000025	0.00175	0.000278	0.00025	0.121	0.1415	0.01005
	HCT-5	0.01455	0.00071875	0.000266	0.0032975	0.000005	0.0000025	0.025	0.0000565	0.000222	6.99	0.00005	0.00007075	0.004265	0.000025	0.001625	0.000276	0.00025	0.1165	0.13975	0.010075
	HCT-5	0.0143	0.000695	0.000258	0.00317	0.000005	0.0000025	0.025	0.000052	0.000213	6.9	0.00005	0.000068	0.00471	0.000025	0.0015	0.000274	0.00025	0.112	0.138	0.0101
	HCT-5	0.016075	0.0007145	0.00026825	0.0033	0.000005	0.0000025	0.025	0.000077	0.000224	7.0975	0.00005	0.000069325	0.0043725	0.000025	0.00195	0.000276	0.00025	0.11075	0.14275	0.008925
	HCT-5	0.01785	0.000734	0.0002785	0.00343	0.000005	0.0000025	0.025	0.000102	0.000235	7.295	0.00005	0.00007065	0.004035	0.000025	0.0024	0.000278	0.00025	0.1095	0.1475	0.00775
	HCT-5	0.019625	0.0007535	0.00028875	0.00356	0.000005	0.0000025	0.025	0.000127	0.000246	7.4925	0.00005	0.000071975	0.0036975	0.000025	0.00285	0.00028	0.00025	0.10825	0.15225	0.006575
	HCT-5	0.0214	0.000773	0.000299	0.00369	0.000005	0.0000025	0.025	0.000152	0.000257	7.69	0.00005	0.0000733	0.00336	0.000025	0.0033	0.000282	0.00025	0.107	0.157	0.0054
	HCT-5	0.020425	0.00076775	0.0002975	0.00365	0.000005	0.0000025	0.025	0.000127	0.00027875	7.62	0.000065	0.000080975	0.01272	0.000025	0.019825	0.000564	0.00025	0.10625	0.1635	0.0043
	HCT-5	0.01945	0.0007625	0.000296	0.00361	0.000005	0.0000025	0.025	0.000102	0.0003005	7.55	0.00008	0.00008865	0.02208	0.000025	0.03635	0.000846	0.00025	0.1055	0.17	0.0032
	HCT-5	0.018475	0.00075725	0.0002945	0.00357	0.000005	0.0000025	0.025	0.000077	0.00032225	7.48	0.000095	0.000096325	0.03144	0.000025	0.052875	0.001128	0.00025	0.10475	0.1765	0.0021
	HCT-5	0.0175	0.000752	0.000293	0.00353	0.000005	0.0000025	0.025	0.000052	0.000344	7.41	0.00011	0.000104	0.0408	0.000025	0.0694	0.00141	0.00025	0.104	0.183	0.001
	HCT-5	0.019475	0.000755	0.0003065	0.0037175	0.000005	0.0000025	0.025	0.00005475	0.000354	7.8525	0.000095	0.00010375	0.0315875	0.000025	0.052875	0.00115225	0.00025	0.1085	0.19075	0.001575
	HCT-5	0.02145	0.000758	0.00032	0.003905	0.000005	0.0000025	0.025	0.0000575	0.000364	8.295	0.00008	0.0001035	0.022375	0.000025	0.03635	0.0008945	0.00025	0.113	0.1985	0.00215
	HCT-5	0.023425	0.000761	0.0003335	0.0040925	0.000005	0.0000025	0.025	0.00006025	0.000374	8.7375	0.000065	0.00010325	0.0131625	0.000025	0.019825	0.00063675	0.00025	0.1175	0.20625	0.002725
	HCT-5	0.0254	0.000764	0.000347	0.00428	0.000005	0.0000025	0.025	0.000063	0.000384	9.18	0.00005	0.000103	0.00395	0.000025	0.0033	0.000379	0.00025	0.122	0.214	0.0033
Mean last 10	10	0.0206625	0.0007604	0.000307575	0.0037605	0.000005	0.0000025	0.025	0.00008725	0.00032245	7.93075	0.000074	9.28725E-05	0.01851725	0.000025	0.029695	0.00075725	0.00025	0.109675	0.181175	0.0032325
HCT-6 IRON CAP																					
	HCT-6	0.0946	0.00933	0.00047	0.0409	0.00017	0.0000025	0.025	0.00172	0.00377	56	0.00005	0.0287	0.022	0.00038	0.002	0.00613	0.0065	6.72	2	0.016
	HCT-6	0.0093	0.0112	0.00049	0.05	0.00003	0.0000025	0.025	0.00127	0.00134	66.8	0.00005	0.00858	0.00481	0.00006	0.003	0.0015	0.0039	7.83	1.98	0.018
	HCT-6	0.0319	0.0132	0.0006	0.0383	0.00011	0.0000025	0.025	0.00121	0.00153	55.2	0.00005	0.00912	0.00403	0.00014	0.001	0.00318	0.0049	6.1	1.86	0.02
	HCT-6	0.0213	0.00931	0.00052	0.0484	0.00009	0.0000025	0.025	0.00071	0.00108	29.2	0.00005	0.00573	0.00347	0.000025	0.001	0.00241	0.0031	3.16	1.12	0.004
	HCT-6	0.0455	0.00912	0.00053	0.0413	0.00013	0.0000025	0.025	0.00069	0.00115	27.1	0.00005	0.0061	0.00502	0.00006	0.001	0.00323	0.0031	2.87	1.08	0.01
	HCT-6	0.121	0.0093	0.00055	0.0398	0.00031	0.0000025	0.025	0.00055	0.00173	26.1	0.00005	0.00924	0.0113	0.00009	0.002	0.00542	0.0034	2.87	1.31	0.01
	HCT-6	0.26	0.00891	0.00067	0.0371	0.00051	0.0000025	0.025	0.00057	0.00205	26.6	0.00005	0.0113	0.0188	0.00018	0.008	0.00782	0.0034	2.87	1.39	0.012
	HCT-6	0.501	0.00711	0.00046	0.0346	0.00083	0.0000025	0.025	0.00061	0.00248	24	0.00005	0.0149	0.0384	0.00023	0.003	0.011	0.0029	3.1	1.55	0.011
	HCT-6	0.873	0.00673	0.00047	0.031	0.00135	0.0000025	0.025	0.00051	0.00302	25.5	0.00005	0.0181	0.0619	0.00035	0.004	0.0148	0.0031	2.89	1.68	0.001
	HCT-6	1.28	0.00516	0.00043	0.034	0.00164	0.0000025	0.025	0.00048	0.00327	24.8	0.00005	0.0186	0.0882	0.00046	0.009	0.0202	0.0027	2.58	1.7	0.012
	HCT-6	1.72	0.00429	0.00044	0.0281	0.00215	0.0000025	0.025	0.00042	0.00381	26	0.0001	0.0219	0.148	0.00063	0.014	0.0273	0.0026	2.63	1.78	0.012
	HCT-6	2.43	0.00376	0.0004	0.0293	0.00304	0.0000025	0.025	0.00045	0.00431	25.3	0.00005	0.0236	0.208	0.0009	0.027	0.0383	0.0031	2.78	1.89	0.014
	HCT-6	2.66	0.00284	0.00035	0.0286	0.00344	0.0000025	0.025	0.00038	0.00484	27.8	0.00005	0.0261	0.308	0.00112	0.054	0.0515	0.0026	2.5	1.96	0.009
	HCT-6	2.92	0.0026	0.00029	0.0283	0.00337	0.0000025	0.025	0.00038	0.00472	24.8	0.00005	0.0241	0.325	0.00099	0.063	0.0552	0.0023	2.28	1.72	0.007
	HCT-6	3.51	0.00256	0.00042	0.0375	0.00413	0.0000025	0.025	0.00042	0.00558	24.9	0.0002	0.027	0.419	0.001	0.1	0.0722	0.0025	2.37	1.89	0.005
	HCT-6	3.76	0.00188	0.00034	0.0323	0.00454	0.0000025	0.025	0.00036	0.00625	26.8	0.00005	0.0292	0.593	0.00177	0.158	0.095	0.0022	2.32	1.9	0.009
	HCT-6	4.23	0.00158	0.00036	0.0277	0.00487	0.0000025	0.025	0.0004	0.00673	25.5	0.0002	0.0282	0.685	0.00206	0.216	0.113	0.0021	2.18	1.82	0.009
	HCT-6	4.31	0.0014	0.0003	0.0258	0.00549	0.0000025	0.025	0.00039	0.00747	25.7	0.00005	0.0295	0.832	0.00223	0.304	0.132	0.0019	2.4	1.8	0.008
	HCT-6	4.36	0.00117	0.00031	0.0276	0.00539	0.0000025	0.025	0.00047	0.00766	27.5	0.00005	0.0269	0.895	0.00265	0.41	0.159	0.0018	1.97	1.63	0.009
	HCT-6	4.17	0.00095	0.00038	0.0269	0.00497	0.0000025	0.025	0.00039	0.0078	23.4	0.00005	0.027	1.01	0.00269	0.435	0.161	0.0015	1.97	1.63	0.005
	HCT-6	4.105	0.00083	0.000375	0.02885	0.004975	0.0000025	0.025	0.000455	0.00795	21.95	0.00005	0.02585	1.065	0.002815	0.514	0.169	0.00135	1.875	1.545	0.006
	HCT-6	4.04	0.00071	0.00037	0.0308	0.00498	0.0000025	0.025	0.00052	0.0081	20.5	0.00005	0.0247	1.12	0.00294	0.593	0.177	0.0012	1.78	1.46	0.007
	HCT-6	3.935	0.000655	0.000415	0.03535	0.00493	0.00000675	0.025	0.0005	0.008575	20.35	0.00005	0.0237	1.195	0.00308	0.6635	0.1945	0.0012	1.71	1.39	0.0085
	HCT-6	3.83	0.0006	0.00046	0.0399	0.00488	0.000011	0.025	0.00048	0.00905	20.2	0.00005	0.0227	1.27	0.00322	0.734	0.212	0.0012	1.64	1.32	0.01
	HCT-6	3.775	0.000545	0.0004	0.03735	0.00492	0.00000675	0.025	0.00046	0.009875	20.5	0.00005	0.0229	1.485	0.003525	0.828	0.242	0.00115	1.635	1.33	0.017
	HCT-6	3.72	0.00049	0.00034	0.0348	0.00496	0.0000025	0.025	0.00044	0.0107	20.8	0.00005	0.0231	1.7	0.00383	0.922	0.272	0.0011	1.63	1.34	0.024
	HCT-6	3.84	0.000445	0.000425	0.03145	0.00516	0.0000025	0.025	0.000455	0.0119	22.05	0.000125	0.0234	1.94	0.004805	0.991	0.3205	0.00105	1.665	1.38	0.0125
	HCT-6	3.96	0.0004	0.00051	0.0281	0.00536	0.0000025	0.025	0.00047	0.0131	23.3	0.0002	0.0237	2.18	0.00578	1.06	0.369	0.001	1.7	1.42	0.001
	HCT-6	3.995	0.00035	0.00045	0.02725	0.005275	0.0000025	0.025	0.00046	0.0133	22	0.000125	0.02345	2.465	0.006785	0.9945	0.3835	0.00095	1.685	1.365	0.005
	HCT-6	4.03	0.0003	0.00039	0.0264	0.00519	0.0000025	0.025	0.00045	0.0135	20.7	0.00005	0.0232	2.75	0.00779	0.929	0.398	0.0009	1.67	1.31	0.009
	HCT-6	4.44	0.0003	0.000795	0.0253	0.0055	0.00000875	0.0875	0.000475	0.01585	22.9	0.00015	0.0257	3.49	0.013395	1.3445	0.465	0.0012	1.835	1.43	0.007
	HCT-6	4.85	0.0003	0.0012	0.0242	0.00581	0.000015	0.15	0.0005	0.0182	25.1	0.00025	0.0282	4.23	0.019	1.76	0.532	0.0015	2	1.55	0.005
	HCT-6	5.75	0.0003	0.0014	0.0283	0.00554	0.000015	0.15	0.0005	0.01995	26.35	0.000425	0.02905	4.57	0.02415	2.605	0.5605	0.0015	2.05	1.59	0.0075
	HCT-6	6.65	0.0003	0.0016	0.0324	0.00527	0.000015	0.15	0.0005	0.0217	27.6	0.0006	0.0299	4.91	0.0293	3.45	0.589	0.0015	2.1	1.63	0.01
	HCT-6	6.52	0.0003	0.0019	0.0316	0.0056	0.000015	0.15	0.0005	0.02365	28.25	0.001	0.0309	5.385	0.0349	4.81	0.593	0.0015	2.05	1.615	0.0075
	HCT-6	6.39	0.0003	0.0022	0.0308	0.00593	0.000015	0.15	0.0005	0.0256	28.9	0.0014	0.0319	5.86	0.0405	6.17	0.597	0.0015	2	1.6	0.005

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Mercury (Hg)-Dissolved (mg/L)	(Mo)-Dissolved (mg/L)	Nickel (Ni)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Rubidium (Rb)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Tellurium (Te)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Thorium (Th)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Tungsten (W)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
	HCT-5	0.000001	0.002445	0.000075	0.77	0.001305	0.002255	0.55	0.0000065	0.07	0.1068	0.00008	0.000011	0.0000025	0.0001	0.00025	0.00004	0.0003345	0.0001	0.00655	0.00005
	HCT-5	0.000001	0.0025725	0.0000775	0.77	0.0012875	0.0021775	0.575	0.00000675	0.065	0.1002	0.000085	0.000011	0.0000025	0.0001	0.00025	0.00004	0.00033175	0.0001	0.005875	0.00005
	HCT-5	0.000001	0.0027	0.00008	0.77	0.00127	0.0021	0.6	0.000007	0.06	0.0936	0.00009	0.000011	0.0000025	0.0001	0.00025	0.00004	0.000329	0.0001	0.0052	0.00005
	HCT-5	0.000001	0.002545	0.0000775	0.72	0.001205	0.0020425	0.575	0.000007	0.0575	0.088	0.0000825	0.000011	0.0000025	0.000125	0.00025	0.000035	0.000331	0.0001	0.0052	0.00005
	HCT-5	0.000001	0.00239	0.000075	0.67	0.00114	0.001985	0.55	0.000007	0.055	0.0824	0.000075	0.000011	0.0000025	0.00015	0.00025	0.00003	0.000333	0.0001	0.0052	0.00005
	HCT-5	0.000001	0.002235	0.0000725	0.62	0.001075	0.0019275	0.525	0.000007	0.0525	0.0768	0.0000675	0.000011	0.0000025	0.000175	0.00025	0.000025	0.000335	0.0001	0.0052	0.00005
	HCT-5	0.000001	0.00208	0.00007	0.57	0.00101	0.00187	0.5	0.000007	0.05	0.0712	0.00006	0.000011	0.0000025	0.0002	0.00025	0.00002	0.000337	0.0001	0.0052	0.00005
	HCT-5	0.000001	0.002015	0.00007175	0.5605	0.000984	0.0017625	0.4775	0.000007	0.04375	0.0701	0.00005875	0.00001025	0.0000025	0.000205	0.00025	0.00002125	0.0003145	0.0001	0.00612	0.00005
	HCT-5	0.000001	0.00195	0.0000735	0.551	0.000958	0.001655	0.455	0.000007	0.0375	0.069	0.0000575	0.0000095	0.0000025	0.00021	0.00025	0.0000225	0.000292	0.0001	0.00704	0.00005
	HCT-5	0.000001	0.001885	0.00007525	0.5415	0.000932	0.0015475	0.4325	0.000007	0.03125	0.0679	0.00005625	0.00000875	0.0000025	0.000215	0.00025	0.00002375	0.0002695	0.0001	0.00796	0.00005
	HCT-5	0.000001	0.00182	0.000077	0.532	0.000906	0.00144	0.41	0.000007	0.025	0.0668	0.000055	0.000008	0.0000025	0.00022	0.00025	0.000025	0.000247	0.0001	0.00888	0.00005
	HCT-5	0.000001	0.001865	0.00007275	0.53525	0.00092625	0.001565	0.4325	0.000005875	0.03125	0.068025	0.000055	0.000008275	0.0000025	0.00029	0.00025	0.0000255	0.000263	0.0001	0.00811	0.00005
	HCT-5	0.000001	0.00191	0.0000685	0.5385	0.0009465	0.00169	0.455	0.00000475	0.0375	0.06925	0.000055	0.00000855	0.0000025	0.00036	0.00025	0.000026	0.000279	0.0001	0.00734	0.00005
	HCT-5	0.000001	0.001955	0.00006425	0.54175	0.00096675	0.001815	0.4775	0.000003625	0.04375	0.070475	0.000055	0.000008825	0.0000025	0.00043	0.00025	0.0000265	0.000295	0.0001	0.00657	0.00005
	HCT-5	0.000001	0.002	0.00006	0.545	0.000987	0.00194	0.5	0.0000025	0.05	0.0717	0.000055	0.0000091	0.0000025	0.0005	0.00025	0.000027	0.000311	0.0001	0.0058	0.00005
	HCT-5	0.000001	0.0019075	0.000092	0.542	0.00096125	0.0018925	0.5125	0.0000033	0.04375	0.070925	0.00006425	0.000009125	0.0000025	0.003025	0.00025	0.000025	0.0003065	0.0001	0.01505	0.00005
	HCT-5	0.000001	0.001815	0.000124	0.539	0.0009355	0.001845	0.525	0.0000041	0.0375	0.07015	0.0000735	0.00000915	0.0000025	0.00555	0.00025	0.000023	0.000302	0.0001	0.0243	0.00005
	HCT-5	0.000001	0.0017225	0.000156	0.536	0.00090975	0.0017975	0.5375	0.0000049	0.03125	0.069375	0.00008275	0.000009175	0.0000025	0.008075	0.00025	0.000021	0.0002975	0.0001	0.03355	0.00005
	HCT-5	0.000001	0.00163	0.000188	0.533	0.000884	0.00175	0.55	0.0000057	0.025	0.0686	0.000092	0.0000092	0.0000025	0.0106	0.00025	0.000019	0.000293	0.0001	0.0428	0.00005
	HCT-5	0.000001	0.0017925	0.00017675	0.548	0.00090125	0.00174	0.5525	0.000005775	0.025	0.07135	0.0000715	0.0000094	0.0000025	0.008075	0.00025	0.0000215	0.0003165	0.0001	0.03428	0.00005
	HCT-5	0.000001	0.001955	0.0001655	0.563	0.0009185	0.00173	0.555	0.00000585	0.025	0.0741	0.000051	0.0000096	0.0000025	0.00555	0.00025	0.000024	0.00034	0.0001	0.02576	0.00005
	HCT-5	0.000001	0.0021175	0.00015425	0.578	0.00093575	0.00172	0.5575	0.000005925	0.025	0.07685	0.0000305	0.0000098	0.0000025	0.003025	0.00025	0.0000265	0.0003635	0.0001	0.01724	0.00005
	HCT-5	0.000001	0.00228	0.000143	0.593	0.000953	0.00171	0.56	0.000006	0.025	0.0796	0.00001	0.00001	0.0000025	0.0005	0.00025	0.000029	0.000387	0.0001	0.00872	0.00005
Mean last 10	10	0.000001	0.0019175	0.000132375	0.551875	0.000935275	0.001794	0.53275	4.7675E-06	0.033125	0.0723125	0.00005855	9.3375E-06	0.0000025	0.004533	0.00025	0.00002425	0.0003212	0.0001	0.021407	0.00005
HCT-6 IRON CAP																					
	HCT-6	0.00005	0.00036	0.00659	23.7	0.0311	0.0232	0.8	0.0000025	17.7	1.37	0.00004	0.000341	0.000025	0.000005	0.00025	0.00005	0.00338	0.0001	0.108	0.00005
	HCT-6	0.000004	0.0008	0.00168	20.4	0.025	0.0367	1.6	0.0000025	17.5	1.33	0.00001	0.000227	0.0000025	0.000005	0.00025	0.00004	0.000945	0.0001	0.0195	0.00005
	HCT-6	0.000005	0.00047	0.00137	18	0.0191	0.0226	2.8	0.0000025	9.48	1.35	0.00003	0.000199	0.0000025	0.000005	0.00025	0.00003	0.000995	0.0001	0.0313	0.00005
	HCT-6	0.000005	0.00029	0.0007	9.94	0.0122	0.0114	1.9	0.0000025	3.54	0.766	0.00001	0.00011	0.0000025	0.000005	0.00025	0.00002	0.000592	0.0001	0.0225	0.00005
	HCT-6	0.000005	0.00031	0.00074	9.31	0.0102	0.0103	2.6	0.0000025	2.1	0.662	0.00002	0.000095	0.0000025	0.000005	0.00025	0.00002	0.000707	0.0001	0.0299	0.00005
	HCT-6	0.000001	0.00025	0.00114	8.23	0.0103	0.0111	2.7	0.0000025	1.46	0.714	0.00001	0.0001	0.0000025	0.00003	0.00025	0.00002	0.00114	0.0002	0.0521	0.00005
	HCT-6	0.000002	0.00007	0.00135	7.46	0.00833	0.0123	3.7	0.0000025	1.03	0.716	0.00003	0.000101	0.0000025	0.000005	0.00025	0.000005	0.00143	0.0001	0.0765	0.00005
	HCT-6	0.000001	0.00015	0.00184	7.17	0.00903	0.0118	3.4	0.0000025	0.84	0.654	0.00002	0.000092	0.0000025	0.00005	0.00025	0.000005	0.00293	0.0001	0.109	0.00005
	HCT-6	0.000001	0.00015	0.00246	6.7	0.00828	0.0162	4	0.0000025	0.65	0.657	0.00006	0.000094	0.0000025	0.000005	0.00025	0.000005	0.00418	0.0001	0.158	0.00005
	HCT-6	0.000001	0.00005	0.0027	6.5	0.00798	0.0178	4.3	0.0000025	0.54	0.622	0.00003	0.000086	0.0000025	0.00002	0.00025	0.000005	0.00602	0.0001	0.192	0.00005
	HCT-6	0.000001	0.00013	0.0035	5.72	0.00729	0.0196	4.5	0.0000025	0.47	0.595	0.00009	0.000087	0.000018	0.000005	0.00025	0.00001	0.00917	0.0001	0.242	0.00005
	HCT-6	0.000001	0.00009	0.00384	5.83	0.00724	0.0252	5	0.0000025	0.47	0.631	0.00009	0.000094	0.000042	0.00002	0.00025	0.00005	0.0133	0.0001	0.293	0.00005
	HCT-6	0.000001	0.00009	0.00457	5.12	0.00711	0.0258	5.2	0.0000025	0.4	0.614	0.00006	0.000091	0.00007	0.000005	0.00025	0.000005	0.018	0.0001	0.363	0.00005
	HCT-6	0.000001	0.00011	0.00434	4.92	0.00644	0.0242	5	0.0000025	0.37	0.535	0.00012	0.000089	0.000023	0.000005	0.00025	0.000005	0.017	0.0001	0.358	0.00005
	HCT-6	0.000001	0.00005	0.00504	5.7	0.00721	0.0272	4.1	0.000008	0.37	0.526	0.00013	0.0001	0.000178	0.00003	0.00025	0.000005	0.0246	0.0001	0.428	0.0004
	HCT-6	0.000001	0.000025	0.0058	4.94	0.00621	0.0284	5	0.000008	0.37	0.554	0.00015	0.00009	0.000238	0.00002	0.00025	0.000005	0.0324	0.0001	0.502	0.00005
	HCT-6	0.000001	0.000025	0.00593	4.58	0.00648	0.0288	5.1	0.000008	0.33	0.512	0.00014	0.000092	0.000295	0.00001	0.00025	0.000005	0.034	0.0001	0.557	0.00005
	HCT-6	0.000001	0.00006	0.00619	4.9	0.00665	0.0299	5.5	0.00001	0.37	0.5	0.00013	0.000096	0.000292	0.000005	0.00025	0.000005	0.0368	0.0001	0.645	0.00005
	HCT-6	0.000001	0.00024	0.006	4.53	0.00693	0.0263	5.1	0.000012	0.3	0.471	0.00012	0.000114	0.000386	0.000005	0.00025	0.00001	0.039	0.0001	0.614	0.00005
	HCT-6	0.000001	0.00012	0.00633	4.13	0.00588	0.0244	5.1	0.000014	0.3	0.419	0.00011	0.000116	0.00037	0.000005	0.00025	0.000005	0.041	0.0001	0.675	0.00005
	HCT-6	0.000001	0.0000725	0.00624	3.895	0.0063	0.02405	4.85	0.0000165	0.29	0.384	0.00011	0.000139	0.0003155	0.0000325	0.00025	0.000005	0.04065	0.0001	0.699	0.00005
	HCT-6	0.000001	0.000025	0.00615	3.66	0.00672	0.0237	4.6	0.000019	0.28	0.349	0.00011	0.000162	0.000261	0.00006	0.00025	0.000005	0.0403	0.0001	0.723	0.00005
	HCT-6	0.0000015	0.0000575	0.00583	3.47	0.00616	0.0235	4.7	0.0000245	0.29	0.3355	0.000095	0.0001405	0.000316	0.0000325	0.00025	0.000005	0.04	0.0001	0.727	0.00005
	HCT-6	0.000002	0.00009	0.00551	3.28	0.0056	0.0233	4.8	0.00003	0.3	0.322	0.00008	0.000119	0.000371	0.000005	0.00025	0.000005	0.0397	0.0001	0.731	0.00005
	HCT-6	0.0000025	0.000085	0.005785	3.33	0.00581	0.0225	4.75	0.0000275	0.305	0.3175	0.000095	0.0001335	0.0004225	0.000005	0.000425	0.000005	0.0445	0.0001	0.8205	0.000075
	HCT-6	0.000003	0.00008	0.00606	3.38	0.00602	0.0217	4.7	0.000025	0.31	0.313	0.00011	0.000148	0.000474	0.000005	0.0006	0.000005	0.0493	0.0001	0.91	0.0001
	HCT-6	0.000002	0.00008	0.006145	3.34	0.00607	0.021	4.95	0.00003	0.3	0.321	0.00011	0.000168	0.000437	0.000005	0.000425	0.000005	0.0514	0.0001	0.995	0.000075
	HCT-6	0.000001	0.00008	0.00623	3.3	0.00612	0.0203	5.2	0.000035	0.29	0.329	0.00011	0.000188	0.0004	0.000005	0.00025	0.000005	0.0535	0.0001	1.08	0.00005
	HCT-6	0.000001	0.0000525	0.006345	3.25	0.00588	0.01805	4.85	0.000041	0.31	0.301	0.000125	0.000163	0.00097	0.0000975	0.00025	0.000005	0.0545	0.0001	1.1	0.00005
	HCT-6	0.000001	0.000025	0.00646	3.2	0.00564	0.0158	4.5	0.000047	0.33	0.273	0.00014	0.000138	0.00154	0.00019	0.00025	0.000005	0.0555	0.0001	1.12	0.00005
	HCT-6	0.000001	0.0000875	0.00718	3.25	0.00572	0.01465	5	0.000031	0.365	0.2855	0.00022	0.000144	0.00206	0.00038	0.000875	0.000015	0.0629	0.0003	1.385	0.00015
	HCT-6	0.000001	0.00015	0.0079	3.3	0.0058	0.0135	5.5	0.000015	0.4	0.298	0.0003	0.00015	0.00258	0.00057	0.0015	0.000025	0.0703	0.0005	1.65	0.00025
	HCT-6	0.000001	0.00015	0.00825	3.5	0.00615	0.0119	6	0.0000375	0.45	0.2995	0.0004	0.000155	0.004435	0.00043	0.0015	0.000025	0.07365	0.0005	1.785	0.00025
	HCT-6	0.000001	0.00015	0.0086	3.7	0.0065	0.0103	6.5	0.00006	0.5	0.301	0.0005	0.00016	0.00629	0.00029	0.0015	0.000025	0.077	0.0005	1.92	0.00025
	HCT-6	0.000001	0.00015	0.00895	3.6	0.00615	0.0104	6.8	0.00007	0.5	0.2965	0.00065	0.00017	0.006505	0.00021	0.0015	0.000025	0.07165	0.0005	2.185	0.00025
	HCT-6	0.000001	0.00015	0.0093	3.5	0.0058	0.0105	7.1	0.00008	0.5	0.292	0.0008	0.00018	0.00672	0.00013	0.0015	0.000025	0.0663	0.0005	2.45	0.00025

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Week No.	Date Sampled	Zone	Position	PFS Block Model	Lithology	Alteration1	Alt1 Intensity	Alteration2	Alt2 Intensity	TYPE	Time Sampled	Sample ID	Matrix	Total Volume In (mL)	Volume Out (mL)	ORP mV	Hardness ($CaCO_3$ mg/L)	Conductivity (uS/cm)	pH (pH units)	Acidity (to pH 8.3) ($CaCO_3$ mg/L)	Acidity (as $CaCO_3$) ($CaCO_3$ mg/L)	Alkalinity, Total (as $CaCO_3$) ($CaCO_3$ mg/L)	Sulfate (SO_4) (mg/L)	Chloride (Cl) (mg/L)	Fluoride (F) (mg/L)
	HCT-6	36	7-Nov-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	370	440	77.9	563	3.3	38.30	93	0.25	159	0.25	4.15
	HCT-6	37	14-Nov-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	395	415	75.5	636	3.22	37.50	93.7	0.25	166	0.25	4.10
	HCT-6	38	21-Nov-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	385	490	73.65	640	3.2	38.10	91.15	0.25	171	0.25	3.95
	HCT-6	39	28-Nov-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	365	460	71.8	613	3.14	38.70	88.6	0.25	175	0.25	3.80
	HCT-6	40	5-Dec-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	350	490	71.6	677	3.13	47.10	103.45	0.25	177	0.25	3.95
	HCT-6	41	12-Dec-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	375	495	71.4	671	3.11	55.50	118.3	0.25	179	0.25	4.10
	HCT-6	42	19-Dec-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	370	495	71.2	724	2.99	63.90	133.15	0.25	181	0.25	4.25
	HCT-6	43	26-Dec-11	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	370	505	71	880	2.92	72.30	148	0.25	183	0.25	4.40
	HCT-6	44	2-Jan-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	370	500	70.025	847	2.97	81.98	158	0.25	184	0.25	4.13
	HCT-6	45	9-Jan-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	370	470	69.05	832	2.93	91.65	168	0.25	184	0.25	3.85
	HCT-6	46	16-Jan-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	370	490	68.075	921	2.9	101.33	178	0.25	185	0.25	3.58
	HCT-6	47	23-Jan-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	365	490	67.1	980	2.78	111.00	188	0.25	185	0.25	3.30
	HCT-6	48	30-Jan-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	375	485	67.175	1103	2.82	131.75	219.25	0.25	213	0.25	3.30
	HCT-6	49	6-Feb-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	370	480	67.25	1070	2.82	152.50	250.5	0.25	242	0.25	3.30
	HCT-6	50	13-Feb-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	380	485	67.325	1060	2.83	173.25	281.75	0.25	270	0.25	3.30
	HCT-6	51	20-Feb-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	365	500	67.4	1187	2.79	194.00	313	0.25	298	0.25	3.30
	HCT-6	52	27-Feb-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	380	495	58.225	1036	2.8	191.00	302.5	0.25	282	0.25	3.10
	HCT-6	53	5-Mar-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	370	495	49.05	1120	2.82	188.00	292	0.25	266	0.25	2.90
	HCT-6	54	12-Mar-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	365	495	39.875	1084	2.81	185.00	281.5	0.25	249	0.25	2.70
	HCT-6	55	19-Mar-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	355	490	30.7	1053	2.81	182.00	271	0.25	233	0.25	2.50
	HCT-6	56	26-Mar-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	375	485	29.1	1118	2.75	175.00	262.75	0.25	226	0.25	2.35
	HCT-6	57	2-Apr-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	375	485	27.5	1122	2.82	168.00	254.5	0.25	218	0.25	2.20
	HCT-6	58	9-Apr-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	370	490	25.9	1154	2.8	161.00	246.25	0.25	211	0.25	2.05
	HCT-6	59	16-Apr-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	355	490	24.3	1013	2.8	154.00	238	0.25	203	0.25	1.90
	HCT-6	60	23-Apr-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	350	500	22.95	1002	2.81	153.50	236	0.25	192	0.25	1.83
	HCT-6	61	30-Apr-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	370	500	21.6	981	2.86	153.00	234	0.25	181	0.25	1.75
	HCT-6	62	7-May-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	400	370	490	20.25	940	2.86	152.50	232	0.25	170	0.25	1.68
	HCT-6	63	14-May-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	370	490	18.9	946	2.89	152.00	230	0.25	159	0.25	1.60
	HCT-6	64	21-May-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	375	500	18.2	998	2.85	156.25	234.5	0.25	174	0.25	1.55
	HCT-6	65	28-May-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	370	480	17.5	1042	2.85	160.50	239	0.25	188	0.25	1.50
	HCT-6	66	4-Jun-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	375	490	16.8	1083	2.82	164.75	243.5	0.25	203	0.25	1.45
	HCT-6	67	11-Jun-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	395	495	16.1	1080	2.81	169.00	248	0.25	217	0.25	1.40
	HCT-6	68	18-Jun-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	370	495	15.3	1090	2.78	163.75	241.5	0.25	209	0.25	1.33
	HCT-6	69	25-Jun-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	380	490	14.5	996	2.8	158.50	235	0.25	201	0.25	1.25
	HCT-6	70	2-Jul-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	385	495	13.7	981	2.84	153.25	228.5	0.25	192	0.25	1.18
	HCT-6	71	9-Jul-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	385	485	12.9	920	2.87	148.00	222	0.25	184	0.25	1.10
	HCT-6	72	16-Jul-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	370	490	13.425	890	2.81	142.00	213	0.25	186	0.25	1.08
	HCT-6	73	23-Jul-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	385	495	13.95	882	2.87	136.00	204	0.25	188	0.25	1.05
	HCT-6	74	30-Jul-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	375	485	14.475	899	2.83	130.00	195	0.25	190	0.25	1.03
	HCT-6	75	6-Aug-12	Iron Cap	0	IRON CAP	0	SIL	4	0	0	Drillcore			Water	350	370	485	15	937	2.86	124.00	186	0.25	192	0.25	1.00
Mean last 10	10																	490.5	14.615	975.8	2.829	148.925	221.65	0.25	196.1	0.25	1.185

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Aluminum (Al)-Dissolved (mg/L)	Antimony (Sb)-Dissolved (mg/L)	Arsenic (As)-Dissolved (mg/L)	Barium (Ba)-Dissolved (mg/L)	Beryllium (Be)-Dissolved (mg/L)	Bismuth (Bi)-Dissolved (mg/L)	Boron (B)-Dissolved (mg/L)	Cesium (Cs)-Dissolved (mg/L)	Cadmium (Cd)-Dissolved (mg/L)	Calcium (Ca)-Dissolved (mg/L)	Chromium (Cr)-Dissolved (mg/L)	Cobalt (Co)-Dissolved (mg/L)	Copper (Cu)-Dissolved (mg/L)	(La)-Dissolved (mg/L)	Iron (Fe)-Dissolved (mg/L)	Lead (Pb)-Dissolved (mg/L)	Lithium (Li)-Dissolved (mg/L)	Magnesium (Mg)-Dissolved (mg/L)	(Mn)-Dissolved (mg/L)	Phosphorus (P)-Dissolved (mg/L)
	HCT-6	6.675	0.0003	0.00265	0.03045	0.005775	0.000015	0.15	0.00055	0.0277	27.95	0.00165	0.0321	6.23	0.0431	6.99	0.612	0.0015	1.95	1.6	0.0075
	HCT-6	6.96	0.0003	0.0031	0.0301	0.00562	0.000015	0.15	0.0006	0.0298	27	0.0019	0.0323	6.6	0.0457	7.81	0.627	0.0015	1.9	1.6	0.01
	HCT-6	6.68	0.000355	0.003135	0.0269	0.00562	0.000011	0.0875	0.00049	0.03135	26.55	0.0025	0.0318	6.755	0.04405	8.895	0.592	0.00125	1.77	1.485	0.013
	HCT-6	6.4	0.00041	0.00317	0.0237	0.00562	0.000007	0.025	0.00038	0.0329	26.1	0.0031	0.0313	6.91	0.0424	9.98	0.557	0.001	1.64	1.37	0.016
	HCT-6	6.61	0.00044	0.0036925	0.0219	0.00546	0.000005875	0.025	0.000375	0.0353	26.075	0.00405	0.03245	7.3225	0.046875	12.56	0.541	0.001025	1.6025	1.33	0.01675
	HCT-6	6.82	0.00047	0.004215	0.0201	0.0053	0.00000475	0.025	0.00037	0.0377	26.05	0.005	0.0336	7.735	0.05135	15.14	0.525	0.00105	1.565	1.29	0.0175
	HCT-6	7.03	0.0005	0.0047375	0.0183	0.00514	0.000003625	0.025	0.000365	0.0401	26.025	0.00595	0.03475	8.1475	0.055825	17.72	0.509	0.001075	1.5275	1.25	0.01825
	HCT-6	7.24	0.00053	0.00526	0.0165	0.00498	0.0000025	0.025	0.00036	0.0425	26	0.0069	0.0359	8.56	0.0603	20.3	0.493	0.0011	1.49	1.21	0.019
	HCT-6	7.2125	0.0005725	0.005895	0.01735	0.00464	0.000005625	0.05625	0.00042	0.044925	25.75	0.0074	0.03745	8.91	0.066975	23.225	0.44625	0.0012	1.4175	1.1625	0.04175
	HCT-6	7.185	0.000615	0.00653	0.0182	0.0043	0.00000875	0.0875	0.00048	0.04735	25.5	0.0079	0.039	9.26	0.07365	26.15	0.3995	0.0013	1.345	1.115	0.0645
	HCT-6	7.1575	0.0006575	0.007165	0.01905	0.00396	0.000011875	0.11875	0.00054	0.049775	25.25	0.0084	0.04055	9.61	0.080325	29.075	0.35275	0.0014	1.2725	1.0675	0.08725
	HCT-6	7.13	0.0007	0.0078	0.0199	0.00362	0.000015	0.15	0.0006	0.0522	25	0.0089	0.0421	9.96	0.087	32	0.306	0.0015	1.2	1.02	0.11
	HCT-6	7.025	0.00075	0.008225	0.01935	0.003435	0.000015	0.15	0.00055	0.056	25.125	0.00955	0.0449	10.67	0.09375	37.825	0.25475	0.0015	1.125	0.9435	0.12
	HCT-6	6.92	0.0008	0.00865	0.0188	0.00325	0.000015	0.15	0.0005	0.0598	25.25	0.0102	0.0477	11.38	0.1005	43.65	0.2035	0.0015	1.05	0.867	0.13
	HCT-6	6.815	0.00085	0.009075	0.01825	0.003065	0.000015	0.15	0.00045	0.0636	25.375	0.01085	0.0505	12.09	0.10725	49.475	0.15225	0.0015	0.975	0.7905	0.14
	HCT-6	6.71	0.0009	0.0095	0.0177	0.00288	0.000015	0.15	0.0004	0.0674	25.5	0.0115	0.0533	12.8	0.114	55.3	0.101	0.0015	0.9	0.714	0.15
	HCT-6	6.3725	0.00095	0.00975	0.01945	0.0026075	0.000015	0.15	0.0004	0.0642	22	0.010725	0.05065	12.275	0.107175	54.975	0.084025	0.0015	0.8	0.62625	0.1775
	HCT-6	6.035	0.001	0.01	0.0212	0.002335	0.000015	0.15	0.0004	0.061	18.5	0.00995	0.048	11.75	0.10035	54.65	0.06705	0.0015	0.7	0.5385	0.205
	HCT-6	5.6975	0.00105	0.01025	0.02295	0.0020625	0.000015	0.15	0.0004	0.0578	15	0.009175	0.04535	11.225	0.093525	54.325	0.050075	0.0015	0.6	0.45075	0.2325
	HCT-6	5.36	0.0011	0.0105	0.0247	0.00179	0.000015	0.15	0.0004	0.0546	11.5	0.0084	0.0427	10.7	0.0867	54	0.0331	0.0015	0.5	0.363	0.26
	HCT-6	5.085	0.001075	0.0102	0.022025	0.0016525	0.000015	0.15	0.0003375	0.05325	10.925	0.007625	0.0415	10.405	0.08585	53.475	0.02885	0.0015	0.45	0.32525	0.24
	HCT-6	4.81	0.00105	0.0099	0.01935	0.001515	0.000015	0.15	0.000275	0.0519	10.35	0.00685	0.0403	10.11	0.085	52.95	0.0246	0.0015	0.4	0.2875	0.22
	HCT-6	4.535	0.001025	0.0096	0.016675	0.0013775	0.000015	0.15	0.0002125	0.05055	9.775	0.006075	0.0391	9.815	0.08415	52.425	0.02035	0.0015	0.35	0.24975	0.2
	HCT-6	4.26	0.001	0.0093	0.014	0.00124	0.000015	0.15	0.00015	0.0492	9.2	0.0053	0.0379	9.52	0.0833	51.9	0.0161	0.0015	0.3	0.212	0.18
	HCT-6	4.06	0.0009625	0.0086075	0.01445	0.00113575	0.000014375	0.14375	0.00014375	0.047375	8.79	0.0050275	0.03675	9.465	0.0795	50.825	0.01452	0.0014375	0.25625	0.19675	0.1645
	HCT-6	3.86	0.000925	0.007915	0.0149	0.0010315	0.00001375	0.1375	0.0001375	0.04555	8.38	0.004755	0.0356	9.41	0.0757	49.75	0.01294	0.001375	0.2125	0.1815	0.149
	HCT-6	3.66	0.0008875	0.0072225	0.01535	0.00092725	0.000013125	0.13125	0.00013125	0.043725	7.97	0.0044825	0.03445	9.355	0.0719	48.675	0.01136	0.0013125	0.16875	0.16625	0.1335
	HCT-6	3.46	0.00085	0.00653	0.0158	0.000823	0.0000125	0.125	0.000125	0.0419	7.56	0.00421	0.0333	9.3	0.0681	47.6	0.00978	0.00125	0.125	0.151	0.118
	HCT-6	3.395	0.0009625	0.007195	0.0162	0.000827	0.0000125	0.125	0.00019625	0.041225	7.285	0.00406	0.033075	9.06	0.07065	48.75	0.0094075	0.00125	0.125	0.14175	0.12775
	HCT-6	3.33	0.001075	0.00786	0.0166	0.000831	0.0000125	0.125	0.0002675	0.04055	7.01	0.00391	0.03285	8.82	0.0732	49.9	0.009035	0.00125	0.125	0.1325	0.1375
	HCT-6	3.265	0.0011875	0.008525	0.017	0.000835	0.0000125	0.125	0.00033875	0.039875	6.735	0.00376	0.032625	8.58	0.07575	51.05	0.0086625	0.00125	0.125	0.12325	0.14725
	HCT-6	3.2	0.0013	0.00919	0.0174	0.000839	0.0000125	0.125	0.00041	0.0392	6.46	0.00361	0.0324	8.34	0.0783	52.2	0.00829	0.00125	0.125	0.114	0.157
	HCT-6	3.06	0.001355	0.0093925	0.017175	0.000765	0.0000125	0.125	0.00033875	0.037075	6.14	0.003325	0.0313	7.9525	0.0747	50.3	0.007505	0.00125	0.125	0.106625	0.147
	HCT-6	2.92	0.00141	0.009595	0.01695	0.000691	0.0000125	0.125	0.0002675	0.03495	5.82	0.00304	0.0302	7.565	0.0711	48.4	0.00672	0.00125	0.125	0.09925	0.137
	HCT-6	2.78	0.001465	0.0097975	0.016725	0.000617	0.0000125	0.125	0.00019625	0.032825	5.5	0.002755	0.0291	7.1775	0.0675	46.5	0.005935	0.00125	0.125	0.091875	0.127
	HCT-6	2.64	0.00152	0.01	0.0165	0.000543	0.0000125	0.125	0.000125	0.0307	5.18	0.00247	0.028	6.79	0.0639	44.6	0.00515	0.00125	0.125	0.0845	0.117
	HCT-6	2.7325	0.0015275	0.0095875	0.0162	0.00053925	0.000010625	0.1	0.00013725	0.02955	5.3425	0.002455	0.028275	6.84	0.06375	45.7	0.00521	0.001	0.122	0.082575	0.1245
	HCT-6	2.825	0.001535	0.009175	0.0159	0.0005355	0.00000875	0.075	0.0001495	0.0284	5.505	0.00244	0.02855	6.89	0.0636	46.8	0.00527	0.00075	0.119	0.08065	0.132
	HCT-6	2.9175	0.0015425	0.0087625	0.0156	0.00053175	0.000006875	0.05	0.00016175	0.02725	5.6675	0.002425	0.028825	6.94	0.06345	47.9	0.00533	0.0005	0.116	0.078725	0.1395
	HCT-6	3.01	0.00155	0.00835	0.0153	0.000528	0.000005	0.025	0.000174	0.0261	5.83	0.00241	0.0291	6.99	0.0633	49	0.00539	0.00025	0.113	0.0768	0.147
Mean last 10	10	2.935	0.00143925	0.0092375	0.016475	0.00064245	0.000010625	0.1	0.000229875	0.0325925	5.818	0.002869	0.0298375	7.4065	0.068535	48.245	0.00634625	0.001	0.122	0.093825	0.137525

Appendix 5.2-6. Humidity Cell Leachate Concentrations: Iron Cap Deposit

Sample ID	HC	Mercury (Hg)-Dissolved (mg/L)	(Mo)-Dissolved (mg/L)	Nickel (Ni)-Dissolved (mg/L)	Potassium (K)-Dissolved (mg/L)	Rubidium (Rb)-Dissolved (mg/L)	Selenium (Se)-Dissolved (mg/L)	Silicon (Si)-Dissolved (mg/L)	Silver (Ag)-Dissolved (mg/L)	Sodium (Na)-Dissolved (mg/L)	Strontium (Sr)-Dissolved (mg/L)	Tellurium (Te)-Dissolved (mg/L)	Thallium (Tl)-Dissolved (mg/L)	Thorium (Th)-Dissolved (mg/L)	Tin (Sn)-Dissolved (mg/L)	Titanium (Ti)-Dissolved (mg/L)	Tungsten (W)-Dissolved (mg/L)	Uranium (U)-Dissolved (mg/L)	Vanadium (V)-Dissolved (mg/L)	Zinc (Zn)-Dissolved (mg/L)	Zircon (Zr)-Dissolved (mg/L)
	HCT-6	0.00000165	0.00015	0.00945	3.55	0.0059	0.0095	6.95	0.00008	0.55	0.2965	0.0009	0.000185	0.00946	0.000135	0.0015	0.000025	0.06665	0.0005	2.57	0.00025
	HCT-6	0.0000023	0.00015	0.0096	3.6	0.006	0.0085	6.8	0.00008	0.6	0.301	0.001	0.00019	0.0122	0.00014	0.0015	0.000025	0.067	0.0005	2.69	0.00025
	HCT-6	0.00000165	0.000145	0.0098	3.275	0.00558	0.008605	6.7	0.000108	0.595	0.2905	0.001115	0.0001925	0.02405	0.000655	0.000875	0.0000175	0.0628	0.0004	2.68	0.00015
	HCT-6	0.000001	0.00014	0.01	2.95	0.00516	0.00871	6.6	0.000136	0.59	0.28	0.00123	0.000195	0.0359	0.00117	0.00025	0.00001	0.0586	0.0003	2.67	0.00005
	HCT-6	0.000001	0.0001575	0.0103	2.885	0.005165	0.0083	6.775	0.00015725	0.64	0.278	0.0013025	0.0001845	0.04115	0.001255	0.00025	0.0000125	0.055875	0.00035	2.88	0.00005
	HCT-6	0.000001	0.000175	0.0106	2.82	0.00517	0.00789	6.95	0.0001785	0.69	0.276	0.001375	0.000174	0.0464	0.00134	0.00025	0.000015	0.05315	0.0004	3.09	0.00005
	HCT-6	0.000001	0.0001925	0.0109	2.755	0.005175	0.00748	7.125	0.00019975	0.74	0.274	0.0014475	0.0001635	0.05165	0.001425	0.00025	0.0000175	0.050425	0.00045	3.3	0.00005
	HCT-6	0.000001	0.00021	0.0112	2.69	0.00518	0.00707	7.3	0.000221	0.79	0.272	0.00152	0.000153	0.0569	0.00151	0.00025	0.00002	0.0477	0.0005	3.51	0.00005
	HCT-6	0.00000225	0.000195	0.0118	2.6425	0.00526	0.0066275	7.375	0.00022575	0.8175	0.26175	0.001515	0.00014725	0.056725	0.0012575	0.0005625	0.00002125	0.044225	0.000625	3.785	0.0001
	HCT-6	0.0000035	0.00018	0.0124	2.595	0.00534	0.006185	7.45	0.0002305	0.845	0.2515	0.00151	0.0001415	0.05655	0.001005	0.000875	0.0000225	0.04075	0.00075	4.06	0.00015
	HCT-6	0.00000475	0.000165	0.013	2.5475	0.00542	0.0057425	7.525	0.00023525	0.8725	0.24125	0.001505	0.00013575	0.056375	0.0007525	0.0011875	0.00002375	0.037275	0.000875	4.335	0.0002
	HCT-6	0.000006	0.00015	0.0136	2.5	0.0055	0.0053	7.6	0.00024	0.9	0.231	0.0015	0.00013	0.0562	0.0005	0.0015	0.000025	0.0338	0.001	4.61	0.00025
	HCT-6	0.000006575	0.0001875	0.0145	2.35	0.005175	0.004875	7.525	0.00025	0.925	0.23325	0.00145	0.0001225	0.059325	0.0005	0.0015	0.000025	0.032075	0.000875	5.0075	0.00025
	HCT-6	0.00000715	0.000225	0.0154	2.2	0.00485	0.00445	7.45	0.00026	0.95	0.2355	0.0014	0.000115	0.06245	0.0005	0.0015	0.000025	0.03035	0.00075	5.405	0.00025
	HCT-6	0.000007725	0.0002625	0.0163	2.05	0.004525	0.004025	7.375	0.00027	0.975	0.23775	0.00135	0.0001075	0.065575	0.0005	0.0015	0.000025	0.028625	0.000625	5.8025	0.00025
	HCT-6	0.0000083	0.0003	0.0172	1.9	0.0042	0.0036	7.3	0.00028	1	0.24	0.0013	0.0001	0.0687	0.0005	0.0015	0.000025	0.0269	0.0005	6.2	0.00025
	HCT-6	0.00000835	0.0002625	0.0165	1.75	0.004	0.00345	6.725	0.0002825	1.05	0.20775	0.0012	0.000095	0.06095	0.0005	0.0015	0.000025	0.024275	0.0005	5.8775	0.00025
	HCT-6	0.0000084	0.000225	0.0158	1.6	0.0038	0.0033	6.15	0.000285	1.1	0.1755	0.0011	0.00009	0.0532	0.0005	0.0015	0.000025	0.02165	0.0005	5.555	0.00025
	HCT-6	0.00000845	0.0001875	0.0151	1.45	0.0036	0.00315	5.575	0.0002875	1.15	0.14325	0.001	0.000085	0.04545	0.0005	0.0015	0.000025	0.019025	0.0005	5.2325	0.00025
	HCT-6	0.0000085	0.00015	0.0144	1.3	0.0034	0.003	5	0.00029	1.2	0.111	0.0009	0.00008	0.0377	0.0005	0.0015	0.000025	0.0164	0.0005	4.91	0.00025
	HCT-6	0.00000815	0.00015	0.014075	1.2	0.00315	0.002825	5.275	0.0002875	1.125	0.10875	0.00085	0.0000725	0.036075	0.0005	0.0015	0.000025	0.0154	0.0005	4.785	0.00025
	HCT-6	0.0000078	0.00015	0.01375	1.1	0.0029	0.00265	5.55	0.000285	1.05	0.1065	0.0008	0.000065	0.03445	0.0005	0.0015	0.000025	0.0144	0.0005	4.66	0.00025
	HCT-6	0.00000745	0.00015	0.013425	1	0.00265	0.002475	5.825	0.0002825	0.975	0.10425	0.00075	0.0000575	0.032825	0.0005	0.0015	0.000025	0.0134	0.0005	4.535	0.00025
	HCT-6	0.0000071	0.00015	0.0131	0.9	0.0024	0.0023	6.1	0.00028	0.9	0.102	0.0007	0.00005	0.0312	0.0005	0.0015	0.000025	0.0124	0.0005	4.41	0.00025
	HCT-6	0.00000685	0.00014375	0.0127	0.86	0.0022325	0.002115	6.0825	0.00026425	0.8875	0.096075	0.0006625	0.00005175	0.028375	0.0005	0.0014375	0.000025	0.01131	0.0005	4.2775	0.00025
	HCT-6	0.0000066	0.0001375	0.0123	0.82	0.002065	0.00193	6.065	0.0002485	0.875	0.09015	0.000625	0.0000535	0.02555	0.0005	0.001375	0.000025	0.01022	0.0005	4.145	0.00025
	HCT-6	0.00000635	0.00013125	0.0119	0.78	0.0018975	0.001745	6.0475	0.00023275	0.8625	0.084225	0.0005875	0.00005525	0.022725	0.0005	0.0013125	0.000025	0.00913	0.0005	4.0125	0.00025
	HCT-6	0.0000061	0.000125	0.0115	0.74	0.00173	0.00156	6.03	0.000217	0.85	0.0783	0.00055	0.000057	0.0199	0.0005	0.00125	0.000025	0.00804	0.0005	3.88	0.00025
	HCT-6	0.00000555	0.000125	0.01145	0.715	0.00178	0.0017275	6.0275	0.0002375	0.8275	0.07775	0.0005575	0.000055	0.018775	0.0005	0.00125	0.000025	0.007745	0.0005	3.805	0.00025
	HCT-6	0.000005	0.000125	0.0114	0.69	0.00183	0.001895	6.025	0.000258	0.805	0.0772	0.000565	0.000053	0.01765	0.0005	0.00125	0.000025	0.00745	0.0005	3.73	0.00025
	HCT-6	0.00000445	0.000125	0.01135	0.665	0.00188	0.0020625	6.0225	0.0002785	0.7825	0.07665	0.0005725	0.000051	0.016525	0.0005	0.00125	0.000025	0.007155	0.0005	3.655	0.00025
	HCT-6	0.0000039	0.000125	0.0113	0.64	0.00193	0.00223	6.02	0.000299	0.76	0.0761	0.00058	0.000049	0.0154	0.0005	0.00125	0.000025	0.00686	0.0005	3.58	0.00025
	HCT-6	0.00000385	0.000125	0.01096	0.63	0.0017775	0.0021375	6.2875	0.0002975	0.7575	0.07215	0.00058	0.000046	0.013495	0.0005	0.00125	0.000025	0.0062575	0.0005	3.3925	0.00025
	HCT-6	0.0000038	0.000125	0.01062	0.62	0.001625	0.002045	6.555	0.000296	0.755	0.0682	0.00058	0.000043	0.01159	0.0005	0.00125	0.000025	0.005655	0.0005	3.205	0.00025
	HCT-6	0.00000375	0.000125	0.01028	0.61	0.0014725	0.0019525	6.8225	0.0002945	0.7525	0.06425	0.00058	0.00004	0.009685	0.0005	0.00125	0.000025	0.0050525	0.0005	3.0175	0.00025
	HCT-6	0.0000037	0.000125	0.00994	0.6	0.00132	0.00186	7.09	0.000293	0.75	0.0603	0.00058	0.000037	0.00778	0.0005	0.00125	0.000025	0.00445	0.0005	2.83	0.00025
	HCT-6	0.000003025	0.00012225	0.01003	0.61125	0.001435	0.00184	7.0325	0.00029575	0.784	0.060725	0.00052975	0.000039	0.008485	0.0004	0.001	0.00002	0.0044525	0.000575	2.7225	0.000225
	HCT-6	0.00000235	0.0001195	0.01012	0.6225	0.00155	0.00182	6.975	0.0002985	0.818	0.06115	0.0004795	0.000041	0.00919	0.0003	0.00075	0.000015	0.004455	0.00065	2.615	0.0002
	HCT-6	0.000001675	0.00011675	0.01021	0.63375	0.001665	0.0018	6.9175	0.00030125	0.852	0.061575	0.00042925	0.000043	0.009895	0.0002	0.0005	0.00001	0.0044575	0.000725	2.5075	0.000175
	HCT-6	0.000001	0.000114	0.0103	0.645	0.00178	0.00178	6.86	0.000304	0.886	0.062	0.000379	0.000045	0.0106	0.0001	0.00025	0.000005	0.00446	0.0008	2.4	0.00015
Mean last 10	10	0.00000315	0.00012225	0.010511	0.62775	0.0016435	0.00195275	6.65825	0.0002958	0.78975	0.06631	0.000529	0.0000434	0.0112645	0.0004	0.001	0.00002	0.0053255	0.000575	2.9925	0.000225

Appendix 5.2-7

Post-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

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Appendix 5.2-7. Post-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

HC	Zone	Year	Drill Hole	From	To		Interval	PFS Sample#	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	Litho	Alt	Rock Model	Lithology	Alteration 1	Alt_1_Intensity	Alt_2_Code	Alt_2_Intensity	Position	Paste pH unit less	Rinse pH unit less	S_Total %	S_Sulphide %	S_S2_CALC %
	Mitchell	2008	NM-05-03	46	48	NM-05-03 (46-48m)	2	9289	Monzonite	WASTE	IN PIT	0	0	nm monz	PQMZ	KP	2	0	0	ABOVE MTF	9.8		0.2	0.16	0.19
2	Mitchell	2009	M-09-97	52.5	53.5	M-09-97 (52.5-53.5m)	1	H43086	UP Hazelton	ORE	IN PIT	PMON	KP	NM VOLC	PMON	KP	2	None		ABOVE MTF					
3	Mitchell	2009	M-09-97	92.5	93.5	M-09-97 (92.5-93.5m)	1	H43086	UP Hazelton	ORE	IN PIT	PMON	KP	NM VOLC	PMON	KP	2	None		ABOVE MTF					
4	Mitchell	2009	M-09-97	147.5	148.5	M-09-97 (147.5-148.5m)	1	H43140	UP Hazelton	MARGINAL	IN PIT	PMON	PR	NM VOLC	PMON	PR	3	MTH	1	ABOVE MTF					
	Mitchell	2008	M-07-33	96	98	M-07-33 (96-98m)	2	G34723	UP Hazelton	WASTE	IN PIT	SEDS	SIH		SEDS	SIH		QSP		ABOVE MTF	9.3		2.32	2.25	2.31
10	Mitchell	2009	M-09-108	56.5	57.5	M-09-108 (56.5-57.5m)	1	H41633	UP Hazelton	ORE	IN PIT	VU	SIH	NM VOLC	VU	SIH	2	PSBX	1	ABOVE MTF					
13	Mitchell	2009	M-09-110	34.5	35.5	M-09-110 (34.5-35.5m)	1	H41782	UP Hazelton	MARGINAL	IN PIT	PMON	SIH	NM VOLC	PMON	SIH	3	HEM	3	ABOVE MTF	8.08		0.62	0.4	0.62
14	Mitchell	2009	M-09-110	88.5	89.5	M-09-110 (88.5-89.5m)	1	H41812	UP Hazelton	WASTE	IN PIT	PMON	SIH	NM VOLC	PMON	SIH	5	0	0	ABOVE MTF	9.09		1.74	1.51	1.74
	Mitchell	2008	M-07-44	57	59	M-07-44 (57-59m)	2	G37849	UP Hazelton	ORE	IN PIT	VATF	IARG		VATF	IARG				ABOVE MTF					
	Mitchell	2008	M-07-30	5	7	M-07-30 (5-7m)	2	G36541	Monzonite	WASTE	IN PIT	VULT	FEOX		VULT	FEOX				BELOW MTF	8.9		0.02	0.02	0
	Mitchell	2008	M-06-14	107	109	M-06-14 (107-109m)	2	E217257	LP Hazelton	ORE	IN PIT	VALT	IARG		VATF	IARG				BELOW MTF	6.8		6.39	5.74	6.37
	Mitchell	2008	M-07-43	220	222	M-07-43 (220-222m)	2	G37765	LP Hazelton	ORE	IN PIT	VALT	IARG		VALT	IARG		QSP		BELOW MTF	6.9		2.28	2.06	2.27
12	Mitchell	2009	M-09-108	162.5	163.5	M-09-108 (162.5-163.5m)	1	H41691	LP Hazelton	ORE	IN PIT	VU	IARG	IARG	VU	IARG	4	CL	1	BELOW MTF					
16	Mitchell	2009	M-09-112	224.5	225.5	M-09-112 (224.5-225.5m)	1	H42251	LP Hazelton	WASTE	IN PIT	VUTF	IARG	IARG	VUTF	IARG	2	CL	1	BELOW MTF					
26	Mitchell	2009	M-09-108	184.5	185.5	M-09-108 (184.5-185.5m)	1	H41704	LP Hazelton	ORE	IN PIT	VU	IARG	IARG	VU	IARG	4	CL	1	BELOW MTF					
15	Mitchell	2009	M-09-110	342.5	343.5	M-09-110 (342.5-343.5m)	1	H41951	Leach breccia/bornite breccia	WASTE	IN PIT	VU	QSP	QSP	VU	QSP	5	None		BELOW MTF	4.03		19.8	19.2	19.8
1	Mitchell	2009	M-09-96	195.5	196.5	M-09-96 (195.5-196.5m)	1	H43401	LP Hazelton	ORE	IN PIT	IVOL	QSP	IARG	IVOL	QSP	3	None		BELOW MTF	4.81		5.56	5.04	5.56
5	Mitchell	2009	M-09-102	120.5	121.5	M-09-102 (120.5-121.5m)	1	H41040	LP Hazelton	WASTE	IN PIT	0	0	HORN/PROP	PSBX	SI	5	QSP	1	BELOW MTF					
6	Mitchell	2009	M-09-102A	125.5	126.5	M-09-102A (125.5-126.5m)	1	H41075	LP Hazelton	WASTE	IN PIT	PSBX	SI	HORN/PROP	PSBX	SI	2	None		BELOW MTF					
11	Mitchell	2009	M-09-108	118.5	119.5	M-09-108 (118.5-119.5m)	1	H41669	LP Hazelton	ORE	IN PIT	VU	SIL	HORN/PROP	VU	SIL	3	PSBX	2	BELOW MTF					
7	Mitchell	2009	M-09-102A	133.5	134.5	M-09-102A (133.5-134.5m)	1	H41079	LP Hazelton	WASTE	IN PIT	SARG	SIH	HORN/PROP	SARG	SIH	3	CL	1	BELOW MTF					
8	Mitchell	2009	M-09-106	34.5	35.5	M-09-106 (34.5-35.5m)	1	H41431	LP Hazelton	MARGINAL	IN PIT	VU	CL	IARG	VU	CL	4	QSP	3	BELOW MTF					
9	Mitchell	2009	M-09-106	58.5	59.5	M-09-106 (58.5-59.5m)	1	H41443	LP Hazelton	ORE	IN PIT	VU	CL	IARG	VU	CL	4	QSP	3	BELOW MTF	8.28		8.32	7.88	8.32
	Sulphurets	2008	S-06-04	30	32	S-06-04 (30-32m)	2	G24663	UP Hazelton	WASTE	IN	PPFP	PR		PPFP	PR		SIL		MC Panel					
17	Sulphurets	2009	S-08-06	252.5	253.5	S-08-06 (252.5-253.5m)	1	X15860	UP Hazelton	ORE	IN	VUTF	CL		VUTF	CL	3	None		MC Panel					
	Sulphurets	2008	S-06-05	10.4	12	S-06-05 (10.4-12m)	1.6	G24857	Overburden	ORE	IN	VU	Sil		VU	SIL				Upper Panel					
24	Sulphurets	2009	S-09-11	350.5	351.5	S-09-11 (350.5-351.5m)	1	H45195	Lower Au zone	ORE	IN	VU	SIH		VU	SIH	4	CL	2	Upper Panel	8.58		2.53	2.31	2.53
25	Sulphurets	2009	S-09-11	374.5	375.5	S-09-11 (374.5-375.5m)	1	H45208	Lower Au zone	MARGINAL	OUT	VU	SIH		VU	SIH	4/3	CL	2/3	Upper Panel					
18	Sulphurets	2009	S-09-12	144.5	145.5	S-09-12 (144.5-145.5m)	1	H42406	Undefined	WASTE	IN	PMON	CL		PMON	CL	3	IARG	1	Upper Panel	8.5		3.56	3.37	3.56
19	Sulphurets	2009	S-09-12	172.5	173.5	S-09-12 (172.5-173.5m)	1	H42421	Undefined	WASTE	IN	VAAT	CL		VAAT	CL	2	KP	1	Upper Panel					
20	Kerr	2009	K-09-01	84.5	85.5	K-09-01 (84.5-85.5m)	1	K-09-01_15	KERR	0	0	0	0	KERR	VU	IARG	3	CL	1						
21	Kerr	2009	K-09-02	66.5	67.5	K-09-02 (66.5-67.5m)	1	K-09-02_8_B	KERR	0	0	0	0	KERR	VU	IARG	4	QSP	1		4.6		8.9	8.22	8.9
22	Kerr	2009	K-09-03	140.5	141.5	K-09-03 (140.5-141.5m)	1	K-09-04_7	KERR	0	0	0	0	KERR	VU	QSP	5	None							
23	Kerr	2009	K-09-04	126.5	127.5	K-09-04 (126.5-127.5m)	1	K-09-03_2	KERR	0	0	0	0	KERR	VU	QSP	3	IARG	3		4.1		10.3	9.5	10.3
HCT-1	Iron Cap	2011	IC-10-007	Composite				H46789,H46801-B,H46817	IRON CAP	WASTE	IN	0	0	IRON CAP	0	CL	0	CARB	0						
HCT-2	Iron Cap	2011	0	Composite				H46894,H46895,H47403	IRON CAP	WASTE	IN	0	0	IRON CAP	0	CL	0	0	0						
HCT-3	Iron Cap	2011	IC-10-010	Composite				H48504,H48517,H48559A	IRON CAP	WASTE	IN	0	0	IRON CAP	IBX	QSP	5	IARG	4						
HCT-4	Iron Cap	2011	IC-10-010	Composite				H48532,H48545,H48559B	IRON CAP	WASTE	IN	0	0	IRON CAP	IBX	QSP	5	IARG	4						
HCT-5	Iron Cap	2011	IC-10-006	Composite				H48336,H48251,H48305	IRON CAP	ORE	IN	0	0	IRON CAP	SEDS	SIL	4	CL	1						
HCT-6	Iron Cap	2011	0	Composite				H47377,H48761,H47552	IRON CAP	WASTE	IN	0	0	IRON CAP	0	SIL	4	0	0						

Appendix 5.2-7. Post-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

HC	Zone	Year	Drill Hole	From	To		S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %	S_DEL %	S_DEL_CAL %	TAP kg $CaCO_3$ / t	SAP kg $CaCO_3$ / t	SAP (S Del Calc) kg $CaCO_3$ / t	NP kg $CaCO_3$ / t	NP_ADJ kg $CaCO_3$ / t	UNP kg $CaCO_3$ / t	Total C %	Inorganic C %	Inorganic CO_2 %	C_DEL_CALC %	CANP_TTL kg $CaCO_3$ / t	CANP_INORG kg $CaCO_3$ / t	CANP_CA kg $CaCO_3$ / t	CANP_CAMG kg $CaCO_3$ / t
	Mitchell	2008	NM-05-03	46	48	NM-05-03 (46-48m)	0.19	0.01	0.01	0.0196	0.0104	0.0104	6.3	5.0	5.3	29			0.31	0.29	1.1	0.02	24.17	25.02	23.22	31.78
2	Mitchell	2009	M-09-97	52.5	53.5	M-09-97 (52.5-53.5m)																				
3	Mitchell	2009	M-09-97	92.5	93.5	M-09-97 (92.5-93.5m)																				
4	Mitchell	2009	M-09-97	147.5	148.5	M-09-97 (147.5-148.5m)																				
	Mitchell	2008	M-07-33	96	98	M-07-33 (96-98m)	2.31	0.03	0.01	0.0140	0.0460	0.0460	72.5	70.3	71.7	59			0.86	0.81	3	0.05	67.50	68.23	40.46	66.15
10	Mitchell	2009	M-09-108	56.5	57.5	M-09-108 (56.5-57.5m)																				
13	Mitchell	2009	M-09-110	34.5	35.5	M-09-110 (34.5-35.5m)	0.62	0.03		0.0168	0.2032	0.2032	19.4	12.5	18.8	31.8				0.22						
14	Mitchell	2009	M-09-110	88.5	89.5	M-09-110 (88.5-89.5m)	1.74	0.005		0.0029	0.2271	0.2271	54.4	47.2	54.3	58.2				0.58						
	Mitchell	2008	M-07-44	57	59	M-07-44 (57-59m)																				
	Mitchell	2008	M-07-30	5	7	M-07-30 (5-7m)	0	0.005	0.02	0.0348	-0.0548	0.0000	0.6	0.6	0.6	18			0.15	0.13	0.5	0.02	10.83	11.37	12.74	44.67
	Mitchell	2008	M-06-14	107	109	M-06-14 (107-109m)	6.37	0.005	0.02	0.0028	0.6272	0.6272	199.7	179.4	199.0	14			0.04	0.025	0.2	0.015	2.08	4.55	12.74	77.31
	Mitchell	2008	M-07-43	220	222	M-07-43 (220-222m)	2.27	0.06	0.01	0.0138	0.1962	0.1962	71.3	64.4	70.5	11			0.03	0.025	0.1	0.005	2.08	2.27	8.74	59.85
12	Mitchell	2009	M-09-108	162.5	163.5	M-09-108 (162.5-163.5m)																				
16	Mitchell	2009	M-09-112	224.5	225.5	M-09-112 (224.5-225.5m)																				
26	Mitchell	2009	M-09-108	184.5	185.5	M-09-108 (184.5-185.5m)																				
15	Mitchell	2009	M-09-110	342.5	343.5	M-09-110 (342.5-343.5m)	19.8	0.06		0.0004	0.5996	0.5996	618.8	600.0	618.7	0				0.005		-0.005	0.42	0.00	2.50	7.45
1	Mitchell	2009	M-09-96	195.5	196.5	M-09-96 (195.5-196.5m)	5.56	0.06		0.0013	0.5187	0.5187	173.8	157.5	173.7	5.8				0.005		-0.005	0.42	0.00	7.99	12.89
5	Mitchell	2009	M-09-102	120.5	121.5	M-09-102 (120.5-121.5m)																				
6	Mitchell	2009	M-09-102A	125.5	126.5	M-09-102A (125.5-126.5m)																				
11	Mitchell	2009	M-09-108	118.5	119.5	M-09-108 (118.5-119.5m)																				
7	Mitchell	2009	M-09-102A	133.5	134.5	M-09-102A (133.5-134.5m)																				
8	Mitchell	2009	M-09-106	34.5	35.5	M-09-106 (34.5-35.5m)																				
9	Mitchell	2009	M-09-106	58.5	59.5	M-09-106 (58.5-59.5m)	8.32	0.07		0.0008	0.4392	0.4392	260.0	246.3	260.0	76.8				0.93		-0.93	77.51	0.00	76.92	113.39
	Sulphurets	2008	S-06-04	30	32	S-06-04 (30-32m)																				
17	Sulphurets	2009	S-08-06	252.5	253.5	S-08-06 (252.5-253.5m)																				
	Sulphurets	2008	S-06-05	10.4	12	S-06-05 (10.4-12m)																				
24	Sulphurets	2009	S-09-11	350.5	351.5	S-09-11 (350.5-351.5m)	2.53	0.005		0.0020	0.2180	0.2180	79.1	72.2	79.0	34.9				0.25		-0.25	20.83	0.00	24.47	69.01
25	Sulphurets	2009	S-09-11	374.5	375.5	S-09-11 (374.5-375.5m)																				
18	Sulphurets	2009	S-09-12	144.5	145.5	S-09-12 (144.5-145.5m)	3.56	0.01		0.0024	0.1876	0.1876	111.3	105.3	111.2	177				1.24		-1.24	103.34	0.00	119.87	196.72
19	Sulphurets	2009	S-09-12	172.5	173.5	S-09-12 (172.5-173.5m)																				
20	Kerr	2009	K-09-01	84.5	85.5	K-09-01 (84.5-85.5m)																				
21	Kerr	2009	K-09-02	66.5	67.5	K-09-02 (66.5-67.5m)	8.9	0.025		0.0007	0.6793	0.6793	278.1	256.9	278.1	5.8				0.005		-0.005	0.42	0.00	10.74	13.46
22	Kerr	2009	K-09-03	140.5	141.5	K-09-03 (140.5-141.5m)																				
23	Kerr	2009	K-09-04	126.5	127.5	K-09-04 (126.5-127.5m)	10.3	0.07		0.0007	0.7993	0.7993	321.9	296.9	321.9	3.3				0.005		-0.005	0.42	0.00	60.43	73.59
HCT-1	Iron Cap	2011	IC-10-007	Composite																						
HCT-2	Iron Cap	2011	0	Composite																						
HCT-3	Iron Cap	2011	IC-10-010	Composite																						
HCT-4	Iron Cap	2011	IC-10-010	Composite																						
HCT-5	Iron Cap	2011	IC-10-006	Composite																						
HCT-6	Iron Cap	2011	0	Composite																						

Appendix 5.2-7. Post-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

HC	Zone	Year	Drill Hole	From	To		TNNP kg $CaCO_3$ / t	TNNP_ADJ kg $CaCO_3$ / t	SNNP kg $CaCO_3$ / t	SNNP_ADJ kg $CaCO_3$ / t	ICNNP kg $CaCO_3$ / t	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	SNPR (S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR $CaCO_3$/1000	Fizz Rating unit less	Fizz Check 0	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm
	Mitchell	2008	NM-05-03	46	48	NM-05-03 (46-48m)	22.8		24.0		18.77	4.64		5.80	5.45	5.45			2		0.85	5.96	11		840	3.55	1.02	0.93	0.14	8.24	2.5
2	Mitchell	2009	M-09-97	52.5	53.5	M-09-97 (52.5-53.5m)																								
3	Mitchell	2009	M-09-97	92.5	93.5	M-09-97 (92.5-93.5m)																								
4	Mitchell	2009	M-09-97	147.5	148.5	M-09-97 (147.5-148.5m)																								
	Mitchell	2008	M-07-33	96	98	M-07-33 (96-98m)	-13.5		-11.3		-4.27	0.813793103		0.84	0.82	0.82			2		0.33	8.15	15.3		600	1.56	1.01	1.62	0.12	13.75	11.7
10	Mitchell	2009	M-09-108	56.5	57.5	M-09-108 (56.5-57.5m)																								
13	Mitchell	2009	M-09-110	34.5	35.5	M-09-110 (34.5-35.5m)														2		5.84	0.76	8	50	720	0.9	4.38	0.95	0.92	13.8	5.6
14	Mitchell	2009	M-09-110	88.5	89.5	M-09-110 (88.5-89.5m)														2		1.6	1.34	25	50	124	0.8	0.4	2.42	0.17	21.4	16.4
	Mitchell	2008	M-07-44	57	59	M-07-44 (57-59m)																									
	Mitchell	2008	M-07-30	5	7	M-07-30 (5-7m)	17.4		17.4		10.75	28.8		28.80	28.80	28.80			2		0.16	8.2	9.1		1490	2.46	0.19	0.51	0.2	37	13.4
	Mitchell	2008	M-06-14	107	109	M-06-14 (107-109m)	-185.7		-165.4		-195.14	0.070109546		0.08	0.07	0.07			1		1.04	8.03	22.3		120	1.12	0.33	0.51	0.76	10.9	21.8
	Mitchell	2008	M-07-43	220	222	M-07-43 (220-222m)	-60.3		-53.4		-68.98	0.154385965		0.17	0.16	0.16			1		0.75	8.04	7.3		590	1.52	0.12	0.35	0.27	16.2	10.2
12	Mitchell	2009	M-09-108	162.5	163.5	M-09-108 (162.5-163.5m)																								
16	Mitchell	2009	M-09-112	224.5	225.5	M-09-112 (224.5-225.5m)																								
26	Mitchell	2009	M-09-108	184.5	185.5	M-09-108 (184.5-185.5m)																								
15	Mitchell	2009	M-09-110	342.5	343.5	M-09-110 (342.5-343.5m)	-618.8		-600.0		-618.75	0		0.00	0.00	0.00			1		1.09	0.38	17	5	16	0.1	0.89	0.1	0.07	0.47	29.1
1	Mitchell	2009	M-09-96	195.5	196.5	M-09-96 (195.5-196.5m)	-168.0		-151.7		-173.75	0.033381295		0.04	0.03	0.03			1		0.77	0.51	42	30	54	0.05	0.54	0.32	0.32	0.92	12.6
5	Mitchell	2009	M-09-102	120.5	121.5	M-09-102 (120.5-121.5m)																								
6	Mitchell	2009	M-09-102A	125.5	126.5	M-09-102A (125.5-126.5m)																								
11	Mitchell	2009	M-09-108	118.5	119.5	M-09-108 (118.5-119.5m)																								
7	Mitchell	2009	M-09-102A	133.5	134.5	M-09-102A (133.5-134.5m)																								
8	Mitchell	2009	M-09-106	34.5	35.5	M-09-106 (34.5-35.5m)																								
9	Mitchell	2009	M-09-106	58.5	59.5	M-09-106 (58.5-59.5m)	-183.2		-169.5		-260.00	0.295384615		0.31	0.30	0.30			2		5.79	1.12	14	40	35	0.2	0.89	3.08	0.86	5.08	18.9
	Sulphurets	2008	S-06-04	30	32	S-06-04 (30-32m)																									
17	Sulphurets	2009	S-08-06	252.5	253.5	S-08-06 (252.5-253.5m)																								
	Sulphurets	2008	S-06-05	10.4	12	S-06-05 (10.4-12m)																								
24	Sulphurets	2009	S-09-11	350.5	351.5	S-09-11 (350.5-351.5m)	-44.2		-37.3		-79.06	0.441422925		0.48	0.44	0.44			2		0.38	1.94	11	40	84	0.6	0.13	0.98	1.2	18.9	23.2
25	Sulphurets	2009	S-09-11	374.5	375.5	S-09-11 (374.5-375.5m)																								
18	Sulphurets	2009	S-09-12	144.5	145.5	S-09-12 (144.5-145.5m)	65.8		71.7		-111.25	1.591011236		1.68	1.59	1.59			3		0.78	2.45	35	30	101	0.7	2.71	4.8	0.07	13.5	27.5
19	Sulphurets	2009	S-09-12	172.5	173.5	S-09-12 (172.5-173.5m)																								
20	Kerr	2009	K-09-01	84.5	85.5	K-09-01 (84.5-85.5m)																								
21	Kerr	2009	K-09-02	66.5	67.5	K-09-02 (66.5-67.5m)	-272.3		-251.1		-278.13	0.020853933		0.02	0.02	0.02			1		3.97	0.41	1040	30	32	0.05	0.45	0.43	1.14	0.35	20.6
22	Kerr	2009	K-09-03	140.5	141.5	K-09-03 (140.5-141.5m)																								
23	Kerr	2009	K-09-04	126.5	127.5	K-09-04 (126.5-127.5m)	-318.6		-293.6		-321.88	0.010252427		0.01	0.01	0.01			1		0.66	0.43	11	40	29	0.05	0.19	2.42	0.05	0.63	24.2
HCT-1	Iron Cap	2011	IC-10-007	Composite																										
HCT-2	Iron Cap	2011	0	Composite																										
HCT-3	Iron Cap	2011	IC-10-010	Composite																										
HCT-4	Iron Cap	2011	IC-10-010	Composite																										
HCT-5	Iron Cap	2011	IC-10-006	Composite																										
HCT-6	Iron Cap	2011	0	Composite																										

Appendix 5.2-7. Post-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

HC	Zone	Year	Drill Hole	From	To		Cr ppm	Cs ppm	Cu ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al_2O_3 %	BaO %	CaO %	Cr_2O_3 %
	Mitchell	2008	NM-05-03	46	48	NM-05-03 (46-48m)	10	0.79	361	1.6	28.6	0.09	1.3	0.03	0.02	5.11	4.9	2.8	0.18	423	0.6	2.06	13.7	3.5	230	8.4	92.1	0.001	0.21	2.06	3.1	1	1.5	107	0.56	0.11	12.9	0.082	0.5	5.1	347	4.2	2.8	49	36.7	13.02	0.1	1.35	0.01
2	Mitchell	2009	M-09-97	52.5	53.5	M-09-97 (52.5-53.5m)																																											
3	Mitchell	2009	M-09-97	92.5	93.5	M-09-97 (92.5-93.5m)																																											
4	Mitchell	2009	M-09-97	147.5	148.5	M-09-97 (147.5-148.5m)																																											
	Mitchell	2008	M-07-33	96	98	M-07-33 (96-98m)	15	2.04	69.2	3.35	17.65	0.18	0.7	0.04	0.043	4.86	8.5	10.4	0.69	743	17.8	2.46	6	5.1	1210	13	135	0.055	2.4	3.16	18.4	12	0.9	269	0.36	0.35	1.8	0.186	1.39	1.5	184	10.5	6.3	44	19.8	17.6	0.61	2.29	0.005
10	Mitchell	2009	M-09-108	56.5	57.5	M-09-108 (56.5-57.5m)																																											
13	Mitchell	2009	M-09-110	34.5	35.5	M-09-110 (34.5-35.5m)	86	2.53	3600	2.27	3.4	0.2	0.18	0.04	0.03	0.57	7.5	31	0.78	616	9.52	0.05	1.57	15.8	1160	167	47.5		0.67	1.11	5.2	2	0.5	64.3	0.025	0.53	1.1	0.11	0.32	1.46	267	1.4	9.62	103	3.9				
14	Mitchell	2009	M-09-110	88.5	89.5	M-09-110 (88.5-89.5m)	111	5.18	1030	3.03	5.3	0.05	0.025	0.03	0.03	1.04	12.9	44	1.51	1490	3.52	0.03	0.24	40.2	1490	25.6	75.2		2.02	1.43	7	4	0.5	113	0.025	0.72	1	0.04	0.68	2.64	314	31.2	10.7	94	2.4				
	Mitchell	2008	M-07-44	57	59	M-07-44 (57-59m)																																											
	Mitchell	2008	M-07-30	5	7	M-07-30 (5-7m)	7	8.78	94.7	4.33	17.6	0.16	2.5	0.02	0.049	5.22	18.6	20.4	1.05	845	2.93	0.06	8.7	11.6	940	11.7	182.5	0.001	0.02	7.18	14.8	2	1.3	24.7	0.56	0.025	8.4	0.323	1.56	3.5	144	2.9	16.9	98	94.7	17.29	0.18	0.71	0.005
	Mitchell	2008	M-06-14	107	109	M-06-14 (107-109m)	19	4.58	324	7.63	20.8	0.2	0.6	0.07	0.086	2.52	4.9	28.5	2.19	906	119	0.24	3.6	7.2	2360	56.9	70.2	0.547	6.12	1.6	42.7	6	2.8	31.6	0.17	0.31	2.2	0.206	2.33	1.4	402	0.5	8.8	365	16.2	17.26	0.24	0.72	0.01
	Mitchell	2008	M-07-43	220	222	M-07-43 (220-222m)	7	4.28	339	4.58	18.75	0.17	0.5	0.01	0.026	2.44	6.7	33.7	1.74	837	63.5	0.2	4.2	3.3	1630	22.7	83.9	0.271	2.16	0.86	13.6	7	1.8	88.5	0.24	0.025	3.2	0.212	1.85	1.3	147	0.6	10	171	15.7	17.03	0.33	0.47	0.005
12	Mitchell	2009	M-09-108	162.5	163.5	M-09-108 (162.5-163.5m)																																											
16	Mitchell	2009	M-09-112	224.5	225.5	M-09-112 (224.5-225.5m)																																											
26	Mitchell	2009	M-09-108	184.5	185.5	M-09-108 (184.5-185.5m)																																											
15	Mitchell	2009	M-09-110	342.5	343.5	M-09-110 (342.5-343.5m)	101	0.42	51.8	15	0.4	0.05	0.025	0.02	0.01	0.14	0.2	2	0.16	50	71.3	0.02	0.1	8.8	450	29.1	3.9		5	0.98	0.8	36	0.15	2.2	0.025	0.23	0.4	0.005	0.16	0.33	9	0.4	0.71	16	0.25				
1	Mitchell	2009	M-09-96	195.5	196.5	M-09-96 (195.5-196.5m)	70	1.22	756	5.1	0.9	0.05	0.025	0.12	0.02	0.18	0.4	2	0.13	65	246	0.02	0.025	2.9	1420	62.8	5.7		5	0.7	1.7	13	0.15	41	0.025	0.24	0.4	0.005	0.24	0.26	10	0.05	1.69	32	0.7				
5	Mitchell	2009	M-09-102	120.5	121.5	M-09-102 (120.5-121.5m)																																											
6	Mitchell	2009	M-09-102A	125.5	126.5	M-09-102A (125.5-126.5m)																																											
11	Mitchell	2009	M-09-108	118.5	119.5	M-09-108 (118.5-119.5m)																																											
7	Mitchell	2009	M-09-102A	133.5	134.5	M-09-102A (133.5-134.5m)																																											
8	Mitchell	2009	M-09-106	34.5	35.5	M-09-106 (34.5-35.5m)																																											
9	Mitchell	2009	M-09-106	58.5	59.5	M-09-106 (58.5-59.5m)	58	0.86	1290	8.32	2.2	0.05	0.025	0.005	0.02	0.23	2.5	11	0.88	1130	237	0.01	0.025	3.9	1210	83.7	6.5		5	0.62	2	21	0.15	85.3	0.025	2.61	2	0.005	0.21	0.65	25	0.1	5.29	39	0.7				
	Sulphurets	2008	S-06-04	30	32	S-06-04 (30-32m)																																											
17	Sulphurets	2009	S-08-06	252.5	253.5	S-08-06 (252.5-253.5m)																																											
	Sulphurets	2008	S-06-05	10.4	12	S-06-05 (10.4-12m)																																											
24	Sulphurets	2009	S-09-11	350.5	351.5	S-09-11 (350.5-351.5m)	50	5.02	1400	4.91	6.5	0.05	0.05	0.12	0.03	0.75	8.9	18	1.43	765	30.7	0.02	0.025	51.4	1600	36.2	41.8		2.84	2.99	4.4	5	0.3	57.9	0.025	0.11	4.5	0.01	0.45	1.27	48	0.2	13.2	268	1				
25	Sulphurets	2009	S-09-11	374.5	375.5	S-09-11 (374.5-375.5m)																																											
18	Sulphurets	2009	S-09-12	144.5	145.5	S-09-12 (144.5-145.5m)	173	0.66	240	8.68	14.3	0.2	0.025	0.06	0.52	0.12	7.2	20	2.07	1470	7.1	0.01	0.05	62.9	1840	11.4	5.4		4.07	1.1	16.1	2	0.9	225	0.025	1.49	1.3	0.01	0.08	0.9	281	2.5	9.25	70	1.8				
19	Sulphurets	2009	S-09-12	172.5	173.5	S-09-12 (172.5-173.5m)																																											
20	Kerr	2009	K-09-01	84.5	85.5	K-09-01 (84.5-85.5m)																																											
21	Kerr	2009	K-09-02	66.5	67.5	K-09-02 (66.5-67.5m)	54	1.06	3490	7.71	0.7	0.05	0.025	14.9	0.18	0.21	0.2	1	0.04	16	5.92	0.02	0.025	13.5	1890	14.9	4.5		5	114	2.1	23	0.4	119	0.025	60.8	0.3	0.005	0.18	0.11	14	0.1	2	295	1.2				
22	Kerr	2009	K-09-03	140.5	141.5	K-09-03 (140.5-141.5m)																																											
23	Kerr	2009	K-09-04	126.5	127.5	K-09-04 (126.5-127.5m)	75	1.12	2330	8.94	0.8	0.05	0.025	0.18	0.08	0.18	0.3	3	0.15	45	23	0.02	0.05	21.7	1280	5	4.2		5	0.43	1.8	27	0.15	31	0.025	0.75	0.5	0.005	0.16	0.07	14	0.05	1.45	15	0.6				
HCT-1	Iron Cap	2011	IC-10-007	Composite																																												
HCT-2	Iron Cap	2011	0	Composite																																												
HCT-3	Iron Cap	2011	IC-10-010	Composite																																											
HCT-4	Iron Cap	2011	IC-10-010	Composite																																											
HCT-5	Iron Cap	2011	IC-10-006	Composite																																											
HCT-6	Iron Cap	2011	0	Composite																																											

Appendix 5.2-7. Post-Humidity Cells Solid-Phase Static Tests Results for the Kerr, Sulphurets, Mitchell, and Iron Cap Deposits

HC	Zone	Year	Drill Hole	From	To		Fe_2O_3 %	K_2O %	MgO %	MnO %	Na2O %	P_2O_5 %	SiO_2 %	SRO %	TiO_2 %	LOI %	Total_DC %
	Mitchell	2008	NM-05-03	46	48	NM-05-03 (46-48m)	2.38	6.45	0.37	0.06	2.98	0.047	71.4	0.01	0.24	1.57	99.98
2	Mitchell	2009	M-09-97	52.5	53.5	M-09-97 (52.5-53.5m)											
3	Mitchell	2009	M-09-97	92.5	93.5	M-09-97 (92.5-93.5m)											
4	Mitchell	2009	M-09-97	147.5	148.5	M-09-97 (147.5-148.5m)											
	Mitchell	2008	M-07-33	96	98	M-07-33 (96-98m)	4.64	6.74	1.31	0.09	3.4	0.26	55.19	0.02	0.84	5.33	98.33
10	Mitchell	2009	M-09-108	56.5	57.5	M-09-108 (56.5-57.5m)											
13	Mitchell	2009	M-09-110	34.5	35.5	M-09-110 (34.5-35.5m)											
14	Mitchell	2009	M-09-110	88.5	89.5	M-09-110 (88.5-89.5m)											
	Mitchell	2008	M-07-44	57	59	M-07-44 (57-59m)											
	Mitchell	2008	M-07-30	5	7	M-07-30 (5-7m)	6.11	7.13	2	0.11	0.06	0.21	60.69	0.005	0.85	3.94	99.27
	Mitchell	2008	M-06-14	107	109	M-06-14 (107-109m)	10.77	3.23	4.1	0.12	0.35	0.533	51.78	0.005	0.91	8.16	98.18
	Mitchell	2008	M-07-43	220	222	M-07-43 (220-222m)	6.51	3.01	3.18	0.11	0.29	0.367	61.33	0.005	0.86	5.19	98.69
12	Mitchell	2009	M-09-108	162.5	163.5	M-09-108 (162.5-163.5m)											
16	Mitchell	2009	M-09-112	224.5	225.5	M-09-112 (224.5-225.5m)											
26	Mitchell	2009	M-09-108	184.5	185.5	M-09-108 (184.5-185.5m)											
15	Mitchell	2009	M-09-110	342.5	343.5	M-09-110 (342.5-343.5m)											
1	Mitchell	2009	M-09-96	195.5	196.5	M-09-96 (195.5-196.5m)											
5	Mitchell	2009	M-09-102	120.5	121.5	M-09-102 (120.5-121.5m)											
6	Mitchell	2009	M-09-102A	125.5	126.5	M-09-102A (125.5-126.5m)											
11	Mitchell	2009	M-09-108	118.5	119.5	M-09-108 (118.5-119.5m)											
7	Mitchell	2009	M-09-102A	133.5	134.5	M-09-102A (133.5-134.5m)											
8	Mitchell	2009	M-09-106	34.5	35.5	M-09-106 (34.5-35.5m)											
9	Mitchell	2009	M-09-106	58.5	59.5	M-09-106 (58.5-59.5m)											
	Sulphurets	2008	S-06-04	30	32	S-06-04 (30-32m)											
17	Sulphurets	2009	S-08-06	252.5	253.5	S-08-06 (252.5-253.5m)											
	Sulphurets	2008	S-06-05	10.4	12	S-06-05 (10.4-12m)											
24	Sulphurets	2009	S-09-11	350.5	351.5	S-09-11 (350.5-351.5m)											
25	Sulphurets	2009	S-09-11	374.5	375.5	S-09-11 (374.5-375.5m)											
18	Sulphurets	2009	S-09-12	144.5	145.5	S-09-12 (144.5-145.5m)											
19	Sulphurets	2009	S-09-12	172.5	173.5	S-09-12 (172.5-173.5m)											
20	Kerr	2009	K-09-01	84.5	85.5	K-09-01 (84.5-85.5m)											
21	Kerr	2009	K-09-02	66.5	67.5	K-09-02 (66.5-67.5m)											
22	Kerr	2009	K-09-03	140.5	141.5	K-09-03 (140.5-141.5m)											
23	Kerr	2009	K-09-04	126.5	127.5	K-09-04 (126.5-127.5m)											
HCT-1	Iron Cap	2011	IC-10-007	Composite													
HCT-2	Iron Cap	2011	0	Composite													
HCT-3	Iron Cap	2011	IC-10-010	Composite													
HCT-4	Iron Cap	2011	IC-10-010	Composite													
HCT-5	Iron Cap	2011	IC-10-006	Composite													
HCT-6	Iron Cap	2011	0	Composite													

Appendix 5.2-8

Sub-Aerial Drip Columns Solid-Phase Static Tests Results for the Mitchell Deposit

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Appendix 5.2-8. Sub-Aerial Drip Columns Solid-Phase Static Tests Results for the Mitchell Deposit

Column	Zone	Year	Drill Hole	From	To	Interval	PFS Sample#	PFS ABA Model Code	PFS Waste/Ore	PFS Pit In/Out	Litho	PFS Alt	Rock Model	Lithology	Alteration 1	y	Alt_2_Code	y	Position	Paste pH unit less	Rinse pH unit less	S_Total %	S_Sulphide %	S_S2_CALC %	S_S2_S_DEL CALC %	S_SO4_NA2CO3 %	S_SO4_HCL %	S_BASO4 %
Column 1	Mitchell	2009		Composite							PMON		NM Monz/NM Haz UP							9		1.07	0.93	1.065	1.932686394	0.02	0.005	0.062313606
Column 2	Mitchell	2009		Composite									NM Haz UP							9.3		2.35	2.11	2.345	4.436329257	0.03	0.005	0.018670743
Column 3	Mitchell	2009		Composite									SW Haz UP							9.2		3.02	2.65	3.015	5.654497707	0.01	0.005	0.010502293
Column 4	Mitchell	2009		Composite									NM Haz UP/IARG LP/QSP LP							9		3.67	3.33	3.64	6.965332314	0.04	0.03	0.004667686
Column 1 Fine	Mitchell	2009		Composite							PMON		NM Monz/NM Haz UP							8		1.73	1.46	1.71	3.144094344	0.02	0.02	0.025905656
Column 2 Fine	Mitchell	2009		Composite									NM Haz UP							7.7		4.17	3.75	4.12	7.864865546	0.09	0.05	0.005134454
Column 3 Fine	Mitchell	2009		Composite									SW Haz UP							7.7		5.38	4.93	5.35	10.2755657	0.04	0.03	0.004434302
Column 4 Fine	Mitchell	2009		Composite									NM Haz UP/IARG LP/QSP LP							7.5		5.42	5.09	5.34	10.42626585	0.1	0.08	0.003734149

Column	Zone	Year	Drill Hole	From	To	S_DEL %	S_DEL_CAL %	TAP kg CaCO3 / t	SAP kg CaCO3 / t	SAP (S Del Calc) kg CaCO3 / t	NP kg CaCO3 / t	NP_ADJ kg CaCO3 / t	UNP CaCO3 / t	Total C %	Inorganic C %	Inorganic CO2 %	C_DEL_CALC %	CANP_TTL kg CaCO3 / t	CANP_INORG kg CaCO3 / t	CANP_CA kg CaCO3 / t	CANP_CAMG kg CaCO3 / t	TNNP kg CaCO3 / t	TNNP_ADJ kg CaCO3 / t	SNNP kg CaCO3 / t	SNNP_ADJ kg CaCO3 / t	ICNNP kg CaCO3 / t
Column 1	Mitchell	2009		Composite		1.002686394	1.002686394	33.4375	29.0625	31.33394983	50	35	15	0.59	0.62	2.3	0	49.16994172	52.30788457	179.1786012	77.88630009	16.5625	-68.4375	-79.0625	-64.0625	18.87038457
Column 2	Mitchell	2009		Composite		2.326329257	2.326329257	73.4375	65.9375	72.69778927	44	29	15	0.42	0.45	1.6	0	35.00233139	36.38809362	151.6767694	83.89958062	-29.4375	-102.4375	-109.9375	-94.9375	-37.0494064
Column 3	Mitchell	2009		Composite		3.004497707	3.004497707	94.375	82.8125	93.89055334	70	55	15	0.69	0.7	2.6	0	57.50383014	59.13065212	195.0129892	97.9305685	-24.375	-149.375	-152.8125	-137.8125	-35.2443479
Column 4	Mitchell	2009		Composite		3.635332314	3.635332314	114.6875	104.0625	113.6041348	52	37	15	0.52	0.53	2	0	43.33621982	45.48511702	160.0106578	81.89515377	-62.6875	-151.6875	-156.0625	-141.0625	-69.202383
Column 1 Fine	Mitchell	2009		Composite		1.684094344	1.684094344	54.0625	45.625	52.62794824	75	60	15	0.92	0.94	3.4	0	76.67177352	77.32469893	287.5191507	123.9881174	20.9375	-114.0625	-120.625	-105.625	23.26219893
Column 2 Fine	Mitchell	2009		Composite		4.114865546	4.114865546	130.3125	117.1875	128.5895483	69	54	15	0.76	0.76	2.8	0	63.33755204	63.67916383	245.0163197	125.4198509	-61.3125	-184.3125	-186.1875	-171.1875	-66.6333362
Column 3 Fine	Mitchell	2009		Composite		5.345565698	5.345565698	168.125	154.0625	167.0489281	91	76	15	1.14	1.11	4.1	0.03	95.00632806	93.24448989	289.1859284	145.1777726	-77.125	-244.125	-245.0625	-230.0625	-74.8805101
Column 4 Fine	Mitchell	2009		Composite		5.336265851	5.336265851	169.375	159.0625	166.7583079	62	47	15	0.71	0.73	2.7	0	59.17060783	61.40490798	215.8477102	105.0892358	-107.375	-216.375	-221.0625	-206.0625	-107.970092

Column	Zone	Year	Drill Hole	From	To	TNPR unit less	TNPR_ADJ unit less	SNPR unit less	(S DEL CALC) unit less	SNPR for graphs unit less	SNPR_ADJ for graphs unit less	ICNPR CaCO3/1000	Fizz Rating unit less	Fizz Check 0	Ag ppm	Al ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Cu %	Fe ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K ppm	K %	La ppm	Li ppm	Mg ppm
Column 1	Mitchell	2009		Composite		1.495327103	1.046728972	1.720430108	1.595713285	1.720430108	1.204301075	1.56434795	2	Agree	0.94	71000	7.1	8.9	2670	1.48	0.54	21500	2.15	0.09	15.8	8.7	4	1.94	1010	0.101	32500	3.25	22.9	0.1	1.1	0.03	0.064	42000	4.2	7.9	9.6	5700
Column 2	Mitchell	2009		Composite		0.599148936	0.394893617	0.667298578	0.605245365	0.667298578	0.439810427	0.495497445	2	Disagree	1.05	72200	7.22	6	800	4.03	1.26	18200	1.82	0.13	13.15	15.2	14	3.48	1220	0.122	40300	4.03	18.9	0.11	1	0.04	0.063	41200	4.12	7.5	18.4	11100
Column 3	Mitchell	2009		Composite		0.741721854	0.582781457	0.845283019	0.745548913	0.845283019	0.664150943	0.626549956	2	Agree	1.37	70900	7.09	68.4	450	1.29	2.17	23400	2.34	0.16	20.9	15.1	31	4.79	305	0.0305	36000	3.6	17.4	0.14	0.9	0.05	0.056	40400	4.04	10.5	19.7	10800
Column 4	Mitchell	2009		Composite		0.453405995	0.322615804	0.4996997	0.457729818	0.4996997	0.355555556	0.396600475	2	Agree	1.52	73200	7.32	35.2	200	1.26	0.88	19200	1.92	1.93	15.75	13.4	8	3.28	741	0.0741	42900	4.29	16.65	0.13	0.6	0.17	0.087	41100	4.11	7.8	12.6	9400
Column 1 Fine	Mitchell	2009		Composite		1.387283237	1.10982659	1.643835616	1.425098308	1.643835616	1.315068493	1.430283448	2	Agree	1.98	73600	7.36	13.1	1110	1.72	0.92	34500	3.45	0.2	32.9	13.3	26	2.24	2080	0.208	45700	4.57	24.5	0.15	1.6	0.04	0.106	43600	4.36	18	13.4	8800
Column 2 Fine	Mitchell	2009		Composite		0.529496403	0.414388489	0.5888	0.536591044	0.5888	0.4608	0.488665046	2	Agree	3.19	67400	6.74	9.6	220	1.76	2.53	29400	2.94	0.29	22.1	28.3	44	3.78	2510	0.251	62700	6.27	19.35	0.19	0.9	0.06	0.103	43400	4.34	12.7	24.1	14400
Column 3 Fine	Mitchell	2009		Composite		0.541263941	0.45204461	0.590669371	0.544750577	0.590669371	0.493306288	0.554614066	2	Agree	3.53	69100	6.91	94.3	190	1.47	4.24	34700	3.47	0.47	43.3	22.8	54	5.51	636	0.0636	56000	5.6	18.55	0.22	1	0.07	0.069	37200	3.72	21.6	28	16000
Column 4 Fine	Mitchell	2009		Composite		0.366051661	0.277490775	0.38978389	0.371795569	0.38978389	0.295481336	0.362538202	2	Agree	3.42	68000	6.8	62.4	160	1.36	1.91	25900	2.59	4.23	23.8	19.9	13	3.92	1250	0.125	59000	5.9	17.25	0.17	0.7	0.34	0.159	39200	3.92	12.3	15.9	10800

Column	Zone	Year	Drill Hole	From	To	Mg %	Mn ppm	Mo ppm	Na ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Al_2O_3 %	BaO %	CaO %	Cr_2O_3 %	Fe_2O_3 %	K_2O %	MgO %	MnO %	Na_2O %	P_2O_5 %	SiO_2 %	SRO %	TiO_2 %	LOI %	Total_DC %
Column 1	Mitchell	2009		Composite		0.57	565	26.5	22000	2.2	11.4	4.2	830	18	73.7	0.041	11200	1.12	2.58	10.2	5	1.9	443	0.51	0.23	4.3	1710	0.171	0.61	4.2	367	11.2	7.4	33	27.4	15.62	0.34	3.06	0.005	4.82	6.39	1.2	0.08	3.19	0.189	59.89	0.06	0.32	3.82	98.98
Column 2	Mitchell	2009		Composite		1.11	643	33.1	17400	1.74	9.7	10.8	1350	31.7	86.6	0.06	24000	2.4	1.73	18.1	9	1.6	208	0.43	0.23	2.3	2220	0.222	1.07	5.7	332	8.4	9.3	50	32	15.55	0.32	2.49	0.01	5.89	6.92	2.19	0.09	2.55	0.29	57.84	0.02	0.43	4.37	98.96
Column 3	Mitchell	2009		Composite		1.08	1055	35.3	19800	1.98	4.7	23.2	810	30	138.5	0.108	31200	3.12	9.47	12.6	13	1.3	214	0.28	1.36	2.6	2220	0.222	1.6	2.2	125	18	10.2	45	27.1	14.78	0.21	3.28	0.01	5.16	5.27	2.08	0.14	2.88	0.179	58.22	0.03	0.49	5.86	98.59
Column 4	Mitchell	2009		Composite		0.94	587	10.85	15700	1.57	7.7	8.3	1370	43.8	113.5	0.022	36600	3.66	14.9	18.3	10	1.8	207	0.36	0.44	2.5	2030	0.203	1.75	2.1	385	10.1	9.2	170	18.5	15.51	0.42	2.66	0.01	6.26	5.4	1.85	0.08	2.3	0.305	57.46	0.03	0.44	6.12	98.84
Column 1 Fine	Mitchell	2009		Composite		0.88	875	68.1	19900	1.99	13.8	21.1	1600	106	93.3	0.129	17400	1.74	3.52	14.3	7	11	525	0.61	0.38	12.6	2010	0.201	0.6	7.6	489	25.3	14.6	48	44.5	15.16	0.36	4.74	0.01	6.74	5.86	1.66	0.12	2.82	0.346	57.52	0.06	0.38	2.48	98.25
Column 2 Fine	Mitchell	2009		Composite		1.44	1050	67	14200	1.42	11.1	41.6	1710	60.7	106.5	0.105	40000	4	2.28	22.7	17	10.5	345	0.48	0.43	2.8	2670	0.267	1.03	6.7	450	11.7	14.4	81	28.3	14.43	0.4	4.19	0.02	9.4	6.05	2.76	0.15	1.99	0.369	54.07	0.04	0.51	3.84	98.22
Column 3 Fine	Mitchell	2009		Composite		1.6	1545	51.2	14600	1.46	5.3	47.9	890	56.8	140.5	0.127	51100	5.11	15.3	14.6	22	8.5	271	0.31	2.12	4.1	2570	0.257	1.54	3.5	152	27.3	15.2	100	30.4	14.29	0.23	5	0.01	8.36	4.91	3.08	0.22	2.11	0.202	53.24	0.04	0.58	6.1	98.37
Column 4 Fine	Mitchell	2009		Composite		1.08	898	23.1	10800	1.08	8.5	14.2	1640	89.8	106	0.044	53300	5.33	33.1	20.2	14	5.1	295	0.41	0.83	3	2410	0.241	1.83	3	472	16.7	11.5	327	20	14.79	0.59	3.7	0.01	8.82	5.16	2.15	0.13	1.6	0.368	54.59	0.04	0.52	5.9	98.36

Appendix 5.2-9

Sub-Aerial Drip Columns Leachate Concentrations: Mitchell Deposit

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Appendix 5.2-9. Sub-aerial Drip Columns Leachate Concentrations: Mitchell Deposit

Week	Sample ID	Date Sampled	Time Sampled	ALS Sample ID	Matrix	Physical Tests	Conductivity	pH	Anions and Nutrients	Acidity (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Chloride (Cl)	Fluoride (F)	Sulfate (SO_4)	Calculated Hardness	Dissolved Metals	Aluminum (Al)-Dissolved	Antimony (Sb)-Dissolved	Arsenic (As)-Dissolved	Barium (Ba)-Dissolved	Beryllium (Be)-Dissolved
0	Column 1-0	18-Mar-09	00:00	L745242-1	Water		189	8.20		2	48	3.5	0.327	34.6	64.487		0.128	0.0021	0.0005	0.113	0.0025
4	Column 1-4	15-Apr-09	00:00	L752270-1	Water		271	8.11		2.9	72.2	4.6	1.27	62.8	120.72		0.046	0.0061	0.0005	0.0524	0.0025
32	Column 1-32	28-Oct-09	00:00	L834820-1	Water		391	7.95		3.9	56.3	4.16	1.54	124	172.526		0.02	0.0061	0.0005	0.0235	0.0025
34	Column 1-34	12-Nov-09	00:00	L839393-1	Water		369	8.02		6.7	60.1	4.22	1.36	121	171.224		0.024	0.006	0.0005	0.0249	0.0025
35	Column 1-35	18-Nov-09	00:00	L841194-1	Water		350	7.94		3.2	59.4	3.61	1.2	113	151.906		0.022	0.0051	0.0005	0.0234	0.0025
36	Column 1-36	25-Nov-09	00:00	L843168-1	Water		332	7.98		3.3	54.2	3.66	1.19	107	151.641		0.031	0.0052	0.0005	0.0278	0.0025
37	Column 1-37	2-Dec-09	00:00	L845463-1	Water		315	7.98		5.8	57.3	3.37	1.16	99.4	143.517		0.029	0.0048	0.0005	0.0265	0.0025
38	Column 1-38	9-Dec-09	00:00	L847219-1	Water		298	8.06		2.2	49.2	3.09	1.09	92.6	136.38		0.029	0.0044	0.0005	0.0276	0.0025
39	Column 1-39	16-Dec-09	00:00	L848940-1	Water		285	8.00		2	49	2.42	1.02	88.3	128.142		0.037	0.0042	0.0005	0.0308	0.0025
40	Column 1-40	23-Dec-09	00:00	L850704-1	Water		271	8.00		4.9	47.8	2.24	0.981	78.9	129.687		0.036	0.004	0.0005	0.0318	0.0025
41	Column 1-41	30-Dec-09	00:00	L851575-1	Water		265	8.02		2.5	48.3	2.36	0.965	75.9	110.432		0.034	0.0037	0.0005	0.0327	0.0025
42	Column 1-42	6-Jan-10	00:00	L852457-1	Water		252	8.05		2	48.3	1.98	0.962	70.4	116.1		0.037	0.0036	0.0005	0.0341	0.0025
43	Column 1-43	13-Jan-10	00:00	L854094-1	Water		244	8.06		3.4	47.3	1.8	0.905	67.3	107.964		0.039	0.0035	0.0005	0.0358	0.0025
44	Column 1-44	20-Jan-10	00:00	L855784-1	Water		235	8.09		3	48.4	1.6	0.914	64.5	108.103		0.038	0.0032	0.0005	0.035	0.0025
45	Column 1-45	27-Jan-10	00:00	L857367-1	Water		229	8.09		3.9	46.7	1.66	0.944	60.8	109.492		0.043	0.0032	0.0005	0.0383	0.0025
46	Column 1-46	3-Feb-10	00:00	L859094-1	Water		225	8.05		3.9	48.5	1.53	0.969	57.9	104.062		0.04	0.0033	0.0005	0.0394	0.0025
47	Column 1-47	10-Feb-10	00:00	L861120-1	Water		220	8.06		4.1	48	1.38	0.957	54.4	101.815		0.036	0.0031	0.0005	0.04	0.0025
48	Column 1-48	17-Feb-10	00:00	L862552-1	Water		218	7.98		3.5	56.2	1.35	0.981	54.4	103.808		0.04	0.0031	0.0005	0.0402	0.0025
49	Column 1-49	24-Feb-10	00:00	L864535-1	Water		215	8.10		2.7	51.8	1.24	0.977	51.6	100.693		0.043	0.003	0.0005	0.0461	0.0025
50	Column 1-50	3-Mar-10	00:00	L866346-1	Water		205	8.09		2.4	50.4	1.1	0.94	47.9	98.18		0.043	0.0028	0.0005	0.0442	0.0025
51	Column 1-51	10-Mar-10	00:00	L868250-1	Water		200	8.09		3.9	50.3	1.04	0.947	46.2	99.369		0.043	0.0027	0.0005	0.0464	0.0025
52	Column 1-52	17-Mar-10	00:00	L869904-1	Water		197	8.10		7.9	54.1	0.92	0.891	43.5	93.328		0.046	0.0028	0.0005	0.05	0.0025
53	Column 1-53	24-Mar-10	00:00	L871617-1	Water		193	8.11		2.5	58.5	0.9	0.951	42.2	99.327		0.043	0.0025	0.0005	0.048	0.0025
54	Column 1-54	31-Mar-10	00:00	L873452-1	Water		189	8.12		3.2	60.6	0.81	0.921	40.2	82.176		0.046	0.0026	0.0005	0.0486	0.0025
55	Column 1-55	7-Apr-10	00:00	L874968-1	Water		185	8.09		3.8	49.7	0.76	0.929	39.8	86.262		0.049	0.0024	0.0005	0.0484	0.0025
56	Column 1-56	14-Apr-10	00:00	L877112-1	Water		183	8.13		3.8	56.8	0.71	0.908	37.8	86.832		0.044	0.0024	0.0005	0.0504	0.0025
57	Column 1-57	21-Apr-10	00:00	L879129-1	Water		184	8.14		1.7	55	0.65	0.951	37.5	86.356		0.04	0.0023	0.0005	0.0517	0.0025
58	Column 1-58	28-Apr-10	00:00	L881229-1	Water		178	8.11		4.1	56	0.57	0.905	35.6	84.065		0.042	0.0021	0.0005	0.0522	0.0025
59	Column 1-59	5-May-10	00:00	L883236-1	Water		177	8.11		3.3	57.3	0.25	0.877	33.9	80.671		0.041	0.0021	0.0005	0.0595	0.0025
63	Column 1-63	2-Jun-10	00:00	L892978-1	Water		181	8.11		2.6	57.5	0.57	0.993	33.7	91.852		0.043	0.0021	0.0005	0.0582	0.0025
67	Column 1-67	30-Jun-10	00:00	L903224-1	Water		190	8.09		1.9	59.1	2.19	1.11	37.1	92.681		0.045	0.0022	0.0005	0.0583	0.0025
71	Column 1-71	28-Jul-10	00:00	L913677-1	Water		206	8.15		3.4	57.3	6.57	1.23	43.6	97.218		0.043	0.0022	0.0005	0.0578	0.0025
75	Column 1-75	25-Aug-10	00:00	L924199-1	Water		224	8.10		2.3	63.9	10.1	1.09	40.5	103.018		0.04	0.002	0.0005	0.0581	0.0025
79	Column 1-79	22-Sep-10	00:00	L934320-1	Water		210	8.05		2.8	62.7	7.71	1.04	38.6	100.727		0.0394	0.00186	0.00022	0.0532	0.00025
83	Column 1-83	20-Oct-10	00:00	L945039-1	Water		203	8.03		3.3	60.2	6.09	1.08	37.5	97.423		0.036	0.00172	0.0002	0.0511	0.00025
87	Column 1-87	17-Nov-10	00:00	L954870-1	Water		197	8.06		1.5	58.6	4.79	0.995	36.3	94.825		0.0354	0.00162	0.00026	0.0514	0.00025
91	Column 1-91	15-Dec-10	00:00	L963008-1	Water		196	8.11		3.2	54.9	3.77	0.968	35.2	97.153		0.032	0.00152	0.00019	0.0524	0.00025
95	Column 1-95	12-Jan-11	00:00	L969114-1	Water		190	8.1		1.3	59.1	2.86	0.883	33.8	89.583		0.0331	0.00139	0.00017	0.0478	0.00025
99	Column 1-99	9-Feb-11	00:00	L976966-1	Water		187	8.08		1.9	54.2	2.25	0.886	33.1	92.666		0.0342	0.00137	0.00016	0.0541	0.00025
103	Column 1-103	9-Mar-11	00:00	L984574-1	Water		178	8.08		1.4	57.3	1.68	0.782	31	87.477		0.0347	0.00117	0.00013	0.0503	0.00025
107	Column 1-107	6-Apr-11	00:00	L992445-1	Water		176	8.12		3	65	1.29	0.873	30.7	83.21		0.032	0.00111	0.00017	0.0483	0.00025
Average								8.058611111		2.92987013	45.32818182	2.618292683	0.996634146	56.45121951	106.2706829		0.039921951	0.002991707	0.000439024	0.045456098	0.002060976

Appendix 5.2-9. Sub-aerial Drip Columns Leachate Concentrations: Mitchell Deposit

Week	Sample ID	Date Sampled	Time Sampled	ALS Sample ID	Matrix	Physical Tests	Conductivity	pH	Anions and Nutrients	Acidity (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Chloride (Cl)	Fluoride (F)	Sulfate (SO_4)	Calculated Hardness	Dissolved Metals	Aluminum (Al)-Dissolved	Antimony (Sb)-Dissolved	Arsenic (As)-Dissolved	Barium (Ba)-Dissolved	Beryllium (Be)-Dissolved
0	Column 2-0	18-Mar-09	00:00	L745242-2	Water		158	8.03		2.2	40.4	0.56	0.459	33.9	63.146		0.099	0.0039	0.0014	0.102	0.0025
4	Column 2-4	15-Apr-09	00:00	L752270-2	Water		256	8.05		2	62.6	0.66	1.55	62.8	114.604		0.038	0.0137	0.002	0.0521	0.0025
33	Column 2-33	4-Nov-09	00:00	L836963-2	Water		368	7.87		3.5	46.5	0.98	1.57	140	181.329		0.016	0.0079	0.0005	0.0231	0.0025
35	Column 2-35	18-Nov-09	00:00	L841194-2	Water		344	7.84		5	44.1	1.14	1.32	134	185.121		0.018	0.0078	0.0005	0.0248	0.0025
36	Column 2-36	25-Nov-09	00:00	L843168-2	Water		328	7.88		3.1	44.1	0.91	1.18	125	155.234		0.017	0.0067	0.0005	0.0236	0.0025
37	Column 2-37	2-Dec-09	00:00	L845463-2	Water		310	7.91		3.1	43.4	1.03	1.13	118	159.657		0.023	0.0067	0.0005	0.0276	0.0025
38	Column 2-38	9-Dec-09	00:00	L847219-2	Water		295	7.93		3.1	42.3	1.17	1.13	109	147.127		0.021	0.0058	0.0005	0.0269	0.0025
39	Column 2-39	16-Dec-09	00:00	L848940-2	Water		277	7.94		1.7	41.2	0.88	1.08	102	137.503		0.021	0.0053	0.0005	0.0279	0.0025
40	Column 2-40	23-Dec-09	00:00	L850704-2	Water		261	7.90		2.3	40.5	0.62	1.02	94.8	130.593		0.026	0.0051	0.0005	0.0316	0.0025
41	Column 2-41	30-Dec-09	00:00	L851575-2	Water		253	7.90		4.8	39.3	0.57	0.871	83.5	128.482		0.026	0.0047	0.0005	0.0318	0.0025
42	Column 2-42	6-Jan-10	00:00	L852457-2	Water		247	7.93		2.5	39.8	0.71	0.972	82.3	116.088		0.025	0.0043	0.0005	0.0323	0.0025
43	Column 2-43	13-Jan-10	00:00	L854094-2	Water		235	7.97		2	40.3	0.54	0.976	75.1	117.006		0.028	0.0042	0.0005	0.0366	0.0025
44	Column 2-44	20-Jan-10	00:00	L855784-2	Water		228	7.96		3.5	38.9	0.5	0.91	71.7	106.907		0.028	0.0038	0.0005	0.0363	0.0025
45	Column 2-45	27-Jan-10	00:00	L857367-2	Water		227	7.97		3.1	39.9	0.25	0.965	70.2	108.161		0.029	0.0038	0.0005	0.0346	0.0025
46	Column 2-46	3-Feb-10	00:00	L859094-2	Water		217	7.93		3.9	40.3	0.55	1.06	67.4	111.804		0.03	0.0037	0.0005	0.0406	0.0025
47	Column 2-47	10-Feb-10	00:00	L861120-2	Water		213	7.96		4.2	38.6	0.5	1.05	62.6	101.382		0.031	0.0036	0.0005	0.0402	0.0025
48	Column 2-48	17-Feb-10	00:00	L862552-2	Water		207	7.94		4	41.5	0.25	1.04	59.7	101.861		0.027	0.0034	0.0005	0.0401	0.0025
49	Column 2-49	24-Feb-10	00:00	L864535-2	Water		204	7.97		3.4	40.7	0.25	1.05	58.2	100.136		0.03	0.0033	0.0005	0.0396	0.0025
50	Column 2-50	3-Mar-10	00:00	L866346-2	Water		195	7.97		2.5	42.6	0.25	1.09	56.5	98.021		0.032	0.0032	0.0005	0.0452	0.0025
51	Column 2-51	10-Mar-10	00:00	L868250-2	Water		195	8.00		2.5	40.8	0.25	1.05	52.6	95.033		0.033	0.003	0.0005	0.0429	0.0025
52	Column 2-52	17-Mar-10	00:00	L869904-2	Water		188	8.00		3.7	42.6	0.25	1.1	51.2	99.189		0.034	0.0029	0.0005	0.0467	0.0025
53	Column 2-53	24-Mar-10	00:00	L871617-2	Water		187	8.03		7.9	42	0.25	1.02	47.7	90.693		0.035	0.0029	0.0005	0.0479	0.0025
54	Column 2-54	31-Mar-10	00:00	L873452-2	Water		182	8.05		2.8	43.7	0.25	1.14	46.5	99.385		0.032	0.0027	0.0005	0.0486	0.0025
55	Column 2-55	7-Apr-10	00:00	L874968-2	Water		180	8.01		2.7	44.3	0.25	1.11	44.5	86.459		0.034	0.0027	0.0005	0.0491	0.0025
56	Column 2-56	14-Apr-10	00:00	L877112-2	Water		174	8.00		3.9	42.7	0.25	1.14	43.5	89.291		0.036	0.0026	0.0005	0.0514	0.0025
57	Column 2-57	21-Apr-10	00:00	L879129-2	Water		173	8.03		3	43.2	0.25	1.12	41.2	89.373		0.033	0.0025	0.0005	0.0501	0.0025
58	Column 2-58	28-Apr-10	00:00	L881229-2	Water		170	8.01		1.8	42.8	0.25	1.15	40.7	84.717		0.031	0.0023	0.0005	0.0493	0.0025
59	Column 2-59	5-May-10	00:00	L883236-2	Water		166	7.99		4	43.4	0.25	1.12	39.3	83.094		0.031	0.0022	0.0005	0.0495	0.0025
60	Column 2-60	12-May-10	00:00	L885535-2	Water		161	7.95		3.5	42.2	0.25	1.05	37.3	74.483		0.031	0.0022	0.0005	0.0517	0.0025
64	Column 2-64	9-Jun-10	00:00	L895614-2	Water		167	7.99		2.8	44.3	0.25	1.22	37	87.934		0.034	0.0021	0.0005	0.0533	0.0025
68	Column 2-68	7-Jul-10	00:00	L905409-2	Water		169	8.02		2.5	44.5	0.25	1.37	41.9	88.123		0.034	0.0023	0.0005	0.0519	0.0025
72	Column 2-72	4-Aug-10	00:00	L915971-2	Water		170	8.02		3.4	44.5	0.25	1.55	48.2	90.754		0.034	0.0022	0.0005	0.0509	0.0025
76	Column 2-76	1-Sep-10	00:00	L926702-2	Water		170	8.00		3.3	43.5	0.25	1.32	42.9	92.832		0.03	0.0021	0.0005	0.0445	0.0025
80	Column 2-80	29-Sep-10	00:00	L937151-2	Water		169	7.96		3.8	44.3	0.25	1.29	41.2	92.082		0.0296	0.00195	0.00029	0.0458	0.00025
84	Column 2-84	27-Oct-10	00:00	L947660-2	Water		165	8.03		3.7	45	0.25	1.35	39.9	90.557		0.0271	0.00182	0.00026	0.0429	0.00025
88	Column 2-88	24-Nov-10	00:00	L956849-2	Water		168	7.93		1.6	44.1	0.25	1.28	40.5	86.344		0.0263	0.00166	0.00031	0.0417	0.00025
92	Column 2-92	22-Dec-10	00:00	L965048-2	Water		163	7.96		1.5	45.6	0.25	1.29	39	90.016		0.0245	0.00153	0.00025	0.0441	0.00025
95	Column 2-95	12-Jan-11	00:00	L969114-2	Water		170	7.98		1.6	43.9	0.25	1.24	38.4	87.975		0.0239	0.00142	0.00023	0.0407	0.00025
99	Column 2-99	9-Feb-11	00:00	L976966-2	Water		168	7.98		1.8	46.1	0.25	1.21	37.4	85.963		0.0266	0.00142	0.00025	0.0457	0.00025
103	Column 2-103	9-Mar-11	00:00	L984574-2	Water		162	7.98		1.7	42.5	0.25	1.1	36.7	80.389		0.027	0.00125	0.00021	0.0361	0.00025
107	Column 2-107	6-Apr-11	00:00	L992445-2	Water		162	8.02		2.8	40.8	0.25	1.21	36.6	81.86		0.0251	0.00118	0.00019	0.0379	0.00025
Average								7.960833333		2.915789474	40.66710526	0.434634146	1.142756098	61.72926829	105.1392195		0.030173171	0.00360561	0.000509512	0.042429268	0.002060976

Appendix 5.2-9. Sub-aerial Drip Columns Leachate Concentrations: Mitchell Deposit

Week	Sample ID	Date Sampled	Time Sampled	ALS Sample ID	Matrix	Physical Tests	Conductivity	pH	Anions and Nutrients	Acidity (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Chloride (Cl)	Fluoride (F)	Sulfate (SO_4)	Calculated Hardness	Dissolved Metals	Aluminum (Al)-Dissolved	Antimony (Sb)-Dissolved	Arsenic (As)-Dissolved	Barium (Ba)-Dissolved	Beryllium (Be)-Dissolved
0	Column 3-0	18-Mar-09	00:00	L745242-3	Water		138	7.93		2.4	31.7	0.25	0.154	32.9	57.565		0.081	0.004	0.0044	0.0276	0.0025
4	Column 3-4	15-Apr-09	00:00	L752270-3	Water		254	8.05		2.1	57.6	0.25	0.597	70.4	123.029		0.033	0.0189	0.0123	0.0391	0.0025
32	Column 3-32	28-Oct-09	00:00	L834820-3	Water		414	7.83		3.4	43.9	0.71	0.772	160	203.861		0.012	0.0194	0.0057	0.0262	0.0025
34	Column 3-34	12-Nov-09	00:00	L839393-3	Water		397	7.88		4.9	42.9	0.85	0.555	155	205.399		0.013	0.02	0.0055	0.0258	0.0025
35	Column 3-35	18-Nov-09	00:00	L841194-3	Water		372	7.80		3.2	40.9	0.67	0.477	147	175.831		0.012	0.0168	0.0046	0.0223	0.0025
36	Column 3-36	25-Nov-09	00:00	L843168-3	Water		349	7.85		3.1	39.4	0.76	0.435	136	176.086		0.016	0.0171	0.0049	0.0234	0.0025
37	Column 3-37	2-Dec-09	00:00	L845463-3	Water		340	7.87		3	38.8	0.98	0.446	130	167.884		0.015	0.0153	0.0038	0.0221	0.0025
38	Column 3-38	9-Dec-09	00:00	L847219-3	Water		322	7.85		1.5	36.9	0.66	0.427	124	156.493		0.015	0.0142	0.0041	0.0211	0.0025
39	Column 3-39	16-Dec-09	00:00	L848940-3	Water		311	7.87		2.5	37.1	0.25	0.391	119	150.108		0.017	0.0138	0.0042	0.0215	0.0025
40	Column 3-40	23-Dec-09	00:00	L850704-3	Water		296	7.85		4.9	36.2	0.25	0.32	115	150.878		0.023	0.0132	0.0041	0.0217	0.0025
41	Column 3-41	30-Dec-09	00:00	L851575-3	Water		282	7.83		2.5	34.7	0.54	0.314	101	132.787		0.019	0.012	0.0038	0.0204	0.0025
42	Column 3-42	6-Jan-10	00:00	L852457-3	Water		276	7.86		2	35.6	0.25	0.309	97.1	134.373		0.019	0.012	0.0039	0.0208	0.0025
43	Column 3-43	13-Jan-10	00:00	L854094-3	Water		261	7.87		3.5	34.1	0.25	0.27	95.9	124.126		0.017	0.0107	0.0035	0.0197	0.0025
44	Column 3-44	20-Jan-10	00:00	L855784-3	Water		254	7.89		3.2	34.7	0.25	0.269	89.5	124.167		0.019	0.0106	0.0034	0.0198	0.0025
45	Column 3-45	27-Jan-10	00:00	L857367-3	Water		250	7.88		4	34.9	0.25	0.275	87.1	126.064		0.02	0.0104	0.0032	0.0207	0.0025
46	Column 3-46	3-Feb-10	00:00	L859094-3	Water		241	7.84		4.2	33.6	0.25	0.287	82.5	115.773		0.019	0.0103	0.0032	0.0198	0.0025
47	Column 3-47	10-Feb-10	00:00	L861120-3	Water		232	7.87		4.3	32.7	0.25	0.284	78.2	114.748		0.018	0.01	0.003	0.0204	0.0025
48	Column 3-48	17-Feb-10	00:00	L862552-3	Water		228	7.85		3.4	34	0.25	0.243	76.2	112.359		0.02	0.0096	0.0031	0.0199	0.0025
49	Column 3-49	24-Feb-10	00:00	L864535-3	Water		222	7.88		2.6	34.6	0.25	0.21	73.8	107.207		0.02	0.0094	0.0029	0.02	0.0025
50	Column 3-50	3-Mar-10	00:00	L866346-3	Water		217	7.88		2.5	35.4	0.25	0.22	70.3	107.223		0.02	0.0092	0.0031	0.0206	0.0025
51	Column 3-51	10-Mar-10	00:00	L868250-3	Water		209	7.92		7.2	35.1	0.25	0.188	67	102.51		0.02	0.0085	0.0029	0.0199	0.0025
52	Column 3-52	17-Mar-10	00:00	L869904-3	Water		208	7.94		6.4	35.9	0.25	0.162	64.5	100.428		0.022	0.0089	0.0029	0.0219	0.0025
53	Column 3-53	24-Mar-10	00:00	L871617-3	Water		204	7.93		2.6	37.4	0.25	0.188	63	109.46		0.02	0.0084	0.0029	0.0215	0.0025
54	Column 3-54	31-Mar-10	00:00	L873452-3	Water		202	7.98		2.6	39.5	0.25	0.164	60.8	98.366		0.022	0.0083	0.0029	0.0226	0.0025
55	Column 3-55	7-Apr-10	00:00	L874968-3	Water		195	7.92		4.1	36.9	0.25	0.183	58.7	97.12		0.022	0.0082	0.0027	0.0224	0.0025
56	Column 3-56	14-Apr-10	00:00	L877112-3	Water		195	7.97		3.9	40.4	0.25	0.174	57	101.481		0.022	0.0083	0.0029	0.0231	0.0025
57	Column 3-57	21-Apr-10	00:00	L879129-3	Water		191	7.96		1.9	38.6	0.25	0.163	55.9	94.796		0.019	0.0077	0.0026	0.0222	0.0025
58	Column 3-58	28-Apr-10	00:00	L881229-3	Water		185	7.95		4.2	37.9	0.25	0.143	53.3	90.263		0.02	0.0073	0.0025	0.0216	0.0025
59	Column 3-59	5-May-10	00:00	L883236-3	Water		181	7.92		3.7	36.6	0.25	0.125	51.5	91.775		0.02	0.0074	0.0027	0.0224	0.0025
63	Column 3-63	2-Jun-10	00:00	L892978-3	Water		187	7.95		2.7	39.5	0.25	0.124	52.6	98.517		0.021	0.0076	0.0026	0.0241	0.0025
67	Column 3-67	30-Jun-10	00:00	L903224-3	Water		200	7.98		2.4	39.8	0.25	0.154	60.5	100.456		0.021	0.0079	0.0029	0.0244	0.0025
71	Column 3-71	28-Jul-10	00:00	L913677-3	Water		202	8.00		3.9	37.2	0.25	0.149	69.7	104.136		0.021	0.008	0.0028	0.024	0.0025
75	Column 3-75	25-Aug-10	00:00	L924199-3	Water		200	7.92		3.1	37	0.25	0.12	62.7	106.296		0.019	0.0076	0.0026	0.0219	0.0025
79	Column 3-79	22-Sep-10	00:00	L934320-3	Water		202	7.86		3.8	37.8	0.25	0.123	63.2	106.296		0.0171	0.00709	0.00229	0.0217	0.00025
83	Column 3-83	20-Oct-10	00:00	L945039-3	Water		199	7.92		7.8	38.6	0.25	0.104	61.7	105.074		0.0153	0.00682	0.00209	0.021	0.00025
87	Column 3-87	17-Nov-10	00:00	L954870-3	Water		197	7.94		1.7	38.9	0.25	0.108	61.7	102.361		0.0153	0.00665	0.00219	0.0205	0.00025
91	Column 3-91	15-Dec-10	00:00	L963008-3	Water		205	7.92		1.3	37.8	0.25	0.101	63.4	106.619		0.0137	0.00629	0.00187	0.0198	0.00025
95	Column 3-95	12-Jan-11	00:00	L969114-3	Water		200	7.87		1.7	38.3	0.25	0.082	61.5	104.246		0.015	0.00587	0.00186	0.019	0.00025
99	Column 3-99	9-Feb-11	00:00	L976966-3	Water		197	7.88		2.3	37.1	0.25	0.074	60.2	98.906		0.0152	0.00586	0.00183	0.0198	0.00025
103	Column 3-103	9-Mar-11	00:00	L984574-3	Water		193	7.92		1.8	35.8	0.25	0.038	59.8	97.906		0.0148	0.00547	0.00175	0.0179	0.00025
107	Column 3-107	6-Apr-11	00:00	L992445-3	Water		190	7.92		2.9	34.4	0.25	0.059	59.1	94.389		0.0133	0.00519	0.00153	0.0173	0.00025
Average								7.904444444		3.211688312	46.99220779	0.333414634	0.243439024	80.7	118.9600488		0.019919512	0.010005854	0.003366098	0.021997561	0.002060976

Appendix 5.2-9. Sub-aerial Drip Columns Leachate Concentrations: Mitchell Deposit

Week	Sample ID	Date Sampled	Time Sampled	ALS Sample ID	Matrix	Physical Tests	Conductivity	pH	Anions and Nutrients	Acidity (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Chloride (Cl)	Fluoride (F)	Sulfate (SO_4)	Calculated Hardness	Dissolved Metals	Aluminum (Al)-Dissolved	Antimony (Sb)-Dissolved	Arsenic (As)-Dissolved	Barium (Ba)-Dissolved	Beryllium (Be)-Dissolved
0	Column 4-0	18-Mar-09	00:00	L745242-4	Water		211	8.05		2.8	42	0.69	0.297	60.3	86.992		0.063	0.0048	0.0079	0.0752	0.0025
4	Column 4-4	15-Apr-09	00:00	L752270-4	Water		332	7.99		2.3	60.5	0.77	0.756	106	149.602		0.028	0.0221	0.0086	0.0383	0.0025
32	Column 4-32	28-Oct-09	00:00	L834820-4	Water		524	7.83		3.5	43	0.87	0.896	210	256.022		0.005	0.0282	0.004	0.018	0.0025
34	Column 4-34	12-Nov-09	00:00	L839393-4	Water		500	7.87		4.9	41	1.03	0.712	207	254.642		0.005	0.029	0.0039	0.018	0.0025
35	Column 4-35	18-Nov-09	00:00	L841194-4	Water		470	7.78		3.3	40.6	0.8	0.616	195	215.709		0.005	0.0254	0.0034	0.0162	0.0025
36	Column 4-36	25-Nov-09	00:00	L843168-4	Water		441	7.83		3.3	39.6	0.91	0.568	184	221.292		0.012	0.0256	0.0037	0.0188	0.0025
37	Column 4-37	2-Dec-09	00:00	L845463-4	Water		428	7.87		2.8	38.6	0.93	0.615	177	209.213		0.012	0.0237	0.0033	0.0176	0.0025
38	Column 4-38	9-Dec-09	00:00	L847219-4	Water		403	7.84		1.8	36.9	0.78	0.568	165	194.449		0.012	0.0226	0.0036	0.0188	0.0025
39	Column 4-39	16-Dec-09	00:00	L848940-4	Water		387	7.88		2.5	37.3	0.55	0.505	156	180.818		0.014	0.0222	0.0035	0.0206	0.0025
40	Column 4-40	23-Dec-09	00:00	L850704-4	Water		370	7.85		4.9	36.4	0.51	0.434	141	186.379		0.015	0.0221	0.0036	0.0219	0.0025
41	Column 4-41	30-Dec-09	00:00	L851575-4	Water		354	7.80		4.4	36.6	0.63	0.435	138	157.489		0.014	0.0212	0.0033	0.0223	0.0025
42	Column 4-42	6-Jan-10	00:00	L852457-4	Water		346	7.84		2.1	37.3	0.58	0.404	147	168.444		0.015	0.021	0.0034	0.0227	0.0025
43	Column 4-43	13-Jan-10	00:00	L854094-4	Water		329	7.88		3.6	35.4	0.25	0.363	128	153.119		0.016	0.0197	0.0032	0.0227	0.0025
44	Column 4-44	20-Jan-10	00:00	L855784-4	Water		320	7.89		3.2	36.9	0.25	0.359	122	155.213		0.015	0.0196	0.0031	0.0225	0.0025
45	Column 4-45	27-Jan-10	00:00	L857367-4	Water		308	7.87		4.1	35.4	0.25	0.368	117	154.442		0.016	0.0194	0.0031	0.0242	0.0025
46	Column 4-46	3-Feb-10	00:00	L859094-4	Water		303	7.84		4.5	35.7	0.25	0.383	112	143.073		0.016	0.0198	0.0029	0.0236	0.0025
47	Column 4-47	10-Feb-10	00:00	L861120-4	Water		293	7.86		4.4	36.2	0.25	0.367	107	143.155		0.016	0.02	0.003	0.0255	0.0025
48	Column 4-48	17-Feb-10	00:00	L862552-4	Water		286	7.89		3.6	37.8	0.25	0.318	104	139.319		0.016	0.019	0.0028	0.0254	0.0025
49	Column 4-49	24-Feb-10	00:00	L864535-4	Water		275	7.90		2.6	38	0.25	0.276	99.1	133.29		0.017	0.0191	0.0028	0.0265	0.0025
50	Column 4-50	3-Mar-10	00:00	L866346-4	Water		268	7.90		2.6	37.5	0.25	0.287	94.4	131.556		0.017	0.0187	0.0029	0.0261	0.0025
51	Column 4-51	10-Mar-10	00:00	L868250-4	Water		261	7.95		5.6	38.2	0.25	0.248	90.2	126.347		0.017	0.0172	0.0026	0.0272	0.0025
52	Column 4-52	17-Mar-10	00:00	L869904-4	Water		255	7.94		5.8	37.8	0.25	0.209	87.1	121.687		0.018	0.018	0.0026	0.0268	0.0025
53	Column 4-53	24-Mar-10	00:00	L871617-4	Water		249	7.93		2.8	39.2	0.25	0.241	85.2	132.719		0.017	0.0174	0.0025	0.0278	0.0025
54	Column 4-54	31-Mar-10	00:00	L873452-4	Water		248	7.99		2.6	40.6	0.25	0.224	82.7	124.576		0.018	0.0177	0.0025	0.0293	0.0025
55	Column 4-55	7-Apr-10	00:00	L874968-4	Water		242	7.93		4.2	38.5	0.25	0.235	80.3	119.662		0.019	0.0171	0.0025	0.0299	0.0025
56	Column 4-56	14-Apr-10	00:00	L877112-4	Water		237	7.96		3.8	39.5	0.25	0.217	76.9	121.736		0.018	0.0173	0.0025	0.0287	0.0025
57	Column 4-57	21-Apr-10	00:00	L879129-4	Water		233	7.97		1.9	40.4	0.25	0.207	76.5	115.371		0.016	0.0166	0.0024	0.029	0.0025
58	Column 4-58	28-Apr-10	00:00	L881229-4	Water		229	7.97		2.9	40.2	0.25	0.181	73.6	111.305		0.017	0.0159	0.0023	0.0294	0.0025
59	Column 4-59	5-May-10	00:00	L883236-4	Water		224	7.93		3.7	40.1	0.25	0.162	70.9	116.227		0.017	0.0156	0.0024	0.0306	0.0025
63	Column 4-63	2-Jun-10	00:00	L892978-4	Water		230	7.95		3.2	40.7	0.25	0.155	72	119.629		0.019	0.0167	0.0023	0.0329	0.0025
67	Column 4-67	30-Jun-10	00:00	L903224-4	Water		238	7.96		2.2	40.5	0.25	0.181	78.9	117.699		0.017	0.0167	0.0024	0.0296	0.0025
71	Column 4-71	28-Jul-10	00:00	L913677-4	Water		247	7.98		3.9	40.3	0.25	0.165	94.5	127.617		0.017	0.0168	0.0025	0.0292	0.0025
75	Column 4-75	25-Aug-10	00:00	L924199-4	Water		248	7.89		3.1	39.3	0.25	0.14	86.4	132.683		0.014	0.0156	0.0023	0.0249	0.0025
79	Column 4-79	22-Sep-10	00:00	L934320-4	Water		250	7.90		3.3	40.3	0.25	0.137	86.4	133.343		0.0149	0.0154	0.00206	0.0258	0.00025
83	Column 4-83	20-Oct-10	00:00	L945039-4	Water		247	7.94		4.6	40.9	0.25	0.114	83.3	129.338		0.0125	0.0145	0.00191	0.0245	0.00025
87	Column 4-87	17-Nov-10	00:00	L954870-4	Water		244	7.92		1.8	40.8	0.25	0.124	85.4	126.15		0.012	0.0138	0.00184	0.0235	0.00025
91	Column 4-91	15-Dec-10	00:00	L963008-4	Water		254	7.95		1.5	41.7	0.25	0.115	86.9	134.019		0.0113	0.0133	0.00177	0.0233	0.00025
95	Column 4-95	12-Jan-11	00:00	L969114-4	Water		250	7.94		1.7	41.9	0.25	0.096	84.9	131.416		0.0116	0.0127	0.00174	0.023	0.00025
99	Column 4-99	9-Feb-11	00:00	L976966-4	Water		248	7.92		2.4	43.7	0.25	0.085	83.1	127.306		0.0124	0.0128	0.00172	0.0247	0.00025
103	Column 4-103	9-Mar-11	00:00	L984574-4	Water		242	7.94		1.7	43.6	0.25	0.048	81.8	123.265		0.0134	0.0119	0.00156	0.0213	0.00025
107	Column 4-107	6-Apr-11	00:00	L992445-4	Water		233	7.94		2.9	38.4	0.25	0.07	81.6	120.096		0.0108	0.0112	0.00141	0.0199	0.00025
Average								7.909166667		3.17012987	58.24545455	0.397560976	0.314170732	109.7170732	147.4733902		0.0159	0.018229268	0.002970976	0.026004878	0.002060976

Appendix 5.2-9. Sub-aerial Drip Columns Leachate Concentrations: Mitchell Deposit

Week	Sample ID	Bismuth (Bi)-Dissolved	Boron (B)-Dissolved	Cadmium (Cd)-Dissolved	Calcium (Ca)-Dissolved	Chromium (Cr)-Dissolved	Cobalt (Co)-Dissolved	Copper (Cu)-Dissolved	Iron (Fe)-Dissolved	Lead (Pb)-Dissolved	Lithium (Li)-Dissolved	Magnesium (Mg)-Dissolved	Manganese (Mn)-Dissolved	Mercury (Hg)-Dissolved	Molybdenum (Mo)-Dissolved	Nickel (Ni)-Dissolved	Phosphorus (P)-Dissolved	Potassium (K)-Dissolved	Selenium (Se)-Dissolved	Silicon (Si)-Dissolved
0	Column 1-0	0.0025	0.05	0.00025	22.4	0.0025	0.0005	0.0016	0.015	0.00254	0.005	2.07	0.0296	0.0005	0.00767	0.0025	0.15	9.81	0.005	1.5
4	Column 1-4	0.0025	0.05	0.00025	41.4	0.0025	0.0005	0.0046	0.015	0.0007	0.005	4.2	0.0823	0.0005	0.019	0.0025	0.15	9.26	0.005	2.9
32	Column 1-32	0.0025	0.05	0.00025	55.3	0.0025	0.0005	0.0127	0.015	0.00025	0.016	8.36	0.122	0.0005	0.0736	0.0025	0.15	8.28	0.017	2.87
34	Column 1-34	0.0025	0.05	0.00025	53.5	0.0025	0.0005	0.0128	0.015	0.00025	0.005	9.14	0.141	0.0005	0.0747	0.0025	0.15	8.59	0.018	2.71
35	Column 1-35	0.0025	0.05	0.00025	48.2	0.0025	0.0005	0.011	0.015	0.00025	0.005	7.66	0.118	0.0005	0.064	0.0025	0.15	7.16	0.014	2.57
36	Column 1-36	0.0025	0.05	0.00025	46.7	0.0025	0.0005	0.011	0.015	0.00025	0.005	8.51	0.136	0.0005	0.0668	0.0025	0.15	7.55	0.016	2.42
37	Column 1-37	0.0025	0.05	0.00025	44.5	0.0025	0.0005	0.0096	0.015	0.00025	0.005	7.87	0.131	0.0005	0.0616	0.0025	0.15	6.9	0.015	2.35
38	Column 1-38	0.0025	0.05	0.00025	43.4	0.0025	0.0005	0.0091	0.015	0.00025	0.005	6.8	0.117	0.0005	0.0586	0.0025	0.15	6.53	0.014	2.2
39	Column 1-39	0.0025	0.05	0.00025	40.4	0.0025	0.0005	0.0088	0.015	0.00025	0.005	6.62	0.113	0.0005	0.0558	0.0025	0.15	6.15	0.013	2.2
40	Column 1-40	0.0025	0.05	0.00025	41.1	0.0025	0.0005	0.0087	0.015	0.00025	0.005	6.57	0.113	0.0005	0.0561	0.0025	0.15	5.96	0.012	2.16
41	Column 1-41	0.0025	0.05	0.00025	34.3	0.0025	0.0005	0.0079	0.015	0.00025	0.005	6.02	0.115	0.0005	0.0503	0.0025	0.15	5.37	0.012	1.8
42	Column 1-42	0.0025	0.05	0.00025	36.6	0.0025	0.0005	0.008	0.015	0.00025	0.005	6	0.109	0.0005	0.0511	0.0025	0.15	5.2	0.01	1.96
43	Column 1-43	0.0025	0.05	0.00025	34.1	0.0025	0.0005	0.0073	0.015	0.00025	0.005	5.54	0.101	0.0005	0.0485	0.0025	0.15	4.94	0.01	1.98
44	Column 1-44	0.0025	0.05	0.00025	34.5	0.0025	0.0005	0.0067	0.015	0.00025	0.005	5.33	0.099	0.0005	0.0465	0.0025	0.15	4.54	0.005	1.9
45	Column 1-45	0.0025	0.05	0.00025	35.4	0.0025	0.0005	0.0072	0.015	0.00025	0.005	5.12	0.105	0.0005	0.0479	0.0025	0.15	4.61	0.005	1.87
46	Column 1-46	0.0025	0.05	0.00025	32.9	0.0025	0.0005	0.0072	0.015	0.00025	0.005	5.32	0.107	0.0005	0.0475	0.0025	0.15	4.37	0.005	1.88
47	Column 1-47	0.0025	0.05	0.00025	33.1	0.0025	0.0005	0.0069	0.015	0.00025	0.005	4.65	0.113	0.0005	0.0454	0.0025	0.15	4.04	0.005	1.78
48	Column 1-48	0.0025	0.05	0.00025	32.7	0.0025	0.0005	0.0071	0.015	0.00025	0.005	5.38	0.104	0.0005	0.0485	0.0025	0.15	4.05	0.005	1.79
49	Column 1-49	0.0025	0.05	0.00025	31.7	0.0025	0.0005	0.0073	0.015	0.00025	0.005	5.23	0.115	0.0005	0.047	0.0025	0.15	4.08	0.005	1.76
50	Column 1-50	0.0025	0.05	0.00025	31.4	0.0025	0.0005	0.0072	0.015	0.00025	0.005	4.8	0.107	0.0005	0.0459	0.0025	0.15	3.83	0.005	1.69
51	Column 1-51	0.0025	0.05	0.00025	31.4	0.0025	0.0005	0.0069	0.015	0.00025	0.005	5.09	0.105	0.0005	0.0455	0.0025	0.15	3.76	0.005	1.63
52	Column 1-52	0.0025	0.05	0.00025	29	0.0025	0.0005	0.007	0.015	0.00025	0.005	5.08	0.115	0.0005	0.0457	0.0025	0.15	3.7	0.005	1.66
53	Column 1-53	0.0025	0.05	0.00025	32.4	0.0025	0.0005	0.0066	0.015	0.00025	0.005	4.47	0.103	0.0005	0.0434	0.0025	0.15	3.26	0.005	1.59
54	Column 1-54	0.0025	0.05	0.00025	24.9	0.0025	0.0005	0.0065	0.015	0.00025	0.005	4.86	0.104	0.0005	0.0445	0.0025	0.15	3.29	0.005	1.4
55	Column 1-55	0.0025	0.05	0.00025	26.6	0.0025	0.0005	0.0064	0.015	0.00025	0.005	4.82	0.103	0.0005	0.0451	0.0025	0.15	3.22	0.005	1.5
56	Column 1-56	0.0025	0.05	0.00025	26.5	0.0025	0.0005	0.0064	0.015	0.00025	0.005	5.02	0.108	0.0005	0.0441	0.0025	0.15	3.04	0.005	1.48
57	Column 1-57	0.0025	0.05	0.00025	26.9	0.0025	0.0005	0.0062	0.015	0.00025	0.005	4.66	0.108	0.0005	0.0423	0.0025	0.15	2.87	0.005	1.54
58	Column 1-58	0.0025	0.05	0.00025	26	0.0025	0.0005	0.0056	0.015	0.00025	0.005	4.65	0.099	0.0005	0.0425	0.0025	0.15	2.76	0.005	1.48
59	Column 1-59	0.0025	0.05	0.00025	25.2	0.0025	0.0005	0.0105	0.015	0.00025	0.005	4.31	0.108	0.0005	0.0405	0.0025	0.15	2.61	0.005	1.43
63	Column 1-63	0.0025	0.05	0.00025	29	0.0025	0.0005	0.006	0.015	0.00025	0.005	4.72	0.103	0.0005	0.0471	0.0025	0.15	2.62	0.005	1.42
67	Column 1-67	0.0025	0.05	0.00025	28.2	0.0025	0.0005	0.0096	0.015	0.00025	0.005	5.41	0.0902	0.0005	0.052	0.0025	0.15	2.87	0.005	1.48
71	Column 1-71	0.0025	0.05	0.00025	29.9	0.0025	0.0005	0.0327	0.015	0.00025	0.005	5.48	0.0932	0.0005	0.0572	0.0025	0.15	3.3	0.005	1.49
75	Column 1-75	0.0025	0.05	0.00025	31.4	0.0025	0.0005	0.0799	0.015	0.00025	0.005	5.98	0.099	0.0005	0.0573	0.0025	0.15	3.81	0.005	1.53
79	Column 1-79	0.00025	0.011	0.000028	30.5	0.00025	0.0001	0.0603	0.015	0.00009	0.0025	5.97	0.1	0.000005	0.0583	0.00025	0.15	3.25	0.00519	1.38
83	Column 1-83	0.00025	0.05	0.000025	29.9	0.00025	0.00005	0.0482	0.015	0.00011	0.005	5.53	0.0986	0.000005	0.0574	0.00025	0.15	2.92	0.0048	1.34
87	Column 1-87	0.00025	0.05	0.000025	28.5	0.00025	0.00013	0.0374	0.015	0.000107	0.005	5.75	0.101	0.0005	0.0538	0.00025	0.15	2.55	0.0048	1.26
91	Column 1-91	0.00025	0.05	0.000025	29.3	0.00025	0.00005	0.0292	0.015	0.00015	0.005	5.83	0.0962	0.0005	0.0548	0.00025	0.15	2.37	0.0042	1.19
95	Column 1-95	0.00025	0.05	0.000025	26.6	0.00025	0.00005	0.0228	0.015	0.000088	0.005	5.63	0.0883	0.0005	0.0509	0.00025	0.15	2.14	0.0039	1.13
99	Column 1-99	0.00025	0.05	0.000025	26.8	0.00025	0.0001	0.0188	0.015	0.000093	0.005	6.26	0.0884	0.0005	0.0513	0.00025	0.15	2.04	0.0036	1.08
103	Column 1-103	0.00025	0.05	0.000025	25.2	0.00025	0.0001	0.0151	0.015	0.000079	0.005	5.97	0.09	0.0005	0.0518	0.00051	0.15	1.82	0.0034	1.02
107	<0.00050	0.00025	0.05	0.000025	24.1	0.00025	0.00005	0.0118	0.015	0.000071	0.005	5.6	0.0776	0.0005	0.0508	0.00025	0.15	1.63	0.0032	0.989
Average		0.002060976	0.04904878	0.000206171	33.21707317	0.002060976	0.000417805	0.01455122	0.015	0.000287268	0.005207317	5.665365854	0.103814634	0.000475854	0.050067561	0.002067317	0.15	4.415853659	0.007172927	1.739243902

Appendix 5.2-9. Sub-aerial Drip Columns Leachate Concentrations: Mitchell Deposit

Week	Sample ID	Bismuth (Bi)-Dissolved	Boron (B)-Dissolved	Cadmium (Cd)-Dissolved	Calcium (Ca)-Dissolved	Chromium (Cr)-Dissolved	Cobalt (Co)-Dissolved	Copper (Cu)-Dissolved	Iron (Fe)-Dissolved	Lead (Pb)-Dissolved	Lithium (Li)-Dissolved	Magnesium (Mg)-Dissolved	Manganese (Mn)-Dissolved	Mercury (Hg)-Dissolved	Molybdenum (Mo)-Dissolved	Nickel (Ni)-Dissolved	Phosphorus (P)-Dissolved	Potassium (K)-Dissolved	Selenium (Se)-Dissolved	Silicon (Si)-Dissolved
0	Column 2-0	0.0025	0.05	0.00025	22.7	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.56	0.0375	0.0005	0.0104	0.0025	0.15	5	0.011	1.29
4	Column 2-4	0.0025	0.05	0.00025	40.2	0.0025	0.0005	0.002	0.015	0.00025	0.005	3.44	0.0762	0.0005	0.0263	0.0025	0.15	5.41	0.021	3.28
33	Column 2-33	0.0025	0.05	0.00025	63.2	0.0025	0.0005	0.0102	0.015	0.0007	0.017	5.69	0.186	0.0005	0.0569	0.0025	0.15	5.06	0.032	3.27
35	Column 2-35	0.0025	0.05	0.00025	63.7	0.0025	0.0005	0.0105	0.015	0.00067	0.011	6.31	0.21	0.0005	0.0588	0.0025	0.15	5.24	0.037	3.18
36	Column 2-36	0.0025	0.05	0.00025	53.5	0.0025	0.0005	0.0095	0.015	0.00066	0.005	5.24	0.167	0.0005	0.0506	0.0025	0.15	4.38	0.03	2.83
37	Column 2-37	0.0025	0.05	0.00025	54.4	0.0025	0.0005	0.0094	0.015	0.00077	0.005	5.77	0.193	0.0005	0.0521	0.0025	0.15	4.64	0.031	2.79
38	Column 2-38	0.0025	0.05	0.00025	50.7	0.0025	0.0005	0.0081	0.015	0.00059	0.005	4.97	0.177	0.0005	0.0459	0.0025	0.15	4.05	0.028	2.59
39	Column 2-39	0.0025	0.05	0.00025	47.9	0.0025	0.0005	0.0078	0.015	0.00057	0.005	4.33	0.16	0.0005	0.0432	0.0025	0.15	3.85	0.027	2.42
40	Column 2-40	0.0025	0.05	0.00025	45.3	0.0025	0.0005	0.0075	0.015	0.0006	0.011	4.23	0.156	0.0005	0.0409	0.0025	0.15	3.84	0.026	2.37
41	Column 2-41	0.0025	0.05	0.00025	44.8	0.0025	0.0005	0.007	0.015	0.00058	0.005	4.02	0.149	0.0005	0.0393	0.0025	0.15	3.59	0.024	2.32
42	Column 2-42	0.0025	0.05	0.00025	40.4	0.0025	0.0005	0.0068	0.015	0.00061	0.005	3.68	0.146	0.0005	0.0356	0.0025	0.15	3.28	0.022	2.03
43	Column 2-43	0.0025	0.05	0.00025	40.8	0.0025	0.0005	0.0069	0.015	0.00054	0.005	3.66	0.143	0.0005	0.0361	0.0025	0.15	3.26	0.022	2.18
44	Column 2-44	0.0025	0.05	0.00025	37.4	0.0025	0.0005	0.0064	0.015	0.00053	0.005	3.27	0.13	0.0005	0.0323	0.0025	0.15	3.02	0.02	2.14
45	Column 2-45	0.0025	0.05	0.00025	38	0.0025	0.0005	0.0061	0.015	0.00054	0.005	3.21	0.131	0.0005	0.0328	0.0025	0.15	2.91	0.02	2.06
46	Column 2-46	0.0025	0.05	0.00025	39.9	0.0025	0.0005	0.0067	0.015	0.00051	0.005	2.94	0.138	0.0005	0.033	0.0025	0.15	2.94	0.019	2.06
47	Column 2-47	0.0025	0.05	0.00025	35.6	0.0025	0.0005	0.0066	0.015	0.00052	0.005	3.02	0.138	0.0005	0.0319	0.0025	0.15	2.78	0.02	2.04
48	Column 2-48	0.0025	0.05	0.00025	36.3	0.0025	0.0005	0.0065	0.015	0.00057	0.005	2.71	0.142	0.0005	0.0309	0.0025	0.15	2.61	0.019	1.92
49	Column 2-49	0.0025	0.05	0.00025	35.2	0.0025	0.0005	0.0064	0.015	0.00025	0.005	2.96	0.13	0.0005	0.0326	0.0025	0.15	2.59	0.019	1.91
50	Column 2-50	0.0025	0.05	0.00025	34.6	0.0025	0.0005	0.007	0.015	0.00052	0.005	2.81	0.137	0.0005	0.032	0.0025	0.15	2.63	0.018	1.94
51	Column 2-51	0.0025	0.05	0.00025	33.7	0.0025	0.0005	0.0068	0.015	0.00056	0.005	2.63	0.128	0.0005	0.0306	0.0025	0.15	2.45	0.017	1.83
52	Column 2-52	0.0025	0.05	0.00025	35.1	0.0025	0.0005	0.0065	0.015	0.00052	0.005	2.79	0.136	0.0005	0.0309	0.0025	0.15	2.46	0.016	1.8
53	Column 2-53	0.0025	0.05	0.00025	31.8	0.0025	0.0005	0.0069	0.015	0.00055	0.005	2.73	0.142	0.0005	0.0303	0.0025	0.15	2.39	0.015	1.84
54	Column 2-54	0.0025	0.05	0.00025	35.9	0.0025	0.0005	0.0065	0.015	0.00025	0.005	2.35	0.133	0.0005	0.0288	0.0025	0.15	2.18	0.015	1.78
55	Column 2-55	0.0025	0.05	0.00025	30.5	0.0025	0.0005	0.0065	0.015	0.00025	0.005	2.49	0.136	0.0005	0.0293	0.0025	0.15	2.18	0.015	1.57
56	Column 2-56	0.0025	0.05	0.00025	31.6	0.0025	0.0005	0.0066	0.015	0.00025	0.005	2.51	0.134	0.0005	0.03	0.0025	0.15	2.2	0.015	1.7
57	Column 2-57	0.0025	0.05	0.00025	31.6	0.0025	0.0005	0.0065	0.015	0.00025	0.005	2.53	0.141	0.0005	0.0293	0.0025	0.15	2.03	0.014	1.67
58	Column 2-58	0.0025	0.05	0.00025	30	0.0025	0.0005	0.0065	0.015	0.00051	0.005	2.37	0.15	0.0005	0.0279	0.0025	0.15	1.99	0.013	1.69
59	Column 2-59	0.0025	0.05	0.00025	29.4	0.0025	0.0005	0.0061	0.015	0.00025	0.005	2.34	0.129	0.0005	0.0277	0.0025	0.15	1.92	0.012	1.69
60	Column 2-60	0.0025	0.05	0.00025	26.3	0.0025	0.0005	0.0059	0.015	0.00057	0.005	2.13	0.137	0.0005	0.0266	0.0025	0.15	1.82	0.013	1.61
64	Column 2-64	0.0025	0.05	0.00025	31.5	0.0025	0.0005	0.0065	0.015	0.00052	0.005	2.24	0.145	0.0005	0.0295	0.0025	0.15	1.88	0.013	1.64
68	Column 2-68	0.0025	0.05	0.00025	31.1	0.0025	0.0005	0.0064	0.015	0.00058	0.005	2.53	0.146	0.0005	0.0343	0.0025	0.15	1.95	0.014	1.77
72	Column 2-72	0.0025	0.05	0.00025	32.3	0.0025	0.0005	0.0064	0.015	0.00054	0.005	2.44	0.153	0.0005	0.0373	0.0025	0.15	1.93	0.014	1.81
76	Column 2-76	0.0025	0.05	0.00025	33	0.0025	0.0005	0.0062	0.015	0.00056	0.005	2.52	0.159	0.0005	0.0372	0.0025	0.15	1.89	0.014	1.86
80	Column 2-80	0.00025	0.005	0.00014	32.7	0.00025	0.00012	0.00615	0.015	0.000516	0.0025	2.52	0.164	0.000005	0.0364	0.00025	0.15	1.76	0.0133	1.72
84	Column 2-84	0.00025	0.05	0.000139	32.5	0.00025	0.00012	0.00623	0.015	0.000563	0.005	2.27	0.16	0.000005	0.0349	0.00025	0.15	1.65	0.0129	1.69
88	Column 2-88	0.00025	0.05	0.000144	30.7	0.00025	0.00013	0.00597	0.015	0.000526	0.005	2.34	0.174	0.0005	0.0338	0.00025	0.15	1.59	0.0125	1.59
92	Column 2-92	0.00025	0.05	0.000153	32.3	0.00025	0.00014	0.00617	0.015	0.000499	0.005	2.26	0.174	0.0005	0.0338	0.00025	0.15	1.52	0.011	1.53
95	Column 2-95	0.00025	0.05	0.000131	31.5	0.00025	0.00013	0.00608	0.015	0.000509	0.005	2.25	0.16	0.0005	0.0314	0.00025	0.15	1.47	0.0107	1.44
99	Column 2-99	0.00025	0.05	0.000148	30.4	0.00025	0.00015	0.00619	0.015	0.000522	0.005	2.43	0.172	0.0005	0.0322	0.00025	0.15	1.45	0.0108	1.39
103	Column 2-103	0.00025	0.05	0.000128	28.4	0.00025	0.00016	0.00573	0.015	0.000507	0.005	2.29	0.181	0.0005	0.0317	0.00051	0.15	1.35	0.0101	1.32
107	<0.00050	0.00025	0.05	0.00014	29.3	0.00025	0.00014	0.00545	0.015	0.000482	0.005	2.1	0.16	0.0005	0.0311	0.00025	0.15	1.27	0.009	1.29
Average		0.002060976	0.048902439	0.00022861	36.9804878	0.002060976	0.000429024	0.006589512	0.015	0.000500341	0.00552439	3.094634146	0.147821951	0.000475854	0.03455122	0.002067317	0.15	2.741707317	0.017958537	1.97195122

Appendix 5.2-9. Sub-aerial Drip Columns Leachate Concentrations: Mitchell Deposit

Week	Sample ID	Bismuth (Bi)-Dissolved	Boron (B)-Dissolved	Cadmium (Cd)-Dissolved	Calcium (Ca)-Dissolved	Chromium (Cr)-Dissolved	Cobalt (Co)-Dissolved	Copper (Cu)-Dissolved	Iron (Fe)-Dissolved	Lead (Pb)-Dissolved	Lithium (Li)-Dissolved	Magnesium (Mg)-Dissolved	Manganese (Mn)-Dissolved	Mercury (Hg)-Dissolved	Molybdenum (Mo)-Dissolved	Nickel (Ni)-Dissolved	Phosphorus (P)-Dissolved	Potassium (K)-Dissolved	Selenium (Se)-Dissolved	Silicon (Si)-Dissolved
0	Column 3-0	0.0025	0.05	0.00025	19.5	0.0025	0.0005	0.0005	0.015	0.00025	0.005	2.15	0.0868	0.0005	0.0106	0.0025	0.15	2.32	0.016	0.871
4	Column 3-4	0.0025	0.05	0.00025	40.7	0.0025	0.0005	0.0011	0.015	0.00025	0.005	5.19	0.135	0.0005	0.0301	0.0025	0.15	3.26	0.036	2.94
32	Column 3-32	0.0025	0.05	0.00025	68.9	0.0025	0.0005	0.0035	0.015	0.00078	0.018	7.71	0.329	0.0005	0.072	0.0025	0.15	2.99	0.05	3.11
34	Column 3-34	0.0025	0.05	0.00025	68.4	0.0025	0.0005	0.0034	0.015	0.0008	0.011	8.39	0.373	0.0005	0.0737	0.0025	0.15	3.13	0.056	2.96
35	Column 3-35	0.0025	0.05	0.00025	59	0.0025	0.0005	0.0031	0.015	0.00084	0.005	6.91	0.289	0.0005	0.0627	0.0025	0.15	2.55	0.045	2.68
36	Column 3-36	0.0025	0.05	0.00025	58.2	0.0025	0.0005	0.0032	0.015	0.00083	0.005	7.46	0.351	0.0005	0.0662	0.0025	0.15	2.73	0.047	2.57
37	Column 3-37	0.0025	0.05	0.00025	56.1	0.0025	0.0005	0.003	0.015	0.00079	0.005	6.74	0.339	0.0005	0.0581	0.0025	0.15	2.46	0.042	2.39
38	Column 3-38	0.0025	0.05	0.00025	53.2	0.0025	0.0005	0.003	0.015	0.00069	0.005	5.73	0.312	0.0005	0.0573	0.0025	0.15	2.33	0.041	2.2
39	Column 3-39	0.0025	0.05	0.00025	50.4	0.0025	0.0005	0.0029	0.015	0.00066	0.01	5.88	0.309	0.0005	0.0547	0.0025	0.15	2.38	0.039	2.17
40	Column 3-40	0.0025	0.05	0.00025	51.2	0.0025	0.0005	0.003	0.015	0.00065	0.005	5.58	0.31	0.0005	0.0531	0.0025	0.15	2.26	0.037	2.11
41	Column 3-41	0.0025	0.05	0.00025	44.8	0.0025	0.0005	0.0026	0.015	0.00064	0.005	5.07	0.294	0.0005	0.0473	0.0025	0.15	2.09	0.034	1.8
42	Column 3-42	0.0025	0.05	0.00025	45.5	0.0025	0.0005	0.0028	0.015	0.00062	0.005	5.03	0.293	0.0005	0.0489	0.0025	0.15	2.09	0.034	1.93
43	Column 3-43	0.0025	0.05	0.00025	42.5	0.0025	0.0005	0.0026	0.015	0.00052	0.005	4.36	0.25	0.0005	0.0436	0.0025	0.15	1.88	0.03	1.9
44	Column 3-44	0.0025	0.05	0.00025	42.5	0.0025	0.0005	0.0023	0.015	0.00025	0.005	4.37	0.272	0.0005	0.0421	0.0025	0.15	1.85	0.029	1.79
45	Column 3-45	0.0025	0.05	0.00025	43.8	0.0025	0.0005	0.0028	0.015	0.00076	0.005	4.04	0.277	0.0005	0.0438	0.0025	0.15	1.89	0.029	1.78
46	Column 3-46	0.0025	0.05	0.00025	39.7	0.0025	0.0005	0.0025	0.015	0.00065	0.005	4.03	0.272	0.0005	0.0418	0.0025	0.15	1.8	0.03	1.77
47	Column 3-47	0.0025	0.05	0.00025	39.7	0.0025	0.0005	0.0027	0.015	0.00072	0.005	3.78	0.287	0.0005	0.0402	0.0025	0.15	1.73	0.028	1.64
48	Column 3-48	0.0025	0.05	0.00025	38.4	0.0025	0.0005	0.0029	0.015	0.00063	0.005	3.99	0.266	0.0005	0.0404	0.0025	0.15	1.7	0.026	1.64
49	Column 3-49	0.0025	0.05	0.00025	36.7	0.0025	0.0005	0.003	0.015	0.00065	0.005	3.77	0.264	0.0005	0.0398	0.0025	0.15	1.72	0.026	1.59
50	Column 3-50	0.0025	0.05	0.00025	37.1	0.0025	0.0005	0.003	0.015	0.00061	0.005	3.53	0.267	0.0005	0.0385	0.0025	0.15	1.66	0.025	1.59
51	Column 3-51	0.0025	0.05	0.00025	35.1	0.0025	0.0005	0.0027	0.015	0.00052	0.005	3.6	0.258	0.0005	0.0374	0.0025	0.15	1.6	0.023	1.55
52	Column 3-52	0.0025	0.05	0.00025	34.3	0.0025	0.0005	0.0028	0.015	0.00025	0.005	3.58	0.281	0.0005	0.0376	0.0025	0.15	1.63	0.022	1.57
53	Column 3-53	0.0025	0.05	0.00025	38.7	0.0025	0.0005	0.0026	0.015	0.00025	0.005	3.1	0.26	0.0005	0.0354	0.0025	0.15	1.48	0.021	1.51
54	Column 3-54	0.0025	0.05	0.00025	34	0.0025	0.0005	0.0026	0.015	0.00025	0.005	3.26	0.264	0.0005	0.0358	0.0025	0.15	1.5	0.021	1.39
55	Column 3-55	0.0025	0.05	0.00025	33.6	0.0025	0.0005	0.0025	0.015	0.00025	0.005	3.2	0.261	0.0005	0.0354	0.0025	0.15	1.48	0.021	1.46
56	Column 3-56	0.0025	0.05	0.00025	35	0.0025	0.0005	0.0026	0.015	0.00025	0.005	3.41	0.293	0.0005	0.036	0.0025	0.15	1.48	0.021	1.47
57	Column 3-57	0.0025	0.05	0.00025	32.9	0.0025	0.0005	0.0025	0.015	0.00025	0.005	3.06	0.29	0.0005	0.0335	0.0025	0.15	1.36	0.019	1.48
58	Column 3-58	0.0025	0.05	0.00025	31.3	0.0025	0.0005	0.0024	0.015	0.00025	0.005	2.93	0.263	0.0005	0.0334	0.0025	0.15	1.32	0.018	1.44
59	Column 3-59	0.0025	0.05	0.00025	32.2	0.0025	0.0005	0.0024	0.015	0.00025	0.005	2.75	0.276	0.0005	0.0317	0.0025	0.15	1.28	0.019	1.39
63	Column 3-63	0.0025	0.05	0.00025	34.7	0.0025	0.0005	0.0026	0.015	0.00025	0.005	2.87	0.289	0.0005	0.0353	0.0025	0.15	1.37	0.019	1.42
67	Column 3-67	0.0025	0.05	0.00025	35	0.0025	0.0005	0.0027	0.015	0.00025	0.005	3.16	0.301	0.0005	0.0374	0.0025	0.15	1.4	0.02	1.56
71	Column 3-71	0.0025	0.05	0.00025	36.8	0.0025	0.0005	0.0027	0.015	0.00025	0.005	2.96	0.307	0.0005	0.0406	0.0025	0.15	1.4	0.02	1.57
75	Column 3-75	0.0025	0.05	0.00025	37.5	0.0025	0.0005	0.003	0.015	0.00056	0.005	3.06	0.33	0.0005	0.0394	0.0025	0.15	1.41	0.02	1.63
79	Column 3-79	0.00025	0.01	0.000073	37.5	0.00025	0.00051	0.00273	0.015	0.000514	0.0025	3.06	0.352	0.000005	0.0394	0.00057	0.15	1.32	0.0187	1.5
83	Column 3-83	0.00025	0.05	0.000069	37.7	0.00025	0.00051	0.00256	0.015	0.000433	0.005	2.64	0.333	0.000005	0.0386	0.00063	0.15	1.24	0.0185	1.48
87	Column 3-87	0.00025	0.05	0.000078	36.5	0.00025	0.00052	0.00238	0.015	0.000267	0.005	2.71	0.356	0.0005	0.0376	0.00025	0.15	1.18	0.0183	1.42
91	Column 3-91	0.00025	0.05	0.000105	38.4	0.00025	0.00057	0.00267	0.015	0.000339	0.005	2.59	0.355	0.0005	0.0381	0.00057	0.15	1.18	0.0173	1.36
95	Column 3-95	0.00025	0.05	0.000075	37.5	0.00025	0.00051	0.00257	0.015	0.000234	0.005	2.56	0.341	0.0005	0.036	0.00025	0.15	1.12	0.0169	1.29
99	Column 3-99	0.00025	0.05	0.000079	35.2	0.00025	0.00052	0.00252	0.015	0.000218	0.005	2.66	0.358	0.0005	0.0364	0.00052	0.15	1.11	0.0161	1.22
103	Column 3-103	0.00025	0.05	0.000074	34.8	0.00025	0.00056	0.00266	0.015	0.00021	0.005	2.66	0.402	0.0005	0.0366	0.00104	0.15	1.09	0.0158	1.19
107	<0.00050	0.00025	0.05	0.000098	34	0.00025	0.00052	0.00238	0.015	0.000208	0.005	2.29	0.337	0.0005	0.0354	0.00025	0.15	0.986	0.0136	1.16
Average		0.002060976	0.04902439	0.000217098	40.95121951	0.002060976	0.000505366	0.00264561	0.015	0.000459585	0.00552439	4.044390244	0.294702439	0.000475854	0.042241463	0.002111707	0.15	1.774536585	0.026809756	1.743682927

Appendix 5.2-9. Sub-aerial Drip Columns Leachate Concentrations: Mitchell Deposit

Week	Sample ID	Bismuth (Bi)-Dissolved	Boron (B)-Dissolved	Cadmium (Cd)-Dissolved	Calcium (Ca)-Dissolved	Chromium (Cr)-Dissolved	Cobalt (Co)-Dissolved	Copper (Cu)-Dissolved	Iron (Fe)-Dissolved	Lead (Pb)-Dissolved	Lithium (Li)-Dissolved	Magnesium (Mg)-Dissolved	Manganese (Mn)-Dissolved	Mercury (Hg)-Dissolved	Molybdenum (Mo)-Dissolved	Nickel (Ni)-Dissolved	Phosphorus (P)-Dissolved	Potassium (K)-Dissolved	Selenium (Se)-Dissolved	Silicon (Si)-Dissolved
0	Column 4-0	0.0025	0.05	0.00025	30.5	0.0025	0.0005	0.0013	0.015	0.00025	0.005	2.62	0.061	0.0005	0.00851	0.0025	0.15	9.6	0.011	1.68
4	Column 4-4	0.0025	0.05	0.00025	52.1	0.0025	0.0005	0.0022	0.015	0.00025	0.012	4.72	0.17	0.0005	0.0211	0.0025	0.15	9.12	0.025	3.46
32	Column 4-32	0.0025	0.05	0.00025	88.6	0.0025	0.0005	0.0077	0.015	0.0009	0.025	8.42	0.357	0.0005	0.0313	0.0025	0.15	8.26	0.034	3.16
34	Column 4-34	0.0025	0.05	0.00025	86.9	0.0025	0.0005	0.0075	0.015	0.00079	0.015	9.12	0.375	0.0005	0.0308	0.0025	0.15	8.21	0.037	3.04
35	Column 4-35	0.0025	0.05	0.00025	74	0.0025	0.0005	0.007	0.015	0.00079	0.013	7.49	0.297	0.0005	0.0262	0.0025	0.15	6.75	0.03	2.72
36	Column 4-36	0.0025	0.05	0.00025	75.2	0.0025	0.0005	0.007	0.015	0.00081	0.012	8.12	0.337	0.0005	0.0266	0.0025	0.15	7.07	0.03	2.72
37	Column 4-37	0.0025	0.05	0.00025	71.5	0.0025	0.0005	0.0064	0.015	0.00067	0.011	7.43	0.315	0.0005	0.0237	0.0025	0.15	6.4	0.029	2.52
38	Column 4-38	0.0025	0.05	0.00025	67.3	0.0025	0.0005	0.0061	0.015	0.00063	0.011	6.39	0.291	0.0005	0.0233	0.0025	0.15	6.2	0.027	2.38
39	Column 4-39	0.0025	0.05	0.00025	61.7	0.0025	0.0005	0.0057	0.015	0.00065	0.014	6.48	0.273	0.0005	0.0219	0.0025	0.15	6.13	0.027	2.3
40	Column 4-40	0.0025	0.05	0.00025	64.4	0.0025	0.0005	0.0059	0.015	0.00066	0.005	6.19	0.273	0.0005	0.0215	0.0025	0.15	5.92	0.025	2.36
41	Column 4-41	0.0025	0.05	0.00025	53.5	0.0025	0.0005	0.0054	0.015	0.00065	0.005	5.79	0.269	0.0005	0.0194	0.0025	0.15	5.37	0.023	2.04
42	Column 4-42	0.0025	0.05	0.00025	57.8	0.0025	0.0005	0.0059	0.015	0.00067	0.005	5.84	0.258	0.0005	0.0196	0.0025	0.15	5.31	0.022	2.22
43	Column 4-43	0.0025	0.05	0.00025	52.9	0.0025	0.0005	0.0054	0.015	0.0006	0.005	5.09	0.221	0.0005	0.0175	0.0025	0.15	4.78	0.02	2.19
44	Column 4-44	0.0025	0.05	0.00025	54	0.0025	0.0005	0.0052	0.015	0.00062	0.005	4.93	0.234	0.0005	0.017	0.0025	0.15	4.46	0.019	2.1
45	Column 4-45	0.0025	0.05	0.00025	54.2	0.0025	0.0005	0.0051	0.015	0.0006	0.005	4.62	0.235	0.0005	0.0174	0.0025	0.15	4.58	0.02	2.04
46	Column 4-46	0.0025	0.05	0.00025	49.8	0.0025	0.0005	0.0051	0.015	0.00059	0.005	4.53	0.226	0.0005	0.0164	0.0025	0.15	4.12	0.02	2.06
47	Column 4-47	0.0025	0.05	0.00025	49.8	0.0025	0.0005	0.0056	0.015	0.0007	0.005	4.55	0.246	0.0005	0.0165	0.0025	0.15	4.28	0.019	1.95
48	Column 4-48	0.0025	0.05	0.00025	48.2	0.0025	0.0005	0.0054	0.015	0.00059	0.005	4.59	0.214	0.0005	0.0165	0.0025	0.15	4.09	0.018	1.94
49	Column 4-49	0.0025	0.05	0.00025	46.1	0.0025	0.0005	0.0056	0.015	0.00064	0.005	4.4	0.226	0.0005	0.0158	0.0025	0.15	4	0.017	1.9
50	Column 4-50	0.0025	0.05	0.00025	45.8	0.0025	0.0005	0.0058	0.015	0.00066	0.005	4.16	0.211	0.0005	0.0159	0.0025	0.15	3.88	0.016	1.87
51	Column 4-51	0.0025	0.05	0.00025	43.7	0.0025	0.0005	0.0052	0.015	0.00061	0.005	4.17	0.206	0.0005	0.0149	0.0025	0.15	3.61	0.016	1.83
52	Column 4-52	0.0025	0.05	0.00025	42	0.0025	0.0005	0.0054	0.015	0.00065	0.005	4.07	0.214	0.0005	0.0151	0.0025	0.15	3.58	0.014	1.82
53	Column 4-53	0.0025	0.05	0.00025	47.2	0.0025	0.0005	0.005	0.015	0.00058	0.005	3.59	0.197	0.0005	0.0145	0.0025	0.15	3.28	0.014	1.76
54	Column 4-54	0.0025	0.05	0.00025	43.5	0.0025	0.0005	0.005	0.015	0.00061	0.005	3.86	0.201	0.0005	0.0148	0.0025	0.15	3.33	0.014	1.72
55	Column 4-55	0.0025	0.05	0.00025	41.6	0.0025	0.0005	0.0051	0.015	0.00059	0.005	3.82	0.197	0.0005	0.0149	0.0025	0.15	3.26	0.014	1.7
56	Column 4-56	0.0025	0.05	0.00025	42.2	0.0025	0.0005	0.0054	0.015	0.00063	0.005	3.96	0.216	0.0005	0.0149	0.0025	0.15	3.14	0.014	1.68
57	Column 4-57	0.0025	0.05	0.00025	39.9	0.0025	0.0005	0.0053	0.015	0.00063	0.005	3.81	0.222	0.0005	0.0146	0.0025	0.15	3.01	0.013	1.71
58	Column 4-58	0.0025	0.05	0.00025	38.7	0.0025	0.0005	0.0052	0.015	0.00062	0.005	3.55	0.2	0.0005	0.0145	0.0025	0.15	2.91	0.012	1.66
59	Column 4-59	0.0025	0.05	0.00025	40.8	0.0025	0.0005	0.0051	0.015	0.00063	0.005	3.47	0.207	0.0005	0.0135	0.0025	0.15	2.77	0.013	1.6
63	Column 4-63	0.0025	0.05	0.00025	41.8	0.0025	0.0005	0.0057	0.015	0.00067	0.005	3.69	0.221	0.0005	0.0162	0.0025	0.15	2.88	0.013	1.63
67	Column 4-67	0.0025	0.05	0.00025	40.7	0.0025	0.0005	0.0057	0.015	0.00067	0.005	3.89	0.216	0.0005	0.0164	0.0025	0.15	2.76	0.013	1.66
71	Column 4-71	0.0025	0.05	0.00025	44.7	0.0025	0.0005	0.0056	0.015	0.00063	0.005	3.87	0.225	0.0005	0.0186	0.0025	0.15	2.7	0.013	1.71
75	Column 4-75	0.0025	0.05	0.00025	46.3	0.0025	0.0005	0.006	0.015	0.00065	0.005	4.13	0.234	0.0005	0.0183	0.0025	0.15	2.65	0.014	1.78
79	Column 4-79	0.00025	0.011	0.000403	46.4	0.00025	0.00027	0.00599	0.015	0.000652	0.0025	4.23	0.248	0.000005	0.0187	0.00025	0.15	2.48	0.0131	1.64
83	Column 4-83	0.00025	0.05	0.000436	45.7	0.00025	0.00027	0.00593	0.015	0.000655	0.005	3.68	0.234	0.000005	0.0178	0.00025	0.15	2.26	0.0122	1.59
87	Column 4-87	0.00025	0.05	0.00045	43.9	0.00025	0.00027	0.0057	0.015	0.000645	0.005	4	0.247	0.0005	0.0173	0.00025	0.15	2.17	0.0122	1.51
91	Column 4-91	0.00025	0.05	0.000469	46.9	0.00025	0.00027	0.00597	0.015	0.000629	0.005	4.09	0.245	0.0005	0.0175	0.00025	0.15	2.09	0.0115	1.46
95	Column 4-95	0.00025	0.05	0.000473	46.4	0.00025	0.00028	0.00567	0.015	0.000641	0.005	3.76	0.23	0.0005	0.0168	0.00025	0.15	1.94	0.0114	1.41
99	Column 4-99	0.00025	0.05	0.000497	44.1	0.00025	0.0003	0.0057	0.015	0.000635	0.005	4.16	0.24	0.0005	0.0167	0.00025	0.15	1.97	0.0112	1.34
103	Column 4-103	0.00025	0.05	0.000455	42.5	0.00025	0.00034	0.00584	0.015	0.000622	0.005	4.15	0.267	0.0005	0.0169	0.0007	0.15	1.89	0.0105	1.28
107	<0.00050	0.00025	0.05	0.000502	42.2	0.00025	0.00029	0.00538	0.015	0.000594	0.005	3.56	0.221	0.0005	0.0164	0.00025	0.15	1.67	0.0092	1.26
Average		0.002060976	0.04904878	0.000291098	51.1097561	0.002060976	0.000458293	0.005540976	0.015	0.000633244	0.006719512	4.804634146	0.238463415	0.000475854	0.018200244	0.002071951	0.15	4.265365854	0.017982927	1.96097561

Appendix 5.2-9. Sub-aerial Drip Columns Leachate Concentrations: Mitchell Deposit

Week	Sample ID	Silver (Ag)-Dissolved	Sodium (Na)-Dissolved	Strontium (Sr)·Dissolved	Sulfur (S)-Dissolved	Thallium (Tl)-Dissolved	Tin (Sn)-Dissolved	Titanium (Ti)-Dissolved	Uranium (U)-Dissolved	Vanadium (V)-Dissolved	Zinc (Zn)-Dissolved	Volume Wt (kg)	Volume In (mL)	Volume Out (mL)
0	Column 1-0	0.00005	5.04	0.508		0.0005	0.0005	0.005	0.00886	0.005	0.0025	3.04	250	250
4	Column 1-4	0.00005	6.15	0.916		0.0005	0.0005	0.005	0.081	0.005	0.0025	2.97	50	20
32	Column 1-32	0.00005	5.2	1.28		0.0005	0.0005	0.005	0.105	0.005	0.0025	2.95	50	320
34	Column 1-34	0.00005	5.44	1.31		0.0005	0.0005	0.005	0.097	0.005	0.0025	2.93	70	250
35	Column 1-35	0.00005	4.53	1.06		0.0005	0.0005	0.005	0.0782	0.005	0.0025	2.73	270	270
36	Column 1-36	0.00005	4.61	1.19		0.0005	0.0005	0.005	0.0841	0.005	0.0025	2.7	300	275
37	Column 1-37	0.00005	4.16	1.06		0.0005	0.0005	0.005	0.0764	0.005	0.0025	2.66	340	275
38	Column 1-38	0.00005	3.8	0.978		0.0005	0.0005	0.005	0.0659	0.005	0.0025	2.66	340	275
39	Column 1-39	0.00005	3.41	0.897		0.0005	0.0005	0.005	0.0602	0.005	0.0025	2.66	340	275
40	Column 1-40	0.00005	3.34	0.896		0.0005	0.0005	0.005	0.0562	0.005	0.0025	2.66	340	275
41	Column 1-41	0.00005	3.06	0.805		0.0005	0.0005	0.005	0.0547	0.005	0.0025	2.66	340	275
42	Column 1-42	0.00005	2.82	0.791		0.0005	0.0005	0.005	0.0474	0.005	0.0025	2.63	370	275
43	Column 1-43	0.00005	2.62	0.749		0.0005	0.0005	0.005	0.0421	0.005	0.0025	2.66	340	275
44	Column 1-44	0.00005	2.33	0.714		0.0005	0.0005	0.005	0.0404	0.005	0.0025	2.66	340	275
45	Column 1-45	0.00005	2.25	0.682		0.0005	0.0005	0.005	0.04	0.005	0.0025	2.66	340	275
46	Column 1-46	0.00005	2.08	0.711		0.0005	0.0005	0.005	0.0394	0.005	0.0025	2.7	300	275
47	Column 1-47	0.00005	1.77	0.67		0.0005	0.0005	0.005	0.0373	0.005	0.0025	2.66	340	275
48	Column 1-48	0.00005	1.96	0.692		0.0005	0.0005	0.005	0.035	0.005	0.0025	2.66	340	275
49	Column 1-49	0.00005	1.87	0.666		0.0005	0.0005	0.005	0.0342	0.005	0.0025	2.62	380	275
50	Column 1-50	0.00005	1.68	0.608		0.0005	0.0005	0.005	0.0308	0.005	0.0025	2.63	370	275
51	Column 1-51	0.00005	1.61	0.627		0.0005	0.0005	0.005	0.0299	0.005	0.0025	2.68	320	275
52	Column 1-52	0.00005	1.52	0.641		0.0005	0.0005	0.005	0.0289	0.005	0.0025	2.68	320	275
53	Column 1-53	0.00005	1.41	0.579		0.0005	0.0005	0.005	0.0263	0.005	0.0025	2.66	340	275
54	Column 1-54	0.00005	1.33	0.577		0.0005	0.0005	0.005	0.0258	0.005	0.0025	2.66	340	275
55	Column 1-55	0.00005	1.25	0.552		0.0005	0.0005	0.005	0.0238	0.005	0.0025	2.66	340	275
56	Column 1-56	0.00005	1.2	0.611		0.0005	0.0005	0.005	0.0241	0.005	0.0025	2.66	340	275
57	Column 1-57	0.00005	1.05	0.586		0.0005	0.0005	0.005	0.023	0.005	0.0025	2.66	340	275
58	Column 1-58	0.00005	1.08	0.541		0.0005	0.0005	0.005	0.0214	0.005	0.0025	2.66	340	275
59	Column 1-59	0.00005	0.89	0.548		0.0005	0.0005	0.005	0.0223	0.005	0.0025	2.68	320	275
63	Column 1-63	0.00005	0.93	0.542		0.0005	0.0005	0.005	0.0208	0.005	0.0025	2.84	160	275
67	Column 1-67	0.00005	1.55	0.585		0.0005	0.0005	0.005	0.0213	0.005	0.0025	2.84	160	275
71	Column 1-71	0.00005	3.19	0.586		0.0005	0.0005	0.005	0.0235	0.005	0.0025	2.83	170	275
75	Column 1-75	0.00005	5.13	0.594		0.0005	0.0005	0.005	0.0256	0.005	0.0025	2.8	200	275
79	Column 1-79	0.0001	3.92	0.568	13.4	0.00005	0.00005	0.005	0.0238	0.0005	0.0015	2.83	170	275
83	Column 1-83	0.000096	3.2	0.543		0.00005	0.00005	0.005	0.0225	0.0005	0.0025	2.85	150	275
87	Column 1-87	0.000073	2.45	0.511		0.00005	0.00005	0.005	0.0208	0.0005	0.0025	2.83	170	275
91	Column 1-91	0.000047	2.05	0.509		0.00005	0.00005	0.005	0.0187	0.0005	0.0025	2.8	200	275
95	Column 1-95	0.000028	1.66	0.472		0.00005	0.00005	0.005	0.0166	0.0005	0.0025	2.8	200	275
99	Column 1-99	0.000033	1.46	0.473		0.00005	0.00005	0.005	0.0175	0.0005	0.0025	2.8	200	275
103	Column 1-103	0.000032	1.13	0.5		0.00005	0.00005	0.005	0.0142	0.0005	0.0025	2.8	200	275
107	0.956	0.000023	0.956	0.426		0.00005	0.00005	0.005	0.0142	0.0005	0.0025	2.8	200	275
Average		5.07805E-05	2.611853659	0.701317073	13.4	0.000412195	0.000412195	0.005	0.038516098	0.004121951	0.00247561			

Appendix 5.2-9. Sub-aerial Drip Columns Leachate Concentrations: Mitchell Deposit

Week	Sample ID	Silver (Ag)-Dissolved	Sodium (Na)-Dissolved	Strontium (Sr)·Dissolved	Sulfur (S)-Dissolved	Thallium (Tl)-Dissolved	Tin (Sn)-Dissolved	Titanium (Ti)-Dissolved	Uranium (U)-Dissolved	Vanadium (V)-Dissolved	Zinc (Zn)-Dissolved	Volume Wt (kg)	Volume In (mL)	Volume Out (mL)
0	Column 2-0	0.00005	2.22	1.2		0.0005	0.0005	0.005	0.00352	0.005	0.0025	3.01	250	250
4	Column 2-4	0.00005	3.39	2.4		0.0005	0.0005	0.005	0.0581	0.005	0.0025	2.93	90	20
33	Column 2-33	0.00005	3.1	3.14		0.0005	0.0005	0.005	0.0551	0.005	0.0025	2.65	320	20
35	Column 2-35	0.00005	3.25	3.22		0.0005	0.0005	0.005	0.0525	0.005	0.0025	2.7	300	270
36	Column 2-36	0.00005	2.76	2.55		0.0005	0.0005	0.005	0.0423	0.005	0.0025	2.7	300	275
37	Column 2-37	0.00005	2.83	2.86		0.0005	0.0005	0.005	0.043	0.005	0.0025	2.63	370	275
38	Column 2-38	0.00005	2.41	2.45		0.0005	0.0005	0.005	0.0374	0.005	0.0025	2.66	340	275
39	Column 2-39	0.00005	2.2	2.31		0.0005	0.0005	0.005	0.0343	0.005	0.0025	2.61	390	275
40	Column 2-40	0.00005	2.1	2.09		0.0005	0.0005	0.005	0.0308	0.005	0.0025	2.63	370	275
41	Column 2-41	0.00005	1.94	2		0.0005	0.0005	0.005	0.0277	0.005	0.0025	2.7	300	275
42	Column 2-42	0.00005	1.81	1.78		0.0005	0.0005	0.005	0.0263	0.005	0.0025	2.61	390	275
43	Column 2-43	0.00005	1.69	1.8		0.0005	0.0005	0.005	0.0238	0.005	0.0025	2.66	340	275
44	Column 2-44	0.00005	1.59	1.61		0.0005	0.0005	0.005	0.0212	0.005	0.0025	2.66	340	275
45	Column 2-45	0.00005	1.47	1.59		0.0005	0.0005	0.005	0.0203	0.005	0.0025	2.66	340	275
46	Column 2-46	0.00005	1.39	1.49		0.0005	0.0005	0.005	0.0203	0.005	0.0025	2.63	370	275
47	Column 2-47	0.00005	1.34	1.52		0.0005	0.0005	0.005	0.0187	0.005	0.0025	2.68	320	275
48	Column 2-48	0.00005	1.14	1.43		0.0005	0.0005	0.005	0.0185	0.005	0.0025	2.66	340	275
49	Column 2-49	0.00005	1.24	1.41		0.0005	0.0005	0.005	0.0168	0.005	0.0025	2.66	340	275
50	Column 2-50	0.00005	1.2	1.39		0.0005	0.0005	0.005	0.0164	0.005	0.0025	2.63	370	275
51	Column 2-51	0.00005	1.1	1.22		0.0005	0.0005	0.005	0.0151	0.005	0.0025	2.68	320	275
52	Column 2-52	0.00005	1.07	1.28		0.0005	0.0005	0.005	0.015	0.005	0.0025	2.65	350	275
53	Column 2-53	0.00005	1.04	1.26		0.0005	0.0005	0.005	0.0143	0.005	0.0025	2.66	340	275
54	Column 2-54	0.00005	0.93	1.16		0.0005	0.0005	0.005	0.0134	0.005	0.0025	2.66	340	275
55	Column 2-55	0.00005	0.89	1.13		0.0005	0.0005	0.005	0.0131	0.005	0.0025	2.66	340	275
56	Column 2-56	0.00005	0.88	1.11		0.0005	0.0005	0.005	0.0124	0.005	0.0025	2.66	340	275
57	Column 2-57	0.00005	0.84	1.18		0.0005	0.0005	0.005	0.0121	0.005	0.0025	2.66	340	275
58	Column 2-58	0.00005	0.77	1.13		0.0005	0.0005	0.005	0.0116	0.005	0.0025	2.66	340	275
59	Column 2-59	0.00005	0.78	1.02		0.0005	0.0005	0.005	0.0108	0.005	0.0025	2.66	340	275
60	Column 2-60	0.00005	0.67	1.02		0.0005	0.0005	0.005	0.0109	0.005	0.0025	2.66	340	275
64	Column 2-64	0.00005	0.68	1		0.0005	0.0005	0.005	0.0104	0.005	0.0025	2.7	300	100
68	Column 2-68	0.00005	0.67	1.06		0.0005	0.0005	0.005	0.0108	0.005	0.0025	2.66	340	100
72	Column 2-72	0.00005	0.68	1.04		0.0005	0.0005	0.005	0.0107	0.005	0.0025	2.64	360	125
76	Column 2-76	0.00005	0.64	1.03		0.0005	0.0005	0.005	0.0107	0.005	0.0025	2.67	360	125
80	Column 2-80	0.000016	0.61	0.993	14.3	0.00005	0.00005	0.005	0.0103	0.0014	0.0015	2.67	330	125
84	Column 2-84	0.000014	0.553	0.919		0.00005	0.00005	0.005	0.0106	0.0012	0.0113	2.66	340	125
88	Column 2-88	0.000014	0.496	0.889		0.00005	0.00005	0.005	0.00989	0.0012	0.0025	2.68	320	125
92	Column 2-92	0.000005	0.483	0.873		0.00005	0.00005	0.005	0.00928	0.0011	0.0025	2.67	330	125
95	Column 2-95	0.000011	0.45	0.816		0.00005	0.00005	0.005	0.00873	0.0005	0.0025	2.8	200	275
99	Column 2-99	0.000017	0.438	0.819		0.00005	0.00005	0.005	0.00923	0.0005	0.0025	2.8	200	275
103	Column 2-103	0.000021	0.382	0.847		0.00005	0.00005	0.005	0.00738	0.0005	0.0025	2.8	200	275
107	0.363	0.000015	0.363	0.723		0.00005	0.00005	0.005	0.00761	0.0005	0.0025	2.85	170	275
Average		0.000043	1.328902439	1.481926829	14.3	0.000412195	0.000412195	0.005	0.01978878	0.004192683	0.002690244			

Appendix 5.2-9. Sub-aerial Drip Columns Leachate Concentrations: Mitchell Deposit

Week	Sample ID	Silver (Ag)-Dissolved	Sodium (Na)-Dissolved	Strontium (Sr)·Dissolved	Sulfur (S)-Dissolved	Thallium (Tl)-Dissolved	Tin (Sn)-Dissolved	Titanium (Ti)-Dissolved	Uranium (U)-Dissolved	Vanadium (V)-Dissolved	Zinc (Zn)-Dissolved	Volume Wt (kg)	Volume In (mL)	Volume Out (mL)
0	Column 3-0	0.00005	1.87	0.309		0.0005	0.0005	0.005	0.00415	0.005	0.0025	3.01	250	250
4	Column 3-4	0.00005	3.47	0.736		0.0005	0.0005	0.005	0.043	0.005	0.0025	2.97	50	20
32	Column 3-32	0.00005	3.2	1.07		0.0005	0.0005	0.005	0.0463	0.005	0.0025	2.95	50	320
34	Column 3-34	0.00005	3.32	1.1		0.0005	0.0005	0.005	0.045	0.005	0.0025	2.93	70	250
35	Column 3-35	0.00005	2.73	0.869		0.0005	0.0005	0.005	0.0365	0.005	0.0025	2.73	270	270
36	Column 3-36	0.00005	2.79	0.981		0.0005	0.0005	0.005	0.0368	0.005	0.0025	2.7	300	275
37	Column 3-37	0.00005	2.46	0.855		0.0005	0.0005	0.005	0.0326	0.005	0.0025	2.68	320	275
38	Column 3-38	0.00005	2.3	0.809		0.0005	0.0005	0.005	0.0297	0.005	0.0025	2.38	320	275
39	Column 3-39	0.00005	2.19	0.755		0.0005	0.0005	0.005	0.0278	0.005	0.0025	2.66	340	275
40	Column 3-40	0.00005	2.1	0.744		0.0005	0.0005	0.005	0.0257	0.005	0.0025	2.68	320	275
41	Column 3-41	0.00005	1.91	0.649		0.0005	0.0005	0.005	0.0238	0.005	0.0025	2.63	370	275
42	Column 3-42	0.00005	1.84	0.674		0.0005	0.0005	0.005	0.0222	0.005	0.0025	2.7	300	275
43	Column 3-43	0.00005	1.7	0.588		0.0005	0.0005	0.005	0.0195	0.005	0.0025	2.68	320	275
44	Column 3-44	0.00005	1.59	0.583		0.0005	0.0005	0.005	0.019	0.005	0.0025	2.63	320	275
45	Column 3-45	0.00005	1.5	0.56		0.0005	0.0005	0.005	0.0186	0.005	0.0025	2.69	310	275
46	Column 3-46	0.00005	1.45	0.561		0.0005	0.0005	0.005	0.0174	0.005	0.0025	2.7	300	275
47	Column 3-47	0.00005	1.3	0.539		0.0005	0.0005	0.005	0.0169	0.005	0.0025	2.66	340	275
48	Column 3-48	0.00005	1.35	0.516		0.0005	0.0005	0.005	0.0151	0.005	0.0025	2.7	300	275
49	Column 3-49	0.00005	1.31	0.496		0.0005	0.0005	0.005	0.0144	0.005	0.0025	2.68	320	275
50	Column 3-50	0.00005	1.23	0.468		0.0005	0.0005	0.005	0.0138	0.005	0.0025	2.7	300	275
51	Column 3-51	0.00005	1.16	0.462		0.0005	0.0005	0.005	0.013	0.005	0.0025	2.66	340	275
52	Column 3-52	0.00005	1.15	0.469		0.0005	0.0005	0.005	0.0129	0.005	0.0025	2.7	300	275
53	Column 3-53	0.00005	1.04	0.435		0.0005	0.0005	0.005	0.0119	0.005	0.0025	2.66	340	275
54	Column 3-54	0.00005	1.01	0.428		0.0005	0.0005	0.005	0.012	0.005	0.0025	2.68	320	275
55	Column 3-55	0.00005	0.97	0.414		0.0005	0.0005	0.005	0.0114	0.005	0.0025	2.68	320	275
56	Column 3-56	0.00005	0.97	0.462		0.0005	0.0005	0.005	0.0116	0.005	0.0025	2.68	320	275
57	Column 3-57	0.00005	0.87	0.427		0.0005	0.0005	0.005	0.0108	0.005	0.0025	2.7	300	275
58	Column 3-58	0.00005	0.9	0.395		0.0005	0.0005	0.005	0.0104	0.005	0.0025	2.68	320	275
59	Column 3-59	0.00005	0.77	0.394		0.0005	0.0005	0.005	0.0106	0.005	0.0025	2.68	320	275
63	Column 3-63	0.00005	0.79	0.398		0.0005	0.0005	0.005	0.00998	0.005	0.0025	2.86	140	275
67	Column 3-67	0.00005	0.77	0.431		0.0005	0.0005	0.005	0.00968	0.005	0.0025	2.88	120	275
71	Column 3-71	0.00005	0.75	0.418		0.0005	0.0005	0.005	0.00935	0.005	0.0025	2.83	170	275
75	Column 3-75	0.00005	0.72	0.411		0.0005	0.0005	0.005	0.00914	0.005	0.0025	2.83	170	275
79	Column 3-79	0.000011	0.677	0.408	21.8	0.00005	0.00005	0.005	0.00855	0.0005	0.0015	2.83	170	275
83	Column 3-83	0.000005	0.604	0.383		0.00005	0.00005	0.005	0.00865	0.0005	0.0025	2.85	150	275
87	Column 3-87	0.000005	0.576	0.375		0.00005	0.00005	0.005	0.00839	0.0005	0.0025	2.85	150	275
91	Column 3-91	0.000005	0.575	0.376		0.00005	0.00005	0.005	0.00807	0.0005	0.0025	2.85	150	275
95	Column 3-95	0.000005	0.53	0.353		0.00005	0.00005	0.005	0.0074	0.0005	0.0025	2.83	170	275
99	Column 3-99	0.000005	0.515	0.352		0.00005	0.00005	0.005	0.00753	0.0005	0.0025	2.83	170	275
103	Column 3-103	0.000005	0.472	0.378		0.00005	0.00005	0.005	0.00648	0.0005	0.0025	2.85	150	275
107	0.428	0.000005	0.428	0.314		0.00005	0.00005	0.005	0.00638	0.0005	0.0025	2.85	150	275
Average		4.13659E-05	1.411146341	0.545	21.8	0.000412195	0.000412195	0.005	0.017376829	0.004121951	0.00247561			

Appendix 5.2-9. Sub-aerial Drip Columns Leachate Concentrations: Mitchell Deposit

Week	Sample ID	Silver (Ag)-Dissolved	Sodium (Na)-Dissolved	Strontium (Sr)·Dissolved	Sulfur (S)-Dissolved	Thallium (Tl)-Dissolved	Tin (Sn)-Dissolved	Titanium (Ti)-Dissolved	Uranium (U)-Dissolved	Vanadium (V)-Dissolved	Zinc (Zn)-Dissolved	Volume Wt (kg)	Volume In (mL)	Volume Out (mL)
0	Column 4-0	0.00005	4.03	0.694		0.0005	0.0005	0.005	0.0054	0.005	0.0025	3.05	250	250
4	Column 4-4	0.00005	5.22	1.93		0.0005	0.0005	0.005	0.0353	0.005	0.0025	2.97	50	20
32	Column 4-32	0.00171	4.33	2.54		0.0005	0.0005	0.005	0.0282	0.005	0.0025	2.9	100	320
34	Column 4-34	0.00168	4.45	2.58		0.0005	0.0005	0.005	0.027	0.005	0.0025	2.95	50	250
35	Column 4-35	0.00132	3.62	2.04		0.0005	0.0005	0.005	0.0222	0.005	0.0025	2.73	270	270
36	Column 4-36	0.00113	3.7	2.26		0.0005	0.0005	0.005	0.0218	0.005	0.0025	2.68	320	275
37	Column 4-37	0.00097	3.33	2.03		0.0005	0.0005	0.005	0.0193	0.005	0.0025	2.68	320	275
38	Column 4-38	0.0007	3.08	1.93		0.0005	0.0005	0.005	0.018	0.005	0.0025	2.62	380	275
39	Column 4-39	0.00052	2.88	1.73		0.0005	0.0005	0.005	0.0163	0.005	0.0025	2.63	370	275
40	Column 4-40	0.00044	2.74	1.72		0.0005	0.0005	0.005	0.0149	0.005	0.0025	2.68	320	275
41	Column 4-41	0.00042	2.49	1.53		0.0005	0.0005	0.005	0.0146	0.005	0.0025	2.66	340	275
42	Column 4-42	0.00039	2.41	1.57		0.0005	0.0005	0.005	0.0132	0.005	0.0025	2.66	340	275
43	Column 4-43	0.00025	2.18	1.38		0.0005	0.0005	0.005	0.0116	0.005	0.0025	2.63	370	275
44	Column 4-44	0.00024	2.02	1.33		0.0005	0.0005	0.005	0.0112	0.005	0.0025	2.68	320	275
45	Column 4-45	0.00022	1.86	1.28		0.0005	0.0005	0.005	0.011	0.005	0.0025	2.64	360	275
46	Column 4-46	0.00012	1.7	1.27		0.0005	0.0005	0.005	0.01	0.005	0.0025	2.7	340	275
47	Column 4-47	0.00023	1.64	1.28		0.0005	0.0005	0.005	0.0101	0.005	0.0025	2.66	340	275
48	Column 4-48	0.00021	1.64	1.2		0.0005	0.0005	0.005	0.00921	0.005	0.0025	2.66	340	275
49	Column 4-49	0.0002	1.55	1.16		0.0005	0.0005	0.005	0.00881	0.005	0.0025	2.63	370	275
50	Column 4-50	0.00019	1.46	1.07		0.0005	0.0005	0.005	0.00851	0.005	0.0025	2.68	320	275
51	Column 4-51	0.00015	1.34	1.06		0.0005	0.0005	0.005	0.00774	0.005	0.0025	2.63	370	275
52	Column 4-52	0.00017	1.3	1.06		0.0005	0.0005	0.005	0.00742	0.005	0.0025	2.7	300	275
53	Column 4-53	0.00016	1.17	0.979		0.0005	0.0005	0.005	0.00704	0.005	0.0025	2.66	360	275
54	Column 4-54	0.00013	1.15	0.98		0.0005	0.0005	0.005	0.00707	0.005	0.0025	2.68	320	275
55	Column 4-55	0.00014	1.11	0.936		0.0005	0.0005	0.005	0.00666	0.005	0.0025	2.66	340	275
56	Column 4-56	0.00015	1.07	1.02		0.0005	0.0005	0.005	0.00648	0.005	0.0025	2.66	340	275
57	Column 4-57	0.00013	0.99	0.974		0.0005	0.0005	0.005	0.00634	0.005	0.0025	2.68	320	275
58	Column 4-58	0.00011	0.99	0.908		0.0005	0.0005	0.005	0.00597	0.005	0.0025	2.68	340	275
59	Column 4-59	0.00005	0.87	0.886		0.0005	0.0005	0.005	0.00593	0.005	0.0025	2.68	320	275
63	Column 4-63	0.00012	0.88	0.909		0.0005	0.0005	0.005	0.00596	0.005	0.0025	2.82	180	275
67	Column 4-67	0.00013	0.81	0.905		0.0005	0.0005	0.005	0.00535	0.005	0.0025	2.86	140	275
71	Column 4-71	0.00015	0.81	0.898		0.0005	0.0005	0.005	0.00532	0.005	0.0025	2.85	150	275
75	Column 4-75	0.00013	0.77	0.881		0.0005	0.0005	0.005	0.00535	0.005	0.0025	2.8	200	275
79	Column 4-79	0.000168	0.731	0.89	29.9	0.00005	0.00005	0.005	0.00501	0.0005	0.0055	2.83	170	275
83	Column 4-83	0.000095	0.644	0.803		0.00005	0.00005	0.005	0.00529	0.0005	0.0072	2.87	130	275
87	Column 4-87	0.000068	0.607	0.777		0.00005	0.00005	0.005	0.00504	0.0005	0.0078	2.8	150	275
91	Column 4-91	0.000067	0.589	0.768		0.00005	0.00005	0.005	0.00475	0.0005	0.0081	2.85	220	275
95	Column 4-95	0.000059	0.525	0.725		0.00005	0.00005	0.005	0.00446	0.0005	0.0086	2.83	170	275
99	Column 4-99	0.000066	0.537	0.713		0.00005	0.00005	0.005	0.0047	0.0005	0.0088	2.83	170	275
103	Column 4-103	0.000071	0.475	0.755		0.00005	0.00005	0.005	0.00388	0.0005	0.0094	2.8	200	275
107	0.426	0.000058	0.426	0.621		0.00005	0.00005	0.005	0.00373	0.0005	0.0079	2.87	130	275
Average		0.000327122	1.807902439	1.243219512	29.9	0.000412195	0.000412195	0.005	0.010637073	0.004121951	0.003556098			

Appendix 5.2-10

Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

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Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Interval	Rock Code	Lithology	Alteration 1	Alt_1_ Intensity	Alt_1_ Intensity_ Old	Alt_2_Code	Alt_2_ Intensity	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	21012 ABA Model Code	PFS Waste/Ore
Barrel 1	Mitchell	2008	M-08-75	170	186	16.0	nm volc	PMON	SIL/HEM	2/3		CL/SIL	1/1	upper panel	in	PAG-waste	M-08-75_11	X16176	UP Hazelton	ORE
Barrel 1	Mitchell	2008	M-08-75	186	204	18.0	nm monz	PMON	HEM/SIL	3/1		SIL/CL	1/1	upper panel	in	NPAG-waste	M-08-75_10	X16185	UP Hazelton	WASTE
Barrel 1	Mitchell	2008	M-08-75	204	220	16.0	nm volc	PMON	SIL/HEM	1/2		CL/CL	1/2	upper panel	in	U-waste	M-08-75_9	X16195	UP Hazelton	WASTE
Barrel 1	Mitchell	2008	M-08-75	220	230	10.0	nm monz	PMON	HEM	2		CL	2	upper panel	in	PAG-waste	M-08-75_8	X16205	UP Hazelton	ORE
Barrel 1	Mitchell	2008	M-08-75	337	359	22.0	nm monz	PMON	CL	2		HEM	1	upper panel	in	NPAG-waste	M-08-75_7	X16272	Monzonite	WASTE
Barrel 1	Mitchell	2008	M-08-75	359	379	20.0	nm monz	PMON	CL	2		HEM	1	upper panel	in	NPAG-waste	M-08-75_6	X16283	Monzonite	WASTE
Barrel 1	Mitchell	2008	M-08-75	379	403	24.0	nm monz	PMON	CL	2		HEM	1	upper panel	in	NPAG-waste	M-08-75_5	X16295	Monzonite	WASTE
Barrel 1	Mitchell	2008	M-08-75	403	437	34.0	nm monz	PMON	CL/CL	2/2		HEM/HEM	1/1	upper panel	in	NPAG-waste	M-08-75_4	X16307	Monzonite	WASTE
Barrel 1	Mitchell	2008	M-08-75	437	469	32.0	nm monz	PMON	CL/HEM	2/1		HEM/CL	1/1	upper panel	in	NPAG-waste	M-08-75_3	X16326	Monzonite	WASTE
Barrel 1	Mitchell	2008	M-08-75	469	502	33.0	nm monz	PMON	HEM/PR	1/2		CL/HEM	1/1	upper panel	in	PAG-waste	M-08-75_2	X16344	Monzonite	WASTE
Barrel 1	Mitchell	2008	M-08-75	502	520	18.0	nm monz	PMON	PR	2		HEM	1	upper panel	in	NPAG-waste	M-08-75_1	X16362	Monzonite	WASTE
Barrel 2	Mitchell	2008	M-08-75	645	659	14.0	nm volc	ANDS/PSBX	CL/SIL	2/4		HEM/CL	1/2	upper panel	below	PAG-pit wall	M-08-75_12	X16439	UP Hazelton	ORE
Barrel 2	Mitchell	2008	M-08-75	659	671	12.0	nm volc	ANDS	SIL/CL	2/1		CL/HEM	1/1	upper panel	below	PAG-pit wall	M-08-75_13	X16447	UP Hazelton	ORE
Barrel 2	Mitchell	2008	M-08-75	671	683	12.0	nm volc	ANDS	CL	1		HEM	1	upper panel	below	U-pit wall	M-08-75_14	X16454	UP Hazelton	ORE
Barrel 2	Mitchell	2008	M-08-79	11	23	12.0	nm volc	ANDS	SIH	3				upper panel	in	PAG-waste	M-08-79_13	X16743	UP Hazelton	ORE
Barrel 2	Mitchell	2008	M-08-79	23	35	12.0	nm volc	ANDS	SIH	3				upper panel	in	PAG-waste	M-08-79_14	X16750	UP Hazelton	WASTE
Barrel 2	Mitchell	2008	M-08-79	35	47	12.0	nm volc	ANDS	SIH	3				upper panel	in	PAG-waste	M-08-79_15	X16756	UP Hazelton	WASTE
Barrel 2	Mitchell	2008	M-08-79	47	61	14.0	nm volc	ANDS	SIH	3				upper panel	in	PAG-waste	M-08-79_16	X16763	UP Hazelton	ORE
Barrel 2	Mitchell	2008	M-08-79	382	399	17.0	nm volc	ANDS	MTH	3				upper panel	below	PAG-pit wall	M-08-79_17	X16946	Monzonite	ORE
Barrel 2	Mitchell	2008	M-08-85	62	77	15.0	nm volc	SEDS/ANDS	SIH/SIH	2/3		CARB	2	upper panel	in	PAG-waste	M-08-85_11	X17338	UP Hazelton	ORE
Barrel 2	Mitchell	2008	M-08-85	77	92.6	15.6	nm volc	ANDS	SIH	3				upper panel	in	PAG-waste	M-08-85_12	X17346	UP Hazelton	ORE
Barrel 2	Mitchell	2008	M-08-85	92.6	103.5	10.9	nm volc	PMON	HEM	3		IARG	2	upper panel	in	PAG-waste	M-08-85_13	X17354	UP Hazelton	WASTE
Barrel 3	Mitchell	2008	M-08-80	183	195	12.0	sw volc	FLTZ/SEDS	/SIH	/3				upper panel	in	NPAG-waste	M-08-80_14	X14875	Monzonite	WASTE
Barrel 3	Mitchell	2008	M-08-80	195	206.2	11.2	sw volc	SEDS	SIH	3				upper panel	in	U-waste	M-08-80_15	X14882	UP Hazelton	ORE
Barrel 3	Mitchell	2008	M-08-80	206.2	224.2	18.0	sw volc	ANDS	CL/SIL	2/2				upper panel	in	U-waste	M-08-80_16	X14888	UP Hazelton	WASTE
Barrel 3	Mitchell	2008	M-08-80	224.2	236.1	11.9	sw volc	SEDS	SIH	3				upper panel	in	PAG-waste	M-08-80_17	X14897	UP Hazelton	ORE
Barrel 3	Mitchell	2008	M-08-80	236.1	249.8	13.7	sw volc	PMON	SIL	4				upper panel	in	PAG-waste	M-08-80_18	X14904	UP Hazelton	WASTE
Barrel 3	Mitchell	2008	M-08-80	249.8	267	17.2	sw volc	SEDS	SIH	4				upper panel	in	PAG-waste	M-08-80_19	X14912	UP Hazelton	WASTE
Barrel 3	Mitchell	2008	M-08-80	267	283	16.0	sw volc	SEDS/ANDS	SIH/CL	4/1				upper panel	in	PAG-waste	M-08-80_20	X14921	UP Hazelton	WASTE
Barrel 3	Mitchell	2008	M-08-80	366	380.3	14.3	sw volc	ANDS	SIL	3				upper panel	outside	PAG-pit wall	M-08-80_21	X14977	UP Hazelton	ORE
Barrel 3	Mitchell	2008	M-08-80	380.3	400	19.7	sw volc	SEDS/VU	SIH/SIL	4/3				upper panel	outside	PAG-pit wall	M-08-80_22	X14984	UP Hazelton	WASTE
Barrel 4	Mitchell	2008	M-08-75	250.6	261	10.4	nm volc	VU	CLZ	3		SIL	2	upper panel	in	PAG-waste	M-08-75_15	X16222	UP Hazelton	ORE
Barrel 4	Mitchell	2008	M-08-75	261	276	15.0	nm volc	GRAN	CLZ/CLZ	2/3		HEM/SIL	1/2	upper panel	in	PAG-waste	M-08-75_16	X16229	UP Hazelton	ORE
Barrel 4	Mitchell	2008	M-08-75	276	291.05	15.1	nm volc	VU	CLZ	3		SIL	2	upper panel	in	PAG-waste	M-08-75_17	X16237	UP Hazelton	ORE
Barrel 4	Mitchell	2008	M-08-75	750	766	16.0	iarg	VU	IARG/QSP	4/4		SIL/	2	lower panel	below	PAG-pit wall	M-08-75_18	X16501	LP Hazelton	WASTE
Barrel 4	Mitchell	2008	M-08-75	766	782	16.0	qsp	VU	QSP/IARG	4/3		/QSP	1	upper panel	below	PAG-pit wall	M-08-75_19	X16510	LP Hazelton	WASTE
Barrel 4	Mitchell	2008	M-08-75	782	798	16.0	iarg	VU	IARG	3		QSP	1	lower panel	below	PAG-pit wall	M-08-75_20	X16518	LP Hazelton	WASTE
Barrel 4	Mitchell	2008	M-08-75	798	813	15.0	iarg	VU	IARG	3		QSP	1	lower panel	below	PAG-pit wall	M-08-75_21	X16527	LP Hazelton	WASTE
Barrel 4	Mitchell		M-08-83	122	135	13.0	nm volc	FLTZ/VU	/QSP	/3		/IARG	/1	upper panel	in	PAG-waste	M-08-83_11	X17270	UP Hazelton	WASTE
Barrel 4	Mitchell	2008	M-08-83	135	149	14.0	iarg	VU	QSP	3		IARG	1	lower panel	in	PAG-waste	M-08-83_12	X17277	LP Hazelton	WASTE
Barrel 4	Mitchell	2008	M-08-83	149	163	14.0	iarg	VU	QSP	3		IARG	1	lower panel	in	PAG-waste	M-08-83_13	X17284	LP Hazelton	ORE
Barrel 5	Mitchell	M-09-105_25	M-09-105	310.5	311.5	1.0	IARG	VUTF	CL	4	None			BELOW MTF			M-09-105_25	H44112	LP Hazelton	MARGINAL
Barrel 5	Mitchell	M-09-105_30	M-09-105	330.5	331.5	1.0	IARG	VUTF	CL	3	None			BELOW MTF			M-09-105_30	H44123	LP Hazelton	MARGINAL
Barrel 5	Mitchell	M-09-105_31	M-09-105	334.5	335.5	1.0	IARG	VUTF	CL	3	None			BELOW MTF			M-09-105_31	H44125	LP Hazelton	ORE
Barrel 5	Mitchell	M-09-105_32	M-09-105	338.5	339.5	1.0	IARG	VUTF	CL	3	None			BELOW MTF			M-09-105_32	H44127	LP Hazelton	ORE
Barrel 5	Mitchell	M-09-106_18	M-09-106	272.5	273.5	1.0	CL-PR	VU	CL	3	IARG			BELOW MTF			M-09-106_18	H41559	LP Hazelton	ORE
Barrel 5	Mitchell	M-09-106_19	M-09-106	276.5	277.5	1.0	CL-PR	VU	CL	3	IARG			BELOW MTF			M-09-106_19	H41561	LP Hazelton	ORE
Barrel 5	Mitchell	M-09-106_20	M-09-106	280.5	281.5	1.0	CL-PR	VU	CL	3	IARG			BELOW MTF			M-09-106_20	H41563	LP Hazelton	ORE
Barrel 5	Mitchell	M-09-110_32	M-09-110	330.5	331.5	1.0	QSP	VU	QSP	5	None			BELOW MTF			M-09-110_32	H41944	Leach breccia/bornite breccia	MARGINAL
Barrel 5	Mitchell	M-09-110_33	M-09-110	334.5	335.5	1.0	QSP	VU	QSP	5	None			BELOW MTF			M-09-110_33	H41947	Leach breccia/bornite breccia	WASTE
Barrel 5	Mitchell	M-09-110_34	M-09-110	338.5	339.5	1.0	QSP	VU	QSP	5	None			BELOW MTF			M-09-110_34	H41949	Leach breccia/bornite breccia	WASTE
Barrel 5	Mitchell	M-09-110_35	M-09-110	342.5	343.5	1.0	QSP	VU	QSP	5	None			BELOW MTF			M-09-110_35	H41951	Leach breccia/bornite breccia	WASTE
Barrel 6	Mitchell	M-09-103_1	M-09-103	26.5	27.5	1.0	IARG	VU	CL2	3	None			BELOW MTF			M-09-103_1	H43765	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_2	M-09-103	51.5	52.5	1.0	IARG	VU	CL	4	None			BELOW MTF			M-09-103_2	H43776	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_3	M-09-103	55.5	56.5	1.0	IARG	VU	CL	4	None			BELOW MTF			M-09-103_3	H43777	LP Hazelton	MARGINAL
Barrel 6	Mitchell	M-09-103_4	M-09-103	59.5	60.5	1.0	IARG	VU	CL	4	None			BELOW MTF			M-09-103_4	H43778	LP Hazelton	WASTE
Barrel 6	Mitchell	M-09-103_5	M-09-103	63.5	64.5	1.0	IARG	VU	CL	4	None			BELOW MTF			M-09-103_5	H43779	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_6	M-09-103	67.5	68.5	1.0	IARG	VU	CL	4	None			BELOW MTF			M-09-103_6	H43780	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_7	M-09-103	177.5	178.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_7	H43843	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_8	M-09-103	183.5	184.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_8	H43846	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_9	M-09-103	187.5	188.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_9	H43848	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_10	M-09-103	191.5	192.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_10	H43850	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_11	M-09-103	195.5	196.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_11	H43852	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_14	M-09-103	205.5	206.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_14	H43857	LP Hazelton	ORE

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	PFS Pit In/Out	PFS Litho	PFS Alt	Sample Matrix	SampleType	udf_LabID	Weight Received (kg)	Lab Certificate Number	Collect Date/ Time	Paste pH	Rinse pH	S_Total (%)	S_Sulphide (%)	S_S2_ CALC (%)	S_S2_S_ DEL CALC (%)	S_SO4_ NA2CO3 (%)	S_SO4_ HCL (%)	S_BASO4 (%)
Barrel 1	Mitchell	2008	M-08-75	170	186	IN PIT	PMON	SIL	Rock	Drillcore	ALS Chemex		VA08108753	8/5/2008	9		1.45	1.18	1.440	1.407	0.02	0.01	0.033
Barrel 1	Mitchell	2008	M-08-75	186	204	IN PIT	PMON	HEM	Rock	Drillcore	ALS Chemex		VA08108753	8/5/2008	8.8		1.6	1.35	1.570	1.547	0.04	0.03	0.023
Barrel 1	Mitchell	2008	M-08-75	204	220	IN PIT	PMON	SIL	Rock	Drillcore	ALS Chemex		VA08108753	8/5/2008	8.8		1.14	0.9	1.130	1.105	0.01	0.01	0.025
Barrel 1	Mitchell	2008	M-08-75	220	230	IN PIT	PMON	HEM	Rock	Drillcore	ALS Chemex		VA08108753	8/5/2008	8.7		2.35	2.05	2.330	2.307	0.03	0.02	0.023
Barrel 1	Mitchell	2008	M-08-75	337	359	IN PIT	PMON	CL	Rock	Drillcore	ALS Chemex		VA08108753	8/5/2008	9.1		0.52	0.44	0.5100	0.444	0.01	0.01	0.066
Barrel 1	Mitchell	2008	M-08-75	359	379	IN PIT	PMON	CL	Rock	Drillcore	ALS Chemex		VA08108753	8/5/2008	9		0.92	0.7	0.8800	0.800	0.04	0.04	0.080
Barrel 1	Mitchell	2008	M-08-75	379	403	IN PIT	PMON	CL	Rock	Drillcore	ALS Chemex		VA08108753	8/5/2008	9.2		1.08	0.96	1.070	1.007	0.02	0.01	0.063
Barrel 1	Mitchell	2008	M-08-75	403	437	IN PIT	PMON	CL	Rock	Drillcore	ALS Chemex		VA08108753	8/5/2008	9.2		1.19	0.94	1.160	1.094	0.03	0.03	0.066
Barrel 1	Mitchell	2008	M-08-75	437	469	IN PIT	PMON	CL	Rock	Drillcore	ALS Chemex		VA08108753	8/5/2008	9.3		0.73	0.58	0.6800	0.586	0.03	0.05	0.094
Barrel 1	Mitchell	2008	M-08-75	469	502	IN PIT	PMON	HEM	Rock	Drillcore	ALS Chemex		VA08108753	8/5/2008	9.2		0.49	0.34	0.4400	0.340	0.04	0.05	0.112
Barrel 1	Mitchell	2008	M-08-75	502	520	IN PIT	PMON	PR	Rock	Drillcore	ALS Chemex		VA08108753	8/5/2008	9.1		0.18	0.12	0.1500	0.120	0.01	0.03	0.114
Barrel 2	Mitchell	2008	M-08-75	645	659	IN PIT	ANDS	CL	Rock	Drillcore	ALS Chemex		VA09027962	2/6/2009	9.6		1.58	1.49	1.560	1.526	0.05	0.02	0.034
Barrel 2	Mitchell	2008	M-08-75	659	671	IN PIT	ANDS	SIL	Rock	Drillcore	ALS Chemex		VA09027962	2/6/2009	9.6		1.77	1.66	1.750	1.716	0.04	0.02	0.034
Barrel 2	Mitchell	2008	M-08-75	671	683	IN PIT	ANDS	CL	Rock	Drillcore	ALS Chemex		VA09027962	2/6/2009	9.7		1.26	1.12	1.250	1.222	0.03	0.01	0.028
Barrel 2	Mitchell	2008	M-08-79	11	23	IN PIT	ANDS	SIH	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9.1		3.02	2.72	3.010	3.002	0.08	0.01	0.008
Barrel 2	Mitchell	2008	M-08-79	23	35	IN PIT	ANDS	SIH	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9.1		2.84	2.45	2.830	2.821	0.05	0.01	0.009
Barrel 2	Mitchell	2008	M-08-79	35	47	IN PIT	ANDS	SIH	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9		3.22	2.97	3.200	3.192	0.05	0.02	0.008
Barrel 2	Mitchell	2008	M-08-79	47	61	IN PIT	ANDS	SIH	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9.1		3.35	2.95	3.340	3.329	0.02	0.01	0.011
Barrel 2	Mitchell	2008	M-08-79	382	399	OUT PIT	ANDS	MTH	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	8.9		2.43	2.25	2.420	2.403	0.02	0.01	0.017
Barrel 2	Mitchell	2008	M-08-85	62	77	IN PIT	SEDS	SIH	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9.2		2.26	2.06	2.250	2.233	0.04	0.01	0.017
Barrel 2	Mitchell	2008	M-08-85	77	92.6	IN PIT	ANDS	SIH	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9.4		2.47	2.29	2.450	2.434	0.03	0.02	0.016
Barrel 2	Mitchell	2008	M-08-85	92.6	103.5	IN PIT	PMON	HEM	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9.9		0.77	0.66	0.7500	0.712	0.02	0.02	0.038
Barrel 3	Mitchell	2008	M-08-80	183	195	IN PIT	SEDS	SIH	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9.1		1.84	1.63	1.820	1.801	0.03	0.02	0.019
Barrel 3	Mitchell	2008	M-08-80	195	206.2	IN PIT	SEDS	SIH	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9.2		2.37	1.94	2.360	2.348	0.01	0.01	0.012
Barrel 3	Mitchell	2008	M-08-80	206.2	224.2	IN PIT	ANDS	CL	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9.1		2.65	2.19	2.640	2.629	0.01	0.01	0.011
Barrel 3	Mitchell	2008	M-08-80	224.2	236.1	IN PIT	SEDS	SIH	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9.1		3.1	2.42	3.090	3.081	0.02	0.01	0.009
Barrel 3	Mitchell	2008	M-08-80	236.1	249.8	IN PIT	PMON	SIL	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9.1		2.14	1.87	2.130	2.107	0.005	0.01	0.023
Barrel 3	Mitchell	2008	M-08-80	249.8	267	IN PIT	SEDS	SIH	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9.6		2.94	2.66	2.920	2.908	0.03	0.02	0.012
Barrel 3	Mitchell	2008	M-08-80	267	283	IN PIT	SEDS	SIH	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9.1		3.5	2.96	3.480	3.475	0.02	0.02	0.005
Barrel 3	Mitchell	2008	M-08-80	366	380.3	IN PIT	ANDS	SIL	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9.3		2.98	2.59	2.970	2.964	0.005	0.01	0.007
Barrel 3	Mitchell	2008	M-08-80	380.3	400	IN PIT	SEDS	SIH	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9.1		5.54	4.72	5.530	5.527	0.04	0.01	0.004
Barrel 4	Mitchell	2008	M-08-75	250.6	261	IN PIT	VU	CL2	Rock	Drillcore	ALS Chemex		VA09027962	2/6/2009	9.4		1.49	1.37	1.470	1.444	0.02	0.02	0.026
Barrel 4	Mitchell	2008	M-08-75	261	276	IN PIT	GRAN	CL2	Rock	Drillcore	ALS Chemex		VA09027962	2/6/2009	9.4		1.6	1.48	1.590	1.565	0.02	0.01	0.025
Barrel 4	Mitchell	2008	M-08-75	276	291.05	IN PIT	VU	CL2	Rock	Drillcore	ALS Chemex		VA09027962	2/6/2009	9.4		0.97	0.89	0.9600	0.919	0.02	0.01	0.041
Barrel 4	Mitchell	2008	M-08-75	750	766	IN PIT	VU	IARG	Rock	Drillcore	ALS Chemex		VA09027962	2/6/2009	9		4.02	3.72	3.980	3.974	0.07	0.04	0.006
Barrel 4	Mitchell	2008	M-08-75	766	782	IN PIT	VU	QSP	Rock	Drillcore	ALS Chemex		VA09027962	2/6/2009	8.9		4.75	4.28	4.730	4.721	0.06	0.02	0.009
Barrel 4	Mitchell	2008	M-08-75	782	798	IN PIT	VU	IARG	Rock	Drillcore	ALS Chemex		VA09027962	2/6/2009	9.2		3.37	3.27	3.360	3.352	0.05	0.01	0.008
Barrel 4	Mitchell	2008	M-08-75	798	813	IN PIT	VU	IARG	Rock	Drillcore	ALS Chemex		VA09027962	2/6/2009	9.3		3.88	3.29	3.870	3.862	0.04	0.01	0.008
Barrel 4	Mitchell		M-08-83	122	135	IN PIT	FLTZ	0	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	8.9		5.02	4.44	5.010	5.006	0.02	0.01	0.004
Barrel 4	Mitchell	2008	M-08-83	135	149	IN PIT	VU	QSP	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9.1		4.18	4.08	4.140	4.136	0.08	0.04	0.004
Barrel 4	Mitchell	2008	M-08-83	149	163	IN PIT	VU	QSP	Rock	Drillcore	ALS Chemex		VA09027962	2/5/2009	9.1		5.02	4.47	5.010	5.006	0.04	0.01	0.004
Barrel 5	Mitchell	M-09-105_25	M-09-105	310.5	311.5	IN PIT	VUTF	CL	Rock	Drillcore	ALS Chemex	2.04	VA09116241		8.8	8.8	2.69	2.36	2.64	2.636	0.09	0.05	0.0040
Barrel 5	Mitchell	M-09-105_30	M-09-105	330.5	331.5	IN PIT	VUTF	CL	Rock	Drillcore	ALS Chemex	2.02	VA09116241		8.8	8.7	2.72	2.17	2.71	2.704	0.04	0.005	0.0061
Barrel 5	Mitchell	M-09-105_31	M-09-105	334.5	335.5	IN PIT	VUTF	CL	Rock	Drillcore	ALS Chemex	1.68	VA09116241		8.9	8.7	2.11	1.59	2.10	2.090	0.03	0.005	0.0100
Barrel 5	Mitchell	M-09-105_32	M-09-105	338.5	339.5	IN PIT	VUTF	CL	Rock	Drillcore	ALS Chemex	2.28	VA09116241		8.5	8.4	3.41	3.06	3.40	3.396	0.03	0.005	0.0037
Barrel 5	Mitchell	M-09-106_18	M-09-106	272.5	273.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.48	VA09116242		8.1	8.0	5.20	4.07	4.56	4.559	0.68	0.64	0.0014
Barrel 5	Mitchell	M-09-106_19	M-09-106	276.5	277.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.44	VA09116242		8.1	8.0	5.20	4.73	4.96	4.958	0.28	0.24	0.0016
Barrel 5	Mitchell	M-09-106_20	M-09-106	280.5	281.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.7	VA09116242		8.2	8.0	5.89	4.64	4.95	4.949	0.99	0.94	0.0014
Barrel 5	Mitchell	M-09-110_32	M-09-110	330.5	331.5	IN PIT	VU	QSP	Rock	Drillcore	ALS Chemex	2.02	VA09124617		8.0	7.9	5.26	4.35	5.25	5.247	0.04	0.01	0.0030
Barrel 5	Mitchell	M-09-110_33	M-09-110	334.5	335.5	IN PIT	VU	QSP	Rock	Drillcore	ALS Chemex	2.12	VA09124617		7.0	7.1	10.75	8.90	10.74	10.737	0.03	0.01	0.0026
Barrel 5	Mitchell	M-09-110_34	M-09-110	338.5	339.5	IN PIT	VU	QSP	Rock	Drillcore	ALS Chemex	2.2	VA09124617		6.6	7.1	7.31	5.42	7.30	7.298	0.03	0.005	0.0016
Barrel 5	Mitchell	M-09-110_35	M-09-110	342.5	343.5	IN PIT	VU	QSP	Rock	Drillcore	ALS Chemex	2.28	VA09124617		4.9	6.6	19.05	16.35	19.00	18.993	0.05	0.05	0.0072
Barrel 6	Mitchell	M-09-103_1	M-09-103	26.5	27.5	IN PIT	VU	CL2	Rock	Drillcore	ALS Chemex	2.44	VA09116240		8.0	8.0	2.66	2.66	2.63	2.660	0.01	0.03	0.0259
Barrel 6	Mitchell	M-09-103_2	M-09-103	51.5	52.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	0.42	VA09116240		8.5	8.3	3.25	3.07	3.24	3.227	0.06	0.005	0.0135
Barrel 6	Mitchell	M-09-103_3	M-09-103	55.5	56.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	0.36	VA09116240		8.8	8.2	1.22	1.11	1.21	1.167	0.09	0.01	0.0434
Barrel 6	Mitchell	M-09-103_4	M-09-103	59.5	60.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	0.18	VA09116240		8.9	8.2	1.36	1.36	1.32	1.360	0.11	0.04	0.0647
Barrel 6	Mitchell	M-09-103_5	M-09-103	63.5	64.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	0.22	VA09116240		8.6	8.4	0.64	0.50	0.56	0.500	0.16	0.08	0.1081
Barrel 6	Mitchell	M-09-103_6	M-09-103	67.5	68.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	0.16	VA09116240		8.6	8.5	1.28	1.07	1.20	1.109	0.16	0.08	0.0910
Barrel 6	Mitchell	M-09-103_7	M-09-103	177.5	178.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.06	VA09116240		8.3	8.2	3.05	0.66	0.65	0.660	2.46	2.4	0.0079
Barrel 6	Mitchell	M-09-103_8	M-09-103	183.5	184.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.66	VA09116240		8.2	8.1	4.08	0.97	0.97	0.970	3.22	3.11	0.0056
Barrel 6	Mitchell	M-09-103_9	M-09-103	187.5	188.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.6	VA09116240		8.3	8.3	4.49	1.02	1.43	1.424	3.16	3.06	0.0063
Barrel 6	Mitchell	M-09-103_10	M-09-103	191.5	192.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.42	VA09116240		8.3	8.1	3.03	0.50	0.61	0.599	2.51	2.42	0.0112
Barrel 6	Mitchell	M-09-103_11	M-09-103	195.5	196.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.48	VA09116240		8.3	8.1	3.91	1.03	1.06	1.052	2.93	2.85	0.0082
Barrel 6	Mitchell	M-09-103_14	M-09-103	205.5	206.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.04	VA09116240		8.3	8.1	4.40	1.84	1.83	1.840	2.68	2.57	0.0056

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	S_DEL (%)	S_DEL_CAL (%)	TAP (%)	SAP ($kg\ CaCO_3$ /t)	SAP (S Del Calc) ($kg\ CaCO_3$ /t)	NP ($kg\ CaCO_3$ /t)	NP_ADJ ($kg\ CaCO_3$ /t)	UNP	Total C (%)	Inorganic C (%)	Inorganic CO2 (%)	C_DEL_ CALC (%)	CANP_ TTL (%)	CANP_ INORG (%)	CANP_ CA (%)	CANP_ CAMG (%)	TNNP ($kg\ CaCO_3$ /t)
Barrel 1	Mitchell	2008	M-08-75	170	186	0.227	0.2273	45.31	36.88	43.98	40	25	15	0.53	0.52	1.9	0.01000	44.17	43.2	30.47	50.11	-5.31
Barrel 1	Mitchell	2008	M-08-75	186	204	0.197	0.1967	50.0	42.1875	48.33	23	8	15	0.26	0.3	1.1	-0.04000	21.67	25.0	17.23	29.49	-27.00
Barrel 1	Mitchell	2008	M-08-75	204	220	0.205	0.2053	35.62	28.125	34.54	59	44	15	0.85	0.68	2.5	0.1700	70.84	56.9	50.94	88.19	23.38
Barrel 1	Mitchell	2008	M-08-75	220	230	0.257	0.2574	73.44	64.0625	72.11	57	42	15	0.63	0.62	2.3	0.01000	52.50	52.3	43.20	63.00	-16.44
Barrel 1	Mitchell	2008	M-08-75	337	359	0.004	0.003952	16.25	13.75	13.87	81	66	15	0.8	0.81	3	-0.01000	66.7	68.2	72.67	103.4	64.75
Barrel 1	Mitchell	2008	M-08-75	359	379	0.100	0.1002	28.75	21.875	25.01	79	64	15	0.75	0.74	2.7	0.01000	62.50	61.4	63.68	91.63	50.25
Barrel 1	Mitchell	2008	M-08-75	379	403	0.047	0.04652	33.75	30	31.45	88	73	15	0.96	0.98	3.6	-0.02000	80.01	81.9	73.42	100.8	54.25
Barrel 1	Mitchell	2008	M-08-75	403	437	0.154	0.1537	37.19	29.375	34.18	93	78	15	0.89	0.87	3.2	0.02000	74.17	72.8	75.92	108.5	55.81
Barrel 1	Mitchell	2008	M-08-75	437	469	0.006	0.005946	22.81	18.125	18.31	79	64	15	0.81	0.84	3.1	-0.03000	67.50	70.5	62.68	85.90	56.19
Barrel 1	Mitchell	2008	M-08-75	469	502	-0.012	0.000	15.31	10.625	10.63	55	40	15	0.61	0.62	2.3	-0.01000	50.84	52.3	66.68	90.20	39.69
Barrel 1	Mitchell	2008	M-08-75	502	520	-0.084	0.000	5.625	3.75	3.75	28	13	15	0.26	0.28	1	-0.02000	21.67	22.7	53.94	78.75	22.38
Barrel 2	Mitchell	2008	M-08-75	645	659	0.036	0.03569	49.38	46.5625	47.68	41	26	15		0.34	1.3			29.6	39.71	85.33	-8.38
Barrel 2	Mitchell	2008	M-08-75	659	671	0.056	0.05639	55.31	51.875	53.64	51	36	15		0.46	1.7			38.7	48.45	99.94	-4.31
Barrel 2	Mitchell	2008	M-08-75	671	683	0.102	0.1022	39.38	35	38.19	67	52	15		0.7	2.6			59.1	65.18	104.2	27.62
Barrel 2	Mitchell	2008	M-08-79	11	23	0.282	0.2821	94.38	85	93.82	55	40	15		0.52	1.9			43.2	48.70	98.22	-39.38
Barrel 2	Mitchell	2008	M-08-79	23	35	0.371	0.3711	88.75	76.5625	88.16	46	31	15		0.43	1.6			36.4	43.45	87.05	-42.75
Barrel 2	Mitchell	2008	M-08-79	35	47	0.222	0.2218	100.6	92.8125	99.74	50	35	15		0.48	1.8			40.9	45.20	91.63	-50.60
Barrel 2	Mitchell	2008	M-08-79	47	61	0.379	0.3790	104.7	92.1875	104.03	30	15	15		0.21	0.8			18.2	25.47	71.01	-74.70
Barrel 2	Mitchell	2008	M-08-79	382	399	0.153	0.1530	75.94	70.3125	75.09	64	49	15		0.79	2.9			66.0	44.70	90.49	-11.94
Barrel 2	Mitchell	2008	M-08-85	62	77	0.173	0.1727	70.62	64.375	69.77	51	36	15		0.38	1.4			31.8	48.45	81.32	-19.62
Barrel 2	Mitchell	2008	M-08-85	77	92.6	0.144	0.1441	77.19	71.5625	76.07	47	32	15		0.33	1.2			27.3	41.95	69.87	-30.19
Barrel 2	Mitchell	2008	M-08-85	92.6	103.5	0.052	0.05172	24.06	20.625	22.24	9	0	9		0.09	0.3			6.82	7.242	12.60	-15.06
Barrel 3	Mitchell	2008	M-08-80	183	195	0.171	0.1711	57.50	50.9375	56.28	160	145	15		1.53	5.6			127	112.1	214.8	102.50
Barrel 3	Mitchell	2008	M-08-80	195	206.2	0.408	0.4081	74.06	60.625	73.38	112	97	15		1.2	4.4			100	91.65	152.3	37.94
Barrel 3	Mitchell	2008	M-08-80	206.2	224.2	0.439	0.4386	82.81	68.4375	82.14	111	96	15		1.13	4.1			93.2	91.90	143.5	28.19
Barrel 3	Mitchell	2008	M-08-80	224.2	236.1	0.661	0.6609	96.9	75.625	96.28	67	52	15		0.68	2.5			56.9	53.44	101.1	-29.90
Barrel 3	Mitchell	2008	M-08-80	236.1	249.8	0.237	0.2371	66.88	58.4375	65.85	33	18	15		0.37	1.4			31.8	25.47	44.67	-33.88
Barrel 3	Mitchell	2008	M-08-80	249.8	267	0.248	0.2476	91.88	83.125	90.86	38	23	15		0.38	1.4			31.8	29.22	56.12	-53.88
Barrel 3	Mitchell	2008	M-08-80	267	283	0.515	0.5146	109	92.5	108.58	48	33	15		0.55	2			45.5	42.95	62.14	-61.00
Barrel 3	Mitchell	2008	M-08-80	366	380.3	0.374	0.3735	93.12	80.9375	92.61	46	31	15		0.48	1.8			40.9	38.96	54.98	-47.12
Barrel 3	Mitchell	2008	M-08-80	380.3	400	0.807	0.8065	173.1	147.5	172.70	53	38	15		0.54	2			45.5	45.45	65.57	-120.10
Barrel 4	Mitchell	2008	M-08-75	250.6	261	0.074	0.07433	46.56	42.8125	45.14	46	31	15		0.28	1			22.7	33.21	58.41	-0.56
Barrel 4	Mitchell	2008	M-08-75	261	276	0.085	0.08549	50.0	46.25	48.92	47	32	15		0.43	1.6			36.4	41.20	66.43	-3.00
Barrel 4	Mitchell	2008	M-08-75	276	291.05	0.029	0.02939	30.31	27.8125	28.73	39	24	15		0.39	1.4			31.8	36.21	60.71	8.69
Barrel 4	Mitchell	2008	M-08-75	750	766	0.254	0.2544	125.6	116.25	124.20	77	62	15		0.92	3.4			77.3	54.19	93.92	-48.60
Barrel 4	Mitchell	2008	M-08-75	766	782	0.441	0.4409	148.4	133.75	147.53	51	36	15		0.56	2			45.5	40.95	76.74	-97.40
Barrel 4	Mitchell	2008	M-08-75	782	798	0.082	0.08206	105.3	102.1875	104.75	57	42	15		0.58	2.1			47.8	49.70	93.06	-48.30
Barrel 4	Mitchell	2008	M-08-75	798	813	0.572	0.5723	121.2	102.8125	120.70	47	32	15		0.48	1.8			40.9	45.70	81.04	-74.20
Barrel 4	Mitchell		M-08-83	122	135	0.566	0.5658	156.9	138.75	156.43	58	43	15		0.62	2.3			52.3	47.20	76.17	-98.90
Barrel 4	Mitchell	2008	M-08-83	135	149	0.056	0.05557	130.6	127.5	129.24	49	34	15		0.51	1.9			43.2	41.20	78.17	-81.60
Barrel 4	Mitchell	2008	M-08-83	149	163	0.536	0.5358	156.9	139.6875	156.43	46	31	15		0.47	1.7			38.7	42.20	82.47	-110.90
Barrel 5	Mitchell	M-09-105_25	M-09-105	310.5	311.5	0.2760	0.2760	84.06	73.75	82.38	79	64.0	15	0.83	0.81	3.0	0.020	69.2	68.2	69.9	112.0	-5.1
Barrel 5	Mitchell	M-09-105_30	M-09-105	330.5	331.5	0.5339	0.5339	85.00	67.8125	84.50	52	37.0	15	0.50	0.50	1.8	0.000	41.7	40.9	46.0	91.3	-33.0
Barrel 5	Mitchell	M-09-105_31	M-09-105	334.5	335.5	0.5000	0.5000	65.94	49.6875	65.31	78	63.0	15	0.86	0.82	3.0	0.040	71.7	68.2	74.7	126.6	12.1
Barrel 5	Mitchell	M-09-105_32	M-09-105	338.5	339.5	0.3363	0.3363	106.60	95.625	106.13	120	105.0	15	1.37	1.30	4.8	0.070	114.2	109.0	113.6	160.4	13.4
Barrel 5	Mitchell	M-09-106_18	M-09-106	272.5	273.5	0.4886	0.4886	162.00	127.1875	142.46	34	19.0	15	0.38	0.34	1.2	0.040	31.7	27.3	53.9	92.2	-128.0
Barrel 5	Mitchell	M-09-106_19	M-09-106	276.5	277.5	0.2284	0.2284	162.00	147.8125	154.95	28	13.0	15	0.28	0.27	1.0	0.010	23.3	22.7	37.5	72.7	-134.0
Barrel 5	Mitchell	M-09-106_20	M-09-106	280.5	281.5	0.3086	0.3086	184.10	145	154.64	35	20.0	15	0.40	0.35	1.3	0.050	33.3	29.6	62.2	99.9	-149.1
Barrel 5	Mitchell	M-09-110_32	M-09-110	330.5	331.5	0.8970	0.8970	164.40	135.9375	163.97	9	0.0	9	0.01	0.05	0.2	-0.040	0.8	4.6	7.2	32.1	-155.4
Barrel 5	Mitchell	M-09-110_33	M-09-110	334.5	335.5	1.8374	1.8374	335.94	278.125	335.54	6	0.0	6	0.01	0.03	0.2	-0.040	0.8	4.6	6.2	13.2	-329.9
Barrel 5	Mitchell	M-09-110_34	M-09-110	338.5	339.5	1.8780	1.8780	228.40	169.375	228.06	6	0.0	6	0.01	0.03	0.1	-0.040	0.8	4.6	6.0	15.5	-222.4
Barrel 5	Mitchell	M-09-110_35	M-09-110	342.5	343.5	2.6428	2.6428	595.31	510.9375	593.53	5	0.0	5	0.01	0.03	0.1	-0.040	0.8	4.6	5.7	14.3	-590.3
Barrel 6	Mitchell	M-09-103_1	M-09-103	26.5	27.5	-0.0559	0.0000	83.12	83.125	83.13	18	3.0	15	0.95	0.16	0.6	0.790	79.2	13.6	14.5	95.1	-65.1
Barrel 6	Mitchell	M-09-103_2	M-09-103	51.5	52.5	0.1565	0.1565	101.60	95.9375	100.83	70	55.0	15	0.67	0.69	2.5	-0.020	55.8	56.9	35.7	101.4	-31.6
Barrel 6	Mitchell	M-09-103_3	M-09-103	55.5	56.5	0.0566	0.0566	38.12	34.6875	36.46	51	36.0	15	0.62	0.63	2.3	-0.010	51.7	52.3	31.5	105.9	12.9
Barrel 6	Mitchell	M-09-103_4	M-09-103	59.5	60.5	-0.1046	0.0000	42.50	42.5	42.50	63	48.0	15	0.77	0.84	3.1	-0.070	64.2	70.5	40.5	105.4	20.5
Barrel 6	Mitchell	M-09-103_5	M-09-103	63.5	64.5	-0.0481	0.0000	20.00	15.625	15.63	28	13.0	15	0.23	0.24	0.9	-0.010	19.2	20.5	18.5	89.6	8.0
Barrel 6	Mitchell	M-09-103_6	M-09-103	67.5	68.5	0.0390	0.0390	40.00	33.4375	34.66	24	9.0	15	0.17	0.18	0.7	-0.010	14.2	15.9	15.7	82.2	-16.0
Barrel 6	Mitchell	M-09-103_7	M-09-103	177.5	178.5	-0.0179	0.0000	95.31	20.625	20.63	33	18.0	15	0.30	0.32	1.2	-0.020	25.0	27.3	93.9	153.2	-62.3
Barrel 6	Mitchell	M-09-103_8	M-09-103	183.5	184.5	-0.0056	0.0000	127.50	30.3125	30.31	30	15.0	15	0.22	0.24	0.9	-0.020	18.3	20.5	113.4	172.7	-97.5
Barrel 6	Mitchell	M-09-103_9	M-09-103	187.5	188.5	0.4037	0.4037	140.30	31.875	44.49	38	23.0	15	0.01	0.34	1.2	-0.330	0.8	27.3	116.4	180.1	-102.3
Barrel 6	Mitchell	M-09-103_10	M-09-103	191.5	192.5	0.0988	0.0988	94.69	15.625	18.71	31	16.0	15	0.26	0.29	1.1	-0.030	21.7	25.0	94.7	157.5	-63.7
Barrel 6	Mitchell	M-09-103_11	M-09-103	195.5	196.5	0.0218	0.0218	122.20	32.1875	32.87	41	26.0	15	0.37	0.42	1.5	-0.050	30.8	34.1	113.6	185.3	-81.2
Barrel 6	Mitchell	M-09-103_14	M-09-103	205.5	206.5	-0.0156	0.0000	138.00	57.5	57.50	43	28.0	15	0.40	0.45	1.7	-0.050	33.3	38.7	103.1	172.7	-94.5

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	TNNP_ADJ (kg $CaCO_3$ /t)	SNNP (kg $CaCO_3$ /t)	SNNP_ADJ (kg $CaCO_3$ /t)	ICNNP (kg $CaCO_3$ /t)	TNPR	TNPR_ ADJ	SNPR	SNPR (S DEL CALC)	SNPR for graphs	SNPR_ADJ for graphs	ICNPR	Fizz Rating	Fizz Check	Ag (ppm)	Al (ppm)	Al (%)	As (ppm)	Ba (ppm)
Barrel 1	Mitchell	2008	M-08-75	170	186	-20.31	-3.98	-18.98	-2.102	-5.31	-20.310	1.08	0.91	1.08	0.68	0.9536	2	Disagree	1.18	69400	6.94	5.2	1400
Barrel 1	Mitchell	2008	M-08-75	186	204	-42.00	-25.33	-40.33	-25.0	-27.00	-42.000	0.55	0.48	0.55	0.19	0.500	2	Disagree	2.92	64500	6.45	3	1000
Barrel 1	Mitchell	2008	M-08-75	204	220	8.38	24.46	9.461	21.23	23.38	8.375	2.10	1.71	2.10	1.56	1.596	2	Disagree	1.27	65400	6.54	3.3	1060
Barrel 1	Mitchell	2008	M-08-75	220	230	-31.44	-15.11	-30.11	-21.13	-16.44	-31.440	0.89	0.79	0.89	0.66	0.7123	2	Disagree	1.31	65900	6.59	4.3	970
Barrel 1	Mitchell	2008	M-08-75	337	359	49.75	67.13	52.13	51.98	64.75	49.750	5.89	5.84	5.89	4.80	4.199	3	Disagree	0.28	76800	7.68	2	2830
Barrel 1	Mitchell	2008	M-08-75	359	379	35.25	53.99	38.99	32.65	50.25	35.250	3.61	3.16	3.61	2.93	2.136	3	Disagree	0.75	72400	7.24	5.8	3420
Barrel 1	Mitchell	2008	M-08-75	379	403	39.25	56.55	41.55	48.12	54.25	39.250	2.93	2.80	2.93	2.43	2.426	3	Disagree	1.19	70500	7.05	8.9	2720
Barrel 1	Mitchell	2008	M-08-75	403	437	40.81	58.82	43.82	35.59	55.81	40.810	3.17	2.72	3.17	2.66	1.957	3	Disagree	0.89	77100	7.71	14.7	2840
Barrel 1	Mitchell	2008	M-08-75	437	469	41.19	60.69	45.69	47.69	56.19	41.190	4.36	4.31	4.36	3.53	3.090	3	Disagree	0.53	75400	7.54	21.1	4030
Barrel 1	Mitchell	2008	M-08-75	469	502	24.69	44.38	29.38	37.00	39.69	24.690	5.18	5.18	5.18	3.76	3.416	3	Disagree	0.53	78100	7.81	6	4790
Barrel 1	Mitchell	2008	M-08-75	502	520	7.38	24.25	9.250	17.12	22.38	7.375	7.47	7.47	7.47	3.47	4.043	2	Disagree	0.22	81500	8.15	7.3	4870
Barrel 2	Mitchell	2008	M-08-75	645	659	-23.38	-6.68	-21.68	-19.81	-8.38	-23.380	0.88	0.86	0.88	0.56	0.5988	2	Disagree	2.02	68900	6.89	4.7	1470
Barrel 2	Mitchell	2008	M-08-75	659	671	-19.31	-2.64	-17.64	-16.65	-4.31	-19.310	0.98	0.95	0.98	0.69	0.6990	2	Disagree	1.64	77600	7.76	4.3	1440
Barrel 2	Mitchell	2008	M-08-75	671	683	12.62	28.81	13.81	19.76	27.62	12.620	1.91	1.75	1.91	1.49	1.502	2	Disagree	1.75	74800	7.48	3.7	1190
Barrel 2	Mitchell	2008	M-08-79	11	23	-54.38	-38.82	-53.81	-51.16	-39.38	-54.380	0.65	0.59	0.65	0.47	0.4579	2	Disagree	0.41	75500	7.55	5.7	340
Barrel 2	Mitchell	2008	M-08-79	23	35	-57.75	-42.16	-57.16	-52.36	-42.75	-57.750	0.60	0.52	0.60	0.40	0.4100	2	Disagree	0.49	76900	7.69	4.1	380
Barrel 2	Mitchell	2008	M-08-79	35	47	-65.60	-49.74	-64.74	-59.69	-50.62	-65.620	0.54	0.50	0.54	0.38	0.4068	2	Disagree	0.39	75500	7.55	6.7	350
Barrel 2	Mitchell	2008	M-08-79	47	61	-89.70	-74.03	-89.03	-86.49	-74.69	-89.690	0.33	0.29	0.33	0.16	0.1738	2	Disagree	0.54	75800	7.58	7.4	470
Barrel 2	Mitchell	2008	M-08-79	382	399	-26.94	-11.09	-26.09	-9.984	-11.94	-26.940	0.91	0.85	0.91	0.70	0.8685	2	Disagree	1	69900	6.99	4.6	730
Barrel 2	Mitchell	2008	M-08-85	62	77	-34.62	-18.77	-33.77	-38.79	-19.62	-34.620	0.79	0.73	0.79	0.56	0.4508	2	Disagree	1.95	74800	7.48	7.7	740
Barrel 2	Mitchell	2008	M-08-85	77	92.6	-45.19	-29.07	-44.07	-49.90	-30.19	-45.190	0.66	0.62	0.66	0.45	0.3536	2	Disagree	1.66	76500	7.65	10.5	680
Barrel 2	Mitchell	2008	M-08-85	92.6	103.5	-24.06	-13.24	-28.24	-17.24	-15.06	-30.060	0.44	0.405	0.436	0.001	0.2835	2	Disagree	0.81	71700	7.17	3.9	1640
Barrel 3	Mitchell	2008	M-08-80	183	195	87.50	103.72	88.72	69.86	102.50	87.500	3.14	2.84	3.14	2.85	2.215	3	Disagree	1.25	71700	7.17	11.8	810
Barrel 3	Mitchell	2008	M-08-80	195	206.2	22.94	38.62	23.62	26.00	37.94	22.940	1.85	1.53	1.85	1.60	1.351	3	Disagree	1.43	70300	7.03	18.2	510
Barrel 3	Mitchell	2008	M-08-80	206.2	224.2	13.19	28.86	13.86	10.43	28.19	13.190	1.62	1.35	1.62	1.40	1.126	3	Disagree	1.17	72400	7.24	36.6	490
Barrel 3	Mitchell	2008	M-08-80	224.2	236.1	-44.90	-29.28	-44.28	-40.0	-29.90	-44.900	0.89	0.70	0.89	0.69	0.587	3	Disagree	7.29	70800	7.08	77.2	390
Barrel 3	Mitchell	2008	M-08-80	236.1	249.8	-48.88	-32.85	-47.85	-35.04	-33.88	-48.880	0.56	0.50	0.56	0.31	0.4761	2	Disagree	0.54	64200	6.42	13.3	980
Barrel 3	Mitchell	2008	M-08-80	249.8	267	-68.88	-52.86	-67.86	-60.04	-53.88	-68.880	0.46	0.42	0.46	0.28	0.3466	2	Disagree	0.59	70100	7.01	53.8	530
Barrel 3	Mitchell	2008	M-08-80	267	283	-76.00	-60.58	-75.58	-63.9	-61.40	-76.400	0.52	0.44	0.52	0.36	0.416	2	Disagree	1.37	66100	6.61	157	230
Barrel 3	Mitchell	2008	M-08-80	366	380.3	-62.12	-46.61	-61.61	-52.19	-47.12	-62.120	0.57	0.50	0.57	0.38	0.4396	3	Disagree	1.02	64600	6.46	62.7	280
Barrel 3	Mitchell	2008	M-08-80	380.3	400	-135.10	-119.70	-134.7	-127.6	-120.10	-135.100	0.36	0.31	0.36	0.26	0.2627	3	Disagree	4.44	73200	7.32	126	150
Barrel 4	Mitchell	2008	M-08-75	250.6	261	-15.56	0.86	-14.14	-23.82	-0.56	-15.560	1.07	1.02	1.07	0.72	0.4884	3	Disagree	1.48	63700	6.37	7.2	1100
Barrel 4	Mitchell	2008	M-08-75	261	276	-18.00	-1.92	-16.92	-13.6	-3.00	-18.000	1.02	0.96	1.02	0.69	0.728	2	Disagree	1.85	64900	6.49	6.8	1050
Barrel 4	Mitchell	2008	M-08-75	276	291.05	-6.31	10.27	-4.731	1.527	8.69	-6.312	1.40	1.36	1.40	0.86	1.050	2	Disagree	1.78	65600	6.56	4.4	1740
Barrel 4	Mitchell	2008	M-08-75	750	766	-63.60	-47.20	-62.20	-48.30	-48.62	-63.620	0.66	0.62	0.66	0.53	0.6155	2	Disagree	0.69	70800	7.08	21.1	240
Barrel 4	Mitchell	2008	M-08-75	766	782	-112.40	-96.53	-111.5	-103.0	-97.44	-112.400	0.38	0.35	0.38	0.27	0.3064	2	Disagree	2.79	72500	7.25	51.6	390
Barrel 4	Mitchell	2008	M-08-75	782	798	-63.30	-47.75	-62.75	-57.55	-48.31	-63.310	0.56	0.54	0.56	0.41	0.4535	2	Disagree	2.08	75200	7.52	26.1	340
Barrel 4	Mitchell	2008	M-08-75	798	813	-89.20	-73.70	-88.70	-80.31	-74.25	-89.250	0.46	0.39	0.46	0.31	0.3376	2	Disagree	2.44	73100	7.31	36.5	330
Barrel 4	Mitchell		M-08-83	122	135	-113.90	-98.43	-113.4	-104.6	-98.88	-113.900	0.42	0.37	0.42	0.31	0.3334	2	Disagree	1.11	70200	7.02	71.9	180
Barrel 4	Mitchell	2008	M-08-83	135	149	-96.60	-80.24	-95.24	-87.41	-81.62	-96.620	0.38	0.38	0.38	0.27	0.3308	2	Disagree	1.31	74900	7.49	64.1	190
Barrel 4	Mitchell	2008	M-08-83	149	163	-125.90	-110.43	-125.4	-118.2	-110.90	-125.900	0.33	0.29	0.33	0.22	0.2465	2	Disagree	2.7	74800	7.48	69.1	180
Barrel 5	Mitchell	M-09-105_25	M-09-105	310.5	311.5	-20.1	-3.38	-18.4	-15.8	-5.1	-20.1	1.07	0.96	1.07	0.87	0.81	3	Disagree	1.03	72000	7.2	8.4	170
Barrel 5	Mitchell	M-09-105_30	M-09-105	330.5	331.5	-48.0	-32.50	-47.5	-44.1	-33.0	-48.0	0.77	0.62	0.77	0.55	0.48	3	Disagree	0.75	75600	7.56	8.9	260
Barrel 5	Mitchell	M-09-105_31	M-09-105	334.5	335.5	-2.9	12.69	-2.3	2.3	12.1	-2.9	1.57	1.19	1.57	1.27	1.04	3	Disagree	1.26	72200	7.22	5.7	430
Barrel 5	Mitchell	M-09-105_32	M-09-105	338.5	339.5	-1.6	13.87	-1.1	2.6	13.4	-1.6	1.25	1.13	1.25	1.10	1.02	3	Disagree	2.37	70100	7.01	24.9	160
Barrel 5	Mitchell	M-09-106_18	M-09-106	272.5	273.5	-144.0	-108.46	-123.5	-135.0	-128.0	-144.0	0.27	0.24	0.27	0.15	0.17	2	Disagree	3.58	68800	6.88	69.5	60
Barrel 5	Mitchell	M-09-106_19	M-09-106	276.5	277.5	-150.0	-126.95	-141.9	-140.0	-134.0	-150.0	0.19	0.18	0.19	0.09	0.14	2	Disagree	3.64	72600	7.26	60	70
Barrel 5	Mitchell	M-09-106_20	M-09-106	280.5	281.5	-164.1	-119.64	-134.6	-154.5	-149.1	-164.1	0.24	0.23	0.24	0.14	0.16	2	Disagree	3.38	63400	6.34	29.1	60
Barrel 5	Mitchell	M-09-110_32	M-09-110	330.5	331.5	-170.4	-154.97	-170.0	-159.8	-155.4	-170.4	0.07	0.05	0.07	0.00	0.03	1	Disagree	2.03	75200	7.52	2.9	130
Barrel 5	Mitchell	M-09-110_33	M-09-110	334.5	335.5	-344.9	-329.54	-344.5	-331.4	-329.9	-344.9	0.02	0.02	0.02	0.00	0.01	1	Disagree	1.01	63400	6.34	3.7	110
Barrel 5	Mitchell	M-09-110_34	M-09-110	338.5	339.5	-237.4	-222.06	-237.1	-223.9	-222.4	-237.4	0.04	0.03	0.04	0.00	0.02	1	Disagree	1.42	70300	7.03	5.4	70
Barrel 5	Mitchell	M-09-110_35	M-09-110	342.5	343.5	-605.3	-588.53	-603.5	-590.8	-590.3	-605.3	0.01	0.01	0.01	0.00	0.01	1	Disagree	1.35	49000	4.9	18.9	310
Barrel 6	Mitchell	M-09-103_1	M-09-103	26.5	27.5	-80.1	-65.13	-80.1	-69.5	-65.1	-80.1	0.22	0.22	0.22	0.04	0.16	1	Disagree	1.85	79600	7.96	11	1110
Barrel 6	Mitchell	M-09-103_2	M-09-103	51.5	52.5	-46.6	-30.83	-45.8	-44.7	-31.6	-46.6	0.73	0.69	0.73	0.57	0.56	2	Disagree	1.95	79400	7.94	9.1	580
Barrel 6	Mitchell	M-09-103_3	M-09-103	55.5	56.5	-2.1	14.54	-0.5	14.2	12.9	-2.1	1.47	1.40	1.47	1.04	1.37	2	Disagree	1.31	80000	8	4.2	1860
Barrel 6	Mitchell	M-09-103_4	M-09-103	59.5	60.5	5.5	20.50	5.5	28.0	20.5	5.5	1.48	1.48	1.48	1.13	1.66	2	Disagree	1.07	81600	8.16	6.1	2770
Barrel 6	Mitchell	M-09-103_5	M-09-103	63.5	64.5	-7.0	12.38	-2.6	0.5	8.0	-7.0	1.79	1.79	1.79	0.83	1.02	2	Disagree	1.02	82200	8.22	3.6	4630
Barrel 6	Mitchell	M-09-103_6	M-09-103	67.5	68.5	-31.0	-10.66	-25.7	-24.1	-16.0	-31.0	0.72	0.69	0.72	0.27	0.40	2	Disagree	1.52	79900	7.99	3.5	3900
Barrel 6	Mitchell	M-09-103_7	M-09-103	177.5	178.5	-77.3	12.38	-2.6	-68.0	-62.3	-77.3	1.60	1.60	1.60	0.87	0.29	2	Disagree	1.24	63600	6.36	9.3	340
Barrel 6	Mitchell	M-09-103_8	M-09-103	183.5	184.5	-112.5	-0.31	-15.3	-107.0	-97.5	-112.5	0.99	0.99	0.99	0.49	0.16	2	Disagree	0.99	71200	7.12	6.9	240
Barrel 6	Mitchell	M-09-103_9	M-09-103	187.5	188.5	-117.3	-6.49	-21.5	-113.0	-102.3	-117.3	1.19	0.85	1.19	0.72	0.19	2	Disagree	1.08	65800	6.58	6.3	270
Barrel 6	Mitchell	M-09-103_10	M-09-103	191.5	192.5	-78.7	12.29	-2.7	-69.7	-63.7	-78.7	1.98	1.66	1.98	1.02	0.26	2	Disagree	0.86	73000	7.3	2.8	480
Barrel 6	Mitchell	M-09-103_11	M-09-103	195.5	196.5	-96.2	8.13	-6.9	-88.1	-81.2	-96.2	1.27	1.25	1.27	0.81	0.28	2	Disagree	0.84	66600	6.66	4.1	350
Barrel 6	Mitchell	M-09-103_14	M-09-103	205.5	206.5	-110.0	-14.50	-29.5	-98.8	-94.5	-110.0	0.75	0.75	0.75	0.49	0.28	2	Disagree	0.83	65700	6.57	4.8	240

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Be (ppm)	Bi (ppm)	Ca (ppm)	Ca (%)	Cd (ppm)	Ce (ppm)	Co (ppm)	Cr (ppm)	Cs (ppm)	Cu (ppm)	Fe (ppm)	Fe (%)	Ga (ppm)	Ge (ppm)	Hf (ppm)	Hg (ppm)	In (ppm)	K (ppm)	K (%)	La (ppm)	Li (ppm)	Mg (ppm)	Mg (%)
Barrel 1	Mitchell	2008	M-08-75	170	186	1.65	0.58	12200	1.22	0.08	8.09	9.3	7	2.04	2100	29100	2.91	24.5	0.14	0.6	0.02	0.078	44400	4.44	5.1	14.8	5300	0.53
Barrel 1	Mitchell	2008	M-08-75	186	204	1.96	1.65	6900	0.69	0.08	6.94	9.6	4	1.21	2930	50600	5.06	28.9	0.18	1.1	0.02	0.127	46400	4.64	4.3	8.5	3400	0.34
Barrel 1	Mitchell	2008	M-08-75	204	220	1.91	0.53	20400	2.04	0.07	7.65	6.4	5	2.16	1720	29700	2.97	26.5	0.16	0.8	0.01	0.078	46700	4.67	4.1	18.2	10400	1.04
Barrel 1	Mitchell	2008	M-08-75	220	230	1.77	1.03	17300	1.73	0.04	7.37	10.9	3	1.93	1600	32800	3.28	25.9	0.17	0.8	0.03	0.079	49500	4.95	4.1	8.6	4700	0.47
Barrel 1	Mitchell	2008	M-08-75	337	359	2.11	0.34	29100	2.91	0.05	22.2	6.4	3	4.23	231	33200	3.32	26.4	0.17	1.2	0.01	0.058	52400	5.24	11.3	15.6	7000	0.7
Barrel 1	Mitchell	2008	M-08-75	359	379	1.93	0.44	25500	2.55	0.17	22.1	6.7	3	2.81	848	32300	3.23	23.8	0.16	1.1	0.05	0.078	48000	4.8	11.3	13.2	6500	0.65
Barrel 1	Mitchell	2008	M-08-75	379	403	1.79	0.25	29400	2.94	0.3	21.6	7.8	4	2.98	242	32200	3.22	24.2	0.16	1.1	0.07	0.053	50000	5	10.7	15.2	5800	0.58
Barrel 1	Mitchell	2008	M-08-75	403	437	1.81	0.48	30400	3.04	0.06	25.2	10.1	3	2.46	671	36000	3.6	25.7	0.16	1.3	0.02	0.08	50400	5.04	13.1	16.2	7500	0.75
Barrel 1	Mitchell	2008	M-08-75	437	469	1.92	0.27	25100	2.51	0.1	21.7	7	4	1.56	464	29100	2.91	25.4	0.15	1.2	0.02	0.07	49900	4.99	11	9.5	4900	0.49
Barrel 1	Mitchell	2008	M-08-75	469	502	2.2	0.48	26700	2.67	0.11	25.2	8.2	3	1.16	466	27900	2.79	25	0.14	1.1	0.01	0.07	47200	4.72	13.2	7.2	4800	0.48
Barrel 1	Mitchell	2008	M-08-75	502	520	2.25	0.18	21600	2.16	0.1	30.2	6.8	3	1.2	231	27900	2.79	25.5	0.14	1	0.01	0.056	45100	4.51	16.3	8.1	5900	0.59
Barrel 2	Mitchell	2008	M-08-75	645	659	1.81	1.24	15900	1.59	0.38	8.58	23.5	29	4.81	2350	51900	5.19	17.15	0.13	0.4	0.05	0.087	43900	4.39	5	43.1	13900	1.39
Barrel 2	Mitchell	2008	M-08-75	659	671	1.13	0.73	19400	1.94	0.15	9.06	28	29	4.94	2300	57100	5.71	18.55	0.15	0.4	0.04	0.072	51600	5.16	5	37.2	15500	1.55
Barrel 2	Mitchell	2008	M-08-75	671	683	1.15	0.87	26100	2.61	0.11	10.4	19.6	18	3.52	2290	49300	4.93	17.45	0.16	0.7	0.04	0.088	51800	5.18	6.1	25.6	10300	1.03
Barrel 2	Mitchell	2008	M-08-79	11	23	1.19	0.38	19500	1.95	0.07	10.85	18.6	15	4.45	906	40000	4	16.65	0.12	0.5	0.04	0.033	46700	4.67	6	18.4	14800	1.48
Barrel 2	Mitchell	2008	M-08-79	23	35	1.19	0.38	17400	1.74	0.04	11.25	18.9	11	3.66	1085	38300	3.83	17.2	0.12	0.5	0.02	0.051	52300	5.23	6.4	16.5	13000	1.3
Barrel 2	Mitchell	2008	M-08-79	35	47	1.49	0.49	18100	1.81	0.02	9.57	16.1	16	4.99	818	40800	4.08	17.55	0.11	0.5	0.03	0.051	50200	5.02	5.4	17.4	13900	1.39
Barrel 2	Mitchell	2008	M-08-79	47	61	1.35	0.36	10200	1.02	<0.02	9.67	13.8	13	4.31	633	39400	3.94	17.35	0.14	0.5	0.03	0.068	53200	5.32	5.3	17.8	14600	1.46
Barrel 2	Mitchell	2008	M-08-79	382	399	1.28	0.38	17900	1.79	0.06	11.45	17.4	13	2.43	2270	47700	4.77	17.3	0.13	0.3	0.02	0.062	50000	5	6.8	16.2	13700	1.37
Barrel 2	Mitchell	2008	M-08-85	62	77	3.49	3.14	19400	1.94	0.27	28.1	11.5	11	1.97	779	38400	3.84	19.05	0.13	1.4	0.02	0.061	63800	6.38	19.2	14.4	9000	0.9
Barrel 2	Mitchell	2008	M-08-85	77	92.6	2.42	4.09	16800	1.68	0.23	24.9	10.2	9	1.56	766	36500	3.65	20.3	0.13	1.2	0.01	0.084	56800	5.68	16.1	13	7600	0.76
Barrel 2	Mitchell	2008	M-08-85	92.6	103.5	3.02	2.2	2900	0.29	0.42	11.3	0.6	1	1.26	79.3	10500	1.05	38	0.06	3.3	0.04	0.012	53600	5.36	9.1	3.8	1500	0.15
Barrel 3	Mitchell	2008	M-08-80	183	195	1.59	0.69	44900	4.49	0.21	30.1	10.8	21	4.9	623	39500	3.95	19.1	0.13	1.5	0.01	0.08	15400	1.54	15.2	28	30100	3.01
Barrel 3	Mitchell	2008	M-08-80	195	206.2	1.63	0.27	36700	3.67	0.13	25.6	11.7	18	5.11	693	38700	3.87	18.25	0.13	1.4	0.01	0.056	20700	2.07	12.1	22.6	16500	1.65
Barrel 3	Mitchell	2008	M-08-80	206.2	224.2	1.57	0.25	36800	3.68	0.16	16.8	13.7	10	5.45	566	37200	3.72	18.8	0.09	0.8	0.03	0.058	38200	3.82	8.3	16.8	13300	1.33
Barrel 3	Mitchell	2008	M-08-80	224.2	236.1	2.06	4.7	21400	2.14	0.52	22.1	10.9	27	6.05	786	35900	3.59	20.9	0.12	1.3	0.51	0.059	35900	3.59	10.9	24.3	13900	1.39
Barrel 3	Mitchell	2008	M-08-80	236.1	249.8	1.43	0.82	10200	1.02	0.19	13.85	8.1	25	2.9	63.6	20300	2.03	16.35	0.09	0.5	0.05	0.016	46600	4.66	7.5	24.4	5400	0.54
Barrel 3	Mitchell	2008	M-08-80	249.8	267	1.41	1.58	11700	1.17	0.04	29.2	17.6	43	5.06	316	28300	2.83	20.8	0.12	0.9	0.02	0.04	33600	3.36	15.6	32	7900	0.79
Barrel 3	Mitchell	2008	M-08-80	267	283	1.33	4.38	17200	1.72	0.08	18.5	27.2	23	3.28	171.5	34500	3.45	17.45	0.12	0.7	0.02	0.098	46300	4.63	10.3	20.6	4500	0.45
Barrel 3	Mitchell	2008	M-08-80	366	380.3	0.77	4.73	15600	1.56	0.11	15.5	8.4	39	2.96	60.9	30800	3.08	14.5	0.11	0.5	0.02	0.068	59400	5.94	8.8	9.8	3600	0.36
Barrel 3	Mitchell	2008	M-08-80	380.3	400	0.75	29.4	18200	1.82	0.23	19.8	16.3	34	3.83	18.5	49300	4.93	15.3	0.19	0.8	0.02	0.038	50300	5.03	8.9	11.8	4700	0.47
Barrel 4	Mitchell	2008	M-08-75	250.6	261	1.45	1.09	13300	1.33	0.06	10.05	10.6	10	2.35	1900	35700	3.57	15	0.12	0.4	0.03	0.061	51500	5.15	6.4	15.2	7100	0.71
Barrel 4	Mitchell	2008	M-08-75	261	276	1.52	0.99	16500	1.65	0.09	9.91	10.9	16	2.74	1800	36200	3.62	14.85	0.11	0.4	0.05	0.1	45500	4.55	5.8	17.4	6700	0.67
Barrel 4	Mitchell	2008	M-08-75	276	291.05	1.4	0.73	14500	1.45	0.11	11.5	7.6	13	2.64	1445	30900	3.09	15.05	0.1	0.5	0.04	0.07	49900	4.99	7.2	16.1	6700	0.67
Barrel 4	Mitchell	2008	M-08-75	750	766	1.81	0.55	21700	2.17	0.22	17.9	12.1	10	4.43	238	42100	4.21	16.05	0.13	0.7	0.03	0.038	37200	3.72	9.3	14.6	11100	1.11
Barrel 4	Mitchell	2008	M-08-75	766	782	1.3	0.89	16400	1.64	3.5	18.85	11.3	7	4.67	121.5	45000	4.5	15.2	0.16	0.6	0.38	0.18	41600	4.16	9.7	11.2	10400	1.04
Barrel 4	Mitchell	2008	M-08-75	782	798	1.11	0.73	19900	1.99	1.82	18.6	12.2	11	4.84	128	42200	4.22	16.45	0.13	0.7	0.12	0.067	38600	3.86	9.7	13.6	12600	1.26
Barrel 4	Mitchell	2008	M-08-75	798	813	1.01	0.23	18300	1.83	0.55	16.2	12.3	6	4.45	151	42400	4.24	15	0.14	0.6	0.08	0.02	39900	3.99	8.2	11.1	10000	1
Barrel 4	Mitchell		M-08-83	122	135	1.25	1.34	18900	1.89	1.02	15.3	10.9	12	2.74	292	44600	4.46	15.7	0.16	0.7	0.05	0.076	45200	4.52	8.4	13.8	7700	0.77
Barrel 4	Mitchell	2008	M-08-83	135	149	1.18	1.17	16500	1.65	5.09	16.15	10.9	7	3.09	160	42900	4.29	16.4	0.13	0.7	0.39	0.432	38100	3.81	7.8	12.6	10800	1.08
Barrel 4	Mitchell	2008	M-08-83	149	163	1.14	3.12	16900	1.69	11.85	15.85	12.4	8	4.09	191	45800	4.58	16.45	0.14	0.5	0.56	0.443	37000	3.7	7.8	12.5	11900	1.19
Barrel 5	Mitchell	M-09-105_25	M-09-105	310.5	311.5	0.67	0.28	28000	2.8	0.67	21.9	13.5	3	2.78	1110	39400	3.94	15.3	0.12	0.4	0.01	0.079	27900	2.79	11.8	14.8	11100	1.11
Barrel 5	Mitchell	M-09-105_30	M-09-105	330.5	331.5	1.17	0.17	18400	1.84	0.32	21.6	12.2	4	4.93	793	44100	4.41	17.95	0.14	0.5	0.01	0.04	35200	3.52	10.9	17.2	13500	1.35
Barrel 5	Mitchell	M-09-105_31	M-09-105	334.5	335.5	1.18	0.08	29900	2.99	0.29	20.9	14.3	3	6.13	882	40600	4.06	17.05	0.13	0.4	<0.1	0.031	38200	3.82	10.9	18.8	14300	1.43
Barrel 5	Mitchell	M-09-105_32	M-09-105	338.5	339.5	1.3	0.1	45500	4.55	0.56	20.9	12.7	4	7.46	808	42800	4.28	16.3	0.15	0.5	0.01	0.041	37500	3.75	11.1	13.7	10500	1.05
Barrel 5	Mitchell	M-09-106_18	M-09-106	272.5	273.5	1.16	1.3	21600	2.16	0.78	21.5	16.9	5	6.05	1040	53400	5.34	16.7	0.18	0.4	0.03	0.229	38900	3.89	11.5	12	10600	1.06
Barrel 5	Mitchell	M-09-106_19	M-09-106	276.5	277.5	1.2	0.89	15000	1.5	0.76	20.3	14.7	4	6.15	1305	54000	5.4	16.5	0.18	0.4	0.03	0.21	41500	4.15	10.4	11.4	10400	1.04
Barrel 5	Mitchell	M-09-106_20	M-09-106	280.5	281.5	1.04	1.47	24900	2.49	0.32	12.7	7.6	3	4.7	1610	54400	5.44	14.15	0.18	0.3	0.01	0.159	34800	3.48	6.3	11	10000	1
Barrel 5	Mitchell	M-09-110_32	M-09-110	330.5	331.5	1.78	0.64	2900	0.29	0.23	28.3	10.5	4	4.09	1180	47100	4.71	20.3	0.18	0.8	0.01	0.112	32500	3.25	13.9	11.2	8300	0.83
Barrel 5	Mitchell	M-09-110_33	M-09-110	334.5	335.5	0.72	0.6	2500	0.25	0.18	9.62	16.7	5	1.96	117.5	85000	8.5	9.82	0.24	0.5	0.01	0.033	26600	2.66	4.2	3	2100	0.21
Barrel 5	Mitchell	M-09-110_34	M-09-110	338.5	339.5	0.66	1.04	2400	0.24	<0.02	24.9	11.1	5	2.42	194	63500	6.35	10.1	0.16	0.6	<0.01	0.043	30800	3.08	12.9	3.4	3000	0.3
Barrel 5	Mitchell	M-09-110_35	M-09-110	342.5	343.5	0.38	0.95	2300	0.23	0.05	6.63	31.9	5	1.75	71.7	162500	16.25	6.23	0.31	0.3	0.01	0.038	19100	1.91	3	4.6	2700	0.27
Barrel 6	Mitchell	M-09-103_1	M-09-103	26.5	27.5	1.09	0.09	5800	0.58	0.78	6.77	22.3	4	6.92	1015	80900	8.09	17.95	0.2	0.5	0.02	0.04	30700	3.07	2.7	39.7	27400	2.74
Barrel 6	Mitchell	M-09-103_2	M-09-103	51.5	52.5	1.02	0.06	14300	1.43	1.11	23.8	17.3	4	4.84	625	57800	5.78	18.05	0.18	0.5	0.01	0.038	26300	2.63	12.1	25.8	21100	2.11
Barrel 6	Mitchell	M-09-103_3	M-09-103	55.5	56.5	1.14	0.09	12600	1.26	1.08	27.2	17.5	4	5.14	616	46500	4.65	19.4	0.16	0.5	0.01	0.035	28100	2.81	15	33.9	24400	2.44
Barrel 6	Mitchell	M-09-103_4	M-09-103	59.5	60.5	1.06	0.08	16200	1.62	1.34	24.6	15.5	4	4.68	572	43900	4.39	16.7	0.15	0.5	0.01	0.032	28200	2.82	13.5	23.5	20600	2.06
Barrel 6	Mitchell	M-09-103_5	M-09-103	63.5	64.5	0.92	0.04	7400	0.74	0.53	25.6	13.7	6	4.48	547	54500	5.45	18.1	0.15	0.5	0.01	0.042	28500	2.85	13.9	31.9	23900	2.39
Barrel 6	Mitchell	M-09-103_6	M-09-103	67.5	68.5	1.04	0.13	6300	0.63	0.39	24.1	20.7	4	4.54	932	56900	5.69	18.5	0.16	0.5	0.1	0.064	30000	3	12.7	31.1	22400	2.24
Barrel 6	Mitchell	M-09-103_7	M-09-103	177.5	178.5	0.91	0.08	37600	3.76	0.34	14.7	12.7	10	3.54	456	37800	3.78	14.25	0.11	0.5	0.02	0.035	20800	2.08	7.5	18.9	15900	1.59
Barrel 6	Mitchell	M-09-103_8	M-09-103	183.5	184.5	1.01	0.06	45400	4.54	0.57	18.95	11	8	3.77	399	36500	3.65	15.4	0.12	0.5	0.01	0.025	23500	2.35	10	19	14900	1.49
Barrel 6	Mitchell	M-09-103_9	M-09-103	187.5	188.5	0.85	0.07	46600	4.66	0.84	20.8	12.1	8	3.05	609	32800	3.28	14.55	0.13	0.5	0.01	0.034	17200	1.72	12.1	18.5	16300	1.63
Barrel 6	Mitchell	M-09-103_10	M-09-103	191.5	192.5	0.74	0.04	37900	3.79	0.5	20.3	10.9	10	3.32	450	39100	3.91	15.95	0.14	0.6	0.01	0.036	17800	1.78	11.2	19.6	17100	1.71
Barrel 6	Mitchell	M-09-103_11	M-09-103	195.5	196.5	0.92	0.07	45500	4.55	0.54	15.7	11.7	10	4.53	448	37000	3.7	15.7	0.13	0.6	0.01	0.032	28000	2.8	7.5	21.3	19200	1.92
Barrel 6	Mitchell	M-09-103_14	M-09-103	205.5	206.5	0.84	0.05	41300	4.13	0.34	17.8	14.1	12	4.46	648	38400	3.84	14	0.13	0.6	0.01	0.032	25000	2.5	9.7	17.5	19000	1.9

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Mn (ppm)	Mo (ppm)	Na (ppm)	Na (%)	Nb (ppm)	Ni (ppm)	P (%)	Pb (ppm)	Rb (ppm)	Re (ppm)	S (ppm)	S (%)	Sb (ppm)	Sc (ppm)	Se (ppm)	Sn (ppm)	Sr (ppm)	Ta (ppm)	Te (ppm)	Th (ppm)	Ti (ppm)	Ti (%)	Tl (ppm)
Barrel 1	Mitchell	2008	M-08-75	170	186	376	83.8	15200	1.52	12.7	4.2	0.085	11.9	101.5	0.136	14700	1.47	2.67	11.6	9	2.2	168	0.5	0.2	4.9	1460.0	0.146	0.75
Barrel 1	Mitchell	2008	M-08-75	186	204	223	89.1	17600	1.76	11.4	3.1	0.036	14.9	97.5	0.163	16900	1.69	1.95	9.4	10	2.5	120.5	0.46	0.49	10.4	970.00	0.097	0.53
Barrel 1	Mitchell	2008	M-08-75	204	220	613	28.6	11400	1.14	13.2	2.8	0.07	9.2	101	0.089	11500	1.15	2.03	11.7	5	2.4	152	0.48	0.18	7.3	1160.0	0.116	0.66
Barrel 1	Mitchell	2008	M-08-75	220	230	427	35.9	16400	1.64	12	2.8	0.065	11.7	101.5	0.084	24100	2.41	1.91	9	9	2.2	169.5	0.46	0.55	5.7	1150.0	0.115	0.64
Barrel 1	Mitchell	2008	M-08-75	337	359	710	12.15	23700	2.37	11.9	2.1	0.111	7.8	119.5	0.017	5700	0.57	2.56	13.3	3	1.8	398	0.64	0.14	4.4	2320.0	0.232	0.66
Barrel 1	Mitchell	2008	M-08-75	359	379	617	45.2	24000	2.4	10.7	2.2	0.091	36.9	104.5	0.083	9900	0.99	4.12	11.1	4	1.8	488	0.56	0.18	4.4	1930.0	0.193	0.64
Barrel 1	Mitchell	2008	M-08-75	379	403	764	14.9	24100	2.41	10.9	2.6	0.104	20.2	93.8	0.028	11700	1.17	5.58	12.2	3	1.8	503	0.58	0.13	3.7	2100	0.21	0.77
Barrel 1	Mitchell	2008	M-08-75	403	437	880	24.5	28000	2.8	11.4	2.5	0.113	12.3	103	0.033	12600	1.26	2.51	13.5	4	2	465	0.6	0.44	4.2	2240.0	0.224	0.66
Barrel 1	Mitchell	2008	M-08-75	437	469	696	18.6	32200	3.22	11.3	2.7	0.103	10.6	94.6	0.028	7700	0.77	2.16	10.2	3	1.8	527	0.58	0.2	4.3	1910.0	0.191	0.56
Barrel 1	Mitchell	2008	M-08-75	469	502	748	22.3	34500	3.45	11.9	2.3	0.094	15.4	90.6	0.027	4900	0.49	2.02	10	3	1.5	896	0.62	0.11	4.9	1920.0	0.192	0.46
Barrel 1	Mitchell	2008	M-08-75	502	520	586	17.75	35700	3.57	12.7	2.8	0.101	21.5	90.6	0.017	1900	0.19	1.88	9.9	3	1.5	1120	0.67	0.05	5.4	2040.0	0.204	0.42
Barrel 2	Mitchell	2008	M-08-75	645	659	578	6.79	25000	2.5	8.9	21.8	0.138	14.2	130	0.021	15900	1.59	1.53	22.7	13	1.8	257	0.37	0.18	1	2250.0	0.225	0.58
Barrel 2	Mitchell	2008	M-08-75	659	671	723	16.9	26900	2.69	9.7	18.9	0.168	15.4	138.5	0.043	18400	1.84	1.42	22.4	12	1.7	248	0.43	0.2	1.1	2960.0	0.296	0.62
Barrel 2	Mitchell	2008	M-08-75	671	683	910	16	24500	2.45	8.3	13.7	0.142	16.5	154.5	0.043	13300	1.33	1.7	22.6	10	2	227	0.43	0.19	1.3	2690.0	0.269	0.64
Barrel 2	Mitchell	2008	M-08-79	11	23	411	42.8	16900	1.69	7.2	8.3	0.165	6.2	135.5	0.093	29800	2.98	2.53	23.9	10	1	228	0.4	0.17	1.4	2580.0	0.258	0.9
Barrel 2	Mitchell	2008	M-08-79	23	35	394	45.9	19200	1.92	6.7	8.1	0.155	4.9	143	0.079	29100	2.91	1.65	23.5	11	1.2	250	0.38	0.15	1.5	2320.0	0.232	0.97
Barrel 2	Mitchell	2008	M-08-79	35	47	463	66.1	15400	1.54	7	7.4	0.15	5	146.5	0.101	33200	3.32	1.93	22.8	10	1.4	191.5	0.39	0.21	1.4	2390.0	0.239	1.03
Barrel 2	Mitchell	2008	M-08-79	47	61	386	93.8	16100	1.61	6.4	7.4	0.157	4.6	146	0.138	32400	3.24	1.69	22.3	11	1.7	156	0.37	0.32	1.4	2280.0	0.228	1.11
Barrel 2	Mitchell	2008	M-08-79	382	399	680	51.2	16000	1.6	6.4	5.4	0.145	6	121.5	0.114	23800	2.38	1.19	21.6	9	1.4	184.5	0.33	0.22	1.3	2130.0	0.213	0.69
Barrel 2	Mitchell	2008	M-08-85	62	77	1165	23.1	11100	1.11	10.9	8.6	0.113	124.5	135	0.063	23000	2.3	1.77	12.6	10	1.5	226	0.55	0.14	3.5	2570.0	0.257	1.34
Barrel 2	Mitchell	2008	M-08-85	77	92.6	1090	9.75	21700	2.17	11.2	4.6	0.118	86	124.5	0.016	25800	2.58	1.49	11.9	12	2.2	228	0.52	0.2	2.7	2300	0.23	1.19
Barrel 2	Mitchell	2008	M-08-85	92.6	103.5	407	4.56	14500	1.45	17.6	0.6	0.004	81	103.5	0.005	8700	0.87	1.35	0.7	4	1.4	123	0.51	0.31	13.9	350.00	0.035	1.32
Barrel 3	Mitchell	2008	M-08-80	183	195	1990	34.1	30700	3.07	5.3	22.1	0.08	23.1	70.3	0.073	19200	1.92	3.72	14.2	13	1.6	315	0.38	0.12	3.7	2880.0	0.288	0.64
Barrel 3	Mitchell	2008	M-08-80	195	206.2	1715	59.5	28100	2.81	4.5	15.9	0.076	24	95.8	0.124	24900	2.49	6.3	12.8	16	1.6	211	0.32	0.09	3	2650.0	0.265	0.91
Barrel 3	Mitchell	2008	M-08-80	206.2	224.2	1450	24	17700	1.77	6	7.6	0.122	42.3	132	0.055	26200	2.62	6.71	15.2	9	1.2	220	0.34	0.6	2	2350.0	0.235	1.36
Barrel 3	Mitchell	2008	M-08-80	224.2	236.1	1245	18.65	19900	1.99	6.6	18.8	0.078	72.3	127.5	0.047	32000	3.2	88.6	12.1	14	1.4	167.5	0.37	0.87	3.9	2480.0	0.248	1.58
Barrel 3	Mitchell	2008	M-08-80	236.1	249.8	555	30.5	16600	1.66	3.2	10.1	0.045	31	125	0.152	20500	2.05	5.17	6.8	12	1.6	140.5	0.23	0.41	2.1	1710.0	0.171	1.64
Barrel 3	Mitchell	2008	M-08-80	249.8	267	496	18.7	37300	3.73	5.5	44.1	0.111	17	116	0.074	28500	2.85	4.35	14	12	1	213	0.36	1	2.6	3150.0	0.315	1.19
Barrel 3	Mitchell	2008	M-08-80	267	283	767	54.1	20500	2.05	3.4	20.6	0.051	54.1	138	0.142	36300	3.63	6.35	8.3	17	1.1	207	0.24	1.94	1.9	1970.0	0.197	1.35
Barrel 3	Mitchell	2008	M-08-80	366	380.3	819	11.55	11100	1.11	2.5	17.5	0.057	20.7	154	0.009	31600	3.16	4.46	8.2	9	1	175	0.18	2.75	1.5	1480.0	0.148	1.67
Barrel 3	Mitchell	2008	M-08-80	380.3	400	786	32.2	20400	2.04	3.9	26.8	0.094	55.8	109.5	0.035	50900	5.09	4.89	11.1	15	1.2	209	0.25	4.62	2.5	2530.0	0.253	1.79
Barrel 4	Mitchell	2008	M-08-75	250.6	261	439	23	13300	1.33	10	5.3	0.154	14.7	97.1	0.047	16300	1.63	2.53	15.7	6	2.5	123.5	0.33	0.27	2.1	1840.0	0.184	0.61
Barrel 4	Mitchell	2008	M-08-75	261	276	478	18.7	18600	1.86	10.1	6.1	0.134	17.6	113.5	0.024	16400	1.64	2.26	17.2	7	2.6	148.5	0.35	0.33	1.4	2100	0.21	0.62
Barrel 4	Mitchell	2008	M-08-75	276	291.05	464	7.61	16300	1.63	8.9	4.2	0.11	12.8	128	0.013	10200	1.02	1.98	13.6	5	1.8	157	0.37	0.35	1.8	1610.0	0.161	0.62
Barrel 4	Mitchell	2008	M-08-75	750	766	674	6.59	19200	1.92	6.4	5.2	0.135	16.4	122	0.01	39600	3.96	6.65	17	7	1.4	234	0.38	0.31	2.6	2240.0	0.224	1.95
Barrel 4	Mitchell	2008	M-08-75	766	782	504	3.05	7400	0.74	5.9	3.4	0.139	35.5	143.5	0.002	45300	4.53	40	18.8	9	1.4	230	0.34	0.72	2.9	2160.0	0.216	3
Barrel 4	Mitchell	2008	M-08-75	782	798	669	2.46	14800	1.48	6.7	3.3	0.139	56.7	121	<0.002	34000	3.4	17.95	18.7	8	1.2	231	0.4	0.38	2.8	2490.0	0.249	2.9
Barrel 4	Mitchell	2008	M-08-75	798	813	503	6.15	10300	1.03	4.9	3.4	0.138	15.1	122.5	0.007	38800	3.88	25.5	17.7	10	1.2	188.5	0.3	0.45	2.6	2070.0	0.207	2.83
Barrel 4	Mitchell		M-08-83	122	135	647	24.8	21300	2.13	6.6	5.3	0.132	39.6	111.5	0.065	46900	4.69	6.06	17.8	11	1.6	215	0.37	0.58	2.1	2220.0	0.222	1.9
Barrel 4	Mitchell	2008	M-08-83	135	149	578	7.16	21800	2.18	6.3	3.4	0.141	56.1	107.5	0.012	45200	4.52	27.1	18	8	1.7	198.5	0.37	0.64	2.6	2220.0	0.222	1.98
Barrel 4	Mitchell	2008	M-08-83	149	163	520	2.06	16000	1.6	4.7	3.6	0.145	183	102	<0.002	47400	4.74	39.2	19.2	9	1.7	155	0.29	0.9	2.4	2050.0	0.205	2.21
Barrel 5	Mitchell	M-09-105_25	M-09-105	310.5	311.5	790	82.2	20900	2.09	6.2	2.6	0.118	14.1	81.3	0.26	25800	2.58	1.71	15.4	9	1.3	216	0.34	0.08	3.1	2090.0	0.209	1.04
Barrel 5	Mitchell	M-09-105_30	M-09-105	330.5	331.5	665	24.3	12400	1.24	7.2	2.5	0.137	14	108	0.107	26500	2.65	3.13	17.2	10	1.4	137	0.39	0.11	3.3	2400	0.24	1.29
Barrel 5	Mitchell	M-09-105_31	M-09-105	334.5	335.5	681	17.95	2500	0.25	6.6	3	0.133	6.6	116	0.067	20500	2.05	3.69	15.9	8	1.5	140	0.37	0.06	3.1	2330.0	0.233	1.4
Barrel 5	Mitchell	M-09-105_32	M-09-105	338.5	339.5	1120	70.5	1600	0.16	6.8	2.6	0.122	16.4	115.5	0.272	33500	3.35	5.17	15	9	1.3	166.5	0.38	0.12	3.2	2220.0	0.222	1.37
Barrel 5	Mitchell	M-09-106_18	M-09-106	272.5	273.5	861	58.9	800.0	0.08	6.5	3.7	0.122	63.7	130	0.252	54100	5.41	14.25	16.4	11	1.5	248	0.34	0.55	3	2210.0	0.221	3.13
Barrel 5	Mitchell	M-09-106_19	M-09-106	276.5	277.5	728	57.1	500.0	0.05	6.4	3.3	0.128	61	137.5	0.209	51900	5.19	14.7	16.5	9	1.8	138	0.34	0.47	3.1	2180.0	0.218	3.21
Barrel 5	Mitchell	M-09-106_20	M-09-106	280.5	281.5	896	61.1	500.0	0.05	5.3	2.9	0.106	77.8	116.5	0.246	59500	5.95	5.84	13.9	10	2	288	0.28	0.6	2.5	1850.0	0.185	2.41
Barrel 5	Mitchell	M-09-110_32	M-09-110	330.5	331.5	109	57.4	2300	0.23	1.9	1.8	0.119	12.6	104	0.328	47900	4.79	0.48	16.4	15	1.1	34.9	0.12	0.11	4.4	850.00	0.085	2.41
Barrel 5	Mitchell	M-09-110_33	M-09-110	334.5	335.5	76	62.9	1800	0.18	1.3	2.3	0.105	35.3	91.1	0.3	94200	9.42	0.42	7.1	26	2.2	15.6	0.08	0.35	2.9	760.00	0.076	1.62
Barrel 5	Mitchell	M-09-110_34	M-09-110	338.5	339.5	43	92.1	1900	0.19	1.6	4.7	0.109	13.8	91.6	0.49	67500	6.75	0.87	12.7	16	2	18.1	0.13	0.67	3.9	900.0	0.09	2.01
Barrel 5	Mitchell	M-09-110_35	M-09-110	342.5	343.5	69	59.7	1500	0.15	1.1	6.1	0.1	35	69.9	0.443	100000	10.0	1.22	8.2	44	2.2	15.7	0.1	0.37	1.8	540.00	0.054	1.36
Barrel 6	Mitchell	M-09-103_1	M-09-103	26.5	27.5	1830	101	1200	0.12	2.2	4.3	0.215	63.7	71.6	0.489	27400	2.74	1.07	27.5	17	3.1	37.1	0.12	0.11	1.3	1450.0	0.145	3.25
Barrel 6	Mitchell	M-09-103_2	M-09-103	51.5	52.5	1210	131	17600	1.76	3.6	3.3	0.164	42.2	96.1	0.657	31400	3.14	1.01	27.4	10	2.3	140.5	0.19	0.33	3.1	1730.0	0.173	2.56
Barrel 6	Mitchell	M-09-103_3	M-09-103	55.5	56.5	1080	61.2	15600	1.56	3.6	3.2	0.179	27.9	108.5	0.265	12300	1.23	0.98	28.6	8	2.8	130.5	0.22	0.09	3.2	1820.0	0.182	2.83
Barrel 6	Mitchell	M-09-103_4	M-09-103	59.5	60.5	1460	94.2	16300	1.63	3.9	2.7	0.174	34.3	110	0.475	13700	1.37	0.92	26.7	10	2.3	221	0.22	0.11	3	2030.0	0.203	2.55
Barrel 6	Mitchell	M-09-103_5	M-09-103	63.5	64.5	1000	66.3	9200	0.92	2.7	3	0.162	26.4	100	0.374	6500	0.65	0.85	25.8	6	2.2	326	0.15	0.06	3.1	1440.0	0.144	2.41
Barrel 6	Mitchell	M-09-103_6	M-09-103	67.5	68.5	800	115	8200	0.82	3	3.2	0.165	50.4	91.5	0.722	12200	1.22	0.9	25.6	11	2.5	307	0.17	0.11	2.9	1550.0	0.155	2.62
Barrel 6	Mitchell	M-09-103_7	M-09-103	177.5	178.5	840	65.6	19800	1.98	5	3.7	0.118	30.1	87.9	0.282	30200	3.02	1.37	18.3	4	1.8	428	0.27	0.05	2.4	1790.0	0.179	1.66
Barrel 6	Mitchell	M-09-103_8	M-09-103	183.5	184.5	722	46.2	23000	2.3	5.5	3.6	0.123	30.8	98.5	0.181	40100	4.01	1.47	16.7	5	1.6	547	0.31	0.11	3.2	1700	0.17	1.8
Barrel 6	Mitchell	M-09-103_9	M-09-103	187.5	188.5	898	81.4	24400	2.44	5.3	3.7	0.113	42.5	75.7	0.397	40700	4.07	1.32	16.2	6	2	554	0.29	0.06	2.9	1570.0	0.157	1.34
Barrel 6	Mitchell	M-09-103_10	M-09-103	191.5	192.5	862	85.3	29200	2.92	6.3	4.1	0.12	28.1	84.1	0.498	28300	2.83	1.17	18.7	4	1.9	579	0.34	0.05	3.3	1810.0	0.181	1.42
Barrel 6	Mitchell	M-09-103_11	M-09-103	195.5	196.5	913	67.9	14300	1.43	6.4	4.5	0.136	29.6	102.5	0.297	37300	3.73	2.01	18.7	6	2.2	526	0.36	0.08	2.9	1970.0	0.197	2.29
Barrel 6	Mitchell	M-09-103_14	M-09-103	205.5	206.5	1000	67.1	12000	1.2	4.6	5.1	0.099	13.2	99.8	0.309	43500	4.35	1.94	17.1	7	2.2	503	0.26	0.07	2.9	1520.0	0.152	2.01

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	U (ppm)	V (ppm)	W (ppm)	Y (ppm)	Zn (ppm)	Zr (ppm)	Al2O3 (%)	BaO (%)	CaO (%)	Cr2O3 (%)	Fe2O3 (%)	K2O (%)	MgO (%)	MnO (%)	Na2O (%)	P2O5 (%)	SiO2 (%)	SRO (%)	TiO2 (%)	LOI (%)	Total_DC (%)
Barrel 1	Mitchell	2008	M-08-75	170	186	5.7	563	13.8	6.2	27	18.4	14.7	0.17	1.63	0.01	4.24	8.29	1	0.05	2.05	0.189	64.11	0.02	0.25	3.26	99.97
Barrel 1	Mitchell	2008	M-08-75	186	204	8.4	1045	12.5	4	21	31.1	12.76	0.12	0.88	0.01	7.11	6.51	0.62	0.03	2.38	0.082	66.35	0.01	0.16	2.47	99.49
Barrel 1	Mitchell	2008	M-08-75	204	220	4.7	681	14.3	5.4	40	22.1	13.87	0.13	2.75	<0.01	4.33	7.25	1.95	0.08	1.53	0.154	63.37	0.02	0.2	4.17	99.8
Barrel 1	Mitchell	2008	M-08-75	220	230	3.9	520	13.3	4.7	21	22.3	14.04	0.12	2.31	<0.01	4.76	7.14	0.9	0.05	2.2	0.142	63.06	0.02	0.22	4.39	99.36
Barrel 1	Mitchell	2008	M-08-75	337	359	3.1	217	15.1	9.7	31	26.9	17.6	0.34	4.01	<0.01	5.02	6.6	1.38	0.09	3.15	0.247	56.4	0.05	0.4	4.5	99.79
Barrel 1	Mitchell	2008	M-08-75	359	379	4.6	195	12.4	9.8	36	27.3	15.75	0.46	3.4	<0.01	4.65	5.89	1.2	0.08	3.08	0.195	59.63	0.05	0.32	4.39	99.1
Barrel 1	Mitchell	2008	M-08-75	379	403	4.2	206	10	9.9	48	27.4	16.42	0.37	4.02	<0.01	4.87	6.21	1.17	0.1	3.15	0.223	57.19	0.06	0.36	4.51	98.65
Barrel 1	Mitchell	2008	M-08-75	403	437	4.1	218	10.8	11	37	31.2	17.21	0.39	4.05	<0.01	5.26	6.18	1.42	0.11	3.63	0.239	56.36	0.05	0.38	4.48	99.76
Barrel 1	Mitchell	2008	M-08-75	437	469	5.5	181	8.5	8.5	29	30.7	17.72	0.49	3.43	<0.01	4.41	6.24	0.99	0.09	4.24	0.218	57.7	0.06	0.35	3.58	99.51
Barrel 1	Mitchell	2008	M-08-75	469	502	4.4	160	10	10.5	23	26.2	17.7	0.58	3.69	<0.01	4.29	5.89	0.94	0.1	4.56	0.208	58.7	0.1	0.34	2.71	99.81
Barrel 1	Mitchell	2008	M-08-75	502	520	3.8	158	60.6	12.3	29	22.5	17.99	0.59	3.07	<0.01	4.21	5.65	1.08	0.08	4.78	0.216	60	0.13	0.34	1.81	99.94
Barrel 2	Mitchell	2008	M-08-75	645	659	1.4	561	5.1	8	83	12.3	14.21	0.2	2.25	0.01	7.7	5.47	2.62	0.08	3.44	0.311	60.09	0.04	0.42	2.82	99.66
Barrel 2	Mitchell	2008	M-08-75	659	671	1.3	523	7.6	8.9	75	11.7	16	0.17	2.77	0.01	8.5	6.31	2.91	0.1	3.63	0.374	55.37	0.03	0.56	3.11	99.85
Barrel 2	Mitchell	2008	M-08-75	671	683	1.4	732	10.1	9.4	55	27.1	15.03	0.14	3.71	0.01	7.29	6.39	1.94	0.12	3.33	0.316	56.46	0.03	0.52	3.18	98.47
Barrel 2	Mitchell	2008	M-08-79	11	23	0.8	248	8.2	10	34	15.5	16.07	0.44	2.86	<0.01	6.03	5.9	2.84	0.06	2.35	0.371	55.2	0.03	0.49	5.63	98.27
Barrel 2	Mitchell	2008	M-08-79	23	35	0.9	237	10.5	9.8	20	14.8	16.21	0.49	2.49	<0.01	5.69	6.55	2.46	0.05	2.67	0.339	57.55	0.03	0.44	4.74	99.72
Barrel 2	Mitchell	2008	M-08-79	35	47	0.9	253	13.2	8.6	23	14.7	16.4	0.36	2.62	0.01	6.12	6.2	2.69	0.07	2.1	0.338	56.14	0.02	0.45	5.04	98.55
Barrel 2	Mitchell	2008	M-08-79	47	61	0.9	252	12.2	8.4	18	15.6	17.11	0.31	1.53	<0.01	6.08	6.84	2.85	0.05	2.28	0.356	57.52	0.02	0.47	4.4	99.82
Barrel 2	Mitchell	2008	M-08-79	382	399	1.1	337	10.4	8.6	43	9.8	14.6	0.28	2.56	<0.01	7.06	6.19	2.56	0.09	2.17	0.32	56.48	0.02	0.42	5.45	98.21
Barrel 2	Mitchell	2008	M-08-85	62	77	19.1	338	3.5	16.8	79	42.1	15.26	0.48	2.7	<0.01	5.56	9.04	1.73	0.16	1.47	0.248	57.64	0.03	0.46	3.78	98.56
Barrel 2	Mitchell	2008	M-08-85	77	92.6	9.2	305	8.1	14.5	76	38.5	15.93	0.41	2.35	<0.01	5.28	7.6	1.47	0.15	2.93	0.258	58.21	0.03	0.42	3.69	98.73
Barrel 2	Mitchell	2008	M-08-85	92.6	103.5	17.5	72	1.9	5.5	63	100.5	15.14	0.19	0.39	<0.01	1.5	9.31	0.35	0.06	2.09	0.017	68.68	0.02	0.05	1.11	98.89
Barrel 3	Mitchell	2008	M-08-80	183	195	3.6	146	20	14.3	89	41.1	14.6	0.09	6.67	0.01	6.07	1.89	5.57	0.28	4.12	0.186	51.94	0.03	0.55	6.77	98.78
Barrel 3	Mitchell	2008	M-08-80	195	206.2	2.9	168	17.5	11	57	39.8	14.07	0.05	5.08	0.01	5.57	2.51	3.02	0.23	3.67	0.167	57.39	0.03	0.52	6.14	98.46
Barrel 3	Mitchell	2008	M-08-80	206.2	224.2	1.6	145	12.6	9.9	55	21.2	16.04	0.31	5.45	<0.01	5.76	4.92	2.64	0.2	2.52	0.284	53.83	0.02	0.45	6.34	98.78
Barrel 3	Mitchell	2008	M-08-80	224.2	236.1	3.1	142	14.1	9.3	78	36.9	15.28	0.19	3.09	<0.01	5.25	4.47	2.63	0.17	2.69	0.175	58.11	0.02	0.51	5.96	98.55
Barrel 3	Mitchell	2008	M-08-80	236.1	249.8	1.3	83	25	6.6	31	14.5	14.59	0.25	1.52	0.01	3.1	6.31	1.08	0.08	2.37	0.109	65.58	0.02	0.37	3.37	98.76
Barrel 3	Mitchell	2008	M-08-80	249.8	267	1.3	135	15.7	9	27	22.6	16.71	0.16	1.82	0.01	4.43	4.36	1.59	0.07	5.31	0.258	59.66	0.03	0.65	3.76	98.81
Barrel 3	Mitchell	2008	M-08-80	267	283	1.9	116	12.7	7.1	17	18.8	14.24	0.2	2.46	<0.01	5.04	5.85	0.93	0.1	2.85	0.12	62.78	0.02	0.39	4.93	99.92
Barrel 3	Mitchell	2008	M-08-80	366	380.3	1.2	75	21.9	6.8	20	14.2	13.04	0.26	2.13	0.01	4.36	7.36	0.72	0.11	1.48	0.133	64.8	0.03	0.33	3.82	98.58
Barrel 3	Mitchell	2008	M-08-80	380.3	400	1.7	107	23.6	9.4	40	24.4	15.82	0.29	2.58	0.01	7.37	7.33	1	0.11	2.82	0.217	56.02	0.03	0.59	5.68	99.86
Barrel 4	Mitchell	2008	M-08-75	250.6	261	3.6	1150	16.9	7	44	11.5	12.21	0.11	1.74	0.01	4.73	6.22	1.28	0.05	1.69	0.312	67.43	0.02	0.34	2.65	98.79
Barrel 4	Mitchell	2008	M-08-75	261	276	2.6	829	10	8.8	47	10.3	14.43	0.13	2.45	0.02	5.63	6.3	1.35	0.07	2.64	0.313	62.21	0.02	0.42	3.35	99.32
Barrel 4	Mitchell	2008	M-08-75	276	291.05	2.6	796	9	7.5	42	15.6	13.54	0.21	2.03	0.01	4.63	6.3	1.31	0.06	2.27	0.254	65.27	0.02	0.31	2.55	98.77
Barrel 4	Mitchell	2008	M-08-75	750	766	1.6	185	8.8	8	47	17.5	16.56	0.45	3.3	<0.01	6.51	4.78	2.21	0.1	2.76	0.313	55	0.03	0.5	7.46	99.98
Barrel 4	Mitchell	2008	M-08-75	766	782	1.6	161	6.3	8	240	16.1	16.65	0.5	2.47	<0.01	6.93	5.39	2.04	0.07	1.05	0.322	56.01	0.03	0.55	6.51	98.53
Barrel 4	Mitchell	2008	M-08-75	782	798	1.6	162	6.6	9.8	148	18	16.65	0.54	2.87	<0.01	6.43	4.8	2.41	0.1	2.04	0.31	56.14	0.04	0.5	5.66	98.49
Barrel 4	Mitchell	2008	M-08-75	798	813	1.5	156	4.4	10.8	51	16.7	15.93	0.56	2.61	<0.01	6.38	5.01	1.92	0.07	1.43	0.306	58.17	0.02	0.47	5.58	98.47
Barrel 4	Mitchell		M-08-83	122	135	2.2	174	14.6	7.8	89	20.7	15.77	0.55	2.75	0.02	6.7	5.89	1.54	0.09	2.94	0.303	55.1	0.03	0.45	6.33	98.48
Barrel 4	Mitchell	2008	M-08-83	135	149	1.8	169	12.5	8.4	377	17.2	16.74	0.67	2.42	0.02	6.4	4.79	2.09	0.08	2.99	0.315	55.06	0.03	0.47	6.42	98.49
Barrel 4	Mitchell	2008	M-08-83	149	163	1.6	172	7.5	8.5	865	14.4	16.9	0.46	2.46	<0.01	6.95	4.73	2.3	0.07	2.22	0.326	55.28	0.02	0.5	6.41	98.64
Barrel 5	Mitchell	M-09-105_25	M-09-105	310.5	311.5	1.6	137	3.9	10.4	48	12.6	14.12	0.57	3.96	<0.01	5.68	3.54	2.05	0.11	2.93	0.255	59.37	0.03	0.4	6	99.02
Barrel 5	Mitchell	M-09-105_30	M-09-105	330.5	331.5	1.9	154	1.8	13.7	55	14.2	15.56	0.44	2.6	<0.01	6.45	4.5	2.45	0.09	1.74	0.292	59.93	0.02	0.45	4.99	99.51
Barrel 5	Mitchell	M-09-105_31	M-09-105	334.5	335.5	1.8	148	1.1	12.9	48	13	15.02	0.44	4.28	<0.01	5.96	4.86	2.66	0.09	0.4	0.285	59.56	0.02	0.43	5.78	99.79
Barrel 5	Mitchell	M-09-105_32	M-09-105	338.5	339.5	1.8	143	1.2	14.3	48	13.2	13.96	0.4	6.47	<0.01	6.14	4.67	1.99	0.15	0.29	0.265	56.9	0.02	0.41	6.8	98.47
Barrel 5	Mitchell	M-09-106_18	M-09-106	272.5	273.5	1.6	146	1.3	13.5	108	13.6	13.71	0.47	3	<0.01	7.55	4.67	1.95	0.12	0.19	0.261	59.56	0.03	0.41	7.53	99.44
Barrel 5	Mitchell	M-09-106_19	M-09-106	276.5	277.5	1.6	149	1	12.8	78	13	14.57	0.32	2.05	<0.01	7.93	5.08	1.92	0.1	0.15	0.284	60.26	0.02	0.43	6.88	99.99
Barrel 5	Mitchell	M-09-106_20	M-09-106	280.5	281.5	1	130	1.1	9.7	68	8.8	12.47	0.52	3.56	<0.01	7.86	4.34	1.85	0.12	0.14	0.237	58.75	0.04	0.36	8.36	98.61
Barrel 5	Mitchell	M-09-110_32	M-09-110	330.5	331.5	1.9	109	0.9	8.4	90	26.7	16.49	0.33	0.41	<0.01	6.92	4.21	1.59	0.02	0.38	0.272	61.95	0.01	0.58	5.81	98.96
Barrel 5	Mitchell	M-09-110_33	M-09-110	334.5	335.5	1.2	79	2.2	5.7	19	15.1	13.14	0.16	0.35	<0.01	12.61	3.53	0.45	0.01	0.33	0.247	60.08	0.01	0.48	8.13	99.52
Barrel 5	Mitchell	M-09-110_34	M-09-110	338.5	339.5	1.4	94	2.3	5.9	18	18.5	14.73	0.17	0.32	<0.01	9.01	3.93	0.59	<0.01	0.35	0.251	63.63	0.01	0.54	6.43	99.97
Barrel 5	Mitchell	M-09-110_35	M-09-110	342.5	343.5	0.9	69	2.1	5.7	25	10.4	9.52	0.11	0.29	<0.01	23.23	2.4	0.53	0.01	0.28	0.229	49.65	<0.01	0.36	13.05	99.66
Barrel 6	Mitchell	M-09-103_1	M-09-103	26.5	27.5	1	281	0.4	4.9	308	14.7	17.26	0.16	0.84	<0.01	12.56	3.88	5.07	0.26	0.24	0.486	50.06	<0.01	0.69	8.5	100
Barrel 6	Mitchell	M-09-103_2	M-09-103	51.5	52.5	1.3	271	0.8	6.1	335	15.2	17.7	0.22	2.23	0.01	8.76	3.34	3.84	0.17	2.63	0.377	53.13	0.02	0.64	6.84	99.91
Barrel 6	Mitchell	M-09-103_3	M-09-103	55.5	56.5	1.4	278	0.5	6.8	269	16.6	18.59	0.23	2.06	<0.01	7.27	3.67	4.52	0.16	2.34	0.405	53.75	0.02	0.65	6.17	99.84
Barrel 6	Mitchell	M-09-103_4	M-09-103	59.5	60.5	1.2	251	0.6	6.4	207	14.5	17.14	0.36	2.4	<0.01	6.63	3.56	3.71	0.2	2.4	0.396	56.3	0.03	0.6	6.31	100.05
Barrel 6	Mitchell	M-09-103_5	M-09-103	63.5	64.5	1.3	265	0.7	6.1	337	16.2	17.21	0.57	1.08	<0.01	8.2	3.7	4.36	0.14	1.35	0.371	57.06	0.04	0.64	5.11	99.83
Barrel 6	Mitchell	M-09-103_6	M-09-103	67.5	68.5	1.5	246	0.7	5.7	319	16.8	17.4	0.56	0.92	<0.01	8.74	3.89	4.13	0.12	1.23	0.378	57.04	0.04	0.62	4.99	100.05
Barrel 6	Mitchell	M-09-103_7	M-09-103	177.5	178.5	1.1	177	0.5	8.2	191	15.2	14.4	0.2	5.84	<0.01	6.02	2.64	3.01	0.12	2.91	0.28	54.33	0.06	0.43	8.84	99.09
Barrel 6	Mitchell	M-09-103_8	M-09-103	183.5	184.5	1.3	165	0.7	8.9	163	15.4	15.33	0.24	6.81	<0.01	5.63	2.93	2.79	0.11	3.31	0.289	52.12	0.07	0.41	8.26	98.29
Barrel 6	Mitchell	M-09-103_9	M-09-103	187.5	188.5	1.4	153	0.5	7.2	167	16.4	14.2	0.34	7.14	<0.01	5.06	2.18	3.07	0.13	3.56	0.265	53.53	0.08	0.39	8.23	98.18
Barrel 6	Mitchell	M-09-103_10	M-09-103	191.5	192.5	1.9	178	0.7	10.7	226	20.9	15.84	0.31	5.76	<0.01	6.05	2.23	3.17	0.12	4.14	0.285	52.23	0.07	0.42	7.54	98.18
Barrel 6	Mitchell	M-09-103_11	M-09-103	195.5	196.5	1.3	184	0.7	7.6	191	20.1	15.53	0.36	7.13	<0.01	5.89	3.56	3.67	0.13	2.14	0.325	50.64	0.07	0.46	8.78	98.7
Barrel 6	Mitchell	M-09-103_14	M-09-103	205.5	206.5	1.3	167	0.8	4.8	257	18.2	13.83	0.37	6.2	<0.01	5.89	3.13	3.51	0.14	1.76	0.23	53.55	0.07	0.38	9.41	98.47

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Interval	Rock Code	Lithology	Alteration 1	Alt_1_ Intensity	Alt_1_ Intensity_ Old	Alt_2_Code	Alt_2_ Intensity	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	21012 ABA Model Code	PFS Waste/Ore
Barrel 6	Mitchell	M-09-103_17	M-09-103	222.5	223.5	1.0	IARG	VU	CL	3	IARG			BELOW MTF			M-09-103_17	H43869	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_18	M-09-103	226.5	227.5	1.0	IARG	VU	CL	3	IARG			BELOW MTF			M-09-103_18	H43871	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_19	M-09-103	232.5	233.5	1.0	IARG	VU	CL	3	IARG			BELOW MTF			M-09-103_19	H43875	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_20	M-09-103	236.5	237.5	1.0	IARG	VU	CL	3	IARG			BELOW MTF			M-09-103_20	H43877	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_21	M-09-103	240.5	241.5	1.0	IARG	VU	CL	3	IARG			BELOW MTF			M-09-103_21	H43880	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_22	M-09-103	244.5	245.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_22	H43881	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_23	M-09-103	248.5	249.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_23	H43884	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_24	M-09-103	252.5	253.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_24	H43886	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_25	M-09-103	256.5	257.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_25	H43888	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_26	M-09-103	260.5	261.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_26	H43891	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_27	M-09-103	264.5	265.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_27	H43893	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_28	M-09-103	272.5	273.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_28	H43897	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_29	M-09-103	276.5	277.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_29	H43899	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_30	M-09-103	280.5	281.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_30	H43901	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_32	M-09-103	284.5	285.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_32	H43904	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_35	M-09-103	295.5	296.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_35	H43911	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-103_36	M-09-103	302.5	303.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_36	H43914	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-105_22	M-09-105	298.5	299.5	1.0	IARG	VUTF	CL	4	None			BELOW MTF			M-09-105_22	H44104	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-105_23	M-09-105	302.5	303.5	1.0	IARG	VUTF	CL	4	None			BELOW MTF			M-09-105_23	H44106	LP Hazelton	MARGINAL
Barrel 6	Mitchell	M-09-105_24	M-09-105	306.5	307.5	1.0	IARG	VUTF	CL	4	None			BELOW MTF			M-09-105_24	H44109	LP Hazelton	MARGINAL
Barrel 6	Mitchell	M-09-106_1	M-09-106	6.5	7.5	1.0	IARG	VU	CL	4	QSP			BELOW MTF			M-09-106_1	H41414	LP Hazelton	MARGINAL
Barrel 6	Mitchell	M-09-106_2	M-09-106	10.5	11.5	1.0	IARG	VU	CL	4	QSP			BELOW MTF			M-09-106_2	H41418	LP Hazelton	WASTE
Barrel 6	Mitchell	M-09-106_3	M-09-106	14.5	15.5	1.0	IARG	VU	CL	4	QSP			BELOW MTF			M-09-106_3	H41420	LP Hazelton	WASTE
Barrel 6	Mitchell	M-09-106_4	M-09-106	18.5	19.5	1.0	IARG	VU	CL	4	QSP			BELOW MTF			M-09-106_4	H41422	LP Hazelton	WASTE
Barrel 6	Mitchell	M-09-106_5	M-09-106	22.5	23.5	1.0	IARG	VU	CL	4	QSP			BELOW MTF			M-09-106_5	H41424	LP Hazelton	WASTE
Barrel 6	Mitchell	M-09-106_6	M-09-106	26.5	27.5	1.0	IARG	VU	CL	4	QSP			BELOW MTF			M-09-106_6	H41427	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-106_7	M-09-106	30.5	31.5	1.0	IARG	VU	CL	4	QSP			BELOW MTF			M-09-106_7	H41429	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-106_8	M-09-106	34.5	35.5	1.0	IARG	VU	CL	4	QSP			BELOW MTF			M-09-106_8	H41431	LP Hazelton	MARGINAL
Barrel 6	Mitchell	M-09-106_9	M-09-106	38.5	39.5	1.0	IARG	VU	CL	4	QSP			BELOW MTF			M-09-106_9	H41433	LP Hazelton	WASTE
Barrel 6	Mitchell	M-09-106_10	M-09-106	42.5	43.5	1.0	IARG	VU	CL	4	QSP			BELOW MTF			M-09-106_10	H41435	LP Hazelton	WASTE
Barrel 6	Mitchell	M-09-106_11	M-09-106	46.5	47.5	1.0	IARG	VU	CL	4	QSP			BELOW MTF			M-09-106_11	H41437	LP Hazelton	MARGINAL
Barrel 6	Mitchell	M-09-106_12	M-09-106	50.5	51.5	1.0	IARG	VU	CL	4	QSP			BELOW MTF			M-09-106_12	H41439	LP Hazelton	WASTE
Barrel 6	Mitchell	M-09-106_13	M-09-106	54.5	55.5	1.0	IARG	VU	CL	4	QSP			BELOW MTF			M-09-106_13	H41441	LP Hazelton	MARGINAL
Barrel 6	Mitchell	M-09-106_14	M-09-106	58.5	59.5	1.0	IARG	VU	CL	4	QSP			BELOW MTF			M-09-106_14	H41443	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-106_15	M-09-106	62.5	63.5	1.0	IARG	VU	CL	4	QSP			BELOW MTF			M-09-106_15	H41446	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-106_16	M-09-106	66.5	67.5	1.0	IARG	VU	CL	4	QSP			BELOW MTF			M-09-106_16	H41448	LP Hazelton	ORE
Barrel 6	Mitchell	M-09-106_17	M-09-106	70.5	71.5	1.0	IARG	VU	CL	4	QSP			BELOW MTF			M-09-106_17	H41450	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-102_1	M-09-102	108.5	109.5	1.0	HORN/PROP	VAXT	IARG					BELOW MTF			M-09-102_1	H41033	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-102_2	M-09-102	112.5	113.5	1.0	HORN/PROP	VAXT	SIH	3	IARG			BELOW MTF			M-09-102_2	H41036	LP Hazelton	MARGINAL
Barrel 7	Mitchell	M-09-102_3	M-09-102	116.5	117.5	1.0	HORN/PROP	VAXT/FLTZ	SIH/SI	3/5	IARG None			BELOW MTF			M-09-102_3	H41039	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-102_4	M-09-102	120.5	121.5	1.0	HORN/PROP	PSBX	SI	5	QSP			BELOW MTF			M-09-102_4	H41040	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-102_5	M-09-102	124.5	125.5	1.0	HORN/PROP	PSBX	SI	5	QSP			BELOW MTF			M-09-102_5	H41043	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-102_6	M-09-102	128.5	129.5	1.0	HORN/PROP	PSBX	SI	5	QSP			BELOW MTF			M-09-102_6	H41045	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-102_7	M-09-102	132.5	133.5	1.0	HORN/PROP	PSBX	SI	5	QSP			BELOW MTF			M-09-102_7	H41048	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-103_15	M-09-103	209.5	210.5	1.0	IARG	VU	CL	3	None			BELOW MTF			M-09-103_15	H43861	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-103_16	M-09-103	213.5	214.5	1.0	IARG	VU	IARG	3	CL			BELOW MTF			M-09-103_16	H43863	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-105_15	M-09-105	270.5	271.5	1.0	IARG	VU	IARG	4	CL			BELOW MTF			M-09-105_15	H44089	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-105_16	M-09-105	274.5	275.5	1.0	IARG	VU	IARG	4	CL			BELOW MTF			M-09-105_16	H44091	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-105_17	M-09-105	278.5	279.5	1.0	IARG	VU	IARG	4	CL			BELOW MTF			M-09-105_17	H44093	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-112_1	M-09-112	56.5	57.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_1	H42161	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_2	M-09-112	60.5	61.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_2	H42163	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-112_3	M-09-112	64.5	65.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_3	H42165	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_4	M-09-112	68.5	69.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_4	H42167	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_5	M-09-112	72.5	73.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_5	H42169	LP Hazelton	MARGINAL
Barrel 7	Mitchell	M-09-112_6	M-09-112	76.5	77.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_6	H42172	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-112_7	M-09-112	80.5	81.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_7	H42174	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-112_8	M-09-112	84.5	85.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_8	H42176	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-112_9	M-09-112	88.5	89.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_9	H42178	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-112_10	M-09-112	92.5	93.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_10	H42180	LP Hazelton	MARGINAL
Barrel 7	Mitchell	M-09-112_11	M-09-112	96.5	97.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_11	H42182	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-112_12	M-09-112	100.5	101.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_12	H42184	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-112_13	M-09-112	104.5	105.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_13	H42186	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-112_14	M-09-112	108.5	109.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_14	H42188	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-112_15	M-09-112	112.5	113.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_15	H42190	LP Hazelton	WASTE

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	PFS Pit In/Out	PFS Litho	PFS Alt	Sample Matrix	SampleType	udf_LabID	Weight Received (kg)	Lab Certificate Number	Collect Date/ Time	Paste pH	Rinse pH	S_Total (%)	S_Sulphide (%)	S_S2_ CALC (%)	S_S2_S_ DEL CALC (%)	S_SO4_ NA2CO3 (%)	S_SO4_ HCL (%)	S_BASO4 (%)
Barrel 6	Mitchell	M-09-103_17	M-09-103	222.5	223.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	0.76	VA09116240		8.2	8.2	3.64	0.74	0.80	0.789	2.94	2.84	0.0114
Barrel 6	Mitchell	M-09-103_18	M-09-103	226.5	227.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.22	VA09116240		8.3	8.2	3.82	0.46	0.39	0.460	3.5	3.43	0.0135
Barrel 6	Mitchell	M-09-103_19	M-09-103	232.5	233.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.16	VA09116240		8.2	8.3	3.84	0.45	0.49	0.477	3.41	3.35	0.0128
Barrel 6	Mitchell	M-09-103_20	M-09-103	236.5	237.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.24	VA09116240		8.2	8.2	4.37	0.87	1.01	1.001	3.42	3.36	0.0093
Barrel 6	Mitchell	M-09-103_21	M-09-103	240.5	241.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.36	VA09116240		8.3	8.2	4.23	1.04	1.21	1.203	3.15	3.02	0.0075
Barrel 6	Mitchell	M-09-103_22	M-09-103	244.5	245.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.6	VA09116240		8.3	8.2	3.98	1.24	1.14	1.240	2.88	2.84	0.0077
Barrel 6	Mitchell	M-09-103_23	M-09-103	248.5	249.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.96	VA09116240		8.2	8.1	6.54	1.39	2.41	2.403	4.28	4.13	0.0070
Barrel 6	Mitchell	M-09-103_24	M-09-103	252.5	253.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	1.88	VA09116240		8.2	7.8	4.84	1.54	1.60	1.594	3.36	3.24	0.0056
Barrel 6	Mitchell	M-09-103_25	M-09-103	256.5	257.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.5	VA09116240		8.2	7.3	4.54	1.72	1.73	1.724	2.84	2.81	0.0061
Barrel 6	Mitchell	M-09-103_26	M-09-103	260.5	261.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.28	VA09116240		8.2	8.0	6.39	3.01	3.32	3.313	3.1	3.07	0.0070
Barrel 6	Mitchell	M-09-103_27	M-09-103	264.5	265.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.08	VA09116240		8.2	8.1	5.88	2.94	3.49	3.485	2.47	2.39	0.0054
Barrel 6	Mitchell	M-09-103_28	M-09-103	272.5	273.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.2	VA09116240		8.4	8.0	3.17	2.00	2.13	2.113	1.12	1.04	0.0173
Barrel 6	Mitchell	M-09-103_29	M-09-103	276.5	277.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.2	VA09116240		8.2	7.5	4.84	1.12	1.52	1.509	3.38	3.32	0.0110
Barrel 6	Mitchell	M-09-103_30	M-09-103	280.5	281.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.08	VA09116240		8.3	7.8	5.00	1.29	1.77	1.765	3.34	3.23	0.0054
Barrel 6	Mitchell	M-09-103_32	M-09-103	284.5	285.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.32	VA09116240		8.2	7.5	5.09	1.48	1.58	1.553	3.62	3.51	0.0268
Barrel 6	Mitchell	M-09-103_35	M-09-103	295.5	296.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.66	VA09116240		8.2	7.7	5.39	1.76	2.15	2.126	3.36	3.24	0.0236
Barrel 6	Mitchell	M-09-103_36	M-09-103	302.5	303.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.94	VA09116240		8.0	7.9	7.15	2.15	2.19	2.162	5.05	4.96	0.0285
Barrel 6	Mitchell	M-09-105_22	M-09-105	298.5	299.5	IN PIT	VUTF	CL	Rock	Drillcore	ALS Chemex	2.3	VA09116241		8.7	8.6	3.27	2.64	3.26	3.256	0.05	0.01	0.0042
Barrel 6	Mitchell	M-09-105_23	M-09-105	302.5	303.5	IN PIT	VUTF	CL	Rock	Drillcore	ALS Chemex	2.08	VA09116241		8.9	8.8	2.30	1.78	2.28	2.269	0.04	0.02	0.0107
Barrel 6	Mitchell	M-09-105_24	M-09-105	306.5	307.5	IN PIT	VUTF	CL	Rock	Drillcore	ALS Chemex	2.06	VA09116241		9.0	8.9	2.30	1.66	2.17	2.163	0.15	0.13	0.0075
Barrel 6	Mitchell	M-09-106_1	M-09-106	6.5	7.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	1.84	VA09116242		8.6	8.5	1.82	1.44	1.73	1.715	0.15	0.09	0.0147
Barrel 6	Mitchell	M-09-106_2	M-09-106	10.5	11.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	1.86	VA09116242		8.6	8.5	3.00	2.40	2.99	2.967	0.05	0.005	0.0229
Barrel 6	Mitchell	M-09-106_3	M-09-106	14.5	15.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	1.62	VA09116242		8.5	8.2	2.93	2.39	2.85	2.845	0.09	0.08	0.0054
Barrel 6	Mitchell	M-09-106_4	M-09-106	18.5	19.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.54	VA09116242		7.7	7.7	7.28	6.53	7.23	7.229	0.11	0.05	0.0012
Barrel 6	Mitchell	M-09-106_5	M-09-106	22.5	23.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	1.44	VA09116242		9.0	8.8	1.83	1.46	1.78	1.762	0.14	0.05	0.0182
Barrel 6	Mitchell	M-09-106_6	M-09-106	26.5	27.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.12	VA09116242		8.2	8.2	4.37	3.58	4.27	4.267	0.15	0.1	0.0026
Barrel 6	Mitchell	M-09-106_7	M-09-106	30.5	31.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	1.94	VA09116242		8.4	8.3	3.54	2.92	3.41	3.407	0.17	0.13	0.0035
Barrel 6	Mitchell	M-09-106_8	M-09-106	34.5	35.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	1.46	VA09116242		8.7	8.6	2.46	1.99	2.33	2.325	0.16	0.13	0.0054
Barrel 6	Mitchell	M-09-106_9	M-09-106	38.5	39.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	1.9	VA09116242		8.9	8.8	1.31	0.92	1.12	1.095	0.2	0.19	0.0247
Barrel 6	Mitchell	M-09-106_10	M-09-106	42.5	43.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	1.92	VA09116242		9.0	8.8	0.83	0.69	0.80	0.740	0.06	0.03	0.0600
Barrel 6	Mitchell	M-09-106_11	M-09-106	46.5	47.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.24	VA09116242		8.7	8.3	2.15	1.75	2.11	2.074	0.06	0.04	0.0357
Barrel 6	Mitchell	M-09-106_12	M-09-106	50.5	51.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	1.92	VA09116242		8.8	8.6	2.06	1.53	1.82	1.813	0.28	0.24	0.0068
Barrel 6	Mitchell	M-09-106_13	M-09-106	54.5	55.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.44	VA09116242		8.3	8.2	4.13	3.62	4.12	4.116	0.14	0.01	0.0044
Barrel 6	Mitchell	M-09-106_14	M-09-106	58.5	59.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.34	VA09116242		8.3	8.3	8.25	7.22	8.09	8.089	0.2	0.16	0.0009
Barrel 6	Mitchell	M-09-106_15	M-09-106	62.5	63.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.76	VA09116242		8.7	8.6	3.20	2.86	3.06	3.057	0.16	0.14	0.0028
Barrel 6	Mitchell	M-09-106_16	M-09-106	66.5	67.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	1.86	VA09116242		8.9	8.8	2.38	1.87	2.34	2.327	0.08	0.04	0.0126
Barrel 6	Mitchell	M-09-106_17	M-09-106	70.5	71.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	1.52	VA09116242		8.9	8.8	1.65	1.22	1.53	1.507	0.16	0.12	0.0231
Barrel 7	Mitchell	M-09-102_1	M-09-102	108.5	109.5	IN PIT	0	0	Rock	Drillcore	ALS Chemex		VA09097250		8.9	8.5	2.17	2.04	2.16	2.141	0.02	0.01	0.0189
Barrel 7	Mitchell	M-09-102_2	M-09-102	112.5	113.5	IN PIT	0	0	Rock	Drillcore	ALS Chemex		VA09097250		8.7	8.3	3.03	2.77	3.02	3.012	0.02	0.01	0.0082
Barrel 7	Mitchell	M-09-102_3	M-09-102	116.5	117.5	IN PIT	0	0	Rock	Drillcore	ALS Chemex		VA09097250		8.7	8.4	2.32	2.29	2.31	2.291	0.02	0.005	0.0191
Barrel 7	Mitchell	M-09-102_4	M-09-102	120.5	121.5	IN PIT	0	0	Rock	Drillcore	ALS Chemex		VA09097250		9.0	8.7	3.10	3.09	3.09	3.090	0.03	0.005	0.0089
Barrel 7	Mitchell	M-09-102_5	M-09-102	124.5	125.5	IN PIT	0	0	Rock	Drillcore	ALS Chemex		VA09097250		9.3	8.9	1.69	1.60	1.67	1.646	0.07	0.02	0.0238
Barrel 7	Mitchell	M-09-102_6	M-09-102	128.5	129.5	IN PIT	0	0	Rock	Drillcore	ALS Chemex		VA09097250		9.1	8.7	2.18	2.14	2.17	2.155	0.02	0.01	0.0147
Barrel 7	Mitchell	M-09-102_7	M-09-102	132.5	133.5	IN PIT	0	0	Rock	Drillcore	ALS Chemex		VA09097250		9.1	8.8	2.97	2.71	2.96	2.952	0.02	0.01	0.0079
Barrel 7	Mitchell	M-09-103_15	M-09-103	209.5	210.5	IN PIT	VU	CL	Rock	Drillcore	ALS Chemex	2.56	VA09116240		8.2	8.1	5.56	2.37	2.49	2.475	3.17	3.07	0.0147
Barrel 7	Mitchell	M-09-103_16	M-09-103	213.5	214.5	IN PIT	VU	IARG	Rock	Drillcore	ALS Chemex	2.44	VA09116240		8.3	8.2	4.50	1.05	0.99	1.050	3.64	3.51	0.0065
Barrel 7	Mitchell	M-09-105_15	M-09-105	270.5	271.5	IN PIT	VU	IARG	Rock	Drillcore	ALS Chemex	2	VA09116241		8.8	8.8	2.73	2.19	2.72	2.714	0.1	0.005	0.0063
Barrel 7	Mitchell	M-09-105_16	M-09-105	274.5	275.5	IN PIT	VU	IARG	Rock	Drillcore	ALS Chemex	1.86	VA09116241		8.6	8.6	2.67	2.16	2.66	2.653	0.03	0.005	0.0068
Barrel 7	Mitchell	M-09-105_17	M-09-105	278.5	279.5	IN PIT	VU	IARG	Rock	Drillcore	ALS Chemex	1.98	VA09116241		8.7	8.6	2.51	2.08	2.50	2.492	0.03	0.005	0.0084
Barrel 7	Mitchell	M-09-112_1	M-09-112	56.5	57.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.24	VA09116245		8.2	8.2	4.89	4.35	4.88	4.877	0.06	0.005	0.0028
Barrel 7	Mitchell	M-09-112_2	M-09-112	60.5	61.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.56	VA09116245		8.5	8.4	3.99	3.37	3.98	3.977	0.08	0.01	0.0026
Barrel 7	Mitchell	M-09-112_3	M-09-112	64.5	65.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.2	VA09124617		8.7	8.4	4.70	3.96	4.69	4.687	0.04	0.005	0.0030
Barrel 7	Mitchell	M-09-112_4	M-09-112	68.5	69.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.12	VA09124617		8.7	8.4	4.01	3.89	3.99	3.987	0.02	0.02	0.0033
Barrel 7	Mitchell	M-09-112_5	M-09-112	72.5	73.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	1.06	VA09116245		8.2	8.2	5.21	4.60	5.20	5.197	0.05	0.01	0.0030
Barrel 7	Mitchell	M-09-112_6	M-09-112	76.5	77.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.2	VA09124617		9.0	8.8	2.37	2.16	2.36	2.344	0.04	0.01	0.0163
Barrel 7	Mitchell	M-09-112_7	M-09-112	80.5	81.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.02	VA09124617		8.7	8.5	3.22	3.02	3.20	3.195	0.03	0.02	0.0054
Barrel 7	Mitchell	M-09-112_8	M-09-112	84.5	85.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.4	VA09124617		8.7	8.3	3.77	3.58	3.75	3.745	0.04	0.02	0.0047
Barrel 7	Mitchell	M-09-112_9	M-09-112	88.5	89.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	1.74	VA09124617		8.6	8.3	3.91	3.51	3.76	3.757	0.15	0.15	0.0035
Barrel 7	Mitchell	M-09-112_10	M-09-112	92.5	93.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.52	VA09124617		8.7	8.3	3.31	2.61	3.19	3.187	0.15	0.12	0.0035
Barrel 7	Mitchell	M-09-112_11	M-09-112	96.5	97.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.16	VA09124617		8.6	8.4	4.21	3.86	4.20	4.197	0.05	0.01	0.0033
Barrel 7	Mitchell	M-09-112_12	M-09-112	100.5	101.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	1.84	VA09124617		8.5	8.2	4.27	3.85	4.26	4.234	0.05	0.01	0.0257
Barrel 7	Mitchell	M-09-112_13	M-09-112	104.5	105.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.34	VA09124617		8.5	8.2	4.52	4.05	4.41	4.405	0.14	0.11	0.0047
Barrel 7	Mitchell	M-09-112_14	M-09-112	108.5	109.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.16	VA09124617		8.8	8.2	2.77	2.57	2.76	2.754	0.07	0.005	0.0063
Barrel 7	Mitchell	M-09-112_15	M-09-112	112.5	113.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.26	VA09124617		8.7	8.1	2.97	2.58	2.89	2.886	0.15	0.08	0.0040

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	S_DEL (%)	S_DEL_CAL (%)	TAP (%)	SAP ($kg\ CaCO_3$ /t)	SAP (S Del Calc) ($kg\ CaCO_3$ /t)	NP ($kg\ CaCO_3$ /t)	NP_ADJ ($kg\ CaCO_3$ /t)	UNP	Total C (%)	Inorganic C (%)	Inorganic CO2 (%)	C_DEL_ CALC (%)	CANP_ TTL (%)	CANP_ INORG (%)	CANP_ CA (%)	CANP_ CAMG (%)	TNNP ($kg\ CaCO_3$ /t)
Barrel 6	Mitchell	M-09-103_17	M-09-103	222.5	223.5	0.0486	0.0486	113.80	23.125	24.64	23	8.0	15	0.16	0.19	0.7	-0.030	13.3	15.9	103.9	162.1	-90.8
Barrel 6	Mitchell	M-09-103_18	M-09-103	226.5	227.5	-0.0835	0.0000	119.40	14.375	14.38	24	9.0	15	0.19	0.21	0.8	-0.020	15.8	18.2	123.4	190.7	-95.4
Barrel 6	Mitchell	M-09-103_19	M-09-103	232.5	233.5	0.0272	0.0272	120.00	14.0625	14.91	31	16.0	15	0.25	0.27	1.0	-0.020	20.8	22.7	123.1	186.4	-89.0
Barrel 6	Mitchell	M-09-103_20	M-09-103	236.5	237.5	0.1307	0.1307	136.60	27.1875	31.27	33	18.0	15	0.29	0.31	1.2	-0.020	24.2	27.3	127.1	189.6	-103.6
Barrel 6	Mitchell	M-09-103_21	M-09-103	240.5	241.5	0.1625	0.1625	132.20	32.5	37.58	41	26.0	15	0.37	0.43	1.6	-0.060	30.8	36.4	123.6	184.1	-91.2
Barrel 6	Mitchell	M-09-103_22	M-09-103	244.5	245.5	-0.1077	0.0000	124.40	38.75	38.75	43	28.0	15	0.40	0.44	1.6	-0.040	33.3	36.4	116.1	177.8	-81.4
Barrel 6	Mitchell	M-09-103_23	M-09-103	248.5	249.5	1.0130	1.0130	204.40	43.4375	75.09	43	28.0	15	0.43	0.48	1.8	-0.050	35.8	40.9	159.1	211.9	-161.4
Barrel 6	Mitchell	M-09-103_24	M-09-103	252.5	253.5	0.0544	0.0544	151.20	48.125	49.83	21	6.0	15	0.14	0.18	0.6	-0.040	11.7	13.6	110.4	160.6	-130.2
Barrel 6	Mitchell	M-09-103_25	M-09-103	256.5	257.5	0.0039	0.0039	141.90	53.75	53.87	32	17.0	15	0.28	0.31	1.1	-0.030	23.3	25.0	104.4	164.4	-109.9
Barrel 6	Mitchell	M-09-103_26	M-09-103	260.5	261.5	0.3030	0.3030	199.70	94.0625	103.53	32	17.0	15	0.26	0.30	1.1	-0.040	21.7	25.0	113.4	160.4	-167.7
Barrel 6	Mitchell	M-09-103_27	M-09-103	264.5	265.5	0.5446	0.5446	183.80	91.875	108.89	47	32.0	15	0.46	0.53	2.0	-0.070	38.3	45.5	111.6	171.2	-136.8
Barrel 6	Mitchell	M-09-103_28	M-09-103	272.5	273.5	0.1127	0.1127	99.06	62.5	66.02	105	90.0	15	1.33	1.43	5.3	-0.100	110.8	121.0	97.1	159.5	5.9
Barrel 6	Mitchell	M-09-103_29	M-09-103	276.5	277.5	0.3890	0.3890	151.20	35	47.16	55	40.0	15	0.65	0.68	2.5	-0.030	54.2	56.9	138.3	224.2	-96.3
Barrel 6	Mitchell	M-09-103_30	M-09-103	280.5	281.5	0.4746	0.4746	156.00	40.3125	55.14	68	53.0	15	0.78	0.84	3.1	-0.060	65.0	70.5	146.6	215.6	-88.2
Barrel 6	Mitchell	M-09-103_32	M-09-103	284.5	285.5	0.0732	0.0732	159.10	46.25	48.54	39	24.0	15	0.41	0.46	1.7	-0.050	34.2	38.7	129.1	199.6	-120.1
Barrel 6	Mitchell	M-09-103_35	M-09-103	295.5	296.5	0.3664	0.3664	168.40	55	66.45	53	38.0	15	0.63	0.64	2.3	-0.010	52.5	52.3	140.3	208.5	-115.4
Barrel 6	Mitchell	M-09-103_36	M-09-103	302.5	303.5	0.0115	0.0115	223.40	67.1875	67.55	34	19.0	15	0.33	0.34	1.2	-0.010	27.5	27.3	174.3	260.0	-189.4
Barrel 6	Mitchell	M-09-105_22	M-09-105	298.5	299.5	0.6158	0.6158	102.20	82.5	101.74	67	52.0	15	0.67	0.56	2.1	0.110	55.8	47.8	56.2	100.5	-35.2
Barrel 6	Mitchell	M-09-105_23	M-09-105	302.5	303.5	0.4893	0.4893	71.90	55.625	70.92	58	43.0	15	0.66	0.63	2.3	0.030	55.0	52.3	56.9	105.9	-13.9
Barrel 6	Mitchell	M-09-105_24	M-09-105	306.5	307.5	0.5025	0.5025	71.90	51.875	67.58	46	31.0	15	0.47	0.40	1.5	0.070	39.2	34.1	42.5	90.8	-25.9
Barrel 6	Mitchell	M-09-106_1	M-09-106	6.5	7.5	0.2753	0.2753	56.88	45	53.60	41	26.0	15	0.40	0.34	1.3	0.060	33.3	29.6	35.0	97.9	-15.9
Barrel 6	Mitchell	M-09-106_2	M-09-106	10.5	11.5	0.5671	0.5671	93.80	75	92.72	48	33.0	15	0.51	0.47	1.7	0.040	42.5	38.7	43.2	98.2	-45.8
Barrel 6	Mitchell	M-09-106_3	M-09-106	14.5	15.5	0.4546	0.4546	91.56	74.6875	88.89	40	25.0	15	0.42	0.38	1.4	0.040	35.0	31.8	38.5	91.3	-51.6
Barrel 6	Mitchell	M-09-106_4	M-09-106	18.5	19.5	0.6988	0.6988	227.50	204.0625	225.90	15		15	0.08	0.07	0.3	0.010	6.7	6.8	18.0	38.9	-212.5
Barrel 6	Mitchell	M-09-106_5	M-09-106	22.5	23.5	0.3018	0.3018	57.19	45.625	55.06	80	65.0	15	0.82	0.76	2.8	0.060	68.3	63.7	69.7	128.6	22.8
Barrel 6	Mitchell	M-09-106_6	M-09-106	26.5	27.5	0.6874	0.6874	136.60	111.875	133.36	31	16.0	15	0.31	0.29	1.1	0.020	25.8	25.0	30.0	72.5	-105.6
Barrel 6	Mitchell	M-09-106_7	M-09-106	30.5	31.5	0.4865	0.4865	110.60	91.25	106.45	27	12.0	15	0.21	0.19	0.7	0.020	17.5	15.9	24.2	69.6	-83.6
Barrel 6	Mitchell	M-09-106_8	M-09-106	34.5	35.5	0.3346	0.3346	76.88	62.1875	72.64	66	51.0	15	0.71	0.62	2.3	0.090	59.2	52.3	57.9	118.3	-10.9
Barrel 6	Mitchell	M-09-106_9	M-09-106	38.5	39.5	0.1753	0.1753	40.94	28.75	34.23	100	85.0	15	1.08	0.94	3.5	0.140	90.0	79.6	86.7	148.6	59.1
Barrel 6	Mitchell	M-09-106_10	M-09-106	42.5	43.5	0.0500	0.0500	25.94	21.5625	23.13	79	64.0	15	0.82	0.76	2.8	0.060	68.3	63.7	66.4	134.0	53.1
Barrel 6	Mitchell	M-09-106_11	M-09-106	46.5	47.5	0.3243	0.3243	67.19	54.6875	64.82	80	65.0	15	0.82	0.75	2.8	0.070	68.3	63.7	69.7	123.1	12.8
Barrel 6	Mitchell	M-09-106_12	M-09-106	50.5	51.5	0.2832	0.2832	64.38	47.8125	56.66	94	79.0	15	1.02	0.99	3.6	0.030	85.0	81.9	82.7	140.6	29.6
Barrel 6	Mitchell	M-09-106_13	M-09-106	54.5	55.5	0.4956	0.4956	129.10	113.125	128.61	29	14.0	15	0.25	0.22	0.8	0.030	20.8	18.2	28.2	73.3	-100.1
Barrel 6	Mitchell	M-09-106_14	M-09-106	58.5	59.5	0.8691	0.8691	257.80	225.625	252.78	82	67.0	15	0.95	0.93	3.4	0.020	79.2	77.3	77.9	127.1	-175.8
Barrel 6	Mitchell	M-09-106_15	M-09-106	62.5	63.5	0.1972	0.1972	100.00	89.375	95.54	55	40.0	15	0.61	0.56	2.1	0.050	50.8	47.8	53.4	99.7	-45.0
Barrel 6	Mitchell	M-09-106_16	M-09-106	66.5	67.5	0.4574	0.4574	74.38	58.4375	72.73	75	60.0	15	0.77	0.64	2.4	0.130	64.2	54.6	64.2	124.3	0.6
Barrel 6	Mitchell	M-09-106_17	M-09-106	70.5	71.5	0.2869	0.2869	51.56	38.125	47.09	71	56.0	15	0.83	0.78	2.9	0.050	69.2	66.0	71.2	121.1	19.4
Barrel 7	Mitchell	M-09-102_1	M-09-102	108.5	109.5	0.1011	0.1011	67.81	63.75	66.91	111	96.0	15	1.38	1.34	4.9	0.040	115.0	111.0	79.2	110.8	43.2
Barrel 7	Mitchell	M-09-102_2	M-09-102	112.5	113.5	0.2418	0.2418	94.69	86.5625	94.12	99	84.0	15	1.24	1.20	4.4	0.040	103.3	100.0	86.4	110.0	4.3
Barrel 7	Mitchell	M-09-102_3	M-09-102	116.5	117.5	0.0009	0.0009	72.50	71.5625	71.59	132	117.0	15	1.66	1.58	5.8	0.080	138.3	132.0	100.4	141.5	59.5
Barrel 7	Mitchell	M-09-102_4	M-09-102	120.5	121.5	-0.0089	0.0000	96.90	96.5625	96.56	76	61.0	15	1.02	0.98	3.6	0.040	85.0	81.9	47.2	80.2	-20.9
Barrel 7	Mitchell	M-09-102_5	M-09-102	124.5	125.5	0.0462	0.0462	52.81	50	51.44	35	20.0	15	0.39	0.38	1.4	0.010	32.5	31.8	23.5	36.7	-17.8
Barrel 7	Mitchell	M-09-102_6	M-09-102	128.5	129.5	0.0153	0.0153	68.12	66.875	67.35	91	76.0	15	1.37	1.30	4.8	0.070	114.2	109.0	82.7	108.8	22.9
Barrel 7	Mitchell	M-09-102_7	M-09-102	132.5	133.5	0.2421	0.2421	92.81	84.6875	92.25	61	46.0	15	0.86	0.77	2.8	0.090	71.7	63.7	45.0	67.6	-31.8
Barrel 7	Mitchell	M-09-103_15	M-09-103	209.5	210.5	0.1053	0.1053	173.80	74.0625	77.35	45	30.0	15	0.45	0.50	1.8	-0.050	37.5	40.9	125.4	189.0	-128.8
Barrel 7	Mitchell	M-09-103_16	M-09-103	213.5	214.5	-0.0665	0.0000	141.00	32.8125	32.81	41	26.0	15	0.41	0.45	1.7	-0.040	34.2	38.7	141.8	197.6	-99.6
Barrel 7	Mitchell	M-09-105_15	M-09-105	270.5	271.5	0.5237	0.5237	85.31	68.4375	84.80	122	107.0	15	1.42	1.18	4.3	0.240	118.3	97.8	111.6	171.5	36.7
Barrel 7	Mitchell	M-09-105_16	M-09-105	274.5	275.5	0.4932	0.4932	83.44	67.5	82.91	58	43.0	15	0.62	0.48	1.8	0.140	51.7	40.9	50.4	104.8	-25.4
Barrel 7	Mitchell	M-09-105_17	M-09-105	278.5	279.5	0.4116	0.4116	78.44	65	77.86	49	34.0	15	0.52	0.50	1.8	0.020	43.3	40.9	43.0	92.8	-29.4
Barrel 7	Mitchell	M-09-112_1	M-09-112	56.5	57.5	0.5272	0.5272	152.80	135.9375	152.41	12	0.0	12	0.04	0.05	0.2	-0.010	3.3	4.6	10.7	29.8	-140.8
Barrel 7	Mitchell	M-09-112_2	M-09-112	60.5	61.5	0.6074	0.6074	124.70	105.3125	124.29	12	0.0	12	0.08	0.08	0.3	0.000	6.7	6.8	11.5	37.5	-112.7
Barrel 7	Mitchell	M-09-112_3	M-09-112	64.5	65.5	0.7270	0.7270	147.00	123.75	146.47	59	44.0	15	0.63	0.63	2.3	0.000	52.5	52.3	40.5	98.2	-87.9
Barrel 7	Mitchell	M-09-112_4	M-09-112	68.5	69.5	0.0967	0.0967	125.30	121.5625	124.59	51	36.0	15	0.52	0.50	1.8	0.020	43.3	40.9	38.0	91.9	-74.3
Barrel 7	Mitchell	M-09-112_5	M-09-112	72.5	73.5	0.5970	0.5970	162.80	143.75	162.41	18	3.0	15	0.10	0.10	0.4	0.000	8.3	9.1	15.0	41.8	-144.8
Barrel 7	Mitchell	M-09-112_6	M-09-112	76.5	77.5	0.1837	0.1837	74.06	67.5	73.24	45	30.0	15	0.40	0.37	1.4	0.030	33.3	31.8	30.7	108.8	-29.1
Barrel 7	Mitchell	M-09-112_7	M-09-112	80.5	81.5	0.1746	0.1746	100.60	94.375	99.83	50	35.0	15	0.55	0.53	2.0	0.020	45.8	45.5	32.2	89.3	-50.6
Barrel 7	Mitchell	M-09-112_8	M-09-112	84.5	85.5	0.1653	0.1653	117.80	111.875	117.04	47	32.0	15	0.53	0.50	1.8	0.030	44.2	40.9	27.7	94.8	-70.8
Barrel 7	Mitchell	M-09-112_9	M-09-112	88.5	89.5	0.2465	0.2465	122.20	109.6875	117.39	57	42.0	15	0.65	0.63	2.3	0.020	54.2	52.3	33.0	83.0	-65.2
Barrel 7	Mitchell	M-09-112_10	M-09-112	92.5	93.5	0.5765	0.5765	103.40	81.5625	99.58	62	47.0	15	0.74	0.71	2.6	0.030	61.7	59.1	40.0	91.1	-41.4
Barrel 7	Mitchell	M-09-112_11	M-09-112	96.5	97.5	0.3367	0.3367	131.60	120.625	131.15	51	36.0	15	0.57	0.53	2.0	0.040	47.5	45.5	37.0	85.0	-80.6
Barrel 7	Mitchell	M-09-112_12	M-09-112	100.5	101.5	0.3843	0.3843	133.40	120.3125	132.32	77	62.0	15	0.92	0.88	3.2	0.040	76.7	72.8	62.2	110.8	-56.4
Barrel 7	Mitchell	M-09-112_13	M-09-112	104.5	105.5	0.3553	0.3553	141.20	126.5625	137.67	45	30.0	15	0.54	0.51	1.9	0.030	45.0	43.2	35.7	66.4	-96.3
Barrel 7	Mitchell	M-09-112_14	M-09-112	108.5	109.5	0.1837	0.1837	86.56	80.3125	86.05	48	33.0	15	0.54	0.51	1.9	0.030	45.0	43.2	39.2	89.3	-38.6
Barrel 7	Mitchell	M-09-112_15	M-09-112	112.5	113.5	0.3060	0.3060	92.81	80.625	90.19	39	24.0	15	0.40	0.42	1.6	-0.020	33.3	36.4	22.5	75.6	-53.8

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	TNNP_ADJ (kg $CaCO_3$ /t)	SNNP (kg $CaCO_3$ /t)	SNNP_ADJ (kg $CaCO_3$ /t)	ICNNP (kg $CaCO_3$ /t)	TNPR	TNPR_ ADJ	SNPR	SNPR (S DEL CALC)	SNPR for graphs	SNPR_ADJ for graphs	ICNPR	Fizz Rating	Fizz Check	Ag (ppm)	Al (ppm)	Al (%)	As (ppm)	Ba (ppm)
Barrel 6	Mitchell	M-09-103_17	M-09-103	222.5	223.5	-105.8	-1.64	-16.6	-97.8	-90.8	-105.8	0.99	0.93	0.99	0.35	0.14	2	Disagree	0.43	72300	7.23	3.2	490
Barrel 6	Mitchell	M-09-103_18	M-09-103	226.5	227.5	-110.4	9.63	-5.4	-101.2	-95.4	-110.4	1.67	1.67	1.67	0.63	0.15	2	Disagree	0.37	73300	7.33	5.5	580
Barrel 6	Mitchell	M-09-103_19	M-09-103	232.5	233.5	-104.0	16.09	1.1	-97.3	-89.0	-104.0	2.20	2.08	2.20	1.14	0.19	2	Disagree	0.36	68000	6.8	2.3	550
Barrel 6	Mitchell	M-09-103_20	M-09-103	236.5	237.5	-118.6	1.73	-13.3	-109.3	-103.6	-118.6	1.21	1.06	1.21	0.66	0.20	2	Disagree	0.69	66900	6.69	8.4	400
Barrel 6	Mitchell	M-09-103_21	M-09-103	240.5	241.5	-106.2	3.42	-11.6	-95.8	-91.2	-106.2	1.26	1.09	1.26	0.80	0.28	2	Disagree	0.67	66500	6.65	7.9	320
Barrel 6	Mitchell	M-09-103_22	M-09-103	244.5	245.5	-96.4	4.25	-10.8	-88.0	-81.4	-96.4	1.11	1.11	1.11	0.72	0.29	2	Disagree	1.14	66600	6.66	6	330
Barrel 6	Mitchell	M-09-103_23	M-09-103	248.5	249.5	-176.4	-32.09	-47.1	-163.4	-161.4	-176.4	0.99	0.57	0.99	0.64	0.20	2	Disagree	1.09	64700	6.47	4.6	300
Barrel 6	Mitchell	M-09-103_24	M-09-103	252.5	253.5	-145.2	-28.83	-43.8	-137.6	-130.2	-145.2	0.44	0.42	0.44	0.12	0.09	2	Disagree	1.04	64900	6.49	6.8	240
Barrel 6	Mitchell	M-09-103_25	M-09-103	256.5	257.5	-124.9	-21.87	-36.9	-116.9	-109.9	-124.9	0.60	0.59	0.60	0.32	0.18	2	Disagree	0.89	64900	6.49	3.5	260
Barrel 6	Mitchell	M-09-103_26	M-09-103	260.5	261.5	-182.7	-71.53	-86.5	-174.7	-167.7	-182.7	0.34	0.31	0.34	0.18	0.13	2	Disagree	1	65800	6.58	5.1	300
Barrel 6	Mitchell	M-09-103_27	M-09-103	264.5	265.5	-151.8	-61.89	-76.9	-138.3	-136.8	-151.8	0.51	0.43	0.51	0.35	0.25	2	Disagree	1.14	67400	6.74	10.9	230
Barrel 6	Mitchell	M-09-103_28	M-09-103	272.5	273.5	-9.1	38.98	24.0	21.5	5.9	-9.1	1.68	1.59	1.68	1.44	1.22	3	Disagree	0.92	67200	6.72	29.6	740
Barrel 6	Mitchell	M-09-103_29	M-09-103	276.5	277.5	-111.2	7.84	-7.2	-94.4	-96.3	-111.2	1.57	1.17	1.57	1.14	0.38	2	Disagree	0.37	71600	7.16	3.7	470
Barrel 6	Mitchell	M-09-103_30	M-09-103	280.5	281.5	-103.0	12.86	-2.1	-85.7	-88.2	-103.0	1.69	1.23	1.69	1.31	0.45	2	Disagree	0.83	69600	6.96	5.1	230
Barrel 6	Mitchell	M-09-103_32	M-09-103	284.5	285.5	-135.1	-9.54	-24.5	-120.4	-120.1	-135.1	0.84	0.80	0.84	0.52	0.24	2	Disagree	1.31	66100	6.61	3.7	1150
Barrel 6	Mitchell	M-09-103_35	M-09-103	295.5	296.5	-130.4	-13.45	-28.5	-116.1	-115.4	-130.4	0.96	0.80	0.96	0.69	0.31	2	Disagree	0.85	71100	7.11	9.5	1010
Barrel 6	Mitchell	M-09-103_36	M-09-103	302.5	303.5	-204.4	-33.55	-48.6	-196.1	-189.4	-204.4	0.51	0.50	0.51	0.28	0.12	2	Disagree	1.57	71600	7.16	8.7	1220
Barrel 6	Mitchell	M-09-105_22	M-09-105	298.5	299.5	-50.2	-34.74	-49.7	-54.4	-35.2	-50.2	0.81	0.66	0.81	0.63	0.47	3	Disagree	1.02	68300	6.83	6.9	180
Barrel 6	Mitchell	M-09-105_23	M-09-105	302.5	303.5	-28.9	-12.92	-27.9	-19.6	-13.9	-28.9	1.04	0.82	1.04	0.77	0.73	2	Disagree	0.62	70700	7.07	5.4	460
Barrel 6	Mitchell	M-09-105_24	M-09-105	306.5	307.5	-40.9	-21.58	-36.6	-37.8	-25.9	-40.9	0.89	0.68	0.89	0.60	0.48	2	Disagree	0.64	77900	7.79	16	320
Barrel 6	Mitchell	M-09-106_1	M-09-106	6.5	7.5	-30.9	-12.60	-27.6	-27.3	-15.9	-30.9	0.91	0.76	0.91	0.58	0.52	2	Disagree	1.13	81300	8.13	7	630
Barrel 6	Mitchell	M-09-106_2	M-09-106	10.5	11.5	-60.8	-44.72	-59.7	-55.1	-45.8	-60.8	0.64	0.52	0.64	0.44	0.41	2	Disagree	1.11	82500	8.25	14.9	980
Barrel 6	Mitchell	M-09-106_3	M-09-106	14.5	15.5	-66.6	-48.89	-63.9	-59.7	-51.6	-66.6	0.54	0.45	0.54	0.33	0.35	2	Disagree	1.01	83800	8.38	4.7	230
Barrel 6	Mitchell	M-09-106_4	M-09-106	18.5	19.5	-227.5	-210.90	-225.9	-220.7	-212.5	-227.5	0.07	0.07	0.07		0.03	1	Disagree	1.85	81400	8.14	18.8	50
Barrel 6	Mitchell	M-09-106_5	M-09-106	22.5	23.5	7.8	24.94	9.9	6.5	22.8	7.8	1.75	1.45	1.75	1.42	1.11	3	Disagree	1.02	83600	8.36	5.4	780
Barrel 6	Mitchell	M-09-106_6	M-09-106	26.5	27.5	-120.6	-102.36	-117.4	-111.5	-105.6	-120.6	0.28	0.23	0.28	0.14	0.18	2	Disagree	2.74	83200	8.32	26.5	110
Barrel 6	Mitchell	M-09-106_7	M-09-106	30.5	31.5	-98.6	-79.45	-94.5	-94.7	-83.6	-98.6	0.30	0.25	0.30	0.13	0.14	2	Disagree	2.04	91100	9.11	17.4	150
Barrel 6	Mitchell	M-09-106_8	M-09-106	34.5	35.5	-25.9	-6.64	-21.6	-24.6	-10.9	-25.9	1.06	0.91	1.06	0.82	0.68	3	Disagree	1.07	78500	7.85	12.9	230
Barrel 6	Mitchell	M-09-106_9	M-09-106	38.5	39.5	44.1	65.77	50.8	38.7	59.1	44.1	3.48	2.92	3.48	2.96	1.94	3	Disagree	0.39	76100	7.61	4.6	1060
Barrel 6	Mitchell	M-09-106_10	M-09-106	42.5	43.5	38.1	55.87	40.9	37.7	53.1	38.1	3.66	3.42	3.66	2.97	2.46	3	Disagree	0.68	77000	7.7	5.5	2570
Barrel 6	Mitchell	M-09-106_11	M-09-106	46.5	47.5	-2.2	15.18	0.2	-3.5	12.8	-2.2	1.46	1.23	1.46	1.19	0.95	3	Disagree	0.99	79600	7.96	7	1530
Barrel 6	Mitchell	M-09-106_12	M-09-106	50.5	51.5	14.6	37.34	22.3	17.5	29.6	14.6	1.97	1.66	1.97	1.65	1.27	3	Disagree	0.99	73700	7.37	7.5	290
Barrel 6	Mitchell	M-09-106_13	M-09-106	54.5	55.5	-115.1	-99.61	-114.6	-110.9	-100.1	-115.1	0.26	0.23	0.26	0.12	0.14	2	Disagree	1.56	86000	8.6	13.2	190
Barrel 6	Mitchell	M-09-106_14	M-09-106	58.5	59.5	-190.8	-170.78	-185.8	-180.5	-175.8	-190.8	0.36	0.32	0.36	0.30	0.30	2	Disagree	8.82	68300	6.83	15.2	40
Barrel 6	Mitchell	M-09-106_15	M-09-106	62.5	63.5	-60.0	-40.54	-55.5	-52.2	-45.0	-60.0	0.62	0.58	0.62	0.45	0.48	2	Disagree	2.25	74900	7.49	9	120
Barrel 6	Mitchell	M-09-106_16	M-09-106	66.5	67.5	-14.4	2.27	-12.7	-19.8	0.6	-14.4	1.28	1.03	1.28	1.03	0.73	3	Disagree	1.02	77400	7.74	9.3	540
Barrel 6	Mitchell	M-09-106_17	M-09-106	70.5	71.5	4.4	23.91	8.9	14.4	19.4	4.4	1.86	1.51	1.86	1.47	1.28	2	Disagree	1.43	84900	8.49	4.9	990
Barrel 7	Mitchell	M-09-102_1	M-09-102	108.5	109.5	28.2	44.09	29.1	43.6	43.2	28.2	1.74	1.66	1.74	1.51	1.64	3	Disagree	2.16	71900	7.19	27.5	810
Barrel 7	Mitchell	M-09-102_2	M-09-102	112.5	113.5	-10.7	4.88	-10.1	5.4	4.3	-10.7	1.14	1.05	1.14	0.97	1.06	3	Disagree	2.1	63800	6.38	10.4	350
Barrel 7	Mitchell	M-09-102_3	M-09-102	116.5	117.5	44.5	60.41	45.4	59.4	59.5	44.5	1.84	1.84	1.84	1.63	1.82	3	Disagree	3.01	69200	6.92	29.6	820
Barrel 7	Mitchell	M-09-102_4	M-09-102	120.5	121.5	-35.9	-20.56	-35.6	-15.0	-20.9	-35.9	0.79	0.79	0.79	0.63	0.85	2	Disagree	1.16	76500	7.65	23.9	380
Barrel 7	Mitchell	M-09-102_5	M-09-102	124.5	125.5	-32.8	-16.44	-31.4	-21.0	-17.8	-32.8	0.70	0.68	0.70	0.40	0.60	2	Disagree	0.68	77800	7.78	10.1	1020
Barrel 7	Mitchell	M-09-102_6	M-09-102	128.5	129.5	7.9	23.65	8.6	41.0	22.9	7.9	1.36	1.35	1.36	1.14	1.60	2	Disagree	0.67	64600	6.46	19.2	630
Barrel 7	Mitchell	M-09-102_7	M-09-102	132.5	133.5	-46.8	-31.25	-46.3	-29.1	-31.8	-46.8	0.72	0.66	0.72	0.54	0.69	2	Disagree	0.64	80900	8.09	15.4	340
Barrel 7	Mitchell	M-09-103_15	M-09-103	209.5	210.5	-143.8	-32.35	-47.4	-132.8	-128.8	-143.8	0.61	0.58	0.61	0.41	0.24	2	Disagree	0.91	65400	6.54	6.7	630
Barrel 7	Mitchell	M-09-103_16	M-09-103	213.5	214.5	-115.0	8.19	-6.8	-102.0	-99.6	-115.0	1.25	1.25	1.25	0.79	0.28	2	Disagree	0.46	69500	6.95	4	280
Barrel 7	Mitchell	M-09-105_15	M-09-105	270.5	271.5	21.7	37.20	22.2	12.5	36.7	21.7	1.78	1.44	1.78	1.56	1.15	3	Disagree	1.47	57500	5.75	8.7	270
Barrel 7	Mitchell	M-09-105_16	M-09-105	274.5	275.5	-40.4	-24.91	-39.9	-42.5	-25.4	-40.4	0.86	0.70	0.86	0.64	0.49	3	Disagree	1.06	59500	5.95	11.2	290
Barrel 7	Mitchell	M-09-105_17	M-09-105	278.5	279.5	-44.4	-28.86	-43.9	-37.5	-29.4	-44.4	0.75	0.63	0.75	0.52	0.52	3	Disagree	0.88	58700	5.87	9.2	360
Barrel 7	Mitchell	M-09-112_1	M-09-112	56.5	57.5	-155.8	-140.41	-155.4	-148.3	-140.8	-155.8	0.09	0.08	0.09	0.00	0.03	1	Disagree	12	90100	9.01	7.3	120
Barrel 7	Mitchell	M-09-112_2	M-09-112	60.5	61.5	-127.7	-112.29	-127.3	-117.9	-112.7	-127.7	0.11	0.10	0.11	0.00	0.05	1	Disagree	11.3	80100	8.01	5.1	110
Barrel 7	Mitchell	M-09-112_3	M-09-112	64.5	65.5	-103.0	-87.47	-102.5	-94.6	-87.9	-103.0	0.48	0.40	0.48	0.36	0.36	2	Disagree	7.49	78000	7.8	10.9	130
Barrel 7	Mitchell	M-09-112_4	M-09-112	68.5	69.5	-89.3	-73.59	-88.6	-84.4	-74.3	-89.3	0.42	0.41	0.42	0.30	0.33	2	Disagree	2.13	81800	8.18	4.4	140
Barrel 7	Mitchell	M-09-112_5	M-09-112	72.5	73.5	-159.8	-144.41	-159.4	-153.7	-144.8	-159.8	0.13	0.11	0.13	0.02	0.06	2	Disagree	11.65	97900	9.79	14.5	130
Barrel 7	Mitchell	M-09-112_6	M-09-112	76.5	77.5	-44.1	-28.24	-43.2	-42.2	-29.1	-44.1	0.67	0.61	0.67	0.44	0.43	2	Disagree	1.87	78400	7.84	5.3	700
Barrel 7	Mitchell	M-09-112_7	M-09-112	80.5	81.5	-65.6	-49.83	-64.8	-55.1	-50.6	-65.6	0.53	0.50	0.53	0.37	0.45	2	Disagree	1.39	79900	7.99	3.9	230
Barrel 7	Mitchell	M-09-112_8	M-09-112	84.5	85.5	-85.8	-70.04	-85.0	-76.9	-70.8	-85.8	0.42	0.40	0.42	0.29	0.35	2	Disagree	1.26	76500	7.65	3.6	200
Barrel 7	Mitchell	M-09-112_9	M-09-112	88.5	89.5	-80.2	-60.39	-75.4	-69.9	-65.2	-80.2	0.52	0.49	0.52	0.38	0.43	2	Disagree	1.2	83000	8.3	7.2	150
Barrel 7	Mitchell	M-09-112_10	M-09-112	92.5	93.5	-56.4	-37.58	-52.6	-44.3	-41.4	-56.4	0.76	0.62	0.76	0.58	0.57	2	Disagree	0.65	81800	8.18	7.8	150
Barrel 7	Mitchell	M-09-112_11	M-09-112	96.5	97.5	-95.6	-80.15	-95.2	-86.1	-80.6	-95.6	0.42	0.39	0.42	0.30	0.35	2	Disagree	1.04	73100	7.31	8.2	140
Barrel 7	Mitchell	M-09-112_12	M-09-112	100.5	101.5	-71.4	-55.32	-70.3	-60.7	-56.4	-71.4	0.64	0.58	0.64	0.52	0.55	2	Disagree	2.39	73500	7.35	12.5	1100
Barrel 7	Mitchell	M-09-112_13	M-09-112	104.5	105.5	-111.2	-92.67	-107.7	-98.0	-96.3	-111.2	0.36	0.33	0.36	0.24	0.31	2	Disagree	4.16	69200	6.92	13.6	200
Barrel 7	Mitchell	M-09-112_14	M-09-112	108.5	109.5	-53.6	-38.05	-53.1	-43.4	-38.6	-53.6	0.60	0.56	0.60	0.41	0.50	2	Disagree	1.49	76100	7.61	11.8	270
Barrel 7	Mitchell	M-09-112_15	M-09-112	112.5	113.5	-68.8	-51.19	-66.2	-56.4	-53.8	-68.8	0.48	0.43	0.48	0.30	0.39	2	Disagree	0.99	75300	7.53	3.8	170

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Be (ppm)	Bi (ppm)	Ca (ppm)	Ca (%)	Cd (ppm)	Ce (ppm)	Co (ppm)	Cr (ppm)	Cs (ppm)	Cu (ppm)	Fe (ppm)	Fe (%)	Ga (ppm)	Ge (ppm)	Hf (ppm)	Hg (ppm)	In (ppm)	K (ppm)	K (%)	La (ppm)	Li (ppm)	Mg (ppm)	Mg (%)
Barrel 6	Mitchell	M-09-103_17	M-09-103	222.5	223.5	1.02	0.03	41600	4.16	0.26	15.2	9.4	12	3.71	357	30900	3.09	16.4	0.11	0.8	0.01	0.02	22500	2.25	7.4	16	15000	1.5
Barrel 6	Mitchell	M-09-103_18	M-09-103	226.5	227.5	1.04	0.05	49400	4.94	0.38	15.3	7.5	10	3.56	287	27400	2.74	17.2	0.1	0.6	0.01	0.023	20000	2	7.3	18.8	17200	1.72
Barrel 6	Mitchell	M-09-103_19	M-09-103	232.5	233.5	0.89	0.02	49300	4.93	0.23	18.3	9.2	11	2.94	401	34400	3.44	15.1	0.1	0.6	0.01	0.02	16200	1.62	8	16.7	15800	1.58
Barrel 6	Mitchell	M-09-103_20	M-09-103	236.5	237.5	0.9	0.06	50900	5.09	0.43	15.5	11.1	9	2.92	446	35800	3.58	14.8	0.11	0.6	0.01	0.032	17900	1.79	7.6	16.6	15300	1.53
Barrel 6	Mitchell	M-09-103_21	M-09-103	240.5	241.5	0.83	0.07	49500	4.95	0.56	18.6	12	10	3.49	474	38300	3.83	15.2	0.12	0.5	0.01	0.027	19900	1.99	9.6	16.3	14800	1.48
Barrel 6	Mitchell	M-09-103_22	M-09-103	244.5	245.5	0.74	0.07	46500	4.65	0.59	19.75	10.8	9	3.37	704	42900	4.29	15.65	0.13	0.6	0.01	0.039	20500	2.05	10.4	16.7	15600	1.56
Barrel 6	Mitchell	M-09-103_23	M-09-103	248.5	249.5	0.77	0.12	63700	6.37	0.73	19.9	8	8	3.05	489	27700	2.77	13.8	0.12	0.6	0.01	0.025	19700	1.97	11.1	11.2	10300	1.03
Barrel 6	Mitchell	M-09-103_24	M-09-103	252.5	253.5	0.98	0.16	44200	4.42	0.48	40.5	8.5	12	2.93	794	25300	2.53	15	0.12	0.7	0.01	0.036	17300	1.73	22.5	13.5	11900	1.19
Barrel 6	Mitchell	M-09-103_25	M-09-103	256.5	257.5	1.11	0.2	41800	4.18	0.39	12.85	11.7	11	3.2	611	35300	3.53	14.3	0.12	0.6	0.01	0.04	18900	1.89	6.7	17.1	15600	1.56
Barrel 6	Mitchell	M-09-103_26	M-09-103	260.5	261.5	0.92	0.22	45400	4.54	0.5	14.9	14.9	15	3.12	727	40500	4.05	12.25	0.12	0.7	0.01	0.038	19600	1.96	7.8	12.6	10600	1.06
Barrel 6	Mitchell	M-09-103_27	M-09-103	264.5	265.5	0.9	0.23	44700	4.47	0.55	10.7	17.1	5	3.48	814	49400	4.94	14.85	0.15	0.5	0.01	0.042	21500	2.15	5.4	17.2	15100	1.51
Barrel 6	Mitchell	M-09-103_28	M-09-103	272.5	273.5	1.71	0.24	38900	3.89	0.64	13.7	15.5	7	7.58	432	40000	4	14.95	0.12	0.6	0.02	0.039	38000	3.8	6.9	12.1	16800	1.68
Barrel 6	Mitchell	M-09-103_29	M-09-103	276.5	277.5	0.66	0.05	55400	5.54	0.43	19.25	10.5	7	2.72	425	45800	4.58	11.7	0.1	0.4	0.01	0.021	20700	2.07	10.3	15.6	22900	2.29
Barrel 6	Mitchell	M-09-103_30	M-09-103	280.5	281.5	0.89	0.08	58700	5.87	0.49	22.7	14.1	6	3.57	429	37400	3.74	16.25	0.13	0.5	0.01	0.034	18800	1.88	12.1	15.6	16600	1.66
Barrel 6	Mitchell	M-09-103_32	M-09-103	284.5	285.5	0.69	0.08	51700	5.17	0.03	20.1	20.1	6	3.52	735	47300	4.73	13.6	0.14	0.6	0.01	0.054	20600	2.06	11.8	17.4	18000	1.8
Barrel 6	Mitchell	M-09-103_35	M-09-103	295.5	296.5	0.8	0.08	56200	5.62	0.56	17.7	14.8	7	3.59	546	44800	4.48	13.1	0.12	0.7	0.01	0.036	23300	2.33	10.5	14.2	16600	1.66
Barrel 6	Mitchell	M-09-103_36	M-09-103	302.5	303.5	0.8	0.07	69800	6.98	0.56	18.95	22.5	8	4.48	1450	53200	5.32	15.35	0.15	0.5	0.02	0.07	25000	2.5	10.2	20	21000	2.1
Barrel 6	Mitchell	M-09-105_22	M-09-105	298.5	299.5	1.03	0.13	22500	2.25	0.39	20.4	14.1	5	4.65	1285	44500	4.45	16.75	0.16	0.4	0.01	0.028	37000	3.7	10.7	17.3	12600	1.26
Barrel 6	Mitchell	M-09-105_23	M-09-105	302.5	303.5	1.04	0.05	22800	2.28	0.24	20	10	4	4.56	737	38200	3.82	17.3	0.14	0.4	0.01	0.013	39800	3.98	10.2	18.9	14200	1.42
Barrel 6	Mitchell	M-09-105_24	M-09-105	306.5	307.5	0.91	0.04	17000	1.7	0.47	24.4	9.6	5	4.46	512	40400	4.04	18.55	0.13	0.5	0.01	0.034	39200	3.92	13.1	18.7	14700	1.47
Barrel 6	Mitchell	M-09-106_1	M-09-106	6.5	7.5	1.15	0.08	14000	1.4	0.31	23	9.5	4	5.28	506	45500	4.55	20.4	0.13	0.6	<0.01	0.034	34600	3.46	11.8	26.8	20200	2.02
Barrel 6	Mitchell	M-09-106_2	M-09-106	10.5	11.5	1.42	0.06	17300	1.73	0.58	19.75	10.2	5	5.96	319	48100	4.81	18.6	0.14	0.7	0.01	0.019	40100	4.01	10.3	19.4	17000	1.7
Barrel 6	Mitchell	M-09-106_3	M-09-106	14.5	15.5	1.03	0.06	15400	1.54	0.46	23.2	16.6	5	4.68	571	53300	5.33	17.95	0.17	0.7	<0.01	0.019	33600	3.36	12.2	19.3	16500	1.65
Barrel 6	Mitchell	M-09-106_4	M-09-106	18.5	19.5	1.44	0.26	7200	0.72	1.18	16.75	13.1	8	6.14	380	69700	6.97	15.7	0.21	0.6	0.01	0.021	40600	4.06	7.8	5.5	6400	0.64
Barrel 6	Mitchell	M-09-106_5	M-09-106	22.5	23.5	0.88	0.12	27900	2.79	0.62	24	15.8	6	4.15	505	49200	4.92	17.85	0.17	0.6	<0.01	0.022	28300	2.83	13.1	20.3	17000	1.7
Barrel 6	Mitchell	M-09-106_6	M-09-106	26.5	27.5	1.25	0.29	12000	1.2	0.47	18.6	14.1	9	6.02	923	55000	5.5	17.6	0.17	0.5	0.01	0.053	39100	3.91	9.2	14	13300	1.33
Barrel 6	Mitchell	M-09-106_7	M-09-106	30.5	31.5	1.31	0.24	9700	0.97	0.21	23.6	15.7	6	6.42	619	50100	5.01	19	0.17	0.7	0.01	0.032	44300	4.43	11.9	15.8	14600	1.46
Barrel 6	Mitchell	M-09-106_8	M-09-106	34.5	35.5	1.13	0.13	23200	2.32	0.24	20	13.7	7	6.5	603	42500	4.25	17.7	0.16	0.7	<0.01	0.042	35800	3.58	10.1	21.9	18100	1.81
Barrel 6	Mitchell	M-09-106_9	M-09-106	38.5	39.5	0.8	0.07	34700	3.47	0.38	22.3	7.1	5	6.01	161.5	35900	3.59	17.75	0.16	0.7	<0.01	0.028	32400	3.24	11.6	14.7	17200	1.72
Barrel 6	Mitchell	M-09-106_10	M-09-106	42.5	43.5	0.9	0.08	26600	2.66	0.27	21.6	9.2	2	4.89	357	41300	4.13	16.75	0.15	0.7	<0.01	0.021	29400	2.94	11.2	24.4	20200	2.02
Barrel 6	Mitchell	M-09-106_11	M-09-106	46.5	47.5	1.18	0.1	27900	2.79	0.4	23.9	13.1	2	7.1	705	45100	4.51	18.1	0.18	0.6	0.01	0.029	38800	3.88	12.8	18.3	15100	1.51
Barrel 6	Mitchell	M-09-106_12	M-09-106	50.5	51.5	0.9	0.08	33100	3.31	0.48	21	12.3	3	4.72	623	39300	3.93	16.4	0.16	0.6	<0.01	0.023	28600	2.86	11.4	18.2	16000	1.6
Barrel 6	Mitchell	M-09-106_13	M-09-106	54.5	55.5	1.21	0.35	11300	1.13	0.21	24.5	18	4	6.86	756	55900	5.59	18.5	0.19	0.6	0.01	0.066	39600	3.96	13	15.1	14300	1.43
Barrel 6	Mitchell	M-09-106_14	M-09-106	58.5	59.5	0.98	0.78	31200	3.12	0.87	19.05	19.7	3	5.05	1175	85000	8.5	14.65	0.27	0.4	<0.01	0.062	32500	3.25	10.1	14.2	13200	1.32
Barrel 6	Mitchell	M-09-106_15	M-09-106	62.5	63.5	1.12	0.29	21400	2.14	1.09	19.7	11.4	5	5.54	1685	49200	4.92	16	0.16	0.6	0.01	0.046	33800	3.38	10	14.8	13400	1.34
Barrel 6	Mitchell	M-09-106_16	M-09-106	66.5	67.5	0.92	0.24	25700	2.57	0.62	19.95	17.2	4	4.41	701	49800	4.98	17.55	0.16	0.6	<0.01	0.031	28100	2.81	10.3	21.2	17700	1.77
Barrel 6	Mitchell	M-09-106_17	M-09-106	70.5	71.5	1.16	0.15	28500	2.85	0.48	21.9	14.6	4	5.9	1070	45800	4.58	19.75	0.18	0.7	0.01	0.039	38600	3.86	11.8	15.7	13800	1.38
Barrel 7	Mitchell	M-09-102_1	M-09-102	108.5	109.5	1.19	2.05	31700	3.17	0.35	15.7	8.7	6	2.41	919	32100	3.21	16.45	0.16	0.6	0.05	0.107	45800	4.58	10.3	13.3	7000	0.7
Barrel 7	Mitchell	M-09-102_2	M-09-102	112.5	113.5	1.66	1.08	34600	3.46	0.22	24	10.6	17	2.06	374	32000	3.2	16.55	0.21	0.6	0.02	0.074	42200	4.22	15.3	9.6	3800	0.38
Barrel 7	Mitchell	M-09-102_3	M-09-102	116.5	117.5	2.63	1.5	40200	4.02	1.69	33.7	13.7	27	4.19	893	31800	3.18	19.5	0.24	1.1	0.18	0.048	44800	4.48	20.4	21.2	9200	0.92
Barrel 7	Mitchell	M-09-102_4	M-09-102	120.5	121.5	1.69	1.97	18900	1.89	0.15	17.55	12.6	6	2.62	177.5	37400	3.74	17.55	0.23	0.7	0.04	0.077	43900	4.39	12.5	14.8	9100	0.91
Barrel 7	Mitchell	M-09-102_5	M-09-102	124.5	125.5	0.83	0.81	9400	0.94	0.34	12.05	9.8	8	1.96	219	17600	1.76	15.85	0.15	0.8	0.06	0.011	40800	4.08	7.2	8.3	3400	0.34
Barrel 7	Mitchell	M-09-102_6	M-09-102	128.5	129.5	1.02	0.8	33100	3.31	0.14	11.95	11.9	9	1.5	569	24400	2.44	15.8	0.21	0.7	0.08	0.055	43700	4.37	6.9	9.9	4900	0.49
Barrel 7	Mitchell	M-09-102_7	M-09-102	132.5	133.5	1.2	1.01	18000	1.8	0.14	14.2	10.6	8	1.59	373	30800	3.08	16.7	0.22	0.5	0.08	0.049	44600	4.46	8	10.3	5600	0.56
Barrel 7	Mitchell	M-09-103_15	M-09-103	209.5	210.5	0.74	0.08	50200	5.02	0.57	14.05	18.1	9	3.71	685	41400	4.14	12.25	0.15	0.5	0.01	0.032	24200	2.42	7	14.1	15800	1.58
Barrel 7	Mitchell	M-09-103_16	M-09-103	213.5	214.5	0.75	0.05	56800	5.68	0.34	16.25	11.3	10	3.14	413	31200	3.12	13.25	0.1	0.6	0.01	0.02	19000	1.9	8.3	12.1	12200	1.22
Barrel 7	Mitchell	M-09-105_15	M-09-105	270.5	271.5	0.95	0.3	44700	4.47	0.61	27.7	13.6	18	3.83	955	36400	3.64	14.7	0.14	0.7	<0.1	0.104	25300	2.53	13.1	18	15200	1.52
Barrel 7	Mitchell	M-09-105_16	M-09-105	274.5	275.5	1.41	0.13	20200	2.02	0.33	31.6	11.8	21	6.02	991	34600	3.46	16.35	0.14	0.7	0.02	0.04	29000	2.9	15.4	21	16400	1.64
Barrel 7	Mitchell	M-09-105_17	M-09-105	278.5	279.5	1.25	0.13	17200	1.72	0.28	24.5	10.1	26	6.11	1075	31100	3.11	16.1	0.11	0.5	0.02	0.055	29000	2.9	12	21.8	15200	1.52
Barrel 7	Mitchell	M-09-112_1	M-09-112	56.5	57.5	1.31	0.65	4300	0.43	0.18	21.1	14.4	6	5.24	401	44900	4.49	23.3	0.19	0.8	0.03	0.053	38000	3.8	10.2	8.7	6100	0.61
Barrel 7	Mitchell	M-09-112_2	M-09-112	60.5	61.5	1.24	0.65	4600	0.46	0.14	17.35	17.1	8	5.07	831	42500	4.25	18.4	0.19	0.7	0.03	0.06	35200	3.52	9.4	11.5	8500	0.85
Barrel 7	Mitchell	M-09-112_3	M-09-112	64.5	65.5	1.31	2.67	16200	1.62	43.1	27.5	15.5	8	5.34	1260	53600	5.36	17.4	0.15	0.8	0.69	0.613	31300	3.13	15.4	21.2	18100	1.81
Barrel 7	Mitchell	M-09-112_4	M-09-112	68.5	69.5	1.2	0.45	15200	1.52	0.45	24.9	17.8	6	5.33	422	50000	5	16.45	0.15	0.5	0.01	0.06	33900	3.39	13.8	21.2	16900	1.69
Barrel 7	Mitchell	M-09-112_5	M-09-112	72.5	73.5	1.54	3.26	6000	0.6	19.95	22.9	18.3	18	6.82	780	48100	4.81	21.9	0.26	0.7	0.18	0.397	42500	4.25	12.1	11.4	8600	0.86
Barrel 7	Mitchell	M-09-112_6	M-09-112	76.5	77.5	1.07	0.23	12300	1.23	0.45	20.4	16.8	15	4.59	671	42800	4.28	18.1	0.11	0.7	0.01	0.055	24500	2.45	11.2	34	25700	2.57
Barrel 7	Mitchell	M-09-112_7	M-09-112	80.5	81.5	1.49	0.44	12900	1.29	1.13	19.3	11.3	7	5.63	644	39000	3.9	17.9	0.13	0.6	0.01	0.035	36400	3.64	10.7	20.8	18300	1.83
Barrel 7	Mitchell	M-09-112_8	M-09-112	84.5	85.5	1.43	0.23	11100	1.11	0.45	22.4	15.5	4	5.21	808	45300	4.53	18.25	0.13	0.4	0.01	0.029	34500	3.45	11.8	23	22000	2.2
Barrel 7	Mitchell	M-09-112_9	M-09-112	88.5	89.5	1.49	0.29	13200	1.32	0.39	19.15	11.6	8	5.59	962	37200	3.72	18.7	0.13	0.5	0.01	0.035	39500	3.95	10.1	14.5	15800	1.58
Barrel 7	Mitchell	M-09-112_10	M-09-112	92.5	93.5	1.44	0.2	16000	1.6	0.31	21	13.9	8	6.01	559	36900	3.69	17.9	0.13	0.6	<0.01	0.025	38500	3.85	11.9	14.2	15800	1.58
Barrel 7	Mitchell	M-09-112_11	M-09-112	96.5	97.5	1.21	0.33	14800	1.48	0.57	26.4	15.4	4	5.02	637	43000	4.3	14.95	0.13	0.4	0.01	0.03	33400	3.34	14.6	14.7	14900	1.49
Barrel 7	Mitchell	M-09-112_12	M-09-112	100.5	101.5	1.69	0.47	24900	2.49	0.47	23.3	12	6	4.95	1085	44900	4.49	15.8	0.19	0.5	0.02	0.027	32800	3.28	14.4	11.9	13800	1.38
Barrel 7	Mitchell	M-09-112_13	M-09-112	104.5	105.5	1.15	0.4	14300	1.43	0.59	25.5	11	7	4.9	1850	43700	4.37	14.75	0.16	0.3	0.01	0.071	31600	3.16	13	7.8	8900	0.89
Barrel 7	Mitchell	M-09-112_14	M-09-112	108.5	109.5	1.29	0.25	15700	1.57	0.56	17.9	10	8	5.39	491	34600	3.46	16.5	0.12	0.3	<0.01	0.023	33500	3.35	10.2	17.5	15500	1.55
Barrel 7	Mitchell	M-09-112_15	M-09-112	112.5	113.5	1.61	0.27	9000	0.9	0.22	14.75	11.2	8	5.65	533	32900	3.29	17.95	0.11	0.5	<0.01	0.023	37500	3.75	7.8	16.9	17400	1.74

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Mn (ppm)	Mo (ppm)	Na (ppm)	Na (%)	Nb (ppm)	Ni (ppm)	P (%)	Pb (ppm)	Rb (ppm)	Re (ppm)	S (ppm)	S (%)	Sb (ppm)	Sc (ppm)	Se (ppm)	Sn (ppm)	Sr (ppm)	Ta (ppm)	Te (ppm)	Th (ppm)	Ti (ppm)	Ti (%)	Tl (ppm)
Barrel 6	Mitchell	M-09-103_17	M-09-103	222.5	223.5	635	37.6	27400	2.74	4.1	6.4	0.119	9.8	89.5	0.151	37400	3.74	1.23	17	4	1.5	463	0.26	<0.05	3.1	1930.0	0.193	1.87
Barrel 6	Mitchell	M-09-103_18	M-09-103	226.5	227.5	695	17.75	28100	2.81	4.8	5	0.122	31.5	81.4	0.077	39700	3.97	1.37	16.2	2	1.7	475	0.28	<0.05	3	2270.0	0.227	1.59
Barrel 6	Mitchell	M-09-103_19	M-09-103	232.5	233.5	765	44.7	29200	2.92	4.5	5.6	0.117	5.6	69	0.151	39400	3.94	1.28	19	2	1.7	499	0.24	<0.05	2.8	2090.0	0.209	1.41
Barrel 6	Mitchell	M-09-103_20	M-09-103	236.5	237.5	851	41.6	26500	2.65	4.4	4.7	0.111	16.4	67.2	0.145	43200	4.32	1.23	16.6	3	2	496	0.24	0.06	2.7	1970.0	0.197	1.47
Barrel 6	Mitchell	M-09-103_21	M-09-103	240.5	241.5	993	64.2	24300	2.43	4	5.8	0.117	14	80.2	0.359	42100	4.21	1.36	18	5	1.7	461	0.23	0.1	2.6	1960.0	0.196	1.67
Barrel 6	Mitchell	M-09-103_22	M-09-103	244.5	245.5	1000	101.5	20500	2.05	4.9	4.7	0.099	18.1	87.1	0.511	41000	4.1	1.21	17.2	7	1.9	534	0.29	0.09	3.4	1580.0	0.158	1.74
Barrel 6	Mitchell	M-09-103_23	M-09-103	248.5	249.5	867	74.1	20700	2.07	4.2	3.7	0.095	29	91.4	0.428	56700	5.67	1.17	15	8	1.8	638	0.24	0.06	3.8	1240.0	0.124	1.55
Barrel 6	Mitchell	M-09-103_24	M-09-103	252.5	253.5	416	74.2	26400	2.64	4.7	3.7	0.109	50.4	82.5	0.404	47800	4.78	1.27	17.2	7	2.1	541	0.28	0.12	3.9	1380.0	0.138	1.36
Barrel 6	Mitchell	M-09-103_25	M-09-103	256.5	257.5	709	59.5	21500	2.15	5.2	4.9	0.099	25.4	85.6	0.36	46400	4.64	1.34	18.5	6	2.1	489	0.33	0.07	4	1460.0	0.146	1.54
Barrel 6	Mitchell	M-09-103_26	M-09-103	260.5	261.5	539	67	23600	2.36	3.9	4.9	0.092	30.1	91.1	0.388	60000	6	1.23	18.9	9	2.1	647	0.25	0.1	3.9	1130.0	0.113	1.57
Barrel 6	Mitchell	M-09-103_27	M-09-103	264.5	265.5	802	464	18000	1.8	3.8	3.1	0.118	23.4	87.4	3.17	55400	5.54	1.75	22.1	10	2.3	449	0.23	0.16	3.3	1610.0	0.161	1.8
Barrel 6	Mitchell	M-09-103_28	M-09-103	272.5	273.5	1950	68.8	800.0	0.08	3.8	3.8	0.148	77.6	163.5	0.348	31000	3.1	4.38	31.2	5	2.2	206	0.23	0.12	3.1	1990.0	0.199	3.44
Barrel 6	Mitchell	M-09-103_29	M-09-103	276.5	277.5	1440	33	16000	1.6	3.1	3.2	0.15	14.8	66.7	0.167	45700	4.57	1.63	22.4	4	1.6	494	0.18	<0.05	2.3	2090.0	0.209	1.34
Barrel 6	Mitchell	M-09-103_30	M-09-103	280.5	281.5	1320	32	26400	2.64	4.5	4.5	0.155	50.5	76.5	0.154	47100	4.71	2.45	32.2	5	2.3	489	0.27	0.07	2.8	2270.0	0.227	1.64
Barrel 6	Mitchell	M-09-103_32	M-09-103	284.5	285.5	1080	323	11500	1.15	3.3	4.3	0.133	9.7	82.5	1.78	49100	4.91	2.19	27	6	1.9	547	0.2	0.08	2.7	1700	0.17	1.77
Barrel 6	Mitchell	M-09-103_35	M-09-103	295.5	296.5	1200	89.1	15600	1.56	3.6	4	0.137	22.5	87.5	0.373	53400	5.34	2.55	24.2	6	1.9	606	0.22	0.08	3	1770.0	0.177	1.81
Barrel 6	Mitchell	M-09-103_36	M-09-103	302.5	303.5	828	75.8	9900	0.99	4	5.2	0.122	20.9	99	0.415	73600	7.36	3.38	23.3	11	2.3	831	0.22	0.1	3	1660.0	0.166	1.97
Barrel 6	Mitchell	M-09-105_22	M-09-105	298.5	299.5	597	33.7	5500	0.55	5.9	2.9	0.121	27	145	0.169	30600	3.06	2.97	15.4	12	1.5	131	0.31	0.08	3	2100	0.21	1.51
Barrel 6	Mitchell	M-09-105_23	M-09-105	302.5	303.5	793	25.4	6600	0.66	7	2.4	0.134	10.4	98.9	0.107	22100	2.21	3.07	16.3	11	1.5	129	0.38	0.05	3.1	2390.0	0.239	1.58
Barrel 6	Mitchell	M-09-105_24	M-09-105	306.5	307.5	706	19.25	10900	1.09	7.1	2.8	0.14	10.8	111	0.074	20700	2.07	3.3	18.2	7	1.5	235	0.39	0.07	3.5	2420.0	0.242	1.59
Barrel 6	Mitchell	M-09-106_1	M-09-106	6.5	7.5	895	79.8	1300	0.13	4.2	2.6	0.151	8.6	121.5	0.352	16500	1.65	1.91	18.6	6	1.4	290	0.25	0.16	3.4	1720.0	0.172	3.08
Barrel 6	Mitchell	M-09-106_2	M-09-106	10.5	11.5	872	33.2	900.0	0.09	4.8	4	0.159	19.3	124	0.161	29100	2.91	4.46	18.5	5	1.3	76.6	0.3	0.09	3.7	2010.0	0.201	3.75
Barrel 6	Mitchell	M-09-106_3	M-09-106	14.5	15.5	760	30.8	7100	0.71	4.4	4.7	0.15	10.6	127	0.169	28600	2.86	1.72	19	8	1.3	193	0.25	0.05	3.7	1770.0	0.177	3.11
Barrel 6	Mitchell	M-09-106_4	M-09-106	18.5	19.5	191	80.1	900.0	0.09	2.5	3.5	0.21	133.5	152	0.402	70500	7.05	4.88	14.1	17	2.2	149	0.14	0.14	2.7	990.00	0.099	3.55
Barrel 6	Mitchell	M-09-106_5	M-09-106	22.5	23.5	1040	10.8	13700	1.37	4.5	3.7	0.147	6.7	108	0.067	17900	1.79	1.45	19.3	6	1.4	357	0.26	0.06	3.8	1920.0	0.192	2.71
Barrel 6	Mitchell	M-09-106_6	M-09-106	26.5	27.5	533	192	1200	0.12	3.4	4.2	0.148	28.5	142	1.415	41800	4.18	4.85	18	7	1.4	222	0.2	0.2	3.4	1510.0	0.151	3.77
Barrel 6	Mitchell	M-09-106_7	M-09-106	30.5	31.5	558	99.7	2500	0.25	4.2	3.8	0.166	21	152	0.445	34900	3.49	4.08	20.7	7	1.6	312	0.25	0.13	4.1	1830.0	0.183	4.39
Barrel 6	Mitchell	M-09-106_8	M-09-106	34.5	35.5	1300	120	1300	0.13	6.2	3.3	0.147	12.7	122	0.702	23600	2.36	2.85	18.2	6	1.1	341	0.35	0.1	3.5	2170.0	0.217	3.17
Barrel 6	Mitchell	M-09-106_9	M-09-106	38.5	39.5	1320	32.5	7200	0.72	5.8	3.6	0.144	7.5	99.6	0.141	11700	1.17	2.11	20.1	4	1	518	0.38	0.05	4.2	2100	0.21	2.8
Barrel 6	Mitchell	M-09-106_10	M-09-106	42.5	43.5	1010	323	8300	0.83	6.1	3	0.138	6.7	91.3	1.985	8900	0.89	1.99	17.9	4	1.2	166	0.34	<0.05	3.6	2240.0	0.224	2.49
Barrel 6	Mitchell	M-09-106_11	M-09-106	46.5	47.5	827	136.5	900.0	0.09	5.9	3.3	0.149	8.1	122.5	0.74	21900	2.19	2.65	18.5	7	1.3	166	0.33	0.09	3.5	2200	0.22	3.14
Barrel 6	Mitchell	M-09-106_12	M-09-106	50.5	51.5	987	139	9400	0.94	5.8	3.3	0.132	12.1	108	0.684	18700	1.87	1.98	16.9	6	1.1	572	0.32	0.1	3.5	2070.0	0.207	2.26
Barrel 6	Mitchell	M-09-106_13	M-09-106	54.5	55.5	655	193.5	800.0	0.08	5.8	3.9	0.158	21.9	142	1.25	42800	4.28	3.1	19.3	9	1.4	32	0.32	0.47	3.9	2130.0	0.213	2.96
Barrel 6	Mitchell	M-09-106_14	M-09-106	58.5	59.5	998	215	500.0	0.05	3.3	3.6	0.128	94.5	119.5	1.09	81100	8.11	2.63	15.3	28	2	220	0.17	4	2.8	1280.0	0.128	2.38
Barrel 6	Mitchell	M-09-106_15	M-09-106	62.5	63.5	635	168	6400	0.64	3.6	3.4	0.134	48.8	120	0.776	31700	3.17	3.04	16.6	10	1.7	261	0.21	0.17	3	1500	0.15	2.46
Barrel 6	Mitchell	M-09-106_16	M-09-106	66.5	67.5	993	106	14800	1.48	6.1	3.5	0.142	31.3	100.5	0.467	23300	2.33	1.86	18.7	8	1.4	188	0.34	0.14	3.6	2170.0	0.217	2.09
Barrel 6	Mitchell	M-09-106_17	M-09-106	70.5	71.5	729	116.5	9100	0.91	4.9	3.1	0.151	16.7	143.5	0.692	16300	1.63	2.08	19.9	7	1.6	416	0.27	0.07	4	1950.0	0.195	2.6
Barrel 7	Mitchell	M-09-102_1	M-09-102	108.5	109.5	1740	54.6	3800	0.38	4.8	3.6	0.11	130	92.9	0.075	22100	2.21	6.64	13.6	11	0.8	235	0.28	0.44	1.4	1520.0	0.152	1.76
Barrel 7	Mitchell	M-09-102_2	M-09-102	112.5	113.5	1840	21	17200	1.72	3.6	12.1	0.038	29.1	138.5	0.048	29600	2.96	3.33	7.5	7	1.1	256	0.28	0.72	2.8	1880.0	0.188	1.15
Barrel 7	Mitchell	M-09-102_3	M-09-102	116.5	117.5	2140	34.2	6500	0.65	5.7	18.6	0.073	109.5	143	0.047	23500	2.35	113	14.2	8	1.3	259	0.38	0.47	3.5	3090.0	0.309	1.4
Barrel 7	Mitchell	M-09-102_4	M-09-102	120.5	121.5	1080	12.3	15200	1.52	5.6	3.8	0.119	81.5	126	0.019	30200	3.02	10.3	18	16	0.7	252	0.38	0.58	1.7	1740.0	0.174	1.47
Barrel 7	Mitchell	M-09-102_5	M-09-102	124.5	125.5	364	60.8	16200	1.62	5.5	3.5	0.123	15.5	95.5	0.088	15900	1.59	16.35	19.6	6	1.4	178	0.36	0.31	1.7	1520.0	0.152	1.76
Barrel 7	Mitchell	M-09-102_6	M-09-102	128.5	129.5	1140	14.95	30500	3.05	5.1	3.3	0.111	19.8	116	0.027	21300	2.13	68.5	20.1	9	1.3	342	0.34	0.32	1.5	1480.0	0.148	1.11
Barrel 7	Mitchell	M-09-102_7	M-09-102	132.5	133.5	771	13.3	29700	2.97	5.6	4.2	0.121	15.3	131	0.014	28300	2.83	47.5	19.7	12	1.4	230	0.38	0.4	1.6	1580.0	0.158	1.39
Barrel 7	Mitchell	M-09-103_15	M-09-103	209.5	210.5	925	157	14800	1.48	3.3	7.8	0.09	18.4	94.5	0.576	54300	5.43	1.59	15.5	8	2	600	0.2	0.14	2.8	1570.0	0.157	1.86
Barrel 7	Mitchell	M-09-103_16	M-09-103	213.5	214.5	669	80.2	23800	2.38	4.2	5.1	0.105	11.4	88.5	0.401	46300	4.63	1.19	17.2	5	1.6	576	0.23	0.08	3.1	1750.0	0.175	1.46
Barrel 7	Mitchell	M-09-105_15	M-09-105	270.5	271.5	1930	91.2	5900	0.59	3.8	14.7	0.078	32.8	87.4	0.225	26600	2.66	2.51	10.1	9	2.1	346	0.21	0.12	2.5	2170.0	0.217	1.22
Barrel 7	Mitchell	M-09-105_16	M-09-105	274.5	275.5	764	50.8	300.0	0.03	4.5	14.4	0.077	12.7	105.5	0.309	26600	2.66	5.51	11.7	11	2.4	79.8	0.24	0.09	3.3	2460.0	0.246	1.41
Barrel 7	Mitchell	M-09-105_17	M-09-105	278.5	279.5	750	45.1	900.0	0.09	4.4	13.2	0.074	14.5	107	0.223	25700	2.57	3.55	9.6	8	2.1	82.1	0.24	0.08	3.3	2210.0	0.221	1.37
Barrel 7	Mitchell	M-09-112_1	M-09-112	56.5	57.5	157	40.8	2000	0.2	5.1	2.8	0.157	58	117.5	0.17	44400	4.44	2.16	20.3	14	4.7	41.7	0.3	0.28	4.2	1530.0	0.153	3.06
Barrel 7	Mitchell	M-09-112_2	M-09-112	60.5	61.5	322	49	2500	0.25	5.2	3.4	0.101	59.2	121.5	0.152	38000	3.8	2.28	13.5	12	3	65.5	0.28	0.16	3.6	1000	0.1	2.57
Barrel 7	Mitchell	M-09-112_3	M-09-112	64.5	65.5	1300	16.05	4100	0.41	4.8	4.6	0.133	261	94.3	0.059	44300	4.43	2.29	18.4	11	2.6	72.2	0.29	0.73	3.6	1670.0	0.167	2.49
Barrel 7	Mitchell	M-09-112_4	M-09-112	68.5	69.5	903	82	4000	0.4	4.2	6.6	0.153	39.8	103	0.288	39400	3.94	1.25	19.4	12	2.6	78.5	0.28	0.13	4.1	1690.0	0.169	2.69
Barrel 7	Mitchell	M-09-112_5	M-09-112	72.5	73.5	317	424	1700	0.17	6.7	5.4	0.179	828	140	1.455	47600	4.76	6.19	21.7	24	6	44.4	0.35	0.87	3.6	1960.0	0.196	3.4
Barrel 7	Mitchell	M-09-112_6	M-09-112	76.5	77.5	840	18.1	13200	1.32	6.9	8.3	0.143	10.7	78.2	0.076	23300	2.33	1.18	21.3	8	1.6	76.7	0.41	0.1	3.3	2090.0	0.209	2
Barrel 7	Mitchell	M-09-112_7	M-09-112	80.5	81.5	1010	11.5	1300	0.13	5.7	3.3	0.122	46.7	111.5	0.048	31000	3.1	1.25	15.7	11	1.5	55.9	0.32	0.1	3.5	1360.0	0.136	2.88
Barrel 7	Mitchell	M-09-112_8	M-09-112	84.5	85.5	1050	8.55	1100	0.11	3	3.4	0.142	10.7	92.3	0.029	35000	3.5	0.96	18.3	10	1	67.9	0.2	0.1	3.5	1490.0	0.149	2.8
Barrel 7	Mitchell	M-09-112_9	M-09-112	88.5	89.5	1100	49.6	1300	0.13	6.3	2.8	0.113	23.4	122	0.255	35000	3.5	1.31	13.5	11	1.8	271	0.34	0.14	3.7	1180.0	0.118	2.72
Barrel 7	Mitchell	M-09-112_10	M-09-112	92.5	93.5	1140	23.5	1200	0.12	6.4	2.9	0.117	7.9	119	0.086	30100	3.01	0.92	14.9	10	1	328	0.35	0.11	3.7	1450.0	0.145	2.91
Barrel 7	Mitchell	M-09-112_11	M-09-112	96.5	97.5	802	46	1100	0.11	2.9	4.4	0.134	31.9	102	0.176	39200	3.92	2.52	18	11	1.9	60.4	0.18	0.1	3.4	1270.0	0.127	2.54
Barrel 7	Mitchell	M-09-112_12	M-09-112	100.5	101.5	1490	836	1100	0.11	5.6	4.8	0.131	105.5	134.5	4.37	42100	4.21	4.86	15.2	12	1.8	61.2	0.3	0.36	3.5	1710.0	0.171	2.34
Barrel 7	Mitchell	M-09-112_13	M-09-112	104.5	105.5	1210	310	1000	0.1	3.3	5.6	0.094	37.4	104.5	1.525	42600	4.26	3.99	14.7	13	2	290	0.2	0.65	3	990.00	0.099	2.51
Barrel 7	Mitchell	M-09-112_14	M-09-112	108.5	109.5	1320	39.4	1000	0.1	5.9	3	0.103	31.1	105	0.154	26500	2.65	2.18	12.6	8	1.1	124	0.33	0.34	3.1	1130.0	0.113	2.56
Barrel 7	Mitchell	M-09-112_15	M-09-112	112.5	113.5	1220	40	1100	0.11	6.9	3.2	0.103	26.4	116	0.148	27200	2.72	1.13	11.8	7	1	234	0.37	0.12	3.4	1130.0	0.113	2.77

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	U (ppm)	V (ppm)	W (ppm)	Y (ppm)	Zn (ppm)	Zr (ppm)	Al2O3 (%)	BaO (%)	CaO (%)	Cr2O3 (%)	Fe2O3 (%)	K2O (%)	MgO (%)	MnO (%)	Na2O (%)	P2O5 (%)	SiO2 (%)	SRO (%)	TiO2 (%)	LOI (%)	Total_DC (%)
Barrel 6	Mitchell	M-09-103_17	M-09-103	222.5	223.5	1.8	172	0.7	6.5	181	28.9	16.32	0.12	6.14	<0.01	4.61	2.75	2.8	0.09	3.84	0.274	52.35	0.06	0.52	8.36	98.23
Barrel 6	Mitchell	M-09-103_18	M-09-103	226.5	227.5	1.2	190	1.1	6.5	191	22.5	15.9	0.06	7.25	<0.01	4.12	2.44	3.16	0.1	3.93	0.272	52.22	0.06	0.51	8.44	98.47
Barrel 6	Mitchell	M-09-103_19	M-09-103	232.5	233.5	1.3	183	0.9	7.5	262	21.3	15.44	0.07	7.37	<0.01	5.26	1.97	2.9	0.11	4.08	0.267	51.54	0.06	0.54	8.61	98.21
Barrel 6	Mitchell	M-09-103_20	M-09-103	236.5	237.5	1.1	167	1	6.4	225	20.7	15.15	0.08	7.53	<0.01	5.5	2.21	2.85	0.12	3.75	0.255	49.02	0.06	0.49	7.42	94.43
Barrel 6	Mitchell	M-09-103_21	M-09-103	240.5	241.5	1.2	174	1	6.7	211	17.9	15.37	0.09	7.5	<0.01	5.96	2.47	2.82	0.14	3.46	0.27	49.14	0.06	0.55	7.59	95.42
Barrel 6	Mitchell	M-09-103_22	M-09-103	244.5	245.5	1.7	183	0.6	6.9	232	21.7	14.76	0.38	7.04	<0.01	6.61	2.54	2.89	0.14	2.91	0.231	49.77	0.07	0.39	7.74	95.47
Barrel 6	Mitchell	M-09-103_23	M-09-103	248.5	249.5	1.8	156	0.8	5.1	143	21.4	13.24	0.23	9.62	<0.01	4.22	2.43	1.97	0.13	3.02	0.222	50.75	0.08	0.36	7.13	93.4
Barrel 6	Mitchell	M-09-103_24	M-09-103	252.5	253.5	2.2	154	0.5	5.5	120	22.5	14.07	0.27	6.76	<0.01	3.95	2.19	2.25	0.06	3.82	0.255	55.88	0.08	0.36	8.47	98.41
Barrel 6	Mitchell	M-09-103_25	M-09-103	256.5	257.5	2	157	0.5	5	177	21.2	13.65	0.28	6.29	<0.01	5.35	2.3	2.85	0.1	3.01	0.229	55.21	0.06	0.36	8.79	98.48
Barrel 6	Mitchell	M-09-103_26	M-09-103	260.5	261.5	1.6	164	0.5	5.1	137	22.6	13.78	0.47	6.73	<0.01	6.08	2.41	1.98	0.08	3.37	0.216	53.34	0.09	0.41	9.23	98.19
Barrel 6	Mitchell	M-09-103_27	M-09-103	264.5	265.5	1.3	201	0.8	5	198	16.2	14.07	0.2	6.68	<0.01	7.51	2.65	2.76	0.12	2.56	0.277	51.67	0.06	0.45	9.54	98.55
Barrel 6	Mitchell	M-09-103_28	M-09-103	272.5	273.5	1.8	236	1.2	7.8	103	18.6	13.88	0.15	5.81	<0.01	6.17	4.69	3.13	0.28	0.2	0.346	54.88	0.03	0.53	8.38	98.48
Barrel 6	Mitchell	M-09-103_29	M-09-103	276.5	277.5	1.2	256	0.8	5.4	341	13.6	14.26	0.12	8.23	<0.01	6.87	2.52	4.19	0.2	2.28	0.343	46.48	0.06	0.56	8.47	94.59
Barrel 6	Mitchell	M-09-103_30	M-09-103	280.5	281.5	1.5	270	1.1	8.3	246	15.2	15.01	0.22	8.74	<0.01	5.75	2.32	3.11	0.19	3.7	0.357	46.29	0.06	0.58	7.51	93.84
Barrel 6	Mitchell	M-09-103_32	M-09-103	284.5	285.5	1.6	221	1.6	6.3	375	18.4	13.15	0.35	7.83	<0.01	7.19	2.58	3.34	0.16	1.69	0.312	48.82	0.06	0.52	9.02	95.02
Barrel 6	Mitchell	M-09-103_35	M-09-103	295.5	296.5	1.6	213	1	6	203	21.1	13.5	0.48	8.07	<0.01	6.64	2.73	2.95	0.17	2.19	0.303	49.61	0.07	0.47	8.02	95.2
Barrel 6	Mitchell	M-09-103_36	M-09-103	302.5	303.5	1.5	211	1.2	5.6	294	15.3	13.18	0.53	9.81	<0.01	7.61	2.84	3.6	0.12	1.35	0.269	41.49	0.1	0.42	8.42	89.74
Barrel 6	Mitchell	M-09-105_22	M-09-105	298.5	299.5	1.7	141	1.3	12.4	52	10.6	14.61	0.46	3.25	<0.01	6.67	4.82	2.4	0.09	0.84	0.275	59.82	0.02	0.47	5.63	99.34
Barrel 6	Mitchell	M-09-105_23	M-09-105	302.5	303.5	1.7	152	1.5	12.1	81	12.9	15.41	0.44	3.21	<0.01	5.62	5.05	2.6	0.1	0.96	0.284	59.8	0.02	0.44	5.12	99.06
Barrel 6	Mitchell	M-09-105_24	M-09-105	306.5	307.5	1.9	158	6.5	11.8	104	13.5	15.75	1.03	2.4	<0.01	5.86	5.01	2.65	0.09	1.55	0.293	58.82	0.03	0.47	5.08	99.03
Barrel 6	Mitchell	M-09-106_1	M-09-106	6.5	7.5	1.8	169	0.7	7.9	104	20.8	18.26	0.65	2.11	<0.01	6.89	4.63	3.84	0.12	0.27	0.34	56.4	0.03	0.59	5.52	99.66
Barrel 6	Mitchell	M-09-106_2	M-09-106	10.5	11.5	2	188	1.5	7.3	100	25	18.03	0.2	2.53	<0.01	7.15	4.88	3.1	0.12	0.22	0.343	56.26	0.01	0.52	5.93	99.29
Barrel 6	Mitchell	M-09-106_3	M-09-106	14.5	15.5	1.6	171	0.9	7.6	86	23.9	17.06	0.48	2.15	<0.01	7.83	4.12	2.95	0.1	1.02	0.324	57.45	0.02	0.5	5.49	99.51
Barrel 6	Mitchell	M-09-106_4	M-09-106	18.5	19.5	1.3	140	1.4	7	21	19.9	16.52	0.4	0.99	<0.01	10.04	5.12	1.22	0.02	0.22	0.464	57.01	0.02	0.46	7.41	99.9
Barrel 6	Mitchell	M-09-106_5	M-09-106	22.5	23.5	2.5	169	1.5	8.9	87	22.4	16.86	0.63	3.98	<0.01	7.13	3.44	3.07	0.14	1.85	0.319	55.52	0.04	0.48	5.61	99.06
Barrel 6	Mitchell	M-09-106_6	M-09-106	26.5	27.5	1.7	164	2.1	8.4	127	18.9	16.88	0.53	1.67	<0.01	8.12	4.84	2.43	0.07	0.23	0.329	57.87	0.02	0.48	6.25	99.73
Barrel 6	Mitchell	M-09-106_7	M-09-106	30.5	31.5	2.1	190	3.2	8.9	104	22.5	18.4	0.69	1.33	<0.01	7.11	5.3	2.59	0.07	0.41	0.35	56.38	0.04	0.55	5.88	99.1
Barrel 6	Mitchell	M-09-106_8	M-09-106	34.5	35.5	1.8	165	1.7	8.8	168	24.5	16.58	0.7	3.41	<0.01	6.4	4.46	3.36	0.18	0.27	0.324	56.72	0.05	0.5	6.22	99.17
Barrel 6	Mitchell	M-09-106_9	M-09-106	38.5	39.5	2.1	160	1	9.2	83	26	17.12	0.97	5.15	<0.01	5.53	4.14	3.26	0.18	1.05	0.324	55.03	0.07	0.5	5.66	98.98
Barrel 6	Mitchell	M-09-106_10	M-09-106	42.5	43.5	1.7	166	1	7.7	84	26.8	16.78	0.31	3.94	<0.01	6.21	3.72	3.73	0.14	1.18	0.31	55.62	0.02	0.51	5.69	98.15
Barrel 6	Mitchell	M-09-106_11	M-09-106	46.5	47.5	1.6	171	1.2	8.7	74	21.2	17.27	0.3	4.03	<0.01	6.68	4.84	2.86	0.11	0.21	0.337	56.63	0.02	0.57	6.16	100
Barrel 6	Mitchell	M-09-106_12	M-09-106	50.5	51.5	1.6	152	0.7	8.3	83	22.7	15.21	1.25	4.77	<0.01	5.82	3.52	2.93	0.13	1.3	0.287	56.55	0.07	0.45	6.39	98.67
Barrel 6	Mitchell	M-09-106_13	M-09-106	54.5	55.5	2	176	0.8	8.7	142	21.1	16.51	0.26	1.47	<0.01	7.67	4.71	2.46	0.08	0.18	0.332	59.51	0.01	0.49	6.09	99.77
Barrel 6	Mitchell	M-09-106_14	M-09-106	58.5	59.5	1.2	144	1.2	7.7	47	14.7	13.18	0.82	4.3	<0.01	12.17	3.88	2.35	0.13	0.13	0.273	51.42	0.03	0.38	10.05	99.11
Barrel 6	Mitchell	M-09-106_15	M-09-106	62.5	63.5	1.6	161	1	7.1	48	20.9	15.38	0.72	3.02	<0.01	7.1	4.13	2.44	0.09	0.89	0.29	58.69	0.04	0.45	5.77	99
Barrel 6	Mitchell	M-09-106_16	M-09-106	66.5	67.5	1.9	162	0.7	8.3	103	21.4	16.32	0.36	3.71	<0.01	7.27	3.43	3.21	0.14	2.06	0.309	55.79	0.02	0.47	6.02	99.11
Barrel 6	Mitchell	M-09-106_17	M-09-106	70.5	71.5	2.1	177	0.9	8.7	59	23.7	17.11	0.65	3.99	<0.01	6.49	4.61	2.48	0.1	1.23	0.324	55.55	0.05	0.53	5.53	98.64
Barrel 7	Mitchell	M-09-102_1	M-09-102	108.5	109.5	3.7	241	7.5	8.2	78	17.1	15.18	0.48	4.53	0.01	4.78	8.94	1.41	0.25	0.54	0.241	55.68	0.03	0.29	6.44	98.79
Barrel 7	Mitchell	M-09-102_2	M-09-102	112.5	113.5	1.9	205	8.2	8.9	48	16.5	13.9	0.21	5	<0.01	4.88	5.31	0.77	0.25	2.32	0.088	60.56	0.03	0.33	5.14	98.8
Barrel 7	Mitchell	M-09-102_3	M-09-102	116.5	117.5	3.9	188	11.7	12	158	34.3	15.35	0.3	5.91	<0.01	4.91	6.42	1.83	0.3	0.89	0.168	54.1	0.03	0.55	8.68	99.44
Barrel 7	Mitchell	M-09-102_4	M-09-102	120.5	121.5	1.4	213	7.5	7.4	39	17.9	16.85	0.5	2.79	<0.01	5.74	6.86	1.78	0.15	2.14	0.267	55.2	0.03	0.34	7.06	99.71
Barrel 7	Mitchell	M-09-102_5	M-09-102	124.5	125.5	2.7	136	23.2	7.7	32	23.7	18.13	0.76	1.49	<0.01	2.77	9.66	0.72	0.05	2.35	0.284	60	0.02	0.34	3.4	99.98
Barrel 7	Mitchell	M-09-102_6	M-09-102	128.5	129.5	1.9	136	15.9	8.9	46	21.6	16.32	0.49	4.9	<0.01	3.86	5.6	1.02	0.16	4.13	0.256	56.8	0.04	0.31	4.79	98.67
Barrel 7	Mitchell	M-09-102_7	M-09-102	132.5	133.5	1.6	164	17.2	8.7	28	13.9	17.39	0.54	2.61	<0.01	4.63	6.44	1.08	0.11	4.02	0.269	57.01	0.03	0.33	5.32	99.77
Barrel 7	Mitchell	M-09-103_15	M-09-103	209.5	210.5	1.2	145	0.9	4.8	255	19.5	13.56	0.4	7.51	<0.01	6.2	2.95	2.89	0.13	2.12	0.213	50.03	0.08	0.48	9.25	95.81
Barrel 7	Mitchell	M-09-103_16	M-09-103	213.5	214.5	1.4	138	0.7	7.5	183	20.8	14.19	0.19	8.43	<0.01	4.71	2.35	2.28	0.1	3.46	0.249	50.8	0.08	0.45	7.27	94.55
Barrel 7	Mitchell	M-09-105_15	M-09-105	270.5	271.5	2.2	92	4.7	8.2	114	17.7	10.97	0.36	6.39	<0.01	5.21	3.16	2.75	0.26	0.84	0.171	61.44	0.05	0.42	6.46	98.48
Barrel 7	Mitchell	M-09-105_16	M-09-105	274.5	275.5	2.3	95	3	9.5	63	18.6	11.44	0.11	2.79	<0.01	5	3.62	2.9	0.1	0.12	0.163	67.24	0.01	0.5	4.97	98.97
Barrel 7	Mitchell	M-09-105_17	M-09-105	278.5	279.5	1.8	92	6.5	7	62	15.2	11.36	0.12	2.38	<0.01	4.46	3.67	2.71	0.1	0.18	0.162	68.92	0.01	0.44	4.94	99.46
Barrel 7	Mitchell	M-09-112_1	M-09-112	56.5	57.5	1.8	191	4	8	32	24.3	20.03	0.54	0.66	<0.01	6.64	5.7	1.21	0.02	0.36	0.344	57.48	0.01	0.51	5.99	99.5
Barrel 7	Mitchell	M-09-112_2	M-09-112	60.5	61.5	1.4	123	2.5	6.2	50	21.9	16.37	0.55	0.64	<0.01	6.06	4.46	1.58	0.04	0.43	0.219	64.06	0.02	0.27	5.21	99.92
Barrel 7	Mitchell	M-09-112_3	M-09-112	64.5	65.5	1.8	164	1.4	8	2750	181.5	16.22	0.47	2.28	<0.01	7.61	3.91	3.26	0.17	0.67	0.292	56.65	0.01	0.46	7.21	99.23
Barrel 7	Mitchell	M-09-112_4	M-09-112	68.5	69.5	1.7	167	2	8.2	52	18.2	17.46	0.5	2.2	<0.01	7.17	4.28	3.1	0.12	0.61	0.338	56.95	0.02	0.52	6.49	99.75
Barrel 7	Mitchell	M-09-112_5	M-09-112	72.5	73.5	1.8	200	3.2	10.2	982	22.6	21.33	0.53	0.92	<0.01	7.05	6.03	1.66	0.04	0.37	0.392	54.4	0.01	0.48	6.53	99.74
Barrel 7	Mitchell	M-09-112_6	M-09-112	76.5	77.5	1.6	186	1.5	7.4	89	25.8	17.47	0.31	1.75	<0.01	6.25	3.13	4.69	0.11	1.91	0.318	57.91	0.01	0.47	5.66	99.99
Barrel 7	Mitchell	M-09-112_7	M-09-112	80.5	81.5	1.5	143	1.4	6.3	83	22.1	18.48	0.42	1.96	<0.01	5.85	4.85	3.54	0.15	0.26	0.278	57.91	0.01	0.42	5.86	99.98
Barrel 7	Mitchell	M-09-112_8	M-09-112	84.5	85.5	1.8	167	1.2	7.3	92	15.9	17.94	0.38	1.68	<0.01	6.79	4.54	4.23	0.15	0.23	0.33	55.27	0.01	0.54	6.43	98.52
Barrel 7	Mitchell	M-09-112_9	M-09-112	88.5	89.5	1.6	136	1.3	5.6	69	17	18.76	0.83	1.99	<0.01	5.56	5.18	2.98	0.16	0.27	0.259	55.89	0.04	0.34	6.39	98.65
Barrel 7	Mitchell	M-09-112_10	M-09-112	92.5	93.5	1.7	141	1.3	6.1	55	20	18.36	0.85	2.42	<0.01	5.52	5.03	3.01	0.17	0.25	0.274	56.39	0.04	0.37	5.87	98.55
Barrel 7	Mitchell	M-09-112_11	M-09-112	96.5	97.5	1.4	149	2.1	7	40	14	15.97	0.3	2.17	<0.01	6.27	4.31	2.79	0.11	0.23	0.305	60.13	0.02	0.46	6.02	99.09
Barrel 7	Mitchell	M-09-112_12	M-09-112	100.5	101.5	1.3	122	1.8	7.3	60	15.7	14.62	0.23	3.39	<0.01	6.22	4.02	2.45	0.19	0.22	0.283	59.81	0.01	0.4	6.58	98.43
Barrel 7	Mitchell	M-09-112_13	M-09-112	104.5	105.5	1	125	1.3	6.1	44	10.6	14.24	0.66	1.95	<0.01	6.38	4	1.67	0.17	0.21	0.214	63.36	0.03	0.36	5.89	99.14
Barrel 7	Mitchell	M-09-112_14	M-09-112	108.5	109.5	1.2	121	1	5.5	92	11.4	16.3	0.36	2.25	<0.01	4.97	4.26	2.85	0.17	0.23	0.226	61.67	0.02	0.31	4.99	98.61
Barrel 7	Mitchell	M-09-112_15	M-09-112	112.5	113.5	1.7	121	0.9	5.2	95	18.7	18.14	0.77	1.38	<0.01	4.82	4.89	3.28	0.17	0.24	0.236	59.42	0.04	0.34	5.78	99.51

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Interval	Rock Code	Lithology	Alteration 1	Alt_1_ Intensity	Alt_1_ Intensity_ Old	Alt_2_Code	Alt_2_ Intensity	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	21012 ABA Model Code	PFS Waste/Ore
Barrel 7	Mitchell	M-09-112_16	M-09-112	116.5	117.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_16	H42193	LP Hazelton	MARGINAL
Barrel 7	Mitchell	M-09-112_17	M-09-112	120.5	121.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_17	H42195	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_18	M-09-112	124.5	125.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_18	H42197	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_19	M-09-112	128.5	129.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_19	H42199	LP Hazelton	MARGINAL
Barrel 7	Mitchell	M-09-112_21	M-09-112	136.5	137.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_21	H42203	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-112_22	M-09-112	140.5	141.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_22	H42206	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_23	M-09-112	144.5	145.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_23	H42208	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_24	M-09-112	148.5	149.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_24	H42210	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_25	M-09-112	152.5	153.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_25	H42213	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-112_26	M-09-112	156.5	157.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_26	H42215	LP Hazelton	MARGINAL
Barrel 7	Mitchell	M-09-112_27	M-09-112	160.5	161.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_27	H42217	LP Hazelton	MARGINAL
Barrel 7	Mitchell	M-09-112_28	M-09-112	164.5	165.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_28	H42219	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-112_29	M-09-112	168.5	169.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_29	H42221	LP Hazelton	MARGINAL
Barrel 7	Mitchell	M-09-112_30	M-09-112	172.5	173.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_30	H42223	LP Hazelton	MARGINAL
Barrel 7	Mitchell	M-09-112_31	M-09-112	176.5	177.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_31	H42225	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_32	M-09-112	180.5	181.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_32	H42227	LP Hazelton	MARGINAL
Barrel 7	Mitchell	M-09-112_33	M-09-112	184.5	185.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_33	H42229	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_34	M-09-112	188.5	189.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_34	H42232	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_35	M-09-112	192.5	193.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_35	H42234	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_36	M-09-112	196.5	197.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_36	H42236	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_37	M-09-112	200.5	201.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_37	H42238	LP Hazelton	MARGINAL
Barrel 7	Mitchell	M-09-112_38	M-09-112	204.5	205.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_38	H42240	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-112_39	M-09-112	208.5	209.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_39	H42242	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_40	M-09-112	212.5	213.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_40	H42245	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_41	M-09-112	216.5	217.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_41	H42247	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_42	M-09-112	220.5	221.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_42	H42249	LP Hazelton	MARGINAL
Barrel 7	Mitchell	M-09-112_43	M-09-112	224.5	225.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_43	H42251	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_44	M-09-112	228.5	229.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_44	H42253	LP Hazelton	MARGINAL
Barrel 7	Mitchell	M-09-112_45	M-09-112	232.5	233.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_45	H42255	LP Hazelton	WASTE
Barrel 7	Mitchell	M-09-112_46	M-09-112	236.5	237.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_46	H42258	LP Hazelton	MARGINAL
Barrel 7	Mitchell	M-09-112_47	M-09-112	240.5	241.5	1.0	IARG	VUTF	IARG	2	QSP			BELOW MTF			M-09-112_47	H42260	LP Hazelton	ORE
Barrel 7	Mitchell	M-09-112_48	M-09-112	244.5	245.5	1.0	IARG	VUTF	IARG	2	CL			BELOW MTF			M-09-112_48	H42262	LP Hazelton	WASTE
Barrel 8	Mitchell	M-09-101_1	M-09-101	223.5	224.5	1.0	SM VOLC	VAXT	CL	1	SIH			ABOVE MTF			M-09-101_1	H40878	UP Hazelton	ORE
Barrel 8	Mitchell	M-09-101_2	M-09-101	227.5	228.5	1.0	SM VOLC	VAAT	SIH	3	IARG			ABOVE MTF			M-09-101_2	H40880	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-101_3	M-09-101	231.5	232.5	1.0	SM VOLC	VAAT	SIH	3	IARG			ABOVE MTF			M-09-101_3	H40882	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-101_4	M-09-101	235.5	236.5	1.0	SM VOLC	VAAT	SIH	3	IARG			ABOVE MTF			M-09-101_4	H40884	UP Hazelton	MARGINAL
Barrel 8	Mitchell	M-09-101_5	M-09-101	239.5	240.5	1.0	SM VOLC	VAAT	SIH	3	IARG			ABOVE MTF			M-09-101_5	H40886	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-101_6	M-09-101	243.5	244.5	1.0	SM VOLC	VAAT	SIH	3	IARG			ABOVE MTF			M-09-101_6	H40888	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-101_7	M-09-101	247.5	248.5	1.0	SM VOLC	VAAT	SIH	3	IARG			ABOVE MTF			M-09-101_7	H40891	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-105_1	M-09-105	132.5	133.5	1.0	HIGHQTZ	PMON	SIL	3	None			BELOW MTF			M-09-105_1	H44014	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-105_2	M-09-105	136.5	137.5	1.0	HIGHQTZ	PMON	SIL	3	None			BELOW MTF			M-09-105_2	H44016	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-105_3	M-09-105	140.5	141.5	1.0	HIGHQTZ	PMON	SIL	3	None			BELOW MTF			M-09-105_3	H44018	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-105_4	M-09-105	144.5	145.5	1.0	HIGHQTZ	PMON	SIL	3	None			BELOW MTF			M-09-105_4	H44020	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-105_5	M-09-105	148.5	149.5	1.0	HIGHQTZ	PMON	SIL	3	None			BELOW MTF			M-09-105_5	H44022	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-105_6	M-09-105	152.5	153.5	1.0	HIGHQTZ	PMON	SIL	3	None			BELOW MTF			M-09-105_6	H44025	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-105_7	M-09-105	156.5	157.5	1.0	HIGHQTZ	VUTF	SIL	4	None			BELOW MTF			M-09-105_7	H44028	UP Hazelton	MARGINAL
Barrel 8	Mitchell	M-09-105_8	M-09-105	160.5	161.5	1.0	HIGHQTZ	VUTF	SIL	4	None			BELOW MTF			M-09-105_8	H44030	UP Hazelton	ORE
Barrel 8	Mitchell	M-09-105_9	M-09-105	164.5	165.5	1.0	HIGHQTZ	PMON	SIL	3	IARG			BELOW MTF			M-09-105_9	H44032	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-105_10	M-09-105	168.5	169.5	1.0	HIGHQTZ	PMON	SIL	3	IARG			BELOW MTF			M-09-105_10	H44034	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-105_11	M-09-105	172.5	173.5	1.0	HIGHQTZ	PMON	SIL	3	IARG			BELOW MTF			M-09-105_11	H44036	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-105_12	M-09-105	176.5	177.5	1.0	HIGHQTZ	PMON	SIL	3	IARG			BELOW MTF			M-09-105_12	H44038	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-105_13	M-09-105	180.5	181.5	1.0	HIGHQTZ	PMON	SIL	3	IARG			BELOW MTF			M-09-105_13	H44040	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-105_14	M-09-105	184.5	185.5	1.0	HIGHQTZ	PMON	SIL	3	IARG			BELOW MTF			M-09-105_14	H44042	LP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_1	M-09-110	6.5	7.5	1.0	NM VOLC	PMON	SIH	3	HEM			ABOVE MTF			M-09-110_1	H41767	Monzonite	ORE
Barrel 8	Mitchell	M-09-110_2	M-09-110	10.5	11.5	1.0	NM VOLC	PMON	SIH	3	HEM			ABOVE MTF			M-09-110_2	H41769	Monzonite	ORE
Barrel 8	Mitchell	M-09-110_3	M-09-110	14.5	15.5	1.0	NM VOLC	PMON	SIH	3	HEM			ABOVE MTF			M-09-110_3	H41771	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_4	M-09-110	16.5	17.5	1.0	NM VOLC	PMON	SIH	3	HEM			ABOVE MTF			M-09-110_4	H41772	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_5	M-09-110	22.5	23.5	1.0	NM VOLC	PMON	SIH	3	HEM			ABOVE MTF			M-09-110_5	H41776	UP Hazelton	MARGINAL
Barrel 8	Mitchell	M-09-110_6	M-09-110	26.5	27.5	1.0	NM VOLC	PMON	SIH	3	HEM			ABOVE MTF			M-09-110_6	H41778	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_7	M-09-110	30.5	31.5	1.0	NM VOLC	PMON	SIH	3	HEM			ABOVE MTF			M-09-110_7	H41780	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_8	M-09-110	34.5	35.5	1.0	NM VOLC	PMON	SIH	3	HEM			ABOVE MTF			M-09-110_8	H41782	UP Hazelton	MARGINAL
Barrel 8	Mitchell	M-09-110_9	M-09-110	38.5	39.5	1.0	NM VOLC	PMON	SIH	3	HEM			ABOVE MTF			M-09-110_9	H41785	UP Hazelton	MARGINAL
Barrel 8	Mitchell	M-09-110_10	M-09-110	42.5	43.5	1.0	NM VOLC	PMON	SIH	3	HEM			ABOVE MTF			M-09-110_10	H41787	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_11	M-09-110	46.5	47.5	1.0	NM VOLC	PMON	SIH	4	HEM			ABOVE MTF			M-09-110_11	H41789	UP Hazelton	ORE

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	PFS Pit In/Out	PFS Litho	PFS Alt	Sample Matrix	SampleType	udf_LabID	Weight Received (kg)	Lab Certificate Number	Collect Date/ Time	Paste pH	Rinse pH	S_Total (%)	S_Sulphide (%)	S_S2_ CALC (%)	S_S2_S_ DEL CALC (%)	S_SO4_ NA2CO3 (%)	S_SO4_ HCL (%)	S_BASO4 (%)
Barrel 7	Mitchell	M-09-112_16	M-09-112	116.5	117.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.48	VA09124617		8.6	8.1	4.10	3.94	4.06	4.057	0.1	0.04	0.0026
Barrel 7	Mitchell	M-09-112_17	M-09-112	120.5	121.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.12	VA09124617		8.5	7.9	3.38	3.31	3.33	3.327	0.1	0.05	0.0033
Barrel 7	Mitchell	M-09-112_18	M-09-112	124.5	125.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.38	VA09124617		8.7	7.7	3.31	3.15	3.28	3.276	0.11	0.03	0.0040
Barrel 7	Mitchell	M-09-112_19	M-09-112	128.5	129.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.46	VA09124617		8.6	8.2	3.88	3.56	3.68	3.643	0.25	0.2	0.0373
Barrel 7	Mitchell	M-09-112_21	M-09-112	136.5	137.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	1.5	VA09124617		8.6	7.8	3.52	3.39	3.51	3.505	0.05	0.005	0.0054
Barrel 7	Mitchell	M-09-112_22	M-09-112	140.5	141.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.48	VA09124617		8.2	7.4	4.05	2.88	2.99	2.985	1.11	1.06	0.0051
Barrel 7	Mitchell	M-09-112_23	M-09-112	144.5	145.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.12	VA09124617		8.2	7.7	2.99	2.18	2.19	2.186	0.87	0.8	0.0040
Barrel 7	Mitchell	M-09-112_24	M-09-112	148.5	149.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.46	VA09124617		8.0	7.6	4.35	2.99	3.21	3.207	1.24	1.14	0.0033
Barrel 7	Mitchell	M-09-112_25	M-09-112	152.5	153.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.08	VA09124617		8.2	7.6	4.08	2.80	2.92	2.917	1.24	1.16	0.0035
Barrel 7	Mitchell	M-09-112_26	M-09-112	156.5	157.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.54	VA09124617		8.1	7.5	6.40	3.34	3.39	3.382	3.17	3.01	0.0077
Barrel 7	Mitchell	M-09-112_27	M-09-112	160.5	161.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.5	VA09116245		8.2	8.0	4.40	2.64	2.79	2.787	1.69	1.61	0.0026
Barrel 7	Mitchell	M-09-112_28	M-09-112	164.5	165.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	1.94	VA09116245		8.2	8.0	4.39	3.69	4.12	4.111	0.36	0.27	0.0086
Barrel 7	Mitchell	M-09-112_29	M-09-112	168.5	169.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.42	VA09116245		8.1	8.0	4.78	2.84	3.32	3.317	1.58	1.46	0.0026
Barrel 7	Mitchell	M-09-112_30	M-09-112	172.5	173.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.06	VA09124617		8.2	7.6	4.83	3.42	3.43	3.426	1.5	1.4	0.0035
Barrel 7	Mitchell	M-09-112_31	M-09-112	176.5	177.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.24	VA09124617		8.4	7.8	3.90	1.96	1.98	1.977	1.87	1.92	0.0030
Barrel 7	Mitchell	M-09-112_32	M-09-112	180.5	181.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.54	VA09116245		8.3	8.2	4.73	2.63	3.26	3.258	1.62	1.47	0.0021
Barrel 7	Mitchell	M-09-112_33	M-09-112	184.5	185.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.38	VA09116245		8.4	8.1	3.61	1.98	2.46	2.457	1.31	1.15	0.0028
Barrel 7	Mitchell	M-09-112_34	M-09-112	188.5	189.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.42	VA09116245		8.3	8.1	4.24	2.98	3.61	3.607	0.71	0.63	0.0035
Barrel 7	Mitchell	M-09-112_35	M-09-112	192.5	193.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.12	VA09116245		8.5	8.2	5.53	3.56	4.41	4.409	1.21	1.12	0.0014
Barrel 7	Mitchell	M-09-112_36	M-09-112	196.5	197.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.24	VA09116245		8.5	8.3	4.90	2.90	3.44	3.438	1.61	1.46	0.0019
Barrel 7	Mitchell	M-09-112_37	M-09-112	200.5	201.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.18	VA09116245		8.5	8.2	5.18	3.77	4.33	4.328	0.89	0.85	0.0016
Barrel 7	Mitchell	M-09-112_38	M-09-112	204.5	205.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.44	VA09124617		8.3	7.8	5.08	4.19	4.36	4.358	0.81	0.72	0.0023
Barrel 7	Mitchell	M-09-112_39	M-09-112	208.5	209.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.26	VA09124617		8.4	7.8	4.43	3.61	3.44	3.610	1.05	0.99	0.0026
Barrel 7	Mitchell	M-09-112_40	M-09-112	212.5	213.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.04	VA09124617		8.4	7.9	6.43	4.23	5.04	5.038	1.48	1.39	0.0021
Barrel 7	Mitchell	M-09-112_41	M-09-112	216.5	217.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.14	VA09124617		8.5	7.7	5.52	4.43	4.68	4.678	0.92	0.84	0.0021
Barrel 7	Mitchell	M-09-112_42	M-09-112	220.5	221.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.1	VA09124617		8.4	7.7	6.54	5.25	5.59	5.588	1.03	0.95	0.0016
Barrel 7	Mitchell	M-09-112_43	M-09-112	224.5	225.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.12	VA09124617		8.3	7.7	8.14	6.04	6.32	6.315	1.91	1.82	0.0054
Barrel 7	Mitchell	M-09-112_44	M-09-112	228.5	229.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	1.88	VA09124617		8.4	8.0	4.61	3.26	3.27	3.268	1.42	1.34	0.0021
Barrel 7	Mitchell	M-09-112_45	M-09-112	232.5	233.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.06	VA09124617		8.5	8.0	4.24	2.55	2.62	2.617	1.69	1.62	0.0026
Barrel 7	Mitchell	M-09-112_46	M-09-112	236.5	237.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.7	VA09116245		8.4	8.1	4.27	2.90	3.40	3.397	0.99	0.87	0.0030
Barrel 7	Mitchell	M-09-112_47	M-09-112	240.5	241.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.08	VA09116245		8.4	8.1	3.91	2.53	2.86	2.855	1.15	1.05	0.0051
Barrel 7	Mitchell	M-09-112_48	M-09-112	244.5	245.5	IN PIT	VUTF	IARG	Rock	Drillcore	ALS Chemex	2.36	VA09116245		8.4	8.2	3.61	2.49	2.75	2.747	0.94	0.86	0.0033
Barrel 8	Mitchell	M-09-101_1	M-09-101	223.5	224.5	IN PIT	VAXT	CL	Rock	Drillcore	ALS Chemex		VA09097251		8.8	8.7	3.08	3.09	3.03	3.090	0.03	0.05	0.0096
Barrel 8	Mitchell	M-09-101_2	M-09-101	227.5	228.5	IN PIT	VAAT	SIH	Rock	Drillcore	ALS Chemex		VA09097251		9.2	9.0	1.10	0.96	1.09	1.055	0.01	0.01	0.0352
Barrel 8	Mitchell	M-09-101_3	M-09-101	231.5	232.5	IN PIT	VAAT	SIH	Rock	Drillcore	ALS Chemex		VA09097251		9.2	9.1	2.94	2.79	2.93	2.919	0.005	0.005	0.0107
Barrel 8	Mitchell	M-09-101_4	M-09-101	235.5	236.5	IN PIT	VAAT	SIH	Rock	Drillcore	ALS Chemex		VA09097251		8.9	8.6	3.87	3.43	3.86	3.854	0.02	0.005	0.0065
Barrel 8	Mitchell	M-09-101_5	M-09-101	239.5	240.5	IN PIT	VAAT	SIH	Rock	Drillcore	ALS Chemex		VA09097251		9.2	9.0	1.74	1.65	1.73	1.701	0.005	0.01	0.0294
Barrel 8	Mitchell	M-09-101_6	M-09-101	243.5	244.5	IN PIT	VAAT	SIH	Rock	Drillcore	ALS Chemex		VA09097251		9.1	9.1	1.86	1.79	1.85	1.827	0.005	0.01	0.0226
Barrel 8	Mitchell	M-09-101_7	M-09-101	247.5	248.5	IN PIT	VAAT	SIH	Rock	Drillcore	ALS Chemex		VA09097251		9.2	9.0	1.98	1.85	1.97	1.945	0.01	0.01	0.0247
Barrel 8	Mitchell	M-09-105_1	M-09-105	132.5	133.5	IN PIT	PMON	SIL	Rock	Drillcore	ALS Chemex	2.18	VA09116241		9.6	9.4	0.75	0.60	0.73	0.674	0.04	0.02	0.0565
Barrel 8	Mitchell	M-09-105_2	M-09-105	136.5	137.5	IN PIT	PMON	SIL	Rock	Drillcore	ALS Chemex	2.06	VA09116241		9.7	9.5	0.77	0.70	0.76	0.700	0.03	0.005	0.0637
Barrel 8	Mitchell	M-09-105_3	M-09-105	140.5	141.5	IN PIT	PMON	SIL	Rock	Drillcore	ALS Chemex	1.82	VA09116241		9.3	9.3	0.86	0.79	0.85	0.790	0.11	0.005	0.0742
Barrel 8	Mitchell	M-09-105_4	M-09-105	144.5	145.5	IN PIT	PMON	SIL	Rock	Drillcore	ALS Chemex	2.18	VA09116241		9.3	9.2	0.87	0.75	0.86	0.788	0.05	0.01	0.0724
Barrel 8	Mitchell	M-09-105_5	M-09-105	148.5	149.5	IN PIT	PMON	SIL	Rock	Drillcore	ALS Chemex	2.36	VA09116241		9.4	9.1	1.73	1.52	1.72	1.698	0.08	0.005	0.0224
Barrel 8	Mitchell	M-09-105_6	M-09-105	152.5	153.5	IN PIT	PMON	SIL	Rock	Drillcore	ALS Chemex	1.52	VA09116241		9.4	9.3	1.11	0.99	1.10	1.042	0.07	0.005	0.0577
Barrel 8	Mitchell	M-09-105_7	M-09-105	156.5	157.5	IN PIT	VUTF	SIL	Rock	Drillcore	ALS Chemex	2.42	VA09116241		9.3	9.1	1.94	1.72	1.93	1.910	0.07	0.005	0.0196
Barrel 8	Mitchell	M-09-105_8	M-09-105	160.5	161.5	IN PIT	VUTF	SIL	Rock	Drillcore	ALS Chemex	2.38	VA09116241		8.9	8.8	3.19	2.89	3.18	3.175	0.03	0.005	0.0051
Barrel 8	Mitchell	M-09-105_9	M-09-105	164.5	165.5	IN PIT	PMON	SIL	Rock	Drillcore	ALS Chemex	2.24	VA09116241		9.0	8.9	2.41	2.04	2.40	2.384	0.04	0.005	0.0161
Barrel 8	Mitchell	M-09-105_10	M-09-105	168.5	169.5	IN PIT	PMON	SIL	Rock	Drillcore	ALS Chemex	2.42	VA09116241		9.4	9.2	1.09	0.91	1.08	1.039	0.04	0.005	0.0408
Barrel 8	Mitchell	M-09-105_11	M-09-105	172.5	173.5	IN PIT	PMON	SIL	Rock	Drillcore	ALS Chemex	1.94	VA09116241		9.1	9.1	1.22	1.13	1.21	1.187	0.01	0.005	0.0229
Barrel 8	Mitchell	M-09-105_12	M-09-105	176.5	177.5	IN PIT	PMON	SIL	Rock	Drillcore	ALS Chemex	1.6	VA09116241		9.3	9.2	0.86	0.77	0.85	0.826	0.04	0.005	0.0240
Barrel 8	Mitchell	M-09-105_13	M-09-105	180.5	181.5	IN PIT	PMON	SIL	Rock	Drillcore	ALS Chemex	2.22	VA09116241		9.0	9.0	2.61	2.23	2.60	2.582	0.03	0.005	0.0182
Barrel 8	Mitchell	M-09-105_14	M-09-105	184.5	185.5	IN PIT	PMON	SIL	Rock	Drillcore	ALS Chemex	2.16	VA09116241		9.4	9.2	0.74	0.65	0.73	0.697	0.01	0.005	0.0327
Barrel 8	Mitchell	M-09-110_1	M-09-110	6.5	7.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex	1.88	VA09124617		9.6	9.2	0.20	0.15	0.18	0.150	0.04	0.02	0.0357
Barrel 8	Mitchell	M-09-110_2	M-09-110	10.5	11.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex	1.92	VA09124617		9.5	9.0	0.22	0.19	0.19	0.190	0.04	0.03	0.0570
Barrel 8	Mitchell	M-09-110_3	M-09-110	14.5	15.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex	1.44	VA09124617		9.3	8.8	0.16	0.13	0.15	0.138	0.01	0.01	0.0121
Barrel 8	Mitchell	M-09-110_4	M-09-110	16.5	17.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex	2.06	VA09124617		9.2	9.1	0.91	0.82	0.90	0.871	0.01	0.01	0.0294
Barrel 8	Mitchell	M-09-110_5	M-09-110	22.5	23.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex	1.74	VA09124617		9.4	9.1	1.08	0.95	1.07	1.042	0.005	0.01	0.0285
Barrel 8	Mitchell	M-09-110_6	M-09-110	26.5	27.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex		VA09116244		9.3	9.3	0.28	0.23	0.26	0.230	0.02	0.02	0.0686
Barrel 8	Mitchell	M-09-110_7	M-09-110	30.5	31.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex		VA09116244		9.6	9.5	0.74	0.66	0.73	0.687	0.03	0.005	0.0434
Barrel 8	Mitchell	M-09-110_8	M-09-110	34.5	35.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex	1.72	VA09124617		9.0	8.9	0.67	0.63	0.65	0.630	0.02	0.02	0.0432
Barrel 8	Mitchell	M-09-110_9	M-09-110	38.5	39.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex	1.88	VA09124617		9.4	9.2	0.26	0.21	0.25	0.210	0.05	0.01	0.0717
Barrel 8	Mitchell	M-09-110_10	M-09-110	42.5	43.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex	1.92	VA09124617		9.6	9.4	0.50	0.41	0.39	0.410	0.13	0.11	0.1025
Barrel 8	Mitchell	M-09-110_11	M-09-110	46.5	47.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex	1.72	VA09124617		9.6	9.4	1.47	1.16	1.46	1.428	0.03	0.01	0.0320

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	S_DEL (%)	S_DEL_CAL (%)	TAP (%)	SAP (kg $CaCO_3$ /t)	SAP (S Del Calc) (kg $CaCO_3$ /t)	NP (kg $CaCO_3$ /t)	NP_ADJ (kg $CaCO_3$ /t)	UNP	Total C (%)	Inorganic C (%)	Inorganic CO2 (%)	C_DEL_ CALC (%)	CANP_ TTL (%)	CANP_ INORG (%)	CANP_ CA (%)	CANP_ CAMG (%)	TNNP (kg $CaCO_3$ /t)
Barrel 7	Mitchell	M-09-112_16	M-09-112	116.5	117.5	0.1174	0.1174	128.00	123.125	126.79	37	22.0	15	0.39	0.40	1.5	-0.010	32.5	34.1	28.2	74.7	-91.1
Barrel 7	Mitchell	M-09-112_17	M-09-112	120.5	121.5	0.0167	0.0167	105.60	103.4375	103.96	24	9.0	15	0.22	0.24	0.9	-0.020	18.3	20.5	22.5	48.1	-81.6
Barrel 7	Mitchell	M-09-112_18	M-09-112	124.5	125.5	0.1260	0.1260	103.40	98.4375	102.38	37	22.0	15	0.40	0.39	1.4	0.010	33.3	31.8	34.7	71.0	-66.4
Barrel 7	Mitchell	M-09-112_19	M-09-112	128.5	129.5	0.0827	0.0827	121.20	111.25	113.83	55	40.0	15	0.57	0.58	2.1	-0.010	47.5	47.8	54.2	90.5	-66.3
Barrel 7	Mitchell	M-09-112_21	M-09-112	136.5	137.5	0.1146	0.1146	110.00	105.9375	109.52	44	29.0	15	0.44	0.44	1.6	0.000	36.7	36.4	42.7	85.0	-66.0
Barrel 7	Mitchell	M-09-112_22	M-09-112	140.5	141.5	0.1049	0.1049	126.60	90	93.28	65	50.0	15	0.68	0.71	2.6	-0.030	56.7	59.1	92.2	137.2	-61.6
Barrel 7	Mitchell	M-09-112_23	M-09-112	144.5	145.5	0.0060	0.0060	93.44	68.125	68.31	63	48.0	15	0.71	0.71	2.6	0.000	59.2	59.1	82.9	124.6	-30.4
Barrel 7	Mitchell	M-09-112_24	M-09-112	148.5	149.5	0.2167	0.2167	135.90	93.4375	100.21	16	1.0	15	0.09	0.09	0.3	0.000	7.5	6.8	49.5	98.5	-119.9
Barrel 7	Mitchell	M-09-112_25	M-09-112	152.5	153.5	0.1165	0.1165	127.50	87.5	91.14	53	38.0	15	0.60	0.58	2.1	0.020	50.0	47.8	88.2	147.5	-74.5
Barrel 7	Mitchell	M-09-112_26	M-09-112	156.5	157.5	0.0423	0.0423	200.00	104.375	105.70	43	28.0	15	0.43	0.46	1.7	-0.030	35.8	38.7	135.4	198.7	-157.0
Barrel 7	Mitchell	M-09-112_27	M-09-112	160.5	161.5	0.1474	0.1474	138.00	82.5	87.11	80	65.0	15	0.77	0.79	2.9	-0.020	64.2	66.0	124.6	182.4	-57.5
Barrel 7	Mitchell	M-09-112_28	M-09-112	164.5	165.5	0.4214	0.4214	137.20	115.3125	128.48	59	44.0	15	0.51	0.52	1.9	-0.010	42.5	43.2	58.2	96.5	-78.2
Barrel 7	Mitchell	M-09-112_29	M-09-112	168.5	169.5	0.4774	0.4774	149.40	88.75	103.67	28	13.0	15	0.23	0.26	1.0	-0.030	19.2	22.7	71.7	118.5	-121.4
Barrel 7	Mitchell	M-09-112_30	M-09-112	172.5	173.5	0.0065	0.0065	150.90	106.875	107.08	51	36.0	15	0.53	0.55	2.0	-0.020	44.2	45.5	93.2	136.6	-99.9
Barrel 7	Mitchell	M-09-112_31	M-09-112	176.5	177.5	0.0170	0.0170	122.00	61.25	61.78	47	32.0	15	0.46	0.48	1.8	-0.020	38.3	40.9	104.6	160.9	-74.9
Barrel 7	Mitchell	M-09-112_32	M-09-112	180.5	181.5	0.6279	0.6279	147.80	82.1875	101.81	65	50.0	15	0.56	0.56	2.1	0.000	46.7	47.8	100.1	156.1	-82.8
Barrel 7	Mitchell	M-09-112_33	M-09-112	184.5	185.5	0.4772	0.4772	112.80	61.875	76.79	98	83.0	15	1.02	0.98	3.6	0.040	85.0	81.9	128.6	189.3	-14.8
Barrel 7	Mitchell	M-09-112_34	M-09-112	188.5	189.5	0.6265	0.6265	132.50	93.125	112.70	64	49.0	15	0.61	0.62	2.3	-0.010	50.8	52.3	80.7	126.6	-68.5
Barrel 7	Mitchell	M-09-112_35	M-09-112	192.5	193.5	0.8486	0.8486	172.80	111.25	137.77	65	50.0	15	0.50	0.51	1.9	-0.010	41.7	43.2	85.2	138.9	-107.8
Barrel 7	Mitchell	M-09-112_36	M-09-112	196.5	197.5	0.5381	0.5381	153.00	90.625	107.44	51	36.0	15	0.41	0.44	1.6	-0.030	34.2	36.4	83.7	121.4	-102.0
Barrel 7	Mitchell	M-09-112_37	M-09-112	200.5	201.5	0.5584	0.5584	161.90	117.8125	135.26	48	33.0	15	0.43	0.44	1.6	-0.010	35.8	36.4	70.2	116.8	-113.9
Barrel 7	Mitchell	M-09-112_38	M-09-112	204.5	205.5	0.1677	0.1677	158.80	130.9375	136.18	33	18.0	15	0.30	0.32	1.2	-0.020	25.0	27.3	58.9	106.5	-125.8
Barrel 7	Mitchell	M-09-112_39	M-09-112	208.5	209.5	-0.1726	0.0000	138.40	112.8125	112.81	34	19.0	15	0.30	0.33	1.2	-0.030	25.0	27.3	65.9	118.8	-104.4
Barrel 7	Mitchell	M-09-112_40	M-09-112	212.5	213.5	0.8079	0.8079	200.90	132.1875	157.43	31	16.0	15	0.27	0.28	1.0	-0.010	22.5	22.7	75.4	128.3	-169.9
Barrel 7	Mitchell	M-09-112_41	M-09-112	216.5	217.5	0.2479	0.2479	172.50	138.4375	146.18	47	32.0	15	0.47	0.49	1.8	-0.020	39.2	40.9	75.7	128.9	-125.5
Barrel 7	Mitchell	M-09-112_42	M-09-112	220.5	221.5	0.3384	0.3384	204.40	164.0625	174.64	36	21.0	15	0.33	0.36	1.3	-0.030	27.5	29.6	67.2	113.7	-168.4
Barrel 7	Mitchell	M-09-112_43	M-09-112	224.5	225.5	0.2746	0.2746	254.40	188.75	197.33	50	35.0	15	0.58	0.57	2.1	0.010	48.3	47.8	106.4	154.1	-204.4
Barrel 7	Mitchell	M-09-112_44	M-09-112	228.5	229.5	0.0079	0.0079	144.10	101.875	102.12	76	61.0	15	0.86	0.82	3.0	0.040	71.7	68.2	118.6	175.5	-68.1
Barrel 7	Mitchell	M-09-112_45	M-09-112	232.5	233.5	0.0674	0.0674	132.50	79.6875	81.79	54	39.0	15	0.55	0.58	2.1	-0.030	45.8	47.8	104.4	160.9	-78.5
Barrel 7	Mitchell	M-09-112_46	M-09-112	236.5	237.5	0.4970	0.4970	133.40	90.625	106.16	55	40.0	15	0.51	0.50	1.8	0.010	42.5	40.9	76.7	133.2	-78.4
Barrel 7	Mitchell	M-09-112_47	M-09-112	240.5	241.5	0.3249	0.3249	122.20	79.0625	89.22	61	46.0	15	0.62	0.61	2.2	0.010	51.7	50.0	86.2	128.0	-61.2
Barrel 7	Mitchell	M-09-112_48	M-09-112	244.5	245.5	0.2567	0.2567	112.80	77.8125	85.83	59	44.0	15	0.64	0.64	2.4	0.000	53.3	54.6	89.2	139.5	-53.8
Barrel 8	Mitchell	M-09-101_1	M-09-101	223.5	224.5	-0.0696	0.0000	96.25	96.5625	96.56	67	52.0	15	0.81	0.73	2.7	0.080	67.5	61.4	64.2	95.1	-29.3
Barrel 8	Mitchell	M-09-101_2	M-09-101	227.5	228.5	0.0948	0.0948	34.40	30	32.96	102	87.0	15	1.14	1.11	4.1	0.030	95.0	93.2	91.9	120.6	67.6
Barrel 8	Mitchell	M-09-101_3	M-09-101	231.5	232.5	0.1293	0.1293	91.88	87.1875	91.23	57	42.0	15	0.65	0.65	2.4	0.000	54.2	54.6	60.2	82.8	-34.9
Barrel 8	Mitchell	M-09-101_4	M-09-101	235.5	236.5	0.4235	0.4235	120.90	107.1875	120.42	60	45.0	15	0.60	0.57	2.1	0.030	50.0	47.8	55.4	128.9	-60.9
Barrel 8	Mitchell	M-09-101_5	M-09-101	239.5	240.5	0.0506	0.0506	54.38	51.5625	53.14	82	67.0	15	0.96	0.91	3.4	0.050	80.0	77.3	77.9	104.8	27.6
Barrel 8	Mitchell	M-09-101_6	M-09-101	243.5	244.5	0.0374	0.0374	58.12	55.9375	57.11	118	103.0	15	1.25	1.19	4.4	0.060	104.2	100.0	105.0	138.0	59.9
Barrel 8	Mitchell	M-09-101_7	M-09-101	247.5	248.5	0.0953	0.0953	61.88	57.8125	60.79	67	52.0	15	0.77	0.68	2.5	0.090	64.2	56.9	61.9	93.1	5.1
Barrel 8	Mitchell	M-09-105_1	M-09-105	132.5	133.5	0.0735	0.0735	23.44	18.75	21.05	45	30.0	15	0.48	0.48	1.8	0.000	40.0	40.9	43.0	51.8	21.6
Barrel 8	Mitchell	M-09-105_2	M-09-105	136.5	137.5	-0.0037	0.0000	24.06	21.875	21.88	24	9.0	15	0.24	0.27	1.0	-0.030	20.0	22.7	22.5	29.2	-0.1
Barrel 8	Mitchell	M-09-105_3	M-09-105	140.5	141.5	-0.0142	0.0000	26.88	24.6875	24.69	23	8.0	15	0.23	0.26	1.0	-0.030	19.2	22.7	19.5	28.9	-3.9
Barrel 8	Mitchell	M-09-105_4	M-09-105	144.5	145.5	0.0377	0.0377	27.19	23.4375	24.61	27	12.0	15	0.27	0.29	1.1	-0.020	22.5	25.0	24.0	34.7	-0.2
Barrel 8	Mitchell	M-09-105_5	M-09-105	148.5	149.5	0.1776	0.1776	54.06	47.5	53.05	73	58.0	15	0.85	0.90	3.3	-0.050	70.8	75.1	75.2	97.9	18.9
Barrel 8	Mitchell	M-09-105_6	M-09-105	152.5	153.5	0.0524	0.0524	34.69	30.9375	32.57	22	7.0	15	0.21	0.25	0.9	-0.040	17.5	20.5	21.0	29.8	-12.7
Barrel 8	Mitchell	M-09-105_7	M-09-105	156.5	157.5	0.1904	0.1904	60.62	53.75	59.70	83	68.0	15	0.84	0.88	3.2	-0.040	70.0	72.8	71.2	99.1	22.4
Barrel 8	Mitchell	M-09-105_8	M-09-105	160.5	161.5	0.2849	0.2849	99.69	90.3125	99.22	108	93.0	15	1.18	1.12	4.1	0.060	98.3	93.2	92.7	135.7	8.3
Barrel 8	Mitchell	M-09-105_9	M-09-105	164.5	165.5	0.3439	0.3439	75.31	63.75	74.50	63	48.0	15	0.77	0.68	2.5	0.090	64.2	56.9	55.9	71.6	-12.3
Barrel 8	Mitchell	M-09-105_10	M-09-105	168.5	169.5	0.1292	0.1292	34.06	28.4375	32.48	36	21.0	15	0.44	0.43	1.6	0.010	36.7	36.4	33.2	46.7	1.9
Barrel 8	Mitchell	M-09-105_11	M-09-105	172.5	173.5	0.0571	0.0571	38.12	35.3125	37.10	32	17.0	15	0.38	0.37	1.4	0.010	31.7	31.8	27.2	46.1	-6.1
Barrel 8	Mitchell	M-09-105_12	M-09-105	176.5	177.5	0.0560	0.0560	26.88	24.0625	25.81	58	43.0	15	0.70	0.62	2.3	0.080	58.3	52.3	52.2	67.0	31.1
Barrel 8	Mitchell	M-09-105_13	M-09-105	180.5	181.5	0.3518	0.3518	81.56	69.6875	80.68	83	68.0	15	0.98	0.94	3.4	0.040	81.7	77.3	78.2	98.8	1.4
Barrel 8	Mitchell	M-09-105_14	M-09-105	184.5	185.5	0.0473	0.0473	23.12	20.3125	21.79	95	80.0	15	1.08	1.07	3.9	0.010	90.0	88.7	81.7	110.5	71.9
Barrel 8	Mitchell	M-09-110_1	M-09-110	6.5	7.5	-0.0057	0.0000	6.25	4.6875	4.69	16	1.0	15	0.20	0.21	0.8	-0.010	16.7	18.2	14.7	18.6	9.8
Barrel 8	Mitchell	M-09-110_2	M-09-110	10.5	11.5	-0.0570	0.0000	6.88	5.9375	5.94	41	26.0	15	0.48	0.45	1.6	0.030	40.0	36.4	48.2	108.5	34.1
Barrel 8	Mitchell	M-09-110_3	M-09-110	14.5	15.5	0.0079	0.0079	5.00	4.0625	4.31	12	0.0	12	0.12	0.14	0.5	-0.020	10.0	11.4	10.0	17.2	7.0
Barrel 8	Mitchell	M-09-110_4	M-09-110	16.5	17.5	0.0506	0.0506	28.44	25.625	27.21	56	41.0	15	0.49	0.48	1.8	0.010	40.8	40.9	43.2	81.0	27.6
Barrel 8	Mitchell	M-09-110_5	M-09-110	22.5	23.5	0.0915	0.0915	33.75	29.6875	32.55	33	18.0	15	0.29	0.27	1.0	0.020	24.2	22.7	28.7	61.6	-0.8
Barrel 8	Mitchell	M-09-110_6	M-09-110	26.5	27.5	-0.0386	0.0000	8.75	7.1875	7.19	75	60.0	15	0.55	0.56	2.1	-0.010	45.8	47.8	59.4	118.5	66.3
Barrel 8	Mitchell	M-09-110_7	M-09-110	30.5	31.5	0.0266	0.0266	23.12	20.625	21.46	69	54.0	15	0.42	0.46	1.7	-0.040	35.0	38.7	51.7	98.8	45.9
Barrel 8	Mitchell	M-09-110_8	M-09-110	34.5	35.5	-0.0232	0.0000	20.94	19.6875	19.69	26	11.0	15	0.21	0.21	0.8	0.000	17.5	18.2	25.2	50.4	5.1
Barrel 8	Mitchell	M-09-110_9	M-09-110	38.5	39.5	-0.0317	0.0000	8.13	6.5625	6.56	68	53.0	15	0.65	0.63	2.3	0.020	54.2	52.3	56.7	93.9	59.9
Barrel 8	Mitchell	M-09-110_10	M-09-110	42.5	43.5	-0.1225	0.0000	15.60	12.8125	12.81	42	27.0	15	0.48	0.49	1.8	-0.010	40.0	40.9	41.7	60.1	26.4
Barrel 8	Mitchell	M-09-110_11	M-09-110	46.5	47.5	0.2680	0.2680	45.94	36.25	44.63	55	40.0	15	0.56	0.53	2.0	0.030	46.7	45.5	51.9	87.1	9.1

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	TNNP_ADJ (kg $CaCO_3$ /t)	SNNP (kg $CaCO_3$ /t)	SNNP_ADJ (kg $CaCO_3$ /t)	ICNNP (kg $CaCO_3$ /t)	TNPR	TNPR_ ADJ	SNPR	SNPR (S DEL CALC)	SNPR for graphs	SNPR_ADJ for graphs	ICNPR	Fizz Rating	Fizz Check	Ag (ppm)	Al (ppm)	Al (%)	As (ppm)	Ba (ppm)
Barrel 7	Mitchell	M-09-112_16	M-09-112	116.5	117.5	-106.0	-89.79	-104.8	-94.0	-91.1	-106.0	0.30	0.29	0.30	0.18	0.27	2	Disagree	1.24	82600	8.26	4.2	110
Barrel 7	Mitchell	M-09-112_17	M-09-112	120.5	121.5	-96.6	-79.96	-95.0	-85.2	-81.6	-96.6	0.23	0.23	0.23	0.09	0.19	2	Disagree	1.15	79000	7.9	7	140
Barrel 7	Mitchell	M-09-112_18	M-09-112	124.5	125.5	-81.4	-65.38	-80.4	-71.6	-66.4	-81.4	0.38	0.36	0.38	0.22	0.31	2	Disagree	1.19	77500	7.75	6.4	170
Barrel 7	Mitchell	M-09-112_19	M-09-112	128.5	129.5	-81.3	-58.83	-73.8	-73.5	-66.3	-81.3	0.49	0.48	0.49	0.36	0.39	2	Disagree	5.25	66100	6.61	13.1	1600
Barrel 7	Mitchell	M-09-112_21	M-09-112	136.5	137.5	-81.0	-65.52	-80.5	-73.6	-66.0	-81.0	0.42	0.40	0.42	0.27	0.33	2	Disagree	1.24	78900	7.89	12.2	230
Barrel 7	Mitchell	M-09-112_22	M-09-112	140.5	141.5	-76.6	-28.28	-43.3	-67.4	-61.6	-76.6	0.72	0.70	0.72	0.56	0.47	2	Disagree	1.27	70000	7	13.6	220
Barrel 7	Mitchell	M-09-112_23	M-09-112	144.5	145.5	-45.4	-5.31	-20.3	-34.3	-30.4	-45.4	0.92	0.92	0.92	0.70	0.63	2	Disagree	0.65	70800	7.08	4.9	170
Barrel 7	Mitchell	M-09-112_24	M-09-112	148.5	149.5	-134.9	-84.21	-99.2	-129.1	-119.9	-134.9	0.17	0.16	0.17	0.01	0.05	2	Disagree	0.85	78800	7.88	8.3	140
Barrel 7	Mitchell	M-09-112_25	M-09-112	152.5	153.5	-89.5	-38.14	-53.1	-79.7	-74.5	-89.5	0.61	0.58	0.61	0.43	0.37	2	Disagree	1.56	80000	8	5.6	150
Barrel 7	Mitchell	M-09-112_26	M-09-112	156.5	157.5	-172.0	-62.70	-77.7	-161.0	-157.0	-172.0	0.41	0.41	0.41	0.27	0.19	2	Disagree	1.14	73500	7.35	3.6	330
Barrel 7	Mitchell	M-09-112_27	M-09-112	160.5	161.5	-72.5	-7.11	-22.1	-71.5	-57.5	-72.5	0.97	0.92	0.97	0.79	0.48	3	Disagree	1.23	73900	7.39	7.5	110
Barrel 7	Mitchell	M-09-112_28	M-09-112	164.5	165.5	-93.2	-69.48	-84.5	-94.0	-78.2	-93.2	0.51	0.46	0.51	0.38	0.32	3	Disagree	3.81	75900	7.59	17.9	370
Barrel 7	Mitchell	M-09-112_29	M-09-112	168.5	169.5	-136.4	-75.67	-90.7	-126.6	-121.4	-136.4	0.32	0.27	0.32	0.15	0.15	2	Disagree	0.98	77600	7.76	9.7	110
Barrel 7	Mitchell	M-09-112_30	M-09-112	172.5	173.5	-114.9	-56.08	-71.1	-105.5	-99.9	-114.9	0.48	0.48	0.48	0.34	0.30	2	Disagree	1.17	73400	7.34	11.6	150
Barrel 7	Mitchell	M-09-112_31	M-09-112	176.5	177.5	-89.9	-14.78	-29.8	-80.9	-74.9	-89.9	0.77	0.76	0.77	0.52	0.34	2	Disagree	0.87	75200	7.52	5.4	130
Barrel 7	Mitchell	M-09-112_32	M-09-112	180.5	181.5	-97.8	-36.81	-51.8	-100.1	-82.8	-97.8	0.79	0.64	0.79	0.61	0.32	3	Disagree	1.35	69600	6.96	7.6	90
Barrel 7	Mitchell	M-09-112_33	M-09-112	184.5	185.5	-29.8	21.21	6.2	-30.9	-14.8	-29.8	1.58	1.28	1.58	1.34	0.73	3	Disagree	1.02	69000	6.9	5.3	120
Barrel 7	Mitchell	M-09-112_34	M-09-112	188.5	189.5	-83.5	-48.70	-63.7	-80.2	-68.5	-83.5	0.69	0.57	0.69	0.53	0.39	3	Disagree	1.97	76100	7.61	12.1	150
Barrel 7	Mitchell	M-09-112_35	M-09-112	192.5	193.5	-122.8	-72.77	-87.8	-129.6	-107.8	-122.8	0.58	0.47	0.58	0.45	0.25	3	Disagree	1.61	74300	7.43	8.4	60
Barrel 7	Mitchell	M-09-112_36	M-09-112	196.5	197.5	-117.0	-56.44	-71.4	-117.0	-102.0	-117.0	0.56	0.47	0.56	0.40	0.24	3	Disagree	1.02	73200	7.32	6.2	80
Barrel 7	Mitchell	M-09-112_37	M-09-112	200.5	201.5	-128.9	-87.26	-102.3	-125.5	-113.9	-128.9	0.41	0.35	0.41	0.28	0.22	2	Disagree	1.29	71600	7.16	7.3	70
Barrel 7	Mitchell	M-09-112_38	M-09-112	204.5	205.5	-140.8	-103.18	-118.2	-131.5	-125.8	-140.8	0.25	0.24	0.25	0.14	0.17	2	Disagree	1.56	77600	7.76	10.6	100
Barrel 7	Mitchell	M-09-112_39	M-09-112	208.5	209.5	-119.4	-78.81	-93.8	-111.1	-104.4	-119.4	0.30	0.30	0.30	0.17	0.20	2	Disagree	1.17	76700	7.67	7.2	110
Barrel 7	Mitchell	M-09-112_40	M-09-112	212.5	213.5	-184.9	-126.43	-141.4	-178.2	-169.9	-184.9	0.23	0.20	0.23	0.12	0.11	2	Disagree	1.09	76200	7.62	9.2	90
Barrel 7	Mitchell	M-09-112_41	M-09-112	216.5	217.5	-140.5	-99.18	-114.2	-131.6	-125.5	-140.5	0.34	0.32	0.34	0.23	0.24	2	Disagree	0.89	73400	7.34	7.6	90
Barrel 7	Mitchell	M-09-112_42	M-09-112	220.5	221.5	-183.4	-138.64	-153.6	-174.8	-168.4	-183.4	0.22	0.21	0.22	0.13	0.14	2	Disagree	1.29	71300	7.13	7.7	70
Barrel 7	Mitchell	M-09-112_43	M-09-112	224.5	225.5	-219.4	-147.33	-162.3	-206.6	-204.4	-219.4	0.26	0.25	0.26	0.19	0.19	2	Disagree	1.3	67200	6.72	11.3	230
Barrel 7	Mitchell	M-09-112_44	M-09-112	228.5	229.5	-83.1	-26.12	-41.1	-75.8	-68.1	-83.1	0.75	0.74	0.75	0.60	0.47	2	Disagree	1.15	68400	6.84	9.4	90
Barrel 7	Mitchell	M-09-112_45	M-09-112	232.5	233.5	-93.5	-27.79	-42.8	-84.7	-78.5	-93.5	0.68	0.66	0.68	0.49	0.36	2	Disagree	0.8	71900	7.19	8.7	110
Barrel 7	Mitchell	M-09-112_46	M-09-112	236.5	237.5	-93.4	-51.16	-66.2	-92.5	-78.4	-93.4	0.61	0.52	0.61	0.44	0.31	3	Disagree	1.27	78300	7.83	8.4	130
Barrel 7	Mitchell	M-09-112_47	M-09-112	240.5	241.5	-76.2	-28.22	-43.2	-72.2	-61.2	-76.2	0.77	0.68	0.77	0.58	0.41	3	Disagree	4.1	64300	6.43	39.3	220
Barrel 7	Mitchell	M-09-112_48	M-09-112	244.5	245.5	-68.8	-26.83	-41.8	-58.2	-53.8	-68.8	0.76	0.69	0.76	0.57	0.48	2	Disagree	1.33	63400	6.34	50.1	140
Barrel 8	Mitchell	M-09-101_1	M-09-101	223.5	224.5	-44.3	-29.56	-44.6	-34.9	-29.3	-44.3	0.69	0.69	0.69	0.54	0.64	2	Disagree	2.64	77000	7.7	21.9	410
Barrel 8	Mitchell	M-09-101_2	M-09-101	227.5	228.5	52.6	69.04	54.0	58.9	67.6	52.6	3.40	3.09	3.40	2.90	2.71	3	Disagree	1.4	61700	6.17	7.9	1510
Barrel 8	Mitchell	M-09-101_3	M-09-101	231.5	232.5	-49.9	-34.23	-49.2	-37.3	-34.9	-49.9	0.65	0.62	0.65	0.48	0.59	2	Disagree	3.08	71300	7.13	24.5	460
Barrel 8	Mitchell	M-09-101_4	M-09-101	235.5	236.5	-75.9	-60.42	-75.4	-73.2	-60.9	-75.9	0.56	0.50	0.56	0.42	0.39	2	Disagree	2.17	71200	7.12	15.2	280
Barrel 8	Mitchell	M-09-101_5	M-09-101	239.5	240.5	12.6	28.86	13.9	23.0	27.6	12.6	1.59	1.54	1.59	1.30	1.42	2	Disagree	0.69	62900	6.29	6.1	1260
Barrel 8	Mitchell	M-09-101_6	M-09-101	243.5	244.5	44.9	60.90	45.9	41.9	59.9	44.9	2.11	2.07	2.11	1.84	1.72	3	Disagree	0.65	70700	7.07	10.4	970
Barrel 8	Mitchell	M-09-101_7	M-09-101	247.5	248.5	-9.9	6.21	-8.8	-5.0	5.1	-9.9	1.16	1.10	1.16	0.90	0.92	2	Disagree	1.03	64000	6.4	13.1	1060
Barrel 8	Mitchell	M-09-105_1	M-09-105	132.5	133.5	6.6	23.95	9.0	17.5	21.6	6.6	2.40	2.14	2.40	1.60	1.75	2	Disagree	0.3	70200	7.02	7.8	2420
Barrel 8	Mitchell	M-09-105_2	M-09-105	136.5	137.5	-15.1	2.13	-12.9	-1.3	-0.1	-15.1	1.10	1.10	1.10	0.41	0.95	2	Disagree	0.41	74100	7.41	4.3	2730
Barrel 8	Mitchell	M-09-105_3	M-09-105	140.5	141.5	-18.9	-1.69	-16.7	-4.1	-3.9	-18.9	0.93	0.93	0.93	0.32	0.85	2	Disagree	0.74	74700	7.47	15.1	3180
Barrel 8	Mitchell	M-09-105_4	M-09-105	144.5	145.5	-15.2	2.39	-12.6	-2.2	-0.2	-15.2	1.15	1.10	1.15	0.51	0.92	2	Disagree	0.49	78300	7.83	39.5	3100
Barrel 8	Mitchell	M-09-105_5	M-09-105	148.5	149.5	3.9	19.95	5.0	21.0	18.9	3.9	1.54	1.38	1.54	1.22	1.39	3	Disagree	1.8	67400	6.74	5.1	960
Barrel 8	Mitchell	M-09-105_6	M-09-105	152.5	153.5	-27.7	-10.57	-25.6	-14.2	-12.7	-27.7	0.71	0.68	0.71	0.23	0.59	2	Disagree	0.83	72800	7.28	5.2	2470
Barrel 8	Mitchell	M-09-105_7	M-09-105	156.5	157.5	7.4	23.30	8.3	12.2	22.4	7.4	1.54	1.39	1.54	1.27	1.20	3	Disagree	2.58	69300	6.93	8.8	840
Barrel 8	Mitchell	M-09-105_8	M-09-105	160.5	161.5	-6.7	8.78	-6.2	-6.4	8.3	-6.7	1.20	1.09	1.20	1.03	0.94	3	Disagree	2.52	67200	6.72	35.4	220
Barrel 8	Mitchell	M-09-105_9	M-09-105	164.5	165.5	-27.3	-11.50	-26.5	-18.5	-12.3	-27.3	0.99	0.85	0.99	0.75	0.75	3	Disagree	0.61	57800	5.78	19.8	690
Barrel 8	Mitchell	M-09-105_10	M-09-105	168.5	169.5	-13.1	3.53	-11.5	2.3	1.9	-13.1	1.27	1.11	1.27	0.74	1.07	3	Disagree	0.46	75500	7.55	15.8	1750
Barrel 8	Mitchell	M-09-105_11	M-09-105	172.5	173.5	-21.1	-5.10	-20.1	-6.3	-6.1	-21.1	0.91	0.86	0.91	0.48	0.84	3	Disagree	0.41	74000	7.4	12.3	980
Barrel 8	Mitchell	M-09-105_12	M-09-105	176.5	177.5	16.1	32.19	17.2	25.4	31.1	16.1	2.41	2.25	2.41	1.79	1.95	3	Disagree	0.82	69100	6.91	7.8	1030
Barrel 8	Mitchell	M-09-105_13	M-09-105	180.5	181.5	-13.6	2.32	-12.7	-4.2	1.4	-13.6	1.19	1.03	1.19	0.98	0.95	3	Disagree	0.75	64900	6.49	24.6	780
Barrel 8	Mitchell	M-09-105_14	M-09-105	184.5	185.5	56.9	73.21	58.2	65.6	71.9	56.9	4.68	4.36	4.68	3.94	3.84	3	Disagree	3.69	64400	6.44	5	1400
Barrel 8	Mitchell	M-09-110_1	M-09-110	6.5	7.5	-5.3	11.31	-3.7	11.9	9.8	-5.3	3.41	3.41	3.41	0.21	2.91	2	Disagree	2.06	76300	7.63	5.4	1530
Barrel 8	Mitchell	M-09-110_2	M-09-110	10.5	11.5	19.1	35.06	20.1	29.5	34.1	19.1	6.91	6.91	6.91	4.38	5.29	1	Disagree	5.45	62400	6.24	16.7	2440
Barrel 8	Mitchell	M-09-110_3	M-09-110	14.5	15.5	-8.0	7.69	-7.3	6.4	7.0	-8.0	2.95	2.79	2.95	0.00	2.27	2	Disagree	1.52	68200	6.82	4.1	520
Barrel 8	Mitchell	M-09-110_4	M-09-110	16.5	17.5	12.6	28.79	13.8	12.5	27.6	12.6	2.19	2.06	2.19	1.60	1.44	3	Disagree	1.3	66300	6.63	7.2	1260
Barrel 8	Mitchell	M-09-110_5	M-09-110	22.5	23.5	-15.8	0.45	-14.6	-11.0	-0.8	-15.8	1.11	1.01	1.11	0.61	0.67	2	Disagree	2.14	73000	7.3	24.7	1220
Barrel 8	Mitchell	M-09-110_6	M-09-110	26.5	27.5	51.3	67.81	52.8	39.0	66.3	51.3	10.43	10.43	10.43	8.35	5.46	3	Disagree	1.28	77900	7.79	8.1	2940
Barrel 8	Mitchell	M-09-110_7	M-09-110	30.5	31.5	30.9	47.54	32.5	15.5	45.9	30.9	3.35	3.22	3.35	2.62	1.67	3	Disagree	1.62	80400	8.04	5.5	1860
Barrel 8	Mitchell	M-09-110_8	M-09-110	34.5	35.5	-9.9	6.31	-8.7	-2.7	5.1	-9.9	1.32	1.32	1.32	0.56	0.87	2	Disagree	5.9	71700	7.17	10.4	1850
Barrel 8	Mitchell	M-09-110_9	M-09-110	38.5	39.5	44.9	61.44	46.4	44.2	59.9	44.9	10.36	10.36	10.36	8.08	6.44	3	Disagree	1.93	63900	6.39	3.5	3070
Barrel 8	Mitchell	M-09-110_10	M-09-110	42.5	43.5	11.4	29.19	14.2	25.3	26.4	11.4	3.28	3.28	3.28	2.11	2.62	3	Disagree	0.87	64100	6.41	4.6	4390
Barrel 8	Mitchell	M-09-110_11	M-09-110	46.5	47.5	-5.9	10.38	-4.6	-0.5	9.1	-5.9	1.52	1.23	1.52	1.10	0.99	2	Disagree	1.66	69700	6.97	9	1370

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Be (ppm)	Bi (ppm)	Ca (ppm)	Ca (%)	Cd (ppm)	Ce (ppm)	Co (ppm)	Cr (ppm)	Cs (ppm)	Cu (ppm)	Fe (ppm)	Fe (%)	Ga (ppm)	Ge (ppm)	Hf (ppm)	Hg (ppm)	In (ppm)	K (ppm)	K (%)	La (ppm)	Li (ppm)	Mg (ppm)	Mg (%)
Barrel 7	Mitchell	M-09-112_16	M-09-112	116.5	117.5	1.43	0.28	11300	1.13	0.23	22.9	14.8	3	5.57	596	42500	4.25	17.7	0.16	0.4	<0.01	0.038	39900	3.99	11.2	14.8	14800	1.48
Barrel 7	Mitchell	M-09-112_17	M-09-112	120.5	121.5	1.39	0.33	9000	0.9	0.13	19.45	12.3	9	4.41	489	34200	3.42	17.45	0.13	0.5	0.01	0.042	38600	3.86	10.9	7.3	7800	0.78
Barrel 7	Mitchell	M-09-112_18	M-09-112	124.5	125.5	1.34	0.26	13900	1.39	0.23	28.1	11.4	5	5.07	671	32300	3.23	15.85	0.13	0.4	0.01	0.039	36700	3.67	15.1	11.2	10900	1.09
Barrel 7	Mitchell	M-09-112_19	M-09-112	128.5	129.5	1.13	1.28	21700	2.17	48.4	23.9	10.4	11	4.63	491	38500	3.85	13.4	0.15	0.3	0.16	0.395	28600	2.86	12.7	10.2	9900	0.99
Barrel 7	Mitchell	M-09-112_21	M-09-112	136.5	137.5	1.23	0.24	17100	1.71	0.43	19.9	16.6	6	4.76	421	41800	4.18	16.85	0.16	0.4	<0.01	0.029	36600	3.66	10.4	13.9	12600	1.26
Barrel 7	Mitchell	M-09-112_22	M-09-112	140.5	141.5	0.94	0.15	36900	3.69	0.12	25.2	12.2	6	4.49	564	38000	3.8	14.2	0.12	0.3	<0.01	0.019	31400	3.14	14.2	10.8	11000	1.1
Barrel 7	Mitchell	M-09-112_23	M-09-112	144.5	145.5	1.13	0.16	33200	3.32	0.36	13.75	8.7	6	4.62	301	29100	2.91	16.7	0.11	0.4	0.01	0.042	36500	3.65	7.6	11.3	10300	1.03
Barrel 7	Mitchell	M-09-112_24	M-09-112	148.5	149.5	1.15	0.17	19800	1.98	0.11	24.9	12.9	5	5.03	443	41000	4.1	16.55	0.14	0.4	<0.01	0.025	35300	3.53	13.3	15.3	14600	1.46
Barrel 7	Mitchell	M-09-112_25	M-09-112	152.5	153.5	1.2	0.14	35300	3.53	0.18	24.5	15.2	4	5.47	1110	42100	4.21	15.3	0.15	0.3	<0.01	0.026	35800	3.58	13.9	18	16200	1.62
Barrel 7	Mitchell	M-09-112_26	M-09-112	156.5	157.5	1.02	0.22	54200	5.42	0.24	21.1	15.8	4	4.49	510	46000	4.6	13.6	0.15	0.4	<0.01	0.018	33600	3.36	11.9	16.9	15200	1.52
Barrel 7	Mitchell	M-09-112_27	M-09-112	160.5	161.5	0.93	0.2	49900	4.99	0.51	24	14	4	4.79	676	43200	4.32	16.65	0.2	0.4	0.01	0.021	33800	3.38	12.7	16.8	13800	1.38
Barrel 7	Mitchell	M-09-112_28	M-09-112	164.5	165.5	1.06	0.67	23300	2.33	13.95	20.2	15	4	5.58	1650	45200	4.52	16.5	0.2	0.4	0.03	0.089	36700	3.67	10.7	11	10400	1.04
Barrel 7	Mitchell	M-09-112_29	M-09-112	168.5	169.5	1.01	0.23	28700	2.87	0.25	20.1	16.7	5	5.31	614	44400	4.44	17.15	0.2	0.5	<0.01	0.023	35700	3.57	9.9	13.5	12700	1.27
Barrel 7	Mitchell	M-09-112_30	M-09-112	172.5	173.5	1.07	0.3	37300	3.73	0.52	20.5	16.2	4	5.06	688	43300	4.33	15.15	0.16	0.3	<0.01	0.087	36200	3.62	11	10.8	10400	1.04
Barrel 7	Mitchell	M-09-112_31	M-09-112	176.5	177.5	0.8	0.16	41900	4.19	0.21	24	13.8	5	3.7	568	39600	3.96	15.4	0.12	0.4	<0.01	0.019	24900	2.49	13.1	14.5	14300	1.43
Barrel 7	Mitchell	M-09-112_32	M-09-112	180.5	181.5	0.97	0.25	40100	4.01	0.42	18.6	15.1	4	4.42	600	42500	4.25	17.55	0.18	0.5	<0.01	0.03	32800	3.28	8.9	15.5	14400	1.44
Barrel 7	Mitchell	M-09-112_33	M-09-112	184.5	185.5	0.89	0.11	51500	5.15	0.43	17.9	12.5	4	4.89	513	40200	4.02	15.7	0.18	0.5	<0.01	0.026	34500	3.45	9.1	15.1	14600	1.46
Barrel 7	Mitchell	M-09-112_34	M-09-112	188.5	189.5	1.3	0.49	32300	3.23	0.56	26.4	14.5	4	6.46	650	42300	4.23	18.8	0.19	0.5	<0.01	0.049	41500	4.15	14.2	11.8	11900	1.19
Barrel 7	Mitchell	M-09-112_35	M-09-112	192.5	193.5	1.01	0.45	34100	3.41	0.42	18.45	19.3	4	3.69	930	51000	5.1	18.1	0.19	0.6	<0.01	0.048	29500	2.95	8.1	14.5	14400	1.44
Barrel 7	Mitchell	M-09-112_36	M-09-112	196.5	197.5	0.87	0.28	33500	3.35	0.42	16.05	11.9	7	2.95	614	33400	3.34	17.9	0.17	0.4	<0.01	0.031	21400	2.14	8.9	8.9	8900	0.89
Barrel 7	Mitchell	M-09-112_37	M-09-112	200.5	201.5	0.86	0.39	28100	2.81	0.44	14.95	14.7	7	3.53	809	46000	4.6	19.15	0.17	0.4	<0.01	0.049	24900	2.49	7.3	13.3	12700	1.27
Barrel 7	Mitchell	M-09-112_38	M-09-112	204.5	205.5	1.18	0.45	23600	2.36	0.3	20.4	15.9	7	5.31	883	50300	5.03	17.2	0.14	0.4	<0.01	0.062	35800	3.58	10.4	13.5	13600	1.36
Barrel 7	Mitchell	M-09-112_39	M-09-112	208.5	209.5	1.02	0.36	26400	2.64	0.13	24.2	14.5	5	4.51	613	42900	4.29	16.75	0.12	0.4	0.01	0.052	31000	3.1	12.6	15.3	15100	1.51
Barrel 7	Mitchell	M-09-112_40	M-09-112	212.5	213.5	1.02	0.62	30200	3.02	0.17	21.1	15.3	4	4.5	782	45200	4.52	18.1	0.15	0.3	<0.01	0.322	31000	3.1	11.2	14.5	14600	1.46
Barrel 7	Mitchell	M-09-112_41	M-09-112	216.5	217.5	0.93	0.4	30300	3.03	0.09	22.5	15.2	4	3.16	834	48000	4.8	17.05	0.12	0.4	<0.01	0.066	23400	2.34	11.9	15.6	14700	1.47
Barrel 7	Mitchell	M-09-112_42	M-09-112	220.5	221.5	0.93	0.48	26900	2.69	0.02	18.5	19.9	4	3.63	1120	58400	5.84	16.1	0.14	0.4	<0.01	0.062	28300	2.83	9	13.4	12800	1.28
Barrel 7	Mitchell	M-09-112_43	M-09-112	224.5	225.5	1.04	0.44	42600	4.26	0.16	18.6	21.5	4	4.84	910	62900	6.29	15.65	0.16	0.3	<0.01	0.041	36700	3.67	9.7	12	11200	1.12
Barrel 7	Mitchell	M-09-112_44	M-09-112	228.5	229.5	1.22	0.31	47500	4.75	0.23	19	15.4	3	5.69	770	42200	4.22	16.2	0.14	0.4	<0.01	0.043	40100	4.01	9.4	15.1	13800	1.38
Barrel 7	Mitchell	M-09-112_45	M-09-112	232.5	233.5	0.85	0.22	41800	4.18	0.2	21.2	13.1	4	3.55	561	35900	3.59	15.45	0.1	0.5	<0.01	0.042	27100	2.71	10.3	15.1	14400	1.44
Barrel 7	Mitchell	M-09-112_46	M-09-112	236.5	237.5	1.14	0.25	30700	3.07	0.22	21.1	19.2	4	5.81	930	46400	4.64	18.95	0.19	0.6	<0.01	0.05	43900	4.39	10.4	16.1	15800	1.58
Barrel 7	Mitchell	M-09-112_47	M-09-112	240.5	241.5	0.92	0.24	34500	3.45	1.26	16.35	12.5	4	4.53	1330	35200	3.52	14	0.17	0.3	0.02	0.06	33600	3.36	8.6	9.8	10200	1.02
Barrel 7	Mitchell	M-09-112_48	M-09-112	244.5	245.5	1.1	0.19	35700	3.57	0.27	16.15	13.1	5	5.33	559	43700	4.37	19.3	0.17	0.5	<0.01	0.038	41600	4.16	7.4	14	13000	1.3
Barrel 8	Mitchell	M-09-101_1	M-09-101	223.5	224.5	2.58	2.27	25700	2.57	0.43	24.9	12.4	7	5.09	606	33400	3.34	18.1	0.24	0.9	0.04	0.066	51600	5.16	18.8	26.5	7500	0.75
Barrel 8	Mitchell	M-09-101_2	M-09-101	227.5	228.5	1.67	2.1	36800	3.68	0.1	26	9.3	35	3.25	201	18100	1.81	16.9	0.19	0.8	0.02	0.039	40600	4.06	13.8	19.1	5300	0.53
Barrel 8	Mitchell	M-09-101_3	M-09-101	231.5	232.5	1.49	2.41	24100	2.41	60.1	33.8	10.4	35	4.84	399	28500	2.85	18.75	0.22	1.3	2.58	0.218	42800	4.28	22.2	22.3	4800	0.48
Barrel 8	Mitchell	M-09-101_4	M-09-101	235.5	236.5	1.62	3.8	22200	2.22	0.13	85.7	28.6	25	8.34	670	73500	7.35	23.9	0.37	1.4	0.02	0.213	24200	2.42	74.5	25.3	22800	2.28
Barrel 8	Mitchell	M-09-101_5	M-09-101	239.5	240.5	1.12	0.88	31200	3.12	0.15	29.2	13.4	32	2.61	266	24400	2.44	16.9	0.2	0.8	0.02	0.047	33700	3.37	15.9	11.6	5400	0.54
Barrel 8	Mitchell	M-09-101_6	M-09-101	243.5	244.5	1.35	1.06	42000	4.2	0.07	37.8	16.8	44	3.62	236	25700	2.57	18.8	0.23	1.1	0.03	0.02	33400	3.34	23.2	16.1	6200	0.62
Barrel 8	Mitchell	M-09-101_7	M-09-101	247.5	248.5	1.15	1.24	24800	2.48	0.11	25.9	11.8	24	3.62	519	27100	2.71	17.05	0.22	0.9	0.02	0.032	36500	3.65	15.1	19.6	7700	0.77
Barrel 8	Mitchell	M-09-105_1	M-09-105	132.5	133.5	1.9	0.23	17200	1.72	0.2	6.32	1.1	4	1.23	27.9	9300	0.93	32.1	0.06	3.1	0.04	0.018	46400	4.64	3.6	4.5	900.0	0.09
Barrel 8	Mitchell	M-09-105_2	M-09-105	136.5	137.5	2.45	0.38	9000	0.9	0.63	8.71	0.7	3	1.42	58.3	10100	1.01	35.5	0.07	3.3	0.12	0.021	39600	3.96	5.5	5.7	1200	0.12
Barrel 8	Mitchell	M-09-105_3	M-09-105	140.5	141.5	2.42	0.53	7800	0.78	0.73	10.2	0.9	4	1.64	43.2	10400	1.04	31.6	0.06	3	0.15	0.019	41700	4.17	7	5.5	2300	0.23
Barrel 8	Mitchell	M-09-105_4	M-09-105	144.5	145.5	2.55	0.74	9600	0.96	0.22	11.7	1.3	3	1.85	74.9	10800	1.08	31.8	0.07	2.9	0.19	0.019	45800	4.58	8	6	2500	0.25
Barrel 8	Mitchell	M-09-105_5	M-09-105	148.5	149.5	1.23	2.86	30100	3.01	0.09	18.05	8	3	3.94	824	20100	2.01	15.45	0.1	1	0.02	0.108	40900	4.09	9.8	24.5	4100	0.41
Barrel 8	Mitchell	M-09-105_6	M-09-105	152.5	153.5	2.61	0.66	8400	0.84	0.03	12.45	1.8	3	1.8	231	13400	1.34	34.4	0.06	2.5	<0.1	0.039	41700	4.17	9.8	8.1	2000	0.2
Barrel 8	Mitchell	M-09-105_7	M-09-105	156.5	157.5	1.87	7.65	28500	2.85	0.49	19.95	7.8	4	5.13	596	24700	2.47	16.55	0.11	1.1	0.06	0.145	42700	4.27	10.8	24.9	6100	0.61
Barrel 8	Mitchell	M-09-105_8	M-09-105	160.5	161.5	3.15	3.92	37100	3.71	0.51	22.7	7.8	2	6.15	1290	30800	3.08	16.45	0.15	1.2	0.2	0.102	44200	4.42	15	65.5	10300	1.03
Barrel 8	Mitchell	M-09-105_9	M-09-105	164.5	165.5	2.26	1.77	22400	2.24	0.04	6.96	3.9	1	3.13	48.1	24800	2.48	30	0.08	2.5	<0.1	0.029	39800	3.98	4.5	12.5	2600	0.26
Barrel 8	Mitchell	M-09-105_10	M-09-105	168.5	169.5	2.14	1.13	13300	1.33	0.07	7.05	1.9	2	3.32	50.2	13400	1.34	35.2	0.06	3.1	0.01	0.012	42500	4.25	5.1	10.7	3000	0.3
Barrel 8	Mitchell	M-09-105_11	M-09-105	172.5	173.5	2.98	1.13	10900	1.09	0.03	7.05	1.8	2	3.41	38.3	15200	1.52	35.6	0.06	2.8	0.01	0.012	41800	4.18	5.3	15.8	5200	0.52
Barrel 8	Mitchell	M-09-105_12	M-09-105	176.5	177.5	2.31	1.92	20900	2.09	0.05	7.73	0.6	1	2.34	396	11500	1.15	34.3	0.07	3	0.01	0.03	48100	4.81	6	8.3	2500	0.25
Barrel 8	Mitchell	M-09-105_13	M-09-105	180.5	181.5	1.71	4.85	31300	3.13	0.07	5.97	5.3	2	3.69	52.3	29400	2.94	30.6	0.11	2.5	<0.01	0.03	42400	4.24	4.3	21.5	3200	0.32
Barrel 8	Mitchell	M-09-105_14	M-09-105	184.5	185.5	1.77	2.59	32700	3.27	0.13	11.55	3.2	2	3.81	929	18900	1.89	24.4	0.08	2	0.01	0.041	40700	4.07	7.6	35.3	5900	0.59
Barrel 8	Mitchell	M-09-110_1	M-09-110	6.5	7.5	2.11	1.94	5900	0.59	0.2	3.94	1.1	1	0.85	1050	6900	0.69	39	0.07	0.6	0.03	0.009	49800	4.98	2.3	3.7	600.0	0.06
Barrel 8	Mitchell	M-09-110_2	M-09-110	10.5	11.5	3.02	2.39	19300	1.93	1.05	18.1	20.2	90	7.91	2430	50600	5.06	18.9	0.13	1.1	0.08	0.101	38000	3.8	10.7	86.1	18600	1.86
Barrel 8	Mitchell	M-09-110_3	M-09-110	14.5	15.5	4.27	1.07	4000	0.4	0.15	5.23	2.1	6	1.62	639	8800	0.88	34.2	0.07	0.6	0.02	0.01	36800	3.68	3.6	8.9	2000	0.2
Barrel 8	Mitchell	M-09-110_4	M-09-110	16.5	17.5	2.32	0.76	17300	1.73	0.24	9.29	13.8	62	5.53	789	26900	2.69	24.8	0.11	0.7	0.03	0.037	31100	3.11	5.5	47.6	11000	1.1
Barrel 8	Mitchell	M-09-110_5	M-09-110	22.5	23.5	2.38	1.84	11500	1.15	0.26	17.25	12.7	59	4.05	1250	25400	2.54	36.1	0.12	1.6	0.03	0.076	43400	4.34	10.4	41.5	10000	1
Barrel 8	Mitchell	M-09-110_6	M-09-110	26.5	27.5	1.72	0.93	23800	2.38	0.67	15.95	11.5	69	5.63	780	34700	3.47	25.4	0.14	1.2	0.02	0.075	45400	4.54	9	39.6	17600	1.76
Barrel 8	Mitchell	M-09-110_7	M-09-110	30.5	31.5	3.32	0.78	20700	2.07	0.21	26	24.9	35	5.63	1150	44300	4.43	17.65	0.17	1.1	0.01	0.062	45800	4.58	15.4	57.1	13800	1.38
Barrel 8	Mitchell	M-09-110_8	M-09-110	34.5	35.5	3.08	3.33	10100	1.01	1.19	16.7	6.7	26	3.05	3280	21900	2.19	19	0.1	1	0.05	0.027	39900	3.99	9.1	38.7	7500	0.75
Barrel 8	Mitchell	M-09-110_9	M-09-110	38.5	39.5	3.12	1.16	22700	2.27	0.41	16.55	11.2	30	3.66	1220	30900	3.09	15.7	0.09	0.9	0.01	0.056	37600	3.76	10.1	42	10100	1.01
Barrel 8	Mitchell	M-09-110_10	M-09-110	42.5	43.5	1.57	1.28	16700	1.67	0.07	14.7	4.3	54	1.57	426	10500	1.05	16.75	0.09	0.9	0.01	0.021	41500	4.15	7.5	22	4300	0.43
Barrel 8	Mitchell	M-09-110_11	M-09-110	46.5	47.5	2.6	2.57	20800	2.08	0.21	23.1	10.9	89	3.14	653	27900	2.79	17.9	0.11	1.1	0.01	0.056	40500	4.05	12.6	57.9	9600	0.96

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Mn (ppm)	Mo (ppm)	Na (ppm)	Na (%)	Nb (ppm)	Ni (ppm)	P (%)	Pb (ppm)	Rb (ppm)	Re (ppm)	S (ppm)	S (%)	Sb (ppm)	Sc (ppm)	Se (ppm)	Sn (ppm)	Sr (ppm)	Ta (ppm)	Te (ppm)	Th (ppm)	Ti (ppm)	Ti (%)	Tl (ppm)
Barrel 7	Mitchell	M-09-112_16	M-09-112	116.5	117.5	1000	62.6	1200	0.12	2.3	3.9	0.154	32.9	123	0.243	40300	4.03	1.15	20.4	12	1.9	158	0.15	0.15	4	1150.0	0.115	2.83
Barrel 7	Mitchell	M-09-112_17	M-09-112	120.5	121.5	502	278	1200	0.12	5.1	3.7	0.101	38.5	120.5	1.52	33500	3.35	3.73	12.6	10	3.2	164	0.29	0.13	3.1	980.00	0.098	2.63
Barrel 7	Mitchell	M-09-112_18	M-09-112	124.5	125.5	771	137.5	1100	0.11	2.7	3.5	0.133	70.1	114.5	0.625	30000	3	2.34	17.5	10	1.6	149.5	0.16	0.11	3.6	1110.0	0.111	2.58
Barrel 7	Mitchell	M-09-112_19	M-09-112	128.5	129.5	1060	14.7	800.0	0.08	4.3	3.9	0.106	1515	89.3	0.063	37900	3.79	5.17	14.6	15	1.3	428	0.24	1.43	2.5	1460.0	0.146	1.93
Barrel 7	Mitchell	M-09-112_21	M-09-112	136.5	137.5	586	42.8	900.0	0.09	3.4	5.1	0.139	23	113	0.188	33500	3.35	2.02	19.1	13	1.8	79.6	0.21	0.1	3.9	1420.0	0.142	2.64
Barrel 7	Mitchell	M-09-112_22	M-09-112	140.5	141.5	605	358	800.0	0.08	3.8	3.3	0.119	14.8	93	1.635	39200	3.92	1.92	16.1	10	1	202	0.23	0.11	3.4	1710.0	0.171	2.16
Barrel 7	Mitchell	M-09-112_23	M-09-112	144.5	145.5	729	19.5	900.0	0.09	7.1	1.9	0.087	20.3	85.3	0.1	28600	2.86	1.7	9.7	7	0.7	270	0.37	0.1	2.8	1080.0	0.108	2.58
Barrel 7	Mitchell	M-09-112_24	M-09-112	148.5	149.5	409	52.5	900.0	0.09	3.7	3.7	0.136	8.7	104	0.21	40600	4.06	2.2	17.9	9	1.3	195	0.23	0.08	3.8	1560.0	0.156	2.45
Barrel 7	Mitchell	M-09-112_25	M-09-112	152.5	153.5	690	178	800.0	0.08	2.8	4.9	0.139	11.6	106.5	0.682	39600	3.96	2.23	18.5	13	2.9	289	0.17	0.06	3.8	1280.0	0.128	2.47
Barrel 7	Mitchell	M-09-112_26	M-09-112	156.5	157.5	645	53.2	700.0	0.07	3.2	4.3	0.134	13.6	98	0.152	64900	6.49	1.79	17.7	15	1.9	494	0.2	0.09	3.2	1520.0	0.152	2.22
Barrel 7	Mitchell	M-09-112_27	M-09-112	160.5	161.5	811	207	900.0	0.09	5.2	<0.2	0.133	14.3	102.5	0.593	46700	4.67	2.18	18.6	11	1.9	309	0.34	0.13	3.3	2070.0	0.207	2.09
Barrel 7	Mitchell	M-09-112_28	M-09-112	164.5	165.5	479	130.5	800.0	0.08	5	2	0.128	2170	122	0.594	41300	4.13	7.68	18	14	1.6	224	0.32	0.78	3.3	1960.0	0.196	2.29
Barrel 7	Mitchell	M-09-112_29	M-09-112	168.5	169.5	326	55.1	5600	0.56	4.8	1.3	0.141	32.5	107.5	0.257	46800	4.68	2.66	19.5	14	1.8	284	0.32	0.14	3.2	2080.0	0.208	2.23
Barrel 7	Mitchell	M-09-112_30	M-09-112	172.5	173.5	418	70.8	3400	0.34	3.4	3.8	0.135	24.9	113.5	0.344	48400	4.84	3.61	18.7	12	1.6	289	0.22	0.2	3.4	1640.0	0.164	2.48
Barrel 7	Mitchell	M-09-112_31	M-09-112	176.5	177.5	381	100.5	18400	1.84	5.2	3.5	0.14	9.3	95.5	0.419	39900	3.99	1.29	19.3	9	1	545	0.31	0.1	3.6	2240.0	0.224	1.62
Barrel 7	Mitchell	M-09-112_32	M-09-112	180.5	181.5	471	48.2	9100	0.91	5.6	0.4	0.143	26.7	84.8	0.221	46600	4.66	2.31	18.9	14	1.1	262	0.37	0.15	3	2320.0	0.232	1.92
Barrel 7	Mitchell	M-09-112_33	M-09-112	184.5	185.5	778	63.3	1300	0.13	5.6	<0.2	0.128	8.9	85	0.254	36500	3.65	3.14	17.3	10	1.1	284	0.38	0.11	2.9	2270.0	0.227	1.95
Barrel 7	Mitchell	M-09-112_34	M-09-112	188.5	189.5	590	16.6	800.0	0.08	5.9	1.1	0.15	65	108	0.062	42200	4.22	4.8	20.2	11	1.4	146	0.41	0.5	3.3	2450.0	0.245	2.44
Barrel 7	Mitchell	M-09-112_35	M-09-112	192.5	193.5	458	23.2	19800	1.98	5.7	1.7	0.147	17.5	78.8	0.071	52700	5.27	1.84	22.1	13	1.4	405	0.39	0.19	3.4	2420.0	0.242	1.64
Barrel 7	Mitchell	M-09-112_36	M-09-112	196.5	197.5	280	39.2	32300	3.23	8.8	<0.2	0.092	29.2	67.8	0.152	44900	4.49	1.48	11.4	11	0.9	478	0.51	0.14	3.1	1280.0	0.128	1.2
Barrel 7	Mitchell	M-09-112_37	M-09-112	200.5	201.5	383	54.5	23700	2.37	7.5	1.4	0.126	24.3	73.6	0.225	48500	4.85	1.72	16.4	12	1.2	309	0.45	0.23	3	2050.0	0.205	1.44
Barrel 7	Mitchell	M-09-112_38	M-09-112	204.5	205.5	341	44.5	12500	1.25	7.1	5.1	0.138	20.1	103	0.162	51000	5.1	3.13	18.9	10	1.1	263	0.42	0.28	3.7	2390.0	0.239	2.2
Barrel 7	Mitchell	M-09-112_39	M-09-112	208.5	209.5	408	57.4	17000	1.7	6.3	3.7	0.143	12.8	89.1	0.238	45800	4.58	2.27	19.7	8	1	252	0.38	0.22	3.8	2490.0	0.249	1.82
Barrel 7	Mitchell	M-09-112_40	M-09-112	212.5	213.5	397	46.6	17200	1.72	6.1	3.7	0.139	31.9	90.9	0.173	56500	5.65	3.37	19.7	12	1.4	300	0.35	0.28	3.8	2380.0	0.238	1.8
Barrel 7	Mitchell	M-09-112_41	M-09-112	216.5	217.5	516	76	24900	2.49	6.5	4.7	0.135	24.4	90.4	0.372	53800	5.38	1.85	19.4	9	1.1	304	0.37	0.29	3.8	2330.0	0.233	1.42
Barrel 7	Mitchell	M-09-112_42	M-09-112	220.5	221.5	425	90.3	18900	1.89	6.2	4.1	0.135	29.7	99.2	0.438	65500	6.55	1.94	18.5	12	1	261	0.35	0.31	3.4	2290.0	0.229	1.71
Barrel 7	Mitchell	M-09-112_43	M-09-112	224.5	225.5	479	93.1	3400	0.34	6.2	3.9	0.121	31.1	112.5	0.368	80700	8.07	4.2	15.7	12	1	384	0.36	0.32	2.9	2050.0	0.205	2.19
Barrel 7	Mitchell	M-09-112_44	M-09-112	228.5	229.5	684	70.3	800.0	0.08	6.8	3.3	0.132	19.4	98.6	0.259	46800	4.68	3.8	17.5	11	1	366	0.4	0.16	3	2430.0	0.243	2.45
Barrel 7	Mitchell	M-09-112_45	M-09-112	232.5	233.5	489	52.5	21500	2.15	6.7	3.5	0.142	12.8	91.1	0.162	41700	4.17	1.81	18.9	9	1	414	0.39	0.11	3.4	2450.0	0.245	1.61
Barrel 7	Mitchell	M-09-112_46	M-09-112	236.5	237.5	502	38.6	1200	0.12	7.4	1.8	0.152	8.3	109	0.139	42100	4.21	3.66	20.1	10	1	254	0.48	0.14	3.1	2740.0	0.274	2.48
Barrel 7	Mitchell	M-09-112_47	M-09-112	240.5	241.5	539	232	1200	0.12	5.7	0.4	0.109	17	114	0.819	37400	3.74	25.2	15.4	11	1.1	227	0.33	0.17	2.8	1960.0	0.196	1.92
Barrel 7	Mitchell	M-09-112_48	M-09-112	244.5	245.5	816	37.5	700.0	0.07	7.6	1.6	0.148	8.9	87.9	0.135	38200	3.82	5.87	18.8	8	1	153	0.48	0.1	2.8	2720.0	0.272	2.54
Barrel 8	Mitchell	M-09-101_1	M-09-101	223.5	224.5	1150	74.2	11800	1.18	6.4	5.7	0.12	106	163	0.208	30900	3.09	5.99	19.6	14	1.2	167	0.4	1.43	2	1880.0	0.188	2.08
Barrel 8	Mitchell	M-09-101_2	M-09-101	227.5	228.5	1390	103.5	24300	2.43	4.5	18.2	0.051	139	132	0.125	10900	1.09	3.72	12.1	7	1	212	0.32	0.26	2.6	2850.0	0.285	1.2
Barrel 8	Mitchell	M-09-101_3	M-09-101	231.5	232.5	854	257	26200	2.62	5.8	18.3	0.086	1535	121.5	0.339	30500	3.05	4.74	9.4	14	0.8	218	0.37	1.11	3.9	3210.0	0.321	1.44
Barrel 8	Mitchell	M-09-101_4	M-09-101	235.5	236.5	1980	10.55	28600	2.86	6.7	35	0.135	320	112	0.036	36500	3.65	2.63	16.7	29	2.9	191.5	0.48	0.72	5.8	3190.0	0.319	1.08
Barrel 8	Mitchell	M-09-101_5	M-09-101	239.5	240.5	1650	22.9	31400	3.14	4.3	14.4	0.055	45.1	98.8	0.027	18000	1.8	2.52	9.6	7	1.1	258	0.32	0.47	3.1	2640.0	0.264	0.91
Barrel 8	Mitchell	M-09-101_6	M-09-101	243.5	244.5	1740	41.1	31800	3.18	4.9	16	0.058	28.9	119	0.073	19100	1.91	2.94	12.6	10	1.1	282	0.36	0.35	3	3300	0.33	0.99
Barrel 8	Mitchell	M-09-101_7	M-09-101	247.5	248.5	1260	80.1	28500	2.85	3.4	13.7	0.041	45.3	112.5	0.141	19000	1.9	2.53	10.5	8	1	195.5	0.25	0.48	1.9	1910.0	0.191	1.06
Barrel 8	Mitchell	M-09-105_1	M-09-105	132.5	133.5	668	3.41	29400	2.94	10	1.8	0.007	55.2	101	<0.002	7900	0.79	0.75	0.7	3	1.3	244	0.43	0.25	4.2	450.00	0.045	1.12
Barrel 8	Mitchell	M-09-105_2	M-09-105	136.5	137.5	356	4.71	30900	3.09	11.4	1.1	0.007	98.3	93.9	<0.002	8600	0.86	1.11	0.5	3	1.4	213	0.47	0.36	9.2	490.00	0.049	1.22
Barrel 8	Mitchell	M-09-105_3	M-09-105	140.5	141.5	327	4.97	15500	1.55	10.9	1.9	0.006	57.9	108.5	0.003	9000	0.9	7.34	0.5	3	1.5	183.5	0.47	0.4	10.9	480.00	0.048	1.56
Barrel 8	Mitchell	M-09-105_4	M-09-105	144.5	145.5	371	3.13	14100	1.41	12.1	1	0.014	35.8	102.5	<0.002	9100	0.91	15	1.1	4	1.5	198.5	0.5	0.44	10.4	580.00	0.058	1.6
Barrel 8	Mitchell	M-09-105_5	M-09-105	148.5	149.5	1120	3.77	24000	2.4	9.3	3	0.095	29.8	103.5	0.003	16700	1.67	2.03	7.8	6	1.9	256	0.43	0.41	1.8	1540.0	0.154	1.33
Barrel 8	Mitchell	M-09-105_6	M-09-105	152.5	153.5	329	3.61	25800	2.58	9.8	1.2	0.023	10.8	99.9	<0.002	11300	1.13	1.99	1.5	5	2.3	166.5	0.43	0.9	10.1	630.00	0.063	1.11
Barrel 8	Mitchell	M-09-105_7	M-09-105	156.5	157.5	1170	5.56	21900	2.19	9.1	3.7	0.086	96.8	123	0.005	19000	1.9	3.24	9.4	7	2.6	224	0.45	0.71	2.6	1730.0	0.173	1.44
Barrel 8	Mitchell	M-09-105_8	M-09-105	160.5	161.5	2300	4.61	11600	1.16	8.5	4.5	0.086	62.5	137.5	0.002	32400	3.24	18	9.7	11	2	186	0.41	2.65	4.7	1630.0	0.163	1.53
Barrel 8	Mitchell	M-09-105_9	M-09-105	164.5	165.5	1100	3.72	2600	0.26	7.9	1.8	0.018	13.1	85	0.002	23000	2.3	3.91	0.9	4	1.2	137.5	0.34	1.34	3	490.00	0.049	1.79
Barrel 8	Mitchell	M-09-105_10	M-09-105	168.5	169.5	776	2.86	3500	0.35	9.3	1.1	0.006	16.1	94	<0.002	11800	1.18	3.57	0.7	2	1.4	142.5	0.41	0.31	10	530.00	0.053	2.1
Barrel 8	Mitchell	M-09-105_11	M-09-105	172.5	173.5	659	4.81	8700	0.87	8.8	0.7	0.007	11.9	141.5	0.002	12700	1.27	5.13	0.5	4	1	86.7	0.4	0.58	11.6	490.00	0.049	1.77
Barrel 8	Mitchell	M-09-105_12	M-09-105	176.5	177.5	911	2.65	14500	1.45	9	0.5	0.007	9.3	122	<0.002	8900	0.89	2.99	0.3	2	1.2	129.5	0.4	1.31	10.3	440.00	0.044	1.58
Barrel 8	Mitchell	M-09-105_13	M-09-105	180.5	181.5	1420	3.03	5500	0.55	7.9	1.2	0.008	23.1	87.4	<0.002	27200	2.72	3.92	1.4	7	1.4	178.5	0.38	2.5	7.9	550.00	0.055	1.99
Barrel 8	Mitchell	M-09-105_14	M-09-105	184.5	185.5	1970	5.35	25400	2.54	8.5	2.5	0.034	24.2	93.9	0.004	7800	0.78	1.9	3.2	4	1.3	276	0.39	0.95	4	980.00	0.098	1.33
Barrel 8	Mitchell	M-09-110_1	M-09-110	6.5	7.5	215	0.87	32000	3.2	8.1	1.2	0.01	14.9	98	<0.002	1900	0.19	2.46	1	3	0.8	341	0.28	0.33	5.2	420.00	0.042	0.48
Barrel 8	Mitchell	M-09-110_2	M-09-110	10.5	11.5	1050	0.64	26400	2.64	12.7	47	0.175	70.2	133	<0.002	2200	0.22	10.25	18.6	7	2.9	243	0.51	0.32	2.6	3240.0	0.324	0.64
Barrel 8	Mitchell	M-09-110_3	M-09-110	14.5	15.5	248	1.04	13400	1.34	10.2	4.4	0.03	11.2	90.4	<0.002	1500	0.15	2.16	3.3	2	1.2	118.5	0.32	0.15	4.9	490.00	0.049	0.53
Barrel 8	Mitchell	M-09-110_4	M-09-110	16.5	17.5	845	0.66	17400	1.74	10.1	29.4	0.118	10.3	88.9	<0.002	9400	0.94	5.02	13.9	5	1.8	173	0.41	0.2	6.4	2190.0	0.219	0.7
Barrel 8	Mitchell	M-09-110_5	M-09-110	22.5	23.5	692	0.69	30300	3.03	16.5	27.2	0.12	14.7	128	0.002	10100	1.01	2.28	12.4	6	2	143	0.62	0.61	5.5	2140.0	0.214	0.62
Barrel 8	Mitchell	M-09-110_6	M-09-110	26.5	27.5	1330	1.81	20100	2.01	11.8	37	0.149	18.9	107	0.004	3100	0.31	5.68	13.9	3	1.8	243	0.45	0.25	5	2650.0	0.265	0.8
Barrel 8	Mitchell	M-09-110_7	M-09-110	30.5	31.5	609	5.63	30100	3.01	12.9	20.3	0.181	22.5	136	0.012	8300	0.83	3.21	17.1	5	1	206	0.74	0.21	2.5	3310.0	0.331	0.77
Barrel 8	Mitchell	M-09-110_8	M-09-110	34.5	35.5	608	12.4	25200	2.52	11.2	15.7	0.121	183	99.8	0.002	6900	0.69	2.63	11.8	4	0.9	143	0.66	0.57	1.7	2610.0	0.261	0.65
Barrel 8	Mitchell	M-09-110_9	M-09-110	38.5	39.5	799	2.03	15200	1.52	8.3	21.3	0.084	58.2	94.2	0.002	2700	0.27	2.52	16.1	3	1.3	243	0.34	0.15	1.7	2330.0	0.233	0.71
Barrel 8	Mitchell	M-09-110_10	M-09-110	42.5	43.5	482	12.25	24300	2.43	9.2	14.8	0.075	46.5	98.8	0.007	5000	0.5	1.63	10	2	0.8	235	0.45	0.15	1.4	2440.0	0.244	0.57
Barrel 8	Mitchell	M-09-110_11	M-09-110	46.5	47.5	943	2.05	28300	2.83	9.7	41.2	0.126	55.8	114	0.004	14600	1.46	2.25	17.4	4	1.6	181.5	0.45	0.75	1.9	3110.0	0.311	0.72

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	U (ppm)	V (ppm)	W (ppm)	Y (ppm)	Zn (ppm)	Zr (ppm)	Al2O3 (%)	BaO (%)	CaO (%)	Cr2O3 (%)	Fe2O3 (%)	K2O (%)	MgO (%)	MnO (%)	Na2O (%)	P2O5 (%)	SiO2 (%)	SRO (%)	TiO2 (%)	LOI (%)	Total_DC (%)
Barrel 7	Mitchell	M-09-112_16	M-09-112	116.5	117.5	1.7	172	1.5	7.2	68	15.1	18.21	0.56	1.64	<0.01	6.21	5.05	2.71	0.14	0.24	0.334	58.02	0.03	0.54	6.15	99.83
Barrel 7	Mitchell	M-09-112_17	M-09-112	120.5	121.5	1.1	124	2.5	5.2	44	16.9	17.02	0.61	1.31	<0.01	4.85	4.93	1.49	0.07	0.24	0.227	63.74	0.02	0.3	5.06	99.87
Barrel 7	Mitchell	M-09-112_18	M-09-112	124.5	125.5	1.4	154	2	7	81	12.7	16.92	0.53	2	<0.01	4.82	4.78	2.08	0.11	0.24	0.3	62.54	0.02	0.49	5.06	99.89
Barrel 7	Mitchell	M-09-112_19	M-09-112	128.5	129.5	1.2	135	1.4	6.3	1870	4.5	12.65	1.12	2.98	<0.01	5.39	3.52	1.8	0.14	0.24	0.229	64.25	0.05	0.33	5.62	98.32
Barrel 7	Mitchell	M-09-112_21	M-09-112	136.5	137.5	1.4	163	2	6.9	53	13.9	16.87	0.36	2.46	<0.01	6.3	4.7	2.41	0.09	0.22	0.316	58.87	0.01	0.47	5.65	98.72
Barrel 7	Mitchell	M-09-112_22	M-09-112	140.5	141.5	1.5	142	1.1	6.2	39	10.6	14.43	0.33	5.32	<0.01	5.67	3.97	2.11	0.09	0.19	0.277	57.5	0.02	0.45	7.98	98.34
Barrel 7	Mitchell	M-09-112_23	M-09-112	144.5	145.5	1.2	108	0.9	4.3	45	14.5	16.6	0.65	4.83	<0.01	4.44	4.67	2.18	0.1	0.22	0.206	58.39	0.04	0.24	6.06	98.64
Barrel 7	Mitchell	M-09-112_24	M-09-112	148.5	149.5	2.5	161	1.3	6.7	68	12.2	16.64	0.39	2.8	<0.01	6.03	4.51	2.72	0.06	0.21	0.303	56.86	0.02	0.49	8.23	99.27
Barrel 7	Mitchell	M-09-112_25	M-09-112	152.5	153.5	1.1	169	1.5	6.6	67	11.8	16.62	0.46	4.97	<0.01	6.2	4.47	3.01	0.09	0.19	0.314	53.41	0.04	0.52	8.31	98.6
Barrel 7	Mitchell	M-09-112_26	M-09-112	156.5	157.5	1.3	160	2.1	7.1	54	12.5	15.08	0.56	7.63	<0.01	6.81	4.05	2.84	0.09	0.19	0.293	46.79	0.06	0.45	13.35	98.2
Barrel 7	Mitchell	M-09-112_27	M-09-112	160.5	161.5	1.4	160	1.8	7.8	54	14	14.66	0.43	6.91	<0.01	6.17	4.08	2.54	0.11	0.2	0.287	52.9	0.03	0.43	10.1	98.85
Barrel 7	Mitchell	M-09-112_28	M-09-112	164.5	165.5	1.4	157	2.9	7.3	609	12.7	15.3	0.54	3.31	<0.01	6.62	4.64	1.97	0.06	0.19	0.285	59.01	0.03	0.44	7.12	99.51
Barrel 7	Mitchell	M-09-112_29	M-09-112	168.5	169.5	1.5	172	1.8	6.9	51	15.1	16.08	0.41	4.07	<0.01	6.37	4.47	2.4	0.04	0.83	0.307	52.62	0.03	0.5	10.45	98.58
Barrel 7	Mitchell	M-09-112_30	M-09-112	172.5	173.5	1.3	173	1.4	6.9	61	12.3	15.65	0.52	5.4	<0.01	6.52	4.58	2.04	0.06	0.56	0.307	53.48	0.03	0.47	8.44	98.06
Barrel 7	Mitchell	M-09-112_31	M-09-112	176.5	177.5	1.5	170	0.9	9.3	41	14.4	15.59	0.61	6.01	<0.01	5.8	3.13	2.68	0.05	2.61	0.316	52.25	0.07	0.48	8.87	98.46
Barrel 7	Mitchell	M-09-112_32	M-09-112	180.5	181.5	1.3	163	1.1	10.3	52	16.8	15.95	0.33	5.84	<0.01	6.29	4.15	2.82	0.07	1.3	0.314	51.38	0.04	0.51	10.8	99.78
Barrel 7	Mitchell	M-09-112_33	M-09-112	184.5	185.5	1.4	153	1.3	11.1	50	16	14.41	0.42	7.24	<0.01	5.84	4.16	2.8	0.11	0.28	0.279	53.48	0.03	0.43	9.28	98.76
Barrel 7	Mitchell	M-09-112_34	M-09-112	188.5	189.5	1.7	177	1.7	13.1	51	17.5	16.59	0.29	4.65	<0.01	6.23	5.3	2.37	0.08	0.19	0.329	54.41	0.02	0.49	8.15	99.1
Barrel 7	Mitchell	M-09-112_35	M-09-112	192.5	193.5	1.8	183	1.9	12.9	43	18.1	16.94	0.73	4.94	<0.01	7.63	3.73	2.75	0.06	2.76	0.319	49.59	0.06	0.5	9.79	99.79
Barrel 7	Mitchell	M-09-112_36	M-09-112	196.5	197.5	1	122	1.2	7.9	30	13.1	16.8	0.63	4.96	<0.01	5.11	2.77	1.73	0.04	4.68	0.209	53.9	0.07	0.27	8.45	99.61
Barrel 7	Mitchell	M-09-112_37	M-09-112	200.5	201.5	1.3	151	1.3	9.8	39	14.7	16.2	0.47	4.17	<0.01	6.95	3.22	2.45	0.05	3.43	0.28	53.65	0.04	0.39	8.56	99.87
Barrel 7	Mitchell	M-09-112_38	M-09-112	204.5	205.5	1.6	169	1.1	12.4	37	11.9	16.97	0.48	3.39	<0.01	7.4	4.55	2.59	0.05	1.78	0.31	54.17	0.04	0.48	7.15	99.36
Barrel 7	Mitchell	M-09-112_39	M-09-112	208.5	209.5	1.8	172	1.4	15.2	55	12	16.76	0.35	3.87	<0.01	6.37	4.02	2.88	0.06	2.47	0.331	53.85	0.03	0.53	6.85	98.36
Barrel 7	Mitchell	M-09-112_40	M-09-112	212.5	213.5	1.7	172	1.9	14.6	69	11.5	16.16	0.35	4.35	<0.01	6.63	3.9	2.74	0.06	2.43	0.314	51.86	0.04	0.49	9.23	98.55
Barrel 7	Mitchell	M-09-112_41	M-09-112	216.5	217.5	1.7	165	1.6	13.8	61	12.8	15.72	0.42	4.35	<0.01	7.15	2.97	2.74	0.07	3.53	0.306	53.01	0.04	0.47	8.36	99.14
Barrel 7	Mitchell	M-09-112_42	M-09-112	220.5	221.5	1.6	164	1.8	13.4	79	12.9	15.6	0.4	3.87	<0.01	8.78	3.58	2.43	0.06	2.63	0.302	52.27	0.03	0.48	9.33	99.76
Barrel 7	Mitchell	M-09-112_43	M-09-112	224.5	225.5	1.6	150	2.3	13.3	56	12	14.25	0.6	6.14	<0.01	9.18	4.63	2.14	0.07	0.53	0.273	49.84	0.05	0.42	10.35	98.48
Barrel 7	Mitchell	M-09-112_44	M-09-112	228.5	229.5	1.6	159	2	14.3	56	13.1	15.72	0.57	6.96	<0.01	6.48	5.15	2.82	0.1	0.2	0.306	52.12	0.05	0.47	7.74	98.69
Barrel 7	Mitchell	M-09-112_45	M-09-112	232.5	233.5	1.7	164	1.8	13.2	52	15.6	16.06	0.55	6.01	<0.01	5.29	3.42	2.75	0.07	3.01	0.32	52.86	0.05	0.52	7.55	98.45
Barrel 7	Mitchell	M-09-112_46	M-09-112	236.5	237.5	1.8	176	1.9	13.1	54	18.1	16.84	0.51	4.4	<0.01	6.85	5.52	3.1	0.07	0.25	0.33	52.5	0.03	0.49	8.19	99.08
Barrel 7	Mitchell	M-09-112_47	M-09-112	240.5	241.5	1.2	122	1.6	10.9	46	12.1	12.99	0.39	5.12	<0.01	5.35	4.36	1.99	0.08	0.26	0.247	60.5	0.02	0.38	8.19	99.88
Barrel 7	Mitchell	M-09-112_48	M-09-112	244.5	245.5	1.5	174	1.8	12.8	53	17.1	15.93	0.27	5.01	<0.01	6.44	5.21	2.78	0.11	0.18	0.319	55.05	0.02	0.48	7.87	99.67
Barrel 8	Mitchell	M-09-101_1	M-09-101	223.5	224.5	4.5	156	7	13	62	26.3	16.63	0.52	3.71	<0.01	5.05	7.39	1.47	0.16	1.61	0.263	56.2	0.02	0.33	6.42	99.77
Barrel 8	Mitchell	M-09-101_2	M-09-101	227.5	228.5	1.6	187	3.8	15.3	47	24.1	14.45	0.18	5.35	0.01	2.78	5.11	1.07	0.19	3.25	0.12	61.92	0.02	0.52	5.02	99.99
Barrel 8	Mitchell	M-09-101_3	M-09-101	231.5	232.5	5.8	169	8.2	12.7	6420	42	15.9	0.26	3.52	0.01	4.4	6.63	0.98	0.12	3.77	0.194	58.74	0.02	0.63	4.43	99.61
Barrel 8	Mitchell	M-09-101_4	M-09-101	235.5	236.5	6.6	193	6.6	24.8	174	41.1	15.39	0.17	3.3	0.01	11.51	3.12	3.96	0.28	3.82	0.299	50.54	0.02	0.57	6.69	99.68
Barrel 8	Mitchell	M-09-101_5	M-09-101	239.5	240.5	8.6	133	4.8	16.9	53	25	14.74	0.16	4.63	0.01	3.84	4.35	1.08	0.23	4.33	0.128	61.27	0.03	0.53	4.45	99.78
Barrel 8	Mitchell	M-09-101_6	M-09-101	243.5	244.5	2.6	174	7.2	18.3	44	30.4	14.49	0.11	6.01	0.01	3.85	4.17	1.1	0.24	4.23	0.131	59.01	0.03	0.64	4.3	98.32
Barrel 8	Mitchell	M-09-101_7	M-09-101	247.5	248.5	2.5	162	5.2	14	58	27.9	14.06	0.13	3.58	<0.01	4.16	4.57	1.43	0.17	3.79	0.095	62.68	0.02	0.38	4.71	99.78
Barrel 8	Mitchell	M-09-105_1	M-09-105	132.5	133.5	4.9	71	2.1	2.4	31	98.8	16.02	0.28	2.49	<0.01	1.35	6.67	0.25	0.09	4.18	0.025	66	0.03	0.08	2.35	99.82
Barrel 8	Mitchell	M-09-105_2	M-09-105	136.5	137.5	6.4	76	2.7	2.4	96	104	16.64	0.32	1.23	<0.01	1.45	6.93	0.25	0.04	4.43	0.026	66.53	0.03	0.09	1.87	99.83
Barrel 8	Mitchell	M-09-105_3	M-09-105	140.5	141.5	6.3	70	1.9	2.8	56	94.2	16.68	0.44	1.14	<0.01	1.53	8.44	0.49	0.05	2.36	0.025	65.69	0.03	0.09	2.09	99.04
Barrel 8	Mitchell	M-09-105_4	M-09-105	144.5	145.5	9.6	92	2.1	4.4	36	98.4	16.83	0.4	1.42	<0.01	1.48	8.71	0.51	0.05	2.02	0.038	65.75	0.03	0.1	2.42	99.75
Barrel 8	Mitchell	M-09-105_5	M-09-105	148.5	149.5	2.7	265	8.1	8.1	43	31.5	15.88	0.42	4.57	<0.01	3.12	6.8	0.91	0.16	3.63	0.23	59.94	0.03	0.35	2.93	98.98
Barrel 8	Mitchell	M-09-105_6	M-09-105	152.5	153.5	8	208	9.2	2.5	21	78.6	16.18	0.4	1.23	<0.01	1.98	7.22	0.42	0.05	3.73	0.058	65.5	0.02	0.12	2.18	99.09
Barrel 8	Mitchell	M-09-105_7	M-09-105	156.5	157.5	3.3	485	7.5	8.6	137	37.9	15.11	0.39	4.18	<0.01	3.68	6.39	1.24	0.16	3.21	0.198	59.83	0.03	0.35	3.82	98.59
Barrel 8	Mitchell	M-09-105_8	M-09-105	160.5	161.5	4.7	507	5.4	10.4	110	40.1	13.75	0.3	5.44	<0.01	4.58	6.07	1.98	0.32	1.66	0.194	58.38	0.03	0.34	5.47	98.5
Barrel 8	Mitchell	M-09-105_9	M-09-105	164.5	165.5	9	251	9.1	2	19	74.7	14.73	0.21	3.28	<0.01	3.72	9.59	0.69	0.15	0.46	0.051	61.42	0.02	0.1	3.71	98.14
Barrel 8	Mitchell	M-09-105_10	M-09-105	168.5	169.5	11.3	182	5.2	2	21	97.5	15.87	0.2	1.85	<0.01	1.89	10.8	0.62	0.1	0.54	0.024	64.29	0.02	0.09	2.56	98.86
Barrel 8	Mitchell	M-09-105_11	M-09-105	172.5	173.5	11.5	130	6.7	3.1	18	86.6	16.04	0.11	1.61	<0.01	2.25	8.02	1.02	0.09	1.33	0.024	66.02	0.02	0.1	3.22	99.86
Barrel 8	Mitchell	M-09-105_12	M-09-105	176.5	177.5	6.5	195	6.4	1.8	14	97.4	15.98	0.12	3.13	<0.01	1.8	7.81	0.59	0.13	2.18	0.023	64.55	0.02	0.09	3.42	99.84
Barrel 8	Mitchell	M-09-105_13	M-09-105	180.5	181.5	8.6	302	13.6	2.4	30	75.3	14.18	0.13	4.3	<0.01	4.14	9.49	0.68	0.18	0.78	0.028	61.25	0.02	0.11	2.92	98.21
Barrel 8	Mitchell	M-09-105_14	M-09-105	184.5	185.5	5.8	329	4.6	4.7	55	64.9	14.53	0.16	4.82	<0.01	2.84	5.46	1.22	0.27	3.71	0.085	62.29	0.03	0.26	4.22	99.9
Barrel 8	Mitchell	M-09-110_1	M-09-110	6.5	7.5	3.4	201	2.3	1.4	21	18.1	17.75	0.17	0.87	<0.01	1	8.24	0.16	0.03	4.63	0.031	64.69	0.04	0.09	1.1	98.81
Barrel 8	Mitchell	M-09-110_2	M-09-110	10.5	11.5	2.2	1080	4	9.9	196	35.2	13.14	0.29	2.75	0.02	7.39	5.24	3.43	0.14	3.58	0.393	59.12	0.02	0.63	2.55	98.7
Barrel 8	Mitchell	M-09-110_3	M-09-110	14.5	15.5	1.6	510	3	1.7	33	17.8	14.75	0.05	0.56	<0.01	1.22	9.74	0.41	0.04	1.99	0.071	70.01	0.02	0.12	0.89	99.86
Barrel 8	Mitchell	M-09-110_4	M-09-110	16.5	17.5	2	775	9.9	6.3	63	23.1	14.25	0.15	2.46	0.02	3.9	7.62	2.11	0.12	2.52	0.27	63.01	0.03	0.45	3.04	99.94
Barrel 8	Mitchell	M-09-110_5	M-09-110	22.5	23.5	4.1	502	4.6	7.8	65	52.2	15.6	0.14	1.62	0.01	3.72	5.85	1.87	0.1	4.38	0.268	63.5	0.02	0.44	2.34	99.85
Barrel 8	Mitchell	M-09-110_6	M-09-110	26.5	27.5	2.9	652	4	11.1	133	37.5	14.79	0.34	3.21	0.02	4.83	6.28	3.07	0.17	2.72	0.306	59.64	0.03	0.44	3.92	99.75
Barrel 8	Mitchell	M-09-110_7	M-09-110	30.5	31.5	3.1	435	4.7	16.6	62	34.7	14.97	0.21	2.78	0.01	6.08	5.83	2.39	0.08	4.01	0.368	59.38	0.02	0.59	2.95	99.66
Barrel 8	Mitchell	M-09-110_8	M-09-110	34.5	35.5	2.6	345	4.2	12.6	114	33.1	14.87	0.21	1.4	0.01	3.16	6.6	1.41	0.08	3.57	0.266	65.84	0.02	0.51	1.81	99.76
Barrel 8	Mitchell	M-09-110_9	M-09-110	38.5	39.5	4	686	4.1	10.2	91	32	13.58	0.38	3.27	0.01	4.6	7.24	1.96	0.11	2.23	0.195	62.5	0.04	0.48	3.18	99.78
Barrel 8	Mitchell	M-09-110_10	M-09-110	42.5	43.5	3.5	226	4.4	10	40	32	13.92	0.55	2.44	0.01	1.55	6.12	0.87	0.07	3.64	0.177	67.41	0.03	0.51	2.44	99.74
Barrel 8	Mitchell	M-09-110_11	M-09-110	46.5	47.5	3.8	525	5.9	16.2	74	39.6	14.73	0.16	3.01	0.02	4.14	5.39	1.84	0.13	4.11	0.285	61.71	0.02	0.58	3.72	99.85

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Interval	Rock Code	Lithology	Alteration 1	Alt_1_ Intensity	Alt_1_ Intensity_ Old	Alt_2_Code	Alt_2_ Intensity	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	21012 ABA Model Code	PFS Waste/Ore
Barrel 8	Mitchell	M-09-110_12	M-09-110	50.5	51.5	1.0	NM VOLC	PMON	SIH	4	HEM			ABOVE MTF			M-09-110_12	H41791	UP Hazelton	ORE
Barrel 8	Mitchell	M-09-110_13	M-09-110	54.5	55.5	1.0	NM VOLC	PMON	SIH	4	HEM			ABOVE MTF			M-09-110_13	H41793	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_14	M-09-110	58.5	59.5	1.0	NM VOLC	PMON	SIH	4	HEM			ABOVE MTF			M-09-110_14	H41795	UP Hazelton	ORE
Barrel 8	Mitchell	M-09-110_15	M-09-110	62.5	63.5	1.0	NM VOLC	PMON	SIH	4	HEM			ABOVE MTF			M-09-110_15	H41797	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_16	M-09-110	68.5	69.5	1.0	NM VOLC	PMON	SIH/SIH	4/5	HEM/None			ABOVE MTF			M-09-110_16	H41800	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_17	M-09-110	72.5	73.5	1.0	NM VOLC	PMON	SIH	5	None			ABOVE MTF			M-09-110_17	H41803	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_18	M-09-110	76.5	77.5	1.0	NM VOLC	PMON	SIH	5	None			ABOVE MTF			M-09-110_18	H41805	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_19	M-09-110	80.5	81.5	1.0	NM VOLC	PMON	SIH	5	None			ABOVE MTF			M-09-110_19	H41807	UP Hazelton	MARGINAL
Barrel 8	Mitchell	M-09-110_20	M-09-110	84.5	85.5	1.0	NM VOLC	PMON	SIH	5	None			ABOVE MTF			M-09-110_20	H41810	UP Hazelton	MARGINAL
Barrel 8	Mitchell	M-09-110_21	M-09-110	88.5	89.5	1.0	NM VOLC	PMON	SIH	5	None			ABOVE MTF			M-09-110_21	H41812	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_22	M-09-110	92.5	93.5	1.0	NM VOLC	PMON	SIH	5	None			ABOVE MTF			M-09-110_22	H41814	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_23	M-09-110	98.5	99.5	1.0	HORN/PROP	FLTZ/VU	SI/SI	2/2	IARG/QSP			BELOW MTF			M-09-110_23	H41818	UP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_25	M-09-110	114.5	115.5	1.0	QSP	VU	SI	2	QSP			BELOW MTF			M-09-110_25	H41827	LP Hazelton	MARGINAL
Barrel 8	Mitchell	M-09-110_26	M-09-110	117.5	118.5	1.0	QSP	VU	SI	2	QSP			BELOW MTF			M-09-110_26	H41829	LP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_27	M-09-110	122.5	123.5	1.0	QSP	VU	SI	2	QSP			BELOW MTF			M-09-110_27	H41831	LP Hazelton	ORE
Barrel 8	Mitchell	M-09-110_28	M-09-110	126.5	127.5	1.0	QSP	VU	SI	2	QSP			BELOW MTF			M-09-110_28	H41833	LP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_29	M-09-110	130.5	131.5	1.0	IARG	VU	SI	2	QSP			BELOW MTF			M-09-110_29	H41835	LP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_30	M-09-110	134.5	135.5	1.0	IARG	VU	SI	2	QSP			BELOW MTF			M-09-110_30	H41837	LP Hazelton	WASTE
Barrel 8	Mitchell	M-09-110_31	M-09-110	138.5	139.5	1.0	IARG	VU	SI	2	QSP			BELOW MTF			M-09-110_31	H41839	LP Hazelton	ORE
Barrel 9	Kerr	K-09-01_99	K-09-01	36.5	37.5	1.0		VU	QSP	3	IARG						K-09-01_99	K-09-01_99	KERR	0
Barrel 9	Kerr	K-09-01_7	K-09-01	52.5	53.5	1.0		VU	IARG	3	CL						K-09-01_7	K-09-01_7	KERR	0
Barrel 9	Kerr	K-09-01_8	K-09-01	56.5	57.5	1.0		VU	IARG	3	CL						K-09-01_8	K-09-01_8	KERR	0
Barrel 9	Kerr	K-09-01_9	K-09-01	60.5	61.5	1.0		VU	IARG	3	CL						K-09-01_9	K-09-01_9	KERR	0
Barrel 9	Kerr	K-09-01_10	K-09-01	64.5	65.5	1.0		VU	IARG	3	CL						K-09-01_10	K-09-01_10	KERR	0
Barrel 9	Kerr	K-09-01_11	K-09-01	68.5	69.5	1.0		VU	IARG	3	CL						K-09-01_11	K-09-01_11	KERR	0
Barrel 9	Kerr	K-09-01_12	K-09-01	72.5	73.5	1.0		VU	IARG	3	CL						K-09-01_12	K-09-01_12	KERR	0
Barrel 9	Kerr	K-09-01_13	K-09-01	76.5	77.5	1.0		VU	IARG	3	CL						K-09-01_13	K-09-01_13	KERR	0
Barrel 9	Kerr	K-09-01_14	K-09-01	80.5	81.5	1.0		VU	IARG	3	CL						K-09-01_14	K-09-01_14	KERR	0
Barrel 9	Kerr	K-09-01_15	K-09-01	84.5	85.5	1.0		VU	IARG	3	CL						K-09-01_15	K-09-01_15	KERR	0
Barrel 9	Kerr	K-09-01_16	K-09-01	88.5	89.5	1.0		VU	IARG	3	CL						K-09-01_16	K-09-01_16	KERR	0
Barrel 9	Kerr	K-09-01_17	K-09-01	92.5	93.5	1.0		VU	IARG	3	CL						K-09-01_17	K-09-01_17	KERR	0
Barrel 9	Kerr	K-09-01_18	K-09-01	96.5	97.5	1.0		VU	IARG	3	CL						K-09-01_18	K-09-01_18	KERR	0
Barrel 9	Kerr	K-09-01_19	K-09-01	102.5	103.5	1.0		VU	IARG	3	CL						K-09-01_19	K-09-01_19	KERR	0
Barrel 9	Kerr	K-09-01_20	K-09-01	106.5	107.5	1.0		VU	IARG	3	CL						K-09-01_20	K-09-01_20	KERR	0
Barrel 9	Kerr	K-09-01_21	K-09-01	110.5	111.5	1.0		VU	IARG	3	CL						K-09-01_21	K-09-01_21	KERR	0
Barrel 9	Kerr	K-09-01_22	K-09-01	114.5	115.5	1.0		VU	IARG	3	CL						K-09-01_22	K-09-01_22	KERR	0
Barrel 9	Kerr	K-09-01_23	K-09-01	118.5	119.5	1.0		VU	IARG	3	CL						K-09-01_23	K-09-01_23	KERR	0
Barrel 9	Kerr	K-09-01_24	K-09-01	122.5	123.5	1.0		VU	IARG	3	CL						K-09-01_24	K-09-01_24	KERR	0
Barrel 9	Kerr	K-09-01_25	K-09-01	126.5	127.5	1.0		VU	IARG	3	CL						K-09-01_25	K-09-01_25	KERR	0
Barrel 9	Kerr	K-09-01_26	K-09-01	130.5	131.5	1.0		VU	IARG	3	CL						K-09-01_26	K-09-01_26	KERR	0
Barrel 9	Kerr	K-09-01_27	K-09-01	134.5	135.5	1.0		VU	IARG	3	CL						K-09-01_27	K-09-01_27	KERR	0
Barrel 9	Kerr	K-09-01_28	K-09-01	138.5	139.5	1.0		VU	IARG	3	CL						K-09-01_28	K-09-01_28	KERR	0
Barrel 9	Kerr	K-09-01_29	K-09-01	142.5	143.5	1.0		VU	IARG	3	CL						K-09-01_29	K-09-01_29	KERR	0
Barrel 9	Kerr	K-09-01_30	K-09-01	146.5	147.5	1.0		VU	IARG	3	CL						K-09-01_30	K-09-01_30	KERR	0
Barrel 9	Kerr	K-09-01_31	K-09-01	152.5	153.5	1.0		VU	IARG	3	CL						K-09-01_31	K-09-01_31	KERR	0
Barrel 9	Kerr	K-09-01_32	K-09-01	156.5	157.5	1.0		VU	IARG	3	CL						K-09-01_32	K-09-01_32	KERR	0
Barrel 9	Kerr	K-09-01_33	K-09-01	160.5	161.5	1.0		VU	IARG	3	PR						K-09-01_33	K-09-01_33	KERR	0
Barrel 9	Kerr	K-09-01_34	K-09-01	164.5	165.5	1.0		VU	IARG	3	PR						K-09-01_34	K-09-01_34	KERR	0
Barrel 9	Kerr	K-09-01_35	K-09-01	168.5	169.5	1.0		VU	IARG	3	PR						K-09-01_35	K-09-01_35	KERR	0
Barrel 9	Kerr	K-09-01_36	K-09-01	172.5	173.5	1.0		VU	IARG	3	None						K-09-01_36	K-09-01_36	KERR	0
Barrel 9	Kerr	K-09-01_37	K-09-01	176.5	177.5	1.0		SSLT	IARG	2	None						K-09-01_37	K-09-01_37	KERR	0
Barrel 9	Kerr	K-09-01_38	K-09-01	180.5	181.5	1.0		SSLT	IARG	2	None						K-09-01_38	K-09-01_38	KERR	0
Barrel 9	Kerr	K-09-01_39	K-09-01	184.5	185.5	1.0		SSLT	IARG	2	None						K-09-01_39	K-09-01_39	KERR	0
Barrel 9	Kerr	K-09-02_1	K-09-02	28.5	29.5	1.0		VU	IARG	3	QSP						K-09-02_1	K-09-02_1	KERR	0
Barrel 9	Kerr	K-09-02_2	K-09-02	32.5	33.5	1.0		VU	IARG	3	QSP						K-09-02_2	K-09-02_2	KERR	0
Barrel 9	Kerr	K-09-02_3	K-09-02	36.5	37.5	1.0		VU	IARG	3	QSP						K-09-02_3	K-09-02_3	KERR	0
Barrel 9	Kerr	K-09-02_4	K-09-02	40.5	41.5	1.0		VU	IARG	3	QSP						K-09-02_4	K-09-02_4	KERR	0
Barrel 9	Kerr	K-09-02_5	K-09-02	42.5	43.5	1.0		VU	IARG	3	QSP						K-09-02_5	K-09-02_5	KERR	0
Barrel 9	Kerr	K-09-02_6	K-09-02	46.5	47.5	1.0		VU	IARG	3	QSP						K-09-02_6	K-09-02_6	KERR	0
Barrel 9	Kerr	K-09-02_8_B	K-09-02	66.5	67.5	1.0		VU	IARG	4	QSP						K-09-02_8_B	K-09-02_8_B	KERR	0
Barrel 9	Kerr	K-09-02_8_A	K-09-02	66.5	67.5	1.0		VU	IARG	4	QSP						K-09-02_8_A	K-09-02_8_A	KERR	0
Barrel 9	Kerr	K-09-02_9	K-09-02	71.5	72.5	1.0		VU	IARG	4	QSP						K-09-02_9	K-09-02_9	KERR	0
Barrel 9	Kerr	K-09-02_10	K-09-02	74.5	75.5	1.0		VU	IARG	4	QSP						K-09-02_10	K-09-02_10	KERR	0
Barrel 9	Kerr	K-09-02_11	K-09-02	78.5	79.5	1.0		VU	IARG	4	QSP						K-09-02_11	K-09-02_11	KERR	0

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	PFS Pit In/Out	PFS Litho	PFS Alt	Sample Matrix	SampleType	udf_LabID	Weight Received (kg)	Lab Certificate Number	Collect Date/ Time	Paste pH	Rinse pH	S_Total (%)	S_Sulphide (%)	S_S2_ CALC (%)	S_S2_S_ DEL CALC (%)	S_SO4_ NA2CO3 (%)	S_SO4_ HCL (%)	S_BASO4 (%)
Barrel 8	Mitchell	M-09-110_12	M-09-110	50.5	51.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex	1.9	VA09124617		9.8	9.5	1.54	1.32	1.52	1.500	0.02	0.02	0.0198
Barrel 8	Mitchell	M-09-110_13	M-09-110	54.5	55.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex		VA09116244		9.3	9.3	2.32	2.10	2.30	2.273	0.02	0.02	0.0268
Barrel 8	Mitchell	M-09-110_14	M-09-110	58.5	59.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex		VA09116244		9.1	9.1	2.52	2.19	2.51	2.492	0.03	0.005	0.0177
Barrel 8	Mitchell	M-09-110_15	M-09-110	62.5	63.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex		VA09116244		9.4	9.4	3.16	2.84	3.15	3.140	0.03	0.005	0.0096
Barrel 8	Mitchell	M-09-110_16	M-09-110	68.5	69.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex		VA09116244		9.5	9.1	2.42	2.20	2.41	2.386	0.04	0.01	0.0245
Barrel 8	Mitchell	M-09-110_17	M-09-110	72.5	73.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex		VA09116244		9.5	9.4	1.55	1.37	1.52	1.479	0.04	0.03	0.0408
Barrel 8	Mitchell	M-09-110_18	M-09-110	76.5	77.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex		VA09116244		9.5	9.4	1.06	1.03	1.05	1.030	0.03	0.01	0.0343
Barrel 8	Mitchell	M-09-110_19	M-09-110	80.5	81.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex		VA09116244		9.4	9.4	1.77	1.57	1.74	1.706	0.03	0.03	0.0336
Barrel 8	Mitchell	M-09-110_20	M-09-110	84.5	85.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex		VA09116244		9.4	9.3	1.52	1.41	1.51	1.480	0.03	0.01	0.0301
Barrel 8	Mitchell	M-09-110_21	M-09-110	88.5	89.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex		VA09116244		9.2	9.2	1.85	1.67	1.84	1.813	0.04	0.01	0.0266
Barrel 8	Mitchell	M-09-110_22	M-09-110	92.5	93.5	IN PIT	PMON	SIH	Rock	Drillcore	ALS Chemex		VA09116244		9.2	9.2	2.78	2.51	2.74	2.733	0.04	0.04	0.0072
Barrel 8	Mitchell	M-09-110_23	M-09-110	98.5	99.5	IN PIT	FLTZ	SI	Rock	Drillcore	ALS Chemex		VA09116244		8.9	8.8	2.78	2.60	2.77	2.761	0.05	0.01	0.0093
Barrel 8	Mitchell	M-09-110_25	M-09-110	114.5	115.5	IN PIT	VU	SI	Rock	Drillcore	ALS Chemex		VA09116244		8.9	8.9	4.97	4.49	4.82	4.818	0.13	0.15	0.0021
Barrel 8	Mitchell	M-09-110_26	M-09-110	117.5	118.5	IN PIT	VU	SI	Rock	Drillcore	ALS Chemex		VA09116244		8.4	8.4	6.06	5.31	6.03	6.029	0.07	0.03	0.0014
Barrel 8	Mitchell	M-09-110_27	M-09-110	122.5	123.5	IN PIT	VU	SI	Rock	Drillcore	ALS Chemex		VA09116244		8.8	8.8	4.35	4.10	4.30	4.297	0.04	0.05	0.0028
Barrel 8	Mitchell	M-09-110_28	M-09-110	126.5	127.5	IN PIT	VU	SI	Rock	Drillcore	ALS Chemex		VA09116244		9.2	9.0	4.38	4.29	4.37	4.368	0.04	0.01	0.0023
Barrel 8	Mitchell	M-09-110_29	M-09-110	130.5	131.5	IN PIT	VU	SI	Rock	Drillcore	ALS Chemex		VA09116244		8.7	8.8	6.15	5.28	6.11	6.109	0.11	0.04	0.0012
Barrel 8	Mitchell	M-09-110_30	M-09-110	134.5	135.5	IN PIT	VU	SI	Rock	Drillcore	ALS Chemex		VA09116244		8.8	8.9	4.90	4.28	4.88	4.878	0.12	0.02	0.0019
Barrel 8	Mitchell	M-09-110_31	M-09-110	138.5	139.5	IN PIT	VU	SI	Rock	Drillcore	ALS Chemex		VA09116244		8.4	8.7	5.96	5.17	5.95	5.948	0.05	0.01	0.0016
Barrel 9	Kerr	K-09-01_99	K-09-01	36.5	37.5	0	0	0	Rock	Drillcore	ALS Chemex	1.14	VA09116126		5.1	5.1	1.14	0.72	1.13	1.099	0.37	0.005	0.0306
Barrel 9	Kerr	K-09-01_7	K-09-01	52.5	53.5	0	0	0	Rock	Drillcore	ALS Chemex	3.2	VA09116126		6.5	6.8	2.11	1.83	2.10	2.077	0.03	0.01	0.0231
Barrel 9	Kerr	K-09-01_8	K-09-01	56.5	57.5	0	0	0	Rock	Drillcore	ALS Chemex	3.4	VA09116126		7.3	7.2	3.25	3.23	3.23	3.230	0.05	0.02	0.0056
Barrel 9	Kerr	K-09-01_9	K-09-01	60.5	61.5	0	0	0	Rock	Drillcore	ALS Chemex	3.06	VA09116126		6.7	6.6	2.65	2.39	2.63	2.614	0.05	0.02	0.0159
Barrel 9	Kerr	K-09-01_10	K-09-01	64.5	65.5	0	0	0	Rock	Drillcore	ALS Chemex	3.08	VA09116126		6.4	6.4	2.50	2.38	2.46	2.443	0.03	0.04	0.0166
Barrel 9	Kerr	K-09-01_11	K-09-01	68.5	69.5	0	0	0	Rock	Drillcore	ALS Chemex	2.82	VA09116126		7.6	7.6	2.40	2.02	2.39	2.364	0.02	0.01	0.0261
Barrel 9	Kerr	K-09-01_12	K-09-01	72.5	73.5	0	0	0	Rock	Drillcore	ALS Chemex	3.04	VA09116126		7.3	7.3	2.51	2.14	2.49	2.472	0.05	0.02	0.0182
Barrel 9	Kerr	K-09-01_13	K-09-01	76.5	77.5	0	0	0	Rock	Drillcore	ALS Chemex	2.94	VA09116126		8.3	8.3	0.08	0.05	0.05	0.050	0.03	0.03	0.0626
Barrel 9	Kerr	K-09-01_14	K-09-01	80.5	81.5	0	0	0	Rock	Drillcore	ALS Chemex	2.88	VA09116126		7.1	7.0	4.73	4.31	4.72	4.716	0.04	0.01	0.0040
Barrel 9	Kerr	K-09-01_15	K-09-01	84.5	85.5	0	0	0	Rock	Drillcore	ALS Chemex	2.78	VA09116126		8.3	8.1	3.57	3.41	3.55	3.541	0.03	0.02	0.0089
Barrel 9	Kerr	K-09-01_16	K-09-01	88.5	89.5	0	0	0	Rock	Drillcore	ALS Chemex	3.44	VA09116126		7.3	7.5	1.67	1.61	1.65	1.621	0.03	0.02	0.0294
Barrel 9	Kerr	K-09-01_17	K-09-01	92.5	93.5	0	0	0	Rock	Drillcore	ALS Chemex	1.48	VA09116126		6.4	6.1	0.83	0.75	0.79	0.750	0.08	0.04	0.0478
Barrel 9	Kerr	K-09-01_18	K-09-01	96.5	97.5	0	0	0	Rock	Drillcore	ALS Chemex	3.48	VA09116126		7.7	7.7	2.05	1.98	2.02	1.993	0.04	0.03	0.0268
Barrel 9	Kerr	K-09-01_19	K-09-01	102.5	103.5	0	0	0	Rock	Drillcore	ALS Chemex	3.04	VA09116126		7.7	7.8	3.73	3.69	3.67	3.690	0.02	0.06	0.0054
Barrel 9	Kerr	K-09-01_20	K-09-01	106.5	107.5	0	0	0	Rock	Drillcore	ALS Chemex	3.54	VA09116126		7.4	7.6	4.99	4.50	4.94	4.935	0.01	0.05	0.0047
Barrel 9	Kerr	K-09-01_21	K-09-01	110.5	111.5	0	0	0	Rock	Drillcore	ALS Chemex	4.02	VA09116126		7.3	7.5	5.99	5.90	5.95	5.947	0.005	0.04	0.0028
Barrel 9	Kerr	K-09-01_22	K-09-01	114.5	115.5	0	0	0	Rock	Drillcore	ALS Chemex	3.34	VA09116126		7.9	7.9	3.14	3.12	3.12	3.120	0.005	0.02	0.0117
Barrel 9	Kerr	K-09-01_23	K-09-01	118.5	119.5	0	0	0	Rock	Drillcore	ALS Chemex	3.26	VA09116126		7.3	7.4	5.84	5.15	5.79	5.787	0.05	0.05	0.0035
Barrel 9	Kerr	K-09-01_24	K-09-01	122.5	123.5	0	0	0	Rock	Drillcore	ALS Chemex	3.18	VA09116126		8.2	8.1	4.32	3.98	4.15	4.144	0.01	0.17	0.0056
Barrel 9	Kerr	K-09-01_25	K-09-01	126.5	127.5	0	0	0	Rock	Drillcore	ALS Chemex	3.98	VA09116126		7.2	7.2	5.48	5.36	5.39	5.385	0.05	0.09	0.0049
Barrel 9	Kerr	K-09-01_26	K-09-01	130.5	131.5	0	0	0	Rock	Drillcore	ALS Chemex	3.62	VA09116126		7.1	8.2	4.85	4.66	4.78	4.776	0.04	0.07	0.0044
Barrel 9	Kerr	K-09-01_27	K-09-01	134.5	135.5	0	0	0	Rock	Drillcore	ALS Chemex	3.3	VA09116126		7.9	8.0	6.13	6.01	5.99	6.010	0.05	0.14	0.0037
Barrel 9	Kerr	K-09-01_28	K-09-01	138.5	139.5	0	0	0	Rock	Drillcore	ALS Chemex	3.1	VA09116126		8.6	8.9	1.16	1.00	1.10	1.045	0.05	0.06	0.0551
Barrel 9	Kerr	K-09-01_29	K-09-01	142.5	143.5	0	0	0	Rock	Drillcore	ALS Chemex	3.42	VA09116126		7.8	7.7	4.76	4.34	4.74	4.731	0.06	0.02	0.0089
Barrel 9	Kerr	K-09-01_30	K-09-01	146.5	147.5	0	0	0	Rock	Drillcore	ALS Chemex	3.34	VA09116126		8.0	7.8	4.99	4.64	4.98	4.974	0.03	0.01	0.0065
Barrel 9	Kerr	K-09-01_31	K-09-01	152.5	153.5	0	0	0	Rock	Drillcore	ALS Chemex	3.72	VA09116126		8.4	8.5	3.23	2.85	3.11	3.104	0.11	0.12	0.0065
Barrel 9	Kerr	K-09-01_32	K-09-01	156.5	157.5	0	0	0	Rock	Drillcore	ALS Chemex	2.82	VA09116126		7.7	7.7	2.14	1.92	2.11	2.071	0.01	0.03	0.0392
Barrel 9	Kerr	K-09-01_33	K-09-01	160.5	161.5	0	0	0	Rock	Drillcore	ALS Chemex	3.14	VA09116126		8.3	8.5	1.00	0.88	0.86	0.880	0.08	0.14	0.0950
Barrel 9	Kerr	K-09-01_34	K-09-01	164.5	165.5	0	0	0	Rock	Drillcore	ALS Chemex	3.22	VA09116126		7.7	7.7	4.34	4.05	4.27	4.266	0.05	0.07	0.0040
Barrel 9	Kerr	K-09-01_35	K-09-01	168.5	169.5	0	0	0	Rock	Drillcore	ALS Chemex	1.58	VA09116126		7.9	7.8	3.23	2.82	3.18	3.171	0.03	0.05	0.0089
Barrel 9	Kerr	K-09-01_36	K-09-01	172.5	173.5	0	0	0	Rock	Drillcore	ALS Chemex	2.9	VA09116126		7.8	7.9	4.55	4.32	4.50	4.496	0.01	0.05	0.0040
Barrel 9	Kerr	K-09-01_37	K-09-01	176.5	177.5	0	0	0	Rock	Drillcore	ALS Chemex	3.62	VA09116126		8.0	8.0	5.40	5.21	5.39	5.386	0.01	0.01	0.0037
Barrel 9	Kerr	K-09-01_38	K-09-01	180.5	181.5	0	0	0	Rock	Drillcore	ALS Chemex	3.68	VA09116126		7.7	7.7	6.22	6.24	6.20	6.240	0.005	0.02	0.0019
Barrel 9	Kerr	K-09-01_39	K-09-01	184.5	185.5	0	0	0	Rock	Drillcore	ALS Chemex	4.24	VA09116126		8.2	8.1	5.32	5.37	5.30	5.370	0.03	0.02	0.0040
Barrel 9	Kerr	K-09-02_1	K-09-02	28.5	29.5	0	0	0	Rock	Drillcore	ALS Chemex	3.66	VA09116127		5.7	6.2	8.33	7.91	8.28	8.278	0.06	0.05	0.0023
Barrel 9	Kerr	K-09-02_2	K-09-02	32.5	33.5	0	0	0	Rock	Drillcore	ALS Chemex	3.24	VA09116127		6.3	6.6	7.32	6.87	7.30	7.298	0.05	0.02	0.0019
Barrel 9	Kerr	K-09-02_3	K-09-02	36.5	37.5	0	0	0	Rock	Drillcore	ALS Chemex	3.12	VA09116127		5.9	6.4	7.86	7.49	7.78	7.777	0.07	0.08	0.0026
Barrel 9	Kerr	K-09-02_4	K-09-02	40.5	41.5	0	0	0	Rock	Drillcore	ALS Chemex	3.26	VA09116127		6.4	6.4	6.20	5.91	6.17	6.167	0.06	0.03	0.0026
Barrel 9	Kerr	K-09-02_5	K-09-02	42.5	43.5	0	0	0	Rock	Drillcore	ALS Chemex	3.86	VA09116127		5.8	6.0	8.49	7.83	8.36	8.358	0.08	0.13	0.0023
Barrel 9	Kerr	K-09-02_6	K-09-02	46.5	47.5	0	0	0	Rock	Drillcore	ALS Chemex	3.44	VA09116127		6.4	6.3	6.17	5.41	6.09	6.087	0.09	0.08	0.0026
Barrel 9	Kerr	K-09-02_8_B	K-09-02	66.5	67.5	0	0	0	Rock	Drillcore	ALS Chemex	3.34	VA09116127		5.3	5.3	10.65	10.30	10.59	10.589	0.05	0.06	0.0014
Barrel 9	Kerr	K-09-02_8_A	K-09-02	66.5	67.5	0	0	0	Rock	Drillcore	ALS Chemex	3.9	VA09116127		5.7	5.6	8.54	8.12	8.52	8.518	0.05	0.02	0.0019
Barrel 9	Kerr	K-09-02_9	K-09-02	71.5	72.5	0	0	0	Rock	Drillcore	ALS Chemex	4.48	VA09116127		6.0	5.8	7.53	6.82	7.50	7.498	0.04	0.03	0.0016
Barrel 9	Kerr	K-09-02_10	K-09-02	74.5	75.5	0	0	0	Rock	Drillcore	ALS Chemex	2.8	VA09116127		5.7	6.8	8.76	8.31	8.73	8.728	0.05	0.03	0.0016
Barrel 9	Kerr	K-09-02_11	K-09-02	78.5	79.5	0	0	0	Rock	Drillcore	ALS Chemex	3.24	VA09116127		6.1	5.8	5.43	5.08	5.42	5.417	0.02	0.01	0.0026

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	S_DEL (%)	S_DEL_CAL (%)	TAP (%)	SAP (kg $CaCO_3$ /t)	SAP (S Del Calc) (kg $CaCO_3$ /t)	NP (kg $CaCO_3$ /t)	NP_ADJ (kg $CaCO_3$ /t)	UNP	Total C (%)	Inorganic C (%)	Inorganic CO2 (%)	C_DEL_ CALC (%)	CANP_ TTL (%)	CANP_ INORG (%)	CANP_ CA (%)	CANP_ CAMG (%)	TNNP (kg $CaCO_3$ /t)
Barrel 8	Mitchell	M-09-110_12	M-09-110	50.5	51.5	0.1802	0.1802	48.12	41.25	46.88	77	62.0	15	0.84	0.77	2.8	0.070	70.0	63.7	71.9	112.0	28.9
Barrel 8	Mitchell	M-09-110_13	M-09-110	54.5	55.5	0.1732	0.1732	72.50	65.625	71.04	83	68.0	15	0.74	0.75	2.8	-0.010	61.7	63.7	72.4	108.5	10.5
Barrel 8	Mitchell	M-09-110_14	M-09-110	58.5	59.5	0.3023	0.3023	78.75	68.4375	77.88	93	78.0	15	0.93	0.92	3.4	0.010	77.5	77.3	81.7	129.1	14.3
Barrel 8	Mitchell	M-09-110_15	M-09-110	62.5	63.5	0.3004	0.3004	98.75	88.75	98.14	84	69.0	15	0.74	0.77	2.8	-0.030	61.7	63.7	72.9	120.3	-14.8
Barrel 8	Mitchell	M-09-110_16	M-09-110	68.5	69.5	0.1855	0.1855	75.62	68.75	74.55	70	55.0	15	0.51	0.45	1.7	0.060	42.5	38.7	52.9	105.7	-5.6
Barrel 8	Mitchell	M-09-110_17	M-09-110	72.5	73.5	0.1092	0.1092	48.44	42.8125	46.23	93	78.0	15	0.79	0.75	2.8	0.040	65.8	63.7	77.4	137.2	44.6
Barrel 8	Mitchell	M-09-110_18	M-09-110	76.5	77.5	-0.0143	0.0000	33.12	32.1875	32.19	75	60.0	15	0.56	0.60	2.2	-0.040	46.7	50.0	61.2	109.1	41.9
Barrel 8	Mitchell	M-09-110_19	M-09-110	80.5	81.5	0.1364	0.1364	55.31	49.0625	53.33	79	64.0	15	0.67	0.62	2.3	0.050	55.8	52.3	67.2	112.0	23.7
Barrel 8	Mitchell	M-09-110_20	M-09-110	84.5	85.5	0.0699	0.0699	47.50	44.0625	46.25	95	80.0	15	0.89	0.90	3.3	-0.010	74.2	75.1	83.9	146.3	47.5
Barrel 8	Mitchell	M-09-110_21	M-09-110	88.5	89.5	0.1434	0.1434	57.81	52.1875	56.67	72	57.0	15	0.54	0.59	2.2	-0.050	45.0	50.0	54.4	108.2	14.2
Barrel 8	Mitchell	M-09-110_22	M-09-110	92.5	93.5	0.2228	0.2228	86.88	78.4375	85.40	78	63.0	15	0.61	0.60	2.2	0.010	50.8	50.0	66.2	104.8	-8.9
Barrel 8	Mitchell	M-09-110_23	M-09-110	98.5	99.5	0.1607	0.1607	86.88	81.25	86.27	113	98.0	15	1.36	1.25	4.6	0.110	113.3	105.0	80.9	125.1	26.1
Barrel 8	Mitchell	M-09-110_25	M-09-110	114.5	115.5	0.3279	0.3279	155.30	140.3125	150.56	89	74.0	15	1.03	0.98	3.6	0.050	85.8	81.9	57.9	101.4	-66.3
Barrel 8	Mitchell	M-09-110_26	M-09-110	117.5	118.5	0.7186	0.7186	189.40	165.9375	188.39	34	19.0	15	0.33	0.35	1.3	-0.020	27.5	29.6	33.5	61.9	-155.4
Barrel 8	Mitchell	M-09-110_27	M-09-110	122.5	123.5	0.1972	0.1972	135.90	128.125	134.29	83	68.0	15	1.01	1.04	3.8	-0.030	84.2	86.4	70.9	109.1	-52.9
Barrel 8	Mitchell	M-09-110_28	M-09-110	126.5	127.5	0.0777	0.0777	136.90	134.0625	136.49	73	58.0	15	0.77	0.78	2.9	-0.010	64.2	66.0	44.7	80.8	-63.9
Barrel 8	Mitchell	M-09-110_29	M-09-110	130.5	131.5	0.8288	0.8288	192.20	165	190.90	33	18.0	15	0.30	0.34	1.3	-0.040	25.0	29.6	22.2	52.4	-159.2
Barrel 8	Mitchell	M-09-110_30	M-09-110	134.5	135.5	0.5981	0.5981	153.00	133.75	152.44	70	55.0	15	0.84	0.83	3.1	0.010	70.0	70.5	50.4	93.1	-83.1
Barrel 8	Mitchell	M-09-110_31	M-09-110	138.5	139.5	0.7784	0.7784	186.20	161.5625	185.89	21	6.0	15	0.16	0.18	0.7	-0.020	13.3	15.9	20.5	45.8	-165.2
Barrel 9	Kerr	K-09-01_99	K-09-01	36.5	37.5	0.3794	0.3794	35.62	22.5	34.36	-1	0.0	-1	0.02	0.03	0.1	-0.030	1.7	4.6	0.2	16.3	-36.6
Barrel 9	Kerr	K-09-01_7	K-09-01	52.5	53.5	0.2469	0.2469	65.94	57.1875	64.90	8	0.0	8	0.01	0.03	0.1	-0.040	0.8	4.6	5.7	45.2	-57.9
Barrel 9	Kerr	K-09-01_8	K-09-01	56.5	57.5	-0.0056	0.0000	101.60	100.9375	100.94	13	0.0	13	0.05	0.06	0.2	-0.010	4.2	4.6	10.2	63.3	-88.6
Barrel 9	Kerr	K-09-01_9	K-09-01	60.5	61.5	0.2241	0.2241	82.81	74.6875	81.69	9	0.0	9	0.01	0.03	0.1	-0.040	0.8	4.6	6.5	54.1	-73.8
Barrel 9	Kerr	K-09-01_10	K-09-01	64.5	65.5	0.0634	0.0634	78.10	74.375	76.36	8	0.0	8	0.01	0.03	0.1	-0.040	0.8	4.6	6.0	58.4	-70.1
Barrel 9	Kerr	K-09-01_11	K-09-01	68.5	69.5	0.3439	0.3439	75.00	63.125	73.87	15		15	0.17	0.07	0.3	0.100	14.2	6.8	13.5	65.9	-60.0
Barrel 9	Kerr	K-09-01_12	K-09-01	72.5	73.5	0.3318	0.3318	78.44	66.875	77.24	11	0.0	11	0.03	0.05	0.2	-0.020	2.5	4.6	7.5	49.3	-67.4
Barrel 9	Kerr	K-09-01_13	K-09-01	76.5	77.5	-0.0626	0.0000	2.50	1.5625	1.56	14	0.0	14	0.05	0.08	0.3	-0.030	4.2	6.8	9.2	58.1	11.5
Barrel 9	Kerr	K-09-01_14	K-09-01	80.5	81.5	0.4060	0.4060	147.80	134.6875	147.38	12	0.0	12	0.03	0.05	0.2	-0.020	2.5	4.6	9.0	46.4	-135.8
Barrel 9	Kerr	K-09-01_15	K-09-01	84.5	85.5	0.1311	0.1311	111.60	106.5625	110.66	40	25.0	15	0.39	0.39	1.4	0.000	32.5	31.8	39.0	81.3	-71.6
Barrel 9	Kerr	K-09-01_16	K-09-01	88.5	89.5	0.0106	0.0106	52.19	50.3125	50.64	12	0.0	12	0.02	0.05	0.2	-0.030	1.7	4.6	7.7	49.8	-40.2
Barrel 9	Kerr	K-09-01_17	K-09-01	92.5	93.5	-0.0078	0.0000	25.94	23.4375	23.44	5	0.0	5	0.11	0.03	0.1	0.060	9.2	4.6	3.2	32.1	-20.9
Barrel 9	Kerr	K-09-01_18	K-09-01	96.5	97.5	0.0132	0.0132	64.06	61.875	62.29	30	15.0	15	0.26	0.30	1.1	-0.040	21.7	25.0	26.2	63.0	-34.1
Barrel 9	Kerr	K-09-01_19	K-09-01	102.5	103.5	-0.0254	0.0000	116.60	115.3125	115.31	32	17.0	15	0.20	0.22	0.8	-0.020	16.7	18.2	21.7	63.0	-84.6
Barrel 9	Kerr	K-09-01_20	K-09-01	106.5	107.5	0.4353	0.4353	155.90	140.625	154.23	11	0.0	11	0.06	0.06	0.2	0.000	5.0	4.6	8.5	47.0	-144.9
Barrel 9	Kerr	K-09-01_21	K-09-01	110.5	111.5	0.0472	0.0472	187.20	184.375	185.85	11	0.0	11	0.04	0.08	0.3	-0.040	3.3	6.8	10.0	38.7	-176.2
Barrel 9	Kerr	K-09-01_22	K-09-01	114.5	115.5	-0.0117	0.0000	98.12	97.5	97.50	45	30.0	15	0.50	0.51	1.9	-0.010	41.7	43.2	38.0	74.2	-53.1
Barrel 9	Kerr	K-09-01_23	K-09-01	118.5	119.5	0.6365	0.6365	182.50	160.9375	180.83	13	0.0	13	0.08	0.09	0.3	-0.010	6.7	6.8	10.5	37.2	-169.5
Barrel 9	Kerr	K-09-01_24	K-09-01	122.5	123.5	0.1644	0.1644	135.00	124.375	129.51	51	36.0	15	0.54	0.54	2.0	0.000	45.0	45.5	35.0	68.4	-84.0
Barrel 9	Kerr	K-09-01_25	K-09-01	126.5	127.5	0.0251	0.0251	171.20	167.5	168.28	11	0.0	11	0.01	0.03	0.1	-0.040	0.8	4.6	10.0	37.8	-160.2
Barrel 9	Kerr	K-09-01_26	K-09-01	130.5	131.5	0.1156	0.1156	151.60	145.625	149.24	68	53.0	15	0.78	0.74	2.7	0.040	65.0	61.4	61.9	102.8	-83.6
Barrel 9	Kerr	K-09-01_27	K-09-01	134.5	135.5	-0.0237	0.0000	191.60	187.8125	187.81	32	17.0	15	0.31	0.34	1.3	-0.030	25.8	29.6	25.5	52.4	-159.6
Barrel 9	Kerr	K-09-01_28	K-09-01	138.5	139.5	0.0449	0.0449	36.25	31.25	32.65	0	0.0	0	1.01	1.04	3.8	-0.030	84.2	86.4	82.4	138.0	-36.3
Barrel 9	Kerr	K-09-01_29	K-09-01	142.5	143.5	0.3911	0.3911	148.80	135.625	147.85	15		15	0.06	0.09	0.3	-0.030	5.0	6.8	13.0	47.3	-133.8
Barrel 9	Kerr	K-09-01_30	K-09-01	146.5	147.5	0.3335	0.3335	155.90	145	155.42	17	2.0	15	0.10	0.12	0.4	-0.020	8.3	9.1	11.5	32.6	-138.9
Barrel 9	Kerr	K-09-01_31	K-09-01	152.5	153.5	0.2535	0.2535	100.90	89.0625	96.98	59	44.0	15	0.55	0.57	2.1	-0.020	45.8	47.8	52.9	96.5	-41.9
Barrel 9	Kerr	K-09-01_32	K-09-01	156.5	157.5	0.1508	0.1508	66.88	60	64.71	13	0.0	13	0.11	0.12	0.4	-0.010	9.2	9.1	8.0	43.0	-53.9
Barrel 9	Kerr	K-09-01_33	K-09-01	160.5	161.5	-0.1150	0.0000	31.20	27.5	27.50	0	0.0	0	0.63	0.66	2.4	-0.030	52.5	54.6	53.4	103.7	-31.2
Barrel 9	Kerr	K-09-01_34	K-09-01	164.5	165.5	0.2160	0.2160	135.60	126.5625	133.31	28	13.0	15	0.23	0.26	1.0	-0.030	19.2	22.7	17.2	53.6	-107.6
Barrel 9	Kerr	K-09-01_35	K-09-01	168.5	169.5	0.3511	0.3511	100.90	88.125	99.10	14	0.0	14	0.06	0.09	0.3	-0.030	5.0	6.8	9.2	62.7	-86.9
Barrel 9	Kerr	K-09-01_36	K-09-01	172.5	173.5	0.1760	0.1760	142.20	135	140.50	44	29.0	15	0.46	0.46	1.7	0.000	38.3	38.7	27.5	67.9	-98.2
Barrel 9	Kerr	K-09-01_37	K-09-01	176.5	177.5	0.1763	0.1763	169.00	162.8125	168.32	36	21.0	15	0.37	0.39	1.4	-0.020	30.8	31.8	26.5	71.3	-133.0
Barrel 9	Kerr	K-09-01_38	K-09-01	180.5	181.5	-0.0419	0.0000	194.40	195	195.00	30	15.0	15	0.28	0.27	1.0	0.010	23.3	22.7	20.5	41.5	-164.4
Barrel 9	Kerr	K-09-01_39	K-09-01	184.5	185.5	-0.0740	0.0000	166.20	167.8125	167.81	70	55.0	15	0.80	0.76	2.8	0.040	66.7	63.7	42.7	79.9	-96.3
Barrel 9	Kerr	K-09-02_1	K-09-02	28.5	29.5	0.3677	0.3677	260.30	247.1875	258.68	7	0.0	7	0.01	0.03	0.1	-0.040	0.8	4.6	8.5	24.9	-253.3
Barrel 9	Kerr	K-09-02_2	K-09-02	32.5	33.5	0.4281	0.4281	228.80	214.6875	228.07	9	0.0	9	0.01	0.03	0.1	-0.040	0.8	4.6	8.5	20.3	-219.8
Barrel 9	Kerr	K-09-02_3	K-09-02	36.5	37.5	0.2874	0.2874	245.60	234.0625	243.04	6	0.0	6	0.01	0.03	0.1	-0.040	0.8	4.6	5.7	20.9	-239.6
Barrel 9	Kerr	K-09-02_4	K-09-02	40.5	41.5	0.2574	0.2574	194.00	184.6875	192.73	6	0.0	6	0.01	0.03	0.1	-0.040	0.8	4.6	6.5	24.6	-188.0
Barrel 9	Kerr	K-09-02_5	K-09-02	42.5	43.5	0.5277	0.5277	265.30	244.6875	261.18	6	0.0	6	0.01	0.03	0.1	-0.040	0.8	4.6	6.0	22.9	-259.3
Barrel 9	Kerr	K-09-02_6	K-09-02	46.5	47.5	0.6774	0.6774	192.80	169.0625	190.23	6	0.0	6	0.01	0.03	0.1	-0.040	0.8	4.6	7.0	23.8	-186.8
Barrel 9	Kerr	K-09-02_8_B	K-09-02	66.5	67.5	0.2886	0.2886	332.81	321.875	330.89	7	0.0	7	0.01	0.03	0.1	-0.040	0.8	4.6	7.2	18.3	-325.8
Barrel 9	Kerr	K-09-02_8_A	K-09-02	66.5	67.5	0.3981	0.3981	266.90	253.75	266.19	8	0.0	8	0.01	0.03	0.1	-0.040	0.8	4.6	9.2	19.5	-258.9
Barrel 9	Kerr	K-09-02_9	K-09-02	71.5	72.5	0.6784	0.6784	235.30	213.125	234.33	10	0.0	10	0.01	0.03	0.1	-0.040	0.8	4.6	8.5	23.8	-225.3
Barrel 9	Kerr	K-09-02_10	K-09-02	74.5	75.5	0.4184	0.4184	273.80	259.6875	272.76	7	0.0	7	0.01	0.03	0.1	-0.040	0.8	4.6	7.7	18.3	-266.8
Barrel 9	Kerr	K-09-02_11	K-09-02	78.5	79.5	0.3374	0.3374	169.70	158.75	169.29	9	0.0	9	0.01	0.03	0.1	-0.040	0.8	4.6	9.2	17.2	-160.7

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	TNNP_ADJ (kg $CaCO_3$ /t)	SNNP (kg $CaCO_3$ /t)	SNNP_ADJ (kg $CaCO_3$ /t)	ICNNP (kg $CaCO_3$ /t)	TNPR	TNPR_ ADJ	SNPR	SNPR (S DEL CALC)	SNPR for graphs	SNPR_ADJ for graphs	ICNPR	Fizz Rating	Fizz Check	Ag (ppm)	Al (ppm)	Al (%)	As (ppm)	Ba (ppm)
Barrel 8	Mitchell	M-09-110_12	M-09-110	50.5	51.5	13.9	30.12	15.1	15.6	28.9	13.9	1.87	1.64	1.87	1.50	1.32	2	Disagree	1.63	66500	6.65	10.4	850
Barrel 8	Mitchell	M-09-110_13	M-09-110	54.5	55.5	-4.5	11.96	-3.0	-8.8	10.5	-4.5	1.26	1.17	1.26	1.04	0.88	3	Disagree	1.24	75100	7.51	14.8	1150
Barrel 8	Mitchell	M-09-110_14	M-09-110	58.5	59.5	-0.8	15.12	0.1	-1.4	14.3	-0.8	1.36	1.19	1.36	1.14	0.98	3	Disagree	2.13	67800	6.78	8.8	760
Barrel 8	Mitchell	M-09-110_15	M-09-110	62.5	63.5	-29.8	-14.14	-29.1	-35.1	-14.8	-29.8	0.95	0.86	0.95	0.78	0.64	3	Disagree	2.3	74400	7.44	19.1	410
Barrel 8	Mitchell	M-09-110_16	M-09-110	68.5	69.5	-20.6	-4.55	-19.6	-37.0	-5.6	-20.6	1.02	0.94	1.02	0.80	0.51	3	Disagree	1.02	74500	7.45	11.8	1050
Barrel 8	Mitchell	M-09-110_17	M-09-110	72.5	73.5	29.6	46.78	31.8	15.2	44.6	29.6	2.17	2.01	2.17	1.82	1.32	3	Disagree	1.22	75300	7.53	12.6	1750
Barrel 8	Mitchell	M-09-110_18	M-09-110	76.5	77.5	26.9	42.81	27.8	16.9	41.9	26.9	2.33	2.33	2.33	1.86	1.51	3	Disagree	1.62	78200	7.82	5.5	1470
Barrel 8	Mitchell	M-09-110_19	M-09-110	80.5	81.5	8.7	25.68	10.7	-3.0	23.7	8.7	1.61	1.48	1.61	1.30	0.95	3	Disagree	1.55	76200	7.62	9.9	1440
Barrel 8	Mitchell	M-09-110_20	M-09-110	84.5	85.5	32.5	48.75	33.8	27.6	47.5	32.5	2.16	2.05	2.16	1.82	1.58	3	Disagree	1.23	75600	7.56	40.8	1290
Barrel 8	Mitchell	M-09-110_21	M-09-110	88.5	89.5	-0.8	15.33	0.3	-7.8	14.2	-0.8	1.38	1.27	1.38	1.09	0.87	3	Disagree	1.73	78400	7.84	35	1140
Barrel 8	Mitchell	M-09-110_22	M-09-110	92.5	93.5	-23.9	-7.40	-22.4	-36.8	-8.9	-23.9	0.99	0.91	0.99	0.80	0.58	3	Disagree	2.19	71200	7.12	21.7	310
Barrel 8	Mitchell	M-09-110_23	M-09-110	98.5	99.5	11.1	26.73	11.7	17.7	26.1	11.1	1.39	1.31	1.39	1.21	1.20	3	Disagree	0.58	84600	8.46	11.9	400
Barrel 8	Mitchell	M-09-110_25	M-09-110	114.5	115.5	-81.3	-61.56	-76.6	-73.4	-66.3	-81.3	0.63	0.59	0.63	0.53	0.53	3	Disagree	0.95	79400	7.94	26.4	90
Barrel 8	Mitchell	M-09-110_26	M-09-110	117.5	118.5	-170.4	-154.39	-169.4	-159.8	-155.4	-170.4	0.20	0.18	0.20	0.11	0.16	2	Disagree	0.52	83800	8.38	121	60
Barrel 8	Mitchell	M-09-110_27	M-09-110	122.5	123.5	-67.9	-51.29	-66.3	-49.5	-52.9	-67.9	0.65	0.62	0.65	0.53	0.64	2	Disagree	0.41	74600	7.46	24.2	120
Barrel 8	Mitchell	M-09-110_28	M-09-110	126.5	127.5	-78.9	-63.49	-78.5	-70.9	-63.9	-78.9	0.54	0.53	0.54	0.43	0.48	2	Disagree	0.31	78300	7.83	19.2	100
Barrel 8	Mitchell	M-09-110_29	M-09-110	130.5	131.5	-174.2	-157.90	-172.9	-162.6	-159.2	-174.2	0.20	0.17	0.20	0.11	0.15	2	Disagree	0.63	82400	8.24	42.6	50
Barrel 8	Mitchell	M-09-110_30	M-09-110	134.5	135.5	-98.1	-82.44	-97.4	-82.6	-83.1	-98.1	0.52	0.46	0.52	0.41	0.46	2	Disagree	0.3	75800	7.58	16.3	80
Barrel 8	Mitchell	M-09-110_31	M-09-110	138.5	139.5	-180.2	-164.89	-179.9	-170.3	-165.2	-180.2	0.13	0.11	0.13	0.04	0.09	2	Disagree	1.67	81800	8.18	49.3	70
Barrel 9	Kerr	K-09-01_99	K-09-01	36.5	37.5	-51.6	-35.36	-50.4	-31.1	-36.6	-51.6	-0.04	-0.03	0.00	0.00	0.13	1	Disagree	0.71	65400	6.54	114.5	1310
Barrel 9	Kerr	K-09-01_7	K-09-01	52.5	53.5	-72.9	-56.90	-71.9	-61.4	-57.9	-72.9	0.14	0.12	0.14	0.00	0.07	1	Disagree	1.04	80500	8.05	16.4	990
Barrel 9	Kerr	K-09-01_8	K-09-01	56.5	57.5	-103.6	-87.94	-102.9	-97.0	-88.6	-103.6	0.13	0.13	0.13	0.00	0.04	1	Disagree	0.53	76100	7.61	13.8	240
Barrel 9	Kerr	K-09-01_9	K-09-01	60.5	61.5	-88.8	-72.69	-87.7	-78.3	-73.8	-88.8	0.12	0.11	0.12	0.00	0.05	1	Disagree	0.5	82300	8.23	24.3	680
Barrel 9	Kerr	K-09-01_10	K-09-01	64.5	65.5	-85.1	-68.36	-83.4	-73.6	-70.1	-85.1	0.11	0.10	0.11	0.00	0.06	1	Disagree	0.37	83100	8.31	11.6	710
Barrel 9	Kerr	K-09-01_11	K-09-01	68.5	69.5	-75.0	-58.87	-73.9	-68.2	-60.0	-75.0	0.24	0.20	0.24		0.09	1	Disagree	0.37	77500	7.75	12.8	1120
Barrel 9	Kerr	K-09-01_12	K-09-01	72.5	73.5	-82.4	-66.24	-81.2	-73.9	-67.4	-82.4	0.16	0.14	0.16	0.00	0.06	1	Disagree	0.77	76200	7.62	11.2	780
Barrel 9	Kerr	K-09-01_13	K-09-01	76.5	77.5	-3.5	12.44	-2.6	4.3	11.5	-3.5	8.96	8.96	8.96	0.00	2.73	1	Disagree	0.1	76300	7.63	5.4	2680
Barrel 9	Kerr	K-09-01_14	K-09-01	80.5	81.5	-150.8	-135.38	-150.4	-143.3	-135.8	-150.8	0.09	0.08	0.09	0.00	0.03	1	Disagree	0.54	78900	7.89	10.1	170
Barrel 9	Kerr	K-09-01_15	K-09-01	84.5	85.5	-86.6	-70.66	-85.7	-79.7	-71.6	-86.6	0.38	0.36	0.38	0.23	0.29	2	Disagree	0.76	80700	8.07	11.8	380
Barrel 9	Kerr	K-09-01_16	K-09-01	88.5	89.5	-55.2	-38.64	-53.6	-47.6	-40.2	-55.2	0.24	0.24	0.24	0.00	0.09	1	Disagree	0.47	80400	8.04	8.6	1260
Barrel 9	Kerr	K-09-01_17	K-09-01	92.5	93.5	-35.9	-18.44	-33.4	-21.4	-20.9	-35.9	0.21	0.21	0.21	0.00	0.18	1	Disagree	0.98	82300	8.23	25.9	2050
Barrel 9	Kerr	K-09-01_18	K-09-01	96.5	97.5	-49.1	-32.29	-47.3	-39.1	-34.1	-49.1	0.48	0.48	0.48	0.24	0.39	1	Disagree	0.4	77000	7.7	19.4	1150
Barrel 9	Kerr	K-09-01_19	K-09-01	102.5	103.5	-99.6	-83.31	-98.3	-98.4	-84.6	-99.6	0.28	0.28	0.28	0.15	0.16	2	Disagree	0.33	73400	7.34	17.6	230
Barrel 9	Kerr	K-09-01_20	K-09-01	106.5	107.5	-159.9	-143.23	-158.2	-151.4	-144.9	-159.9	0.08	0.07	0.08	0.00	0.03	1	Disagree	1.26	84000	8.4	35.2	200
Barrel 9	Kerr	K-09-01_21	K-09-01	110.5	111.5	-191.2	-174.85	-189.8	-180.4	-176.2	-191.2	0.06	0.06	0.06	0.00	0.04	1	Disagree	0.71	78500	7.85	17.6	120
Barrel 9	Kerr	K-09-01_22	K-09-01	114.5	115.5	-68.1	-52.50	-67.5	-54.9	-53.1	-68.1	0.46	0.46	0.46	0.31	0.44	2	Disagree	0.57	80700	8.07	18.2	500
Barrel 9	Kerr	K-09-01_23	K-09-01	118.5	119.5	-184.5	-167.83	-182.8	-175.7	-169.5	-184.5	0.08	0.07	0.08	0.00	0.04	1	Disagree	0.76	78700	7.87	24.1	150
Barrel 9	Kerr	K-09-01_24	K-09-01	122.5	123.5	-99.0	-78.51	-93.5	-89.5	-84.0	-99.0	0.41	0.39	0.41	0.29	0.34	2	Disagree	3.07	81700	8.17	107.5	240
Barrel 9	Kerr	K-09-01_25	K-09-01	126.5	127.5	-175.2	-157.28	-172.3	-166.7	-160.2	-175.2	0.07	0.07	0.07	0.00	0.03	1	Disagree	1.04	92300	9.23	28.1	210
Barrel 9	Kerr	K-09-01_26	K-09-01	130.5	131.5	-98.6	-81.24	-96.2	-90.2	-83.6	-98.6	0.47	0.46	0.47	0.36	0.41	2	Disagree	0.53	75700	7.57	14.6	190
Barrel 9	Kerr	K-09-01_27	K-09-01	134.5	135.5	-174.6	-155.81	-170.8	-162.0	-159.6	-174.6	0.17	0.17	0.17	0.09	0.15	2	Disagree	0.59	76600	7.66	18.5	160
Barrel 9	Kerr	K-09-01_28	K-09-01	138.5	139.5	-51.3	-32.65	-47.7	50.2	-36.3	-51.3	0.00	0.00	0.00	0.00	2.38	3	Disagree	0.09	74800	7.48	13.1	2360
Barrel 9	Kerr	K-09-01_29	K-09-01	142.5	143.5	-148.8	-132.85	-147.8	-141.9	-133.8	-148.8	0.11	0.10	0.11		0.05	1	Disagree	0.5	91500	9.15	14.4	380
Barrel 9	Kerr	K-09-01_30	K-09-01	146.5	147.5	-153.9	-138.42	-153.4	-146.8	-138.9	-153.9	0.12	0.11	0.12	0.01	0.06	1	Disagree	0.58	80100	8.01	8.8	280
Barrel 9	Kerr	K-09-01_31	K-09-01	152.5	153.5	-56.9	-37.98	-53.0	-53.2	-41.9	-56.9	0.66	0.61	0.66	0.49	0.47	2	Disagree	0.51	73600	7.36	4.5	280
Barrel 9	Kerr	K-09-01_32	K-09-01	156.5	157.5	-68.9	-51.71	-66.7	-57.8	-53.9	-68.9	0.22	0.20	0.22	0.00	0.14	1	Disagree	0.78	78200	7.82	35.7	1680
Barrel 9	Kerr	K-09-01_33	K-09-01	160.5	161.5	-46.2	-27.50	-42.5	23.3	-31.2	-46.2	0.00	0.00	0.00	0.00	1.75	3	Disagree	0.25	81200	8.12	8	4070
Barrel 9	Kerr	K-09-01_34	K-09-01	164.5	165.5	-122.6	-105.31	-120.3	-112.9	-107.6	-122.6	0.22	0.21	0.22	0.10	0.17	2	Disagree	0.78	80000	8	12.4	170
Barrel 9	Kerr	K-09-01_35	K-09-01	168.5	169.5	-101.9	-85.10	-100.1	-94.1	-86.9	-101.9	0.16	0.14	0.16	0.00	0.07	1	Disagree	0.28	78500	7.85	4.4	380
Barrel 9	Kerr	K-09-01_36	K-09-01	172.5	173.5	-113.2	-96.50	-111.5	-103.5	-98.2	-113.2	0.33	0.31	0.33	0.21	0.27	2	Disagree	0.42	79400	7.94	6.2	170
Barrel 9	Kerr	K-09-01_37	K-09-01	176.5	177.5	-148.0	-132.32	-147.3	-137.0	-133.0	-148.0	0.22	0.21	0.22	0.13	0.19	2	Disagree	0.44	80900	8.09	12.4	160
Barrel 9	Kerr	K-09-01_38	K-09-01	180.5	181.5	-179.4	-165.00	-180.0	-171.6	-164.4	-179.4	0.15	0.15	0.15	0.08	0.12	2	Disagree	2.58	74400	7.44	17	80
Barrel 9	Kerr	K-09-01_39	K-09-01	184.5	185.5	-111.2	-97.81	-112.8	-102.6	-96.3	-111.2	0.42	0.42	0.42	0.33	0.38	2	Disagree	2.04	75200	7.52	27.3	170
Barrel 9	Kerr	K-09-02_1	K-09-02	28.5	29.5	-268.3	-251.68	-266.7	-255.8	-253.3	-268.3	0.03	0.03	0.03	0.00	0.02	1	Disagree	0.61	77100	7.71	83.8	100
Barrel 9	Kerr	K-09-02_2	K-09-02	32.5	33.5	-234.8	-219.07	-234.1	-224.2	-219.8	-234.8	0.04	0.04	0.04	0.00	0.02	1	Disagree	1.35	79500	7.95	452	80
Barrel 9	Kerr	K-09-02_3	K-09-02	36.5	37.5	-254.6	-237.04	-252.0	-241.1	-239.6	-254.6	0.03	0.02	0.03	0.00	0.02	1	Disagree	0.4	73000	7.3	82.7	110
Barrel 9	Kerr	K-09-02_4	K-09-02	40.5	41.5	-203.0	-186.73	-201.7	-189.0	-188.0	-203.0	0.03	0.03	0.03	0.00	0.02	1	Disagree	0.76	78800	7.88	193.5	110
Barrel 9	Kerr	K-09-02_5	K-09-02	42.5	43.5	-274.3	-255.18	-270.2	-260.8	-259.3	-274.3	0.02	0.02	0.02	0.00	0.02	1	Disagree	0.69	72600	7.26	315	100
Barrel 9	Kerr	K-09-02_6	K-09-02	46.5	47.5	-201.8	-184.23	-199.2	-188.3	-186.8	-201.8	0.04	0.03	0.04	0.00	0.02	1	Disagree	0.83	78000	7.8	452	110
Barrel 9	Kerr	K-09-02_8_B	K-09-02	66.5	67.5	-340.8	-323.89	-338.9	-328.3	-325.8	-340.8	0.02	0.02	0.02	0.00	0.01	1	Disagree	0.41	76300	7.63	128	60
Barrel 9	Kerr	K-09-02_8_A	K-09-02	66.5	67.5	-273.9	-258.19	-273.2	-262.3	-258.9	-273.9	0.03	0.03	0.03	0.00	0.02	1	Disagree	5.47	76000	7.6	1475	80
Barrel 9	Kerr	K-09-02_9	K-09-02	71.5	72.5	-240.3	-224.33	-239.3	-230.8	-225.3	-240.3	0.05	0.04	0.05	0.00	0.02	1	Disagree	0.6	77400	7.74	190.5	70
Barrel 9	Kerr	K-09-02_10	K-09-02	74.5	75.5	-281.8	-265.76	-280.8	-269.2	-266.8	-281.8	0.03	0.03	0.03	0.00	0.02	1	Disagree	0.37	83300	8.33	40.1	70
Barrel 9	Kerr	K-09-02_11	K-09-02	78.5	79.5	-175.7	-160.29	-175.3	-165.1	-160.7	-175.7	0.06	0.05	0.06	0.00	0.03	1	Disagree	0.57	76700	7.67	19.1	110

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Be (ppm)	Bi (ppm)	Ca (ppm)	Ca (%)	Cd (ppm)	Ce (ppm)	Co (ppm)	Cr (ppm)	Cs (ppm)	Cu (ppm)	Fe (ppm)	Fe (%)	Ga (ppm)	Ge (ppm)	Hf (ppm)	Hg (ppm)	In (ppm)	K (ppm)	K (%)	La (ppm)	Li (ppm)	Mg (ppm)	Mg (%)
Barrel 8	Mitchell	M-09-110_12	M-09-110	50.5	51.5	1.84	1.59	28800	2.88	0.11	17.95	11.4	50	3.52	421	24300	2.43	15.9	0.12	1.2	0.01	0.053	33200	3.32	8.8	45.6	10300	1.03
Barrel 8	Mitchell	M-09-110_13	M-09-110	54.5	55.5	2.5	1.27	29000	2.9	0.2	24.8	12.7	55	3.42	648	29100	2.91	18.85	0.14	1.3	0.02	0.05	42600	4.26	14.1	32.4	8900	0.89
Barrel 8	Mitchell	M-09-110_14	M-09-110	58.5	59.5	2.39	0.8	32700	3.27	0.25	23.6	11	45	3.52	1570	38000	3.8	16.8	0.17	1.1	0.03	0.062	39100	3.91	14.6	33.5	12400	1.24
Barrel 8	Mitchell	M-09-110_15	M-09-110	62.5	63.5	2.42	2.36	29200	2.92	0.72	18.65	18.9	25	5.68	1130	40300	4.03	16.3	0.18	1.1	0.02	0.068	41100	4.11	10.3	49.6	12800	1.28
Barrel 8	Mitchell	M-09-110_16	M-09-110	68.5	69.5	1.69	0.49	21200	2.12	0.12	22.4	13.7	61	6.27	570	34800	3.48	16.75	0.16	1.2	0.02	0.035	43000	4.3	12.5	42.8	15700	1.57
Barrel 8	Mitchell	M-09-110_17	M-09-110	72.5	73.5	2.17	0.43	31000	3.1	0.12	19.05	15.8	49	6.86	853	34300	3.43	17.4	0.15	0.9	0.02	0.036	42100	4.21	11.3	47.7	16900	1.69
Barrel 8	Mitchell	M-09-110_18	M-09-110	76.5	77.5	1.44	0.43	24500	2.45	0.15	29.5	16.8	96	4.68	1340	23400	2.34	19.5	0.14	1.1	0.03	0.036	29200	2.92	16.8	42.5	13600	1.36
Barrel 8	Mitchell	M-09-110_19	M-09-110	80.5	81.5	2	0.44	26900	2.69	0.17	26.2	12.4	38	6.09	959	29400	2.94	16.8	0.14	0.9	0.02	0.047	42300	4.23	15.8	31.1	12200	1.22
Barrel 8	Mitchell	M-09-110_20	M-09-110	84.5	85.5	1.83	0.33	33600	3.36	0.19	30	15.7	96	6.81	701	31400	3.14	19.15	0.17	1.4	0.02	0.052	40000	4	17.5	45.5	17500	1.75
Barrel 8	Mitchell	M-09-110_21	M-09-110	88.5	89.5	2.01	0.39	21800	2.18	0.2	27.2	15.7	81	6.9	1160	31700	3.17	17.9	0.16	1.1	0.02	0.045	41100	4.11	15.5	42.6	16000	1.6
Barrel 8	Mitchell	M-09-110_22	M-09-110	92.5	93.5	1.32	2.75	26500	2.65	0.43	24	10.6	5	4.92	1010	39100	3.91	16.8	0.18	1.1	0.04	0.037	41400	4.14	15.8	34.6	10100	1.01
Barrel 8	Mitchell	M-09-110_23	M-09-110	98.5	99.5	1.45	1.5	32400	3.24	0.09	24.5	13.5	5	3.52	114	43300	4.33	18.95	0.18	0.9	0.01	0.101	44500	4.45	14.7	15.4	11300	1.13
Barrel 8	Mitchell	M-09-110_25	M-09-110	114.5	115.5	1.67	1.7	23200	2.32	8.72	24.2	10.6	4	3.63	82.8	47800	4.78	17.7	0.2	0.9	0.18	0.255	38800	3.88	14.2	13.6	12200	1.22
Barrel 8	Mitchell	M-09-110_26	M-09-110	117.5	118.5	1.24	1.1	13400	1.34	0.23	20.1	29.1	4	4.9	44	54300	5.43	19.6	0.21	0.8	0.04	0.02	38200	3.82	9.4	11	8200	0.82
Barrel 8	Mitchell	M-09-110_27	M-09-110	122.5	123.5	1.13	0.9	28400	2.84	0.16	19.6	8.2	4	4.37	131.5	40300	4.03	17.55	0.2	0.8	0.04	0.062	40700	4.07	9.5	11.2	9700	0.97
Barrel 8	Mitchell	M-09-110_28	M-09-110	126.5	127.5	0.82	0.59	17900	1.79	0.14	17.75	9	5	2.44	89.2	44300	4.43	17.95	0.18	0.7	0.02	0.066	33200	3.32	8.5	7.1	10300	1.03
Barrel 8	Mitchell	M-09-110_29	M-09-110	130.5	131.5	1.29	0.67	8900	0.89	1.3	21.6	13.7	5	3.47	105	53500	5.35	20	0.19	0.8	0.04	0.038	39100	3.91	9.5	8.3	9400	0.94
Barrel 8	Mitchell	M-09-110_30	M-09-110	134.5	135.5	1.11	0.39	20200	2.02	0.24	17.7	11.7	4	4.58	158	46600	4.66	17.3	0.2	0.7	0.02	0.026	38600	3.86	8.5	9.6	12300	1.23
Barrel 8	Mitchell	M-09-110_31	M-09-110	138.5	139.5	1.35	0.33	8200	0.82	0.46	21.1	14.8	5	3.62	93.1	52600	5.26	18	0.21	0.7	0.09	0.027	39600	3.96	9.8	8.3	7800	0.78
Barrel 9	Kerr	K-09-01_99	K-09-01	36.5	37.5	0.75	0.15	100.0	0.01	0.08	16.2	4.6	46	3.51	577	157500	15.75	12.85	0.37	0.3	0.11	0.089	33600	3.36	10.5	2.6	5600	0.56
Barrel 9	Kerr	K-09-01_7	K-09-01	52.5	53.5	0.88	0.1	2300	0.23	0.13	20.4	15.7	22	4.37	1410	50200	5.02	15.95	0.18	1	0.02	0.038	40700	4.07	11	8.9	13500	1.35
Barrel 9	Kerr	K-09-01_8	K-09-01	56.5	57.5	0.8	0.08	4100	0.41	0.26	17.25	25.8	25	3.4	1360	65200	6.52	16.3	0.21	1	0.02	0.053	35000	3.5	8.8	12.9	18000	1.8
Barrel 9	Kerr	K-09-01_9	K-09-01	60.5	61.5	1.01	0.31	2600	0.26	1.21	13.8	21.4	12	4.72	630	56800	5.68	19.85	0.21	0.8	0.06	0.1	39000	3.9	7	17.8	16300	1.63
Barrel 9	Kerr	K-09-01_10	K-09-01	64.5	65.5	0.83	0.2	2400	0.24	0.06	14.85	15.4	18	4.34	778	55800	5.58	17.05	0.18	0.8	<0.1	0.081	40100	4.01	7.5	12	18000	1.8
Barrel 9	Kerr	K-09-01_11	K-09-01	68.5	69.5	0.84	0.17	5400	0.54	0.19	11.85	15.3	10	4.15	1160	44700	4.47	16.3	0.16	0.8	0.01	0.105	40500	4.05	5.3	14.4	17600	1.76
Barrel 9	Kerr	K-09-01_12	K-09-01	72.5	73.5	0.89	0.06	3000	0.3	0.27	13.75	28.3	32	4.51	3200	53500	5.35	18.8	0.17	0.7	0.04	0.062	37700	3.77	6.4	10.8	14200	1.42
Barrel 9	Kerr	K-09-01_13	K-09-01	76.5	77.5	0.77	0.02	3700	0.37	0.24	17.05	21.2	20	2.26	661	48200	4.82	18	0.14	1.5	0.01	0.042	21800	2.18	8.8	16.2	16600	1.66
Barrel 9	Kerr	K-09-01_14	K-09-01	80.5	81.5	0.96	0.3	3600	0.36	0.2	12.3	16.5	12	4.7	1400	58900	5.89	16.9	0.2	0.9	0.05	0.07	41800	4.18	5.6	9	12600	1.26
Barrel 9	Kerr	K-09-01_15	K-09-01	84.5	85.5	0.8	0.09	15600	1.56	0.21	13.7	25.9	24	5.04	3190	52300	5.23	18.15	0.22	0.6	0.02	0.063	42300	4.23	6.4	10.2	12800	1.28
Barrel 9	Kerr	K-09-01_16	K-09-01	88.5	89.5	0.8	0.12	3100	0.31	0.27	15.45	10.2	13	4.07	1710	40500	4.05	18.35	0.15	1.1	0.03	0.039	39300	3.93	8.5	11.2	14300	1.43
Barrel 9	Kerr	K-09-01_17	K-09-01	92.5	93.5	0.9	0.17	1300	0.13	0.07	20	27.5	14	5.29	847	59100	5.91	18.75	0.2	1.1	0.19	0.084	36200	3.62	10.8	7.2	9900	0.99
Barrel 9	Kerr	K-09-01_18	K-09-01	96.5	97.5	0.73	0.08	10500	1.05	0.16	16.7	15.7	14	3.9	1080	38800	3.88	14.35	0.17	0.7	0.05	0.029	40700	4.07	9.1	7.8	11500	1.15
Barrel 9	Kerr	K-09-01_19	K-09-01	102.5	103.5	0.92	0.12	8700	0.87	0.98	13	47.3	20	3.27	1920	72100	7.21	16.8	0.25	0.5	0.04	0.036	34600	3.46	5.5	14.1	13300	1.33
Barrel 9	Kerr	K-09-01_20	K-09-01	106.5	107.5	1.19	0.23	3400	0.34	1.04	15.4	40.6	24	4.28	2590	69900	6.99	21.4	0.3	0.7	0.18	0.157	41200	4.12	6.5	14.9	13000	1.3
Barrel 9	Kerr	K-09-01_21	K-09-01	110.5	111.5	0.84	0.17	4000	0.4	0.32	13.05	29.9	37	3.6	1080	66700	6.67	18.2	0.26	0.5	0.06	0.054	41000	4.1	5.4	8.6	9500	0.95
Barrel 9	Kerr	K-09-01_22	K-09-01	114.5	115.5	1.01	0.08	15200	1.52	0.22	12	20.3	11	5.28	1150	46500	4.65	18.15	0.16	1	0.05	0.034	42400	4.24	5.5	10.9	10700	1.07
Barrel 9	Kerr	K-09-01_23	K-09-01	118.5	119.5	0.84	0.21	4200	0.42	0.33	14.55	26.4	24	3.64	1600	54900	5.49	17.15	0.23	0.7	0.18	0.064	41900	4.19	6.7	7.7	8800	0.88
Barrel 9	Kerr	K-09-01_24	K-09-01	122.5	123.5	0.95	0.23	14000	1.4	2.36	15.2	15.6	12	4.3	873	42600	4.26	16.55	0.19	0.8	1.42	0.072	44100	4.41	7.7	5.2	9900	0.99
Barrel 9	Kerr	K-09-01_25	K-09-01	126.5	127.5	1	0.23	4000	0.4	0.35	17.95	34.3	28	3.88	3580	59500	5.95	21.5	0.25	0.6	0.12	0.069	44500	4.45	8.3	10.3	9200	0.92
Barrel 9	Kerr	K-09-01_26	K-09-01	130.5	131.5	0.84	0.15	24800	2.48	0.11	17.15	19	10	3.07	1360	51100	5.11	16.05	0.23	0.7	0.05	0.047	38500	3.85	8.3	10.1	11100	1.11
Barrel 9	Kerr	K-09-01_27	K-09-01	134.5	135.5	0.85	0.39	10200	1.02	1.04	18.25	21.3	7	3.82	572	62100	6.21	18.65	0.27	1.1	0.19	0.129	39200	3.92	9.3	6.4	8100	0.81
Barrel 9	Kerr	K-09-01_28	K-09-01	138.5	139.5	0.8	0.1	33000	3.3	0.21	16.25	18.4	11	2.72	156	50300	5.03	17.3	0.17	0.5	0.02	0.083	24800	2.48	7.3	19.7	15200	1.52
Barrel 9	Kerr	K-09-01_29	K-09-01	142.5	143.5	1.21	0.29	5200	0.52	0.1	18.8	19.2	12	5.01	784	54300	5.43	20.9	0.19	0.8	0.02	0.153	43500	4.35	9.3	12	11300	1.13
Barrel 9	Kerr	K-09-01_30	K-09-01	146.5	147.5	1.01	0.27	4600	0.46	0.19	14.35	16.3	9	3.55	720	51000	5.1	20.9	0.2	0.7	0.02	0.056	38000	3.8	7.2	6	6800	0.68
Barrel 9	Kerr	K-09-01_31	K-09-01	152.5	153.5	0.74	0.11	21200	2.12	0.25	12.6	15.1	8	3.58	639	47100	4.71	18.45	0.19	0.7	0.01	0.03	35500	3.55	5.8	14.2	12500	1.25
Barrel 9	Kerr	K-09-01_32	K-09-01	156.5	157.5	1.02	0.15	3200	0.32	1.63	25.2	17.4	9	4.5	884	46500	4.65	19.55	0.18	1.5	0.01	0.028	37900	3.79	15	15.9	11800	1.18
Barrel 9	Kerr	K-09-01_33	K-09-01	160.5	161.5	0.94	0.11	21400	2.14	1.23	16.2	20.4	10	2.8	416	50700	5.07	19.9	0.17	1.1	0.01	0.111	25200	2.52	7.6	18	14800	1.48
Barrel 9	Kerr	K-09-01_34	K-09-01	164.5	165.5	0.85	0.18	6900	0.69	0.31	15.6	18.9	9	4.62	819	51400	5.14	17.15	0.18	0.7	0.02	0.045	38100	3.81	8.1	13.8	11800	1.18
Barrel 9	Kerr	K-09-01_35	K-09-01	168.5	169.5	0.7	0.18	3700	0.37	0.87	16.6	16.9	9	3.26	891	48100	4.81	17.95	0.16	0.8	0.01	0.029	30400	3.04	9.2	22.1	18200	1.82
Barrel 9	Kerr	K-09-01_36	K-09-01	172.5	173.5	0.8	0.2	11000	1.1	0.66	15.1	17.4	9	3.98	785	51900	5.19	18.35	0.19	0.8	0.05	0.033	39500	3.95	8	11.2	12700	1.27
Barrel 9	Kerr	K-09-01_37	K-09-01	176.5	177.5	0.76	0.95	10600	1.06	2.45	15.4	14.7	10	4.16	264	60400	6.04	17.45	0.17	0.8	0.12	0.45	35900	3.59	8.3	17.3	14300	1.43
Barrel 9	Kerr	K-09-01_38	K-09-01	180.5	181.5	0.74	1.55	8200	0.82	1.38	12.7	14.3	11	3.49	436	60700	6.07	15.4	0.2	0.8	0.08	0.336	37300	3.73	6.2	4.5	6300	0.63
Barrel 9	Kerr	K-09-01_39	K-09-01	184.5	185.5	0.7	0.77	17100	1.71	1.95	15	13.1	9	3.55	243	52000	5.2	16.75	0.19	0.7	0.21	0.322	36700	3.67	8.2	4.3	10800	1.08
Barrel 9	Kerr	K-09-02_1	K-09-02	28.5	29.5	0.68	1.54	3400	0.34	0.12	10.55	25.5	50	4.32	747	74600	7.46	16.65	0.28	0.9	1.96	0.313	33400	3.34	5.2	9.4	5300	0.53
Barrel 9	Kerr	K-09-02_2	K-09-02	32.5	33.5	0.69	3.43	3400	0.34	0.24	11.65	22.2	42	5.07	1800	62300	6.23	20.4	0.26	0.8	10.9	0.383	35900	3.59	5.4	7.1	3700	0.37
Barrel 9	Kerr	K-09-02_3	K-09-02	36.5	37.5	0.68	1.14	2300	0.23	0.08	9.89	28.5	41	3.83	609	69200	6.92	15.3	0.3	1	0.97	0.251	31300	3.13	4.8	7.9	5000	0.5
Barrel 9	Kerr	K-09-02_4	K-09-02	40.5	41.5	0.76	1.48	2600	0.26	0.14	14.75	28.5	30	4.5	1090	56000	5.6	20.4	0.25	0.7	2.01	0.264	34000	3.4	7	10.5	6000	0.6
Barrel 9	Kerr	K-09-02_5	K-09-02	42.5	43.5	0.6	1.21	2400	0.24	0.17	11.85	25.1	58	4.25	1020	74000	7.4	17.3	0.3	0.7	3.53	0.207	30600	3.06	5.3	9.5	5600	0.56
Barrel 9	Kerr	K-09-02_6	K-09-02	46.5	47.5	0.72	2.78	2800	0.28	0.15	12.4	14.2	33	4.73	1250	52800	5.28	19.9	0.26	0.9	4.63	0.234	32500	3.25	6	9.3	5500	0.55
Barrel 9	Kerr	K-09-02_8_B	K-09-02	66.5	67.5	0.3	0.46	2900	0.29	0.17	10.95	29.9	69	3.47	386	101000	10.1	15.7	0.35	0.5	0.64	0.145	31400	3.14	4.8	7.2	3500	0.35
Barrel 9	Kerr	K-09-02_8_A	K-09-02	66.5	67.5	0.37	0.49	3700	0.37	1.52	12.7	20.7	30	3.39	4500	75100	7.51	15.35	0.28	0.6	15	0.26	31500	3.15	5.8	5.1	3100	0.31
Barrel 9	Kerr	K-09-02_9	K-09-02	71.5	72.5	0.39	0.37	3400	0.34	0.21	6.15	19.5	17	3.58	569	67400	6.74	15.25	0.24	0.6	2.18	0.159	32400	3.24	3.1	10.2	4900	0.49
Barrel 9	Kerr	K-09-02_10	K-09-02	74.5	75.5	0.39	0.3	3100	0.31	0.07	15.7	18.7	16	3.99	459	79300	7.93	16.65	0.31	0.5	0.69	0.077	36600	3.66	7.8	7.3	3300	0.33
Barrel 9	Kerr	K-09-02_11	K-09-02	78.5	79.5	0.38	0.45	3700	0.37	0.06	6.48	20.8	29	4.25	838	51200	5.12	15.9	0.22	0.5	0.93	0.067	34800	3.48	2.8	5.9	2300	0.23

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Mn (ppm)	Mo (ppm)	Na (ppm)	Na (%)	Nb (ppm)	Ni (ppm)	P (%)	Pb (ppm)	Rb (ppm)	Re (ppm)	S (ppm)	S (%)	Sb (ppm)	Sc (ppm)	Se (ppm)	Sn (ppm)	Sr (ppm)	Ta (ppm)	Te (ppm)	Th (ppm)	Ti (ppm)	Ti (%)	Tl (ppm)
Barrel 8	Mitchell	M-09-110_12	M-09-110	50.5	51.5	1340	1.85	33100	3.31	7.8	28.7	0.125	96.8	100.5	0.007	14600	1.46	1.71	15.2	6	1.3	215	0.42	0.88	2.2	2880.0	0.288	0.57
Barrel 8	Mitchell	M-09-110_13	M-09-110	54.5	55.5	1640	4.85	20800	2.08	9.3	24.6	0.158	36.3	84.9	0.006	23900	2.39	3.99	16.4	5	1.2	266	0.5	0.92	2.5	3320.0	0.332	0.99
Barrel 8	Mitchell	M-09-110_14	M-09-110	58.5	59.5	1300	3.07	17800	1.78	9.1	26.2	0.122	29.4	88.1	0.008	25200	2.52	2.73	14.5	5	1.3	283	0.44	0.76	2	2820.0	0.282	0.81
Barrel 8	Mitchell	M-09-110_15	M-09-110	62.5	63.5	1280	4.28	19700	1.97	9.7	19.2	0.145	166	102	0.006	32700	3.27	3.08	16.7	10	1	277	0.55	1.67	2.1	2620.0	0.262	1.14
Barrel 8	Mitchell	M-09-110_16	M-09-110	68.5	69.5	994	2.9	27600	2.76	9.1	35.2	0.143	21.3	133.5	0.002	24000	2.4	2.33	17.3	5	1.1	231	0.5	0.9	2.2	3110.0	0.311	0.89
Barrel 8	Mitchell	M-09-110_17	M-09-110	72.5	73.5	1250	1.87	23600	2.36	8.7	27	0.147	23.2	120.5	0.007	16000	1.6	2.15	14	5	0.9	329	0.55	0.53	1.9	2850.0	0.285	0.98
Barrel 8	Mitchell	M-09-110_18	M-09-110	76.5	77.5	973	3.06	42100	4.21	9.2	49.6	0.127	10.5	94	0.005	12200	1.22	1.95	15	3	1.1	253	0.46	0.45	1.4	3190.0	0.319	0.65
Barrel 8	Mitchell	M-09-110_19	M-09-110	80.5	81.5	1140	3.36	22100	2.21	10.9	17.7	0.147	18.8	91.7	0.008	18400	1.84	2.32	17.9	3	1.3	289	0.49	0.94	1.5	2740.0	0.274	1.04
Barrel 8	Mitchell	M-09-110_20	M-09-110	84.5	85.5	1710	1.28	29200	2.92	9	50.3	0.13	15.6	127	0.003	17000	1.7	2.84	17.9	6	1.4	270	0.43	0.65	2.1	3180.0	0.318	0.95
Barrel 8	Mitchell	M-09-110_21	M-09-110	88.5	89.5	1280	3.57	16300	1.63	10.9	47	0.147	31.9	97.6	0.01	19300	1.93	3.24	18.6	7	1.2	266	0.53	0.76	1.8	3300	0.33	1.42
Barrel 8	Mitchell	M-09-110_22	M-09-110	92.5	93.5	1630	4.9	2500	0.25	15.5	3.3	0.151	161.5	85.6	0.031	28200	2.82	2.53	18.5	8	1.2	216	0.58	0.63	4.8	2590.0	0.259	2.03
Barrel 8	Mitchell	M-09-110_23	M-09-110	98.5	99.5	1260	26.3	24600	2.46	8.2	1.9	0.145	8.4	134	0.066	29600	2.96	1.68	19.2	10	1	314	0.46	0.47	3.2	2700	0.27	1.62
Barrel 8	Mitchell	M-09-110_25	M-09-110	114.5	115.5	1200	62.6	23500	2.35	7.6	1.9	0.143	80.9	125	0.222	47900	4.79	3.79	18	12	1.4	306	0.42	0.61	3.1	2340.0	0.234	1.69
Barrel 8	Mitchell	M-09-110_26	M-09-110	117.5	118.5	340	11.2	10100	1.01	6.5	2.8	0.151	22.7	120	0.014	59700	5.97	9.36	19.4	15	1.7	138	0.38	0.72	3.2	2040.0	0.204	2.35
Barrel 8	Mitchell	M-09-110_27	M-09-110	122.5	123.5	792	4.28	18200	1.82	7.1	2	0.142	9.4	117.5	0.006	42100	4.21	4.72	17.8	10	1.7	220	0.39	0.42	2.7	2290.0	0.229	2
Barrel 8	Mitchell	M-09-110_28	M-09-110	126.5	127.5	439	3.12	33700	3.37	8.2	2.6	0.145	9.3	86.7	<0.002	44700	4.47	2.2	19.8	8	1.5	250	0.45	0.28	3	2580.0	0.258	1.49
Barrel 8	Mitchell	M-09-110_29	M-09-110	130.5	131.5	233	3.57	21000	2.1	6.5	3.4	0.151	16.9	115	<0.002	57700	5.77	19.15	20	10	2.3	172.5	0.38	0.47	3.4	2170.0	0.217	2
Barrel 8	Mitchell	M-09-110_30	M-09-110	134.5	135.5	525	3.83	13100	1.31	5.5	2.2	0.139	12.5	122.5	0.003	46700	4.67	8.3	17.7	13	1.9	185	0.32	0.23	2.8	1990.0	0.199	2.28
Barrel 8	Mitchell	M-09-110_31	M-09-110	138.5	139.5	241	2.82	2600	0.26	4.5	2.9	0.144	19.1	110.5	<0.002	56700	5.67	29.3	19.1	15	2.2	62.5	0.26	0.42	3.2	1790.0	0.179	2.56
Barrel 9	Kerr	K-09-01_99	K-09-01	36.5	37.5	192	28.5	300.0	0.03	1.1	3.8	0.58	58.4	95.8	0.015	9800	0.98	16.7	21.9	13	1.1	287	0.09	1.24	1.5	850.00	0.085	1.92
Barrel 9	Kerr	K-09-01_7	K-09-01	52.5	53.5	568	10.1	3700	0.37	5	9.3	0.176	22.1	110	0.022	20200	2.02	5.82	24.5	8	1.1	48.5	0.34	0.45	2	2040.0	0.204	1.83
Barrel 9	Kerr	K-09-01_8	K-09-01	56.5	57.5	816	6.54	8800	0.88	4.4	13.4	0.188	16.4	84.6	0.01	34400	3.44	4.34	22.4	9	1.1	88.8	0.31	0.17	1.7	1860.0	0.186	1.5
Barrel 9	Kerr	K-09-01_9	K-09-01	60.5	61.5	796	10.2	6400	0.64	7.7	6.6	0.182	28.1	98.6	0.015	26100	2.61	6.64	27.3	10	1.4	41.7	0.51	0.71	1.7	2340.0	0.234	1.93
Barrel 9	Kerr	K-09-01_10	K-09-01	64.5	65.5	675	7.84	5300	0.53	7.1	7.6	0.185	15.4	88.7	0.028	26800	2.68	6.3	21.2	11	1.2	31.1	0.46	0.36	1.6	2380.0	0.238	1.84
Barrel 9	Kerr	K-09-01_11	K-09-01	68.5	69.5	596	13.25	4500	0.45	6.3	5.9	0.21	7.8	72.9	0.068	23200	2.32	6.12	21	10	1.1	36.2	0.41	0.33	1.4	1980.0	0.198	1.71
Barrel 9	Kerr	K-09-01_12	K-09-01	72.5	73.5	658	56.1	10900	1.09	5.3	12.3	0.175	12.1	81.6	0.18	24000	2.4	5.5	22	9	1.9	78.7	0.38	0.18	1.4	2690.0	0.269	1.66
Barrel 9	Kerr	K-09-01_13	K-09-01	76.5	77.5	1470	2.76	25400	2.54	5.9	10.3	0.127	6.1	56.6	<0.002	800.0	0.08	3.44	18.5	1	0.7	126	0.43	0.05	1.9	2520.0	0.252	0.93
Barrel 9	Kerr	K-09-01_14	K-09-01	80.5	81.5	496	18.85	1800	0.18	5.9	5.9	0.184	26.2	87.9	0.06	45500	4.55	6.16	24.7	11	2	34.5	0.4	0.82	1.4	2050.0	0.205	1.95
Barrel 9	Kerr	K-09-01_15	K-09-01	84.5	85.5	672	55.8	5800	0.58	5.7	14.1	0.18	8.6	84.8	0.202	37500	3.75	5.12	24.6	18	2.5	84.8	0.41	0.3	1.4	2780.0	0.278	1.86
Barrel 9	Kerr	K-09-01_16	K-09-01	88.5	89.5	767	31.9	6800	0.68	7.1	5.5	0.169	11.3	99.2	0.109	17700	1.77	4.06	22.9	6	2.4	39.6	0.48	0.28	2.1	2340.0	0.234	1.65
Barrel 9	Kerr	K-09-01_17	K-09-01	92.5	93.5	1400	29.7	800.0	0.08	6.5	5	0.16	25	102.5	0.03	8900	0.89	5.8	25.8	10	2.5	24	0.42	1.15	2.2	2320.0	0.232	2.03
Barrel 9	Kerr	K-09-01_18	K-09-01	96.5	97.5	916	25.7	2200	0.22	5.5	6.9	0.16	22.6	98.2	0.065	21200	2.12	4.35	19.1	11	1.9	54	0.37	0.36	1.8	2030.0	0.203	1.9
Barrel 9	Kerr	K-09-01_19	K-09-01	102.5	103.5	4870	17.4	500.0	0.05	3.8	16.6	0.156	18.9	76.4	0.046	37300	3.73	4.03	21.7	19	1.9	48.4	0.27	0.21	1.2	1850.0	0.185	1.62
Barrel 9	Kerr	K-09-01_20	K-09-01	106.5	107.5	741	59.3	700.0	0.07	3.2	16.9	0.174	52.1	96.8	0.172	51000	5.1	5.97	28.5	27	3.4	29.6	0.22	1.24	1.2	2570.0	0.257	2.13
Barrel 9	Kerr	K-09-01_21	K-09-01	110.5	111.5	559	11.15	700.0	0.07	2.2	19.6	0.17	23.3	99.5	0.042	60800	6.08	4.26	27.4	24	2.1	29.3	0.17	0.4	1.1	1790.0	0.179	1.94
Barrel 9	Kerr	K-09-01_22	K-09-01	114.5	115.5	3190	10.75	800.0	0.08	8.2	9.1	0.194	22.7	79.7	0.029	33900	3.39	5.3	21.4	9	1.5	41	0.54	0.27	1.6	2410.0	0.241	2.23
Barrel 9	Kerr	K-09-01_23	K-09-01	118.5	119.5	421	23.3	600.0	0.06	3.9	13.4	0.174	25.9	108.5	0.053	53400	5.34	18.45	23.6	22	2.3	21.3	0.29	0.5	1.5	2060.0	0.206	1.99
Barrel 9	Kerr	K-09-01_24	K-09-01	122.5	123.5	2250	8.11	700.0	0.07	7.2	7.2	0.179	46.1	107.5	0.031	41000	4.1	201	22	13	2	61.4	0.49	1.09	1.7	2280.0	0.228	2.37
Barrel 9	Kerr	K-09-01_25	K-09-01	126.5	127.5	176	29.5	700.0	0.07	5	18.7	0.222	34	116.5	0.155	55700	5.57	14.2	29.3	26	3.7	41.1	0.33	0.75	1.5	2830.0	0.283	2.3
Barrel 9	Kerr	K-09-01_26	K-09-01	130.5	131.5	1890	13	700.0	0.07	6.7	7.4	0.177	17.5	92.4	0.04	49200	4.92	4.84	21.7	20	2.9	81.5	0.45	0.4	1.8	2140.0	0.214	1.97
Barrel 9	Kerr	K-09-01_27	K-09-01	134.5	135.5	2110	5.68	700.0	0.07	6.8	6.1	0.174	22.5	113	0.014	60800	6.08	8.45	23.1	25	2.9	32.8	0.47	1.01	2	2170.0	0.217	2.17
Barrel 9	Kerr	K-09-01_28	K-09-01	138.5	139.5	3200	0.49	13100	1.31	5.2	5.4	0.154	5.7	52.2	<0.002	11600	1.16	3.22	21.7	2	0.8	177	0.36	0.54	1	3060.0	0.306	1.32
Barrel 9	Kerr	K-09-01_29	K-09-01	142.5	143.5	596	3.88	1700	0.17	6.5	8.4	0.21	6.8	115.5	0.011	46100	4.61	2.69	24.1	11	1.7	30.8	0.45	0.47	2.1	2460.0	0.246	2.55
Barrel 9	Kerr	K-09-01_30	K-09-01	146.5	147.5	1290	3.03	700.0	0.07	5.4	6.1	0.178	5	105.5	0.009	49300	4.93	1.82	21.5	12	2.2	15.8	0.38	0.39	1.9	1810.0	0.181	2.61
Barrel 9	Kerr	K-09-01_31	K-09-01	152.5	153.5	1550	3.2	4400	0.44	5.2	5.8	0.167	8.7	74.5	0.013	29600	2.96	2.89	19.7	10	1.7	229	0.38	0.17	1.5	1790.0	0.179	2.11
Barrel 9	Kerr	K-09-01_32	K-09-01	156.5	157.5	2010	3.3	700.0	0.07	7.6	6.7	0.168	34.9	125.5	0.014	19900	1.99	4.31	24.3	8	1.2	26.2	0.52	0.38	3	2320.0	0.232	2.22
Barrel 9	Kerr	K-09-01_33	K-09-01	160.5	161.5	2820	0.34	17400	1.74	6	6.9	0.145	12.4	60.8	<0.002	10700	1.07	2.66	21.7	2	0.9	252	0.4	0.25	1.5	2870.0	0.287	1.48
Barrel 9	Kerr	K-09-01_34	K-09-01	164.5	165.5	2220	3.02	700.0	0.07	4.7	9.6	0.172	10	116	0.01	40200	4.02	3.49	22	9	1.3	64.2	0.3	0.29	1.9	1510.0	0.151	2.24
Barrel 9	Kerr	K-09-01_35	K-09-01	168.5	169.5	1130	3.03	9800	0.98	7.3	8.1	0.185	12	85.1	0.009	28200	2.82	2.86	23	6	1.5	52.7	0.45	0.1	2	2290.0	0.229	1.72
Barrel 9	Kerr	K-09-01_36	K-09-01	172.5	173.5	1300	3.18	900.0	0.09	4.1	7.8	0.166	11.5	104.5	0.013	45400	4.54	2.59	21.4	11	1.4	50.4	0.26	0.55	1.9	1330.0	0.133	2.19
Barrel 9	Kerr	K-09-01_37	K-09-01	176.5	177.5	1310	2.36	800.0	0.08	7	6.6	0.153	16.9	94.1	0.01	53000	5.3	2.62	21	8	1.5	28.8	0.43	1.32	1.9	2170.0	0.217	2.2
Barrel 9	Kerr	K-09-01_38	K-09-01	180.5	181.5	703	4.31	900.0	0.09	5.5	6.6	0.146	195.5	92.7	0.014	62900	6.29	3.95	18.1	15	2.9	23.3	0.35	2.22	1.9	1870.0	0.187	2.43
Barrel 9	Kerr	K-09-01_39	K-09-01	184.5	185.5	2010	2.65	700.0	0.07	7.4	5.4	0.141	80.9	97.9	0.007	52400	5.24	21.4	19.4	11	1.7	37.2	0.45	1.13	1.8	2200	0.22	2.23
Barrel 9	Kerr	K-09-02_1	K-09-02	28.5	29.5	53	22.1	1600	0.16	3.1	20.4	0.174	41.7	80.6	0.043	80900	8.09	15.15	19.4	29	2.7	901	0.22	5.95	1.7	1110.0	0.111	2.28
Barrel 9	Kerr	K-09-02_2	K-09-02	32.5	33.5	50	71	1900	0.19	2.1	24.2	0.161	28.2	81.5	0.213	68700	6.87	55.9	22.1	27	3.1	373	0.14	6.7	2	860.00	0.086	2.4
Barrel 9	Kerr	K-09-02_3	K-09-02	36.5	37.5	39	57.9	1500	0.15	1.6	22.1	0.102	28.1	72.1	0.169	75400	7.54	7.78	13	35	5	755	0.1	1.31	2.5	850.00	0.085	1.91
Barrel 9	Kerr	K-09-02_4	K-09-02	40.5	41.5	38	23	1800	0.18	3.2	21.1	0.12	12.2	78.3	0.039	61700	6.17	12.25	20.4	28	3.6	541	0.22	1.84	2.1	1160.0	0.116	2.16
Barrel 9	Kerr	K-09-02_5	K-09-02	42.5	43.5	36	23	1700	0.17	1.9	30.6	0.109	12.3	67.3	0.054	81700	8.17	13.75	12.9	30	2.9	1215	0.13	1.36	2.2	740.00	0.074	1.94
Barrel 9	Kerr	K-09-02_6	K-09-02	46.5	47.5	33	9.2	2000	0.2	3.8	19.7	0.123	4.6	75.9	0.027	58800	5.88	24.3	15.1	19	3.3	1010	0.26	1.12	2.2	1110.0	0.111	2.24
Barrel 9	Kerr	K-09-02_8_B	K-09-02	66.5	67.5	27	6.46	1900	0.19	1.6	23.4	0.152	47.3	79.5	0.019	100000	10.0	10.6	40.6	32	4	285	0.11	1.89	0.8	1130.0	0.113	2.28
Barrel 9	Kerr	K-09-02_8_A	K-09-02	66.5	67.5	26	6.45	2000	0.2	1.8	12.8	0.185	18.1	77.1	0.018	83500	8.35	196.5	25.7	29	5.9	198	0.12	78	1.3	890.00	0.089	2.18
Barrel 9	Kerr	K-09-02_9	K-09-02	71.5	72.5	36	9.27	2000	0.2	1.9	6.9	0.17	30.4	79.2	0.035	73000	7.3	30.5	27.7	22	2.9	237	0.13	1.81	1.3	840.00	0.084	2.26
Barrel 9	Kerr	K-09-02_10	K-09-02	74.5	75.5	26	14.5	2100	0.21	2	9.9	0.158	20.2	90	0.042	85300	8.53	20.6	26.6	31	3.8	246	0.14	0.62	1.4	830.00	0.083	2.57
Barrel 9	Kerr	K-09-02_11	K-09-02	78.5	79.5	25	43.4	2100	0.21	1.9	11.7	0.199	8	89.6	0.142	53100	5.31	12.35	24.1	23	4.3	156.5	0.13	1.89	1.3	840.00	0.084	2.54

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	U (ppm)	V (ppm)	W (ppm)	Y (ppm)	Zn (ppm)	Zr (ppm)	Al2O3 (%)	BaO (%)	CaO (%)	Cr2O3 (%)	Fe2O3 (%)	K2O (%)	MgO (%)	MnO (%)	Na2O (%)	P2O5 (%)	SiO2 (%)	SRO (%)	TiO2 (%)	LOI (%)	Total_DC (%)
Barrel 8	Mitchell	M-09-110_12	M-09-110	50.5	51.5	3	462	4.1	13.8	56	38.3	14.25	0.1	4.24	0.01	3.69	4.32	2.01	0.19	4.79	0.287	60.25	0.03	0.56	4.1	98.83
Barrel 8	Mitchell	M-09-110_13	M-09-110	54.5	55.5	3.5	477	9.9	15	61	41.6	15.2	0.23	4.09	0.01	4.19	7.16	1.7	0.22	2.96	0.342	58.09	0.03	0.61	4.94	99.77
Barrel 8	Mitchell	M-09-110_14	M-09-110	58.5	59.5	4.5	612	4.6	14.6	66	37.1	13.32	0.2	4.67	0.02	5.54	6.15	2.3	0.18	2.54	0.265	58.44	0.03	0.49	5.75	99.9
Barrel 8	Mitchell	M-09-110_15	M-09-110	62.5	63.5	3.1	523	3.7	13.4	119	35.2	14.82	0.27	4.08	0.01	5.66	7.25	2.37	0.17	2.76	0.311	56	0.03	0.46	5.51	99.7
Barrel 8	Mitchell	M-09-110_16	M-09-110	68.5	69.5	3.4	462	3.2	15	76	38.1	15.04	0.21	3.09	0.01	5.15	5.62	2.96	0.14	4.03	0.323	58.29	0.03	0.58	4.37	99.84
Barrel 8	Mitchell	M-09-110_17	M-09-110	72.5	73.5	2.6	445	2.4	13	75	29.4	14.46	0.26	4.34	0.02	4.94	6.02	3.07	0.17	3.24	0.315	57.11	0.04	0.5	4.7	99.18
Barrel 8	Mitchell	M-09-110_18	M-09-110	76.5	77.5	2.6	437	2.3	16.9	78	34.5	15.01	0.17	3.39	0.02	3.3	3.53	2.42	0.13	5.72	0.271	61.55	0.03	0.57	3.7	99.8
Barrel 8	Mitchell	M-09-110_19	M-09-110	80.5	81.5	3.5	552	4.2	15.3	68	28.3	14.92	0.25	3.72	0.01	4.22	6.9	2.22	0.15	3.08	0.316	59.05	0.04	0.49	4.49	99.84
Barrel 8	Mitchell	M-09-110_20	M-09-110	84.5	85.5	5	585	5.1	17.2	77	44.8	14.15	0.16	4.62	0.02	4.43	4.79	3.1	0.22	3.88	0.274	58.13	0.03	0.57	5.33	99.7
Barrel 8	Mitchell	M-09-110_21	M-09-110	88.5	89.5	5.1	550	6.7	15.1	94	35.2	15.36	0.32	3.05	0.02	4.62	7.69	2.92	0.17	2.31	0.316	58.01	0.03	0.59	4.57	99.99
Barrel 8	Mitchell	M-09-110_22	M-09-110	92.5	93.5	17.7	367	6.3	14.7	134	33.5	13.56	0.64	3.58	<0.01	5.43	8.97	1.84	0.21	0.4	0.317	59.13	0.02	0.44	5.16	99.7
Barrel 8	Mitchell	M-09-110_23	M-09-110	98.5	99.5	2.3	186	15.6	9.6	61	30.4	16.76	0.4	4.39	<0.01	6.02	5.3	2.06	0.16	3.37	0.305	53.11	0.03	0.5	7.44	99.85
Barrel 8	Mitchell	M-09-110_25	M-09-110	114.5	115.5	2.6	157	8.7	9.4	562	29.5	15.93	0.89	3.17	<0.01	6.77	4.79	2.22	0.15	3.27	0.304	53.27	0.04	0.44	8.32	99.58
Barrel 8	Mitchell	M-09-110_26	M-09-110	117.5	118.5	1.8	176	22	9.5	20	25.3	17.65	0.63	1.91	<0.01	7.92	6.45	1.6	0.05	1.48	0.332	54	0.02	0.5	7.11	99.65
Barrel 8	Mitchell	M-09-110_27	M-09-110	122.5	123.5	1.8	165	17.7	9.4	26	22.5	16.66	0.48	4.13	<0.01	6.04	5.46	1.94	0.11	2.66	0.316	53.77	0.03	0.47	7.95	100
Barrel 8	Mitchell	M-09-110_28	M-09-110	126.5	127.5	1.9	204	21	8.6	34	20.3	16.89	0.43	2.61	<0.01	6.53	4.26	2.02	0.06	4.88	0.322	54.65	0.03	0.49	6.69	99.87
Barrel 8	Mitchell	M-09-110_29	M-09-110	130.5	131.5	2.3	190	24.1	9.7	41	21.4	17.59	0.82	1.32	0.01	7.8	5.3	1.76	0.03	3.07	0.333	54.55	0.02	0.51	6.76	99.86
Barrel 8	Mitchell	M-09-110_30	M-09-110	134.5	135.5	1.8	167	11.5	7.8	35	20.8	16.07	0.65	2.87	<0.01	6.75	4.86	2.32	0.07	1.9	0.306	55.38	0.02	0.46	7.85	99.52
Barrel 8	Mitchell	M-09-110_31	M-09-110	138.5	139.5	2	166	6.8	8.9	28	20.9	16.97	0.56	1.2	<0.01	7.66	5.56	1.5	0.03	0.46	0.319	58.42	0.01	0.49	6.58	99.77
Barrel 9	Kerr	K-09-01_99	K-09-01	36.5	37.5	0.5	181	1	3.1	37	10	13.11	1.11	0.01	0.01	23.02	4.24	1.06	0.02	0.12	1.254	46.85	0.03	0.43	8.51	99.77
Barrel 9	Kerr	K-09-01_7	K-09-01	52.5	53.5	0.8	219	4	7.6	81	29.9	17.23	0.34	0.32	<0.01	7.31	5.22	2.5	0.08	0.58	0.391	60.33	0.01	0.53	4.82	99.67
Barrel 9	Kerr	K-09-01_8	K-09-01	56.5	57.5	0.8	211	5.4	7.8	108	28.6	16.84	0.39	0.61	0.01	9.33	4.4	3.31	0.11	1.27	0.407	56.92	0.01	0.53	5.52	99.65
Barrel 9	Kerr	K-09-01_9	K-09-01	60.5	61.5	1.1	253	8.1	6.5	175	24.5	17.99	0.24	0.39	<0.01	8.29	5.01	3.03	0.11	0.97	0.406	57.55	0.01	0.47	5.27	99.74
Barrel 9	Kerr	K-09-01_10	K-09-01	64.5	65.5	0.9	212	6.9	6.1	101	22.6	17.85	0.23	0.35	0.01	7.89	5.11	3.23	0.09	0.79	0.393	57.81	0.01	0.49	5.33	99.57
Barrel 9	Kerr	K-09-01_11	K-09-01	68.5	69.5	1	211	5.2	6.4	90	23.5	17.85	0.19	0.75	<0.01	6.45	5.21	3.39	0.08	0.68	0.449	59.4	0.01	0.49	4.83	99.78
Barrel 9	Kerr	K-09-01_12	K-09-01	72.5	73.5	0.7	234	4.4	5.6	83	21.4	17.37	0.26	0.47	<0.01	7.77	4.82	2.67	0.09	1.58	0.381	58.51	0.01	0.62	4.76	99.31
Barrel 9	Kerr	K-09-01_13	K-09-01	76.5	77.5	1.2	156	8.5	10.8	129	51.7	17.79	0.3	0.58	<0.01	7.11	2.79	3.11	0.2	3.6	0.277	60.05	0.02	0.46	3.44	99.74
Barrel 9	Kerr	K-09-01_14	K-09-01	80.5	81.5	1	206	6.3	7.4	70	25.9	17.24	0.26	0.54	<0.01	8.48	5.64	2.38	0.07	0.32	0.4	58	0.01	0.49	6.17	99.99
Barrel 9	Kerr	K-09-01_15	K-09-01	84.5	85.5	0.5	248	3.5	7.1	88	19.4	17.61	0.2	2.13	<0.01	7.49	5.35	2.45	0.09	0.82	0.382	56.32	0.01	0.57	6.07	99.49
Barrel 9	Kerr	K-09-01_16	K-09-01	88.5	89.5	1.1	226	5.3	7.4	124	31.4	17.31	0.22	0.45	<0.01	5.78	5	2.59	0.1	0.99	0.364	61.56	<0.01	0.51	4.26	99.14
Barrel 9	Kerr	K-09-01_17	K-09-01	92.5	93.5	1.5	229	6.4	5.5	89	32.2	17.38	0.22	0.16	0.01	8.5	5.52	1.87	0.19	0.22	0.358	59.92	0.01	0.55	5.01	99.91
Barrel 9	Kerr	K-09-01_18	K-09-01	96.5	97.5	0.6	205	3.9	6.5	106	21.4	17.32	0.21	1.55	<0.01	5.86	5.4	2.27	0.13	0.41	0.364	60.4	0.02	0.53	5.09	99.55
Barrel 9	Kerr	K-09-01_19	K-09-01	102.5	103.5	0.4	201	1.9	10.4	158	14.9	15.95	0.27	1.25	<0.01	10.68	4.56	2.59	0.68	0.14	0.353	55.53	0.01	0.5	6.9	99.42
Barrel 9	Kerr	K-09-01_20	K-09-01	106.5	107.5	0.6	266	4.6	10.7	227	22.3	17.51	0.23	0.48	<0.01	9.37	5.2	2.33	0.09	0.16	0.358	56.95	0.01	0.75	6.57	100
Barrel 9	Kerr	K-09-01_21	K-09-01	110.5	111.5	0.4	240	3.3	9.6	106	16.8	17.27	0.23	0.61	0.01	9.78	5.23	1.82	0.08	0.17	0.387	56.45	<0.01	0.67	7.05	99.76
Barrel 9	Kerr	K-09-01_22	K-09-01	114.5	115.5	0.9	211	3.4	9.1	181	27.7	17.82	0.2	2.04	<0.01	6.57	5.28	2.1	0.41	0.2	0.406	57.22	0.01	0.44	6.38	99.07
Barrel 9	Kerr	K-09-01_23	K-09-01	118.5	119.5	0.6	223	5.2	7.7	63	19.5	17.46	0.22	0.63	<0.01	8.07	5.46	1.71	0.06	0.15	0.394	58.34	0.01	0.61	6.63	99.74
Barrel 9	Kerr	K-09-01_24	K-09-01	122.5	123.5	0.8	207	5.9	6.8	239	21.4	17.6	0.27	1.98	<0.01	6.27	5.61	1.93	0.3	0.2	0.399	58.16	0.01	0.47	6.66	99.86
Barrel 9	Kerr	K-09-01_25	K-09-01	126.5	127.5	0.7	262	10.4	8.5	84	20.9	19.44	0.2	0.58	0.01	8.41	5.84	1.71	0.02	0.18	0.474	55.19	0.01	0.69	6.94	99.69
Barrel 9	Kerr	K-09-01_26	K-09-01	130.5	131.5	0.7	219	6.4	7.5	62	24	16.34	0.18	3.52	<0.01	7.52	4.95	2.17	0.25	0.18	0.39	55.56	0.02	0.5	7.29	98.88
Barrel 9	Kerr	K-09-01_27	K-09-01	134.5	135.5	0.9	219	6	9.3	211	33.3	16.6	0.19	1.45	<0.01	9.1	5.24	1.62	0.28	0.19	0.386	56.13	<0.01	0.49	7.62	99.29
Barrel 9	Kerr	K-09-01_28	K-09-01	138.5	139.5	0.5	178	2.2	9.3	171	14.9	16.93	0.28	4.89	<0.01	7.56	3.25	2.99	0.44	1.97	0.355	53.45	0.03	0.59	6.09	98.82
Barrel 9	Kerr	K-09-01_29	K-09-01	142.5	143.5	0.9	255	3.2	8.1	138	22.5	20.5	0.2	0.81	<0.01	8	5.97	2.17	0.08	0.31	0.467	53.92	<0.01	0.6	6.81	99.85
Barrel 9	Kerr	K-09-01_30	K-09-01	146.5	147.5	0.8	233	3.7	7.8	69	22.3	17.95	0.18	0.74	<0.01	7.52	5.55	1.34	0.18	0.19	0.397	59.25	0.01	0.5	6.19	99.99
Barrel 9	Kerr	K-09-01_31	K-09-01	152.5	153.5	0.7	221	2.1	6.7	118	21	17.18	0.62	3.07	<0.01	7.04	4.64	2.56	0.21	0.69	0.372	56.05	0.03	0.48	6.2	99.15
Barrel 9	Kerr	K-09-01_32	K-09-01	156.5	157.5	1.2	232	2.9	13.8	228	50.3	18.01	0.25	0.51	<0.01	7.04	4.95	2.31	0.28	0.19	0.371	60.55	0.01	0.5	4.8	99.78
Barrel 9	Kerr	K-09-01_33	K-09-01	160.5	161.5	0.8	185	1	10.8	311	36.5	17.4	0.56	2.98	<0.01	7.19	3.11	2.73	0.37	2.45	0.307	55.86	0.03	0.52	5.37	98.88
Barrel 9	Kerr	K-09-01_34	K-09-01	164.5	165.5	0.7	216	2.3	8.6	158	23.3	17.98	0.43	1.05	<0.01	7.89	5.11	2.3	0.32	0.19	0.399	56.98	0.01	0.51	6.83	100
Barrel 9	Kerr	K-09-01_35	K-09-01	168.5	169.5	0.8	227	2	9.8	133	23.2	18.04	0.29	0.56	<0.01	7.24	4.02	3.41	0.16	1.49	0.413	58.26	0.01	0.52	5.56	99.97
Barrel 9	Kerr	K-09-01_36	K-09-01	172.5	173.5	0.9	219	2.8	7.9	135	26.3	17.24	0.25	1.58	0.01	7.55	4.98	2.37	0.18	0.22	0.367	57.28	0.01	0.49	7.17	99.68
Barrel 9	Kerr	K-09-01_37	K-09-01	176.5	177.5	0.7	224	2.7	6.5	332	21.9	17.13	0.19	1.5	<0.01	8.81	4.59	2.67	0.18	0.21	0.344	56.61	0.01	0.45	7.3	100
Barrel 9	Kerr	K-09-01_38	K-09-01	180.5	181.5	0.7	213	3.3	6.1	166	22.1	16.39	0.18	1.21	<0.01	8.85	4.72	1.23	0.1	0.22	0.33	58.54	0.01	0.47	7.36	99.61
Barrel 9	Kerr	K-09-01_39	K-09-01	184.5	185.5	0.6	218	2.2	6.2	344	20	16.57	0.18	2.49	<0.01	7.94	4.89	2.12	0.28	0.2	0.332	55.88	0.01	0.45	8.3	99.65
Barrel 9	Kerr	K-09-02_1	K-09-02	28.5	29.5	1	204	5.4	13.3	16	31.7	16.07	0.22	0.46	0.01	10.75	4.2	1.02	0.01	0.31	0.381	57.75	0.11	0.65	7.85	99.79
Barrel 9	Kerr	K-09-02_2	K-09-02	32.5	33.5	1.2	213	3.1	9.9	34	29.7	17.29	0.16	0.5	0.01	9.1	4.63	0.75	0.01	0.32	0.361	58.97	0.05	0.62	7.17	99.93
Barrel 9	Kerr	K-09-02_3	K-09-02	36.5	37.5	1.3	192	7.4	9.9	15	37	15.78	0.19	0.32	0.01	10.31	4.12	1	0.01	0.31	0.236	59.25	0.1	0.63	7.62	99.88
Barrel 9	Kerr	K-09-02_4	K-09-02	40.5	41.5	1	206	3.9	12.6	22	25.5	17.28	0.17	0.38	0.01	8.28	4.39	1.18	0.01	0.34	0.278	59.75	0.07	0.77	6.85	99.76
Barrel 9	Kerr	K-09-02_5	K-09-02	42.5	43.5	1	167	3.1	10.8	25	25.3	15.23	0.22	0.34	0.01	10.65	3.83	1.09	0.01	0.31	0.255	58.92	0.15	0.64	7.95	99.6
Barrel 9	Kerr	K-09-02_6	K-09-02	46.5	47.5	1	183	4.4	9.7	21	29.8	16.51	0.18	0.39	0.01	7.47	4.09	1.05	<0.01	0.36	0.277	62.15	0.13	0.74	6.46	99.82
Barrel 9	Kerr	K-09-02_8_B	K-09-02	66.5	67.5	0.4	249	3.3	8.7	38	16.5	15.42	0.25	0.4	0.01	14.43	3.87	0.68	<0.01	0.35	0.328	53.75	0.04	0.58	9.7	99.81
Barrel 9	Kerr	K-09-02_8_A	K-09-02	66.5	67.5	0.6	217	2.9	6.4	308	20.5	15.9	0.22	0.52	<0.01	10.78	4	0.62	0.01	0.35	0.412	58.46	0.02	0.53	7.75	99.58
Barrel 9	Kerr	K-09-02_9	K-09-02	71.5	72.5	0.5	223	2.3	6.9	47	15.6	16.31	0.23	0.5	<0.01	9.6	4.01	0.95	0.01	0.36	0.371	59.75	0.03	0.46	7.23	99.81
Barrel 9	Kerr	K-09-02_10	K-09-02	74.5	75.5	0.8	208	3.9	8.3	18	16.7	17.86	0.2	0.46	0.01	11.44	4.71	0.66	<0.01	0.38	0.36	55.06	0.03	0.49	8.16	99.82
Barrel 9	Kerr	K-09-02_11	K-09-02	78.5	79.5	0.7	211	6.6	7.6	15	16.6	17.17	0.17	0.57	0.01	7.62	4.58	0.5	<0.01	0.38	0.452	61.71	0.02	0.52	6.04	99.74

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Interval	Rock Code	Lithology	Alteration 1	Alt_1_ Intensity	Alt_1_ Intensity_ Old	Alt_2_Code	Alt_2_ Intensity	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	21012 ABA Model Code	PFS Waste/Ore
Barrel 9	Kerr	K-09-02_12	K-09-02	82.5	83.5	1.0		VU	IARG	4	QSP						K-09-02_12	K-09-02_12	KERR	0
Barrel 9	Kerr	K-09-02_13	K-09-02	86.5	87.5	1.0		VU	IARG	4	QSP						K-09-02_13	K-09-02_13	KERR	0
Barrel 9	Kerr	K-09-02_14	K-09-02	90.5	91.5	1.0		VU	IARG	4	QSP						K-09-02_14	K-09-02_14	KERR	0
Barrel 9	Kerr	K-09-02_15	K-09-02	94.5	95.5	1.0		VU	IARG	4	QSP						K-09-02_15	K-09-02_15	KERR	0
Barrel 9	Kerr	K-09-02_16	K-09-02	152.5	153.5	1.0		VU	IARG	2	CL						K-09-02_16	K-09-02_16	KERR	0
Barrel 9	Kerr	K-09-02_17	K-09-02	156.5	157.5	1.0		VU	IARG	2	CL						K-09-02_17	K-09-02_17	KERR	0
Barrel 9	Kerr	K-09-02_18	K-09-02	160.5	161.5	1.0		VU	IARG	2	CL						K-09-02_18	K-09-02_18	KERR	0
Barrel 9	Kerr	K-09-02_19	K-09-02	164.5	165.5	1.0		VU	IARG	2	CL						K-09-02_19	K-09-02_19	KERR	0
Barrel 10	Sulphurets	S-09-11_16	S-09-11	374.5	375.5	1.0		VU/VU	SIH/SIH	4/3	CL						S-09-11_16	H45208	Lower Au zone	MARGINAL
Barrel 10	Sulphurets	S-09-11_17	S-09-11	378.5	379.5	1.0		VU	SIH	3	CL						S-09-11_17	H45211	Lower Au zone	ORE
Barrel 10	Sulphurets	S-09-10_1	S-09-10	422.5	423.5	1.0		VU	SIH	4	None						S-09-10_1	H44933	Au, Leach, Raewn zones	ORE
Barrel 10	Sulphurets	S-09-10_2	S-09-10	426.5	427.5	1.0		VU	SIH	4	None						S-09-10_2	H44936	Au, Leach, Raewn zones	ORE
Barrel 10	Sulphurets	S-09-10_3	S-09-10	432.5	433.5	1.0		VU	SIH	4	None						S-09-10_3	H44939	Au, Leach, Raewn zones	ORE
Barrel 10	Sulphurets	S-09-10_4	S-09-10	436.5	437.5	1.0		VU	SIL	3	None						S-09-10_4	H44942	Au, Leach, Raewn zones	ORE
Barrel 10	Sulphurets	S-09-09_12	S-09-09	68.5	69.5	1.0		PMON	SIL	3	None						S-09-09_12	H44481	Monzonite	WASTE
Barrel 10	Sulphurets	S-09-09_13	S-09-09	72.5	73.5	1.0		PMON	SIL	3	None						S-09-09_13	H44483	Monzonite	WASTE
Barrel 10	Sulphurets	S-09-09_14	S-09-09	76.5	77.5	1.0		PMON	SIL	3	None						S-09-09_14	H44485	Monzonite	WASTE
Barrel 10	Sulphurets	S-09-09_15	S-09-09	80.5	81.5	1.0		PMON	SIL	3	None						S-09-09_15	H44487	Monzonite	WASTE
Barrel 10	Sulphurets	S-09-09_16	S-09-09	84.5	85.5	1.0		PMON	SIL	3	None						S-09-09_16	H44489	Monzonite	WASTE
Barrel 10	Sulphurets	S-09-09_17	S-09-09	88.5	89.5	1.0		PMON	SIL	3	None						S-09-09_17	H44491	Monzonite	WASTE
Barrel 10	Sulphurets	S-09-09_18	S-09-09	92.5	93.5	1.0		PMON	SIL	3	None						S-09-09_18	H44494	Monzonite	WASTE
Barrel 10	Sulphurets	S-09-09_19	S-09-09	96.5	97.5	1.0		PMON	SIL	3	None						S-09-09_19	H44497	Monzonite	WASTE
Barrel 10	Sulphurets	S-09-09_20	S-09-09	100.5	101.5	1.0		PMON	SIL	3	None						S-09-09_20	H44499	Monzonite	WASTE
Barrel 10	Sulphurets	S-09-09_21	S-09-09	104.5	105.5	1.0		PMON	SIL	3	None						S-09-09_21	H44501	Monzonite	WASTE
Barrel 10	Sulphurets	S-09-09_22	S-09-09	108.5	109.5	1.0		PMON	SIL	3	None						S-09-09_22	H44503	UP Hazelton	WASTE
Barrel 10	Sulphurets	S-09-09_23	S-09-09	112.5	113.5	1.0		PMON	SIL	3	None						S-09-09_23	H44505	UP Hazelton	WASTE
Barrel 10	Sulphurets	S-09-11_2	S-09-11	146.5	147.5	1.0		VU	SIH	3	None						S-09-11_2	H45083	LP Hazelton	WASTE
Barrel 10	Sulphurets	S-09-11_3	S-09-11	150.5	151.5	1.0		VU	SIH	3	None						S-09-11_3	H45086	LP Hazelton	WASTE
Barrel 10	Sulphurets	S-09-11_4	S-09-11	154.5	155.5	1.0		VU	SIH	3	None						S-09-11_4	H45088	LP Hazelton	WASTE
Barrel 10	Sulphurets	S-09-11_5	S-09-11	184.5	185.5	1.0		VU	SIH	2	CL						S-09-11_5	H45104	LP Hazelton	ORE
Barrel 10	Sulphurets	S-09-11_6	S-09-11	334.5	335.5	1.0		VU	SIH	4	CL						S-09-11_6	H45187	Au, Leach, Raewn zones	ORE
Barrel 10	Sulphurets	S-09-11_7	S-09-11	338.5	339.5	1.0		VU	SIH	4	CL						S-09-11_7	H45189	Au, Leach, Raewn zones	ORE
Barrel 10	Sulphurets	S-09-11_8	S-09-11	342.5	343.5	1.0		VU	SIH	4	CL						S-09-11_8	H45191	Au, Leach, Raewn zones	ORE
Barrel 10	Sulphurets	S-09-11_9	S-09-11	346.5	347.5	1.0		VU	SIH	4	CL						S-09-11_9	H45193	Lower Au zone	ORE
Barrel 10	Sulphurets	S-09-11_10	S-09-11	350.5	351.5	1.0		VU	SIH	4	CL						S-09-11_10	H45195	Lower Au zone	ORE
Barrel 10	Sulphurets	S-09-11_11	S-09-11	354.5	355.5	1.0		VU	SIH	4	CL						S-09-11_11	H45198	Lower Au zone	ORE
Barrel 10	Sulphurets	S-09-11_12	S-09-11	358.5	359.5	1.0		VU	SIH	4	CL						S-09-11_12	H45200	Lower Au zone	ORE
Barrel 10	Sulphurets	S-09-11_13	S-09-11	362.5	363.5	1.0		VU	SIH	4	CL						S-09-11_13	H45202	Lower Au zone	ORE
Barrel 10	Sulphurets	S-09-11_14	S-09-11	366.5	367.5	1.0		VU	SIH	4	CL						S-09-11_14	H45204	Lower Au zone	WASTE
Barrel 10	Sulphurets	S-09-11_15	S-09-11	370.5	371.5	1.0		VU	SIH	4	CL						S-09-11_15	H45206	Lower Au zone	MARGINAL
Barrel 11	Sulphurets	S-08-06_10	S-08-06	382.5	383.5	1.0		SARG	CL	3	SIH						S-08-06_10	X15934	LP Hazelton	ORE
Barrel 11	Sulphurets	S-08-06_11	S-08-06	386.5	387.5	1.0		SARG	CL	3	SIH						S-08-06_11	X15937	LP Hazelton	ORE
Barrel 11	Sulphurets	S-08-06_12	S-08-06	390.5	391.5	1.0		SARG	CL	3	SIH						S-08-06_12	X15939	Au, Leach, Raewn zones	WASTE
Barrel 11	Kerr	K-09-03_1	K-09-03	136.5	137.5	1.0		VU	IARG/QSP	4/5	CL/--						K-09-03_1	K-09-03_1	KERR	0
Barrel 11	Kerr	K-09-03_2	K-09-03	140.5	141.5	1.0		VU	QSP	5	None						K-09-03_2	K-09-03_2	KERR	0
Barrel 11	Kerr	K-09-03_3	K-09-03	144.5	145.5	1.0		ANDS	CL	2	None						K-09-03_3	K-09-03_3	KERR	0
Barrel 11	Kerr	K-09-03_4	K-09-03	148.5	149.5	1.0		ANDS	CL	2	None						K-09-03_4	K-09-03_4	KERR	0
Barrel 11	Kerr	K-09-03_5	K-09-03	152.5	153.5	1.0		ANDS	CL	2	None						K-09-03_5	K-09-03_5	KERR	0
Barrel 11	Kerr	K-09-03_6	K-09-03	156.5	157.5	1.0		ANDS	CL	2	None						K-09-03_6	K-09-03_6	KERR	0
Barrel 11	Kerr	K-09-04_1	K-09-04	102.5	103.5	1.0		VU	QSP	3	IARG						K-09-04_1	K-09-04_1	KERR	0
Barrel 11	Kerr	K-09-04_2	K-09-04	106.5	107.5	1.0		VU	QSP	3	IARG						K-09-04_2	K-09-04_2	KERR	0
Barrel 11	Kerr	K-09-04_3	K-09-04	110.5	111.5	1.0		VU	QSP	3	IARG						K-09-04_3	K-09-04_3	KERR	0
Barrel 11	Kerr	K-09-04_4	K-09-04	114.5	115.5	1.0		VU	QSP	3	IARG						K-09-04_4	K-09-04_4	KERR	0
Barrel 11	Kerr	K-09-04_7	K-09-04	126.5	127.5	1.0		DDRT	CL	1	None						K-09-04_7	K-09-04_7	KERR	0
Barrel 11	Kerr	K-09-04_5	K-09-04	120.5	121.5	1.0		VU	QSP	3	IARG						K-09-04_5	K-09-04_5	KERR	0
Barrel 11	Kerr	K-09-04_6	K-09-04	123.5	124.5	1.0		DDRT	CL	1	None						K-09-04_6	K-09-04_6	KERR	0
Barrel 11	Sulphurets	S-08-06_1	S-08-06	42.5	43.5	1.0		VULT	CL	3	SI						S-08-06_1	X15748	UP Hazelton	ORE
Barrel 11	Sulphurets	S-08-06_2	S-08-06	46.5	47.5	1.0		VULT	CL	3	SI						S-08-06_2	X15751	UP Hazelton	MARGINAL
Barrel 11	Sulphurets	S-08-06_3	S-08-06	50.5	51.5	1.0		VULT	CL	3	SI						S-08-06_3	X15753	UP Hazelton	ORE
Barrel 11	Sulphurets	S-08-06_4	S-08-06	252.5	253.5	1.0		VUTF	CL	3	None						S-08-06_4	X15860	UP Hazelton	ORE
Barrel 11	Sulphurets	S-08-06_5	S-08-06	256.5	257.5	1.0		VUTF	CL	3	None						S-08-06_5	X15862	UP Hazelton	ORE
Barrel 11	Sulphurets	S-08-06_6	S-08-06	298.5	299.5	1.0		PSBX	CL	3	SIL						S-08-06_6	X15887	Monzonite	ORE
Barrel 11	Sulphurets	S-08-06_7	S-08-06	312.5	313.5	1.0		VU	CL	4	None						S-08-06_7	X15896	Undefined	WASTE
Barrel 11	Sulphurets	S-08-06_9	S-08-06	378.5	379.5	1.0		SARG	CL	3	SIH						S-08-06_9	X15932	LP Hazelton	ORE

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	PFS Pit In/Out	PFS Litho	PFS Alt	Sample Matrix	SampleType	udf_LabID	Weight Received (kg)	Lab Certificate Number	Collect Date/ Time	Paste pH	Rinse pH	S_Total (%)	S_Sulphide (%)	S_S2_ CALC (%)	S_S2_S_ DEL CALC (%)	S_SO4_ NA2CO3 (%)	S_SO4_ HCL (%)	S_BASO4 (%)
Barrel 9	Kerr	K-09-02_12	K-09-02	82.5	83.5	0	0	0	Rock	Drillcore	ALS Chemex	3.64	VA09116127		6.1	5.6	6.25	6.40	6.24	6.400	0.03	0.01	0.0023
Barrel 9	Kerr	K-09-02_13	K-09-02	86.5	87.5	0	0	0	Rock	Drillcore	ALS Chemex	3.3	VA09116127		5.7	5.9	7.36	6.63	7.35	7.348	0.03	0.01	0.0023
Barrel 9	Kerr	K-09-02_14	K-09-02	90.5	91.5	0	0	0	Rock	Drillcore	ALS Chemex	4.06	VA09116127		5.7	5.7	7.78	7.28	7.74	7.738	0.04	0.04	0.0016
Barrel 9	Kerr	K-09-02_15	K-09-02	94.5	95.5	0	0	0	Rock	Drillcore	ALS Chemex	1.48	VA09116127		5.6	6.8	7.97	7.74	7.94	7.938	0.06	0.03	0.0019
Barrel 9	Kerr	K-09-02_16	K-09-02	152.5	153.5	0	0	0	Rock	Drillcore	ALS Chemex	3.26	VA09116127		7.9	6.4	5.16	2.07	2.23	2.184	2.97	2.93	0.0457
Barrel 9	Kerr	K-09-02_17	K-09-02	156.5	157.5	0	0	0	Rock	Drillcore	ALS Chemex	3.52	VA09116127		7.3	6.4	10.70	4.56	4.83	4.828	5.99	5.87	0.0019
Barrel 9	Kerr	K-09-02_18	K-09-02	160.5	161.5	0	0	0	Rock	Drillcore	ALS Chemex	3.2	VA09116127		7.2	6.4	7.62	4.41	4.73	4.728	2.89	2.89	0.0023
Barrel 9	Kerr	K-09-02_19	K-09-02	164.5	165.5	0	0	0	Rock	Drillcore	ALS Chemex	4	VA09116127		7.9	7.4	6.22	2.92	3.67	3.632	3.08	2.55	0.0383
Barrel 10	Sulphurets	S-09-11_16	S-09-11	374.5	375.5	OUT	VU	SIH	Rock	Drillcore	ALS Chemex	1.34	VA09124617		8.6	8.6	3.66	3.51	3.65	3.638	0.03	0.01	0.0121
Barrel 10	Sulphurets	S-09-11_17	S-09-11	378.5	379.5	OUT	VU	SIH	Rock	Drillcore	ALS Chemex	1.94	VA09124617		9.0	9.0	1.68	1.56	1.67	1.644	0.02	0.005	0.0259
Barrel 10	Sulphurets	S-09-10_1	S-09-10	422.5	423.5	IN	VU	SIH	Rock	Drillcore	ALS Chemex	2.06	VA09124617		8.9	8.7	1.76	1.64	1.75	1.713	0.04	0.005	0.0373
Barrel 10	Sulphurets	S-09-10_2	S-09-10	426.5	427.5	IN	VU	SIH	Rock	Drillcore	ALS Chemex	1.98	VA09124617		8.6	8.3	2.69	2.55	2.68	2.665	0.04	0.005	0.0152
Barrel 10	Sulphurets	S-09-10_3	S-09-10	432.5	433.5	IN	VU	SIH	Rock	Drillcore	ALS Chemex	2.64	VA09124617		8.3	8.0	3.08	2.80	3.07	3.057	0.02	0.005	0.0131
Barrel 10	Sulphurets	S-09-10_4	S-09-10	436.5	437.5	IN	VU	SIL	Rock	Drillcore	ALS Chemex	2.08	VA09116247		8.4	8.2	2.23	2.05	2.22	2.203	0.03	0.01	0.0168
Barrel 10	Sulphurets	S-09-09_12	S-09-09	68.5	69.5	IN	PMON	SIL	Rock	Drillcore	ALS Chemex	2.04	VA09116246		8.8	8.7	0.88	0.75	0.85	0.773	0.09	0.03	0.0766
Barrel 10	Sulphurets	S-09-09_13	S-09-09	72.5	73.5	IN	PMON	SIL	Rock	Drillcore	ALS Chemex	1.66	VA09116246		9.2	9.1	0.15	0.11	0.00	0.110	0.03	0.15	0.0801
Barrel 10	Sulphurets	S-09-09_14	S-09-09	76.5	77.5	IN	PMON	SIL	Rock	Drillcore	ALS Chemex	1.72	VA09116246		9.0	8.9	0.16	0.14	0.14	0.140	0.03	0.02	0.0775
Barrel 10	Sulphurets	S-09-09_15	S-09-09	80.5	81.5	IN	PMON	SIL	Rock	Drillcore	ALS Chemex	2.02	VA09116246		9.0	8.9	0.37	0.30	0.34	0.300	0.05	0.03	0.0948
Barrel 10	Sulphurets	S-09-09_16	S-09-09	84.5	85.5	IN	PMON	SIL	Rock	Drillcore	ALS Chemex	0.66	VA09116246		8.8	8.9	0.13	0.08	0.12	0.080	0.05	0.01	0.0777
Barrel 10	Sulphurets	S-09-09_17	S-09-09	88.5	89.5	IN	PMON	SIL	Rock	Drillcore	ALS Chemex	1.52	VA09116246		9.0	8.9	0.50	0.43	0.48	0.430	0.04	0.02	0.0689
Barrel 10	Sulphurets	S-09-09_18	S-09-09	92.5	93.5	IN	PMON	SIL	Rock	Drillcore	ALS Chemex	1.68	VA09116246		9.0	8.9	0.40	0.31	0.39	0.323	0.05	0.005	0.0672
Barrel 10	Sulphurets	S-09-09_19	S-09-09	96.5	97.5	IN	PMON	SIL	Rock	Drillcore	ALS Chemex	2.02	VA09116246		9.0	9.0	0.54	0.49	0.53	0.490	0.03	0.01	0.0691
Barrel 10	Sulphurets	S-09-09_20	S-09-09	100.5	101.5	IN	PMON	SIL	Rock	Drillcore	ALS Chemex	1.6	VA09116246		8.9	8.9	0.48	0.42	0.46	0.420	0.02	0.02	0.0768
Barrel 10	Sulphurets	S-09-09_21	S-09-09	104.5	105.5	IN	PMON	SIL	Rock	Drillcore	ALS Chemex	2.08	VA09116246		9.0	9.0	0.32	0.26	0.27	0.260	0.02	0.05	0.0476
Barrel 10	Sulphurets	S-09-09_22	S-09-09	108.5	109.5	IN	PMON	SIL	Rock	Drillcore	ALS Chemex	2	VA09116246		8.7	8.7	1.08	0.96	1.04	0.996	0.01	0.04	0.0443
Barrel 10	Sulphurets	S-09-09_23	S-09-09	112.5	113.5	IN	PMON	SIL	Rock	Drillcore	ALS Chemex	0.6	VA09116246		8.7	8.7	0.70	0.58	0.69	0.632	0.01	0.01	0.0579
Barrel 10	Sulphurets	S-09-11_2	S-09-11	146.5	147.5	IN	VU	SIH	Rock	Drillcore	ALS Chemex	2.3	VA09124617		8.7	8.5	2.12	2.02	2.11	2.085	0.02	0.005	0.0254
Barrel 10	Sulphurets	S-09-11_3	S-09-11	150.5	151.5	IN	VU	SIH	Rock	Drillcore	ALS Chemex	1.8	VA09124617		9.0	8.9	2.70	2.60	2.69	2.666	0.02	0.005	0.0240
Barrel 10	Sulphurets	S-09-11_4	S-09-11	154.5	155.5	IN	VU	SIH	Rock	Drillcore	ALS Chemex	1.64	VA09116248		8.9	8.7	2.28	1.90	2.24	2.222	0.04	0.04	0.0184
Barrel 10	Sulphurets	S-09-11_5	S-09-11	184.5	185.5	IN	VU	SIH	Rock	Drillcore	ALS Chemex	2.16	VA09124617		9.1	8.9	0.86	0.76	0.85	0.816	0.005	0.01	0.0336
Barrel 10	Sulphurets	S-09-11_6	S-09-11	334.5	335.5	IN	VU	SIH	Rock	Drillcore	ALS Chemex	1.98	VA09124617		8.9	8.8	2.10	2.06	2.09	2.062	0.02	0.005	0.0278
Barrel 10	Sulphurets	S-09-11_7	S-09-11	338.5	339.5	IN	VU	SIH	Rock	Drillcore	ALS Chemex	1.9	VA09124617		9.1	8.9	1.17	1.13	1.16	1.141	0.04	0.005	0.0187
Barrel 10	Sulphurets	S-09-11_8	S-09-11	342.5	343.5	IN	VU	SIH	Rock	Drillcore	ALS Chemex	1.88	VA09124617		8.8	8.6	3.08	2.98	3.07	3.060	0.05	0.005	0.0103
Barrel 10	Sulphurets	S-09-11_9	S-09-11	346.5	347.5	IN	VU	SIH	Rock	Drillcore	ALS Chemex	1.64	VA09124617		9.1	8.9	0.82	0.80	0.81	0.800	0.03	0.01	0.0513
Barrel 10	Sulphurets	S-09-11_10	S-09-11	350.5	351.5	IN	VU	SIH	Rock	Drillcore	ALS Chemex	1.88	VA09124617		8.9	8.8	2.27	2.19	2.26	2.242	0.02	0.005	0.0177
Barrel 10	Sulphurets	S-09-11_11	S-09-11	354.5	355.5	IN	VU	SIH	Rock	Drillcore	ALS Chemex	1.78	VA09124617		9.0	8.9	2.79	2.70	2.78	2.765	0.03	0.005	0.0154
Barrel 10	Sulphurets	S-09-11_12	S-09-11	358.5	359.5	IN	VU	SIH	Rock	Drillcore	ALS Chemex	1.74	VA09124617		8.9	8.8	2.21	2.11	2.20	2.179	0.06	0.005	0.0212
Barrel 10	Sulphurets	S-09-11_13	S-09-11	362.5	363.5	IN	VU	SIH	Rock	Drillcore	ALS Chemex	1.62	VA09124617		8.7	8.9	1.11	1.03	1.10	1.060	0.03	0.005	0.0397
Barrel 10	Sulphurets	S-09-11_14	S-09-11	366.5	367.5	IN	VU	SIH	Rock	Drillcore	ALS Chemex	1.96	VA09124617		8.7	8.6	2.22	2.22	2.21	2.220	0.02	0.005	0.0222
Barrel 10	Sulphurets	S-09-11_15	S-09-11	370.5	371.5	OUT	VU	SIH	Rock	Drillcore	ALS Chemex	1.9	VA09124617		8.8	8.8	1.87	1.78	1.86	1.831	0.03	0.005	0.0292
Barrel 11	Sulphurets	S-08-06_10	S-08-06	382.5	383.5	IN	SARG	CL	Rock	Drillcore	ALS Chemex	1.96	VA09124617		9.0	8.9	1.74	1.76	1.73	1.760	0.03	0.01	0.0310
Barrel 11	Sulphurets	S-08-06_11	S-08-06	386.5	387.5	IN	SARG	CL	Rock	Drillcore	ALS Chemex	2.62	VA09124617		8.7	8.5	2.93	2.83	2.92	2.910	0.02	0.005	0.0098
Barrel 11	Sulphurets	S-08-06_12	S-08-06	390.5	391.5	IN	SARG	CL	Rock	Drillcore	ALS Chemex	1.96	VA09124617		9.3	9.2	0.60	0.50	0.59	0.569	0.005	0.005	0.0210
Barrel 11	Kerr	K-09-03_1	K-09-03	136.5	137.5	0	0	0	Rock	Drillcore	ALS Chemex	3.38	VA09116128		6.2	6.9	8.98	8.28	8.85	8.849	0.15	0.13	0.0012
Barrel 11	Kerr	K-09-03_2	K-09-03	140.5	141.5	0	0	0	Rock	Drillcore	ALS Chemex	3.4	VA09116128		7.1	7.6	7.13	6.42	7.12	7.119	0.05	0.005	0.0012
Barrel 11	Kerr	K-09-03_3	K-09-03	144.5	145.5	0	0	0	Rock	Drillcore	ALS Chemex	3.7	VA09116128		9.0	8.6	0.06	0.03	0.05	0.030	0.07	0.01	0.0499
Barrel 11	Kerr	K-09-03_4	K-09-03	148.5	149.5	0	0	0	Rock	Drillcore	ALS Chemex	3.24	VA09116128		8.8	8.5	0.05	0.02	0.00	0.020	0.06	0.05	0.0593
Barrel 11	Kerr	K-09-03_5	K-09-03	152.5	153.5	0	0	0	Rock	Drillcore	ALS Chemex	3.32	VA09116128		9.1	8.7	0.05	0.03	0.02	0.030	0.05	0.03	0.0661
Barrel 11	Kerr	K-09-03_6	K-09-03	156.5	157.5	0	0	0	Rock	Drillcore	ALS Chemex	3.16	VA09116128		9.0	8.6	0.06	0.02	0.02	0.020	0.04	0.04	0.0642
Barrel 11	Kerr	K-09-04_1	K-09-04	102.5	103.5	0	0	0	Rock	Drillcore	ALS Chemex	4.1	VA09116129		6.2	6.5	9.76	8.10	9.70	9.699	0.15	0.06	0.0009
Barrel 11	Kerr	K-09-04_2	K-09-04	106.5	107.5	0	0	0	Rock	Drillcore	ALS Chemex	4.14	VA09116129		6.4	6.6	10.10	8.54	9.89	9.889	0.22	0.21	0.0007
Barrel 11	Kerr	K-09-04_3	K-09-04	110.5	111.5	0	0	0	Rock	Drillcore	ALS Chemex	3.14	VA09116129		7.4	6.8	6.97	5.85	6.84	6.839	0.21	0.13	0.0012
Barrel 11	Kerr	K-09-04_4	K-09-04	114.5	115.5	0	0	0	Rock	Drillcore	ALS Chemex	2.8	VA09116129		6.5	6.7	9.98	8.62	9.76	9.759	0.29	0.22	0.0007
Barrel 11	Kerr	K-09-04_7	K-09-04	126.5	127.5	0	0	0	Rock	Drillcore	ALS Chemex	4.22	VA09116129		6.0	6.3	9.53	9.36	9.43	9.429	0.2	0.1	0.0007
Barrel 11	Kerr	K-09-04_5	K-09-04	120.5	121.5	0	0	0	Rock	Drillcore	ALS Chemex	3.28	VA09116129		7.1	7.0	7.93	6.74	7.53	7.529	0.46	0.4	0.0009
Barrel 11	Kerr	K-09-04_6	K-09-04	123.5	124.5	0	0	0	Rock	Drillcore	ALS Chemex	1.98	VA09116129		8.1	8.0	0.82	0.04	0.07	0.040	0.8	0.75	0.0299
Barrel 11	Sulphurets	S-08-06_1	S-08-06	42.5	43.5	IN	VULT	CL	Rock	Drillcore	ALS Chemex	1.6	VA09124617		8.6	8.6	2.14	2.05	2.13	2.110	0.06	0.005	0.0198
Barrel 11	Sulphurets	S-08-06_2	S-08-06	46.5	47.5	IN	VULT	CL	Rock	Drillcore	ALS Chemex	2.32	VA09124617		8.3	8.8	0.45	0.39	0.44	0.395	0.04	0.01	0.0448
Barrel 11	Sulphurets	S-08-06_3	S-08-06	50.5	51.5	IN	VULT	CL	Rock	Drillcore	ALS Chemex	1.9	VA09124617		8.4	8.4	1.20	1.21	1.19	1.210	0.05	0.01	0.0464
Barrel 11	Sulphurets	S-08-06_4	S-08-06	252.5	253.5	IN	VUTF	CL	Rock	Drillcore	ALS Chemex	1.68	VA09124617		9.0	9.0	1.28	1.21	1.24	1.210	0.08	0.04	0.0542
Barrel 11	Sulphurets	S-08-06_5	S-08-06	256.5	257.5	IN	VUTF	CL	Rock	Drillcore	ALS Chemex	1.9	VA09124617		8.7	8.6	2.05	1.99	1.97	1.990	0.12	0.08	0.0142
Barrel 11	Sulphurets	S-08-06_6	S-08-06	298.5	299.5	IN	PSBX	CL	Rock	Drillcore	ALS Chemex	1.7	VA09124617		9.2	8.8	0.49	0.46	0.48	0.460	0.02	0.01	0.0481
Barrel 11	Sulphurets	S-08-06_7	S-08-06	312.5	313.5	IN	VU	CL	Rock	Drillcore	ALS Chemex	2.28	VA09124617		8.9	8.8	3.10	3.04	3.09	3.083	0.05	0.005	0.0072
Barrel 11	Sulphurets	S-08-06_9	S-08-06	378.5	379.5	IN	SARG	CL	Rock	Drillcore	ALS Chemex	2.36	VA09124617		8.8	8.5	1.75	1.67	1.74	1.721	0.02	0.01	0.0189

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	S_DEL (%)	S_DEL_CAL (%)	TAP (%)	SAP ($kg CaCO_3$ /t)	SAP (S Del Calc) ($kg CaCO_3$ /t)	NP ($kg CaCO_3$ /t)	NP_ADJ ($kg CaCO_3$ /t)	UNP	Total C (%)	Inorganic C (%)	Inorganic CO2 (%)	C_DEL_ CALC (%)	CANP_ TTL (%)	CANP_ INORG (%)	CANP_ CA (%)	CANP_ CAMG (%)	TNNP ($kg CaCO_3$ /t)
Barrel 9	Kerr	K-09-02_12	K-09-02	82.5	83.5	-0.1623	0.0000	195.30	200	200.00	8	0.0	8	0.01	0.03	0.1	-0.040	0.8	4.6	7.5	15.2	-187.3
Barrel 9	Kerr	K-09-02_13	K-09-02	86.5	87.5	0.7177	0.7177	230.00	207.1875	229.62	7	0.0	7	0.01	0.03	0.1	-0.040	0.8	4.6	7.2	15.8	-223.0
Barrel 9	Kerr	K-09-02_14	K-09-02	90.5	91.5	0.4584	0.4584	243.10	227.5	241.83	9	0.0	9	0.01	0.03	0.1	-0.040	0.8	4.6	9.0	16.3	-234.1
Barrel 9	Kerr	K-09-02_15	K-09-02	94.5	95.5	0.1981	0.1981	249.10	241.875	248.07	8	0.0	8	0.01	0.03	0.1	-0.040	0.8	4.6	9.0	19.8	-241.1
Barrel 9	Kerr	K-09-02_16	K-09-02	152.5	153.5	0.1143	0.1143	161.20	64.6875	68.26	19	4.0	15	0.14	0.13	0.5	0.010	11.7	11.4	103.1	156.9	-142.2
Barrel 9	Kerr	K-09-02_17	K-09-02	156.5	157.5	0.2681	0.2681	334.40	142.5	150.88	9	0.0	9	0.04	0.05	0.2	-0.010	3.3	4.6	185.5	221.6	-325.4
Barrel 9	Kerr	K-09-02_18	K-09-02	160.5	161.5	0.3177	0.3177	238.10	137.8125	147.74	7	0.0	7	0.01	0.03	0.1	-0.040	0.8	4.6	92.2	112.8	-231.1
Barrel 9	Kerr	K-09-02_19	K-09-02	164.5	165.5	0.7117	0.7117	194.40	91.25	113.49	11	0.0	11	0.04	0.03	0.1	-0.010	3.3	4.6	96.6	160.6	-183.4
Barrel 10	Sulphurets	S-09-11_16	S-09-11	374.5	375.5	0.1279	0.1279	114.40	109.6875	113.68	147	132.0	15	1.57	1.54	5.7	0.030	130.8	130.0	123.6	237.7	32.6
Barrel 10	Sulphurets	S-09-11_17	S-09-11	378.5	379.5	0.0841	0.0841	52.50	48.75	51.38	61	46.0	15	0.67	0.57	2.1	0.100	55.8	47.8	59.7	114.5	8.5
Barrel 10	Sulphurets	S-09-10_1	S-09-10	422.5	423.5	0.0727	0.0727	55.00	51.25	53.52	74	59.0	15	0.86	0.49	1.8	0.370	71.7	40.9	65.9	110.0	19.0
Barrel 10	Sulphurets	S-09-10_2	S-09-10	426.5	427.5	0.1148	0.1148	84.06	79.6875	83.28	42	27.0	15	0.45	0.36	1.3	0.090	37.5	29.6	38.7	67.3	-42.1
Barrel 10	Sulphurets	S-09-10_3	S-09-10	432.5	433.5	0.2569	0.2569	96.25	87.5	95.53	18	3.0	15	0.15	0.09	0.3	0.060	12.5	6.8	13.5	38.1	-78.3
Barrel 10	Sulphurets	S-09-10_4	S-09-10	436.5	437.5	0.1532	0.1532	69.69	64.0625	68.85	18	3.0	15	0.27	0.20	0.7	0.070	22.5	15.9	20.0	31.5	-51.7
Barrel 10	Sulphurets	S-09-09_12	S-09-09	68.5	69.5	0.0235	0.0235	27.50	23.4375	24.17	97	82.0	15	1.05	1.01	3.7	0.040	87.5	84.1	95.6	142.9	69.5
Barrel 10	Sulphurets	S-09-09_13	S-09-09	72.5	73.5	-0.1901	0.0000	4.69	3.4375	3.44	65	50.0	15	0.68	0.65	2.4	0.030	56.7	54.6	64.4	87.3	60.3
Barrel 10	Sulphurets	S-09-09_14	S-09-09	76.5	77.5	-0.0775	0.0000	5.00	4.375	4.38	84	69.0	15	0.86	0.86	3.2	0.000	71.7	72.8	75.4	103.1	79.0
Barrel 10	Sulphurets	S-09-09_15	S-09-09	80.5	81.5	-0.0548	0.0000	11.56	9.375	9.38	69	54.0	15	0.65	0.69	2.5	-0.040	54.2	56.9	62.7	90.8	57.4
Barrel 10	Sulphurets	S-09-09_16	S-09-09	84.5	85.5	-0.0377	0.0000	4.06	2.5	2.50	64	49.0	15	0.71	0.65	2.4	0.060	59.2	54.6	63.2	94.8	59.9
Barrel 10	Sulphurets	S-09-09_17	S-09-09	88.5	89.5	-0.0189	0.0000	15.60	13.4375	13.44	69	54.0	15	0.66	0.66	2.4	0.000	55.0	54.6	58.4	92.2	53.4
Barrel 10	Sulphurets	S-09-09_18	S-09-09	92.5	93.5	0.0128	0.0128	12.50	9.6875	10.09	78	63.0	15	0.75	0.79	2.9	-0.040	62.5	66.0	69.9	103.0	65.5
Barrel 10	Sulphurets	S-09-09_19	S-09-09	96.5	97.5	-0.0291	0.0000	16.88	15.3125	15.31	72	57.0	15	0.63	0.65	2.4	-0.020	52.5	54.6	58.2	93.1	55.1
Barrel 10	Sulphurets	S-09-09_20	S-09-09	100.5	101.5	-0.0368	0.0000	15.00	13.125	13.13	83	68.0	15	0.81	0.86	3.2	-0.050	67.5	72.8	74.4	114.8	68.0
Barrel 10	Sulphurets	S-09-09_21	S-09-09	104.5	105.5	-0.0376	0.0000	10.00	8.125	8.13	93	78.0	15	1.03	0.94	3.4	0.090	85.8	77.3	84.7	122.8	83.0
Barrel 10	Sulphurets	S-09-09_22	S-09-09	108.5	109.5	0.0357	0.0357	33.75	30	31.11	158	143.0	15	1.79	1.72	6.3	0.070	149.2	143.0	150.1	222.2	124.2
Barrel 10	Sulphurets	S-09-09_23	S-09-09	112.5	113.5	0.0521	0.0521	21.90	18.125	19.75	44	29.0	15	0.41	0.44	1.6	-0.030	34.2	36.4	41.5	77.6	22.1
Barrel 10	Sulphurets	S-09-11_2	S-09-11	146.5	147.5	0.0646	0.0646	66.25	63.125	65.14	62	47.0	15	0.69	0.60	2.2	0.090	57.5	50.0	61.2	102.2	-4.3
Barrel 10	Sulphurets	S-09-11_3	S-09-11	150.5	151.5	0.0660	0.0660	84.40	81.25	83.31	40	25.0	15	0.40	0.38	1.4	0.020	33.3	31.8	44.0	82.2	-44.4
Barrel 10	Sulphurets	S-09-11_4	S-09-11	154.5	155.5	0.3216	0.3216	71.25	59.375	69.43	102	87.0	15	0.98	0.95	3.5	0.030	81.7	79.6	97.1	160.9	30.8
Barrel 10	Sulphurets	S-09-11_5	S-09-11	184.5	185.5	0.0564	0.0564	26.88	23.75	25.51	50	35.0	15	0.52	0.48	1.8	0.040	43.3	40.9	47.4	102.2	23.1
Barrel 10	Sulphurets	S-09-11_6	S-09-11	334.5	335.5	0.0022	0.0022	65.60	64.375	64.44	36	21.0	15	0.37	0.33	1.2	0.040	30.8	27.3	28.5	75.9	-29.6
Barrel 10	Sulphurets	S-09-11_7	S-09-11	338.5	339.5	0.0113	0.0113	36.56	35.3125	35.67	40	25.0	15	0.40	0.36	1.3	0.040	33.3	29.6	28.2	88.2	3.4
Barrel 10	Sulphurets	S-09-11_8	S-09-11	342.5	343.5	0.0797	0.0797	96.25	93.125	95.62	56	41.0	15	0.63	0.10	0.4	0.530	52.5	9.1	38.5	89.3	-40.3
Barrel 10	Sulphurets	S-09-11_9	S-09-11	346.5	347.5	-0.0413	0.0000	25.62	25	25.00	50	35.0	15	0.56	0.47	1.7	0.090	46.7	38.7	38.5	89.9	24.4
Barrel 10	Sulphurets	S-09-11_10	S-09-11	350.5	351.5	0.0523	0.0523	70.94	68.4375	70.07	33	18.0	15	0.27	0.19	0.7	0.080	22.5	15.9	23.0	79.0	-37.9
Barrel 10	Sulphurets	S-09-11_11	S-09-11	354.5	355.5	0.0646	0.0646	87.19	84.375	86.39	47	32.0	15	0.46	0.46	1.7	0.000	38.3	38.7	40.2	85.3	-40.2
Barrel 10	Sulphurets	S-09-11_12	S-09-11	358.5	359.5	0.0688	0.0688	69.06	65.9375	68.09	40	25.0	15	0.40	0.38	1.4	0.020	33.3	31.8	34.2	75.3	-29.1
Barrel 10	Sulphurets	S-09-11_13	S-09-11	362.5	363.5	0.0303	0.0303	34.69	32.1875	33.14	26	11.0	15	0.15	0.15	0.6	0.000	12.5	13.6	23.0	57.8	-8.7
Barrel 10	Sulphurets	S-09-11_14	S-09-11	366.5	367.5	-0.0322	0.0000	69.38	69.375	69.38	151	136.0	15	1.68	1.56	5.7	0.120	140.0	130.0	105.4	181.3	81.6
Barrel 10	Sulphurets	S-09-11_15	S-09-11	370.5	371.5	0.0508	0.0508	58.44	55.625	57.21	62	47.0	15	0.66	0.63	2.3	0.030	55.0	52.3	58.7	115.1	3.6
Barrel 11	Sulphurets	S-08-06_10	S-08-06	382.5	383.5	-0.0610	0.0000	54.38	55	55.00	59	44.0	15	0.71	0.75	2.7	-0.040	59.2	61.4	52.2	100.8	4.6
Barrel 11	Sulphurets	S-08-06_11	S-08-06	386.5	387.5	0.0802	0.0802	91.56	88.4375	90.94	38	23.0	15	0.42	0.33	1.2	0.090	35.0	27.3	33.5	60.1	-53.6
Barrel 11	Sulphurets	S-08-06_12	S-08-06	390.5	391.5	0.0690	0.0690	18.80	15.625	17.78	52	37.0	15	0.39	0.33	1.2	0.060	32.5	27.3	36.0	103.4	33.2
Barrel 11	Kerr	K-09-03_1	K-09-03	136.5	137.5	0.5688	0.5688	280.60	258.75	276.53	8	0.0	8	0.03	0.03	0.2	-0.020	2.5	4.6	13.2	33.2	-272.6
Barrel 11	Kerr	K-09-03_2	K-09-03	140.5	141.5	0.6988	0.6988	222.80	200.625	222.46	15		15	0.12	0.15	0.5	-0.030	10.0	11.4	13.2	31.5	-207.8
Barrel 11	Kerr	K-09-03_3	K-09-03	144.5	145.5	-0.0299	0.0000	1.88	0.9375	0.94	100	85.0	15	1.04	1.06	3.9	-0.020	86.7	88.7	88.7	154.6	98.1
Barrel 11	Kerr	K-09-03_4	K-09-03	148.5	149.5	-0.0793	0.0000	1.56	0.625	0.63	142	127.0	15	1.45	1.47	5.4	-0.020	120.8	123.0	116.6	164.4	140.4
Barrel 11	Kerr	K-09-03_5	K-09-03	152.5	153.5	-0.0761	0.0000	1.56	0.9375	0.94	123	108.0	15	1.46	1.42	5.2	0.040	121.7	118.0	117.6	164.9	121.4
Barrel 11	Kerr	K-09-03_6	K-09-03	156.5	157.5	-0.0642	0.0000	1.88	0.625	0.63	128	113.0	15	1.32	1.26	4.6	0.060	110.0	105.0	110.4	168.1	126.1
Barrel 11	Kerr	K-09-04_1	K-09-04	102.5	103.5	1.5990	1.5990	305.00	253.125	303.09	8	0.0	8	0.01	0.03	0.1	-0.040	0.8	4.6	11.0	18.3	-297.0
Barrel 11	Kerr	K-09-04_2	K-09-04	106.5	107.5	1.3490	1.3490	315.60	266.875	309.03	0	0.0	0	0.01	0.03	0.1	-0.040	0.8	4.6	12.5	20.9	-315.6
Barrel 11	Kerr	K-09-04_3	K-09-04	110.5	111.5	0.9888	0.9888	217.80	182.8125	213.71	5	0.0	5	0.02	0.03	0.1	-0.030	1.7	4.6	14.0	73.0	-212.8
Barrel 11	Kerr	K-09-04_4	K-09-04	114.5	115.5	1.1390	1.1390	311.90	269.375	304.97	12	0.0	12	0.04	0.05	0.2	-0.010	3.3	4.6	20.0	51.5	-299.9
Barrel 11	Kerr	K-09-04_7	K-09-04	126.5	127.5	0.0693	0.0693	297.80	292.5	294.67	5	0.0	5	0.01	0.03	0.1	-0.040	0.8	4.6	9.5	19.8	-292.8
Barrel 11	Kerr	K-09-04_5	K-09-04	120.5	121.5	0.7891	0.7891	247.80	210.625	235.28	10	0.0	10	0.01	0.03	0.1	-0.040	0.8	4.6	22.7	60.7	-237.8
Barrel 11	Kerr	K-09-04_6	K-09-04	123.5	124.5	0.0001	0.0001	25.62	1.25	1.25	118	103.0	15	1.18	1.16	4.3	0.020	98.3	97.8	106.9	238.0	92.4
Barrel 11	Sulphurets	S-08-06_1	S-08-06	42.5	43.5	0.0602	0.0602	66.88	64.0625	65.94	25	10.0	15	0.91	0.92	3.4	-0.010	75.8	77.3	81.9	144.3	-41.9
Barrel 11	Sulphurets	S-08-06_2	S-08-06	46.5	47.5	0.0052	0.0052	14.06	12.1875	12.35	74	59.0	15	0.80	0.82	3.0	-0.020	66.7	68.2	70.9	112.0	59.9
Barrel 11	Sulphurets	S-08-06_3	S-08-06	50.5	51.5	-0.0664	0.0000	37.50	37.8125	37.81	66	51.0	15	0.73	0.74	2.7	-0.010	60.8	61.4	67.4	116.0	28.5
Barrel 11	Sulphurets	S-08-06_4	S-08-06	252.5	253.5	-0.0242	0.0000	40.00	37.8125	37.81	88	73.0	15	0.85	0.88	3.2	-0.030	70.8	72.8	76.7	152.6	48.0
Barrel 11	Sulphurets	S-08-06_5	S-08-06	256.5	257.5	-0.0342	0.0000	64.06	62.1875	62.19	90	75.0	15	0.96	0.98	3.6	-0.020	80.0	81.9	81.7	141.7	25.9
Barrel 11	Sulphurets	S-08-06_6	S-08-06	298.5	299.5	-0.0281	0.0000	15.31	14.375	14.38	206	191.0	15	2.83	2.79	10.2	0.040	235.8	232.0	123.1	199.6	190.7
Barrel 11	Sulphurets	S-08-06_7	S-08-06	312.5	313.5	0.0428	0.0428	96.90	95	96.34	41	26.0	15	0.40	0.44	1.6	-0.040	33.3	36.4	40.0	71.9	-55.9
Barrel 11	Sulphurets	S-08-06_9	S-08-06	378.5	379.5	0.0511	0.0511	54.69	52.1875	53.78	164	149.0	15	2.77	1.82	6.7	0.950	230.8	152.0	61.7	110.0	109.3

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	TNNP_ADJ (kg $CaCO_3$ /t)	SNNP (kg $CaCO_3$ /t)	SNNP_ADJ (kg $CaCO_3$ /t)	ICNNP (kg $CaCO_3$ /t)	TNPR	TNPR_ ADJ	SNPR	SNPR (S DEL CALC)	SNPR for graphs	SNPR_ADJ for graphs	ICNPR	Fizz Rating	Fizz Check	Ag (ppm)	Al (ppm)	Al (%)	As (ppm)	Ba (ppm)
Barrel 9	Kerr	K-09-02_12	K-09-02	82.5	83.5	-202.3	-192.00	-207.0	-190.8	-187.3	-202.3	0.04	0.04	0.04	0.00	0.02	1	Disagree	1.3	80100	8.01	29.2	100
Barrel 9	Kerr	K-09-02_13	K-09-02	86.5	87.5	-238.0	-222.62	-237.6	-225.5	-223.0	-238.0	0.03	0.03	0.03	0.00	0.02	1	Disagree	0.46	83000	8.3	12.3	100
Barrel 9	Kerr	K-09-02_14	K-09-02	90.5	91.5	-249.1	-232.83	-247.8	-238.6	-234.1	-249.1	0.04	0.04	0.04	0.00	0.02	1	Disagree	0.33	74800	7.48	15.4	70
Barrel 9	Kerr	K-09-02_15	K-09-02	94.5	95.5	-256.1	-240.07	-255.1	-244.5	-241.1	-256.1	0.03	0.03	0.03	0.00	0.02	1	Disagree	0.71	82300	8.23	19	80
Barrel 9	Kerr	K-09-02_16	K-09-02	152.5	153.5	-157.2	-49.26	-64.3	-149.9	-142.2	-157.2	0.29	0.28	0.29	0.06	0.07	1	Disagree	0.5	74700	7.47	4.4	1960
Barrel 9	Kerr	K-09-02_17	K-09-02	156.5	157.5	-340.4	-141.88	-156.9	-329.8	-325.4	-340.4	0.06	0.06	0.06	0.00	0.01	1	Disagree	0.68	59600	5.96	9.2	80
Barrel 9	Kerr	K-09-02_18	K-09-02	160.5	161.5	-246.1	-140.74	-155.7	-233.6	-231.1	-246.1	0.05	0.05	0.05	0.00	0.02	1	Disagree	1.98	68000	6.8	442	100
Barrel 9	Kerr	K-09-02_19	K-09-02	164.5	165.5	-198.4	-102.49	-117.5	-189.8	-183.4	-198.4	0.12	0.10	0.12	0.00	0.02	1	Disagree	0.54	67000	6.7	5.7	1640
Barrel 10	Sulphurets	S-09-11_16	S-09-11	374.5	375.5	17.6	33.32	18.3	15.3	32.6	17.6	1.34	1.29	1.34	1.20	1.13	3	Disagree	0.49	65300	6.53	35.3	520
Barrel 10	Sulphurets	S-09-11_17	S-09-11	378.5	379.5	-6.5	9.62	-5.4	-4.7	8.5	-6.5	1.25	1.19	1.25	0.94	0.91	2	Disagree	0.3	78800	7.88	23.7	1110
Barrel 10	Sulphurets	S-09-10_1	S-09-10	422.5	423.5	4.0	20.48	5.5	-14.1	19.0	4.0	1.44	1.38	1.44	1.15	0.74	2	Disagree	0.57	73900	7.39	49.2	1600
Barrel 10	Sulphurets	S-09-10_2	S-09-10	426.5	427.5	-57.1	-41.28	-56.3	-54.5	-42.1	-57.1	0.53	0.50	0.53	0.34	0.35	2	Disagree	0.38	71200	7.12	72	650
Barrel 10	Sulphurets	S-09-10_3	S-09-10	432.5	433.5	-93.3	-77.53	-92.5	-89.4	-78.3	-93.3	0.21	0.19	0.21	0.03	0.07	2	Disagree	2.28	67000	6.7	41.4	560
Barrel 10	Sulphurets	S-09-10_4	S-09-10	436.5	437.5	-66.7	-50.85	-65.9	-53.8	-51.7	-66.7	0.28	0.26	0.28	0.05	0.23	2	Disagree	2.2	71500	7.15	80.3	720
Barrel 10	Sulphurets	S-09-09_12	S-09-09	68.5	69.5	54.5	72.83	57.8	56.7	69.5	54.5	4.14	4.01	4.14	3.50	3.06	3	Disagree	0.89	75300	7.53	18.1	3280
Barrel 10	Sulphurets	S-09-09_13	S-09-09	72.5	73.5	45.3	61.56	46.6	49.9	60.3	45.3	18.91	18.91	18.91	14.55	11.64	3	Disagree	0.16	75600	7.56	2.2	3430
Barrel 10	Sulphurets	S-09-09_14	S-09-09	76.5	77.5	64.0	79.63	64.6	67.8	79.0	64.0	19.20	19.20	19.20	15.77	14.56	3	Disagree	0.22	76200	7.62	2.8	3320
Barrel 10	Sulphurets	S-09-09_15	S-09-09	80.5	81.5	42.4	59.63	44.6	45.3	57.4	42.4	7.36	7.36	7.36	5.76	4.92	3	Disagree	0.13	76700	7.67	3.6	4060
Barrel 10	Sulphurets	S-09-09_16	S-09-09	84.5	85.5	44.9	61.50	46.5	50.5	59.9	44.9	25.60	25.60	25.60	19.60	13.44	3	Disagree	0.31	68400	6.84	2.4	3330
Barrel 10	Sulphurets	S-09-09_17	S-09-09	88.5	89.5	38.4	55.56	40.6	39.0	53.4	38.4	5.13	5.13	5.13	4.02	3.49	3	Disagree	0.76	74400	7.44	5.2	2950
Barrel 10	Sulphurets	S-09-09_18	S-09-09	92.5	93.5	50.5	67.91	52.9	53.5	65.5	50.5	8.05	7.73	8.05	6.50	5.28	3	Disagree	0.35	74400	7.44	4.9	2880
Barrel 10	Sulphurets	S-09-09_19	S-09-09	96.5	97.5	40.1	56.69	41.7	37.7	55.1	40.1	4.70	4.70	4.70	3.72	3.23	3	Disagree	0.35	72800	7.28	14.7	2960
Barrel 10	Sulphurets	S-09-09_20	S-09-09	100.5	101.5	53.0	69.88	54.9	57.8	68.0	53.0	6.32	6.32	6.32	5.18	4.85	3	Disagree	0.32	73800	7.38	7.9	3290
Barrel 10	Sulphurets	S-09-09_21	S-09-09	104.5	105.5	68.0	84.88	69.9	67.3	83.0	68.0	11.45	11.45	11.45	9.60	7.73	3	Disagree	0.43	65700	6.57	23.8	2040
Barrel 10	Sulphurets	S-09-09_22	S-09-09	108.5	109.5	109.2	126.89	111.9	109.5	124.2	109.2	5.27	5.08	5.27	4.77	4.25	3	Disagree	0.5	67100	6.71	23.8	1900
Barrel 10	Sulphurets	S-09-09_23	S-09-09	112.5	113.5	7.1	24.25	9.2	14.5	22.1	7.1	2.43	2.23	2.43	1.60	1.66	3	Disagree	0.67	78200	7.82	17.2	2480
Barrel 10	Sulphurets	S-09-11_2	S-09-11	146.5	147.5	-19.3	-3.14	-18.1	-16.2	-4.3	-19.3	0.98	0.95	0.98	0.74	0.76	2	Disagree	1.34	82100	8.21	52.1	1090
Barrel 10	Sulphurets	S-09-11_3	S-09-11	150.5	151.5	-59.4	-43.31	-58.3	-52.5	-44.4	-59.4	0.49	0.48	0.49	0.31	0.38	2	Disagree	1.21	89500	8.95	65.5	1030
Barrel 10	Sulphurets	S-09-11_4	S-09-11	154.5	155.5	15.8	32.58	17.6	8.3	30.8	15.8	1.72	1.47	1.72	1.47	1.12	3	Disagree	1	80200	8.02	42.5	790
Barrel 10	Sulphurets	S-09-11_5	S-09-11	184.5	185.5	8.1	24.49	9.5	14.1	23.1	8.1	2.11	1.96	2.11	1.47	1.52	2	Disagree	0.55	77100	7.71	17.4	1440
Barrel 10	Sulphurets	S-09-11_6	S-09-11	334.5	335.5	-44.6	-28.44	-43.4	-38.3	-29.6	-44.6	0.56	0.56	0.56	0.33	0.42	2	Disagree	0.84	73700	7.37	13.7	1190
Barrel 10	Sulphurets	S-09-11_7	S-09-11	338.5	339.5	-11.6	4.33	-10.7	-7.0	3.4	-11.6	1.13	1.12	1.13	0.71	0.81	2	Disagree	0.44	79500	7.95	6.5	800
Barrel 10	Sulphurets	S-09-11_8	S-09-11	342.5	343.5	-55.3	-39.62	-54.6	-87.2	-40.3	-55.3	0.60	0.59	0.60	0.44	0.09	2	Disagree	1.58	71000	7.1	33.1	440
Barrel 10	Sulphurets	S-09-11_9	S-09-11	346.5	347.5	9.4	25.00	10.0	13.0	24.4	9.4	2.00	2.00	2.00	1.40	1.51	2	Disagree	1.2	73800	7.38	16.1	2200
Barrel 10	Sulphurets	S-09-11_10	S-09-11	350.5	351.5	-52.9	-37.07	-52.1	-55.0	-37.9	-52.9	0.48	0.47	0.48	0.26	0.22	2	Disagree	0.33	78300	7.83	11.2	760
Barrel 10	Sulphurets	S-09-11_11	S-09-11	354.5	355.5	-55.2	-39.39	-54.4	-48.5	-40.2	-55.2	0.56	0.54	0.56	0.38	0.44	2	Disagree	0.32	78300	7.83	14.9	660
Barrel 10	Sulphurets	S-09-11_12	S-09-11	358.5	359.5	-44.1	-28.09	-43.1	-37.2	-29.1	-44.1	0.61	0.59	0.61	0.38	0.46	2	Disagree	0.76	74900	7.49	14.1	910
Barrel 10	Sulphurets	S-09-11_13	S-09-11	362.5	363.5	-23.7	-7.14	-22.1	-21.0	-8.7	-23.7	0.81	0.78	0.81	0.34	0.39	2	Disagree	3.06	74700	7.47	27.8	1700
Barrel 10	Sulphurets	S-09-11_14	S-09-11	366.5	367.5	66.6	81.63	66.6	60.3	81.6	66.6	2.18	2.18	2.18	1.96	1.87	3	Disagree	0.22	70500	7.05	18.9	950
Barrel 10	Sulphurets	S-09-11_15	S-09-11	370.5	371.5	-11.4	4.79	-10.2	-6.1	3.6	-11.4	1.11	1.08	1.11	0.84	0.90	2	Disagree	0.4	74700	7.47	19.5	1250
Barrel 11	Sulphurets	S-08-06_10	S-08-06	382.5	383.5	-10.4	4.00	-11.0	7.0	4.6	-10.4	1.07	1.07	1.07	0.80	1.13	3	Disagree	0.51	74500	7.45	25.2	1330
Barrel 11	Sulphurets	S-08-06_11	S-08-06	386.5	387.5	-68.6	-52.94	-67.9	-64.3	-53.6	-68.6	0.43	0.42	0.43	0.26	0.30	2	Disagree	0.89	69300	6.93	17.5	420
Barrel 11	Sulphurets	S-08-06_12	S-08-06	390.5	391.5	18.2	34.22	19.2	8.5	33.2	18.2	3.33	2.92	3.33	2.37	1.46	3	Disagree	0.08	80400	8.04	10.4	900
Barrel 11	Kerr	K-09-03_1	K-09-03	136.5	137.5	-287.6	-268.53	-283.5	-276.1	-272.6	-287.6	0.03	0.03	0.03	0.00	0.02	1	Disagree	1.05	76500	7.65	74.1	50
Barrel 11	Kerr	K-09-03_2	K-09-03	140.5	141.5	-222.8	-207.46	-222.5	-211.4	-207.8	-222.8	0.07	0.07	0.07		0.05	2	Disagree	0.69	50200	5.02	15.1	50
Barrel 11	Kerr	K-09-03_3	K-09-03	144.5	145.5	83.1	99.06	84.1	86.8	98.1	83.1	106.67	106.67	106.67	90.67	47.30	3	Disagree	0.1	83000	8.3	3.2	2140
Barrel 11	Kerr	K-09-03_4	K-09-03	148.5	149.5	125.4	141.38	126.4	121.2	140.4	125.4	227.20	227.20	227.20	203.20	78.60	3	Disagree	0.09	77700	7.77	3.1	2540
Barrel 11	Kerr	K-09-03_5	K-09-03	152.5	153.5	106.4	122.06	107.1	116.7	121.4	106.4	131.20	131.20	131.20	115.20	75.69	3	Disagree	0.07	78000	7.8	2.6	2830
Barrel 11	Kerr	K-09-03_6	K-09-03	156.5	157.5	111.1	127.38	112.4	102.7	126.1	111.1	204.80	204.80	204.80	180.80	55.80	3	Disagree	0.06	80000	8	2	2750
Barrel 11	Kerr	K-09-04_1	K-09-04	102.5	103.5	-312.0	-295.09	-310.1	-300.5	-297.0	-312.0	0.03	0.03	0.03	0.00	0.01	1	Disagree	0.73	80900	8.09	21.5	40
Barrel 11	Kerr	K-09-04_2	K-09-04	106.5	107.5	-330.6	-309.03	-324.0	-311.1	-315.6	-330.6	0.00	0.00	0.00	0.00	0.01	1	Disagree	0.77	67100	6.71	22.9	30
Barrel 11	Kerr	K-09-04_3	K-09-04	110.5	111.5	-227.8	-208.71	-223.7	-213.3	-212.8	-227.8	0.03	0.02	0.03	0.00	0.02	1	Disagree	0.59	70900	7.09	12.5	50
Barrel 11	Kerr	K-09-04_4	K-09-04	114.5	115.5	-314.9	-292.97	-308.0	-307.3	-299.9	-314.9	0.04	0.04	0.04	0.00	0.01	1	Disagree	0.79	70200	7.02	12.9	30
Barrel 11	Kerr	K-09-04_7	K-09-04	126.5	127.5	-307.8	-289.67	-304.7	-293.3	-292.8	-307.8	0.02	0.02	0.02	0.00	0.02	1	Disagree	0.77	71700	7.17	16.5	30
Barrel 11	Kerr	K-09-04_5	K-09-04	120.5	121.5	-252.8	-225.28	-240.3	-243.3	-237.8	-252.8	0.05	0.04	0.05	0.00	0.02	1	Disagree	0.49	73400	7.34	20.2	40
Barrel 11	Kerr	K-09-04_6	K-09-04	123.5	124.5	77.4	116.75	101.7	72.2	92.4	77.4	94.40	94.10	94.40	82.40	3.82	3	Disagree	0.08	64100	6.41	3.3	1280
Barrel 11	Sulphurets	S-08-06_1	S-08-06	42.5	43.5	-56.9	-40.94	-55.9	10.5	-41.9	-56.9	0.39	0.38	0.39	0.16	1.16	2	Disagree	1.27	70100	7.01	16.7	850
Barrel 11	Sulphurets	S-08-06_2	S-08-06	46.5	47.5	44.9	61.65	46.7	54.2	59.9	44.9	6.07	5.99	6.07	4.84	4.85	2	Disagree	0.6	67700	6.77	8.2	1920
Barrel 11	Sulphurets	S-08-06_3	S-08-06	50.5	51.5	13.5	28.19	13.2	23.9	28.5	13.5	1.75	1.75	1.75	1.35	1.64	2	Disagree	1.83	76900	7.69	50.7	1990
Barrel 11	Sulphurets	S-08-06_4	S-08-06	252.5	253.5	33.0	50.19	35.2	32.8	48.0	33.0	2.33	2.33	2.33	1.93	1.82	3	Disagree	0.86	75800	7.58	9.5	2320
Barrel 11	Sulphurets	S-08-06_5	S-08-06	256.5	257.5	10.9	27.81	12.8	17.8	25.9	10.9	1.45	1.45	1.45	1.21	1.28	3	Disagree	1.74	72900	7.29	16.2	610
Barrel 11	Sulphurets	S-08-06_6	S-08-06	298.5	299.5	175.7	191.63	176.6	216.7	190.7	175.7	14.33	14.33	14.33	13.29	15.15	3	Disagree	0.51	72600	7.26	10.4	2060
Barrel 11	Sulphurets	S-08-06_7	S-08-06	312.5	313.5	-70.9	-55.34	-70.3	-60.5	-55.9	-70.9	0.43	0.43	0.43	0.27	0.38	2	Disagree	0.32	81700	8.17	125.5	310
Barrel 11	Sulphurets	S-08-06_9	S-08-06	378.5	379.5	94.3	110.22	95.2	97.7	109.3	94.3	3.14	3.05	3.14	2.86	2.79	3	Disagree	0.7	54700	5.47	34.7	810

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Be (ppm)	Bi (ppm)	Ca (ppm)	Ca (%)	Cd (ppm)	Ce (ppm)	Co (ppm)	Cr (ppm)	Cs (ppm)	Cu (ppm)	Fe (ppm)	Fe (%)	Ga (ppm)	Ge (ppm)	Hf (ppm)	Hg (ppm)	In (ppm)	K (ppm)	K (%)	La (ppm)	Li (ppm)	Mg (ppm)	Mg (%)
Barrel 9	Kerr	K-09-02_12	K-09-02	82.5	83.5	0.43	0.46	3000	0.3	0.29	4.3	22.8	7	4.56	384	60200	6.02	16.5	0.23	0.6	0.56	0.065	37600	3.76	2	5.6	2300	0.23
Barrel 9	Kerr	K-09-02_13	K-09-02	86.5	87.5	0.46	0.61	2900	0.29	0.03	4.78	24	31	4.38	1140	67100	6.71	17.4	0.27	0.5	0.44	0.079	36600	3.66	2.2	6.7	2600	0.26
Barrel 9	Kerr	K-09-02_14	K-09-02	90.5	91.5	0.33	0.41	3600	0.36	0.04	6.17	24.8	32	3.98	478	70900	7.09	13.05	0.29	0.5	0.52	0.047	33700	3.37	2.8	5	2100	0.21
Barrel 9	Kerr	K-09-02_15	K-09-02	94.5	95.5	0.56	0.34	3600	0.36	0.14	6.12	32.4	69	4.76	3760	78800	7.88	17.6	0.32	0.4	0.19	0.186	37200	3.72	2.5	8.6	3300	0.33
Barrel 9	Kerr	K-09-02_16	K-09-02	152.5	153.5	0.52	0.13	41300	4.13	0.13	5.76	11.1	4	2.67	2720	43700	4.37	13.6	0.16	0.5	0.08	0.133	29600	2.96	3.2	19.5	13500	1.35
Barrel 9	Kerr	K-09-02_17	K-09-02	156.5	157.5	0.37	0.18	74300	7.43	0.15	9.48	14	4	2.38	3040	47100	4.71	12.25	0.19	0.3	0.09	0.144	28800	2.88	5	3.7	3100	0.31
Barrel 9	Kerr	K-09-02_18	K-09-02	160.5	161.5	0.47	0.66	36900	3.69	2.02	7.4	14	3	3.67	2840	43100	4.31	15.5	0.18	0.4	3.24	0.142	36000	3.6	3.7	2.6	2500	0.25
Barrel 9	Kerr	K-09-02_19	K-09-02	164.5	165.5	0.41	0.14	38700	3.87	0.06	5.81	11.6	8	2.55	2710	58300	5.83	14.05	0.18	0.3	0.06	0.159	22800	2.28	3.3	27.3	17400	1.74
Barrel 10	Sulphurets	S-09-11_16	S-09-11	374.5	375.5	1.65	0.25	49500	4.95	0.09	24.3	22.6	22	16.2	1170	82000	8.2	20.6	0.24	1.7	0.02	0.328	29300	2.93	16.1	55.5	33500	3.35
Barrel 10	Sulphurets	S-09-11_17	S-09-11	378.5	379.5	1.32	0.18	23900	2.39	0.06	35.3	22.7	33	7.4	799	50400	5.04	21.4	0.2	1.7	0.03	0.037	34000	3.4	17.7	17.7	16100	1.61
Barrel 10	Sulphurets	S-09-10_1	S-09-10	422.5	423.5	1.81	0.33	26400	2.64	0.79	38.2	16.7	36	8.47	5200	21700	2.17	20.7	0.09	2.2	0.27	0.228	52100	5.21	22.9	32	12000	1.2
Barrel 10	Sulphurets	S-09-10_2	S-09-10	426.5	427.5	0.92	0.13	15500	1.55	0.42	24	18.8	52	5.77	1770	39400	3.94	16.3	0.18	0.8	0.12	0.07	45100	4.51	12.7	17.8	8000	0.8
Barrel 10	Sulphurets	S-09-10_3	S-09-10	432.5	433.5	0.9	0.58	5400	0.54	1.35	21.4	12.6	65	5.81	>10000	32600	3.26	18.05	0.18	0.5	0.2	0.664	46200	4.62	13.3	19.6	7900	0.79
Barrel 10	Sulphurets	S-09-10_4	S-09-10	436.5	437.5	1.12	0.24	8000	0.8	2.55	28.1	57.8	23	3.37	6270	24800	2.48	13.55	0.17	0.5	1.58	0.252	49100	4.91	18.1	6.1	3000	0.3
Barrel 10	Sulphurets	S-09-09_12	S-09-09	68.5	69.5	1.57	0.07	38300	3.83	0.11	18.7	15.8	29	6	1260	31600	3.16	19.15	0.15	1.5	0.05	0.083	48600	4.86	9.9	18.1	11600	1.16
Barrel 10	Sulphurets	S-09-09_13	S-09-09	72.5	73.5	1.27	0.04	25800	2.58	0.03	19	5.2	7	4.19	223	28500	2.85	21.7	0.12	1.6	0.01	0.047	47600	4.76	9.9	7.4	4700	0.47
Barrel 10	Sulphurets	S-09-09_14	S-09-09	76.5	77.5	1.34	0.04	30200	3.02	0.04	21.1	6.3	5	5.03	225	28300	2.83	22.5	0.14	1.7	0.01	0.038	49300	4.93	10.5	9	5800	0.58
Barrel 10	Sulphurets	S-09-09_15	S-09-09	80.5	81.5	1.57	0.03	25100	2.51	0.03	17.85	6.3	5	5.86	143	26700	2.67	23	0.12	1.9	0.03	0.036	47800	4.78	8.6	10.2	6600	0.66
Barrel 10	Sulphurets	S-09-09_16	S-09-09	84.5	85.5	0.9	0.29	25300	2.53	0.03	18.25	4.4	4	3.09	217	24200	2.42	19.35	0.13	1.4	0.02	0.04	47900	4.79	9.5	12.9	7800	0.78
Barrel 10	Sulphurets	S-09-09_17	S-09-09	88.5	89.5	1.11	0.15	23400	2.34	0.07	17.5	8.4	5	3.13	1150	25300	2.53	20.6	0.13	1.6	0.03	0.066	46400	4.64	9	13.3	8800	0.88
Barrel 10	Sulphurets	S-09-09_18	S-09-09	92.5	93.5	1.12	0.07	28000	2.8	0.03	21.2	6.4	5	3.1	611	28800	2.88	22.1	0.13	1.7	0.02	0.053	45300	4.53	10.6	11.6	8000	0.8
Barrel 10	Sulphurets	S-09-09_19	S-09-09	96.5	97.5	1.65	0.09	23300	2.33	0.02	21.1	7.5	4	4.33	352	24800	2.48	21.2	0.15	1.7	0.05	0.045	50400	5.04	10.6	14.4	9200	0.92
Barrel 10	Sulphurets	S-09-09_20	S-09-09	100.5	101.5	1.42	0.05	29800	2.98	0.04	20.4	9.7	4	4.43	326	26600	2.66	21.5	0.14	1.6	0.02	0.042	51500	5.15	9.9	14.6	10300	1.03
Barrel 10	Sulphurets	S-09-09_21	S-09-09	104.5	105.5	1.49	0.07	33900	3.39	0.06	17.75	8.1	4	3.58	349	18300	1.83	18.25	0.13	1.4	0.04	0.041	41800	4.18	10	14.3	9000	0.9
Barrel 10	Sulphurets	S-09-09_22	S-09-09	108.5	109.5	1.26	0.17	60100	6.01	0.09	24.5	8.5	3	3.59	313	35600	3.56	17	0.15	1.1	0.08	0.039	38900	3.89	14.5	20.5	17500	1.75
Barrel 10	Sulphurets	S-09-09_23	S-09-09	112.5	113.5	2.35	0.57	16600	1.66	0.07	22.4	7	7	7.56	456	28800	2.88	21.7	0.13	1.5	0.05	0.068	50500	5.05	12.4	16	10500	1.05
Barrel 10	Sulphurets	S-09-11_2	S-09-11	146.5	147.5	2.05	0.46	24500	2.45	2.02	21.6	25.7	32	6.56	651	38600	3.86	19.2	0.14	1.1	0.52	0.077	40500	4.05	10.3	11.1	11200	1.12
Barrel 10	Sulphurets	S-09-11_3	S-09-11	150.5	151.5	2.07	0.26	17600	1.76	0.09	36.4	27.9	32	7.02	878	41200	4.12	24.3	0.17	1.6	0.05	0.019	36800	3.68	17.6	9.3	11100	1.11
Barrel 10	Sulphurets	S-09-11_4	S-09-11	154.5	155.5	1.57	0.73	38900	3.89	1.04	21.9	21.1	28	5.06	652	51400	5.14	22.3	0.18	1.3	0.09	0.251	23400	2.34	10.2	12.7	17300	1.73
Barrel 10	Sulphurets	S-09-11_5	S-09-11	184.5	185.5	1.58	0.14	19000	1.9	1.24	31	14.9	40	6.27	2420	36600	3.66	22.6	0.15	1.6	0.17	0.101	33800	3.38	13.5	24.3	16700	1.67
Barrel 10	Sulphurets	S-09-11_6	S-09-11	334.5	335.5	1.2	0.41	11400	1.14	7	37.9	23.8	85	7.24	2110	32200	3.22	17.4	0.16	0.6	0.22	0.116	47100	4.71	22.8	29.8	15100	1.51
Barrel 10	Sulphurets	S-09-11_7	S-09-11	338.5	339.5	1.65	0.17	11300	1.13	4.8	25.2	19.4	132	9.5	1900	33000	3.3	21.7	0.16	0.8	0.17	0.071	41800	4.18	12.1	35.1	19500	1.95
Barrel 10	Sulphurets	S-09-11_8	S-09-11	342.5	343.5	1.13	0.17	15400	1.54	23	22.7	33	66	6.89	4880	46900	4.69	17.9	0.18	0.7	1.22	0.173	47000	4.7	10.9	25.4	15800	1.58
Barrel 10	Sulphurets	S-09-11_9	S-09-11	346.5	347.5	1.15	0.1	15400	1.54	4.12	26.6	15.4	57	5.72	4620	30000	3	19.6	0.13	0.9	0.23	0.139	48400	4.84	12.5	24.4	16000	1.6
Barrel 10	Sulphurets	S-09-11_10	S-09-11	350.5	351.5	2	0.09	9200	0.92	1.1	36	24.1	56	10.75	1320	50100	5.01	24.5	0.19	1.3	0.08	0.054	43500	4.35	16.5	33.1	18400	1.84
Barrel 10	Sulphurets	S-09-11_11	S-09-11	354.5	355.5	1.13	0.14	16100	1.61	2.51	26	24.1	38	5.86	1160	46100	4.61	21.3	0.16	0.8	0.16	0.042	31500	3.15	12.9	24.7	13700	1.37
Barrel 10	Sulphurets	S-09-11_12	S-09-11	358.5	359.5	1.33	0.31	13700	1.37	3.52	44.3	34.1	39	7.31	3200	37600	3.76	19.35	0.18	0.8	0.15	0.188	43700	4.37	24.3	24.4	12600	1.26
Barrel 10	Sulphurets	S-09-11_13	S-09-11	362.5	363.5	2.17	0.22	9200	0.92	0.38	48.7	7.6	23	6.75	2180	25400	2.54	18.4	0.14	0.7	0.04	0.098	52700	5.27	27.7	31.8	11000	1.1
Barrel 10	Sulphurets	S-09-11_14	S-09-11	366.5	367.5	1.64	0.19	42200	4.22	0.17	19.45	20.9	21	7.93	448	57700	5.77	17.6	0.19	1.2	0.03	0.129	41500	4.15	9.9	23	21100	2.11
Barrel 10	Sulphurets	S-09-11_15	S-09-11	370.5	371.5	1.69	0.18	23500	2.35	0.1	34	24.4	25	13.05	1200	52100	5.21	19.85	0.2	1.4	0.02	0.086	45200	4.52	19.3	23.9	16700	1.67
Barrel 11	Sulphurets	S-08-06_10	S-08-06	382.5	383.5	1.57	0.15	20900	2.09	2.75	26.2	20.4	29	8.26	2150	34600	3.46	18.8	0.16	0.9	0.33	0.094	47400	4.74	12.6	30.2	14300	1.43
Barrel 11	Sulphurets	S-08-06_11	S-08-06	386.5	387.5	1.05	1.63	13400	1.34	1.67	24.7	15.2	43	5.58	3100	37900	3.79	16.15	0.14	1.1	0.78	0.179	49100	4.91	12.5	15.1	7600	0.76
Barrel 11	Sulphurets	S-08-06_12	S-08-06	390.5	391.5	2.4	0.13	14400	1.44	0.13	32.4	13.9	37	12.1	126.5	48900	4.89	22.2	0.15	0.9	0.03	0.044	42800	4.28	15.6	32.3	21700	2.17
Barrel 11	Kerr	K-09-03_1	K-09-03	136.5	137.5	0.6	1.04	5300	0.53	0.56	2.85	26.7	23	3.23	2020	84800	8.48	14.15	0.25	0.4	2.64	0.199	32200	3.22	1.3	6.4	6300	0.63
Barrel 11	Kerr	K-09-03_2	K-09-03	140.5	141.5	0.43	0.25	5300	0.53	0.17	2.44	9.9	7	2.14	6090	67500	6.75	12.05	0.21	0.2	0.59	0.292	20700	2.07	1.1	5	5700	0.57
Barrel 11	Kerr	K-09-03_3	K-09-03	144.5	145.5	0.76	0.06	35500	3.55	0.13	26.5	8.4	2	2.92	15.2	39400	3.94	18.65	0.13	1.3	0.25	0.054	30400	3.04	13	25.8	18500	1.85
Barrel 11	Kerr	K-09-03_4	K-09-03	148.5	149.5	0.76	0.08	46700	4.67	0.16	22.2	7.9	2	3.63	17.1	37400	3.74	17.55	0.13	1.2	0.01	0.048	32100	3.21	10.5	15.5	10700	1.07
Barrel 11	Kerr	K-09-03_5	K-09-03	152.5	153.5	0.87	0.04	47100	4.71	0.25	22.5	8.3	2	4.11	3.7	37000	3.7	18.05	0.13	1.3	<0.01	0.048	33300	3.33	10.6	14.8	10500	1.05
Barrel 11	Kerr	K-09-03_6	K-09-03	156.5	157.5	0.86	0.04	44200	4.42	0.28	23.3	7.9	2	3.39	6.5	36900	3.69	18.15	0.12	1.6	0.02	0.05	30900	3.09	11.2	22.3	14500	1.45
Barrel 11	Kerr	K-09-04_1	K-09-04	102.5	103.5	1.16	1.07	4400	0.44	0.18	6.64	30.4	75	4.28	3510	81600	8.16	18.95	0.24	0.3	0.7	0.256	35300	3.53	2.5	2.1	2000	0.2
Barrel 11	Kerr	K-09-04_2	K-09-04	106.5	107.5	0.87	0.29	5000	0.5	0.09	3.59	31.9	145	3.3	5060	84600	8.46	15.15	0.29	0.4	0.33	0.31	28100	2.81	1.4	2.2	2300	0.23
Barrel 11	Kerr	K-09-04_3	K-09-04	110.5	111.5	0.73	0.11	5600	0.56	0.06	4.99	19.4	223	3.65	3910	74600	7.46	17.5	0.23	0.4	0.15	0.265	22100	2.21	2.1	29.8	19900	1.99
Barrel 11	Kerr	K-09-04_4	K-09-04	114.5	115.5	0.87	0.87	8000	0.8	0.09	4.12	20.7	50	3.81	4390	90700	9.07	16.6	0.26	0.4	0.15	0.296	26400	2.64	1.5	13.1	10000	1
Barrel 11	Kerr	K-09-04_7	K-09-04	126.5	127.5	0.74	0.22	3800	0.38	0.06	1.3	23.1	38	3.38	2740	91700	9.17	14.7	0.31	0.3	0.13	0.141	30700	3.07	<0.5	3.4	3100	0.31
Barrel 11	Kerr	K-09-04_5	K-09-04	120.5	121.5	1.01	0.25	9100	0.91	0.07	8.6	28.4	104	3.8	2210	78100	7.81	17	0.23	0.8	0.22	0.242	25800	2.58	3.6	16.5	12100	1.21
Barrel 11	Kerr	K-09-04_6	K-09-04	123.5	124.5	0.39	0.02	42800	4.28	0.13	23	23.6	74	1.25	61.3	62600	6.26	15.35	0.14	1.2	0.04	0.077	6800	0.68	10.3	68.9	40300	4.03
Barrel 11	Sulphurets	S-08-06_1	S-08-06	42.5	43.5	1.25	0.61	32800	3.28	0.02	21	16.8	3	6.2	1420	50800	5.08	17.65	0.15	0.6	0.06	0.079	40600	4.06	10.5	21.5	17600	1.76
Barrel 11	Sulphurets	S-08-06_2	S-08-06	46.5	47.5	1.42	0.11	28400	2.84	0.03	16.25	7.1	4	6.26	1380	25400	2.54	19.15	0.11	1	0.03	0.034	45100	4.51	7.3	11.6	10700	1.07
Barrel 11	Sulphurets	S-08-06_3	S-08-06	50.5	51.5	2.17	0.19	27000	2.7	0.07	17.45	15.8	13	8.93	970	33700	3.37	18.9	0.15	1.1	0.08	0.055	47700	4.77	8.9	16.2	13500	1.35
Barrel 11	Sulphurets	S-08-06_4	S-08-06	252.5	253.5	1.13	0.09	30700	3.07	0.02	13.6	32.3	23	2.61	1750	39500	3.95	17.65	0.14	0.8	0.04	0.066	32900	3.29	6.3	24.9	22600	2.26
Barrel 11	Sulphurets	S-08-06_5	S-08-06	256.5	257.5	1.78	0.21	32700	3.27	0.11	12.05	32.2	41	7.88	4230	41800	4.18	18.05	0.15	0.8	0.1	0.155	44200	4.42	5.8	28.8	16800	1.68
Barrel 11	Sulphurets	S-08-06_6	S-08-06	298.5	299.5	0.89	0.03	49300	4.93	0.14	16.25	14.8	46	4.28	2080	30700	3.07	14.7	0.11	0.7	0.08	0.064	30800	3.08	9	10.8	20400	2.04
Barrel 11	Sulphurets	S-08-06_7	S-08-06	312.5	313.5	1.65	0.67	16000	1.6	0.8	19	14.9	14	5.41	72.3	53200	5.32	18.85	0.18	0.8	0.11	0.19	43900	4.39	9.5	13.1	9100	0.91
Barrel 11	Sulphurets	S-08-06_9	S-08-06	378.5	379.5	0.63	0.57	24700	2.47	7.31	43.1	16	27	3.77	2420	99800	9.98	13.9	0.25	0.6	1.83	0.109	43700	4.37	24.5	15.3	13700	1.37

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Mn (ppm)	Mo (ppm)	Na (ppm)	Na (%)	Nb (ppm)	Ni (ppm)	P (%)	Pb (ppm)	Rb (ppm)	Re (ppm)	S (ppm)	S (%)	Sb (ppm)	Sc (ppm)	Se (ppm)	Sn (ppm)	Sr (ppm)	Ta (ppm)	Te (ppm)	Th (ppm)	Ti (ppm)	Ti (%)	Tl (ppm)
Barrel 9	Kerr	K-09-02_12	K-09-02	82.5	83.5	21	13.3	2100	0.21	3.1	5.1	0.149	4.1	92.6	0.048	63400	6.34	40.2	27.5	23	3.5	63.8	0.18	0.89	1.6	1110.0	0.111	2.59
Barrel 9	Kerr	K-09-02_13	K-09-02	86.5	87.5	26	13.1	2100	0.21	2.2	15.8	0.142	6.7	92	0.074	69300	6.93	5.47	32.2	25	4.6	131	0.15	1.19	1.4	1140.0	0.114	2.78
Barrel 9	Kerr	K-09-02_14	K-09-02	90.5	91.5	20	12.15	1900	0.19	2	11.3	0.182	11.8	81	0.123	75200	7.52	6.16	25.7	24	3.2	435	0.12	0.89	1	1020.0	0.102	2.29
Barrel 9	Kerr	K-09-02_15	K-09-02	94.5	95.5	41	108	1900	0.19	1.4	24.4	0.216	11.4	95.6	0.443	81200	8.12	3.42	48	26	3.2	75.6	0.09	0.76	0.6	1700	0.17	2.58
Barrel 9	Kerr	K-09-02_16	K-09-02	152.5	153.5	397	14.1	1000	0.1	4	1.8	0.142	5.1	63	0.082	52300	5.23	0.56	21.5	10	1.5	382	0.23	0.32	1.4	1250.0	0.125	1.41
Barrel 9	Kerr	K-09-02_17	K-09-02	156.5	157.5	106	132	1100	0.11	3.2	2.2	0.11	6.2	57.7	0.42	100000	10.0	0.48	17.1	18	2	603	0.2	0.85	1.2	1000	0.1	1.36
Barrel 9	Kerr	K-09-02_18	K-09-02	160.5	161.5	34	12.5	1500	0.15	4.4	1.8	0.144	56.6	69	0.059	74200	7.42	51.2	24.5	15	1.8	340	0.26	2.05	1.2	1450.0	0.145	1.9
Barrel 9	Kerr	K-09-02_19	K-09-02	164.5	165.5	367	18.35	800.0	0.08	3.1	2.2	0.128	3.7	50.5	0.085	59000	5.9	0.64	20	9	1.2	404	0.19	0.65	1.2	1100	0.11	1.21
Barrel 10	Sulphurets	S-09-11_16	S-09-11	374.5	375.5	1550	50.4	300.0	0.03	4.2	22.8	0.076	7.1	167	0.073	38500	3.85	16.15	16.6	15	6	294	0.3	0.15	3.4	2880.0	0.288	3.32
Barrel 10	Sulphurets	S-09-11_17	S-09-11	378.5	379.5	745	27	28800	2.88	5.5	23.1	0.093	3.8	110	0.07	18200	1.82	9.13	15.4	8	2.2	186	0.39	0.2	4.2	3310.0	0.331	2.49
Barrel 10	Sulphurets	S-09-10_1	S-09-10	422.5	423.5	1040	735	5700	0.57	4.8	29.8	0.125	31.5	120	2.23	18100	1.81	45.7	18	11	4.8	266	0.3	<0.05	4.3	2440.0	0.244	2.88
Barrel 10	Sulphurets	S-09-10_2	S-09-10	426.5	427.5	637	88.2	5000	0.5	3.4	39	0.097	13.7	116	0.103	27000	2.7	8.19	12.2	11	2.9	168	0.2	0.06	2.7	1790.0	0.179	2.16
Barrel 10	Sulphurets	S-09-10_3	S-09-10	432.5	433.5	260	104.5	6400	0.64	3.7	25.7	0.085	26.4	123.5	0.16	28800	2.88	13.95	12	23	9.2	109	0.21	0.11	4.2	2140.0	0.214	2.42
Barrel 10	Sulphurets	S-09-10_4	S-09-10	436.5	437.5	323	290	3600	0.36	1.9	11.8	0.044	77.8	138.5	0.404	24200	2.42	238	7.3	18	4.5	123.5	0.12	0.14	2	1040.0	0.104	2.19
Barrel 10	Sulphurets	S-09-09_12	S-09-09	68.5	69.5	886	48.5	15600	1.56	7.7	12.6	0.116	14.2	115	0.063	9900	0.99	5.64	17.7	4	1.7	385	0.42	0.16	3.9	2480.0	0.248	0.87
Barrel 10	Sulphurets	S-09-09_13	S-09-09	72.5	73.5	494	9.57	25800	2.58	9.7	3.2	0.091	4.5	99.1	0.02	1700	0.17	2.77	8.2	2	1.3	439	0.54	<0.05	4.1	2040.0	0.204	0.69
Barrel 10	Sulphurets	S-09-09_14	S-09-09	76.5	77.5	697	2.88	22100	2.21	10.3	3.2	0.096	3.8	104	0.005	1700	0.17	3.58	8	2	1.2	373	0.56	<0.05	3.9	2070.0	0.207	0.8
Barrel 10	Sulphurets	S-09-09_15	S-09-09	80.5	81.5	691	12.7	17900	1.79	10.6	2.8	0.099	4.5	92.1	0.023	4000	0.4	4.68	8.1	2	1.3	384	0.57	<0.05	3.7	2180.0	0.218	0.89
Barrel 10	Sulphurets	S-09-09_16	S-09-09	84.5	85.5	780	6.26	14900	1.49	8.5	3.1	0.077	39	94.1	0.007	1300	0.13	3.07	7.3	3	1.4	284	0.45	0.07	4.4	1730.0	0.173	0.74
Barrel 10	Sulphurets	S-09-09_17	S-09-09	88.5	89.5	770	16.6	21600	2.16	10	4.7	0.097	15.8	92.4	0.034	5400	0.54	3.34	7.8	3	1.8	319	0.53	0.06	4	1990.0	0.199	0.74
Barrel 10	Sulphurets	S-09-09_18	S-09-09	92.5	93.5	803	18.3	24500	2.45	10	4	0.096	4.4	84.5	0.038	4400	0.44	2.84	8.3	3	1.6	353	0.55	<0.05	3.9	2030.0	0.203	0.71
Barrel 10	Sulphurets	S-09-09_19	S-09-09	96.5	97.5	724	9.64	15200	1.52	10	5.4	0.095	6.3	103.5	0.025	5800	0.58	4.73	8.4	2	1.5	316	0.53	<0.05	4.3	2020.0	0.202	0.94
Barrel 10	Sulphurets	S-09-09_20	S-09-09	100.5	101.5	957	6.26	16700	1.67	9.9	3.9	0.095	5.7	94.6	0.011	5600	0.56	4.55	8.3	3	1.4	347	0.53	<0.05	3.9	2030.0	0.203	0.83
Barrel 10	Sulphurets	S-09-09_21	S-09-09	104.5	105.5	862	28	13100	1.31	7.9	4.6	0.079	7.9	104.5	0.062	3700	0.37	5.73	7.6	2	1.3	266	0.43	<0.05	4.3	1630.0	0.163	0.77
Barrel 10	Sulphurets	S-09-09_22	S-09-09	108.5	109.5	1590	37.5	9900	0.99	7.6	6.5	0.079	7.2	97.5	0.08	12100	1.21	5.66	7.7	3	1.3	342	0.41	0.11	4.5	1590.0	0.159	0.88
Barrel 10	Sulphurets	S-09-09_23	S-09-09	112.5	113.5	586	19.5	7000	0.7	9.5	4.5	0.102	7.7	163	0.021	7800	0.78	8.58	10.7	3	2.1	165.5	0.52	0.15	5.2	2080.0	0.208	1.14
Barrel 10	Sulphurets	S-09-11_2	S-09-11	146.5	147.5	1080	15.4	16600	1.66	8.4	22.9	0.132	75	146	0.03	23400	2.34	45.6	17.8	6	0.9	253	0.53	0.26	3.1	3200	0.32	1.39
Barrel 10	Sulphurets	S-09-11_3	S-09-11	150.5	151.5	878	13.05	25300	2.53	6.2	42.1	0.147	14.9	160.5	0.027	26900	2.69	10.5	17.5	5	0.3	178	0.43	0.39	4.5	3540.0	0.354	1.61
Barrel 10	Sulphurets	S-09-11_4	S-09-11	154.5	155.5	2200	5.79	24600	2.46	4.9	14.9	0.109	61.9	94.8	0.027	23100	2.31	11.7	14	7	2.3	221	0.34	0.25	2.7	3740.0	0.374	1.08
Barrel 10	Sulphurets	S-09-11_5	S-09-11	184.5	185.5	2100	22.9	23300	2.33	6.6	32.5	0.137	118	126	0.05	8800	0.88	8.22	16.1	5	2.4	196	0.43	0.09	4.2	3550.0	0.355	1.24
Barrel 10	Sulphurets	S-09-11_6	S-09-11	334.5	335.5	358	104.5	8700	0.87	3.9	52.9	0.113	329	141	0.137	21600	2.16	14.1	16	7	2.3	182	0.25	0.42	2.6	2590.0	0.259	1.56
Barrel 10	Sulphurets	S-09-11_7	S-09-11	338.5	339.5	504	51.9	20500	2.05	5.3	81.2	0.1	95.4	166	0.078	12200	1.22	8.15	16	5	2.3	153.5	0.34	0.06	2.5	3290.0	0.329	1.37
Barrel 10	Sulphurets	S-09-11_8	S-09-11	342.5	343.5	706	129	7300	0.73	3.6	49.5	0.106	111	106	0.143	32000	3.2	8.95	14.2	10	2.1	198.5	0.23	0.16	2.2	2380.0	0.238	2.38
Barrel 10	Sulphurets	S-09-11_9	S-09-11	346.5	347.5	616	45	5900	0.59	5.6	42.5	0.125	79.8	110.5	0.08	8900	0.89	5.32	18.9	5	2.3	232	0.34	0.09	3.5	3430.0	0.343	1.6
Barrel 10	Sulphurets	S-09-11_10	S-09-11	350.5	351.5	632	28.5	15300	1.53	6.5	46.7	0.155	32.6	161	0.031	23300	2.33	9.43	17.4	5	1.9	107.5	0.43	0.07	5	3720.0	0.372	1.61
Barrel 10	Sulphurets	S-09-11_11	S-09-11	354.5	355.5	896	49.7	28300	2.83	4.2	31	0.104	60.4	127	0.068	29600	2.96	7.61	14.4	7	1.4	175.5	0.29	0.05	3.8	3160.0	0.316	1.18
Barrel 10	Sulphurets	S-09-11_12	S-09-11	358.5	359.5	688	121.5	15500	1.55	3.5	28.7	0.129	184	164.5	0.247	22300	2.23	8.83	13.4	8	1.8	137	0.22	0.09	3.5	2500	0.25	1.49
Barrel 10	Sulphurets	S-09-11_13	S-09-11	362.5	363.5	237	66.6	4100	0.41	3.8	9.5	0.214	23.6	208	0.129	11800	1.18	9.77	12.6	5	3.1	101.5	0.22	0.19	4	1810.0	0.181	1.83
Barrel 10	Sulphurets	S-09-11_14	S-09-11	366.5	367.5	1360	13.7	11700	1.17	5.8	11.6	0.152	8.9	119.5	0.017	22300	2.23	11	29.6	8	2	356	0.35	0.18	2.1	3130.0	0.313	1.54
Barrel 10	Sulphurets	S-09-11_15	S-09-11	370.5	371.5	729	31.3	11900	1.19	6.4	15.3	0.157	6.4	174.5	0.068	19300	1.93	13.95	28.8	9	1.8	190	0.39	0.12	3.2	3240.0	0.324	2.71
Barrel 11	Sulphurets	S-08-06_10	S-08-06	382.5	383.5	2340	59.1	8700	0.87	3.5	31.2	0.101	101	151.5	0.113	18600	1.86	27.9	13.1	8	2.6	190.5	0.24	0.14	3.3	2240.0	0.224	1.81
Barrel 11	Sulphurets	S-08-06_11	S-08-06	386.5	387.5	1820	42.7	10000	1	1.9	16.7	0.071	99.1	127	0.11	29100	2.91	11.4	11.4	7	1.8	160	0.15	0.11	2.9	1840.0	0.184	1.67
Barrel 11	Sulphurets	S-08-06_12	S-08-06	390.5	391.5	1530	28.7	7800	0.78	7.3	40.2	0.144	21	184	0.019	5600	0.56	11.05	16.7	2	1.8	146.5	0.48	0.07	4	3430.0	0.343	1.77
Barrel 11	Kerr	K-09-03_1	K-09-03	136.5	137.5	195	33.1	1200	0.12	3	13.9	0.159	31	82.6	0.143	92600	9.26	24.2	23.2	32	2	67.6	0.18	1.05	1.3	1110.0	0.111	1.83
Barrel 11	Kerr	K-09-03_2	K-09-03	140.5	141.5	262	4.82	700.0	0.07	3.4	3.2	0.12	14.9	52.7	0.026	68700	6.87	2.39	12.3	25	1.6	51.7	0.2	0.47	0.8	1040.0	0.104	1.13
Barrel 11	Kerr	K-09-03_3	K-09-03	144.5	145.5	1760	0.44	1000	0.1	7.5	1.1	0.117	3.8	71.2	<0.002	700.0	0.07	1.24	12.1	2	1	210	0.46	<0.05	3	3280.0	0.328	1.8
Barrel 11	Kerr	K-09-03_4	K-09-03	148.5	149.5	1380	0.55	1200	0.12	7	1.2	0.109	4.9	70.3	0.002	600.0	0.06	1.64	10.8	1	0.9	411	0.41	<0.05	2.8	3020.0	0.302	1.99
Barrel 11	Kerr	K-09-03_5	K-09-03	152.5	153.5	1310	0.14	1500	0.15	7.2	1.1	0.109	5.3	77.7	<0.002	500.0	0.05	1.8	10.8	1	0.9	408	0.42	<0.05	2.7	3100	0.31	2.09
Barrel 11	Kerr	K-09-03_6	K-09-03	156.5	157.5	1740	1.22	1100	0.11	7.2	1.2	0.116	4.3	67.5	<0.002	600.0	0.06	1.3	11.7	1	1	379	0.43	<0.05	2.8	3150.0	0.315	1.82
Barrel 11	Kerr	K-09-04_1	K-09-04	102.5	103.5	57	20	1900	0.19	2.2	41.3	0.165	11.2	82.3	0.169	92300	9.23	11.65	35.2	15	1.6	112	0.13	0.28	1	2200	0.22	2.38
Barrel 11	Kerr	K-09-04_2	K-09-04	106.5	107.5	72	15.05	1300	0.13	2.3	81.8	0.129	7.3	69	0.114	94400	9.44	1.5	18.8	31	1.5	95	0.14	0.54	1.3	880.00	0.088	1.9
Barrel 11	Kerr	K-09-04_3	K-09-04	110.5	111.5	346	26.8	900.0	0.09	2.6	84.5	0.155	4.5	53.3	0.182	67100	6.71	0.72	18.6	21	1.9	67.4	0.15	0.34	1.7	1660.0	0.166	1.58
Barrel 11	Kerr	K-09-04_4	K-09-04	114.5	115.5	259	14.4	1200	0.12	2.7	44.5	0.222	9	63.3	0.13	95400	9.54	0.78	17.4	19	2.4	90.4	0.16	0.32	1.8	1980.0	0.198	1.84
Barrel 11	Kerr	K-09-04_7	K-09-04	126.5	127.5	71	21.1	1200	0.12	2.3	19.7	0.104	5.6	78.3	0.129	99400	9.94	0.54	21	32	1.8	109.5	0.15	0.75	0.8	1200	0.12	2.16
Barrel 11	Kerr	K-09-04_5	K-09-04	120.5	121.5	204	21.9	1300	0.13	3.1	50	0.183	7.2	64.2	0.168	78400	7.84	0.8	22.4	23	2	120.5	0.2	0.33	2.3	1730.0	0.173	1.82
Barrel 11	Kerr	K-09-04_6	K-09-04	123.5	124.5	2570	1.81	400.0	0.04	6.3	21.8	0.086	2.9	19.2	0.002	8500	0.85	0.47	22.8	2	1.4	260	0.38	<0.05	1.8	4960.0	0.496	0.49
Barrel 11	Sulphurets	S-08-06_1	S-08-06	42.5	43.5	842	8.75	7500	0.75	10.7	5.7	0.172	8.9	117	0.017	23300	2.33	8.02	16.3	5	2.6	170.5	0.67	0.35	1.6	3510.0	0.351	0.77
Barrel 11	Sulphurets	S-08-06_2	S-08-06	46.5	47.5	628	5.08	9800	0.98	7.4	3.6	0.092	4.9	100.5	0.012	4400	0.44	7.5	8.9	3	1	194	0.45	0.08	2.7	2310.0	0.231	0.77
Barrel 11	Sulphurets	S-08-06_3	S-08-06	50.5	51.5	705	12.05	7800	0.78	7.8	10	0.133	7.9	141.5	0.026	12700	1.27	10.6	14.4	5	1.4	159	0.47	0.36	2.4	3200	0.32	1.01
Barrel 11	Sulphurets	S-08-06_4	S-08-06	252.5	253.5	625	287	27200	2.72	4.7	19.9	0.126	6.5	76.1	0.734	13400	1.34	5.7	22.6	6	1.7	444	0.28	0.11	1.4	3280.0	0.328	0.47
Barrel 11	Sulphurets	S-08-06_5	S-08-06	256.5	257.5	606	113.5	14700	1.47	4.8	26.2	0.132	8.5	108	0.138	20600	2.06	8.77	25.7	6	1.8	410	0.3	0.34	1.2	3400	0.34	0.76
Barrel 11	Sulphurets	S-08-06_6	S-08-06	298.5	299.5	923	29.9	26700	2.67	4.2	22.8	0.1	3.2	81.3	0.065	5000	0.5	7.4	19.5	2	1.2	615	0.24	0.06	1.8	2190.0	0.219	0.75
Barrel 11	Sulphurets	S-08-06_7	S-08-06	312.5	313.5	1460	1.98	18000	1.8	5.5	7.1	0.134	65.1	144.5	0.002	31800	3.18	8.37	20.8	6	1.5	233	0.38	0.6	1.3	2860.0	0.286	1.52
Barrel 11	Sulphurets	S-08-06_9	S-08-06	378.5	379.5	24800	58	1400	0.14	1.7	32	0.08	187	96.4	0.117	17600	1.76	5.55	10.2	8	3.1	217	0.11	0.36	3.2	1110.0	0.111	1.27

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	U (ppm)	V (ppm)	W (ppm)	Y (ppm)	Zn (ppm)	Zr (ppm)	Al2O3 (%)	BaO (%)	CaO (%)	Cr2O3 (%)	Fe2O3 (%)	K2O (%)	MgO (%)	MnO (%)	Na2O (%)	P2O5 (%)	SiO2 (%)	SRO (%)	TiO2 (%)	LOI (%)	Total_DC (%)
Barrel 9	Kerr	K-09-02_12	K-09-02	82.5	83.5	0.6	211	7	9.1	21	20.1	17.62	0.14	0.47	<0.01	8.82	4.73	0.49	<0.01	0.39	0.335	59.71	0.02	0.44	6.74	99.91
Barrel 9	Kerr	K-09-02_13	K-09-02	86.5	87.5	0.6	253	7.7	8.3	13	15.4	17.6	0.18	0.4	0.01	9.73	4.67	0.54	0.01	0.36	0.319	58.45	0.02	0.55	7.05	99.88
Barrel 9	Kerr	K-09-02_14	K-09-02	90.5	91.5	0.5	197	7.2	6.2	11	14.5	16.38	0.19	0.52	0.01	10.53	4.39	0.47	<0.01	0.36	0.417	58.45	0.06	0.54	7.5	99.82
Barrel 9	Kerr	K-09-02_15	K-09-02	94.5	95.5	0.6	325	7.5	8.3	46	9.5	17.34	0.2	0.51	0.01	11.09	4.69	0.66	0.01	0.33	0.466	55.71	0.01	0.7	7.75	99.47
Barrel 9	Kerr	K-09-02_16	K-09-02	152.5	153.5	0.5	174	1.8	4.5	112	13.7	14.68	0.3	5.78	<0.01	6.25	3.59	2.43	0.05	0.21	0.308	55.24	0.04	0.36	9.09	98.33
Barrel 9	Kerr	K-09-02_17	K-09-02	156.5	157.5	0.3	161	2.4	4.3	26	9.3	12.25	0.1	10.46	<0.01	6.77	3.46	0.65	0.02	0.22	0.249	45.76	0.07	0.34	11.6	91.95
Barrel 9	Kerr	K-09-02_18	K-09-02	160.5	161.5	0.5	206	1.8	4.3	112	12.4	16.09	0.16	5.36	<0.01	6.52	4.58	0.59	0.01	0.3	0.329	53.22	0.05	0.4	10.75	98.36
Barrel 9	Kerr	K-09-02_19	K-09-02	164.5	165.5	0.3	180	1	3.6	145	9.1	13.51	0.24	5.61	<0.01	8.66	2.88	3.19	0.05	0.16	0.292	53.32	0.05	0.35	9.8	98.12
Barrel 10	Sulphurets	S-09-11_16	S-09-11	374.5	375.5	6.1	265	99.5	17.1	74	60.5	13.03	0.08	7.23	<0.01	12.68	3.47	6.05	0.22	0.09	0.178	46.55	0.03	0.51	8.25	98.38
Barrel 10	Sulphurets	S-09-11_17	S-09-11	378.5	379.5	3.8	142	42.1	19	38	46.2	16.95	0.13	3.34	0.01	7.27	4.16	2.96	0.1	3.92	0.207	55.1	0.02	0.67	4.99	99.82
Barrel 10	Sulphurets	S-09-10_1	S-09-10	422.5	423.5	2.9	176	12	23.4	110	24	16.42	0.2	3.78	0.01	3.24	9.51	2.37	0.15	0.84	0.285	56.12	0.04	0.58	5.02	98.56
Barrel 10	Sulphurets	S-09-10_2	S-09-10	426.5	427.5	2.2	139	14.6	10.4	71	24.9	15.1	0.18	2.19	0.01	5.86	7.97	1.54	0.09	0.76	0.222	60.44	0.03	0.49	4.27	99.15
Barrel 10	Sulphurets	S-09-10_3	S-09-10	432.5	433.5	9.7	508	17.7	7.3	99	13.8	14.19	0.21	0.77	0.02	4.78	7.71	1.49	0.04	0.91	0.199	64.25	0.01	0.7	3.24	98.51
Barrel 10	Sulphurets	S-09-10_4	S-09-10	436.5	437.5	2.8	83	10.1	7.9	249	14	13.9	0.19	1.05	<0.01	3.37	7.67	0.6	0.04	0.55	0.105	68.37	0.02	0.35	3.09	99.32
Barrel 10	Sulphurets	S-09-09_12	S-09-09	68.5	69.5	5.1	171	9.4	9.5	24	43	15.6	0.38	5.21	<0.01	4.35	5.94	2.13	0.11	2.09	0.229	56.26	0.04	0.47	6.15	98.97
Barrel 10	Sulphurets	S-09-09_13	S-09-09	72.5	73.5	2	140	7.2	7.7	15	44.6	17.15	0.41	3.59	<0.01	4.08	6.07	0.99	0.07	3.67	0.195	59.19	0.05	0.38	3.92	99.76
Barrel 10	Sulphurets	S-09-09_14	S-09-09	76.5	77.5	1.9	143	8.4	7.6	21	46.1	16.55	0.38	4.09	<0.01	3.91	6	1.18	0.09	3.02	0.197	58.99	0.04	0.36	4.6	99.41
Barrel 10	Sulphurets	S-09-09_15	S-09-09	80.5	81.5	2.5	156	8.8	7.1	19	55.9	17.54	0.48	3.45	<0.01	3.81	6.86	1.39	0.09	2.53	0.205	59	0.04	0.38	4.2	99.99
Barrel 10	Sulphurets	S-09-09_16	S-09-09	84.5	85.5	1.9	135	6.3	7.7	24	38.8	14.33	0.39	3.48	<0.01	3.41	5.97	1.52	0.1	2.11	0.162	64.01	0.04	0.3	4.1	99.93
Barrel 10	Sulphurets	S-09-09_17	S-09-09	88.5	89.5	2.2	134	10.4	7.4	22	49	15.91	0.34	3.17	<0.01	3.54	5.8	1.67	0.1	3.02	0.193	61.33	0.04	0.36	4.01	99.48
Barrel 10	Sulphurets	S-09-09_18	S-09-09	92.5	93.5	2.9	145	6.2	7.9	29	47.4	16.69	0.35	3.93	<0.01	4.15	5.78	1.61	0.11	3.49	0.204	58.7	0.05	0.36	4.47	99.88
Barrel 10	Sulphurets	S-09-09_19	S-09-09	96.5	97.5	4.4	151	10	7.7	24	47.2	16.52	0.36	3.34	<0.01	3.68	6.87	1.84	0.1	2.23	0.199	60.2	0.04	0.36	4.09	99.83
Barrel 10	Sulphurets	S-09-09_20	S-09-09	100.5	101.5	3.7	144	8.7	9	25	43.7	16.81	0.4	4.28	<0.01	3.87	6.61	2.01	0.13	2.43	0.202	57.5	0.05	0.36	5.22	99.87
Barrel 10	Sulphurets	S-09-09_21	S-09-09	104.5	105.5	7.4	114	8.4	7.6	20	39.3	13.66	0.24	4.83	<0.01	2.65	5.34	1.73	0.12	1.88	0.166	63.4	0.04	0.3	5.41	99.76
Barrel 10	Sulphurets	S-09-09_22	S-09-09	108.5	109.5	4.3	118	10	11.9	36	25.3	12.59	0.22	8.22	<0.01	4.91	4.69	3.04	0.21	1.33	0.161	55.32	0.04	0.28	7.66	98.67
Barrel 10	Sulphurets	S-09-09_23	S-09-09	112.5	113.5	4.2	181	9.6	10.2	19	42.1	16.2	0.28	2.25	0.01	3.98	6.23	1.87	0.08	1.02	0.201	63.04	0.02	0.36	4.28	99.8
Barrel 10	Sulphurets	S-09-11_2	S-09-11	146.5	147.5	1.8	167	24.5	11.1	416	32.3	17.21	0.12	3.34	<0.01	5.45	4.89	2.09	0.14	2.3	0.285	58.25	0.03	0.59	5.03	99.73
Barrel 10	Sulphurets	S-09-11_3	S-09-11	150.5	151.5	3.6	170	4.6	26.6	69	50	19.59	0.12	2.6	0.01	6.15	4.72	2.1	0.12	3.64	0.339	54.59	0.02	0.65	5.08	99.73
Barrel 10	Sulphurets	S-09-11_4	S-09-11	154.5	155.5	2.1	187	5	15.3	293	29.1	16.13	0.09	5.46	<0.01	7.39	2.87	3.18	0.29	3.41	0.237	52.11	0.02	0.67	7.14	99
Barrel 10	Sulphurets	S-09-11_5	S-09-11	184.5	185.5	2.9	156	5.1	19	310	48.2	17.33	0.17	2.79	0.01	5.49	4.22	3.11	0.3	3.25	0.31	58.02	0.03	0.67	4.14	99.83
Barrel 10	Sulphurets	S-09-11_6	S-09-11	334.5	335.5	1.2	192	9.3	15.2	264	17.3	15.61	0.17	1.58	0.02	4.76	7.22	2.8	0.05	1.27	0.256	60.43	0.02	0.56	4.34	99.09
Barrel 10	Sulphurets	S-09-11_7	S-09-11	338.5	339.5	1.2	131	3.5	15	268	21.6	17.52	0.09	1.64	0.02	4.89	5.35	3.65	0.07	2.98	0.233	58.5	0.02	0.63	4.23	99.83
Barrel 10	Sulphurets	S-09-11_8	S-09-11	342.5	343.5	1.2	183	6.8	12	1820	19.2	15.46	0.23	2.16	0.01	6.83	7.68	2.95	0.1	1.05	0.237	56.34	0.03	0.54	5.59	99.19
Barrel 10	Sulphurets	S-09-11_9	S-09-11	346.5	347.5	1.3	191	5.3	13.5	315	25	15.89	0.27	2.22	0.01	4.45	8.39	3.02	0.09	0.85	0.28	59.03	0.03	0.66	3.8	98.98
Barrel 10	Sulphurets	S-09-11_10	S-09-11	350.5	351.5	2.6	153	4.5	16.8	237	35.6	18.31	0.09	1.35	0.01	7.63	5.67	3.6	0.09	2.25	0.351	54.6	0.01	0.73	5.05	99.74
Barrel 10	Sulphurets	S-09-11_11	S-09-11	354.5	355.5	1.6	172	5.8	13	263	22.2	16.15	0.07	2.28	0.01	6.67	3.87	2.49	0.12	3.92	0.231	58.05	0.02	0.63	5.31	99.82
Barrel 10	Sulphurets	S-09-11_12	S-09-11	358.5	359.5	1.9	136	5.5	16.7	245	21.3	16.05	0.11	1.95	0.01	5.63	5.65	2.4	0.1	2.3	0.296	60.05	0.02	0.56	4.57	99.69
Barrel 10	Sulphurets	S-09-11_13	S-09-11	362.5	363.5	2	157	14.3	17.7	52	19.1	15.31	0.2	1.25	<0.01	3.64	6.48	2.01	0.03	0.63	0.461	65.9	0.01	0.57	3.34	99.84
Barrel 10	Sulphurets	S-09-11_14	S-09-11	366.5	367.5	2.1	252	39.9	12.9	78	32	15.55	0.28	6.21	<0.01	8.85	5.21	4.1	0.2	1.66	0.348	47.81	0.04	0.58	7.58	98.42
Barrel 10	Sulphurets	S-09-11_15	S-09-11	370.5	371.5	2.3	237	89.1	12.8	43	36.7	15.76	0.23	3.24	0.01	7.43	5.43	3.04	0.1	1.6	0.343	55.96	0.02	0.56	4.93	98.65
Barrel 11	Sulphurets	S-08-06_10	S-08-06	382.5	383.5	1.9	131	7.9	13.2	318	26.7	16.06	0.17	2.99	0.01	5.14	5.9	2.67	0.32	1.23	0.229	58.73	0.02	0.53	5.17	99.16
Barrel 11	Sulphurets	S-08-06_11	S-08-06	386.5	387.5	3.5	135	7	10.4	716	30.7	14.61	0.24	1.86	0.01	5.6	6.66	1.48	0.26	1.47	0.169	62.17	0.02	0.63	4.3	99.47
Barrel 11	Sulphurets	S-08-06_12	S-08-06	390.5	391.5	1.6	172	3.7	18.2	242	27.5	17.08	0.11	2	0.01	7.33	5.46	4.08	0.21	1.15	0.325	56.21	0.01	0.64	4.76	99.37
Barrel 11	Kerr	K-09-03_1	K-09-03	136.5	137.5	0.7	198	7.1	5.6	74	12	15.02	0.15	0.7	<0.01	11.7	4.08	1.16	0.02	0.23	0.343	57.68	0.01	0.45	8.21	99.76
Barrel 11	Kerr	K-09-03_2	K-09-03	140.5	141.5	0.3	116	2.3	3.8	28	5	9.83	0.1	0.7	<0.01	9.46	2.65	1.04	0.03	0.14	0.26	67.78	0.01	0.23	6.31	98.55
Barrel 11	Kerr	K-09-03_3	K-09-03	144.5	145.5	1.7	113	1.4	10.6	129	42.2	17.47	0.26	5.1	<0.01	5.82	3.87	3.51	0.24	0.2	0.26	55.49	0.03	0.59	6.14	98.98
Barrel 11	Kerr	K-09-03_4	K-09-03	148.5	149.5	1.7	105	0.8	9.6	69	41.8	17.01	0.32	6.94	<0.01	5.69	4.22	2.17	0.19	0.23	0.247	54.12	0.05	0.58	7.45	99.22
Barrel 11	Kerr	K-09-03_5	K-09-03	152.5	153.5	1.7	107	1.4	9.7	72	45.8	17.08	0.35	6.98	<0.01	5.59	4.34	2.11	0.18	0.26	0.247	54.3	0.05	0.57	7.1	99.16
Barrel 11	Kerr	K-09-03_6	K-09-03	156.5	157.5	1.7	110	0.8	9.6	130	51	17.06	0.33	6.38	<0.01	5.47	3.98	2.78	0.24	0.21	0.26	53.88	0.05	0.58	6.99	98.2
Barrel 11	Kerr	K-09-04_1	K-09-04	102.5	103.5	0.6	270	0.9	9.9	10	10.7	17.35	0.27	0.63	0.01	12.08	4.6	0.42	0.01	0.31	0.367	54.43	0.01	0.84	8.48	99.81
Barrel 11	Kerr	K-09-04_2	K-09-04	106.5	107.5	0.6	186	0.9	6.2	10	13.9	13.03	0.21	0.66	0.02	12.18	3.53	0.45	0.01	0.22	0.277	59.88	0.02	0.51	8.3	99.3
Barrel 11	Kerr	K-09-04_3	K-09-04	110.5	111.5	0.7	218	0.8	7.5	82	13.6	14.37	0.15	0.78	0.04	11.11	2.91	3.61	0.05	0.17	0.345	57.31	0.01	0.67	7.89	99.42
Barrel 11	Kerr	K-09-04_4	K-09-04	114.5	115.5	0.8	226	1.5	8.8	44	13.1	14.5	0.2	1.11	0.01	13.39	3.45	1.85	0.03	0.21	0.485	54.09	0.02	0.74	9.3	99.39
Barrel 11	Kerr	K-09-04_7	K-09-04	126.5	127.5	0.5	177	1	8	15	8.5	14.8	0.3	0.51	0.01	13.38	4.02	0.62	0.01	0.23	0.236	56.31	0.02	0.51	8.92	99.88
Barrel 11	Kerr	K-09-04_5	K-09-04	120.5	121.5	1.1	240	1.4	8.8	67	25.6	14.63	0.18	1.24	0.02	11.31	3.24	2.12	0.03	0.23	0.387	55.8	0.02	0.63	8.73	98.57
Barrel 11	Kerr	K-09-04_6	K-09-04	123.5	124.5	0.7	148	1.4	16.3	246	42.2	12.3	0.15	6.22	0.01	9.15	0.85	7.09	0.35	0.1	0.194	51.59	0.03	0.93	9.44	98.41
Barrel 11	Sulphurets	S-08-06_1	S-08-06	42.5	43.5	1.4	286	16	14.5	33	14.4	14.55	0.1	4.7	<0.01	7.51	5.01	3.28	0.12	1.05	0.384	55.83	0.02	0.64	5.66	98.86
Barrel 11	Sulphurets	S-08-06_2	S-08-06	46.5	47.5	1.5	177	7.6	11	16	27.7	15.52	0.24	4.12	<0.01	3.86	5.71	2.17	0.09	1.39	0.214	60.85	0.02	0.42	4.84	99.45
Barrel 11	Sulphurets	S-08-06_3	S-08-06	50.5	51.5	2.3	246	22.6	13.2	27	31	15.9	0.24	3.8	<0.01	4.91	5.85	2.5	0.1	1.1	0.292	59.15	0.02	0.55	4.51	98.93
Barrel 11	Sulphurets	S-08-06_4	S-08-06	252.5	253.5	1.8	200	7.6	9.2	28	21.9	16.89	0.51	4.51	<0.01	6.03	4.22	4.33	0.09	3.89	0.292	52.71	0.05	0.62	5.76	99.91
Barrel 11	Sulphurets	S-08-06_5	S-08-06	256.5	257.5	3.1	229	13.4	7.4	34	21.3	16.56	0.54	4.7	<0.01	6.29	5.51	3.23	0.09	2.03	0.293	51.83	0.05	0.61	6.5	98.23
Barrel 11	Sulphurets	S-08-06_6	S-08-06	298.5	299.5	2	153	8.3	12.7	26	18.1	14.81	0.25	7.14	0.01	4.54	3.72	3.78	0.13	3.63	0.227	50.62	0.07	0.44	9.78	99.14
Barrel 11	Sulphurets	S-08-06_7	S-08-06	312.5	313.5	0.8	169	5	7.9	191	20.7	16.66	0.44	2.23	<0.01	7.6	5.39	1.68	0.2	2.53	0.291	57.2	0.03	0.51	4.87	99.62
Barrel 11	Sulphurets	S-08-06_9	S-08-06	378.5	379.5	3.5	104	7	14.1	4060	17.5	10.62	0.27	3.49	<0.01	15	5.29	2.5	3.4	0.35	0.185	47.02	0.02	0.41	9.82	98.38

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Interval	Rock Code	Lithology	Alteration 1	Alt_1_ Intensity	Alt_1_ Intensity_ Old	Alt_2_Code	Alt_2_ Intensity	Position	In/Below PEA Pit	Waste/Ore	Sample No.	PFS Sample#	21012 ABA Model Code	PFS Waste/Ore
Barrel 11	Sulphurets	S-09-12_1	S-09-12	8.5	9.5	1.0		VU/VU	CL/QSP	3/3	PR/CL						S-09-12_1	H42328	UP Hazelton	ORE
Barrel 11	Sulphurets	S-09-12_2	S-09-12	18.5	19.5	1.0		VU	CL	4	PR						S-09-12_2	H42333	Overburden	WASTE
Barrel 11	Sulphurets	S-09-12_3	S-09-12	22.5	23.5	1.0		VU	CL	4	PR						S-09-12_3	H42335	UP Hazelton	MARGINAL
Barrel 11	Sulphurets	S-09-12_4	S-09-12	26.5	27.5	1.0		VU	CL	4	PR						S-09-12_4	H42338	UP Hazelton	ORE
Barrel 11	Sulphurets	S-09-12_6	S-09-12	30.5	31.5	1.0		PMON	CL	3	PR						S-09-12_6	H42341	UP Hazelton	MARGINAL
Barrel 11	Sulphurets	S-09-12_7	S-09-12	34.5	35.5	1.0		VU	CL	3	PR						S-09-12_7	H42343	UP Hazelton	WASTE
Barrel 11	Sulphurets	S-09-12_8	S-09-12	38.5	39.5	1.0		VU	CL	3	PR						S-09-12_8	H42345	Monzonite	MARGINAL
Barrel 11	Sulphurets	S-09-12_9	S-09-12	42.5	43.5	1.0		VU	CL	3	PR						S-09-12_9	H42347	Monzonite	ORE
Barrel 11	Sulphurets	S-09-12_10	S-09-12	46.5	47.5	1.0		VU	CL	3	PR						S-09-12_10	H42350	Monzonite	ORE
Barrel 11	Sulphurets	S-09-12_11	S-09-12	50.5	51.5	1.0		VU	CL	3	PR						S-09-12_11	H42352	Monzonite	MARGINAL
Barrel 11	Sulphurets	S-09-12_12	S-09-12	140.5	141.5	1.0		PMON	CL	3	IARG						S-09-12_12	H42404	Undefined	WASTE
Barrel 11	Sulphurets	S-09-12_13	S-09-12	144.5	145.5	1.0		PMON	CL	3	IARG						S-09-12_13	H42406	Undefined	WASTE
Barrel 11	Sulphurets	S-09-12_14	S-09-12	148.5	149.5	1.0		PMON	CL	3	IARG						S-09-12_14	H42408	Undefined	WASTE
Barrel 11	Sulphurets	S-09-12_15	S-09-12	152.5	153.5	1.0		PMON	CL	3	IARG						S-09-12_15	H42410	Undefined	WASTE
Barrel 11	Sulphurets	S-09-12_16	S-09-12	156.5	157.5	1.0		PMON	CL	3	IARG						S-09-12_16	H42412	Undefined	WASTE
Barrel 11	Sulphurets	S-09-12_17	S-09-12	160.5	161.5	1.0		PMON	CL	3	IARG						S-09-12_17	H42415	Undefined	MARGINAL
Barrel 11	Sulphurets	S-09-12_18	S-09-12	164.5	165.5	1.0		PMON	CL	3	IARG						S-09-12_18	H42417	Undefined	WASTE
Barrel 11	Sulphurets	S-09-12_19	S-09-12	168.5	169.5	1.0		VAAT	CL	2	KP						S-09-12_19	H42419	Undefined	WASTE
Barrel 11	Sulphurets	S-09-12_20	S-09-12	172.5	173.5	1.0		VAAT	CL	2	KP						S-09-12_20	H42421	Undefined	WASTE
Barrel 11	Sulphurets	S-09-12_21	S-09-12	202.5	203.5	1.0		VAAT/VAAT	QB/CL	4/3	PSBX/QB						S-09-12_21	H42440	Undefined	WASTE
Barrel 11	Sulphurets	S-09-12_22	S-09-12	206.5	207.5	1.0		VAAT	CL	3	QB						S-09-12_22	H42443	Undefined	WASTE
Barrel 11	Sulphurets	S-09-12_24	S-09-12	214.5	215.5	1.0		VAAT	CL	3	QB						S-09-12_24	H42447	Undefined	WASTE
Barrel 11	Sulphurets	S-09-12_25	S-09-12	218.5	219.5	1.0		VAAT	CL	3	QB						S-09-12_25	H42450	Undefined	WASTE
Barrel 11	Sulphurets	S-09-12_26	S-09-12	236.5	237.5	1.0		VAAT	CL	3	SIH						S-09-12_26	H42460	Au, Leach, Raewn zones	ORE
Barrel 12	Mitchell	M-09-97_1	M-09-97	8.5	9.5	1.0		PMON	KP	1	None			ABOVE MTF			M-09-97_1	H43060	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_2	M-09-97	12.5	13.5	1.0		PMON	KP	1	None			ABOVE MTF			M-09-97_2	H43064	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_3	M-09-97	16.5	17.5	1.0		PMON	KP/HEM	1/	None/KP			ABOVE MTF			M-09-97_3	H43066	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_4	M-09-97	20.5	21.5	1.0		PMON	HEM	1	KP			ABOVE MTF			M-09-97_4	H43068	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_5	M-09-97	24.5	25.5	1.0		PMON	HEM/KP	1	KP			ABOVE MTF			M-09-97_5	H43070	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_6	M-09-97	28.5	29.5	1.0		PMON	KP	1	None			ABOVE MTF			M-09-97_6	H43074	UP Hazelton	MARGINAL
Barrel 12	Mitchell	M-09-97_7	M-09-97	32.5	33.5	1.0		PMON	KP	1	None			ABOVE MTF			M-09-97_7	H43076	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_8	M-09-97	36.5	37.5	1.0		IVOL	KP	1	None			ABOVE MTF			M-09-97_8	H43078	UP Hazelton	MARGINAL
Barrel 12	Mitchell	M-09-97_9	M-09-97	40.5	41.5	1.0		PMON	KP	1	None			ABOVE MTF			M-09-97_9	H43080	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_10	M-09-97	44.5	45.5	1.0		PMON	KP	1	None			ABOVE MTF			M-09-97_10	H43082	UP Hazelton	MARGINAL
Barrel 12	Mitchell	M-09-97_11	M-09-97	48.5	49.5	1.0		IVOL	KP	1	None			ABOVE MTF			M-09-97_11	H43084	UP Hazelton	ORE
Barrel 12	Mitchell	M-09-97_12	M-09-97	52.5	53.5	1.0		PMON	KP	2	None			ABOVE MTF			M-09-97_12	H43086	UP Hazelton	ORE
Barrel 12	Mitchell	M-09-97_13	M-09-97	56.5	57.5	1.0		PMON	KP	2	None			ABOVE MTF			M-09-97_13	H43088	UP Hazelton	ORE
Barrel 12	Mitchell	M-09-97_14	M-09-97	60.5	61.5	1.0		PMON	KP	2	None			ABOVE MTF			M-09-97_14	H43091	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_15	M-09-97	64.5	65.5	1.0		PMON	KP	2	None			ABOVE MTF			M-09-97_15	H43093	UP Hazelton	ORE
Barrel 12	Mitchell	M-09-97_16	M-09-97	68.5	69.5	1.0		PMON	KP	2	None			ABOVE MTF			M-09-97_16	H43096	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_17	M-09-97	72.5	73.5	1.0		PMON	KP	2	None			ABOVE MTF			M-09-97_17	H43098	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_18	M-09-97	76.5	77.5	1.0		PMON	KP	2	None			ABOVE MTF			M-09-97_18	H43100	UP Hazelton	ORE
Barrel 12	Mitchell	M-09-97_19	M-09-97	80.5	81.5	1.0		PMON	KP	2	None			ABOVE MTF			M-09-97_19	H43102	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_20	M-09-97	84.5	85.5	1.0		PMON	KP	2	None			ABOVE MTF			M-09-97_20	H43104	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_21	M-09-97	88.5	89.5	1.0		PMON	KP	2	None			ABOVE MTF			M-09-97_21	H43106	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_22	M-09-97	92.5	93.5	1.0		PMON	KP	2	None			ABOVE MTF			M-09-97_22	H43109	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_23	M-09-97	96.5	97.5	1.0		PMON	KP	2	None			ABOVE MTF			M-09-97_23	H43111	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_24	M-09-97	100.5	101.5	1.0		PMON	KP	2	None			ABOVE MTF			M-09-97_24	H43113	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_26	M-09-97	108.5	109.5	1.0		PMON	KP	2	PR			ABOVE MTF			M-09-97_26	H43118	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_27	M-09-97	112.5	113.5	1.0		PMON	KP	2	PR			ABOVE MTF			M-09-97_27	H43120	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_30	M-09-97	124.5	125.5	1.0		PMON	KP	2	PR			ABOVE MTF			M-09-97_30	H43127	UP Hazelton	MARGINAL
Barrel 12	Mitchell	M-09-97_31	M-09-97	128.5	129.5	1.0		PMON	KP	2	PR			ABOVE MTF			M-09-97_31	H43129	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_32	M-09-97	132.5	133.5	1.0		PMON	KP	2	PR			ABOVE MTF			M-09-97_32	H43131	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_33	M-09-97	136.5	137.5	1.0		PMON	KP	2	PR			ABOVE MTF			M-09-97_33	H43134	UP Hazelton	WASTE
Barrel 12	Mitchell	M-09-97_34	M-09-97	140.5	141.5	1.0		PMON	KP	2	PR			ABOVE MTF			M-09-97_34	H43136	UP Hazelton	MARGINAL

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	PFS Pit In/Out	PFS Litho	PFS Alt	Sample Matrix	SampleType	udf_LabID	Weight Received (kg)	Lab Certificate Number	Collect Date/ Time	Paste pH	Rinse pH	S_Total (%)	S_Sulphide (%)	S_S2_ CALC (%)	S_S2_S_ DEL CALC (%)	S_SO4_ NA2CO3 (%)	S_SO4_ HCL (%)	S_BASO4 (%)
Barrel 11	Sulphurets	S-09-12_1	S-09-12	8.5	9.5	IN	VU	CL	Rock	Drillcore	ALS Chemex	1.34	VA09124617		8.5	8.4	0.12	0.12	0.11	0.120	0.01	0.005	0.0301
Barrel 11	Sulphurets	S-09-12_2	S-09-12	18.5	19.5	IN	VU	CL	Rock	Drillcore	ALS Chemex	1.64	VA09124617		9.0	8.9	0.30	0.28	0.29	0.280	0.005	0.005	0.0401
Barrel 11	Sulphurets	S-09-12_3	S-09-12	22.5	23.5	IN	VU	CL	Rock	Drillcore	ALS Chemex	1.64	VA09124617		8.9	8.6	0.08	0.06	0.07	0.060	0.01	0.005	0.0609
Barrel 11	Sulphurets	S-09-12_4	S-09-12	26.5	27.5	IN	VU	CL	Rock	Drillcore	ALS Chemex	1.5	VA09124617		9.1	8.9	0.06	0.06	0.05	0.060	0.005	0.005	0.0240
Barrel 11	Sulphurets	S-09-12_6	S-09-12	30.5	31.5	IN	PMON	CL	Rock	Drillcore	ALS Chemex	1.54	VA09124617		8.7	8.7	0.51	0.44	0.50	0.440	0.01	0.005	0.0761
Barrel 11	Sulphurets	S-09-12_7	S-09-12	34.5	35.5	IN	VU	CL	Rock	Drillcore	ALS Chemex	1.38	VA09124617		8.9	8.8	0.31	0.31	0.29	0.310	0.005	0.02	0.0317
Barrel 11	Sulphurets	S-09-12_8	S-09-12	38.5	39.5	IN	VU	CL	Rock	Drillcore	ALS Chemex	2.1	VA09124617		8.9	8.9	0.28	0.25	0.26	0.250	0.005	0.02	0.0187
Barrel 11	Sulphurets	S-09-12_9	S-09-12	42.5	43.5	IN	VU	CL	Rock	Drillcore	ALS Chemex	2.18	VA09124617		8.9	8.9	0.03	0.03	0.02	0.030	0.005	0.01	0.0184
Barrel 11	Sulphurets	S-09-12_10	S-09-12	46.5	47.5	IN	VU	CL	Rock	Drillcore	ALS Chemex	1.5	VA09124617		9.1	8.9	0.34	0.32	0.33	0.320	0.01	0.005	0.0233
Barrel 11	Sulphurets	S-09-12_11	S-09-12	50.5	51.5	IN	VU	CL	Rock	Drillcore	ALS Chemex	1.86	VA09124617		9.1	9.0	0.41	0.38	0.39	0.380	0.005	0.02	0.0233
Barrel 11	Sulphurets	S-09-12_12	S-09-12	140.5	141.5	IN	PMON	CL	Rock	Drillcore	ALS Chemex	2.02	VA09124617		8.5	8.5	2.02	1.81	2.01	1.991	0.03	0.005	0.0189
Barrel 11	Sulphurets	S-09-12_13	S-09-12	144.5	145.5	IN	PMON	CL	Rock	Drillcore	ALS Chemex	1.82	VA09124617		8.3	8.3	3.88	3.56	3.87	3.860	0.08	0.005	0.0098
Barrel 11	Sulphurets	S-09-12_14	S-09-12	148.5	149.5	IN	PMON	CL	Rock	Drillcore	ALS Chemex	1.86	VA09124617		8.6	8.5	0.60	0.61	0.59	0.610	0.005	0.01	0.0556
Barrel 11	Sulphurets	S-09-12_15	S-09-12	152.5	153.5	IN	PMON	CL	Rock	Drillcore	ALS Chemex	1.64	VA09124617		8.9	8.7	1.34	1.13	1.31	1.265	0.03	0.03	0.0448
Barrel 11	Sulphurets	S-09-12_16	S-09-12	156.5	157.5	IN	PMON	CL	Rock	Drillcore	ALS Chemex	2.28	VA09124617		8.4	8.3	3.07	2.98	3.06	3.050	0.02	0.01	0.0100
Barrel 11	Sulphurets	S-09-12_17	S-09-12	160.5	161.5	IN	PMON	CL	Rock	Drillcore	ALS Chemex	1.88	VA09124617		8.5	8.4	3.05	2.74	3.03	2.994	0.03	0.02	0.0357
Barrel 11	Sulphurets	S-09-12_18	S-09-12	164.5	165.5	IN	PMON	CL	Rock	Drillcore	ALS Chemex	1.92	VA09124617		8.6	8.5	2.33	2.15	2.31	2.296	0.03	0.02	0.0138
Barrel 11	Sulphurets	S-09-12_19	S-09-12	168.5	169.5	IN	VAAT	CL	Rock	Drillcore	ALS Chemex	2	VA09124617		9.2	9.0	1.65	1.47	1.64	1.602	0.03	0.01	0.0376
Barrel 11	Sulphurets	S-09-12_20	S-09-12	172.5	173.5	IN	VAAT	CL	Rock	Drillcore	ALS Chemex	1.72	VA09124617		8.7	8.7	2.42	2.19	2.41	2.394	0.01	0.01	0.0163
Barrel 11	Sulphurets	S-09-12_21	S-09-12	202.5	203.5	IN	VAAT	QB	Rock	Drillcore	ALS Chemex	2.18	VA09124617		8.5	8.4	3.46	3.19	3.45	3.442	0.01	0.01	0.0077
Barrel 11	Sulphurets	S-09-12_22	S-09-12	206.5	207.5	IN	VAAT	CL	Rock	Drillcore	ALS Chemex	1.9	VA09124617		8.9	8.7	0.69	0.65	0.67	0.650	0.01	0.02	0.0661
Barrel 11	Sulphurets	S-09-12_24	S-09-12	214.5	215.5	IN	VAAT	CL	Rock	Drillcore	ALS Chemex	1.96	VA09124617		9.0	8.7	0.80	0.66	0.79	0.746	0.01	0.005	0.0439
Barrel 11	Sulphurets	S-09-12_25	S-09-12	218.5	219.5	IN	VAAT	CL	Rock	Drillcore	ALS Chemex	1.88	VA09124617		9.0	8.9	2.94	2.67	2.93	2.918	0.03	0.01	0.0119
Barrel 11	Sulphurets	S-09-12_26	S-09-12	236.5	237.5	IN	VAAT	CL	Rock	Drillcore	ALS Chemex	1.06	VA09124617		8.7	8.4	3.25	3.12	3.23	3.218	0.03	0.02	0.0117
Barrel 12	Mitchell	M-09-97_1	M-09-97	8.5	9.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097255		6.8	7.1	1.19	0.87	1.18	1.120	0.03	0.01	0.0602
Barrel 12	Mitchell	M-09-97_2	M-09-97	12.5	13.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097253		8.5	8.5	2.99	2.72	2.98	2.964	0.03	0.005	0.0159
Barrel 12	Mitchell	M-09-97_3	M-09-97	16.5	17.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097253		8.0	7.7	3.27	2.98	3.26	3.252	0.08	0.005	0.0077
Barrel 12	Mitchell	M-09-97_4	M-09-97	20.5	21.5	IN PIT	PMON	HEM	Rock	Drillcore	ALS Chemex		VA09097253		8.3	8.3	2.85	2.17	2.73	2.724	0.23	0.12	0.0063
Barrel 12	Mitchell	M-09-97_5	M-09-97	24.5	25.5	IN PIT	PMON	HEM	Rock	Drillcore	ALS Chemex		VA09097255		8.6	8.6	4.39	3.80	4.38	4.377	0.03	0.005	0.0035
Barrel 12	Mitchell	M-09-97_6	M-09-97	28.5	29.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097255		8.6	8.5	4.13	3.75	3.99	3.987	0.17	0.14	0.0028
Barrel 12	Mitchell	M-09-97_7	M-09-97	32.5	33.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097255		8.9	8.8	2.90	2.27	2.89	2.884	0.06	0.01	0.0065
Barrel 12	Mitchell	M-09-97_8	M-09-97	36.5	37.5	IN PIT	IVOL	KP	Rock	Drillcore	ALS Chemex		VA09097254		8.6	8.7	2.92	2.66	2.91	2.887	0.05	0.005	0.0229
Barrel 12	Mitchell	M-09-97_9	M-09-97	40.5	41.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097255		8.9	8.9	0.90	0.65	0.89	0.835	0.06	0.01	0.0546
Barrel 12	Mitchell	M-09-97_10	M-09-97	44.5	45.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097253		8.9	8.9	1.59	1.37	1.50	1.477	0.14	0.09	0.0226
Barrel 12	Mitchell	M-09-97_11	M-09-97	48.5	49.5	IN PIT	IVOL	KP	Rock	Drillcore	ALS Chemex		VA09097254		8.3	8.4	2.49	2.17	2.40	2.391	0.12	0.09	0.0091
Barrel 12	Mitchell	M-09-97_12	M-09-97	52.5	53.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097254		8.2	8.3	2.22	1.90	2.21	2.179	0.02	0.005	0.0306
Barrel 12	Mitchell	M-09-97_13	M-09-97	56.5	57.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097253		9.1	8.9	1.84	1.60	1.83	1.806	0.02	0.005	0.0245
Barrel 12	Mitchell	M-09-97_14	M-09-97	60.5	61.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097253		9.1	9.0	0.72	0.59	0.71	0.682	0.02	0.01	0.0280
Barrel 12	Mitchell	M-09-97_15	M-09-97	64.5	65.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097254		8.9	8.9	0.62	0.46	0.61	0.596	0.01	0.005	0.0145
Barrel 12	Mitchell	M-09-97_16	M-09-97	68.5	69.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097254		9.1	9.0	0.73	0.61	0.72	0.700	0.01	0.005	0.0201
Barrel 12	Mitchell	M-09-97_17	M-09-97	72.5	73.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097254		9.3	9.1	0.89	0.78	0.88	0.862	0.03	0.005	0.0182
Barrel 12	Mitchell	M-09-97_18	M-09-97	76.5	77.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097254		8.3	8.5	1.50	1.27	1.49	1.469	0.02	0.005	0.0208
Barrel 12	Mitchell	M-09-97_19	M-09-97	80.5	81.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097254		9.1	9.1	0.58	0.50	0.57	0.541	0.06	0.005	0.0287
Barrel 12	Mitchell	M-09-97_20	M-09-97	84.5	85.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097255		9.1	9.0	1.31	0.96	1.25	1.213	0.12	0.06	0.0371
Barrel 12	Mitchell	M-09-97_21	M-09-97	88.5	89.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097255		9.1	9.0	1.24	0.94	1.23	1.168	0.02	0.01	0.0623
Barrel 12	Mitchell	M-09-97_22	M-09-97	92.5	93.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097255		8.7	8.6	4.12	3.58	4.11	4.100	0.03	0.005	0.0098
Barrel 12	Mitchell	M-09-97_23	M-09-97	96.5	97.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097255		9.0	9.0	2.30	1.74	2.29	2.261	0.04	0.01	0.0289
Barrel 12	Mitchell	M-09-97_24	M-09-97	100.5	101.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097255		8.9	8.9	4.13	3.48	4.12	4.114	0.03	0.01	0.0058
Barrel 12	Mitchell	M-09-97_26	M-09-97	108.5	109.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097255		9.1	9.0	1.58	1.18	1.57	1.532	0.05	0.01	0.0380
Barrel 12	Mitchell	M-09-97_27	M-09-97	112.5	113.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097255		9.1	9.0	2.29	1.91	2.28	2.251	0.02	0.005	0.0294
Barrel 12	Mitchell	M-09-97_30	M-09-97	124.5	125.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097253		9.2	8.9	3.37	3.32	3.36	3.347	0.04	0.005	0.0131
Barrel 12	Mitchell	M-09-97_31	M-09-97	128.5	129.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097253		9.2	9.0	1.52	1.32	1.51	1.477	0.02	0.005	0.0327
Barrel 12	Mitchell	M-09-97_32	M-09-97	132.5	133.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex	2.6	VA09124617		8.4	8.5	4.23	4.19	4.20	4.196	0.08	0.03	0.0037
Barrel 12	Mitchell	M-09-97_33	M-09-97	136.5	137.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097253		9.0	8.9	3.79	3.59	3.78	3.767	0.02	0.005	0.0126
Barrel 12	Mitchell	M-09-97_34	M-09-97	140.5	141.5	IN PIT	PMON	KP	Rock	Drillcore	ALS Chemex		VA09097253		8.9	8.5	2.52	2.34	2.51	2.495	0.03	0.005	0.0154

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	S_DEL (%)	S_DEL_CAL (%)	TAP (%)	SAP ($kg\ CaCO_3$ /t)	SAP (S Del Calc) ($kg\ CaCO_3$ /t)	NP ($kg\ CaCO_3$ /t)	NP_ADJ ($kg\ CaCO_3$ /t)	UNP	Total C (%)	Inorganic C (%)	Inorganic CO2 (%)	C_DEL_ CALC (%)	CANP_ TTL (%)	CANP_ INORG (%)	CANP_ CA (%)	CANP_ CAMG (%)	TNNP ($kg\ CaCO_3$ /t)
Barrel 11	Sulphurets	S-09-12_1	S-09-12	8.5	9.5	-0.0401	0.0000	3.75	3.75	3.75	15		15	0.09	0.07	0.3	0.020	7.5	6.8	17.7	54.7	11.3
Barrel 11	Sulphurets	S-09-12_2	S-09-12	18.5	19.5	-0.0301	0.0000	9.38	8.75	8.75	98	83.0	15	0.95	0.63	2.3	0.320	79.2	52.3	95.2	160.9	88.6
Barrel 11	Sulphurets	S-09-12_3	S-09-12	22.5	23.5	-0.0509	0.0000	2.50	1.875	1.88	91	76.0	15	0.85	0.64	2.3	0.210	70.8	52.3	93.9	162.6	88.5
Barrel 11	Sulphurets	S-09-12_4	S-09-12	26.5	27.5	-0.0340	0.0000	1.88	1.875	1.88	30	15.0	15	0.24	0.21	0.8	0.030	20.0	18.2	41.7	92.8	28.1
Barrel 11	Sulphurets	S-09-12_6	S-09-12	30.5	31.5	-0.0161	0.0000	15.94	13.75	13.75	19	4.0	15	0.08	0.07	0.3	0.010	6.7	6.8	23.0	83.0	3.1
Barrel 11	Sulphurets	S-09-12_7	S-09-12	34.5	35.5	-0.0517	0.0000	9.69	9.6875	9.69	58	43.0	15	0.62	0.50	1.8	0.120	51.7	40.9	81.7	162.9	48.3
Barrel 11	Sulphurets	S-09-12_8	S-09-12	38.5	39.5	-0.0087	0.0000	8.75	7.8125	7.81	40	25.0	15	0.39	0.06	0.2	0.330	32.5	4.6	76.9	151.8	31.3
Barrel 11	Sulphurets	S-09-12_9	S-09-12	42.5	43.5	-0.0284	0.0000	0.94	0.9375	0.94	35	20.0	15	0.27	0.21	0.8	0.060	22.5	18.2	67.9	167.8	34.1
Barrel 11	Sulphurets	S-09-12_10	S-09-12	46.5	47.5	-0.0133	0.0000	10.62	10	10.00	21	6.0	15	0.08	0.05	0.2	0.030	6.7	4.6	60.4	129.4	10.4
Barrel 11	Sulphurets	S-09-12_11	S-09-12	50.5	51.5	-0.0133	0.0000	12.81	11.875	11.88	73	58.0	15	0.65	0.43	1.6	0.220	54.2	36.4	80.9	136.3	60.2
Barrel 11	Sulphurets	S-09-12_12	S-09-12	140.5	141.5	0.1811	0.1811	63.12	56.5625	62.22	136	121.0	15	1.39	0.50	1.8	0.890	115.8	40.9	112.6	165.2	72.9
Barrel 11	Sulphurets	S-09-12_13	S-09-12	144.5	145.5	0.3002	0.3002	121.20	111.25	120.63	125	110.0	15	0.12	0.10	0.4	0.020	10.0	9.1	106.9	180.7	3.8
Barrel 11	Sulphurets	S-09-12_14	S-09-12	148.5	149.5	-0.0756	0.0000	18.80	19.0625	19.06	86	71.0	15	0.65	0.64	2.3	0.010	54.2	52.3	62.7	180.1	67.2
Barrel 11	Sulphurets	S-09-12_15	S-09-12	152.5	153.5	0.1352	0.1352	41.88	35.3125	39.54	88	73.0	15	1.03	0.93	3.4	0.100	85.8	77.3	79.2	121.7	46.1
Barrel 11	Sulphurets	S-09-12_16	S-09-12	156.5	157.5	0.0700	0.0700	95.94	93.125	95.31	96	81.0	15	0.81	0.79	2.9	0.020	67.5	66.0	74.2	131.4	0.1
Barrel 11	Sulphurets	S-09-12_17	S-09-12	160.5	161.5	0.2543	0.2543	95.31	85.625	93.57	91	76.0	15	0.81	0.76	2.8	0.050	67.5	63.7	70.2	120.8	-4.3
Barrel 11	Sulphurets	S-09-12_18	S-09-12	164.5	165.5	0.1462	0.1462	72.81	67.1875	71.76	124	109.0	15	0.88	0.86	3.2	0.020	73.3	72.8	78.4	153.5	51.2
Barrel 11	Sulphurets	S-09-12_19	S-09-12	168.5	169.5	0.1324	0.1324	51.56	45.9375	50.08	114	99.0	15	1.05	0.96	3.5	0.090	87.5	79.6	88.4	132.3	62.4
Barrel 11	Sulphurets	S-09-12_20	S-09-12	172.5	173.5	0.2037	0.2037	75.62	68.4375	74.80	51	36.0	15	0.51	0.46	1.7	0.050	42.5	38.7	46.2	87.6	-24.6
Barrel 11	Sulphurets	S-09-12_21	S-09-12	202.5	203.5	0.2523	0.2523	108.10	99.6875	107.57	114	99.0	15	1.50	1.39	5.1	0.110	125.0	116.0	88.7	140.6	5.9
Barrel 11	Sulphurets	S-09-12_22	S-09-12	206.5	207.5	-0.0461	0.0000	21.56	20.3125	20.31	120	105.0	15	1.11	1.07	3.9	0.040	92.5	88.7	96.9	175.2	98.4
Barrel 11	Sulphurets	S-09-12_24	S-09-12	214.5	215.5	0.0861	0.0861	25.00	20.625	23.32	82	67.0	15	1.03	0.90	3.3	0.130	85.8	75.1	77.7	120.8	57.0
Barrel 11	Sulphurets	S-09-12_25	S-09-12	218.5	219.5	0.2481	0.2481	91.88	83.4375	91.19	76	61.0	15	0.95	0.88	3.2	0.070	79.2	72.8	74.7	121.7	-15.9
Barrel 11	Sulphurets	S-09-12_26	S-09-12	236.5	237.5	0.0983	0.0983	101.60	97.5	100.57	31	16.0	15	0.30	0.31	1.1	-0.010	25.0	25.0	27.2	53.6	-70.6
Barrel 12	Mitchell	M-09-97_1	M-09-97	8.5	9.5	0.2498	0.2498	37.19	27.1875	34.99	9	0.0	9	0.07	0.03	0.1	0.020	5.8	4.6	7.0	87.1	-28.2
Barrel 12	Mitchell	M-09-97_2	M-09-97	12.5	13.5	0.2441	0.2441	93.44	85	92.63	17	2.0	15	0.02	0.05	0.2	-0.030	1.7	4.6	8.5	38.4	-76.4
Barrel 12	Mitchell	M-09-97_3	M-09-97	16.5	17.5	0.2723	0.2723	102.20	93.125	101.63	16	1.0	15	0.19	0.03	0.2	0.140	15.8	4.6	7.5	43.0	-86.2
Barrel 12	Mitchell	M-09-97_4	M-09-97	20.5	21.5	0.5537	0.5537	89.06	67.8125	85.12	32	17.0	15	0.29	0.17	0.6	0.120	24.2	13.6	24.7	79.9	-57.1
Barrel 12	Mitchell	M-09-97_5	M-09-97	24.5	25.5	0.5765	0.5765	137.20	118.75	136.77	22	7.0	15	0.16	0.16	0.6	0.000	13.3	13.6	21.2	41.0	-115.2
Barrel 12	Mitchell	M-09-97_6	M-09-97	28.5	29.5	0.2372	0.2372	129.10	117.1875	124.60	42	27.0	15	0.48	0.40	1.5	0.080	40.0	34.1	36.5	59.3	-87.1
Barrel 12	Mitchell	M-09-97_7	M-09-97	32.5	33.5	0.6135	0.6135	90.60	70.9375	90.11	67	52.0	15	0.90	0.85	3.1	0.050	75.0	70.5	49.7	87.3	-23.6
Barrel 12	Mitchell	M-09-97_8	M-09-97	36.5	37.5	0.2271	0.2271	91.25	83.125	90.22	39	24.0	15	0.40	0.37	1.4	0.030	33.3	31.8	22.7	75.3	-52.3
Barrel 12	Mitchell	M-09-97_9	M-09-97	40.5	41.5	0.1854	0.1854	28.10	20.3125	26.11	28	13.0	15	0.30	0.27	1.0	0.030	25.0	22.7	26.7	46.1	-0.1
Barrel 12	Mitchell	M-09-97_10	M-09-97	44.5	45.5	0.1074	0.1074	49.69	42.8125	46.17	20	5.0	15	0.16	0.16	0.6	0.000	13.3	13.6	14.5	34.4	-29.7
Barrel 12	Mitchell	M-09-97_11	M-09-97	48.5	49.5	0.2209	0.2209	77.81	67.8125	74.72	18	3.0	15	0.11	0.12	0.5	-0.010	9.2	11.4	12.7	49.0	-59.8
Barrel 12	Mitchell	M-09-97_12	M-09-97	52.5	53.5	0.2794	0.2794	69.38	59.375	68.11	12	0.0	12	0.03	0.03	0.2	-0.020	2.5	4.6	9.5	47.3	-57.4
Barrel 12	Mitchell	M-09-97_13	M-09-97	56.5	57.5	0.2055	0.2055	57.50	50	56.42	57	42.0	15	0.61	0.59	2.2	0.020	50.8	50.0	49.2	75.3	-0.5
Barrel 12	Mitchell	M-09-97_14	M-09-97	60.5	61.5	0.0920	0.0920	22.50	18.4375	21.31	10	0.0	10	0.07	0.03	0.2	0.020	5.8	4.6	3.2	16.9	-12.5
Barrel 12	Mitchell	M-09-97_15	M-09-97	64.5	65.5	0.1355	0.1355	19.38	14.375	18.61	9	0.0	9	0.03	0.05	0.2	-0.020	2.5	4.6	2.2	8.9	-10.4
Barrel 12	Mitchell	M-09-97_16	M-09-97	68.5	69.5	0.0899	0.0899	22.81	19.0625	21.87	45	30.0	15	0.48	0.45	1.7	0.030	40.0	38.7	37.7	56.1	22.2
Barrel 12	Mitchell	M-09-97_17	M-09-97	72.5	73.5	0.0818	0.0818	27.81	24.375	26.93	25	10.0	15	0.21	0.22	0.8	-0.010	17.5	18.2	16.7	30.4	-2.8
Barrel 12	Mitchell	M-09-97_18	M-09-97	76.5	77.5	0.1992	0.1992	46.90	39.6875	45.91	11	0.0	11	0.05	0.05	0.2	0.000	4.2	4.6	3.5	27.8	-35.9
Barrel 12	Mitchell	M-09-97_19	M-09-97	80.5	81.5	0.0413	0.0413	18.12	15.625	16.92	11	0.0	11	0.06	0.07	0.3	-0.010	5.0	6.8	5.0	15.8	-7.1
Barrel 12	Mitchell	M-09-97_20	M-09-97	84.5	85.5	0.2529	0.2529	40.94	30	37.90	78	63.0	15	0.96	0.89	3.3	0.070	80.0	75.1	81.7	112.5	37.1
Barrel 12	Mitchell	M-09-97_21	M-09-97	88.5	89.5	0.2277	0.2277	38.75	29.375	36.49	58	43.0	15	0.59	0.56	2.0	0.030	49.2	45.5	54.9	95.4	19.3
Barrel 12	Mitchell	M-09-97_22	M-09-97	92.5	93.5	0.5202	0.5202	128.80	111.875	128.13	241	226.0	15	2.69	2.64	9.7	0.050	224.2	221.0	216.5	287.5	112.2
Barrel 12	Mitchell	M-09-97_23	M-09-97	96.5	97.5	0.5211	0.5211	71.90	54.375	70.66	51	36.0	15	0.60	0.48	1.8	0.120	50.0	40.9	47.4	73.6	-20.9
Barrel 12	Mitchell	M-09-97_24	M-09-97	100.5	101.5	0.6342	0.6342	129.10	108.75	128.57	40	25.0	15	0.40	0.36	1.3	0.040	33.3	29.6	39.2	55.3	-89.1
Barrel 12	Mitchell	M-09-97_26	M-09-97	108.5	109.5	0.3520	0.3520	49.38	36.875	47.88	55	40.0	15	0.53	0.50	1.8	0.030	44.2	40.9	51.9	104.8	5.6
Barrel 12	Mitchell	M-09-97_27	M-09-97	112.5	113.5	0.3406	0.3406	71.56	59.6875	70.33	44	29.0	15	0.31	0.28	1.0	0.030	25.8	22.7	37.0	108.8	-27.6
Barrel 12	Mitchell	M-09-97_30	M-09-97	124.5	125.5	0.0269	0.0269	105.30	103.75	104.59	77	62.0	15	0.91	0.86	3.2	0.050	75.8	72.8	57.4	116.3	-28.3
Barrel 12	Mitchell	M-09-97_31	M-09-97	128.5	129.5	0.1573	0.1573	47.50	41.25	46.17	78	63.0	15	0.84	0.82	3.0	0.020	70.0	68.2	75.9	147.8	30.5
Barrel 12	Mitchell	M-09-97_32	M-09-97	132.5	133.5	0.0063	0.0063	132.20	130.9375	131.13	81	66.0	15	0.21	0.26	1.0	-0.050	17.5	22.7	24.7	49.8	-51.2
Barrel 12	Mitchell	M-09-97_33	M-09-97	136.5	137.5	0.1774	0.1774	118.40	112.1875	117.73	49	34.0	15	0.46	0.44	1.6	0.020	38.3	36.4	46.2	80.2	-69.4
Barrel 12	Mitchell	M-09-97_34	M-09-97	140.5	141.5	0.1546	0.1546	78.75	73.125	77.96	132	117.0	15	1.13	1.09	4.0	0.040	94.2	91.0	100.6	160.4	53.3

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	TNNP_ADJ (kg $CaCO_3$ /t)	SNNP (kg $CaCO_3$ /t)	SNNP_ADJ (kg $CaCO_3$ /t)	ICNNP (kg $CaCO_3$ /t)	TNPR	TNPR_ ADJ	SNPR	SNPR (S DEL CALC)	SNPR for graphs	SNPR_ADJ for graphs	ICNPR	Fizz Rating	Fizz Check	Ag (ppm)	Al (ppm)	Al (%)	As (ppm)	Ba (ppm)
Barrel 11	Sulphurets	S-09-12_1	S-09-12	8.5	9.5	-3.8	11.25	-3.8	3.1	11.3	-3.8	4.00	4.00	4.00		1.82	2	Disagree	0.59	63400	6.34	5.9	1290
Barrel 11	Sulphurets	S-09-12_2	S-09-12	18.5	19.5	73.6	89.25	74.3	42.9	88.6	73.6	11.20	11.20	11.20	9.49	5.58	3	Disagree	0.57	73700	7.37	5.4	1720
Barrel 11	Sulphurets	S-09-12_3	S-09-12	22.5	23.5	73.5	89.13	74.1	49.8	88.5	73.5	48.53	48.53	48.53	40.53	20.92	3	Disagree	0.34	76900	7.69	5.8	2610
Barrel 11	Sulphurets	S-09-12_4	S-09-12	26.5	27.5	13.1	28.13	13.1	16.3	28.1	13.1	16.00	16.00	16.00	8.00	9.70	2	Disagree	0.61	79300	7.93	6.1	1030
Barrel 11	Sulphurets	S-09-12_6	S-09-12	30.5	31.5	-11.9	5.25	-9.8	-9.1	3.1	-11.9	1.38	1.38	1.38	0.29	0.43	2	Disagree	0.93	76900	7.69	24.1	3260
Barrel 11	Sulphurets	S-09-12_7	S-09-12	34.5	35.5	33.3	48.31	33.3	31.3	48.3	33.3	5.99	5.99	5.99	4.44	4.23	2	Disagree	0.5	75600	7.56	9.8	1360
Barrel 11	Sulphurets	S-09-12_8	S-09-12	38.5	39.5	16.3	32.19	17.2	-4.2	31.3	16.3	5.12	5.12	5.12	3.20	0.52	2	Disagree	0.56	76800	7.68	14.5	800
Barrel 11	Sulphurets	S-09-12_9	S-09-12	42.5	43.5	19.1	34.06	19.1	17.3	34.1	19.1	37.33	37.33	37.33	21.33	19.41	2	Disagree	0.36	76300	7.63	12.2	790
Barrel 11	Sulphurets	S-09-12_10	S-09-12	46.5	47.5	-4.6	11.00	-4.0	-6.1	10.4	-4.6	2.10	2.10	2.10	0.60	0.43	2	Disagree	0.98	78600	7.86	8.6	1000
Barrel 11	Sulphurets	S-09-12_11	S-09-12	50.5	51.5	45.2	61.13	46.1	23.6	60.2	45.2	6.15	6.15	6.15	4.88	2.84	3	Disagree	1.01	72500	7.25	10.6	1000
Barrel 11	Sulphurets	S-09-12_12	S-09-12	140.5	141.5	57.9	73.78	58.8	-22.2	72.9	57.9	2.40	2.19	2.40	2.14	0.65	3	Disagree	0.72	69000	6.9	27.3	810
Barrel 11	Sulphurets	S-09-12_13	S-09-12	144.5	145.5	-11.3	4.37	-10.6	-112.2	3.8	-11.3	1.12	1.04	1.12	0.99	0.08	3	Disagree	0.88	71400	7.14	38.2	420
Barrel 11	Sulphurets	S-09-12_14	S-09-12	148.5	149.5	52.2	66.94	51.9	33.6	67.2	52.2	4.51	4.51	4.51	3.72	2.79	3	Disagree	0.37	76900	7.69	18.3	2380
Barrel 11	Sulphurets	S-09-12_15	S-09-12	152.5	153.5	31.1	48.46	33.5	35.5	46.1	31.1	2.49	2.23	2.49	2.07	1.85	3	Disagree	0.35	60100	6.01	72.4	1920
Barrel 11	Sulphurets	S-09-12_16	S-09-12	156.5	157.5	-14.9	0.69	-14.3	-30.0	0.1	-14.9	1.03	1.01	1.03	0.87	0.69	3	Disagree	0.82	74700	7.47	41.3	430
Barrel 11	Sulphurets	S-09-12_17	S-09-12	160.5	161.5	-19.3	-2.57	-17.6	-31.6	-4.3	-19.3	1.06	0.97	1.06	0.89	0.67	3	Disagree	1.55	70800	7.08	111.5	1530
Barrel 11	Sulphurets	S-09-12_18	S-09-12	164.5	165.5	36.2	52.24	37.2	0.0	51.2	36.2	1.85	1.73	1.85	1.62	1.00	3	Disagree	0.98	72900	7.29	59.7	590
Barrel 11	Sulphurets	S-09-12_19	S-09-12	168.5	169.5	47.4	63.93	48.9	28.0	62.4	47.4	2.48	2.28	2.48	2.16	1.54	3	Disagree	5.19	69600	6.96	53	1610
Barrel 11	Sulphurets	S-09-12_20	S-09-12	172.5	173.5	-39.6	-23.80	-38.8	-37.0	-24.6	-39.6	0.75	0.68	0.75	0.53	0.51	2	Disagree	8.76	74100	7.41	125	700
Barrel 11	Sulphurets	S-09-12_21	S-09-12	202.5	203.5	-9.1	6.43	-8.6	7.9	5.9	-9.1	1.14	1.06	1.14	0.99	1.07	3	Disagree	3.06	77600	7.76	542	330
Barrel 11	Sulphurets	S-09-12_22	S-09-12	206.5	207.5	83.4	99.69	84.7	67.1	98.4	83.4	5.91	5.91	5.91	5.17	4.11	3	Disagree	0.43	79600	7.96	32.1	2830
Barrel 11	Sulphurets	S-09-12_24	S-09-12	214.5	215.5	42.0	58.68	43.7	50.1	57.0	42.0	3.98	3.52	3.98	3.25	3.00	2	Disagree	0.54	73100	7.31	454	1880
Barrel 11	Sulphurets	S-09-12_25	S-09-12	218.5	219.5	-30.9	-15.19	-30.2	-19.1	-15.9	-30.9	0.91	0.83	0.91	0.73	0.79	2	Disagree	9.29	71400	7.14	1190	510
Barrel 11	Sulphurets	S-09-12_26	S-09-12	236.5	237.5	-85.6	-69.57	-84.6	-76.6	-70.6	-85.6	0.32	0.31	0.32	0.16	0.25	2	Disagree	1.03	77900	7.79	30.3	500
Barrel 12	Mitchell	M-09-97_1	M-09-97	8.5	9.5	-43.2	-25.99	-41.0	-32.6	-28.2	-43.2	0.33	0.26	0.33	0.00	0.12	1	Disagree	0.69	90400	9.04	6.5	2580
Barrel 12	Mitchell	M-09-97_2	M-09-97	12.5	13.5	-91.4	-75.63	-90.6	-88.9	-76.4	-91.4	0.20	0.18	0.20	0.02	0.05	1	Disagree	0.84	72900	7.29	10.4	680
Barrel 12	Mitchell	M-09-97_3	M-09-97	16.5	17.5	-101.2	-85.63	-100.6	-97.6	-86.2	-101.2	0.17	0.16	0.17	0.01	0.04	1	Disagree	0.85	71800	7.18	9.9	330
Barrel 12	Mitchell	M-09-97_4	M-09-97	20.5	21.5	-72.1	-53.12	-68.1	-75.4	-57.1	-72.1	0.47	0.38	0.47	0.25	0.15	2	Disagree	1.36	74300	7.43	34.7	270
Barrel 12	Mitchell	M-09-97_5	M-09-97	24.5	25.5	-130.2	-114.77	-129.8	-123.5	-115.2	-130.2	0.19	0.16	0.19	0.06	0.10	2	Disagree	1.42	85200	8.52	12.5	150
Barrel 12	Mitchell	M-09-97_6	M-09-97	28.5	29.5	-102.1	-82.60	-97.6	-95.0	-87.1	-102.1	0.36	0.34	0.36	0.23	0.26	2	Disagree	1.01	84200	8.42	9.6	120
Barrel 12	Mitchell	M-09-97_7	M-09-97	32.5	33.5	-38.6	-23.11	-38.1	-20.1	-23.6	-38.6	0.94	0.74	0.94	0.73	0.78	2	Disagree	3.61	76200	7.62	8.2	280
Barrel 12	Mitchell	M-09-97_8	M-09-97	36.5	37.5	-67.3	-51.22	-66.2	-59.4	-52.3	-67.3	0.47	0.43	0.47	0.29	0.35	2	Disagree	0.78	74300	7.43	10.5	980
Barrel 12	Mitchell	M-09-97_9	M-09-97	40.5	41.5	-15.1	1.89	-13.1	-5.4	-0.1	-15.1	1.38	1.07	1.38	0.64	0.81	2	Disagree	1.04	80100	8.01	5.5	2340
Barrel 12	Mitchell	M-09-97_10	M-09-97	44.5	45.5	-44.7	-26.17	-41.2	-36.0	-29.7	-44.7	0.47	0.43	0.47	0.12	0.27	1	Disagree	0.94	75600	7.56	12.1	970
Barrel 12	Mitchell	M-09-97_11	M-09-97	48.5	49.5	-74.8	-56.72	-71.7	-66.4	-59.8	-74.8	0.27	0.24	0.27	0.04	0.15	1	Disagree	1.59	72600	7.26	8.8	390
Barrel 12	Mitchell	M-09-97_12	M-09-97	52.5	53.5	-72.4	-56.11	-71.1	-64.8	-57.4	-72.4	0.20	0.18	0.20	0.00	0.07	1	Disagree	1.17	80200	8.02	7.7	1310
Barrel 12	Mitchell	M-09-97_13	M-09-97	56.5	57.5	-15.5	0.58	-14.4	-7.5	-0.5	-15.5	1.14	1.01	1.14	0.84	0.87	2	Disagree	1.06	56700	5.67	4.5	1050
Barrel 12	Mitchell	M-09-97_14	M-09-97	60.5	61.5	-27.5	-11.31	-26.3	-18.0	-12.5	-27.5	0.54	0.47	0.54	0.00	0.20	1	Disagree	0.47	68400	6.84	8.6	1200
Barrel 12	Mitchell	M-09-97_15	M-09-97	64.5	65.5	-25.4	-9.61	-24.6	-14.8	-10.4	-25.4	0.63	0.48	0.63	0.00	0.23	1	Disagree	3.79	55800	5.58	6.4	620
Barrel 12	Mitchell	M-09-97_16	M-09-97	68.5	69.5	7.2	23.13	8.1	15.9	22.2	7.2	2.36	2.06	2.36	1.57	1.70	2	Disagree	0.3	61000	6.1	14.3	860
Barrel 12	Mitchell	M-09-97_17	M-09-97	72.5	73.5	-17.8	-1.93	-16.9	-9.6	-2.8	-17.8	1.03	0.93	1.03	0.41	0.65	2	Disagree	0.44	61900	6.19	5.3	780
Barrel 12	Mitchell	M-09-97_18	M-09-97	76.5	77.5	-50.9	-34.91	-49.9	-42.3	-35.9	-50.9	0.28	0.24	0.28	0.00	0.10	1	Disagree	1.38	68300	6.83	47.6	890
Barrel 12	Mitchell	M-09-97_19	M-09-97	80.5	81.5	-22.1	-5.92	-20.9	-11.3	-7.1	-22.1	0.70	0.65	0.70	0.00	0.38	1	Disagree	0.42	61200	6.12	5.9	1230
Barrel 12	Mitchell	M-09-97_20	M-09-97	84.5	85.5	22.1	40.10	25.1	34.1	37.1	22.1	2.60	2.06	2.60	2.10	1.83	2	Disagree	0.47	86200	8.62	6.4	1590
Barrel 12	Mitchell	M-09-97_21	M-09-97	88.5	89.5	4.3	21.51	6.5	6.7	19.3	4.3	1.97	1.59	1.97	1.46	1.17	2	Disagree	0.8	81300	8.13	4.8	2670
Barrel 12	Mitchell	M-09-97_22	M-09-97	92.5	93.5	97.3	112.87	97.9	91.9	112.2	97.3	2.15	1.88	2.15	2.02	1.71	3	Disagree	0.74	65000	6.5	9.8	420
Barrel 12	Mitchell	M-09-97_23	M-09-97	96.5	97.5	-35.9	-19.66	-34.7	-30.9	-20.9	-35.9	0.94	0.72	0.94	0.66	0.57	2	Disagree	0.9	75400	7.54	6.6	1240
Barrel 12	Mitchell	M-09-97_24	M-09-97	100.5	101.5	-104.1	-88.57	-103.6	-99.5	-89.1	-104.1	0.37	0.31	0.37	0.23	0.23	2	Disagree	1.36	79700	7.97	5.6	250
Barrel 12	Mitchell	M-09-97_26	M-09-97	108.5	109.5	-9.4	7.13	-7.9	-8.4	5.6	-9.4	1.49	1.15	1.49	1.08	0.83	2	Disagree	0.51	74600	7.46	16	1630
Barrel 12	Mitchell	M-09-97_27	M-09-97	112.5	113.5	-42.6	-26.33	-41.3	-48.8	-27.6	-42.6	0.74	0.63	0.74	0.49	0.32	2	Disagree	0.96	79700	7.97	17.1	1260
Barrel 12	Mitchell	M-09-97_30	M-09-97	124.5	125.5	-43.3	-27.59	-42.6	-32.5	-28.3	-43.3	0.74	0.74	0.74	0.60	0.69	2	Disagree	1.6	67600	6.76	31.4	560
Barrel 12	Mitchell	M-09-97_31	M-09-97	128.5	129.5	15.5	31.83	16.8	20.7	30.5	15.5	1.89	1.69	1.89	1.53	1.44	2	Disagree	0.82	71400	7.14	4.9	1400
Barrel 12	Mitchell	M-09-97_32	M-09-97	132.5	133.5	-66.2	-50.13	-65.1	-109.4	-51.2	-66.2	0.62	0.62	0.62	0.50	0.17	2	Disagree	2.6	71300	7.13	18.5	160
Barrel 12	Mitchell	M-09-97_33	M-09-97	136.5	137.5	-84.4	-68.73	-83.7	-82.1	-69.4	-84.4	0.44	0.42	0.44	0.30	0.31	2	Disagree	1.59	81600	8.16	5.1	540
Barrel 12	Mitchell	M-09-97_34	M-09-97	140.5	141.5	38.3	54.04	39.0	12.2	53.3	38.3	1.81	1.69	1.81	1.60	1.16	3	Disagree	1.89	69100	6.91	5.2	660

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Be (ppm)	Bi (ppm)	Ca (ppm)	Ca (%)	Cd (ppm)	Ce (ppm)	Co (ppm)	Cr (ppm)	Cs (ppm)	Cu (ppm)	Fe (ppm)	Fe (%)	Ga (ppm)	Ge (ppm)	Hf (ppm)	Hg (ppm)	In (ppm)	K (ppm)	K (%)	La (ppm)	Li (ppm)	Mg (ppm)	Mg (%)
Barrel 11	Sulphurets	S-09-12_1	S-09-12	8.5	9.5	0.9	0.22	7100	0.71	0.11	14.5	12.2	9	3.09	1460	26600	2.66	15.65	0.11	0.6	0.09	0.052	32800	3.28	7.6	13.8	12000	1.2
Barrel 11	Sulphurets	S-09-12_2	S-09-12	18.5	19.5	1.12	0.16	38100	3.81	0.04	17.2	14.1	6	3.29	1250	47100	4.71	18.25	0.1	0.4	0.02	0.07	33800	3.38	7.6	19.9	18100	1.81
Barrel 11	Sulphurets	S-09-12_3	S-09-12	22.5	23.5	1.36	0.06	37600	3.76	0.05	15.4	16.8	4	3.71	766	51400	5.14	18.75	0.12	0.5	0.01	0.076	34200	3.42	7	22.2	19200	1.92
Barrel 11	Sulphurets	S-09-12_4	S-09-12	26.5	27.5	1.25	0.09	16700	1.67	0.09	16.2	13.2	3	2.75	1150	34900	3.49	21.4	0.1	0.7	0.03	0.058	32500	3.25	6.9	19.2	15700	1.57
Barrel 11	Sulphurets	S-09-12_6	S-09-12	30.5	31.5	1.24	0.41	9200	0.92	0.05	13.6	9.7	5	3.6	792	39200	3.92	21.1	0.11	1	0.05	0.065	43400	4.34	6.3	23.1	19800	1.98
Barrel 11	Sulphurets	S-09-12_7	S-09-12	34.5	35.5	1.12	0.19	32700	3.27	0.06	17.55	19.4	7	2.19	619	51500	5.15	17.15	0.13	0.4	0.02	0.063	27500	2.75	8.2	19	24200	2.42
Barrel 11	Sulphurets	S-09-12_8	S-09-12	38.5	39.5	1.14	0.32	30800	3.08	0.09	14.5	18	8	1.96	1250	47000	4.7	20.9	0.13	0.7	0.02	0.122	33500	3.35	6.3	18.3	22200	2.22
Barrel 11	Sulphurets	S-09-12_9	S-09-12	42.5	43.5	1.36	0.06	27200	2.72	0.04	14.5	21.8	6	1.6	1150	50500	5.05	20.4	0.12	0.4	0.02	0.062	27800	2.78	6.5	22.2	31400	3.14
Barrel 11	Sulphurets	S-09-12_10	S-09-12	46.5	47.5	1.26	0.17	24200	2.42	0.13	14.5	21.7	10	1.16	2420	46600	4.66	21.2	0.13	0.6	0.03	0.097	28300	2.83	5.9	14.7	21000	2.1
Barrel 11	Sulphurets	S-09-12_11	S-09-12	50.5	51.5	1.08	2.52	32400	3.24	0.08	11.85	14.2	12	1.63	885	50300	5.03	19.7	0.12	0.7	0.02	0.108	31800	3.18	4.6	13.6	15200	1.52
Barrel 11	Sulphurets	S-09-12_12	S-09-12	140.5	141.5	0.7	1.31	45100	4.51	0.06	19.95	29.5	89	1.81	514	61200	6.12	15	0.14	0.8	0.04	0.289	43400	4.34	10.3	16.6	12600	1.26
Barrel 11	Sulphurets	S-09-12_13	S-09-12	144.5	145.5	0.94	2.44	42800	4.28	0.07	22.4	29.4	133	1.84	247	86800	8.68	19.45	0.17	1	0.02	0.548	49900	4.99	11.2	21.2	20300	2.03
Barrel 11	Sulphurets	S-09-12_14	S-09-12	148.5	149.5	1.03	0.78	25100	2.51	0.05	22.2	12.7	138	1.77	249	67900	6.79	19.25	0.15	1.6	<0.01	0.18	41800	4.18	11.7	29.5	37800	3.78
Barrel 11	Sulphurets	S-09-12_15	S-09-12	152.5	153.5	1.41	0.56	31700	3.17	1.01	18.45	10.1	77	3.62	34.5	38200	3.82	12.8	0.11	1.1	0.05	0.135	43200	4.32	10.1	16.3	10800	1.08
Barrel 11	Sulphurets	S-09-12_16	S-09-12	156.5	157.5	0.79	1.42	29700	2.97	0.06	20.9	23.7	80	1.8	208	77800	7.78	18.65	0.16	1.4	0.04	0.204	47400	4.74	10.2	24.5	16200	1.62
Barrel 11	Sulphurets	S-09-12_17	S-09-12	160.5	161.5	0.68	1.97	28100	2.81	0.06	19.9	19.1	58	1.81	195.5	62500	6.25	16.4	0.15	1.8	0.02	0.202	48600	4.86	10.3	22.8	14100	1.41
Barrel 11	Sulphurets	S-09-12_18	S-09-12	164.5	165.5	0.89	1.3	31400	3.14	0.23	19.15	19.2	48	1.58	199	69800	6.98	18.3	0.14	1.5	0.03	0.131	44300	4.43	10	32.2	22200	2.22
Barrel 11	Sulphurets	S-09-12_19	S-09-12	168.5	169.5	1.03	2.21	35400	3.54	3.02	15.05	18.5	14	2.06	121	36000	3.6	16.15	0.13	1.1	0.1	0.138	39100	3.91	6.9	15.6	10800	1.08
Barrel 11	Sulphurets	S-09-12_20	S-09-12	172.5	173.5	1.07	1.8	18500	1.85	73.6	24.1	16.8	86	3.06	227	54600	5.46	20.3	0.16	1.1	6.75	0.213	42700	4.27	10.9	27.8	12100	1.21
Barrel 11	Sulphurets	S-09-12_21	S-09-12	202.5	203.5	1	1.26	35500	3.55	4.01	18.75	15.3	15	3.1	128	60000	6	17.75	0.15	0.8	0.15	0.113	35000	3.5	8.8	15.6	13600	1.36
Barrel 11	Sulphurets	S-09-12_22	S-09-12	206.5	207.5	0.92	0.47	38800	3.88	0.11	14.45	12.1	25	1.72	63.6	61400	6.14	17.2	0.13	0.6	0.01	0.219	28300	2.83	6.4	29.5	22400	2.24
Barrel 11	Sulphurets	S-09-12_24	S-09-12	214.5	215.5	0.96	0.24	31100	3.11	0.3	17.05	13.6	31	1.51	73.6	39800	3.98	18.45	0.1	1	0.04	0.091	35100	3.51	7.7	21.1	11100	1.11
Barrel 11	Sulphurets	S-09-12_25	S-09-12	218.5	219.5	0.98	0.34	29900	2.99	36.9	19.45	12.3	34	2.13	213	55300	5.53	18.6	0.12	0.9	2.39	1.025	35300	3.53	9.4	19.2	12600	1.26
Barrel 11	Sulphurets	S-09-12_26	S-09-12	236.5	237.5	1.29	0.25	10900	1.09	1.87	12.2	26.5	23	10.25	5290	42400	4.24	18.45	0.14	0.7	0.12	0.176	40100	4.01	6	21.5	7800	0.78
Barrel 12	Mitchell	M-09-97_1	M-09-97	8.5	9.5	2.24	0.55	2800	0.28	0.02	10.8	10.6	23	11.65	550	57700	5.77	20	0.15	0.5	0.01	0.049	52900	5.29	5.9	62.4	27600	2.76
Barrel 12	Mitchell	M-09-97_2	M-09-97	12.5	13.5	1.25	0.78	3400	0.34	0.03	16.8	15.6	10	4.23	770	41900	4.19	18.35	0.2	0.7	0.02	0.068	47300	4.73	9.8	29.2	10000	1
Barrel 12	Mitchell	M-09-97_3	M-09-97	16.5	17.5	1.74	0.9	3000	0.3	0.02	14	19.5	14	5.98	487	47000	4.7	16.25	0.2	0.6	0.03	0.039	40800	4.08	7.4	30.6	12000	1.2
Barrel 12	Mitchell	M-09-97_4	M-09-97	20.5	21.5	2.56	0.43	9900	0.99	0.05	16.75	17.5	9	11.8	924	45100	4.51	18.55	0.2	0.7	0.04	0.048	51000	5.1	9	45.4	18000	1.8
Barrel 12	Mitchell	M-09-97_5	M-09-97	24.5	25.5	1.42	0.81	8500	0.85	0.11	18.7	16.5	13	3.7	1980	49900	4.99	27.5	0.16	0.6	0.02	0.109	50900	5.09	10.9	20.4	5800	0.58
Barrel 12	Mitchell	M-09-97_6	M-09-97	28.5	29.5	1.77	0.64	14600	1.46	0.04	15.6	15.4	15	5.19	648	44400	4.44	20.3	0.17	0.6	0.07	0.043	50700	5.07	8.2	18	6100	0.61
Barrel 12	Mitchell	M-09-97_7	M-09-97	32.5	33.5	2.23	1.02	19900	1.99	0.5	14.7	14.7	11	3.84	814	38100	3.81	16.15	0.14	0.5	0.03	0.087	47400	4.74	8.4	22.5	10600	1.06
Barrel 12	Mitchell	M-09-97_8	M-09-97	36.5	37.5	2.36	0.69	9100	0.91	2.83	14.4	18	19	11.55	1140	51500	5.15	16.65	0.2	0.7	0.03	0.084	40100	4.01	9	52	17200	1.72
Barrel 12	Mitchell	M-09-97_9	M-09-97	40.5	41.5	1.6	0.53	10700	1.07	0.54	15.95	6.2	3	4.42	467	34500	3.45	18.15	0.11	0.9	0.04	0.149	49700	4.97	10.3	14.3	5400	0.54
Barrel 12	Mitchell	M-09-97_10	M-09-97	44.5	45.5	1.84	0.79	5800	0.58	0.18	14.85	10.1	1	4.77	1085	31700	3.17	18.95	0.2	1	0.02	0.129	47100	4.71	9.4	15.5	6200	0.62
Barrel 12	Mitchell	M-09-97_11	M-09-97	48.5	49.5	1.94	1.2	5100	0.51	0.23	16.3	16.6	15	6.37	1490	46000	4.6	16.75	0.21	0.6	0.05	0.095	39600	3.96	10.5	33.4	12000	1.2
Barrel 12	Mitchell	M-09-97_12	M-09-97	52.5	53.5	1.97	0.77	3800	0.38	0.11	25.2	23	13	6.94	1790	42200	4.22	18.6	0.2	0.7	0.05	0.08	44600	4.46	11.1	37.6	12700	1.27
Barrel 12	Mitchell	M-09-97_13	M-09-97	56.5	57.5	1.46	0.63	19700	1.97	0.08	7.4	15.6	12	1.95	1095	34800	3.48	18.15	0.17	1.9	0.02	0.056	43300	4.33	4.9	12.1	6600	0.66
Barrel 12	Mitchell	M-09-97_14	M-09-97	60.5	61.5	1.91	0.32	1300	0.13	0.1	7.59	3.8	9	1.44	442	21200	2.12	33.3	0.12	2.9	0.02	0.04	54000	5.4	6.1	8.5	4600	0.46
Barrel 12	Mitchell	M-09-97_15	M-09-97	64.5	65.5	1.69	4.71	900.0	0.09	0.19	5.97	2.8	5	1.1	2120	17500	1.75	27	0.11	1.6	0.04	0.111	44200	4.42	4.6	4	2200	0.22
Barrel 12	Mitchell	M-09-97_16	M-09-97	68.5	69.5	1.61	0.46	15100	1.51	0.07	5.68	2.9	7	1.26	308	22700	2.27	28.7	0.11	2.1	0.03	0.032	42500	4.25	4.5	6.6	4500	0.45
Barrel 12	Mitchell	M-09-97_17	M-09-97	72.5	73.5	1.55	0.31	6700	0.67	0.06	7.45	3.5	5	1.15	288	21100	2.11	27.9	0.12	1.9	0.04	0.042	48800	4.88	5.4	5.7	3900	0.39
Barrel 12	Mitchell	M-09-97_18	M-09-97	76.5	77.5	3.97	0.45	1400	0.14	0.6	6.38	4.8	6	6.41	1030	29500	2.95	34.9	0.15	2.9	0.07	0.069	45900	4.59	5.6	25.9	8300	0.83
Barrel 12	Mitchell	M-09-97_19	M-09-97	80.5	81.5	1.66	0.32	2000	0.2	0.1	5.75	2.4	5	1.24	327	21200	2.12	29.4	0.11	1.7	0.02	0.062	45100	4.51	4.2	4.8	3500	0.35
Barrel 12	Mitchell	M-09-97_20	M-09-97	84.5	85.5	1.66	0.51	32700	3.27	0.12	14.2	9.5	1	4.55	412	33700	3.37	19.55	0.12	1.1	0.01	0.194	52000	5.2	7.5	16.5	6600	0.66
Barrel 12	Mitchell	M-09-97_21	M-09-97	88.5	89.5	1.55	0.62	22000	2.2	0.13	10.4	10.3	14	3.72	762	38800	3.88	18.4	0.12	0.6	0.03	0.093	46500	4.65	5.5	19.4	11300	1.13
Barrel 12	Mitchell	M-09-97_22	M-09-97	92.5	93.5	1.03	0.87	86700	8.67	0.07	15.45	10.1	7	2.97	462	62600	6.26	13.9	0.15	0.5	0.06	0.115	29100	2.91	8.3	17.3	13700	1.37
Barrel 12	Mitchell	M-09-97_23	M-09-97	96.5	97.5	1.24	0.84	19000	1.9	0.12	13.55	13.5	39	2.08	852	38400	3.84	11.2	0.13	0.6	0.04	0.053	48500	4.85	7.8	38	6700	0.67
Barrel 12	Mitchell	M-09-97_24	M-09-97	100.5	101.5	0.96	2.21	15700	1.57	0.04	13.6	19.4	30	1.54	1405	50200	5.02	12.95	0.15	0.5	0.03	0.045	51700	5.17	7.7	16.7	3600	0.36
Barrel 12	Mitchell	M-09-97_26	M-09-97	108.5	109.5	1.72	0.46	20800	2.08	0.05	12.75	14.4	8	6.03	429	33500	3.35	15.85	0.11	0.9	0.01	0.036	42400	4.24	7.5	33.8	15800	1.58
Barrel 12	Mitchell	M-09-97_27	M-09-97	112.5	113.5	1.34	1.14	14800	1.48	0.11	15.25	23	79	7.33	754	53100	5.31	16.7	0.15	0.6	0.04	0.074	47400	4.74	8.8	44.7	23200	2.32
Barrel 12	Mitchell	M-09-97_30	M-09-97	124.5	125.5	1.45	1.12	23000	2.3	0.1	12	18.1	60	6.8	843	49600	4.96	16.2	0.22	0.7	0.05	0.118	36700	3.67	7	40	17600	1.76
Barrel 12	Mitchell	M-09-97_31	M-09-97	128.5	129.5	1.26	0.93	30400	3.04	0.08	13.4	13.9	37	9.34	645	46200	4.62	16.2	0.23	0.6	0.05	0.083	44500	4.45	7.8	44.4	21200	2.12
Barrel 12	Mitchell	M-09-97_32	M-09-97	132.5	133.5	1.34	0.3	9900	0.99	0.3	16.35	14.9	6	4.07	873	42000	4.2	16	0.15	0.4	0.01	0.034	35200	3.52	8.1	7.7	7500	0.75
Barrel 12	Mitchell	M-09-97_33	M-09-97	136.5	137.5	1.78	1.6	18500	1.85	0.06	13.95	41.2	93	3.96	1795	64500	6.45	16.25	0.27	0.4	0.02	0.141	53600	5.36	7.4	26.2	9500	0.95
Barrel 12	Mitchell	M-09-97_34	M-09-97	140.5	141.5	1.28	1.36	40300	4.03	0.08	12.85	18.7	10	3.32	2090	52700	5.27	15	0.21	0.8	0.03	0.078	29700	2.97	7.6	35.2	15700	1.57

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	Mn (ppm)	Mo (ppm)	Na (ppm)	Na (%)	Nb (ppm)	Ni (ppm)	P (%)	Pb (ppm)	Rb (ppm)	Re (ppm)	S (ppm)	S (%)	Sb (ppm)	Sc (ppm)	Se (ppm)	Sn (ppm)	Sr (ppm)	Ta (ppm)	Te (ppm)	Th (ppm)	Ti (ppm)	Ti (%)	Tl (ppm)
Barrel 11	Sulphurets	S-09-12_1	S-09-12	8.5	9.5	594	5.19	19300	1.93	7.3	8.9	0.142	5.2	88.5	0.004	1400	0.14	2.72	16.6	2	1.9	191	0.38	0.1	1.5	3250.0	0.325	0.39
Barrel 11	Sulphurets	S-09-12_2	S-09-12	18.5	19.5	1160	15.45	23900	2.39	11.3	9	0.254	3.1	76.1	0.014	3300	0.33	2.9	24.6	3	1.6	349	0.57	0.14	1	4410.0	0.441	0.53
Barrel 11	Sulphurets	S-09-12_3	S-09-12	22.5	23.5	1000	1.32	24300	2.43	12	9.3	0.265	3.7	89.4	<0.002	900.0	0.09	3.24	27.1	2	1.6	420	0.61	<0.05	1	4670.0	0.467	0.65
Barrel 11	Sulphurets	S-09-12_4	S-09-12	26.5	27.5	641	1.5	32800	3.28	11.1	9.5	0.242	6.4	76.5	<0.002	600.0	0.06	2.67	27.2	2	2.2	350	0.6	0.05	1.2	4910.0	0.491	0.49
Barrel 11	Sulphurets	S-09-12_6	S-09-12	30.5	31.5	921	10.7	17600	1.76	9.4	6.5	0.168	12.7	89.8	0.006	5600	0.56	3.88	19.4	3	1.5	223	0.53	0.15	2.5	3340.0	0.334	0.75
Barrel 11	Sulphurets	S-09-12_7	S-09-12	34.5	35.5	886	1.35	22800	2.28	9.9	10.4	0.226	7.8	86.3	<0.002	3500	0.35	3.39	30.5	3	1.4	418	0.5	<0.05	1.4	4000	0.4	0.49
Barrel 11	Sulphurets	S-09-12_8	S-09-12	38.5	39.5	1080	2.14	25300	2.53	10	9.3	0.191	8.3	91.6	0.002	2600	0.26	2.99	29.1	4	2.2	461	0.53	0.08	1.1	4370.0	0.437	0.6
Barrel 11	Sulphurets	S-09-12_9	S-09-12	42.5	43.5	767	1.25	26300	2.63	10.3	9.2	0.213	4	49.6	<0.002	300.0	0.03	5.26	26.9	2	1.2	607	0.54	0.06	0.9	4350.0	0.435	0.52
Barrel 11	Sulphurets	S-09-12_10	S-09-12	46.5	47.5	591	2.05	32700	3.27	10.7	12.6	0.221	6	54.5	0.004	3500	0.35	3.11	26.2	5	1.9	670	0.59	0.08	1.1	4630.0	0.463	0.43
Barrel 11	Sulphurets	S-09-12_11	S-09-12	50.5	51.5	928	2.73	26900	2.69	9.4	12.3	0.194	10.1	81.1	0.003	4500	0.45	3.9	22.6	3	2.5	466	0.51	0.12	1.1	3920.0	0.392	0.51
Barrel 11	Sulphurets	S-09-12_12	S-09-12	140.5	141.5	898	4.83	3900	0.39	5.7	48.9	0.16	6	85.1	0.003	19400	1.94	2.54	22.6	3	1.7	550	0.32	0.79	2	3230.0	0.323	1.38
Barrel 11	Sulphurets	S-09-12_13	S-09-12	144.5	145.5	1220	9.18	1000	0.1	6.1	73.6	0.179	12.9	97.7	0.004	38300	3.83	3.11	28.1	4	2.2	476	0.33	1.33	2.1	3620.0	0.362	1.27
Barrel 11	Sulphurets	S-09-12_14	S-09-12	148.5	149.5	1300	3.58	10000	1	6.9	56.7	0.212	5.7	99.7	<0.002	6200	0.62	2.06	26.4	2	1.2	389	0.39	0.2	2.7	3890.0	0.389	0.81
Barrel 11	Sulphurets	S-09-12_15	S-09-12	152.5	153.5	906	5.22	5500	0.55	4.6	35.3	0.121	13.3	153.5	0.023	13600	1.36	8.82	16.7	2	0.7	381	0.27	0.2	1.9	2660.0	0.266	1.51
Barrel 11	Sulphurets	S-09-12_16	S-09-12	156.5	157.5	1470	2.64	13800	1.38	8.9	46.7	0.19	10.5	114.5	0.004	30800	3.08	4.28	23.7	3	1.3	525	0.46	0.63	2.9	3940.0	0.394	1.13
Barrel 11	Sulphurets	S-09-12_17	S-09-12	160.5	161.5	1280	41.7	1700	0.17	9	39	0.181	25.4	109	0.009	28600	2.86	5.17	18.6	5	1.3	535	0.46	0.88	3.2	3850.0	0.385	1.62
Barrel 11	Sulphurets	S-09-12_18	S-09-12	164.5	165.5	1700	4.73	12300	1.23	8.4	42.9	0.176	29.9	104	0.003	22800	2.28	3.87	22.3	4	1.2	397	0.47	0.46	3	3820.0	0.382	1.27
Barrel 11	Sulphurets	S-09-12_19	S-09-12	168.5	169.5	1600	1.39	21800	2.18	5.6	13.3	0.206	156	90	0.002	15600	1.56	3.08	18.6	7	1	501	0.33	2.84	1.8	3100	0.31	1.2
Barrel 11	Sulphurets	S-09-12_20	S-09-12	172.5	173.5	3090	2.48	1200	0.12	8.4	46.2	0.19	5520	87	0.008	22500	2.25	11.9	25.9	9	1.2	430	0.45	0.74	2.5	4310.0	0.431	2.03
Barrel 11	Sulphurets	S-09-12_21	S-09-12	202.5	203.5	1840	4.45	20900	2.09	5.5	17.9	0.112	174.5	106	0.003	33200	3.32	11.5	15.4	4	0.8	464	0.34	0.22	1.8	2910.0	0.291	1.43
Barrel 11	Sulphurets	S-09-12_22	S-09-12	206.5	207.5	1840	1.04	25700	2.57	3.9	18.7	0.121	20.7	60.6	<0.002	8100	0.81	4.03	27.8	2	0.9	426	0.24	<0.05	0.9	3650.0	0.365	0.96
Barrel 11	Sulphurets	S-09-12_24	S-09-12	214.5	215.5	1460	1.15	28900	2.89	4.2	15.7	0.092	34	80.5	0.002	8100	0.81	4.1	13.3	1	0.8	409	0.27	0.05	1.9	3460.0	0.346	1.22
Barrel 11	Sulphurets	S-09-12_25	S-09-12	218.5	219.5	1430	2.06	21300	2.13	3.8	16.5	0.082	4160	95.8	<0.002	30100	3.01	17.9	13.7	6	1	316	0.24	0.2	1.9	3110.0	0.311	1.24
Barrel 11	Sulphurets	S-09-12_26	S-09-12	236.5	237.5	730	84.5	3700	0.37	3.9	19.5	0.128	56.6	105.5	0.189	31600	3.16	10.55	22.9	10	2.6	133.5	0.23	0.25	1.8	1990.0	0.199	2.25
Barrel 12	Mitchell	M-09-97_1	M-09-97	8.5	9.5	682	23.1	18100	1.81	6.9	8.7	0.168	10.3	197	0.006	12600	1.26	3.73	29.4	9	1.2	76.3	0.4	0.23	1.5	3020.0	0.302	1.4
Barrel 12	Mitchell	M-09-97_2	M-09-97	12.5	13.5	298	12.6	24500	2.45	7	8.2	0.163	10.9	141.5	0.016	30600	3.06	1.91	23.1	11	1.1	81.4	0.4	0.44	2.1	2090.0	0.209	0.84
Barrel 12	Mitchell	M-09-97_3	M-09-97	16.5	17.5	279	28.3	16800	1.68	7.4	8.1	0.156	8.2	154.5	0.033	32000	3.2	3.38	23	10	1.3	83.1	0.39	0.37	1.6	2120.0	0.212	0.99
Barrel 12	Mitchell	M-09-97_4	M-09-97	20.5	21.5	636	18.35	12300	1.23	8.9	7.5	0.186	6.6	231	0.018	25800	2.58	4.5	27	9	1	255	0.48	0.54	1.6	2640.0	0.264	1.46
Barrel 12	Mitchell	M-09-97_5	M-09-97	24.5	25.5	209	10.05	19000	1.9	4.9	10	0.153	9.6	148.5	0.021	44200	4.42	2.39	41.4	15	1.1	89.5	0.29	1	1.7	1770.0	0.177	1.05
Barrel 12	Mitchell	M-09-97_6	M-09-97	28.5	29.5	384	26.6	18000	1.8	4.3	9.4	0.161	11.9	156.5	0.044	41700	4.17	3.48	24.2	18	0.9	251	0.25	1.23	1.6	1520.0	0.152	0.93
Barrel 12	Mitchell	M-09-97_7	M-09-97	32.5	33.5	686	49.4	13300	1.33	4.4	7.8	0.151	21.8	144	0.032	29200	2.92	5.91	20.6	11	1.2	173	0.26	0.98	1.5	1730.0	0.173	0.99
Barrel 12	Mitchell	M-09-97_8	M-09-97	36.5	37.5	588	67.9	14800	1.48	6.6	12.7	0.168	6.3	189.5	0.077	27400	2.74	9.21	26.3	10	1.1	78.8	0.4	0.54	1.5	2740.0	0.274	1.17
Barrel 12	Mitchell	M-09-97_9	M-09-97	40.5	41.5	443	5.87	15500	1.55	8.4	3.2	0.084	9.8	141	0.005	8500	0.85	2.87	22.6	5	1.3	154	0.4	1.01	3.1	1690.0	0.169	0.96
Barrel 12	Mitchell	M-09-97_10	M-09-97	44.5	45.5	327	31	15700	1.57	9	3.6	0.072	13.9	173.5	0.042	14700	1.47	3.34	6.1	10	1.2	202	0.44	0.97	2.8	1430.0	0.143	1.11
Barrel 12	Mitchell	M-09-97_11	M-09-97	48.5	49.5	405	57.3	23700	2.37	6.4	9.3	0.156	9.5	169.5	0.054	22600	2.26	3.19	23.2	11	1.4	171	0.36	1.43	1.7	2190.0	0.219	0.92
Barrel 12	Mitchell	M-09-97_12	M-09-97	52.5	53.5	987	28.9	19700	1.97	5.9	11.3	0.165	8.5	207	0.021	21200	2.12	4.04	31.8	9	1.2	67.3	0.36	0.79	1.9	2250.0	0.225	1.09
Barrel 12	Mitchell	M-09-97_13	M-09-97	56.5	57.5	518	33	9300	0.93	8.7	4.8	0.061	7.5	107	0.038	18100	1.81	1.52	9.4	12	1.2	127	0.41	0.31	14.3	1320.0	0.132	0.68
Barrel 12	Mitchell	M-09-97_14	M-09-97	60.5	61.5	367	10.2	18800	1.88	12.6	4.5	0.029	9.5	87.1	0.004	7400	0.74	1.41	5.3	4	2	61.7	0.58	0.12	19.3	820.00	0.082	0.74
Barrel 12	Mitchell	M-09-97_15	M-09-97	64.5	65.5	174	2.64	15800	1.58	10.2	3.3	0.017	17.3	83	<0.002	6000	0.6	1.54	2.7	5	1.8	42.6	0.41	0.31	8.7	710.00	0.071	0.56
Barrel 12	Mitchell	M-09-97_16	M-09-97	68.5	69.5	542	3.72	13600	1.36	13.1	3.7	0.038	7.1	74.6	0.003	7900	0.79	1.13	3.1	2	2.1	106	0.51	0.07	11.7	790.00	0.079	0.7
Barrel 12	Mitchell	M-09-97_17	M-09-97	72.5	73.5	251	7.84	11600	1.16	14.2	3	0.032	7.4	77.6	0.011	8800	0.88	1	3.7	3	2.2	74.2	0.5	0.08	13.6	780.00	0.078	0.73
Barrel 12	Mitchell	M-09-97_18	M-09-97	76.5	77.5	891	21.9	3600	0.36	14.3	7.9	0.026	167.5	142.5	0.008	15700	1.57	6.37	4.7	5	2.6	29.8	0.57	0.44	14.4	840.00	0.084	1.28
Barrel 12	Mitchell	M-09-97_19	M-09-97	80.5	81.5	275	2.47	3300	0.33	11.9	3.5	0.028	7.3	79.6	0.004	6200	0.62	1.26	3.1	3	1.9	85.4	0.47	0.1	8.4	750.00	0.075	0.77
Barrel 12	Mitchell	M-09-97_20	M-09-97	84.5	85.5	775	1.2	26000	2.6	8.4	1.3	0.117	11.1	143	0.003	12400	1.24	2.22	14.4	5	1.4	363	0.43	0.31	3.8	2110.0	0.211	0.77
Barrel 12	Mitchell	M-09-97_21	M-09-97	88.5	89.5	941	2.59	25200	2.52	8	7.9	0.112	11.4	124	0.003	12800	1.28	2.23	15.9	7	1.5	178.5	0.38	0.24	1.5	2810.0	0.281	0.63
Barrel 12	Mitchell	M-09-97_22	M-09-97	92.5	93.5	2650	1.02	20100	2.01	5.7	5.4	0.094	10.1	88.2	0.002	40900	4.09	2.51	16.4	5	1.5	269	0.27	0.25	1.5	2100	0.21	0.46
Barrel 12	Mitchell	M-09-97_23	M-09-97	96.5	97.5	684	7.28	15800	1.58	7.3	10.3	0.131	12.3	116.5	0.017	22500	2.25	1.45	11.6	9	1.6	171	0.3	0.36	2.5	2130.0	0.213	0.63
Barrel 12	Mitchell	M-09-97_24	M-09-97	100.5	101.5	411	6.68	23300	2.33	6.8	14.1	0.153	18.8	106	0.02	40900	4.09	1.22	33.3	11	1.8	157	0.32	0.48	1.4	2450.0	0.245	0.67
Barrel 12	Mitchell	M-09-97_26	M-09-97	108.5	109.5	624	5.53	19800	1.98	7.8	6.1	0.143	5	149.5	0.007	16200	1.62	2.49	18.7	5	1.1	137.5	0.41	0.23	2.5	2100	0.21	0.91
Barrel 12	Mitchell	M-09-97_27	M-09-97	112.5	113.5	700	7.09	20900	2.09	7.3	40	0.178	7.5	121.5	0.008	22600	2.26	1.6	30.6	8	1.6	145	0.33	0.51	1.3	2980.0	0.298	1.03
Barrel 12	Mitchell	M-09-97_30	M-09-97	124.5	125.5	1020	6.58	22500	2.25	5.9	24	0.145	9.6	159.5	0.013	32000	3.2	3.02	24.7	9	2.1	130	0.31	0.77	2.5	2700	0.27	0.83
Barrel 12	Mitchell	M-09-97_31	M-09-97	128.5	129.5	1100	4.72	18600	1.86	6.2	13.8	0.153	10.3	191.5	0.008	17000	1.7	2.11	29.8	6	1.7	174.5	0.31	0.46	1.1	3130.0	0.313	0.83
Barrel 12	Mitchell	M-09-97_32	M-09-97	132.5	133.5	339	153	1000	0.1	2.5	3.7	0.126	65	110	0.588	40700	4.07	4.53	15.4	12	2	86.8	0.17	0.13	2.7	1000	0.1	2.16
Barrel 12	Mitchell	M-09-97_33	M-09-97	136.5	137.5	632	18.7	19400	1.94	5.4	11.9	0.185	16.6	177.5	0.014	38100	3.81	2.02	27.2	13	2.4	198.5	0.29	0.54	1	2270.0	0.227	0.8
Barrel 12	Mitchell	M-09-97_34	M-09-97	140.5	141.5	1100	9.99	26900	2.69	8.2	8.1	0.141	14.7	107	0.022	25600	2.56	1.84	19.1	9	2.4	167.5	0.4	0.36	1.5	2400	0.24	0.44

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

Barrel No.	Zone	Year	Drill Hole	From	To	U (ppm)	V (ppm)	W (ppm)	Y (ppm)	Zn (ppm)	Zr (ppm)	Al2O3 (%)	BaO (%)	CaO (%)	Cr2O3 (%)	Fe2O3 (%)	K2O (%)	MgO (%)	MnO (%)	Na2O (%)	P2O5 (%)	SiO2 (%)	SRO (%)	TiO2 (%)	LOI (%)	Total_DC (%)
Barrel 11	Sulphurets	S-09-12_1	S-09-12	8.5	9.5	1.5	224	9.8	14	29	16.8	12.94	0.15	0.98	<0.01	3.76	4.03	2.13	0.08	2.69	0.303	70.1	0.03	0.58	2.04	99.81
Barrel 11	Sulphurets	S-09-12_2	S-09-12	18.5	19.5	0.6	357	7	13.9	38	10.1	17.64	0.22	5.74	<0.01	7.33	4.46	3.67	0.17	3.4	0.589	49.9	0.04	0.83	5.91	99.9
Barrel 11	Sulphurets	S-09-12_3	S-09-12	22.5	23.5	0.6	368	3	13.1	36	10.3	18.21	0.33	5.59	<0.01	7.83	4.36	3.82	0.14	3.36	0.601	49.13	0.05	0.85	5.31	99.58
Barrel 11	Sulphurets	S-09-12_4	S-09-12	26.5	27.5	1.2	413	6.9	16.3	34	17	18.8	0.13	2.57	<0.01	5.46	4.31	3.09	0.09	4.77	0.549	56.01	0.05	0.93	3.13	99.89
Barrel 11	Sulphurets	S-09-12_6	S-09-12	30.5	31.5	1.9	259	7	12.5	37	29.5	17.19	0.38	1.3	<0.01	5.72	6.08	3.69	0.13	2.48	0.364	58.98	0.03	0.61	3.04	100
Barrel 11	Sulphurets	S-09-12_7	S-09-12	34.5	35.5	0.5	319	2.7	14.9	48	10.8	15.59	0.16	4.76	<0.01	7.61	3.52	4.47	0.12	3.23	0.499	54.53	0.05	0.76	4.56	99.87
Barrel 11	Sulphurets	S-09-12_8	S-09-12	38.5	39.5	0.8	362	3.9	14.5	52	16.4	17.17	0.09	4.49	<0.01	7.06	4.28	4.21	0.15	3.55	0.432	54.04	0.06	0.82	3.67	100.05
Barrel 11	Sulphurets	S-09-12_9	S-09-12	42.5	43.5	0.6	325	2.6	12.4	50	10.6	17.65	0.1	3.95	<0.01	7.52	3.63	5.98	0.11	3.63	0.469	52.01	0.07	0.82	4.02	99.95
Barrel 11	Sulphurets	S-09-12_10	S-09-12	46.5	47.5	0.9	363	2.4	14	48	14.9	18.05	0.11	3.55	<0.01	6.89	3.65	4.05	0.08	4.53	0.493	54.87	0.07	0.89	2.67	99.91
Barrel 11	Sulphurets	S-09-12_11	S-09-12	50.5	51.5	0.8	387	7.8	13.7	43	16.7	16.31	0.12	4.73	<0.01	7.54	4.04	2.92	0.13	3.76	0.434	55.14	0.06	0.73	3.95	99.86
Barrel 11	Sulphurets	S-09-12_12	S-09-12	140.5	141.5	1.7	205	40.4	11.6	37	21.9	14.25	0.42	6.67	0.02	9.24	7.88	2.42	0.13	0.61	0.371	50.66	0.06	0.61	4.94	98.27
Barrel 11	Sulphurets	S-09-12_13	S-09-12	144.5	145.5	1.9	261	51.4	11.4	71	29.3	13.94	0.36	6.05	0.02	12.72	7.43	3.68	0.17	0.21	0.401	47.02	0.05	0.64	5.82	98.51
Barrel 11	Sulphurets	S-09-12_14	S-09-12	148.5	149.5	1.8	262	14.5	11.7	102	54.2	14.86	0.28	3.49	0.02	9.75	5.08	6.53	0.17	1.35	0.444	50.71	0.04	0.7	5.24	98.67
Barrel 11	Sulphurets	S-09-12_15	S-09-12	152.5	153.5	2	193	14.7	14.2	94	43.5	11.8	0.26	4.43	0.01	5.37	5.37	2	0.12	0.8	0.265	63.28	0.05	0.48	4.14	98.37
Barrel 11	Sulphurets	S-09-12_16	S-09-12	156.5	157.5	2.3	261	12.8	11.4	53	44.2	15.1	0.37	4.13	0.02	11.21	5.81	3	0.19	1.95	0.401	50.61	0.06	0.71	4.74	98.31
Barrel 11	Sulphurets	S-09-12_17	S-09-12	160.5	161.5	9.3	239	10.7	11	75	62.5	14.44	0.53	4.09	0.01	9.27	8.27	2.69	0.18	0.3	0.406	53.55	0.06	0.72	4.12	98.64
Barrel 11	Sulphurets	S-09-12_18	S-09-12	164.5	165.5	2.3	248	9.9	10.3	130	52.3	14.77	0.33	4.42	0.01	10.1	5.53	4.03	0.23	1.73	0.384	50.74	0.04	0.7	5.92	98.93
Barrel 11	Sulphurets	S-09-12_19	S-09-12	168.5	169.5	1.2	191	15.6	9.2	459	38.3	16	0.44	5.22	<0.01	5.43	5.69	2.17	0.23	3.16	0.471	54.45	0.07	0.59	5.87	99.79
Barrel 11	Sulphurets	S-09-12_20	S-09-12	172.5	173.5	1.8	326	24.8	10.5	>10000	30.9	16.39	0.58	2.63	0.02	8.02	8.85	2.39	0.44	0.55	0.426	53.54	0.06	0.82	3.63	98.33
Barrel 11	Sulphurets	S-09-12_21	S-09-12	202.5	203.5	1.3	145	11.2	11.9	391	26.7	15.88	0.37	5.01	<0.01	8.71	4.41	2.56	0.25	2.96	0.243	50.2	0.06	0.56	8.13	99.34
Barrel 11	Sulphurets	S-09-12_22	S-09-12	206.5	207.5	0.5	211	3.9	9.3	86	12.9	16.6	0.34	5.48	0.01	8.85	3.51	4.12	0.25	3.5	0.266	50.94	0.05	0.68	5.34	99.92
Barrel 11	Sulphurets	S-09-12_24	S-09-12	214.5	215.5	1	140	9.7	8.1	96	27.4	16.69	0.23	4.62	<0.01	6.03	4.56	2.23	0.21	4.13	0.219	55.02	0.05	0.68	4.9	99.57
Barrel 11	Sulphurets	S-09-12_25	S-09-12	218.5	219.5	1	151	8.8	8	5490	24.4	15.22	0.2	4.24	0.01	8.03	4.43	2.4	0.2	3.14	0.189	54.1	0.04	0.62	6.79	99.6
Barrel 11	Sulphurets	S-09-12_26	S-09-12	236.5	237.5	1.6	176	8.9	8.9	189	22.4	17.33	0.34	1.59	<0.01	6.11	8.69	1.53	0.1	0.55	0.285	57.29	0.02	0.47	4.48	98.8
Barrel 12	Mitchell	M-09-97_1	M-09-97	8.5	9.5	2.9	450	5.6	7.7	84	16.1	18.19	0.3	0.37	0.01	8.57	6.71	4.59	0.09	2.33	0.358	53.56	0.01	0.58	4.04	99.71
Barrel 12	Mitchell	M-09-97_2	M-09-97	12.5	13.5	1.8	339	10.9	11.2	36	19.7	16.4	0.19	0.53	<0.01	6.52	6.24	1.81	0.04	3.43	0.363	60.02	0.01	0.47	3.82	99.85
Barrel 12	Mitchell	M-09-97_3	M-09-97	16.5	17.5	2.2	299	12.1	8.8	38	17.5	15.88	0.34	0.45	<0.01	7.21	6.24	2.17	0.04	2.36	0.348	60.01	0.01	0.46	4.4	99.91
Barrel 12	Mitchell	M-09-97_4	M-09-97	20.5	21.5	2.4	370	9.8	13.8	63	19	17.14	1.1	1.56	<0.01	6.97	6.61	3.23	0.09	1.72	0.4	55.01	0.03	0.49	5.58	99.93
Barrel 12	Mitchell	M-09-97_5	M-09-97	24.5	25.5	1.9	315	5.9	12.2	24	18.3	16.5	0.27	1.15	<0.01	7.28	6.82	1.01	0.03	2.43	0.33	58.64	0.01	0.47	4.82	99.76
Barrel 12	Mitchell	M-09-97_6	M-09-97	28.5	29.5	1.7	235	6.8	11.7	16	18.7	16.07	0.94	1.96	<0.01	6.38	6.17	1.05	0.05	2.28	0.337	57.78	0.03	0.44	6.23	99.72
Barrel 12	Mitchell	M-09-97_7	M-09-97	32.5	33.5	1.5	260	10.8	10.7	83	16.1	14.41	0.3	2.64	<0.01	5.45	6.1	1.78	0.09	1.66	0.316	60.14	0.02	0.4	6.66	99.96
Barrel 12	Mitchell	M-09-97_8	M-09-97	36.5	37.5	1.6	338	15.2	10	202	20.9	17.27	0.23	1.5	<0.01	8.05	6.23	3.12	0.08	2.08	0.379	54.5	0.01	0.52	5.78	99.76
Barrel 12	Mitchell	M-09-97_9	M-09-97	40.5	41.5	1.9	626	5.9	9.5	93	30.1	15.5	0.54	1.45	<0.01	5.04	6.6	0.95	0.06	1.97	0.184	64.04	0.02	0.31	3.18	99.84
Barrel 12	Mitchell	M-09-97_10	M-09-97	44.5	45.5	3.3	379	6.6	9.6	77	29.8	16.46	0.85	0.87	<0.01	4.93	7	1.19	0.04	2.26	0.167	62.21	0.03	0.25	3.39	99.64
Barrel 12	Mitchell	M-09-97_11	M-09-97	48.5	49.5	2.4	323	13.1	13.8	59	18.3	15.74	0.62	0.78	<0.01	6.94	5.15	2.12	0.05	3.26	0.342	60.37	0.02	0.47	4.05	99.92
Barrel 12	Mitchell	M-09-97_12	M-09-97	52.5	53.5	1.9	337	12.3	14.4	52	19.5	17.37	0.22	0.58	0.02	6.51	5.87	2.3	0.14	2.81	0.367	59.17	0.01	0.52	3.92	99.8
Barrel 12	Mitchell	M-09-97_13	M-09-97	56.5	57.5	7.5	440	8.1	5.7	35	62.6	11.12	0.16	2.85	<0.01	5.22	5.79	1.25	0.07	1.28	0.138	67.2	0.02	0.22	4.47	99.78
Barrel 12	Mitchell	M-09-97_14	M-09-97	60.5	61.5	6	335	6.9	5.9	38	85.7	13.83	0.13	0.16	<0.01	3.09	7.08	0.84	0.05	2.58	0.067	70.41	0.01	0.11	1.43	99.79
Barrel 12	Mitchell	M-09-97_15	M-09-97	64.5	65.5	3.9	263	6.2	4.3	26	42.5	11.12	0.07	0.12	<0.01	2.58	5.69	0.44	0.02	2.22	0.043	76.4	0.01	0.09	1.01	99.81
Barrel 12	Mitchell	M-09-97_16	M-09-97	68.5	69.5	4.1	339	6.3	5.9	33	53	12.59	0.1	2.15	<0.01	3.38	7.13	0.89	0.07	1.87	0.084	68.24	0.01	0.11	3.14	99.77
Barrel 12	Mitchell	M-09-97_17	M-09-97	72.5	73.5	3.9	356	8.2	3.3	25	50.8	12.74	0.09	0.99	<0.01	3.26	7.88	0.78	0.03	1.69	0.079	70.02	0.01	0.11	2.01	99.7
Barrel 12	Mitchell	M-09-97_18	M-09-97	76.5	77.5	7.9	424	10.8	6.4	98	82.9	14.08	0.1	0.18	<0.01	4.38	7.53	1.54	0.12	0.5	0.063	68.15	<0.01	0.11	3.13	99.89
Barrel 12	Mitchell	M-09-97_19	M-09-97	80.5	81.5	3.1	380	6.4	3.4	20	44.5	12.42	0.14	0.27	<0.01	3.15	9.5	0.73	0.03	0.47	0.065	71.62	0.01	0.1	1.26	99.78
Barrel 12	Mitchell	M-09-97_20	M-09-97	84.5	85.5	2	327	11.4	10.9	55	32.1	17.3	0.89	4.58	<0.01	5	6.53	1.18	0.1	3.36	0.252	55.59	0.04	0.35	4.61	99.8
Barrel 12	Mitchell	M-09-97_21	M-09-97	88.5	89.5	1.4	573	8.7	9.6	68	16.4	16.23	0.32	3.01	<0.01	5.72	5.7	1.91	0.13	3.21	0.25	58.01	0.02	0.48	4.87	99.86
Barrel 12	Mitchell	M-09-97_22	M-09-97	92.5	93.5	1.8	521	15	19.5	72	13.6	12.12	0.32	12.28	0.01	9.3	3.45	2.31	0.37	2.47	0.201	42.92	0.03	0.37	7.16	93.31
Barrel 12	Mitchell	M-09-97_23	M-09-97	96.5	97.5	2.1	368	12.4	7.2	38	19.4	14.79	0.18	2.59	0.01	5.62	6.39	1.19	0.09	2	0.277	61.26	0.02	0.5	4.84	99.75
Barrel 12	Mitchell	M-09-97_24	M-09-97	100.5	101.5	1.8	404	8.6	9.3	30	13.9	15.85	0.18	2.17	0.01	7.46	6.94	0.66	0.05	3.08	0.339	57.61	0.02	0.51	4.91	99.79
Barrel 12	Mitchell	M-09-97_26	M-09-97	108.5	109.5	1.9	325	8.8	10.5	48	27.3	14.43	0.22	2.85	<0.01	4.92	5.15	2.64	0.08	2.49	0.303	61.46	0.02	0.36	4.9	99.83
Barrel 12	Mitchell	M-09-97_27	M-09-97	112.5	113.5	1.6	540	9.9	11.1	83	17.5	15.41	0.21	2.01	0.03	7.8	6.36	3.79	0.09	2.61	0.371	56	0.02	0.5	4.79	99.99
Barrel 12	Mitchell	M-09-97_30	M-09-97	124.5	125.5	1.7	370	22	7.8	67	18.2	14.47	0.16	3.5	0.01	7.82	4.92	3.18	0.15	3.21	0.328	54.39	0.02	0.5	7.03	99.68
Barrel 12	Mitchell	M-09-97_31	M-09-97	128.5	129.5	1	365	18.5	11.9	71	16.1	14.53	0.17	4.38	0.01	6.91	5.52	3.6	0.15	2.46	0.327	55.01	0.02	0.52	6.25	99.85
Barrel 12	Mitchell	M-09-97_32	M-09-97	132.5	133.5	1.2	144	1.4	6.1	54	10.8	15.61	0.43	1.47	<0.01	6.22	4.48	1.45	0.05	0.23	0.288	63.29	0.01	0.39	5.29	99.21
Barrel 12	Mitchell	M-09-97_33	M-09-97	136.5	137.5	3.6	601	15.8	7.7	52	9.7	17.63	0.27	2.76	0.02	9.97	6.98	1.84	0.09	2.69	0.417	50.45	0.02	0.42	6.12	99.69
Barrel 12	Mitchell	M-09-97_34	M-09-97	140.5	141.5	1.6	581	14.5	10.5	68	21.1	13.71	0.18	5.81	0.01	7.85	3.71	2.7	0.15	3.54	0.303	54.69	0.02	0.41	6.89	99.97

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Paste pH	Rinse pH	S_Total (%)	S_Sulphide (%)	S_S2_CALC (%)	S_S2_S_DEL CALC (%)	S_SO4_NA2CO 3 (%)	S_SO4_HCL (%)	S_BASO4 (%)	S_DEL (%)	S_DEL_CAL (%)	TAP (%)	SAP (kg $CaCO_3$ /t)	SAP (S Del Calc) (kg $CaCO_3$ /t)	NP (kg $CaCO_3$ /t)	NP_ADJ (kg $CaCO_3$ /t)	UNP	Total C (%)	Inorganic C (%)
FIELD LEACH BARREL - All																			
Count	11	0	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Minimum	8.7	0	0.18	0.12	0.15	0.12	0.01	0.01	0.0226	-0.08366	0	5.625	3.75	3.75	23	8	15	0.26	0.28
10 Percentile	8.8	#NUM!	0.49	0.34	0.44	0.34	0.01	0.01	0.02334	-0.01179	0	15.31	10.625	10.625	28	13	15	0.26	0.3
25 Percentile	8.9	#NUM!	0.625	0.51	0.595	0.514949	0.015	0.01	0.028705	0.004949	0.004949	19.53	15.9375	16.09215625	47.5	32.5	15	0.57	0.57
Median-25Percentile	0.2	#NUM!	0.455	0.39	0.475	0.491571	0.015	0.02	0.037345	0.095251	0.095251	14.22	12.1875	15.36159375	11.5	11.5	0	0.18	0.11
Mean	9.036363636	#DIV/0!	1.059090909	0.869090909	1.032727273	0.977910727	0.025454545	0.026363636	0.063502727	0.100142545	0.108819818	33.09590909	27.15909091	30.55971023	62	47	15	0.668181818	0.66
Standard Deviation	0.187193275	#DIV/0!	0.576106912	0.511156524	0.581222707	0.5968982	0.011570838	0.014937888	0.032759826	0.109321053	0.097411294	18.00403829	15.97364137	18.65306874	23.0019762	23.0019762	0	0.227389061	0.214264068
Median	9.1	#NUM!	1.08	0.9	1.07	1.00652	0.03	0.03	0.06605	0.1002	0.1002	33.75	28.125	31.45375	59	44	15	0.75	0.68
75Percentile-Median	0.1	#NUM!	0.24	0.17	0.23	0.24978	0.005	0.005	0.020885	0.1008	0.1008	7.5	5.3125	7.805625	21	21	0	0.08	0.145
75 Percentile	9.2	#NUM!	1.32	1.07	1.3	1.2563	0.035	0.035	0.086935	0.201	0.201	41.25	33.4375	39.259375	80	65	15	0.83	0.825
90 Percentile	9.2	#NUM!	1.6	1.35	1.57	1.5467	0.04	0.05	0.1118	0.2273	0.2273	50	42.1875	48.334375	88	73	15	0.89	0.87
Maximum	9.3	0	2.35	2.05	2.33	2.3074	0.04	0.05	0.1137	0.2574	0.2574	73.44	64.0625	72.10625	93	78	15	0.96	0.98
Interquartile Range (IQR) 1	0.3	#NUM!	0.695	0.56	0.705	0.741351	0.02	0.025	0.05823	0.196051	0.196051	21.72	17.5	23.16721875	32.5	32.5	0	0.26	0.255
Variance	0.038545455	#DIV/0!	0.365089091	0.287409091	0.371601818	0.391916207	0.000147273	0.000245455	0.001180527	0.013146202	0.010437856	356.5599341	280.6729403	382.7306707	582	582	0	0.056876364	0.0505
Skewness	-0.526164651	#DIV/0!	0.727658715	0.882700149	0.713575524	0.751045173	-0.128859416	0.359330668	0.154465623	-0.107860717	0.177507324	0.727850907	0.882700149	0.751045173	-0.397937551	-0.397937551	#DIV/0!	-0.823941155	-0.566972493
Coefficient of Variation (CoV) 2	0.020715554	#DIV/0!	0.543963607	0.588150812	0.562803677	0.610381074	0.454568645	0.566609542	0.515880616	1.09165443	0.895161339	0.543995883	0.588150812	0.610381074	0.370999616	0.489403749	0	0.34031016	0.324642528
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
NPR > 2.0 or NPR =2.0																			
Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
% 1.0 < NPR < 2.0 of Total																			
% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			
FIELD LEACH BARREL - Barrel 1 M-PMON																			
Count	11	0	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Minimum	8.7	0	0.18	0.12	0.15	0.12	0.01	0.01	0.0226	-0.08366	0	5.625	3.75	3.75	23	8	15	0.26	0.28
10 Percentile	8.8	#NUM!	0.49	0.34	0.44	0.34	0.01	0.01	0.02334	-0.01179	0	15.31	10.625	10.625	28	13	15	0.26	0.3
25 Percentile	8.9	#NUM!	0.625	0.51	0.595	0.514949	0.015	0.01	0.028705	0.004949	0.004949	19.53	15.9375	16.09215625	47.5	32.5	15	0.57	0.57
Median-25Percentile	0.2	#NUM!	0.455	0.39	0.475	0.491571	0.015	0.02	0.037345	0.095251	0.095251	14.22	12.1875	15.36159375	11.5	11.5	0	0.18	0.11
Mean	9.036363636	#DIV/0!	1.059090909	0.869090909	1.032727273	0.977910727	0.025454545	0.026363636	0.063502727	0.100142545	0.108819818	33.09590909	27.15909091	30.55971023	62	47	15	0.668181818	0.66
Standard Deviation	0.187193275	#DIV/0!	0.576106912	0.511156524	0.581222707	0.5968982	0.011570838	0.014937888	0.032759826	0.109321053	0.097411294	18.00403829	15.97364137	18.65306874	23.0019762	23.0019762	0	0.227389061	0.214264068
Median	9.1	#NUM!	1.08	0.9	1.07	1.00652	0.03	0.03	0.06605	0.1002	0.1002	33.75	28.125	31.45375	59	44	15	0.75	0.68
75Percentile-Median	0.1	#NUM!	0.24	0.17	0.23	0.24978	0.005	0.005	0.020885	0.1008	0.1008	7.5	5.3125	7.805625	21	21	0	0.08	0.145
75 Percentile	9.2	#NUM!	1.32	1.07	1.3	1.2563	0.035	0.035	0.086935	0.201	0.201	41.25	33.4375	39.259375	80	65	15	0.83	0.825
90 Percentile	9.2	#NUM!	1.6	1.35	1.57	1.5467	0.04	0.05	0.1118	0.2273	0.2273	50	42.1875	48.334375	88	73	15	0.89	0.87
Maximum	9.3	0	2.35	2.05	2.33	2.3074	0.04	0.05	0.1137	0.2574	0.2574	73.44	64.0625	72.10625	93	78	15	0.96	0.98
Interquartile Range (IQR) 1	0.3	#NUM!	0.695	0.56	0.705	0.741351	0.02	0.025	0.05823	0.196051	0.196051	21.72	17.5	23.16721875	32.5	32.5	0	0.26	0.255
Variance	0.038545455	#DIV/0!	0.365089091	0.287409091	0.371601818	0.391916207	0.000147273	0.000245455	0.001180527	0.013146202	0.010437856	356.5599341	280.6729403	382.7306707	582	582	0	0.056876364	0.0505
Skewness	-0.526164651	#DIV/0!	0.727658715	0.882700149	0.713575524	0.751045173	-0.128859416	0.359330668	0.154465623	-0.107860717	0.177507324	0.727850907	0.882700149	0.751045173	-0.397937551	-0.397937551	#DIV/0!	-0.823941155	-0.566972493
Coefficient of Variation (CoV) 2	0.020715554	#DIV/0!	0.543963607	0.588150812	0.562803677	0.610381074	0.454568645	0.566609542	0.515880616	1.09165443	0.895161339	0.543995883	0.588150812	0.610381074	0.370999616	0.489403749	0	0.34031016	0.324642528
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
NPR > 2.0 or NPR =2.0																			
Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
% 1.0 < NPR < 2.0 of Total																			
% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Inorganic CO2 (%)	C_DEL_CALC (%)	CANP_TTL (%)	CANP_INORG (%)	CANP_CA (%)	CANP_CAMG (%)	TNNP (kg $CaCO_3$ /t)	TNNP_ADJ (kg $CaCO_3$ /t)	SNNP (kg $CaCO_3$ /t)	SNNP_ADJ (kg $CaCO_3$ /t)	ICNNP (kg $CaCO_3$ /t)	TNPR	TNPR_ADJ	SNPR	SNPR(S DEL CALC)	SNPR for graphs	SNPR_ADJ for graphs	ICNPR	Fizz Rating
FIELD LEACH BARREL - All																			
Count	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Minimum	1	-0.04	21.67	22.7	17.23	29.49	-27	-42	-25.334375	-40.33	-25	-27	-42	0.545185185	0.475851814	0.545185185	0.18962963	0.5	2
10 Percentile	1.1	-0.03	21.67	25	30.47	50.11	-16.44	-31.44	-15.10625	-30.11	-21.13	-16.44	-31.44	0.889756098	0.79050013	0.889756098	0.655609756	0.7123	2
25 Percentile	2.1	-0.02	47.505	47.75	47.07	70.875	8.5325	-6.4675	10.1359375	-4.865	7.509	8.534	-6.4675	1.59126177	1.308838318	1.59126177	1.121205273	1.2748	2
Median-25Percentile	0.4	0.01	14.995	9.15	15.61	17.315	31.1575	31.1575	34.2390625	34.245	25.141	31.156	31.1575	1.574695677	1.488920296	1.574695677	1.534113876	0.8612	1
Mean	2.427272727	0.008181818	55.68818182	55.2	55.53	80.90636364	28.90409091	13.90409091	31.44028977	16.441	22.10436364	28.90436364	13.90363636	3.383713746	3.214366645	3.383713746	2.424038521	2.275354545	2.545454545
Standard Deviation	0.794401901	0.054241578	18.95136686	18.08108002	17.94428245	23.08055312	30.73771645	30.73771645	31.52181039	31.5222512	26.00442671	30.73782233	30.73779818	2.102790836	2.161720543	2.102790836	1.413182913	1.233500041	0.497929598
Median	2.5	-0.01	62.5	56.9	62.68	88.19	39.69	24.69	44.375	29.38	32.65	39.69	24.69	3.165957447	2.797758614	3.165957447	2.655319149	2.136	3
75Percentile-Median	0.55	0.02	6.67	12.45	6.995	8.025	15.34	15.34	13.3090625	13.305	9.695	15.34	15.34	1.601588192	1.947672053	1.601588192	0.843531426	1.117	0
75 Percentile	3.05	0.01	69.17	69.35	69.675	96.215	55.03	40.03	57.6840625	42.685	42.345	55.03	40.03	4.767545639	4.745430667	4.767545639	3.498850575	3.253	3
90 Percentile	3.2	0.02	74.17	72.8	73.42	103.4	56.19	41.19	60.6891875	45.69	48.12	56.19	41.19	5.890909091	5.838469024	5.890909091	3.764705882	4.043	3
Maximum	3.6	0.17	80.01	81.9	75.92	108.5	64.75	49.75	67.1265	52.13	51.98	64.75	49.75	7.466666667	7.466666667	7.466666667	4.8	4.199	3
Interquartile Range (IQR) 1	0.95	0.03	21.665	21.6	22.605	25.34	46.4975	46.4975	47.548125	47.55	34.836	46.496	46.4975	3.176283869	3.43659235	3.176283869	2.377645302	1.9782	1
Variance	0.694181818	0.003236364	395.0697364	359.618	354.197	585.9831255	1039.287934	1039.287934	1092.986983	1093.017553	743.8532295	1039.295093	1039.29346	4.86390223	5.140339277	4.86390223	2.196794539	1.673674587	0.272727273
Skewness	-0.593637668	2.665053614	-0.823840538	-0.593950741	-0.960089637	-1.103535852	-0.71254532	-0.71254532	-0.705357564	-0.705318022	-0.793337678	-0.712592269	-0.712489609	0.430279696	0.558060701	0.430279696	-0.157410451	0.14661633	-0.21276158
Coefficient of Variation (CoV) 2	0.327281682	6.629526173	0.340312185	0.327555797	0.323145731	0.285274879	1.063438271	2.210695878	1.002592871	1.91729525	1.176438605	1.063431899	2.210774029	0.621444659	0.672518347	0.621444659	0.582986987	0.542113335	0.195615199
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
NPR > 2.0 or NPR =2.0																			
Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
% 1.0 < NPR < 2.0 of Total																			
% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			
FIELD LEACH BARREL - Barrel 1 M-PMON																			
Count	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Minimum	1	-0.04	21.67	22.7	17.23	29.49	-27	-42	-25.334375	-40.33	-25	-27	-42	0.545185185	0.475851814	0.545185185	0.18962963	0.5	2
10 Percentile	1.1	-0.03	21.67	25	30.47	50.11	-16.44	-31.44	-15.10625	-30.11	-21.13	-16.44	-31.44	0.889756098	0.79050013	0.889756098	0.655609756	0.7123	2
25 Percentile	2.1	-0.02	47.505	47.75	47.07	70.875	8.5325	-6.4675	10.1359375	-4.865	7.509	8.534	-6.4675	1.59126177	1.308838318	1.59126177	1.121205273	1.2748	2
Median-25Percentile	0.4	0.01	14.995	9.15	15.61	17.315	31.1575	31.1575	34.2390625	34.245	25.141	31.156	31.1575	1.574695677	1.488920296	1.574695677	1.534113876	0.8612	1
Mean	2.427272727	0.008181818	55.68818182	55.2	55.53	80.90636364	28.90409091	13.90409091	31.44028977	16.441	22.10436364	28.90436364	13.90363636	3.383713746	3.214366645	3.383713746	2.424038521	2.275354545	2.545454545
Standard Deviation	0.794401901	0.054241578	18.95136686	18.08108002	17.94428245	23.08055312	30.73771645	30.73771645	31.52181039	31.5222512	26.00442671	30.73782233	30.73779818	2.102790836	2.161720543	2.102790836	1.413182913	1.233500041	0.497929598
Median	2.5	-0.01	62.5	56.9	62.68	88.19	39.69	24.69	44.375	29.38	32.65	39.69	24.69	3.165957447	2.797758614	3.165957447	2.655319149	2.136	3
75Percentile-Median	0.55	0.02	6.67	12.45	6.995	8.025	15.34	15.34	13.3090625	13.305	9.695	15.34	15.34	1.601588192	1.947672053	1.601588192	0.843531426	1.117	0
75 Percentile	3.05	0.01	69.17	69.35	69.675	96.215	55.03	40.03	57.6840625	42.685	42.345	55.03	40.03	4.767545639	4.745430667	4.767545639	3.498850575	3.253	3
90 Percentile	3.2	0.02	74.17	72.8	73.42	103.4	56.19	41.19	60.6891875	45.69	48.12	56.19	41.19	5.890909091	5.838469024	5.890909091	3.764705882	4.043	3
Maximum	3.6	0.17	80.01	81.9	75.92	108.5	64.75	49.75	67.1265	52.13	51.98	64.75	49.75	7.466666667	7.466666667	7.466666667	4.8	4.199	3
Interquartile Range (IQR) 1	0.95	0.03	21.665	21.6	22.605	25.34	46.4975	46.4975	47.548125	47.55	34.836	46.496	46.4975	3.176283869	3.43659235	3.176283869	2.377645302	1.9782	1
Variance	0.694181818	0.003236364	395.0697364	359.618	354.197	585.9831255	1039.287934	1039.287934	1092.986983	1093.017553	743.8532295	1039.295093	1039.29346	4.86390223	5.140339277	4.86390223	2.196794539	1.673674587	0.272727273
Skewness	-0.593637668	2.665053614	-0.823840538	-0.593950741	-0.960089637	-1.103535852	-0.71254532	-0.71254532	-0.705357564	-0.705318022	-0.793337678	-0.712592269	-0.712489609	0.430279696	0.558060701	0.430279696	-0.157410451	0.14661633	-0.21276158
Coefficient of Variation (CoV) 2	0.327281682	6.629526173	0.340312185	0.327555797	0.323145731	0.285274879	1.063438271	2.210695878	1.002592871	1.91729525	1.176438605	1.063431899	2.210774029	0.621444659	0.672518347	0.621444659	0.582986987	0.542113335	0.195615199
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
NPR > 2.0 or NPR =2.0																			
Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
% 1.0 < NPR < 2.0 of Total																			
% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Ag (ppm)	Al (ppm)	Al (%)	As (ppm)	Ba (ppm)	Be (ppm)	Bi (ppm)	Ca (ppm)	Ca (%)	Cd (ppm)	Ce (ppm)	Co (ppm)	Cr (ppm)	Cs (ppm)	Cu (ppm)	Fe (ppm)	Fe (%)	Ga (ppm)
FIELD LEACH BARREL - All																		
Count	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Minimum	0.22	64500	6.45	2	970	1.65	0.18	6900	0.69	0.04	6.94	6.4	3	1.16	231	27900	2.79	23.8
10 Percentile	0.28	65400	6.54	3	1000	1.77	0.25	12200	1.22	0.05	7.37	6.4	3	1.2	231	27900	2.79	24.2
25 Percentile	0.53	67650	6.765	3.8	1230	1.8	0.305	18850	1.885	0.065	7.87	6.75	3	1.385	353	29100	2.91	24.75
Median-25Percentile	0.36	4750	0.475	2	1600	0.12	0.175	6250	0.625	0.015	13.83	1.05	0	0.655	318	3100	0.31	0.75
Mean	1.006363636	72454.54545	7.245454545	7.418181818	2720.909091	1.936363636	0.566363636	22236.36364	2.223636364	0.105454545	18.02272727	8.109090909	3.818181818	2.158181818	1045.727273	32800	3.28	25.61818182
Standard Deviation	0.711378594	5493.692852	0.549369285	5.456741982	1403.20707	0.177521969	0.40564814	7185.373113	0.718537311	0.070112071	8.280675303	1.54534759	1.19226155	0.890411735	866.0979465	6126.395945	0.612639594	1.323094295
Median	0.89	72400	7.24	5.8	2830	1.92	0.48	25100	2.51	0.08	21.7	7.8	3	2.04	671	32200	3.22	25.5
75Percentile-Median	0.34	4550	0.455	2.3	895	0.115	0.075	2800	0.28	0.025	2	1.65	1	0.595	989	800	0.08	0.65
75 Percentile	1.23	76950	7.695	8.1	3725	2.035	0.555	27900	2.79	0.105	23.7	9.45	4	2.635	1660	33000	3.3	26.15
90 Percentile	1.31	78100	7.81	14.7	4790	2.2	1.03	29400	2.94	0.17	25.2	10.1	5	2.98	2100	36000	3.6	26.5
Maximum	2.92	81500	8.15	21.1	4870	2.25	1.65	30400	3.04	0.3	30.2	10.9	7	4.23	2930	50600	5.06	28.9
Interquartile Range (IQR) 1	0.7	9300	0.93	4.3	2495	0.235	0.25	9050	0.905	0.04	15.83	2.7	1	1.25	1307	3900	0.39	1.4
Variance	0.556665455	33198727.27	0.331987273	32.75363636	2165889.091	0.034665455	0.181005455	56792545.45	0.567925455	0.005407273	75.42654182	2.626909091	1.563636364	0.872116364	825138.2182	41286000	0.41286	1.925636364
Skewness	1.754305643	-0.028164336	-0.028164336	1.686795403	0.154184937	0.400705128	1.970934692	-0.960274423	-0.960274423	2.154581324	-0.351661559	0.522879172	1.912482973	1.020208298	1.025007784	2.444560374	2.444560374	1.190298571
Coefficient of Variation (CoV) 2	0.706880265	0.075822612	0.075822612	0.735590218	0.515712589	0.091678012	0.71623267	0.323136158	0.323136158	0.664855844	0.459457394	0.19056977	0.312258977	0.41257494	0.828225455	0.186780364	0.186780364	0.05164669
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 1 M-PMON																		
Count	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Minimum	0.22	64500	6.45	2	970	1.65	0.18	6900	0.69	0.04	6.94	6.4	3	1.16	231	27900	2.79	23.8
10 Percentile	0.28	65400	6.54	3	1000	1.77	0.25	12200	1.22	0.05	7.37	6.4	3	1.2	231	27900	2.79	24.2
25 Percentile	0.53	67650	6.765	3.8	1230	1.8	0.305	18850	1.885	0.065	7.87	6.75	3	1.385	353	29100	2.91	24.75
Median-25Percentile	0.36	4750	0.475	2	1600	0.12	0.175	6250	0.625	0.015	13.83	1.05	0	0.655	318	3100	0.31	0.75
Mean	1.006363636	72454.54545	7.245454545	7.418181818	2720.909091	1.936363636	0.566363636	22236.36364	2.223636364	0.105454545	18.02272727	8.109090909	3.818181818	2.158181818	1045.727273	32800	3.28	25.61818182
Standard Deviation	0.711378594	5493.692852	0.549369285	5.456741982	1403.20707	0.177521969	0.40564814	7185.373113	0.718537311	0.070112071	8.280675303	1.54534759	1.19226155	0.890411735	866.0979465	6126.395945	0.612639594	1.323094295
Median	0.89	72400	7.24	5.8	2830	1.92	0.48	25100	2.51	0.08	21.7	7.8	3	2.04	671	32200	3.22	25.5
75Percentile-Median	0.34	4550	0.455	2.3	895	0.115	0.075	2800	0.28	0.025	2	1.65	1	0.595	989	800	0.08	0.65
75 Percentile	1.23	76950	7.695	8.1	3725	2.035	0.555	27900	2.79	0.105	23.7	9.45	4	2.635	1660	33000	3.3	26.15
90 Percentile	1.31	78100	7.81	14.7	4790	2.2	1.03	29400	2.94	0.17	25.2	10.1	5	2.98	2100	36000	3.6	26.5
Maximum	2.92	81500	8.15	21.1	4870	2.25	1.65	30400	3.04	0.3	30.2	10.9	7	4.23	2930	50600	5.06	28.9
Interquartile Range (IQR) 1	0.7	9300	0.93	4.3	2495	0.235	0.25	9050	0.905	0.04	15.83	2.7	1	1.25	1307	3900	0.39	1.4
Variance	0.556665455	33198727.27	0.331987273	32.75363636	2165889.091	0.034665455	0.181005455	56792545.45	0.567925455	0.005407273	75.42654182	2.626909091	1.563636364	0.872116364	825138.2182	41286000	0.41286	1.925636364
Skewness	1.754305643	-0.028164336	-0.028164336	1.686795403	0.154184937	0.400705128	1.970934692	-0.960274423	-0.960274423	2.154581324	-0.351661559	0.522879172	1.912482973	1.020208298	1.025007784	2.444560374	2.444560374	1.190298571
Coefficient of Variation (CoV) 2	0.706880265	0.075822612	0.075822612	0.735590218	0.515712589	0.091678012	0.71623267	0.323136158	0.323136158	0.664855844	0.459457394	0.19056977	0.312258977	0.41257494	0.828225455	0.186780364	0.186780364	0.05164669
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Ge (ppm)	Hf (ppm)	Hg (ppm)	In (ppm)	K (ppm)	K (%)	La (ppm)	Li (ppm)	Mg (ppm)	Mg (%)	Mn (ppm)	Mo (ppm)	Na (ppm)	Na (%)	Nb (ppm)	Ni (ppm)	P (%)	Pb (ppm)
FIELD LEACH BARREL - All	x																	
Count	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Minimum	0.14	0.6	0.01	0.053	44400	4.44	4.1	7.2	3400	0.34	223	12.15	11400	1.14	10.7	2.1	0.036	7.8
10 Percentile	0.14	0.8	0.01	0.056	45100	4.51	4.1	8.1	4700	0.47	376	14.9	15200	1.52	10.9	2.2	0.065	9.2
25 Percentile	0.145	0.9	0.01	0.064	46550	4.655	4.7	8.55	4850	0.485	506.5	18.175	17000	1.7	11.35	2.4	0.0775	11.15
Median-25Percentile	0.015	0.2	0.01	0.014	1450	0.145	6.3	4.65	950	0.095	110.5	6.325	7000	0.7	0.55	0.3	0.0165	1.15
Mean	0.157272727	1.027272727	0.024545455	0.075181818	48181.81818	4.818181818	9.5	12.28181818	6018.181818	0.601818182	603.6363636	35.70909091	23890.90909	2.389090909	11.82727273	2.736363636	0.088454545	15.67272727
Standard Deviation	0.012856487	0.200412797	0.018272501	0.018963209	2352.491206	0.235249121	4.131695668	3.765831595	1770.884823	0.177088482	183.713845	25.60668253	7776.825076	0.777682508	0.752077014	0.543177064	0.022182563	7.843479157
Median	0.16	1.1	0.02	0.078	48000	4.8	11	13.2	5800	0.58	617	24.5	24000	2.4	11.9	2.7	0.094	12.3
75Percentile-Median	0.005	0.05	0.005	0.0005	1950	0.195	1.2	2.2	950	0.095	112	16.05	6100	0.61	0.45	0.1	0.0095	5.5
75 Percentile	0.165	1.15	0.025	0.0785	49950	4.995	12.2	15.4	6750	0.675	729	40.55	30100	3.01	12.35	2.8	0.1035	17.8
90 Percentile	0.17	1.2	0.05	0.08	50400	5.04	13.2	16.2	7500	0.75	764	83.8	34500	3.45	12.7	3.1	0.111	21.5
Maximum	0.18	1.3	0.07	0.127	52400	5.24	16.3	18.2	10400	1.04	880	89.1	35700	3.57	13.2	4.2	0.113	36.9
Interquartile Range (IQR) 1	0.02	0.25	0.015	0.0145	3400	0.34	7.5	6.85	1900	0.19	222.5	22.375	13100	1.31	1	0.4	0.026	6.65
Variance	0.000181818	0.044181818	0.000367273	0.000395564	6087636.364	0.060876364	18.778	15.59963636	3449636.364	0.034496364	37125.85455	721.2724091	66526909.09	0.665269091	0.622181818	0.324545455	0.000541273	67.67218182
Skewness	0.004944132	-0.912994989	1.699730957	1.802901312	0.04980475	0.04980475	-0.168544846	0.031086658	1.232667151	1.232667151	-0.721457722	1.433577699	0.047155092	0.047155092	0.346099682	1.767275731	-1.245365129	1.934396455
Coefficient of Variation (CoV) 2	0.081746449	0.195092103	0.744435231	0.25223132	0.048825289	0.048825289	0.434915333	0.306618413	0.294255786	0.294255786	0.304345225	0.717091415	0.325513987	0.325513987	0.063588372	0.198503246	0.250779236	0.500454007
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 1 M-PMON																		
Count	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Minimum	0.14	0.6	0.01	0.053	44400	4.44	4.1	7.2	3400	0.34	223	12.15	11400	1.14	10.7	2.1	0.036	7.8
10 Percentile	0.14	0.8	0.01	0.056	45100	4.51	4.1	8.1	4700	0.47	376	14.9	15200	1.52	10.9	2.2	0.065	9.2
25 Percentile	0.145	0.9	0.01	0.064	46550	4.655	4.7	8.55	4850	0.485	506.5	18.175	17000	1.7	11.35	2.4	0.0775	11.15
Median-25Percentile	0.015	0.2	0.01	0.014	1450	0.145	6.3	4.65	950	0.095	110.5	6.325	7000	0.7	0.55	0.3	0.0165	1.15
Mean	0.157272727	1.027272727	0.024545455	0.075181818	48181.81818	4.818181818	9.5	12.28181818	6018.181818	0.601818182	603.6363636	35.70909091	23890.90909	2.389090909	11.82727273	2.736363636	0.088454545	15.67272727
Standard Deviation	0.012856487	0.200412797	0.018272501	0.018963209	2352.491206	0.235249121	4.131695668	3.765831595	1770.884823	0.177088482	183.713845	25.60668253	7776.825076	0.777682508	0.752077014	0.543177064	0.022182563	7.843479157
Median	0.16	1.1	0.02	0.078	48000	4.8	11	13.2	5800	0.58	617	24.5	24000	2.4	11.9	2.7	0.094	12.3
75Percentile-Median	0.005	0.05	0.005	0.0005	1950	0.195	1.2	2.2	950	0.095	112	16.05	6100	0.61	0.45	0.1	0.0095	5.5
75 Percentile	0.165	1.15	0.025	0.0785	49950	4.995	12.2	15.4	6750	0.675	729	40.55	30100	3.01	12.35	2.8	0.1035	17.8
90 Percentile	0.17	1.2	0.05	0.08	50400	5.04	13.2	16.2	7500	0.75	764	83.8	34500	3.45	12.7	3.1	0.111	21.5
Maximum	0.18	1.3	0.07	0.127	52400	5.24	16.3	18.2	10400	1.04	880	89.1	35700	3.57	13.2	4.2	0.113	36.9
Interquartile Range (IQR) 1	0.02	0.25	0.015	0.0145	3400	0.34	7.5	6.85	1900	0.19	222.5	22.375	13100	1.31	1	0.4	0.026	6.65
Variance	0.000181818	0.044181818	0.000367273	0.000395564	6087636.364	0.060876364	18.778	15.59963636	3449636.364	0.034496364	37125.85455	721.2724091	66526909.09	0.665269091	0.622181818	0.324545455	0.000541273	67.67218182
Skewness	0.004944132	-0.912994989	1.699730957	1.802901312	0.04980475	0.04980475	-0.168544846	0.031086658	1.232667151	1.232667151	-0.721457722	1.433577699	0.047155092	0.047155092	0.346099682	1.767275731	-1.245365129	1.934396455
Coefficient of Variation (CoV) 2	0.081746449	0.195092103	0.744435231	0.25223132	0.048825289	0.048825289	0.434915333	0.306618413	0.294255786	0.294255786	0.304345225	0.717091415	0.325513987	0.325513987	0.063588372	0.198503246	0.250779236	0.500454007
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Rb (ppm)	Re (ppm)	S (ppm)	S (%)	Sb (ppm)	Sc (ppm)	Se (ppm)	Sn (ppm)	Sr (ppm)	Ta (ppm)	Te (ppm)	Th (ppm)	Ti (ppm)	Ti (%)	Tl (ppm)	U (ppm)	V (ppm)	W (ppm)
FIELD LEACH BARREL - All	x																	
Count	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Minimum	90.6	0.017	1900	0.19	1.88	9	3	1.5	120.5	0.46	0.05	3.7	970	0.097	0.42	3.1	158	8.5
10 Percentile	90.6	0.017	4900	0.49	1.91	9.4	3	1.5	152	0.46	0.11	4.2	1150	0.115	0.46	3.8	160	10
25 Percentile	94.2	0.0275	6700	0.67	1.985	9.95	3	1.8	168.75	0.49	0.135	4.35	1310	0.131	0.545	4	188	10.4
Median-25Percentile	6.8	0.0055	4800	0.48	0.175	1.15	1	0	296.25	0.09	0.045	0.55	610	0.061	0.095	0.4	29	2.1
Mean	99.82727273	0.064090909	11054.54545	1.105454545	2.671818182	11.08181818	5.090909091	1.954545455	455.1818182	0.559090909	0.242727273	5.418181818	1745.454545	0.174545455	0.613636364	4.763636364	376.7272727	16.48181818
Standard Deviation	7.776665669	0.048346203	5905.215512	0.590521551	1.104559297	1.451530967	2.678349066	0.320123943	303.9452906	0.070382661	0.160685515	1.827476244	453.1578821	0.045315788	0.105250586	1.348583585	276.4048713	14.08718426
Median	101	0.033	11500	1.15	2.16	11.1	4	1.8	465	0.58	0.18	4.9	1920	0.192	0.64	4.4	217	12.5
75Percentile-Median	1.25	0.0535	2150	0.215	0.455	0.85	3	0.4	50	0.03	0.14	0.65	150	0.015	0.02	0.7	324.5	1.55
75 Percentile	102.25	0.0865	13650	1.365	2.615	11.95	7	2.2	515	0.61	0.32	5.55	2070	0.207	0.66	5.1	541.5	14.05
90 Percentile	104.5	0.136	16900	1.69	4.12	13.3	9	2.4	896	0.64	0.49	7.3	2240	0.224	0.75	5.7	681	15.1
Maximum	119.5	0.163	24100	2.41	5.58	13.5	10	2.5	1120	0.67	0.55	10.4	2320	0.232	0.77	8.4	1045	60.6
Interquartile Range (IQR) 1	8.05	0.059	6950	0.695	0.63	2	4	0.4	346.25	0.12	0.185	1.2	760	0.076	0.115	1.1	353.5	3.65
Variance	66.52418182	0.002571091	38358727.27	0.383587273	1.342056364	2.317636364	7.890909091	0.112727273	101621.0136	0.005449091	0.028401818	3.673636364	225887.2727	0.002258873	0.012185455	2.000545455	84039.61818	218.2936364
Skewness	1.309412693	0.924021719	0.65811066	0.65811066	2.015437919	0.327220732	1.044726314	0.251083755	1.009138659	-0.133811009	0.999556084	2.077090437	-0.574424867	-0.574424867	-0.448123318	1.841677536	1.448958109	3.199902173
Coefficient of Variation (CoV) 2	0.077901213	0.754337924	0.534188903	0.534188903	0.413411101	0.130983106	0.526104281	0.163784343	0.667744797	0.125887687	0.662000249	0.337285884	0.259621703	0.259621703	0.171519474	0.283099608	0.733700189	0.854710573
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 1 M-PMON																		
Count	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Minimum	90.6	0.017	1900	0.19	1.88	9	3	1.5	120.5	0.46	0.05	3.7	970	0.097	0.42	3.1	158	8.5
10 Percentile	90.6	0.017	4900	0.49	1.91	9.4	3	1.5	152	0.46	0.11	4.2	1150	0.115	0.46	3.8	160	10
25 Percentile	94.2	0.0275	6700	0.67	1.985	9.95	3	1.8	168.75	0.49	0.135	4.35	1310	0.131	0.545	4	188	10.4
Median-25Percentile	6.8	0.0055	4800	0.48	0.175	1.15	1	0	296.25	0.09	0.045	0.55	610	0.061	0.095	0.4	29	2.1
Mean	99.82727273	0.064090909	11054.54545	1.105454545	2.671818182	11.08181818	5.090909091	1.954545455	455.1818182	0.559090909	0.242727273	5.418181818	1745.454545	0.174545455	0.613636364	4.763636364	376.7272727	16.48181818
Standard Deviation	7.776665669	0.048346203	5905.215512	0.590521551	1.104559297	1.451530967	2.678349066	0.320123943	303.9452906	0.070382661	0.160685515	1.827476244	453.1578821	0.045315788	0.105250586	1.348583585	276.4048713	14.08718426
Median	101	0.033	11500	1.15	2.16	11.1	4	1.8	465	0.58	0.18	4.9	1920	0.192	0.64	4.4	217	12.5
75Percentile-Median	1.25	0.0535	2150	0.215	0.455	0.85	3	0.4	50	0.03	0.14	0.65	150	0.015	0.02	0.7	324.5	1.55
75 Percentile	102.25	0.0865	13650	1.365	2.615	11.95	7	2.2	515	0.61	0.32	5.55	2070	0.207	0.66	5.1	541.5	14.05
90 Percentile	104.5	0.136	16900	1.69	4.12	13.3	9	2.4	896	0.64	0.49	7.3	2240	0.224	0.75	5.7	681	15.1
Maximum	119.5	0.163	24100	2.41	5.58	13.5	10	2.5	1120	0.67	0.55	10.4	2320	0.232	0.77	8.4	1045	60.6
Interquartile Range (IQR) 1	8.05	0.059	6950	0.695	0.63	2	4	0.4	346.25	0.12	0.185	1.2	760	0.076	0.115	1.1	353.5	3.65
Variance	66.52418182	0.002571091	38358727.27	0.383587273	1.342056364	2.317636364	7.890909091	0.112727273	101621.0136	0.005449091	0.028401818	3.673636364	225887.2727	0.002258873	0.012185455	2.000545455	84039.61818	218.2936364
Skewness	1.309412693	0.924021719	0.65811066	0.65811066	2.015437919	0.327220732	1.044726314	0.251083755	1.009138659	-0.133811009	0.999556084	2.077090437	-0.574424867	-0.574424867	-0.448123318	1.841677536	1.448958109	3.199902173
Coefficient of Variation (CoV) 2	0.077901213	0.754337924	0.534188903	0.534188903	0.413411101	0.130983106	0.526104281	0.163784343	0.667744797	0.125887687	0.662000249	0.337285884	0.259621703	0.259621703	0.171519474	0.283099608	0.733700189	0.854710573
NPR < 1.0 or NPR = 1.0																		
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NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
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% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Y (ppm)	Zn (ppm)	Zr (ppm)	Al2O3 (%)	BaO (%)	CaO (%)	Cr2O3 (%)	Fe2O3 (%)	K2O (%)	MgO (%)	MnO (%)	Na2O (%)	P2O5 (%)	SiO2 (%)	SRO (%)	TiO2 (%)	LOI (%)	Total_DC (%)
FIELD LEACH BARREL - All	x																	
Count	11	11	11	11	11	11	2	11	11	11	11	11	11	11	11	11	11	11
Minimum	4	21	18.4	12.76	0.12	0.88	0.01	4.21	5.65	0.62	0.03	1.53	0.082	56.36	0.01	0.16	1.81	98.65
10 Percentile	4.7	21	22.1	13.87	0.12	1.63	0.01	4.24	5.89	0.9	0.05	2.05	0.142	56.4	0.02	0.2	2.47	99.1
25 Percentile	5.8	25	22.4	14.37	0.15	2.53	0.01	4.31	6.035	0.965	0.065	2.29	0.1715	57.445	0.02	0.235	2.985	99.425
Median-25Percentile	3.9	4	4.5	2.05	0.22	0.87	0	0.34	0.205	0.115	0.015	0.86	0.0365	2.185	0.03	0.105	1.185	0.335
Mean	8.363636364	31.09090909	26.00909091	15.97818182	0.341818182	3.021818182	0.01	4.831818182	6.531818182	1.15	0.078181818	3.159090909	0.192090909	60.26090909	0.051818182	0.301818182	3.660909091	99.56181818
Standard Deviation	2.682696312	8.084266937	4.028862809	1.774372197	0.173248019	0.995150223	0	0.79250831	0.732117951	0.33155282	0.023671303	1.0178985	0.046480601	3.280921308	0.034855072	0.07661215	0.921159887	0.382879477
Median	9.7	29	26.9	16.42	0.37	3.4	0.01	4.65	6.24	1.08	0.08	3.15	0.208	59.63	0.05	0.34	4.17	99.76
75Percentile-Median	0.5	7.5	2.15	1.23	0.105	0.45	0	0.295	0.63	0.21	0.015	0.785	0.0125	3.585	0.01	0.015	0.265	0.045
75 Percentile	10.2	36.5	29.05	17.65	0.475	3.85	0.01	4.945	6.87	1.29	0.095	3.935	0.2205	63.215	0.06	0.355	4.435	99.805
90 Percentile	11	40	31.1	17.72	0.58	4.02	0.01	5.26	7.25	1.42	0.1	4.56	0.239	64.11	0.1	0.38	4.5	99.94
Maximum	12.3	48	31.2	17.99	0.59	4.05	0.01	7.11	8.29	1.95	0.11	4.78	0.247	66.35	0.13	0.4	4.51	99.97
Interquartile Range (IQR) 1	4.4	11.5	6.65	3.28	0.325	1.32	0	0.635	0.835	0.325	0.03	1.645	0.049	5.77	0.04	0.12	1.45	0.38
Variance	7.916545455	71.89090909	17.85490909	3.463236364	0.033016364	1.089356364	0	0.690876364	0.589596364	0.12092	0.000616364	1.139729091	0.002376491	11.84088909	0.001336364	0.006456364	0.933389091	0.161256364
Skewness	-0.3861593	0.64061922	-0.346569656	-0.518231868	-0.05229681	-1.014260525	#DIV/0!	2.361368789	1.272750616	1.053412208	-0.801228567	0.133795355	-1.246852388	0.504050704	1.053386922	-0.646530372	-0.853235146	-1.311326557
Coefficient of Variation (CoV) 2	0.320757168	0.260020282	0.1549021	0.111049694	0.506842608	0.329321674	0	0.164018653	0.112084864	0.2883068	0.302772478	0.322212475	0.241971894	0.054445267	0.672641737	0.253835436	0.25162053	0.003845646
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 1 M-PMON																		
Count	11	11	11	11	11	11	2	11	11	11	11	11	11	11	11	11	11	11
Minimum	4	21	18.4	12.76	0.12	0.88	0.01	4.21	5.65	0.62	0.03	1.53	0.082	56.36	0.01	0.16	1.81	98.65
10 Percentile	4.7	21	22.1	13.87	0.12	1.63	0.01	4.24	5.89	0.9	0.05	2.05	0.142	56.4	0.02	0.2	2.47	99.1
25 Percentile	5.8	25	22.4	14.37	0.15	2.53	0.01	4.31	6.035	0.965	0.065	2.29	0.1715	57.445	0.02	0.235	2.985	99.425
Median-25Percentile	3.9	4	4.5	2.05	0.22	0.87	0	0.34	0.205	0.115	0.015	0.86	0.0365	2.185	0.03	0.105	1.185	0.335
Mean	8.363636364	31.09090909	26.00909091	15.97818182	0.341818182	3.021818182	0.01	4.831818182	6.531818182	1.15	0.078181818	3.159090909	0.192090909	60.26090909	0.051818182	0.301818182	3.660909091	99.56181818
Standard Deviation	2.682696312	8.084266937	4.028862809	1.774372197	0.173248019	0.995150223	0	0.79250831	0.732117951	0.33155282	0.023671303	1.0178985	0.046480601	3.280921308	0.034855072	0.07661215	0.921159887	0.382879477
Median	9.7	29	26.9	16.42	0.37	3.4	0.01	4.65	6.24	1.08	0.08	3.15	0.208	59.63	0.05	0.34	4.17	99.76
75Percentile-Median	0.5	7.5	2.15	1.23	0.105	0.45	0	0.295	0.63	0.21	0.015	0.785	0.0125	3.585	0.01	0.015	0.265	0.045
75 Percentile	10.2	36.5	29.05	17.65	0.475	3.85	0.01	4.945	6.87	1.29	0.095	3.935	0.2205	63.215	0.06	0.355	4.435	99.805
90 Percentile	11	40	31.1	17.72	0.58	4.02	0.01	5.26	7.25	1.42	0.1	4.56	0.239	64.11	0.1	0.38	4.5	99.94
Maximum	12.3	48	31.2	17.99	0.59	4.05	0.01	7.11	8.29	1.95	0.11	4.78	0.247	66.35	0.13	0.4	4.51	99.97
Interquartile Range (IQR) 1	4.4	11.5	6.65	3.28	0.325	1.32	0	0.635	0.835	0.325	0.03	1.645	0.049	5.77	0.04	0.12	1.45	0.38
Variance	7.916545455	71.89090909	17.85490909	3.463236364	0.033016364	1.089356364	0	0.690876364	0.589596364	0.12092	0.000616364	1.139729091	0.002376491	11.84088909	0.001336364	0.006456364	0.933389091	0.161256364
Skewness	-0.3861593	0.64061922	-0.346569656	-0.518231868	-0.05229681	-1.014260525	#DIV/0!	2.361368789	1.272750616	1.053412208	-0.801228567	0.133795355	-1.246852388	0.504050704	1.053386922	-0.646530372	-0.853235146	-1.311326557
Coefficient of Variation (CoV) 2	0.320757168	0.260020282	0.1549021	0.111049694	0.506842608	0.329321674	0	0.164018653	0.112084864	0.2883068	0.302772478	0.322212475	0.241971894	0.054445267	0.672641737	0.253835436	0.25162053	0.003845646
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Paste pH	Rinse pH	S_Total (%)	S_Sulphide (%)	S_S2_CALC (%)	S_S2_S_DEL CALC (%)	S_SO4_NA2CO 3 (%)	S_SO4_HCL (%)	S_BASO4 (%)	S_DEL (%)	S_DEL_CAL (%)	TAP (%)	SAP (kg $CaCO_3$ /t)	SAP (S Del Calc) (kg $CaCO_3$ /t)	NP (kg $CaCO_3$ /t)	NP_ADJ (kg $CaCO_3$ /t)	UNP	Total C (%)	Inorganic C (%)
FIELD LEACH BARREL - Barrel 2 M-ANDS																			
Count	11	0	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	0	11
Minimum	8.9	0	0.77	0.66	0.75	0.71172	0.02	0.01	0.00794	0.03569	0.03569	24.06	20.625	22.24125	9	0	9	0	0.09
10 Percentile	9	#NUM!	1.26	1.12	1.25	1.2222	0.02	0.01	0.00817	0.05172	0.05172	39.38	35	38.19375	30	15	15	#NUM!	0.21
25 Percentile	9.1	#NUM!	1.675	1.575	1.655	1.62104	0.025	0.01	0.009935	0.079295	0.079295	52.345	49.21875	50.6575	43.5	28.5	15	#NUM!	0.335
Median-25Percentile	0.1	#NUM!	0.755	0.675	0.765	0.78196	0.015	0	0.007065	0.073705	0.073705	23.595	21.09375	24.43625	6.5	6.5	0	#NUM!	0.095
Mean	9.327272727	#DIV/0!	2.27	2.056363636	2.255454545	2.235436364	0.039090909	0.014545455	0.020013636	0.179072727	0.179072727	70.93727273	64.26136364	69.85738636	46.45454545	32	14.45454545	#DIV/0!	0.43
Standard Deviation	0.313603424	#DIV/0!	0.798760403	0.715113122	0.800526686	0.810743131	0.017296634	0.004979296	0.010904156	0.116372016	0.116372016	24.96023422	22.34728505	25.33572285	15.25756823	13.9609846	1.724878724	#DIV/0!	0.190358513
Median	9.2	#NUM!	2.43	2.25	2.42	2.403	0.04	0.01	0.017	0.153	0.153	75.94	70.3125	75.09375	50	35	15	#NUM!	0.43
75Percentile-Median	0.4	#NUM!	0.5	0.335	0.5	0.5086	0.01	0.01	0.01369	0.09895	0.09895	15.625	10.46875	15.89375	3	3	0	#NUM!	0.07
75 Percentile	9.6	#NUM!	2.93	2.585	2.92	2.9116	0.05	0.02	0.03069	0.25195	0.25195	91.565	80.78125	90.9875	53	38	15	#NUM!	0.5
90 Percentile	9.7	#NUM!	3.22	2.95	3.2	3.1918	0.05	0.02	0.03431	0.3711	0.3711	100.6	92.1875	99.74375	64	49	15	#NUM!	0.7
Maximum	9.9	0	3.35	2.97	3.34	3.329	0.08	0.02	0.03828	0.379	0.379	104.7	92.8125	104.03125	67	52	15	0	0.79
Interquartile Range (IQR) 1	0.5	#NUM!	1.255	1.01	1.265	1.29056	0.025	0.01	0.020755	0.172655	0.172655	39.22	31.5625	40.33	9.5	9.5	0	#NUM!	0.165
Variance	0.108181818	#DIV/0!	0.70182	0.562525455	0.704927273	0.723034867	0.000329091	2.72727E-05	0.000130791	0.014896691	0.014896691	685.3146218	549.3412642	706.0887375	256.0727273	214.4	3.272727273	#DIV/0!	0.03986
Skewness	0.447450208	#DIV/0!	-0.441236612	-0.561432037	-0.442844396	-0.443057241	1.023299495	0.21276158	0.518246134	0.596197327	0.596197327	-0.441334209	-0.561432037	-0.443057241	-1.259579509	-0.946762087	-3.31662479	#DIV/0!	0.236733429
Coefficient of Variation (CoV) 2	0.033622199	#DIV/0!	0.35187683	0.34775616	0.354929204	0.362677795	0.442472037	0.342326598	0.544836332	0.649858961	0.649858961	0.35186346	0.34775616	0.362677795	0.328440803	0.436280769	0.119331232	#DIV/0!	0.442694217
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
NPR > 2.0 or NPR =2.0																			
Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
% 1.0 < NPR < 2.0 of Total																			
% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			
FIELD LEACH BARREL - Barrel 3 M-SEDS																			
Count	9	0	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	0	9
Minimum	9.1	0	1.84	1.63	1.82	1.8011	0.005	0.01	0.0035	0.1711	0.1711	57.5	50.9375	56.284375	33	18	15	0	0.37
10 Percentile	9.1	#NUM!	2.08	1.822	2.068	2.0459	0.005	0.01	0.004996	0.2239	0.2239	65.004	56.9375	63.934375	37	22	15	#NUM!	0.378
25 Percentile	9.1	#NUM!	2.37	1.94	2.36	2.3481	0.01	0.01	0.00653	0.2476	0.2476	74.06	60.625	73.378125	46	31	15	#NUM!	0.48
Median-25Percentile	0	#NUM!	0.57	0.48	0.56	0.5595	0.01	0	0.00487	0.1605	0.1605	17.82	15	17.484375	7	7	0	#NUM!	0.07
Mean	9.188888889	#DIV/0!	3.006666667	2.553333333	2.993333333	2.982	0.018888889	0.013333333	0.011333333	0.428666667	0.428666667	93.91666667	79.79166667	93.1875	74.22222222	59.22222222	15	#DIV/0!	0.762222222
Standard Deviation	0.159474445	#DIV/0!	1.017611583	0.863970164	1.018430165	1.023039557	0.011732618	0.004714045	0.005939396	0.195352508	0.195352508	31.7734872	26.99906763	31.96998616	41.0088819	41.0088819	0	#DIV/0!	0.394004449
Median	9.1	#NUM!	2.94	2.42	2.92	2.9076	0.02	0.01	0.0114	0.4081	0.4081	91.88	75.625	90.8625	53	38	15	#NUM!	0.55
75Percentile-Median	0.1	#NUM!	0.16	0.24	0.17	0.1733	0.01	0.01	0.001	0.1065	0.1065	5.02	7.5	5.415625	58	58	0	#NUM!	0.58
75 Percentile	9.2	#NUM!	3.1	2.66	3.09	3.0809	0.03	0.02	0.0124	0.5146	0.5146	96.9	83.125	96.278125	111	96	15	#NUM!	1.13
90 Percentile	9.36	#NUM!	3.908	3.312	3.89	3.88498	0.032	0.02	0.0197	0.69002	0.69002	121.82	103.5	121.405625	121.6	106.6	15	#NUM!	1.266
Maximum	9.6	0	5.54	4.72	5.53	5.5265	0.04	0.02	0.0229	0.8065	0.8065	173.1	147.5	172.703125	160	145	15	0	1.53
Interquartile Range (IQR) 1	0.1	#NUM!	0.73	0.72	0.73	0.7328	0.02	0.01	0.00587	0.267	0.267	22.84	22.5	22.9	65	65	0	#NUM!	0.65
Variance	0.028611111	#DIV/0!	1.164975	0.83975	1.16685	1.177436178	0.000154861	0.000025	3.9686E-05	0.042932928	0.042932928	1135.7488	820.0683594	1149.840017	1891.944444	1891.944444	0	#DIV/0!	0.174644444
Skewness	2.213096024	#DIV/0!	1.76851169	1.848822158	1.769970038	1.758434416	0.449664726	0.857142857	0.750452038	0.666087437	0.666087437	1.774735949	1.848822158	1.758434416	1.106898001	1.106898001	#DIV/0!	#DIV/0!	0.939145175
Coefficient of Variation (CoV) 2	0.017355139	#DIV/0!	0.338451746	0.338369516	0.340232794	0.343071615	0.621138591	0.353553391	0.524064333	0.455721246	0.455721246	0.338315747	0.338369516	0.343071615	0.552514876	0.692457668	0	#DIV/0!	0.516915458
NPR < 1.0 or NPR = 1.0																			
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Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Inorganic CO2 (%)	C_DEL_CALC (%)	CANP_TTL (%)	CANP_INORG (%)	CANP_CA (%)	CANP_CAMG (%)	TNNP (kg $CaCO_3$ /t)	TNNP_ADJ (kg $CaCO_3$ /t)	SNNP (kg $CaCO_3$ /t)	SNNP_ADJ (kg $CaCO_3$ /t)	ICNNP (kg $CaCO_3$ /t)	TNPR	TNPR_ADJ	SNPR	SNPR(S DEL CALC)	SNPR for graphs	SNPR_ADJ for graphs	ICNPR	Fizz Rating
FIELD LEACH BARREL - Barrel 2 M-ANDS																			
Count	11	0	0	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Minimum	0.3	0	0	6.82	7.242	12.6	-74.7	-89.7	-74.03125	-89.03	-86.49	-74.69	-89.69	0.325423729	0.288374887	0.325423729	0.001	0.1738	2
10 Percentile	0.8	#NUM!	#NUM!	18.2	25.47	69.87	-50.6	-65.6	-49.74375	-64.74	-59.69	-50.62	-65.62	0.436363636	0.404653515	0.436363636	0.162711864	0.2835	2
25 Percentile	1.25	#NUM!	#NUM!	28.45	40.83	76.165	-41.065	-56.065	-40.4875	-55.485	-51.76	-41.065	-56.065	0.569768433	0.511533413	0.569768433	0.391001168	0.3802	2
Median-25Percentile	0.35	#NUM!	#NUM!	7.95	3.87	10.885	21.445	21.445	21.715625	21.715	12.97	21.445	21.445	0.087000126	0.106354102	0.087000126	0.079587067	0.0706	0
Mean	1.590909091	#DIV/0!	#DIV/0!	36.18363636	41.682	81.06	-24.48272727	-38.93727273	-23.40284091	-38.40181818	-34.75581818	-24.48336364	-39.48363636	0.789596546	0.733495085	0.789596546	0.53251415	0.564063636	2
Standard Deviation	0.703826613	#DIV/0!	#DIV/0!	16.0089221	14.04710776	24.03444536	26.01182636	26.2653699	26.27036615	26.27021432	27.90631027	26.01203817	26.01189772	0.404741946	0.376498326	0.404741946	0.36104411	0.348986062	0
Median	1.6	#NUM!	#NUM!	36.4	44.7	87.05	-19.62	-34.62	-18.771875	-33.77	-38.79	-19.62	-34.62	0.656768559	0.617887515	0.656768559	0.470588235	0.4508	2
75Percentile-Median	0.25	#NUM!	#NUM!	5.65	3.75	7.875	9.46	10.9	9.88609375	9.885	21.845	9.4625	9.46	0.238611009	0.238215875	0.238611009	0.156011367	0.1981	0
75 Percentile	1.85	#NUM!	#NUM!	42.05	48.45	94.925	-10.16	-23.72	-8.88578125	-23.885	-16.945	-10.1575	-25.16	0.895379567	0.85610339	0.895379567	0.626599602	0.6489	2
90 Percentile	2.6	#NUM!	#NUM!	59.1	48.7	99.94	-4.31	-19.31	-2.6371875	-17.64	-9.984	-4.312	-19.31	0.98313253	0.950832853	0.98313253	0.696888889	0.8685	2
Maximum	2.9	0	0	66	65.18	104.2	27.62	12.62	28.80625	13.81	19.76	27.62	12.62	1.914285714	1.754213713	1.914285714	1.485714286	1.502	2
Interquartile Range (IQR) 1	0.6	#NUM!	#NUM!	13.6	7.62	18.76	30.905	32.345	31.60171875	31.6	34.815	30.9075	30.905	0.325611135	0.344569977	0.325611135	0.235598434	0.2687	0
Variance	0.544909091	#DIV/0!	#DIV/0!	281.9141455	217.05336	635.42002	744.2766218	758.8566218	759.1453511	759.1365764	856.6383684	744.2887425	744.2807055	0.180197647	0.155926088	0.180197647	0.143388134	0.133970399	0
Skewness	0.174296335	#DIV/0!	#DIV/0!	0.175671961	-1.188729275	-2.264663	0.016330635	-0.040193556	0.002727247	0.002870215	0.119407966	0.016633234	0.016661433	2.014148941	1.83997605	2.014148941	1.50219	1.881340734	#DIV/0!
Coefficient of Variation (CoV) 2	0.442405299	#DIV/0!	#DIV/0!	0.442435413	0.337006568	0.296501917	-1.06245624	-0.674555973	-1.122528938	-0.684087774	-0.802924855	-1.062437276	-0.658801978	0.512593359	0.513293591	0.512593359	0.677999092	0.618699805	0
NPR < 1.0 or NPR = 1.0																			
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% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			
FIELD LEACH BARREL - Barrel 3 M-SEDS																			
Count	9	0	0	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Minimum	1.4	0	0	31.8	25.47	44.67	-120.1	-135.1	-119.703125	-134.7	-127.6	-120.1	-135.1	0.359322034	0.306885009	0.359322034	0.257627119	0.2627	2
10 Percentile	1.4	#NUM!	#NUM!	31.8	28.47	52.918	-72.82	-87.82	-72.405625	-87.404	-76.64	-73.14	-88.14	0.437578692	0.39594847	0.437578692	0.272878807	0.32982	2
25 Percentile	1.8	#NUM!	#NUM!	40.9	38.96	56.12	-53.88	-68.88	-52.8625	-67.86	-60.04	-53.88	-68.88	0.518918919	0.442065274	0.518918919	0.30802139	0.416	2
Median-25Percentile	0.2	#NUM!	#NUM!	4.6	6.49	9.45	20	20	20.015625	20.01	20.04	20	20	0.049420849	0.059097462	0.049420849	0.074990193	0.0601	1
Mean	2.8	#DIV/0!	#DIV/0!	63.62222222	59.01555556	99.46444444	-19.69444444	-34.69444444	-18.96527778	-33.96444444	-30.27555556	-19.73888889	-34.73888889	1.10720274	0.953475024	1.10720274	0.902119709	0.802222222	2.666666667
Standard Deviation	1.429063407	#DIV/0!	#DIV/0!	32.41836852	29.53880653	55.21440716	61.96751176	61.96751176	62.13431414	62.13473713	54.70840929	61.99725737	61.99725737	0.876306814	0.781829588	0.876306814	0.836072569	0.608636434	0.471404521
Median	2	#NUM!	#NUM!	45.5	45.45	65.57	-33.88	-48.88	-32.846875	-47.85	-40	-33.88	-48.88	0.568339768	0.501162736	0.568339768	0.383011583	0.4761	3
75Percentile-Median	2.1	#NUM!	#NUM!	47.7	46.2	77.93	62.07	62.07	61.703125	61.71	50.43	62.07	62.07	1.05357804	0.850126924	1.05357804	1.019728143	0.6499	0
75 Percentile	4.1	#NUM!	#NUM!	93.2	91.65	143.5	28.19	13.19	28.85625	13.86	10.43	28.19	13.19	1.621917808	1.35128966	1.621917808	1.402739726	1.126	3
90 Percentile	4.64	#NUM!	#NUM!	105.4	95.94	164.8	50.852	35.852	51.640625	36.64	34.772	50.852	35.852	2.106159003	1.789613803	2.106159003	1.849325153	1.5238	3
Maximum	5.6	0	0	127	112.1	214.8	102.5	87.5	103.715625	88.72	69.86	102.5	87.5	3.141104294	2.842707234	3.141104294	2.846625767	2.215	3
Interquartile Range (IQR) 1	2.3	#NUM!	#NUM!	52.3	52.69	87.38	82.07	82.07	81.71875	81.72	70.47	82.07	82.07	1.102998889	0.909224386	1.102998889	1.094718336	0.71	1
Variance	2.2975	#DIV/0!	#DIV/0!	1182.319444	981.6087278	3429.709603	4319.969078	4319.969078	4343.257118	4343.316253	3367.136303	4324.117411	4324.117411	0.863902836	0.687664692	0.863902836	0.786394508	0.416743097	0.25
Skewness	0.955580793	#DIV/0!	#DIV/0!	0.949567054	0.735900841	1.073956488	0.553908795	0.553908795	0.555041707	0.555156232	0.207235016	0.554550423	0.554550423	1.547593478	1.756273254	1.547593478	1.563375299	1.563618325	-0.857142857
Coefficient of Variation (CoV) 2	0.510379788	#DIV/0!	#DIV/0!	0.509544737	0.500525772	0.555117032	-3.146446295	-1.786093213	-3.276214294	-1.829405372	-1.807015868	-3.140868654	-1.784664373	0.79146012	0.819979096	0.79146012	0.926786723	0.758688075	0.176776695
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
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Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
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% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Ag (ppm)	Al (ppm)	Al (%)	As (ppm)	Ba (ppm)	Be (ppm)	Bi (ppm)	Ca (ppm)	Ca (%)	Cd (ppm)	Ce (ppm)	Co (ppm)	Cr (ppm)	Cs (ppm)	Cu (ppm)	Fe (ppm)	Fe (%)	Ga (ppm)
FIELD LEACH BARREL - Barrel 2 M-ANDS																		
Count	11	11	11	11	11	11	11	11	11	10	11	11	11	11	11	11	11	11
Minimum	0.39	68900	6.89	3.7	340	1.13	0.36	2900	0.29	0.02	8.58	0.6	1	1.26	79.3	10500	1.05	16.65
10 Percentile	0.41	69900	6.99	3.9	350	1.15	0.38	10200	1.02	0.038	9.06	10.2	9	1.56	633	36500	3.65	17.15
25 Percentile	0.515	73250	7.325	4.2	425	1.19	0.38	16350	1.635	0.0625	9.62	12.65	11	2.2	772.5	38350	3.835	17.25
Median-25Percentile	0.485	2250	0.225	0.5	305	0.16	0.35	1550	0.155	0.0675	1.23	4.75	2	1.46	133.5	1650	0.165	0.2
Mean	1.150909091	74354.54545	7.435454545	5.754545455	857.2727273	1.774545455	1.296363636	16690.90909	1.669090909	0.175	13.19363636	16.2	15	3.445454545	1297.845455	40900	4.09	19.68636364
Standard Deviation	0.62726614	2752.969846	0.275296985	2.019614561	467.3346263	0.792376903	1.227408747	5624.694666	0.562469467	0.136180028	6.37365925	6.913754407	7.827689779	1.342611862	794.802916	11520.10101	1.152010101	5.877657655
Median	1	75500	7.55	4.7	730	1.35	0.73	17900	1.79	0.13	10.85	17.4	13	3.66	906	40000	4	17.45
75Percentile-Median	0.705	650	0.065	2.35	585	0.765	0.99	1500	0.15	0.13	0.525	1.85	4	0.97	1374	8500	0.85	1.35
75 Percentile	1.705	76150	7.615	7.05	1315	2.115	1.72	19400	1.94	0.26	11.375	19.25	17	4.63	2280	48500	4.85	18.8
90 Percentile	1.95	76900	7.69	7.7	1470	3.02	3.14	19500	1.95	0.384	24.9	23.5	29	4.94	2300	51900	5.19	20.3
Maximum	2.02	77600	7.76	10.5	1640	3.49	4.09	26100	2.61	0.42	28.1	28	29	4.99	2350	57100	5.71	38
Interquartile Range (IQR) 1	1.19	2900	0.29	2.85	890	0.925	1.34	3050	0.305	0.1975	1.755	6.6	6	2.43	1507.5	10150	1.015	1.55
Variance	0.432809091	8336727.273	0.083367273	4.486727273	240241.8182	0.690647273	1.657185455	34800909.09	0.348009091	0.020605556	44.68588545	52.58	67.4	1.982867273	694882.8427	145984000	1.45984	38.00154545
Skewness	0.095997767	-1.028848237	-1.028848237	1.210916692	0.518261233	1.302727775	1.426221037	-1.188891771	-1.188891771	0.713355416	1.88301857	-0.648660363	0.53276739	-0.445000103	0.315027427	-1.505559238	-1.505559238	3.148003079
Coefficient of Variation (CoV) 2	0.545017973	0.037024903	0.037024903	0.350959876	0.545141133	0.44652387	0.946808991	0.33699151	0.33699151	0.778171588	0.483085866	0.426774963	0.521845985	0.389676266	0.612401818	0.281665061	0.281665061	0.298564924
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
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Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
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Sum Check																		
FIELD LEACH BARREL - Barrel 3 M-SEDS																		
Count	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Minimum	0.54	64200	6.42	11.8	150	0.75	0.25	10200	1.02	0.04	13.85	8.1	10	2.9	18.5	20300	2.03	14.5
10 Percentile	0.58	64520	6.452	13	214	0.766	0.266	11400	1.14	0.072	15.17	8.34	16.4	2.948	52.42	26700	2.67	15.14
25 Percentile	1.02	66100	6.61	18.2	280	1.33	0.69	15600	1.56	0.11	16.8	10.8	21	3.28	63.6	30800	3.08	16.35
Median-25Percentile	0.23	4200	0.42	35.6	210	0.1	0.89	2600	0.26	0.05	3	0.9	4	1.62	252.4	5100	0.51	1.9
Mean	2.122222222	69266.66667	6.926666667	61.84444444	485.5555556	1.393333333	5.202222222	23633.33333	2.363333333	0.185555556	21.27222222	13.85555556	26.66666667	4.393333333	366.5	34944.44444	3.494444444	17.93888889
Standard Deviation	2.130637765	3211.091888	0.321109189	48.16047506	254.2138693	0.391350937	8.744646334	11830.56306	1.183056306	0.131749857	5.562329204	5.614487433	9.854496999	1.101372881	285.7726408	7622.497565	0.762249757	2.126392064
Median	1.25	70300	7.03	53.8	490	1.43	1.58	18200	1.82	0.16	19.8	11.7	25	4.9	316	35900	3.59	18.25
75Percentile-Median	0.18	1400	0.14	23.4	40	0.16	3.12	18500	1.85	0.05	5.8	4.6	9	0.21	307	2800	0.28	0.85
75 Percentile	1.43	71700	7.17	77.2	530	1.59	4.7	36700	3.67	0.21	25.6	16.3	34	5.11	623	38700	3.87	19.1
90 Percentile	5.01	72560	7.256	132.2	844	1.716	9.664	38420	3.842	0.288	29.38	19.52	39.8	5.57	711.6	41460	4.146	20.82
Maximum	7.29	73200	7.32	157	980	2.06	29.4	44900	4.49	0.52	30.1	27.2	43	6.05	786	49300	4.93	20.9
Interquartile Range (IQR) 1	0.41	5600	0.56	59	250	0.26	4.01	21100	2.11	0.1	8.8	5.5	13	1.83	559.4	7900	0.79	2.75
Variance	5.107069444	11600000	0.116	2609.360278	72702.77778	0.1723	86.02744444	157457500	1.574575	0.019527778	34.80694444	35.46277778	109.25	1.36465	91874.2525	65365277.78	0.653652778	5.086736111
Skewness	1.939482032	-0.618889071	-0.618889071	0.952292144	0.74690307	-0.417922664	2.759996784	0.736312525	0.736312525	1.921833026	0.4325409	1.541829886	0.15641077	-0.132329114	0.158282167	-0.117685865	-0.117685865	-0.161859561
Coefficient of Variation (CoV) 2	1.003965439	0.046358401	0.046358401	0.778735673	0.523552591	0.280873878	1.680944404	0.500588	0.500588	0.710029167	0.261483222	0.405215613	0.369543637	0.250691854	0.779734354	0.218131886	0.218131886	0.118535327
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
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Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Ge (ppm)	Hf (ppm)	Hg (ppm)	In (ppm)	K (ppm)	K (%)	La (ppm)	Li (ppm)	Mg (ppm)	Mg (%)	Mn (ppm)	Mo (ppm)	Na (ppm)	Na (%)	Nb (ppm)	Ni (ppm)	P (%)	Pb (ppm)
FIELD LEACH BARREL - Barrel 2 M-ANDS																		
Count	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Minimum	0.06	0.3	0.01	0.012	43900	4.39	5	3.8	1500	0.15	386	4.56	11100	1.11	6.4	0.6	0.004	4.6
10 Percentile	0.11	0.4	0.02	0.033	46700	4.67	5	13	7600	0.76	394	6.79	14500	1.45	6.4	4.6	0.113	4.9
25 Percentile	0.12	0.45	0.02	0.051	50100	5.01	5.35	15.3	9650	0.965	409	12.875	15700	1.57	6.85	6.4	0.128	5.5
Median-25Percentile	0.01	0.05	0.01	0.011	1700	0.17	0.75	2.1	4050	0.405	169	10.225	1200	0.12	1.45	1.7	0.017	8.7
Mean	0.125454545	0.881818182	0.030909091	0.060818182	52172.72727	5.217272727	8.218181818	20.30909091	11618.18182	1.161818182	655.1818182	34.26363636	18845.45455	1.884545455	9.118181818	9.527272727	0.132272727	33.11818182
Standard Deviation	0.024629486	0.833195581	0.011642044	0.022339603	4928.413152	0.492841315	4.625977672	10.63189494	4021.039708	0.402103971	273.6809085	27.05374391	4797.41666	0.479741666	3.152147372	5.956980765	0.043805543	40.72965902
Median	0.13	0.5	0.03	0.062	51800	5.18	6.1	17.4	13700	1.37	578	23.1	16900	1.69	8.3	8.1	0.145	14.2
75Percentile-Median	0.005	0.45	0.01	0.016	1600	0.16	1.85	4.6	550	0.055	238.5	25.45	6200	0.62	2	3.05	0.011	34.55
75 Percentile	0.135	0.95	0.04	0.078	53400	5.34	7.95	22	14250	1.425	816.5	48.55	23100	2.31	10.3	11.15	0.156	48.75
90 Percentile	0.15	1.4	0.04	0.087	56800	5.68	16.1	37.2	14800	1.48	1090	66.1	25000	2.5	11.2	18.9	0.165	86
Maximum	0.16	3.3	0.05	0.088	63800	6.38	19.2	43.1	15500	1.55	1165	93.8	26900	2.69	17.6	21.8	0.168	124.5
Interquartile Range (IQR) 1	0.015	0.5	0.02	0.027	3300	0.33	2.6	6.7	4600	0.46	407.5	35.675	7400	0.74	3.45	4.75	0.028	43.25
Variance	0.000667273	0.763636364	0.000149091	0.000548964	26718181.82	0.267181818	23.53963636	124.3409091	17785636.36	0.177856364	82391.36364	805.0955655	25316727.27	0.253167273	10.92963636	39.03418182	0.002110818	1824.795636
Skewness	-1.595253745	2.50238121	-0.206410127	-0.831515963	0.820165077	0.820165077	1.788850779	1.016997174	-1.577895057	-1.577895057	0.810698305	0.941446072	0.308046143	0.308046143	1.872711518	0.911292047	-2.526139716	1.405645836
Coefficient of Variation (CoV) 2	0.196321988	0.944860968	0.376654367	0.367317833	0.094463399	0.094463399	0.562895513	0.523504227	0.346098879	0.346098879	0.417717496	0.78957597	0.254566248	0.254566248	0.345699114	0.625255615	0.331175928	1.22982775
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 3 M-SEDS																		
Count	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Minimum	0.09	0.5	0.01	0.016	15400	1.54	7.5	9.8	3600	0.36	496	11.55	11100	1.11	2.5	7.6	0.045	17
10 Percentile	0.09	0.5	0.01	0.0336	19640	1.964	8.14	11.4	4320	0.432	543.2	17.23	15500	1.55	3.06	9.6	0.0498	19.96
25 Percentile	0.11	0.7	0.02	0.04	33600	3.36	8.8	16.8	4700	0.47	767	18.7	17700	1.77	3.4	15.9	0.057	23.1
Median-25Percentile	0.01	0.1	0	0.018	4600	0.46	1.5	5.8	3200	0.32	52	11.8	2700	0.27	1.1	2.9	0.021	7.9
Mean	0.122222222	0.933333333	0.076666667	0.057	38488.88889	3.848888889	10.84444444	21.14444444	11100	1.11	1091.444444	31.47777778	22477.77778	2.247777778	4.544444444	20.38888889	0.079333333	37.81111111
Standard Deviation	0.027799991	0.355902608	0.153622915	0.022774254	13265.69883	1.326569883	2.770523862	6.8532411	8071.486164	0.807148616	501.4953442	15.22505448	7605.667153	0.760566715	1.314120839	10.0373131	0.024792472	18.19037868
Median	0.12	0.8	0.02	0.058	38200	3.82	10.3	22.6	7900	0.79	819	30.5	20400	2.04	4.5	18.8	0.078	31
75Percentile-Median	0.01	0.5	0.01	0.01	8400	0.84	1.8	1.8	6000	0.6	631	3.6	7700	0.77	1	3.3	0.016	23.1
75 Percentile	0.13	1.3	0.03	0.068	46600	4.66	12.1	24.4	13900	1.39	1450	34.1	28100	2.81	5.5	22.1	0.094	54.1
90 Percentile	0.142	1.42	0.142	0.0836	52120	5.212	15.28	28.8	19220	1.922	1770	55.18	32020	3.202	6.12	30.26	0.1132	59.1
Maximum	0.19	1.5	0.51	0.098	59400	5.94	15.6	32	30100	3.01	1990	59.5	37300	3.73	6.6	44.1	0.122	72.3
Interquartile Range (IQR) 1	0.02	0.6	0.01	0.028	13000	1.3	3.3	7.6	9200	0.92	683	15.4	10400	1.04	2.1	6.2	0.037	31
Variance	0.000869444	0.1425	0.02655	0.0005835	197976111.1	1.979761111	8.635277778	52.83777778	73292500	0.732925	282934.7778	260.7775694	65076944.44	0.650769444	1.942777778	113.3411111	0.0006915	372.2511111
Skewness	1.526671988	0.456117158	2.96936705	0.019771621	-0.361759523	-0.361759523	0.774049896	-0.287734478	1.500832618	1.500832618	0.607949618	0.804113373	0.664660609	0.664660609	0.019639679	1.371842721	0.337503247	0.695924274
Coefficient of Variation (CoV) 2	0.227454473	0.381324223	2.003777152	0.399548324	0.344663076	0.344663076	0.255478635	0.324115449	0.727160916	0.727160916	0.459478581	0.483676281	0.338363838	0.338363838	0.289170845	0.492293286	0.312510151	0.481085537
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Rb (ppm)	Re (ppm)	S (ppm)	S (%)	Sb (ppm)	Sc (ppm)	Se (ppm)	Sn (ppm)	Sr (ppm)	Ta (ppm)	Te (ppm)	Th (ppm)	Ti (ppm)	Ti (%)	Tl (ppm)	U (ppm)	V (ppm)	W (ppm)
FIELD LEACH BARREL - Barrel 2 M-ANDS																		
Count	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Minimum	103.5	0.005	8700	0.87	1.19	0.7	4	1	123	0.33	0.14	1	350	0.035	0.58	0.8	72	1.9
10 Percentile	121.5	0.016	13300	1.33	1.35	11.9	9	1.2	156	0.37	0.15	1.1	2130	0.213	0.62	0.9	237	3.5
25 Percentile	127.25	0.032	17150	1.715	1.455	17.1	10	1.4	188	0.375	0.175	1.3	2265	0.2265	0.665	0.9	250	6.35
Median-25Percentile	8.25	0.031	6650	0.665	0.195	5.3	0	0.1	39	0.025	0.025	0.1	55	0.0055	0.305	0.4	55	1.85
Mean	134.4090909	0.065090909	23036.36364	2.303636364	1.659090909	18.81818182	10.18181818	1.572727273	210.8181818	0.425454545	0.208181818	2.772727273	2256.363636	0.225636364	0.944545455	4.954545455	350.7272727	8.254545455
Standard Deviation	13.53752056	0.041467303	7713.420739	0.771342074	0.339101876	7.009450527	2.248966705	0.333278232	40.35764698	0.068005833	0.05540236	3.591680009	643.9123702	0.064391237	0.268103224	6.712046651	176.3715556	3.390726293
Median	135.5	0.063	23800	2.38	1.65	22.4	10	1.5	227	0.4	0.2	1.4	2320	0.232	0.97	1.3	305	8.2
75Percentile-Median	9	0.034	5650	0.565	0.085	0.35	1.5	0.25	11	0.07	0.015	0.7	255	0.0255	0.18	4	125.5	2.25
75 Percentile	144.5	0.097	29450	2.945	1.735	22.75	11.5	1.75	238	0.47	0.215	2.1	2575	0.2575	1.15	5.3	430.5	10.45
90 Percentile	146.5	0.114	32400	3.24	1.93	23.5	12	2	250	0.52	0.31	3.5	2690	0.269	1.32	17.5	561	12.2
Maximum	154.5	0.138	33200	3.32	2.53	23.9	13	2.2	257	0.55	0.32	13.9	2960	0.296	1.34	19.1	732	13.2
Interquartile Range (IQR) 1	17.25	0.065	12300	1.23	0.28	5.65	1.5	0.35	50	0.095	0.04	0.8	310	0.031	0.485	4.4	180.5	4.1
Variance	201.5909091	0.001891491	65446545.45	0.654465455	0.126489091	54.04563636	5.563636364	0.122181818	1791.613636	0.005087273	0.003376364	14.19018182	456085.4545	0.004560855	0.079067273	49.55672727	34217.61818	12.64672727
Skewness	-0.879703347	0.197191391	-0.440418339	-0.440418339	1.435895116	-1.845669449	-1.88517187	0.243797552	-1.030671122	0.678984341	1.156401032	3.090548018	-2.552574188	-2.552574188	0.03996625	1.546381032	0.842483603	-0.505199998
Coefficient of Variation (CoV) 2	0.100718787	0.637067499	0.334836733	0.334836733	0.204390172	0.372482878	0.220880659	0.211911015	0.191433427	0.159842771	0.266124873	1.295360003	0.285376151	0.285376151	0.283843645	1.354725012	0.502873798	0.410770806
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 3 M-SEDS																		
Count	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Minimum	70.3	0.009	19200	1.92	3.72	6.8	9	1	140.5	0.18	0.09	1.5	1480	0.148	0.64	1.2	75	12.6
10 Percentile	90.7	0.0298	20240	2.024	4.224	7.92	9	1	162.1	0.22	0.114	1.82	1664	0.1664	0.856	1.28	81.4	12.68
25 Percentile	109.5	0.047	24900	2.49	4.46	8.3	12	1.1	175	0.24	0.41	2	1970	0.197	1.19	1.3	107	14.1
Median-25Percentile	15.5	0.026	3600	0.36	0.71	3.8	1	0.1	34	0.08	0.46	0.5	510	0.051	0.17	0.4	28	3.4
Mean	118.6777778	0.079	30011.11111	3.001111111	14.50555556	11.41111111	13	1.3	206.4444444	0.296666667	1.377777778	2.577777778	2355.555556	0.235555556	1.347777778	2.066666667	124.1111111	18.12222222
Standard Deviation	23.26536662	0.046927841	9022.495891	0.902249589	26.21405438	2.83997044	2.666666667	0.240370085	45.81693309	0.068475462	1.410025829	0.772841478	513.2491513	0.051324915	0.35844658	0.844590631	29.32744049	4.440164606
Median	125	0.073	28500	2.85	5.17	12.1	13	1.2	209	0.32	0.87	2.5	2480	0.248	1.36	1.7	135	17.5
75Percentile-Median	7	0.051	3500	0.35	1.18	1.9	2	0.4	4	0.04	1.07	0.5	170	0.017	0.28	1.2	10	4.4
75 Percentile	132	0.124	32000	3.2	6.35	14	15	1.6	213	0.36	1.94	3	2650	0.265	1.64	2.9	145	21.9
90 Percentile	141.2	0.144	39220	3.922	23.088	14.4	16.2	1.6	239	0.372	3.124	3.74	2934	0.2934	1.694	3.2	150.4	23.88
Maximum	154	0.152	50900	5.09	88.6	15.2	17	1.6	315	0.38	4.62	3.9	3150	0.315	1.79	3.6	168	25
Interquartile Range (IQR) 1	22.5	0.077	7100	0.71	1.89	5.7	3	0.5	38	0.12	1.53	1	680	0.068	0.45	1.6	38	7.8
Variance	608.9369444	0.0024775	91581111.11	0.915811111	773.0737278	9.073611111	8	0.065	2361.590278	0.005275	2.236694444	0.671944444	296352.7778	0.002963528	0.144544444	0.8025	967.6111111	22.17944444
Skewness	-0.763674421	0.332427371	1.294472483	1.294472483	2.992194061	-0.381351366	-0.213079052	0.174564911	1.267641579	-0.355167525	1.496909466	0.564437989	-0.317911491	-0.317911491	-0.833404581	0.800182531	-0.439546602	0.219877898
Coefficient of Variation (CoV) 2	0.196038105	0.594023299	0.300638515	0.300638515	1.807173416	0.248877643	0.205128205	0.184900065	0.221933476	0.230816164	1.023405844	0.299809194	0.217888791	0.217888791	0.265953769	0.408672886	0.236299879	0.245012149
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Y (ppm)	Zn (ppm)	Zr (ppm)	Al2O3 (%)	BaO (%)	CaO (%)	Cr2O3 (%)	Fe2O3 (%)	K2O (%)	MgO (%)	MnO (%)	Na2O (%)	P2O5 (%)	SiO2 (%)	SRO (%)	TiO2 (%)	LOI (%)	Total_DC (%)
FIELD LEACH BARREL - Barrel 2 M-ANDS																		
Count	11	11	11	11	11	11	4	11	11	11	11	11	11	11	11	11	11	11
Minimum	5.5	18	9.8	14.21	0.14	0.39	0.01	1.5	5.47	0.35	0.05	1.47	0.017	55.2	0.02	0.05	1.11	98.21
10 Percentile	8	20	11.7	14.6	0.17	1.53	0.01	5.28	5.9	1.47	0.05	2.09	0.248	55.37	0.02	0.42	2.82	98.27
25 Percentile	8.5	28.5	13.5	15.085	0.195	2.3	0.01	5.625	6.195	1.835	0.06	2.135	0.2845	56.3	0.02	0.42	3.145	98.51
Median-25Percentile	0.4	26.5	2	0.845	0.115	0.26	0	0.455	0.195	0.725	0.02	0.215	0.0355	1.22	0.01	0.03	0.635	0.22
Mean	9.863636364	51.72727273	27.50909091	15.63272727	0.315454545	2.384545455	0.01	6.073636364	6.890909091	2.22	0.09	2.587272727	0.295272727	58.12181818	0.027272727	0.427272727	3.904545455	98.97545455
Standard Deviation	2.994319691	24.02684449	25.34853249	0.817669537	0.122945933	0.800912702	0	1.730681803	1.192784782	0.750115143	0.036927447	0.643019735	0.096156209	3.590041322	0.006165755	0.126569486	1.272144672	0.622405358
Median	8.9	55	15.5	15.93	0.31	2.56	0.01	6.08	6.39	2.56	0.08	2.35	0.32	57.52	0.03	0.45	3.78	98.73
75Percentile-Median	1	20.5	17.3	0.21	0.115	0.175	0	1.095	0.83	0.205	0.03	0.78	0.0275	0.405	0	0.03	1.11	0.96
75 Percentile	9.9	75.5	32.8	16.14	0.425	2.735	0.01	7.175	7.22	2.765	0.11	3.13	0.3475	57.925	0.03	0.48	4.89	99.69
90 Percentile	14.5	79	42.1	16.4	0.48	2.86	0.01	7.7	9.04	2.85	0.15	3.44	0.371	60.09	0.03	0.52	5.45	99.82
Maximum	16.8	83	100.5	17.11	0.49	3.71	0.01	8.5	9.31	2.91	0.16	3.63	0.374	68.68	0.04	0.56	5.63	99.85
Interquartile Range (IQR) 1	1.4	47	19.3	1.055	0.23	0.435	0	1.55	1.025	0.93	0.05	0.995	0.063	1.625	0.01	0.06	1.745	1.18
Variance	9.862545455	635.0181818	706.8029091	0.735441818	0.016627273	0.705607273	0	3.294785455	1.565009091	0.61894	0.0015	0.454821818	0.010170618	14.17723636	4.18182E-05	0.017621818	1.780187273	0.426127273
Skewness	1.324573805	-0.160419019	2.424211663	-0.066705004	0.034282597	-1.240726006	#DIV/0!	-1.533118284	1.221169734	-1.521786558	0.833121751	0.181684054	-2.427278511	2.567812204	0.291347763	-2.622405692	-0.668774051	0.400683881
Coefficient of Variation (CoV) 2	0.303571582	0.464490843	0.921460203	0.052304983	0.389742151	0.335876467	0	0.284949855	0.173095417	0.337889704	0.41030497	0.248531872	0.325652186	0.061767533	0.226077666	0.296226456	0.325811208	0.006288482
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 3 M-SEDS																		
Count	9	9	9	9	9	9	6	9	9	9	9	9	9	9	9	9	9	9
Minimum	6.6	17	14.2	13.04	0.05	1.52	0.01	3.1	1.89	0.72	0.07	1.48	0.109	51.94	0.02	0.33	3.37	98.46
10 Percentile	6.76	19.4	14.44	13.864	0.082	1.76	0.01	4.108	2.386	0.888	0.078	2.192	0.1178	53.452	0.02	0.362	3.682	98.532
25 Percentile	7.1	27	18.8	14.24	0.16	2.13	0.01	4.43	4.36	1	0.1	2.52	0.133	56.02	0.02	0.39	3.82	98.58
Median-25Percentile	2.2	13	3.8	0.36	0.04	0.45	0	0.82	0.56	0.59	0.01	0.3	0.042	2.09	0.01	0.12	1.86	0.2
Mean	9.266666667	46	25.94444444	14.93222222	0.2	3.422222222	0.01	5.216666667	5	2.131111111	0.15	3.092222222	0.183222222	58.90111111	0.025555556	0.484444444	5.196666667	98.94444444
Standard Deviation	2.278400999	24.06934426	9.987337662	1.071206773	0.083399973	1.732344447	0	1.137756076	1.825930509	1.461919928	0.069282032	1.056806277	0.057014185	4.477219982	0.00496904	0.101007273	1.19516619	0.518461637
Median	9.3	40	22.6	14.6	0.2	2.58	0.01	5.25	4.92	1.59	0.11	2.82	0.175	58.11	0.03	0.51	5.68	98.78
75Percentile-Median	0.6	17	14.3	1.22	0.06	2.5	0	0.51	1.39	1.05	0.09	0.85	0.042	4.67	0	0.04	0.46	0.03
75 Percentile	9.9	57	36.9	15.82	0.26	5.08	0.01	5.76	6.31	2.64	0.2	3.67	0.217	62.78	0.03	0.55	6.14	98.81
90 Percentile	11.66	80.2	40.06	16.174	0.294	5.694	0.01	6.33	7.336	3.53	0.24	4.358	0.2632	64.956	0.03	0.602	6.426	99.872
Maximum	14.3	89	41.1	16.71	0.31	6.67	0.01	7.37	7.36	5.57	0.28	5.31	0.284	65.58	0.03	0.65	6.77	99.92
Interquartile Range (IQR) 1	2.8	30	18.1	1.58	0.1	2.95	0	1.33	1.95	1.64	0.1	1.15	0.084	6.76	0.01	0.16	2.32	0.23
Variance	5.84	651.75	112.2152778	1.290919444	0.007825	3.376144444	0	1.4563	3.750775	2.404361111	0.0054	1.256444444	0.003656944	22.55118611	2.77778E-05	0.011477778	1.606975	0.302402778
Skewness	1.011446046	0.598086322	0.51707581	-0.011472038	-0.550270599	0.84128207	#DIV/0!	0.018867298	-0.382182685	1.479322098	0.702284262	0.836758931	0.499358195	0.099654089	-0.271052371	-0.001187574	-0.386741768	1.406013637
Coefficient of Variation (CoV) 2	0.245870611	0.523246614	0.384950916	0.071737934	0.416999867	0.506204546	0	0.218100206	0.365186102	0.685989539	0.461880215	0.34176272	0.311175054	0.076012488	0.194440694	0.208501251	0.22998708	0.005239927
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
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% NPR < 1.0 or NPR = 1.0 of Total																		
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Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Paste pH	Rinse pH	S_Total (%)	S_Sulphide (%)	S_S2_CALC (%)	S_S2_S_DEL CALC (%)	S_SO4_NA2CO 3 (%)	S_SO4_HCL (%)	S_BASO4 (%)	S_DEL (%)	S_DEL_CAL (%)	TAP (%)	SAP (kg $CaCO_3$ /t)	SAP (S Del Calc) (kg $CaCO_3$ /t)	NP (kg $CaCO_3$ /t)	NP_ADJ (kg $CaCO_3$ /t)	UNP	Total C (%)	Inorganic C (%)
FIELD LEACH BARREL - Barrel 4 M-VU																			
Count	10	0	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0	10
Minimum	8.9	0	0.97	0.89	0.96	0.91939	0.02	0.01	0.0042	0.02939	0.02939	30.31	27.8125	28.7309375	39	24	15	0	0.28
10 Percentile	8.9	#NUM!	1.438	1.322	1.419	1.391836	0.02	0.01	0.0042	0.052952	0.052952	44.935	41.3125	43.494875	45.3	30.3	15	#NUM!	0.379
25 Percentile	9.025	#NUM!	2.0425	1.9275	2.0325	2.0121325	0.02	0.01	0.0047225	0.0762625	0.0762625	63.825	60.234375	62.87914063	46.25	31.25	15	#NUM!	0.44
Median-25Percentile	0.125	#NUM!	1.9075	1.5775	1.8925	1.9062175	0.02	0	0.0030975	0.0936825	0.0936825	59.575	49.296875	59.56929688	1.75	1.75	0	#NUM!	0.055
Mean	9.17	#DIV/0!	3.43	3.129	3.412	3.398604	0.042	0.018	0.013396	0.269604	0.269604	107.177	97.78125	106.206375	51.7	36.7	15	#DIV/0!	0.524
Standard Deviation	0.19	#DIV/0!	1.45187465	1.30260086	1.44957787	1.460563617	0.021354157	0.011661904	0.011856397	0.221473859	0.221473859	45.37010735	40.70627687	45.64261302	9.930256794	9.930256794	0	#DIV/0!	0.161814709
Median	9.15	#NUM!	3.95	3.505	3.925	3.91835	0.04	0.01	0.00782	0.169945	0.169945	123.4	109.53125	122.4484375	48	33	15	#NUM!	0.495
75Percentile-Median	0.225	#NUM!	0.6575	0.725	0.6575	0.6562175	0.0175	0.01	0.0128375	0.34213	0.34213	20.55	22.65625	20.50679688	7.5	7.5	0	#NUM!	0.08
75 Percentile	9.375	#NUM!	4.6075	4.23	4.5825	4.5745675	0.0575	0.02	0.0206575	0.512075	0.512075	143.95	132.1875	142.9552344	55.5	40.5	15	#NUM!	0.575
90 Percentile	9.4	#NUM!	5.02	4.443	5.01	5.0058	0.071	0.04	0.027164	0.56645	0.56645	156.9	138.84375	156.43125	59.9	44.9	15	#NUM!	0.65
Maximum	9.4	0	5.02	4.47	5.01	5.0058	0.08	0.04	0.04061	0.5723	0.5723	156.9	139.6875	156.43125	77	62	15	0	0.92
Interquartile Range (IQR) 1	0.35	#NUM!	2.565	2.3025	2.55	2.562435	0.0375	0.01	0.015935	0.4358125	0.4358125	80.125	71.953125	80.07609375	9.25	9.25	0	#NUM!	0.135
Variance	0.040111111	#DIV/0!	2.342155556	1.885298889	2.334751111	2.37027342	0.000506667	0.000151111	0.000156193	0.054500745	0.054500745	2287.162934	1841.112196	2314.720137	109.5666667	109.5666667	0	#DIV/0!	0.029093333
Skewness	-0.107883507	#DIV/0!	-0.668755753	-0.745125324	-0.661795757	-0.66819355	0.493948817	1.363790746	1.437238343	0.367389998	0.367389998	-0.667961514	-0.745125324	-0.66819355	1.68897475	1.68897475	#DIV/0!	#DIV/0!	1.264997242
Coefficient of Variation (CoV) 2	0.020719738	#DIV/0!	0.42328707	0.416299412	0.424846972	0.429753986	0.508432298	0.647883544	0.885069928	0.821478386	0.821478386	0.423319437	0.416299412	0.429753986	0.1920746	0.270579204	0	#DIV/0!	0.308806696
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
NPR > 2.0 or NPR =2.0																			
Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
% 1.0 < NPR < 2.0 of Total																			
% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			
FIELD LEACH BARREL - Barrel 5 M-PW																			
Count	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Minimum	4.9	6.6	2.1	1.6	2.1	2.1	0.0	0.005	0.0	0.2	0.2	65.9	49.7	65.3	5.0	0.0	5.0	0.0	0.0
10 Percentile	6.6	7.1	2.69	2.17	2.64	2.636	0.03	0.005	0.0014	0.276	0.276	84.06	67.8125	82.375	6	0	6	0.005	0.025
25 Percentile	7.5	7.5	3.065	2.71	3.055	3.0501	0.03	0.005	0.00163	0.32245	0.32245	95.8	84.6875	95.315625	7.5	0	7.5	0.01	0.0375
Median-25Percentile	0.6	0.5	2.135	1.64	1.895	1.8985	0.01	0.005	0.0014	0.17755	0.17755	66.2	51.25	59.328125	26.5	19	7.5	0.37	0.3025
Mean	7.8	7.9	6.3	5.2	6.1	6.1	0.2	0.178181818	0.0	0.9	0.9	197.6	163.8	192.0	41.1	29.2	11.9	0.4	0.4
Standard Deviation	1.150853079	0.695796113	4.659339151	3.993578937	4.688727823	4.688482297	0.310653803	0.302544307	0.00266915	0.788768356	0.788768356	145.6223306	124.7993418	146.5150718	35.9278432	33.05867561	4.187742839	0.423488562	0.396653355
Median	8.1	8.0	5.2	4.4	5.0	4.9	0.0	0.01	0.0	0.5	0.5	162.0	135.9	154.6	34.0	19.0	15.0	0.4	0.3
75Percentile-Median	0.55	0.55	1.4	0.725	1.325	1.3239	0.145	0.135	0.00199	0.8672	0.8672	44.25	22.65625	41.371875	31	31	0	0.285	0.315
75 Percentile	8.65	8.55	6.6	5.075	6.275	6.2725	0.185	0.145	0.00502	1.3672	1.3672	206.25	158.59375	196.015625	65	50	15	0.665	0.655
90 Percentile	8.8	8.7	10.75	8.9	10.74	10.7374	0.68	0.64	0.00723	1.878	1.878	335.94	278.125	335.54375	79	64	15	0.86	0.82
Maximum	8.9	8.8	19.1	16.4	19.0	19.0	1.0	0.94	0.0	2.6	2.6	595.3	510.9	593.5	120.0	105.0	15.0	1.4	1.3
Interquartile Range (IQR) 1	1.15	1.05	3.535	2.365	3.22	3.2224	0.155	0.14	0.00339	1.04475	1.04475	110.45	73.90625	100.7	57.5	50	7.5	0.655	0.6175
Variance	1.456909091	0.532545455	23.88038545	17.54354	24.18258545	24.18005287	0.106156364	0.100686364	7.8368E-06	0.684371071	0.684371071	23326.44949	17132.36328	23613.33288	1419.890909	1202.163636	19.29090909	0.197276818	0.173067273
Skewness	-1.614293165	-0.604300202	2.040695972	2.172121273	2.100090105	2.098493177	1.927747253	1.937116629	1.234532535	1.271037299	1.271037299	2.041854198	2.172121273	2.098493177	0.977924642	1.207301979	-0.808358276	0.99349625	1.044175646
Coefficient of Variation (CoV) 2	0.147373503	0.087671904	0.736495627	0.762133385	0.762845822	0.76329133	1.492223506	1.697952745	0.688247706	0.874025578	0.874025578	0.736904261	0.762133385	0.76329133	0.874350166	1.132851812	0.351642528	1.001800899	0.966375838
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
NPR > 2.0 or NPR =2.0																			
Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
% 1.0 < NPR < 2.0 of Total																			
% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Inorganic CO2 (%)	C_DEL_CALC (%)	CANP_TTL (%)	CANP_INORG (%)	CANP_CA (%)	CANP_CAMG (%)	TNNP (kg $CaCO_3$ /t)	TNNP_ADJ (kg $CaCO_3$ /t)	SNNP (kg $CaCO_3$ /t)	SNNP_ADJ (kg $CaCO_3$ /t)	ICNNP (kg $CaCO_3$ /t)	TNPR	TNPR_ADJ	SNPR	SNPR(S DEL CALC)	SNPR for graphs	SNPR_ADJ for graphs	ICNPR	Fizz Rating
FIELD LEACH BARREL - Barrel 4 M-VU																			
Count	10	0	0	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Minimum	1	0	0	22.7	33.21	58.41	-110.9	-125.9	-110.43125	-125.4	-118.2	-110.9	-125.9	0.329306488	0.294058892	0.329306488	0.221923937	0.2465	2
10 Percentile	1.36	#NUM!	#NUM!	30.89	35.91	60.48	-100.1	-115.1	-99.63125	-114.6	-105.96	-100.082	-115.1	0.376108219	0.340533005	0.376108219	0.262192394	0.30041	2
25 Percentile	1.625	#NUM!	#NUM!	36.975	41.0125	68.865	-93.45	-108.45	-92.45523438	-107.435	-99.1025	-93.485	-108.455	0.392739799	0.372864848	0.392739799	0.279346636	0.33145	2
Median-25Percentile	0.225	#NUM!	#NUM!	5.075	0.6875	8.59	32.05	32.05	31.73085938	31.71	30.1725	32.05	32.02	0.114730713	0.093909293	0.114730713	0.081781051	0.0641	0
Mean	1.92	#DIV/0!	#DIV/0!	43.66	43.176	76.712	-55.477	-70.477	-54.506375	-69.4981	-63.5263	-55.48945	-70.4872	0.668316922	0.628049234	0.668316922	0.460214893	0.48901	2.1
Standard Deviation	0.604648658	#DIV/0!	#DIV/0!	13.75479553	5.899127393	11.46483999	42.11138137	42.11138137	42.4017834	42.39159047	39.56674476	42.11564144	42.114046	0.349583656	0.343379321	0.349583656	0.216511475	0.23524762	0.3
Median	1.85	#NUM!	#NUM!	42.05	41.7	77.455	-61.4	-76.4	-60.724375	-75.725	-68.93	-61.435	-76.435	0.507470511	0.466774141	0.507470511	0.361127687	0.39555	2
75Percentile-Median	0.225	#NUM!	#NUM!	5.175	5.125	4.6575	47.075	47.075	47.48320313	47.485	38.99	47.1075	47.1075	0.420283049	0.40875898	0.420283049	0.291124565	0.188175	0
75 Percentile	2.075	#NUM!	#NUM!	47.225	46.825	82.1125	-14.325	-29.325	-13.24117188	-28.24	-29.94	-14.3275	-29.3275	0.92775356	0.875533121	0.92775356	0.652252252	0.583725	2
90 Percentile	2.41	#NUM!	#NUM!	54.8	50.149	93.146	0.365	-14.635	1.805125	-13.1991	-12.0873	0.36255	-14.6352	1.107232018	1.052984081	1.107232018	0.737970967	0.7602	2.1
Maximum	3.4	0	0	77.3	54.19	93.92	8.69	-6.31	10.2690625	-4.731	1.527	8.688	-6.312	1.402247191	1.357421769	1.402247191	0.862921348	1.05	3
Interquartile Range (IQR) 1	0.45	#NUM!	#NUM!	10.25	5.8125	13.2475	79.125	79.125	79.2140625	79.195	69.1625	79.1575	79.1275	0.535013761	0.502668273	0.535013761	0.372905616	0.252275	0
Variance	0.406222222	#DIV/0!	#DIV/0!	210.216	38.66633778	146.0472844	1970.409379	1970.409379	1997.679151	1996.718825	1739.474768	1970.80806	1970.658745	0.135787481	0.131010398	0.135787481	0.052085798	0.061490492	0.1
Skewness	1.254499533	#DIV/0!	#DIV/0!	1.248071347	0.19626004	-0.123974828	0.357033277	0.357033277	0.357295996	0.357764895	0.293884469	0.357590197	0.357632229	1.089400792	1.107896246	1.089400792	0.723598435	1.463104467	3.16227766
Coefficient of Variation (CoV) 2	0.314921176	#DIV/0!	#DIV/0!	0.315043416	0.13662978	0.149453019	-0.759078201	-0.597519494	-0.777923379	-0.609967617	-0.622840379	-0.758984662	-0.597470832	0.52308066	0.546739495	0.52308066	0.47045734	0.48106914	0.142857143
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
NPR > 2.0 or NPR =2.0																			
Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
% 1.0 < NPR < 2.0 of Total																			
% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			
FIELD LEACH BARREL - Barrel 5 M-PW																			
Count	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Minimum	0.1	0.0	0.8	4.6	5.7	13.2	-590.3	-605.3	-588.5	-603.5	-590.8	-590.3	-605.3	0.0	0.0	0.0	0.0	0.0	1.0
10 Percentile	0.1	-0.04	0.8334	4.55	5.993	14.32	-329.94	-344.94	-329.54375	-344.54	-331.39	-329.94	-344.94	0.021573034	0.017881424	0.021573034	0.001	0.01354	1
25 Percentile	0.2	-0.04	0.8334	4.55	6.7425	23.765	-188.9	-203.9	-188.515625	-203.55	-191.85	-188.9	-203.9	0.050815625	0.040598543	0.050815625	0.001	0.02379	1
Median-25Percentile	1	0.05	30.8366	22.75	39.2075	67.575	54.9	53.9	68.871875	68.95	51.85	54.9	53.9	0.190563685	0.185728095	0.190563685	0.136931034	0.13681	1
Mean	1.5	0.0	35.3	34.9	43.9	75.5	-156.5	-171.7	-150.9	-165.9	-162.8	-156.5	-171.7	0.5	0.4	0.5	0.4	0.4	2.0
Standard Deviation	1.450904534	0.039375287	35.2244326	32.56289908	33.86562302	48.05795107	170.4186345	170.3920028	170.9740554	170.9740634	167.0568791	170.4186345	170.3920028	0.539570872	0.445193966	0.539570872	0.461318566	0.394291032	0.852802865
Median	1.2	0.0	31.7	27.3	46.0	91.3	-134.0	-150.0	-119.6	-134.6	-140.0	-134.0	-150.0	0.2	0.2	0.2	0.1	0.2	2.0
75Percentile-Median	1.2	0.03	23.765	27.25	20.09	14.63	114.969	115.97	101.7078125	101.66	110.055	114.969	115.97	0.677624048	0.560891465	0.677624048	0.568778331	0.486	1
75 Percentile	2.4	0.04	55.435	54.55	66.04	105.97	-19.031	-34.03	-17.9359375	-32.94	-29.945	-19.031	-34.03	0.919003359	0.787218103	0.919003359	0.706709365	0.6466	3
90 Percentile	3	0.05	71.67	68.2	74.67	126.6	12.06	-2.938	12.6875	-2.311	2.29	12.06	-2.938	1.254901961	1.130642169	1.254901961	1.098039216	1.024	3
Maximum	4.8	0.1	114.2	109.0	113.6	160.4	13.4	-1.6	13.9	-1.1	2.6	13.4	-1.6	1.6	1.2	1.6	1.3	1.0	3.0
Interquartile Range (IQR) 1	2.2	0.08	54.6016	50	59.2975	82.205	169.869	169.87	170.5796875	170.61	161.905	169.869	169.87	0.868187733	0.74661956	0.868187733	0.705709365	0.62281	2
Variance	2.315636364	0.001705455	1364.836717	1166.376636	1261.568465	2540.523327	31946.76207	31936.7781	32155.34038	32155.34339	30698.80093	31946.76207	31936.7781	0.320250399	0.218017434	0.320250399	0.234096301	0.17101196	0.8
Skewness	1.089423656	0.035711158	1.000068238	1.123206371	0.489034476	0.047343098	-1.541903703	-1.538978768	-1.612427776	-1.612348052	-1.579968602	-1.541903703	-1.538978768	0.941635087	0.836126796	0.941635087	1.009361032	0.933311514	-5.42776E-17
Coefficient of Variation (CoV) 2	0.955685621	6.187545094	0.997670178	0.932548529	0.771327461	0.63673616	-1.088802877	-0.992376824	-1.133323306	-1.030820055	-1.026406972	-1.088802877	-0.992376824	1.080351626	1.052572208	1.080351626	1.220229168	1.115087773	0.426401433
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
NPR > 2.0 or NPR =2.0																			
Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
% 1.0 < NPR < 2.0 of Total																			
% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Ag (ppm)	Al (ppm)	Al (%)	As (ppm)	Ba (ppm)	Be (ppm)	Bi (ppm)	Ca (ppm)	Ca (%)	Cd (ppm)	Ce (ppm)	Co (ppm)	Cr (ppm)	Cs (ppm)	Cu (ppm)	Fe (ppm)	Fe (%)	Ga (ppm)
FIELD LEACH BARREL - Barrel 4 M-VU																		
Count	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Minimum	0.69	63700	6.37	4.4	180	1.01	0.23	13300	1.33	0.06	9.91	7.6	6	2.35	121.5	30900	3.09	14.85
10 Percentile	1.068	64780	6.478	6.56	180	1.1	0.518	14380	1.438	0.087	10.036	10.3	6.9	2.611	127.35	35220	3.522	14.985
25 Percentile	1.3525	66750	6.675	10.675	202.5	1.15	0.73	16425	1.6425	0.1375	12.45	10.9	7.25	2.74	153.25	37675	3.7675	15.0125
Median-25Percentile	0.4625	4900	0.49	20.625	132.5	0.125	0.21	275	0.0275	0.6475	3.55	0.2	2.75	0.85	61.25	4625	0.4625	0.4375
Mean	1.823	70570	7.057	35.88	574	1.317	1.084	17290	1.729	2.431	15.031	11.12	10	3.604	642.65	40780	4.078	15.615
Standard Deviation	0.657754513	4152.601594	0.415260159	25.33407981	507.9803146	0.223787846	0.74362894	2361.546104	0.23615461	3.524350862	3.200288893	1.341491707	2.966479395	0.925053512	711.7563505	4613.848719	0.461384872	0.635629609
Median	1.815	71650	7.165	31.3	335	1.275	0.94	16700	1.67	0.785	16	11.1	10	3.59	214.5	42300	4.23	15.45
75Percentile-Median	0.535	2725	0.2725	29.675	550	0.1625	0.21	2050	0.205	2.295	1.475	1.075	1.75	0.855	942.25	1875	0.1875	0.8625
75 Percentile	2.35	74375	7.4375	60.975	885	1.4375	1.15	18750	1.875	3.08	17.475	12.175	11.75	4.445	1156.75	44175	4.4175	16.3125
90 Percentile	2.709	74930	7.493	69.38	1164	1.549	1.518	20080	2.008	5.766	18.625	12.31	13.3	4.687	1810	45080	4.508	16.45
Maximum	2.79	75200	7.52	71.9	1740	1.81	3.12	21700	2.17	11.85	18.85	12.4	16	4.84	1900	45800	4.58	16.45
Interquartile Range (IQR) 1	0.9975	7625	0.7625	50.3	682.5	0.2875	0.42	2325	0.2325	2.9425	5.025	1.275	4.5	1.705	1003.5	6500	0.65	1.3
Variance	0.480712222	19160111.11	0.191601111	713.1284444	286715.5556	0.055645556	0.614426667	6196555.556	0.061965556	13.80116556	11.37983222	1.999555556	9.777777778	0.950804444	562885.6694	23652888.89	0.236528889	0.448916667
Skewness	-0.067378312	-0.579320475	-0.579320475	0.191156706	1.437382809	0.898174485	2.187426841	0.195930691	0.195930691	2.157614884	-0.627926546	-1.858731172	0.572371241	0.013470074	1.099739564	-1.10505399	-1.10505399	0.261487018
Coefficient of Variation (CoV) 2	0.360808839	0.058843724	0.058843724	0.706078033	0.884983126	0.169922434	0.686004557	0.136584506	0.136584506	1.449753543	0.212912574	0.120637743	0.296647939	0.256674115	1.107533417	0.113139988	0.113139988	0.040706347
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 5 M-PW																		
Count	11	11	11	11	11	11	11	11	11	10	11	11	11	11	11	11	11	11
Minimum	0.8	49000.0	4.9	2.9	60.0	0.4	0.1	2300.0	0.2	0.1	6.6	7.6	3.0	1.8	71.7	39400.0	3.9	6.2
10 Percentile	1.01	63400	6.34	3.7	60	0.66	0.1	2400	0.24	0.167	9.62	10.5	3	1.96	117.5	40600	4.06	9.82
25 Percentile	1.145	66100	6.61	5.55	70	0.695	0.225	2700	0.27	0.245	16.5	11.65	3.5	2.6	493.5	43450	4.345	12.125
Median-25Percentile	0.275	4200	0.42	3.35	60	0.465	0.415	15700	1.57	0.075	4.4	1.85	0.5	2.1	388.5	9950	0.995	4.175
Mean	2.0	68418.2	6.8	21.6	166.4	1.0	0.7	17581.8	1.8	0.4	19.0	14.7	4.1	4.4	828.3	62436.4	6.2	14.6
Standard Deviation	1.045129594	7237.128785	0.723712879	22.08305884	114.6752511	0.370264592	0.465095742	13563.91055	1.356391055	0.243852414	6.269084449	6.011545366	0.792527081	1.861801758	483.427254	33985.16448	3.398516448	3.98256614
Median	1.4	70300.0	7.0	8.9	130.0	1.2	0.6	18400.0	1.8	0.3	20.9	13.5	4.0	4.7	882.0	53400.0	5.3	16.3
75Percentile-Median	1.455	2100	0.21	18.1	85	0.03	0.355	8050	0.805	0.3225	0.85	2.2	1	1.39	263	5550	0.555	0.575
75 Percentile	2.875	72400	7.24	27	215	1.19	0.995	26450	2.645	0.6425	21.75	15.7	5	6.09	1145	58950	5.895	16.875
90 Percentile	3.58	75200	7.52	60	310	1.3	1.3	29900	2.99	0.762	24.9	16.9	5	6.15	1305	85000	8.5	17.95
Maximum	3.6	75600.0	7.6	69.5	430.0	1.8	1.5	45500.0	4.6	0.8	28.3	31.9	5.0	7.5	1610.0	162500.0	16.3	20.3
Interquartile Range (IQR) 1	1.73	6300	0.63	21.45	145	0.495	0.77	23750	2.375	0.3975	5.25	4.05	1.5	3.49	651.5	15500	1.55	4.75
Variance	1.201525455	57613636.36	0.576136364	536.4276364	14465.45455	0.150805455	0.237945455	202377636.4	2.023776364	0.066071111	43.23156182	39.75254545	0.690909091	3.812936364	257072.1009	1270490545	12.70490545	17.44691636
Skewness	0.641515404	-1.874711446	-1.874711446	1.400481722	1.242358002	0.170834249	0.181823664	0.489771729	0.489771729	0.293856531	-0.823152536	2.223488774	-0.18995783	-0.02512248	-0.361889136	2.622183525	2.622183525	-0.869469718
Coefficient of Variation (CoV) 2	0.526875597	0.105777859	0.105777859	1.023225136	0.689304788	0.361714965	0.680326219	0.771473713	0.771473713	0.586183688	0.329557605	0.407939537	0.193728842	0.422961985	0.583644283	0.544316845	0.544316845	0.273118626
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Ge (ppm)	Hf (ppm)	Hg (ppm)	In (ppm)	K (ppm)	K (%)	La (ppm)	Li (ppm)	Mg (ppm)	Mg (%)	Mn (ppm)	Mo (ppm)	Na (ppm)	Na (%)	Nb (ppm)	Ni (ppm)	P (%)	Pb (ppm)
FIELD LEACH BARREL - Barrel 4 M-VU																		
Count	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Minimum	0.1	0.4	0.03	0.02	37000	3.7	5.8	11.1	6700	0.67	439	2.06	7400	0.74	4.7	3.3	0.11	12.8
10 Percentile	0.109	0.4	0.03	0.0362	37180	3.718	6.34	11.19	6700	0.67	461.5	2.42	10010	1.001	4.88	3.39	0.1298	14.51
25 Percentile	0.1225	0.5	0.0425	0.0625	38225	3.8225	7.35	12.525	7250	0.725	484.25	3.825	13675	1.3675	6	3.4	0.13425	15.425
Median-25Percentile	0.0075	0.1	0.0225	0.0105	2525	0.2525	0.65	1.175	2950	0.295	27.75	3.05	2475	0.2475	0.5	0.5	0.00425	11.125
Mean	0.132	0.58	0.173	0.1487	42450	4.245	8.03	13.81	9500	0.95	547.6	10.158	15900	1.59	7.05	4.32	0.1367	44.75
Standard Deviation	0.018330303	0.116619038	0.184393601	0.149962029	5024.987562	0.502498756	1.256224502	1.951127879	2129.788722	0.212978872	83.54543674	8.196989447	4403.407771	0.440340777	1.84945938	0.998799279	0.010696261	48.82678056
Median	0.13	0.6	0.065	0.073	40750	4.075	8	13.7	10200	1.02	512	6.875	16150	1.615	6.5	3.9	0.1385	26.55
75Percentile-Median	0.01	0.1	0.25	0.087	4675	0.4675	1.075	1.35	825	0.0825	117.75	9.0525	2900	0.29	1.85	1.375	0.002	25.425
75 Percentile	0.14	0.7	0.315	0.16	45425	4.5425	9.075	15.05	11025	1.1025	629.75	15.9275	19050	1.905	8.35	5.275	0.1405	51.975
90 Percentile	0.16	0.7	0.407	0.4331	50060	5.006	9.7	16.23	11970	1.197	669.5	23.18	21350	2.135	10.01	5.38	0.1459	69.33
Maximum	0.16	0.7	0.56	0.443	51500	5.15	9.7	17.4	12600	1.26	674	24.8	21800	2.18	10.1	6.1	0.154	183
Interquartile Range (IQR) 1	0.0175	0.2	0.2725	0.0975	7200	0.72	1.725	2.525	3775	0.3775	145.5	12.1025	5375	0.5375	2.35	1.875	0.00625	36.55
Variance	0.000373333	0.015111111	0.037778889	0.024987344	28056111.11	0.280561111	1.753444444	4.229888889	5040000	0.0504	7755.377778	74.65626222	21544444.44	0.215444444	3.800555556	1.108444444	0.000127122	2648.949444
Skewness	-0.004620975	-0.430670762	1.213790233	1.496636956	0.692281476	0.692281476	-0.275015324	0.31523138	-0.157095522	-0.157095522	0.492941987	0.943188144	-0.541829654	-0.541829654	0.658135527	0.527392124	-1.289486357	2.563119656
Coefficient of Variation (CoV) 2	0.13886593	0.201067307	1.065858964	1.008487078	0.118374265	0.118374265	0.156441408	0.141283699	0.224188287	0.224188287	0.152566539	0.806949148	0.276943885	0.276943885	0.262334664	0.231203537	0.07824624	1.091101242
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 5 M-PW																		
Count	11	11	9	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Minimum	0.1	0.3	0.0	0.0	19100.0	1.9	3.0	3.0	2100.0	0.2	43.0	18.0	500.0	0.1	1.1	1.8	0.1	6.6
10 Percentile	0.13	0.3	0.01	0.033	26600	2.66	4.2	3.4	2700	0.27	69	24.3	500	0.05	1.3	2.3	0.105	12.6
25 Percentile	0.145	0.4	0.01	0.039	29350	2.935	8.35	7.8	5650	0.565	92.5	57.25	1150	0.115	1.75	2.55	0.1075	13.9
Median-25Percentile	0.035	0	0	0.004	5450	0.545	2.55	3.6	4750	0.475	588.5	2.45	650	0.065	4.45	0.35	0.0115	2.5
Mean	0.2	0.5	0.0	0.1	33000.0	3.3	9.7	11.0	8772.7	0.9	548.9	58.6	4245.5	0.4	4.6	3.2	0.1	31.8
Standard Deviation	0.051778294	0.136666331	0.008314794	0.071078818	6235.528701	0.62355287	3.405294856	5.089464081	4087.028462	0.408702846	377.6194464	20.62532444	6154.431314	0.615443131	2.429399817	1.168597379	0.011429265	23.74808561
Median	0.2	0.4	0.0	0.0	34800.0	3.5	10.9	11.4	10400.0	1.0	681.0	59.7	1800.0	0.2	6.2	2.9	0.1	16.4
75Percentile-Median	0	0.1	0	0.0925	3050	0.305	0.75	2.85	450	0.045	144.5	7	600	0.06	0.35	0.6	0.006	31.75
75 Percentile	0.18	0.5	0.01	0.1355	37850	3.785	11.65	14.25	10850	1.085	825.5	66.7	2400	0.24	6.55	3.5	0.125	48.15
90 Percentile	0.24	0.6	0.03	0.21	38900	3.89	12.9	17.2	13500	1.35	896	82.2	12400	1.24	6.8	4.7	0.133	63.7
Maximum	0.3	0.8	0.0	0.2	41500.0	4.2	13.9	18.8	14300.0	1.4	1120.0	92.1	20900.0	2.1	7.2	6.1	0.1	77.8
Interquartile Range (IQR) 1	0.035	0.1	0	0.0965	8500	0.85	3.3	6.45	5200	0.52	733	9.45	1250	0.125	4.8	0.95	0.0175	34.25
Variance	0.002949091	0.020545455	7.77778E-05	0.005557418	42770000	0.4277	12.75563636	28.49290909	18374181.82	0.183741818	156856.0909	467.9444091	41664727.27	0.416647273	6.492181818	1.502181818	0.000143691	620.3687273
Skewness	1.567110185	1.28418329	1.619847741	1.030994973	-0.884174673	-0.884174673	-1.032650986	-0.347467671	-0.634710453	-0.634710453	-0.292772173	-0.657248942	2.243397122	2.243397122	-0.572271944	1.485532783	0.03442264	0.871477084
Coefficient of Variation (CoV) 2	0.289117378	0.294770517	0.575639598	0.770312312	0.188955415	0.188955415	0.350404522	0.46229649	0.465878892	0.465878892	0.687945331	0.352213877	1.449651915	1.449651915	0.525017642	0.362100596	0.096783615	0.745729208
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Rb (ppm)	Re (ppm)	S (ppm)	S (%)	Sb (ppm)	Sc (ppm)	Se (ppm)	Sn (ppm)	Sr (ppm)	Ta (ppm)	Te (ppm)	Th (ppm)	Ti (ppm)	Ti (%)	Tl (ppm)	U (ppm)	V (ppm)	W (ppm)
FIELD LEACH BARREL - Barrel 4 M-VU																		
Count	10	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Minimum	97.1	0.002	10200	1.02	1.98	13.6	5	1.2	123.5	0.29	0.27	1.4	1610	0.161	0.61	1.5	156	4.4
10 Percentile	101.51	0.0055	15690	1.569	2.232	15.49	5.9	1.2	146	0.299	0.306	1.76	1817	0.1817	0.619	1.59	160.5	6.11
25 Percentile	108.5	0.00925	20800	2.08	3.4125	17.05	7	1.4	155.5	0.3325	0.335	2.1	2055	0.2055	0.94	1.6	163.75	6.825
Median-25Percentile	8.75	0.00325	18400	1.84	8.8875	0.7	1	0.25	38	0.0275	0.08	0.4	75	0.0075	1.025	0.1	9.25	2.075
Mean	116.86	0.0225	34010	3.401	16.923	17.37	8	1.71	188.1	0.35	0.493	2.33	2100	0.21	1.862	2.07	395.4	9.66
Standard Deviation	12.8376945	0.020694202	13575.6731	1.35756731	14.40832471	1.581802769	1.732050808	0.463573079	37.86674002	0.033466401	0.197790293	0.449555336	226.9801753	0.022698018	0.900353264	0.648151217	357.644013	3.730469139
Median	117.25	0.0125	39200	3.92	12.3	17.75	8	1.65	193.5	0.36	0.415	2.5	2130	0.213	1.965	1.7	173	8.9
75Percentile-Median	5.125	0.01725	6075	0.6075	14.4	0.775	1	0.125	32.75	0.01	0.21	0.1	90	0.009	0.71	0.8	470.25	2.975
75 Percentile	122.375	0.02975	45275	4.5275	26.7	18.525	9	1.775	226.25	0.37	0.625	2.6	2220	0.222	2.675	2.5	643.25	11.875
90 Percentile	129.55	0.0524	46950	4.695	39.28	18.84	10.1	2.51	231.3	0.382	0.738	2.81	2265	0.2265	2.91	2.7	861.1	14.83
Maximum	143.5	0.065	47400	4.74	40	19.2	11	2.6	234	0.4	0.9	2.9	2490	0.249	3	3.6	1150	16.9
Interquartile Range (IQR) 1	13.875	0.0205	24475	2.4475	23.2875	1.475	2	0.375	70.75	0.0375	0.29	0.5	165	0.0165	1.735	0.9	479.5	5.05
Variance	183.1182222	0.000489429	204776555.6	2.047765556	230.6664678	2.780111111	3.333333333	0.238777778	1593.211111	0.001244444	0.043467778	0.224555556	57244.44444	0.000572444	0.900706667	0.466777778	142121.3778	15.46266667
Skewness	0.485722653	1.322329582	-0.798478353	-0.798478353	0.523081023	-1.393988406	3.85494E-18	1.038608889	-0.28004421	-0.550495131	0.872880131	-0.82118858	-0.7062179	-0.7062179	-0.365660512	1.420368348	1.278657424	0.685006467
Coefficient of Variation (CoV) 2	0.109855335	0.919742315	0.399167101	0.399167101	0.851404876	0.091065214	0.216506351	0.271095368	0.201311749	0.095618289	0.401197349	0.192942204	0.108085798	0.108085798	0.483540958	0.31311653	0.904511919	0.38617693
NPR < 1.0 or NPR = 1.0																		
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Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 5 M-PW																		
Count	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Minimum	69.9	0.1	20500.0	2.1	0.4	7.1	8.0	1.1	15.6	0.1	0.1	1.8	540.0	0.1	1.0	0.9	69.0	0.9
10 Percentile	81.3	0.107	25800	2.58	0.48	8.2	9	1.3	15.7	0.1	0.08	2.5	760	0.076	1.29	1	79	1
25 Percentile	91.35	0.2275	30000	3	1.045	13.3	9	1.35	26.5	0.125	0.11	2.95	875	0.0875	1.365	1.3	101.5	1.1
Median-25Percentile	16.65	0.0325	21900	2.19	2.085	2.1	1	0.15	111.5	0.215	0.24	0.15	1215	0.1215	0.255	0.3	35.5	0.2
Mean	105.6	0.3	52854.5	5.3	4.7	14.1	15.2	1.7	128.9	0.3	0.3	3.1	1666.4	0.2	1.9	1.5	123.5	1.7
Standard Deviation	19.58082634	0.118741333	25344.40457	2.534440457	4.936412021	3.268102793	10.38196147	0.37239453	93.19246414	0.119655152	0.220127686	0.637920174	700.75638	0.070075638	0.723800804	0.335256162	29.11220811	0.846187366
Median	108.0	0.3	51900.0	5.2	3.1	15.4	10.0	1.5	138.0	0.3	0.4	3.1	2090.0	0.2	1.6	1.6	137.0	1.3
75Percentile-Median	8.25	0.054	11600	1.16	2.375	1	5.5	0.5	53.25	0.015	0.16	0.15	125	0.0125	0.79	0.2	10	0.85
75 Percentile	116.25	0.314	63500	6.35	5.505	16.4	15.5	2	191.25	0.355	0.51	3.25	2215	0.2215	2.41	1.8	147	2.15
90 Percentile	130	0.443	94200	9.42	14.25	16.5	26	2.2	248	0.38	0.6	3.9	2330	0.233	3.13	1.9	149	2.3
Maximum	137.5	0.5	100000.0	10.0	14.7	17.2	44.0	2.2	288.0	0.4	0.7	4.4	2400.0	0.2	3.2	1.9	154.0	3.9
Interquartile Range (IQR) 1	24.9	0.0865	33500	3.35	4.46	3.1	6.5	0.65	164.75	0.23	0.4	0.3	1340	0.134	1.045	0.5	45.5	1.05
Variance	421.7496364	0.015509455	706572727.3	7.065727273	26.80498	11.74854545	118.5636364	0.152545455	9553.318909	0.015749091	0.053301818	0.447636364	540165.4545	0.005401655	0.576276364	0.123636364	932.2727273	0.787636364
Skewness	-0.211984942	0.185711394	0.647855941	0.647855941	1.413644207	-1.401026316	2.250286928	0.174250692	0.175403247	-0.525545955	0.267769776	0.021126547	-0.594954274	-0.594954274	0.700929402	-0.707092069	-0.842641436	1.599567616
Coefficient of Variation (CoV) 2	0.185456423	0.439191211	0.479512298	0.479512298	1.054788893	0.232379643	0.683841773	0.223843707	0.723033648	0.458608596	0.693812192	0.204580814	0.420530288	0.420530288	0.374673357	0.220827412	0.235813173	0.492490001
NPR < 1.0 or NPR = 1.0																		
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% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Y (ppm)	Zn (ppm)	Zr (ppm)	Al2O3 (%)	BaO (%)	CaO (%)	Cr2O3 (%)	Fe2O3 (%)	K2O (%)	MgO (%)	MnO (%)	Na2O (%)	P2O5 (%)	SiO2 (%)	SRO (%)	TiO2 (%)	LOI (%)	Total_DC (%)
FIELD LEACH BARREL - Barrel 4 M-VU																		
Count	10	10	10	10	10	10	5	10	10	10	10	10	10	10	10	10	10	10
Minimum	7	42	10.3	12.21	0.11	1.74	0.01	4.63	4.73	1.28	0.05	1.05	0.254	55	0.02	0.31	2.55	98.47
10 Percentile	7.45	43.8	11.38	13.407	0.128	2.001	0.01	4.72	4.775	1.307	0.059	1.392	0.2981	55.054	0.02	0.337	2.64	98.479
25 Percentile	7.85	47	14.7	14.765	0.27	2.4275	0.01	5.8175	4.7925	1.3975	0.07	1.7775	0.307	55.145	0.02	0.4275	3.9075	98.49
Median-25Percentile	0.35	23	1.7	1.48	0.21	0.0375	0.01	0.5975	0.4075	0.5825	0	0.4675	0.0055	0.93	0.005	0.0425	2.0875	0.095
Mean	8.46	195	15.8	15.538	0.418	2.51	0.016	6.129	5.421	1.845	0.076	2.203	0.3074	58.567	0.026	0.451	5.292	98.796
Standard Deviation	1.063202709	246.6268436	2.92130108	1.527093972	0.18616122	0.407480061	0.004898979	0.804182193	0.651589595	0.413116206	0.015620499	0.623314527	0.018921945	4.440581156	0.00663325	0.071337227	1.681426775	0.465364373
Median	8.2	70	16.4	16.245	0.48	2.465	0.02	6.415	5.2	1.98	0.07	2.245	0.3125	56.075	0.025	0.47	5.995	98.585
75Percentile-Median	0.525	147	1.025	0.405	0.0675	0.25	0	0.2375	0.9375	0.2	0.0175	0.485	0.002	5.125	0.005	0.03	0.4225	0.2
75 Percentile	8.725	217	17.425	16.65	0.5475	2.715	0.02	6.6525	6.1375	2.18	0.0875	2.73	0.3145	61.2	0.03	0.5	6.4175	98.785
90 Percentile	9.9	425.8	18.27	16.756	0.571	2.913	0.02	6.932	6.3	2.311	0.1	2.945	0.3224	65.486	0.031	0.505	6.605	99.386
Maximum	10.8	865	20.7	16.9	0.67	3.3	0.02	6.95	6.3	2.41	0.1	2.99	0.326	67.43	0.04	0.55	7.46	99.98
Interquartile Range (IQR) 1	0.875	170	2.725	1.885	0.2775	0.2875	0.01	0.835	1.345	0.7825	0.0175	0.9525	0.0075	6.055	0.01	0.0725	2.51	0.295
Variance	1.256	67583.11111	9.482222222	2.591128889	0.038506667	0.184488889	0.00003	0.718565556	0.471743333	0.189627778	0.000271111	0.43169	0.000397822	21.90973444	4.88889E-05	0.005654444	3.141328889	0.240626667
Skewness	1.063570667	2.285330143	-0.532384659	-1.266779843	-0.707008091	-0.024082353	-0.608580619	-1.107903903	0.350663672	-0.231141089	0.246417592	-0.484637116	-2.483958021	1.149720196	0.780105755	-0.935420919	-0.757346722	1.95035829
Coefficient of Variation (CoV) 2	0.125674079	1.264753044	0.184892473	0.098281244	0.445361771	0.162342654	0.306186218	0.131209364	0.120197306	0.223911223	0.205532886	0.282938959	0.061554798	0.075820533	0.255124984	0.15817567	0.317729927	0.004710356
NPR < 1.0 or NPR = 1.0																		
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% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 5 M-PW																		
Count	11	11	11	11	11	11	0	11	11	11	10	11	11	11	10	11	11	11
Minimum	5.7	18.0	8.8	9.5	0.1	0.3	0.0	5.7	2.4	0.5	0.0	0.1	0.2	49.7	0.0	0.4	5.0	98.5
10 Percentile	5.7	19	10.4	12.47	0.16	0.32	#NUM!	5.96	3.53	0.53	0.01	0.15	0.237	56.9	0.01	0.36	5.78	98.61
25 Percentile	7.15	36.5	12.8	13.425	0.245	0.38	#NUM!	6.295	3.735	1.09	0.0375	0.235	0.249	59.06	0.0125	0.405	5.905	98.99
Median-25Percentile	3.25	11.5	0.4	0.695	0.155	2.22	#NUM!	1.255	0.605	0.83	0.0575	0.095	0.012	0.5	0.0075	0.025	0.895	0.52
Mean	10.3	55.0	14.5	13.9	0.4	2.5	#DIV/0!	9.0	4.2	1.6	0.1	0.7	0.3	59.1	0.0	0.4	7.3	99.4
Standard Deviation	3.253834356	27.70625135	4.524533673	1.75128713	0.146851249	1.936963202	#DIV/0!	4.85549446	0.734773817	0.736014508	0.047916594	0.836791393	0.019377929	3.389558347	0.009433981	0.065844796	2.081111829	0.498047427
Median	10.4	48.0	13.2	14.1	0.4	2.6	#NUM!	7.6	4.3	1.9	0.1	0.3	0.3	59.6	0.0	0.4	6.8	99.5
75Percentile-Median	2.8	25	1.45	0.755	0.055	1.16	#NUM!	0.92	0.33	0.1	0.0225	0.06	0.017	0.61	0.0075	0.035	1.03	0.215
75 Percentile	13.2	73	14.65	14.875	0.455	3.76	#NUM!	8.47	4.67	2.02	0.1175	0.39	0.278	60.17	0.0275	0.465	7.83	99.725
90 Percentile	13.7	90	18.5	15.56	0.52	4.28	#NUM!	12.61	4.86	2.45	0.123	1.74	0.285	61.95	0.031	0.54	8.36	99.97
Maximum	14.3	108.0	26.7	16.5	0.6	6.5	0.0	23.2	5.1	2.7	0.2	2.9	0.3	63.6	0.0	0.6	13.1	100.0
Interquartile Range (IQR) 1	6.05	36.5	1.85	1.45	0.21	3.38	#NUM!	2.175	0.935	0.93	0.08	0.155	0.029	1.11	0.015	0.06	1.925	0.735
Variance	11.64618182	844.4	22.51854545	3.373707273	0.023721818	4.127009091	#DIV/0!	25.93340909	0.593881818	0.595889091	0.002551111	0.770241818	0.000413055	12.63801636	9.88889E-05	0.004769091	4.764129091	0.272856364
Skewness	-0.332516598	0.402365684	1.868871998	-1.316558775	-0.430128568	0.505716792	#DIV/0!	2.577474693	-1.194128542	-0.645358204	-0.573263697	2.266745591	-0.018394472	-1.956906428	0.610140712	0.940723504	2.076893945	-0.534881303
Coefficient of Variation (CoV) 2	0.316744937	0.503750024	0.31282131	0.125671332	0.41103403	0.780747352	#DIV/0!	0.5376529	0.176744194	0.449038246	0.58434871	1.281992384	0.074064357	0.057393544	0.449237197	0.149338713	0.287013918	0.005012646
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
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% NPR < 1.0 or NPR = 1.0 of Total																		
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% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Paste pH	Rinse pH	S_Total (%)	S_Sulphide (%)	S_S2_CALC (%)	S_S2_S_DEL CALC (%)	S_SO4_NA2CO 3 (%)	S_SO4_HCL (%)	S_BASO4 (%)	S_DEL (%)	S_DEL_CAL (%)	TAP (%)	SAP (kg $CaCO_3$ /t)	SAP (S Del Calc) (kg $CaCO_3$ /t)	NP (kg $CaCO_3$ /t)	NP_ADJ (kg $CaCO_3$ /t)	UNP	Total C (%)	Inorganic C (%)
FIELD LEACH BARREL - Barrel 6 M-CL																			
Count	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	48	49	49	49
Minimum	7.7	7.3	0.6	0.5	0.4	0.5	0.0	0.005	0.0	-0.1	0.0	20.0	14.1	14.4	15.0	3.0	15.0	0.0	0.1
10 Percentile	8.2	7.78	1.35	0.684	0.77	0.724016	0.06	0.018	0.00406	-0.023964	0	42.188	21.375	22.6255	24	11.1	15	0.186	0.19
25 Percentile	8.2	8.1	2.3	1.04	1.2	1.16659	0.14	0.05	0.0056	0.03898	0.03898	71.9	32.5	36.4559375	31	16.75	15	0.26	0.29
Median-25Percentile	0.1	0.1	1.24	0.49	0.58	0.59801	0.06	0.14	0.00374	0.15822	0.15822	38.7	15.3125	18.6878125	12	11.25	0	0.16	0.15
Mean	8.4	8.2	3.6	1.9	2.1	2.1	1.5	1.473469388	0.0	0.3	0.3	113.0	58.3	66.6	48.5	34.2	15.0	0.5	0.5
Standard Deviation	0.304389654	0.363047401	1.726079813	1.318227863	1.483137876	1.484948356	1.581644292	1.560488282	0.021662675	0.263958962	0.253494568	53.93911453	41.19462071	46.40463613	22.14156866	21.83006297	0	0.291505521	0.269324668
Median	8.3	8.2	3.5	1.5	1.8	1.8	0.2	0.19	0.0	0.2	0.2	110.6	47.8	55.1	43.0	28.0	15.0	0.4	0.4
75Percentile-Median	0.4	0.3	0.95	0.86	0.85	0.8954	2.95	2.87	0.01356	0.2602	0.2602	29.7	26.875	27.98125	23	23.25	0	0.29	0.2
75 Percentile	8.7	8.5	4.49	2.39	2.63	2.66	3.15	3.06	0.0229	0.4574	0.4574	140.3	74.6875	83.125	66	51.25	15	0.71	0.64
90 Percentile	8.9	8.8	5.982	3.022	3.426	3.42212	3.412	3.352	0.03725	0.57684	0.57684	186.98	94.4375	106.94125	80	65	15	0.854	0.84
Maximum	9.0	8.9	8.3	7.2	8.1	8.1	5.1	4.96	0.1	1.0	1.0	257.8	225.6	252.8	105.0	90.0	15.0	1.3	1.4
Interquartile Range (IQR) 1	0.5	0.4	2.19	1.35	1.43	1.49341	3.01	3.01	0.0173	0.41842	0.41842	68.4	42.1875	46.6690625	35	34.5	0	0.45	0.35
Variance	0.094583333	0.13454932	3.041421344	1.773927296	2.245525	2.251010613	2.553715306	2.485855421	0.000479048	0.071125882	0.065598236	2970.041161	1732.350875	2198.252552	500.462585	486.6910461	0	0.086745791	0.074046939
Skewness	0.27584527	-0.287881455	0.554237184	2.304951893	2.155677091	2.158652937	0.398078938	0.398213852	2.676204081	0.732090117	0.869470268	0.553477536	2.304951893	2.158652937	0.768234716	0.797636351	#DIV/0!	0.626104477	1.019234756
Coefficient of Variation (CoV) 2	0.03605292	0.044054786	0.477463649	0.706244973	0.692592737	0.696262511	1.028268148	1.059057144	1.227966097	1.026066434	0.952230078	0.477406274	0.706244973	0.696262511	0.45623922	0.637762034	0	0.577472024	0.547135519
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
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Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
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Sum Check																			
FIELD LEACH BARREL - Barrel 7 M-IARG																			
Count	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
Minimum	8.0	7.4	1.7	1.1	1.0	1.1	0.0	0.005	0.0	-0.2	0.0	52.8	32.8	32.8	12.0	0.0	12.0	0.0	0.1
10 Percentile	8.2	7.7	2.638	2.128	2.286	2.2698964	0.028	0.005	0.0021	0.0076198	0.0076198	82.44	66.5	70.9342625	30.4	15.4	15	0.262	0.276
25 Percentile	8.3	7.9	3.265	2.54	2.755	2.7502	0.05	0.01	0.002685	0.098915	0.098915	102	79.375	85.94375	42	27	15	0.405	0.43
Median-25Percentile	0.2	0.3	0.815	0.45	0.525	0.5258	0.2	0.19	0.000815	0.142885	0.142885	25.5	14.0625	16.43125	9	9	0	0.125	0.08
Mean	8.5	8.1	4.1	3.1	3.4	3.4	0.8	0.687033898	0.0	0.3	0.3	127.6	97.4	106.0	54.6	39.7	14.9	0.6	0.6
Standard Deviation	0.270645647	0.348979717	1.191610263	0.894461525	0.978513873	0.97802757	0.862705571	0.83635616	0.006726616	0.23510277	0.228873162	37.24527005	27.95192265	30.56336157	23.96821126	23.79292791	0.542902284	0.326316484	0.299400627
Median	8.5	8.2	4.1	3.0	3.3	3.3	0.3	0.2	0.0	0.2	0.2	127.5	93.4	102.4	51.0	36.0	15.0	0.5	0.5
75Percentile-Median	0.2	0.15	0.635	0.66	0.745	0.746065	0.99	0.945	0.00315	0.2355	0.2355	19.9	20.625	23.31453125	11.5	11.5	0	0.115	0.125
75 Percentile	8.7	8.35	4.715	3.65	4.025	4.022065	1.24	1.145	0.00665	0.4773	0.4773	147.4	114.0625	125.6895313	62.5	47.5	15	0.645	0.635
90 Percentile	8.82	8.62	5.522	4.198	4.682	4.67972	1.69	1.612	0.01502	0.59908	0.59908	172.56	131.1875	146.24125	82.2	67.2	15	1.02	0.98
Maximum	9.3	8.9	8.1	6.0	6.3	6.3	3.6	3.51	0.0	0.8	0.8	254.4	188.8	197.3	132.0	117.0	15.0	1.7	1.6
Interquartile Range (IQR) 1	0.4	0.45	1.45	1.11	1.27	1.271865	1.19	1.135	0.003965	0.378385	0.378385	45.4	34.6875	39.74578125	20.5	20.5	0	0.24	0.205
Variance	0.074511981	0.123886616	1.444416657	0.813855582	0.973997838	0.973029962	0.757092987	0.711551826	4.60275E-05	0.0562263	0.053286078	1411.127557	794.7808413	950.224572	584.3798948	575.8638223	0.299824664	0.108318352	0.091186265
Skewness	0.613388875	0.081450756	0.665047364	0.597598923	0.466601213	0.47412122	1.38339413	1.422368573	2.652746744	0.525431678	0.641737922	0.664117652	0.597598923	0.47412122	1.060377171	1.110129902	-5.28658733	1.283491566	1.203820465
Coefficient of Variation (CoV) 2	0.031796283	0.042850787	0.291867343	0.28706065	0.288229249	0.288273528	1.149754431	1.217343368	1.049893818	0.862536892	0.826929684	0.291898586	0.28706065	0.288273528	0.438896482	0.59913903	0.03644054	0.557402216	0.521696308
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
NPR > 2.0 or NPR =2.0																			
Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
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% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Inorganic CO2 (%)	C_DEL_CALC (%)	CANP_TTL (%)	CANP_INORG (%)	CANP_CA (%)	CANP_CAMG (%)	TNNP (kg $CaCO_3$ /t)	TNNP_ADJ (kg $CaCO_3$ /t)	SNNP (kg $CaCO_3$ /t)	SNNP_ADJ (kg $CaCO_3$ /t)	ICNNP (kg $CaCO_3$ /t)	TNPR	TNPR_ADJ	SNPR	SNPR(S DEL CALC)	SNPR for graphs	SNPR_ADJ for graphs	ICNPR	Fizz Rating
FIELD LEACH BARREL - Barrel 6 M-CL																			
Count	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	48	49	49
Minimum	0.3	-0.3	0.8	6.8	14.5	38.9	-212.5	-227.5	-210.9	-225.9	-220.7	-212.5	-227.5	0.1	0.1	0.1	0.0	0.0	1.0
10 Percentile	0.7	-0.06	15.498	15.9	27.42	88.14	-141.72	-156.72	-73.115625	-88.114	-143.32	-141.72	-156.72	0.331337551	0.297994889	0.331337551	0.169416656	0.1408	2
25 Percentile	1.1	-0.04	21.67	25	42.5	100.5	-102.3	-117.3	-33.5478125	-48.55	-110.9	-102.3	-117.3	0.615384615	0.572617561	0.615384615	0.347710976	0.1895	2
Median-25Percentile	0.5	0.03	13.33	11.4	40.16	40.1	21.11	21.11	26.9040625	26.91	25.2	21.11	21.11	0.379209979	0.281494962	0.379209979	0.305625665	0.1104	0
Mean	1.8	0.0	42.1	41.4	81.7	141.5	-64.4	-79.5	-18.1	-33.1	-71.6	-64.4	-79.5	1.1	1.0	1.1	0.8	0.5	2.1
Standard Deviation	0.991735949	0.132707681	24.27803408	22.59535145	42.10409249	47.59214105	64.09944448	64.10278217	50.33603599	50.33768923	62.7330908	64.09944448	64.10278217	0.731568106	0.65810564	0.731568106	0.602887921	0.519204515	0.451753951
Median	1.6	0.0	35.0	36.4	82.7	140.6	-81.2	-96.2	-6.6	-21.6	-85.7	-81.2	-96.2	1.0	0.9	1.0	0.7	0.3	2.0
75Percentile-Median	0.8	0.05	24.17	18.2	30.94	37.2	67.29	67.29	19.01875	19.015	61.62	67.29	67.29	0.576833977	0.54483655	0.576833977	0.376176294	0.3805	0
75 Percentile	2.4	0.04	59.17	54.6	113.6	177.8	-13.9	-28.9	12.375	-2.625	-24.08	-13.9	-28.9	1.571428571	1.398949074	1.571428571	1.029512935	0.6804	2
90 Percentile	3.1	0.074	71.17	70.5	130.94	201.38	19.652	4.6504	24.11625	9.1168	15.012	19.652	4.6504	1.88303868	1.661069452	1.88303868	1.429260274	1.2734	3
Maximum	5.3	0.8	110.8	121.0	174.3	260.0	59.1	44.1	65.8	50.8	38.7	59.1	44.1	3.7	3.4	3.7	3.0	2.5	3.0
Interquartile Range (IQR) 1	1.3	0.08	37.5	29.6	71.1	77.3	88.4	88.4	45.9228125	45.925	86.82	88.4	88.4	0.956043956	0.826331512	0.956043956	0.681801959	0.4909	0
Variance	1.004030612	0.017978231	601.7025834	521.1863636	1809.686992	2312.199637	4194.337508	4194.774321	2586.50228	2586.672186	4017.429029	4194.337508	4194.774321	0.546341724	0.442126013	0.546341724	0.371207332	0.27518944	0.208333333
Skewness	1.035356249	3.875248771	0.62890881	1.043919371	0.092721849	0.169105535	-0.104648909	-0.104394367	-1.75143337	-1.751529515	-0.124888052	-0.104648909	-0.104394367	1.393098863	1.453931535	1.393098863	1.959294548	1.860786604	0.58734504
Coefficient of Variation (CoV) 2	0.545399119	10.4881877	0.577022127	0.546206856	0.515047628	0.336414941	-0.994637348	-0.806812057	-2.77829832	-1.519957419	-0.875951335	-0.994637348	-0.806812057	0.639945289	0.652351318	0.639945289	0.76991094	0.974658041	0.210818511
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
NPR > 2.0 or NPR =2.0																			
Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
% 1.0 < NPR < 2.0 of Total																			
% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			
FIELD LEACH BARREL - Barrel 7 M-IARG																			
Count	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
Minimum	0.2	-0.1	3.3	4.6	10.7	29.8	-204.4	-219.4	-147.3	-162.3	-206.6	-204.4	-219.4	0.1	0.1	0.1	0.0	0.0	1.0
10 Percentile	1	-0.03	21.834	22.7	26.87	67.35	-131.2	-146.2	-105.00125	-120.02	-135.9	-131.2	-146.2	0.234017127	0.225914121	0.234017127	0.126608038	0.15078	2
25 Percentile	1.6	-0.02	33.735	36.4	38.585	89.34	-103.2	-118.2	-79.38640625	-94.385	-114.05	-103.2	-118.2	0.391650036	0.35814095	0.391650036	0.252650255	0.23765	2
Median-25Percentile	0.3	0.02	10.435	6.8	28.595	21.46	28.89	28.89	28.19890625	28.195	33.86	28.89	28.89	0.192619627	0.142704226	0.192619627	0.147349745	0.10985	0
Mean	2.1	0.0	48.8	47.9	67.3	113.8	-73.0	-88.0	-51.4	-66.4	-79.6	-73.0	-88.0	0.6	0.6	0.6	0.5	0.4	2.2
Standard Deviation	1.09487065	0.045279305	27.19123567	24.88117132	33.74873632	40.49230019	51.47855375	51.48103802	45.23057636	45.22939943	52.86447189	51.47855375	51.48103802	0.396848333	0.367043716	0.396848333	0.361169604	0.360020963	0.489475562
Median	1.9	0.0	44.2	43.2	67.2	110.8	-74.3	-89.3	-51.2	-66.2	-80.2	-74.3	-89.3	0.6	0.5	0.6	0.4	0.3	2.0
75Percentile-Median	0.45	0.03	9.585	10.25	21.47	27.25	28.28	28.28	23.87296875	23.875	30.465	28.28	28.28	0.174923431	0.18470834	0.174923431	0.170853529	0.1397	0.5
75 Percentile	2.35	0.03	53.755	53.45	88.65	138.05	-46.03	-61.03	-27.31453125	-42.315	-49.725	-46.03	-61.03	0.759193094	0.685553516	0.759193094	0.570853529	0.4872	2.5
90 Percentile	3.6	0.04	85.01	81.9	113	172.3	-17.21	-32.21	5.5425	-9.4584	-19.776	-17.21	-32.21	1.16485061	1.091394901	1.16485061	0.827984184	0.74956	3
Maximum	5.8	0.2	138.3	132.0	141.8	198.7	59.5	44.5	60.4	45.4	59.4	59.5	44.5	1.8	1.8	1.8	1.6	1.8	3.0
Interquartile Range (IQR) 1	0.75	0.05	20.02	17.05	50.065	48.71	57.17	57.17	52.071875	52.07	64.325	57.17	57.17	0.367543058	0.327412566	0.367543058	0.318203274	0.24955	0.5
Variance	1.219409702	0.002085564	752.1109403	629.7463532	1158.614741	1667.895795	2695.731867	2695.992056	2081.077538	2080.969238	2842.83605	2695.731867	2695.992056	0.16020392	0.137043867	0.16020392	0.132692509	0.131849837	0.243717124
Skewness	1.212372011	2.635486484	1.282770971	1.210311386	0.289369283	0.142548567	0.164514181	0.16470482	0.051733524	0.052135977	0.310362859	0.164514181	0.16470482	1.43041295	1.48411732	1.43041295	1.622959254	2.276134922	0.448687987
Coefficient of Variation (CoV) 2	0.51927145	3.928645575	0.55736374	0.519000989	0.501837416	0.35593914	-0.705441507	-0.58515211	-0.879768292	-0.681040141	-0.663855132	-0.705441507	-0.58515211	0.62181805	0.624721717	0.62181805	0.767609842	0.813779692	0.220450826
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
NPR > 2.0 or NPR =2.0																			
Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
% 1.0 < NPR < 2.0 of Total																			
% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Ag (ppm)	Al (ppm)	Al (%)	As (ppm)	Ba (ppm)	Be (ppm)	Bi (ppm)	Ca (ppm)	Ca (%)	Cd (ppm)	Ce (ppm)	Co (ppm)	Cr (ppm)	Cs (ppm)	Cu (ppm)	Fe (ppm)	Fe (%)	Ga (ppm)
FIELD LEACH BARREL - Barrel 6 M-CL																		
Count	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
Minimum	0.4	63600.0	6.4	2.3	40.0	0.7	0.0	5800.0	0.6	0.0	6.8	7.1	2.0	2.7	161.5	25300.0	2.5	11.7
10 Percentile	0.582	65780	6.578	3.58	174	0.794	0.048	10980	1.098	0.24	14.86	9.2	4	3.05	375.4	34080	3.408	13.96
25 Percentile	0.84	67200	6.72	4.7	240	0.89	0.06	17000	1.7	0.38	17.8	10.8	4	3.52	448	37800	3.78	14.95
Median-25Percentile	0.18	5800	0.58	2.1	160	0.09	0.02	16100	1.61	0.1	2.15	2.3	2	0.96	155	6100	0.61	1.45
Mean	1.3	74026.5	7.4	8.3	755.9	1.0	0.1	32734.7	3.3	0.5	20.0	13.5	6.8	4.6	645.5	44944.9	4.5	16.3
Standard Deviation	1.195159925	7075.043102	0.70750431	5.662565502	928.0040428	0.199869804	0.123045486	16861.83411	1.686183411	0.26808886	4.951123971	3.770562671	2.982805089	1.262994135	294.7796797	11632.60831	1.163260831	1.952764782
Median	1.0	73000.0	7.3	6.8	400.0	1.0	0.1	33100.0	3.3	0.5	20.0	13.1	6.0	4.5	603.0	43900.0	4.4	16.4
75Percentile-Median	0.29	6900	0.69	2.5	580	0.13	0.07	12400	1.24	0.11	3.05	2.6	3	0.8	132	5500	0.55	1.55
75 Percentile	1.31	79900	7.99	9.3	980	1.11	0.15	45500	4.55	0.59	23	15.7	9	5.28	735	49400	4.94	17.95
90 Percentile	1.87	83280	8.328	15.36	1596	1.218	0.244	52440	5.244	0.912	24.42	18.34	11	6.436	1026	56100	5.61	18.56
Maximum	8.8	91100.0	9.1	29.6	4630.0	1.7	0.8	69800.0	7.0	1.3	40.5	22.5	15.0	7.6	1685.0	85000.0	8.5	20.4
Interquartile Range (IQR) 1	0.47	12700	1.27	4.6	740	0.22	0.09	28500	2.85	0.21	5.2	4.9	5	1.76	287	11600	1.16	3
Variance	1.458165731	51099073.13	0.510990731	32.73266156	879132.9932	0.040780187	0.015455612	290244812.9	2.902448129	0.073368963	25.02432917	14.51333333	9.082482993	1.628386565	88705.3733	138136692.2	1.381366922	3.892733844
Skewness	5.341649013	0.321348531	0.321348531	1.991171674	2.675526287	1.149010812	3.330823264	0.092743409	0.092743409	1.152080334	0.90714658	0.526412525	0.585075838	0.567213608	1.534390094	1.402858744	1.402858744	-0.187175329
Coefficient of Variation (CoV) 2	0.950541086	0.095574425	0.095574425	0.679563335	1.227651137	0.200073961	0.958541941	0.515105905	0.515105905	0.502538414	0.247097304	0.279005694	0.438911259	0.276526866	0.456639878	0.258819328	0.258819328	0.119472436
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 7 M-IARG																		
Count	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
Minimum	0.5	57500.0	5.8	3.6	60.0	0.7	0.1	4300.0	0.4	0.0	12.0	8.7	3.0	1.5	177.5	17600.0	1.8	12.3
10 Percentile	0.776	64540	6.454	4.36	90	0.868	0.148	10760	1.076	0.138	14.91	10.56	4	2.884	410.6	31680	3.168	14.6
25 Percentile	1.02	69550	6.955	6.55	115	0.99	0.225	15450	1.545	0.205	17.9	11.85	4	3.77	523	34900	3.49	15.75
Median-25Percentile	0.22	4750	0.475	1.85	35	0.16	0.075	11450	1.145	0.135	2.6	2.05	2	1.07	127	7200	0.72	0.9
Mean	2.1	73994.9	7.4	10.9	274.6	1.2	0.5	26928.8	2.7	2.5	20.9	14.0	7.5	4.6	725.0	40472.9	4.0	16.8
Standard Deviation	2.510144691	7097.82549	0.709782549	8.310713762	288.3225714	0.303338505	0.613010336	13515.84194	1.351584194	8.679657105	4.53582028	2.835863198	5.234572276	1.184399188	312.5514505	7697.409437	0.769740944	1.914427225
Median	1.2	74300.0	7.4	8.4	150.0	1.2	0.3	26900.0	2.7	0.3	20.5	13.9	6.0	4.8	650.0	42100.0	4.2	16.7
75Percentile-Median	0.5	3850	0.385	3.55	135	0.16	0.185	8600	0.86	0.15	3.5	1.6	2	0.495	251.5	2800	0.28	1.25
75 Percentile	1.74	78150	7.815	11.95	285	1.31	0.485	35500	3.55	0.49	24	15.5	8	5.335	901.5	44900	4.49	17.9
90 Percentile	4.112	81080	8.108	18.16	644	1.5	1.12	45260	4.526	1.156	26.4	17.86	15.4	5.714	1090	48480	4.848	18.83
Maximum	12.0	97900.0	9.8	50.1	1600.0	2.6	3.3	56800.0	5.7	48.4	33.7	21.5	27.0	6.8	1850.0	62900.0	6.3	23.3
Interquartile Range (IQR) 1	0.72	8600	0.86	5.4	170	0.32	0.26	20050	2.005	0.285	6.1	3.65	4	1.565	378.5	10000	1	2.15
Variance	6.409461309	51247732.32	0.512477323	70.25879018	84563.17943	0.093600701	0.382260666	185827603.7	1.858276037	76.63535172	20.92838399	8.180777323	27.87317358	1.426987668	99372.69214	60271665.69	0.602716657	3.7282218
Skewness	3.051765371	0.224511236	0.224511236	2.826793634	2.651351538	1.934801505	2.790461554	0.289330281	0.289330281	4.529786139	0.323609458	0.378881288	2.254507101	-0.844482819	1.244620729	0.002286017	0.002286017	0.552191998
Coefficient of Variation (CoV) 2	1.194150434	0.095923152	0.095923152	0.762332264	1.050063686	0.256146727	1.151101522	0.501910042	0.501910042	3.514031217	0.217386293	0.203004039	0.694021942	0.25913948	0.431080254	0.190186841	0.190186841	0.114126711
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Ge (ppm)	Hf (ppm)	Hg (ppm)	In (ppm)	K (ppm)	K (%)	La (ppm)	Li (ppm)	Mg (ppm)	Mg (%)	Mn (ppm)	Mo (ppm)	Na (ppm)	Na (%)	Nb (ppm)	Ni (ppm)	P (%)	Pb (ppm)
FIELD LEACH BARREL - Barrel 6 M-CL																		
Count	49	49	40	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
Minimum	0.1	0.4	0.0	0.0	16200.0	1.6	2.7	5.5	6400.0	0.6	191.0	10.8	500.0	0.1	2.2	2.4	0.1	5.6
10 Percentile	0.11	0.5	0.01	0.0208	18620	1.862	7.38	13.9	13080	1.308	589.2	31.76	900	0.09	3.26	2.98	0.107	8.5
25 Percentile	0.12	0.5	0.01	0.025	20600	2.06	9.2	15.6	14700	1.47	722	44.7	6400	0.64	3.8	3.3	0.119	12.7
Median-25Percentile	0.02	0.1	0	0.009	7500	0.75	1.2	1.9	1600	0.16	145	29.5	5600	0.56	0.7	0.4	0.018	10.7
Mean	0.1	0.6	0.0	0.0	28136.7	2.8	10.5	18.8	16669.4	1.7	920.5	98.1	13193.9	1.3	4.6	3.9	0.1	28.7
Standard Deviation	0.031722716	0.093164998	0.014210471	0.012599855	7941.384598	0.79413846	2.932115469	5.920507002	3780.033694	0.378003369	322.2709041	84.91502415	9212.578096	0.92125781	1.162330451	0.864877637	0.026133065	23.7282489
Median	0.1	0.6	0.0	0.0	28100.0	2.8	10.4	17.5	16300.0	1.6	867.0	74.2	12000.0	1.2	4.5	3.7	0.1	23.4
75Percentile-Median	0.02	0	0	0.005	6500	0.65	1.7	2.5	1800	0.18	143	40.8	8700	0.87	1	0.8	0.014	7.9
75 Percentile	0.16	0.6	0.01	0.039	34600	3.46	12.1	20	18100	1.81	1010	115	20700	2.07	5.5	4.5	0.151	31.3
90 Percentile	0.18	0.7	0.02	0.0532	39280	3.928	13.1	26	21360	2.136	1320	192.3	26420	2.642	6.12	5.02	0.1652	50.42
Maximum	0.3	0.8	0.1	0.1	44300.0	4.4	22.5	39.7	27400.0	2.7	1950.0	464.0	29200.0	2.9	7.1	6.4	0.2	133.5
Interquartile Range (IQR) 1	0.04	0.1	0	0.014	14000	1.4	2.9	4.4	3400	0.34	288	70.3	14300	1.43	1.7	1.2	0.032	18.6
Variance	0.001027296	0.008860544	0.000207115	0.000162064	64379455.78	0.643794558	8.776411565	35.78266156	14586335.03	0.14586335	106022.2551	7360.781354	86639753.4	0.866397534	1.379158163	0.763596939	0.000697165	574.7595833
Skewness	1.270667445	0.005141059	5.91181442	0.999191993	0.255954707	0.255954707	0.867698451	1.373677095	0.352093372	0.352093372	0.971190195	2.434118376	0.180435656	0.180435656	0.215628984	0.773096539	0.681905356	2.402482301
Coefficient of Variation (CoV) 2	0.216492071	0.16131042	1.072488414	0.362532534	0.28224258	0.28224258	0.278383371	0.314374559	0.226764999	0.226764999	0.350108068	0.865974897	0.698246445	0.698246445	0.25380656	0.222461964	0.189426066	0.827179992
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 7 M-IARG																		
Count	59	59	31	59	59	59	59	59	59	59	59	59	59	59	59	56	59	59
Minimum	0.1	0.3	0.0	0.0	19000.0	1.9	6.9	7.3	3400.0	0.3	157.0	8.6	300.0	0.0	2.3	0.4	0.0	7.9
10 Percentile	0.118	0.3	0.01	0.0226	24900	2.49	7.76	9.76	7640	0.764	359.4	15.83	800	0.08	3.28	1.65	0.0894	10.42
25 Percentile	0.13	0.4	0.01	0.029	31000	3.1	9.25	11.35	10250	1.025	464.5	38.05	1000	0.1	4.2	3.15	0.1075	14.4
Median-25Percentile	0.02	0.1	0.01	0.013	4200	0.42	1.65	2.85	3550	0.355	225.5	14.45	700	0.07	1.3	0.55	0.0235	10
Mean	0.2	0.5	0.1	0.1	34454.2	3.4	11.2	14.5	12798.3	1.3	784.1	92.8	7579.7	0.8	5.2	4.6	0.1	109.4
Standard Deviation	0.035812079	0.160507669	0.124783267	0.103416382	6272.385593	0.627238559	2.639289468	4.502225821	4110.775073	0.411077507	430.6457388	129.6436006	9198.300869	0.919830087	1.435322048	3.531938821	0.02515003	347.8767586
Median	0.2	0.5	0.0	0.0	35200.0	3.5	10.9	14.2	13800.0	1.4	690.0	52.5	1700.0	0.2	5.5	3.7	0.1	24.4
75Percentile-Median	0.035	0.1	0.025	0.018	3350	0.335	1.95	1.65	1400	0.14	340	33.65	13300	1.33	0.75	1.125	0.0085	13.55
75 Percentile	0.185	0.6	0.045	0.06	38550	3.855	12.85	15.85	15200	1.52	1030	86.15	15000	1.5	6.25	4.825	0.1395	37.95
90 Percentile	0.202	0.7	0.16	0.092	42740	4.274	14.44	21.04	16500	1.65	1304	212	21940	2.194	6.94	8.05	0.1484	106.3
Maximum	0.3	1.1	0.7	0.6	45800.0	4.6	20.4	34.0	25700.0	2.6	2140.0	836.0	32300.0	3.2	8.8	18.6	0.2	2170.0
Interquartile Range (IQR) 1	0.055	0.2	0.035	0.031	7550	0.755	3.6	4.5	4950	0.495	565.5	48.1	14000	1.4	2.05	1.675	0.032	23.55
Variance	0.001304617	0.026206897	0.016089892	0.010879344	40021145.53	0.400211455	7.085949737	20.61952075	17189824.66	0.171898247	188653.2653	17097.24703	86067510.23	0.860675102	2.095669199	12.7014026	0.00064343	123104.7605
Skewness	0.65801294	1.135767756	4.4140239	3.792830043	-0.317284068	-0.317284068	0.670506527	1.530214583	0.055281419	0.055281419	1.217267652	3.823524516	1.208329155	1.208329155	-0.058777316	2.263574667	-0.873641288	4.903170127
Coefficient of Variation (CoV) 2	0.227194912	0.321015338	2.09096285	1.455873663	0.182049759	0.182049759	0.236294505	0.311225921	0.321196834	0.321196834	0.549221793	1.397212951	1.213550428	1.213550428	0.27432459	0.76662238	0.20469744	3.179318859
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Rb (ppm)	Re (ppm)	S (ppm)	S (%)	Sb (ppm)	Sc (ppm)	Se (ppm)	Sn (ppm)	Sr (ppm)	Ta (ppm)	Te (ppm)	Th (ppm)	Ti (ppm)	Ti (%)	Tl (ppm)	U (ppm)	V (ppm)	W (ppm)
FIELD LEACH BARREL - Barrel 6 M-CL																		
Count	49	49	49	49	49	49	49	49	49	49	44	49	49	49	49	49	49	49
Minimum	66.7	0.1	6500.0	0.7	0.9	14.1	2.0	1.0	32.0	0.1	0.1	1.3	990.0	0.1	1.3	1.0	140.0	0.4
10 Percentile	76.34	0.1442	13420	1.342	1.058	16.2	4	1.3	130.9	0.178	0.053	2.7	1428	0.1428	1.46	1.2	152.8	0.5
25 Percentile	87.1	0.169	22100	2.21	1.27	17.1	5	1.5	206	0.22	0.07	2.9	1570	0.157	1.59	1.3	162	0.7
Median-25Percentile	11.9	0.219	12800	1.28	0.59	1.5	2	0.3	210	0.04	0.02	0.2	250	0.025	0.5	0.3	10	0.2
Mean	103.4	0.5	35210.2	3.5	2.1	20.1	7.5	1.8	370.2	0.3	0.2	3.2	1815.3	0.2	2.3	1.6	187.8	1.1
Standard Deviation	24.01650723	0.557016799	16761.59659	1.676159659	1.073151501	4.331375801	4.281436154	0.445842472	186.6415819	0.064405137	0.58468629	0.53235976	329.8181443	0.032981814	0.761912858	0.332270971	39.2129355	0.91628335
Median	99.0	0.4	34900.0	3.5	1.9	18.6	7.0	1.8	416.0	0.3	0.1	3.1	1820.0	0.2	2.1	1.6	172.0	0.9
75Percentile-Median	21	0.269	8600	0.86	0.79	3.5	2	0.4	102	0.05	0.03	0.5	270	0.027	0.71	0.2	29	0.3
75 Percentile	120	0.657	43500	4.35	2.65	22.1	9	2.2	518	0.31	0.12	3.6	2090	0.209	2.8	1.8	201	1.2
90 Percentile	142.3	1.122	55660	5.566	3.52	27.08	11	2.3	573.4	0.342	0.167	3.9	2208	0.2208	3.288	2.02	257.8	1.52
Maximum	163.5	3.2	81100.0	8.1	4.9	32.2	28.0	3.1	831.0	0.4	4.0	4.2	2420.0	0.2	4.4	2.5	281.0	6.5
Interquartile Range (IQR) 1	32.9	0.488	21400	2.14	1.38	5	4	0.7	312	0.09	0.05	0.7	520	0.052	1.21	0.5	39	0.5
Variance	588.8091327	0.316731625	286804268.7	2.868042687	1.175646939	19.15166667	18.71258503	0.202916667	35560.81094	0.004234439	0.349808245	0.289311224	111046.2585	0.001110463	0.592605187	0.112704082	1569.688776	0.857066327
Skewness	0.701132329	2.865682141	0.552706341	0.552706341	1.11398227	1.212135758	2.614230646	0.457042376	0.014194676	0.00122955	6.473593642	-0.697652548	-0.358503015	-0.358503015	0.733343722	0.37320042	1.174677278	4.547988321
Coefficient of Variation (CoV) 2	0.232359684	1.041152895	0.476043722	0.476043722	0.510478823	0.215951785	0.568537592	0.245739945	0.504194761	0.245591573	2.970692467	0.165517946	0.181687342	0.181687342	0.334321931	0.20793458	0.208851504	0.836087228
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 7 M-IARG																		
Count	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
Minimum	67.8	0.0	15900.0	1.6	0.9	7.5	5.0	0.7	41.7	0.2	0.1	1.4	980.0	0.1	1.1	1.0	92.0	0.7
10 Percentile	85.24	0.048	26340	2.634	1.238	11.78	8	1	67.42	0.2	0.098	2.5	1130	0.113	1.398	1.2	121.8	1.08
25 Percentile	91.7	0.094	30150	3.015	1.8	14.8	9	1	147.75	0.24	0.11	3	1455	0.1455	1.675	1.4	136	1.3
Median-25Percentile	12.3	0.116	9450	0.945	0.51	3.2	2	0.4	106.25	0.09	0.04	0.3	255	0.0255	0.525	0.2	24	0.5
Mean	104.4	0.4	39630.5	4.0	7.3	16.8	10.9	1.6	244.9	0.3	0.3	3.2	1811.9	0.2	2.1	1.6	155.2	3.2
Standard Deviation	16.55164578	0.641722477	11672.86081	1.167286081	17.54205734	3.315735988	2.884544597	0.908164632	136.441496	0.084619907	0.247704544	0.615457313	510.4118463	0.051041185	0.548246323	0.519230863	28.6461638	4.197528034
Median	104.0	0.2	39600.0	4.0	2.3	18.0	11.0	1.4	254.0	0.3	0.2	3.3	1710.0	0.2	2.2	1.6	160.0	1.8
75Percentile-Median	11.25	0.16	6850	0.685	1.785	1.35	1	0.5	52.5	0.045	0.165	0.3	545	0.0545	0.35	0.2	12	0.6
75 Percentile	115.25	0.37	46450	4.645	4.095	19.35	12	1.9	306.5	0.375	0.315	3.6	2255	0.2255	2.55	1.8	172	2.4
90 Percentile	123.6	0.7094	52920	5.292	8.204	20.12	14	2.6	416.8	0.41	0.594	3.8	2450	0.245	2.776	1.96	186.4	7.5
Maximum	143.0	4.4	80700.0	8.1	113.0	22.1	24.0	6.0	600.0	0.5	1.4	4.2	3090.0	0.3	3.4	3.9	241.0	23.2
Interquartile Range (IQR) 1	23.55	0.276	16300	1.63	2.295	4.55	3	0.9	158.75	0.135	0.205	0.6	800	0.08	0.875	0.4	36	1.1
Variance	278.6803741	0.418907871	138604915.3	1.386049153	313.029358	11.18365868	8.464056108	0.838983051	18937.25222	0.007283986	0.06241543	0.385318527	265011.9813	0.00265012	0.305756341	0.274248977	834.7510228	17.92302162
Skewness	0.256234767	4.511163269	0.75432789	0.75432789	4.760222406	-0.866843084	1.46530642	2.713412066	0.538783887	-0.028272583	2.477107504	-1.329475414	0.23953782	0.23953782	-0.093467758	2.580829725	0.06265158	3.196784412
Coefficient of Variation (CoV) 2	0.158558688	1.652047568	0.294542292	0.294542292	2.41535912	0.196967804	0.265504105	0.557562053	0.557119899	0.268417983	0.945926736	0.192636507	0.281705322	0.281705322	0.257679702	0.315495581	0.184571766	1.32648181
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Y (ppm)	Zn (ppm)	Zr (ppm)	Al2O3 (%)	BaO (%)	CaO (%)	Cr2O3 (%)	Fe2O3 (%)	K2O (%)	MgO (%)	MnO (%)	Na2O (%)	P2O5 (%)	SiO2 (%)	SRO (%)	TiO2 (%)	LOI (%)	Total_DC (%)
FIELD LEACH BARREL - Barrel 6 M-CL																		
Count	49	49	49	49	49	49	1	49	49	49	49	49	49	49	48	49	49	49
Minimum	4.8	21.0	10.6	13.2	0.1	0.8	0.0	4.0	2.0	1.2	0.0	0.1	0.2	41.5	0.0	0.4	5.0	89.7
10 Percentile	5.1	71	14.66	13.62	0.12	1.442	0.01	5.22	2.286	2.39	0.08	0.22	0.2502	49.116	0.02	0.388	5.514	94.934
25 Percentile	6.1	100	16.2	14.26	0.22	2.4	0.01	5.82	2.54	2.65	0.1	0.89	0.273	51.54	0.0275	0.44	5.88	98.19
Median-25Percentile	1.2	67	4.5	1.27	0.14	2.37	0	0.79	0.98	0.3	0.02	0.87	0.036	3.34	0.0275	0.05	1.53	0.51
Mean	7.4	170.7	19.4	15.7	0.4	4.8	0.0	6.7	3.5	3.1	0.1	1.9	0.3	53.9	0.0	0.5	7.2	98.1
Standard Deviation	1.80394311	90.01582072	3.972661679	1.539826848	0.25723063	2.531994159	0	1.666221037	0.995459036	0.691428511	0.046406925	1.287668356	0.056080155	3.810410541	0.023124062	0.08046305	1.42671153	2.115967478
Median	7.3	167.0	20.7	15.5	0.4	4.8	0.0	6.6	3.5	3.0	0.1	1.8	0.3	54.9	0.1	0.5	7.4	98.7
75Percentile-Median	1.1	59	1.7	1.53	0.17	2.27	0	0.66	0.94	0.41	0.02	1.25	0.031	1.67	0.015	0.05	1.03	0.64
75 Percentile	8.4	226	22.4	17.06	0.53	7.04	0.01	7.27	4.46	3.36	0.14	3.01	0.34	56.55	0.07	0.54	8.44	99.34
90 Percentile	8.96	310.2	24.02	17.46	0.704	7.878	0.01	8.308	4.848	3.898	0.182	3.764	0.3772	58.034	0.073	0.604	8.876	99.902
Maximum	12.4	375.0	28.9	18.6	1.3	9.8	0.0	12.6	5.3	5.1	0.3	4.1	0.5	59.8	0.1	0.7	10.1	100.1
Interquartile Range (IQR) 1	2.3	126	6.2	2.8	0.31	4.64	0	1.45	1.92	0.71	0.04	2.12	0.067	5.01	0.0425	0.1	2.56	1.15
Variance	3.322006803	8271.657313	16.11083333	2.420463946	0.067546088	6.544556803	#DIV/0!	2.834131973	1.011583248	0.488033248	0.002198469	1.692633333	0.003210504	14.82171241	0.000546099	0.006609184	2.07791216	4.570595833
Skewness	0.850688263	0.478517586	0.002500363	-0.00549099	1.165535708	0.053600515	#DIV/0!	1.521913815	0.205424017	0.404682138	0.952756209	0.187350164	0.90136475	-0.832146241	0.053157961	0.373682384	0.119489688	-1.994425452
Coefficient of Variation (CoV) 2	0.242505384	0.527226299	0.204324995	0.098193019	0.634338241	0.523006971	0	0.247513584	0.284582805	0.225370831	0.360370731	0.67670259	0.18059461	0.070749256	0.47842886	0.163190788	0.198819365	0.021560076
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 7 M-IARG																		
Count	59	59	59	59	59	59	1	59	59	59	59	59	59	59	59	59	59	59
Minimum	4.3	28.0	4.5	11.0	0.1	0.6	0.0	2.8	2.4	0.7	0.0	0.1	0.1	46.8	0.0	0.2	3.4	94.6
10 Percentile	6	39	11.88	13.832	0.286	1.61	0.01	4.766	3.154	1.474	0.05	0.19	0.2084	51.764	0.01	0.31	5.06	98.356
25 Percentile	6.9	46	12.75	15.13	0.36	2.225	0.01	5.16	3.905	1.98	0.06	0.225	0.244	53.21	0.02	0.365	5.865	98.565
Median-25Percentile	0.9	9	2.85	1.07	0.11	1.645	0	1.04	0.565	0.61	0.04	0.135	0.041	2.68	0.01	0.095	1.195	0.525
Mean	8.8	165.7	18.9	16.0	0.5	3.9	0.0	6.0	4.6	2.4	0.1	1.1	0.3	56.4	0.0	0.4	7.2	99.0
Standard Deviation	2.840678977	433.4380332	21.83601047	1.915534433	0.180106579	1.945448418	0	1.100407018	1.276002853	0.745601986	0.059274073	1.262106122	0.054773315	4.480928491	0.017473253	0.07954734	1.846674706	0.920015019
Median	7.8	55.0	15.6	16.2	0.5	3.9	0.0	6.2	4.5	2.6	0.1	0.4	0.3	55.9	0.0	0.5	7.1	99.1
75Percentile-Median	2.8	23.5	2.55	0.73	0.085	1.195	0	0.37	0.57	0.24	0.045	1.77	0.029	3.325	0.01	0.03	1.34	0.635
75 Percentile	10.6	78.5	18.15	16.93	0.555	5.065	0.01	6.57	5.04	2.83	0.145	2.13	0.314	59.215	0.04	0.49	8.4	99.725
90 Percentile	13.22	163	22.2	18.154	0.674	6.494	0.01	7.154	5.766	3.1	0.17	3.094	0.33	62.704	0.052	0.52	9.422	99.872
Maximum	15.2	2750.0	181.5	21.3	1.1	8.4	0.0	9.2	9.7	4.7	0.3	4.7	0.4	68.9	0.1	0.6	13.4	100.0
Interquartile Range (IQR) 1	3.7	32.5	5.4	1.8	0.195	2.84	0	1.41	1.135	0.85	0.085	1.905	0.07	6.005	0.02	0.125	2.535	1.16
Variance	8.208585622	191107.6411	485.0322385	3.732535476	0.032997662	3.850024196	#DIV/0!	1.231773115	1.656255406	0.565507189	0.003573992	1.620375862	0.003051842	20.42490497	0.000310579	0.006436879	3.46900415	0.861021216
Skewness	0.731113197	4.863665117	7.17324938	-0.317097852	0.779568334	0.31392925	#DIV/0!	0.119696288	1.707033738	0.027058437	1.198370293	1.225774308	-1.007824424	0.549371927	0.884576768	-0.67113382	0.683764949	-2.499439904
Coefficient of Variation (CoV) 2	0.324178065	2.615077611	1.155448087	0.119652457	0.379510291	0.50061696	0	0.184192051	0.279078323	0.306981976	0.545580388	1.126880467	0.199138871	0.07938825	0.542590483	0.184557337	0.255214934	0.009293861
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Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Paste pH	Rinse pH	S_Total (%)	S_Sulphide (%)	S_S2_CALC (%)	S_S2_S_DEL CALC (%)	S_SO4_NA2CO 3 (%)	S_SO4_HCL (%)	S_BASO4 (%)	S_DEL (%)	S_DEL_CAL (%)	TAP (%)	SAP (kg $CaCO_3$ /t)	SAP (S Del Calc) (kg $CaCO_3$ /t)	NP (kg $CaCO_3$ /t)	NP_ADJ (kg $CaCO_3$ /t)	UNP	Total C (%)	Inorganic C (%)
FIELD LEACH BARREL - Barrel 8 M-SI/SIH/SIL																			
Count	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Minimum	8.4	8.4	0.2	0.1	0.2	0.1	0.0	0.005	0.0	-0.1	0.0	5.0	4.1	4.3	12.0	0.0	12.0	0.1	0.1
10 Percentile	8.8	8.8	0.5	0.41	0.39	0.41	0.01	0.005	0.00233	-0.02318	0	15.6	12.8125	12.8125	24	9	15	0.23	0.26
25 Percentile	9.05	8.95	0.865	0.78	0.855	0.80798	0.02	0.005	0.010135	0.037505	0.037505	27.035	24.375	25.249375	38.5	23.5	15	0.43	0.44
Median-25Percentile	0.25	0.15	0.865	0.74	0.865	0.88962	0.01	0.005	0.014605	0.057755	0.057755	27.025	23.125	27.800625	30.5	30.5	0	0.22	0.18
Mean	9.2	9.1	2.1	1.9	2.0	2.0	0.0	0.01872549	0.0	0.2	0.2	64.5	57.9	63.2	63.4	48.5	14.9	0.6	0.6
Standard Deviation	0.302977661	0.247307687	1.567190518	1.40563804	1.560921883	1.572338149	0.031457605	0.025607198	0.022732375	0.205921578	0.198560525	48.96842384	43.92618876	49.13556714	27.01856909	26.90966276	0.415945165	0.304794193	0.285840122
Median	9.3	9.1	1.7	1.5	1.7	1.7	0.0	0.01	0.0	0.1	0.1	54.1	47.5	53.1	69.0	54.0	15.0	0.7	0.6
75Percentile-Median	0.1	0.2	1.05	1.035	1.035	1.04915	0.015	0.01	0.013535	0.11474	0.11474	32.82	32.34375	32.7859375	14	14	0	0.19	0.235
75 Percentile	9.4	9.3	2.78	2.555	2.755	2.74675	0.045	0.02	0.038275	0.21	0.21	86.88	79.84375	85.8359375	83	68	15	0.84	0.855
90 Percentile	9.6	9.4	4.38	4.28	4.37	4.36767	0.08	0.04	0.06371	0.3518	0.3518	136.9	133.75	136.4896875	95	80	15	1.03	1.04
Maximum	9.8	9.5	6.2	5.3	6.1	6.1	0.1	0.15	0.1	0.8	0.8	192.2	165.9	190.9	118.0	103.0	15.0	1.4	1.3
Interquartile Range (IQR) 1	0.35	0.35	1.915	1.775	1.9	1.93877	0.025	0.015	0.02814	0.172495	0.172495	59.845	55.46875	60.5865625	44.5	44.5	0	0.41	0.415
Variance	0.093631373	0.062384314	2.505207843	2.015334667	2.485206667	2.521692199	0.001009373	0.000668843	0.000527096	0.04325177	0.040214808	2445.864664	1968.10026	2462.590038	744.6031373	738.612549	0.176470588	0.09475749	0.083338667
Skewness	-0.737165702	-0.503252915	1.128034051	1.028073057	1.118820141	1.116042812	1.494102599	3.67476433	1.044592979	1.684795101	1.878780696	1.1279767	1.028073057	1.116042812	-0.157913333	-0.143357725	-7.141428429	0.228354102	0.221012072
Coefficient of Variation (CoV) 2	0.032834383	0.027164962	0.759398731	0.758437792	0.763909567	0.777722821	0.771316283	1.36750479	0.781860893	1.279587628	1.179190574	0.759348107	0.758437792	0.777722821	0.426213122	0.555399758	0.02783885	0.472477321	0.451326508
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FIELD LEACH BARREL - Barrel 9 K-IARG																			
Count	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	51	53	53	53
Minimum	5.1	5.1	0.1	0.1	0.1	0.1	0.0	0.005	0.0	-0.2	0.0	2.5	1.6	1.6	-1.0	0.0	-1.0	0.0	0.0
10 Percentile	5.7	5.8	1.746	1.654	1.724	1.695104	0.01	0.01	0.00187	-0.025042	0	54.564	51.6875	52.972	6	0	6	0.005	0.025
25 Percentile	6.3	6.4	3.14	2.39	2.63	2.6141	0.03	0.02	0.00233	0.04492	0.04492	98.12	74.6875	81.690625	8	0	8	0.005	0.025
Median-25Percentile	1	0.9	1.85	2.02	2.11	2.117	0.02	0.01	0.0021	0.20198	0.20198	57.78	63.125	66.15625	3	0	3	0.035	0.025
Mean	7.1	7.1	5.0	4.4	4.7	4.7	0.3	0.31009434	0.0	0.2	0.2	156.0	138.5	146.2	17.6	7.4	10.5	0.2	0.2
Standard Deviation	0.947564377	0.930894523	2.533936287	2.320869272	2.395347365	2.405936504	1.038442255	0.99972944	0.018926999	0.221764941	0.208196359	79.19279487	72.52716474	75.18551573	16.6723071	14.22364889	4.258470085	0.240001001	0.235779801
Median	7.3	7.3	5.0	4.4	4.7	4.7	0.1	0.03	0.0	0.2	0.2	155.9	137.8	147.8	11.0	0.0	11.0	0.0	0.1
75Percentile-Median	0.6	0.5	1.26	1.6	1.43	1.4363	0.01	0.04	0.01217	0.1325	0.1325	39.4	50	44.884375	8	8.5	4	0.19	0.21
75 Percentile	7.9	7.8	6.25	6.01	6.17	6.1674	0.06	0.07	0.0166	0.3794	0.3794	195.3	187.8125	192.73125	19	8.5	15	0.23	0.26
90 Percentile	8.2	8.1	8.258	7.69	7.908	7.90596	0.106	0.14	0.039024	0.51384	0.51384	258.06	240.3125	247.06125	43.2	29	15	0.532	0.534
Maximum	8.6	8.9	10.7	10.3	10.6	10.6	6.0	5.87	0.1	0.7	0.7	334.4	321.9	330.9	70.0	55.0	15.0	1.0	1.0
Interquartile Range (IQR) 1	1.6	1.4	3.11	3.62	3.54	3.5533	0.03	0.05	0.01427	0.33448	0.33448	97.18	113.125	111.040625	11	8.5	7	0.225	0.235
Variance	0.915145138	0.883229318	6.544310668	5.490019448	5.848029173	5.899848352	1.099100054	1.018679318	0.00036512	0.050125452	0.044179296	6392.104504	5361.347118	5761.570657	283.3113208	206.3584314	18.48330914	0.058708182	0.056661194
Skewness	-0.38582351	-0.262867998	0.146190426	0.204068919	0.192728571	0.183300025	4.107236393	4.223719215	2.315387951	0.365507223	0.580455238	0.145924817	0.204068919	0.183300025	1.692481183	2.061471623	-0.785523078	1.834048971	1.862758351
Coefficient of Variation (CoV) 2	0.133993895	0.131391238	0.50747666	0.523675216	0.511496416	0.51415056	3.185958873	3.22395256	1.394011848	0.933532417	0.84101789	0.507495125	0.523675216	0.51415056	0.945061258	1.929271524	0.403754767	1.473934307	1.356085671
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Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Inorganic CO2 (%)	C_DEL_CALC (%)	CANP_TTL (%)	CANP_INORG (%)	CANP_CA (%)	CANP_CAMG (%)	TNNP (kg $CaCO_3$ /t)	TNNP_ADJ (kg $CaCO_3$ /t)	SNNP (kg $CaCO_3$ /t)	SNNP_ADJ (kg $CaCO_3$ /t)	ICNNP (kg $CaCO_3$ /t)	TNPR	TNPR_ADJ	SNPR	SNPR(S DEL CALC)	SNPR for graphs	SNPR_ADJ for graphs	ICNPR	Fizz Rating
FIELD LEACH BARREL - Barrel 8 M-SI/SIH/SIL																			
Count	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Minimum	0.5	-0.1	10.0	11.4	10.0	17.2	-165.2	-180.2	-164.9	-179.9	-170.3	-165.2	-180.2	0.1	0.1	0.1	0.0	0.1	1.0
10 Percentile	1	-0.04	19.17	22.7	22.23	34.65	-63.88	-78.88	-61.559375	-76.56	-73.18	-63.88	-78.88	0.559766764	0.534838942	0.559766764	0.226262626	0.4819	2
25 Percentile	1.6	-0.02	35.835	36.4	37.58	60.845	-10.5925	-25.595	-8.98671875	-23.985	-26.655	-10.5925	-25.595	0.939062221	0.859263235	0.939062221	0.496860215	0.64145	2
Median-25Percentile	0.7	0.03	18.335	15.9	18.36	37.085	18.9045	18.907	17.77109375	17.77	24.484	18.9045	18.907	0.381572699	0.334814524	0.381572699	0.478924538	0.30425	1
Mean	2.3	0.0	53.8	53.2	54.7	87.6	-1.1	-16.1	0.2	-14.8	-11.3	-1.1	-16.1	2.0	1.9	2.0	1.4	1.4	2.5
Standard Deviation	1.043387851	0.040666307	25.39975407	23.74351382	22.7547304	34.02683773	52.28277235	52.28270356	52.38848583	52.38961357	49.71583001	52.28277235	52.28270356	2.080613683	2.083591794	2.080613683	1.64139242	1.305427061	0.5369829
Median	2.3	0.0	54.2	52.3	55.9	97.9	8.3	-6.7	8.8	-6.2	-2.2	8.3	-6.7	1.3	1.2	1.3	1.0	0.9	3.0
75Percentile-Median	0.85	0.03	15.83	19.35	16.22	11.87	19.278	19.278	20.23765625	20.24	19.376	19.278	19.278	0.858179393	0.868293828	0.858179393	0.624215247	0.5993	0
75 Percentile	3.15	0.04	70	71.65	72.16	109.8	27.59	12.59	29.02203125	14.025	17.205	27.59	12.59	2.178814314	2.062371588	2.178814314	1.6	1.545	3
90 Percentile	3.8	0.07	85.84	86.4	81.66	128.9	47.5	32.5	48.7534375	33.75	29.51	47.5	32.5	3.4	3.27804878	3.4	2.618181818	2.71	3
Maximum	4.6	0.1	113.3	105.0	105.0	146.3	71.9	56.9	73.2	58.2	65.6	71.9	56.9	10.4	10.4	10.4	8.3	6.4	3.0
Interquartile Range (IQR) 1	1.55	0.06	34.165	35.25	34.58	48.955	38.1825	38.185	38.00875	38.01	43.86	38.1825	38.185	1.239752092	1.203108352	1.239752092	1.103139785	0.90355	1
Variance	1.110431373	0.001686824	658.050457	575.0295373	528.1333107	1180.9822	2788.15805	2788.150713	2799.444517	2799.565042	2521.097029	2788.15805	2788.150713	4.415532362	4.42818186	4.415532362	2.748052459	1.738222608	0.294117647
Skewness	0.217868949	0.499441795	0.228345673	0.219753602	-0.117283259	-0.449944767	-1.615236228	-1.615238103	-1.61785008	-1.617930601	-1.680080226	-1.615236228	-1.615238103	2.921751134	3.010327897	2.921751134	3.031936202	2.353315079	-0.512079841
Coefficient of Variation (CoV) 2	0.446041747	3.45663613	0.472457048	0.446240863	0.41616894	0.388284733	-47.59511968	-3.247655692	245.5033334	-3.542937652	-4.403173073	-47.59511968	-3.247655692	1.057155933	1.110031323	1.057155933	1.186010837	0.926821033	0.212295565
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% NPR < 1.0 or NPR = 1.0 of Total																			
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% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			
FIELD LEACH BARREL - Barrel 9 K-IARG																			
Count	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	51	53	53
Minimum	0.1	0.0	0.8	4.6	0.2	15.2	-325.8	-340.8	-323.9	-338.9	-329.8	-325.8	-340.8	0.0	0.0	0.0	0.0	0.0	1.0
10 Percentile	0.1	-0.04	0.8334	4.55	6.093	18.33	-250.86	-265.86	-239.46125	-254.48	-253.54	-250.86	-265.86	0.025898438	0.024882201	0.025898438	0.001	0.017628	1
25 Percentile	0.1	-0.04	0.8334	4.55	7.741	23.77	-188	-203	-184.23125	-199.2	-190.8	-188	-203	0.03956044	0.037216996	0.03956044	0.001	0.02329	1
Median-25Percentile	0.1	0.01	2.5006	0	1.499	23.48	52.2	52.2	51.909375	51.9	47.5	52.2	52.2	0.071038639	0.064239325	0.071038639	0	0.0347	0
Mean	0.6	0.0	13.7	15.6	25.0	56.5	-138.4	-153.4	-128.6	-143.6	-140.5	-138.4	-153.4	0.3	0.3	0.3	0.1	0.2	1.3
Standard Deviation	0.862955423	0.028049186	19.91117	19.030038	33.22483612	41.43013836	82.95538147	82.95578479	78.45289892	78.45334876	86.96100356	82.95538147	82.95578479	1.207628052	1.20789067	1.207375383	0.116903188	0.527461705	0.534997995
Median	0.2	0.0	3.3	4.6	9.2	47.3	-135.8	-150.8	-132.3	-147.3	-143.3	-135.8	-150.8	0.1	0.1	0.1	0.0	0.1	1.0
75Percentile-Median	0.8	0.02	15.836	18.15	17.23	20.61	65.7	65.7	66.078125	66.06	69.41	65.7	65.7	0.11063549	0.111877012	0.11063549	0.068379413	0.10971	1
75 Percentile	1	-0.01	19.17	22.7	26.47	67.86	-70.1	-85.1	-66.24375	-81.24	-73.89	-70.1	-85.1	0.221234568	0.213333333	0.221234568	0.069379413	0.1677	2
90 Percentile	1.98	0.008	44.34	45.04	60.232	103.52	-37.334	-52.334	-35.881875	-50.884	-40.768	-37.334	-52.334	0.415715823	0.41246265	0.415715823	0.242424242	0.40218	2
Maximum	3.8	0.1	84.2	86.4	185.5	221.6	11.5	-3.5	12.4	-2.6	50.2	11.5	-3.5	9.0	9.0	9.0	0.5	2.7	3.0
Interquartile Range (IQR) 1	0.9	0.03	18.3366	18.15	18.729	44.09	117.9	117.9	117.9875	117.96	116.91	117.9	117.9	0.181674128	0.176116338	0.181674128	0.068379413	0.14441	1
Variance	0.759013062	0.000801887	404.0788196	369.1066222	1125.118384	1749.465141	7013.933686	7014.001888	6273.219991	6273.29193	7707.643374	7013.933686	7014.001888	1.486411002	1.487057561	1.485789073	0.013939683	0.283566155	0.291727141
Skewness	1.856476642	2.290554848	1.846761898	1.931532886	2.862241617	1.857188763	-0.365189356	-0.365204009	-0.423455353	-0.423699036	-0.103281634	-0.365189356	-0.365204009	7.107153436	7.119081163	7.10950899	2.049587503	3.81237738	1.623877807
Coefficient of Variation (CoV) 2	1.345195217	-1.389352219	1.451952315	1.221691697	1.329717313	0.732916996	-0.599370618	-0.540768893	-0.610096444	-0.546385494	-0.619096078	-0.599370618	-0.540768893	3.778679886	3.859767335	3.767336894	1.903046076	2.275018855	0.410940489
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
NPR > 2.0 or NPR =2.0																			
Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
% 1.0 < NPR < 2.0 of Total																			
% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Ag (ppm)	Al (ppm)	Al (%)	As (ppm)	Ba (ppm)	Be (ppm)	Bi (ppm)	Ca (ppm)	Ca (%)	Cd (ppm)	Ce (ppm)	Co (ppm)	Cr (ppm)	Cs (ppm)	Cu (ppm)	Fe (ppm)	Fe (%)	Ga (ppm)
FIELD LEACH BARREL - Barrel 8 M-SI/SIH/SIL																		
Count	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Minimum	0.3	57800.0	5.8	3.5	50.0	0.8	0.2	4000.0	0.4	0.0	3.9	0.6	1.0	0.9	27.9	6900.0	0.7	15.5
10 Percentile	0.41	64000	6.4	5.1	100	1.23	0.39	8900	0.89	0.07	7.05	1.3	2	1.64	50.2	10500	1.05	16.55
25 Percentile	0.67	67600	6.76	7.8	435	1.47	0.665	15050	1.505	0.115	12.075	4.8	4	3.135	109.5	19500	1.95	16.975
Median-25Percentile	0.61	5400	0.54	4.5	625	0.43	0.465	7350	0.735	0.085	6.975	6.2	3	0.495	460.5	9000	0.9	1.825
Mean	1.5	72280.4	7.2	17.8	1245.9	2.0	1.6	21894.1	2.2	1.6	19.9	10.5	27.4	4.0	635.3	29427.5	2.9	22.3
Standard Deviation	1.146929337	6142.395892	0.614239589	18.32889786	973.8123515	0.694950868	1.349191849	9110.377874	0.911037787	8.356172007	12.19699487	6.783979931	29.15069756	1.730848609	627.1397803	14198.85494	1.419885494	7.173602368
Median	1.3	73000.0	7.3	12.3	1060.0	1.9	1.1	22400.0	2.2	0.2	19.1	11.0	7.0	3.6	570.0	28500.0	2.9	18.8
75Percentile-Median	0.715	3250	0.325	9.5	580	0.535	1.055	6500	0.65	0.23	5.6	2.7	40	1.48	374	10050	1.005	8.9
75 Percentile	1.995	76250	7.625	21.8	1640	2.435	2.185	28900	2.89	0.43	24.65	13.7	47	5.11	944	38550	3.855	27.7
90 Percentile	2.58	79400	7.94	35.4	2730	3.02	2.86	32700	3.27	0.73	29.2	16.8	69	6.27	1250	47800	4.78	34.4
Maximum	5.9	84600.0	8.5	121.0	4390.0	4.3	7.7	42000.0	4.2	60.1	85.7	29.1	96.0	8.3	3280.0	73500.0	7.4	39.0
Interquartile Range (IQR) 1	1.325	8650	0.865	14	1205	0.965	1.52	13850	1.385	0.315	12.575	8.9	43	1.975	834.5	19050	1.905	10.725
Variance	1.341755843	38483607.84	0.384836078	342.6674667	967276.7059	0.492615843	1.85672502	84658964.71	0.846589647	71.22212282	151.7420176	46.94283137	866.7584314	3.055753647	401170.3901	205639631.4	2.056396314	52.48978235
Skewness	1.973383424	-0.15816804	-0.15816804	3.769891125	1.043931265	0.732549194	2.226191158	-0.118702993	-0.118702993	6.931205733	3.020799872	0.606534679	0.962424772	0.388422105	1.934708677	0.598018073	0.598018073	1.020665575
Coefficient of Variation (CoV) 2	0.759358642	0.084980113	0.084980113	1.031645283	0.781624645	0.342406475	0.853389363	0.416110757	0.416110757	5.132042056	0.612009778	0.64851542	1.064961014	0.428365502	0.987079166	0.482503733	0.482503733	0.321220177
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 9 K-IARG																		
Count	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
Minimum	0.1	59600.0	6.0	4.4	60.0	0.3	0.0	100.0	0.0	0.0	4.3	4.6	3.0	2.3	156.0	38800.0	3.9	12.3
10 Percentile	0.338	73080	7.308	6.56	80	0.39	0.092	2440	0.244	0.07	6.154	14	8	2.854	420	45060	4.506	14.53
25 Percentile	0.44	75700	7.57	11.8	100	0.6	0.14	3100	0.31	0.13	11.65	15.6	10	3.51	630	50300	5.03	15.95
Median-25Percentile	0.14	2500	0.25	5.8	90	0.17	0.09	600	0.06	0.08	2.15	3.9	4	0.47	261	5500	0.55	1.2
Mean	0.8	77817.0	7.8	88.7	581.7	0.7	0.5	10005.7	1.0	0.5	13.3	20.9	21.2	3.9	1322.7	59686.8	6.0	17.3
Standard Deviation	0.851324016	5367.854561	0.536785456	221.68004	810.9573561	0.22118761	0.64696999	13307.00504	1.330700504	0.632669504	4.344115631	7.585580558	15.75802699	0.728135136	1018.563586	17938.72209	1.793872209	2.152393172
Median	0.6	78200.0	7.8	17.6	190.0	0.8	0.2	3700.0	0.4	0.2	13.8	19.5	14.0	4.0	891.0	55800.0	5.6	17.2
75Percentile-Median	0.2	2500	0.25	18.1	520	0.11	0.23	6900	0.69	0.45	2.4	6	16	0.52	709	10900	1.09	1.3
75 Percentile	0.78	80700	8.07	35.7	710	0.88	0.46	10600	1.06	0.66	16.2	25.5	30	4.5	1600	66700	6.67	18.45
90 Percentile	1.34	82860	8.286	192.9	1672	1.008	1.196	24120	2.412	1.492	17.81	29.62	41.8	4.754	3000	74480	7.448	20.3
Maximum	5.5	92300.0	9.2	1475.0	4070.0	1.2	3.4	74300.0	7.4	2.5	25.2	47.3	69.0	5.3	4500.0	157500.0	15.8	21.5
Interquartile Range (IQR) 1	0.34	5000	0.5	23.9	610	0.28	0.32	7500	0.75	0.53	4.55	9.9	20	0.99	970	16400	1.64	2.5
Variance	0.738690131	29367975.33	0.293679753	50087.07938	670298.984	0.049864804	0.426619594	180481698.1	1.804816981	0.407968215	19.23425102	58.64759071	253.0907112	0.54037656	1057423.16	327986168.4	3.279861684	4.721888607
Skewness	3.687855267	-0.496019359	-0.496019359	4.995417253	2.315630763	-0.292963886	2.959124917	2.862935234	2.862935234	1.721313352	-0.217728979	1.019690742	1.411113753	-0.331317914	1.379450708	3.315489597	3.315489597	-0.103843438
Coefficient of Variation (CoV) 2	1.020587489	0.068980504	0.068980504	2.499636645	1.394120658	0.299207333	1.36611193	1.329947703	1.329947703	1.236411641	0.325867082	0.362651786	0.743038639	0.184690894	0.770043079	0.300547598	0.300547598	0.124694582
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Ge (ppm)	Hf (ppm)	Hg (ppm)	In (ppm)	K (ppm)	K (%)	La (ppm)	Li (ppm)	Mg (ppm)	Mg (%)	Mn (ppm)	Mo (ppm)	Na (ppm)	Na (%)	Nb (ppm)	Ni (ppm)	P (%)	Pb (ppm)
FIELD LEACH BARREL - Barrel 8 M-SI/SIH/SIL																		
Count	51	51	48	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Minimum	0.1	0.6	0.0	0.0	24200.0	2.4	2.3	3.7	600.0	0.1	215.0	0.6	2500.0	0.3	3.4	0.5	0.0	8.4
10 Percentile	0.07	0.7	0.01	0.019	33400	3.34	5.1	7.1	2300	0.23	329	1.28	8700	0.87	5.5	1.2	0.007	10.5
25 Percentile	0.09	0.9	0.02	0.027	38700	3.87	7.8	10.85	4550	0.455	608.5	2.84	14850	1.485	7.7	1.95	0.0375	15.25
Median-25Percentile	0.05	0.2	0	0.012	2200	0.22	2.3	11.45	4350	0.435	385.5	0.88	8650	0.865	1.3	3.75	0.0825	13.65
Mean	0.1	1.4	0.1	0.1	40366.7	4.0	12.1	26.8	8709.8	0.9	997.8	16.4	21182.4	2.1	8.9	14.8	0.1	79.6
Standard Deviation	0.062474908	0.781908075	0.365587189	0.051362415	4868.774725	0.486877472	9.991075987	18.46503851	5192.651478	0.519265148	507.3983123	40.27862381	9103.494392	0.910349439	2.587835679	15.15470877	0.056284586	213.6886122
Median	0.1	1.1	0.0	0.0	40900.0	4.1	10.1	22.3	8900.0	0.9	994.0	3.7	23500.0	2.4	9.0	5.7	0.1	28.9
75Percentile-Median	0.045	0.3	0.02	0.025	1750	0.175	4.75	19.45	3300	0.33	296	1.875	4900	0.49	1.05	19.7	0.0245	31.45
75 Percentile	0.185	1.4	0.04	0.064	42650	4.265	14.85	41.75	12200	1.22	1290	5.595	28400	2.84	10.05	25.4	0.1445	60.35
90 Percentile	0.21	2.9	0.129	0.102	45800	4.58	16.8	47.7	16000	1.6	1650	41.1	31400	3.14	11.8	37	0.151	139
Maximum	0.4	3.3	2.6	0.3	51600.0	5.2	74.5	86.1	22800.0	2.3	2300.0	257.0	42100.0	4.2	16.5	50.3	0.2	1535.0
Interquartile Range (IQR) 1	0.095	0.5	0.02	0.037	3950	0.395	7.05	30.9	7650	0.765	681.5	2.755	13550	1.355	2.35	23.45	0.107	45.1
Variance	0.003981176	0.623607843	0.136497695	0.00269086	24179066.67	0.241790667	101.8180314	347.7768	27502901.96	0.27502902	262602.1082	1654.814886	84531082.35	0.845310824	6.830831373	234.258502	0.003231314	46576.07944
Skewness	0.837571999	1.335282121	6.753666744	2.361985811	-0.753903168	-0.753903168	4.871544305	0.867272725	0.460364552	0.460364552	0.332056822	4.654604341	-0.37949159	-0.37949159	0.414736956	0.928405727	-0.444005515	6.402333552
Coefficient of Variation (CoV) 2	0.437067261	0.564035528	3.865239007	0.901405077	0.120613742	0.120613742	0.823041311	0.688993974	0.596184659	0.596184659	0.508505059	2.450388651	0.429767855	0.429767855	0.291667668	1.023288955	0.59295887	2.683737003
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 9 K-IARG																		
Count	53	53	52	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
Minimum	0.1	0.3	0.0	0.0	21800.0	2.2	2.0	2.6	2100.0	0.2	20.0	0.3	300.0	0.0	1.1	1.8	0.1	3.7
10 Percentile	0.162	0.5	0.011	0.0344	29760	2.976	3.12	5.02	3100	0.31	26.2	3.022	700	0.07	1.9	5.02	0.1272	5.78
25 Percentile	0.18	0.5	0.0275	0.053	33400	3.34	5.3	7.1	5300	0.53	41	5.68	800	0.08	3.1	6.1	0.149	8.7
Median-25Percentile	0.02	0.2	0.0575	0.028	3200	0.32	1.2	2.4	5400	0.54	555	6.82	1000	0.1	1.6	2	0.021	8.2
Mean	0.2	0.7	1.0	0.1	35954.7	3.6	6.6	10.5	9735.8	1.0	901.3	21.1	3275.5	0.3	4.5	10.8	0.2	24.2
Standard Deviation	0.054393972	0.257047341	2.610756624	0.099842207	5200.383369	0.520038337	2.519900149	5.129768488	4979.584522	0.497958452	1021.157068	25.81014226	4608.560765	0.460856076	2.027307347	6.724160886	0.062284022	28.69360986
Median	0.2	0.7	0.1	0.1	36600.0	3.7	6.5	9.5	10700.0	1.1	596.0	12.5	1800.0	0.2	4.7	8.1	0.2	16.9
75Percentile-Median	0.06	0.1	0.495	0.076	2900	0.29	1.8	4.3	2800	0.28	714	10.8	400	0.04	1.6	6	0.012	11.2
75 Percentile	0.26	0.8	0.58	0.157	39500	3.95	8.3	13.8	13500	1.35	1310	23.3	2200	0.22	6.3	14.1	0.182	28.1
90 Percentile	0.3	1.08	2.163	0.2632	41880	4.188	9.28	17.7	16540	1.654	2198	56.04	8400	0.84	7.18	20.96	0.198	47.06
Maximum	0.4	1.5	15.0	0.5	44500.0	4.5	15.0	27.3	18200.0	1.8	4870.0	132.0	25400.0	2.5	8.2	30.6	0.6	195.5
Interquartile Range (IQR) 1	0.08	0.3	0.5525	0.104	6100	0.61	3	6.7	8200	0.82	1269	17.62	1400	0.14	3.2	8	0.033	19.4
Variance	0.003015602	0.067343977	6.94969819	0.010160168	27564063.86	0.275640639	6.47201016	26.82057329	25273113.21	0.252731132	1062814.869	678.9742789	21647271.41	0.216472714	4.189013062	46.08384615	0.003953901	839.1563861
Skewness	0.764401536	0.823285813	4.186470898	1.47855661	-0.792014617	-0.792014617	0.448274227	0.961609335	-0.010893627	-0.010893627	1.684176576	2.528332721	3.013252644	3.013252644	-0.031005556	0.988266893	5.342941621	4.304916196
Coefficient of Variation (CoV) 2	0.2451429	0.349320746	2.605745574	0.813097263	0.144637027	0.144637027	0.379632484	0.488461606	0.511468953	0.511468953	1.132980063	1.223557728	1.406991478	1.406991478	0.446395054	0.622607489	0.360889162	1.188001971
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Rb (ppm)	Re (ppm)	S (ppm)	S (%)	Sb (ppm)	Sc (ppm)	Se (ppm)	Sn (ppm)	Sr (ppm)	Ta (ppm)	Te (ppm)	Th (ppm)	Ti (ppm)	Ti (%)	Tl (ppm)	U (ppm)	V (ppm)	W (ppm)
FIELD LEACH BARREL - Barrel 8 M-SI/SIH/SIL																		
Count	51	37	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Minimum	84.9	0.0	1500.0	0.2	0.8	0.3	2.0	0.8	62.5	0.3	0.2	1.4	420.0	0.0	0.5	1.6	70.0	1.9
10 Percentile	88.1	0.002	5000	0.5	1.9	0.7	3	1	138	0.32	0.23	1.8	490	0.049	0.64	1.9	133	2.4
25 Percentile	94.1	0.003	9050	0.905	2.265	5.55	4	1.1	175.75	0.38	0.34	2.1	1260	0.126	0.805	2.6	171.5	4.05
Median-25Percentile	12.9	0.003	7950	0.795	0.675	8.35	2	0.2	40.25	0.05	0.19	0.9	1070	0.107	0.335	0.9	79.5	1.15
Mean	109.7	0.0	20639.2	2.1	4.8	11.7	6.9	1.4	214.9	0.4	0.7	4.1	2067.1	0.2	1.3	4.6	336.4	7.0
Standard Deviation	17.78831245	0.074093982	15052.66674	1.505266674	5.164000227	6.879302715	4.746151236	0.506960396	60.40881646	0.094084962	0.515213606	2.840865895	1005.270999	0.1005271	0.539703309	3.116275441	211.638628	5.06181702
Median	107.0	0.0	17000.0	1.7	2.9	13.9	6.0	1.3	216.0	0.4	0.5	3.0	2330.0	0.2	1.1	3.5	251.0	5.2
75Percentile-Median	15.25	0.021	11900	1.19	1.79	3.85	3	0.4	41	0.045	0.29	1.95	520	0.052	0.47	2.3	242.5	2.95
75 Percentile	122.25	0.027	28900	2.89	4.73	17.75	9	1.7	257	0.475	0.82	4.95	2850	0.285	1.61	5.8	493.5	8.15
90 Percentile	133.5	0.1314	44700	4.47	9.36	19.1	13	2.2	283	0.55	1.31	10	3210	0.321	2.03	8.6	585	13.6
Maximum	163.0	0.3	59700.0	6.0	29.3	20.0	29.0	2.9	341.0	0.7	2.7	11.6	3320.0	0.3	2.6	17.7	1080.0	24.1
Interquartile Range (IQR) 1	28.15	0.024	19850	1.985	2.465	12.2	5	0.6	81.25	0.095	0.48	2.85	1590	0.159	0.805	3.2	322	4.1
Variance	322.7525412	0.005642416	231114431.4	2.311144314	27.20023631	48.27130196	22.97647059	0.26214902	3722.209608	0.00902902	0.270753961	8.231929412	1030781.176	0.010307812	0.297105255	9.905396078	45686.72706	26.13443137
Skewness	0.609776746	2.717904333	1.027263817	1.027263817	3.067297385	-0.587150228	2.24347103	1.231009614	-0.207686593	0.748161907	2.163210318	1.403171584	-0.534116246	-0.534116246	0.497278436	1.997701859	1.079387562	1.890693941
Coefficient of Variation (CoV) 2	0.162084639	1.94845582	0.729323583	0.729323583	1.081976959	0.587482315	0.683767551	0.349864414	0.281119939	0.216629031	0.765391608	0.686980373	0.486329168	0.486329168	0.424242737	0.677740075	0.629105906	0.720292042
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 9 K-IARG																		
Count	53	50	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
Minimum	50.5	0.0	800.0	0.1	0.5	12.9	1.0	0.7	15.8	0.1	0.1	0.6	740.0	0.1	0.9	0.3	156.0	1.0
10 Percentile	63.86	0.01	18140	1.814	2.628	18.62	8	1.1	28.9	0.122	0.218	1.2	852	0.0852	1.484	0.5	180.2	1.92
25 Percentile	77.1	0.015	28200	2.82	3.49	21	10	1.5	37.2	0.18	0.36	1.4	1110	0.111	1.84	0.6	205	2.7
Median-25Percentile	11.6	0.026	22800	2.28	2.31	1	3	0.5	38.4	0.13	0.35	0.2	750	0.075	0.27	0.1	8	1.2
Mean	87.7	0.1	48777.4	4.9	17.2	23.3	16.5	2.4	201.9	0.3	2.5	1.6	1775.3	0.2	2.0	0.8	215.8	4.3
Standard Deviation	17.20161082	0.091596701	24243.37016	2.424337016	37.77416649	5.592743735	8.766501503	1.145871907	265.2351968	0.134614675	10.54344799	0.432096069	656.2086753	0.065620868	0.38988127	0.261509706	28.73653662	2.178509228
Median	88.7	0.0	51000.0	5.1	5.8	22.0	13.0	2.0	75.6	0.3	0.7	1.6	1860.0	0.2	2.1	0.7	213.0	3.9
75Percentile-Median	9.9	0.039	12400	1.24	7.95	2.7	11	1.1	176.4	0.11	0.53	0.3	460	0.046	0.17	0.2	14	2.1
75 Percentile	98.6	0.08	63400	6.34	13.75	24.7	24	3.1	252	0.42	1.24	1.9	2320	0.232	2.28	0.9	227	6
90 Percentile	109.7	0.1728	81140	8.114	29.26	27.66	28.8	3.78	519.8	0.468	1.89	2.1	2560	0.256	2.548	1.1	252.2	7.36
Maximum	125.5	0.4	100000.0	10.0	201.0	48.0	35.0	5.9	1215.0	0.5	78.0	3.0	3060.0	0.3	2.8	1.5	325.0	10.4
Interquartile Range (IQR) 1	21.5	0.065	35200	3.52	10.26	3.7	14	1.6	214.8	0.24	0.88	0.5	1210	0.121	0.44	0.3	22	3.3
Variance	301.5857112	0.008561179	599043708.3	5.990437083	1454.327801	31.88029753	78.32946299	1.338272859	71702.58865	0.018469594	113.3020705	0.190297533	438890.7837	0.004388908	0.154930624	0.069702467	841.6690856	4.837169811
Skewness	-0.120788174	2.617754902	0.058180218	0.058180218	4.328704126	1.985717196	0.287985083	0.8831827	2.178749771	-0.063762621	7.141012094	0.350772584	-0.026430324	-0.026430324	-0.552747364	0.518209089	0.806008638	0.593067157
Coefficient of Variation (CoV) 2	0.196124637	1.261315076	0.497020973	0.497020973	2.202066549	0.239701939	0.532826353	0.48623868	1.31370815	0.443416891	4.292868892	0.264752505	0.369636091	0.369636091	0.192024043	0.343069664	0.133132556	0.503976382
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Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Y (ppm)	Zn (ppm)	Zr (ppm)	Al2O3 (%)	BaO (%)	CaO (%)	Cr2O3 (%)	Fe2O3 (%)	K2O (%)	MgO (%)	MnO (%)	Na2O (%)	P2O5 (%)	SiO2 (%)	SRO (%)	TiO2 (%)	LOI (%)	Total_DC (%)
FIELD LEACH BARREL - Barrel 8 M-SI/SIH/SIL																		
Count	51	51	51	51	51	51	25	51	51	51	51	51	51	51	51	51	51	51
Minimum	1.4	14.0	17.8	13.1	0.1	0.6	0.0	1.0	3.1	0.2	0.0	0.4	0.0	50.5	0.0	0.1	0.9	98.1
10 Percentile	2.4	21	21.4	13.92	0.13	1.23	0.01	1.53	4.35	0.49	0.05	1.33	0.026	54.55	0.02	0.09	2.18	98.7
25 Percentile	5.5	34.5	28.1	14.475	0.165	2.175	0.01	2.98	5.3	0.945	0.08	2.205	0.09	58.11	0.02	0.295	2.925	99.35
Median-25Percentile	4.4	26.5	7.1	0.565	0.095	1.035	0	1.18	0.98	0.755	0.06	1.035	0.176	1.72	0.01	0.175	1.295	0.41
Mean	10.1	199.0	43.9	15.3	0.3	3.1	0.0	4.3	6.4	1.6	0.1	3.0	0.2	60.3	0.0	0.4	4.3	99.5
Standard Deviation	5.472814221	883.3793955	24.92485932	1.159359718	0.187421854	1.304499002	0.0048	2.093878557	1.659732635	0.902957378	0.068808165	1.250806921	0.118001157	4.230843331	0.006809316	0.184788292	1.831496574	0.507866908
Median	9.9	61.0	35.2	15.0	0.3	3.2	0.0	4.2	6.3	1.7	0.1	3.2	0.3	59.8	0.0	0.5	4.2	99.8
75Percentile-Median	4.75	23.5	8.2	1.015	0.14	0.945	0.01	1.325	1.04	0.52	0.03	0.61	0.047	3.425	0	0.055	1.18	0.085
75 Percentile	14.65	84.5	43.4	16.055	0.4	4.155	0.02	5.485	7.32	2.22	0.17	3.85	0.313	63.255	0.03	0.525	5.4	99.845
90 Percentile	16.6	134	94.2	16.83	0.56	4.63	0.02	6.77	8.71	2.96	0.22	4.38	0.323	65.84	0.03	0.59	6.76	99.9
Maximum	24.8	6420.0	104.0	17.8	0.9	6.0	0.0	11.5	10.8	4.0	0.3	5.7	0.4	70.0	0.0	0.6	8.3	100.0
Interquartile Range (IQR) 1	9.15	50	15.3	1.58	0.235	1.98	0.01	2.505	2.02	1.275	0.09	1.645	0.223	5.145	0.01	0.23	2.475	0.495
Variance	30.55072941	795966.3396	633.6735843	1.370997255	0.03582949	1.735752	2.4E-05	4.472013961	2.809806667	0.831638667	0.004829255	1.595808314	0.014202758	18.258036	4.72941E-05	0.034829647	3.421467294	0.263087373
Skewness	0.070388924	7.054514985	1.314740155	0.259611377	1.209666751	-0.080240971	0.621247399	0.77296013	0.448006915	0.345377523	0.415492503	-0.41197026	-0.482874497	-0.029056125	0.209944207	-0.738200652	0.386400454	-1.412666792
Coefficient of Variation (CoV) 2	0.543762956	4.439529875	0.567713736	0.075703351	0.607661445	0.416772844	0.352941176	0.486172576	0.257855925	0.549466964	0.507846083	0.416391338	0.559143268	0.070151606	0.25724082	0.461292358	0.427567176	0.005103295
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FIELD LEACH BARREL - Barrel 9 K-IARG																		
Count	53	53	53	53	53	53	19	53	53	53	47	53	53	53	49	53	53	53
Minimum	3.1	11.0	9.1	12.3	0.1	0.0	0.0	5.8	2.8	0.5	0.0	0.1	0.2	45.8	0.0	0.3	3.4	92.0
10 Percentile	5.52	18.6	13.86	15.492	0.172	0.356	0.01	6.53	3.638	0.626	0.01	0.172	0.2808	53.784	0.01	0.44	4.866	98.88
25 Percentile	6.5	38	16.7	16.38	0.19	0.46	0.01	7.31	4.2	1.02	0.02	0.2	0.332	55.86	0.01	0.47	6.04	99.47
Median-25Percentile	1.3	63	5.4	0.89	0.03	0.12	0	0.76	0.51	1.08	0.07	0.12	0.039	1.89	0.01	0.04	0.79	0.27
Mean	8.0	112.5	23.0	16.9	0.3	1.4	0.0	8.7	4.6	1.9	0.1	0.5	0.4	57.2	0.0	0.5	6.8	99.4
Standard Deviation	2.255601784	85.84399322	8.673807977	1.360458611	0.148889804	1.887938784	1.73472E-18	2.577926427	0.734378889	0.910751219	0.140033948	0.637274926	0.132435394	3.058971177	0.032418803	0.09589176	1.556742818	1.123843625
Median	7.8	101.0	22.1	17.3	0.2	0.6	0.0	8.1	4.7	2.1	0.1	0.3	0.4	57.8	0.0	0.5	6.8	99.7
75Percentile-Median	1.5	57	4.2	0.34	0.04	0.97	0	1.3	0.5	0.46	0.105	0.09	0.028	1.5	0.01	0.08	0.79	0.08
75 Percentile	9.3	158	26.3	17.61	0.26	1.55	0.01	9.37	5.21	2.56	0.195	0.41	0.399	59.25	0.03	0.59	7.62	99.82
90 Percentile	10.78	227.8	32.1	17.974	0.332	3.43	0.01	10.736	5.508	3.094	0.308	1.214	0.4426	60.274	0.07	0.666	8.468	99.962
Maximum	13.8	344.0	51.7	20.5	1.1	10.5	0.0	23.0	6.0	3.4	0.7	3.6	1.3	62.2	0.2	0.8	11.6	100.0
Interquartile Range (IQR) 1	2.8	120	9.6	1.23	0.07	1.09	0	2.06	1.01	1.54	0.175	0.21	0.067	3.39	0.02	0.12	1.58	0.35
Variance	5.185580552	7510.906386	76.68177068	1.886440856	0.022594485	3.632857329	3.17645E-36	6.773506676	0.549683745	0.845419086	0.0200358	0.413929318	0.017876425	9.53725283	0.001072874	0.009372061	2.470052975	1.287313425
Skewness	0.313608697	1.040375206	1.147279313	-1.125392086	4.112350371	2.81997109	-1.087837765	3.475718797	-0.648844034	-0.049861437	1.670190824	3.029053692	5.450674732	-1.593168182	2.183912571	0.540624271	0.656554009	-5.76660766
Coefficient of Variation (CoV) 2	0.283488012	0.763377792	0.377897101	0.080429571	0.584963648	1.313305625	1.73472E-16	0.296712345	0.158039959	0.489750554	1.00790131	1.191378168	0.346569687	0.05348628	1.07332522	0.18035001	0.227820216	0.011302884
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Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Paste pH	Rinse pH	S_Total (%)	S_Sulphide (%)	S_S2_CALC (%)	S_S2_S_DEL CALC (%)	S_SO4_NA2CO 3 (%)	S_SO4_HCL (%)	S_BASO4 (%)	S_DEL (%)	S_DEL_CAL (%)	TAP (%)	SAP ($kg\ CaCO_3$ /t)	SAP (S Del Calc) ($kg\ CaCO_3$ /t)	NP ($kg\ CaCO_3$ /t)	NP_ADJ ($kg\ CaCO_3$ /t)	UNP	Total C (%)	Inorganic C (%)
FIELD LEACH BARREL - Barrel 10 S-SIH/SIL																			
Count	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Minimum	8.3	8.0	0.1	0.1	0.0	0.1	0.0	0.005	0.0	-0.2	0.0	4.1	2.5	2.5	18.0	3.0	15.0	0.2	0.1
10 Percentile	8.61	8.51	0.325	0.264	0.277	0.264	0.02	0.005	0.01522	-0.040978	0	10.156	8.25	8.25	33.3	18.3	15	0.28	0.191
25 Percentile	8.7	8.7	0.53	0.475	0.5175	0.475	0.02	0.005	0.018625	-0.0298525	0	16.56	14.84375	14.84375	41.5	26.5	15	0.4075	0.375
Median-25Percentile	0.2	0.15	0.895	0.87	0.8975	0.91771	0.01	0.0025	0.012765	0.0730975	0.043245	27.97	27.1875	28.6784375	20.5	20.5	0	0.2475	0.21
Mean	8.9	8.8	1.5	1.4	1.5	1.5	0.0	0.0171875	0.0	0.0	0.1	47.3	44.2	45.9	66.6	51.6	15.0	0.7	0.6
Standard Deviation	0.199780153	0.236841192	1.009044209	0.977325552	1.018554237	1.021625988	0.016576498	0.026720121	0.025147173	0.093130547	0.073168784	31.53505966	30.5414235	31.92581213	34.64990925	34.64990925	0	0.391561253	0.396879306
Median	8.9	8.9	1.4	1.3	1.4	1.4	0.0	0.0075	0.0	0.0	0.0	44.5	42.0	43.5	62.0	47.0	15.0	0.7	0.6
75Percentile-Median	0.1	0.05	0.815	0.785	0.81	0.82769	0.01	0.0125	0.03623	0.02649	0.02649	25.4725	24.53125	25.8653125	17.25	17.25	0	0.1675	0.2225
75 Percentile	9	8.9	2.24	2.13	2.225	2.2204	0.04	0.02	0.06762	0.069735	0.069735	70.0025	66.5625	69.3875	79.25	64.25	15	0.8225	0.8075
90 Percentile	9.09	8.99	2.781	2.69	2.771	2.754736	0.05	0.039	0.07741	0.12659	0.12659	86.911	84.0625	86.0855	101.5	86.5	15	1.048	1.004
Maximum	9.2	9.1	3.7	3.5	3.7	3.6	0.1	0.15	0.1	0.3	0.3	114.4	109.7	113.7	158.0	143.0	15.0	1.8	1.7
Interquartile Range (IQR) 1	0.3	0.2	1.71	1.655	1.7075	1.7454	0.02	0.015	0.048995	0.0995875	0.069735	53.4425	51.71875	54.54375	37.75	37.75	0	0.415	0.4325
Variance	0.041199597	0.057903226	1.051014415	0.985977016	1.070918952	1.077388036	0.000283644	0.000736996	0.00065278	0.008953083	0.00552637	1026.539342	962.8681798	1052.136754	1239.345766	1239.345766	0	0.158266028	0.162594254
Skewness	-0.910138185	-1.586359164	0.273242061	0.284796064	0.254271036	0.277854983	1.336312147	4.08355417	0.576179912	0.756668498	2.184165418	0.273487961	0.284796064	0.277854983	1.201541475	1.201541475	#DIV/0!	1.332817033	1.193431203
Coefficient of Variation (CoV) 2	0.022550141	0.027028952	0.666998857	0.691605875	0.682162737	0.695247679	0.51751017	1.554625197	0.612551986	2.391302513	1.2992359	0.667033684	0.691605875	0.695247679	0.520317736	0.671591215	0	0.565176369	0.628408599
NPR < 1.0 or NPR = 1.0																			
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FIELD LEACH BARREL - Barrel 11 S/K-CL																			
Count	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	46	48	48	48
Minimum	6.0	6.3	0.0	0.0	0.0	0.0	0.0	0.005	0.0	-0.1	0.0	0.9	0.6	0.6	0.0	0.0	0.0	0.0	0.0
10 Percentile	6.92	6.87	0.06	0.037	0.05	0.03708876	0.005	0.005	0.0010992	-0.061982	0	1.875	1.15625	1.15902375	9.4	0	9.4	0.027	0.025
25 Percentile	8.4	8.4	0.3925	0.3175	0.32	0.3175	0.01	0.005	0.00995	-0.031115	0	12.2625	9.921875	9.921875	28.75	17	15	0.21	0.1375
Median-25Percentile	0.3	0.2	1.1025	1.0225	1.155	1.1163	0.02	0.005	0.01222	0.07805	0.046935	34.4575	31.953125	34.884375	44.75	43	0	0.51	0.4975
Mean	8.4	8.4	2.6	2.3	2.5	2.5	0.1	0.054375	0.0	0.2	0.2	80.1	71.8	78.1	70.6	59.3	13.8	0.7	0.6
Standard Deviation	0.874918151	0.743580746	3.026854739	2.681905903	2.989567966	2.992364842	0.136541959	0.12406578	0.021236126	0.381772171	0.371270512	94.58469918	83.80955946	93.5114013	48.20723043	46.11887738	3.192806041	0.623807891	0.557207353
Median	8.7	8.6	1.5	1.3	1.5	1.4	0.0	0.01	0.0	0.0	0.0	46.7	41.9	44.8	73.5	60.0	15.0	0.7	0.6
75Percentile-Median	0.3	0.2	1.5825	1.655	1.5925	1.6243625	0.0325	0.0225	0.02264	0.139815	0.139815	49.46	51.71875	50.76132813	30	35.5	0	0.31	0.2875
75 Percentile	9	8.8	3.0775	2.995	3.0675	3.0581625	0.0625	0.0325	0.04481	0.18675	0.18675	96.18	93.59375	95.56757813	103.5	95.5	15	1.03	0.9225
90 Percentile	9.1	8.9	8.245	7.148	7.926	7.92501	0.203	0.13	0.059769	0.72589	0.72589	257.64	223.375	247.6565625	125.9	111.5	15	1.408	1.299
Maximum	9.3	9.2	10.1	9.4	9.9	9.9	0.8	0.75	0.1	1.6	1.6	315.6	292.5	309.0	206.0	191.0	15.0	2.8	2.8
Interquartile Range (IQR) 1	0.6	0.4	2.685	2.6775	2.7475	2.7406625	0.0525	0.0275	0.03486	0.217865	0.18675	83.9175	83.671875	85.64570313	74.75	78.5	0	0.82	0.785
Variance	0.781768617	0.564676418	9.35678258	7.345653723	9.127676551	9.144763246	0.019040381	0.015719814	0.000460568	0.148851054	0.140774597	9136.61139	7173.489964	8930.432858	2373.382535	2174.216425	10.41090426	0.39741578	0.317085993
Skewness	-1.703780881	-1.639706039	1.47370228	1.423766669	1.454038737	1.456589195	3.769462362	4.326100905	0.517458432	2.314697218	2.413318858	1.473742031	1.423766669	1.456589195	0.43297723	0.493180536	-2.901098748	1.397843134	1.322339748
Coefficient of Variation (CoV) 2	0.10377087	0.089029373	1.180347936	1.16668011	1.191755356	1.197362451	1.785834888	2.281669513	0.77063594	2.095144087	1.852828943	1.180291026	1.16668011	1.197362451	0.682378962	0.777664355	0.231153379	0.859930464	0.864445797
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Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
% 1.0 < NPR < 2.0 of Total																			
% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Inorganic CO2 (%)	C_DEL_CALC (%)	CANP_TTL (%)	CANP_INORG (%)	CANP_CA (%)	CANP_CAMG (%)	TNNP (kg $CaCO_3$ /t)	TNNP_ADJ (kg $CaCO_3$ /t)	SNNP (kg $CaCO_3$ /t)	SNNP_ADJ (kg $CaCO_3$ /t)	ICNNP (kg $CaCO_3$ /t)	TNPR	TNPR_ADJ	SNPR	SNPR(S DEL CALC)	SNPR for graphs	SNPR_ADJ for graphs	ICNPR	Fizz Rating
FIELD LEACH BARREL - Barrel 10 S-SIH/SIL																			
Count	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Minimum	0.3	-0.1	12.5	6.8	13.5	31.5	-78.3	-93.3	-77.5	-92.5	-89.4	-78.3	-93.3	0.2	0.2	0.2	0.0	0.1	2.0
10 Percentile	0.7	-0.029	23.334	15.9	23.495	68.092	-41.879	-56.879	-41.10915625	-56.114	-54.427	-41.879	-56.879	0.495782805	0.482549815	0.495782805	0.309544436	0.24073	2
25 Percentile	1.375	0	33.9525	31.25	38.46	81.3925	-29.195	-44.195	-28.17583594	-43.1775	-37.49	-29.195	-44.195	0.605311874	0.587035747	0.605311874	0.379231174	0.43655	2
Median-25Percentile	0.775	0.04	20.6325	17.65	20.105	11.2375	51.805	51.8175	52.54286719	52.5445	48.1845	51.805	51.8175	0.975586714	0.838892213	0.975586714	0.922478227	0.68845	0
Mean	2.3	0.1	57.7	52.8	59.0	104.0	19.3	4.3	20.7	5.7	5.5	19.3	4.3	4.3	4.3	4.3	3.4	2.9	2.5
Standard Deviation	1.457617384	0.111207857	32.6331386	33.18186741	30.507187	43.88188895	48.91009597	48.91016329	49.28357584	49.28458953	49.23681241	48.91009597	48.91016329	6.112032866	6.119589344	6.112032866	4.839766333	3.809602758	0.499022482
Median	2.2	0.0	54.6	48.9	58.6	92.6	22.6	7.6	24.4	9.4	10.7	22.6	7.6	1.6	1.4	1.6	1.3	1.1	2.0
75Percentile-Median	0.825	0.0425	13.9575	18.8	12.465	21.945	37.4225	37.41	37.14859375	37.148	39.353	37.4225	37.41	3.586930869	3.666321986	3.586930869	2.903910753	2.55375	1
75 Percentile	2.975	0.0825	68.5425	67.7	71.03	114.575	60.0325	45.0325	61.515625	46.515	50.0475	60.0325	45.0325	5.167829457	5.092249946	5.167829457	4.205620155	3.67875	3
90 Percentile	3.68	0.099	87.343	83.65	96.99	159.1	78.05	63.05	78.94546875	63.941	60.012	78.05	63.05	11.10669975	11.07479662	11.10669975	9.290322581	7.4868	3
Maximum	6.3	0.5	149.2	143.0	150.1	237.7	124.2	109.2	126.9	111.9	109.5	124.2	109.2	25.6	25.6	25.6	19.6	14.6	3.0
Interquartile Range (IQR) 1	1.6	0.0825	34.59	36.45	32.57	33.1825	89.2275	89.2275	89.69146094	89.6925	87.5375	89.2275	89.2275	4.562517584	4.505214199	4.562517584	3.826388981	3.2422	1
Variance	2.193185484	0.012766129	1099.274049	1136.553625	960.7106668	1987.736958	2469.365149	2469.371946	2507.22152	2507.324661	2502.465751	2469.365149	2469.371946	38.56200852	38.65741806	38.56200852	24.17892971	14.98123683	0.257056452
Skewness	1.191654143	3.02537493	1.332732589	1.191933412	1.034687953	1.484118044	-0.048573369	-0.048610619	-0.046899254	-0.046816193	-0.102833562	-0.048573369	-0.048610619	2.243610476	2.256202862	2.243610476	2.12895948	1.984246946	0.131490533
Coefficient of Variation (CoV) 2	0.628622052	1.815638485	0.565238101	0.629032687	0.517166839	0.421899405	2.532061747	11.32999294	2.383878519	8.686183268	9.013552537	2.532061747	11.32999294	1.407639811	1.426077575	1.407639811	1.416693277	1.318849092	0.202135689
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
NPR > 2.0 or NPR =2.0																			
Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
% 1.0 < NPR < 2.0 of Total																			
% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			
FIELD LEACH BARREL - Barrel 11 S/K-CL																			
Count	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	46	48	48
Minimum	0.1	0.0	0.8	4.6	9.5	18.3	-315.6	-330.6	-309.0	-324.0	-311.1	-315.6	-330.6	0.0	0.0	0.0	0.0	0.0	1.0
10 Percentile	0.17	-0.04	2.2501	4.55	13.758	46.016	-248.24	-263.24	-238.2565625	-253.26	-253.14	-248.24	-263.24	0.040664776	0.036222949	0.040664776	0.001	0.017708	1
25 Percentile	0.475	-0.02	17.5	10.825	35.335	80.535	-28.935	-43.935	-28.08796875	-43.085	-42.845	-28.935	-43.935	0.666798846	0.617740091	0.666798846	0.349688667	0.415075	2
Median-25Percentile	1.825	0.04	42.505	41.475	37.21	45.015	57.245	57.245	56.24421875	56.24	51.046	57.245	57.245	1.546837517	1.52512315	1.546837517	1.426763379	0.801925	0.5
Mean	2.4	0.1	60.5	54.0	64.7	118.7	-9.5	-24.5	-7.5	-22.5	-26.1	-9.5	-24.5	20.1	20.1	20.1	17.8	7.9	2.4
Standard Deviation	2.036795848	0.19476437	51.95979634	46.05632745	33.15021272	51.54866472	126.9586322	126.9587929	126.042812	126.0449183	122.542562	126.9586322	126.9587929	49.2043027	49.21229719	49.20429417	44.29509599	18.01601684	0.721387071
Median	2.3	0.0	60.0	52.3	72.5	125.6	28.3	13.3	28.2	13.2	8.2	28.3	13.3	2.2	2.1	2.2	1.8	1.2	2.5
75Percentile-Median	1.1	0.055	25.835	25	15.9175	35.775	35.32	35.32	36.521875	36.52	29.1115	35.32	35.32	3.794634935	3.845472953	3.794634935	3.096962258	2.67325	0.5
75 Percentile	3.4	0.075	85.84	77.3	88.4625	161.325	63.63	48.63	64.678125	49.675	37.3125	63.63	48.63	6.008271299	5.988336194	6.008271299	4.873414305	3.89025	3
90 Percentile	4.75	0.213	117.3	108.3	107.95	170.23	101.698	86.701	112.1747488	97.164	90.081	101.698	86.701	62.29333333	62.20384262	62.29333333	61.46666667	19.863	3
Maximum	10.2	1.0	235.8	232.0	123.1	238.0	190.7	175.7	191.6	176.6	216.7	190.7	175.7	227.2	227.2	227.2	203.2	78.6	3.0
Interquartile Range (IQR) 1	2.925	0.095	68.34	66.475	53.1275	80.79	92.565	92.565	92.76609375	92.76	80.1575	92.565	92.565	5.341472452	5.370596103	5.341472452	4.523725637	3.475175	1
Variance	4.236804078	0.038740248	2757.263424	2166.3169	1122.318233	2713.802384	16461.44098	16461.48265	16224.80727	16225.34954	15336.18332	16461.44098	16461.48265	2472.575392	2473.378922	2472.574534	2005.656763	331.4827535	0.531471631
Skewness	1.332581506	3.527126624	1.399175754	1.357532484	-0.202986037	-0.295142846	-1.257831064	-1.257820675	-1.233107081	-1.233121137	-1.0944557	-1.257831064	-1.257820675	3.140465852	3.141111214	3.140466393	3.137318768	3.047918289	-0.668864801
Coefficient of Variation (CoV) 2	0.861376218	2.499649665	0.859280908	0.852635083	0.512574359	0.434191521	-13.37205752	-5.183181564	-16.91398006	-5.613733229	-4.690350144	-13.37205752	-5.183181564	2.442371218	2.449441945	2.442368269	2.485899231	2.286629174	0.306429906
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
NPR > 2.0 or NPR =2.0																			
Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
% 1.0 < NPR < 2.0 of Total																			
% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Ag (ppm)	Al (ppm)	Al (%)	As (ppm)	Ba (ppm)	Be (ppm)	Bi (ppm)	Ca (ppm)	Ca (%)	Cd (ppm)	Ce (ppm)	Co (ppm)	Cr (ppm)	Cs (ppm)	Cu (ppm)	Fe (ppm)	Fe (%)	Ga (ppm)
FIELD LEACH BARREL - Barrel 10 S-SIH/SIL																		
Count	32	32	32	32	32	32	32	32	32	32	32	32	32	32	31	32	32	32
Minimum	0.1	65300.0	6.5	2.2	440.0	0.9	0.0	5400.0	0.5	0.0	17.5	4.4	3.0	3.1	143.0	18300.0	1.8	13.6
10 Percentile	0.228	67230	6.723	3.73	651	1.111	0.052	9410	0.941	0.03	18.295	6.31	4	3.391	225	24800	2.48	17.42
25 Percentile	0.3275	71425	7.1425	10.375	797.5	1.145	0.09	15400	1.54	0.06	20.925	7.975	5	4.405	400	26675	2.6675	18.3625
Median-25Percentile	0.1675	3125	0.3125	7.375	547.5	0.31	0.08	8050	0.805	0.08	2.425	8.275	21.5	1.525	750	5725	0.5725	2.2375
Mean	0.8	74518.8	7.5	24.4	1759.1	1.5	0.2	23621.9	2.4	1.8	26.3	17.5	30.8	6.5	1563.0	36165.6	3.6	20.1
Standard Deviation	0.673948255	4940.928398	0.49409284	20.42240555	1077.538745	0.37303849	0.169221563	12216.09426	1.221609426	4.155416258	8.160068551	11.08139629	28.16148675	2.829551022	1609.3322	12962.67742	1.296267742	2.371917716
Median	0.5	74550.0	7.5	17.8	1345.0	1.5	0.2	23450.0	2.3	0.1	23.4	16.3	26.5	5.9	1150.0	32400.0	3.2	20.6
75Percentile-Median	0.4225	2825	0.2825	15.9	1552.5	0.195	0.0975	5000	0.5	1.3775	8.4	7.625	12.75	1.4025	855	10025	1.0025	1.1
75 Percentile	0.9175	77375	7.7375	33.65	2897.5	1.65	0.2675	28450	2.845	1.5175	31.75	23.875	39.25	7.3325	2005	42425	4.2425	21.7
90 Percentile	1.556	79430	7.943	51.81	3317	2.045	0.455	38840	3.884	4.06	37.75	27.68	64.2	9.397	4620	51300	5.13	22.59
Maximum	3.1	89500.0	9.0	80.3	4060.0	2.4	0.7	60100.0	6.0	23.0	48.7	57.8	132.0	16.2	6270.0	82000.0	8.2	24.5
Interquartile Range (IQR) 1	0.59	5950	0.595	23.275	2100	0.505	0.1775	13050	1.305	1.4575	10.825	15.9	34.25	2.9275	1605	15750	1.575	3.3375
Variance	0.468858065	25200282.26	0.252002823	430.5286694	1198544.254	0.143646673	0.029559677	154046925.4	1.540469254	17.8244999	68.73467742	126.7585484	818.6522177	8.264628629	2676281.8	173451360.9	1.734513609	5.807477319
Skewness	1.896573582	0.452817585	0.452817585	1.25741415	0.576110351	0.504128586	1.444601471	1.034251362	1.034251362	4.412553044	1.12767086	1.498522256	1.65170098	1.596759746	1.621467296	1.536442747	1.536442747	-0.506530394
Coefficient of Variation (CoV) 2	0.878108475	0.066304499	0.066304499	0.835913248	0.612564218	0.253283082	0.782527461	0.517151761	0.517151761	2.334093738	0.309826998	0.631868641	0.913037058	0.43779921	1.029643122	0.358425367	0.358425367	0.117740428
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 11 S/K-CL																		
Count	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Minimum	0.1	50200.0	5.0	2.0	30.0	0.4	0.0	3800.0	0.4	0.0	1.3	7.1	2.0	1.2	3.7	25400.0	2.5	12.1
10 Percentile	0.097	66200	6.62	4.77	47	0.694	0.06	5510	0.551	0.047	4.729	9.31	3	1.621	53.26	34810	3.481	14.7
25 Percentile	0.475	70650	7.065	9.725	427.5	0.8675	0.125	14150	1.415	0.06	13.6	13.075	7	1.93	178.625	38950	3.895	16.3375
Median-25Percentile	0.22	3250	0.325	7.375	522.5	0.1525	0.125	14900	1.49	0.05	3.525	3.725	17	1.33	748.875	11700	1.17	1.7625
Mean	1.2	73112.5	7.3	71.5	1180.8	1.1	0.6	25897.9	2.6	2.9	16.8	18.0	40.6	3.7	1442.5	54625.0	5.5	17.7
Standard Deviation	1.833437296	6451.021398	0.64510214	190.7661613	909.8736939	0.383927924	0.684224013	13275.91004	1.327591004	11.61937546	7.803288166	7.043340223	46.08770323	2.367376938	1589.018866	19021.16694	1.902116694	2.228406218
Median	0.7	73900.0	7.4	17.1	950.0	1.0	0.3	29050.0	2.9	0.1	17.1	16.8	24.0	3.3	927.5	50650.0	5.1	18.1
75Percentile-Median	0.285	3175	0.3175	21.875	970	0.23	0.6625	6375	0.6375	0.175	4.175	5.325	28	0.625	1237.5	16950	1.695	0.8125
75 Percentile	0.98	77075	7.7075	38.975	1920	1.25	0.9125	35425	3.5425	0.285	21.3	22.125	52	3.885	2165	67600	6.76	18.9125
90 Percentile	1.767	79720	7.972	115.55	2561	1.465	1.681	43220	4.322	2.831	24.28	29.43	93.5	6.746	4006	84660	8.466	20.55
Maximum	9.3	83000.0	8.3	1190.0	3260.0	2.4	2.5	49300.0	4.9	73.6	43.1	32.3	223.0	12.1	6090.0	99800.0	10.0	22.2
Interquartile Range (IQR) 1	0.505	6425	0.6425	29.25	1492.5	0.3825	0.7875	21275	2.1275	0.225	7.7	9.05	45	1.955	1986.375	28650	2.865	2.575
Variance	3.433013431	42501117.02	0.42501117	37166.02041	845484.3972	0.150536835	0.478123404	179999782.8	1.799997828	137.8824368	62.18686591	50.6641445	2169.269504	5.723717686	2578703.956	369502766	3.69502766	5.071449468
Skewness	3.602305233	-1.482312017	-1.482312017	4.810726713	0.517291872	1.281543536	1.422855084	-0.202901558	-0.202901558	5.384748731	0.377890582	0.501586671	1.916758137	1.783880758	1.280500597	0.636267519	0.636267519	-0.423385398
Coefficient of Variation (CoV) 2	1.571237104	0.088234179	0.088234179	2.667281021	0.770535238	0.357766266	1.12167871	0.512624633	0.512624633	4.060056941	0.463659225	0.390438077	1.135631291	0.641239733	1.101607873	0.348213582	0.348213582	0.125676769
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Ge (ppm)	Hf (ppm)	Hg (ppm)	In (ppm)	K (ppm)	K (%)	La (ppm)	Li (ppm)	Mg (ppm)	Mg (%)	Mn (ppm)	Mo (ppm)	Na (ppm)	Na (%)	Nb (ppm)	Ni (ppm)	P (%)	Pb (ppm)
FIELD LEACH BARREL - Barrel 10 S-SIH/SIL																		
Count	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Minimum	0.1	0.5	0.0	0.0	23400.0	2.3	8.6	6.1	3000.0	0.3	237.0	2.9	300.0	0.0	1.9	2.8	0.0	3.8
10 Percentile	0.13	0.7	0.02	0.0381	33820	3.382	9.9	9.39	6720	0.672	371.6	6.591	5070	0.507	3.61	3.27	0.079	4.5
25 Percentile	0.13	0.8	0.03	0.042	41250	4.125	10.15	12.85	8600	0.86	628	13.5375	7225	0.7225	4.2	4.675	0.0945	6.925
Median-25Percentile	0.02	0.6	0.02	0.0285	4500	0.45	2.3	5.1	2800	0.28	109	14.7125	8025	0.8025	2.1	10.425	0.0065	8.425
Mean	0.2	1.3	0.2	0.1	43709.4	4.4	14.0	20.1	12703.1	1.3	855.6	69.1	14784.4	1.5	6.6	21.6	0.1	46.3
Standard Deviation	0.029959282	0.442107435	0.334738121	0.123829074	6973.044501	0.69730445	4.923341051	10.11857821	5842.328537	0.584232854	455.6817598	131.8820882	7905.540358	0.790554036	2.505351694	18.79863692	0.031408535	66.26441087
Median	0.2	1.4	0.1	0.1	45750.0	4.6	12.5	18.0	11400.0	1.1	737.0	28.3	15250.0	1.5	6.3	15.1	0.1	15.4
75Percentile-Median	0.03	0.2	0.12	0.061	2700	0.27	4.325	6.525	4850	0.485	174.25	27.325	6475	0.6475	2.45	16.275	0.025	49.825
75 Percentile	0.18	1.6	0.17	0.1315	48450	4.845	16.775	24.475	16250	1.625	911.25	55.575	21725	2.1725	8.75	31.375	0.126	65.175
90 Percentile	0.19	1.7	0.266	0.2487	50490	5.049	22.45	31.98	18310	1.831	1531	119.8	25230	2.523	10	46.28	0.1515	109.44
Maximum	0.2	2.2	1.6	0.7	52700.0	5.3	27.7	55.5	33500.0	3.4	2200.0	735.0	28800.0	2.9	10.6	81.2	0.2	329.0
Interquartile Range (IQR) 1	0.05	0.8	0.14	0.0895	7200	0.72	6.625	11.625	7650	0.765	283.25	42.0375	14500	1.45	4.55	26.7	0.0315	58.25
Variance	0.000926512	0.201764113	0.115664113	0.015828273	50191844.76	0.501918448	25.0211996	105.6883871	35233860.89	0.352338609	214344.12	17953.94599	64513618.95	0.64513619	6.479264113	364.7883871	0.001018319	4532.616411
Skewness	0.444714142	-0.208892409	3.360068276	3.013165806	-1.190317052	-1.190317052	1.236249499	1.36080547	1.304561798	1.304561798	1.506083243	4.342579624	0.080728099	0.080728099	0.12824666	1.191787561	1.072997929	2.824140636
Coefficient of Variation (CoV) 2	0.191356693	0.345903128	1.853221429	1.064910072	0.159532011	0.159532011	0.352690651	0.502786495	0.459912702	0.459912702	0.532591268	1.90990737	0.534722662	0.534722662	0.381949758	0.869301129	0.285369998	1.430617425
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 11 S/K-CL																		
Count	48	48	46	48	48	48	47	48	48	48	48	48	48	48	48	48	48	48
Minimum	0.1	0.2	0.0	0.0	6800.0	0.7	1.1	2.1	2000.0	0.2	57.0	0.1	400.0	0.0	1.7	1.1	0.1	2.9
10 Percentile	0.11	0.4	0.02	0.0514	27170	2.717	2.34	9.48	7210	0.721	242.5	1.199	1070	0.107	2.51	3.48	0.092	3.94
25 Percentile	0.12	0.6	0.03	0.06475	30775	3.0775	6.3	14.775	10775	1.0775	627.25	1.9375	1300	0.13	3.875	9.275	0.115	5.525
Median-25Percentile	0.02	0.2	0.025	0.05275	3825	0.3825	1.9	4.325	3425	0.3425	336.75	3.0175	7950	0.795	2.325	8.025	0.028	3.175
Mean	0.2	0.8	0.4	0.2	35891.7	3.6	8.3	19.7	15564.6	1.6	1579.9	21.3	12043.8	1.2	6.3	24.3	0.2	227.5
Standard Deviation	0.051146576	0.37688761	1.102228217	0.15968215	8668.785799	0.86687858	4.115741733	10.40121437	7778.294843	0.777829484	3449.587677	45.02092069	10638.54835	1.063854835	2.898200471	20.91146972	0.049257292	972.7160488
Median	0.1	0.8	0.1	0.1	34600.0	3.5	8.2	19.1	14200.0	1.4	964.0	5.0	9250.0	0.9	6.2	17.3	0.1	8.7
75Percentile-Median	0.02	0.3	0.095	0.085	8800	0.88	2.2	4.35	5800	0.58	521	16.345	12800	1.28	2.325	22	0.047	17.825
75 Percentile	0.16	1.1	0.15	0.2025	43400	4.34	10.4	23.45	20000	2	1485	21.3	22050	2.205	8.525	39.3	0.19	26.525
90 Percentile	0.243	1.33	0.74	0.2899	47400	4.74	12.02	29.59	22460	2.246	1840	47.29	26760	2.676	10.42	49.23	0.2213	117.5
Maximum	0.3	1.8	6.8	1.0	49900.0	5.0	24.5	68.9	40300.0	4.0	24800.0	287.0	32800.0	3.3	12.0	84.5	0.3	5520.0
Interquartile Range (IQR) 1	0.04	0.5	0.12	0.13775	12625	1.2625	4.1	8.675	9225	0.9225	857.75	19.3625	20750	2.075	4.65	30.025	0.075	21
Variance	0.002671631	0.145066489	1.241904976	0.026040908	76746737.59	0.767467376	17.30757632	110.4870745	61789144.5	0.617891445	12152839.29	2070.008477	115586768.6	1.155867686	8.578280142	446.5935993	0.002477904	966307.9268
Skewness	1.458406574	0.500712388	4.621853461	3.648828272	-0.625425265	-0.625425265	0.988206497	2.017084422	1.007932195	1.007932195	6.546590503	4.653056347	0.440586457	0.440586457	0.181742585	1.228727243	0.400217083	4.876770867
Coefficient of Variation (CoV) 2	0.328213321	0.446681612	2.70125189	0.984679237	0.241526421	0.241526421	0.498042898	0.528315651	0.49974321	0.49974321	2.183369707	2.117137112	0.883325239	0.883325239	0.459727768	0.858934235	0.322778159	4.276536513
NPR < 1.0 or NPR = 1.0																		
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Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Rb (ppm)	Re (ppm)	S (ppm)	S (%)	Sb (ppm)	Sc (ppm)	Se (ppm)	Sn (ppm)	Sr (ppm)	Ta (ppm)	Te (ppm)	Th (ppm)	Ti (ppm)	Ti (%)	Tl (ppm)	U (ppm)	V (ppm)	W (ppm)
FIELD LEACH BARREL - Barrel 10 S-SIH/SIL																		
Count	32	32	32	32	32	32	32	32	32	32	24	32	32	32	32	32	32	32
Minimum	84.5	0.0	1300.0	0.1	2.8	7.3	2.0	0.3	101.5	0.1	0.1	2.0	1040.0	0.1	0.7	1.2	83.0	3.5
10 Percentile	94.15	0.0173	3730	0.373	3.364	7.71	2	1.3	124.85	0.22	0.06	2.51	1736	0.1736	0.743	1.33	131.3	5.01
25 Percentile	102.4	0.0265	5750	0.575	5.1725	8.275	3	1.4	173.625	0.2975	0.085	3.175	2027.5	0.20275	0.8775	1.9	139.75	6.1
Median-25Percentile	15.35	0.036	9400	0.94	3.2275	5.425	2	0.45	52.875	0.1025	0.045	0.725	382.5	0.03825	0.5025	0.5	16.25	2.95
Mean	125.8	0.1	15740.6	1.6	17.5	13.6	6.6	2.3	243.8	0.4	0.2	3.7	2523.4	0.3	1.5	3.1	172.8	16.3
Standard Deviation	30.39933632	0.383086967	10214.50743	1.021450743	40.79162456	5.59439504	4.801936458	1.672946502	93.91193176	0.12439502	0.095712787	0.813340911	716.0115632	0.071601156	0.71197397	1.856228956	70.77284718	22.00017667
Median	117.8	0.1	15150.0	1.5	8.4	13.7	5.0	1.9	226.5	0.4	0.1	3.9	2410.0	0.2	1.4	2.4	156.0	9.1
75Percentile-Median	31.875	0.02325	8175	0.8175	2.775	3.1	3	0.45	98.25	0.1225	0.0525	0.325	800	0.08	0.5325	1.325	25.5	3.525
75 Percentile	149.625	0.08575	23325	2.3325	11.175	16.8	8	2.3	324.75	0.5225	0.1825	4.225	3210	0.321	1.9125	3.725	181.5	12.575
90 Percentile	165.85	0.1583	28620	2.862	15.945	17.98	11	4.36	371.3	0.539	0.257	4.49	3529	0.3529	2.483	5.03	232.5	38.36
Maximum	208.0	2.2	38500.0	3.9	238.0	29.6	23.0	9.2	439.0	0.6	0.4	5.2	3740.0	0.4	3.3	9.7	508.0	99.5
Interquartile Range (IQR) 1	47.225	0.05925	17575	1.7575	6.0025	8.525	5	0.9	151.125	0.225	0.0975	1.05	1182.5	0.11825	1.035	1.825	41.75	6.475
Variance	953.9299597	0.151489676	107701844.8	1.077018448	1717.632654	32.30684476	23.80241935	2.889032258	9103.949345	0.015973286	0.009559239	0.682862903	529210.3831	0.005292104	0.52325877	3.556733871	5170.36996	499.6209274
Skewness	0.804040674	5.302548458	0.261954422	0.261954422	5.187606396	1.121670175	1.775190192	2.660109659	0.279907578	-0.238685525	1.533449383	-0.519710662	0.140400286	0.140400286	0.857943599	1.940187988	3.489249198	2.994042373
Coefficient of Variation (CoV) 2	0.241708185	2.687740174	0.64892642	0.64892642	2.333366676	0.410315474	0.731723651	0.719546883	0.385205642	0.322319081	0.632811812	0.220941504	0.28374452	0.28374452	0.474155401	0.607355078	0.409609533	1.347121419
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 11 S/K-CL																		
Count	48	38	48	48	48	48	48	48	48	48	40	48	48	48	48	48	48	48
Minimum	19.2	0.0	300.0	0.0	0.5	8.9	1.0	0.7	51.7	0.1	0.1	0.8	880.0	0.1	0.4	0.3	104.0	0.8
10 Percentile	58.77	0.002	670	0.067	1.108	11.61	2	0.9	105.15	0.15	0.069	1	1522	0.1522	0.49	0.6	115.1	0.97
25 Percentile	74.875	0.00325	4175	0.4175	2.5025	15.15	2	1.2	167.875	0.24	0.11	1.275	2230	0.223	0.75	0.775	152.5	2.375
Median-25Percentile	11.775	0.01225	10425	1.0425	1.3875	5	2	0.35	196.625	0.14	0.155	0.525	1010	0.101	0.505	0.675	55.5	4.625
Mean	90.7	0.1	25341.7	2.5	6.0	20.1	7.4	1.6	321.0	0.4	0.4	1.9	3084.8	0.3	1.3	1.6	220.9	8.7
Standard Deviation	29.75898141	0.126115106	29523.64754	2.952364754	5.711519412	6.192661638	8.422749452	0.55969982	166.0558293	0.149131164	0.490443103	0.797062206	1070.87579	0.107087579	0.576014805	1.355414489	82.18186768	9.606521765
Median	86.7	0.0	14600.0	1.5	3.9	20.2	4.0	1.6	364.5	0.4	0.3	1.8	3240.0	0.3	1.3	1.5	208.0	7.0
75Percentile-Median	17.725	0.10075	16400	1.64	4.58	4.725	3.25	0.35	69	0.09	0.2225	0.9	620	0.062	0.5475	0.375	53.25	3.1
75 Percentile	104.375	0.11625	31000	3.1	8.47	24.875	7.25	1.9	433.5	0.47	0.4875	2.7	3860	0.386	1.8025	1.825	261.25	10.1
90 Percentile	131.35	0.1683	82570	8.257	11.545	27.38	21.6	2.43	528	0.549	0.799	3	4382	0.4382	2.002	2.3	358.5	15.72
Maximum	184.0	0.7	99400.0	9.9	27.9	35.2	32.0	3.1	670.0	0.7	2.8	4.0	4960.0	0.5	2.4	9.3	413.0	51.4
Interquartile Range (IQR) 1	29.5	0.113	26825	2.6825	5.9675	9.725	5.25	0.7	265.625	0.23	0.3775	1.425	1630	0.163	1.0525	1.05	108.75	7.725
Variance	904.4394637	0.016334885	890191418.4	8.901914184	33.31552748	39.16499557	72.45212766	0.319929078	28161.23074	0.022713298	0.246701987	0.648825355	1171174.424	0.011711744	0.338852482	1.876236702	6897.558511	94.2487766
Skewness	0.789076477	3.981446562	1.468295909	1.468295909	2.035632035	0.089475966	1.920936255	0.566815515	0.060415527	0.054200016	3.355082088	0.466727857	-0.373520374	-0.373520374	0.109241612	4.031489282	0.565825957	2.701771932
Coefficient of Variation (CoV) 2	0.328246687	1.774296204	1.165023908	1.165023908	0.951061305	0.308700549	1.142067722	0.351643866	0.517270951	0.412819832	1.208732232	0.410945068	0.347146876	0.347146876	0.460198246	0.864009236	0.372074104	1.102613689
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Y (ppm)	Zn (ppm)	Zr (ppm)	Al2O3 (%)	BaO (%)	CaO (%)	Cr2O3 (%)	Fe2O3 (%)	K2O (%)	MgO (%)	MnO (%)	Na2O (%)	P2O5 (%)	SiO2 (%)	SRO (%)	TiO2 (%)	LOI (%)	Total_DC (%)
FIELD LEACH BARREL - Barrel 10 S-SIH/SIL																		
Count	32	32	32	32	32	32	15	32	32	32	32	32	32	32	32	32	32	32
Minimum	7.1	15.0	13.8	12.6	0.1	0.8	0.0	2.7	2.9	0.6	0.0	0.1	0.1	46.6	0.0	0.3	3.1	98.4
10 Percentile	7.6	20.1	19.11	13.929	0.09	1.373	0.01	3.423	4.166	1.4	0.052	0.768	0.1672	54.591	0.02	0.351	3.812	98.569
25 Percentile	7.85	24	23.55	15.4225	0.1275	2.1825	0.01	3.855	5.13	1.655	0.09	1.0425	0.1985	56.08	0.02	0.36	4.13	98.995
Median-25Percentile	4.1	46	12.6	0.6675	0.0875	1.1075	0	0.915	0.74	0.46	0.01	1.1275	0.027	2.52	0.01	0.19	0.455	0.715
Mean	12.6	174.8	34.9	16.0	0.2	3.3	0.0	5.3	5.9	2.4	0.1	2.1	0.2	58.4	0.0	0.5	4.9	99.4
Standard Deviation	4.949810602	317.9197029	12.8169794	1.466998124	0.113645213	1.720574685	0.004	2.023158113	1.457846094	1.048156445	0.062960026	1.09429415	0.071505729	4.524293874	0.011726039	0.136610403	1.242738753	0.510759143
Median	12.0	70.0	36.2	16.1	0.2	3.3	0.0	4.8	5.9	2.1	0.1	2.2	0.2	58.6	0.0	0.6	4.6	99.7
75Percentile-Median	3.7	182.5	9.975	0.755	0.1275	0.68	0	1.51	0.9925	0.91	0.0225	0.85	0.0595	1.8325	0.01	0.08	0.6575	0.1125
75 Percentile	15.65	252.5	46.125	16.845	0.3425	3.97	0.01	6.28	6.8625	3.025	0.1225	3.02	0.285	60.4325	0.04	0.63	5.2425	99.8225
90 Percentile	18.87	308.3	48.92	17.501	0.389	5.435	0.02	7.426	7.707	3.558	0.209	3.625	0.3426	63.949	0.04	0.67	7.041	99.867
Maximum	26.6	1820.0	60.5	19.6	0.5	8.2	0.0	12.7	9.5	6.1	0.3	3.9	0.5	68.4	0.1	0.7	8.3	100.0
Interquartile Range (IQR) 1	7.8	228.5	22.575	1.4225	0.215	1.7875	0	2.425	1.7325	1.37	0.0325	1.9775	0.0865	4.3525	0.02	0.27	1.1125	0.8275
Variance	25.29096774	104333.3548	169.5741532	2.221505544	0.013331855	3.055873286	1.71429E-05	4.225206452	2.19387379	1.134071673	0.004091835	1.236108065	0.005278007	21.12953296	0.000141935	0.019264415	1.594218952	0.269290222
Skewness	0.951350056	4.516978396	0.024081498	-0.208334776	0.383002327	1.020263224	1.672081932	1.70582289	0.18850503	1.278046249	1.510460165	0.059988303	0.982942312	-0.413839781	-2.24241E-15	-0.127575031	1.197230877	-0.718184382
Coefficient of Variation (CoV) 2	0.392064206	1.819282992	0.367709647	0.091865012	0.487486167	0.518099086	0.333333333	0.383537083	0.245144903	0.438272654	0.537258886	0.522647952	0.296512031	0.077528451	0.39086798	0.270348356	0.253135838	0.005138697
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		
FIELD LEACH BARREL - Barrel 11 S/K-CL																		
Count	48	47	48	48	48	48	21	48	48	48	48	48	48	48	48	48	48	48
Minimum	3.8	10.0	5.0	9.8	0.1	0.5	0.0	3.8	0.9	0.4	0.0	0.1	0.2	47.0	0.0	0.2	2.0	98.2
10 Percentile	7.78	26.6	10.67	13.003	0.11	0.756	0.01	5.301	3.492	1.384	0.03	0.21	0.2175	50.487	0.017	0.464	3.658	98.358
25 Percentile	9.125	35	14.275	14.595	0.1575	1.965	0.01	5.7125	3.9525	2.1275	0.09	0.2525	0.25675	51.77	0.02	0.5575	4.5025	98.6625
Median-25Percentile	1.875	32	7.875	1.295	0.0975	2.16	0	1.8175	0.4675	0.5525	0.045	1.0375	0.05725	2.67	0.02	0.0675	0.9975	0.6925
Mean	11.1	305.4	25.6	15.6	0.3	3.7	0.0	8.0	4.8	2.9	0.2	1.7	0.3	55.0	0.0	0.6	5.9	99.2
Standard Deviation	2.960641705	962.7234583	13.77784664	1.903585148	0.126340039	1.953905944	0.007315377	2.737095448	1.549273337	1.390521469	0.4729414	1.470345705	0.109128172	4.591379831	0.018800857	0.144678613	1.970437229	0.590384762
Median	11.0	67.0	22.2	15.9	0.3	4.1	0.0	7.5	4.4	2.7	0.1	1.3	0.3	54.4	0.0	0.6	5.5	99.4
75Percentile-Median	2.325	62.5	8.775	1.175	0.0875	0.9075	0.01	2.0025	1.15	1.0325	0.075	1.8875	0.097	2.7825	0.01	0.0975	1.6875	0.455
75 Percentile	13.325	129.5	30.925	17.065	0.3425	5.0325	0.02	9.5325	5.57	3.7125	0.21	3.1775	0.411	57.2225	0.05	0.7225	7.1875	99.81
90 Percentile	14.5	347.2	44.68	17.521	0.44	6.268	0.02	12.11	6.891	4.246	0.253	3.669	0.4874	60.171	0.06	0.833	8.787	99.91
Maximum	18.2	5490.0	62.5	18.8	0.6	7.1	0.0	15.0	8.9	7.1	3.4	4.8	0.6	70.1	0.1	0.9	9.8	100.1
Interquartile Range (IQR) 1	4.2	94.5	16.65	2.47	0.185	3.0675	0.01	3.82	1.6175	1.585	0.12	2.925	0.15425	5.4525	0.03	0.165	2.685	1.1475
Variance	8.951897163	946985.0759	193.8679743	3.700735062	0.016301418	3.898977128	5.61905E-05	7.651089184	2.451316977	1.974689317	0.22843258	2.207914716	0.01216234	21.52929574	0.000360993	0.021377261	3.965231871	0.355970213
Skewness	-0.006416876	4.724457261	0.814576188	-0.958682305	0.59750251	-0.169730239	2.056991111	0.666737743	0.672863901	0.772255104	6.536572233	0.467147084	0.551311089	1.079901419	-0.030930966	-0.067744252	0.385746502	-0.332817118
Coefficient of Variation (CoV) 2	0.266624394	3.152072626	0.539030597	0.122395734	0.469374759	0.523309258	0.49555779	0.340628938	0.320084019	0.475358098	2.168212721	0.851346126	0.321102939	0.083422754	0.48002188	0.226724565	0.33588191	0.00594966
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
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% NPR < 1.0 or NPR = 1.0 of Total																		
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% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Paste pH	Rinse pH	S_Total (%)	S_Sulphide (%)	S_S2_CALC (%)	S_S2_S_DEL CALC (%)	S_SO4_NA2CO 3 (%)	S_SO4_HCL (%)	S_BASO4 (%)	S_DEL (%)	S_DEL_CAL (%)	TAP (%)	SAP (kg $CaCO_3$ /t)	SAP (S Del Calc) (kg $CaCO_3$ /t)	NP (kg $CaCO_3$ /t)	NP_ADJ (kg $CaCO_3$ /t)	UNP	Total C (%)	Inorganic C (%)
FIELD LEACH BARREL - Barrel 12 M-KP																			
Count	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Minimum	6.8	7.1	0.6	0.5	0.6	0.5	0.0	0.005	0.0	0.0	0.0	18.1	14.4	16.9	9.0	0.0	9.0	0.0	0.0
10 Percentile	8.3	8.3	0.73	0.61	0.72	0.69993	0.02	0.005	0.00583	0.0818	0.0818	22.81	19.0625	21.8728125	11	0	11	0.05	0.025
25 Percentile	8.55	8.5	1.275	0.95	1.24	1.1903	0.02	0.005	0.00945	0.14505	0.14505	39.845	29.6875	37.196875	17.5	2.5	15	0.135	0.095
Median-25Percentile	0.35	0.4	1.015	0.95	1.04	1.0603	0.01	0	0.01065	0.08205	0.08205	31.715	29.6875	33.134375	22.5	22.5	0	0.175	0.185
Mean	8.7	8.7	2.3	2.0	2.3	2.2	0.1	0.022419355	0.0	0.3	0.3	71.7	62.2	70.2	47.5	33.5	14.1	0.5	0.4
Standard Deviation	0.49112837	0.421927592	1.19852806	1.133908273	1.192325878	1.202824071	0.050662623	0.036074988	0.015707013	0.174330076	0.174330076	37.459889	35.43463352	37.58825221	45.03965186	44.32274499	1.906776349	0.509816437	0.500123918
Median	8.9	8.9	2.3	1.9	2.3	2.3	0.0	0.005	0.0	0.2	0.2	71.6	59.4	70.3	40.0	25.0	15.0	0.3	0.3
75Percentile-Median	0.2	0.1	0.84	0.95	0.84	0.8576	0.03	0.005	0.009075	0.0829	0.0829	26.26	29.6875	26.8	17.5	17.5	0	0.285	0.25
75 Percentile	9.1	9	3.13	2.85	3.12	3.1082	0.06	0.01	0.029175	0.31	0.31	97.82	89.0625	97.13125	57.5	42.5	15	0.595	0.53
90 Percentile	9.1	9	4.13	3.59	4.11	4.1002	0.12	0.09	0.03804	0.5537	0.5537	129.1	112.1875	128.13125	78	63	15	0.91	0.86
Maximum	9.3	9.1	4.4	4.2	4.4	4.4	0.2	0.14	0.1	0.6	0.6	137.2	130.9	136.8	241.0	226.0	15.0	2.7	2.6
Interquartile Range (IQR) 1	0.55	0.5	1.855	1.9	1.88	1.9179	0.04	0.005	0.019725	0.16495	0.16495	57.975	59.375	59.934375	40	40	0	0.46	0.435
Variance	0.249247312	0.183956989	1.484351828	1.328606237	1.469029032	1.495011936	0.002652258	0.001344785	0.000254934	0.031404008	0.031404008	1450.01806	1297.467028	1459.972594	2096.189247	2029.989247	3.756989247	0.268576559	0.258461398
Skewness	-2.166505661	-2.161056361	0.261185851	0.372394611	0.268959241	0.272809331	1.969317235	2.254598774	1.073301952	0.853275343	0.853275343	0.261475959	0.372394611	0.272809331	2.789721784	2.903190216	-1.877721573	2.843292289	2.946296945
Coefficient of Variation (CoV) 2	0.056139305	0.048533415	0.522418024	0.569987943	0.525477711	0.535327527	0.929314383	1.609100201	0.709285509	0.676907737	0.676907737	0.522471929	0.569987943	0.535327527	0.947238268	1.324980805	0.135263311	1.109074354	1.169218813
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
NPR > 2.0 or NPR =2.0																			
Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
% 1.0 < NPR < 2.0 of Total																			
% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Inorganic CO2 (%)	C_DEL_CALC (%)	CANP_TTL (%)	CANP_INORG (%)	CANP_CA (%)	CANP_CAMG (%)	TNNP (kg $CaCO_3$ /t)	TNNP_ADJ (kg $CaCO_3$ /t)	SNNP (kg $CaCO_3$ /t)	SNNP_ADJ (kg $CaCO_3$ /t)	ICNNP (kg $CaCO_3$ /t)	TNPR	TNPR_ADJ	SNPR	SNPR(S DEL CALC)	SNPR for graphs	SNPR_ADJ for graphs	ICNPR	Fizz Rating
FIELD LEACH BARREL - Barrel 12 M-KP																			
Count	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Minimum	0.1	-0.1	1.7	4.6	2.2	8.9	-115.2	-130.2	-114.8	-129.8	-123.5	-115.2	-130.2	0.2	0.2	0.2	0.0	0.0	1.0
10 Percentile	0.2	-0.02	4.167	4.55	4.99	27.78	-86.19	-101.2	-82.6	-97.6	-97.64	-86.19	-101.2	0.202105263	0.183529571	0.202105263	0.001	0.097	1
25 Percentile	0.4	0	11.2485	9.11	11.115	41.975	-57.22	-72.22	-54.6109375	-69.615	-70.93	-57.22	-72.22	0.363108046	0.324098122	0.363108046	0.033884522	0.1626	1
Median-25Percentile	0.6	0.03	14.5915	13.59	15.605	17.295	29.66	29.66	28.6171875	28.625	38.39	29.66	29.66	0.262978911	0.293593893	0.262978911	0.269179545	0.1552	1
Mean	1.6	0.0	38.3	36.2	38.5	74.6	-24.1	-39.1	-22.7	-37.7	-35.4	-24.1	-39.1	0.9	0.8	0.9	0.6	0.6	1.7
Standard Deviation	1.826393386	0.042785431	42.49043982	41.54100663	40.71062587	53.34616454	47.08946383	47.0984984	47.02690898	47.0290481	47.36123574	47.08946383	47.0984984	0.696988059	0.586000999	0.696988059	0.633034758	0.527529361	0.566126735
Median	1.0	0.0	25.8	22.7	26.7	59.3	-27.6	-42.6	-26.0	-41.0	-32.5	-27.6	-42.6	0.6	0.6	0.6	0.3	0.3	2.0
75Percentile-Median	0.9	0.015	23.745	20.5	22.73	32.075	27.2475	27.26	27.2296875	27.225	24.588	27.2475	27.26	0.633143813	0.42370127	0.633143813	0.483455757	0.50125	0
75 Percentile	1.9	0.045	49.585	43.2	49.45	91.345	-0.3125	-15.3	1.2359375	-13.765	-7.952	-0.3125	-15.3	1.259230769	1.041393285	1.259230769	0.786519824	0.81905	2
90 Percentile	3.2	0.08	75.84	72.8	75.92	116.3	30.5	15.5	31.834375	16.83	15.85	30.5	15.5	1.974468085	1.693257436	1.974468085	1.573770492	1.436	2
Maximum	9.7	0.1	224.2	221.0	216.5	287.5	112.2	97.3	112.9	97.9	91.9	112.2	97.3	2.6	2.1	2.6	2.1	1.8	3.0
Interquartile Range (IQR) 1	1.5	0.045	38.3365	34.09	38.335	49.37	56.9075	56.92	55.846875	55.85	62.978	56.9075	56.92	0.896122723	0.717295163	0.896122723	0.752635302	0.65645	1
Variance	3.446903226	0.001891613	1865.618726	1783.177073	1712.600227	2940.673713	2291.331524	2292.210837	2285.247841	2285.455744	2317.856206	2291.331524	2292.210837	0.501985433	0.354843744	0.501985433	0.414090772	0.287563467	0.331182796
Skewness	2.985164322	0.852238721	2.843694059	3.001060778	2.862587346	2.178342845	0.562314406	0.562574346	0.545979214	0.545692352	0.262599389	0.562314406	0.562574346	1.047294057	1.029701601	1.047294057	1.116862988	1.12678266	0.042021461
Coefficient of Variation (CoV) 2	1.148442088	1.490279068	1.109215707	1.146040391	1.058507072	0.715517751	-1.950012328	-1.203069404	-2.074682187	-1.248504981	-1.336114078	-1.950012328	-1.203069404	0.775046793	0.760156243	0.775046793	1.102128772	0.923315325	0.324998681
NPR < 1.0 or NPR = 1.0																			
1.0 < NPR < 2.0																			
NPR > 2.0 or NPR =2.0																			
Sum Check																			
% NPR < 1.0 or NPR = 1.0 of Total																			
% 1.0 < NPR < 2.0 of Total																			
% NPR > 2.0 or NPR =2.0 of Total																			
Sum Check																			

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Ag (ppm)	Al (ppm)	Al (%)	As (ppm)	Ba (ppm)	Be (ppm)	Bi (ppm)	Ca (ppm)	Ca (%)	Cd (ppm)	Ce (ppm)	Co (ppm)	Cr (ppm)	Cs (ppm)	Cu (ppm)	Fe (ppm)	Fe (%)	Ga (ppm)
FIELD LEACH BARREL - Barrel 12 M-KP																		
Count	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Minimum	0.3	55800.0	5.6	4.5	120.0	1.0	0.3	900.0	0.1	0.0	5.7	2.4	1.0	1.1	288.0	17500.0	1.8	11.2
10 Percentile	0.47	61200	6.12	5.1	250	1.25	0.32	2000	0.2	0.04	6.38	3.5	5	1.26	412	21200	2.12	15
25 Percentile	0.76	68350	6.835	5.75	405	1.38	0.485	4450	0.445	0.06	10.6	9.8	6.5	2.525	477	33600	3.36	16.2
Median-25Percentile	0.2	5950	0.595	2.85	455	0.28	0.285	6250	0.625	0.04	3.35	4.9	4.5	1.705	337	8400	0.84	1.95
Mean	1.2	73354.8	7.3	11.6	948.7	1.7	0.9	15403.2	1.5	0.2	13.0	13.8	18.7	4.9	938.0	40751.6	4.1	19.8
Standard Deviation	0.814923501	8495.951169	0.849595117	9.603123408	673.0706809	0.550597443	0.804477067	16304.05617	1.630405617	0.496591504	4.30446969	7.76114284	21.614492	3.033891084	537.7594788	12105.74033	1.210574033	5.886048073
Median	1.0	74300.0	7.4	8.6	860.0	1.7	0.8	10700.0	1.1	0.1	14.0	14.7	11.0	4.2	814.0	42000.0	4.2	18.2
75Percentile-Median	0.44	5600	0.56	3.7	390	0.215	0.205	9100	0.91	0.055	1.575	3.05	6	2.16	303.5	7750	0.775	2
75 Percentile	1.4	79900	7.99	12.3	1250	1.875	0.975	19800	1.98	0.155	15.525	17.75	17	6.39	1117.5	49750	4.975	20.15
90 Percentile	1.89	84200	8.42	18.5	1630	2.24	1.36	30400	3.04	0.5	16.75	19.5	39	9.34	1795	53100	5.31	28.7
Maximum	3.8	90400.0	9.0	47.6	2670.0	4.0	4.7	86700.0	8.7	2.8	25.2	41.2	93.0	11.8	2120.0	64500.0	6.5	34.9
Interquartile Range (IQR) 1	0.64	11550	1.155	6.55	845	0.495	0.49	15350	1.535	0.095	4.925	7.95	10.5	3.865	640.5	16150	1.615	3.95
Variance	0.686236989	74587225.81	0.745872258	95.29397849	468124.9462	0.313262796	0.668756129	274682989.2	2.746829892	0.254823226	19.14607462	62.2431828	482.7591398	9.511311613	298824.7656	151433914	1.51433914	35.80041398
Skewness	1.938024041	-0.22568735	-0.22568735	2.452518392	1.074048804	2.26548296	3.643741585	2.862014618	2.862014618	4.871976691	0.113922108	1.123301774	2.287983373	0.898875257	0.929704903	-0.150497395	-0.150497395	1.185993413
Coefficient of Variation (CoV) 2	0.675471351	0.115819915	0.115819915	0.826017829	0.709459065	0.319754978	0.882164452	1.058483228	1.058483228	2.16212593	0.330277116	0.564115892	1.157252594	0.624091729	0.573324065	0.297061625	0.297061625	0.297299373
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Ge (ppm)	Hf (ppm)	Hg (ppm)	In (ppm)	K (ppm)	K (%)	La (ppm)	Li (ppm)	Mg (ppm)	Mg (%)	Mn (ppm)	Mo (ppm)	Na (ppm)	Na (%)	Nb (ppm)	Ni (ppm)	P (%)	Pb (ppm)
FIELD LEACH BARREL - Barrel 12 M-KP																		
Count	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Minimum	0.1	0.4	0.0	0.0	29100.0	2.9	4.2	4.0	2200.0	0.2	174.0	1.0	1000.0	0.1	2.5	1.3	0.0	5.0
10 Percentile	0.11	0.5	0.01	0.039	36700	3.67	4.9	6.6	3900	0.39	275	2.59	9300	0.93	4.9	3.3	0.029	7.1
25 Percentile	0.12	0.6	0.02	0.0465	42450	4.245	6	14.9	5950	0.595	353	5.7	14200	1.42	6.05	4.1	0.078	7.85
Median-25Percentile	0.03	0.1	0.01	0.0275	4050	0.405	1.7	7.6	3550	0.355	235	4.35	3900	0.39	1.25	3.8	0.065	2.25
Mean	0.2	1.0	0.0	0.1	45264.5	4.5	7.6	25.4	10632.3	1.1	642.5	21.5	16996.8	1.7	7.9	8.9	0.1	17.5
Standard Deviation	0.042499923	0.681996823	0.016340549	0.038685423	6286.316342	0.628631634	1.887209812	14.99382322	6274.186085	0.627418609	452.4678474	29.17598362	6339.3031	0.63393031	2.827326885	7.206613335	0.053624353	29.25468772
Median	0.2	0.7	0.0	0.1	46500.0	4.7	7.7	22.5	9500.0	1.0	588.0	10.1	18100.0	1.8	7.3	7.9	0.1	10.1
75Percentile-Median	0.05	0.35	0.01	0.028	3700	0.37	1.2	13.9	5200	0.52	149.5	17.4	2400	0.24	1.5	2.25	0.0155	3
75 Percentile	0.2	1.05	0.04	0.102	50200	5.02	8.9	36.4	14700	1.47	737.5	27.45	20500	2.05	8.8	10.15	0.1585	13.1
90 Percentile	0.21	1.9	0.05	0.129	52000	5.2	10.3	44.7	18000	1.8	1020	49.4	24500	2.45	12.6	13.8	0.168	18.8
Maximum	0.3	2.9	0.1	0.2	54000.0	5.4	11.1	62.4	27600.0	2.8	2650.0	153.0	26900.0	2.7	14.3	40.0	0.2	167.5
Interquartile Range (IQR) 1	0.08	0.45	0.02	0.0555	7750	0.775	2.9	21.5	8750	0.875	384.5	21.75	6300	0.63	2.75	6.05	0.0805	5.25
Variance	0.001866452	0.480623656	0.000275914	0.001546447	40835032.26	0.408350323	3.68027957	232.3085591	40677591.4	0.406775914	211551.3914	879.6126206	41526322.58	0.415263226	8.260236559	53.66645161	0.002971424	884.3646452
Skewness	0.517001272	1.685040993	0.566426272	1.019954631	-0.971116781	-0.971116781	-0.054642522	0.494998003	0.912577164	0.912577164	2.894317628	3.238982459	-0.843444164	-0.843444164	0.769565068	2.888968266	-0.734775518	4.693267433
Coefficient of Variation (CoV) 2	0.26140826	0.686425374	0.491802918	0.488293199	0.138879566	0.138879566	0.2476863	0.589260294	0.590108521	0.590108521	0.704212435	1.359020754	0.372970955	0.372970955	0.358328428	0.806225238	0.450258655	1.669234896
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
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% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Rb (ppm)	Re (ppm)	S (ppm)	S (%)	Sb (ppm)	Sc (ppm)	Se (ppm)	Sn (ppm)	Sr (ppm)	Ta (ppm)	Te (ppm)	Th (ppm)	Ti (ppm)	Ti (%)	Tl (ppm)	U (ppm)	V (ppm)	W (ppm)
FIELD LEACH BARREL - Barrel 12 M-KP																		
Count	31	30	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Minimum	74.6	0.0	6000.0	0.6	1.0	2.7	2.0	0.9	29.8	0.2	0.1	1.0	710.0	0.1	0.4	1.0	144.0	1.4
10 Percentile	83	0.003	7900	0.79	1.26	3.7	4	1.1	67.3	0.27	0.12	1.4	790	0.079	0.63	1.5	263	5.9
25 Percentile	107	0.00625	12700	1.27	1.57	10.5	5	1.2	82.25	0.31	0.245	1.5	1375	0.1375	0.715	1.7	326	6.7
Median-25Percentile	35.5	0.00875	9800	0.98	0.82	10.1	4	0.3	55.25	0.09	0.195	0.4	725	0.0725	0.125	0.2	39	3.1
Mean	138.7	0.0	22654.8	2.3	2.9	19.0	8.4	1.6	141.5	0.4	0.5	4.4	1915.5	0.2	0.9	2.7	384.7	10.2
Standard Deviation	40.74320382	0.103579256	11751.48141	1.175148141	1.759675261	10.31899837	3.661254796	0.459810394	73.5513303	0.092140688	0.348863474	4.925017365	738.825741	0.073882574	0.331958838	1.678609999	110.3700426	4.257651495
Median	142.5	0.0	22500.0	2.3	2.4	20.6	9.0	1.5	137.5	0.4	0.4	1.9	2100.0	0.2	0.8	1.9	365.0	9.8
75Percentile-Median	22	0.0145	8800	0.88	1.04	6.05	2	0.45	36.25	0.02	0.215	1.55	325	0.0325	0.2	1.3	67	2.55
75 Percentile	164.5	0.0295	31300	3.13	3.43	26.65	11	1.95	173.75	0.42	0.655	3.45	2425	0.2425	1.04	3.2	432	12.35
90 Percentile	191.5	0.045	40900	4.09	4.53	30.6	12	2.2	251	0.5	1	13.6	2810	0.281	1.28	4.1	573	15.2
Maximum	231.0	0.6	44200.0	4.4	9.2	41.4	18.0	2.6	363.0	0.6	1.4	19.3	3130.0	0.3	2.2	7.9	626.0	22.0
Interquartile Range (IQR) 1	57.5	0.02325	18600	1.86	1.86	16.15	6	0.75	91.5	0.11	0.41	1.95	1050	0.105	0.325	1.5	106	5.65
Variance	1715.34228	0.011098616	142700559.1	1.427005591	3.199672258	110.0311183	13.8516129	0.218473118	5590.124796	0.008772903	0.125762581	25.06432258	564058.9247	0.005640589	0.113869892	2.911655914	12587.59785	18.73184946
Skewness	0.229134074	5.240361259	0.32237173	0.32237173	1.843927445	-0.075629075	0.351069707	0.577610981	0.958831588	0.127342047	0.997670292	1.747312761	-0.257501213	-0.257501213	1.746240659	1.95089418	0.553555595	0.687581139
Coefficient of Variation (CoV) 2	0.293791565	2.720996211	0.518718388	0.518718388	0.610041748	0.544213932	0.434861681	0.291495342	0.51969076	0.242064519	0.693254339	1.120143348	0.385712327	0.385712327	0.360698352	0.622451076	0.286867722	0.419140033
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-10. Static Tests Results and Statistical Summary for the KSM Field Leach Barrels

FIELD LEACH BARREL - Summary Statistics	Y (ppm)	Zn (ppm)	Zr (ppm)	Al2O3 (%)	BaO (%)	CaO (%)	Cr2O3 (%)	Fe2O3 (%)	K2O (%)	MgO (%)	MnO (%)	Na2O (%)	P2O5 (%)	SiO2 (%)	SRO (%)	TiO2 (%)	LOI (%)	Total_DC (%)
FIELD LEACH BARREL - Barrel 12 M-KP																		
Count	31	31	31	31	31	31	10	31	31	31	31	31	31	31	30	31	31	31
Minimum	3.3	16.0	9.7	11.1	0.1	0.1	0.0	2.6	3.5	0.4	0.0	0.2	0.0	42.9	0.0	0.1	1.0	93.3
10 Percentile	5.7	25	13.9	12.42	0.1	0.27	0.01	3.26	4.92	0.78	0.03	1.28	0.067	54.39	0.01	0.11	2.01	99.68
25 Percentile	6.8	35.5	16.95	13.955	0.165	0.68	0.01	4.965	5.695	1.03	0.05	1.92	0.1755	55.3	0.01	0.28	3.605	99.735
Median-25Percentile	2.8	18.5	2.45	1.545	0.055	0.88	0	1.415	0.545	0.75	0.03	0.44	0.1275	4.71	0.01	0.14	1.185	0.055
Mean	9.4	58.3	28.5	15.1	0.3	2.2	0.0	6.1	6.2	1.9	0.1	2.3	0.3	60.3	0.0	0.4	4.5	99.6
Standard Deviation	3.449486834	34.46025022	19.48362155	1.888184137	0.267768362	2.3103274	0.00663325	1.85174755	1.16239947	1.0376392	0.064025554	0.828480047	0.114833989	6.837689455	0.007916228	0.152330491	1.635909215	1.153339358
Median	9.6	54.0	19.4	15.5	0.2	1.6	0.0	6.4	6.2	1.8	0.1	2.4	0.3	60.0	0.0	0.4	4.8	99.8
75Percentile-Median	1.55	17.5	11.7	0.93	0.11	1.245	0.0075	0.99	0.64	0.695	0.015	0.39	0.042	3.655	0	0.075	0.89	0.065
75 Percentile	11.15	71.5	31.1	16.43	0.33	2.805	0.0175	7.37	6.88	2.475	0.095	2.75	0.345	63.665	0.02	0.495	5.68	99.855
90 Percentile	13.8	84	53	17.3	0.85	4.38	0.021	8.05	7.13	3.23	0.15	3.26	0.371	70.02	0.03	0.52	6.66	99.93
Maximum	19.5	202.0	85.7	18.2	1.1	12.3	0.0	10.0	9.5	4.6	0.4	3.5	0.4	76.4	0.0	0.6	7.2	100.0
Interquartile Range (IQR) 1	4.35	36	14.15	2.475	0.165	2.125	0.0075	2.405	1.185	1.445	0.045	0.83	0.1695	8.365	0.01	0.215	2.075	0.12
Variance	12.2955914	1227.092473	392.2652258	3.684080645	0.074089892	5.515533118	4.88889E-05	3.543267957	1.396211613	1.112584946	0.004235914	0.709258495	0.013626406	48.31246366	6.48276E-05	0.023978065	2.765405591	1.374531398
Skewness	0.521131619	2.319251136	1.767079696	-0.488643648	1.648978609	2.859365866	1.657724729	-0.104871084	-0.02264758	0.810093589	2.884390748	-0.806250534	-0.710476237	0.160424181	0.815413557	-0.825932182	-0.438054618	-5.445870085
Coefficient of Variation (CoV) 2	0.368230344	0.59085606	0.684720857	0.125364006	0.812213233	1.05370236	0.473803541	0.302924401	0.18722078	0.552314821	0.737840959	0.364038008	0.440249029	0.113463107	0.439790448	0.409206692	0.362288796	0.011581776
NPR < 1.0 or NPR = 1.0																		
1.0 < NPR < 2.0																		
NPR > 2.0 or NPR =2.0																		
Sum Check																		
% NPR < 1.0 or NPR = 1.0 of Total																		
% 1.0 < NPR < 2.0 of Total																		
% NPR > 2.0 or NPR =2.0 of Total																		
Sum Check																		

Appendix 5.2-11

Field Barrel Leachate Concentrations

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Appendix 5.2-11. Field Barrel Leachate Concentrations

						Physical Tests							Anions and Nutrients					
Sample ID				Volume water in bucket	Height of core in FLB	Colour, True	Conductivity	Hardness (as $CaCO_3$)		TSS	TDS	Turbidity	Acidity (as $CaCO_3$)	Alkalinity, Bicarbonate (as $CaCO_3$)	Alkalinity, Carbonate (as $CaCO_3$)	Alkalinity, Hydroxide (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Ammonia as N
Units	Date Sampled	ALS Sample ID	Matrix	L	cm	CU	uS/cm	mg/L	pH	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 01	12-Jul-09	L7926022	Water	11.0	77	2.5	56.3	26.2	7.63	4.3	37	1.88	2.8	21.2	1	1	21.2	0.0025
Barrel 02	12-Jul-09	L7926023	Water	13.4	78	2.5	213	98.4	8.04	4.3	127	2.02	2.7	63.7	1	1	63.7	0.0025
Barrel 03	12-Jul-09	L7926024	Water	11.7	83	5.2	160	72.6	7.99	7.3	97	4.09	2.6	42.8	1	1	42.8	0.0025
Barrel 04	12-Jul-09	L7926025	Water	12.5	83	2.5	230	88.9	7.96	10.3	146	5.28	2.9	48.2	1	1	48.2	0.01
Barrel 01	26-Aug-09	L8129588	Water	3.8	77	2.5	452	201	7.1	1.5	314	1.03	#N/A	70.9	1	1	70.9	0.0231
Barrel 02	26-Aug-09	L81295810	Water	6.4	78	2.5	400	166	7.58	6	271	2.1	#N/A	61.2	1	1	61.2	0.0025
Barrel 03	26-Aug-09	L81295812	Water	5.1	83	2.5	592	252	7.54	1.5	422	1.28	#N/A	55.9	1	1	55.9	0.142
Barrel 04	26-Aug-09	L81295813	Water	6.4	83	2.5	614	261	7.46	7.5	454	6.03	#N/A	43.8	1	1	43.8	0.076
Barrel 01	19-Sep-09	L8307881	Water	14.7	77	#N/A	#N/A	154	7.86	1.5	237	2.83	4.7	62.2	1	1	62.2	0.0025
Barrel 02	19-Sep-09	L8307882	Water	16.0	78	#N/A	#N/A	157	7.9	3.8	268	5.15	4.5	59.8	1	1	59.8	0.0052
Barrel 03	19-Sep-09	L8307883	Water	14.7	83	#N/A	#N/A	205	7.85	15.8	362	19.6	4.5	45.3	1	1	45.3	0.0279
Barrel 04	19-Sep-09	L8307884	Water	14.0	83	#N/A	#N/A	220	7.78	6.8	409	9.04	4.7	40.5	1	1	40.5	0.0025
Barrel 05	19-Sep-09	L8307885	Water	5.1	69	#N/A	#N/A	253	7.93	12.8	600	18.5	5	97.1	1	1	97.1	0.0025
Barrel 01	22-Oct-09	L8337891	Water	14.7	77	#N/A	#N/A	102	7.03	1.5	140	0.72	5.9	#N/A	#N/A	#N/A	57.5	0.0025
Barrel 02	22-Oct-09	L8337892	Water	15.0	78	#N/A	#N/A	124	7.75	1.5	175	0.86	3.7	#N/A	#N/A	#N/A	52.2	0.0025
Barrel 03	22-Oct-09	L8337893	Water	16.0	83	#N/A	#N/A	131	7.76	1.5	194	3.03	3.9	#N/A	#N/A	#N/A	48.3	0.0025
Barrel 04	22-Oct-09	L8337894	Water	14.7	83	#N/A	#N/A	145	7.83	1.5	227	3.06	3.3	#N/A	#N/A	#N/A	43.8	0.0025
Barrel 05	22-Oct-09	L8337895	Water	14.7	69	#N/A	#N/A	234	7.72	5	511	7.24	4.8	#N/A	#N/A	#N/A	63.1	0.0409
Barrel 06	22-Oct-09	L8337896	Water	15.0	64	#N/A	#N/A	600	7.61	4.7	1130	4.74	6.3	#N/A	#N/A	#N/A	48.4	0.0025
Barrel 07	22-Oct-09	L8337897	Water	15.0	70.5	#N/A	#N/A	1090	7.7	8.7	2350	3.39	6.3	#N/A	#N/A	#N/A	70.2	0.0025
Barrel 08	22-Oct-09	L8337898	Water	14.7	80	#N/A	#N/A	140	7.84	3.5	247	4.64	4.1	#N/A	#N/A	#N/A	83.9	0.0025
Barrel 09	22-Oct-09	L8337899	Water	16.3	85	#N/A	#N/A	75.8	6.74	6	199	2	10	#N/A	#N/A	#N/A	5.5	0.0025
Barrel 10	22-Oct-09	L83378910	Water	16.9	49	#N/A	#N/A	102	7.7	8	171	5.05	5	#N/A	#N/A	#N/A	90.3	0.0025
Barrel 11	22-Oct-09	L83378911	Water	14.7	49	#N/A	#N/A	351	7.69	4.5	634	3.8	7	#N/A	#N/A	#N/A	88.1	0.0025
Barrel 12	22-Oct-09	L83378912	Water	16.3	33	#N/A	#N/A	95.5	7.87	3.5	132	3.06	4.1	#N/A	#N/A	#N/A	53.8	0.0025
Barrel 01	24-Nov-09	L8459031	Water	0.0	77	#N/A	#N/A	53	7.64	1.5	159	0.93	3.3	#N/A	#N/A	#N/A	56	0.0146
Barrel 02	24-Nov-09	L8459032	Water	0.0	78	#N/A	#N/A	25.9	7.81	3.3	137	1.29	2.4	#N/A	#N/A	#N/A	40.7	0.0235
Barrel 03	24-Nov-09	L8459033	Water	0.0	83	#N/A	#N/A	33	7.93	6.3	189	5.02	1.7	#N/A	#N/A	#N/A	34.2	0.0548
Barrel 04	24-Nov-09	L8459034	Water	0.0	83	#N/A	#N/A	80	7.87	3.3	252	0.83	1.9	#N/A	#N/A	#N/A	34.8	0.0107
Barrel 05	24-Nov-09	L8459035	Water	0.0	69	#N/A	#N/A	153	7.95	39.3	673	25.8	3.2	#N/A	#N/A	#N/A	75.3	0.0576
Barrel 06	25-Nov-09	L8459036	Water	0.0	64	#N/A	#N/A	153	7.82	1.5	369	1.36	1.9	#N/A	#N/A	#N/A	26.6	0.0315
Barrel 07	25-Nov-09	L8459037	Water	0.0	70.5	#N/A	#N/A	87	7.69	1.5	308	0.62	1.7	#N/A	#N/A	#N/A	17.2	0.0472
Barrel 08	24-Nov-09	L8459038	Water	0.0	80	#N/A	#N/A	98.9	7.85	3.8	213	1.8	2.1	#N/A	#N/A	#N/A	47.3	0.0025
Barrel 09	25-Nov-09	L8459039	Water	0.0	85	#N/A	#N/A	24.3	7.28	1.5	87	1.3	2.9	#N/A	#N/A	#N/A	8.6	0.0067
Barrel 10	25-Nov-09	L84590310	Water	0.0	49	#N/A	#N/A	26.4	7.81	1.5	77	1.46	1.8	#N/A	#N/A	#N/A	32.6	0.0025
Barrel 11	24-Nov-09	L84590311	Water	0.0	49	#N/A	#N/A	28.5	7.03	6.3	138	3.93	3.2	#N/A	#N/A	#N/A	22.5	0.027
Barrel 12	25-Nov-09	L84590312	Water	0.0	33	#N/A	#N/A	17.5	7.57	3.3	65	0.85	2.2	#N/A	#N/A	#N/A	26	0.0118
Barrel 01	7-Jun-10	L8974761	Water	12.8	77	#N/A	#N/A	91.9	8.04	1.5	122	0.7	2.5	56.3	1	1	56.3	0.0025
Barrel 02	7-Jun-10	L8974762	Water	12.8	78	#N/A	#N/A	110	8.12	1.5	153	0.56	2.3	59.1	1	1	59.1	0.0025
Barrel 03	7-Jun-10	L8974763	Water	10.5	83	#N/A	#N/A	110	8.15	1.5	165	1.26	2	63.2	1	1	63.2	0.0104
Barrel 04	7-Jun-10	L8974764	Water	11.5	83	#N/A	#N/A	129	8.1	1.5	182	0.5	2.3	57.7	1	1	57.7	0.0025
Barrel 05	7-Jun-10	L8974765	Water	9.6	69	#N/A	#N/A	422	7.87	3.7	831	1.17	3.6	40.5	1	1	40.5	0.012
Barrel 06	7-Jun-10	L8974766	Water	12.8	64	#N/A	#N/A	651	7.78	3.7	1150	1.42	3.8	32.5	1	1	32.5	0.0025
Barrel 07	7-Jun-10	L8974767	Water	12.1	70.5	#N/A	#N/A	993	7.74	2.5	1700	1.68	3.9	30.5	1	1	30.5	0.008
Barrel 08	7-Jun-10	L8974768	Water	12.8	80	#N/A	#N/A	104	7.99	3.3	154	2.22	2.9	48.2	1	1	48.2	0.0099
Barrel 09	7-Jun-10	L8974769	Water	13.4	85	#N/A	#N/A	73.6	5.4	1.5	160	1.01	8.9	1	1	1	1	0.0025
Barrel 10	7-Jun-10	L89747610	Water	15.3	49	#N/A	#N/A	76.5	8.08	1.5	106	1.47	2.2	64	1	1	64	0.0025
Barrel 11	7-Jun-10	L89747611	Water	14.7	49	#N/A	#N/A	225	8.14	1.5	370	0.71	2.4	75.4	1	1	75.4	0.0067
Barrel 12	7-Jun-10	L89747612	Water	13.4	33	#N/A	#N/A	60.3	7.5	1.5	82	0.94	3.2	37.8	1	1	37.8	0.0025
Barrel 01	6-Jul-10	L9072991	Water	8.9	77	2.5	239	107	7.99	3.5	163	2.15	3.2	57	1	1	57	0.0193

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

						Physical Tests							Anions and Nutrients					
Sample ID				Volume water in bucket	Height of core in FLB	Colour, True	Conductivity	Hardness (as $CaCO_3$)		TSS	TDS	Turbidity	Acidity (as $CaCO_3$)	Alkalinity, Bicarbonate (as $CaCO_3$)	Alkalinity, Carbonate (as $CaCO_3$)	Alkalinity, Hydroxide (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Ammonia as N
Units	Date Sampled	ALS Sample ID	Matrix	L	cm	CU	uS/cm	mg/L	pH	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 02	6-Jul-10	L9072992	Water	10.8	78	2.5	260	115	7.98	1.5	177	1.87	3.1	46.5	1	1	46.5	0.0237
Barrel 03	6-Jul-10	L9072993	Water	10.2	83	2.5	428	186	7.95	1.5	309	2.03	3.1	44.5	1	1	44.5	0.0101
Barrel 04	6-Jul-10	L9072994	Water	10.2	83	2.5	393	174	7.84	5	282	6.14	3.5	39.5	1	1	39.5	0.0585
Barrel 05	6-Jul-10	L9072995	Water	4.5	69	2.5	1160	609	7.85	1.5	1010	2.53	4.5	67.5	1	1	67.5	0.0322
Barrel 06	6-Jul-10	L9072996	Water	12.8	64	2.5	1410	859	7.85	5.3	1370	4.83	4.3	37.4	1	1	37.4	0.0507
Barrel 07	6-Jul-10	L9072997	Water	12.8	70.5	2.5	1890	1220	6.96	8.7	1950	9.87	6.7	32.8	1	1	32.8	0.084
Barrel 08	6-Jul-10	L9072998	Water	12.1	80	2.5	306	135	7.99	6	217	3.82	3.5	66.2	1	1	66.2	0.0209
Barrel 09	6-Jul-10	L9072999	Water	10.2	49	2.5	352	122	5.93	1.5	274	0.91	17.8	2.3	1	1	2.3	0.0025
Barrel 10	6-Jul-10	L90729910	Water	5.7	85	2.5	251	110	7.95	6.5	164	4.56	3.3	67.7	1	1	67.7	0.0399
Barrel 11	6-Jul-10	L90729911	Water	13.4	49	2.5	627	306	7.88	8.5	490	8.97	3.9	59.8	1	1	59.8	0.0262
Barrel 12	6-Jul-10	L90729912	Water	13.4	33	2.5	200	87.4	7.97	4	123	3.07	3	35.6	1	1	35.6	0.0146
Barrel 01	7-Aug-10	L9189991	Water	7.3	77	2.5	#N/A	103	7.8	3.3	137	0.43	3.2	48.3	1	1	48.3	0.0025
Barrel 02	7-Aug-10	L9189992	Water	8.1	78	2.5	#N/A	105	7.88	1.5	136	0.39	2.7	38.2	1	1	38.2	0.0176
Barrel 03	7-Aug-10	L9189993	Water	1.6	83	2.5	#N/A	150	7.99	8.3	230	1.66	2.6	40.4	1	1	40.4	0.0749
Barrel 04	7-Aug-10	L9189994	Water	7.7	83	2.5	#N/A	151	7.83	1.5	237	1.49	2.8	35.4	1	1	35.4	0.0025
Barrel 05	7-Aug-10	L9189995	Water	3.2	69	2.5	#N/A	523	7.79	14.3	863	6.91	4	45.4	1	1	45.4	0.0081
Barrel 06	7-Aug-10	L9189996	Water	8.5	64	2.5	#N/A	733	7.79	5	1190	0.74	3.8	36.1	1	1	36.1	0.0025
Barrel 07	7-Aug-10	L9189997	Water	9.3	70.5	2.5	#N/A	1080	7.69	3	1790	0.84	4.1	31.3	1	1	31.3	0.013
Barrel 08	7-Aug-10	L9189998	Water	4.9	80	2.5	#N/A	185	8.05	3.8	278	0.94	2.6	65.8	1	1	65.8	0.0025
Barrel 09	7-Aug-10	L9189999	Water	4.5	49	2.5	#N/A	176	5.47	1.5	376	0.49	25.3	3.1	1	1	3.1	0.0261
Barrel 10	7-Aug-10	L91899910	Water	9.3	85	2.5	#N/A	107	8.21	1.5	145	0.69	1.6	59.9	1	1	59.9	0.0025
Barrel 11	7-Aug-10	L91899911	Water	9.7	49	2.5	#N/A	244	7.98	3.3	411	1.3	3	46.4	1	1	46.4	0.0025
Barrel 12	7-Aug-10	L91899912	Water	9.3	33	2.5	#N/A	79	7.92	1.5	109	0.72	2.3	30.8	1	1	30.8	0.0025
Barrel 01	24-Sep-10	L9390521	Water	12.8	71	2.5	223	98.7	8.05	1.5	140	0.53	2.7	48.1	1	1	48.1	0.009
Barrel 02	24-Sep-10	L9390522	Water	12.8	75	2.5	304	138	8.07	1.5	193	0.46	2.7	45.3	1	1	45.3	0.008
Barrel 03	24-Sep-10	L9390523	Water	12.8	83	2.5	275	119	7.94	4.5	170	1.21	3	39.3	1	1	39.3	0.0462
Barrel 04	24-Sep-10	L9390524	Water	12.8	89	2.5	292	122	7.86	5	175	1.48	3.2	32.2	1	1	32.2	0.0025
Barrel 05	24-Sep-10	L9390525	Water	12.8	51	2.5	780	343	7.71	63.5	578	44.3	3.9	31.9	1	1	31.9	0.0069
Barrel 06	23-Sep-10	L9390526	Water	12.8	90	2.5	1120	629	7.78	1.5	928	0.53	3.9	31.3	1	1	31.3	0.0125
Barrel 07	23-Sep-10	L9390527	Water	12.8	90	2.5	1670	980	7.69	1.5	1530	0.6	3.9	26.6	1	1	26.6	0.0252
Barrel 08	23-Sep-10	L9390528	Water	12.8	90	2.5	327	147	8.09	1.5	216	0.43	2.6	59.4	1	1	59.4	0.0025
Barrel 09	23-Sep-10	L9390529	Water	12.8	90	2.5	475	170	4.99	1.5	374	0.26	36.4	1	1	1	1	0.0545
Barrel 10	23-Sep-10	L93905210	Water	6.4	74	2.5	169	71.3	7.94	1.5	98	0.66	2.7	39.4	1	1	39.4	0.0164
Barrel 11	24-Sep-10	L93905211	Water	12.8	51	2.5	574	267	7.99	1.5	408	0.73	3.2	46	1	1	46	0.0167
Barrel 12	24-Sep-10	L93905212	Water	12.8	45	2.5	141	57	7.87	3	75	1.57	2.7	26.8	1	1	26.8	0.0123
Barrel 01	4-Jun-11	L10139921	Water	16.6	90	2.5	190	95.4	8.01	1.5	113	0.38	1.3	48.1	1	1	48.1	0.0025
Barrel 02	4-Jun-11	L10139923	Water	17.9	90	2.5	188	90.9	8.23	1.5	123	0.72	0.5	38.5	1	1	38.5	0.0025
Barrel 03	4-Jun-11	L10139924	Water	15.3	90	2.5	333	163	8.31	3.3	235	0.67	0.5	38.8	0.5	0.5	38.8	0.0147
Barrel 04	4-Jun-11	L10139925	Water	14.7	90	2.5	231	103	8.11	1.5	153	0.51	1.1	37.2	1	1	37.2	0.0025
Barrel 05	4-Jun-11	L10139926	Water	15.3	74	2.5	1390	815	7.91	1.5	1240	0.23	3	35.3	1	1	35.3	0.0025
Barrel 06	4-Jun-11	L10139927	Water	14.7	71	2.5	1680	1060	7.31	1.5	1600	0.46	6.1	31.4	1	1	31.4	0.0103
Barrel 07	4-Jun-11	L10139928	Water	14.7	75	2.5	1490	902	7.76	1.5	1390	0.18	2.5	27.6	1	1	27.6	0.0056
Barrel 08	4-Jun-11	L10139929	Water	14.7	83	2.5	162	72.6	8.15	1.5	103	0.6	1.9	40.4	1	1	40.4	0.0025
Barrel 09	5-Jun-11	L101399210	Water	14.7	45	2.5	516	210	6.73	1.5	389	0.31	7.2	6.2	1	1	6.2	0.0854
Barrel 10	5-Jun-11	L101399211	Water	15.9	33	2.5	193	87	8.26	1.5	123	0.71	1.4	56.8	1	1	56.8	0.0063
Barrel 11	4-Jun-11	L101399212	Water	15.3	89	2.5	362	169	8.03	1.5	246	0.61	2.2	40.3	1	1	40.3	0.0025
Barrel 12	4-Jun-11	L101399213	Water	16.6	51	2.5	177	81.5	8.33	6	107	1.27	0.5	44.3	0.5	0.5	44.3	0.0051
Barrel 13	5-Jun-11	L101399214	Water	17.2	36	59.2	1300	111	2.74	1.5	753	2.54	378	1	1	1	1	0.0305
Barrel 14	5-Jun-11	L101399215	Water	14.7	32	5	202	93.3	7.42	1.5	129	0.32	3.8	34.8	1	1	34.8	#N/A
Barrel 15	5-Jun-11	L101399216	Water	14.0	41	5.1	274	128	7.92	1.5	193	0.46	2.9	35.4	1	1	35.4	#N/A

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

						Physical Tests							Anions and Nutrients					
Sample ID				Volume water in bucket	Height of core in FLB	Colour, True	Conductivity	Hardness (as $CaCO_3$)		TSS	TDS	Turbidity	Acidity (as $CaCO_3$)	Alkalinity, Bicarbonate (as $CaCO_3$)	Alkalinity, Carbonate (as $CaCO_3$)	Alkalinity, Hydroxide (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Ammonia as N
Units	Date Sampled	ALS Sample ID	Matrix	L	cm	CU	uS/cm	mg/L	pH	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 16	5-Jun-11	L101399217	Water	14.7	44	5.1	448	212	7.86	4.7	334	0.42	1.6	28.7	1	1	28.7	#N/A
Barrel 17	4-Jun-11	L101399218	Water	17.9	51	24.9	1270	296	3.01	3.3	1000	5.99	250	1	1	1	1	#N/A
Barrel 01	3-Jul-11	L10269151	Water	6.4	90	7.5	422	200	7.81	1.5	301	0.59	2.7	49.7	1	1	49.7	0.0141
Barrel 02	3-Jul-11	L10269152	Water	7.3	90	6.7	481	235	7.77	1.5	361	0.41	2.9	44	1	1	44	0.0159
Barrel 03	3-Jul-11	L10269153	Water	7.0	90	6.4	957	512	7.69	1.5	621	0.58	3.5	33.8	1	1	33.8	0.0056
Barrel 04	3-Jul-11	L10269154	Water	5.7	90	6.4	733	375	7.77	1.5	451	1.04	3.1	40.3	1	1	40.3	0.0065
Barrel 05	3-Jul-11	L10269155	Water	6.4	74	6	1860	1150	7.71	9.3	1840	1.93	4.5	34.3	1	1	34.3	0.016
Barrel 06	4-Jul-11	L10288081	Water	10.8	71	2.5	1790	965	7.58	1.5	1680	0.48	4	27	1	1	27	0.0139
Barrel 07	4-Jul-11	L10288082	Water	7.7	75	2.5	2000	1110	7.53	1.5	1940	0.29	4.7	33.7	1	1	33.7	0.0135
Barrel 08	4-Jul-11	L10288087	Water	8.3	83	5.3	445	186	7.91	1.5	310	0.34	4	56.6	1	1	56.6	0.0128
Barrel 09	4-Jul-11	L10288089	Water	2.2	89	2.5	1510	711	6.18	6.2	1390	2.31	44.3	9	1	1	9	0.0483
Barrel 10	4-Jul-11	L10288083	Water	10.5	51	6.3	340	133	7.93	1.5	227	0.33	2.9	60.9	1	1	60.9	0.0138
Barrel 11	3-Jul-11	L10269158	Water	8.3	51	7	585	277	7.88	1.5	431	0.49	1.8	47.8	1	1	47.8	0.015
Barrel 12	3-Jul-11	L10269157	Water	8.3	45	5.3	435	200	7.95	1.5	317	0.88	2.4	48.1	1	1	48.1	0.0025
Barrel 13	3-Jul-11	L10269157	Water	8.3	45	5.3	435	200	7.95	1.5	317	0.88	2.4	48.1	1	1	48.1	0.0025
Barrel 14	4-Jul-11	L10288084	Water	5.1	36	6.4	258	103	7.88	1.5	172	0.64	2.4	43.7	1	1	43.7	0.0182
Barrel 15	4-Jul-11	L10288085	Water	5.7	32	7.2	340	154	7.77	1.5	240	0.37	2.9	31.3	1	1	31.3	0.0166
Barrel 16	4-Jul-11	L10288086	Water	4.5	41	6.5	337	134	7.66	1.5	236	1.06	3.3	27	1	1	27	0.0209
Barrel 17	3-Jul-11	L102691510	Water	1.0	44			1240										
Barrel 01	31-Jul-11	L10396801	Water	7.0	87	6.4	470	221	7.87	3.1	343	0.41	5.3	58.5	1	1	58.5	0.0162
Barrel 02	31-Jul-11	L10396802	Water	7.7	87	5.9	576	281	8.02	1.5	438	0.57	4.4	45.6	1	1	45.6	0.0159
Barrel 03	31-Jul-11	L10396803	Water	7.7	85	6.2	1120	621	7.92	1.5	989	0.85	5.3	36.5	1	1	36.5	0.042
Barrel 04	31-Jul-11	L10396804	Water	7.3	89	5.8	879	457	7.93	3.1	698	0.33	5	40.3	1	1	40.3	0.0143
Barrel 05	31-Jul-11	L10396808	Water	6.7	71	5.2	2100	1350	5.86	4.5	2030	0.55	33.5	33.7	1	1	33.7	0.0163
Barrel 06	1-Aug-11	L10396809	Water	7.0	68	5.1	2350	1540	7.62	5.8	2390	1.15	14.8	31.7	1	1	31.7	0.0125
Barrel 07	1-Aug-11	L103968011	Water	5.7	69	2.5	2190	1450	7.77	3.8	2130	1.06	11.5	33	1	1	33	0.0156
Barrel 08	1-Aug-11	L103968012	Water	6.4	81	2.5	545	258	8.05	1.5	401	0.37	6.6	63.1	1	1	63.1	0.0128
Barrel 09	1-Aug-11	L103968023	Water	1.0	89			948										
Barrel 10	1-Aug-11	L103968013	Water	6.7	53	5.8	422	194	6.75	1.5	293	0.52	18.7	63.9	1	1	63.9	0.0163
Barrel 11	31-Jul-11	L10396806	Water	7.7	51	5.7	669	335	8.02	3.8	514	0.62	4.5	48.8	1	1	48.8	0.0127
Barrel 12	31-Jul-11	L10396805	Water	7.7	44	2.5	473	224	8.12	1.5	348	0.42	3.3	47	1	1	47	0.0165
Barrel 13	1-Aug-11	L103968014	Water	2.9	38	3200	9020	903	1.96	37.8	30200	1	15200	0.5	0.5	0.5	0.5	1.36
Barrel 14	1-Aug-11	L103968015	Water	3.8	35	13.6	315	140	5.64	1.5	213	0.89	49.7	40.8	1	1	40.8	0.0128
Barrel 15	1-Aug-11	L103968016	Water	4.1	34	5.4	431	200	7.89	1.5	317	0.8	18	33.1	1	1	33.1	0.0151
Barrel 16	1-Aug-11	L103968017	Water	2.9	40	2.5	409	190	8.01	1.5	297	0.86	11.2	29.2	1	1	29.2	0.0111
Barrel 17	31-Jul-11	L10396807	Water	2.9	44	1500	6140	1570	2.35	8.5	10100	1.44	5480	0.5	0.5	0.5	0.5	0.214
Barrel 01	3-Sep-11	L10543201	Water	16.3	87	5	345	163	8.63	1.5	236	0.51	0.5	46.5	7.7	0.5	54.2	0.0025
Barrel 02	3-Sep-11	L10543202	Water	16.6	87	2.5	293	135	8.16	1.5	191	0.43	3	47.1	1	1	47.1	0.0025
Barrel 03	3-Sep-11	L10543203	Water	15.3	85	2.5	566	261	7.9	1.5	413	0.47	4.6	42	1	1	42	0.0887
Barrel 04	3-Sep-11	L10543204	Water	14.7	89	2.5	425	191	8.06	1.5	287	0.48	3.7	40.9	1	1	40.9	0.0025
Barrel 05	3-Sep-11	L10543208	Water	15.0	71	5.8	1580	923	7.77	4.7	1400	0.48	6.1	30.2	1	1	30.2	0.0025
Barrel 06	3-Sep-11	L10543209	Water	15.3	68	2.5	2100	1370	7.78	1.5	2040	0.32	6.1	29.6	1	1	29.6	0.008
Barrel 07	3-Sep-11	L105432010	Water	14.7	69	2.5	2060	1330	7.79	1.5	2060	0.23	7.1	28.2	1	1	28.2	0.0025
Barrel 08	3-Sep-11	L105432011	Water	14.0	81	2.5	228	102	8.1	1.5	142	0.39	4.8	46.6	1	1	46.6	0.0025
Barrel 09	3-Sep-11	L105432012	Water	15.3	89	2.5	1270	691	5.38	1.5	1190	0.44	90	4.3	1	1	4.3	0.0161
Barrel 10	3-Sep-11	L105432013	Water	16.9	53	2.5	254	130	8.55	1.5	156	1.78	0.5	46.4	7.5	0.5	53.9	0.0025
Barrel 11	3-Sep-11	L10543206	Water	15.3	51	2.5	463	220	8.31	1.5	320	0.5	0.5	51.4	0.5	0.5	51.4	0.0025
Barrel 12	3-Sep-11	L10543205	Water	16.6	44	2.5	174	77.8	8.16	1.5	103	0.52	2.9	37.8	1	1	37.8	0.0025
Barrel 13	3-Sep-11	L105432014	Water	15.0	38	441	5420	193	2.06	1.5	5680	0.54	4210	1	1	1	1	0.0055
Barrel 14	3-Sep-11	L105432019	Water	15.3	35	2.5	185	82.8	8.1	1.5	116	0.52	4.9	28.6	1	1	28.6	0.0025

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

						Physical Tests							Anions and Nutrients					
Sample ID				Volume water in bucket	Height of core in FLB	Colour, True	Conductivity	Hardness (as $CaCO_3$)		TSS	TDS	Turbidity	Acidity (as $CaCO_3$)	Alkalinity, Bicarbonate (as $CaCO_3$)	Alkalinity, Carbonate (as $CaCO_3$)	Alkalinity, Hydroxide (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Ammonia as N
Units	Date Sampled	ALS Sample ID	Matrix	L	cm	CU	uS/cm	mg/L	pH	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 15	3-Sep-11	L105432016	Water	14.0	34	52.4	243	110	7.27	3.6	160	0.47	4.9	30.5	1	1	30.5	0.0025
Barrel 16	3-Sep-11	L105432017	Water	14.7	40	2.5	252	112	7.97	1.5	165	0.36	3.8	21.5	1	1	21.5	0.0025
Barrel 17	3-Sep-11	L10543207	Water	17.2	44	423	3490	327	2.37	1.5	4120	0.25	2310	1	1	1	1	0.0825
Barrel 01	1-Oct-11	L10673341	Water	16.6	87	2.5	158	74	7.97	1.5	89	0.49	3.2	56.4	1	1	56.4	0.0025
Barrel 02	1-Oct-11	L10673342	Water	17.2	87	2.5	173	79.7	8.02	1.5	100	0.44	2.9	46.9	1	1	46.9	0.0025
Barrel 03	1-Oct-11	L10673343	Water	15.3	85	2.5	213	119	7.65	1.5	162	0.61	3.8	45.3	1	1	45.3	0.0025
Barrel 04	1-Oct-11	L10673344	Water	14.7	89	2.5	214	96.1	7.97	1.5	127	0.67	3.1	42.1	1	1	42.1	0.0025
Barrel 05	1-Oct-11	L10673348	Water	14.7	71	2.5	1040	566	6.64	1.5	862	0.22	8	29.5	1	1	29.5	0.0025
Barrel 06	1-Oct-11	L10673349	Water	14.7	68	2.5	1780	1150	7.63	1.5	1660	0.18	6	30.8	1	1	30.8	0.0025
Barrel 07	1-Oct-11	L106733411	Water	14.7	69	2.5	1730	1060	7.5	1.5	1650	0.22	6.2	28.4	1	1	28.4	0.0025
Barrel 08	1-Oct-11	L106733412	Water	13.4	81	2.5	161	71	8.01	1.5	97	0.31	3.6	42.9	1	1	42.9	0.0025
Barrel 09	1-Oct-11	L106733413	Water	15.3	89	2.5	383	130	5.32	1.5	273	0.2	29.7	1	1	1	1	0.0025
Barrel 10	1-Oct-11	L106733414	Water	15.3	53	2.5	136	61.3	8.02	1.5	78	0.81	3.5	47.4	1	1	47.4	0.0025
Barrel 11	1-Oct-11	L10673346	Water	15.3	51	2.5	236	112	8.06	1.5	148	0.44	2.7	48.7	1	1	48.7	0.0025
Barrel 12	1-Oct-11	L10673345	Water	16.6	44	2.5	106	47.1	7.94	1.5	58	0.3	3	30.7	1	1	30.7	0.0025
Barrel 13	1-Oct-11	L106733415	Water	16.6	38	340	3660	83.5	2.2	1.5	3550	0.61	2170	1	1	1	1	0.0109
Barrel 14	1-Oct-11	L106733416	Water	14.7	35	2.5	103	40.8	6.57	1.5	64	0.52	6.9	23.4	1	1	23.4	0.0025
Barrel 15	1-Oct-11	L106733417	Water	14.7	34	2.5	129	55.5	7.83	1.5	78	0.76	4.9	30.2	1	1	30.2	0.0025
Barrel 16	1-Oct-11	L106733418	Water	15.3	40	2.5	148	60.7	8.03	1.5	87	0.46	3.6	20.1	1	1	20.1	0.0025
Barrel 17	1-Oct-11	L10673347	Water	17.2	44	277	2790	195	2.38	1.5	2330	0.17	1470	1	1	1	1	0.0298
Barrel 01	26-Oct-11	L10790311	Water	16.6	87	2.5	192	89.7	8.11	1.5	114	0.41	2.3	63.6	1	1	63.6	0.0025
Barrel 02	26-Oct-11	L10790312	Water	16.6	87	2.5	210	96.4	8.04	1.5	129	0.26	2.8	56.6	1	1	56.6	0.0025
Barrel 03	26-Oct-11	L10790313	Water	15.3	85	2.5	300	147	8.02	1.5	188	0.34	2.9	49.9	1	1	49.9	0.0025
Barrel 04	26-Oct-11	L10790314	Water	15.3	89	2.5	250	117	8	1.5	174	0.44	3.1	46.7	1	1	46.7	0.0025
Barrel 05	26-Oct-11	L10790315	Water	15.0	71	2.5	1310	786	7.76	1.5	1210	0.17	4.3	32.1	1	1	32.1	0.0025
Barrel 06	26-Oct-11	L10790316	Water	14.7	68	2.5	1900	1180	7.8	1.5	1250	0.23	4.5	31.7	1	1	31.7	0.0025
Barrel 07	26-Oct-11	L10790317	Water	14.7	69	2.5	1790	1100	7.81	1.5	1610	0.32	4.2	30.2	1	1	30.2	0.0144
Barrel 08	26-Oct-11	L10790318	Water	14.7	81	2.5	191	82.2	8.03	1.5	117	0.32	2.8	47.3	1	1	47.3	0.0138
Barrel 09	26-Oct-11	L10790319	Water	15.3	89	2.5	507	187	5.1	1.5	377	0.12	36.8	1	1	1	1	0.0119
Barrel 10	26-Oct-11	L107903110	Water	17.9	53	2.5	176	78.4	7.96	1.5	104	0.34	2.8	56.3	1	1	56.3	0.0025
Barrel 11	26-Oct-11	L107903112	Water	15.6	51	2.5	267	120	8.05	1.5	167	0.34	2.8	54.9	1	1	54.9	0.0025
Barrel 12	26-Oct-11	L107903113	Water	15.6	44	2.5	136	59.9	8.03	1.5	73	0.22	2.5	38.9	1	1	38.9	0.0025
Barrel 13	26-Oct-11	L107903114	Water	10.2	38	357	3940	68.2	2.18	7.5	3190	0.35	2110	1	1	1	1	0.0111
Barrel 14	26-Oct-11	L107903115	Water	15.0	35	2.5	127	54.4	6.87	1.5	73	0.46	5.8	23.1	1	1	23.1	0.0025
Barrel 15	26-Oct-11	L107903116	Water	14.4	34	2.5	171	74.3	7.85	1.5	104	0.42	4.5	34.4	1	1	34.4	0.0148
Barrel 16	26-Oct-11	L107903117	Water	15.0	40	2.5	219	93.9	7.87	1.5	138	0.4	4.1	24	1	1	24	0.0025
Barrel 17	26-Oct-11	L107903118	Water	17.2	44	300	2840	157	2.38	1.5	2250	0.17	1440	1	1	1	1	0.0207

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Anions and Nutrients										Carbon	Total Metals				
Sample ID		Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrate (as N)	Nitrite (as N)	Total Kjeldahl Nitrogen	Total Nitrogen	Ortho Phosphate as P	Total Phosphate as P	Sulfate (SO_4)	Total Organic Carbon	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)	Beryllium (Be)
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 01	12-Jul-09	0.025	0.25	0.124	0.0025	0.0005	0.111	0.111	0.0005	0.0208	5.53	1.67	0.0518	0.00093	0.00039	0.113	0.00025
Barrel 02	12-Jul-09	0.025	0.25	0.388	0.0025	0.0005	0.138	0.138	0.0005	0.0123	41	2.45	0.058	0.00788	0.00143	0.0765	0.00025
Barrel 03	12-Jul-09	0.025	0.25	0.109	0.0025	0.0005	0.218	0.218	0.0005	0.0196	33.7	3.9	0.119	0.00861	0.00566	0.0355	0.00025
Barrel 04	12-Jul-09	0.025	0.25	0.321	0.0025	0.0005	0.438	0.438	0.0005	0.0254	60.2	5.74	0.0522	0.00998	0.00392	0.0394	0.00025
Barrel 01	26-Aug-09	0.025	0.9	0.432	1.18	0.0005	0.361	1.54	0.0052	0.0185	155	4.49	0.25	0.00412	0.00138	0.0781	0.00025
Barrel 02	26-Aug-09	0.025	0.25	0.504	0.977	0.0083	0.301	1.29	0.0005	0.0139	134	3.2	0.0498	0.00613	0.00121	0.0455	0.00025
Barrel 03	26-Aug-09	0.025	0.57	0.209	3.26	0.0161	0.602	3.88	0.0322	0.0445	233	5.59	0.0301	0.0153	0.0057	0.0511	0.00025
Barrel 04	26-Aug-09	0.025	0.5	0.435	3.62	0.0328	0.597	4.25	0.0115	0.0147	249	4.93	0.0519	0.0492	0.00768	0.039	0.00025
Barrel 01	19-Sep-09	0.025	0.25	0.373	0.714	0.003	#N/A	0.8	0.0005	0.0028	114	2.41	0.0338	0.00328	0.00058	0.0471	0.00025
Barrel 02	19-Sep-09	0.025	0.25	0.498	0.905	0.0026	#N/A	0.96	0.0005	0.0045	137	2.54	0.0782	0.0051	0.0009	0.0372	0.00025
Barrel 03	19-Sep-09	0.025	0.25	0.189	2.56	0.0117	#N/A	2.82	0.0069	0.0341	198	4.43	0.0983	0.0127	0.00749	0.0405	0.00025
Barrel 04	19-Sep-09	0.025	0.25	0.421	3.37	0.0113	#N/A	3.75	0.0053	0.0169	228	4.33	0.0512	0.0304	0.00658	0.0323	0.00025
Barrel 05	19-Sep-09	0.25	8.2	0.44	0.025	0.005	#N/A	0.18	0.0005	0.0158	322	12.2	0.139	0.0161	0.00716	0.0304	0.0005
Barrel 01	22-Oct-09	0.025	0.25	0.383	0.131	0.0018	#N/A	#N/A	#N/A	0.0039	53	4.76	0.0225	0.00207	0.00044	0.0528	0.00025
Barrel 02	22-Oct-09	0.025	0.25	0.461	0.411	0.0015	#N/A	#N/A	#N/A	0.0048	83.1	3.05	0.0235	0.00425	0.00072	0.0374	0.00025
Barrel 03	22-Oct-09	0.025	0.25	0.17	1.27	0.0018	#N/A	#N/A	#N/A	0.0076	96.8	4.43	0.0524	0.00956	0.00615	0.0252	0.00025
Barrel 04	22-Oct-09	0.025	0.25	0.34	1.33	0.0011	#N/A	#N/A	#N/A	0.0049	119	2.29	0.0274	0.0221	0.00531	0.0252	0.00025
Barrel 05	22-Oct-09	0.025	10.8	0.493	0.0631	0.0005	#N/A	#N/A	#N/A	0.0119	279	6.27	0.347	0.00932	0.0065	0.0379	0.0005
Barrel 06	22-Oct-09	0.25	52	0.51	0.025	0.005	#N/A	#N/A	#N/A	0.0126	680	8.08	0.0921	0.00153	0.00266	0.0213	0.00125
Barrel 07	22-Oct-09	0.25	23.6	0.39	0.053	0.005	#N/A	#N/A	#N/A	0.0112	1290	11.5	0.0241	0.00351	0.011	0.0157	0.00125
Barrel 08	22-Oct-09	0.025	3.21	0.593	0.0025	0.0021	#N/A	#N/A	#N/A	0.0063	68.1	30.7	0.0427	0.00553	0.0053	0.0459	0.00025
Barrel 09	22-Oct-09	0.025	2.14	0.138	0.0053	0.0005	#N/A	#N/A	#N/A	0.0083	116	14.3	0.107	0.00017	0.00031	0.0336	0.00025
Barrel 10	22-Oct-09	0.025	2.74	0.393	0.0364	0.0053	#N/A	#N/A	#N/A	0.0112	27.3	24.8	0.123	0.021	0.00569	0.05	0.00025
Barrel 11	22-Oct-09	0.125	4.7	0.25	0.0125	0.0025	#N/A	#N/A	#N/A	0.0102	334	23.5	0.106	0.0138	0.00342	0.0548	0.0005
Barrel 12	22-Oct-09	0.025	1.14	0.693	0.0025	0.0005	#N/A	#N/A	#N/A	0.0092	44.9	8.53	0.0821	0.00144	0.00072	0.0481	0.0005
Barrel 01	24-Nov-09	0.025	0.25	0.355	0.0676	0.0027	#N/A	0.17	0.0047	#N/A	70.2	2.22	0.0069	0.00147	0.0004	0.0221	0.00025
Barrel 02	24-Nov-09	0.025	0.25	0.393	0.537	0.0015	#N/A	0.69	0.0047	#N/A	63.9	0.95	0.0183	0.00145	0.00031	0.0147	0.00025
Barrel 03	24-Nov-09	0.025	0.25	0.107	1.85	0.0027	#N/A	1.59	0.0146	#N/A	98.3	2.22	0.172	0.00525	0.00485	0.0111	0.00025
Barrel 04	24-Nov-09	0.025	0.25	0.449	1.83	0.0015	#N/A	2.58	0.0064	#N/A	139	3.98	0.0448	0.0357	0.0125	0.039	0.00025
Barrel 05	24-Nov-09	0.25	10	0.61	0.086	0.005	#N/A	0.36	0.0558	#N/A	401	4.39	0.221	0.0149	0.00542	0.0337	0.00025
Barrel 06	25-Nov-09	0.025	14.7	0.228	0.0086	0.0005	#N/A	0.12	0.0049	#N/A	209	2.25	0.0277	0.00084	0.00075	0.0135	0.00025
Barrel 07	25-Nov-09	0.025	4.37	0.094	0.0185	0.0005	#N/A	0.15	0.0034	#N/A	183	1.53	0.0087	0.00101	0.00226	0.00621	0.00025
Barrel 08	24-Nov-09	0.025	3.33	0.711	0.0438	0.0018	#N/A	0.29	0.0076	#N/A	80.6	22.9	0.0556	0.00594	0.00715	0.0318	0.00025
Barrel 09	25-Nov-09	0.025	0.85	0.062	0.0167	0.0005	#N/A	0.07	0.0061	#N/A	50.3	1.94	0.0479	0.00005	0.00012	0.00837	0.00025
Barrel 10	25-Nov-09	0.025	1.09	0.242	0.0025	0.0005	#N/A	0.12	0.0061	#N/A	19.6	7.49	0.0382	0.00955	0.00233	0.0183	0.00025
Barrel 11	24-Nov-09	0.025	0.68	0.112	0.0578	0.0005	#N/A	0.1	0.0089	#N/A	69.3	1.53	0.0342	0.00205	0.00054	0.0147	0.00025
Barrel 12	25-Nov-09	0.025	0.25	0.357	0.0082	0.0005	#N/A	0.1	0.0111	#N/A	23.8	3.96	0.0059	0.00037	0.00017	0.00867	0.00025
Barrel 01	7-Jun-10	0.025	0.54	0.281	0.0025	0.0005	#N/A	0.06	#N/A	0.0057	43.1	2.81	0.032	0.00216	0.00107	0.0595	0.00025
Barrel 02	7-Jun-10	0.025	0.25	0.445	0.111	0.0043	#N/A	0.19	#N/A	0.0043	64.3	1.53	0.0226	0.00436	0.00108	0.0486	0.00025
Barrel 03	7-Jun-10	0.025	0.25	0.135	0.602	0.0125	#N/A	0.74	#N/A	0.0073	66.6	1.92	0.0426	0.0119	0.00778	0.0267	0.00025
Barrel 04	7-Jun-10	0.025	0.25	0.338	0.101	0.0028	#N/A	0.16	#N/A	0.0034	85.7	1.96	0.0228	0.0234	0.00467	0.0369	0.00025
Barrel 05	7-Jun-10	0.25	2.5	0.36	0.093	0.005	#N/A	0.1	#N/A	0.0182	536	3.03	0.0441	0.00996	0.00208	0.0411	0.0005
Barrel 06	7-Jun-10	0.25	9.6	0.37	0.101	0.005	#N/A	0.06	#N/A	0.0069	746	2.07	0.0335	0.00125	0.00082	0.0211	0.00125
Barrel 07	7-Jun-10	0.25	2.5	0.28	0.16	0.005	#N/A	0.33	#N/A	0.0087	1130	1.77	0.0463	0.0032	0.00253	0.023	0.00125
Barrel 08	7-Jun-10	0.025	0.86	0.556	0.0025	0.0005	#N/A	0.15	#N/A	0.0136	67.4	5.68	0.0307	0.00581	0.00255	0.0456	0.00025
Barrel 09	7-Jun-10	0.025	0.69	0.115	0.0025	0.0005	#N/A	0.06	#N/A	0.0201	99.9	3.97	0.161	0.00012	0.00038	0.0358	0.00025
Barrel 10	7-Jun-10	0.025	0.56	0.235	0.0025	0.0005	#N/A	0.1	#N/A	0.0131	24.8	3.37	0.0807	0.0186	0.00209	0.0745	0.00025
Barrel 11	7-Jun-10	0.025	0.25	0.201	0.0025	0.0005	#N/A	0.11	#N/A	0.0137	194	3.65	0.0397	0.014	0.00174	0.0803	0.00025
Barrel 12	7-Jun-10	0.025	0.25	0.447	0.0025	0.0005	#N/A	0.025	#N/A	0.0107	23.4	1.53	0.0741	0.00151	0.00087	0.0874	0.00025
Barrel 01	6-Jul-10	0.025	0.25	0.235	0.184	0.0026	#N/A	0.44	0.0117	#N/A	68.7	2.67	0.0853	0.00173	0.00063	0.0593	0.00025

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Anions and Nutrients										Carbon	Total Metals				
Sample ID		Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrate (as N)	Nitrite (as N)	Total Kjeldahl Nitrogen	Total Nitrogen	Ortho Phosphate as P	Total Phosphate as P	Sulfate (SO_4)	Total Organic Carbon	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)	Beryllium (Be)
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 02	6-Jul-10	0.025	0.25	0.332	0.498	0.0037	#N/A	0.68	0.0136	#N/A	81.2	1.94	0.109	0.00295	0.00077	0.0445	0.00025
Barrel 03	6-Jul-10	0.129	0.25	0.127	2.96	0.0093	#N/A	3.93	0.0081	#N/A	159	2.76	0.103	0.0113	0.00525	0.029	0.00025
Barrel 04	6-Jul-10	0.025	0.25	0.242	1.5	0.0078	#N/A	2.09	0.0284	#N/A	154	2.57	0.161	0.0271	0.00539	0.0378	0.00025
Barrel 05	6-Jul-10	0.25	2.5	0.66	0.266	0.013	#N/A	0.54	0.0179	#N/A	633	2.61	0.0705	0.0255	0.00356	0.0267	0.00125
Barrel 06	6-Jul-10	0.25	2.5	0.46	0.127	0.005	#N/A	0.27	0.0184	#N/A	871	1.75	0.167	0.00195	0.00131	0.0295	0.00125
Barrel 07	6-Jul-10	5.03	2.5	0.37	0.083	0.029	#N/A	0.31	0.0205	#N/A	1250	1.7	0.185	0.00698	0.00354	0.0473	0.00125
Barrel 08	6-Jul-10	0.025	0.25	0.75	0.0025	0.0005	#N/A	0.24	0.0152	#N/A	92.2	4.72	0.853	0.00975	0.00462	0.144	0.00025
Barrel 09	6-Jul-10	0.157	0.61	0.094	0.0025	0.0005	#N/A	0.17	0.017	#N/A	169	3.69	0.219	0.0001	0.0003	0.0277	0.0005
Barrel 10	6-Jul-10	0.025	0.25	0.386	0.0025	0.0005	#N/A	4.45	0.033	#N/A	64.1	2.99	0.376	0.0343	0.00306	0.0474	0.00025
Barrel 11	6-Jul-10	0.025	0.25	0.185	0.161	0.0029	#N/A	0.45	0.0295	#N/A	281	4.64	0.507	0.0157	0.0031	0.0561	0.0005
Barrel 12	6-Jul-10	0.025	0.25	0.513	0.159	0.0012	#N/A	0.38	0.0164	#N/A	59.2	2.18	0.878	0.00211	0.00229	0.129	0.00025
Barrel 01	7-Aug-10	0.025	0.25	0.238	0.0025	0.0005	#N/A	0.025	0.0044	#N/A	62.3	1.5	0.0285	0.00156	0.00057	0.0432	0.00025
Barrel 02	7-Aug-10	0.025	0.25	0.344	0.401	0.0022	#N/A	0.43	0.0058	#N/A	73	1.63	0.0298	0.00251	0.00073	0.0293	0.00025
Barrel 03	7-Aug-10	0.025	0.25	0.12	1.77	0.0105	#N/A	2.41	0.0244	#N/A	126	2.92	0.0652	0.0103	0.005	0.0238	0.00025
Barrel 04	7-Aug-10	0.025	0.25	0.247	1.18	0.0126	#N/A	1.59	0.0081	#N/A	137	1.88	0.0385	0.0212	0.00466	0.0256	0.00025
Barrel 05	7-Aug-10	0.25	2.5	0.57	0.534	0.014	#N/A	0.69	0.0414	#N/A	574	2.08	0.202	0.0202	0.00452	0.0342	0.00125
Barrel 06	7-Aug-10	0.25	5.1	0.45	0.176	0.005	#N/A	0.22	0.0064	#N/A	815	1.67	0.0283	0.00198	0.00138	0.0178	0.00125
Barrel 07	7-Aug-10	0.5	5	0.2	0.05	0.023	#N/A	0.17	0.0106	#N/A	1230	1.66	0.017	0.00732	0.00303	0.0158	0.00125
Barrel 08	7-Aug-10	0.025	0.25	1.06	0.0025	0.0005	#N/A	0.06	0.0063	#N/A	133	3.85	0.043	0.0127	0.00211	0.0363	0.0005
Barrel 09	7-Aug-10	0.303	0.25	0.267	0.0025	0.0005	#N/A	0.05	0.0156	#N/A	244	2.59	0.648	0.00024	0.00039	0.0315	0.0005
Barrel 10	7-Aug-10	0.025	0.25	0.365	0.223	0.0131	#N/A	0.3	0.0194	#N/A	73.6	2.52	0.0365	0.0337	0.00293	0.0309	0.00025
Barrel 11	7-Aug-10	0.025	0.25	0.216	0.0185	0.0005	#N/A	0.14	0.0173	#N/A	255	3.49	0.0652	0.014	0.00276	0.0392	0.00025
Barrel 12	7-Aug-10	0.025	0.25	0.513	0.231	0.0024	#N/A	0.26	0.009	#N/A	57.4	1.45	0.0419	0.00169	0.00053	0.0303	0.00025
Barrel 01	24-Sep-10	0.025	0.25	0.225	0.0117	0.0027	0.076	0.09	#N/A	#N/A	0.0062	1.5	0.0415	0.00119	0.00039	0.0437	0.00025
Barrel 02	24-Sep-10	0.025	0.25	0.467	0.82	0.0021	0.136	0.958	#N/A	#N/A	0.0047	1.74	0.0241	0.00295	0.00063	0.0309	0.00025
Barrel 03	24-Sep-10	0.025	0.25	0.09	1.38	0.0005	0.271	1.65	#N/A	#N/A	0.0107	1.88	0.0593	0.00879	0.00488	0.0186	0.00025
Barrel 04	24-Sep-10	0.025	0.25	0.177	0.954	0.0014	0.111	1.07	#N/A	#N/A	0.008	1.78	0.0567	0.0175	0.00384	0.0267	0.00025
Barrel 05	24-Sep-10	0.025	1.03	0.36	0.139	0.0018	0.179	0.32	#N/A	#N/A	0.0745	2.18	0.743	0.00956	0.00421	0.0955	0.0005
Barrel 06	23-Sep-10	0.25	2.5	0.27	0.344	0.005	0.086	0.43	#N/A	#N/A	0.001	1.1	0.02	0.00126	0.0012	0.0184	0.00125
Barrel 07	23-Sep-10	0.25	2.5	0.21	0.297	0.005	0.073	0.37	#N/A	#N/A	0.0043	1.19	0.023	0.00534	0.00238	0.0136	0.00125
Barrel 08	23-Sep-10	0.025	0.25	0.772	0.0025	0.0005	0.12	0.12	#N/A	#N/A	0.0055	2.54	0.0134	0.00905	0.00101	0.0249	0.00025
Barrel 09	23-Sep-10	0.025	0.25	0.401	0.0076	0.0005	0.642	0.65	#N/A	#N/A	0.001	1.47	1.34	0.00025	0.00025	0.0253	0.00125
Barrel 10	23-Sep-10	0.025	0.25	0.17	0.0025	0.0005	0.08	0.08	#N/A	#N/A	0.0128	1.27	0.0337	0.0133	0.00158	0.023	0.00025
Barrel 11	24-Sep-10	0.025	0.25	0.18	0.27	0.0011	0.209	0.48	#N/A	#N/A	0.0089	2.67	0.0331	0.0149	0.00213	0.0356	0.0005
Barrel 12	24-Sep-10	0.025	0.25	0.315	0.0899	0.0015	0.079	0.17	#N/A	#N/A	0.0113	0.87	0.0566	0.00114	0.00043	0.0362	0.00025
Barrel 01	4-Jun-11	0.025	0.25	0.229	0.0025	0.0005	0.15	0.15	0.0005	0.0121	43.7	2.46	0.0132	0.00155	0.00404	0.0404	0.00025
Barrel 02	4-Jun-11	0.025	0.25	0.336	0.0025	0.0005	0.18	0.18	0.0005	0.0141	51.5	2.17	0.0121	0.00226	0.00248	0.0357	0.00025
Barrel 03	4-Jun-11	0.025	0.25	0.11	0.285	0.0058	0.189	0.48	0.0005	0.0145	124	2.34	0.0107	0.0115	0.00208	0.061	0.00025
Barrel 04	4-Jun-11	0.025	0.25	0.175	0.0025	0.0005	0.17	0.17	0.0005	0.0143	74	2.9	0.024	0.00931	0.00329	0.0397	0.00025
Barrel 05	4-Jun-11	0.25	2.5	0.29	0.097	0.005	0.133	0.23	0.0012	0.0041	851	2.17	0.0082	0.00451	0.00726	0.0645	0.0005
Barrel 06	4-Jun-11	0.25	2.5	0.32	0.061	0.005	0.079	0.14	0.0015	0.0056	1100	1.7	0.006	0.00117	0.00347	0.057	0.0005
Barrel 07	4-Jun-11	0.25	2.5	0.24	0.081	0.005	0.129	0.21	0.0005	0.0023	936	1.43	0.003	0.00588	0.0067	0.0477	0.0005
Barrel 08	4-Jun-11	0.025	0.25	0.35	0.0025	0.0005	0.12	0.12	0.0005	0.0169	36.4	1.99	0.0101	0.00365	0.00306	0.0358	0.00025
Barrel 09	5-Jun-11	0.025	0.25	0.379	0.0096	0.0005	0.17	0.18	0.0031	0.001	253	1.08	0.0125	0.00036	0.00101	0.0295	0.00025
Barrel 10	5-Jun-11	0.025	0.25	0.149	0.0025	0.0005	0.17	0.17	0.001	0.0164	40.4	2.45	0.0213	0.008	0.00366	0.04	0.00025
Barrel 11	4-Jun-11	0.025	0.25	0.108	0.0025	0.0005	0.15	0.15	0.0005	0.0148	138	2.38	0.0163	0.00572	0.00233	0.0643	0.00025
Barrel 12	4-Jun-11	0.025	0.25	0.228	0.0025	0.0005	0.2	0.2	0.0165	0.029	40.8	2.48	0.0204	0.00073	0.00451	0.0265	0.00025
Barrel 13	5-Jun-11	0.5	5	0.94	0.05	0.01	0.11	0.11	2.2	2.1	533	0.83	7.37	0.00005	0.0145	0.0238	0.00118
Barrel 14	5-Jun-11	0.025	0.25	0.081	0.0025	0.0005	#N/A	0.15	0.0118	0.0205	62.7	2.14	0.0202	0.0025	0.00475	0.0254	0.00025
Barrel 15	5-Jun-11	0.025	0.25	0.261	0.0025	0.0005	#N/A	0.16	0.0026	0.0108	96.7	2.43	0.0191	0.00117	0.00335	0.0337	0.00025

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Anions and Nutrients										Carbon	Total Metals				
Sample ID		Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrate (as N)	Nitrite (as N)	Total Kjeldahl Nitrogen	Total Nitrogen	Ortho Phosphate as P	Total Phosphate as P	Sulfate (SO_4)	Total Organic Carbon	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)	Beryllium (Be)
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 16	5-Jun-11	0.025	0.99	0.154	0.0025	0.0005	#N/A	0.23	0.0018	0.0147	195	3.59	0.0133	0.00068	0.00895	0.0417	0.00025
Barrel 17	4-Jun-11	0.25	2.5	1.86	0.128	0.005	#N/A	0.39	0.2	0.197	616	1.71	15	0.00005	0.00573	0.0284	0.00305
Barrel 01	3-Jul-11	0.025	0.55	0.26	0.336	0.0005	0.152	0.48	0.0054	0.0127	158	4.3	0.0059	0.00127	0.00297	0.0821	0.00005
Barrel 02	3-Jul-11	0.025	0.25	0.371	0.839	0.0011	0.272	1.35	0.0065	0.0148	198	4.8	0.0043	0.00168	0.00263	0.0863	0.00005
Barrel 03	3-Jul-11	0.25	2.5	0.1	2.22	0.005	0.297	3.66	0.0069	0.0131	532	1.99	0.005	0.00648	0.00215	0.177	0.00005
Barrel 04	3-Jul-11	0.125	1.25	0.21	0.63	0.0025	0.705	1.28	0.0022	0.0218	367	2.98	0.01	0.00734	0.00325	0.138	0.00005
Barrel 05	3-Jul-11	0.5	5	0.2	0.49	0.01	0.25	0.39	0.0019	0.0324	1240	3.52	0.0075	0.00308	0.00765	0.0866	0.00025
Barrel 06	4-Jul-11	0.5	5	0.2	0.05	0.01	0.22	0.22	0.0023	0.01	1140	2.84	0.003	0.00088	0.00303	0.051	0.0001
Barrel 07	4-Jul-11	0.5	5	0.2	0.13	0.01	0.37	0.5	0.0053	0.0115	1310	3.79	0.0075	0.00528	0.0108	0.0592	0.00025
Barrel 08	4-Jul-11	0.025	0.25	0.285	0.0025	0.0005	0.2	0.2	0.0074	0.0839	164	3.26	0.0056	0.00285	0.00366	0.094	0.00005
Barrel 09	4-Jul-11	0.25	2.5	0.76	0.104	0.005	0.367	0.47	0.0227	0.056	906	2.66	0.286	0.00025	0.00126	0.1	0.00077
Barrel 10	4-Jul-11	0.025	0.25	0.16	0.449	0.0005	0.074	0.76	0.0111	0.0168	108	3.69	0.0085	0.00601	0.00378	0.0668	0.00005
Barrel 11	3-Jul-11	0.025	0.25	0.141	0.284	0.0005	0.494	0.77	0.0113	0.0185	252	4.47	0.015	0.00657	0.003	0.111	0.00005
Barrel 12	3-Jul-11	0.025	0.25	0.249	0.429	0.0005	0.619	1.03	0.0174	0.0342	167	0.56	0.0114	0.00065	0.00424	0.056	0.00005
Barrel 13	3-Jul-11	0.025	0.25	0.249	0.429	0.0005	0.619	1.03	0.0174	0.0342	167	0.56	0.0114	0.00065	0.00424	0.056	0.00005
Barrel 14	4-Jul-11	0.025	0.25	0.115	0.0292	0.0005	0.281	0.31	0.0228	0.0407	78.7	3.55	0.012	0.00268	0.00329	0.0292	0.00005
Barrel 15	4-Jul-11	0.025	0.56	0.262	0.176	0.0031	0.231	0.41	0.0059	0.0226	129	2.97	0.0084	0.00125	0.00351	0.0599	0.00005
Barrel 16	4-Jul-11	0.025	0.68	0.225	0.0057	0.001	0.263	0.27	0.0104	0.04	132	3.7	0.0123	0.00066	0.00643	0.0465	0.00005
Barrel 17	3-Jul-11												180	0.0005	0.365	0.0497	0.0249
Barrel 01	31-Jul-11	0.025	0.25	0.32	0.11	0.0026	0.218	0.33	0.0015	0.011	172	3.56	0.0092	0.00169	0.00169	0.0916	0.00005
Barrel 02	31-Jul-11	0.025	0.25	0.429	0.652	0.0005	0.29	0.94	0.0005	0.0125	234	3.97	0.0098	0.00202	0.00146	0.0982	0.00005
Barrel 03	31-Jul-11	0.25	2.5	0.1	2	0.005	0.245	2.43	0.0005	0.0222	614	4.51	0.0093	0.00903	0.00134	0.186	0.0001
Barrel 04	31-Jul-11	0.25	2.5	0.26	0.636	0.005	0.2	0.84	0.0011	0.0082	449	3.54	0.0068	0.00932	0.00236	0.152	0.00005
Barrel 05	31-Jul-11	0.5	5	0.2	0.15	0.01	0.239	0.39	0.0027	0.0118	1420	4.64	0.0075	0.00369	0.00457	0.0927	0.00025
Barrel 06	1-Aug-11	0.5	5	0.41	0.05	0.01	0.29	0.29	0.0005	0.0204	1610	3.68	0.0075	0.00106	0.0023	0.0712	0.00025
Barrel 07	1-Aug-11	0.5	5	0.2	0.05	0.01	0.46	0.46	0.0005	0.0161	1430	4.93	0.0075	0.00691	0.00839	0.072	0.00025
Barrel 08	1-Aug-11	0.025	0.25	0.354	0.0025	0.0005	0.2	0.2	0.005	0.0118	212	3.38	0.0053	0.0037	0.0027	0.112	0.00005
Barrel 09	1-Aug-11												0.472	0.0005	0.0019	0.0636	0.0016
Barrel 10	1-Aug-11	0.025	0.25	0.212	0.246	0.004	0.38	0.63	0.0013	0.0147	142	4.93	0.0067	0.00784	0.00306	0.0847	0.00005
Barrel 11	31-Jul-11	0.025	0.25	0.168	0.0222	0.0005	0.298	0.32	0.0005	0.0105	286	4.61	0.0093	0.00915	0.002	0.124	0.00005
Barrel 12	31-Jul-11	0.025	0.25	0.291	0.0234	0.0005	0.207	0.23	0.0061	0.0101	180	2.69	0.0086	0.00075	0.00214	0.0596	0.00005
Barrel 13	1-Aug-11	2.5	25	9.2	0.25	0.05	0.92	0.92	770	870	16300	42.1	186	0.0025	7.86	0.0603	0.0198
Barrel 14	1-Aug-11	0.025	0.25	0.119	0.0025	0.0005	0.23	0.23	0.013	0.04	104	3.72	0.0191	0.00354	0.00177	0.0393	0.00005
Barrel 15	1-Aug-11	0.025	0.74	0.297	0.0025	0.0005	0.22	0.22	0.0005	0.0179	170	3.32	0.0188	0.00129	0.00268	0.0677	0.00005
Barrel 16	1-Aug-11	0.025	0.84	0.26	0.0025	0.0005	0.63	0.63	0.0028	0.0242	161	6.25	0.0147	0.00072	0.0048	0.0545	0.00005
Barrel 17	31-Jul-11	0.5	5	13.4	0.05	0.01	0.77	0.77	0.0015	50	6860	15	236	0.001	0.589	0.0366	0.0374
Barrel 01	3-Sep-11	0.025	0.25	0.315	0.0025	0.0005	0.14	0.14	0.0017	0.0111	113	1.92	0.0119	0.0018	0.00086	0.0567	0.00005
Barrel 02	3-Sep-11	0.025	0.25	0.536	0.0449	0.0005	0.095	0.14	0.0016	0.012	90.7	1.64	0.0125	0.00304	0.00077	0.045	0.00005
Barrel 03	3-Sep-11	0.025	0.25	0.159	0.529	0.0005	0.18	0.71	0.0201	0.03	235	2.1	0.0149	0.0125	0.00081	0.0863	0.00005
Barrel 04	3-Sep-11	0.025	0.25	0.249	0.147	0.0005	0.123	0.27	0.0138	0.019	161	1.78	0.014	0.0136	0.00133	0.0798	0.00005
Barrel 05	3-Sep-11	0.5	5	0.43	0.05	0.022	0.128	0.15	0.0038	0.012	1170	1.24	0.0066	0.00465	0.00194	0.0681	0.0001
Barrel 06	3-Sep-11	0.5	5	0.2	0.05	0.01	0.11	0.11	0.0068	0.0126	1350	1.27	0.003	0.00124	0.00091	0.0544	0.0001
Barrel 07	3-Sep-11	0.5	5	0.2	0.05	0.01	0.12	0.12	0.0027	0.007	1360	1.28	0.0063	0.0094	0.00214	0.0549	0.0001
Barrel 08	3-Sep-11	0.025	0.25	0.477	0.0025	0.0005	0.12	0.12	0.0017	0.0137	58.9	1	0.0107	0.008	0.00094	0.0399	0.00005
Barrel 09	3-Sep-11	0.025	0.25	0.135	0.0025	0.0005	0.13	0.13	0.0005	0.001	73.6	1.22	2.2	0.0005	0.0005	0.0584	0.0034
Barrel 10	3-Sep-11	0.025	0.25	0.201	0.0025	0.0005	0.14	0.14	0.0018	0.0176	69.2	1.89	0.0136	0.0113	0.00128	0.0494	0.00005
Barrel 11	3-Sep-11	0.025	0.25	0.172	0.0227	0.0005	0.107	0.13	0.0075	0.0161	175	2.44	0.0074	0.0109	0.00122	0.0774	0.00005
Barrel 12	3-Sep-11	0.025	0.25	0.255	0.0097	0.0005	0.1	0.11	0.0101	0.0192	42.9	1.1	0.0083	0.00087	0.00073	0.0185	0.00005
Barrel 13	3-Sep-11	1.25	12.5	3.7	0.125	0.052	0.148	0.2	0.0188	89	3170	5.87	42.6	0.0014	2.03	0.0388	0.0024
Barrel 14	3-Sep-11	0.025	0.25	0.09	0.0025	0.0005	0.11	0.11	0.0011	0.0163	55.1	1.53	0.018	0.00388	0.00078	0.0182	0.00005

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Anions and Nutrients										Carbon	Total Metals				
Sample ID		Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrate (as N)	Nitrite (as N)	Total Kjeldahl Nitrogen	Total Nitrogen	Ortho Phosphate as P	Total Phosphate as P	Sulfate (SO_4)	Total Organic Carbon	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)	Beryllium (Be)
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 15	3-Sep-11	0.025	0.25	0.259	0.0025	0.0005	0.12	0.12	0.0021	0.009	79.5	1.36	0.0125	0.00136	0.00087	0.0358	0.00005
Barrel 16	3-Sep-11	0.025	0.25	0.21	0.0025	0.0005	0.12	0.12	0.0013	0.0071	92.5	1.39	0.0128	0.00065	0.00091	0.0299	0.00005
Barrel 17	3-Sep-11	0.5	5	3.46	0.05	0.023	0.217	0.24	16.1	17.3	2500	5.66	86.1	0.00025	0.355	0.0182	0.0116
Barrel 01	1-Oct-11	0.025	0.25	0.201	0.0025	0.0005	0.025	0.025	0.0106	0.0155	23.9	0.25	0.017	0.00128	0.00056	0.0257	0.00005
Barrel 02	1-Oct-11	0.025	0.25	0.41	0.0025	0.0005	0.025	0.025	0.0068	0.0183	35.2	0.84	0.0141	0.00202	0.00051	0.0257	0.00005
Barrel 03	1-Oct-11	0.025	0.25	0.116	0.0025	0.0005	0.025	0.025	0.0086	0.012	77.1	1.01	0.0244	0.0112	0.00068	0.0308	0.00005
Barrel 04	1-Oct-11	0.025	0.25	0.183	0.0025	0.0005	0.025	0.025	0.0049	0.0111	58.5	1.1	0.0213	0.012	0.0007	0.03	0.00005
Barrel 05	1-Oct-11	0.25	2.5	0.25	0.025	0.005	0.064	0.0507	0.0078	0.0105	556	0.25	0.0067	0.00503	0.00056	0.0499	0.0001
Barrel 06	1-Oct-11	0.5	5	0.2	0.05	0.01	0.051	0.074	0.0105	0.0124	1140	0.52	0.0078	0.00126	0.0005	0.0416	0.0001
Barrel 07	1-Oct-11	0.5	5	0.2	0.05	0.01	0.074	0.074	0.0068	0.0089	1080	0.98	0.0076	0.00871	0.00094	0.0366	0.0001
Barrel 08	1-Oct-11	0.025	0.25	0.361	0.0025	0.0005	0.025	0.025	0.0191	0.0233	32.2	0.63	0.0124	0.00615	0.00067	0.0284	0.00005
Barrel 09	1-Oct-11	0.025	0.25	0.416	0.0025	0.0005	0.025	0.025	0.0119	0.001	172	0.62	1.21	0.0001	0.0003	0.0664	0.00172
Barrel 10	1-Oct-11	0.025	0.25	0.115	0.0025	0.0005	0.025	0.025	0.0064	0.0102	20.2	0.79	0.0201	0.00789	0.00073	0.0274	0.00005
Barrel 11	1-Oct-11	0.025	0.25	0.132	0.0025	0.0005	0.025	0.025	0.0063	0.013	62.6	1.21	0.0171	0.00848	0.00127	0.0363	0.00005
Barrel 12	1-Oct-11	0.025	0.25	0.149	0.0025	0.0005	0.025	0.025	0.0284	0.0303	19.5	0.84	0.0198	0.0006	0.00048	0.012	0.00005
Barrel 13	1-Oct-11	250	2500	1.13	25	5	0.086	1300	25.6	27.8	2500	1.94	12.8	0.00025	0.417	0.032	0.00068
Barrel 14	1-Oct-11	0.025	0.25	0.061	0.0025	0.0005	0.025	0.025	0.0163	0.0221	23.3	0.25	0.0159	0.00305	0.00058	0.00921	0.00005
Barrel 15	1-Oct-11	0.025	0.25	0.171	0.0025	0.0005	0.025	0.025	0.0041	0.0225	30	0.64	0.0158	0.00111	0.00067	0.0189	0.00005
Barrel 16	1-Oct-11	0.025	0.25	0.169	0.0025	0.0005	0.06	0.06	0.0037	0.0121	45.5	0.94	0.0128	0.00052	0.00042	0.0163	0.00005
Barrel 17	1-Oct-11	50	500	1.55	5	1	0.11	50	4.97	6.08	1800	1.79	23.7	0.00025	0.0738	0.0145	0.00222
Barrel 01	26-Oct-11	0.025	0.25	0.209	0.0025	0.0005	0.06	0.06	0.0146	0.0174	30.6	1.33	0.0125	0.0013	0.00052	0.0313	0.00005
Barrel 02	26-Oct-11	0.025	0.25	0.415	0.0025	0.0005	0.07	0.07	0.0186	0.0201	46.4	1.19	0.0104	0.0021	0.00051	0.0301	0.00005
Barrel 03	26-Oct-11	0.025	0.25	0.081	0.0025	0.0005	0.07	0.07	0.0123	0.0163	70.9	1.48	0.0126	0.0115	0.00058	0.0375	0.00005
Barrel 04	26-Oct-11	0.025	1.49	0.194	0.0646	0.027	0.025	0.08	0.015	0.0164	76.1	1.34	0.0153	0.0129	0.0007	0.0377	0.00005
Barrel 05	26-Oct-11	0.25	2.5	0.25	0.062	0.025	0.025	0.06	0.0103	0.012	741	1.09	0.008	0.00472	0.00073	0.0615	0.0001
Barrel 06	26-Oct-11	0.5	5	0.2	0.05	0.021	0.025	0.07	0.0137	0.0156	1230	1.09	0.0075	0.00108	0.00025	0.0447	0.00025
Barrel 07	26-Oct-11	0.5	5	0.2	0.05	0.01	0.05	0.05	0.0107	0.0126	1140	1.11	0.0075	0.00799	0.00113	0.0359	0.00025
Barrel 08	26-Oct-11	0.025	0.25	0.369	0.0025	0.0005	0.09	0.09	0.0223	0.026	39.3	1.31	0.009	0.00621	0.00064	0.0312	0.00005
Barrel 09	26-Oct-11	0.025	0.25	0.547	0.0153	0.0005	0.055	0.07	0.0012	0.001	240	0.77	1.71	0.0001	0.00033	0.0489	0.00197
Barrel 10	26-Oct-11	0.025	0.25	0.11	0.0025	0.0005	0.06	0.06	0.0102	0.0129	30.1	1.25	0.0122	0.00844	0.00066	0.0339	0.00005
Barrel 11	26-Oct-11	0.025	0.25	0.102	0.0079	0.0026	0.025	0.05	0.0078	0.0131	72	1.48	0.0107	0.00791	0.0012	0.039	0.00005
Barrel 12	26-Oct-11	0.025	0.25	0.158	0.0215	0.0036	0.025	0.05	0.0302	0.0332	25.2	1.14	0.0229	0.00057	0.00044	0.0142	0.00005
Barrel 13	26-Oct-11	2.5	25	1.09	0.25	0.17	0.025	0.025	0.0906	32.3	2260	1.67	9.96	0.00025	0.463	0.0234	0.00025
Barrel 14	26-Oct-11	0.025	0.25	0.05	0.0397	0.0012	0.025	0.09	0.0241	0.0302	33.9	1.15	0.0133	0.00244	0.00046	0.011	0.00005
Barrel 15	26-Oct-11	0.025	0.25	0.164	0.0061	0.0005	0.074	0.08	0.0107	0.0141	43.3	1.14	0.0092	0.00105	0.00065	0.0246	0.00005
Barrel 16	26-Oct-11	0.025	0.25	0.152	0.0074	0.0005	0.063	0.07	0.0042	0.007	74.1	0.96	0.0118	0.00042	0.00042	0.0241	0.00005
Barrel 17	26-Oct-11	2.5	25	0.74	0.25	0.13	0.025	0.08	4.63	5.45	1650	1.52	17.3	0.00025	0.0646	0.0106	0.00125

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Total Metals															
Sample ID		Bismuth (Bi)	Boron (B)	Cadmium (Cd)	Calcium (Ca)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Lithium (Li)	Magnesium (Mg)	Manganese (Mn)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Phosphorus (P)
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 01	12-Jul-09	0.00025	0.005	0.000038	9.1	0.00025	0.00005	0.0103	0.075	0.000928	0.0025	0.655	0.0108	0.000005	0.00404	0.00056	0.15
Barrel 02	12-Jul-09	0.00025	0.005	0.000038	37.4	0.00025	0.00005	0.00972	0.083	0.000326	0.0073	3.48	0.0108	0.000005	0.0292	0.00025	0.15
Barrel 03	12-Jul-09	0.00025	0.005	0.000027	23.1	0.00025	0.00022	0.0161	0.149	0.000882	0.0025	3.83	0.0301	0.000005	0.0113	0.00106	0.15
Barrel 04	12-Jul-09	0.00025	0.005	0.000054	37.3	0.00025	0.00034	0.0169	0.061	0.000769	0.0078	2.56	0.0338	0.000018	0.0106	0.00238	0.15
Barrel 01	26-Aug-09	0.00025	0.014	0.000244	73.9	0.00063	0.0016	0.0478	0.538	0.00204	0.0141	8.87	0.118	0.000005	0.171	0.00598	0.15
Barrel 02	26-Aug-09	0.00025	0.013	0.000105	62.9	0.00025	0.00017	0.0178	0.059	0.000529	0.0155	7.81	0.0123	0.000005	0.107	0.00097	0.15
Barrel 03	26-Aug-09	0.00025	0.012	0.000087	84.7	0.00025	0.00049	0.0216	0.059	0.000587	0.0153	12.8	0.0854	0.000005	0.0905	0.00218	0.15
Barrel 04	26-Aug-09	0.00025	0.024	0.000487	96.1	0.00025	0.00395	0.0236	0.045	0.00163	0.0253	8.2	0.325	0.000012	0.0303	0.0117	0.15
Barrel 01	19-Sep-09	0.00025	0.005	0.000144	49.2	0.00025	0.00078	0.0183	0.045	0.000417	0.0108	5.91	0.0728	0.000005	0.0945	0.00141	0.15
Barrel 02	19-Sep-09	0.00025	0.005	0.000097	54.6	0.00025	0.00021	0.0162	0.115	0.00079	0.0106	6.32	0.0155	0.000005	0.0862	0.00072	0.15
Barrel 03	19-Sep-09	0.00025	0.005	0.000104	71.8	0.00025	0.00067	0.0202	0.099	0.00177	0.012	10.4	0.111	0.000005	0.05	0.00278	0.15
Barrel 04	19-Sep-09	0.00025	0.016	0.000431	82	0.00025	0.00265	0.0209	0.049	0.00129	0.0263	7.33	0.251	0.000005	0.0259	0.0081	0.15
Barrel 05	19-Sep-09	0.0005	0.021	0.000173	96	0.0005	0.00326	0.0177	0.107	0.00272	0.033	6.22	0.122	0.000062	0.0429	0.0035	0.15
Barrel 01	22-Oct-09	0.00025	0.005	0.000094	36.6	0.00025	0.00065	0.0437	0.015	0.000244	0.0051	3.26	0.0972	0.000005	0.0348	0.00025	0.15
Barrel 02	22-Oct-09	0.00025	0.005	0.000033	42.2	0.00025	0.00022	0.018	0.015	0.000229	0.0066	4.32	0.0276	0.000005	0.0581	0.00025	0.15
Barrel 03	22-Oct-09	0.00025	0.005	0.000032	43.1	0.00025	0.00062	0.0202	0.05	0.000902	0.0063	5.72	0.115	0.000005	0.0265	0.00158	0.15
Barrel 04	22-Oct-09	0.00025	0.014	0.000272	50.8	0.00025	0.00161	0.0125	0.015	0.000677	0.0141	4.29	0.172	0.000005	0.0163	0.00372	0.15
Barrel 05	22-Oct-09	0.0005	0.01	0.000136	85.8	0.0005	0.00305	0.0155	0.094	0.00133	0.036	4.33	0.145	0.000017	0.0257	0.0015	0.15
Barrel 06	22-Oct-09	0.00125	0.025	0.00139	228	0.00125	0.00112	0.0168	0.042	0.0015	0.041	3.42	0.29	0.000005	0.0215	0.00125	0.15
Barrel 07	22-Oct-09	0.00125	0.025	0.000173	437	0.00125	0.0023	0.011	0.015	0.00123	0.127	4.89	0.205	0.000005	0.00683	0.00125	0.15
Barrel 08	22-Oct-09	0.00025	0.005	0.000267	51.1	0.00051	0.00848	0.0495	0.035	0.00136	0.0154	3.26	0.484	0.000041	0.0186	0.00277	0.15
Barrel 09	22-Oct-09	0.00025	0.013	0.00262	25.4	0.00025	0.0439	1.58	0.015	0.000301	0.0128	2.98	3.57	0.000021	0.00018	0.0083	0.15
Barrel 10	22-Oct-09	0.00025	0.012	0.000096	34.6	0.0006	0.00146	0.0332	0.135	0.00171	0.0061	4.18	0.151	0.000022	0.0781	0.00174	0.15
Barrel 11	22-Oct-09	0.0005	0.01	0.000106	129	0.0005	0.00613	0.0327	0.132	0.00033	0.016	7.2	0.322	0.000015	0.0527	0.0033	0.15
Barrel 12	22-Oct-09	0.0005	0.01	0.000333	35.3	0.0005	0.00201	0.0701	0.084	0.00028	0.005	1.77	0.309	0.00006	0.0331	0.0016	0.15
Barrel 01	24-Nov-09	0.00025	0.005	0.000036	18.6	0.00025	0.00061	0.0164	0.015	0.000157	0.0054	3.47	0.0966	0.000005	0.0314	0.00025	0.15
Barrel 02	24-Nov-09	0.00025	0.005	0.000018	11.6	0.00025	0.00011	0.00692	0.035	0.000341	0.0025	2.05	0.0123	0.000005	0.0271	0.00025	0.15
Barrel 03	24-Nov-09	0.00025	0.005	0.00002	14.9	0.00025	0.00034	0.00884	0.167	0.00132	0.0025	3.81	0.0545	0.000005	0.0163	0.001	0.15
Barrel 04	24-Nov-09	0.00025	0.025	0.000205	69.7	0.00025	0.00236	0.0216	0.051	0.000652	0.0285	10.7	0.311	0.000005	0.0402	0.00603	0.15
Barrel 05	24-Nov-09	0.00025	0.022	0.00015	60.9	0.00025	0.00629	0.0265	0.234	0.00299	0.0523	9.02	0.318	0.000015	0.046	0.00322	0.15
Barrel 06	25-Nov-09	0.00025	0.005	0.000604	57.7	0.00025	0.00081	0.00482	0.015	0.000595	0.019	2.02	0.164	0.000005	0.00937	0.00025	0.15
Barrel 07	25-Nov-09	0.00025	0.005	0.000093	38.6	0.00025	0.00071	0.0024	0.015	0.000292	0.0247	1.63	0.0673	0.000005	0.00178	0.00025	0.15
Barrel 08	24-Nov-09	0.00025	0.01	0.000139	31.7	0.00025	0.0217	0.0446	0.089	0.00168	0.023	5.74	0.745	0.000031	0.0294	0.00496	0.15
Barrel 09	25-Nov-09	0.00025	0.005	0.000846	8.03	0.00025	0.0132	0.465	0.056	0.000196	0.007	1.73	1.14	0.000005	0.000171	0.00476	0.15
Barrel 10	25-Nov-09	0.00025	0.005	0.000047	8.4	0.00025	0.00055	0.0148	0.041	0.00045	0.0025	2.03	0.0668	0.000005	0.0373	0.00077	0.15
Barrel 11	24-Nov-09	0.00025	0.005	0.000016	10.3	0.00025	0.0008	0.00545	0.058	0.000284	0.0025	0.76	0.0759	0.000005	0.00445	0.00025	0.15
Barrel 12	25-Nov-09	0.00025	0.005	0.000078	6.42	0.00025	0.00042	0.0093	0.015	0.000025	0.0025	0.441	0.0893	0.000005	0.0114	0.00025	0.15
Barrel 01	7-Jun-10	0.00025	0.005	0.00005	32.4	0.00025	0.00015	0.00883	0.038	0.000171	0.0025	2.82	0.0489	0.000005	0.046	0.00025	0.15
Barrel 02	7-Jun-10	0.00025	0.005	0.000047	39.5	0.00025	0.00005	0.00667	0.015	0.000114	0.0054	3.4	0.00796	0.000005	0.0673	0.00025	0.15
Barrel 03	7-Jun-10	0.00025	0.005	0.000026	38.8	0.00025	0.00005	0.0074	0.047	0.000291	0.0025	4.96	0.0135	0.000005	0.0418	0.00056	0.15
Barrel 04	7-Jun-10	0.00025	0.015	0.00011	45.8	0.00025	0.00028	0.00789	0.015	0.000191	0.0085	3.17	0.0633	0.000005	0.0201	0.00118	0.15
Barrel 05	7-Jun-10	0.0005	0.01	0.00015	186	0.0002	0.00059	0.00826	0.05	0.0006	0.023	4.85	0.0597	0.000005	0.0243	0.0012	0.15
Barrel 06	7-Jun-10	0.00125	0.025	0.000889	235	0.0005	0.00135	0.00685	0.036	0.00073	0.0125	3.11	0.265	0.000005	0.017	0.00125	0.15
Barrel 07	7-Jun-10	0.00125	0.025	0.000177	435	0.0005	0.00143	0.00508	0.04	0.00091	0.037	4.22	0.206	0.000005	0.00788	0.00125	0.15
Barrel 08	7-Jun-10	0.00025	0.005	0.000234	38.4	0.00025	0.00469	0.0166	0.035	0.000871	0.0093	2.45	0.389	0.000022	0.0143	0.00218	0.15
Barrel 09	7-Jun-10	0.00025	0.011	0.00354	25.6	0.00025	0.0466	1.72	0.03	0.000249	0.0132	2.83	3.43	0.000005	0.000112	0.01	0.15
Barrel 10	7-Jun-10	0.00025	0.013	0.000042	24.3	0.00025	0.00025	0.0146	0.079	0.000558	0.0025	3.11	0.0444	0.000005	0.0825	0.00025	0.15
Barrel 11	7-Jun-10	0.00025	0.013	0.000023	81.5	0.00025	0.00215	0.0118	0.05	0.000128	0.0066	4.7	0.178	0.000005	0.0344	0.00107	0.15
Barrel 12	7-Jun-10	0.00025	0.005	0.000227	22.9	0.00025	0.00031	0.0194	0.107	0.000342	0.0025	1.07	0.149	0.000005	0.0376	0.00025	0.15
Barrel 01	6-Jul-10	0.00025	0.005	0.000081	38.1	0.00025	0.00028	0.0241	0.13	0.000752	0.0025	4.05	0.0348	0.000005	0.0991	0.00073	0.15

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Total Metals														
Sample ID		Bismuth (Bi)	Boron (B)	Cadmium (Cd)	Calcium (Ca)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Lithium (Li)	Magnesium (Mg)	Manganese (Mn)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Phosphorus (P)
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 02	6-Jul-10	0.00025	0.005	0.00005	40.8	0.00025	0.00012	0.0164	0.152	0.000976	0.0061	4.56	0.00834	0.000005	0.108	0.00025	0.15
Barrel 03	6-Jul-10	0.00025	0.011	0.000021	60.7	0.00025	0.00021	0.0124	0.099	0.00127	0.0072	8.34	0.0229	0.000005	0.086	0.00161	0.15
Barrel 04	6-Jul-10	0.00025	0.015	0.000408	64.8	0.00025	0.0017	0.0219	0.155	0.00266	0.0106	5.65	0.186	0.000005	0.031	0.00636	0.15
Barrel 05	6-Jul-10	0.00125	0.025	0.000704	217	0.0005	0.00973	0.0313	0.065	0.00147	0.028	6.85	0.384	0.000005	0.0646	0.0033	0.15
Barrel 06	6-Jul-10	0.00125	0.025	0.00211	319	0.0005	0.00351	0.0142	0.152	0.00293	0.0125	3.84	0.417	0.000005	0.03	0.00125	0.15
Barrel 07	6-Jul-10	0.00125	0.025	0.000743	474	0.0005	0.00469	0.0204	0.182	0.00486	0.034	4.32	0.282	0.000005	0.0204	0.0036	0.15
Barrel 08	6-Jul-10	0.00025	0.005	0.000417	51.8	0.00202	0.0147	0.0858	1.34	0.0182	0.0149	4.19	0.52	0.000081	0.032	0.00331	0.15
Barrel 09	6-Jul-10	0.0005	0.01	0.00848	42.2	0.0005	0.084	2.75	0.015	0.00028	0.013	4.87	8.94	0.000005	0.00048	0.0215	0.15
Barrel 10	6-Jul-10	0.00025	0.019	0.00014	37.4	0.00079	0.00056	0.0252	0.437	0.00374	0.0083	5.2	0.0281	0.000005	0.156	0.00137	0.15
Barrel 11	6-Jul-10	0.0005	0.01	0.000108	114	0.0012	0.00323	0.0375	0.774	0.00116	0.005	7.17	0.213	0.000005	0.0625	0.0015	0.15
Barrel 12	6-Jul-10	0.00025	0.005	0.000292	34.6	0.00122	0.00108	0.0913	1.39	0.00249	0.0025	2.18	0.157	0.000023	0.0582	0.00104	0.15
Barrel 01	7-Aug-10	0.00025	0.005	0.000085	38.9	0.00025	0.00021	0.014	0.015	0.000212	0.0051	3.99	0.0308	0.000005	0.102	0.00025	0.15
Barrel 02	7-Aug-10	0.00025	0.005	0.000071	38.6	0.00025	0.00005	0.0106	0.015	0.000218	0.0057	3.93	0.00274	0.000005	0.0867	0.00025	0.15
Barrel 03	7-Aug-10	0.00025	0.005	0.000046	55.1	0.00025	0.00035	0.0119	0.051	0.000961	0.0068	6.78	0.0614	0.000005	0.0603	0.00142	0.15
Barrel 04	7-Aug-10	0.00025	0.014	0.000323	57.9	0.00025	0.00119	0.0119	0.015	0.00111	0.0102	4.94	0.161	0.000005	0.0238	0.00464	0.15
Barrel 05	7-Aug-10	0.00125	0.025	0.000654	201	0.0005	0.00356	0.0373	0.198	0.00341	0.029	6.35	0.189	0.000005	0.0708	0.00125	0.15
Barrel 06	7-Aug-10	0.00125	0.025	0.00166	303	0.0005	0.00218	0.00931	0.015	0.00102	0.0125	3.52	0.343	0.000005	0.0285	0.00125	0.15
Barrel 07	7-Aug-10	0.00125	0.025	0.000716	452	0.0005	0.00268	0.0109	0.015	0.00104	0.027	3.84	0.25	0.000005	0.0184	0.0029	0.15
Barrel 08	7-Aug-10	0.0005	0.01	0.00027	68.2	0.0002	0.0214	0.0287	0.05	0.00168	0.017	4.52	0.447	0.000015	0.0468	0.0028	0.15
Barrel 09	7-Aug-10	0.0005	0.01	0.0131	64.3	0.0002	0.132	5.18	0.032	0.00093	0.02	7.22	11.6	0.000005	0.00069	0.0322	0.15
Barrel 10	7-Aug-10	0.00025	0.02	0.000129	40.1	0.00025	0.00014	0.00908	0.015	0.000725	0.0087	5.15	0.0036	0.000005	0.144	0.00118	0.15
Barrel 11	7-Aug-10	0.00025	0.016	0.000096	98.1	0.00025	0.00169	0.0133	0.06	0.000195	0.0086	6.1	0.124	0.000005	0.0504	0.00134	0.15
Barrel 12	7-Aug-10	0.00025	0.005	0.000157	30.4	0.00025	0.00026	0.0178	0.015	0.000136	0.0025	1.34	0.0621	0.000005	0.0488	0.00059	0.15
Barrel 01	24-Sep-10	0.00025	0.005	0.000089	38.5	0.00026	0.00024	0.017	0.044	0.000322	0.0051	4.01	0.0374	0.000005	0.0965	0.00025	0.15
Barrel 02	24-Sep-10	0.00025	0.005	0.000052	51.9	0.0001	0.00005	0.0104	0.015	0.000258	0.008	5.44	0.00493	0.000005	0.121	0.00025	0.15
Barrel 03	24-Sep-10	0.00025	0.005	0.000041	45.4	0.00029	0.00034	0.00961	0.053	0.00111	0.0055	5.44	0.0667	0.000005	0.0411	0.0012	0.15
Barrel 04	24-Sep-10	0.00025	0.013	0.000331	51.1	0.00022	0.00117	0.015	0.063	0.00188	0.0097	4.31	0.167	0.000005	0.0184	0.00438	0.15
Barrel 05	24-Sep-10	0.0005	0.01	0.000547	139	0.0012	0.00381	0.0664	1.07	0.0193	0.022	4.78	0.272	0.000014	0.0376	0.002	0.15
Barrel 06	23-Sep-10	0.00125	0.025	0.00124	240	0.0005	0.00139	0.0076	0.015	0.00083	0.0125	2.8	0.26	0.000005	0.0207	0.00125	0.15
Barrel 07	23-Sep-10	0.00125	0.025	0.0006	397	0.0005	0.00214	0.0085	0.015	0.00094	0.0125	3.05	0.229	0.000005	0.0137	0.0025	0.15
Barrel 08	23-Sep-10	0.00025	0.005	0.000208	53.1	0.0001	0.0208	0.0165	0.015	0.000512	0.0141	3.38	0.283	0.000005	0.0375	0.00185	0.15
Barrel 09	23-Sep-10	0.00125	0.025	0.0138	56.5	0.0005	0.155	8.47	0.015	0.00115	0.0125	6.77	10.9	0.000005	0.00093	0.0337	0.15
Barrel 10	23-Sep-10	0.00025	0.011	0.000088	28.3	0.0001	0.00005	0.00672	0.015	0.000447	0.0051	2.92	0.00179	0.000005	0.0733	0.00069	0.15
Barrel 11	24-Sep-10	0.0005	0.01	0.000081	107	0.0002	0.00198	0.0104	0.031	0.00012	0.005	6.1	0.122	0.000005	0.0535	0.0012	0.15
Barrel 12	24-Sep-10	0.00025	0.005	0.000183	25.4	0.0001	0.00024	0.0223	0.044	0.000253	0.0025	1.1	0.0435	0.000005	0.0272	0.00025	0.15
Barrel 01	4-Jun-11	0.00025	0.005	0.000022	31.9	0.0001	0.00033	0.00285	0.015	0.000025	0.0025	3.68	0.0472	0.000005	0.0315	0.00212	0.15
Barrel 02	4-Jun-11	0.00025	0.005	0.000029	32.3	0.0001	0.00025	0.00191	0.015	0.000063	0.0025	3.1	0.0517	0.000005	0.0437	0.00144	0.15
Barrel 03	4-Jun-11	0.00025	0.005	0.000031	58.1	0.00012	0.00014	0.00192	0.015	0.000074	0.0025	5.51	0.0116	0.000005	0.0263	0.00145	0.15
Barrel 04	4-Jun-11	0.00025	0.014	0.000033	35.6	0.00013	0.00041	0.00298	0.015	0.00015	0.0025	4.65	0.0893	0.000005	0.0123	0.00367	0.15
Barrel 05	4-Jun-11	0.0005	0.01	0.000163	349	0.00023	0.00219	0.0019	0.015	0.00005	0.005	7.34	0.612	0.000005	0.0145	0.0081	0.15
Barrel 06	4-Jun-11	0.0005	0.01	0.000216	443	0.0001	0.00227	0.0016	0.015	0.00019	0.005	4.36	0.509	0.000005	0.011	0.0098	0.15
Barrel 07	4-Jun-11	0.0005	0.01	0.000159	376	0.0001	0.00166	0.0014	0.015	0.00012	0.005	2.78	0.294	0.000005	0.00772	0.0075	0.15
Barrel 08	4-Jun-11	0.00025	0.005	0.000022	24.8	0.00021	0.00028	0.00302	0.015	0.000148	0.0025	2.31	0.0325	0.000005	0.0079	0.00164	0.15
Barrel 09	5-Jun-11	0.00025	0.012	0.00754	78.9	0.00015	0.135	1.61	0.015	0.000079	0.0154	11.6	9.85	0.000005	0.000396	0.0523	0.15
Barrel 10	5-Jun-11	0.00025	0.012	0.00003	29.9	0.00022	0.00039	0.00335	0.015	0.000101	0.0025	3.18	0.0498	0.000005	0.0547	0.0027	0.15
Barrel 11	4-Jun-11	0.00025	0.011	0.000036	61.5	0.0002	0.0003	0.00361	0.015	0.000091	0.0025	3.38	0.055	0.000005	0.0131	0.00181	0.15
Barrel 12	4-Jun-11	0.00025	0.005	0.000024	29.1	0.00028	0.00005	0.00385	0.015	0.000068	0.0025	2.19	0.0098	0.000005	0.0163	0.00074	0.15
Barrel 13	5-Jun-11	0.00025	0.012	0.00566	29.6	0.00279	0.0616	4.59	102	0.00248	0.0025	10.1	1.96	0.000005	0.0162	0.0418	2.92
Barrel 14	5-Jun-11	0.00025	0.005	0.000005	36.3	0.00021	0.00005	0.00313	0.015	0.000025	0.0025	2.77	0.00766	0.000005	0.00294	0.00084	0.15
Barrel 15	5-Jun-11	0.00025	0.013	0.00005	42.7	0.00021	0.00142	0.00307	0.032	0.000069	0.0025	4.71	0.331	0.000005	0.0562	0.00731	0.15

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Total Metals														
Sample ID		Bismuth (Bi)	Boron (B)	Cadmium (Cd)	Calcium (Ca)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Lithium (Li)	Magnesium (Mg)	Manganese (Mn)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Phosphorus (P)
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 16	5-Jun-11	0.00025	0.012	0.00004	71.6	0.00018	0.00085	0.00208	0.015	0.00006	0.0025	8.15	0.289	0.000005	0.00164	0.00659	0.15
Barrel 17	4-Jun-11	0.00025	0.019	0.0143	107	0.00452	0.214	3.83	33.4	0.00257	0.0131	13.1	15.2	0.000005	0.000379	0.224	0.15
Barrel 01	3-Jul-11	0.00025	0.011	0.000065	70.9	0.00017	0.0005	0.0134	0.015	0.000461	0.00058	5.99	0.0842	0.000005	0.0585	0.00306	0.15
Barrel 02	3-Jul-11	0.00025	0.011	0.000074	82.8	0.0002	0.00044	0.00301	0.015	0.000111	0.00025	7.25	0.11	0.000005	0.08	0.00262	0.15
Barrel 03	3-Jul-11	0.00025	0.012	0.000088	183	0.00034	0.00018	0.00282	0.015	0.000127	0.00025	15.1	0.0133	0.000005	0.0347	0.00355	0.15
Barrel 04	3-Jul-11	0.00025	0.02	0.00012	135	0.00029	0.00078	0.00361	0.015	0.000171	0.00025	12.2	0.2	0.000005	0.0258	0.00388	0.15
Barrel 05	3-Jul-11	0.00125	0.025	0.000265	441	0.00025	0.00212	0.0037	0.015	0.000125	0.00125	7.39	0.794	0.000005	0.0193	0.0086	0.15
Barrel 06	4-Jul-11	0.0005	0.01	0.000227	391	0.0001	0.00167	0.002	0.015	0.00039	0.0017	4.94	0.52	0.000005	0.0145	0.007	0.15
Barrel 07	4-Jul-11	0.00125	0.025	0.000243	430	0.00025	0.00209	0.00125	0.015	0.00027	0.00125	4.56	0.494	0.000005	0.0168	0.0096	0.15
Barrel 08	4-Jul-11	0.00025	0.005	0.000078	65.7	0.00012	0.00088	0.00413	0.015	0.000122	0.00055	5.76	0.115	0.000005	0.0126	0.00368	0.15
Barrel 09	4-Jul-11	0.00125	0.025	0.0363	238	0.00025	0.5	8.36	0.119	0.00075	0.0301	35	47.6	0.000005	0.00042	0.257	0.15
Barrel 10	4-Jul-11	0.00025	0.011	0.000074	45.4	0.00011	0.00054	0.00362	0.015	0.000316	0.00056	4.64	0.117	0.000005	0.0707	0.00304	0.15
Barrel 11	3-Jul-11	0.00025	0.016	0.000079	107	0.00035	0.00023	0.00571	0.042	0.000352	0.00025	4.9	0.0178	0.000005	0.0272	0.0019	0.15
Barrel 12	3-Jul-11	0.00025	0.011	0.000033	73.9	0.00049	0.00005	0.00461	0.015	0.000064	0.00025	5.09	0.00813	0.000005	0.0265	0.00112	0.15
Barrel 13	3-Jul-11	0.00025	0.011	0.000033	73.9	0.00049	0.00005	0.00461	0.015	0.000064	0.00025	5.09	0.00813	0.000005	0.0265	0.00112	0.15
Barrel 14	4-Jul-11	0.00025	0.005	0.000017	37	0.00025	0.00005	0.00286	0.015	0.000061	0.00025	3.09	0.0043	0.000005	0.00422	0.0009	0.15
Barrel 15	4-Jul-11	0.00025	0.012	0.000097	48.7	0.00013	0.00145	0.00169	0.015	0.000052	0.00053	4.6	0.462	0.000005	0.0845	0.00593	0.15
Barrel 16	4-Jul-11	0.00025	0.005	0.000113	49.3	0.00016	0.00056	0.00205	0.015	0.00007	0.00025	3.6	0.372	0.000005	0.00222	0.00323	0.15
Barrel 17	3-Jul-11	0.0025	0.05	0.118	364	0.0588	1.32	39.7	1050	0.0141	0.114	72.5	77.6	0.000021	0.0128	1.45	37
Barrel 01	31-Jul-11	0.00025	0.005	0.00005	84.6	0.00027	0.00029	0.00347	0.015	0.000052	0.00094	6.8	0.0385	0.000005	0.0826	0.00266	0.15
Barrel 02	31-Jul-11	0.00025	0.005	0.00005	101	0.00021	0.00027	0.00258	0.015	0.000119	0.00054	8.71	0.0717	0.000005	0.113	0.00201	0.15
Barrel 03	31-Jul-11	0.0005	0.01	0.000078	226	0.00024	0.0001	0.0026	0.015	0.00018	0.0005	18.3	0.00746	0.000005	0.0519	0.0027	0.15
Barrel 04	31-Jul-11	0.00025	0.021	0.000087	164	0.00025	0.0005	0.0025	0.015	0.000096	0.00098	14.6	0.15	0.000005	0.0311	0.003	0.15
Barrel 05	31-Jul-11	0.00125	0.025	0.000266	551	0.00025	0.00177	0.00125	0.015	0.000125	0.00125	10.1	0.767	0.000005	0.0319	0.0074	0.15
Barrel 06	1-Aug-11	0.00125	0.025	0.000272	631	0.00025	0.00175	0.00125	0.015	0.00056	0.00125	8.4	0.636	0.000005	0.029	0.0085	0.15
Barrel 07	1-Aug-11	0.00125	0.025	0.000279	598	0.00025	0.00178	0.0029	0.015	0.00036	0.00125	5.84	0.434	0.000005	0.0318	0.0093	0.15
Barrel 08	1-Aug-11	0.00025	0.005	0.000079	95.9	0.00019	0.00075	0.0038	0.015	0.000185	0.00025	7.2	0.122	0.000037	0.0169	0.00348	0.15
Barrel 09	1-Aug-11	0.0025	0.05	0.0489	320	0.0005	0.658	15.3	0.302	0.00182	0.0386	43.8	68.9	0.000005	0.00054	0.335	0.15
Barrel 10	1-Aug-11	0.00025	0.015	0.000075	70.6	0.00012	0.00059	0.003	0.015	0.000386	0.00025	6.25	0.118	0.000005	0.104	0.00326	0.15
Barrel 11	31-Jul-11	0.00025	0.014	0.000076	134	0.00021	0.00021	0.00468	0.015	0.000429	0.00063	5.66	0.013	0.000005	0.0343	0.00154	0.15
Barrel 12	31-Jul-11	0.00025	0.005	0.000032	83.6	0.00032	0.00005	0.00306	0.015	0.000025	0.00025	5.1	0.00341	0.000005	0.0355	0.00078	0.15
Barrel 13	1-Aug-11	0.0125	0.25	0.036	214	0.174	1.56	40.2	7980	0.269	0.163	97.4	16.1	0.000108	3.22	0.829	953
Barrel 14	1-Aug-11	0.00025	0.005	0.000019	53.7	0.0003	0.00005	0.00351	0.145	0.000079	0.00025	3.44	0.00942	0.000005	0.0045	0.00088	0.15
Barrel 15	1-Aug-11	0.00025	0.012	0.00005	72.3	0.00019	0.00051	0.00245	0.085	0.000102	0.00074	5.95	0.0831	0.000005	0.075	0.00488	0.15
Barrel 16	1-Aug-11	0.00025	0.005	0.000066	72.2	0.00027	0.00034	0.00243	0.043	0.00015	0.00025	4.23	0.0804	0.000005	0.00259	0.00222	0.15
Barrel 17	31-Jul-11	0.005	0.1	0.155	452	0.0936	1.68	58.9	1680	0.008	0.165	114	99.6	0.000028	0.0145	1.91	58
Barrel 01	3-Sep-11	0.00025	0.005	0.000036	57	0.0001	0.00005	0.00205	0.015	0.000075	0.00076	4.61	0.00951	0.000005	0.0822	0.00133	0.15
Barrel 02	3-Sep-11	0.00025	0.005	0.000075	56.6	0.00005	0.00005	0.00141	0.015	0.000115	0.00025	4.1	0.0161	0.000005	0.133	0.00072	0.15
Barrel 03	3-Sep-11	0.00025	0.005	0.000037	122	0.00016	0.00005	0.00157	0.015	0.000134	0.00025	9.43	0.00236	0.000005	0.0617	0.00129	0.15
Barrel 04	3-Sep-11	0.00025	0.014	0.000038	93	0.0001	0.00019	0.00157	0.015	0.000131	0.00059	8.1	0.061	0.000005	0.0355	0.00136	0.15
Barrel 05	3-Sep-11	0.0005	0.01	0.00015	437	0.0001	0.00082	0.0014	0.015	0.00015	0.0023	8.48	0.376	0.000005	0.0377	0.0045	0.15
Barrel 06	3-Sep-11	0.0005	0.022	0.000176	578	0.0001	0.00091	0.0012	0.015	0.00015	0.0045	6.3	0.337	0.000005	0.0476	0.0047	0.15
Barrel 07	3-Sep-11	0.0005	0.023	0.000122	562	0.0001	0.00044	0.0014	0.015	0.00005	0.0048	3.88	0.149	0.000005	0.0403	0.0046	0.15
Barrel 08	3-Sep-11	0.00025	0.005	0.000028	39.1	0.00012	0.00017	0.00214	0.015	0.000159	0.0008	2.46	0.0408	0.000005	0.0199	0.00115	0.15
Barrel 09	3-Sep-11	0.0025	0.05	0.0492	274	0.0005	0.624	23.7	0.015	0.0007	0.0375	39.8	64.1	0.000005	0.00058	0.264	0.15
Barrel 10	3-Sep-11	0.00025	0.012	0.000035	46	0.00022	0.0002	0.00221	0.015	0.000451	0.00073	4.04	0.0421	0.000005	0.11	0.00153	0.15
Barrel 11	3-Sep-11	0.00025	0.01	0.000041	86.8	0.00015	0.00005	0.0034	0.015	0.000354	0.00025	3.9	0.00371	0.000005	0.0333	0.00083	0.15
Barrel 12	3-Sep-11	0.00025	0.005	0.000012	29.1	0.0001	0.00005	0.0012	0.015	0.000025	0.00025	1.59	0.000665	0.000005	0.0268	0.00025	0.15
Barrel 13	3-Sep-11	0.0025	0.05	0.0106	62	0.0259	0.476	8.75	1950	0.0542	0.0387	37.5	7.18	0.000025	1.61	0.136	179
Barrel 14	3-Sep-11	0.00025	0.005	0.000005	30.7	0.00014	0.00005	0.00184	0.015	0.00005	0.00025	1.74	0.00169	0.000005	0.00335	0.00025	0.15

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Total Metals															
Sample ID		Bismuth (Bi)	Boron (B)	Cadmium (Cd)	Calcium (Ca)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Lithium (Li)	Magnesium (Mg)	Manganese (Mn)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Phosphorus (P)
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 15	3-Sep-11	0.00025	0.005	0.000033	40	0.00013	0.00005	0.00109	0.015	0.000055	0.00025	3.2	0.00836	0.000005	0.051	0.00164	0.15
Barrel 16	3-Sep-11	0.00025	0.005	0.000015	43.4	0.00005	0.00005	0.00087	0.015	0.000053	0.00025	2.59	0.00314	0.000005	0.00217	0.00063	0.15
Barrel 17	3-Sep-11	0.00125	0.025	0.0487	157	0.0426	0.621	27.2	954	0.00041	0.0561	36	26.5	0.000025	0.0122	0.623	33.3
Barrel 01	1-Oct-11	0.00025	0.005	0.000017	28.1	0.00017	0.00005	0.00139	0.015	0.000081	0.00113	1.97	0.00224	0.000005	0.0398	0.00025	0.15
Barrel 02	1-Oct-11	0.00025	0.005	0.000026	29.4	0.0002	0.00005	0.00096	0.015	0.000109	0.00054	1.91	0.00386	0.000005	0.0655	0.00025	0.15
Barrel 03	1-Oct-11	0.00025	0.005	0.000017	45.3	0.0002	0.00005	0.00097	0.015	0.000179	0.00069	3.06	0.00101	0.000005	0.0402	0.00025	0.15
Barrel 04	1-Oct-11	0.00025	0.005	0.000018	35.4	0.00005	0.00005	0.00118	0.015	0.000175	0.00083	2.74	0.0196	0.000005	0.0213	0.00025	0.15
Barrel 05	1-Oct-11	0.0005	0.01	0.000043	225	0.0001	0.0001	0.0005	0.015	0.00005	0.0019	2.11	0.0551	0.000005	0.0234	0.0014	0.15
Barrel 06	1-Oct-11	0.0005	0.01	0.000103	471	0.0001	0.00037	0.0005	0.015	0.00011	0.0032	2.53	0.154	0.000005	0.0424	0.0026	0.15
Barrel 07	1-Oct-11	0.0005	0.01	0.000063	441	0.0001	0.0001	0.0005	0.015	0.00015	0.0012	1.28	0.0529	0.000005	0.0286	0.0021	0.15
Barrel 08	1-Oct-11	0.00025	0.005	0.000019	27.1	0.00014	0.00005	0.00224	0.015	0.000158	0.00025	1.68	0.012	0.000005	0.0122	0.00065	0.15
Barrel 09	1-Oct-11	0.0005	0.01	0.0119	45	0.00023	0.134	9.09	0.015	0.00033	0.0124	7.51	13.8	0.000005	0.00017	0.0451	0.15
Barrel 10	1-Oct-11	0.00025	0.005	0.000027	22.4	0.00019	0.00005	0.00142	0.015	0.00036	0.00025	1.63	0.0135	0.000005	0.0478	0.0006	0.15
Barrel 11	1-Oct-11	0.00025	0.005	0.000018	44.3	0.00017	0.00005	0.00185	0.015	0.000377	0.00025	1.57	0.002	0.000005	0.017	0.00025	0.15
Barrel 12	1-Oct-11	0.00025	0.005	0.000005	18.6	0.00005	0.00005	0.00117	0.015	0.000025	0.00025	0.935	0.00134	0.000005	0.0147	0.00025	0.15
Barrel 13	1-Oct-11	0.00125	0.025	0.00366	16.6	0.00856	0.21	7.23	775	0.00724	0.0128	9.74	2	0.000005	0.404	0.0616	37.5
Barrel 14	1-Oct-11	0.00025	0.005	0.000005	15.7	0.00013	0.00005	0.00133	0.032	0.000025	0.00025	0.833	0.00142	0.000005	0.0024	0.00025	0.15
Barrel 15	1-Oct-11	0.00025	0.005	0.000015	20.3	0.00014	0.00005	0.00096	0.015	0.000025	0.00025	1.33	0.00723	0.000005	0.0309	0.00076	0.15
Barrel 16	1-Oct-11	0.00025	0.005	0.000005	23	0.00015	0.00005	0.00067	0.015	0.000079	0.00025	1.26	0.00284	0.000005	0.00149	0.00025	0.15
Barrel 17	1-Oct-11	0.00125	0.025	0.0114	64.7	0.0142	0.185	7.5	425	0.00044	0.0125	9.8	4.88	0.000005	0.00417	0.21	6.71
Barrel 01	26-Oct-11	0.00025	0.005	0.000021	32.3	0.00013	0.00005	0.00134	0.015	0.000084	0.00094	2.35	0.00196	0.000005	0.0461	0.00051	0.15
Barrel 02	26-Oct-11	0.00025	0.005	0.00002	36	0.00013	0.00005	0.00115	0.015	0.000136	0.00025	2.35	0.00274	0.000005	0.0806	0.00025	0.15
Barrel 03	26-Oct-11	0.00025	0.005	0.00002	55.4	0.00028	0.00005	0.00108	0.015	0.00049	0.00053	3.84	0.000992	0.000005	0.0434	0.00025	0.15
Barrel 04	26-Oct-11	0.00025	0.005	0.000021	43.7	0.00005	0.00005	0.00111	0.015	0.00013	0.00078	3.36	0.019	0.000005	0.0252	0.00052	0.15
Barrel 05	26-Oct-11	0.0005	0.01	0.00005	329	0.0001	0.0001	0.0005	0.015	0.00005	0.0018	3.13	0.0573	0.000005	0.0263	0.0017	0.15
Barrel 06	26-Oct-11	0.00125	0.025	0.000092	490	0.00025	0.00025	0.00125	0.015	0.000125	0.00125	2.4	0.129	0.000005	0.0382	0.00125	0.15
Barrel 07	26-Oct-11	0.00125	0.025	0.000062	455	0.00025	0.00025	0.00125	0.015	0.000125	0.00125	1.45	0.0434	0.000005	0.0291	0.00125	0.15
Barrel 08	26-Oct-11	0.00025	0.005	0.000017	31.2	0.00014	0.00005	0.00225	0.015	0.000377	0.00067	1.92	0.0107	0.000005	0.0131	0.00068	0.15
Barrel 09	26-Oct-11	0.0005	0.01	0.0149	64	0.0001	0.161	10.3	0.015	0.00058	0.0134	8.89	16.4	0.000005	0.00014	0.06	0.15
Barrel 10	26-Oct-11	0.00025	0.005	0.000032	29.7	0.00011	0.00005	0.0015	0.015	0.000342	0.00074	1.97	0.0105	0.000005	0.0598	0.00063	0.15
Barrel 11	26-Oct-11	0.00025	0.005	0.000022	46.2	0.00016	0.00005	0.00173	0.015	0.000469	0.00054	1.55	0.00187	0.000005	0.0153	0.00025	0.15
Barrel 12	26-Oct-11	0.00025	0.005	0.000046	22.6	0.00016	0.00005	0.00175	0.015	0.000184	0.00025	1.14	0.00217	0.000005	0.0165	0.00025	0.15
Barrel 13	26-Oct-11	0.00125	0.025	0.00365	18.1	0.00754	0.233	9.79	884	0.00882	0.01	7.6	1.56	0.000005	0.486	0.0636	42.2
Barrel 14	26-Oct-11	0.00025	0.005	0.000005	20.2	0.00025	0.00005	0.00115	0.015	0.000025	0.00025	1.01	0.000824	0.000005	0.00184	0.00025	0.15
Barrel 15	26-Oct-11	0.00025	0.005	0.000016	28.2	0.00014	0.00005	0.00087	0.015	0.000025	0.00025	1.69	0.00351	0.000005	0.0359	0.00084	0.15
Barrel 16	26-Oct-11	0.00025	0.005	0.000005	36	0.00013	0.00005	0.00073	0.015	0.000084	0.00025	1.78	0.00416	0.000005	0.00144	0.00025	0.15
Barrel 17	26-Oct-11	0.00125	0.025	0.00908	53	0.0129	0.169	6.01	443	0.00054	0.0108	7.07	3.2	0.000005	0.00413	0.198	5.78

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Total Metals												Dissolved Metals				
Sample ID		Potassium (K)	Selenium (Se)	Silicon (Si)	Silver (Ag)	Sodium (Na)	Strontium (Sr)	Thallium (Tl)	Tin (Sn)	Titanium (Ti)	Uranium (U)	Vanadium (V)	Zinc (Zn)	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)	Beryllium (Be)
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 01	12-Jul-09	0.53	0.0015	0.322	0.000063	1	0.188	0.00005	0.00005	0.005	0.0291	0.0005	0.0159	0.0143	0.00093	0.00024	0.107	0.00025
Barrel 02	12-Jul-09	1.79	0.00734	1.11	0.000043	4.5	2.55	0.00005	0.00005	0.005	0.0406	0.0012	0.0385	0.0209	0.00767	0.0012	0.0703	0.00025
Barrel 03	12-Jul-09	1.4	0.0138	0.867	0.000187	4.9	0.456	0.00005	0.00013	0.005	0.0207	0.0005	0.0225	0.0476	0.00866	0.00503	0.029	0.00025
Barrel 04	12-Jul-09	3.01	0.00692	1.06	0.000267	8.2	1.27	0.00005	0.00005	0.005	0.025	0.0005	0.0513	0.017	0.0099	0.00372	0.0327	0.00025
Barrel 01	26-Aug-09	3.63	0.0406	2.18	0.000146	3.4	1.31	0.00005	0.00062	0.011	0.21	0.0047	0.375	0.0078	0.00408	0.00073	0.058	0.00025
Barrel 02	26-Aug-09	2.3	0.0193	1.61	0.000047	3.3	3.15	0.00005	0.00005	0.005	0.026	0.0017	0.12	0.0071	0.00605	0.00113	0.0421	0.00025
Barrel 03	26-Aug-09	3.35	0.12	2.19	0.000046	10.5	1.47	0.00005	0.00005	0.005	0.0317	0.0005	0.192	0.0024	0.0153	0.00543	0.0508	0.00025
Barrel 04	26-Aug-09	6.19	0.0499	2.09	0.000082	12	3.32	0.00011	0.00005	0.011	0.0146	0.0005	0.375	0.0022	0.0503	0.00697	0.0375	0.00025
Barrel 01	19-Sep-09	2.26	0.0283	1.65	0.000011	2.3	0.954	0.00005	0.00005	0.005	0.159	0.0012	0.326	0.008	0.00332	0.00055	0.0459	0.00025
Barrel 02	19-Sep-09	1.73	0.0361	1.46	0.000039	4	2.77	0.00005	0.00005	0.005	0.0309	0.0019	0.179	0.0083	0.00538	0.00084	0.0346	0.00025
Barrel 03	19-Sep-09	2.76	0.108	1.94	0.000075	10	1.18	0.00005	0.00014	0.011	0.027	0.0005	0.179	0.0099	0.0127	0.00718	0.0382	0.00025
Barrel 04	19-Sep-09	5.31	0.0447	1.68	0.000074	14	2.53	0.00005	0.00005	0.011	0.0171	0.0005	0.334	0.0043	0.0314	0.0064	0.0311	0.00025
Barrel 05	19-Sep-09	3.96	0.0354	1.78	0.000251	63.5	1.14	0.0001	0.00031	0.013	0.0705	0.0057	0.101	0.0162	0.0168	0.00698	0.0279	0.0005
Barrel 01	22-Oct-09	1.45	0.00842	0.973	0.000015	1	0.712	0.00005	0.00005	0.005	0.116	0.0005	0.379	0.0107	0.00205	0.00038	0.0506	0.00025
Barrel 02	22-Oct-09	1.31	0.0175	1.07	0.000023	3	2.26	0.00005	0.00005	0.005	0.0354	0.001	0.192	0.0135	0.00436	0.00071	0.0361	0.00025
Barrel 03	22-Oct-09	1.8	0.032	1.25	0.000056	4.9	0.751	0.00005	0.00005	0.005	0.0201	0.0005	0.188		#N/A	#N/A	#N/A	#N/A
Barrel 04	22-Oct-09	3.53	0.0142	1.19	0.000055	7.1	1.56	0.00005	0.00005	0.005	0.0182	0.0005	0.305		#N/A	#N/A	#N/A	#N/A
Barrel 05	22-Oct-09	4.13	0.0173	1.79	0.000095	60.2	1.1	0.0001	0.0001	0.017	0.0546	0.0028	0.172	0.0112	0.00947	0.00634	0.0248	0.0005
Barrel 06	22-Oct-09	6.19	0.0109	0.967	0.000071	98	2.75	0.00025	0.00025	0.018	0.0197	0.0025	0.204	0.0119	0.00154	0.00254	0.0204	0.00125
Barrel 07	22-Oct-09	8.28	0.00981	1.13	0.000259	92	3.85	0.00025	0.00025	0.02	0.024	0.0025	0.323	0.0089	0.00358	0.011	0.0139	0.00125
Barrel 08	22-Oct-09	7.44	0.0319	1.65	0.000337	6	0.74	0.00005	0.00005	0.005	0.0538	0.0026	0.13	0.0089	0.00543	0.00514	0.0431	0.00025
Barrel 09	22-Oct-09	2.45	0.0256	3.53	0.000014	14	0.39	0.00005	0.00005	0.005	0.000019	0.0005	1.99		#N/A	#N/A	#N/A	#N/A
Barrel 10	22-Oct-09	2.61	0.0132	1.32	0.000091	8.8	1.69	0.00005	0.00013	0.005	0.00808	0.0005	0.607	0.0173	0.0225	0.00599	0.047	0.00025
Barrel 11	22-Oct-09	6.86	0.0173	1.48	0.000296	36.5	3.86	0.0001	0.0001	0.015	0.0163	0.001	1.54		#N/A	#N/A	#N/A	#N/A
Barrel 12	22-Oct-09	1.89	0.0358	1.52	0.000051	2.9	0.162	0.0001	0.0001	0.005	0.00395	0.001	0.232		#N/A	#N/A	#N/A	#N/A
Barrel 01	24-Nov-09	1.7	0.00624	0.203	0.000005	1	0.41	0.00005	0.00005	0.005	0.0935	0.0005	0.224	0.0005	0.00126	0.0003	0.0192	0.00025
Barrel 02	24-Nov-09	0.729	0.00566	0.247	0.000005	1	0.792	0.00005	0.00005	0.005	0.0126	0.0005	0.0582	0.0005	0.00094	0.00016	0.00807	0.00025
Barrel 03	24-Nov-09	1.37	0.0131	0.674	0.00005	3.1	0.288	0.00005	0.00016	0.005	0.0103	0.0005	0.0272	0.0005	0.00334	0.00308	0.00517	0.00025
Barrel 04	24-Nov-09	8.98	0.0238	0.863	0.000039	14.5	2.24	0.00005	0.00005	0.005	0.0403	0.0005	0.125	0.0005	0.014	0.00512	0.0144	0.00025
Barrel 05	24-Nov-09	6.93	0.0224	1.19	0.00017	80.7	0.889	0.00005	0.00032	0.005	0.12	0.0039	0.226	0.0011	0.0126	0.00456	0.0123	0.00025
Barrel 06	25-Nov-09	3.6	0.00457	0.592	0.000015	43.5	0.853	0.00005	0.00005	0.005	0.0117	0.0005	0.133	0.0016	0.00086	0.00074	0.0103	0.00025
Barrel 07	25-Nov-09	2.56	0.00287	0.358	0.000022	20.1	0.413	0.00005	0.00005	0.005	0.00567	0.0005	0.0965	0.0005	0.00079	0.00177	0.00391	0.00025
Barrel 08	24-Nov-09	8.4	0.0382	1.06	0.00057	7.6	0.666	0.00005	0.00013	0.005	0.0852	0.0046	0.0657	0.001	0.00585	0.00733	0.0252	0.00025
Barrel 09	25-Nov-09	0.878	0.00992	0.57	0.000005	6.3	0.202	0.00005	0.00005	0.005	0.000005	0.0005	0.484	0.0118	0.00005	0.00005	0.00638	0.00025
Barrel 10	25-Nov-09	1.41	0.00585	0.396	0.000053	4	0.516	0.00005	0.00005	0.005	0.00543	0.0005	0.124	0.0042	0.00896	0.00228	0.0159	0.00025
Barrel 11	24-Nov-09	0.693	0.00113	0.209	0.000013	2.9	0.374	0.00005	0.00005	0.005	0.00209	0.0005	0.0402	0.0005	0.00182	0.00043	0.0122	0.00025
Barrel 12	25-Nov-09	0.749	0.00799	0.382	0.000005	1	0.0326	0.00005	0.00005	0.005	0.000569	0.0005	0.0421	0.0005	0.00036	0.00016	0.00699	0.00025
Barrel 01	7-Jun-10	1.42	0.00523	1.13	0.000019	1	0.629	0.00005	0.00005	0.005	0.109	0.0005	0.0463	0.0132	0.00221	0.00093	0.0583	0.00025
Barrel 02	7-Jun-10	1	0.00838	1.2	0.000027	1	2.31	0.00005	0.00005	0.005	0.0389	0.0005	0.0617	0.0089	0.00432	0.00097	0.0459	0.00025
Barrel 03	7-Jun-10	1.46	0.0201	1.42	0.000033	3.6	0.686	0.00005	0.00005	0.005	0.0252	0.0005	0.0169	0.0164	0.0114	0.00762	0.0239	0.00025
Barrel 04	7-Jun-10	2.51	0.00793	1.19	0.000021	3.4	1.36	0.00005	0.00005	0.005	0.0231	0.0005	0.0543	0.0093	0.0239	0.00477	0.0361	0.00025
Barrel 05	7-Jun-10	3	0.012	1.09	0.000034	35.3	2.14	0.0001	0.0001	0.005	0.0687	0.001	0.0429	0.0105	0.00855	0.00161	0.0333	0.0005
Barrel 06	7-Jun-10	3.72	0.0056	0.829	0.000025	41.8	3.2	0.00025	0.00025	0.005	0.0175	0.0025	0.191	0.0142	0.00124	0.00075	0.0198	0.00125
Barrel 07	7-Jun-10	5.26	0.0074	0.951	0.000025	22.9	4.32	0.00025	0.00025	0.005	0.0236	0.0025	0.205	0.0069	0.00292	0.00218	0.0163	0.00125
Barrel 08	7-Jun-10	2.75	0.0183	1.35	0.000117	3.3	0.62	0.00005	0.00005	0.005	0.0717	0.0019	0.154	0.005	0.00595	0.00264	0.0433	0.00025
Barrel 09	7-Jun-10	2.12	0.0335	1.52	0.00001	6.8	0.58	0.00005	0.00005	0.005	0.000168	0.0005	1.41	0.143	0.00011	0.00033	0.0339	0.00025
Barrel 10	7-Jun-10	1.58	0.0107	1.32	0.000023	4.8	0.96	0.00005	0.00005	0.005	0.0121	0.0005	0.0237	0.018	0.0196	0.00206	0.0749	0.00025
Barrel 11	7-Jun-10	3.5	0.00537	1.79	0.000026	11.4	2.95	0.00005	0.00005	0.005	0.0126	0.0005	0.0812	0.0132	0.0145	0.00173	0.0816	0.00025
Barrel 12	7-Jun-10	1.16	0.0202	1.48	0.000027	1	0.107	0.00005	0.00005	0.005	0.00359	0.0011	0.0338	0.0133	0.0015	0.00056	0.0751	0.00025
Barrel 01	6-Jul-10	1.54	0.0111	1	0.000077	1	0.703	0.00005	0.00015	0.005	0.0802	0.0015	0.0967	0.0107	0.00172	0.00057	0.0529	0.00025

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Total Metals												Dissolved Metals				
Sample ID		Potassium (K)	Selenium (Se)	Silicon (Si)	Silver (Ag)	Sodium (Na)	Strontium (Sr)	Thallium (Tl)	Tin (Sn)	Titanium (Ti)	Uranium (U)	Vanadium (V)	Zinc (Zn)	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)	Beryllium (Be)
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 02	6-Jul-10	1.2	0.0136	1.07	0.000049	1	1.96	0.00005	0.0001	0.005	0.0269	0.0016	0.0713	0.0108	0.00297	0.00063	0.0301	0.00025
Barrel 03	6-Jul-10	1.84	0.0544	1.66	0.000041	3.5	1.03	0.00005	0.0001	0.005	0.0225	0.0005	0.0887	0.0068	0.0119	0.00534	0.0279	0.00025
Barrel 04	6-Jul-10	3.61	0.02	1.58	0.000114	2.7	2.04	0.00005	0.0001	0.005	0.0145	0.0015	0.277	0.004	0.0274	0.00503	0.0269	0.00025
Barrel 05	6-Jul-10	5.35	0.0323	3.02	0.000096	30.1	2.98	0.00025	0.00025	0.005	0.0777	0.0025	0.791	0.0082	0.0276	0.00371	0.0259	0.00125
Barrel 06	6-Jul-10	5.01	0.0147	1.44	0.000025	14.9	4.69	0.00025	0.00025	0.005	0.0128	0.0025	0.352	0.0065	0.00205	0.00122	0.0176	0.00125
Barrel 07	6-Jul-10	7.37	0.0201	1.76	0.00009	12.8	5.56	0.00025	0.0005	0.005	0.0138	0.0025	0.407	0.0058	0.00732	0.00328	0.014	0.00125
Barrel 08	6-Jul-10	4.4	0.03	4.26	0.000866	2.9	0.71	0.00012	0.00083	0.016	0.0813	0.0152	0.178	0.0087	0.00962	0.00312	0.0272	0.00025
Barrel 09	6-Jul-10	2.56	0.0482	5.54	0.000199	8.6	0.615	0.0001	0.0001	0.005	0.000062	0.001	4.19	0.206	0.0001	0.00026	0.0269	0.0005
Barrel 10	6-Jul-10	2.37	0.0285	2.52	0.000068	5.9	1.72	0.00005	0.00015	0.005	0.014	0.0019	0.0925	0.0109	0.0352	0.00274	0.0333	0.00025
Barrel 11	6-Jul-10	4.13	0.0155	2.74	0.000257	12	3.46	0.0001	0.00028	0.005	0.0121	0.0029	0.141	0.0092	0.0158	0.00231	0.0415	0.0005
Barrel 12	6-Jul-10	2.03	0.0417	3.47	0.000267	1	0.143	0.00005	0.0002	0.016	0.00443	0.0104	0.0979	0.0083	0.00189	0.0005	0.0324	0.00025
Barrel 01	7-Aug-10	1.72	0.0102	0.941	0.000016	1	0.679	0.00005	0.00005	0.005	0.0586	0.0005	0.056	0.0142	0.00155	0.00059	0.0389	0.00025
Barrel 02	7-Aug-10	1.18	0.0129	0.868	0.000018	1	1.73	0.00005	0.00005	0.005	0.0202	0.0012	0.0362	0.014	0.00258	0.00078	0.0267	0.00025
Barrel 03	7-Aug-10	2	0.0373	1.45	0.000047	2.5	0.867	0.00005	0.00005	0.005	0.015	0.0005	0.0504	0.0122	0.0101	0.00519	0.0212	0.00025
Barrel 04	7-Aug-10	3.44	0.0173	1.24	0.000027	1	1.55	0.00005	0.00005	0.005	0.00981	0.0005	0.178	0.0045	0.0205	0.00481	0.0219	0.00025
Barrel 05	7-Aug-10	6.15	0.0388	3.29	0.000096	27.4	2.8	0.00025	0.00025	0.005	0.0573	0.0025	0.434	0.0103	0.02	0.00418	0.0231	0.00125
Barrel 06	7-Aug-10	5.42	0.0185	1.22	0.000025	10.7	4.6	0.00025	0.00025	0.005	0.0111	0.0025	0.334	0.0025	0.00185	0.00129	0.0163	0.00125
Barrel 07	7-Aug-10	7.66	0.0231	1.42	0.000025	10.6	5.18	0.00025	0.00025	0.005	0.0111	0.0025	0.272	0.0025	0.00693	0.00291	0.0138	0.00125
Barrel 08	7-Aug-10	4.97	0.0429	2.97	0.000163	3.2	0.925	0.0001	0.0001	0.005	0.0879	0.0045	0.217	0.0081	0.0131	0.00313	0.0296	0.0005
Barrel 09	7-Aug-10	3.61	0.0694	5.09	0.000024	6.3	1.1	0.0001	0.0001	0.005	0.000105	0.001	5.58	0.57	0.0001	0.0003	0.0291	0.0005
Barrel 10	7-Aug-10	2.43	0.0261	1.75	0.000015	4.6	1.7	0.00005	0.00005	0.005	0.0105	0.0005	0.0391	0.0133	0.0334	0.00318	0.0289	0.00025
Barrel 11	7-Aug-10	3.6	0.0115	1.78	0.000037	9.1	2.94	0.00005	0.00005	0.005	0.00891	0.0005	0.0653	0.0232	0.0139	0.00303	0.036	0.00025
Barrel 12	7-Aug-10	1.59	0.0296	1.76	0.000016	1	0.129	0.00005	0.00005	0.005	0.00326	0.0005	0.0557	0.0091	0.00176	0.00058	0.0287	0.00025
Barrel 01	24-Sep-10	1.4	0.00775	0.852	0.000014	1	0.621	0.00005	0.00005	0.005	0.0632	0.0005	0.142	0.0083	0.00129	0.0004	0.0386	0.00025
Barrel 02	24-Sep-10	1.33	0.018	1.05	0.000005	1	2.42	0.00005	0.00005	0.005	0.0284	0.0005	0.0665	0.0068	0.00305	0.00064	0.0275	0.00025
Barrel 03	24-Sep-10	1.46	0.0293	1.18	0.000026	2.1	0.696	0.00005	0.00005	0.005	0.0132	0.0005	0.0713	0.0066	0.00899	0.00527	0.0157	0.00025
Barrel 04	24-Sep-10	2.66	0.0141	1.04	0.000035	1	1.32	0.00005	0.00005	0.005	0.0103	0.0005	0.26	0.0034	0.0174	0.004	0.0191	0.00025
Barrel 05	24-Sep-10	4.85	0.0312	3.4	0.000447	20.2	2.2	0.0001	0.00067	0.03	0.0379	0.0076	0.306	0.0065	0.00939	0.00243	0.0162	0.0005
Barrel 06	23-Sep-10	4.02	0.0137	0.889	0.000025	7	4	0.00025	0.00025	0.005	0.00875	0.0025	0.288	0.0075	0.00144	0.0012	0.0177	0.00125
Barrel 07	23-Sep-10	5.8	0.0217	1.04	0.000025	7.6	4.52	0.00025	0.00025	0.01	0.00987	0.0025	0.305	0.0075	0.00517	0.0024	0.0123	0.00125
Barrel 08	23-Sep-10	3.45	0.0321	2.3	0.00006	2.1	0.723	0.00005	0.00005	0.005	0.0686	0.0033	0.149	0.0044	0.00972	0.0023	0.0232	0.00025
Barrel 09	23-Sep-10	3.06	0.0656	4.03	0.000025	3.5	0.989	0.00025	0.00025	0.005	0.000704	0.0025	7.35	1.31	0.00025	0.00025	0.0253	0.00125
Barrel 10	23-Sep-10	1.57	0.0129	1.05	0.000014	2.2	1.03	0.00005	0.00005	0.005	0.00624	0.0005	0.0362	0.0109	0.0136	0.00178	0.0202	0.00025
Barrel 11	24-Sep-10	3.35	0.0118	1.73	0.000031	7.8	2.95	0.0001	0.0001	0.005	0.00916	0.001	0.147	0.0061	0.015	0.00221	0.0327	0.0005
Barrel 12	24-Sep-10	1.18	0.0186	1.37	0.000005	1	0.103	0.00005	0.00005	0.005	0.00211	0.0005	0.0889	0.0055	0.00112	0.00039	0.0277	0.00025
Barrel 01	4-Jun-11	1.85	0.00253	2.25	0.000005	1	0.283	0.00005	0.00242	0.005	0.0147	0.0005	0.0971	0.0071	0.0017	0.00458	0.0385	0.00025
Barrel 02	4-Jun-11	1.13	0.00327	1.84	0.000005	1	0.941	0.00005	0.00292	0.005	0.00652	0.0005	0.281	0.0056	0.00234	0.00282	0.0346	0.00025
Barrel 03	4-Jun-11	1.58	0.00963	1.87	0.000005	1	0.761	0.00005	0.00275	0.005	0.00563	0.0005	0.3	0.0045	0.0123	0.0023	0.06	0.00025
Barrel 04	4-Jun-11	1.99	0.00365	2.12	0.000011	2.3	0.295	0.00005	0.00034	0.005	0.00234	0.0005	0.102	0.006	0.00917	0.00325	0.0366	0.00025
Barrel 05	4-Jun-11	4.98	0.0096	2.63	0.00001	7.5	4.3	0.0001	0.00617	0.005	0.00912	0.001	0.436	0.003	0.00424	0.00702	0.0628	0.0005
Barrel 06	4-Jun-11	4.48	0.00501	2.31	0.00001	2.2	6.49	0.0001	0.00489	0.005	0.00494	0.001	0.507	0.003	0.00114	0.00352	0.0565	0.0005
Barrel 07	4-Jun-11	4.09	0.00559	2.02	0.00001	1	4.06	0.0001	0.00615	0.005	0.00389	0.001	0.779	0.003	0.00589	0.00673	0.046	0.0005
Barrel 08	4-Jun-11	1.67	0.00576	2.03	0.000012	1	0.182	0.00005	0.00241	0.005	0.0089	0.0005	0.223	0.0052	0.00376	0.00314	0.0356	0.00025
Barrel 09	5-Jun-11	6.28	0.0661	2.76	0.000005	2.3	1.94	0.00005	0.00029	0.005	0.000057	0.0005	1.98	0.0015	0.00032	0.00089	0.0281	0.00025
Barrel 10	5-Jun-11	1.4	0.00397	2.34	0.000005	1	0.389	0.00005	0.00234	0.005	0.0016	0.0005	0.142	0.0093	0.00807	0.00378	0.0385	0.00025
Barrel 11	4-Jun-11	1.58	0.00221	1.71	0.000011	1	1.22	0.00005	0.00116	0.005	0.00184	0.0005	0.267	0.0048	0.00582	0.00237	0.0646	0.00025
Barrel 12	4-Jun-11	0.999	0.00758	1.98	0.000005	1	0.0905	0.00005	0.00416	0.005	0.00142	0.0005	0.0861	0.0072	0.00077	0.0045	0.0259	0.00025
Barrel 13	5-Jun-11	1.89	0.00521	4.21	0.000481	1	0.0911	0.00016	0.00147	0.005	0.00302	0.0026	0.44	6.85	0.00005	0.0129	0.0221	0.0012
Barrel 14	5-Jun-11	0.812	0.00147	1.7	0.000005	1	0.0955	0.00005	0.00277	0.005	0.000432	0.0005	0.0035	0.0091	0.00233	0.00461	0.0242	0.00025
Barrel 15	5-Jun-11	1.16	0.00989	3.24	0.000005	1	0.158	0.00005	0.00216	0.005	0.000251	0.0005	0.0036	0.0054	0.00117	0.00337	0.0326	0.00025

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Total Metals												Dissolved Metals				
Sample ID		Potassium (K)	Selenium (Se)	Silicon (Si)	Silver (Ag)	Sodium (Na)	Strontium (Sr)	Thallium (Tl)	Tin (Sn)	Titanium (Ti)	Uranium (U)	Vanadium (V)	Zinc (Zn)	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)	Beryllium (Be)
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 16	5-Jun-11	1.63	0.00445	3.21	0.000005	2.6	0.223	0.00005	0.00381	0.005	0.000121	0.0005	0.0015	0.0035	0.0007	0.0094	0.0414	0.00025
Barrel 17	4-Jun-11	3.15	0.00213	7.96	0.000076	3.9	0.44	0.0002	0.00565	0.005	0.0144	0.0005	0.736	14.9	0.00005	0.00468	0.0262	0.00338
Barrel 01	3-Jul-11	2.31	0.0112	3.26	0.0000075	1	0.747	0.000031	0.00807	0.005	0.0157	0.0005	0.509	0.003	0.00131	0.00307	0.0821	0.00005
Barrel 02	3-Jul-11	2.02	0.0175	3.52	0.0000075	1	2.42	0.000033	0.0089	0.005	0.00522	0.0005	1.14	0.0015	0.00171	0.00277	0.0865	0.00005
Barrel 03	3-Jul-11	3.22	0.0531	3.2	0.00001	2.9	2.44	0.000038	0.0086	0.005	0.00188	0.0005	1.13	0.0015	0.00665	0.00233	0.178	0.00005
Barrel 04	3-Jul-11	3.99	0.0193	3.27	0.0000075	2.6	2.28	0.000048	0.00664	0.005	0.00271	0.0005	0.953	0.0015	0.00752	0.0033	0.136	0.00005
Barrel 05	3-Jul-11	5.4	0.0306	3.94	0.000025	3.6	5.78	0.00007	0.0146	0.005	0.00538	0.0025	1.17	0.0075	0.00313	0.00779	0.0869	0.00025
Barrel 06	4-Jul-11	4.18	0.0135	2.74	0.00001	2.1	7.27	0.000051	0.00887	0.018	0.00188	0.001	0.696	0.003	0.00079	0.00294	0.0503	0.0001
Barrel 07	4-Jul-11	5.94	0.0234	4.12	0.000025	2.1	5.66	0.000063	0.0148	0.018	0.00176	0.0025	1.1	0.0075	0.0052	0.0115	0.06	0.00025
Barrel 08	4-Jul-11	2.81	0.0249	3.7	0.000005	1	0.48	0.000028	0.00761	0.005	0.00506	0.0005	0.979	0.0015	0.00295	0.00386	0.0949	0.00005
Barrel 09	4-Jul-11	8.63	0.127	11	0.000025	2.4	6.42	0.000162	0.00288	0.017	0.000053	0.0025	8.44	0.19	0.00025	0.00093	0.0964	0.00074
Barrel 10	4-Jul-11	1.86	0.00846	3.15	0.000014	2.1	0.772	0.000022	0.00583	0.005	0.00165	0.0005	0.669	0.0041	0.0062	0.00407	0.0675	0.00005
Barrel 11	3-Jul-11	2.63	0.00665	2.89	0.000015	2.9	2.24	0.000029	0.00331	0.005	0.00152	0.0005	0.754	0.0035	0.00674	0.00286	0.113	0.00005
Barrel 12	3-Jul-11	2.11	0.0275	3.06	0.000005	1	0.226	0.000016	0.00925	0.005	0.00119	0.0005	0.337	0.0065	0.00069	0.00435	0.0557	0.00005
Barrel 13	3-Jul-11	2.11	0.0275	3.06	0.000005	1	0.226	0.000016	0.00925	0.005	0.00119	0.0005	0.337	0.0065	0.00069	0.00435	0.0557	0.00005
Barrel 14	4-Jul-11	1.18	0.00134	2.86	0.000005	1	0.0991	0.000011	0.00579	0.005	0.000284	0.0005	0.006	0.0083	0.00277	0.00323	0.029	0.00005
Barrel 15	4-Jul-11	1.38	0.0103	5.14	0.000005	1	0.186	0.000036	0.00559	0.005	0.000066	0.0005	0.003	0.0056	0.0013	0.0037	0.0595	0.00005
Barrel 16	4-Jul-11	1.25	0.00379	3.47	0.000005	1	0.158	0.000028	0.01	0.005	0.000042	0.0005	0.0055	0.0048	0.00062	0.00674	0.0458	0.00005
Barrel 17	3-Jul-11	6.53	0.0191	64.8	0.00304	10.9	1.08	0.00065	0.054	0.027	0.132	0.005	7.37	185	0.0005	0.38	0.0405	0.0251
Barrel 01	31-Jul-11	2.66	0.0113	3.29	0.000005	1	1.01	0.000032	0.00519	0.005	0.021	0.0005	0.379	0.0037	0.00163	0.00163	0.0867	0.00005
Barrel 02	31-Jul-11	2.28	0.0201	3.35	0.000005	1	3.11	0.000035	0.00607	0.005	0.00532	0.0005	0.67	0.0043	0.00204	0.00149	0.0976	0.00005
Barrel 03	31-Jul-11	4	0.0579	3.3	0.00001	3.7	2.81	0.000043	0.00562	0.005	0.00228	0.001	0.611	0.003	0.00895	0.00127	0.181	0.0001
Barrel 04	31-Jul-11	4.89	0.0222	3.22	0.000005	2.8	2.7	0.000049	0.00426	0.005	0.00304	0.0005	0.598	0.0063	0.00938	0.00244	0.15	0.00005
Barrel 05	31-Jul-11	6.17	0.0464	3.85	0.000025	5.1	7.55	0.000074	0.0105	0.005	0.00511	0.0025	0.858	0.0075	0.00351	0.00437	0.0919	0.00025
Barrel 06	1-Aug-11	6.05	0.0188	3.25	0.000025	3.5	13	0.000073	0.0102	0.005	0.00269	0.0025	0.81	0.0075	0.00096	0.00226	0.0676	0.00025
Barrel 07	1-Aug-11	7.32	0.0329	3.94	0.000025	2.9	8.16	0.000074	0.0147	0.005	0.00226	0.0025	1.05	0.0075	0.00653	0.00822	0.0677	0.00025
Barrel 08	1-Aug-11	3.31	0.0223	3.97	0.000012	1	0.698	0.000036	0.00637	0.005	0.00688	0.0005	0.894	0.0015	0.00377	0.00273	0.113	0.00005
Barrel 09	1-Aug-11	10	0.166	12.4	0.00005	2.8	7.13	0.00021	0.0019	0.005	0.00014	0.005	20	0.278	0.0005	0.0011	0.0559	0.0015
Barrel 10	1-Aug-11	2.18	0.0128	3.52	0.000005	2.7	1.19	0.000029	0.00676	0.005	0.00223	0.0005	1.09	0.0032	0.00776	0.00314	0.0843	0.00005
Barrel 11	31-Jul-11	2.76	0.0077	2.94	0.000015	3.2	2.7	0.000036	0.0024	0.005	0.0018	0.0005	0.845	0.0015	0.00886	0.002	0.122	0.00005
Barrel 12	31-Jul-11	2.06	0.0293	2.95	0.000005	1	0.262	0.000019	0.00791	0.005	0.00125	0.0005	0.291	0.0046	0.00075	0.00221	0.0595	0.00005
Barrel 13	1-Aug-11	8.8	0.867	123	0.0489	10	0.936	0.00147	0.0435	0.69	0.0631	0.173	2.87	176	0.0025	7.57	0.0561	0.0199
Barrel 14	1-Aug-11	1.29	0.00121	2.91	0.00001	1	0.13	0.000012	0.00481	0.005	0.000258	0.0005	0.0128	0.0102	0.0035	0.00165	0.0463	0.00005
Barrel 15	1-Aug-11	1.59	0.0117	5.51	0.000021	1	0.24	0.000029	0.00473	0.005	0.00007	0.0005	0.0076	0.0044	0.00128	0.0027	0.0666	0.00005
Barrel 16	1-Aug-11	1.42	0.0042	3.76	0.00001	1	0.203	0.000027	0.0098	0.005	0.000055	0.0005	0.0079	0.0032	0.00071	0.00476	0.0518	0.00005
Barrel 17	31-Jul-11	4.4	0.0259	83.6	0.00476	14	1.3	0.00062	0.0646	0.058	0.181	0.01	9.29	233	0.001	0.585	0.0363	0.0362
Barrel 01	3-Sep-11	1.98	0.00555	2.19	0.000005	1	0.729	0.000022	0.00282	0.005	0.0217	0.0005	0.2	0.0062	0.00186	0.0009	0.0578	0.00005
Barrel 02	3-Sep-11	1.55	0.00566	2.08	0.000005	1	2.11	0.000026	0.00328	0.005	0.00665	0.0005	0.219	0.0057	0.00273	0.00077	0.0431	0.00005
Barrel 03	3-Sep-11	2.35	0.0219	2.34	0.000005	2	1.5	0.000025	0.00368	0.016	0.00387	0.0005	0.344	0.0045	0.0134	0.00079	0.0658	0.00005
Barrel 04	3-Sep-11	3.55	0.00953	2.15	0.000005	1	1.64	0.000031	0.00235	0.014	0.0036	0.0005	0.297	0.0046	0.0144	0.0012	0.0575	0.00005
Barrel 05	3-Sep-11	5.15	0.0236	2.7	0.00001	3.5	6.29	0.000058	0.00596	0.02	0.0045	0.001	0.485	0.003	0.00505	0.00125	0.0574	0.0001
Barrel 06	3-Sep-11	5.05	0.00832	2.21	0.00001	2	11	0.000052	0.00464	0.005	0.00384	0.001	0.444	0.003	0.00123	0.00083	0.0505	0.0001
Barrel 07	3-Sep-11	6.06	0.0128	2.4	0.00001	1	7.32	0.000062	0.00678	0.005	0.00249	0.001	0.497	0.003	0.00918	0.00216	0.0535	0.0001
Barrel 08	3-Sep-11	2.1	0.00612	2.38	0.000005	1	0.334	0.000021	0.003	0.005	0.00895	0.0005	0.399	0.0049	0.00814	0.00094	0.0387	0.00005
Barrel 09	3-Sep-11	7.67	0.132	10.4	0.00005	1	6.01	0.00017	0.0014	0.02	0.00036	0.005	6.75	2.07	0.0005	0.0005	0.0567	0.0033
Barrel 10	3-Sep-11	1.76	0.00645	2.28	0.000005	1	0.837	0.000018	0.00347	0.005	0.00196	0.0005	0.403	0.0052	0.0115	0.0013	0.0482	0.00005
Barrel 11	3-Sep-11	2.04	0.00412	2.27	0.000005	2.2	1.8	0.000023	0.00177	0.005	0.0016	0.0005	0.406	0.0048	0.0108	0.00121	0.0716	0.00005
Barrel 12	3-Sep-11	1.11	0.00644	1.66	0.000005	1	0.0929	0.000005	0.00286	0.005	0.000851	0.0005	0.131	0.0133	0.00087	0.00076	0.0198	0.00005
Barrel 13	3-Sep-11	2.42	0.495	28	0.00667	3	0.244	0.00044	0.0045	0.216	0.0143	0.152	0.955	25	0.0005	0.919	0.0322	0.0013
Barrel 14	3-Sep-11	0.847	0.00064	2.14	0.000005	1	0.0703	0.000005	0.00234	0.005	0.000104	0.0005	0.0015	0.0104	0.00402	0.00082	0.018	0.00005

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Total Metals												Dissolved Metals				
Sample ID		Potassium (K)	Selenium (Se)	Silicon (Si)	Silver (Ag)	Sodium (Na)	Strontium (Sr)	Thallium (Tl)	Tin (Sn)	Titanium (Ti)	Uranium (U)	Vanadium (V)	Zinc (Zn)	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)	Beryllium (Be)
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 15	3-Sep-11	1.06	0.00579	3.59	0.000005	1	0.124	0.000021	0.00308	0.005	0.00007	0.0005	0.0015	0.0054	0.00139	0.00084	0.0349	0.00005
Barrel 16	3-Sep-11	0.896	0.00257	2.18	0.000005	1	0.119	0.000016	0.00342	0.005	0.000036	0.0005	0.0015	0.0061	0.00064	0.00084	0.0287	0.00005
Barrel 17	3-Sep-11	1.01	0.014	38.9	0.00192	4.6	0.481	0.000285	0.00871	0.033	0.0639	0.0066	3.29	49.4	0.00025	0.162	0.0145	0.00512
Barrel 01	1-Oct-11	1.25	0.00137	1.12	0.000005	1	0.396	0.000013	0.00132	0.005	0.0204	0.0005	0.117	0.0089	0.00123	0.00049	0.025	0.00005
Barrel 02	1-Oct-11	1.02	0.00183	1.27	0.000005	1	1.23	0.000013	0.00168	0.005	0.00623	0.0005	0.146	0.0071	0.00202	0.00052	0.0252	0.00005
Barrel 03	1-Oct-11	1.3	0.00439	1.38	0.000005	1	0.593	0.000012	0.00153	0.005	0.00508	0.0005	0.194	0.0159	0.0108	0.0006	0.0295	0.00005
Barrel 04	1-Oct-11	1.86	0.00211	1.18	0.000005	1	0.692	0.000017	0.00089	0.005	0.00335	0.0005	0.175	0.0059	0.0119	0.00071	0.0295	0.00005
Barrel 05	1-Oct-11	2.42	0.0027	1.36	0.00001	1	2.6	0.000026	0.00228	0.005	0.00521	0.001	0.29	0.003	0.00497	0.00056	0.0489	0.0001
Barrel 06	1-Oct-11	3.34	0.00244	1.51	0.00001	1	6.89	0.000038	0.00201	0.005	0.00513	0.001	0.271	0.003	0.00118	0.00045	0.0407	0.0001
Barrel 07	1-Oct-11	3.34	0.00313	1.35	0.00001	1	4.35	0.000032	0.00346	0.005	0.00344	0.001	0.298	0.003	0.00842	0.0009	0.0351	0.0001
Barrel 08	1-Oct-11	1.46	0.00332	1.49	0.000005	1	0.288	0.000014	0.00175	0.005	0.00857	0.0005	0.261	0.004	0.00599	0.00065	0.0266	0.00005
Barrel 09	1-Oct-11	2.89	0.0271	4.09	0.00001	1	1.5	0.000084	0.00026	0.005	0.00029	0.001	1.57	1.03	0.0001	0.00022	0.0558	0.0016
Barrel 10	1-Oct-11	1.04	0.00148	1.08	0.000005	1	0.549	0.000014	0.00136	0.005	0.00166	0.0005	0.192	0.0068	0.00782	0.00066	0.027	0.00005
Barrel 11	1-Oct-11	1.27	0.00095	1.34	0.000005	1	0.943	0.000013	0.00082	0.005	0.00141	0.0005	0.285	0.0081	0.00837	0.00121	0.035	0.00005
Barrel 12	1-Oct-11	0.758	0.00285	1.04	0.000005	1	0.0669	0.000005	0.00164	0.005	0.000577	0.0005	0.111	0.01	0.00056	0.00045	0.0111	0.00005
Barrel 13	1-Oct-11	1.54	0.161	16.5	0.00164	1	0.075	0.000254	0.00092	0.037	0.00379	0.0339	0.329	13.5	0.00025	0.44	0.0322	0.00074
Barrel 14	1-Oct-11	0.505	0.00036	1.31	0.000005	1	0.0412	0.000005	0.00125	0.005	0.00006	0.0005	0.0015	0.0118	0.003	0.00054	0.00886	0.00005
Barrel 15	1-Oct-11	0.614	0.00227	1.94	0.000005	1	0.0714	0.000012	0.00107	0.005	0.000059	0.0005	0.0015	0.0046	0.00105	0.00064	0.0177	0.00005
Barrel 16	1-Oct-11	0.516	0.00131	1.38	0.000005	1	0.0796	0.000005	0.00193	0.005	0.000026	0.0005	0.0015	0.0051	0.00047	0.00041	0.0156	0.00005
Barrel 17	1-Oct-11	0.92	0.00503	22.2	0.000423	1	0.21	0.000181	0.0038	0.011	0.0126	0.0025	0.827	22.2	0.00025	0.0716	0.014	0.00199
Barrel 01	26-Oct-11	1.22	0.00148	1.21	0.000005	1	0.44	0.00001	0.00192	0.005	0.0283	0.0005	0.174	0.0058	0.00128	0.00049	0.0302	0.00005
Barrel 02	26-Oct-11	0.991	0.00214	1.37	0.000005	1	1.47	0.000012	0.00205	0.005	0.0101	0.0005	0.22	0.0058	0.00208	0.0005	0.0295	0.00005
Barrel 03	26-Oct-11	1.25	0.0053	1.41	0.000005	1	0.696	0.000011	0.00228	0.005	0.0074	0.0005	0.276	0.0058	0.0113	0.00055	0.0371	0.00005
Barrel 04	26-Oct-11	1.8	0.00259	1.27	0.000005	1	0.835	0.000016	0.00114	0.005	0.00564	0.0005	0.272	0.0039	0.013	0.00069	0.0373	0.00005
Barrel 05	26-Oct-11	2.61	0.00412	1.51	0.00001	1	3.74	0.000026	0.00368	0.005	0.0096	0.001	0.616	0.003	0.00453	0.00068	0.0578	0.0001
Barrel 06	26-Oct-11	2.66	0.0031	1.35	0.000025	1	7.13	0.000025	0.00279	0.005	0.00747	0.0025	0.548	0.0075	0.00093	0.00025	0.0427	0.00025
Barrel 07	26-Oct-11	3.08	0.00383	1.36	0.000025	1	4.82	0.000025	0.00463	0.005	0.00535	0.0025	0.568	0.0075	0.00788	0.00114	0.0347	0.00025
Barrel 08	26-Oct-11	1.41	0.00359	1.62	0.000013	1	0.319	0.000012	0.00231	0.005	0.0142	0.0005	0.38	0.0035	0.00602	0.00062	0.0301	0.00005
Barrel 09	26-Oct-11	2.62	0.0377	5.18	0.00001	1	2.17	0.000085	0.00056	0.005	0.000371	0.001	2.25	1.65	0.0001	0.00027	0.0462	0.00189
Barrel 10	26-Oct-11	1.05	0.00184	1.22	0.000005	1	0.667	0.000011	0.00175	0.005	0.00282	0.0005	0.299	0.0051	0.0084	0.00068	0.0323	0.00005
Barrel 11	26-Oct-11	1.04	0.0009	1.25	0.000005	1	0.968	0.000005	0.00126	0.005	0.00198	0.0005	0.36	0.0048	0.00791	0.00116	0.0382	0.00005
Barrel 12	26-Oct-11	0.762	0.00348	1.15	0.000014	1	0.0806	0.000005	0.00231	0.005	0.00114	0.0005	0.168	0.0077	0.00056	0.00044	0.0139	0.00005
Barrel 13	26-Oct-11	1.28	0.17	14	0.00135	1	0.0608	0.000211	0.00098	0.041	0.00333	0.036	0.314	8.45	0.00025	0.403	0.0207	0.00025
Barrel 14	26-Oct-11	0.496	0.00041	1.22	0.000005	1	0.0494	0.000005	0.00136	0.005	0.000087	0.0005	0.0036	0.0102	0.00251	0.00048	0.0107	0.00005
Barrel 15	26-Oct-11	0.677	0.00302	2.37	0.000005	1	0.0899	0.000012	0.00134	0.005	0.000106	0.0005	0.0031	0.0037	0.00099	0.00063	0.0233	0.00005
Barrel 16	26-Oct-11	0.592	0.0019	1.54	0.000005	1	0.117	0.000005	0.00233	0.005	0.000054	0.0005	0.0034	0.0043	0.0004	0.0004	0.0229	0.00005
Barrel 17	26-Oct-11	0.88	0.00423	20	0.000275	1	0.198	0.000153	0.00374	0.013	0.00801	0.0025	0.639	17	0.00025	0.0637	0.0103	0.00131

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Dissolved Metals														
Sample ID		Bismuth (Bi)	Boron (B)	Cadmium (Cd)	Calcium (Ca)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Lithium (Li)	Magnesium (Mg)	Manganese (Mn)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Phosphorus (P)
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 01	12-Jul-09	0.00025	0.005	0.000025	9.4	0.00025	0.00005	0.00515	0.015	0.000081	0.0025	0.654	0.00308	0.000005	0.00403	0.00025	0.15
Barrel 02	12-Jul-09	0.00025	0.005	0.000023	33.9	0.00025	0.00005	0.00664	0.015	0.000025	0.007	3.35	0.000394	0.000005	0.0279	0.00025	0.15
Barrel 03	12-Jul-09	0.00025	0.005	0.000013	22.9	0.00025	0.00005	0.0109	0.015	0.000064	0.0025	3.72	0.00301	0.00002	0.0109	0.00071	0.15
Barrel 04	12-Jul-09	0.00025	0.005	0.000017	31.8	0.00025	0.00019	0.0117	0.015	0.000111	0.0069	2.32	0.0197	0.000005	0.0102	0.00196	0.15
Barrel 01	26-Aug-09	0.00025	0.005	0.000219	66.9	0.00025	0.00124	0.0216	0.015	0.000086	0.0127	8.14	0.0904	0.000005	0.166	0.00223	0.15
Barrel 02	26-Aug-09	0.00025	0.005	0.000075	54.7	0.00025	0.00013	0.0147	0.015	0.000077	0.0146	7.09	0.00947	0.000005	0.101	0.00054	0.15
Barrel 03	26-Aug-09	0.00025	0.005	0.00006	80.9	0.00025	0.00039	0.018	0.015	0.000151	0.015	12.2	0.0756	0.000005	0.0882	0.00179	0.15
Barrel 04	26-Aug-09	0.00025	0.017	0.000477	91.7	0.00025	0.00368	0.0195	0.015	0.000306	0.0248	7.83	0.3	0.000005	0.025	0.0112	0.15
Barrel 01	19-Sep-09	0.00025	0.005	0.00014	51.8	0.00025	0.00079	0.0168	0.015	0.000065	0.0111	6.09	0.0726	0.000005	0.0959	0.00132	0.15
Barrel 02	19-Sep-09	0.00025	0.005	0.000111	52.2	0.00025	0.00018	0.0134	0.015	0.000087	0.0116	6.34	0.012	0.000005	0.0879	0.0006	0.15
Barrel 03	19-Sep-09	0.00025	0.005	0.000071	66	0.00025	0.00053	0.0172	0.015	0.000328	0.0116	9.66	0.0993	0.000005	0.0476	0.0022	0.15
Barrel 04	19-Sep-09	0.00025	0.014	0.000424	76.7	0.00025	0.0026	0.0177	0.015	0.00025	0.0259	6.95	0.243	0.000005	0.0253	0.00795	0.15
Barrel 05	19-Sep-09	0.0005	0.01	0.000169	91.5	0.0005	0.00306	0.014	0.015	0.00066	0.031	5.85	0.117	0.000047	0.0418	0.0031	0.15
Barrel 01	22-Oct-09	0.00025	0.005	0.000079	35.7	0.00025	0.00066	0.0405	0.015	0.000107	0.0051	3.19	0.0931	0.000005	0.0335	0.00025	0.15
Barrel 02	22-Oct-09	0.00025	0.005	0.000037	42.7	0.00025	0.00021	0.0172	0.015	0.000091	0.0069	4.31	0.0274	0.000005	0.0598	0.00025	0.15
Barrel 03	22-Oct-09	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Barrel 04	22-Oct-09	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Barrel 05	22-Oct-09	0.0005	0.01	0.000132	86.8	0.0005	0.00297	0.0135	0.015	0.00053	0.035	4.27	0.143	0.000011	0.0256	0.0014	0.15
Barrel 06	22-Oct-09	0.00125	0.025	0.00145	234	0.00125	0.00112	0.0162	0.015	0.00109	0.042	3.55	0.296	0.000005	0.0216	0.00125	0.15
Barrel 07	22-Oct-09	0.00125	0.025	0.000178	428	0.00125	0.00231	0.00968	0.015	0.00082	0.119	4.82	0.2	0.000005	0.00663	0.00125	0.15
Barrel 08	22-Oct-09	0.00025	0.005	0.000276	50.7	0.00025	0.00827	0.0462	0.015	0.000609	0.0154	3.18	0.475	0.000032	0.0185	0.00269	0.15
Barrel 09	22-Oct-09	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Barrel 10	22-Oct-09	0.00025	0.005	0.000095	33.9	0.00025	0.00128	0.0274	0.015	0.000641	0.0061	4.29	0.14	0.000005	0.0764	0.00149	0.15
Barrel 11	22-Oct-09	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Barrel 12	22-Oct-09	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Barrel 01	24-Nov-09	0.00025	0.005	0.000037	16.4	0.00025	0.00054	0.0133	0.015	0.000025	0.0025	2.93	0.0788	0.000005	0.0265	0.00025	0.15
Barrel 02	24-Nov-09	0.00025	0.005	0.000005	8.38	0.00025	0.00005	0.00338	0.015	0.000025	0.0025	1.21	0.00653	0.000005	0.0162	0.00025	0.15
Barrel 03	24-Nov-09	0.00025	0.005	0.000005	9.39	0.00025	0.00015	0.00407	0.015	0.00005	0.0025	2.32	0.0315	0.000005	0.0102	0.00025	0.15
Barrel 04	24-Nov-09	0.00025	0.005	0.000067	25.3	0.00025	0.00091	0.0073	0.015	0.000061	0.0109	4.07	0.12	0.000005	0.0156	0.00264	0.15
Barrel 05	24-Nov-09	0.00025	0.016	0.00015	48.5	0.00025	0.00515	0.0153	0.015	0.00043	0.0427	7.7	0.255	0.000005	0.0392	0.00255	0.15
Barrel 06	25-Nov-09	0.00025	0.005	0.000624	57.7	0.00025	0.00082	0.00372	0.015	0.000245	0.0193	2.04	0.164	0.000005	0.00929	0.00025	0.15
Barrel 07	25-Nov-09	0.00025	0.005	0.000078	32.7	0.00025	0.00056	0.00171	0.015	0.000099	0.0186	1.28	0.0548	0.000005	0.00141	0.00025	0.15
Barrel 08	24-Nov-09	0.00025	0.005	0.000101	30.6	0.00025	0.0204	0.0375	0.015	0.000161	0.0216	5.46	0.712	0.000025	0.0288	0.00463	0.15
Barrel 09	25-Nov-09	0.00025	0.005	0.000746	7.12	0.00025	0.0117	0.389	0.015	0.000025	0.0067	1.59	0.993	0.000005	0.000184	0.00433	0.15
Barrel 10	25-Nov-09	0.00025	0.005	0.000031	7.51	0.00025	0.0005	0.0121	0.015	0.000141	0.0025	1.85	0.0577	0.000005	0.0339	0.00058	0.15
Barrel 11	24-Nov-09	0.00025	0.005	0.000013	10.3	0.00025	0.00073	0.00277	0.015	0.000025	0.0025	0.691	0.0709	0.000005	0.00397	0.00025	0.15
Barrel 12	25-Nov-09	0.00025	0.005	0.000076	6.33	0.00025	0.0004	0.0079	0.015	0.000025	0.0025	0.422	0.084	0.000005	0.011	0.00025	0.15
Barrel 01	7-Jun-10	0.00025	0.005	0.000044	32.2	0.00025	0.00005	0.00662	0.015	0.000025	0.0025	2.81	0.0456	0.000005	0.0466	0.00025	0.15
Barrel 02	7-Jun-10	0.00025	0.005	0.000042	38.6	0.00025	0.00005	0.00563	0.015	0.000025	0.0025	3.31	0.00613	0.000005	0.0643	0.00025	0.15
Barrel 03	7-Jun-10	0.00025	0.005	0.000005	36.3	0.00025	0.00005	0.00591	0.015	0.000025	0.0025	4.61	0.00943	0.000005	0.0384	0.00025	0.15
Barrel 04	7-Jun-10	0.00025	0.005	0.000096	46	0.00025	0.00025	0.0072	0.015	0.000025	0.0085	3.32	0.0618	0.000005	0.0206	0.00118	0.15
Barrel 05	7-Jun-10	0.0005	0.01	0.000093	162	0.0005	0.0003	0.0056	0.015	0.00005	0.019	4.3	0.0433	0.000005	0.0216	0.0005	0.15
Barrel 06	7-Jun-10	0.00125	0.025	0.000953	255	0.0005	0.00139	0.00679	0.015	0.000125	0.025	3.18	0.278	0.000005	0.0165	0.00125	0.15
Barrel 07	7-Jun-10	0.00125	0.025	0.000166	391	0.00125	0.0012	0.00402	0.015	0.000125	0.036	3.82	0.175	0.000005	0.00695	0.00125	0.15
Barrel 08	7-Jun-10	0.00025	0.005	0.000214	37.6	0.00025	0.00448	0.0129	0.015	0.000297	0.0096	2.46	0.375	0.000021	0.0141	0.00156	0.15
Barrel 09	7-Jun-10	0.00025	0.005	0.00343	24.9	0.0001	0.0437	1.66	0.015	0.000186	0.0132	2.8	3.27	0.000005	0.000065	0.00975	0.15
Barrel 10	7-Jun-10	0.00025	0.005	0.000034	25.3	0.00025	0.0001	0.0105	0.015	0.000079	0.0025	3.21	0.034	0.000005	0.0875	0.00025	0.15
Barrel 11	7-Jun-10	0.00025	0.005	0.00002	82.3	0.00025	0.00215	0.00991	0.015	0.000025	0.0068	4.76	0.177	0.000005	0.0347	0.00098	0.15
Barrel 12	7-Jun-10	0.00025	0.005	0.000184	22.5	0.00025	0.00014	0.0119	0.015	0.000025	0.0025	1	0.135	0.000005	0.0364	0.00025	0.15
Barrel 01	6-Jul-10	0.00025	0.005	0.000055	36.5	0.00025	0.0002	0.017	0.015	0.000132	0.0025	3.96	0.0279	0.000005	0.0948	0.0006	0.15

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Dissolved Metals														
Sample ID		Bismuth (Bi)	Boron (B)	Cadmium (Cd)	Calcium (Ca)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Lithium (Li)	Magnesium (Mg)	Manganese (Mn)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Phosphorus (P)
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 02	6-Jul-10	0.00025	0.005	0.000039	38.9	0.00025	0.00005	0.00991	0.015	0.000025	0.006	4.38	0.00125	0.000005	0.105	0.00025	0.15
Barrel 03	6-Jul-10	0.00025	0.005	0.000005	60.8	0.00025	0.00005	0.0103	0.015	0.000097	0.0067	8.38	0.0146	0.000005	0.0862	0.00142	0.15
Barrel 04	6-Jul-10	0.00025	0.012	0.000376	60.8	0.00025	0.00146	0.0123	0.015	0.000104	0.0101	5.46	0.164	0.000005	0.0292	0.00578	0.15
Barrel 05	6-Jul-10	0.00125	0.025	0.000673	232	0.0005	0.00988	0.0293	0.015	0.00072	0.03	7.29	0.396	0.000005	0.0701	0.0034	0.15
Barrel 06	6-Jul-10	0.00125	0.025	0.00213	338	0.0005	0.00339	0.0102	0.015	0.00074	0.0125	4	0.433	0.000005	0.0318	0.00125	0.15
Barrel 07	6-Jul-10	0.00125	0.025	0.000743	482	0.0005	0.00451	0.0127	0.015	0.00101	0.033	4.34	0.279	0.000005	0.0206	0.0037	0.15
Barrel 08	6-Jul-10	0.00025	0.005	0.000203	48.7	0.00025	0.0123	0.0191	0.015	0.000804	0.0122	3.39	0.416	0.000024	0.03	0.00193	0.15
Barrel 09	6-Jul-10	0.0005	0.01	0.00862	41	0.0002	0.0814	2.7	0.015	0.00025	0.012	4.76	8.7	0.000005	0.00017	0.0212	0.15
Barrel 10	6-Jul-10	0.00025	0.014	0.000105	35.8	0.00025	0.00011	0.0116	0.015	0.000242	0.0074	4.95	0.00337	0.000005	0.15	0.00078	0.15
Barrel 11	6-Jul-10	0.0005	0.01	0.000069	111	0.0005	0.00247	0.014	0.015	0.00005	0.005	6.74	0.178	0.000005	0.0603	0.0005	0.15
Barrel 12	6-Jul-10	0.00025	0.005	0.000177	32.4	0.00025	0.0003	0.0152	0.015	0.000025	0.0025	1.57	0.0857	0.000005	0.055	0.00025	0.15
Barrel 01	7-Aug-10	0.00025	0.005	0.000061	35.1	0.00025	0.00016	0.0119	0.015	0.000061	0.0025	3.61	0.0274	0.000005	0.093	0.00025	0.15
Barrel 02	7-Aug-10	0.00025	0.005	0.000057	35.9	0.00025	0.00005	0.00929	0.015	0.000025	0.0051	3.68	0.00104	0.000005	0.0816	0.00025	0.15
Barrel 03	7-Aug-10	0.00025	0.005	0.000048	49.8	0.00025	0.00026	0.00868	0.015	0.000203	0.0053	6.2	0.0519	0.000005	0.055	0.00109	0.15
Barrel 04	7-Aug-10	0.00025	0.005	0.000316	52.9	0.00025	0.00101	0.00913	0.015	0.000098	0.009	4.52	0.134	0.000005	0.0215	0.00425	0.15
Barrel 05	7-Aug-10	0.00125	0.025	0.000622	199	0.0005	0.00326	0.0259	0.015	0.00057	0.0125	6.29	0.176	0.000005	0.0706	0.00125	0.15
Barrel 06	7-Aug-10	0.00125	0.025	0.00165	288	0.0005	0.00213	0.00833	0.015	0.00071	0.0125	3.42	0.338	0.000005	0.0272	0.00125	0.15
Barrel 07	7-Aug-10	0.00125	0.025	0.0007	426	0.0005	0.00255	0.00841	0.015	0.00072	0.026	3.6	0.233	0.000005	0.0175	0.00125	0.15
Barrel 08	7-Aug-10	0.0005	0.01	0.000265	66.6	0.0002	0.0208	0.0236	0.015	0.00047	0.017	4.49	0.432	0.000011	0.0426	0.0025	0.15
Barrel 09	7-Aug-10	0.0005	0.01	0.0131	59.3	0.0002	0.125	5.02	0.015	0.00084	0.018	6.73	10.7	0.000005	0.00057	0.0304	0.15
Barrel 10	7-Aug-10	0.00025	0.014	0.000119	35.2	0.00025	0.00005	0.00734	0.015	0.000327	0.0076	4.57	0.00167	0.000005	0.132	0.0008	0.15
Barrel 11	7-Aug-10	0.00025	0.01	0.000067	88.8	0.00025	0.00148	0.0102	0.015	0.000025	0.0073	5.34	0.111	0.000005	0.0469	0.00098	0.15
Barrel 12	7-Aug-10	0.00025	0.005	0.000164	29.4	0.00025	0.00021	0.0146	0.015	0.000025	0.0025	1.34	0.0586	0.000005	0.0465	0.00025	0.15
Barrel 01	24-Sep-10	0.00025	0.005	0.00008	33.3	0.0001	0.0002	0.014	0.015	0.000086	0.0025	3.79	0.0316	0.000005	0.087	0.00025	0.15
Barrel 02	24-Sep-10	0.00025	0.005	0.000071	46.5	0.0001	0.00005	0.00926	0.015	0.000025	0.0064	5.3	0.00318	0.000005	0.111	0.00025	0.15
Barrel 03	24-Sep-10	0.00025	0.005	0.000032	39.6	0.0001	0.00023	0.00735	0.015	0.000105	0.0025	4.96	0.0561	0.000005	0.0364	0.001	0.15
Barrel 04	24-Sep-10	0.00025	0.005	0.000333	42.5	0.0001	0.00098	0.00797	0.015	0.000104	0.0076	3.81	0.141	0.000005	0.0156	0.00393	0.15
Barrel 05	24-Sep-10	0.0005	0.01	0.000508	130	0.0002	0.00277	0.0229	0.015	0.00084	0.019	4.23	0.223	0.000005	0.0354	0.0013	0.15
Barrel 06	23-Sep-10	0.00125	0.025	0.00131	247	0.0005	0.00146	0.0062	0.015	0.00058	0.0125	2.93	0.271	0.000005	0.0215	0.00125	0.15
Barrel 07	23-Sep-10	0.00125	0.025	0.000596	388	0.0005	0.00219	0.0072	0.015	0.00068	0.0125	2.97	0.219	0.000005	0.0137	0.0031	0.15
Barrel 08	23-Sep-10	0.00025	0.005	0.000216	47	0.0001	0.0192	0.0149	0.015	0.000239	0.0121	3.19	0.264	0.000005	0.0365	0.00168	0.15
Barrel 09	23-Sep-10	0.00125	0.025	0.0144	56.9	0.0005	0.155	8.71	0.015	0.00116	0.0125	6.84	11.1	0.000005	0.00035	0.0338	0.15
Barrel 10	23-Sep-10	0.00025	0.005	0.000097	24.2	0.0001	0.00005	0.00515	0.015	0.000146	0.0025	2.63	0.000537	0.000005	0.0643	0.00055	0.15
Barrel 11	24-Sep-10	0.0005	0.01	0.000067	97.6	0.0002	0.00186	0.0084	0.015	0.00005	0.005	5.62	0.113	0.000005	0.0495	0.0005	0.15
Barrel 12	24-Sep-10	0.00025	0.005	0.000166	21.3	0.0001	0.00015	0.0133	0.015	0.000025	0.0025	0.954	0.0336	0.000005	0.0239	0.00025	0.15
Barrel 01	4-Jun-11	0.00025	0.005	0.000023	32.3	0.00005	0.0003	0.00249	0.015	0.000025	0.0025	3.58	0.0416	0.000005	0.0304	0.00209	0.15
Barrel 02	4-Jun-11	0.00025	0.005	0.000023	31.2	0.00005	0.00024	0.00182	0.015	0.000025	0.0025	3.12	0.0487	0.000005	0.0405	0.00138	0.15
Barrel 03	4-Jun-11	0.00025	0.005	0.000031	56.3	0.00005	0.00012	0.00171	0.015	0.000025	0.0025	5.53	0.0104	0.000005	0.0247	0.00144	0.15
Barrel 04	4-Jun-11	0.00025	0.005	0.000025	34.1	0.00005	0.00033	0.00255	0.015	0.000025	0.0025	4.45	0.0783	0.000005	0.0113	0.00342	0.15
Barrel 05	4-Jun-11	0.0005	0.01	0.000158	316	0.0001	0.00202	0.0016	0.015	0.00005	0.005	6.38	0.571	0.000005	0.0132	0.0075	0.15
Barrel 06	4-Jun-11	0.0005	0.01	0.00021	417	0.0001	0.00215	0.0013	0.015	0.00015	0.005	4.24	0.481	0.000005	0.0102	0.0093	0.15
Barrel 07	4-Jun-11	0.0005	0.01	0.000151	357	0.0001	0.00158	0.0013	0.015	0.00005	0.005	2.71	0.287	0.000005	0.00754	0.0074	0.15
Barrel 08	4-Jun-11	0.00025	0.005	0.000019	25.3	0.00005	0.00027	0.00274	0.015	0.000025	0.0025	2.28	0.0247	0.000005	0.00781	0.00138	0.15
Barrel 09	5-Jun-11	0.00025	0.005	0.00674	67.5	0.00005	0.119	1.41	0.015	0.000052	0.0148	10.1	8.54	0.000005	0.00028	0.0454	0.15
Barrel 10	5-Jun-11	0.00025	0.005	0.000029	29.7	0.00005	0.00033	0.00286	0.015	0.000025	0.0025	3.12	0.0445	0.000005	0.0532	0.00242	0.15
Barrel 11	4-Jun-11	0.00025	0.005	0.000037	62.4	0.00005	0.00027	0.00311	0.015	0.000025	0.0025	3.3	0.0524	0.000005	0.0123	0.00169	0.15
Barrel 12	4-Jun-11	0.00025	0.005	0.00002	29.1	0.00005	0.00005	0.00318	0.015	0.000025	0.0025	2.15	0.00817	0.000005	0.0157	0.00053	0.15
Barrel 13	5-Jun-11	0.00025	0.005	0.00542	28.8	0.00238	0.0579	4.33	97.9	0.00234	0.0025	9.53	1.83	0.000005	0.0148	0.0393	2.65
Barrel 14	5-Jun-11	0.00025	0.005	0.000005	33	0.00005	0.00005	0.00259	0.015	0.000025	0.0025	2.64	0.00476	0.000005	0.00249	0.00075	0.15
Barrel 15	5-Jun-11	0.00025	0.011	0.00004	43.6	0.00005	0.00132	0.00147	0.015	0.000025	0.0025	4.75	0.318	0.000005	0.0565	0.00717	0.15

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Dissolved Metals														
Sample ID		Bismuth (Bi)	Boron (B)	Cadmium (Cd)	Calcium (Ca)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Lithium (Li)	Magnesium (Mg)	Manganese (Mn)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Phosphorus (P)
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 16	5-Jun-11	0.00025	0.005	0.00004	71.5	0.00005	0.00073	0.00163	0.015	0.000025	0.0025	8.05	0.277	0.000005	0.00127	0.00615	0.15
Barrel 17	4-Jun-11	0.00025	0.011	0.0143	95.6	0.00399	0.203	3.62	34	0.00252	0.0134	13.9	14.2	0.000005	0.000246	0.205	0.15
Barrel 01	3-Jul-11	0.00025	0.005	0.000056	70.4	0.00005	0.00048	0.00419	0.015	0.000025	0.00025	5.93	0.0823	0.000005	0.0578	0.00305	0.15
Barrel 02	3-Jul-11	0.00025	0.005	0.000079	82.2	0.00005	0.00043	0.00284	0.015	0.00007	0.00025	7.17	0.109	0.000005	0.0786	0.0026	0.15
Barrel 03	3-Jul-11	0.00025	0.005	0.000085	180	0.00013	0.00017	0.00269	0.015	0.000082	0.00025	15.1	0.0129	0.000005	0.0336	0.00354	0.15
Barrel 04	3-Jul-11	0.00025	0.015	0.000111	131	0.00005	0.00073	0.00325	0.015	0.000061	0.00025	11.6	0.19	0.000005	0.0249	0.00358	0.15
Barrel 05	3-Jul-11	0.00125	0.025	0.00024	449	0.00025	0.00203	0.0026	0.015	0.000125	0.00125	7.41	0.798	0.000005	0.0198	0.0081	0.15
Barrel 06	4-Jul-11	0.0005	0.01	0.000225	379	0.0001	0.00159	0.0018	0.015	0.00029	0.0014	4.75	0.505	0.000005	0.0141	0.0067	0.15
Barrel 07	4-Jul-11	0.00125	0.025	0.000293	439	0.00025	0.00204	0.00125	0.015	0.00027	0.00125	4.71	0.505	0.000005	0.0172	0.0098	0.15
Barrel 08	4-Jul-11	0.00025	0.005	0.000087	64.9	0.00005	0.0009	0.00408	0.015	0.000072	0.00055	5.83	0.114	0.000005	0.0121	0.00371	0.15
Barrel 09	4-Jul-11	0.00125	0.025	0.0361	229	0.00025	0.487	8.02	0.015	0.00041	0.0289	33.6	45.9	0.000005	0.00035	0.25	0.15
Barrel 10	4-Jul-11	0.00025	0.005	0.000075	45.3	0.00005	0.00053	0.00308	0.015	0.000241	0.00061	4.71	0.118	0.000005	0.0709	0.003	0.15
Barrel 11	3-Jul-11	0.00025	0.005	0.000076	103	0.00011	0.00019	0.0051	0.015	0.000224	0.00025	4.77	0.0152	0.000005	0.0256	0.00179	0.15
Barrel 12	3-Jul-11	0.00025	0.005	0.000034	72	0.0002	0.00005	0.00439	0.015	0.000025	0.00025	5.03	0.00733	0.000005	0.0257	0.00106	0.15
Barrel 13	3-Jul-11	0.00025	0.005	0.000034	72	0.0002	0.00005	0.00439	0.015	0.000025	0.00025	5.03	0.00733	0.000005	0.0257	0.00106	0.15
Barrel 14	4-Jul-11	0.00025	0.005	0.000011	36.4	0.00016	0.00005	0.00267	0.015	0.000025	0.00025	3.04	0.00325	0.000005	0.00389	0.00085	0.15
Barrel 15	4-Jul-11	0.00025	0.005	0.000101	54.2	0.00005	0.00146	0.00159	0.015	0.000025	0.00025	4.57	0.458	0.000005	0.0844	0.00587	0.15
Barrel 16	4-Jul-11	0.00025	0.005	0.000101	47.8	0.00005	0.00055	0.00172	0.015	0.000025	0.00025	3.52	0.362	0.000005	0.00203	0.00314	0.15
Barrel 17	3-Jul-11	0.0025	0.05	0.124	374	0.0629	1.38	41.4	1070	0.0143	0.112	74.8	80.1	0.000014	0.0123	1.51	37.1
Barrel 01	31-Jul-11	0.00025	0.005	0.00005	78.4	0.00005	0.00026	0.003	0.015	0.000025	0.00108	6.21	0.0345	0.000005	0.0764	0.00235	0.15
Barrel 02	31-Jul-11	0.00025	0.005	0.00005	98.3	0.00005	0.00026	0.00232	0.015	0.000063	0.00025	8.51	0.0691	0.000005	0.111	0.00192	0.15
Barrel 03	31-Jul-11	0.0005	0.01	0.000076	220	0.0001	0.0001	0.0022	0.015	0.00005	0.0005	17.6	0.00602	0.000005	0.0504	0.0026	0.15
Barrel 04	31-Jul-11	0.00025	0.017	0.000091	160	0.00005	0.00047	0.00229	0.015	0.000052	0.00093	14.1	0.144	0.000005	0.0302	0.00284	0.15
Barrel 05	31-Jul-11	0.00125	0.025	0.000248	525	0.00025	0.00167	0.00125	0.015	0.000125	0.00125	9.63	0.733	0.000005	0.0305	0.0072	0.15
Barrel 06	1-Aug-11	0.00125	0.025	0.000253	604	0.00025	0.00166	0.00125	0.015	0.00032	0.00125	8.11	0.609	0.000005	0.0276	0.0079	0.15
Barrel 07	1-Aug-11	0.00125	0.025	0.000269	571	0.00025	0.00165	0.00125	0.015	0.000125	0.00125	5.54	0.41	0.000005	0.0305	0.0088	0.15
Barrel 08	1-Aug-11	0.00025	0.005	0.000083	91.9	0.00005	0.00072	0.0034	0.015	0.000073	0.00025	6.96	0.116	0.000005	0.0162	0.00335	0.15
Barrel 09	1-Aug-11	0.0025	0.05	0.0477	309	0.0005	0.637	14.3	0.015	0.00061	0.0364	42.8	66.6	0.000005	0.00057	0.322	0.15
Barrel 10	1-Aug-11	0.00025	0.011	0.000075	67.9	0.00005	0.00054	0.00264	0.015	0.000323	0.00025	6.02	0.113	0.000005	0.101	0.0031	0.15
Barrel 11	31-Jul-11	0.00025	0.01	0.000068	125	0.00011	0.00019	0.00395	0.015	0.000414	0.00025	5.35	0.0111	0.000005	0.0323	0.00142	0.15
Barrel 12	31-Jul-11	0.00025	0.005	0.000032	81.5	0.00019	0.00005	0.00285	0.015	0.000025	0.00025	4.99	0.00308	0.000005	0.0344	0.00073	0.15
Barrel 13	1-Aug-11	0.0125	0.25	0.034	206	0.165	1.52	39.2	7580	0.254	0.186	94.5	15.4	0.000154	3.09	0.81	893
Barrel 14	1-Aug-11	0.00025	0.005	0.000017	50.6	0.00029	0.00005	0.0038	0.045	0.000025	0.00025	3.39	0.00519	0.000005	0.00423	0.001	0.15
Barrel 15	1-Aug-11	0.00025	0.005	0.00005	70.8	0.00005	0.00045	0.00184	0.015	0.000025	0.00053	5.69	0.0691	0.000005	0.0732	0.00442	0.15
Barrel 16	1-Aug-11	0.00025	0.005	0.000055	69.2	0.00005	0.00028	0.00178	0.015	0.000025	0.00025	4.09	0.0691	0.000005	0.00236	0.00202	0.15
Barrel 17	31-Jul-11	0.005	0.1	0.154	442	0.0915	1.67	58.2	1590	0.0079	0.159	112	98.7	0.000029	0.0147	1.9	55.6
Barrel 01	3-Sep-11	0.00025	0.005	0.00004	57.5	0.00005	0.00011	0.00183	0.015	0.000025	0.00078	4.71	0.0093	0.000005	0.0805	0.00145	0.15
Barrel 02	3-Sep-11	0.00025	0.005	0.00005	47.3	0.00005	0.00005	0.00127	0.015	0.000074	0.00025	4	0.0147	0.000005	0.108	0.00081	0.15
Barrel 03	3-Sep-11	0.00025	0.005	0.000036	92.5	0.00011	0.00005	0.00145	0.015	0.000087	0.00025	7.34	0.00226	0.000005	0.0577	0.00104	0.15
Barrel 04	3-Sep-11	0.00025	0.01	0.000034	66.7	0.00005	0.00015	0.00127	0.015	0.00005	0.00066	5.93	0.0434	0.000005	0.0319	0.00106	0.15
Barrel 05	3-Sep-11	0.0005	0.01	0.000114	359	0.0001	0.00056	0.0005	0.015	0.00005	0.0024	6.31	0.276	0.000005	0.0336	0.0036	0.15
Barrel 06	3-Sep-11	0.0005	0.01	0.000154	540	0.0001	0.00081	0.0005	0.015	0.00013	0.0043	5.45	0.302	0.000005	0.0447	0.0044	0.15
Barrel 07	3-Sep-11	0.0005	0.01	0.000112	527	0.0001	0.00042	0.0011	0.015	0.00005	0.0042	3.53	0.134	0.000005	0.0374	0.0044	0.15
Barrel 08	3-Sep-11	0.00025	0.005	0.000028	36.4	0.00005	0.00017	0.00189	0.015	0.000088	0.00078	2.64	0.0394	0.000005	0.018	0.00114	0.15
Barrel 09	3-Sep-11	0.0025	0.05	0.0406	223	0.0005	0.498	21.3	0.015	0.00056	0.0334	32.4	52.4	0.000005	0.00025	0.203	0.15
Barrel 10	3-Sep-11	0.00025	0.005	0.00003	45.5	0.00005	0.0002	0.00215	0.015	0.000246	0.00087	3.99	0.0397	0.000005	0.111	0.00149	0.15
Barrel 11	3-Sep-11	0.00025	0.005	0.000035	82	0.00005	0.00005	0.00271	0.015	0.000309	0.00025	3.71	0.00341	0.000005	0.0308	0.00084	0.15
Barrel 12	3-Sep-11	0.00025	0.005	0.000026	28.5	0.00005	0.00005	0.00147	0.015	0.000025	0.00025	1.62	0.00116	0.000005	0.0252	0.00025	0.15
Barrel 13	3-Sep-11	0.0025	0.05	0.00669	37.8	0.0143	0.288	5.99	973	0.0286	0.0208	24	4.56	0.000025	0.768	0.0831	77.5
Barrel 14	3-Sep-11	0.00025	0.005	0.000005	30.3	0.00011	0.00005	0.00142	0.015	0.000025	0.00025	1.75	0.000373	0.000005	0.00313	0.00025	0.15

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Dissolved Metals														
Sample ID		Bismuth (Bi)	Boron (B)	Cadmium (Cd)	Calcium (Ca)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Lithium (Li)	Magnesium (Mg)	Manganese (Mn)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Phosphorus (P)
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Barrel 15	3-Sep-11	0.00025	0.005	0.00003	38.8	0.00005	0.00005	0.00079	0.015	0.000025	0.00025	3.19	0.00456	0.000005	0.0481	0.00156	0.15
Barrel 16	3-Sep-11	0.00025	0.005	0.000005	40.7	0.00005	0.00005	0.00072	0.015	0.000025	0.00025	2.57	0.00211	0.000005	0.00178	0.00057	0.15
Barrel 17	3-Sep-11	0.00125	0.025	0.0268	97.6	0.0244	0.337	17	586	0.00038	0.0269	20.3	13.7	0.000025	0.00643	0.358	14.9
Barrel 01	1-Oct-11	0.00025	0.005	0.000015	26.6	0.0001	0.00005	0.00097	0.015	0.000025	0.00105	1.88	0.00182	0.000005	0.0375	0.00025	0.15
Barrel 02	1-Oct-11	0.00025	0.005	0.000019	28.9	0.00005	0.00005	0.00071	0.015	0.000025	0.00054	1.85	0.00341	0.000005	0.0629	0.00025	0.15
Barrel 03	1-Oct-11	0.00025	0.005	0.000016	43	0.00013	0.00005	0.00073	0.015	0.000025	0.0006	2.88	0.000413	0.000005	0.0372	0.00025	0.15
Barrel 04	1-Oct-11	0.00025	0.005	0.000017	34.1	0.00005	0.00005	0.00081	0.015	0.000025	0.00082	2.67	0.0183	0.000005	0.0202	0.00025	0.15
Barrel 05	1-Oct-11	0.0005	0.01	0.000039	223	0.0001	0.0001	0.0005	0.015	0.00005	0.0017	2.09	0.0491	0.000005	0.023	0.0014	0.15
Barrel 06	1-Oct-11	0.0005	0.01	0.000095	456	0.0001	0.00037	0.0005	0.015	0.00005	0.0024	2.41	0.146	0.000005	0.0414	0.0025	0.15
Barrel 07	1-Oct-11	0.0005	0.01	0.000059	424	0.0001	0.0001	0.0016	0.015	0.00005	0.0017	1.21	0.0453	0.000005	0.0273	0.0019	0.15
Barrel 08	1-Oct-11	0.00025	0.005	0.000016	25.8	0.00005	0.00005	0.00107	0.015	0.000025	0.0005	1.63	0.00952	0.000005	0.0115	0.00062	0.15
Barrel 09	1-Oct-11	0.0005	0.01	0.0103	41.6	0.0001	0.113	7.71	0.015	0.00031	0.0113	6.37	11.7	0.000005	0.00014	0.0384	0.15
Barrel 10	1-Oct-11	0.00025	0.005	0.000021	21.9	0.00005	0.00005	0.00073	0.015	0.000177	0.00025	1.59	0.0107	0.000005	0.0461	0.00058	0.15
Barrel 11	1-Oct-11	0.00025	0.005	0.000017	42.5	0.00005	0.00005	0.00129	0.015	0.00026	0.00025	1.47	0.00141	0.000005	0.016	0.00025	0.15
Barrel 12	1-Oct-11	0.00025	0.005	0.000005	17.4	0.00005	0.00005	0.00073	0.015	0.000025	0.00025	0.882	0.000927	0.000005	0.0137	0.00025	0.15
Barrel 13	1-Oct-11	0.00125	0.025	0.00387	16.6	0.00916	0.214	7.25	689	0.00754	0.0102	10.2	2.1	0.000005	0.405	0.0644	31.3
Barrel 14	1-Oct-11	0.00025	0.005	0.000005	15	0.00005	0.00005	0.00105	0.015	0.000025	0.00025	0.797	0.000725	0.000005	0.00207	0.00025	0.15
Barrel 15	1-Oct-11	0.00025	0.005	0.000014	20.1	0.00005	0.00005	0.0006	0.015	0.000025	0.00025	1.31	0.00319	0.000005	0.03	0.0007	0.15
Barrel 16	1-Oct-11	0.00025	0.005	0.000005	22.3	0.00005	0.00005	0.00025	0.015	0.000025	0.00025	1.22	0.00201	0.000005	0.00132	0.00025	0.15
Barrel 17	1-Oct-11	0.00125	0.025	0.0109	63	0.0134	0.175	7.06	408	0.0004	0.0087	9.19	4.6	0.000005	0.00386	0.199	6.35
Barrel 01	26-Oct-11	0.00025	0.005	0.000018	32.1	0.00005	0.00005	0.00098	0.015	0.000025	0.00067	2.32	0.00143	0.000005	0.0456	0.00025	0.15
Barrel 02	26-Oct-11	0.00025	0.005	0.000015	34.8	0.00005	0.00005	0.00097	0.015	0.000058	0.00025	2.27	0.00226	0.000005	0.0786	0.00025	0.15
Barrel 03	26-Oct-11	0.00025	0.005	0.00002	52.8	0.00012	0.00005	0.00113	0.015	0.000052	0.00025	3.64	0.000495	0.000005	0.0414	0.00025	0.15
Barrel 04	26-Oct-11	0.00025	0.005	0.000023	41.2	0.00005	0.00005	0.00087	0.015	0.000025	0.00051	3.38	0.0186	0.000005	0.0238	0.00025	0.15
Barrel 05	26-Oct-11	0.0005	0.01	0.000041	310	0.0001	0.0001	0.0005	0.015	0.00005	0.0016	2.88	0.0516	0.000005	0.0245	0.0016	0.15
Barrel 06	26-Oct-11	0.00125	0.025	0.000092	470	0.00025	0.00025	0.00125	0.015	0.000125	0.00125	2.27	0.121	0.000005	0.0365	0.00125	0.15
Barrel 07	26-Oct-11	0.00125	0.025	0.000062	438	0.00025	0.00025	0.00125	0.015	0.000125	0.00125	1.42	0.0414	0.000005	0.0282	0.00125	0.15
Barrel 08	26-Oct-11	0.00025	0.005	0.000015	29.8	0.00005	0.00005	0.00182	0.015	0.000053	0.00062	1.88	0.0087	0.000005	0.0126	0.00066	0.15
Barrel 09	26-Oct-11	0.0005	0.01	0.0143	60.7	0.0001	0.154	9.89	0.015	0.00039	0.0118	8.62	15.7	0.000005	0.00014	0.0654	0.15
Barrel 10	26-Oct-11	0.00025	0.005	0.000032	28.2	0.00005	0.00005	0.00112	0.015	0.000178	0.00065	1.9	0.00936	0.000005	0.058	0.00058	0.15
Barrel 11	26-Oct-11	0.00025	0.005	0.000021	45.4	0.00005	0.00005	0.00129	0.015	0.000251	0.00025	1.53	0.00116	0.000005	0.015	0.00025	0.15
Barrel 12	26-Oct-11	0.00025	0.005	0.000005	22.1	0.00005	0.00005	0.00081	0.015	0.000025	0.00025	1.13	0.000507	0.000005	0.0161	0.00025	0.15
Barrel 13	26-Oct-11	0.00125	0.025	0.00325	16.3	0.00635	0.205	8.64	772	0.00795	0.0102	6.68	1.37	0.000005	0.442	0.0567	37.2
Barrel 14	26-Oct-11	0.00025	0.005	0.000005	20.2	0.0002	0.00005	0.00091	0.015	0.000025	0.00025	0.963	0.000194	0.000005	0.00183	0.00025	0.15
Barrel 15	26-Oct-11	0.00025	0.005	0.000016	27.1	0.00005	0.00005	0.0005	0.015	0.000025	0.00025	1.6	0.00197	0.000005	0.034	0.00075	0.15
Barrel 16	26-Oct-11	0.00025	0.005	0.000005	34.7	0.00005	0.00005	0.00025	0.015	0.000025	0.00025	1.73	0.00253	0.000005	0.00133	0.00025	0.15
Barrel 17	26-Oct-11	0.00125	0.025	0.00889	51.3	0.0126	0.165	5.93	437	0.00052	0.0099	6.98	3.15	0.000005	0.00381	0.193	5.7

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Dissolved Metals												Field Tests	
Sample ID		Potassium (K)	Selenium (Se)	Silicon (Si)	Silver (Ag)	Sodium (Na)	Strontium (Sr)	Thallium (Tl)	Tin (Sn)	Titanium (Ti)	Uranium (U)	Vanadium (V)	Zinc (Zn)		Conductivity
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pH	uS/cm
Barrel 01	12-Jul-09	0.515	0.00174	0.238	0.000019	1	0.192	0.00005	0.00005	0.005	0.024	0.0005	0.0104	6.57	51
Barrel 02	12-Jul-09	1.71	0.00826	1.03	0.000026	4.2	2.5	0.00005	0.00005	0.005	0.036	0.0005	0.0254	8.04	197
Barrel 03	12-Jul-09	1.34	0.015	0.73	0.000128	4.6	0.45	0.00005	0.00005	0.005	0.0189	0.0005	0.0059	8.3	147
Barrel 04	12-Jul-09	2.69	0.00748	0.965	0.000096	7.7	1.22	0.00005	0.00005	0.005	0.0222	0.0005	0.0291	8.25	211
Barrel 01	26-Aug-09	3.31	0.0399	1.84	0.000014	3.3	1.22	0.00005	0.00005	0.005	0.2	0.0011	0.337	6.49	502
Barrel 02	26-Aug-09	2.1	0.0186	1.6	0.000019	3.3	2.95	0.00005	0.00005	0.005	0.0247	0.0011	0.113	7.23	364
Barrel 03	26-Aug-09	3.22	0.118	2.25	0.000026	10.4	1.41	0.00005	0.00005	0.005	0.0313	0.0005	0.187	7.39	526
Barrel 04	26-Aug-09	5.85	0.0509	2.1	0.000048	12.4	3.27	0.00011	0.00005	0.005	0.0144	0.0005	0.374	7.36	552
Barrel 01	19-Sep-09	2.31	0.029	1.57	0.000005	2.4	0.988	0.00005	0.00005	0.005	0.164	0.0005	0.329	7.13	372
Barrel 02	19-Sep-09	1.68	0.04	1.43	0.00002	4.2	2.91	0.00005	0.00005	0.005	0.0307	0.001	0.191	7.33	403
Barrel 03	19-Sep-09	2.55	0.112	1.88	0.000027	10	1.14	0.00005	0.00005	0.005	0.0256	0.0005	0.18	7.42	523
Barrel 04	19-Sep-09	4.98	0.0459	1.7	0.000038	14.1	2.49	0.00005	0.00005	0.01	0.0168	0.0005	0.349	7.28	584
Barrel 05	19-Sep-09	3.65	0.0353	1.7	0.000106	68.4	1.12	0.0001	0.0001	0.012	0.0697	0.0044	0.0981	7.82	848
Barrel 01	22-Oct-09	1.41	0.00784	0.959	0.000005	1	0.686	0.00005	0.00005	0.005	0.114	0.0005	0.369	6.33	139
Barrel 02	22-Oct-09	1.31	0.0182	1.04	0.000015	2.9	2.32	0.00005	0.00005	0.005	0.0358	0.0005	0.193	6.28	171
Barrel 03	22-Oct-09	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	6.23	189
Barrel 04	22-Oct-09	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	6.11	210
Barrel 05	22-Oct-09	3.9	0.0178	1.16	0.000046	60.1	1.11	0.0001	0.0001	0.013	0.0559	0.001	0.171	5.24	442
Barrel 06	22-Oct-09	6.4	0.0119	0.891	0.000025	104	2.83	0.00025	0.00025	0.017	0.0211	0.0025	0.212	5.31	875
Barrel 07	22-Oct-09	8.13	0.00935	1.16	0.00016	97.9	3.72	0.00025	0.00025	0.02	0.0241	0.0025	0.318	5.78	1475
Barrel 08	22-Oct-09	7.47	0.0317	1.57	0.000409	6	0.717	0.00005	0.00005	0.005	0.0532	0.0022	0.129	6.04	207
Barrel 09	22-Oct-09	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	5.64	170
Barrel 10	22-Oct-09	2.56	0.0149	1.24	0.000051	9.4	1.69	0.00005	0.00005	0.005	0.00848	0.0005	0.651	5.8	152
Barrel 11	22-Oct-09	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	5.92	500
Barrel 12	22-Oct-09	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	6.15	130
Barrel 01	24-Nov-09	1.46	0.00524	0.111	0.000005	1	0.361	0.00005	0.00005	0.005	0.0777	0.0005	0.193	6.7	47
Barrel 02	24-Nov-09	0.457	0.00353	0.134	0.000005	1	0.542	0.00005	0.00005	0.005	0.00732	0.0005	0.0335	6.3	51
Barrel 03	24-Nov-09	0.844	0.00966	0.19	0.000005	2.1	0.186	0.00005	0.00005	0.005	0.00607	0.0005	0.0087	6.34	51
Barrel 04	24-Nov-09	4.38	0.0101	0.271	0.000005	5.8	0.827	0.00005	0.00005	0.005	0.0151	0.0005	0.0514	5.57	96
Barrel 05	24-Nov-09	5.83	0.0205	0.463	0.000016	73.5	0.723	0.00005	0.00005	0.005	0.0985	0.0022	0.193	6.24	387
Barrel 06	25-Nov-09	3.66	0.00598	0.528	0.000005	45.4	0.873	0.00005	0.00005	0.005	0.0101	0.0005	0.134	6.34	384
Barrel 07	25-Nov-09	2.03	0.0023	0.212	0.000005	15.7	0.342	0.00005	0.00005	0.005	0.00365	0.0005	0.0791	6.75	175
Barrel 08	24-Nov-09	8.07	0.042	0.821	0.000314	8.1	0.643	0.00005	0.00005	0.005	0.0823	0.0036	0.0417	7.73	23
Barrel 09	25-Nov-09	0.791	0.00915	0.367	0.000005	6	0.183	0.00005	0.00005	0.005	0.000005	0.0005	0.425	6.51	69
Barrel 10	25-Nov-09	1.28	0.00582	0.281	0.000036	3.9	0.468	0.00005	0.00005	0.005	0.00471	0.0005	0.122	6.7	56
Barrel 11	24-Nov-09	0.639	0.00099	0.119	0.000005	2.7	0.363	0.00005	0.00005	0.005	0.00197	0.0005	0.0146	7.23	62
Barrel 12	25-Nov-09	0.75	0.00781	0.252	0.000005	1	0.0316	0.00005	0.00005	0.005	0.000455	0.0005	0.0407	6.44	38
Barrel 01	7-Jun-10	1.39	0.00543	1.1	0.000005	1	0.63	0.00005	0.00005	0.005	0.108	0.0005	0.0416	8.16	117
Barrel 02	7-Jun-10	0.972	0.009	1.24	0.000016	1	2.23	0.00005	0.00005	0.005	0.0369	0.0005	0.0586	8.21	156
Barrel 03	7-Jun-10	1.36	0.021	1.41	0.000021	3.7	0.629	0.00005	0.00005	0.005	0.0223	0.0005	0.0126	8.41	182
Barrel 04	7-Jun-10	2.5	0.00821	1.25	0.000013	3.5	1.39	0.00005	0.00005	0.005	0.0233	0.0005	0.0543	8.38	200
Barrel 05	7-Jun-10	2.62	0.0102	1.07	0.00001	36.2	1.87	0.0001	0.0001	0.005	0.0597	0.001	0.0343	8.09	782
Barrel 06	7-Jun-10	3.96	0.0066	0.795	0.000025	43	3.19	0.00025	0.00025	0.005	0.0172	0.0025	0.195	7.91	1010
Barrel 07	7-Jun-10	4.85	0.007	0.946	0.000025	24	3.86	0.00025	0.00025	0.005	0.0211	0.0025	0.185	7.79	1476
Barrel 08	7-Jun-10	2.71	0.0188	1.36	0.000021	3.5	0.606	0.00005	0.00005	0.005	0.0691	0.0016	0.155	7.78	215
Barrel 09	7-Jun-10	2.04	0.0321	1.53	0.000005	7	0.554	0.00005	0.00005	0.005	0.000031	0.0005	1.42	5.83	188
Barrel 10	7-Jun-10	1.61	0.0116	1.26	0.000011	5.1	0.984	0.00005	0.00005	0.005	0.0121	0.0005	0.0189	7.97	143
Barrel 11	7-Jun-10	3.55	0.00556	1.79	0.000005	12	2.91	0.00005	0.00005	0.005	0.0127	0.0005	0.0807	8.22	397
Barrel 12	7-Jun-10	1.11	0.0206	1.45	0.000005	1	0.105	0.00005	0.00005	0.005	0.00341	0.0005	0.029	8.04	94
Barrel 01	6-Jul-10	1.5	0.0132	0.957	0.000028	1	0.671	0.00005	0.00005	0.005	0.0779	0.0005	0.0985	8.13	208

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Dissolved Metals												Field Tests	
Sample ID		Potassium (K)	Selenium (Se)	Silicon (Si)	Silver (Ag)	Sodium (Na)	Strontium (Sr)	Thallium (Tl)	Tin (Sn)	Titanium (Ti)	Uranium (U)	Vanadium (V)	Zinc (Zn)		Conductivity
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pH	uS/cm
Barrel 02	6-Jul-10	1.11	0.0164	0.959	0.00002	1	1.87	0.00005	0.00005	0.005	0.0251	0.0005	0.0705	7.94	190
Barrel 03	6-Jul-10	1.81	0.0618	1.6	0.000013	3.9	1.03	0.00005	0.00005	0.005	0.0225	0.0005	0.094	7.77	306
Barrel 04	6-Jul-10	3.36	0.0231	1.31	0.00002	2.8	1.91	0.00005	0.00005	0.005	0.0137	0.0005	0.291	7.69	291
Barrel 05	6-Jul-10	5.67	0.0378	3.11	0.000025	32.2	3.16	0.00025	0.00025	0.005	0.0824	0.0025	0.85	7.63	461
Barrel 06	6-Jul-10	5.27	0.0157	1.19	0.000025	15.6	4.99	0.00025	0.00025	0.005	0.0135	0.0025	0.37	7.52	1049
Barrel 07	6-Jul-10	7.47	0.022	1.51	0.000025	13.7	5.66	0.00025	0.00025	0.005	0.0139	0.0025	0.419	7.45	1385
Barrel 08	6-Jul-10	3.74	0.034	2.46	0.000124	3	0.667	0.00005	0.00005	0.005	0.077	0.003	0.142	7.82	252
Barrel 09	6-Jul-10	2.53	0.0506	5.88	0.000048	9.2	0.604	0.0001	0.0001	0.005	0.00001	0.001	4.32	7.85	189
Barrel 10	6-Jul-10	2.2	0.0336	2	0.000005	6.3	1.65	0.00005	0.00005	0.005	0.0133	0.0005	0.076	6.17	310
Barrel 11	6-Jul-10	3.95	0.0165	2.01	0.000025	12.8	3.38	0.0001	0.0001	0.005	0.0117	0.001	0.126	7.63	461
Barrel 12	6-Jul-10	1.53	0.0476	1.95	0.000019	1	0.133	0.00005	0.00005	0.005	0.00386	0.0005	0.0756	7.78	146
Barrel 01	7-Aug-10	1.58	0.0122	0.93	0.000005	1	0.616	0.00005	0.00005	0.005	0.0563	0.0005	0.0655	5.93	236
Barrel 02	7-Aug-10	1.11	0.0159	0.859	0.000015	1	1.6	0.00005	0.00005	0.005	0.0189	0.0005	0.0427	6.18	226
Barrel 03	7-Aug-10	1.81	0.0468	1.39	0.000014	2.6	0.804	0.00005	0.00005	0.005	0.0136	0.0005	0.0528	6.64	323
Barrel 04	7-Aug-10	3.16	0.0212	1.18	0.00001	2.1	1.44	0.00005	0.00005	0.005	0.00868	0.0005	0.201	6.56	336
Barrel 05	7-Aug-10	6	0.0413	2.98	0.000025	27.9	2.78	0.00025	0.00025	0.005	0.0565	0.0025	0.423	6.71	988
Barrel 06	7-Aug-10	5.17	0.0174	1.2	0.000025	11.1	4.38	0.00025	0.00025	0.005	0.0107	0.0025	0.338	6.83	1271
Barrel 07	7-Aug-10	7.23	0.0222	1.4	0.000025	10.7	4.91	0.00025	0.00025	0.005	0.0103	0.0025	0.265	7	1800
Barrel 08	7-Aug-10	4.88	0.0482	2.95	0.000096	3.4	0.9	0.0001	0.0001	0.005	0.0868	0.0036	0.23	7.15	405
Barrel 09	7-Aug-10	3.4	0.0767	5.18	0.00001	6.5	1.03	0.0001	0.0001	0.005	0.000038	0.001	6.15	5.71	459
Barrel 10	7-Aug-10	2.23	0.0341	1.73	0.000005	4.6	1.57	0.00005	0.00005	0.005	0.00967	0.0005	0.0433	7.37	244
Barrel 11	7-Aug-10	3.32	0.0146	1.77	0.000005	9.4	2.76	0.00005	0.00005	0.005	0.0081	0.0005	0.0738	7.12	526
Barrel 12	7-Aug-10	1.54	0.0435	1.72	0.000005	1	0.125	0.00005	0.00005	0.005	0.00295	0.0005	0.0783	7.14	351
Barrel 01	24-Sep-10	1.22	0.011	0.79	0.000005	1	0.567	0.00005	0.00005	0.005	0.0554	0.0005	0.177	8.35	820
Barrel 02	24-Sep-10	1.21	0.0258	1.06	0.000005	1	2.26	0.00005	0.00005	0.005	0.0258	0.0005	0.0883	8.07	1151
Barrel 03	24-Sep-10	1.27	0.0405	1.08	0.000012	2.1	0.621	0.00005	0.00005	0.005	0.0115	0.0005	0.0841	8	221
Barrel 04	24-Sep-10	2.29	0.0194	0.899	0.000005	1	1.16	0.00005	0.00005	0.005	0.00871	0.0005	0.307	4.46	335
Barrel 05	24-Sep-10	4.13	0.0357	1.44	0.00001	20	2.06	0.0001	0.0001	0.005	0.0345	0.001	0.33	8	116
Barrel 06	23-Sep-10	4.07	0.0167	0.861	0.000025	7.1	4.09	0.00025	0.00025	0.005	0.00887	0.0025	0.295	8.23	143
Barrel 07	23-Sep-10	5.66	0.024	1.03	0.000025	7.5	4.34	0.00025	0.00025	0.005	0.00959	0.0025	0.311	8.2	209
Barrel 08	23-Sep-10	3.13	0.0484	2.31	0.000027	2.1	0.656	0.00005	0.00005	0.005	0.0617	0.0029	0.183	8.28	170
Barrel 09	23-Sep-10	3.09	0.0745	4.08	0.000025	3.5	0.984	0.00025	0.00025	0.005	0.000172	0.0025	8.11	7.98	189
Barrel 10	23-Sep-10	1.38	0.0184	1	0.000005	2.2	0.908	0.00005	0.00005	0.005	0.00528	0.0005	0.0385	7.88	517
Barrel 11	24-Sep-10	3.09	0.0135	1.71	0.00001	7.7	2.74	0.0001	0.0001	0.005	0.00842	0.001	0.165	8.25	595
Barrel 12	24-Sep-10	0.996	0.0275	1.25	0.000005	1	0.0906	0.00005	0.00005	0.005	0.0018	0.0005	0.107	8.19	92
Barrel 01	4-Jun-11	1.75	0.0033	2.22	0.000005	1	0.277	0.00005	0.00163	0.005	0.0152	0.0005	0.107	#N/A	#N/A
Barrel 02	4-Jun-11	1.1	0.00419	1.88	0.000005	1	0.887	0.00005	0.00225	0.005	0.00636	0.0005	0.329	#N/A	#N/A
Barrel 03	4-Jun-11	1.56	0.0126	1.88	0.000005	1	0.727	0.00005	0.00218	0.005	0.00558	0.0005	0.338	#N/A	#N/A
Barrel 04	4-Jun-11	1.87	0.00362	2.08	0.000005	2.2	0.283	0.00005	0.00016	0.005	0.00212	0.0005	0.0935	#N/A	#N/A
Barrel 05	4-Jun-11	4.84	0.00901	2.66	0.00001	6.9	3.94	0.0001	0.0055	0.005	0.00824	0.001	0.438	#N/A	#N/A
Barrel 06	4-Jun-11	4.45	0.00521	2.38	0.00001	2.2	6.06	0.0001	0.00434	0.005	0.00468	0.001	0.506	#N/A	#N/A
Barrel 07	4-Jun-11	4.06	0.00575	2.2	0.00001	1	3.9	0.0001	0.00584	0.005	0.00372	0.001	0.81	#N/A	#N/A
Barrel 08	4-Jun-11	1.64	0.0059	2.04	0.000005	1	0.183	0.00005	0.00104	0.005	0.00869	0.0005	0.222	#N/A	#N/A
Barrel 09	5-Jun-11	6.05	0.062	2.46	0.000005	2.2	1.67	0.00005	0.00016	0.005	0.000011	0.0005	1.83	#N/A	#N/A
Barrel 10	5-Jun-11	1.34	0.00402	2.31	0.000005	1	0.381	0.00005	0.00175	0.005	0.00161	0.0005	0.141	#N/A	#N/A
Barrel 11	4-Jun-11	1.54	0.00232	1.74	0.000005	1	1.23	0.00005	0.00079	0.005	0.00181	0.0005	0.268	#N/A	#N/A
Barrel 12	4-Jun-11	0.921	0.00798	2.01	0.000005	1	0.0906	0.00005	0.00325	0.005	0.00139	0.0005	0.0841	#N/A	#N/A
Barrel 13	5-Jun-11	1.81	0.00483	3.88	0.000455	1	0.0858	0.00016	0.00129	0.005	0.00288	0.0024	0.43	#N/A	#N/A
Barrel 14	5-Jun-11	0.77	0.00148	1.86	0.000005	1	0.0859	0.00005	0.00197	0.005	0.000372	0.0005	0.0031	#N/A	#N/A
Barrel 15	5-Jun-11	1.12	0.0105	3.49	0.000005	1	0.161	0.00005	0.00163	0.005	0.000249	0.0005	0.0015	#N/A	#N/A

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

		Dissolved Metals												Field Tests	
Sample ID		Potassium (K)	Selenium (Se)	Silicon (Si)	Silver (Ag)	Sodium (Na)	Strontium (Sr)	Thallium (Tl)	Tin (Sn)	Titanium (Ti)	Uranium (U)	Vanadium (V)	Zinc (Zn)		Conductivity
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pH	uS/cm
Barrel 16	5-Jun-11	1.64	0.00459	4.13	0.000005	2.7	0.223	0.00005	0.00286	0.005	0.00012	0.0005	0.0015	#N/A	#N/A
Barrel 17	4-Jun-11	3.17	0.00209	7.55	0.00006	3.9	0.389	0.0002	0.00378	0.005	0.0137	0.0005	0.78	#N/A	#N/A
Barrel 01	3-Jul-11	2.25	0.0127	3.43	0.000005	1	0.739	0.000031	0.00679	0.005	0.0157	0.0005	0.536	#N/A	#N/A
Barrel 02	3-Jul-11	2	0.0196	3.74	0.000005	1	2.43	0.000032	0.00766	0.005	0.00534	0.0005	1.23	#N/A	#N/A
Barrel 03	3-Jul-11	3.22	0.0589	3.31	0.000005	2.9	2.42	0.000038	0.00765	0.005	0.00189	0.0005	1.21	#N/A	#N/A
Barrel 04	3-Jul-11	3.87	0.0204	3.35	0.000005	2.5	2.24	0.000043	0.00573	0.005	0.00265	0.0005	0.967	#N/A	#N/A
Barrel 05	3-Jul-11	5.38	0.0316	4.24	0.000025	3.5	5.9	0.00006	0.0141	0.005	0.00554	0.0025	1.18	#N/A	#N/A
Barrel 06	4-Jul-11	4.1	0.0133	2.81	0.00001	2.1	7.15	0.000051	0.00818	0.018	0.00184	0.001	0.693	#N/A	#N/A
Barrel 07	4-Jul-11	6.13	0.0256	4.56	0.000025	2.1	5.72	0.000062	0.0144	0.018	0.0018	0.0025	1.15	#N/A	#N/A
Barrel 08	4-Jul-11	2.84	0.0267	3.79	0.000005	1	0.474	0.000031	0.00606	0.005	0.00501	0.0005	1.04	#N/A	#N/A
Barrel 09	4-Jul-11	8.32	0.124	10.7	0.000025	2.1	6.25	0.00016	0.00263	0.015	0.000025	0.0025	8.33	#N/A	#N/A
Barrel 10	4-Jul-11	1.87	0.00944	3.24	0.000005	1	0.78	0.000023	0.00487	0.005	0.00167	0.0005	0.722	#N/A	#N/A
Barrel 11	3-Jul-11	2.58	0.00692	2.99	0.000005	2.9	2.17	0.00003	0.00261	0.005	0.00149	0.0005	0.785	#N/A	#N/A
Barrel 12	3-Jul-11	2.04	0.0301	3.21	0.000005	1	0.222	0.000018	0.00769	0.005	0.00118	0.0005	0.351	#N/A	#N/A
Barrel 13	3-Jul-11	2.04	0.0301	3.21	0.000005	1	0.222	0.000018	0.00769	0.005	0.00118	0.0005	0.351	#N/A	#N/A
Barrel 14	4-Jul-11	1.16	0.00144	2.87	0.000005	1	0.0973	0.000011	0.00475	0.005	0.000289	0.0005	0.0048	#N/A	#N/A
Barrel 15	4-Jul-11	1.37	0.0113	5.15	0.000005	1	0.193	0.00004	0.00482	0.005	0.000069	0.0005	0.0037	#N/A	#N/A
Barrel 16	4-Jul-11	1.22	0.00409	3.58	0.000005	1	0.155	0.000029	0.00817	0.005	0.000043	0.0005	0.004	#N/A	#N/A
Barrel 17	3-Jul-11	6.6	0.0193	62.9	0.00293	10.7	1.12	0.00066	0.0507	0.024	0.136	0.005	7.71	#N/A	#N/A
Barrel 01	31-Jul-11	2.47	0.0118	3.21	0.000005	1	0.944	0.000029	0.00421	0.005	0.0206	0.0005	0.372	#N/A	#N/A
Barrel 02	31-Jul-11	2.23	0.0222	3.51	0.000005	1	3.07	0.000034	0.0052	0.005	0.00533	0.0005	0.703	#N/A	#N/A
Barrel 03	31-Jul-11	3.9	0.0583	3.23	0.00001	3.5	2.73	0.000041	0.00477	0.005	0.00224	0.001	0.608	#N/A	#N/A
Barrel 04	31-Jul-11	4.7	0.0235	3.26	0.000005	2.7	2.64	0.000048	0.00367	0.005	0.00302	0.0005	0.612	#N/A	#N/A
Barrel 05	31-Jul-11	5.96	0.0461	3.92	0.000025	4.6	7.24	0.000067	0.00937	0.005	0.00486	0.0025	0.836	#N/A	#N/A
Barrel 06	1-Aug-11	5.78	0.0178	3.31	0.000025	3.4	12.6	0.000073	0.00952	0.005	0.00258	0.0025	0.782	#N/A	#N/A
Barrel 07	1-Aug-11	6.93	0.0332	4.35	0.000025	2.9	7.77	0.000074	0.0132	0.005	0.00214	0.0025	1.01	#N/A	#N/A
Barrel 08	1-Aug-11	3.21	0.0239	4.09	0.000005	1	0.673	0.000035	0.00535	0.005	0.00675	0.0005	0.928	#N/A	#N/A
Barrel 09	1-Aug-11	9.4	0.165	12.2	0.00005	2.7	6.85	0.00021	0.0015	0.005	0.00005	0.005	19.6	#N/A	#N/A
Barrel 10	1-Aug-11	2.12	0.0138	3.55	0.000005	2.6	1.15	0.000028	0.00568	0.005	0.00223	0.0005	1.14	#N/A	#N/A
Barrel 11	31-Jul-11	2.65	0.00824	2.91	0.000005	3.1	2.59	0.000034	0.00196	0.005	0.00175	0.0005	0.866	#N/A	#N/A
Barrel 12	31-Jul-11	2.01	0.0321	3.02	0.000005	1	0.258	0.000021	0.00685	0.005	0.00127	0.0005	0.305	#N/A	#N/A
Barrel 13	1-Aug-11	8.2	0.844	116	0.0419	10	0.873	0.00155	0.0409	0.65	0.0596	0.167	2.78	#N/A	#N/A
Barrel 14	1-Aug-11	1.23	0.00128	2.89	0.000005	1	0.124	0.000012	0.00379	0.005	0.000244	0.0005	0.0106	#N/A	#N/A
Barrel 15	1-Aug-11	1.52	0.0125	5.53	0.000005	1	0.236	0.00003	0.00395	0.005	0.000066	0.0005	0.0015	#N/A	#N/A
Barrel 16	1-Aug-11	1.34	0.00455	3.79	0.000005	1	0.196	0.000028	0.00806	0.005	0.000052	0.0005	0.0034	#N/A	#N/A
Barrel 17	31-Jul-11	4.3	0.0254	78.4	0.00428	13	1.27	0.00063	0.0633	0.056	0.181	0.01	9.26	#N/A	#N/A
Barrel 01	3-Sep-11	2.02	0.0063	2.24	0.000005	1	0.734	0.000022	0.00249	0.005	0.0221	0.0005	0.217	#N/A	#N/A
Barrel 02	3-Sep-11	1.52	0.00585	2.07	0.000005	1	1.74	0.000023	0.00257	0.005	0.00613	0.0005	0.225	#N/A	#N/A
Barrel 03	3-Sep-11	2.14	0.0169	2.18	0.000005	1	1.15	0.000023	0.00285	0.014	0.0042	0.0005	0.41	#N/A	#N/A
Barrel 04	3-Sep-11	2.99	0.00683	1.91	0.000005	1	1.2	0.000028	0.00161	0.012	0.00358	0.0005	0.301	#N/A	#N/A
Barrel 05	3-Sep-11	4.65	0.0144	2.37	0.00001	2.5	5.05	0.000053	0.00438	0.02	0.00483	0.001	0.411	#N/A	#N/A
Barrel 06	3-Sep-11	4.76	0.00686	2.05	0.00001	1	9.94	0.000052	0.00404	0.005	0.00385	0.001	0.424	#N/A	#N/A
Barrel 07	3-Sep-11	5.83	0.0118	2.4	0.00001	1	6.81	0.000058	0.00615	0.005	0.00248	0.001	0.487	#N/A	#N/A
Barrel 08	3-Sep-11	2.1	0.00664	2.37	0.000005	1	0.308	0.000018	0.00233	0.005	0.00868	0.0005	0.434	#N/A	#N/A
Barrel 09	3-Sep-11	6.99	0.113	8.99	0.00005	1	4.97	0.00016	0.0013	0.019	0.00038	0.005	5.36	#N/A	#N/A
Barrel 10	3-Sep-11	1.71	0.00698	2.2	0.000005	1	0.84	0.000017	0.00267	0.005	0.0019	0.0005	0.225	#N/A	#N/A
Barrel 11	3-Sep-11	2.02	0.00402	2.16	0.000005	1	1.65	0.000022	0.00136	0.005	0.00156	0.0005	0.432	#N/A	#N/A
Barrel 12	3-Sep-11	1.13	0.00715	1.7	0.000005	1	0.0892	0.000005	0.00251	0.005	0.000757	0.0005	0.151	#N/A	#N/A
Barrel 13	3-Sep-11	1.81	0.264	19	0.00281	3	0.145	0.00032	0.0021	0.085	0.00838	0.084	0.604	#N/A	#N/A
Barrel 14	3-Sep-11	0.841	0.00072	2.14	0.000005	1	0.0681	0.000005	0.00193	0.005	0.000105	0.0005	0.0015	#N/A	#N/A

When below detection limit half detection limit was used

Appendix 5.2-11. Field Barrel Leachate Concentrations

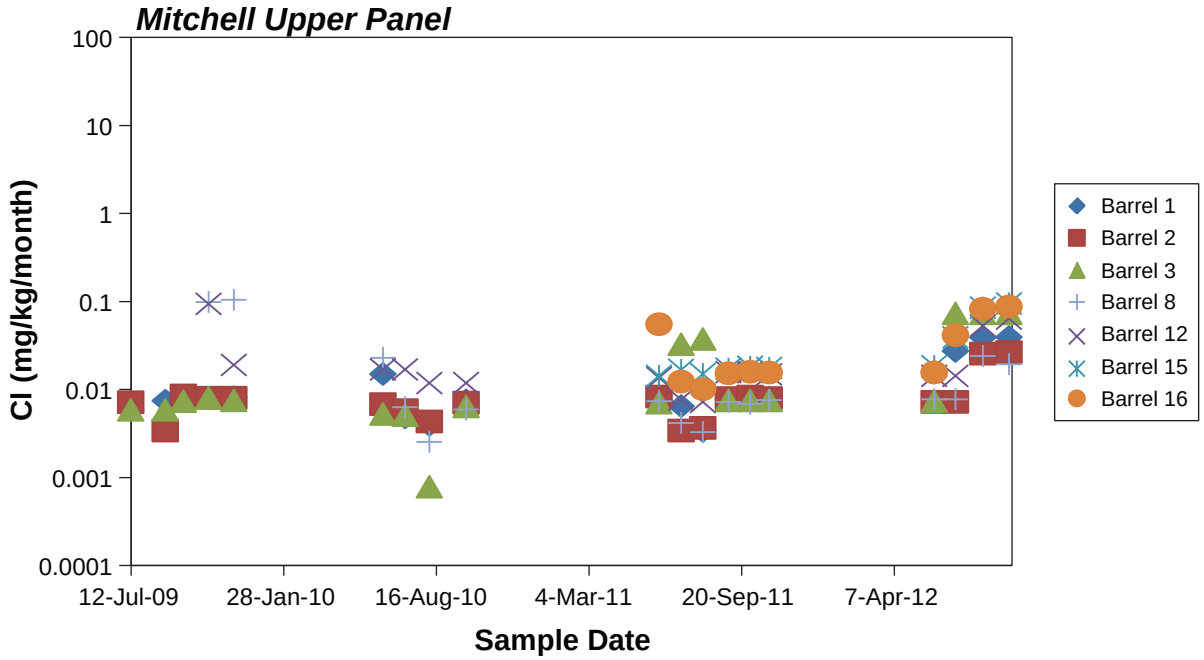
		Dissolved Metals												Field Tests	
Sample ID		Potassium (K)	Selenium (Se)	Silicon (Si)	Silver (Ag)	Sodium (Na)	Strontium (Sr)	Thallium (Tl)	Tin (Sn)	Titanium (Ti)	Uranium (U)	Vanadium (V)	Zinc (Zn)		Conductivity
Units	Date Sampled	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pH	uS/cm
Barrel 15	3-Sep-11	1.04	0.00615	3.52	0.000005	1	0.119	0.00002	0.00154	0.005	0.000071	0.0005	0.0015	#N/A	#N/A
Barrel 16	3-Sep-11	0.855	0.0028	2.13	0.000005	1	0.112	0.000016	0.00267	0.005	0.000035	0.0005	0.0015	#N/A	#N/A
Barrel 17	3-Sep-11	0.96	0.0076	29.1	0.000844	2	0.305	0.000235	0.00584	0.025	0.031	0.0051	1.89	#N/A	#N/A
Barrel 01	1-Oct-11	1.18	0.00133	1.07	0.000005	1	0.375	0.000011	0.00114	0.005	0.0195	0.0005	0.115	#N/A	#N/A
Barrel 02	1-Oct-11	0.995	0.0019	1.24	0.000005	1	1.2	0.000013	0.00149	0.005	0.0063	0.0005	0.148	#N/A	#N/A
Barrel 03	1-Oct-11	1.23	0.00435	1.29	0.000005	1	0.554	0.000011	0.00127	0.005	0.00482	0.0005	0.188	#N/A	#N/A
Barrel 04	1-Oct-11	1.81	0.00219	1.12	0.000005	1	0.662	0.000017	0.00069	0.005	0.00326	0.0005	0.174	#N/A	#N/A
Barrel 05	1-Oct-11	2.39	0.00276	1.37	0.00001	1	2.58	0.000024	0.00206	0.005	0.00509	0.001	0.297	#N/A	#N/A
Barrel 06	1-Oct-11	3.21	0.00247	1.48	0.00001	1	6.71	0.000036	0.00186	0.005	0.00494	0.001	0.273	#N/A	#N/A
Barrel 07	1-Oct-11	3.17	0.00314	1.35	0.00001	1	4.12	0.000034	0.00308	0.005	0.00333	0.001	0.285	#N/A	#N/A
Barrel 08	1-Oct-11	1.39	0.00337	1.41	0.000005	1	0.273	0.000014	0.00139	0.005	0.00834	0.0005	0.265	#N/A	#N/A
Barrel 09	1-Oct-11	2.43	0.0272	3.95	0.00001	1	1.39	0.000076	0.0001	0.005	0.000273	0.001	1.37	#N/A	#N/A
Barrel 10	1-Oct-11	1.01	0.00156	1.08	0.000005	1	0.522	0.000012	0.00119	0.005	0.00166	0.0005	0.188	#N/A	#N/A
Barrel 11	1-Oct-11	1.2	0.00097	1.3	0.000005	1	0.899	0.000013	0.00069	0.005	0.00138	0.0005	0.276	#N/A	#N/A
Barrel 12	1-Oct-11	0.721	0.00286	1.02	0.000005	1	0.0618	0.000005	0.00136	0.005	0.000535	0.0005	0.11	#N/A	#N/A
Barrel 13	1-Oct-11	1.6	0.165	14.3	0.00158	1	0.0755	0.000261	0.00086	0.029	0.00391	0.0353	0.348	#N/A	#N/A
Barrel 14	1-Oct-11	0.476	0.00034	1.24	0.000005	1	0.0386	0.000005	0.0011	0.005	0.000055	0.0005	0.0015	#N/A	#N/A
Barrel 15	1-Oct-11	0.619	0.00227	1.92	0.000005	1	0.0694	0.000011	0.00095	0.005	0.000058	0.0005	0.0015	#N/A	#N/A
Barrel 16	1-Oct-11	0.501	0.00134	1.33	0.000005	1	0.0757	0.000005	0.00176	0.005	0.000024	0.0005	0.0015	#N/A	#N/A
Barrel 17	1-Oct-11	0.91	0.00437	21.4	0.000378	1	0.199	0.000181	0.00349	0.011	0.0119	0.0025	0.794	#N/A	#N/A
Barrel 01	26-Oct-11	1.2	0.00154	1.19	0.000005	1	0.439	0.00001	0.00172	0.005	0.0286	0.0005	0.176	#N/A	#N/A
Barrel 02	26-Oct-11	0.959	0.0022	1.37	0.000005	1	1.41	0.000013	0.00187	0.005	0.01	0.0005	0.22	#N/A	#N/A
Barrel 03	26-Oct-11	1.2	0.00542	1.37	0.000005	1	0.665	0.000011	0.00183	0.005	0.00721	0.0005	0.27	#N/A	#N/A
Barrel 04	26-Oct-11	1.82	0.0027	1.21	0.000005	1	0.797	0.000014	0.0009	0.005	0.00551	0.0005	0.281	#N/A	#N/A
Barrel 05	26-Oct-11	2.42	0.00402	1.44	0.00001	1	3.49	0.000023	0.00325	0.005	0.0092	0.001	0.581	#N/A	#N/A
Barrel 06	26-Oct-11	2.5	0.00296	1.25	0.000025	1	6.79	0.000025	0.00244	0.005	0.00707	0.0025	0.521	#N/A	#N/A
Barrel 07	26-Oct-11	3.08	0.00376	1.41	0.000025	1	4.67	0.000025	0.00421	0.005	0.00522	0.0025	0.56	#N/A	#N/A
Barrel 08	26-Oct-11	1.37	0.00362	1.57	0.000005	1	0.307	0.000011	0.00193	0.005	0.0137	0.0005	0.383	#N/A	#N/A
Barrel 09	26-Oct-11	2.57	0.037	4.88	0.00001	1	2.02	0.000075	0.0004	0.005	0.000359	0.001	2.3	#N/A	#N/A
Barrel 10	26-Oct-11	1.02	0.00187	1.17	0.000005	1	0.648	0.00001	0.00157	0.005	0.00274	0.0005	0.295	#N/A	#N/A
Barrel 11	26-Oct-11	1.02	0.00096	1.23	0.000005	1	0.952	0.00001	0.00113	0.005	0.002	0.0005	0.366	#N/A	#N/A
Barrel 12	26-Oct-11	0.724	0.00368	1.13	0.000005	1	0.0785	0.000005	0.00196	0.005	0.00106	0.0005	0.168	#N/A	#N/A
Barrel 13	26-Oct-11	1.09	0.151	12.3	0.0011	1	0.055	0.000202	0.0008	0.036	0.00304	0.0317	0.278	#N/A	#N/A
Barrel 14	26-Oct-11	0.482	0.00042	1.2	0.000005	1	0.0486	0.000005	0.00127	0.005	0.000076	0.0005	0.0015	#N/A	#N/A
Barrel 15	26-Oct-11	0.652	0.00305	2.26	0.000005	1	0.085	0.000011	0.00111	0.005	0.000102	0.0005	0.0031	#N/A	#N/A
Barrel 16	26-Oct-11	0.582	0.00194	1.47	0.000005	1	0.112	0.000005	0.00205	0.005	0.000053	0.0005	0.0015	#N/A	#N/A
Barrel 17	26-Oct-11	0.83	0.00401	19.8	0.000235	1	0.189	0.000144	0.00342	0.013	0.00772	0.0025	0.637	#N/A	#N/A

When below detection limit half detection limit was used

Appendix 5.2-12

Field Barrel Normalized Leachate Concentrations for Additional Parameters

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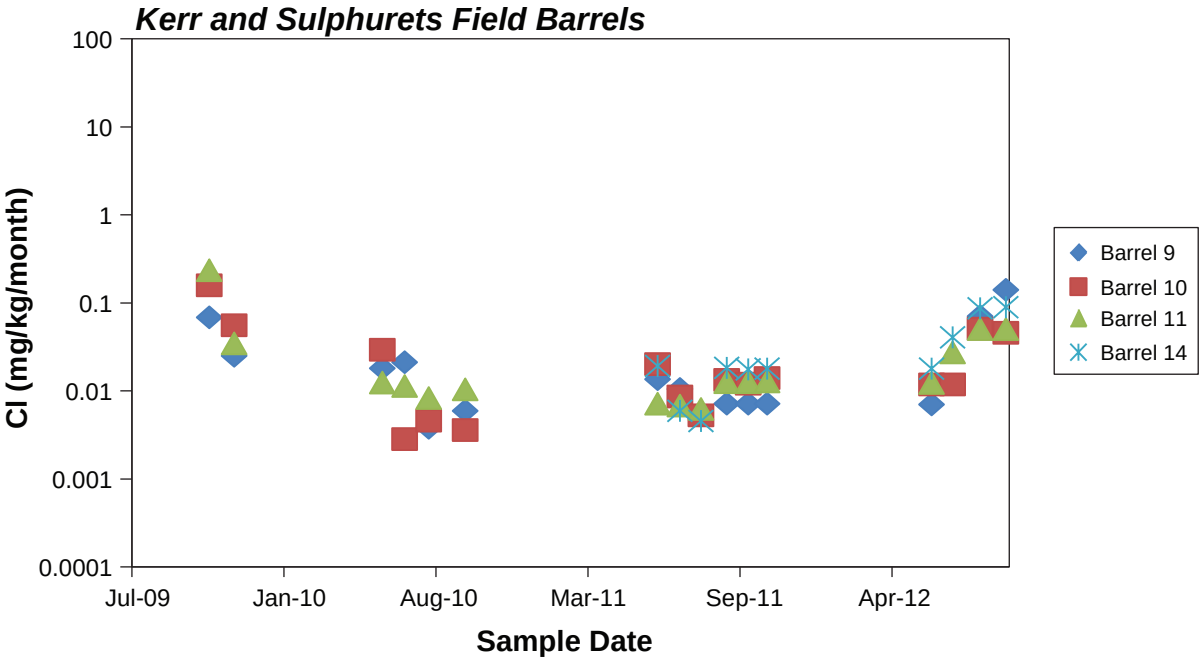
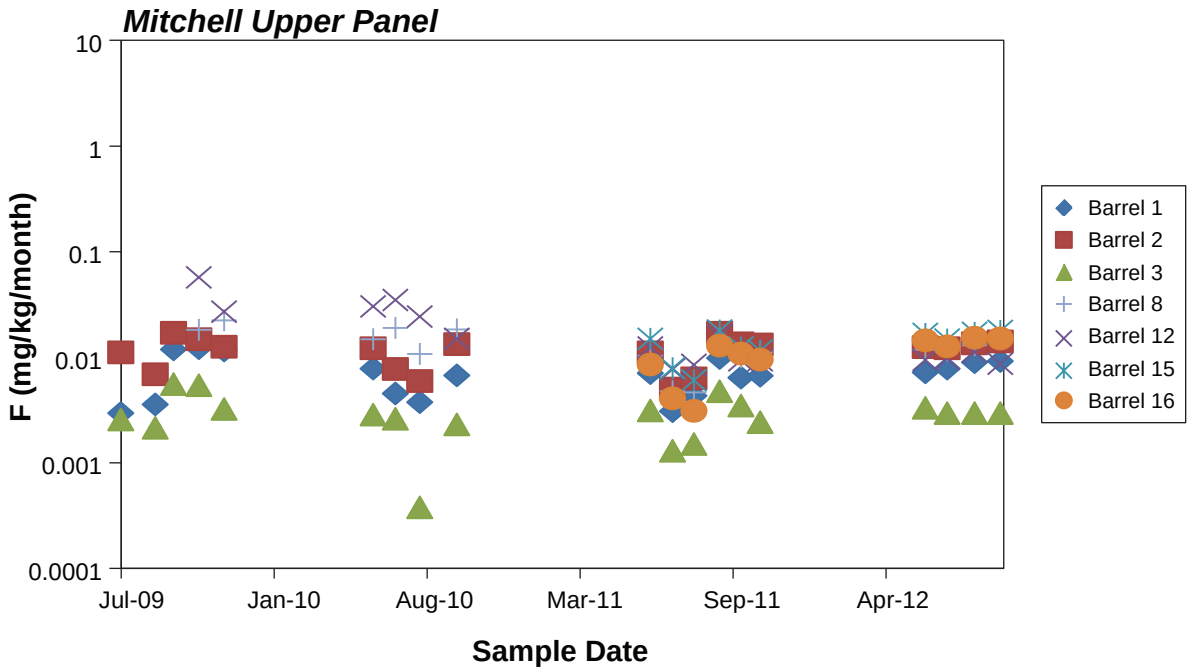


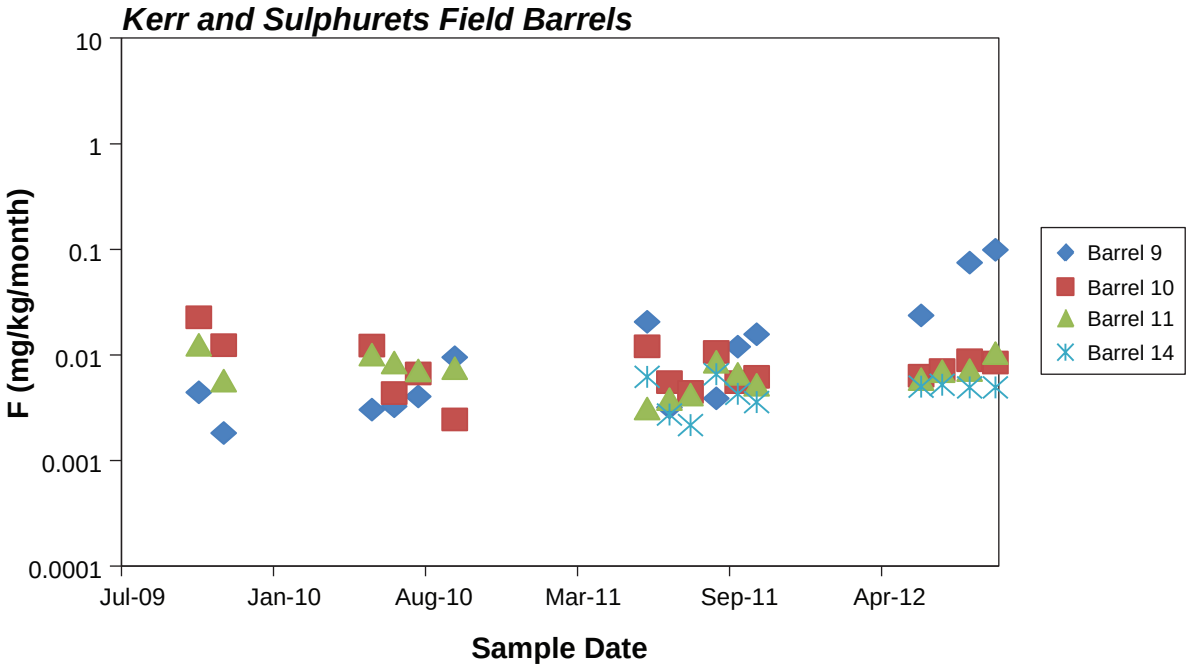
Figure 1

**Chloride,
Field Leach Barrels**

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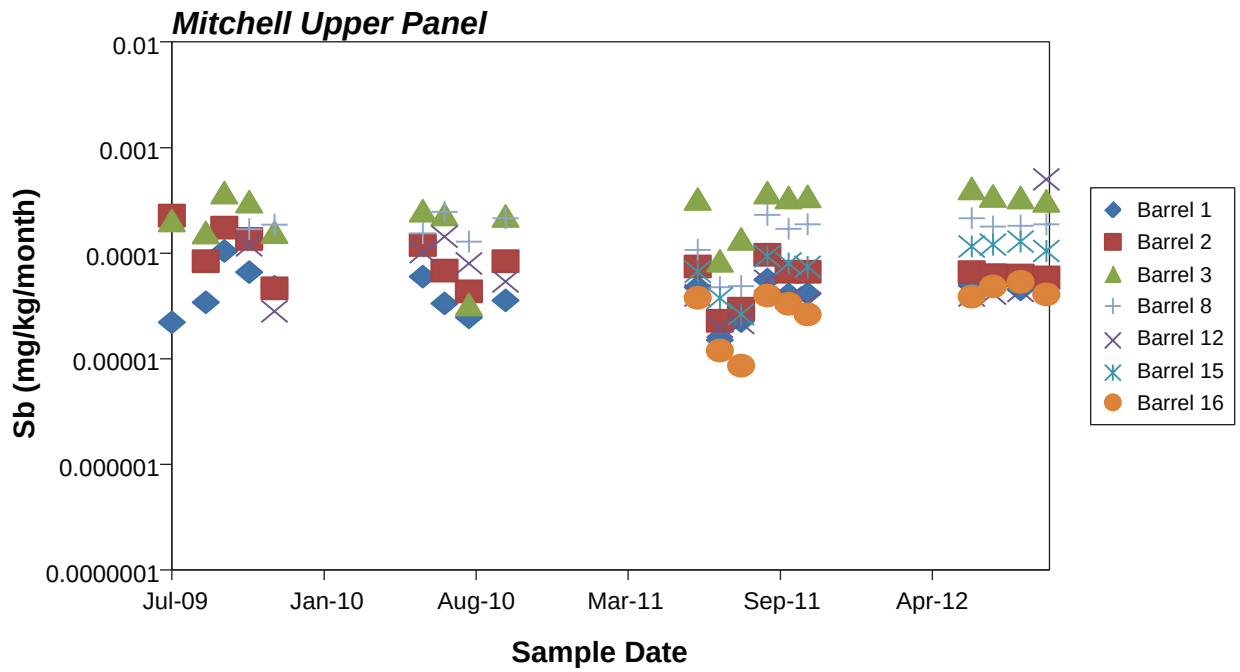


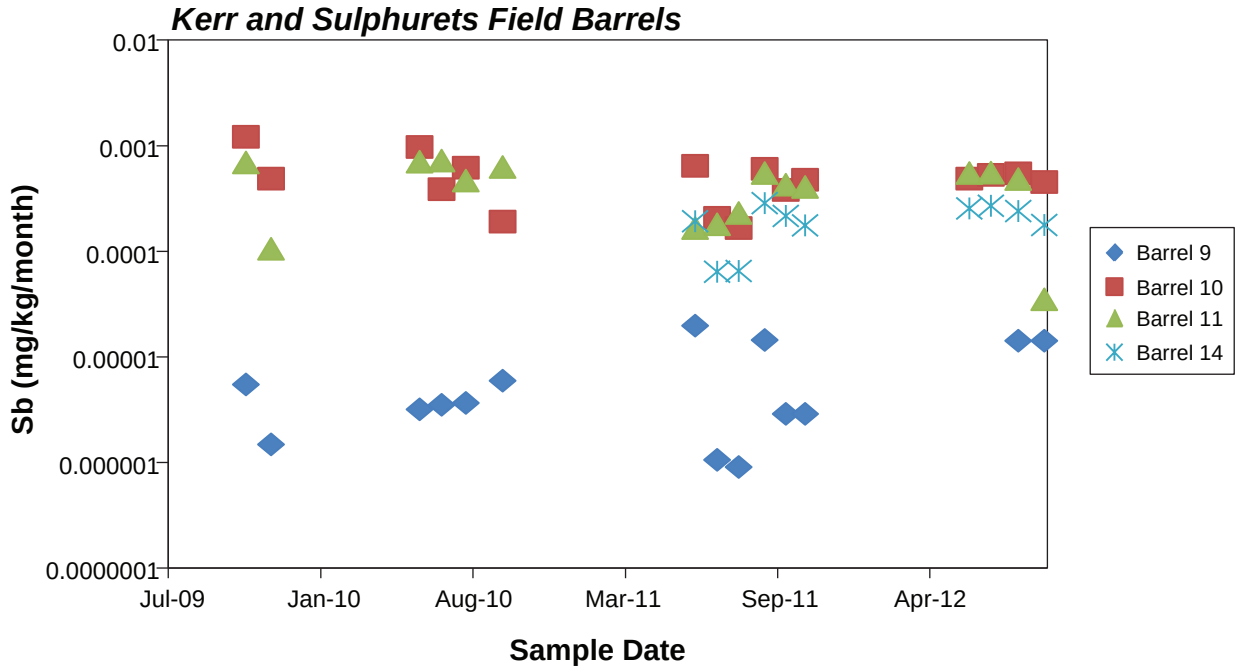
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**Fluoride,
Field Leach Barrels**

Figure 2

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**Antimony,
Field Leach Barrels**

Figure 3

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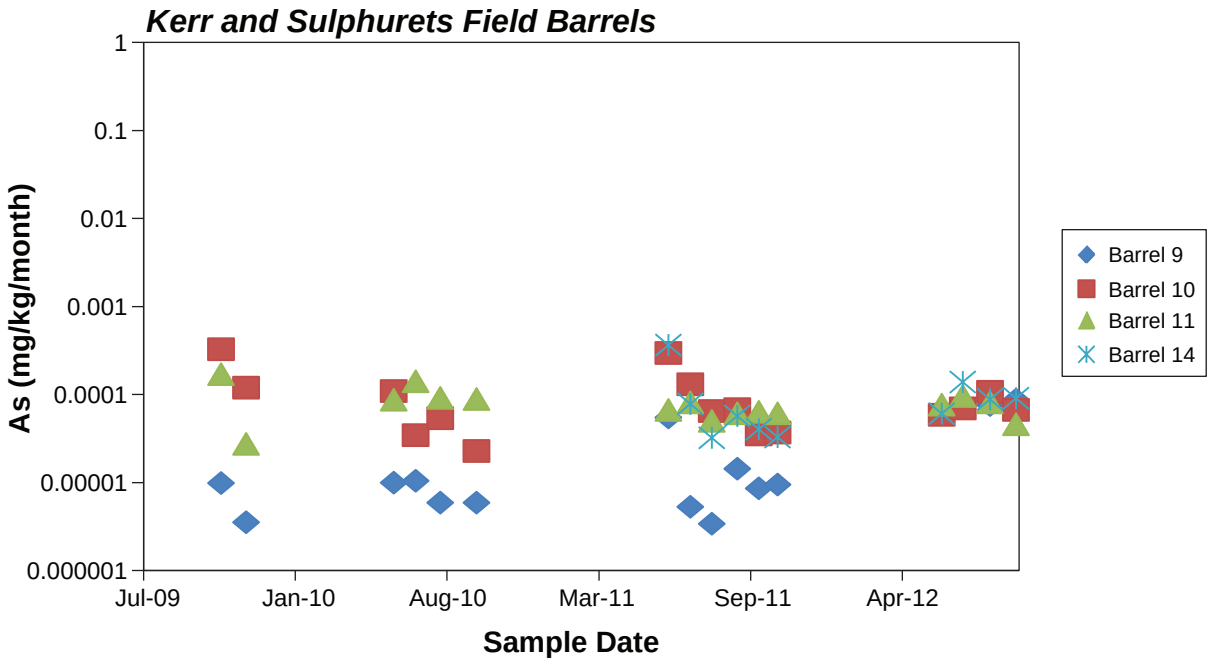
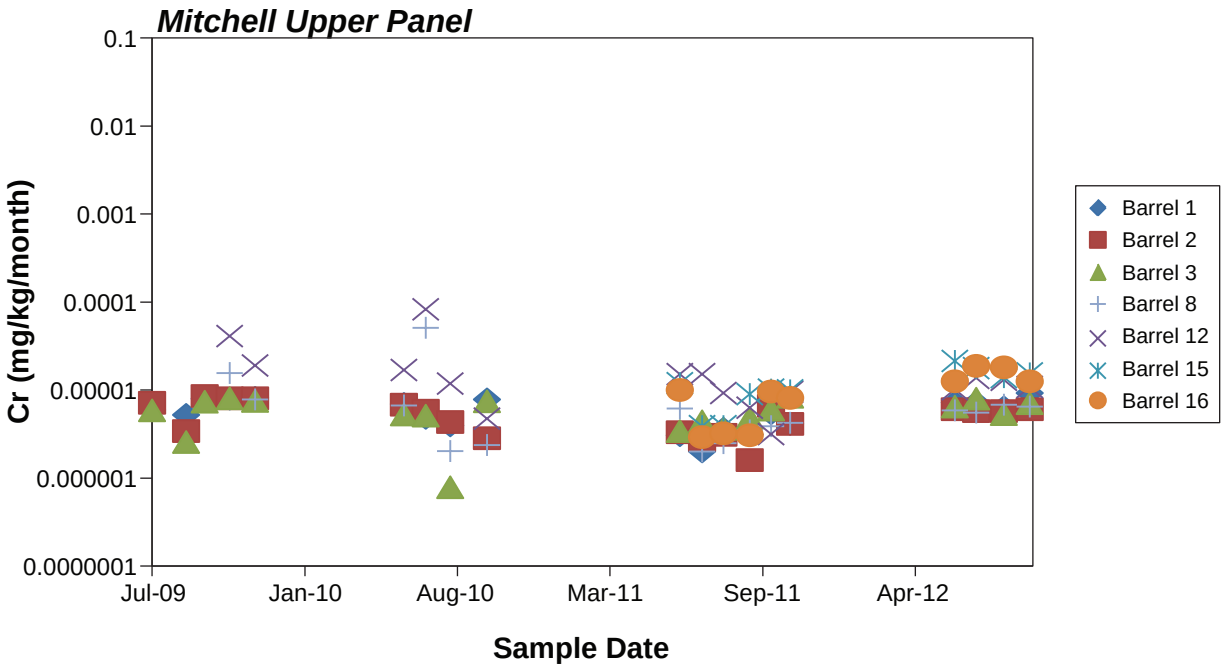


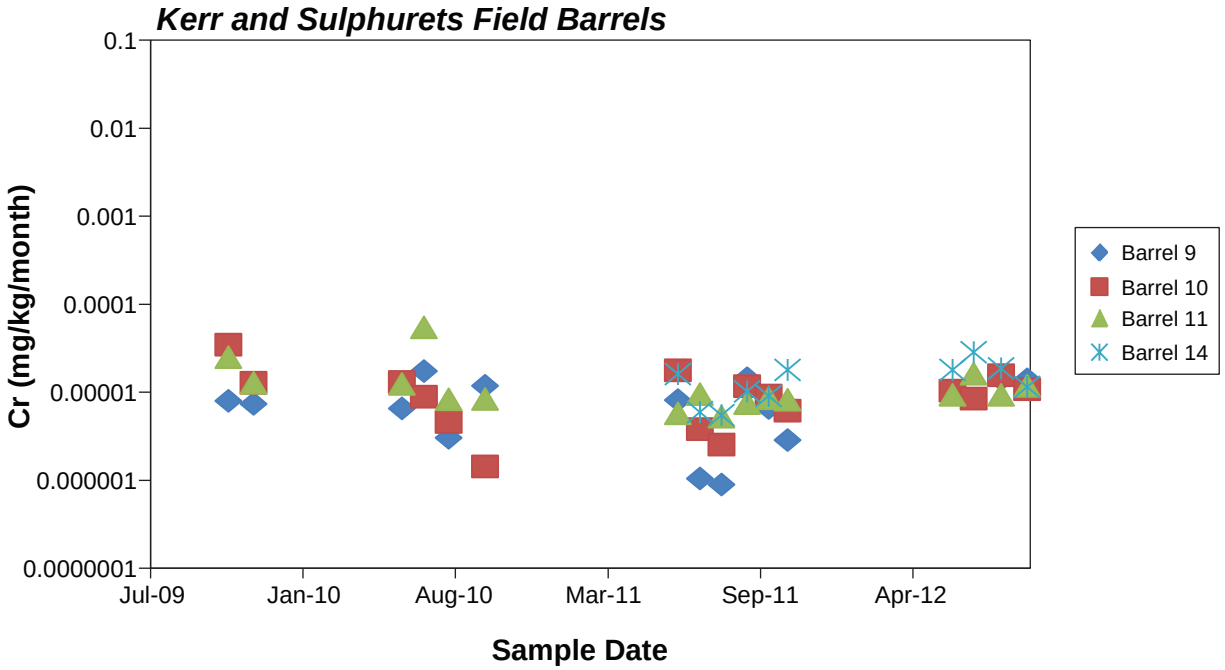
Figure 4

**Arsenic,
Field Leach Barrels**

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**Chromium,
Field Leach Barrels**

Figure 5

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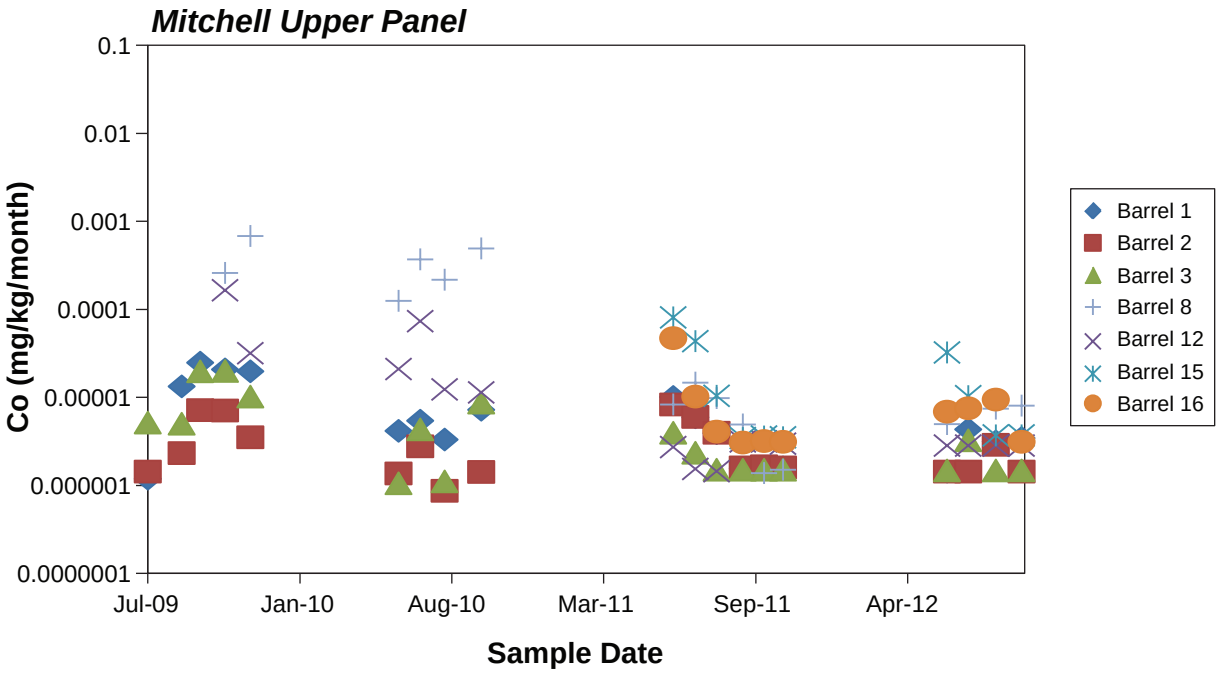
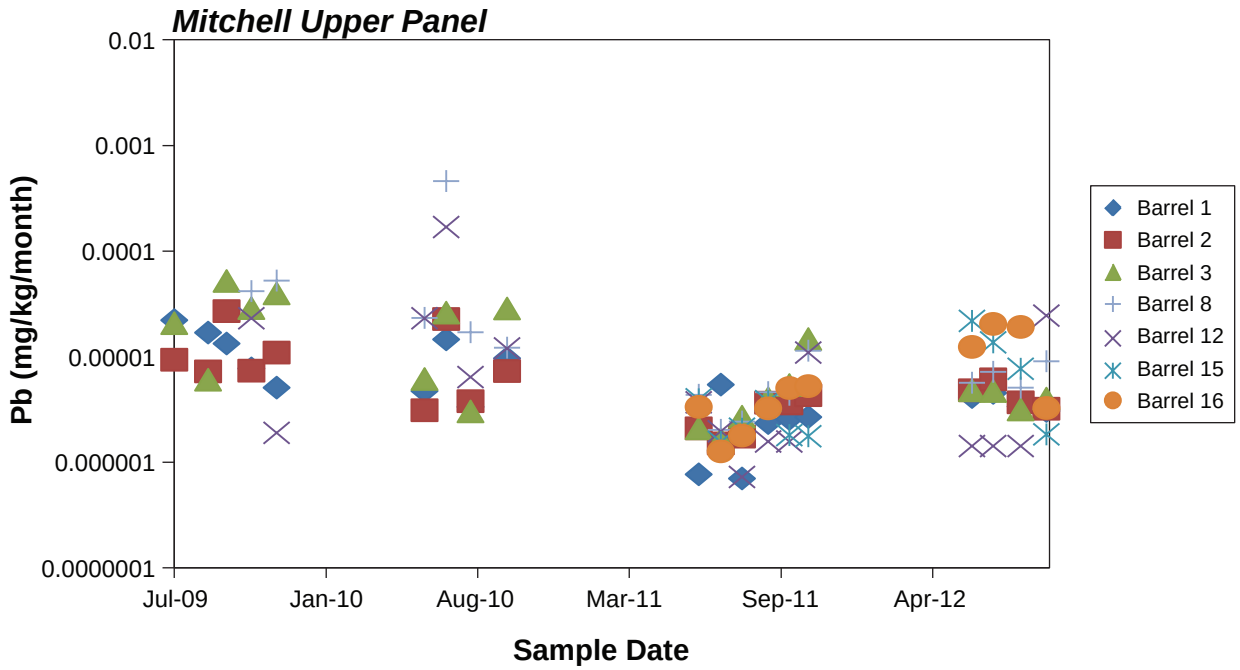


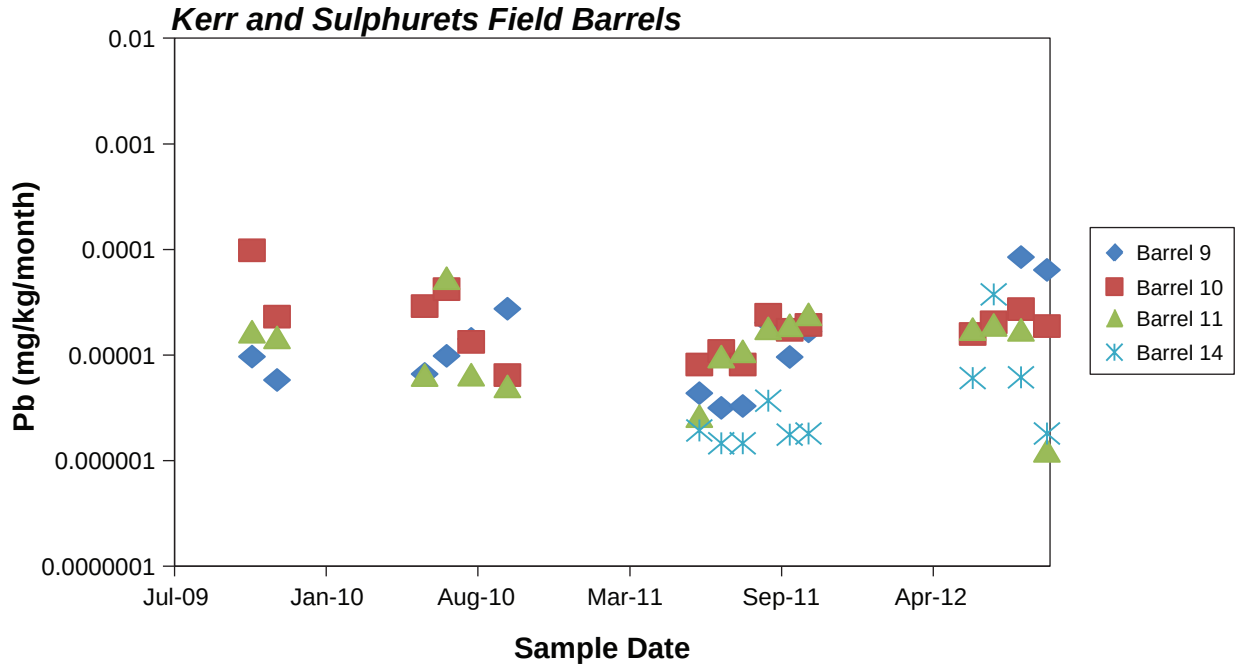
Figure 6

Cobalt,
Field Leach Barrels

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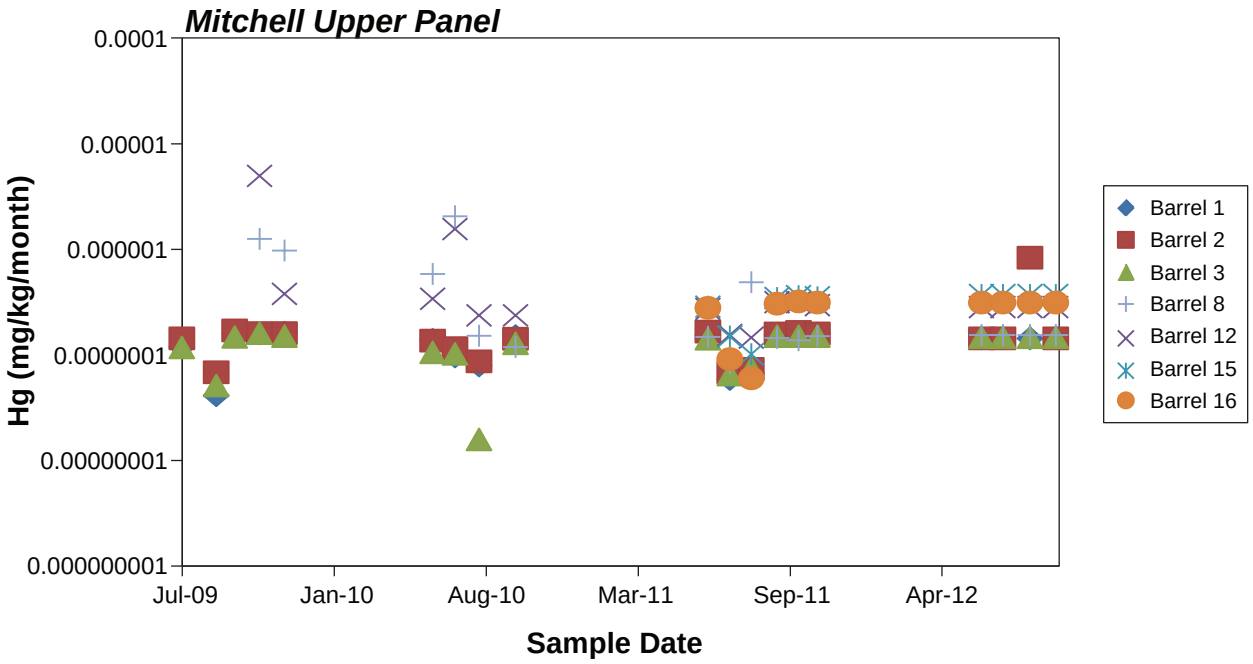


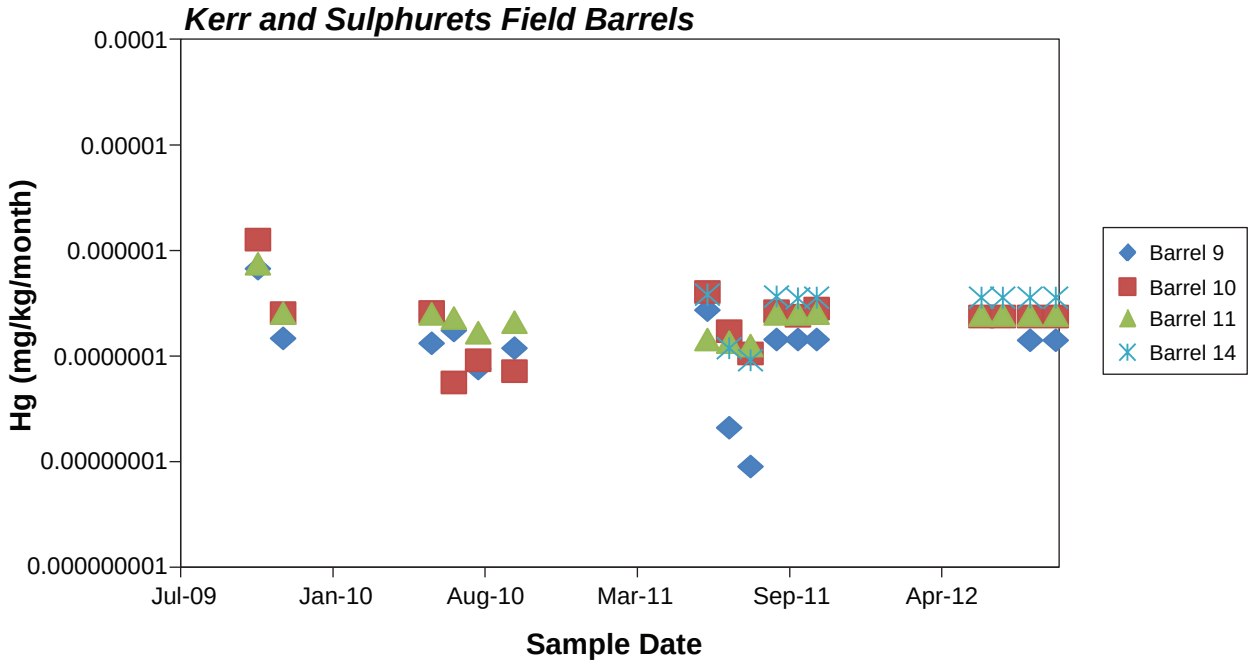
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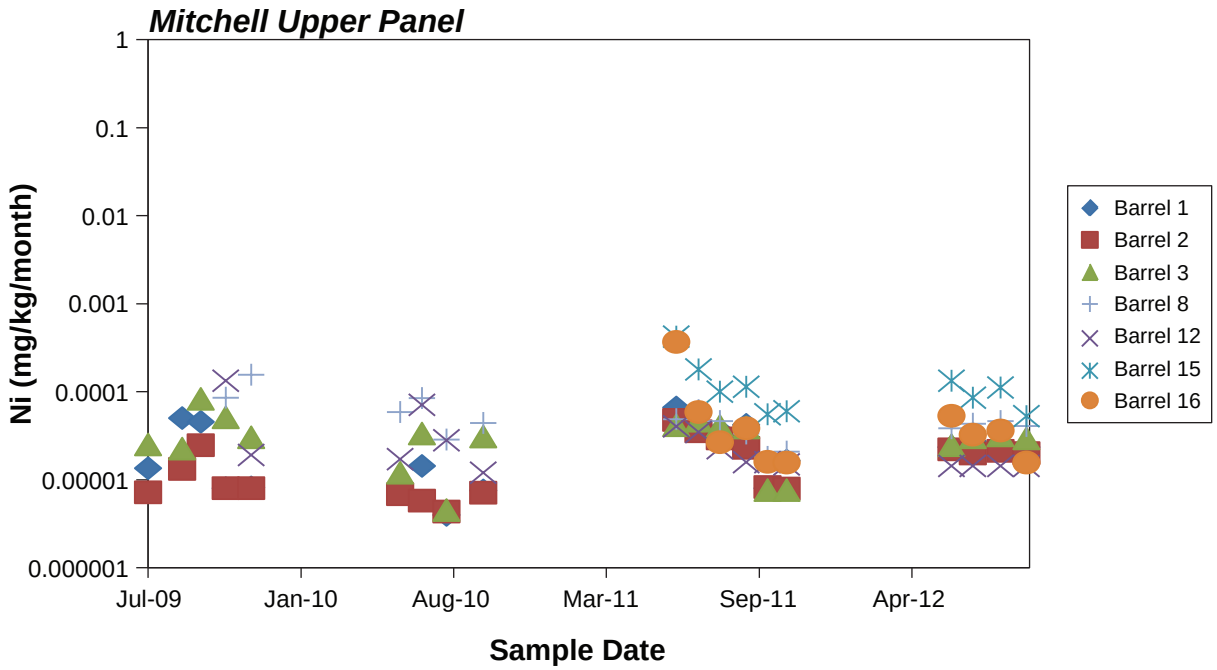
**Lead,
Field Leach Barrels**

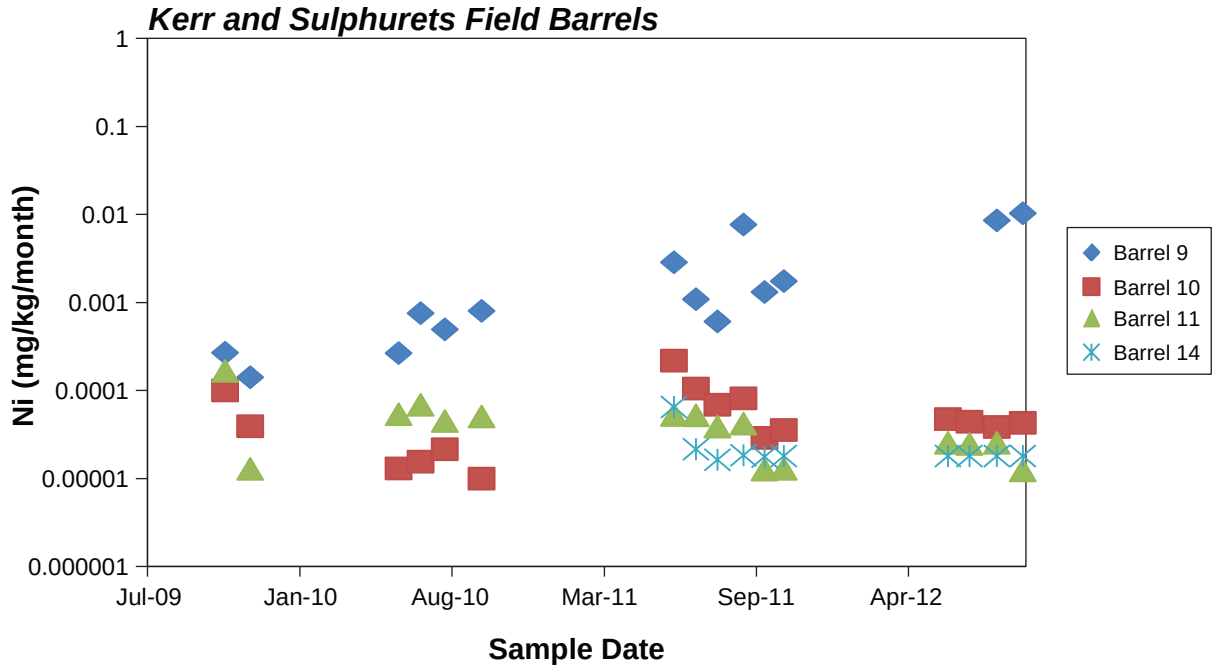
Figure 7

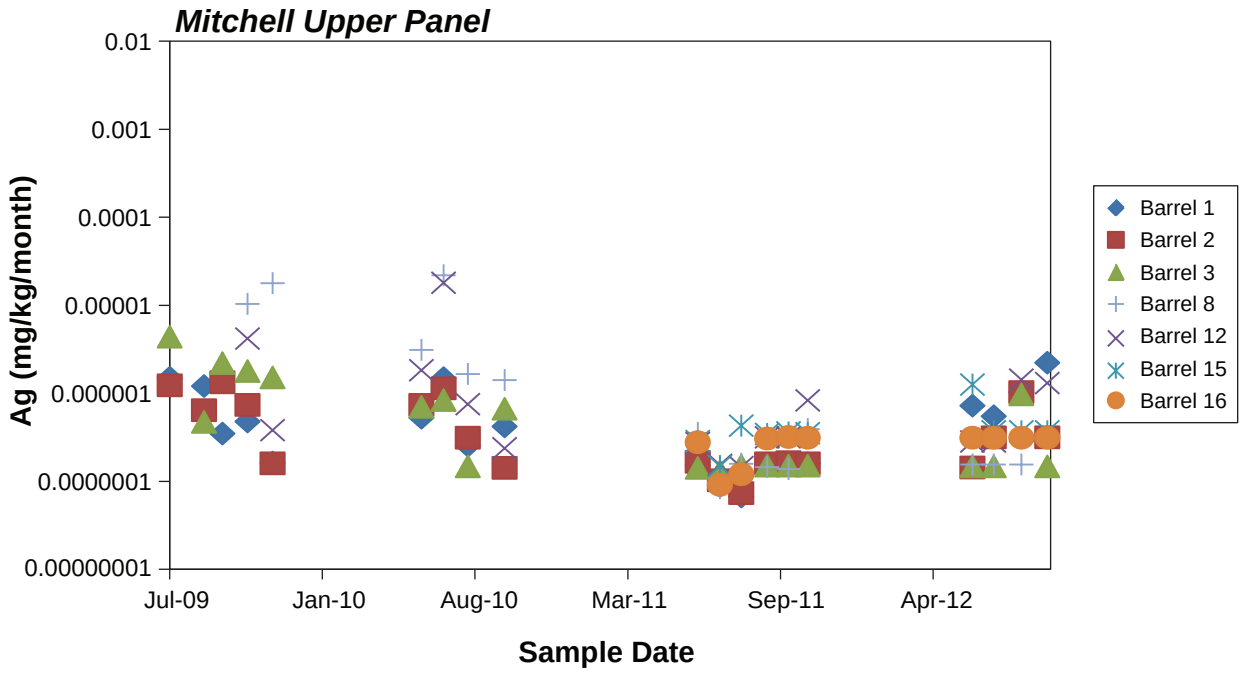
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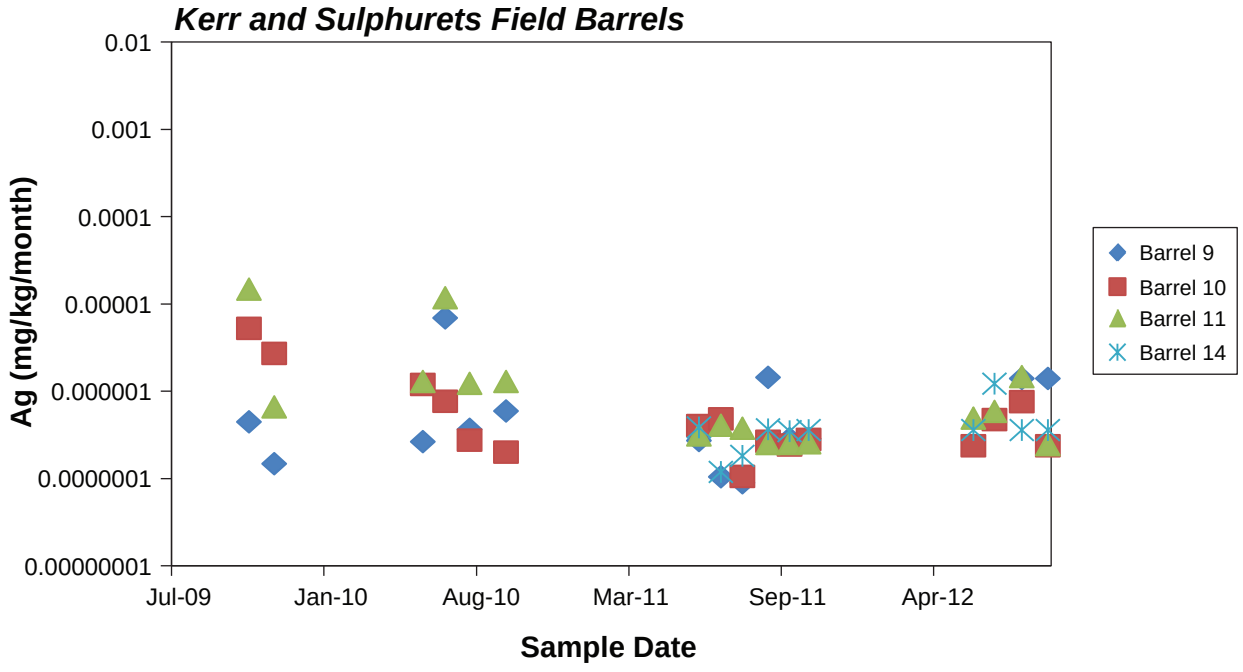

Mitchell Upper Panel
Hg (mg/kg/month)
0.0001
0.00001
0.000001
0.0000001
0.00000001
0.000000001
Jul-09
Jan-10
Aug-10
Mar-11
Sep-11
Apr-12
Sample Date
Barrel 1
Barrel 2
Barrel 3
Barrel 8
Barrel 12
Barrel 15
Barrel 16

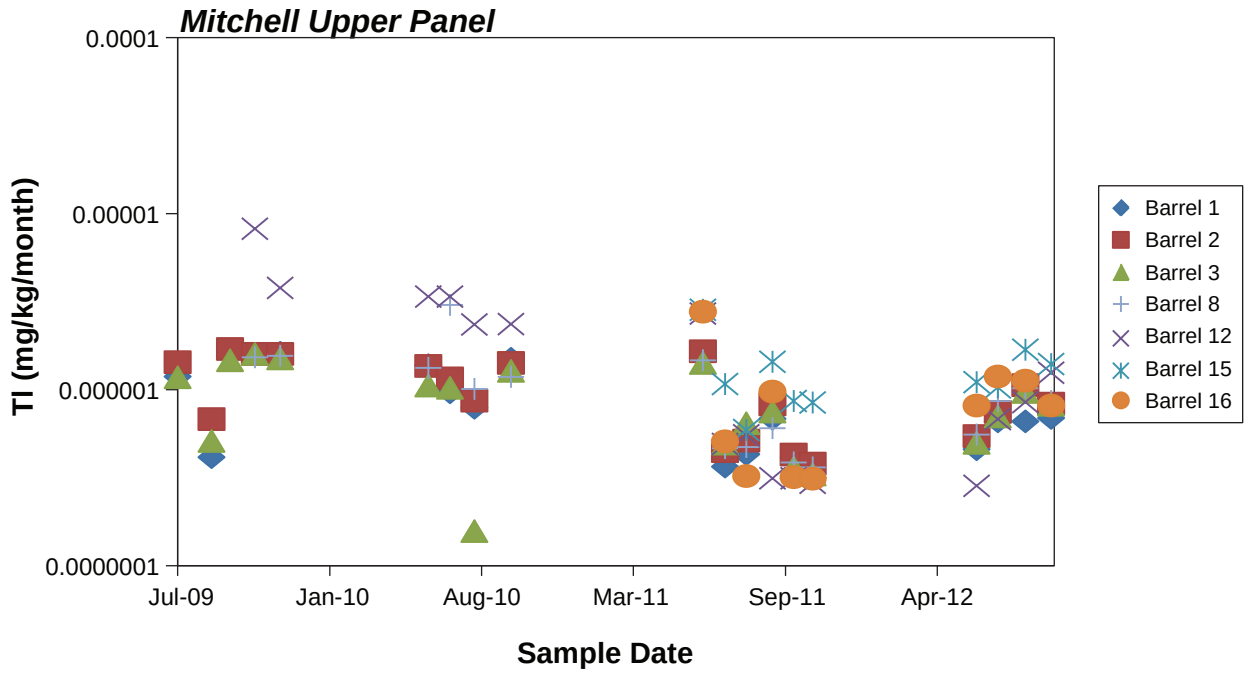

Kerr and Sulphurets Field Barrels
Hg (mg/kg/month)
0.0001
0.00001
0.000001
0.0000001
0.00000001
0.000000001
Jul-09
Jan-10
Aug-10
Mar-11
Sep-11
Apr-12
Sample Date
Barrel 9
Barrel 10
Barrel 11
Barrel 14

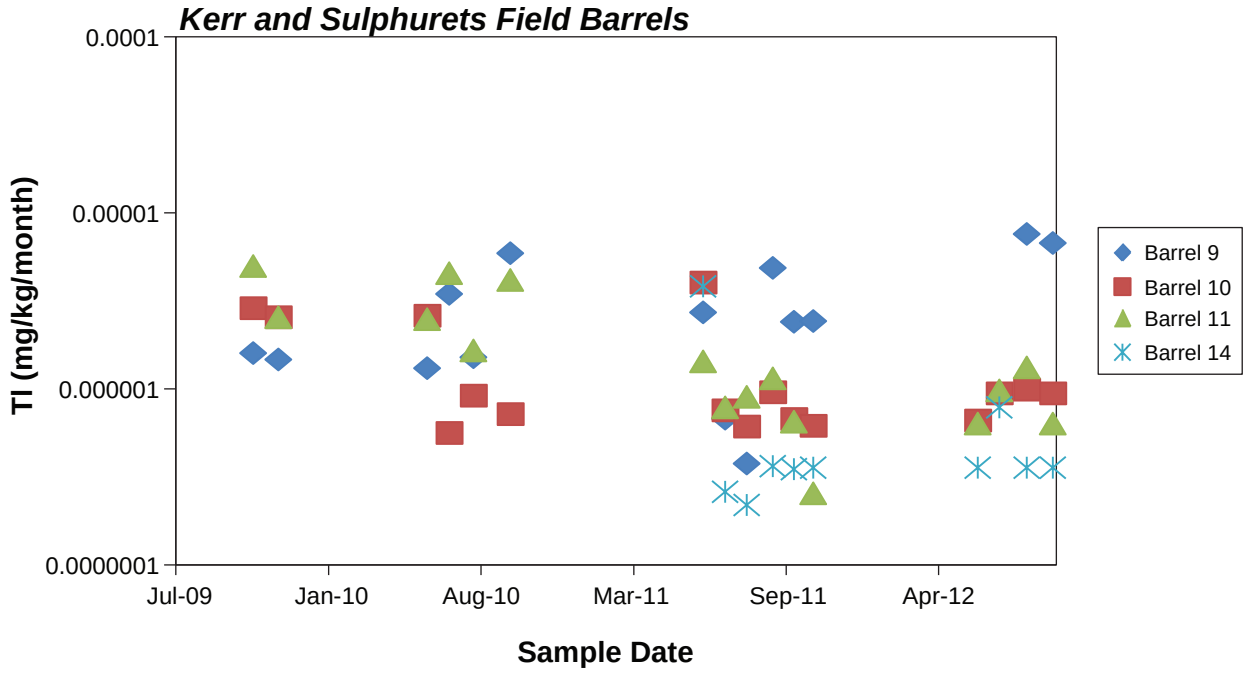

Mitchell Upper Panel
Ni (mg/kg/month)
1
0.1
0.01
0.001
0.0001
0.00001
0.000001
Jul-09
Jan-10
Aug-10
Mar-11
Sep-11
Apr-12
Sample Date
Barrel 1
Barrel 2
Barrel 3
Barrel 8
Barrel 12
Barrel 15
Barrel 16


Kerr and Sulphurets Field Barrels
Ni (mg/kg/month)
1
0.1
0.01
0.001
0.0001
0.00001
0.000001
Jul-09
Jan-10
Aug-10
Mar-11
Sep-11
Apr-12
Sample Date
Barrel 9
Barrel 10
Barrel 11
Barrel 14


Mitchell Upper Panel
0.01
0.001
0.0001
0.00001
0.000001
0.0000001
0.00000001
Ag (mg/kg/month)
Jul-09
Jan-10
Aug-10
Mar-11
Sep-11
Apr-12
Sample Date
Barrel 1
Barrel 2
Barrel 3
Barrel 8
Barrel 12
Barrel 15
Barrel 16


Kerr and Sulphurets Field Barrels
0.01
0.001
0.0001
0.00001
0.000001
0.0000001
0.00000001
Ag (mg/kg/month)
Jul-09
Jan-10
Aug-10
Mar-11
Sep-11
Apr-12
Sample Date
Barrel 9
Barrel 10
Barrel 11
Barrel 14



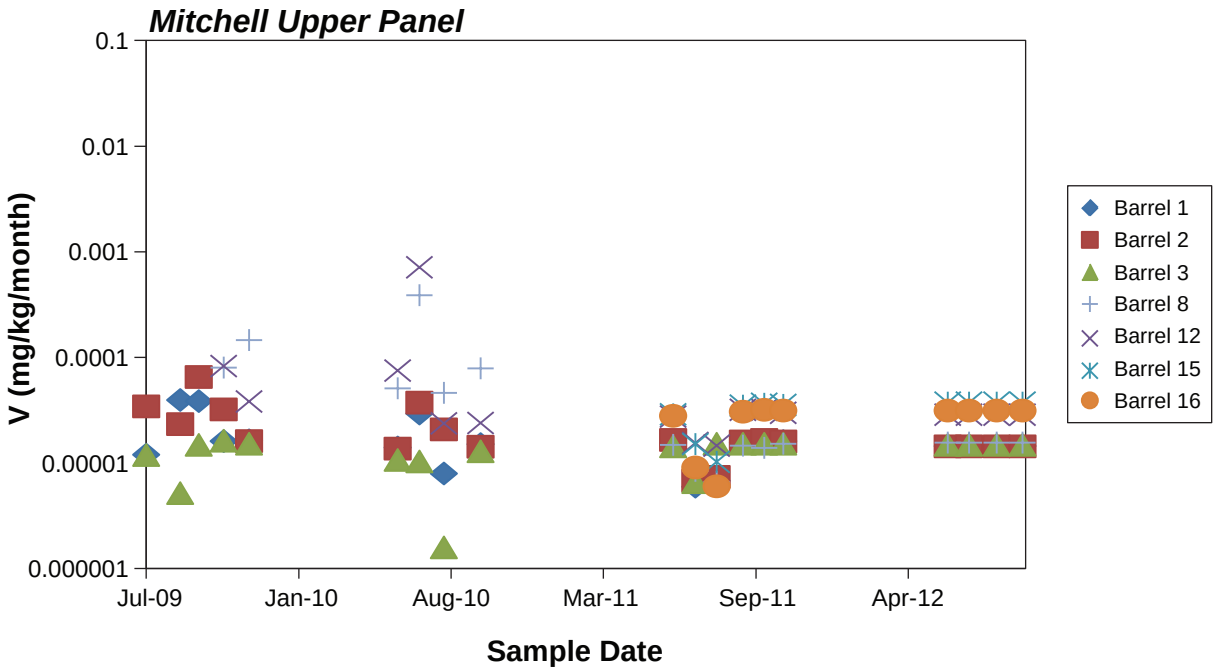


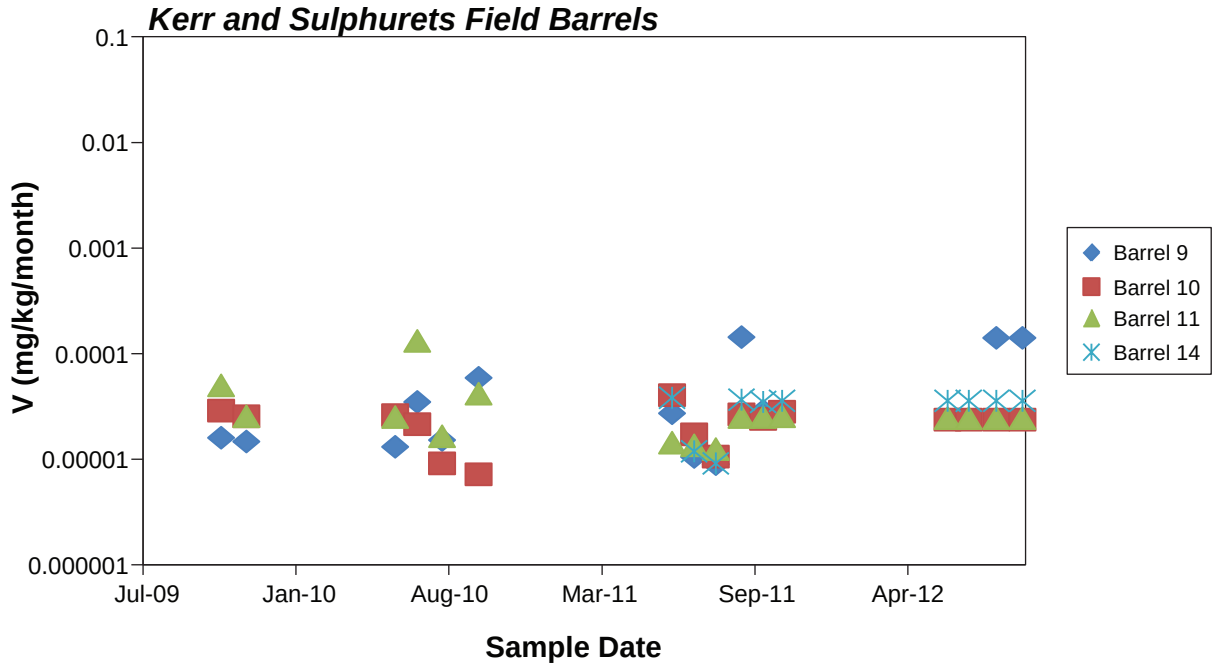
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**Thallium,
Field Leach Barrels**

Figure 11

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**Vanadium,
Field Leach Barrels**

Figure 12

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Appendix 5.3-1
Pre-NAG Test Static Test Results

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Appendix 5.3-1. Pre-NAG Test Static Test Results

Sample ID	Model Code	Deposit	Paste pH	Total Carbon (Wt.%)	CO_2 (Wt.%)	Total Sulphur (Wt.%)	Sulphate Sulphur (Wt.%)	Sulphide Sulphur*[2] (Wt.%)	Insoluble Sulphur*[3] (Wt.%)	Maximum Potential Acidity*[4] (Kg $CaCO_3$/Tonne)	Neutralization Potential (Kg $CaCO_3$/Tonne)	Net Neutralization Potential*[5] (Kg $CaCO_3$/Tonne)	Fizz Rating	
G32981	LP Hazelton	Mitchell	7.3	0.1	0.2	3.5	0.1	3.4	0.0	106.9	10.0	-96.9	1.0	PAG
G35770	LP Hazelton	Mitchell	8.3	0.3	0.8	2.4	0.0	2.0	0.4	62.8	47.1	-15.7	3.0	PAG
H42099	LP Hazelton	Mitchell	8.2	0.2	0.7	2.7	1.5	1.2	0.0	36.6	45.2	8.7	3.0	PAG
H43518	LP Hazelton	Mitchell	7.6	0.2	0.7	6.2	2.1	4.0	0.2	125.0	19.5	-105.5	2.0	PAG
X05177	LP Hazelton	Mitchell	8.2	0.2	0.6	3.0	0.0	3.0	0.0	93.1	26.4	-66.7	3.0	PAG
X06183	LP Hazelton	Mitchell	8.4	0.3	1.2	2.0	0.0	1.6	0.4	50.0	48.8	-1.3	3.0	PAG
X12874	LP Hazelton	Mitchell	7.8	0.2	0.7	3.9	0.0	2.4	1.5	74.4	20.2	-54.2	2.0	PAG
X19627	LP Hazelton	Mitchell	8.1	0.2	0.6	4.5	1.8	2.0	0.6	62.8	35.2	-27.6	3.0	PAG
H45086	LP Hazelton	Sulphurets	9.0	9.0	9.0	2.7	0.0	2.6	0.1	83.5	40.0	-43.5	2.0	PAG
X13074	Leach breccia/bornite breccia	Mitchell	3.6	0.0	0.0	9.5	0.3	8.2	1.0	254.7	-2.9	-257.6	1.0	PAG
X13084	Leach breccia/bornite breccia	Mitchell	7.0	0.1	0.3	8.1	4.1	2.8	1.2	85.9	10.1	-75.9	2.0	PAG
G21048	LP Hazelton	Mitchell	3.9	0.0	0.3	6.4	0.1	6.3	0.0	196.3	6.4	-189.8	1.0	PAG
G37342	LP Hazelton	Mitchell	4.2	0.0	0.0	3.7	0.1	2.8	0.9	86.3	1.5	-84.8	1.0	PAG
H41756	LP Hazelton	Mitchell	8.2	0.4	1.4	6.1	1.8	3.0	1.3	92.2	51.5	-40.7	4.0	PAG
H42223	LP Hazelton	Mitchell	8.2	0.5	2.0	4.8	1.4	3.4	3.4	107.2	51.0	-56.2	2.0	PAG
X05329	LP Hazelton	Mitchell	7.2	0.0	0.0	2.1	0.0	2.1	0.0	66.3	11.8	-54.4	1.0	PAG
X06596	Leach breccia/bornite breccia	Mitchell	3.8	0.0	0.0	5.3	0.1	4.2	1.0	131.3	1.6	-129.6	1.0	PAG
X06968	Leach breccia/bornite breccia	Mitchell	3.5	0.0	0.0	6.6	0.2	5.5	1.0	171.6	-4.3	-175.8	1.0	PAG
X11578	LP Hazelton	Mitchell	8.4	0.1	0.4	2.8	0.0	2.4	2.8	87.5	12.0	-75.5	1.0	PAG
H42752	Kerr	Kerr	8.3	0.2	0.6	3.5	0.0	2.4	1.1	73.8	33.8	-39.9	3.0	PAG
H42772	Kerr	Kerr	7.3	0.1	0.4	5.7	0.0	4.2	1.5	129.7	13.8	-115.9	2.0	PAG
H42801	Kerr	Kerr	3.9	0.0	0.1	8.3	0.1	4.6	3.6	144.7	1.2	-143.4	1.0	PAG
H42895/96	Kerr	Kerr	7.2	0.1	0.5	6.4	3.3	1.8	1.3	55.3	17.9	-37.4	1.0	PAG
H46054/55	Kerr	Kerr	4.5	0.0	0.1	6.5	0.0	3.9	2.5	122.8	5.8	-117.0	1.0	PAG
H46155/56	Kerr	Kerr	4.6	0.0	0.1	2.5	0.1	1.2	1.2	37.8	0.5	-37.3	1.0	PAG
H42509	Au, Leach, Raewn zones	Sulphurets	8.5	0.1	0.3	2.6	0.0	2.6	0.0	80.9	14.4	-66.5	2.0	PAG
H45368	Au, Leach, Raewn zones	Sulphurets	7.5	0.0	0.1	5.3	0.0	5.2	0.2	160.9	7.3	-153.6	1.0	PAG
X16995	UP Hazelton	Mitchell	8.6	0.5	1.9	3.0	0.0	2.3	0.7	72.2	74.1	1.9	4.0	PAG
X17080	UP Hazelton	Mitchell	8.7	0.3	1.2	2.8	0.0	2.0	0.7	63.1	67.8	4.7	4.0	PAG
X17119	UP Hazelton	Mitchell	7.6	<0.01	0.2	1.8	0.1	1.4	1.7	51.6	11.0	-40.6	1.0	PAG
X17360	UP Hazelton	Mitchell	9.9	0.0	0.3	1.0	0.0	0.8	1.0	30.6	9.0	-21.6	1.0	PAG
G36074	LP Hazelton	Mitchell	5.5	0.0	0.1	3.8	0.0	3.7	0.0	116.3	6.2	-110.1	1.0	PAG
H41833	LP Hazelton	Mitchell	9.2	0.8	2.9	4.4	0.0	4.3	4.4	136.6	73.0	-63.6	2.0	PAG
H44421	LP Hazelton	Mitchell	4.3	0.01	0.08	3.55	0.02	3.25	0.28	101.6	5.0	-96.6	1.0	PAG
X10676	LP Hazelton	Mitchell	3.8	0.0	0.0	9.0	0.1	8.7	0.2	271.6	-0.4	-271.9	1.0	PAG
X10945	Leach breccia/bornite breccia	Mitchell	6.6	<0.01	0.2	4.0	0.0	3.7	4.0	125.3	2.0	-123.3	1.0	PAG
X11008	LP Hazelton	Mitchell	7.6	0.3	1.1	6.8	0.7	4.3	6.1	190.6	26.0	-164.6	2.0	PAG
X11486	LP Hazelton	Mitchell	7.1	0.1	0.3	3.0	0.1	2.6	3.0	92.2	6.0	-86.2	1.0	PAG
X11530	LP Hazelton	Mitchell	5.8	0.0	0.2	4.9	0.0	4.4	4.9	154.1	5.0	-149.1	1.0	PAG
X13711	LP Hazelton	Mitchell	3.2	0.0	0.0	5.3	0.2	3.7	1.5	114.1	0.0	-114.1	1.0	PAG
X17581	Leach breccia/bornite breccia	Mitchell	7.3	0.2	0.7	8.7	4.3	2.8	1.6	85.9	20.6	-65.4	1.0	PAG
H44936	Au, Leach, Raewn zones	Sulphurets	8.6	8.6	8.6	2.7	0.0	2.6	0.1	83.4	42.0	-41.4	2.0	PAG
H44939	Au, Leach, Raewn zones	Sulphurets	8.3	8.3	8.3	3.1	0.0	2.8	0.3	95.7	18.0	-77.7	2.0	PAG
H45279	Au, Leach, Raewn zones	Sulphurets	7.5	0.1	0.2	4.2	0.0	4.2	0.0	129.7	10.4	-119.3	1.0	PAG
H45505	Au, Leach, Raewn zones	Sulphurets	6.7	0.0	0.2	4.8	0.0	4.7	0.0	147.8	8.2	-139.6	1.0	PAG
H40759	UP Hazelton	Mitchell	8.0	0.2	0.8	2.5	0.0	1.9	0.6	59.1	16.3	-42.7	3.0	PAG
X14918	UP Hazelton	Mitchell	9.8	0.4	1.3	2.5	0.0	1.9	2.5	77.2	47.0	-30.2	2.0	PAG
X17404	UP Hazelton	Mitchell	9.3	0.7	2.7	5.9	0.0	5.1	5.9	182.8	74.0	-108.8	2.0	PAG
H44363/64	LP Hazelton	Mitchell	5.0	0.0	0.0	4.9	0.0	3.1	1.8	95.9	4.8	-91.2	1.0	PAG
		MIN	3.2	0.0	0.0	1.0	0.0	0.8	0.0	30.6	-4.3	-271.9		
		MAX	9.9	9.0	9.0	9.5	4.3	8.7	6.1	271.6	74.1	8.7		
		MEDIAN	7.5	0.1	0.3	4.0	0.0	3.0	1.0	93.1	12.0	-75.9		

Notes:

Total sulphur, total carbon and carbonate carbon (CO_2; direct HCl method) by Leco furnace done at Acme Labs.

CO_2 Analysis: A 0.2g pf pulp sample is digested with 6 ml of 1.8N HCl in a hot water bath of 70˚C for 30 minutes. The CO_2 that evolves is trapped in a gas chamber that is controled with a stopcock, once the stopcock is is opened the CO_2 gas is swept into the Leco analyser with a oxygen carrier gas. Leco then determines the CO_2 as total-carbon which is calculated to total CO_2.

Calculations:

**[1]: $CaCO_3$ Equivalent is based on Carbonate carbon (CO_2).*

**[2]: Sulphide sulphur by sodium carbonate leach method (where residue after extraction was submitted for total sulphur by Leco)*

**[3]: Insoluble sulphur is based on difference between total sulphur, sulphate sulphur and sulphide sulphur*

**[4]: Maximum Potential Acidity (MPA) is based on sulphide sulphur.*

**[5]: Net Neutralization Potential (NNP) is based on difference between Neutralization Potential (NP) and MPA.*

References:

Reference for Std. Sobek NP method (Maxxam SOP No. 7110): Sobek NP Method (EPA 600 Method - described in Sobek et al. 1978)

Appendix 5.3-2
Pre-NAG Test Metal Content Results

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Appendix 5.3-2. Pre-NAG Test Metal Content Results

Sample ID	Deposit	Model Code	Ag ppb	Al %	As ppm	Au ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Dy ppm	Er ppm	Eu ppm	Fe %	Ga ppm	Gd ppm	Hf ppm	Ho ppm	K %	La ppm	Li ppm	Lu ppm	Mg %	Mn ppm
G32981	Mitchell	LP Hazelton	3752	6.69	8.5	0.3	59	1	0.9	0.38	0.19	15.68	8.1	122	2.8	1634.99	1.2	0.5	0.5	5.14	17.09	1.8	0.45	0.2	4.52	5.6	11.5	0.05	1.11	446
G35770	Mitchell	LP Hazelton	2014	5.91	14.8	1.1	63	1	0.69	0.99	0.38	14.69	10.8	197	2.6	2467.49	1.3	0.6	0.3	5.44	13.88	1.4	0.23	0.2	3.31	6.6	13.6	0.05	1.25	821
H42099	Mitchell	LP Hazelton	688	7.4	16.3	0.1	60	0.5	0.39	3.33	0.46	19.26	12.5	50	2.9	543.52	2.6	1.6	0.7	4.23	16.15	2.2	0.44	0.5	2.49	8.1	17.3	0.2	1.25	479
H43518	Mitchell	LP Hazelton	2334	6.58	35.4	0.2	22	1	0.86	3.47	0.63	13.26	7.8	47	4.8	1402.1	0.8	0.4	0.4	4.02	15.9	1	0.32	0.1	3.9	5.2	7.9	0.05	0.9	528
X05177	Mitchell	LP Hazelton	2259	4.96	4.7	0.4	30	0.5	1.48	0.58	0.57	9.23	4.6	160	2.2	2017.29	0.7	0.4	0.3	5.09	13.81	1.1	0.14	0.1	3.16	3.3	12.4	0.05	1.08	667
X06183	Mitchell	LP Hazelton	1104	6.18	2.3	0.4	60	0.5	0.53	0.88	0.58	16.43	12.5	130	2.5	1673.83	1.1	0.6	0.5	4.53	13.87	1.5	0.23	0.2	2.81	7.2	16.5	0.05	1.35	642
X12874	Mitchell	LP Hazelton	7880	4.99	19.1	0.6	33	1	1.48	0.52	3.08	12.98	8.5	164	2.7	2558.85	0.9	0.4	0.4	4.39	14.06	1.3	0.24	0.2	3.46	4.7	8.8	0.05	0.97	774
X19627	Mitchell	LP Hazelton	1453	6.67	6.1	0.3	24	0.5	0.88	3.19	0.76	18.36	8.2	127	1.6	1210.92	2.2	1.2	0.6	4.21	13.13	2.4	0.43	0.4	2.33	7.8	6.4	0.2	0.83	440
H45086	Sulphurets	LP Hazelton	1210	8.95	65.5		1030	2.07	0.26	1.76	0.09	36.4	27.9	32	7.02	878				4.12	24.3		1.6		3.68	17.6	9.3		1.11	878
X13074	Mitchell	Leach breccia/bornite breccia	15024	2.94	74.4	0.4	9	0.5	5.9	0.19	4.44	12.3	17.2	245	0.7	10000	0.6	0.3	0.4	8.58	7.46	1	0.1	0.1	1.66	3.9	3	0.05	0.3	90
X13084	Mitchell	Leach breccia/bornite breccia	2751	1.87	62.1	0.1	82	0.5	3.15	5.82	1.54	26.19	15.6	245	0.6	1021.12	1.2	0.5	0.7	3.21	5	1.6	0.04	0.2	0.94	13.5	4.5	0.05	0.21	140
G21048	Mitchell	LP Hazelton	2376	5.23	132	0.5	12	0.5	0.53	0.42	40.91	3.28	14.5	111	2.2	1253.74	1.2	0.5	0.4	5.62	15.99	1.8	0.36	0.2	2.2	0.8	5.8	0.05	0.24	101
G37342	Mitchell	LP Hazelton	555	6.96	3	0.3	23	1	0.29	0.33	0.24	9.79	12.1	123	2.8	542.66	1.5	0.7	0.5	4.17	15.9	2.1	0.44	0.3	2.67	3.5	10.5	0.05	0.57	208
H41756	Mitchell	LP Hazelton	2116	6.68	12.1	0.3	26	1	1.74	3.37	7.67	9.12	12	53	3.3	731.95	1.1	0.5	0.3	5.15	17.28	1.2	0.4	0.2	2.8	3.6	13	0.1	1.37	932
H42223	Mitchell	LP Hazelton	1170	7.34	11.6		150	1.07	0.3	3.73	0.52	20.5	16.2	4	5.06	688				4.33	15.15		0.3		3.62	11	10.8		1.04	418
X05329	Mitchell	LP Hazelton	327	7.75	3	0.2	52	1	0.19	0.22	0.19	12.24	12.9	108	4.1	327.57	1.1	0.5	0.5	4.63	19.05	1.4	0.66	0.2	2.19	4.7	42.7	0.05	2.47	795
X06596	Mitchell	Leach breccia/bornite breccia	436	6.3	4.4	0.05	17	1	1.19	0.25	0.37	2.28	10.4	99	2.6	988.66	0.7	0.2	0.3	5.88	14.94	1	0.5	0.1	3.33	0.5	7.2	0.05	0.52	61
X06968	Mitchell	Leach breccia/bornite breccia	893	7.07	152.2	0.05	19	0.5	3.52	0.38	1	8.28	11.6	127	2.3	785.83	1.8	0.7	0.7	5.87	16.38	3	0.78	0.3	3.2	2.8	2	0.05	0.26	31
X11578	Mitchell	LP Hazelton	1010	6.3	5		190	1.12	0.26	0.39	0.96	14.05	11.2	3	3.43	1125				3.96	13.6		0.4		2.27	6.8	23.6		1.39	989
H42752	Kerr	Kerr	750	7.41	1.4	0.05	43	0.5	0.17	0.76	0.1	12.32	11.8	59	2.1	3235.91	1.1	0.6	0.4	5.1	15.44	1.2	0.42	0.2	4.31	5.2	12.2	0.05	1.28	390
H42772	Kerr	Kerr	1127	6.62	0.1	0.2	15	0.5	0.33	0.52	0.28	10.39	21.1	83	1.7	7389.87	1.3	0.7	0.4	5.86	11.43	1.3	0.25	0.3	4.27	4.8	3.8	0.05	0.58	310
H42801	Kerr	Kerr	611	7.72	126.7	0.2	12	0.5	0.71	0.11	0.1	2.34	28.4	80	3.5	406.05	0.7	0.3	0.2	7.12	14.85	0.7	0.59	0.1	3.22	0.8	7.2	0.05	0.14	16
H42895/96	Kerr	Kerr	432	6.91	4.9	0.1	33	0.5	0.27	4.34	0.18	2.62	14.3	50	1.9	2065.96	0.6	0.3	0.2	4.55	13.82	0.9	0.26	0.1	2.81	1.1	9.6	0.05	1.14	261
H46054/55	Kerr	Kerr	426	8.52	3.3	0.05	9	0.5	0.21	0.31	0.07	1.08	22	79	3.3	1701.94	1	0.5	0.4	6.61	16.75	1.4	0.29	0.2	4.34	0.3	8.1	0.05	0.42	46
H46155/56	Kerr	Kerr	596	8.97	9.2	0.2	73	1	0.16	0.03	0.01	1.29	7.5	87	3.4	768.9	0.6	0.4	0.05	3.02	19.34	0.3	0.34	0.1	4.36	0.5	4.4	0.05	0.27	21
H42509	Sulphurets	Au, Leach, Raewn zones	129	7.55	22.8	0.3	100	1	0.23	0.42	0.63	21.65	24.2	63	3.9	176.53	1.9	0.9	0.7	3.2	17.06	2.5	0.39	0.3	3.88	8.9	8.7	0.1	0.58	199
H45368	Sulphurets	Au, Leach, Raewn zones	127	6.14	92.2	0.2	46	2	0.5	0.3	0.08	28.44	42.9	55	3.2	19.21	2.1	1	0.9	5.12	14.54	3.2	0.7	0.4	5	11.8	9.3	0.1	0.51	128
X16995	Mitchell	UP Hazelton	368	8.23	1.5	0.05	75	0.5	0.19	2.12	0.05	11.19	17.9	96	4.8	1181.53	2	1.1	0.5	4.02	14.62	1.9	0.46	0.4	4.21	5.8	16.4	0.2	1.67	294
X17080	Mitchell	UP Hazelton	263	8.28	0.4	0.05	61	1	0.22	1.55	0.04	10.38	16.7	99	4.8	840.27	2	1.1	0.5	4.54	14.83	1.7	0.37	0.4	4.57	5	15.7	0.2	1.65	464
X17119	Mitchell	UP Hazelton	1420	7.55	26.1		960	1.66	0.47	0.29	0.05	10.2	11.6	9	4.29	1270				4.15	19.2		0.5		6.01	7.5	18.7		1.09	313
X17360	Mitchell	UP Hazelton	1580	7.9	4.9		2090	3.88	3.69	0.19	0.67	13.35	0.9	1	2.11	139				1.3	43.4		4		7.89	11.3	7		0.22	412
G36074	Mitchell	LP Hazelton	2529	5.06	7.5	0.6	42	0.5	0.96	0.26	0.22	13.22	11	149	2.5	2419.99	0.9	0.6	0.4	4.8	13.65	1.2	0.15	0.2	3.28	5.4	12.3	0.05	0.96	226
H41833	Mitchell	LP Hazelton	310	7.83	19.2		100	0.82	0.59	1.79	0.14	17.75	9	5	2.44	89.2				4.43	17.95		0.7		3.32	8.5	7.1		1.03	439
H44421	Mitchell	LP Hazelton	1198	5.45	2.6	0.5	42	0.5	0.1	0.2	0.13	7.59	13.4	114	2.9	964.34	0.7	0.4	0.4	4.8	15.57	1.3	0.42	0.1	2.72	2.8	7.1	<0.1	0.42	165
X10676	Mitchell	LP Hazelton	4525	3.55	100.6	0.2	9	0.5	1.72	0.12	0.84	5.27	15	231	0.9	3125.32	0.5	0.2	0.2	8.43	5.24	0.6	0.08	0.05	1.81	1.8	2.8	0.05	0.14	65
X10945	Mitchell	Leach breccia/bornite breccia	800	6.41	4.4		330	0.53	0.22	0.07	0.36	21.3	4.8	3	2.21	192.5				3.64	14.2		0.5		2.89	11.3	3.2		0.18	25
X11008	Mitchell	LP Hazelton	1570	2.94	11.4		240	0.48	0.4	1.43	1.4	5.55	10.3	2	1.61	1760				5.13	8.49		0.1		1.47	2.5	4.2		0.46	403
X11486	Mitchell	LP Hazelton	1360	4.46	16.9		170	0.47	0.85	0.12	1.04	17.35	5.2	14	4.3	2010				2.86	12.45		0.1		2.13	9	5.2		0.32	100
X11530	Mitchell	LP Hazelton	1650	4.5	15.7		240	0.86	0.7	0.16	2.21	7.02	7.5	17	3.21	1645				4.63	10.25		0.1		1.97	3.1	4.6		0.2	102
X13711	Mitchell	LP Hazelton	180	7.8	17.8	0.2	23	0.5	0.35	0.35	0.51	7.82	13.2	107	2	91.88	1.9	1.1	0.6	4.94	17.29	2.1	0.68	0.4	2.96	2.8	2.9	0.2	0.17	20
X17581	Mitchell	Leach breccia/bornite breccia	2455	4.03	83.7	0.2	34	0.5	0.32	7.44	0.64	36.18	6.4	154	1.4	5056.45	2	0.9	1	2.96	7.45	2.4	0.14	0.4	2.3	15.6	5.1	0.1	0.57	474
H44936	Sulphurets	Au, Leach, Raewn zones	380	7.12	72		650	0.92	0.13	1.55	0.42	24	18.8	52	5.77	1770				3.94	16.3		0.8		4.51	12.7	17.8		0.8	637
H44939	Sulphurets	Au, Leach, Raewn zones	2280	6.7	41.4		560	0.9	0.58	0.54	1.35	21.4	12.6	65	5.81	10000				3.26	18.05		0.5		4.62	13.3	19.6		0.79	260
H45279	Sulphurets	Au, Leach, Raewn zones	505	5.75	107.6	0.6	57	1	0.33	0.36	2.72	10.88	15.8	82	6.3	3013.81	1.4	0.8	0.4	3.93	15.04	1.4	0.57	0.3	4.95	4.2	9	0.1	0.34	115
H45505	Sulphurets	Au, Leach, Raewn zones	775	6.76	107.3	0.8	38	0.5	0.34	0.32	6.93	15.4	20.2	113	5.8	6814.33	1.4	0.7	0.6	4.58	14.66	1.8	0.41	0.2	5.42	5.8	10.5	0.1	0.39	133
H40759	Mitchell	UP Hazelton	689	6.87	15.6	0.05	57	1	1.21	0.38	0.24	16.06	10.2	96	1.9	313.26	1	0.5	0.5	3.17	16.01	1.4	0.48	0.2	4.14	9	44	0.05	0.5	240
X14918	Mitchell	UP Hazelton	430	8.18	57.7		1170	1.43	1.87	1.42	0.04	32.7	25.1	58	6.63	81.8				2.83	23.6		0.8		3.26	16.4	33.1		1.02	483
X17404	Mitchell	UP Hazelton	610	7.58	13.6		110	1.37	0.63	2.86	0.16	16	19.8	42	3.23	382				6.57	18.4		0.7		3.8	8.5	15.5		1.95	705
H44363/64	Unknown	LP Hazelton	4394	4.9	57	0.6	30	1	0.41	0.18	2.07	20.9	12.3	179	3.7	1564.82	1.1	0.5	0.7	4.67	12.97	1.8	0.18	0.2	2.82	8.3	7.5	0.05	0.47	121
MEDIAN	Kerr	Kerr	603.5	7.565	4.1	0.15	24	0.5	0.24	0.415	0.1	2.48	17.7	79.5	2.7	1883.95	0.85	0.45	0.3	5.48	15.145	1.05	0.315	0.15	4.29	0.95	7.65	0.05	0.5	153.5
	Mitchell	UP Hazelton	610	7.9	13.6	0	110	1.37	0.63	1.42	0.05	13.35	16.7	58	4.29	382	0	0	0	4.02	18.4	0	0.5	0	4.21	8.5	16.4	0	1.09	412
	Mitchell	LP Hazelton	1453	6.3	12.1	0.2	52	0.82	0.59	0.52	0.57	13.22	11.2	108	2.8	1253.74	0.9	0.4	0.4	4.63	15.15	1.2	0.36	0.2	2.8	5.2	9.3	0.05	0.97	440
	Sulphurets	Au, Leach, Raewn zones	442.5	6.73	82.1	0.25	78.5	0.96	0.335	0.39	0.99	21.525	19.5	64	5.785	2391.905	1.4	0.75	0.5	3.935	15.67	1.6	0.535	0.25	4.785	10.35	9.9	0.1	0.545	166
	Mitchell	Leach breccia/bornite breccia	1674	5.165	68.25	0.075	26.5	0.5	2.17	0.315	0.82	16.8	11	140.5	1.805	1004.89	0.95	0.4	0.55	4.755	10.83	1.3	0.32	0.15	2.595	7.6	3.85	0.05	0.28	75.5

Appendix 5.3-2. Pre-NAG Test Metal Content Results

Sample ID	Deposit	Model Code	Mo ppm	Na %	Nb ppm	Nd ppm	Ni ppm	P %	Pb ppm	Pr ppm	Rb ppm	S %	Sb ppm	Sc ppm	Sm ppm	Sn ppm	Sr ppm	Ta ppm	Tb ppm	Th ppm	Ti %	Tm ppm	U ppm	V ppm	W ppm	Y ppm	Yb ppm	Zn ppm	Zr ppm
G32981	Mitchell	LP Hazelton	23.44	0.422	3.13	9.5	3.2	0.104	16.46	2.1	93.9	3.53	3.3	11.9	1.8	1.5	34	0.2	0.2	2.7	0.167	0.05	1.6	113	0.8	4.7	0.6	53.3	11.7
G35770	Mitchell	LP Hazelton	35.29	0.066	1.98	8	6.7	0.117	11.69	1.8	84.7	2.46	2.44	15.9	1.5	1.6	41	0.05	0.2	2	0.114	0.05	0.8	148	0.4	5.1	0.6	82.4	6
H42099	Mitchell	LP Hazelton	99.57	3.118	8.16	9.6	4.1	0.164	10.87	2.2	57.8	2.57	2.19	18	2	1	450	0.4	0.4	2.9	0.304	0.2	1.8	184	0.9	13.2	1.5	54.9	13.9
H43518	Mitchell	LP Hazelton	36.11	0.072	2.34	7.9	4.8	0.105	26.15	1.8	97.2	6.15	30.61	16	1.4	2.6	327	0.1	0.1	1.9	0.091	0.05	1.6	156	0.8	3.4	0.4	70.6	8
X05177	Mitchell	LP Hazelton	13.65	0.028	1.24	5.9	3.9	0.076	28.65	1.2	48.1	3.21	2.22	7.9	1.2	1.4	17	0.05	0.1	1.6	0.091	0.05	0.6	96	0.5	3	0.4	100.7	3.9
X06183	Mitchell	LP Hazelton	97.29	0.941	2.15	8.5	4.9	0.11	29.82	2	71.5	2.1	1.37	13	1.6	1.4	218	0.05	0.2	2.2	0.108	0.05	1.1	125	0.2	4.6	0.5	91.8	7.9
X12874	Mitchell	LP Hazelton	88.7	0.03	2.69	7.8	3.3	0.068	60.09	1.6	81.3	3.74	3.73	7.2	1.4	1.3	55	0.2	0.2	1.8	0.15	0.05	1.3	85	0.7	4.1	0.5	185.1	6.7
X19627	Mitchell	LP Hazelton	19.59	1.999	5.74	10.3	3.3	0.088	27.91	2.3	52.9	4.8	2.24	10.4	2.2	1.9	353	0.3	0.3	2.8	0.251	0.2	1.5	93	1.3	11.1	1.2	62.2	11.4
H45086	Sulphurets	LP Hazelton	13.05	2.53	6.2		42.1	1.47	14.9		160.5	2.69	10.5	17.5		0.3	178	0.43		4.5	0.354		3.6	170	4.6	26.6		69	50
X13074	Mitchell	Leach breccia/bornite breccia	49.38	0.027	0.92	7.7	10.1	0.061	23.56	1.7	40.5	9.72	429.59	5.5	1.5	9.9	30	0.05	0.1	0.7	0.049	0.05	0.6	107	3.7	2.6	0.3	162.2	3.6
X13084	Mitchell	Leach breccia/bornite breccia	38.62	0.08	0.5	12.6	5.5	0.064	7.39	2.9	27.1	7.99	91.35	7.3	2	2.5	422	0.05	0.2	1.1	0.034	0.05	0.3	114	5	4.6	0.5	36.3	1
G21048	Mitchell	LP Hazelton	284.54	0.356	0.96	3.3	20.6	0.19	721.26	0.6	70.7	6.37	14.57	9.5	1.2	1.4	96	0.05	0.2	1.3	0.059	0.05	2.1	128	0.4	4	0.4	3321	12.2
G37342	Mitchell	LP Hazelton	322.7	0.326	0.85	7.1	11.1	0.13	34.39	1.3	85	3.58	0.34	11.3	1.8	1.4	85	0.05	0.2	2	0.059	0.05	1.1	117	0.5	5.8	0.7	81.1	15.9
H41756	Mitchell	LP Hazelton	75.57	0.925	3.38	5.6	4.2	0.113	199.04	1.3	73.1	5.72	4.81	13.4	1.1	2.2	343	0.2	0.2	2.5	0.137	0.05	1.6	178	1.1	4.2	0.6	639.5	13.6
H42223	Mitchell	LP Hazelton	70.8	0.34	3.4		3.8	1.35	24.9		113.5	4.84	3.61	18.7		1.6	289	0.22		3.4	0.164	2.48	1.3	173	1.4	6.9		61	12.3
X05329	Mitchell	LP Hazelton	66.84	0.239	1.3	6.8	25.2	0.092	15.39	1.5	33.3	3.05	0.39	10.7	1.6	1.9	39	0.05	0.2	1.7	0.126	0.05	1.5	130	0.4	3.3	0.6	111.9	21.4
X06596	Mitchell	Leach breccia/bornite breccia	32.38	0.309	0.71	2.6	3	0.118	9.2	0.4	93.9	6.18	2.32	13.7	1	2.2	55	0.05	0.1	1.2	0.054	0.05	1.4	102	0.6	2.2	0.3	18.3	15.1
X06968	Mitchell	Leach breccia/bornite breccia	27.08	0.312	1.06	6.2	3.6	0.172	18.12	1.3	86.8	6.7	35.84	11.5	1.6	3.5	51	0.05	0.4	1.4	0.064	0.05	1.5	109	0.9	6.7	0.6	76.6	24.1
X11578	Mitchell	LP Hazelton	64.6	0.16	2.6		3.6	1.14	68.8		76.6	2.59	0.44	14.4		1.7	39.1	0.16		3.2	0.121	2.01	1.6	131	0.6	5.4		107	12.2
H42752	Kerr	Kerr	11.5	0.5	6.93	7.1	7.3	0.168	3.41	1.6	76.6	3.47	2.12	20.1	1.4	1.8	59	0.3	0.2	1.2	0.259	0.05	0.5	258	2.4	4.9	0.7	77.5	16.1
H42772	Kerr	Kerr	296.04	0.041	2.6	5.9	3.5	0.143	4.74	1.3	70	5.7	1.06	19.9	1.1	1.5	68	0.1	0.2	0.9	0.117	0.05	0.5	225	1.8	6.1	0.6	30.4	7.6
H42801	Kerr	Kerr	13.01	0.41	1.36	2	6.7	0.057	30.2	0.4	74.8	8.21	34.6	18.9	0.5	2.7	245	0.05	0.05	0.8	0.056	0.05	0.9	197	3.3	2.5	0.4	15.2	20.4
H42895/96	Kerr	Kerr	13.59	0.094	2.64	2.1	2.5	0.146	14.76	0.4	39	6.1	0.65	21.1	0.7	1.3	338	0.1	0.1	0.9	0.107	0.05	0.5	188	1.6	2.8	0.3	103.8	8.3
H46054/55	Kerr	Kerr	34.94	0.125	1.26	1.6	20.6	0.155	5.19	0.2	95.9	6.77	0.69	24.6	1.1	2.5	51	0.05	0.2	0.6	0.084	0.05	0.6	224	1.9	4.2	0.4	23.9	10.5
H46155/56	Kerr	Kerr	11.43	0.139	2.93	1	8.9	0.053	16.09	0.2	91.3	2.32	1.34	23.9	0.3	2.9	94	0.1	0.05	0.9	0.149	0.05	0.5	233	2	2.4	0.4	18.2	12
H42509	Sulphurets	Au, Leach, Raewn zones	5.85	0.486	3.28	13.3	17.3	0.123	24.31	2.7	119.8	2.82	7.27	15.8	2.6	2.9	72	0.2	0.3	1.8	0.215	0.1	2.5	183	12.1	7.6	0.7	104.5	13.8
H45368	Sulphurets	Au, Leach, Raewn zones	19.07	0.153	1.52	17.9	17.4	0.116	24.63	3.9	151.3	5.69	7.33	13.1	3.6	2.6	53	0.05	0.4	2.6	0.103	0.1	4.4	87	10.3	9.3	0.9	33.5	21.3
X16995	Mitchell	UP Hazelton	115.73	2.111	6.71	5.6	7.7	0.157	2.48	1.4	115.3	3.08	2.52	21.6	1.5	1	219	0.3	0.3	1.3	0.269	0.1	0.8	257	11	9.6	1.1	11.6	12.8
X17080	Mitchell	UP Hazelton	36.89	2.063	7.1	5.6	7.6	0.154	3.09	1.3	141.3	2.9	2.51	22.5	1.4	1.1	205	0.3	0.3	1.4	0.287	0.1	0.9	257	10.3	9.7	1.1	25.6	11.8
X17119	Mitchell	UP Hazelton	9	0.85	7		6.7	1.29	12.2		94.4	1.78	2.56	20.5		1.3	221	0.31		1.3	0.191	1.19	2.1	598	7.5	11.2		55	12.8
X17360	Mitchell	UP Hazelton	11.95	1.16	20.9		1	0.05	125.5		174.5	1.11	1.81	1		1.7	143	0.68		19	0.042	2.25	26.4	85	2.1	4.8		73	126.5
G36074	Mitchell	LP Hazelton	54.53	0.03	2.23	7.3	5.6	0.104	11.85	1.7	84.9	3.93	3.34	13.6	1.3	2.6	25	0.1	0.2	1.6	0.122	0.05	0.7	137	0.6	4.5	0.6	48.4	4.9
H41833	Mitchell	LP Hazelton	3.12	3.37	8.2		2.6	1.45	9.3		86.7	4.47	2.2	19.8		1.5	250	0.45		3	0.258	1.49	1.9	204	21	8.6		34	20.3
H44421	Mitchell	LP Hazelton	183.74	0.175	0.57	5.3	18.7	0.104	16.32	1.1	92.6	4.73	0.36	7.4	1.2	1.6	29	<0.1	0.1	1.2	0.054	<0.1	1	102	0.3	2.8	0.3	112.4	12.9
X10676	Mitchell	LP Hazelton	84.01	0.028	0.97	3.8	4.7	0.046	17.62	0.8	32.1	9.77	18.38	4.4	0.7	1.7	10	0.05	0.05	0.9	0.061	0.05	0.3	80	2.7	2.1	0.2	25.5	2.1
X10945	Mitchell	Leach breccia/bornite breccia	33.2	0.16	1.9		1.3	0.3	6		104	3.89	6.81	10.9		3.1	21.6	0.11		2.9	0.09	1.67	0.7	94	14.6	4.7		18	14.9
X11008	Mitchell	LP Hazelton	14.65	0.05	1.2		0.9	0.36	41.5		52.6	6.29	15.25	5.7		1.2	106	0.07		1.2	0.049	1.14	0.3	61	1.9	2.3		102	2.8
X11486	Mitchell	LP Hazelton	93.7	0.06	1.3		5.8	0.25	35		81.1	2.88	8.64	2.2		2	30	0.07		2.6	0.046	1.59	0.3	48	0.7	2.6		83	3.3
X11530	Mitchell	LP Hazelton	99.5	0.11	1.5		7.1	0.63	54.8		65.1	4.63	1.05	4.5		1.2	18.8	0.07		1.4	0.075	1.74	0.5	59	0.7	4.1		204	4.5
X13711	Mitchell	LP Hazelton	9.63	0.305	0.93	5.9	6.7	0.167	29.84	1.2	85	5.34	2.7	12.2	1.5	4.2	125	0.05	0.3	1.2	0.062	0.1	1	151	0.7	10	1	89.4	25.2
X17581	Mitchell	Leach breccia/bornite breccia	44.27	0.02	0.92	18.4	3.6	0.186	63.07	4.3	60.5	8.7	20.5	8.3	3.3	2.4	588	0.05	0.3	1.9	0.053	0.1	1.2	92	3.4	7.1	0.9	47.3	4.1
H44936	Sulphurets	Au, Leach, Raewn zones	88.2	0.5	3.4		39	0.97	13.7		116	2.7	8.19	12.2		2.9	168	0.2		2.7	0.179		2.2	139	14.6	10.4		71	24.9
H44939	Sulphurets	Au, Leach, Raewn zones	104.5	0.64	3.7		25.7	0.85	26.4		123.5	2.88	13.95	12		9.2	109	0.21		4.2	0.214		9.7	508	17.7	7.3		99	13.8
H45279	Sulphurets	Au, Leach, Raewn zones	169.85	0.34	3.77	6.9	10.7	0.119	30.74	1.5	129.8	4.18	27.5	16.7	1.5	2.7	87	0.2	0.2	0.7	0.175	0.05	1.4	187	9.1	6.7	0.7	388.3	17.3
H45505	Sulphurets	Au, Leach, Raewn zones	483.73	0.429	2.64	9.5	25.9	0.098	203.99	1.9	154.1	4.8	71.56	12.5	1.9	3.4	68	0.1	0.3	1.1	0.158	0.05	1.8	177	9.6	6.1	0.7	589	14.2
H40759	Mitchell	UP Hazelton	87.44	3.406	1.4	7.5	13.5	0.039	24.22	1.8	119.2	2.73	2.05	5.9	1.4	1	143	0.05	0.2	1.6	0.103	0.05	1.7	101	8.2	5.1	0.5	26.9	15.5
X14918	Mitchell	UP Hazelton	12.85	4.37	6.9		67.8	1.8	16.9		132.5	2.61	4.3	21.6		0.9	251	0.42		3.4	0.39	1.41	1.3	135	10.5	15.1		34	27.3
X17404	Mitchell	UP Hazelton	2.13	1.89	6.9		8.4	1.66	9.7		123.5	6.58	4.08	31.5		1.4	225	0.35		2.3	0.254	1.75	1.3	248	16.4	7.2		33	20.7
H44363/64	Unknown	LP Hazelton	68.11	0.068	1.3	12.7	19.8	0.09	67.56	2.7	101	4.9	22.38	9.2	2.3	1.6	13	0.05	0.2	1.9	0.112	0.05	0.8	97	1	5	0.5	136.2	5.2
MEDIAN	Kerr	Kerr	13.3	0.132	2.62	2.05	7	0.1445	9.975	0.4	75.7	5.9	1.2	20.6	0.9	2.15	81	0.1	0.15	0.9	0.112	0.05	0.5	224.5	1.95	3.5	0.4	27.15	11.25
	Mitchell	UP Hazelton	12.85	2.063	6.9	0	7.7	0.157	12.2	0	123.5	2.73	2.52	21.6	0	1.1	219	0.31	0	1.6	0.254	1.19	1.3	248	10.3	9.6	0	33	15.5
	Mitchell	LP Hazelton	66.84	0.239	2.15	5.9	4.8	0.117	27.91	1.2	81.1	3.93	2.7	11.9	1.2	1.6	85	0.085	0.2	2	0.114	0.05	1.3	128	0.7	4.5	0.4	83	11.7
	Sulphurets	Au, Leach, Raewn zones	96.35	0.4575	3.34	8.2	21.55	0.121	25.515	1.7	126.65	3.53	11.07	12.8	1.7	2.9	79.5	0.2	0.25	2.2	0.177	0.05	2.35	180	11.2	7.45	0.7	101.75	15.75
	Mitchell	Leach breccia/bornite breccia	35.91	0.12	0.92	6.95	3.6	0.145	13.66	1.5	73.65	7.345	28.17	9.6	1.55	2.8	53	0.05	0.15	1.3	0.0535	0.05	0.95	104.5	3.55	4.65	0.4	41.8	9.5

Appendix 5.3-3
NAG Test Results: Two-Cycle Test

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Appendix 5.3-3. NAG Test Results: Two-Cycle Test

Sample ID		Sample Weight (g)	Vol. of 15% H_2O_2 Used (ml)	Cycle 1 on Filtrate			Cycle 2 on Filtered				NAG Category based on MPA-ANC	NAG Category based on pH	Tested in Modified Single Extraction?
				pH (pH Units)	NAG Acidity pH 4.5 (kg H_2SO_4/t)	NAG Acidity pH 7.0 (kg H_2SO_4/t)	pH (pH Units)	NAG Acidity pH 4.5 (kg H_2SO_4/t)	NAG Acidity pH 7.0 (kg H_2SO_4/t)	Completed Reaction?			
X10945	Leach breccia/bornite breccia	2.5	250	2.1	64.3	70.8	2.1	54.3	57.2	Cycle 1	PAF	PAF	Yes - PAF
G32981	LP Hazelton	2.5	250	2.5	28.2	34.7	2.2	42.1	44.1	Cycle 1	PAF	PAF	Yes - PAF
X11578	LP Hazelton	2.5	250	2.5	18.4	23.7	2.3	32.9	35.9	Cycle 1	PAF	PAF	Yes - PAF
X05177	LP Hazelton	2.5	250	2.6	19.4	26.0	2.2	40.8	43.1	Cycle 1	PAF	PAF	Yes - PAF
H42772	Kerr	2.5	250	2.7	14.2	31.6	2.3	35.3	40.2	Cycle 1	PAF	PAF	Yes - PAF
H42752	Kerr	2.5	250	3.3	3.5	11.0	2.3	38.7	42.1	Cycle 1	PAF	PAF	Yes - PAF
X06183	LP Hazelton	2.5	250	4.3	0.2	2.2	2.5	23.1	27.4	Cycle 1	PAF	PAF	Yes - PAF
X17360	UP Hazelton	2.5	250	2.7	12.2	15.6		0.0	0.0	Cycle 1	PAF	PAF	Yes - PAF
X05329	LP Hazelton	2.5	250	2.3	37.4	43.9	2.4	17.8	20.2	Cycle 1	PAF	PAF	Yes - PAF
H42801	Overburden	2.5	250	2.1	97.4	105.3	2.1	70.6	73.5	Cycle 1	PAF	PAF	Yes - PAF
G37342	LP Hazelton	2.5	250	2.2	46.5	52.7	2.2	39.0	40.2	Cycle 1	PAF	PAF	Yes - PAF
H44421	LP Hazelton	2.5	250	2.2	42.7	52.1	2.0	64.7	67.6	Cycle 1	PAF	PAF	Yes - PAF
H46054/55	Kerr	2.5	250	2.3	39.0	48.0	2.1	64.9	68.8	Cycle 1	PAF	PAF	Yes - PAF
G36074	LP Hazelton	2.5	250	2.5	24.3	30.2	2.3	43.9	46.1	Cycle 1	PAF	PAF	Yes - PAF
X12874	LP Hazelton	2.5	250	2.7	14.7	23.4	2.3	41.7	44.3	Cycle 1	PAF	PAF	Yes - PAF
X19627	LP Hazelton	2.5	250	2.7	16.3	21.8	2.3	34.7	36.3	Cycle 1	PAF	PAF	Yes - PAF
H42895/96	Kerr	2.5	250	2.9	10.5	16.3	2.3	36.0	39.2	Cycle 1	PAF	PAF	Yes - PAF
G21774	UP Hazelton	2.5	250	3.3	2.9	4.9				Cycle 1	PAF	PAF	No
H45368	Au, Leach, Raewn zones	2.5	250	2.0	83.7	90.7				Cycle 1	PAF	PAF	Yes - PAF
H45505	Au, Leach, Raewn zones	2.5	250	2.6	17.6	36.7	2.3	37.0	45.9	Cycle 1	PAF	PAF	Yes - PAF
X13711	LP Hazelton	2.5	250	2.0	96.6	103.5				Cycle 1	PAF	PAF	Yes - PAF
X06968	Leach breccia/bornite breccia	2.5	250	2.1	74.5	82.1	2.1	69.6	72.9	Cycle 1	PAF	PAF	Yes - PAF
X10676	LP Hazelton	2.5	250	2.3	42.7	56.4	2.0	89.6	95.1	Cycle 1	PAF	PAF	Yes - PAF
X06596	Leach breccia/bornite breccia	2.5	250	2.3	49.1	55.9	2.1	70.8	73.7	Cycle 1	PAF	PAF	Yes - PAF
G21048	LP Hazelton	2.5	250	2.3	42.2	50.8	2.2	62.3	65.3	Cycle 1	PAF	PAF	Yes - PAF
X13074	Leach breccia/bornite breccia	2.5	250	2.6	18.6	56.6	2.4	35.3	51.4	Cycle 1	PAF	PAF	Yes - PAF
H43518	LP Hazelton	2.5	250	2.6	19.1	25.0	2.2	45.3	47.6	Cycle 1	PAF	PAF	Yes - PAF
X11486	LP Hazelton	2.5	250	2.6	15.9	21.6	2.3	34.3	36.5	Cycle 1	PAF	PAF	Yes - PAF
X17581	Leach breccia/bornite breccia	2.5	250	3.4	2.6	10.5	2.4	31.4	34.9	Cycle 1	PAF	PAF	Yes - PAF
X13084	Leach breccia/bornite breccia	2.5	250	2.3	36.2	42.5	2.3	37.2	39.2	Cycle 1	PAF	PAF	Yes - PAF
H44363/64	LP Hazelton	2.5	250	2.3	31.3	40.8	2.1	55.2	57.8	Cycle 1	PAF	PAF	Yes - PAF
X11530	LP Hazelton	2.5	250	2.3	30.2	40.8	2.1	55.1	58.0	Cycle 1	PAF	PAF	Yes - PAF
X11008	LP Hazelton	2.5	250	2.6	18.6	25.4	2.1	56.3	59.8	Cycle 1	PAF	PAF	Yes - PAF
H42509	Au, Leach, Raewn zones	2.5	250	2.3	42.1	52.1	2.6	14.1	15.1	Cycle 1	PAF	PAF	Yes - PAF
H41833	LP Hazelton	2.5	250	2.4	26.1	28.6	2.3	32.9	35.1	Cycle 1	PAF	PAF	Yes - PAF
H46155/56	Kerr	2.5	250	2.4	30.4	34.9				Cycle 1	PAF	PAF	Yes - PAF
H40759	UP Hazelton	2.5	250	2.3	29.8	37.6	2.6	16.5	17.6	Cycle 1	PAF	PAF	Yes - PAF
X17080	UP Hazelton	2.5	250	3.1	6.3	9.8	2.4	21.2	28.7	Cycle 1	NAF	PAF	Yes - PAF
H44936	Au, Leach, Raewn zones	2.5	250	3.1	3.9	20.6	2.7	10.6	18.2	Cycle 1	PAF	PAF	Yes - PAF
H44939	Au, Leach, Raewn zones	2.5	250	3.6	3.1	6.1	2.7	13.1	20.6	Cycle 1	PAF	PAF	Yes - PAF
H45279	Au, Leach, Raewn zones	2.5	250	2.5	22.5	33.1	2.2	43.5	48.3	Cycle 1	PAF	PAF	Yes - PAF

Note:

Stage 1: Initial pH of 15% H_2O_2: Batch 1: 5.52; Batch 2: 5.56 (all pH's measured at room temperature).

15% H_2O_2 solution was prepared from 30% H_2O_2 bulk solution and buffered with 0.5N NaOH.

Solid:Liquid ratio used = 1:100; 2.5g pulp sample:250ml 15% H_2O_2.

Initial NAG liquor pH & temperature was done on filtered sample.

As per procedure, stage 2 cycle is not to be carried out if stage 1 NAG liquor pH is greater than 4.5.

Procedure: Prediction Manual for Drainage Chemistry from Sulphidic Geologic Material. Version 0 - Dec. 2009. MEND Report 15.3; Pages 15-6; Sequential NAG Test.

Bold and green pH values are greater than 4.5 and are considered Uncertain unless there is evidence to support no further reaction

*MPA = 30.63 * %$S_{(sulphide)}$*

*ANC = 0.98 * Sobek NP*

Appendix 5.3-3. NAG Test Results: Two-Cycle Test

Sample ID		Sample Weight (g)	Vol. of 15% H_2O_2 Used (ml)	Cycle 1 on Filtrate			Cycle 2 on Filtered				NAG Category based on MPA-ANC	NAG Category based on pH	Tested in Modified Single Extraction?
				pH (pH Units)	NAG Acidity pH 4.5 (kg H_2SO_4/t)	NAG Acidity pH 7.0 (kg H_2SO_4/t)	pH (pH Units)	NAG Acidity pH 4.5 (kg H_2SO_4/t)	NAG Acidity pH 7.0 (kg H_2SO_4/t)	Completed Reaction?			
X17119	UP Hazelton	2.5	250	2.7	12.3	18.0	2.5	19.2	22.7	Cycle 1	PAF	PAF	Yes - PAF
H41756	LP Hazelton	2.5	250	7.5			3.0	82.3	12.3	Cycle 2	PAF	PAF	Yes - PAF
H42099	LP Hazelton	2.5	250	9.1			2.9	7.4	10.2	Cycle 2	NAF	PAF	Yes - PAF
G35770	LP Hazelton	2.5	250	8.1			3.3	2.5	7.3	Cycle 2	PAF	PAF	Yes - PAF
H42223	LP Hazelton	2.5	250	10.8			2.4	24.7	26.3	Cycle 2	PAF	PAF	Yes - PAF
X16106	Monzonite	2.5	250	10.5			2.5	21.2	25.5	Cycle 2	PAF	PAF	No
H45086	LP Hazelton	2.5	250	8.4			2.7	12.4	15.5	Cycle 2	PAF	PAF	Yes - PAF
X17404	UP Hazelton	2.5	250	9.8			2.2	46.8	57.6	Cycle 2	PAF	PAF	Yes - PAF
X14918	UP Hazelton	2.5	250	10.3			2.3	35.3	40.4	Cycle 2	PAF	PAF	Yes - PAF
X16995	UP Hazelton	2.5	250	10.8			3.1	4.9	8.8	Cycle 2	NAF	PAF	Yes - PAF
G22295	LP Hazelton	2.5	250	9.0						No	NAF	Uncertain	No
X11420	LP Hazelton	2.5	250	7.2	0.0	0.0	7.2			No	PAF	Uncertain	No
H42731	Kerr	2.5	250	7.7			7.4			No	PAF	Uncertain	No
H41745	LP Hazelton	2.5	250	7.8			8.1			No	PAF	Uncertain	No
X15937	LP Hazelton	2.5	250	8.1			8.0			No	PAF	Uncertain	No
X06662	LP Hazelton	2.5	250	9.9	0.0	0.0	9.1			No	NAF	Uncertain	No
X10872	LP Hazelton	2.5	250	10.7			9.3			No	NAF	Uncertain	No
H45436	UP Hazelton	2.5	250	11.0						No	NAF	Uncertain	No
X16327	Monzonite	2.5	250	11.1						No	NAF	Uncertain	No
E192502	LP Hazelton	2.5	250	9.8						No	NAF	Uncertain	No
X12204	LP Hazelton	2.5	250	10.4						No	NAF	Uncertain	No
E192902	Undefined	2.5	250	8.0			7.9			No	NAF	Uncertain	No
X17261	UP Hazelton	2.5	250	9.5			8.8	0.0	0.0	No	PAF	Uncertain	No
X19614	LP Hazelton	2.5	250	10.1			8.3			No	NAF	Uncertain	No
H40491	Monzonite	2.5	250	10.9						No	NAF	Uncertain	No
VA09124617R038	UP Hazelton	2.5	250	11.3						No	NAF	Uncertain	No
10276	Undefined	2.5	250	7.6	0.0	0.0	7.6			No	PAF	Uncertain	No
10010	UP Hazelton	2.5	250	8.2	0.0	0.0	7.7			No	PAF	Uncertain	No
G37041	LP Hazelton	2.5	250	9.6						No	NAF	Uncertain	No
G37020	LP Hazelton	2.5	250	9.7						No	NAF	Uncertain	No
X17925	UP Hazelton	2.5	250	8.1			8.8			No	NAF	Uncertain	No
X17910	UP Hazelton	2.5	250	8.2			8.1			No	NAF	Uncertain	No
H44866	LP Hazelton	2.5	250	8.8			8.1			No	PAF	Uncertain	No
H44683	Lower Au zone	2.5	250	8.8			8.3			No	NAF	Uncertain	No
X17040	UP Hazelton	2.5	250	9.1			8.1			No	PAF	Uncertain	No
X18250	UP Hazelton	2.5	250	10.3			10.5			No	PAF	Uncertain	No
X14812	Monzonite	2.5	250	7.3						No	NAF	Uncertain	No
X14802	Monzonite	2.5	250	8.0						No	NAF	Uncertain	No
H44554	LP Hazelton	2.5	250	8.3			8.0			No	NAF	Uncertain	No
X18152	UP Hazelton	2.5	250	8.4						No	PAF	Uncertain	No
X18095	UP Hazelton	2.5	250	8.4			8.4			No	PAF	Uncertain	No
X18198	UP Hazelton	2.5	250	9.0						No	PAF	Uncertain	No
X16176	UP Hazelton	2.5	250	9.3			9.0			No	PAF	Uncertain	No

Note:

Stage 1: Initial pH of 15% H_2O_2: Batch 1: 5.52; Batch 2: 5.56 (all pH's measured at room temperature).

15% H_2O_2 solution was prepared from 30% H_2O_2 bulk solution and buffered with 0.5N NaOH.

Solid:Liquid ratio used = 1:100; 2.5g pulp sample:250ml 15% H_2O_2.

Initial NAG liquor pH & temperature was done on filtered sample.

As per procedure, stage 2 cycle is not to be carried out if stage 1 NAG liquor pH is greater than 4.5.

Procedure: Prediction Manual for Drainage Chemistry from Sulphidic Geologic Material. Version 0 - Dec. 2009. MEND Report 15.3; Pages 15-6; Sequential NAG Test.

Bold and green pH values are greater than 4.5 and are considered Uncertain unless there is evidence to support no further reaction

*MPA = 30.63 * $\%S_{(sulphide)}$*

*ANC = 0.98 * Sobek NP*

Appendix 5.3-4
NAG Test Leachate Results

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Appendix 5.3-4. NAG Test Leachate Results

Sample ID		Pulp Sample Weight (g)	Vol. of 15% H_2O_2 Used (ml)	On Slurry						
				NAG pH (pH Units)	Vol. NaOH to pH 4.5 (ml)	Vol. NaOH to pH 7.0 (ml)	NaOH Conc. (N)	NAG Acidity to pH 4.5 (Kg H_2SO_4/Tonne)	NAG Acidity to pH 7.0 (Kg H_2SO_4/Tonne)	
G32981	LP Hazelton	2.5	750	2.2	33.40	37.70	0.1	65.5	73.9	PAF
G35770	LP Hazelton	2.5	3000	3.2	19.50	24.90	0.1	38.2	48.8	PAF
H42099	LP Hazelton	2.5	2500	3.7	4.30	6.80	0.1	8.4	13.3	PAF
H43518	LP Hazelton	2.5	1000	2.6	34.20	37.90	0.1	67.0	74.3	PAF
X05177	LP Hazelton	2.5	750	2.4	25.40	29.70	0.1	49.8	58.2	PAF
X06183	LP Hazelton	2.5	1000	3.3	6.60	4.20	0.1	12.9	8.2	PAF
X12874	LP Hazelton	2.5	750	2.6	19.10	24.25	0.1	37.4	47.5	PAF
X19627	LP Hazelton	2.5	750	2.7	12.30	15.15	0.1	24.1	29.7	PAF
H45086	LP Hazelton	2.5	3000	3.2	14.00	17.40	0.1	27.4	34.1	PAF
X13074	Leach breccia/bornite breccia	2.5	2250	2.6	54.20	76.10	0.1	106.2	149.2	PAF
X13084	Leach breccia/bornite breccia	2.5	500	2.3	31.40	35.90	0.1	61.5	70.4	PAF
G21048	LP Hazelton	2.5	1000	2.4	55.10	60.90	0.1	108.0	119.4	PAF
G37342	LP Hazelton	2.5	500	2.1	37.40	41.60	0.1	73.3	81.5	PAF
H41756	LP Hazelton	2.5	500	2.5	22.60	27.10	0.1	44.3	53.1	PAF
H42223	LP Hazelton	2.5	2250	2.9	26.60	29.70	0.1	52.1	58.2	PAF
X05329	LP Hazelton	2.5	750	2.3	34.30	38.35	0.1	67.2	75.2	PAF
X06596	Leach breccia/bornite breccia	2.5	500	2.0	42.80	47.85	0.1	83.9	93.8	PAF
X06968	Leach breccia/bornite breccia	2.5	500	2.0	11.85	12.95	0.5	116.1	126.9	PAF
X11578	LP Hazelton	2.5	1000	2.6	27.70	31.10	0.1	54.3	61.0	PAF
H42752	Kerr	2.5	1000	2.7	23.00	29.10	0.1	45.1	57.0	PAF
H42772	Kerr	2.5	1500	2.7	37.20	47.10	0.1	72.9	92.3	PAF
H42801	Kerr	2.5	500	1.9	14.30	15.25	0.5	140.1	149.5	PAF
H42895/96	Kerr	2.5	750	2.5	20.45	24.10	0.1	40.1	47.2	PAF
H46054/55	Kerr	2.5	750	2.1	46.50	52.00	0.1	91.1	101.9	PAF
H46155/56	Kerr	2.5	750	2.3	32.50	36.05	0.1	63.7	70.7	PAF
H42509	Au, Leach, Raewn zones	2.5	750	2.3	33.05	36.25	0.1	64.8	71.1	PAF
H45368	Au, Leach, Raewn zones	2.5	1000	2.2	72.20	76.30	0.1	141.5	149.5	PAF
X16995	UP Hazelton	2.5	3000	3.2	18.80	23.50	0.1	36.8	46.1	PAF
X17080	UP Hazelton	2.5	1250	2.7	20.70	24.60	0.1	40.6	48.2	PAF
X17119	UP Hazelton	2.5	1250	2.8	16.50	19.30	0.1	32.3	37.8	PAF
X17360	UP Hazelton	2.5	1000	3.1	9.80	11.80	0.1	19.2	23.1	PAF
G36074	LP Hazelton	2.5	1000	2.5	33.40	38.10	0.1	65.5	74.7	PAF
H41833	LP Hazelton	2.5	1250	2.4	35.20	37.90	0.1	69.0	74.3	PAF
H44421	LP Hazelton	2.5	500	2.2	36.10	40.40	0.1	70.8	79.2	PAF
X10676	LP Hazelton	2.5	1000	2.3	61.50	68.50	0.1	120.5	134.3	PAF
X10945	Leach breccia/bornite breccia	2.5	500	2.0	10.10	10.80	0.5	99.0	105.8	PAF
X11008	LP Hazelton	2.5	1000	2.4	36.50	40.60	0.1	71.5	79.6	PAF
X11486	LP Hazelton	2.5	1000	2.7	23.90	27.60	0.1	46.8	54.1	PAF
X11530	LP Hazelton	2.5	1000	2.3	46.50	50.80	0.1	91.1	99.6	PAF
X13711	LP Hazelton	2.5	500	1.9	13.00	13.85	0.5	127.4	135.7	PAF
X17581	Leach breccia/bornite breccia	2.5	1250	2.9	22.10	28.20	0.1	43.3	55.3	PAF
H44936	Au, Leach, Raewn zones	2.5	2750	3.4	12.20	24.20	0.1	23.9	47.4	PAF
H44939	Au, Leach, Raewn zones	2.5	3250	3.3	15.60	19.50	0.1	30.6	38.2	PAF
H45279	Au, Leach, Raewn zones	2.5	1000	2.4	35.00	41.10	0.1	68.6	80.6	PAF
H45505	Au, Leach, Raewn zones	2.5	1500	2.6	42.20	59.60	0.1	82.7	116.8	PAF
H40759	UP Hazelton	2.5	750	2.4	27.90	31.20	0.1	54.7	61.2	PAF
X14918	UP Hazelton	2.5	1000	2.5	24.70	27.30	0.1	48.4	53.5	PAF
X17404	UP Hazelton	2.5	1750	2.3	63.60	67.90	0.1	124.7	133.1	PAF
H44363/64	LP Hazelton	2.5	500	2.2	29.50	33.80	0.1	57.8	66.2	PAF

Note:

Initial pH of 15% H_2O_2: 5.53 (all pH's measured at room temperature).

15% H_2O_2 solution was prepared from 30% H_2O_2 bulk solution and buffered with 0.5N NaOH.

Solid:Liquid Ratio: Varies (as per client request); please see table for details.

Procedure:

Based on "Prediction Manual for Drainage Chemistry from Sulphidic Geologic Material. Version 0 - Dec. 2009. MEND Report 15.3; Pages 15-6; Sequential NAG Test".

Duplicate = is a repeat of the entire NAG procedure.

Appendix 5.3-5
Post-NAG Test Residue Results

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Appendix 5.3-5. Post-NAG Test Residue Results

Sample ID		Ag ppb	Al %	As ppm	Au ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Dy ppm	Er ppm	Eu ppm	Fe %	Ga ppm	Gd ppm	Hf ppm	Ho ppm	K %	La ppm	Li ppm	Lu ppm	Mg %
G32981	LP Hazelton	1909	5.58	13.7	0.4	408	0.5	0.92	0.21	0.01	15.74	2.4	125	2.9	65.88	1	0.4	0.3	4.82	17.02	1.4	0.46	0.1	2.87	7.3	11.4	0.05	1.1
G35770	LP Hazelton	895	4.75	19.7	1.2	1111	1	0.63	0.17	0.01	10.12	0.7	240	2.3	60.79	0.8	0.4	0.05	5.53	13.02	0.8	0.19	0.1	2.82	5.1	11.4	0.05	1.03
H42099	LP Hazelton	259	7.83	20.9	0.2	3846	1	0.35	0.83	0.01	21.8	3.6	55	2.9	86.72	2.5	1.4	0.05	4.62	18.44	2.5	0.43	0.5	2.7	11.5	17.1	0.2	1.44
H43518	LP Hazelton	1352	6.81	44.4	0.2	306	0.5	0.76	0.14	0.14	15.74	1.5	96	5.1	133.88	0.5	0.2	0.2	4.5	19.6	1	0.34	0.05	3.5	7.9	8.2	0.05	0.99
X05177	LP Hazelton	970	4.93	6.3	0.5	1047	0.5	1.24	0.13	0.11	9.5	1.2	213	2.8	92.67	0.6	0.3	0.1	5.12	14.65	0.6	0.18	0.05	3.01	4.1	12.8	0.05	1.11
X06183	LP Hazelton	389	5.14	4.5	0.5	3498	0.5	0.51	0.21	0.02	15.8	0.9	187	3.2	45.68	0.7	0.4	0.05	4.59	14.12	1.3	0.23	0.1	3.44	8.1	14.9	0.05	1.14
X12874	LP Hazelton	4976	5.33	21.4	0.7	242	1	1.37	0.09	0.58	12.69	2.6	199	2.9	167.3	0.8	0.3	0.3	4.29	14.9	1	0.24	0.1	3.45	6.2	8.9	0.05	0.87
X19627	LP Hazelton	1237	5.91	8.2	0.4	1368	0.5	0.81	0.36	0.05	18.13	1.6	151	1.6	58.81	2	1.1	0.3	4.36	14.72	2.1	0.37	0.4	2.52	8.6	6.3	0.2	0.9
H45086	LP Hazelton	308	8.66	64.4	0.05	1035	1	0.26	0.52	0.05	15.44	3.2	37	5.7	81.77	2.9	1.6	0.4	3.93	20.64	2.8	1.3	0.6	2.43	5.7	9.9	0.2	1.05
X13074	Leach breccia/bornite breccia	12592	3.53	112.5	0.3	51	0.5	7.02	0.03	0.31	14.7	7.4	377	0.9	633.68	0.3	0.1	0.3	7.62	9.25	0.7	0.11	0.05	2.06	6.4	3.7	0.05	0.36
X13084	Leach breccia/bornite breccia	1836	2.57	91.5	0.2	515	0.5	3.42	0.21	0.05	30.07	4	388	0.8	125.34	0.9	0.3	0.5	3.56	6.77	1.4	0.04	0.1	1.27	17.1	6	0.05	0.23
G21048	LP Hazelton	1758	4.59	164.5	0.7	66	0.5	0.42	0.27	11.87	3.66	5.7	132	1.8	193.27	0.8	0.3	0.3	5.17	15.89	1.3	0.34	0.1	2.16	1.3	5.9	0.05	0.24
G37342	LP Hazelton	550	6.28	7.8	0.2	768	1	0.3	0.15	0.01	7.63	2.6	173	2.2	53.32	0.6	0.3	0.2	3.59	15.62	1	0.43	0.1	2.64	3.3	7.7	0.05	0.45
H41756	LP Hazelton	1813	6.69	12.9	0.3	156	1	1.76	0.22	2.04	9.83	5	74	4	165.94	0.8	0.4	0.2	5.4	19.33	1	0.43	0.2	3.53	4.2	13.5	0.05	1.65
H42223	LP Hazelton	312	6.61	12.6	0.2	5118	0.5	0.35	0.29	0.01	12.24	1.2	31	4.3	140.08	1	0.5	0.05	4.95	15.83	1.4	0.25	0.2	3.47	6.4	12.4	0.05	1.16
X05329	LP Hazelton	162	7.45	6.5	0.3	983	1	0.17	0.16	0.01	12.59	0.7	146	3.9	34.14	0.9	0.4	0.3	4.5	20.14	1.3	0.63	0.2	2.31	5.2	45.8	0.05	2.63
X06596	Leach breccia/bornite breccia	446	6.33	8.4	0.05	84	0.5	1.05	0.12	0.16	4.07	4.7	124	2.6	101.86	0.5	0.2	0.3	4.99	15.69	0.7	0.47	0.05	3.35	1.3	5.7	0.05	0.48
X06968	Leach breccia/bornite breccia	908	6.59	155	0.1	107	0.5	2.82	0.15	0.25	7.92	4	160	2.1	189.13	0.9	0.3	0.4	5.29	17.24	1.7	0.61	0.1	3.23	3.4	2.8	0.05	0.23
X11578	LP Hazelton	473	5.43	4.9	0.5	1112	1	0.26	0.22	0.01	9.84	4.3	78	2.8	70.77	0.8	0.3	0.2	3.97	13.3	0.8	0.25	0.1	2.5	4.3	26.6	0.05	1.42
H42752	Kerr	498	6.48	4.5	0.05	460	0.5	0.17	0.34	0.01	10.23	4.6	60	2.2	117.39	0.8	0.5	0.2	5.24	17.05	0.8	0.49	0.2	3.32	5.4	13.1	0.05	1.32
H42772	Kerr	576	6.08	2.1	0.2	111	0.5	0.34	0.28	0.01	11.5	9.6	104	1.6	358.88	1.2	0.6	0.3	5.62	13.13	1.1	0.29	0.2	3.74	6.8	4	0.05	0.6
H42801	Kerr	739	8.16	157	0.1	134	0.5	0.66	0.01	0.04	2.71	8.8	91	3.3	162.78	0.3	0.2	0.1	6.26	16.5	0.3	0.63	0.05	3.33	1.3	7.2	0.05	0.16
H42895/96	Kerr	332	6.69	7.9	0.1	278	0.5	0.28	0.28	0.01	1.29	4.9	77	2.2	116.68	0.6	0.3	0.05	5.26	17.35	0.9	0.28	0.05	3.17	0.6	11.8	0.05	1.34
H46054/55	Kerr	288	7.37	7.2	0.05	91	0.5	0.19	0.22	0.01	1.64	10.7	93	2.9	82.16	0.6	0.2	0.3	5.92	18.39	0.8	0.32	0.1	3.46	0.6	8.5	0.05	0.45
H46155/56	Kerr	385	6.61	21.7	0.1	1123	0.5	0.99	0.06	0.01	6.7	0.3	108	1.9	56.93	0.5	0.2	0.05	2.97	14.96	0.7	0.51	0.05	2.83	3.8	38.7	0.05	0.33
H42509	Au, Leach, Raewn zones	66	7.03	34.8	0.1	1491	2	0.24	0.15	0.05	20	0.7	49	4.1	21.97	1.3	0.6	0.3	2.93	17.53	2.3	0.47	0.2	2.58	9.1	9.8	0.05	0.56
H45368	Au, Leach, Raewn zones	55	6.4	96.4	0.2	1279	1	0.41	0.09	0.01	28.09	1.4	55	3.1	5.04	1.1	0.5	0.4	4.44	15.26	2	0.56	0.2	3.69	14.3	8.7	0.05	0.49
X16995	UP Hazelton	94	6.21	3.8	0.05	2766	0.5	0.17	0.39	0.01	9.21	0.5	93	4.2	39.81	1.3	0.8	0.05	3.95	14.47	1.4	0.49	0.3	2.86	5.3	14.3	0.1	1.63
X17080	UP Hazelton	141	6.51	2.8	0.05	3112	1	0.21	0.39	0.01	7.21	0.8	92	3.9	40.9	1.4	0.8	0.05	4.43	14.75	1.1	0.41	0.3	2.91	4.1	15.3	0.1	1.63
X17119	UP Hazelton	234	6.4	20.6	0.05	5937	0.5	0.39	0.2	0.03	5.02	1.5	60	2.9	220.18	1.4	0.9	0.05	3.82	15.94	1.3	0.37	0.3	3.76	3.5	15.2	0.1	0.96
X17360	UP Hazelton	335	6.49	3.9	0.05	1699	3	2.15	0.02	0.03	3.11	0.1	77	1.6	24.26	0.3	0.3	0.05	1.12	37.01	0.2	3.42	0.05	4.29	2.2	5.8	0.05	0.2
G36074	LP Hazelton	1185	4.93	12.1	0.5	1267	0.5	0.84	0.11	0.01	9.74	2.4	177	2.5	110.72	0.6	0.3	0.05	4.33	14.37	0.7	0.12	0.1	3.04	4.8	10.8	0.05	0.95
H41833	LP Hazelton	104	8.01	16.8	0.3	4734	0.5	0.6	0.33	0.04	12.5	0.1	23	2	40.67	0.9	0.5	0.05	4.39	16.72	1.2	0.59	0.2	2.53	5.9	9.2	0.05	0.59
H44421	LP Hazelton	862	7.12	4.9	0.5	114	1	0.11	0.13	0.01	8.69	7.2	129	3.3	72.92	0.6	0.3	0.3	4.9	17.88	1.1	0.39	0.1	3.47	3.7	7.3	0.05	0.47
X10676	LP Hazelton	3009	2.72	86.6	0.3	44	0.5	1.17	0.01	0.09	4.91	4.8	245	0.7	185.58	0.3	0.1	0.2	6.1	5.94	0.4	0.07	0.05	1.64	2.1	2.8	0.05	0.15
X10945	Leach breccia/bornite breccia	428	6.02	4.6	0.05	408	0.5	0.28	0.03	0.12	9.52	2	107	1.9	52.06	0.3	0.05	0.1	4.21	12.3	0.5	0.35	0.05	2.92	4.3	3.4	0.05	0.19
X11008	LP Hazelton	711	2.65	11.4	0.2	103	0.5	0.35	0.08	0.4	4.93	3.1	174	1.4	187.4	0.2	0.05	0.1	4.35	6.85	0.3	0.06	0.05	1.55	2.2	4.1	0.05	0.26
X11486	LP Hazelton	868	3.85	21.6	0.6	309	0.5	0.52	0.04	0.11	5.16	2.5	171	3.6	131.65	0.2	0.05	0.1	2.87	10.35	0.4	0.06	0.05	2.44	2.3	5.2	0.05	0.31
X11530	LP Hazelton	932	4.3	18.1	0.8	148	0.5	0.73	0.07	0.5	6.09	2.8	188	2.9	100.52	0.4	0.1	0.2	4.22	10.72	0.6	0.1	0.05	2.2	2.7	5.1	0.05	0.23
X13711	LP Hazelton	324	6.31	39.4	0.2	769	0.5	0.39	0.08	0.26	6.87	1.3	173	1.7	36.59	0.5	0.3	0.2	4.45	17.18	0.6	0.52	0.05	2.81	3.1	3.2	0.05	0.17
X17581	Leach breccia/bornite breccia	2401	4.2	126	0.2	246	0.5	0.39	0.38	0.13	38.85	1.7	283	1.6	212.49	1.4	0.6	0.9	3.62	10.5	2.2	0.16	0.2	2.9	19.1	6.6	0.05	0.57
H44936	Au, Leach, Raewn zones	1258	5.84	39	1.8	1293	0.5	0.57	0.14	0.11	11.31	3.3	78	4.8	1729.11	0.9	0.4	0.05	2.93	15.12	1.1	0.41	0.1	2.67	6.1	21.5	0.05	0.72
H44939	Au, Leach, Raewn zones	108	6.92	76.9	0.6	1450	0.5	0.13	0.19	0.03	14.01	1	70	4.9	117.91	1.2	0.5	0.2	4.25	14.38	1.7	0.54	0.2	3.53	6.5	20	0.05	0.86
H45279	Au, Leach, Raewn zones	481	6.48	144.2	0.9	225	0.5	0.27	0.16	0.27	10.93	4.8	74	6.4	104.45	1	0.5	0.3	3.84	14.05	1	0.56	0.2	3.82	5.4	8.5	0.05	0.37
H45505	Au, Leach, Raewn zones	842	6.71	190.4	0.9	603	1	0.37	0.19	0.46	21.27	7	133	7.3	164.03	1.2	0.5	0.4	4.12	17.73	1.9	0.48	0.2	3.3	11.7	14.6	0.05	0.46
H40759	UP Hazelton	590	7.41	16.2	0.05	1075	1	0.16	0.01	0.02	1.25	1.8	81	3	32.33	0.2	0.1	0.05	3.24	18.21	0.3	0.35	0.05	2.82	0.6	4.5	0.05	0.27
X14918	UP Hazelton	190	7.46	69.2	0.2	1391	1	1.99	0.36	0.01	24.4	0.6	76	5.2	24.87	1.6	0.7	0.4	3.02	20.07	2.1	0.95	0.3	2.41	11.6	31.9	0.1	1.05
X17404	UP Hazelton	127	7.49	14	0.05	4917	1	0.47	0.35	0.02	6.72	0.4	78	2.6	66.97	0.7	0.4	0.05	5.9	16.62	1.1	0.76	0.1	2.79	3.4	16.1	0.05	1.78
H44363/64	LP Hazelton	2268	5.1	53.6	0.3	100	1	0.36	0.1	0.57	19.52	6.2	232	3.4	175.63	0.8	0.2	0.5	4.13	14.01	1.5	0.17	0.05	2.98	8.7	7.2	0.05	0.49
-	Kerr	441.5	6.65	7.55	0.1	206	0.5	0.31	0.25	0.01	4.705	6.85	92	2.2	117.035	0.6	0.25	0.15	5.44	16.775	0.8	0.405	0.075	3.325	2.55	10.15	0.05	0.525
-	UP Hazelton	190	6.51	14	0.05	2766	1	0.39	0.35	0.02	6.72	0.6	78	3	39.81	1.3	0.7	0.05	3.82	16.62	1.1	0.49	0.3	2.86	3.5	15.2	0.1	1.05
-	LP Hazelton	868	5.58	13.7	0.4	769	0.5	0.52	0.16	0.05	9.84	2.5	151	2.9	86.72	0.8	0.3	0.2	4.5	15.62	1	0.34	0.1	2.7	4.8	9.2	0.05	0.95
-	Au, Leach, Raewn zones	294.5	6.595	86.65	0.75	1286	0.75	0.32	0.155	0.08	17.005	2.35	72	4.85	111.18	1.15	0.5	0.3	3.98	15.19	1.8	0.51	0.2	3.415	7.8	12.2	0.05	0.525
-	Leach breccia/bornite breccia	1372	5.11	102	0.15	176.5	0.5	1.935	0.135	0.145	12.11	4	221.5	1.75	157.235	0.7	0.25	0.35	4.6	11.4	1.05	0.255	0.075	2.91	5.35	4.7	0.05	0.295

Appendix 5.3-5. Post-NAG Test Residue Results

Sample ID		Mn ppm	Mo ppm	Na %	Nb ppm	Nd ppm	Ni ppm	P %	Pb ppm	Pr ppm	Rb ppm	S %	Sb ppm	Sc ppm	Sm ppm	Sn ppm	Sr ppm	Ta ppm	Tb ppm	Th ppm	Ti %	Tm ppm	U ppm	V ppm	W ppm	Y ppm	Yb ppm	Zn ppm	Zr ppm
G32981	LP Hazelton	224	22.96	0.335	3.54	9.2	2	0.104	11.78	1.9	75.6	0.9	3.99	9.2	2	8.4	23	0.2	0.2	3.1	0.19	0.05	1.2	109	1	3.6	0.5	59.9	11.9
G35770	LP Hazelton	224	34.46	0.047	2.1	4.9	3.2	0.109	10.46	1.2	69	0.12	2.59	12.2	1	30.2	7	0.1	0.1	1.7	0.121	0.05	0.6	139	0.5	2.9	0.4	74.2	5.3
H42099	LP Hazelton	453	63.46	3.355	8.89	10.5	2.4	0.158	11.59	2.4	74.4	0.08	2.3	17.6	2	29.3	351	0.4	0.4	3.5	0.33	0.2	1.9	200	0.9	11.6	1.5	56.3	14.5
H43518	LP Hazelton	105	42.95	0.062	2.52	7.2	2.8	0.101	18.19	1.7	90	0.8	30.26	15.3	1.2	12.1	154	0.1	0.1	2.6	0.099	0.05	0.9	185	0.8	2.1	0.4	116.4	9.3
X05177	LP Hazelton	226	15.84	0.037	1.57	5	2.5	0.072	33.94	1.2	66.3	0.7	2.65	7.8	1.1	9.2	12	0.05	0.05	2	0.112	0.05	0.5	104	0.7	1.8	0.3	91.7	4.4
X06183	LP Hazelton	128	94.15	0.436	1.96	7.6	3.2	0.11	34.55	1.8	95.3	0.22	2.28	11.2	1.5	11.4	113	0.05	0.1	2.8	0.105	0.05	0.7	139	0.3	2.9	0.5	143.7	8.1
X12874	LP Hazelton	122	83.5	0.022	2.71	6.5	1.4	0.068	46.08	1.5	88.6	1.03	3.71	7	1.3	8.5	23	0.1	0.1	2.4	0.143	0.05	0.7	94	0.7	2.9	0.4	92.4	6.6
X19627	LP Hazelton	341	20.85	2.405	6.29	9.5	2.6	0.094	16.35	2.2	54.2	0.52	2.76	9.5	1.9	10.4	135	0.3	0.3	3.1	0.273	0.1	1.1	105	1.5	9.5	1.1	66.2	11.6
H45086	LP Hazelton	690	10.13	2.916	5.89	10.2	15.8	0.157	11.21	2	85.7	0.13	9.29	14.7	2.2	28.8	119	0.3	0.4	2.3	0.369	0.2	2.6	185	4	11.7	1.8	64.1	39
X13074	Leach breccia/bornite breccia	46	53.57	0.025	0.86	7.2	7.3	0.072	23.47	1.7	51	3.61	280.07	6.5	0.9	32.8	29	0.05	0.05	1.4	0.049	0.05	0.4	126	3.1	0.9	0.1	45.1	4.3
X13084	Leach breccia/bornite breccia	24	48.69	0.096	0.71	13	1.2	0.078	8.34	3.3	33.3	1.09	103.17	8.9	1.9	7.9	30	0.05	0.2	1.5	0.046	0.05	0.2	154	5.9	2.9	0.3	4.7	1.7
G21048	LP Hazelton	51	242.96	0.33	0.83	2.9	7.7	0.202	354.31	0.5	68.8	2.27	13.94	7.4	1	11.1	70	0.05	0.2	1.3	0.052	0.05	1	124	0.4	2.9	0.3	973.3	11.5
G37342	LP Hazelton	116	257.86	0.302	0.59	4.5	4.7	0.123	38.35	1	84.5	0.7	0.38	8	1.1	6.2	63	0.05	0.1	1.8	0.045	0.05	0.8	106	0.4	2.5	0.3	89.5	13.1
H41756	LP Hazelton	393	96.03	1.029	3.73	5.8	2.3	0.118	106.19	1.2	111.5	1.66	5.22	13.7	1.1	8.1	177	0.2	0.1	3.2	0.158	0.05	1.1	213	1.4	3.1	0.5	400.6	14.8
H42223	LP Hazelton	162	81.56	0.356	2.6	6.6	1.3	0.156	19.31	1.4	102.1	0.33	3.82	14.7	1.4	21.7	153	0.1	0.2	2.2	0.163	0.05	0.8	204	0.8	3.6	0.6	93.9	7.5
X05329	LP Hazelton	790	59.12	0.218	1.38	7	11.9	0.094	9	1.5	39.8	0.19	0.51	9.9	1.5	8.6	41	0.05	0.2	1.6	0.129	0.05	1	138	0.4	2.8	0.6	161.9	20.9
X06596	Leach breccia/bornite breccia	49	40.02	0.284	0.76	3.1	0.9	0.1	10.07	0.6	98.4	2.72	2.65	9.8	0.9	7	61	0.05	0.05	1.5	0.052	0.05	0.8	102	0.8	1.6	0.2	22.9	13.8
X06968	Leach breccia/bornite breccia	23	28.28	0.313	0.96	4.6	1.5	0.152	18.96	1	87.9	2.41	32.83	10.2	1.1	8.2	49	0.05	0.2	1.7	0.059	0.05	1.1	111	0.9	2.9	0.3	48.3	21.4
X11578	LP Hazelton	696	63.36	0.151	1.49	5.7	2.6	0.114	25.94	1.2	63.7	0.72	0.44	11.4	1.2	9.9	30	0.05	0.1	2.3	0.089	0.05	0.9	142	0.3	2.7	0.4	117.8	8.7
H42752	Kerr	262	13.82	0.553	7.54	4.7	4.7	0.183	3.41	1.1	70.2	1.14	2.47	16.7	1.1	12.5	54	0.4	0.1	1.3	0.272	0.05	0.5	272	2.7	3.6	0.6	80.4	16.1
H42772	Kerr	68	285.54	0.051	2.66	5.1	1.9	0.156	4.54	1.3	61	2.32	1.22	17.1	0.9	18	55	0.1	0.2	1.2	0.121	0.05	0.4	237	2.1	4.6	0.7	27.2	8.2
H42801	Kerr	10	15.31	0.438	1.14	1.6	3	0.056	34.3	0.3	78.3	2.64	35.82	18.2	0.5	7.2	140	0.05	0.05	1	0.048	0.05	0.8	211	3.1	1.5	0.4	28.8	20.5
H42895/96	Kerr	108	17.36	0.096	2.41	1.1	1.5	0.182	12.93	0.2	53.7	1.1	0.7	20.2	0.6	10.4	52	0.1	0.1	0.8	0.099	0.05	0.4	236	1.9	2.2	0.4	125.7	8.3
H46054/55	Kerr	45	33.95	0.13	1.3	1.4	11.3	0.152	5	0.2	68.1	3.1	0.77	20.3	0.7	10.4	49	0.05	0.1	0.8	0.085	0.05	0.5	223	2	2.2	0.3	26	10.2
H46155/56	Kerr	25	84.76	3.457	1.33	3.1	2	0.034	11.73	0.8	88.1	0.1	2.01	4.7	0.6	7.7	100	0.05	0.05	1.3	0.101	0.05	1	99	7.9	1.7	0.3	13.4	15.2
H42509	Au, Leach, Raewn zones	90	5.62	0.443	3.47	11.8	2.6	0.131	11.04	2.6	108.7	0.11	8.61	14.5	2.5	10.2	56	0.2	0.2	1.8	0.21	0.05	1.2	182	14.1	4.2	0.6	24	13.9
H45368	Au, Leach, Raewn zones	66	17.74	0.16	1.1	14.9	2.2	0.112	6.6	3.3	133.5	0.34	6.45	12.2	2.6	10.3	37	0.05	0.2	2.9	0.091	0.05	1.8	85	7.8	4.3	0.5	15.2	16.1
X16995	UP Hazelton	161	84.4	2.181	6.13	4.9	3.3	0.151	2.31	1	91.4	0.11	3.11	17.8	1	32.7	119	0.3	0.2	1.2	0.243	0.1	0.6	246	9.9	6.2	0.9	13.9	15.7
X17080	UP Hazelton	294	31.67	2.135	6.87	3.8	3.6	0.16	3.39	0.8	93.8	0.17	2.54	17.5	0.9	14.1	130	0.3	0.2	1.3	0.264	0.1	0.6	257	9.9	6.3	1	27.9	11.9
X17119	UP Hazelton	240	11.83	0.814	6.16	3.2	3	0.125	10.22	0.7	119.3	0.19	2.15	13.3	0.8	11.7	147	0.2	0.2	1	0.181	0.1	1.4	682	5.9	5.8	1.3	50.3	12.3
X17360	UP Hazelton	210	11.4	1.195	19.06	0.8	1.4	0.006	36.2	0.3	144.4	0.02	1.46	0.5	0.1	11.6	105	0.5	0.05	15	0.038	0.05	13.1	79	1.6	2	0.4	23.1	95.1
G36074	LP Hazelton	181	55.17	0.025	2.51	5.1	2.1	0.097	7.28	1.2	74.4	0.85	3.63	11.8	0.9	13	11	0.1	0.1	1.7	0.132	0.05	0.4	136	0.8	2.5	0.3	44.2	4.9
H41833	LP Hazelton	57	1.89	3.963	7.03	6.3	0.5	0.165	4.71	1.4	75	0.17	1.92	16	1.1	14.2	154	0.4	0.1	2.5	0.258	0.05	1.2	241	20.6	3.3	0.7	23.1	14.1
H44421	LP Hazelton	159	199.88	0.188	0.47	5.1	10.8	0.107	23.74	1.1	105.5	2.46	0.37	9.5	1.1	4.8	35	0.05	0.1	1.5	0.052	0.05	0.9	108	0.3	2.6	0.3	119.3	12.3
X10676	LP Hazelton	48	40.34	0.02	1.07	2.7	3.2	0.039	14.95	0.6	30.1	3.52	16.59	3.7	0.5	10.8	6	0.05	0.05	1.1	0.059	0.05	0.2	74	2.6	1.2	0.1	7.5	2.3
X10945	Leach breccia/bornite breccia	14	34.46	0.176	1.07	5.2	0.7	0.031	7.67	1.1	87.4	1.56	7.25	7.6	0.8	7.5	15	0.05	0.05	1.8	0.076	0.05	0.5	105	10.9	0.9	0.1	9.5	9.8
X11008	LP Hazelton	29	25.12	0.041	0.66	2.8	0.9	0.041	15.63	0.6	42.8	1.77	15.79	4	0.6	8.9	23	0.05	0.05	1.1	0.041	0.05	0.2	58	0.9	1	0.1	37.1	2
X11486	LP Hazelton	27	89.11	0.051	0.45	2.8	3.2	0.027	21.56	0.6	77.4	1.19	9.32	2.7	0.6	10.1	14	0.05	0.05	0.9	0.033	0.05	0.1	50	0.2	0.9	0.05	37.8	2.1
X11530	LP Hazelton	46	119.92	0.106	0.68	3.5	4	0.063	23.64	0.8	67.3	1.66	1.63	4.1	0.7	11	15	0.05	0.05	1.3	0.041	0.05	0.3	66	0.4	1.4	0.1	58.1	3.4
X13711	LP Hazelton	14	21.68	0.28	0.81	4	0.7	0.157	35.48	0.8	77.9	0.66	5.57	8.4	0.9	9.2	118	0.05	0.1	1.3	0.053	0.05	0.7	144	0.6	2.1	0.3	74.6	20.7
X17581	Leach breccia/bornite breccia	77	62.05	0.037	0.97	18	2	0.229	46.79	4.4	71.2	0.93	25.63	8.8	3.1	18.9	101	0.05	0.2	2.8	0.059	0.05	1	122	3.5	4.4	0.6	20	4.5
H44936	Au, Leach, Raewn zones	48	84.52	0.699	2.09	5.9	13.3	0.092	19.11	1.3	103	0.63	12.44	10.3	1.1	27.3	68	0.1	0.1	4	0.155	0.05	3.7	514	10.3	2.8	0.5	25.4	10.5
H44939	Au, Leach, Raewn zones	179	79.65	0.505	1.84	8.1	13	0.107	11.09	1.6	129.1	0.15	7.21	11.7	1.5	28.1	74	0.05	0.2	2	0.139	0.05	1.3	147	6.9	4.4	0.6	52.8	18.4
H45279	Au, Leach, Raewn zones	40	190.08	0.355	3.58	5.6	3.2	0.131	16.72	1.2	129.5	1.15	27.79	16.3	1	12.4	68	0.2	0.2	1.1	0.171	0.05	0.9	198	8.9	4.1	0.6	51.2	17.1
H45505	Au, Leach, Raewn zones	52	544.38	0.397	2.84	10.2	7.5	0.108	80.35	2.3	94.4	1.15	102.69	13.6	1.8	15.9	70	0.1	0.2	1.9	0.177	0.05	1.4	183	11.1	4.9	0.6	73.5	15
H40759	UP Hazelton	16	12.9	0.149	2.81	0.8	2.8	0.073	15.87	0.2	69.5	0.57	1.5	17.4	0.2	8.8	77	0.2	0.05	0.8	0.133	0.05	0.5	226	2	0.9	0.3	17.3	12.9
X14918	UP Hazelton	134	5.04	4.867	5.88	14.3	26.7	0.181	8.9	3	92.6	0.11	3.76	15.9	2.8	10.1	158	0.3	0.2	2.4	0.377	0.1	0.9	140	9.3	5.9	0.8	27.7	28.8
X17404	UP Hazelton	220	4.92	2.382	6.37	3.8	1.5	0.179	4.54	0.8	66	0.26	3.94	23.5	0.7	16.9	109	0.3	0.1	1.2	0.237	0.05	0.7	259	12.5	2.6	0.7	34	21.8
H44363/64	LP Hazelton	100	77.28	0.062	1.21	10.3	9.6	0.084	26.44	2.4	107.4	2.25	20.99	8.4	2.1	5.4	7	0.05	0.1	1.9	0.099	0.05	0.5	100	0.8	2.5	0.3	69.5	4.9
-	Kerr	56.5	25.655	0.284	1.87	2.35	2.5	0.154	8.365	0.55	69.15	1.73	1.615	17.65	0.65	10.4	54.5	0.075	0.1	1.1	0.1	0.05	0.5	229.5	2.4	2.2	0.4	28	12.7
-	UP Hazelton	210	11.83	2.135	6.16	3.8	3	0.151	8.9	0.8	92.6	0.17	2.54	17.4	0.8	11.7	119	0.3	0.2	1.2	0.237	0.1	0.7	246	9.3	5.8	0.8	27.7	15.7
-	LP Hazelton	159	59.12	0.218	1.96	5.7	2.6	0.107	19.31	1.2	75	0.72	3.63	9.5	1.1	10.4	41	0.05	0.1	2	0.112	0.05	0.8	136	0.7	2.8	0.4	74.6	9.3
-	Au, Leach, Raewn zones	59	82.085	0.42	2.465	9.15	5.35	0.11	13.905	1.95	118.9	0.485	10.525	12.9	1.65	14.15	68	0.1	0.2	1.95	0.163	0.05	1.35	182.5	9.6	4.25	0.6	38.3	15.55
-	Leach breccia/bornite breccia	35	44.355	0.136	0.91	6.2	1.35	0.089	14.515	1.4	79.3	1.985	29.23	8.85	1	8.05	39.5	0.05	0.125	1.6	0.0555	0.05	0.65	116.5	3.3	2.25	0.25	21.45	7.15

Appendix 6.1-1

Static Tests Results and Statistical Summary for the KSM Tailing

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Appendix 6.1-1. Static Tests Results and Statistical Summary for the KSM Tailing

Deposit	Lab	Lab Certificate	Date	Type	Description	Weight kg	Comment	Rinse pH	Paste pH	S total *0.01* %	S sulphide *0.01* %	S sulphide calc %	$S\ SO_4\ NaCO_3$ *0.01* %	$S\ SO_4\ HCl$ *0.01* %	$S\ BaSO_4$ %	S del %
Mitchell	ALS Chemex	VA09124961	02/11/09	Tailings	Rougher	0.86	Pilot plant rougher tails	8	8.2	0.38	0.07	0.06	0.32	0.32	0.059	-0.069
Mitchell	ALS Chemex	VA09106993	09/11/09	Tailings	Sulphide	0.4	Pilot plant sulphide tails	6.1	5.8	22.4	20.2	22.02	0.38	0.38	0.016	1.804
Mitchell	ALS Chemex	VA09106993	09/11/09	Tailings	Rougher/sulphide	0.36	Pilot plant rougher-sulphide tails combined	6.7	6.6	3.13	2.38	2.73	0.4	0.4	0.004	0.346
Mitchell	ALS Chemex	VA09106993	09/11/09	Tailings	Rougher-Fines	0.34	Pilot plant rougher tails - fine fraction	7.7	7.9	0.38	0.04	0.01	0.37	0.37	0.069	-0.099
Mitchell	ALS Chemex	VA09106993	09/11/09	Tailings	Rougher-Coarse	0.18	Pilot plant rougher tails - coarse fraction	7.8	7.9	0.21	0.08	0.06	0.15	0.15	0.039	-0.059
Mitchell/Kerr	ALS Chemex	VA10059173	10/05/10	Tailings	2535-16 PyroTI I	0.26			10.2	0.22	0.13	0.14	0.08	0.08	0.047	-0.037
Mitchell/Kerr	ALS Chemex	VA10059173	10/05/10	Tailings	2535-16 PyroTI II	0.26			10.9	0.2	0.07	0.11	0.09	0.09	0.048	-0.008
Mitchell/Kerr	ALS Chemex	VA10059173	10/05/10	Tailings	2535-16 PyroTI III	0.26			9	0.2	0.13	0.16	0.04	0.04	0.048	-0.018
Mitchell/Kerr	ALS Chemex	VA10059173	10/05/10	Tailings	2535-16 PyroTI IV	0.26			9.1	0.2	0.13	0.15	0.05	0.05	0.050	-0.030
Mitchell/Kerr	ALS Chemex	VA10059173	10/05/10	Tailings	2535-16 PyroTI V	0.26			8.6	0.19	0.12	0.16	0.03	0.03	0.050	-0.010
Mitchell/Kerr	ALS Chemex	VA10059173	10/05/10	Tailings	2535-17 RoTI I	0.26			10	0.48	0.14	0.13	0.35	0.35	0.053	-0.063
Mitchell/Kerr	ALS Chemex	VA10059173	10/05/10	Tailings	2535-17 RoTI II	0.26			9.4	0.48	0.14	0.14	0.34	0.34	0.055	-0.055
Mitchell/Kerr	ALS Chemex	VA10059173	10/05/10	Tailings	2535-17 RoTI III	0.26			8.5	0.46	0.13	0.14	0.32	0.32	0.056	-0.046
Mitchell/Kerr	ALS Chemex	VA10059173	10/05/10	Tailings	2535-17 RoTI IV	0.26			10.3	0.5	0.14	0.16	0.34	0.34	0.054	-0.034
Mitchell/Kerr	ALS Chemex	VA10059173	10/05/10	Tailings	2535-17 RoTI V	0.26			11.1	0.48	0.16	0.16	0.32	0.32	0.057	-0.057
Mitchell/Kerr	ALS Chemex	VA10059173	10/05/10	Tailings	2535-19 PyRoTI I	0.26			7.8	0.35	0.06	0.05	0.3	0.3	0.056	-0.066
Mitchell/Kerr	ALS Chemex	VA10059173	10/05/10	Tailings	2535-19 PyRoTI II	0.26			9	0.37	0.06	0.08	0.29	0.29	0.058	-0.038
Mitchell/Kerr	ALS Chemex	VA10059173	10/05/10	Tailings	2535-19 PyRoTI III	0.26			8.6	0.35	0.07	0.05	0.3	0.3	0.058	-0.078
Mitchell/Kerr	ALS Chemex	VA10059173	10/05/10	Tailings	2535-19 PyRoTI IV	0.26			9	0.36	0.1	0.08	0.28	0.28	0.058	-0.078
Mitchell/Kerr	ALS Chemex	VA10059173	10/05/10	Tailings	2535-19 PyRoTI V	0.26			8.7	0.35	0.07	0.06	0.29	0.29	0.058	-0.068
Mitchell/Kerr	ALS Chemex	VA10059173	10/05/10	Tailings	2535-19 PyRoTI Composite	0.26			8.8	0.35	0.08	0.06	0.29	0.29	0.057	-0.077
Mitchell/Sulphurets	ALS Chemex	VA10109266	11/08/10	Tailings	KM2670-1	0.08			8.9	0.12	0.08	0.07	0.03	0.05	0.067	-0.077
Mitchell/Sulphurets	ALS Chemex	VA10109266	11/08/10	Tailings	KM2670-2	0.04			9.3	0.11	0.06	0.04	0.02	0.07	0.069	-0.089
Mitchell/Sulphurets	ALS Chemex	VA10109266	11/08/10	Tailings	KM2670-3	0.04			9.8	0.12	0.07	0.1	0.07	0.02	0.068	-0.038
Mitchell/Sulphurets	ALS Chemex	VA10109266	11/08/10	Tailings	KM2670-4	0.06			8.9	0.19	0.11	0.13	0.08	0.06	0.069	-0.049
Iron Cap	ALS Chemex	VA10161225	23/11/10	Tailings	2748-11 PyRoTI IV	0.24			8.4	0.06	0.05	0.04	0.005	0.02	0.079	-0.089
Iron Cap	ALS Chemex	VA10161225	23/11/10	Tailings	2748-11 PyRoTI V	0.22			8.8	0.05	0.05	0.04	0.01	0.01	0.079	-0.089
Iron Cap	ALS Chemex	VA10161225	23/11/10	Tailings	2748-12 PyRoTI IV	0.22			8.6	0.05	0.05	0.04	0.005	0.01	0.069	-0.079
Iron Cap	ALS Chemex	VA10161225	23/11/10	Tailings	2748-12 PyRoTI V	0.22			8.6	0.05	0.05	0.03	0.01	0.02	0.074	-0.094
Iron Cap	ALS Chemex	VA10161225	23/11/10	Tailings	2748-18 PyRoTI III	0.26			8.4	0.07	0.05	0.05	0.02	0.02	0.071	-0.071
Iron Cap	ALS Chemex	VA10161225	23/11/10	Tailings	2748-18 PyRoTI IV	0.26			8.4	0.08	0.05	0.05	0.005	0.03	0.072	-0.072
Iron Cap	ALS Chemex	VA10161225	23/11/10	Tailings	2748-18 PyRoTI V	0.22			8.4	0.08	0.05	0.06	0.01	0.02	0.072	-0.062
Iron Cap	ALS Chemex	VA10161225	23/11/10	Tailings	2748-18 PyRoTI Composite	0.24			8.4	0.07	0.06	0.05	0.005	0.02	0.071	-0.081
Iron Cap	ALS Chemex	VA10161225	23/11/10	Tailings	2748-99 PyRoTI IV	0.02				17.45	15.2	16.96	0.49	0.49	0.006	1.754
Iron Cap	ALS Chemex	VA10161225	23/11/10	Tailings	2748-99 PyRoTI V	0.1			4.9	1.67	0.07	0.46	1.27	1.21	0.003	0.387

Values in blue are calculated

Italics values in row 2 are detection limits

Values below detection limit are reported as half detection limit

Blank cells are due to insufficient sample

Appendix 6.1-1. Static Tests Results and Statistical Summary for the KSM Tailing

Description	S del calc %	TAP kg $CaCO_3$ /t	SAP kg $CaCO_3$ /t	NP kg $CaCO_3$ /t	NP adjusted kg $CaCO_3$ /t	C total	C inorganic	CO_2 inorganic	C del calc %	CaNP total kg $CaCO_3$ /t	CaNP inorganic kg $CaCO_3$ /t	CaNP Ca kg $CaCO_3$ /t	CaNP CaMg kg $CaCO_3$ /t	TNNP kg $CaCO_3$ /t	TNNP adjusted kg $CaCO_3$ /t	SNNP kg $CaCO_3$ /t	SNNP adjusted kg $CaCO_3$ /t
				0.5		*0.01*	*0.05*	*0.2*									
Rougher	0	11.88	2.19	28	28	0.33	0.28	1	0.05	27.50	22.74	34.96	66.43	16.13	16.13	25.81	25.81
Sulphide	1.804	700.00	631.25	6	0	0.38	0.11	0.4	0.27	31.67	9.10	18.98	40.95	-694.00	-700.00	-625.25	-631.25
Rougher/sulphide	0.346	97.81	74.38	22	22	0.34	0.25	0.9	0.09	28.34	20.47	34.46	65.29	-75.81	-75.81	-52.38	-52.38
Rougher-Fines	0	11.88	1.25	31	31	0.4	0.34	1.2	0.06	33.34	27.29	40.21	75.02	19.13	19.13	29.75	29.75
Rougher-Coarse	0	6.56	2.50	31	31	0.25	0.18	0.7	0.07	20.83	15.92	23.47	46.39	24.44	24.44	28.50	28.50
2535-16 PyroTI I	0	6.88	4.06	16	16	0.13	0.13	0.5	0	10.83	11.37	18.98	51.83	9.13	9.13	11.94	11.94
2535-16 PyroTI II	0	6.25	2.19	16	16	0.13	0.14	0.5	0	10.83	11.37	21.98	55.26	9.75	9.75	13.81	13.81
2535-16 PyroTI III	0	6.25	4.06	14	14	0.12	0.12	0.5	0	10.00	11.37	15.73	47.82	7.75	7.75	9.94	9.94
2535-16 PyroTI IV	0	6.25	4.06	14	14	0.12	0.11	0.4	0.01	10.00	9.10	15.98	48.39	7.75	7.75	9.94	9.94
2535-16 PyroTI V	0	5.94	3.75	13	13	0.11	0.11	0.4	0	9.17	9.10	15.48	48.68	7.06	7.06	9.25	9.25
2535-17 RoTI I	0	15.00	4.38	15	15	0.12	0.12	0.4	0	10.00	9.10	23.97	49.25	0.00	0.00	10.63	10.63
2535-17 RoTI II	0	15.00	4.38	14	14	0.12	0.13	0.5	0	10.00	11.37	22.97	47.53	-1.00	-1.00	9.63	9.63
2535-17 RoTI III	0	14.38	4.06	12	12	0.15	0.11	0.4	0.04	12.50	9.10	22.97	48.68	-2.38	-2.38	7.94	7.94
2535-17 RoTI IV	0	15.63	4.38	14	14	0.13	0.12	0.4	0.01	10.83	9.10	24.22	49.82	-1.63	-1.63	9.63	9.63
2535-17 RoTI V	0	15.00	5.00	18	18	0.13	0.14	0.5	0	10.83	11.37	26.97	52.97	3.00	3.00	13.00	13.00
2535-19 PyRoTI I	0	10.94	1.88	23	23	0.3	0.24	0.9	0.06	25.00	20.47	30.22	60.42	12.06	12.06	21.13	21.13
2535-19 PyRoTI II	0	11.56	1.88	25	25	0.3	0.26	1	0.04	25.00	22.74	32.21	63.00	13.44	13.44	23.13	23.13
2535-19 PyRoTI III	0	10.94	2.19	25	25	0.3	0.27	1	0.03	25.00	22.74	30.72	60.99	14.06	14.06	22.81	22.81
2535-19 PyRoTI IV	0	11.25	3.13	26	26	0.3	0.25	0.9	0.05	25.00	20.47	31.96	63.28	14.75	14.75	22.88	22.88
2535-19 PyRoTI V	0	10.94	2.19	25	25	0.32	0.25	0.9	0.07	26.67	20.47	31.47	62.71	14.06	14.06	22.81	22.81
2535-19 PyRoTI Comp	0	10.94	2.50	25	25	0.32	0.25	0.9	0.07	26.67	20.47	30.72	61.28	14.06	14.06	22.50	22.50
KM2670-1	0	3.75	2.50	43	43	0.52	0.48	1.7	0.04	43.34	38.66	39.96	75.31	39.25	39.25	40.50	40.50
KM2670-2	0	3.44	1.88	46	46	0.57	0.53	2	0.04	47.50	45.49	43.95	81.04	42.56	42.56	44.13	44.13
KM2670-3	0	3.75	2.19	43	43	0.54	0.49	1.8	0.05	45.00	40.94	42.20	78.46	39.25	39.25	40.81	40.81
KM2670-4	0	5.94	3.44	41	41	0.54	0.47	1.7	0.07	45.00	38.66	40.46	76.74	35.06	35.06	37.56	37.56
2748-11 PyRoTI IV	0	1.88	1.56	24	24	0.23	0.8	0.26	0	19.17	5.91	24.97	45.24	22.13	22.13	22.44	22.44
2748-11 PyRoTI V	0	1.56	1.56	27	27	0.24	0.9	0.24	0	20.00	5.46	24.72	44.96	25.44	25.44	25.44	25.44
2748-12 PyRoTI IV	0	1.56	1.56	26	26	0.23	0.8	0.25	0	19.17	5.69	21.98	45.53	24.44	24.44	24.44	24.44
2748-12 PyRoTI V	0	1.56	1.56	26	26	0.23	0.9	0.26	0	19.17	5.91	23.22	48.11	24.44	24.44	24.44	24.44
2748-18 PyRoTI III	0	2.19	1.56	28	28	0.27	1	0.28	0	22.50	6.37	24.97	50.40	25.81	25.81	26.44	26.44
2748-18 PyRoTI IV	0	2.50	1.56	27	27	0.25	0.9	0.29	0	20.83	6.60	24.72	50.11	24.50	24.50	25.44	25.44
2748-18 PyRoTI V	0	2.50	1.56	27	27	0.25	0.9	0.28	0	20.83	6.37	24.47	49.82	24.50	24.50	25.44	25.44
2748-18 PyRoTI Comp	0	2.19	1.88	28	28	0.25	0.9	0.29	0	20.83	6.60	24.47	49.82	25.81	25.81	26.13	26.13
2748-99 PyRoTI IV	1.754	545.31	475.00			0.025	0.1	0.07	0	2.08	1.59	53.19	105.09				
2748-99 PyRoTI V	0.387	52.19	2.19	1	1	0.025	0.1	0.16	0	2.08	3.64	70.17	157.49	-51.19	-51.19	-1.19	-1.19

Values in blue are calculated

Italics values in row 2 are detection limits

Values below detection limit are reported as half detection limit

Blank cells are due to insufficient sample

Appendix 6.1-1. Static Tests Results and Statistical Summary for the KSM Tailing

Description	ICNNP kg $CaCO_3$ /t	TNPR	TNPR adjusted	SNPR	SNPR adjusted	FIZZ	Ag *0.01* ppm	Al *0.01* %	As *0.2* ppm	Ba *10* ppm	Be *0.05* ppm	Bi *0.01* ppm	Ca *0.01* %	Cd *0.02* ppm	Ce *0.01* ppm	Co *0.1* ppm	Cr *1* ppm	Cs *0.05* ppm	Cu *0.2* ppm	Fe *0.01* %	Ga *0.05* ppm	Ge *0.05* ppm	Hf *0.1* ppm	Hg *0.01* ppm	In *0.005* ppm	K *0.01* %	La *0.5* ppm	Li *0.2* ppm
Rougher	10.87	2.36	2.36	12.80	12.80	1	0.53	5.87	4.1	2540	0.93	0.15	1.4	0.69	17.2	2.1	74	3.38	147	2.46	16	0.08	0.3	0.01	0.145	3.03	9.2	11.1
Sulphide	-690.90	0.01	0.01	0.01	0.00	1	9.29	4.69	118	670	0.53	3.29	0.76	6.6	12.2	58.1	231	2.8	4030	21.6	11.2	0.39	6.7	0.13	0.25	2.24	5.5	6.2
Rougher/sulphide	-77.34	0.22	0.22	0.30	0.30	2	1.42	6	16.7	190	0.76	0.49	1.38	0.94	15.65	8.7	99	3.26	585	4.75	14.345	0.09	1	0.03	0.103	2.9	7..5	8.9
Rougher-Fines	15.42	2.61	2.61	24.80	24.80	2	0.39	6.77	3.6	2960	0.95	0.19	1.61	0.31	19.05	1.2	9	3.92	148	2.56	17	0.07	0.4	0.01	0.099	3.57	9.8	10.5
Rougher-Coarse	9.36	4.72	4.72	12.40	12.40	2	0.59	4.65	4.3	1690	0.65	0.08	0.94	0.44	12	0.9	6	2.09	246	1.72	10.75	0.06	0.2	0.01	0.064	2.29	6.3	7.6
2535-16 PyroTI I	4.50	2.33	2.33	3.94	3.94	2	0.29	8.07	6.7	2020	0.43	0.15	0.76	0.06	10.65	3.1	25	3.3	557	2.09	17.7	0.09	0.5	0.1	0.122	3.9	5.7	11.2
2535-16 PyroTI II	5.12	2.56	2.56	7.31	7.31	2	0.29	8.15	6.1	2040	0.47	0.11	0.88	0.07	10.6	3	25	3.16	521	2.05	17.45	0.08	0.5	0.08	0.115	3.85	5.8	11.2
2535-16 PyroTI III	5.12	2.24	2.24	3.45	3.45	2	0.27	7.89	5.9	2050	0.52	0.11	0.63	0.05	10.25	3	25	3.2	556	2.04	17.95	0.08	0.5	0.08	0.117	3.87	5.4	11.2
2535-16 PyroTI IV	2.85	2.24	2.24	3.45	3.45	2	0.29	8.01	5.6	2130	0.53	0.11	0.64	0.07	10.5	3	24	3.12	545	2.05	17.55	0.09	0.5	0.09	0.119	3.88	5.7	11
2535-16 PyroTI V	3.16	2.19	2.19	3.47	3.47	2	0.3	8.06	5.8	2130	0.48	0.11	0.62	0.07	11.05	3.1	24	3.1	578	2.11	18.25	0.08	0.5	0.08	0.123	3.93	6	11.2
2535-17 RoTI I	-5.90	1.00	1.00	3.43	3.43	2	0.14	8.21	6.3	2260	0.47	0.08	0.96	0.04	7.59	1	25	4.24	429	1.16	18.8	0.07	0.5	0.13	0.107	3.11	3.9	13
2535-17 RoTI II	-3.63	0.93	0.93	3.20	3.20	1	0.12	7.95	7.3	2350	0.59	0.08	0.92	0.04	6.96	1.1	25	4.11	422	1.14	18.9	0.06	0.5	0.11	0.106	3.09	3.5	13.2
2535-17 RoTI III	-5.28	0.83	0.83	2.95	2.95	1	0.14	8.15	7.2	2390	0.79	0.12	0.92	0.06	7.33	1.2	26	4.33	443	1.19	20.6	0.11	0.5	0.12	0.118	3.13	3.7	16.9
2535-17 RoTI IV	-6.53	0.90	0.90	3.20	3.20	1	0.13	8.22	9.8	2310	0.54	0.08	0.97	0.04	7.47	1.1	26	4.24	472	1.16	19.5	0.07	0.4	0.13	0.107	3.12	3.8	13.7
2535-17 RoTI V	-3.63	1.20	1.20	3.60	3.60	2	0.13	8.16	8.5	2440	0.55	0.08	1.08	0.04	7.32	1.1	25	4.22	434	1.17	19.95	0.07	0.4	0.1	0.111	3.13	3.7	14
2535-19 PyRoTI I	9.53	2.10	2.10	12.27	12.27	2	0.49	6.41	7	2420	0.64	0.11	1.21	0.2	16.55	1.4	8	3.18	220	2.14	15.2	0.09	0.4	0.05	0.085	2.99	8.2	9.7
2535-19 PyRoTI II	11.18	2.16	2.16	13.33	13.33	2	0.46	6.51	5.2	2490	0.7	0.1	1.29	0.2	17.45	1.5	8	3.48	215	2.14	15.85	0.11	0.4	0.05	0.089	3.01	8.7	10.4
2535-19 PyRoTI III	11.81	2.29	2.29	11.43	11.43	2	0.44	6.47	4.3	2470	0.67	0.11	1.23	0.25	15.75	1.4	8	3.4	220	2.13	15.85	0.11	0.3	0.05	0.089	3.01	8	10.5
2535-19 PyRoTI IV	9.22	2.31	2.31	8.32	8.32	2	0.43	6.57	4.2	2470	0.63	0.12	1.28	0.22	17.2	1.5	8	3.5	222	2.15	16.7	0.12	0.4	0.05	0.091	3.05	8.7	10.9
2535-19 PyRoTI V	9.53	2.29	2.29	11.43	11.43	2	0.47	6.63	4.3	2480	0.58	0.11	1.26	0.24	16.4	1.5	9	3.42	224	2.21	16.4	0.11	0.4	0.05	0.095	3.05	8.1	10.8
2535-19 PyRoTI Comp	9.53	2.29	2.29	10.00	10.00	2	0.61	6.45	4.1	2460	0.61	0.11	1.23	0.2	17	1.4	7	3.39	224	2.13	16.15	0.12	0.4	0.05	0.091	3	8.4	10.3
KM2670-1	34.91	11.47	11.47	17.20	17.20	2	0.28	6.59	7.3	2890	1.17	0.12	1.6	0.3	19.65	2.1	18	4.89	198	2.41	15.7	0.08	0.6	0.03	0.075	3.8	10.3	16
KM2670-2	42.05	13.38	13.38	24.53	24.53	2	0.35	6.98	6.1	2950	1.25	0.16	1.76	0.27	20.9	2.2	18	5.33	171	2.4	17.7	0.08	0.6	0.03	0.087	3.91	10.9	17.1
KM2670-3	37.19	11.47	11.47	19.66	19.66	2	0.29	6.95	6.1	2930	1.11	0.13	1.69	0.26	19.75	2.1	17	4.94	195	2.44	16.25	0.07	0.5	0.03	0.075	3.89	10.4	15.8
KM2670-4	32.72	6.91	6.91	11.93	11.93	2	0.29	6.97	6.2	2970	1.18	0.19	1.62	0.3	19.95	3.1	19	5.07	190.5	2.62	16.95	0.08	0.6	0.04	0.076	3.86	10.4	16.1
2748-11 PyRoTI IV	4.04	12.80	12.80	15.36	15.36	2	0.79	7.52	4.9	3400	1.63	0.5	1	0.65	21.3	0.7	15	5.34	155	1.11	19.2	0.11	0.9	0.05	0.117	4.22	12.5	12.6
2748-11 PyRoTI V	3.90	17.28	17.28	17.28	17.28	2	0.81	7.62	5.7	3400	1.68	0.45	0.99	0.67	23	0.6	13	5.55	154.5	1.06	19.65	0.14	0.9	0.05	0.113	4.24	13.7	13.2
2748-12 PyRoTI IV	4.12	16.64	16.64	16.64	16.64	2	0.66	7.91	4	2970	1.71	0.18	0.88	0.6	23.3	0.8	22	5.78	323	0.9	21.2	0.16	1	0.05	0.085	4.28	14.1	18.8
2748-12 PyRoTI V	4.35	16.64	16.64	16.64	16.64	2	0.65	8.29	4	3150	1.74	0.19	0.93	0.51	23.9	0.9	25	5.88	337	0.98	19.95	0.12	1	0.05	0.084	4.15	14.1	17.6
2748-18 PyRoTI III	4.18	12.80	12.80	17.92	17.92	2	0.63	7.35	3.5	3040	1.46	0.25	1	0.47	21.5	1	15	5.03	201	1.5	17.75	0.15	0.8	0.03	0.092	4.92	12.4	15.1
2748-18 PyRoTI IV	4.10	10.80	10.80	17.28	17.28	2	0.63	7.47	4.5	3080	1.45	0.26	0.99	0.57	22.2	1	14	5.05	212	1.53	17.85	0.15	0.8	0.03	0.092	4.97	13.1	14.6
2748-18 PyRoTI V	3.87	10.80	10.80	17.28	17.28	2	0.67	7.44	4	3080	1.58	0.25	0.98	0.56	21.6	1	15	5.07	221	1.51	17.85	0.13	0.8	0.03	0.092	4.38	12.3	15.5
2748-18 PyRoTI Comp	4.41	12.80	12.80	14.93	14.93	2	0.61	7.37	4.4	3040	1.49	0.26	0.98	0.52	22	1	15	5.01	214	1.49	18	0.16	0.7	0.02	0.09	4.41	12.9	14.5
2748-99 PyRoTI IV	-543.72						3.47	3.91	7.8	240	0.55	6.3	2.13	1.2	39.5	195	219	1.78	1385	34.6	10.3	0.95	1.6	0.05	0.106	0.61	19.5	14.9
2748-99 PyRoTI V	-48.55	0.02	0.02	0.46	0.46	1	5.73	4.66	10.5	140	0.37	76	2.81	0.01	43.8	13.3	24	0.67	670	19.5	43.7	0.49	3.2	0.01	2.42	0.54	18.5	17.1

Values in blue are calculated

Italics values in row 2 are detection limits

Values below detection limit are reported as half detection limit

Blank cells are due to insufficient sample

Appendix 6.1-1. Static Tests Results and Statistical Summary for the KSM Tailing

	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr			
	0.01	*5*	*0.05*	*0.01*	*0.1*	*0.2*	*10*	*0.5*	*0.1*	*0.002*	*0.01*	*0.05*	*0.1*	*1*	*0.2*	*0.2*	*0.05*	*0.05*	*0.2*	*0.005*	*0.02*	*0.1*	*1*	*0.1*	*0.1*	*2*	*0.5*	Al_2O_3	BaO	CaO
Description	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%
Rougher	0.92	638	8.05	0.54	3.5	46.1	950	10.9	88.9	0.012	0.39	2.08	12.6	2	1.7	167.5	0.2	0.05	3.1	0.143	1.56	1.1	112	1.6	5.9	127	10.2	11.73	0.29	1.9
Sulphide	0.67	490	326	0.32	4.9	133.5	580	130	60.5	1.14	10	17.1	8.2	41	2.6	80.1	0.26	1.53	2.5	0.186	1.57	1.4	104	3.2	27.5	406	263	8.56	0.18	0.99
Rougher/sulphide	0.9	629	56.4	0.49	3.7	69.4	940	23.2	77.4	0.18	3.12	3.81	11.3	6	1.9	160.5	0.2	0.2	2.7	0.139	1.52	1	114	1.8	8.2	118	38.7	11.55	0.28	1.87
Rougher-Fines	1.01	700	4.82	0.48	4.3	3.5	1050	12.1	91.2	0.008	0.44	2.24	13.2	2	2.3	203	0.24	0.09	3.2	0.167	1.8	1.1	130	1.8	6.3	99	11.2	13.49	0.36	2.26
Rougher-Coarse	0.68	472	7.45	0.53	3.1	4.4	680	9	57.4	0.013	0.25	1.89	8.7	2	1.2	115	0.17	0.05	2.2	0.119	1.11	0.7	82	1.2	4.9	78	6.8	8.86	0.19	1.23
2535-16 PyroTI I	1.05	655	11.4	0.18	4.7	3.9	1710	7.5	78	0.046	0.24	1.57	25.5	2	2	94.9	0.29	0.33	1.4	0.174	1.6	0.6	247	3.7	5.5	101	13.8	65.38	17.12	0.23
2535-16 PyroTI II	1.05	650	9.34	0.18	4.7	3.8	1740	7.2	86.1	0.04	0.21	1.51	26	2	1.9	97.1	0.28	0.31	1.4	0.175	1.49	0.6	240	3.7	5.7	103	13.8	65.23	17.06	0.23
2535-16 PyroTI III	1.04	632	8.94	0.18	5	3.9	1770	7.1	78	0.036	0.21	1.55	25.3	2	2	93.1	0.28	0.32	1.3	0.18	1.57	0.6	248	3.7	5.4	100	14.1	65.65	17.15	0.24
2535-16 PyroTI IV	1.05	645	12.15	0.18	4.7	3.8	1750	7.4	79.3	0.049	0.22	1.48	25.1	2	2	96.5	0.27	0.32	1.4	0.171	1.58	0.6	250	3.6	5.5	100	16.2	65.54	17.07	0.24
2535-16 PyroTI V	1.08	666	11.3	0.18	5.1	3.7	1810	8.5	81	0.044	0.21	1.56	26	2	2	93.7	0.3	0.32	1.5	0.185	1.55	0.6	256	4	5.8	106	14.1	66.2	17.19	0.25
2535-17 RoTI I	0.76	285	6.16	0.27	5.1	2.8	1690	8.6	77.1	0.02	0.49	0.8	23.4	2	1.9	217	0.32	0.27	1.5	0.173	1.87	0.5	223	2.8	4.3	65	12	67.05	17.4	0.26
2535-17 RoTI II	0.74	274	3.83	0.28	5.2	3.8	1670	8.3	70.4	0.017	0.5	0.8	23.2	2	1.9	226	0.32	0.28	1.4	0.175	1.84	0.5	220	2.6	4	64	12.4	67.58	17.37	0.27
2535-17 RoTI III	0.78	292	4.34	0.28	5.4	3.3	1740	9.1	76.5	0.022	0.51	0.87	26.9	2	2	224	0.36	0.28	1.6	0.171	2.09	0.6	223	2.5	4.5	67	12.9	68.48	17.32	0.28
2535-17 RoTI IV	0.77	287	5.03	0.28	5.5	2.8	1690	8.7	75.6	0.019	0.51	0.83	24.4	2	1.9	215	0.34	0.28	1.6	0.178	1.89	0.5	224	2.7	4.4	65	12.8	68.09	17.53	0.27
2535-17 RoTI V	0.77	285	4.62	0.28	5.2	2.9	1750	8.2	73.7	0.017	0.51	1.23	24.1	2	1.9	237	0.32	0.3	1.5	0.169	1.9	0.6	223	4.2	4.4	66	12.3	67.77	17.6	0.27
2535-19 PyRoTI I	0.9	595	34	0.45	3.6	3.1	1080	10.3	79.7	0.352	0.37	1.89	13.8	1	1.6	166.5	0.22	0.12	2.5	0.15	1.5	0.9	135	1.8	5.5	81	9.6	71.13	12.97	0.28
2535-19 PyRoTI II	0.91	612	6.32	0.45	3.7	3	1120	10	83.3	0.027	0.38	1.89	14.2	2	1.8	176	0.21	0.13	2.4	0.153	1.56	0.9	136	1.9	5.8	79	9.8	70.37	12.79	0.28
2535-19 PyRoTI III	0.9	592	5.62	0.46	3.6	3	1090	9.5	81	0.016	0.36	1.84	14.6	2	1.7	169	0.22	0.12	2.4	0.147	1.51	0.8	135	1.9	5.6	81	9.1	70.35	12.78	0.28
2535-19 PyRoTI IV	0.93	600	6.29	0.46	3.8	2.9	1090	10	85.6	0.021	0.38	2.01	15	1	1.7	171	0.23	0.14	2.6	0.15	1.56	0.9	137	1.9	5.8	82	13.3	70.38	12.85	0.27
2535-19 PyRoTI V	0.93	610	5.83	0.46	3.7	3.1	1120	9.8	83	0.016	0.37	1.79	14.5	1	1.7	170.5	0.23	0.14	2.6	0.152	1.52	0.9	140	1.9	5.9	82	9.7	70.97	12.92	0.28
2535-19 PyRoTI Comp	0.91	590	8.51	0.46	3.6	2.8	1090	9.5	80.8	0.037	0.37	1.8	14.1	2	1.7	170.5	0.22	0.11	2.3	0.149	1.53	0.8	136	2	5.7	79	9.2	70.59	12.9	0.28
KM2670-1	1.03	942	10.05	0.68	4.1	6.7	1100	15	112.5	0.023	0.14	4.02	13.2	1	1.9	177.5	0.26	0.07	2.7	0.182	1.66	1.4	142	6.9	8.6	100	16.3	68.35	13.48	0.34
KM2670-2	1.07	996	7.52	0.66	4.1	7.5	1120	16.3	119	0.02	0.13	4.02	14.9	1	2.2	185.5	0.25	0.1	3.1	0.18	1.86	1.4	150	7.4	9	102	17	67.15	14.02	0.34
KM2670-3	1.05	973	11.2	0.68	3.7	6.6	1100	15	113.5	0.029	0.14	3.86	13.5	1	1.9	182	0.23	0.07	2.6	0.174	1.74	1.3	147	7.1	8.4	101	15.6	67.23	13.88	0.35
KM2670-4	1.06	986	7.57	0.7	4	37.6	1150	15.8	117	0.02	0.21	4.05	14.1	1	2	186.5	0.24	0.09	3	0.178	1.75	1.4	147	7.1	9	103	16.5	68	13.63	0.33
2748-11 PyRoTI IV	0.58	661	3.93	0.56	6.2	2.7	1480	49.8	118.5	0.005	0.1	4.84	13.7	1	2.4	210	0.32	0.49	3.1	0.22	2.69	2.2	197	7.3	10.3	89	27.7	67.74	16.07	1.6
2748-11 PyRoTI V	0.58	652	4.18	0.58	6.4	2.3	1490	49.2	126.5	0.005	0.1	5.02	13.9	1	2.4	210	0.34	0.39	3.4	0.212	2.78	2.2	185	7.4	10.6	81	27.6	67	15.69	1.48
2748-12 PyRoTI IV	0.71	643	5.68	0.5	6.2	3.7	1100	30.2	130	0.01	0.09	5.78	14.1	2	3	223	0.35	0.37	3.4	0.244	3.13	2.5	195	9.5	10.7	83	32.3	65.47	16.66	1.3
2748-12 PyRoTI V	0.75	683	5.59	0.53	6.2	4	1180	30.6	110.5	0.011	0.1	6.32	14.8	1	3	233	0.35	0.35	3.6	0.252	3.13	2.6	201	9.5	10.3	76	32.2	65.57	16.82	1.35
2748-18 PyRoTI III	0.76	696	5.09	0.48	5.3	3.7	1220	31.3	123.5	0.011	0.12	4.05	13.6	1	2.4	185.5	0.3	0.3	3.2	0.208	2.51	1.9	173	7.1	8.9	87	22.2	68.35	14.76	2.13
2748-18 PyRoTI IV	0.76	701	5.49	0.49	5.2	3.4	1240	32.6	122	0.011	0.12	4.38	13.8	1	2.3	190	0.3	0.32	3.3	0.205	2.54	2.1	170	6.9	9	94	22	69	15.02	2.12
2748-18 PyRoTI V	0.76	703	5.67	0.49	5.2	3.5	1220	32.4	99.2	0.012	0.12	4.3	13.9	1	2.3	190.5	0.29	0.27	3.1	0.202	2.56	2	172	8	8.9	92	21.9	69.12	14.98	2.11
2748-18 PyRoTI Comp	0.76	694	5.46	0.49	5.2	3.6	1230	32.8	100	0.012	0.12	4.19	13.7	1	2.3	189	0.29	0.3	3.6	0.207	2.58	2.1	174	7.1	8.9	91	22.1	68.48	14.7	2.1
2748-99 PyRoTI IV	1.54	806	3.37	0.85	5.2	6160	460	60.3	29.2	0.068	10	0.27	11.9	41	3.9	144.5	0.32	2.87	4.3	0.377	0.58	1.1	161	1.1	13	146	53.4	26.14	6.71	47.58
2748-99 PyRoTI V	2.69	2000	2.4	0.52	5.8	16.6	570	90	17.7	0.005	1.92	1.44	13.3	44	66.9	60.7	0.39	5.57	1.1	0.403	4.3	4.2	114	12	18.3	601	113	43.45	8.37	27.41

Values in blue are calculated

Italics values in row 2 are detection limits

Values below detection limit are reported as half detection limit

Blank cells are due to insufficient sample

Appendix 6.1-1. Static Tests Results and Statistical Summary for the KSM Tailing

Description	Cr_2O_3 %	Fe_2O_3 %	K_2O %	MgO %	MnO %	Na_2O %	P_2O_5 %	SiO_2 %	SrO %	TiO_2 %	LOI %	Total %
Rougher	0.01	3.51	3.69	1.67	0.09	0.77	0.201	71.18	0.02	0.34	3.34	98.75
Sulphide	0.04	30.36	2.63	1.21	0.06	0.44	0.123	36.35	0.01	0.46	17.2	98.61
Rougher/sulphide	0.02	6.7	3.61	1.66	0.08	0.75	0.201	67.73	0.02	0.36	4.16	99
Rougher-Fines	0.01	3.75	4.21	1.89	0.1	0.77	0.241	67.96	0.02	0.39	3.39	98.83
Rougher-Coarse	0.01	2.5	2.8	1.26	0.06	0.8	0.146	79.79	0.02	0.29	2.03	99.97
2535-16 PyroTI I	1.12	0.01	3.08	5.14	2.04	0.1	0.35	0.373	0.01	0.51	3.47	98.94
2535-16 PyroTI II	1.26	0.01	2.99	5.14	2.06	0.09	0.33	0.375	0.02	0.54	3.55	98.88
2535-16 PyroTI III	0.95	0.01	3.04	5.15	2.05	0.09	0.34	0.383	0.01	0.5	3.29	98.85
2535-16 PyroTI IV	0.96	0.01	3.04	5.14	2.05	0.09	0.34	0.381	0.01	0.5	3.29	98.67
2535-16 PyroTI V	0.9	0.01	3.09	5.15	2.06	0.09	0.35	0.38	0.02	0.48	3.23	99.4
2535-17 RoTI I	1.41	0.01	1.68	4.15	1.51	0.05	0.48	0.367	0.03	0.53	3.26	98.18
2535-17 RoTI II	1.41	0.01	1.71	4.17	1.51	0.04	0.49	0.37	0.03	0.44	3.24	98.65
2535-17 RoTI III	1.36	0.02	1.75	4.16	1.55	0.05	0.48	0.367	0.03	0.46	3.16	99.45
2535-17 RoTI IV	1.44	0.01	1.73	4.21	1.52	0.05	0.49	0.365	0.04	0.43	3.28	99.46
2535-17 RoTI V	1.63	0.01	1.73	4.21	1.53	0.04	0.48	0.375	0.03	0.47	3.42	99.58
2535-19 PyRoTI I	1.78	0.01	3.14	3.92	1.72	0.09	0.74	0.241	0.03	0.36	2.94	99.35
2535-19 PyRoTI II	1.81	0.01	3.09	3.87	1.71	0.08	0.72	0.242	0.02	0.43	2.9	98.32
2535-19 PyRoTI III	1.78	0.005	3.09	3.87	1.71	0.08	0.72	0.24	0.02	0.41	2.91	98.24
2535-19 PyRoTI IV	1.83	0.01	3.04	3.85	1.71	0.09	0.74	0.234	0.02	0.41	2.92	98.36
2535-19 PyRoTI V	1.81	0.005	3.1	3.88	1.72	0.09	0.72	0.234	0.03	0.4	2.31	98.46
2535-19 PyRoTI Comp	1.8	0.005	3.11	3.84	1.71	0.09	0.71	0.239	0.03	0.39	2.55	98.23
KM2670-1	2.31	0.01	3.51	4.68	1.99	0.13	1.03	0.232	0.03	0.43	3.66	100.15
KM2670-2	2.56	0.01	3.52	4.78	2.08	0.13	0.99	0.236	0.03	0.42	3.97	100.25
KM2670-3	2.47	0.005	3.57	4.79	2.05	0.13	1.05	0.242	0.02	0.43	3.74	99.96
KM2670-4	2.3	0.01	3.76	4.68	2.03	0.13	1.05	0.236	0.03	0.42	3.42	100
2748-11 PyRoTI IV	1.48	1.21	0.91	7.23	0.01	0.42	0.09	0.308	0.04	0.37	2.53	100
2748-11 PyRoTI V	1.43	1.16	0.89	7.07	0.005	0.4	0.09	0.296	0.03	0.36	2.54	98.45
2748-12 PyRoTI IV	1.3	1.41	0.78	8.39	0.01	0.47	0.09	0.227	0.02	0.32	2.58	99.02
2748-12 PyRoTI V	1.32	1.42	0.81	8.48	0.005	0.5	0.09	0.23	0.03	0.32	2.56	99.5
2748-18 PyRoTI III	1.39	1.46	0.76	6.31	0.005	0.41	0.09	0.244	0.03	0.32	2.72	98.97
2748-18 PyRoTI IV	1.39	1.48	0.77	6.44	0.005	0.44	0.09	0.247	0.03	0.33	2.64	99.99
2748-18 PyRoTI V	1.36	1.46	0.79	6.45	0.01	0.43	0.1	0.245	0.03	0.32	2.6	100
2748-18 PyRoTI Comp	1.36	1.44	0.77	6.35	0.01	0.41	0.09	0.245	0.03	0.32	2.74	99.05
2748-99 PyRoTI IV	2.93	2.77	1.08	0.69	0.04	0.59	0.1	0.093	0.01	0.03	9.58	98.34
2748-99 PyRoTI V	3.84	4.61	0.73	0.65	0.005	0.7	0.25	0.118	0.005	0.02	9.56	99.71

Values in blue are calculated

Italics values in row 2 are detection limits

Values below detection limit are reported as half detection limit

Blank cells are due to insufficient sample

Appendix 6.1-1. Static Tests Results and Statistical Summary for the KSM Tailing

Description	Comment	Paste pH	S total *0.01* %	S sulphide *0.01* %	S sulphide calc %	$S\ SO_4\ NaCO_3$ *0.01* %	$S\ SO_4\ HCl$ *0.01* %	$S\ BaSO_4$ %	S del %	S del calc %	TAP kg $CaCO_3$ /t	SAP kg $CaCO_3$ /t	NP *0.5* kg $CaCO_3$ /t	NP adjusted kg $CaCO_3$ /t	C total *0.01* %	C inorganic *0.05* %
Rougher		8.2	0.38	0.07	0.06	0.32	0.32	0.05927961	-0.06927961	Rougher	11.875	2.1875	28	28	0.33	0.28
Sulphide		5.8	22.4	20.2	22.02	0.38	0.38	0.015636747	1.804363253	Sulphide	700	631.25	6	0	0.38	0.11
Rougher/sulphide		6.6	3.13	2.38	2.73	0.4	0.4	0.004434302	0.345565698	Rougher/sulphide	97.8125	74.375	22	22	0.34	0.25
Rougher-Fines		7.9	0.38	0.04	0.01	0.37	0.37	0.06908175	-0.09908175	Rougher-Fines	11.875	1.25	31	31	0.4	0.34
Rougher-Coarse		7.9	0.21	0.08	0.06	0.15	0.15	0.039441945	-0.059441945	Rougher-Coarse	6.5625	2.5	31	31	0.25	0.18
Mitchell/Kerr																
	Count	16	16	16	16	16	16	16	16	0	16	16	16	16	16	16
	Minimum	7.8	0.19	0.06	0.05	0.03	0.03	0.047143627	-0.07764592	0	5.9375	1.875	12	12	0.11	0.11
	10 Percentile	8.55	0.2	0.065	0.055	0.045	0.045	0.047727087	-0.077529228	#NUM!	6.25	2.03125	13.5	13.5	0.12	0.11
	25 Percentile	8.675	0.215	0.07	0.075	0.0875	0.0875	0.049710854	-0.066829075	#NUM!	6.71875	2.1875	14	14	0.12	0.12
	Median-25Percentile	0.325	0.135	0.055	0.06	0.2025	0.2025	0.005601223	0.016516998	#NUM!	4.21875	1.71875	2	2	0.01	0.015
	Mean	9.3125	0.34625	0.108125	0.114375	0.231875	0.231875	0.053838839	-0.047588839	#DIV/0!	10.8203125	3.37890625	18.4375	18.4375	0.19375	0.171875
	Standard Deviation	0.897827238	0.110559656	0.033207445	0.042126113	0.119489474	0.119489474	0.003973294	0.022996481	#DIV/0!	3.454989245	1.037732643	5.147435648	5.147435648	0.088025209	0.06395494
	Median	9	0.35	0.125	0.135	0.29	0.29	0.055312077	-0.050312077	#NUM!	10.9375	3.90625	16	16	0.13	0.135
	75Percentile-Median	1.05	0.115	0.0075	0.0175	0.03	0.03	0.002158805	0.017450535	#NUM!	3.59375	0.234375	9	9	0.17	0.115
	75 Percentile	10.05	0.465	0.1325	0.1525	0.32	0.32	0.057470882	-0.032861542	#NUM!	14.53125	4.140625	25	25	0.3	0.25
	90 Percentile	10.6	0.48	0.14	0.16	0.34	0.34	0.057762612	-0.013777317	#NUM!	15	4.375	25	25	0.31	0.255
	Maximum	11.1	0.5	0.16	0.16	0.35	0.35	0.058112688	-0.007610395	0	15.625	5	26	26	0.32	0.27
	Interquartile Range (IQR) 1	1.375	0.25	0.0625	0.0775	0.2325	0.2325	0.007760028	0.033967533	#NUM!	7.8125	1.953125	11	11	0.18	0.13
	Variance	0.859833333	0.013038333	0.00117625	0.001892917	0.015229583	0.015229583	1.68395E-05	0.000564094	#DIV/0!	12.7327474	1.148681641	28.2625	28.2625	0.008265	0.004362917
	Skewness	0.62251219	-0.14897056	-0.248637679	-0.4227923	-0.842720358	-0.842720358	-0.598098583	0.308317347	#DIV/0!	-0.14897056	-0.248637679	0.411372591	0.411372591	0.558756363	0.537961717
	Coefficient of Variation (CoV) 2	0.096410979	0.319305865	0.307120875	0.36831574	0.515318486	0.515318486	0.073799765	-0.483232655	#DIV/0!	0.319305865	0.307120875	0.27918295	0.27918295	0.454323662	0.37210147
Mitchell/Sulphurets																
	Count	4	4	4	4	4	4	4	4	0	4	4	4	4	4	4
	Minimum	8.9	0.11	0.06	0.04	0.02	0.02	0.06744806	-0.088848366	0	3.4375	1.875	41	41	0.52	0.47
	10 Percentile	8.9	0.113	0.063	0.049	0.023	0.029	0.067728121	-0.085428274	#NUM!	3.53125	1.96875	41.6	41.6	0.526	0.473
	25 Percentile	8.9	0.1175	0.0675	0.0625	0.0275	0.0425	0.068148213	-0.080298136	#NUM!	3.671875	2.109375	42.5	42.5	0.535	0.4775
	Median-25Percentile	0.2	0.0025	0.0075	0.0225	0.0225	0.0125	0.000466769	0.016916539	#NUM!	0.078125	0.234375	0.5	0.5	0.005	0.0075
	Mean	9.225	0.135	0.08	0.085	0.05	0.05	0.068498289	-0.063498289	#DIV/0!	4.21875	2.5	43.25	43.25	0.5425	0.4925
	Standard Deviation	0.369966215	0.032015621	0.018708287	0.03354102	0.025495098	0.018708287	0.00069036	0.020428121	#DIV/0!	1.000488162	0.584633967	1.785357107	1.785357107	0.017853571	0.022776084
	Median	9.1	0.12	0.075	0.085	0.05	0.055	0.068614981	-0.063381597	#NUM!	3.75	2.34375	43	43	0.54	0.485
	75Percentile-Median	0.325	0.0175	0.0125	0.0225	0.0225	0.0075	0.000350076	0.016799847	#NUM!	0.546875	0.390625	0.75	0.75	0.0075	0.015
	75 Percentile	9.425	0.1375	0.0875	0.1075	0.0725	0.0625	0.068965058	-0.04658175	#NUM!	4.296875	2.734375	43.75	43.75	0.5475	0.5
	90 Percentile	9.65	0.169	0.101	0.121	0.077	0.067	0.069175104	-0.041661658	#NUM!	5.28125	3.15625	45.1	45.1	0.561	0.518
	Maximum	9.8	0.19	0.11	0.13	0.08	0.07	0.069315134	-0.038381597	0	5.9375	3.4375	46	46	0.57	0.53
	Interquartile Range (IQR) 1	0.525	0.02	0.02	0.045	0.045	0.02	0.000816845	0.033716386	#NUM!	0.625	0.625	1.25	1.25	0.0125	0.0225
	Variance	0.1825	0.001366667	0.000466667	0.0015	0.000866667	0.000466667	6.35463E-07	0.000556411	#DIV/0!	1.334635417	0.455729167	4.25	4.25	0.000425	0.000691667
	Skewness	1.042147201	1.900103815	1.190340128	4.44089E-16	0	-1.190340128	-0.752837199	-0.015607471	#DIV/0!	1.900103815	1.190340128	0.713340074	0.713340074	0.713340074	1.443058836
	Coefficient of Variation (CoV) 2	0.040104739	0.23715275	0.233853587	0.394600231	0.509901951	0.374165739	0.0100785	-0.321711367	#DIV/0!	0.23715275	0.233853587	0.041279933	0.041279933	0.032909808	0.046245856
Iron Cap																
	Count	8	8	8	8	8	8	8	8	0	8	8	8	8	8	8
	Minimum	8.4	0.05	0.05	0.03	0.005	0.01	0.069315134	-0.093516052	0	1.5625	1.5625	24	24	0.23	0.8
	10 Percentile	8.4	0.05	0.05	0.037	0.005	0.01	0.070458717	-0.090600277	#NUM!	1.5625	1.5625	25.4	25.4	0.23	0.8
	25 Percentile	8.4	0.05	0.05	0.04	0.005	0.0175	0.070948824	-0.089350659	#NUM!	1.5625	1.5625	26	26	0.23	0.875
	Median-25Percentile	0	0.015	0	0.005	0.0025	0.0025	0.000933537	0.009218679	#NUM!	0.46875	0	1	1	0.015	0.025
	Mean	8.5	0.06375	0.05125	0.045	0.00875	0.01875	0.073399359	-0.079649359	#DIV/0!	1.9921875	1.6015625	26.625	26.625	0.24375	0.8875
	Standard Deviation	0.141421356	0.012183493	0.003307189	0.008660254	0.004841229	0.005994789	0.003608034	0.010210336	#DIV/0!	0.380734154	0.103349661	1.218349293	1.218349293	0.013169567	0.059947894
	Median	8.4	0.065	0.05	0.045	0.0075	0.02	0.071882362	-0.080131979	#NUM!	2.03125	1.5625	27	27	0.245	0.9
	75Percentile-Median	0.2	0.0075	0	0.005	0.0025	0	0.003092342	0.008483002	#NUM!	0.234375	0	0.25	0.25	0.005	0
	75 Percentile	8.6	0.0725	0.05	0.05	0.01	0.02	0.074974703	-0.071648977	#NUM!	2.265625	1.5625	27.25	27.25	0.25	0.9
	90 Percentile	8.66	0.08	0.053	0.053	0.013	0.023	0.079350659	-0.068228885	#NUM!	2.5	1.65625	28	28	0.256	0.93
	Maximum	8.8	0.08	0.06	0.06	0.02	0.03	0.079350659	-0.061882362	0	2.5	1.875	28	28	0.27	1
	Interquartile Range (IQR) 1	0.2	0.0225	0	0.01	0.005	0.0025	0.004025879	0.017701682	#NUM!	0.703125	0	1.25	1.25	0.02	0.025
	Variance	0.022857143	0.000169643	0.0000125	8.57143E-05	2.67857E-05	4.10714E-05	1.48776E-05	0.000119144	#DIV/0!	0.165666853	0.012207031	1.696428571	1.696428571	0.000198214	0.004107143
	Skewness	1.322875656	0.105063523	2.828427125	8.88178E-16	1.674559091	0.067842565	1.052288829	0.328230663	#DIV/0!	0.105063523	2.828427125	-1.13953513	-1.13953513	0.748678578	0.067842565
	Coefficient of Variation (CoV) 2	0.016637807	0.191113615	0.06453052	0.19245009	0.553283335	0.319722102	0.0491562	-0.128191061	#DIV/0!	0.191113615	0.06453052	0.045759598	0.045759598	0.054028994	0.067546923

Appendix 6.1-1. Static Tests Results and Statistical Summary for the KSM Tailing

Description	Comment	CO_2 inorganic 0.2 %	C del calc %	CaNP total kg $CaCO_3$ /t	CaNP inorganic kg $CaCO_3$ /t	CaNP Ca kg $CaCO_3$ /t	CaNP CaMg kg $CaCO_3$ /t	TNNP kg $CaCO_3$ /t	TNNP adjusted kg $CaCO_3$ /t	SNNP kg $CaCO_3$ /t	SNNP adjusted kg $CaCO_3$ /t	ICNNP kg $CaCO_3$ /t	TNPR	TNPR adjusted	SNPR
Rougher		1	0.05	27.50183181	22.74255851	34.96157685	66.43243243	16.125	16.125	Rougher	25.8125	10.86755851	2.357894737	2.357894737	12.8
Sulphide		0.4	0.27	31.66877602	9.097023404	18.97914172	40.94757689	-694	-700	Sulphide	-631.25	-690.9029766	0.008571429	0.008571429	0.00950495
Rougher/sulphide		0.9	0.09	28.33522065	20.46830266	34.46212575	65.28704567	-75.8125	-75.8125	Rougher/sulphide	-52.375	-77.34419734	0.224920128	0.224920128	0.295798319
Rougher-Fines		1.2	0.06	33.33555371	27.29107021	40.20581337	75.02283318	19.125	19.125	Rougher-Fines	29.75	15.41607021	2.610526316	2.610526316	24.8
Rougher-Coarse		0.7	0.07	20.83472107	15.91979096	23.4742016	46.38816403	24.4375	24.4375	Rougher-Coarse	28.5	9.357290957	4.723809524	4.723809524	12.4
Mitchell/Kerr															
	Count	16	16	16	16	16	16	16	16	0	16	16	16	16	16
	Minimum	0.4	0	9.167277269	9.097023404	15.48298403	47.53355079	-2.375	-2.375	0	7.9375	-6.527976596	0.834782609	0.834782609	2.953846154
	10 Percentile	0.4	0	10.00066611	9.097023404	15.85757236	48.10624418	-1.3125	-1.3125	#NUM!	9.4375	-5.590476596	0.914666667	0.914666667	3.2
	25 Percentile	0.4	0	10.00066611	9.097023404	21.22667166	48.67893756	2.25	2.25	#NUM!	9.859375	-3.628720745	1.15	1.15	3.441758242
	Median-25Percentile	0.1	0.01	0.833388843	2.274255851	2.871843812	3.72250699	6.1875	6.1875	#NUM!	2.609375	8.4375	1.064736842	1.064736842	0.327472527
	Mean	0.63125	0.02375	16.14690883	14.35624006	24.78526073	54.49535473	7.6171875	7.6171875	#DIV/0!	15.05859375	3.535927559	1.865883477	1.865883477	6.548205128
	Standard Deviation	0.239057394	0.026427968	7.335922743	5.436776764	5.868882472	6.111102946	5.995639488	5.995639488	#DIV/0!	5.967214657	6.345302464	0.613234327	0.613234327	3.80240242
	Median	0.5	0.01	10.83405495	11.37127925	24.09851547	52.40144455	8.4375	8.4375	#NUM!	12.46875	4.808779255	2.214736842	2.214736842	3.769230769
	75Percentile-Median	0.4	0.0325	14.16761032	9.097023404	6.617727046	8.661987418	5.15625	5.15625	#NUM!	10.109375	4.722023404	0.070977444	0.070977444	6.587912088
	75 Percentile	0.9	0.0425	25.00166528	20.46830266	30.71624251	61.06343197	13.59375	13.59375	#NUM!	22.578125	9.530802658	2.285714286	2.285714286	10.35714286
	90 Percentile	0.95	0.065	25.83505412	21.60543058	31.71514471	62.85309879	14.0625	14.0625	#NUM!	22.84375	10.35543058	2.319191919	2.319191919	11.84761905
	Maximum	1	0.07	26.66844296	22.74255851	32.21459581	63.28261883	14.75	14.75	0	23.125	11.80505851	2.56	2.56	13.33333333
	Interquartile Range (IQR) 1	0.5	0.0425	15.00099917	11.37127925	9.489570858	12.38449441	11.34375	11.34375	#NUM!	12.71875	13.1595234	1.135714286	1.135714286	6.915384615
	Variance	0.060958333	0.000745	57.40347999	31.52911102	36.74003356	39.8352845	38.34420573	38.34420573	#DIV/0!	37.98149414	42.94705425	0.401126762	0.401126762	15.42214844
	Skewness	0.530477559	0.649844255	0.558756363	0.530477559	-0.271386399	0.338621233	-0.482372236	-0.482372236	#DIV/0!	0.421627985	-0.387139241	-0.852680261	-0.852680261	0.622414958
	Coefficient of Variation (CoV) 2	0.378704782	1.112756553	0.454323662	0.378704782	0.236789217	0.112139887	0.787119851	0.787119851	#DIV/0!	0.396266395	1.794522755	0.328656282	0.328656282	0.580678575
Mitchell/Sulphurets															
	Count	4	4	4	4	4	4	4	4	0	4	4	4	4	4
	Minimum	1.7	0.04	43.33621982	38.66234947	39.95608782	75.30917987	35.0625	35.0625	0	37.5625	32.72484947	6.905263158	6.905263158	11.92727273
	10 Percentile	1.7	0.04	43.83625312	38.66234947	40.10592315	75.73869991	36.31875	36.31875	#NUM!	38.44375	33.38109947	8.273684211	8.273684211	13.50909091
	25 Percentile	1.7	0.04	44.58630308	38.66234947	40.33067615	76.38297996	38.203125	38.203125	#NUM!	39.765625	34.36547447	10.32631579	10.32631579	15.88181818
	Median-25Percentile	0.05	0.005	0.416694421	1.137127925	0.998902196	1.216973439	1.046875	1.046875	#NUM!	0.890625	1.684002925	1.140350877	1.140350877	2.546753247
	Mean	1.8	0.05	45.21134471	40.93660532	41.64173528	77.88630009	39.03125	39.03125	#DIV/0!	40.75	36.71785532	10.80510367	10.80510367	18.32943723
	Standard Deviation	0.122474487	0.012247449	1.487896693	2.78538319	1.573221409	2.133234807	2.660658107	2.660658107	#DIV/0!	2.324714364	3.457963037	2.383460976	2.383460976	4.541873729
	Median	1.75	0.045	45.0029975	39.79947739	41.32957834	77.5999534	39.25	39.25	#NUM!	40.65625	36.04947739	11.46666667	11.46666667	18.42857143
	75Percentile-Median	0.1	0.01	0.625041632	2.274255851	1.311059132	1.50332013	0.828125	0.828125	#NUM!	0.984375	2.352380851	0.478787879	0.478787879	2.447619048
	75 Percentile	1.85	0.055	45.62803913	42.07373324	42.64063748	79.10327353	40.078125	40.078125	#NUM!	41.640625	38.40185824	11.94545455	11.94545455	20.87619048
	90 Percentile	1.94	0.064	46.75311407	44.12056351	43.42727295	80.26297763	41.56875	41.56875	#NUM!	43.13125	40.58931351	12.80727273	12.80727273	23.07047619
	Maximum	2	0.07	47.50316403	45.48511702	43.95169661	81.0361137	42.5625	42.5625	0	44.125	42.04761702	13.38181818	13.38181818	24.53333333
	Interquartile Range (IQR) 1	0.15	0.015	1.041736053	3.411383776	2.309961327	2.720293569	1.875	1.875	#NUM!	1.875	4.036383776	1.619138756	1.619138756	4.994372294
	Variance	0.02	0.0002	2.951782093	10.34447935	3.300034134	6.067587653	9.438802083	9.438802083	#DIV/0!	7.205729167	15.94334449	7.574514964	7.574514964	27.50482262
	Skewness	1.414213562	1.414213562	0.713340074	1.414213562	0.672189369	0.571812709	-0.424321726	-0.424321726	#DIV/0!	0.20826059	0.858216602	-1.331150269	-1.331150269	-0.105062397
	Coefficient of Variation (CoV) 2	0.068041382	0.244948974	0.032909808	0.068041382	0.03777992	0.027389089	0.068167381	0.068167381	#DIV/0!	0.057048205	0.094176607	0.22058659	0.22058659	0.247791226
Iron Cap															
	Count	8	8	8	8	8	8	8	8	0	8	8	8	8	8
	Minimum	0.24	0	19.16794338	5.458214042	21.9758483	44.95643057	22.125	22.125	0	22.4375	3.867916383	10.8	10.8	14.93333333
	10 Percentile	0.247	0	19.16794338	5.617411952	22.84988772	45.15687325	23.74375	23.74375	#NUM!	23.8375	3.887374744	10.8	10.8	15.232
	25 Percentile	0.2575	0	19.16794338	5.856208816	24.16094686	45.45753728	24.4375	24.4375	#NUM!	24.4375	4.00247742	12.3	12.3	16.32
	Median-25Percentile	0.0125	0	1.250083264	0.284281981	0.437019711	3.507746971	0.0625	0.0625	#NUM!	1	0.106763378	0.5	0.5	0.64
	Mean	0.26875	0	20.31385304	6.112062599	24.19216255	47.99886417	24.6328125	24.6328125	#DIV/0!	25.0234375	4.119875099	13.82	13.82	16.66666667
	Standard Deviation	0.01763342	0	1.097537036	0.401029085	0.986633219	2.231564546	1.108576958	1.108576958	#DIV/0!	1.177978895	0.180570227	2.480886938	2.480886938	0.962589101
	Median	0.27	0	20.41802664	6.140490798	24.59796657	48.96528425	24.5	24.5	#NUM!	25.4375	4.109240798	12.8	12.8	16.96
	75Percentile-Median	0.0125	0	0.416694421	0.284281981	0.187294162	0.930626747	1.03125	1.03125	#NUM!	0.171875	0.113712793	3.84	3.84	0.32
	75 Percentile	0.2825	0	20.83472107	6.424772779	24.78526073	49.895911	25.53125	25.53125	#NUM!	25.609375	4.22295359	16.64	16.64	17.28
	90 Percentile	0.29	0	21.33475437	6.595341968	24.97255489	50.19657502	25.8125	25.8125	#NUM!	26.21875	4.367748239	16.832	16.832	17.472
	Maximum	0.29	0	22.50149875	6.595341968	24.97255489	50.39701771	25.8125	25.8125	0	26.4375	4.407841968	17.28	17.28	17.92
	Interquartile Range (IQR) 1	0.025	0	1.666777685	0.568563963	0.624313872	4.438373719	1.09375	1.09375	#NUM!	1.171875	0.22047617	4.34	4.34	0.96
	Variance	0.000355357	0	1.37667148	0.183799231	1.112508695	5.691291797	1.404506138	1.404506138	#DIV/0!	1.585867746	0.037263551	7.034057143	7.034057143	1.058946032
	Skewness	-0.274569077	#DIV/0!	0.748678578	-0.274569077	-1.704256935	-0.403813028	-1.371723412	-1.371723412	#DIV/0!	-1.270174416	0.226594742	0.285908857	0.285908857	-0.835129765
	Coefficient of Variation (CoV) 2	0.065612725	#DIV/0!	0.054028994	0.065612725	0.040783176	0.046492028	0.045004076	0.045004076	#DIV/0!	0.047075023	0.043829054	0.17951425	0.17951425	0.057755346

Appendix 6.1-1. Static Tests Results and Statistical Summary for the KSM Tailing

Description	Comment	SNPR adjusted	FIZZ	Ag *0.01* ppm	Al *0.01* %	As *0.2* ppm	Ba *10* ppm	Be *0.05* ppm	Bi *0.01* ppm	Ca *0.01* %	Cd *0.02* ppm	Ce *0.01* ppm	Co *0.1* ppm	Cr *1* ppm	Cs *0.05* ppm	Cu *0.2* ppm	Fe *0.01* %
Rougher		12.8	1	0.53	5.87	4.1	2540	0.93	0.15	1.4	0.69	17.2	2.1	74	3.38	147	2.46
Sulphide		0	1	9.29	4.69	118	670	0.53	3.29	0.76	6.6	12.2	58.1	231	2.8	4030	21.6
Rougher/sulphide		0.295798319	2	1.42	6	16.7	190	0.76	0.49	1.38	0.94	15.65	8.7	99	3.26	585	4.75
Rougher-Fines		24.8	2	0.39	6.77	3.6	2960	0.95	0.19	1.61	0.31	19.05	1.2	9	3.92	148	2.56
Rougher-Coarse		12.4	2	0.59	4.65	4.3	1690	0.65	0.08	0.94	0.44	12	0.9	6	2.09	246	1.72
Mitchell/Kerr																	
	Count	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
	Minimum	2.953846154	1	0.12	6.41	4.1	2020	0.43	0.08	0.62	0.04	6.96	1	7	3.1	215	1.14
	10 Percentile	3.2	1	0.13	6.46	4.25	2045	0.47	0.08	0.635	0.04	7.325	1.1	8	3.14	220	1.16
	25 Percentile	3.441758242	2	0.14	6.555	4.975	2130	0.51	0.095	0.85	0.0475	7.56	1.175	8	3.195	223.5	1.185
	Median-25Percentile	0.327472527	0	0.15	1.425	1.025	240	0.055	0.015	0.115	0.0225	3.065	0.275	16.5	0.215	208	0.885
	Mean	6.548205128	1.8125	0.3125	7.494375	6.14375	2306.875	0.575	0.105625	0.9925	0.115625	11.879375	1.8375	18.625	3.586875	392.625	1.81625
	Standard Deviation	3.80240242	0.390312375	0.150685932	0.770924516	1.552404888	170.2468337	0.093072552	0.018016919	0.235013297	0.081161009	3.98994121	0.825284042	8.25284042	0.449662634	140.8988445	0.441727787
	Median	3.769230769	2	0.29	7.98	6	2370	0.565	0.11	0.965	0.07	10.625	1.45	24.5	3.41	431.5	2.07
	75Percentile-Median	6.587912088	0	0.155	0.17	1.05	92.5	0.0675	0	0.265	0.13	5.8125	1.55	0.5	0.7275	95.5	0.0625
	75 Percentile	10.35714286	2	0.445	8.15	7.05	2462.5	0.6325	0.11	1.23	0.2	16.4375	3	25	4.1375	527	2.1325
	90 Percentile	11.84761905	2	0.48	8.185	7.9	2475	0.685	0.12	1.27	0.23	17.1	3.05	25.5	4.24	556.5	2.145
	Maximum	13.33333333	2	0.61	8.22	9.8	2490	0.79	0.15	1.29	0.25	17.45	3.1	26	4.33	578	2.21
	Interquartile Range (IQR) 1	6.915384615	0	0.305	1.595	2.075	332.5	0.1225	0.015	0.38	0.1525	8.8775	1.825	17	0.9425	303.5	0.9475
	Variance	15.42214844	0.1625	0.02422	0.63394625	2.570625	30916.25	0.00924	0.00034625	0.058913333	0.00702625	16.98093958	0.7265	72.65	0.21567625	21175.98333	0.208131667
	Skewness	0.622414958	-1.77192478	0.264088138	-0.544351129	0.665767986	-0.598098583	0.574649071	0.313465612	-0.271386399	0.601238939	0.245973574	0.777760589	-0.56514701	0.684618863	-0.218850079	-0.866231894
	Coefficient of Variation (CoV) 2	0.580678575	0.215344759	0.482194981	0.102867086	0.252680348	0.073799765	0.161865308	0.170574382	0.236789217	0.70193305	0.335871307	0.449134173	0.443105526	0.125363341	0.35886366	0.243208692
Mitchell/Sulphurets																	
	Count	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Minimum	11.92727273	2	0.28	6.59	6.1	2890	1.11	0.12	1.6	0.26	19.65	2.1	17	4.89	171	2.4
	10 Percentile	13.50909091	2	0.283	6.698	6.1	2902	1.128	0.123	1.606	0.263	19.68	2.1	17.3	4.905	176.85	2.403
	25 Percentile	15.88181818	2	0.2875	6.86	6.1	2920	1.155	0.1275	1.615	0.2675	19.725	2.1	17.75	4.9275	185.625	2.4075
	Median-25Percentile	2.546753247	0	0.0025	0.1	0.05	20	0.02	0.0175	0.04	0.0175	0.125	0.05	0.25	0.0775	7.125	0.0175
	Mean	18.32943723	2	0.3025	6.8725	6.425	2935	1.1775	0.15	1.6675	0.2825	20.0625	2.375	18	5.0575	188.625	2.4675
	Standard Deviation	4.541873729	0	0.027726341	0.16345871	0.506828373	29.58039892	0.049686517	0.027386128	0.062998016	0.017853571	0.49544803	0.420565096	0.707106781	0.170495601	10.5200701	0.089267855
	Median	18.42857143	2	0.29	6.96	6.15	2940	1.175	0.145	1.655	0.285	19.85	2.15	18	5.005	192.75	2.425
	75Percentile-Median	2.447619048	0	0.015	0.0125	0.325	15	0.0225	0.0225	0.0525	0.015	0.3375	0.275	0.25	0.13	3	0.06
	75 Percentile	20.87619048	2	0.305	6.9725	6.475	2955	1.1975	0.1675	1.7075	0.3	20.1875	2.425	18.25	5.135	195.75	2.485
	90 Percentile	23.07047619	2	0.332	6.977	6.97	2964	1.229	0.181	1.739	0.3	20.615	2.83	18.7	5.252	197.1	2.566
	Maximum	24.53333333	2	0.35	6.98	7.3	2970	1.25	0.19	1.76	0.3	20.9	3.1	19	5.33	198	2.62
	Interquartile Range (IQR) 1	4.994372294	0	0.0175	0.1125	0.375	35	0.0425	0.04	0.0925	0.0325	0.4625	0.325	0.5	0.2075	10.125	0.0775
	Variance	27.50482262	0	0.001025	0.035625	0.3425	1166.666667	0.003291667	0.001	0.005291667	0.000425	0.327291667	0.235833333	0.666666667	0.038758333	147.5625	0.010625
	Skewness	-0.105062397	#DIV/0!	1.86646691	-1.974064435	1.961904519	-0.752837199	0.258137349	0.632455532	0.672189369	-0.199735221	1.727880941	1.944956661	0	1.215761014	-1.630996459	1.84327075
	Coefficient of Variation (CoV) 2	0.247791226	0	0.091657326	0.023784461	0.078883794	0.0100785	0.042196618	0.182574186	0.03777992	0.063198482	0.024695229	0.17708004	0.03928371	0.033711439	0.055772406	0.036177449
Iron Cap																	
	Count	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	Minimum	14.93333333	2	0.61	7.35	3.5	2970	1.45	0.18	0.88	0.47	21.3	0.6	13	5.01	154.5	0.9
	10 Percentile	15.232	2	0.624	7.364	3.85	3019	1.457	0.187	0.915	0.498	21.44	0.67	13.7	5.024	154.85	0.956
	25 Percentile	16.32	2	0.63	7.4225	4	3040	1.4825	0.235	0.9675	0.5175	21.575	0.775	14.75	5.045	189.5	1.04
	Median-25Percentile	0.64	0	0.025	0.0725	0.2	40	0.1225	0.02	0.0175	0.0475	0.525	0.175	0.25	0.16	23.5	0.26
	Mean	16.66666667	2	0.68125	7.62125	4.375	3145	1.5925	0.2925	0.96875	0.56875	22.35	0.875	16.75	5.33875	227.1875	1.26
	Standard Deviation	0.962589101	0	0.07096434	0.302755574	0.635904867	154.5962483	0.107906209	0.109971587	0.039508702	0.064698821	0.884590301	0.147901995	4.023369235	0.33378277	64.09170066	0.25406692
	Median	16.96	2	0.655	7.495	4.2	3080	1.605	0.255	0.985	0.565	22.1	0.95	15	5.205	213	1.3
	75Percentile-Median	0.32	0	0.045	0.1975	0.4	132.5	0.0825	0.0525	0.0075	0.0475	0.975	0.05	1.75	0.4025	33.5	0.2025
	75 Percentile	17.28	2	0.7	7.6925	4.6	3212.5	1.6875	0.3075	0.9925	0.6125	23.075	1	16.75	5.6075	246.5	1.5025
	90 Percentile	17.472	2	0.796	8.024	5.14	3400	1.719	0.465	1	0.656	23.48	1	22.9	5.81	327.2	1.516
	Maximum	17.92	2	0.81	8.29	5.7	3400	1.74	0.5	1	0.67	23.9	1	25	5.88	337	1.53
	Interquartile Range (IQR) 1	0.96	0	0.07	0.27	0.6	172.5	0.205	0.0725	0.025	0.095	1.5	0.225	2	0.5625	57	0.4625
	Variance	1.058946032	0	0.005755357	0.104755357	0.462142857	27314.28571	0.013307143	0.013821429	0.001783929	0.004783929	0.894285714	0.025	18.5	0.127326786	4694.566964	0.073771429
	Skewness	-0.835129765	#DIV/0!	1.198765376	1.555532699	0.997186118	1.052288829	-0.092411066	1.186087426	-1.704256935	0.185703298	0.589201707	-0.903507903	1.463194217	0.609787856	0.840623328	-0.177614438
	Coefficient of Variation (CoV) 2	0.057755346	0	0.104167838	0.039725186	0.145349684	0.0491562	0.067759001	0.375971238	0.040783176	0.11375617	0.039578984	0.169030851	0.240201148	0.062520772	0.282109274	0.201640413

Appendix 6.1-1. Static Tests Results and Statistical Summary for the KSM Tailing

		Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb
		0.05	*0.05*	*0.1*	*0.01*	*0.005*	*0.01*	*0.5*	*0.2*	*0.01*	*5*	*0.05*	*0.01*	*0.1*	*0.2*	*10*	*0.5*
Description	**Comment**	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Rougher		16	Rougher	0.3	0.01	0.145	3.03	9.2	11.1	0.92	638	8.05	0.54	3.5	46.1	950	10.9
Sulphide		11.2	Sulphide	6.7	0.13	0.25	2.24	5.5	6.2	0.67	490	326	0.32	4.9	133.5	580	130
Rougher/sulphide		14.345	Rougher/sulphide	1	0.03	0.103	2.9	7..5	8.9	0.9	629	56.4	0.49	3.7	69.4	940	23.2
Rougher-Fines		17	Rougher-Fines	0.4	0.01	0.099	3.57	9.8	10.5	1.01	700	4.82	0.48	4.3	3.5	1050	12.1
Rougher-Coarse		10.75	Rougher-Coarse	0.2	0.01	0.064	2.29	6.3	7.6	0.68	472	7.45	0.53	3.1	4.4	680	9
Mitchell/Kerr																	
	Count	16	0	16	16	16	16	16	16	16	16	16	16	16	16	16	16
	Minimum	15.2	0	0.3	0.05	0.085	2.99	3.5	9.7	0.74	274	3.83	0.18	3.6	2.8	1080	7.1
	10 Percentile	15.85	#NUM!	0.4	0.05	0.089	3.005	3.7	10.35	0.765	285	4.48	0.18	3.6	2.8	1090	7.3
	25 Percentile	16.3375	#NUM!	0.4	0.05	0.091	3.04	3.875	10.725	0.7775	290.75	5.4725	0.18	3.7	2.9	1112.5	8.025
	Median-25Percentile	1.2875	#NUM!	0.05	0.03	0.016	0.075	1.875	0.475	0.1325	306.75	0.8325	0.1	1	0.2	577.5	0.625
	Mean	17.675	#DIV/0!	0.44375	0.0825	0.1053125	3.32	6.08125	11.825	0.910625	516.875	8.98	0.314375	4.5375	3.2875	1494.375	8.73125
	Standard Deviation	1.540900711	#DIV/0!	0.060917465	0.02926175	0.01291665	0.384382622	1.938820115	1.803642149	0.115405196	158.1861542	6.95422803	0.116885026	0.709643396	0.429934588	308.5645951	1.029999242
	Median	17.625	#NUM!	0.45	0.08	0.107	3.115	5.75	11.2	0.91	597.5	6.305	0.28	4.7	3.1	1690	8.65
	75Percentile-Median	1.2	#NUM!	0.05	0.0225	0.01025	0.74	2.375	1.85	0.1325	37.75	3.525	0.1725	0.425	0.7	52.5	0.925
	75 Percentile	18.825	#NUM!	0.5	0.1025	0.11725	3.855	8.125	13.05	1.0425	635.25	9.83	0.4525	5.125	3.8	1742.5	9.575
	90 Percentile	19.725	#NUM!	0.5	0.125	0.1205	3.89	8.55	13.85	1.05	652.5	11.775	0.46	5.3	3.85	1760	10
	Maximum	20.6	0	0.5	0.13	0.123	3.93	8.7	16.9	1.08	666	34	0.46	5.5	3.9	1810	10.3
	Interquartile Range (IQR) 1	2.4875	#NUM!	0.1	0.0525	0.02625	0.815	4.25	2.325	0.265	344.5	4.3575	0.2725	1.425	0.9	630	1.55
	Variance	2.532666667	#DIV/0!	0.003958333	0.000913333	0.000177963	0.1576	4.009625	3.47	0.01420625	26691.05	51.58537333	0.014572917	0.537166667	0.197166667	101559.5833	1.131625
	Skewness	0.235797598	#DIV/0!	-0.652506466	0.25670816	-0.209761459	0.855073979	0.059634404	1.532839895	-0.045741695	-0.826532636	3.127825439	0.21484076	-0.283574621	0.355883116	-0.538189499	-0.144104859
	Coefficient of Variation (CoV) 2	0.087179672	#DIV/0!	0.137278794	0.354687876	0.122650681	0.115777898	0.318819341	0.152527877	0.126731856	0.306043345	0.774412921	0.371801277	0.156395239	0.130778582	0.206484045	0.117966985
Mitchell/Sulphurets																	
	Count	4	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Minimum	15.7	0	0.5	0.03	0.075	3.8	10.3	15.8	1.03	942	7.52	0.66	3.7	6.6	1100	15
	10 Percentile	15.865	#NUM!	0.53	0.03	0.075	3.818	10.33	15.86	1.036	951.3	7.535	0.666	3.79	6.63	1100	15
	25 Percentile	16.1125	#NUM!	0.575	0.03	0.075	3.845	10.375	15.95	1.045	965.25	7.5575	0.675	3.925	6.675	1100	15
	Median-25Percentile	0.4875	#NUM!	0.025	0	0.0005	0.03	0.025	0.1	0.01	14.25	1.2525	0.005	0.125	0.425	10	0.4
	Mean	16.65	#DIV/0!	0.575	0.0325	0.07825	3.865	10.5	16.25	1.0525	974.25	9.085	0.68	3.975	14.6	1117.5	15.525
	Standard Deviation	0.750832871	#DIV/0!	0.04330127	0.004330127	0.005068284	0.041533119	0.234520788	0.502493781	0.014790199	20.32701405	1.592866912	0.014142136	0.163935963	13.28363655	20.46338193	0.553962995
	Median	16.6	#NUM!	0.6	0.03	0.0755	3.875	10.4	16.05	1.055	979.5	8.81	0.68	4.05	7.1	1110	15.4
	75Percentile-Median	0.5375	#NUM!	0	0.0025	0.00325	0.02	0.125	0.3	0.0075	9	1.5275	0.005	0.05	7.925	17.5	0.525
	75 Percentile	17.1375	#NUM!	0.6	0.0325	0.07875	3.895	10.525	16.35	1.0625	988.5	10.3375	0.685	4.1	15.025	1127.5	15.925
	90 Percentile	17.475	#NUM!	0.6	0.037	0.0837	3.904	10.75	16.8	1.067	993	10.855	0.694	4.1	28.57	1141	16.15
	Maximum	17.7	0	0.6	0.04	0.087	3.91	10.9	17.1	1.07	996	11.2	0.7	4.1	37.6	1150	16.3
	Interquartile Range (IQR) 1	1.025	#NUM!	0.025	0.0025	0.00375	0.05	0.15	0.4	0.0175	23.25	2.78	0.01	0.175	8.35	27.5	0.925
	Variance	0.751666667	#DIV/0!	0.0025	0.000025	0.00003425	0.0023	0.073333333	0.336666667	0.000291667	550.9166667	3.382966667	0.000266667	0.035833333	235.2733333	558.3333333	0.409166667
	Skewness	0.269301755	#DIV/0!	-2	2	1.961904519	-1.015374538	1.812801958	1.720042187	-0.752837199	-1.115293308	0.326699202	1.9984E-14	-1.6585238	1.995888464	1.193823774	0.501474603
	Coefficient of Variation (CoV) 2	0.045095067	#DIV/0!	0.075306557	0.133234678	0.064770399	0.010745956	0.022335313	0.030922694	0.014052446	0.020864269	0.175329324	0.020797258	0.041241752	0.90983812	0.018311751	0.035681996
Iron Cap																	
	Count	8	0	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	Minimum	17.75	0	0.7	0.02	0.084	4.15	12.3	12.6	0.58	643	3.93	0.48	5.2	2.3	1100	30.2
	10 Percentile	17.82	#NUM!	0.77	0.027	0.0847	4.199	12.37	13.02	0.58	649.3	4.105	0.487	5.2	2.58	1156	30.48
	25 Percentile	17.85	#NUM!	0.8	0.03	0.08875	4.235	12.475	14.175	0.6775	658.75	4.8625	0.49	5.2	3.225	1210	31.125
	Median-25Percentile	0.75	#NUM!	0.05	0.01	0.00325	0.095	0.525	0.675	0.0775	29.75	0.6125	0.005	0.55	0.325	15	1.375
	Mean	18.93125	#DIV/0!	0.8625	0.03875	0.095625	4.44625	13.1375	15.2375	0.7075	679.125	5.13625	0.515	5.7375	3.3625	1270	36.1125
	Standard Deviation	1.192407622	#DIV/0!	0.099215674	0.011659224	0.011607514	0.298661075	0.696307224	1.949959935	0.075291102	22.18917247	0.650767576	0.035	0.517052947	0.533707551	130.8625233	7.780012452
	Median	18.6	#NUM!	0.85	0.04	0.092	4.33	13	14.85	0.755	688.5	5.475	0.495	5.75	3.55	1225	32.5
	75Percentile-Median	1.125	#NUM!	0.075	0.01	0.00525	0.2075	0.8	1.175	0.005	8.75	0.135	0.0425	0.45	0.15	75	4.4
	75 Percentile	19.725	#NUM!	0.925	0.05	0.09725	4.5375	13.8	16.025	0.76	697.25	5.61	0.5375	6.2	3.7	1300	36.9
	90 Percentile	20.325	#NUM!	1	0.05	0.1142	4.935	14.1	17.96	0.76	701.6	5.673	0.566	6.26	3.79	1483	49.38
	Maximum	21.2	0	1	0.05	0.117	4.97	14.1	18.8	0.76	703	5.68	0.58	6.4	4	1490	49.8
	Interquartile Range (IQR) 1	1.875	#NUM!	0.125	0.02	0.0085	0.3025	1.325	1.85	0.0825	38.5	0.7475	0.0475	1	0.475	90	5.775
	Variance	1.624955357	#DIV/0!	0.01125	0.000155357	0.000153982	0.101941071	0.554107143	4.345535714	0.006478571	562.6964286	0.483998214	0.0014	0.305535714	0.325535714	19571.42857	69.17553571
	Skewness	0.748680492	#DIV/0!	0.044895669	-0.285875428	1.188262939	1.162892125	0.323358149	0.65075105	-1.27472392	-0.582567176	-1.213507274	1.003593235	0.042822698	-1.167262329	0.968798141	1.386983969
	Coefficient of Variation (CoV) 2	0.062986207	#DIV/0!	0.115032666	0.300883195	0.121385765	0.067171453	0.053001501	0.12797112	0.106418518	0.032673179	0.126700915	0.067961165	0.090118161	0.158723435	0.103041357	0.215438213

Appendix 6.1-1. Static Tests Results and Statistical Summary for the KSM Tailing

Description	Comment	Rb *0.1* ppm	Re *0.002* ppm	S *0.01* %	Sb *0.05* ppm	Sc *0.1* ppm	Se *1* ppm	Sn *0.2* ppm	Sr *0.2* ppm	Ta *0.05* ppm	Te *0.05* ppm	Th *0.2* ppm	Ti *0.005* %	Tl *0.02* ppm	U *0.1* ppm	V *1* ppm	W *0.1* ppm
Rougher		88.9	0.012	0.39	2.08	12.6	2	1.7	167.5	0.2	0.05	3.1	0.143	1.56	Rougher	112	1.6
Sulphide		60.5	1.14	10	17.1	8.2	41	2.6	80.1	0.26	1.53	2.5	0.186	1.57	Sulphide	104	3.2
Rougher/sulphide		77.4	0.18	3.12	3.81	11.3	6	1.9	160.5	0.2	0.2	2.7	0.139	1.52	Rougher/sulphid	114	1.8
Rougher-Fines		91.2	0.008	0.44	2.24	13.2	2	2.3	203	0.24	0.09	3.2	0.167	1.8	Rougher-Fines	130	1.8
Rougher-Coarse		57.4	0.013	0.25	1.89	8.7	2	1.2	115	0.17	0.05	2.2	0.119	1.11	Rougher-Coarse	82	1.2
Mitchell/Kerr																	
	Count	16	16	16	16	16	16	16	16	16	16	16	16	16	0	16	16
	Minimum	70.4	0.016	0.21	0.8	13.8	1	1.6	93.1	0.21	0.11	1.3	0.147	1.49	0	135	1.8
	10 Percentile	74.65	0.0165	0.21	0.815	14.15	1	1.7	94.3	0.22	0.12	1.4	0.1495	1.505	#NUM!	135.5	1.9
	25 Percentile	76.95	0.0185	0.235	1.14	14.575	2	1.7	96.95	0.2275	0.1375	1.4	0.1515	1.5275	#NUM!	136.75	1.9
	Median-25Percentile	2.55	0.006	0.135	0.415	9.175	0	0.2	73.55	0.0525	0.1425	0.15	0.0195	0.0375	#NUM!	86.25	0.75
	Mean	79.31875	0.0486875	0.365	1.46375	21.00625	1.8125	1.85625	163.6125	0.275625	0.235625	1.8375	0.16575	1.66	#DIV/0!	198.3125	2.80625
	Standard Deviation	4.062975934	0.079135737	0.113523125	0.414063325	5.226311887	0.390312375	0.132139841	51.39608296	0.047298091	0.086238677	0.497336657	0.012651581	0.182961745	#DIV/0!	49.03916643	0.847399515
	Median	79.5	0.0245	0.37	1.555	23.75	2	1.9	170.5	0.28	0.28	1.55	0.171	1.565	#NUM!	223	2.65
	75Percentile-Median	2	0.0165	0.1225	0.255	1.6	0	0.1	45	0.04	0.0325	0.85	0.004	0.2825	#NUM!	18.75	1.05
	75 Percentile	81.5	0.041	0.4925	1.81	25.35	2	2	215.5	0.32	0.3125	2.4	0.175	1.8475	#NUM!	241.75	3.7
	90 Percentile	84.45	0.0475	0.51	1.89	26	2	2	225	0.33	0.32	2.55	0.179	1.895	#NUM!	249	3.85
	Maximum	86.1	0.352	0.51	2.01	26.9	2	2	237	0.36	0.33	2.6	0.185	2.09	0	256	4.2
	Interquartile Range (IQR) 1	4.55	0.0225	0.2575	0.67	10.775	0	0.3	118.55	0.0925	0.175	1	0.0235	0.32	#NUM!	105	1.8
	Variance	17.60829167	0.006679963	0.013746667	0.182878333	29.13529167	0.1625	0.018625	2817.661167	0.00238625	0.007932917	0.263833333	0.000170733	0.035706667	#DIV/0!	2565.1625	0.765958333
	Skewness	-0.299749236	3.860902139	-0.123238277	-0.598903632	-0.478978098	-1.77192478	-0.509337389	-0.236349234	0.103359112	-0.472078185	0.562184732	-0.309524613	1.112028567	#DIV/0!	-0.414828814	0.283182308
	Coefficient of Variation (CoV) 2	0.051223398	1.625380988	0.311022261	0.282878446	0.248797948	0.215344759	0.071186446	0.314132985	0.17160305	0.365999689	0.270659405	0.076329297	0.110217918	#DIV/0!	0.247282276	0.301968647
Mitchell/Sulphurets																	
	Count	4	4	4	4	4	4	4	4	4	4	4	4	4	0	4	4
	Minimum	112.5	0.02	0.13	3.86	13.2	1	1.9	177.5	0.23	0.07	2.6	0.174	1.66	0	142	6.9
	10 Percentile	112.8	0.02	0.133	3.908	13.29	1	1.9	178.85	0.233	0.07	2.63	0.1752	1.684	#NUM!	143.5	6.96
	25 Percentile	113.25	0.02	0.1375	3.98	13.425	1	1.9	180.875	0.2375	0.07	2.675	0.177	1.72	#NUM!	145.75	7.05
	Median-25Percentile	2	0.0015	0.0025	0.04	0.375	0	0.05	2.875	0.0075	0.01	0.175	0.002	0.025	#NUM!	1.25	0.05
	Mean	115.5	0.023	0.155	3.9875	13.925	1	2	182.875	0.245	0.0825	2.85	0.1785	1.7525	#DIV/0!	146.5	7.125
	Standard Deviation	2.62202212	0.003674235	0.032015621	0.074624058	0.649519053	0	0.122474487	3.524468045	0.01118034	0.012990381	0.206155281	0.00295804	0.071195154	#DIV/0!	2.872281323	0.178535711
	Median	115.25	0.0215	0.14	4.02	13.8	1	1.95	183.75	0.245	0.08	2.85	0.179	1.745	#NUM!	147	7.1
	75Percentile-Median	2.25	0.003	0.0175	0.0075	0.5	0	0.1	2	0.0075	0.0125	0.175	0.0015	0.0325	#NUM!	0.75	0.075
	75 Percentile	117.5	0.0245	0.1575	4.0275	14.3	1	2.05	185.75	0.2525	0.0925	3.025	0.1805	1.7775	#NUM!	147.75	7.175
	90 Percentile	118.4	0.0272	0.189	4.041	14.66	1	2.14	186.2	0.257	0.097	3.07	0.1814	1.827	#NUM!	149.1	7.31
	Maximum	119	0.029	0.21	4.05	14.9	1	2.2	186.5	0.26	0.1	3.1	0.182	1.86	0	150	7.4
	Interquartile Range (IQR) 1	4.25	0.0045	0.02	0.0475	0.875	0	0.15	4.875	0.015	0.0225	0.35	0.0035	0.0575	#NUM!	2	0.125
	Variance	9.166666667	0.000018	0.001366667	0.007425	0.5625	0	0.02	16.5625	0.000166667	0.000225	0.056666667	1.16667E-05	0.006758333	#DIV/0!	11	0.0425
	Skewness	0.270236561	1.414213562	1.900103815	-1.833774275	0.74962963	#DIV/0!	1.414213562	-0.89246649	5.53724E-15	0.37037037	3.70074E-17	-0.752837199	0.538610415	#DIV/0!	-0.877123911	0.713340074
	Coefficient of Variation (CoV) 2	0.02270149	0.159749331	0.206552395	0.018714497	0.046644097	0	0.061237244	0.019272553	0.04563404	0.157459164	0.072335186	0.016571652	0.04062491	#DIV/0!	0.019606016	0.025057644
Iron Cap																	
	Count	8	8	8	8	8	8	8	8	8	8	8	8	8	0	8	8
	Minimum	99.2	0.005	0.09	4.05	13.6	1	2.3	185.5	0.29	0.27	3.1	0.202	2.51	0	170	6.9
	10 Percentile	99.76	0.005	0.097	4.148	13.67	1	2.3	187.95	0.29	0.291	3.1	0.2041	2.531	#NUM!	171.4	7.04
	25 Percentile	107.875	0.00875	0.1	4.2725	13.7	1	2.3	189.75	0.2975	0.3	3.175	0.2065	2.555	#NUM!	172.75	7.1
	Median-25Percentile	12.375	0.00225	0.01	0.3375	0.15	0	0.1	10.5	0.0125	0.035	0.175	0.0035	0.08	#NUM!	6.75	0.25
	Mean	116.275	0.009625	0.10875	4.86	13.9375	1.125	2.5125	203.875	0.3175	0.34875	3.3375	0.21875	2.74	#DIV/0!	183.375	7.85
	Standard Deviation	11.02630378	0.002735759	0.011659224	0.762643429	0.356852561	0.330718914	0.284769644	16.65598616	0.024366986	0.06508408	0.186664807	0.017725335	0.239582971	#DIV/0!	11.92620539	1
	Median	120.25	0.011	0.11	4.61	13.85	1	2.4	200.25	0.31	0.335	3.35	0.21	2.635	#NUM!	179.5	7.35
	75Percentile-Median	4	0.00025	0.01	0.6	0.1	0	0.15	13	0.0325	0.04	0.1	0.016	0.2325	#NUM!	16	1.025
	75 Percentile	124.25	0.01125	0.12	5.21	13.95	1	2.55	213.25	0.3425	0.375	3.45	0.226	2.8675	#NUM!	195.5	8.375
	90 Percentile	127.55	0.012	0.12	5.942	14.31	1.3	3	226	0.35	0.42	3.6	0.2464	3.13	#NUM!	198.2	9.5
	Maximum	130	0.012	0.12	6.32	14.8	2	3	233	0.35	0.49	3.6	0.252	3.13	0	201	9.5
	Interquartile Range (IQR) 1	16.375	0.0025	0.02	0.9375	0.25	0	0.25	23.5	0.045	0.075	0.275	0.0195	0.3125	#NUM!	22.75	1.275
	Variance	138.9478571	8.55357E-06	0.000155357	0.664714286	0.145535714	0.125	0.092678571	317.0535714	0.000678571	0.004841071	0.039821429	0.000359071	0.0656	#DIV/0!	162.5535714	1.142857143
	Skewness	-0.6107226	-1.242766433	-0.285875428	0.975856267	1.982853742	2.828427125	1.341139437	0.59386264	0.299026949	1.21812838	0.173032405	1.186656862	1.003089924	#DIV/0!	0.346897969	1.095837907
	Coefficient of Variation (CoV) 2	0.094829532	0.284234658	0.107211253	0.156922516	0.025603771	0.293972368	0.113341152	0.08169705	0.076746412	0.186621019	0.05592953	0.081030103	0.087439041	#DIV/0!	0.065037248	0.127388535

Appendix 6.1-1. Static Tests Results and Statistical Summary for the KSM Tailing

Description	Comment	Y *0.1* ppm	Zn *2* ppm	Zr *0.5* ppm	Al_2O_3 %	BaO %	CaO %	Cr_2O_3 %	Fe_2O_3 %	K_2O %	MgO %	MnO %	Na_2O %	P_2O_5 %	SiO_2 %	SrO %	TiO_2 %
Rougher		5.9	127	10.2	11.73	0.29	1.9	0.01	3.51	3.69	1.67	0.09	0.77	0.201	71.18	0.02	0.34
Sulphide		27.5	406	263	8.56	0.18	0.99	0.04	30.36	2.63	1.21	0.06	0.44	0.123	36.35	0.01	0.46
Rougher/sulphide		8.2	118	38.7	11.55	0.28	1.87	0.02	6.7	3.61	1.66	0.08	0.75	0.201	67.73	0.02	0.36
Rougher-Fines		6.3	99	11.2	13.49	0.36	2.26	0.01	3.75	4.21	1.89	0.1	0.77	0.241	67.96	0.02	0.39
Rougher-Coarse		4.9	78	6.8	8.86	0.19	1.23	0.01	2.5	2.8	1.26	0.06	0.8	0.146	79.79	0.02	0.29
Mitchell/Kerr																	
	Count	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
	Minimum	4	64	9.1	65.23	12.78	0.23	0.9	0.005	1.68	3.84	1.51	0.04	0.33	0.234	0.01	0.36
	10 Percentile	4.35	65	9.4	65.46	12.82	0.235	0.955	0.005	1.72	3.86	1.515	0.045	0.34	0.2365	0.01	0.395
	25 Percentile	4.475	66.75	9.775	66.0625	12.915	0.2475	1.225	0.01	1.745	3.8775	1.545	0.05	0.35	0.24075	0.02	0.41
	Median-25Percentile	1.025	14.25	2.825	1.8675	4.18	0.0225	0.2	0	1.295	0.2875	0.165	0.04	0.135	0.12625	0.005	0.04
	Mean	5.2375	82.5625	12.19375	68.1725	15.62625	0.263125	1.453125	0.0096875	2.650625	4.365625	1.76	0.075625	0.53	0.322875	0.02375	0.45375
	Standard Deviation	0.639213384	14.62860532	2.059571785	2.126841849	2.141538218	0.018275239	0.328361819	0.003292392	0.628445192	0.540416145	0.212043628	0.020606052	0.161361396	0.065687589	0.008569568	0.051584276
	Median	5.5	81	12.6	67.93	17.095	0.27	1.425	0.01	3.04	4.165	1.71	0.09	0.485	0.367	0.025	0.45
	75Percentile-Median	0.225	19	1.2	2.4425	0.2375	0.01	0.36	0	0.05	0.975	0.3325	0	0.235	0.008	0.005	0.05
	75 Percentile	5.725	100	13.8	70.3725	17.3325	0.28	1.785	0.01	3.09	5.14	2.0425	0.09	0.72	0.375	0.03	0.5
	90 Percentile	5.8	102	14.1	70.78	17.465	0.28	1.81	0.01	3.105	5.145	2.055	0.09	0.73	0.3805	0.03	0.52
	Maximum	5.9	106	16.2	71.13	17.6	0.28	1.83	0.02	3.14	5.15	2.06	0.1	0.74	0.383	0.04	0.54
	Interquartile Range (IQR) 1	1.25	33.25	4.025	4.31	4.4175	0.0325	0.56	0	1.345	1.2625	0.4975	0.04	0.37	0.13425	0.01	0.09
	Variance	0.435833333	228.2625	4.524625	4.82502	4.891931667	0.00035625	0.115009583	1.15625E-05	0.421272917	0.311519583	0.04796	0.000452917	0.027773333	0.004602517	7.83333E-05	0.002838333
	Skewness	-0.838443494	0.279301634	-0.116706845	0.019434171	-0.557101002	-0.78847851	-0.390856994	1.527202574	-0.886949753	0.699225137	0.417834609	-0.810147315	0.181829237	-0.556476726	-0.226659921	0.024279514
	Coefficient of Variation (CoV) 2	0.122045515	0.177182199	0.168903888	0.031197944	0.137047482	0.069454592	0.225969424	0.339859798	0.237093211	0.123788952	0.120479334	0.272476719	0.304455463	0.203445882	0.360823926	0.113684354
Mitchell/Sulphurets																	
	Count	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Minimum	8.4	100	15.6	67.15	13.48	0.33	2.3	0.005	3.51	4.68	1.99	0.13	0.99	0.232	0.02	0.42
	10 Percentile	8.46	100.3	15.81	67.174	13.525	0.333	2.303	0.0065	3.513	4.68	2.002	0.13	1.002	0.2332	0.023	0.42
	25 Percentile	8.55	100.75	16.125	67.21	13.5925	0.3375	2.3075	0.00875	3.5175	4.68	2.02	0.13	1.02	0.235	0.0275	0.42
	Median-25Percentile	0.25	0.75	0.275	0.405	0.1625	0.0025	0.0825	0.00125	0.0275	0.05	0.02	0	0.02	0.001	0.0025	0.005
	Mean	8.75	101.5	16.35	67.6825	13.7525	0.34	2.41	0.00875	3.59	4.7325	2.0375	0.13	1.03	0.2365	0.0275	0.425
	Standard Deviation	0.259807621	1.118033989	0.502493781	0.508594878	0.210401402	0.007071068	0.109772492	0.002165064	0.100747208	0.052618913	0.032691742	0	0.024494897	0.003570714	0.004330127	0.005
	Median	8.8	101.5	16.4	67.615	13.755	0.34	2.39	0.01	3.545	4.73	2.04	0.13	1.04	0.236	0.03	0.425
	75Percentile-Median	0.2	0.75	0.225	0.4725	0.16	0.0025	0.1025	0	0.0725	0.0525	0.0175	0	0.01	0.0015	0	0.005
	75 Percentile	9	102.25	16.625	68.0875	13.915	0.3425	2.4925	0.01	3.6175	4.7825	2.0575	0.13	1.05	0.2375	0.03	0.43
	90 Percentile	9	102.7	16.85	68.245	13.978	0.347	2.533	0.01	3.703	4.787	2.071	0.13	1.05	0.2402	0.03	0.43
	Maximum	9	103	17	68.35	14.02	0.35	2.56	0.01	3.76	4.79	2.08	0.13	1.05	0.242	0.03	0.43
	Interquartile Range (IQR) 1	0.45	1.5	0.5	0.8775	0.3225	0.005	0.185	0.00125	0.1	0.1025	0.0375	0	0.03	0.0025	0.0025	0.01
	Variance	0.09	1.666666667	0.336666667	0.344891667	0.059025	6.66667E-05	0.016066667	0.00000625	0.013533333	0.003691667	0.001425	0	0.0008	1.7E-05	0.000025	3.33333E-05
	Skewness	-0.37037037	0	-0.491440625	0.282302291	-0.03994028	-1.9984E-14	0.412468332	-2	1.714970271	0.023405913	-0.357856111	#DIV/0!	-1.414213562	0.713340074	-2	0
	Coefficient of Variation (CoV) 2	0.0296923	0.011015113	0.030733565	0.007514422	0.015299138	0.020797258	0.045548752	0.24743583	0.028063289	0.011118629	0.016045027	0	0.023781454	0.015098157	0.157459164	0.011764706
Iron Cap																	
	Count	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	Minimum	8.9	76	21.9	65.47	14.7	1.3	1.3	1.16	0.76	6.31	0.005	0.4	0.09	0.227	0.02	0.32
	10 Percentile	8.9	79.5	21.97	65.54	14.742	1.335	1.314	1.195	0.767	6.338	0.005	0.407	0.09	0.2291	0.027	0.32
	25 Percentile	8.9	82.5	22.075	66.6425	14.925	1.4475	1.35	1.36	0.77	6.4175	0.005	0.41	0.09	0.2405	0.03	0.32
	Median-25Percentile	0.75	5.5	2.825	1.4025	0.43	0.4025	0.025	0.07	0.015	0.3425	0.0025	0.015	0	0.0045	0	0
	Mean	9.7	86.625	26	67.59125	15.5875	1.77375	1.37875	1.38	0.81	7.09	0.0075	0.435	0.09125	0.25525	0.03	0.3325
	Standard Deviation	0.785811682	5.764926279	4.272587038	1.352963761	0.796566852	0.351209962	0.054184292	0.115217186	0.054083269	0.838912987	0.0025	0.032015621	0.003307189	0.028025658	0.005	0.019202864
	Median	9.65	88	24.9	68.045	15.355	1.85	1.375	1.43	0.785	6.76	0.0075	0.425	0.09	0.245	0.03	0.32
	75Percentile-Median	0.725	3.25	3.925	0.565	0.8625	0.2625	0.025	0.03	0.045	0.76	0.0025	0.0225	0	0.01425	0	0.0175
	75 Percentile	10.375	91.25	28.825	68.61	16.2175	2.1125	1.4	1.46	0.83	7.52	0.01	0.4475	0.09	0.25925	0.03	0.3375
	90 Percentile	10.63	92.6	32.23	69.036	16.708	2.123	1.445	1.466	0.896	8.417	0.01	0.479	0.093	0.2996	0.033	0.363
	Maximum	10.7	94	32.3	69.12	16.82	2.13	1.48	1.48	0.91	8.48	0.01	0.5	0.1	0.308	0.04	0.37
	Interquartile Range (IQR) 1	1.475	8.75	6.75	1.9675	1.2925	0.665	0.05	0.1	0.06	1.1025	0.005	0.0375	0	0.01875	0	0.0175
	Variance	0.705714286	37.98214286	20.86285714	2.0920125	0.725164286	0.140969643	0.003355357	0.015171429	0.003342857	0.804314286	7.14286E-06	0.001171429	0.0000125	0.000897643	2.85714E-05	0.000421429
	Skewness	0.090603806	-0.627754509	0.500255975	-0.660891735	0.477063551	-0.192687359	0.461678776	-1.348530662	1.206272392	0.915972712	-5.92119E-16	1.140192604	2.828427125	1.215815618	-1.52259E-15	1.40357273
	Coefficient of Variation (CoV) 2	0.081011514	0.066550376	0.164330271	0.020016848	0.051102926	0.198004207	0.039299577	0.083490715	0.066769468	0.118323411	0.333333333	0.073599129	0.036243169	0.109796897	0.166666667	0.057752976

Appendix 6.1-1. Static Tests Results and Statistical Summary for the KSM Tailing

Description	Comment	LOI %	Total %
Rougher		3.34	98.75
Sulphide		17.2	98.61
Rougher/sulphide		4.16	99
Rougher-Fines		3.39	98.83
Rougher-Coarse		2.03	99.97
Mitchell/Kerr			
	Count	16	16
	Minimum	2.31	98.18
	10 Percentile	2.725	98.235
	25 Percentile	2.9175	98.35
	Median-25Percentile	0.3175	0.41
	Mean	3.1075	98.81375
	Standard Deviation	0.32325493	0.484534248
	Median	3.235	98.76
	75Percentile-Median	0.055	0.6025
	75 Percentile	3.29	99.3625
	90 Percentile	3.445	99.455
	Maximum	3.55	99.58
	Interquartile Range (IQR) 1	0.3725	1.0125
	Variance	0.11146	0.250425
	Skewness	-1.061576281	0.259998323
	Coefficient of Variation (CoV) 2	0.104024113	0.00490351
Mitchell/Sulphurets			
	Count	4	4
	Minimum	3.42	99.96
	10 Percentile	3.492	99.972
	25 Percentile	3.6	99.99
	Median-25Percentile	0.1	0.085
	Mean	3.6975	100.09
	Standard Deviation	0.196516539	0.116404467
	Median	3.7	100.075
	75Percentile-Median	0.0975	0.1
	75 Percentile	3.7975	100.175
	90 Percentile	3.901	100.22
	Maximum	3.97	100.25
	Interquartile Range (IQR) 1	0.1975	0.185
	Variance	0.051491667	0.018066667
	Skewness	-0.063353847	0.38050023
	Coefficient of Variation (CoV) 2	0.053148489	0.001162998
Iron Cap			
	Count	8	8
	Minimum	2.53	98.45
	10 Percentile	2.537	98.814
	25 Percentile	2.555	99.0075
	Median-25Percentile	0.035	0.2675
	Mean	2.61375	99.3725
	Standard Deviation	0.074655459	0.550721118
	Median	2.59	99.275
	75Percentile-Median	0.07	0.7175
	75 Percentile	2.66	99.9925
	90 Percentile	2.726	100
	Maximum	2.74	100
	Interquartile Range (IQR) 1	0.105	0.985
	Variance	0.006369643	0.346621429
	Skewness	0.766222232	-0.182857861
	Coefficient of Variation (CoV) 2	0.028562586	0.005541987

Appendix 6.1-2

X-Ray Diffraction Analysis Results for the KSM Tailing

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Appendix 6.1-2a. X-Ray Diffraction Analysis Results for the KSM Tailing

		Silicates, Oxides and Hydroxides										Silicates, Oxides and Hydroxides
Sample ID	Deposit	Quartz SiO_2	Biotite $K(Mg,Fe)_3(AlSi_3O_{10})(F,OH)_2$	Brucite $Mg(OH)_2$	Clinochlore $(Mg,Fe^{2+})_5Al(Si_3Al)O_{10}(OH)_8$	Diaspore ? α-AlO(OH)	Hematite Fe_2O_3	Hydroxylapatite $Ca_5(PO_4)_3(OH)$	K-Feldspar $KAlSi_3O_8$	Magnetite Fe_3O_4	Muscovite 1M $KAl_2(AlSi_3O_{10})(OH)_2$	Muscovite 2M $KAl_2(AlSi_3O_{10})(OH)_2$
Misc KSM Tailing		55.9			4.6				3.6	0.3	23.6	
M/K Tailing SAC Top	Mitchell/Kerr	52.8			4.2		0.2		3.8	0.3	30.6	
M/K Tailing SAC Middle	Mitchell/Kerr	52			4.6				3.9	0.2	29.3	
M/K Tailing SAC Bottom	Mitchell/Kerr	51			3.9		0.3		4.5	0.4	32.3	
Sulphide Tailing SAC Top	Mitchell	22.7			4				3		20.9	
Sulphide Tailing SAC Middle	Mitchell	22.8			3.6				2.2		20.2	
Sulphide Tailing SAC Bottom	Mitchell	23.1			3.7				2.5		19.2	
2535-16 Py Ro Tl Composite	Mitchell/Kerr	42			3.4				3.4			48.8
2535-17 Ro Tl Composite	Mitchell/Kerr	50.7			3.3							43
2535-19 Py Ro Tl I	Mitchell/Kerr	51.4			3.4				5	0.3		32.1
2535-19 Py Ro Tl II	Mitchell/Kerr	50.7			3.2				5.9			33.6
2535-19 Py Ro Tl III	Mitchell/Kerr	50.8			3.1				5.4	0.3		33.6
2535-19 Py Ro Tl IV	Mitchell/Kerr	51.1			2.9				5.5	0.3		33.5
2535-19 Py Ro Tl V	Mitchell/Kerr	49.9			3.2				5.7	0.3		33.5
2535-19 Py Ro Tl Composite	Mitchell/Kerr	52.3			3.7				5.9	0.3		29.9
Sulphide Tailings	Mitchell	25.5			3.7				3.4		17.1	
Rougher Sulphide Tailings	Mitchell	50.3			4.4				6.5	0.3	24.1	
Rougher Fines	Mitchell	49.3			4.9				6.4	0.1	28.4	
Rougher Coarse	Mitchell	64.2			3				5.7	0.2	17.3	
Rougher Tailings	Mitchell	53.5			4.1				6.9	0.3	24.1	
2748-18 Py Ro TL Composite	Iron Cap	37.8			3.5				23.3	0.3		27.4
2748-18 Py Ro TL III	Iron Cap	37.4			3.8				24	0.1		27.7
2748-18 Py Ro TL IV	Iron Cap	38.2			4				24	0.5		26
2748-18 Py Ro TL V	Iron Cap	38.2			3.7				23.8	0.6		26.3

Appendix 6.1-2a. X-Ray Diffraction Analysis Results for the KSM Tailing

		Silicates, Oxides and Hydroxides		Carbonates				Sulphates			Sulphides						
Sample ID	Deposit	Plagioclase $NaAlSi_3O_8 - CaAl_2Si_2O_8$	Other	Calcite $CaCO_3$	Dolomite $CaMg(CO_3)_2$	Siderite $Fe^{2+}CO_3$	Other	Anhydrite $CaSO_4$	Gypsum $CaSO_4{\cdot}2H_2O$	Other	Chalcopyrite $CuFeS_2$	Galena PbS	Molybdenite MoS_2	Pyrite FeS_2	Sphalerite (Zn,Fe)S	Tennantite $Cu_{12}As_4S_{13}$	Other
Misc KSM Tailing		7		1.7	1.2				1.7					0.2			
M/K Tailing SAC Top	Mitchell/Kerr	5.5		1.4	1.3												
M/K Tailing SAC Middle	Mitchell/Kerr	5.7	1.5	1.7	1.1												
M/K Tailing SAC Bottom	Mitchell/Kerr	5.3		1.4	0.9				0.9								
Sulphide Tailing SAC Top	Mitchell	3		1.3	0.4				0.8				0.1	43.9			
Sulphide Tailing SAC Middle	Mitchell	3		2.4	0.6				1.3					44			
Sulphide Tailing SAC Bottom	Mitchell	2.8		2.6	0.5				1.9					43.8			
2535-16 Py Ro Tl Composite	Mitchell/Kerr	1.6		0.5										0.3			
2535-17 Ro Tl Composite	Mitchell/Kerr								1.4	1.1				0.3			
2535-19 Py Ro Tl I	Mitchell/Kerr	5		1.3	0.9				0.5					0.2			
2535-19 Py Ro Tl II	Mitchell/Kerr	3.8		1.3	1.1				0.4								
2535-19 Py Ro Tl III	Mitchell/Kerr	3.8		1.4	1.2				0.4								
2535-19 Py Ro Tl IV	Mitchell/Kerr	4		1.3	1.3												
2535-19 Py Ro Tl V	Mitchell/Kerr	4.3		1.5	1.1				0.4								
2535-19 Py Ro Tl Composite	Mitchell/Kerr	4.8		1.5	1				0.6								
Sulphide Tailings	Mitchell	3.2	1	0.7	0.7				0.7		1.4		0.2	42.5			
Rougher Sulphide Tailings	Mitchell	6		1.3	1				1.5		0.2			4.5			
Rougher Fines	Mitchell	5.7		2.3	1.6				1.1					0.2			
Rougher Coarse	Mitchell	6.6		1.1	1				0.8								
Rougher Tailings	Mitchell	6.4		1.6	1.6				1.5								
2748-18 Py Ro TL Composite	Iron Cap	6.3		1.5													
2748-18 Py Ro TL III	Iron Cap	5.5		1.5													
2748-18 Py Ro TL IV	Iron Cap	5.9		1.5													
2748-18 Py Ro TL V	Iron Cap	6		1.4													

Notes:

Muscovite was placed in 1M unless it was confirmed as 2M

Ankerite was included as dolomite if the lab identified ankerite/dolomite

QUANTITATIVE PHASE ANALYSIS OF EIGHT POWDER SAMPLES USING THE RIETVELD METHOD AND X-RAY POWDER DIFFRACTION DATA.

(Project: Sulphide Tailings)

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EXPERIMENTAL METHOD

The eight samples were reduced to the optimum grain-size range for quantitative X-ray analysis (<10 μm) by grinding under ethanol in a vibratory McCrone Micronising Mill for 7 minutes. Step-scan X-ray powder-diffraction data were collected over a range 3-80°2θ with CoKa radiation on a Bruker D8 Focus Bragg-Brentano diffractometer equipped with an Fe monochromator foil, 0.6 mm (0.3°) divergence slit, incident- and diffracted-beam Soller slits and a LynxEye detector. The long fine-focus Co X-ray tube was operated at 35 kV and 40 mA, using a take-off angle of 6°.

RESULTS

The X-ray diffractograms were analyzed using the International Centre for Diffraction Database PDF-4 and Search-Match software by Siemens (Bruker). X-ray powder-diffraction data of the samples were refined with Rietveld program Topas 4.2 (Bruker AXS). The results of quantitative phase analysis by Rietveld refinements are given in Table 1. These amounts represent the relative amounts of crystalline phases normalized to 100%. The Rietveld refinement plots are shown in Figures 1-8.

Table 1. Results of quantitative phase analysis (wt.%)

Mineral	**Ideal Formula**	**2535-16 Py Ro Tl Composite**	**2535-17 Ro Tl Composite**	**2535-19 Py Ro Tl I**	**2535-19 Py Ro Tl II**	**2535-19 Py Ro Tl III**	**2535-19 Py Ro Tl IV**	**2535-19 Py Ro Tl V**	**2535-19 Py Ro Tl Composite**
Quartz	SiO_2	42.0	50.7	51.4	50.7	50.8	51.1	49.9	52.3
Clinochlore	$(Mg,Fe^{2+})_5Al(Si_3Al)O_{10}(OH)_8$	3.4	3.3	3.4	3.2	3.1	2.9	3.2	3.7
Muscovite2M/Illite,1M	$KAl_2(AlSi_3O_{10})(OH)_2$	48.8	43.0	32.1	33.6	33.6	33.5	33.5	29.9
K-feldspar	$KAlSi_3O_8$	3.4		5.0	5.9	5.4	5.5	5.7	5.9
Plagioclase	$NaAlSi_3O_8 – CaAl_2Si_2O_8$	1.6		5.0	3.8	3.8	4.0	4.3	4.8
Gypsum	$CaSO_4 \cdot 2H_2O$		1.4	0.5	0.4	0.4		0.4	0.6
Bassanite	$CaSO_4 \cdot 0.5H_2O$		1.1						
Calcite	$CaCO_3$	0.5		1.3	1.3	1.4	1.3	1.5	1.5
Dolomite	$CaMg(CO_3)_2$			0.9	1.1	1.2	1.3	1.1	1.0
Magnetite	Fe_3O_4			0.3		0.3	0.3	0.3	0.3
Pyrite	FeS_2	0.3	0.3	0.2					
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

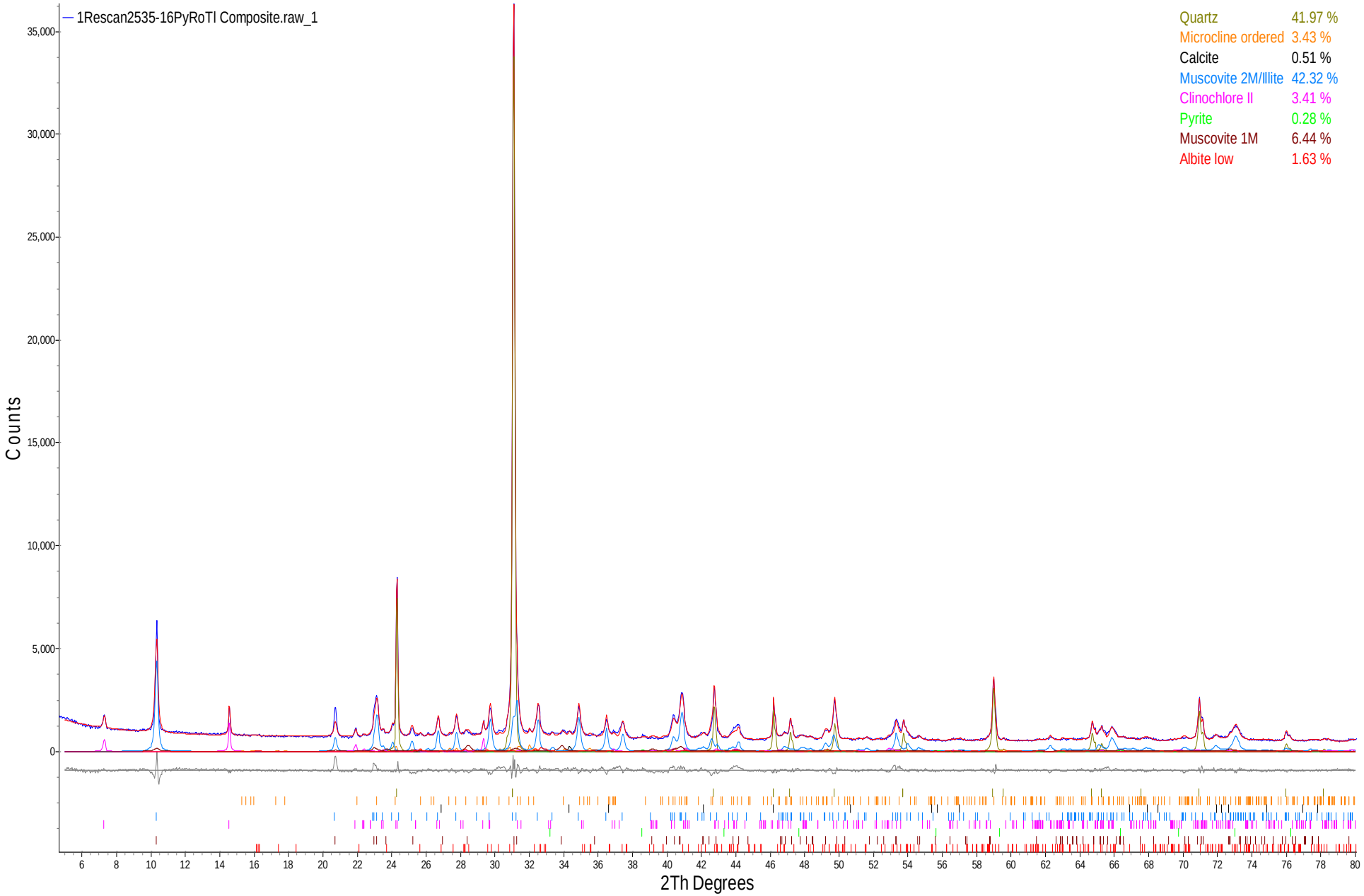


Figure 1. Rietveld refinement plot of sample **Rescan "2535-16 PyRoTl Composite"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

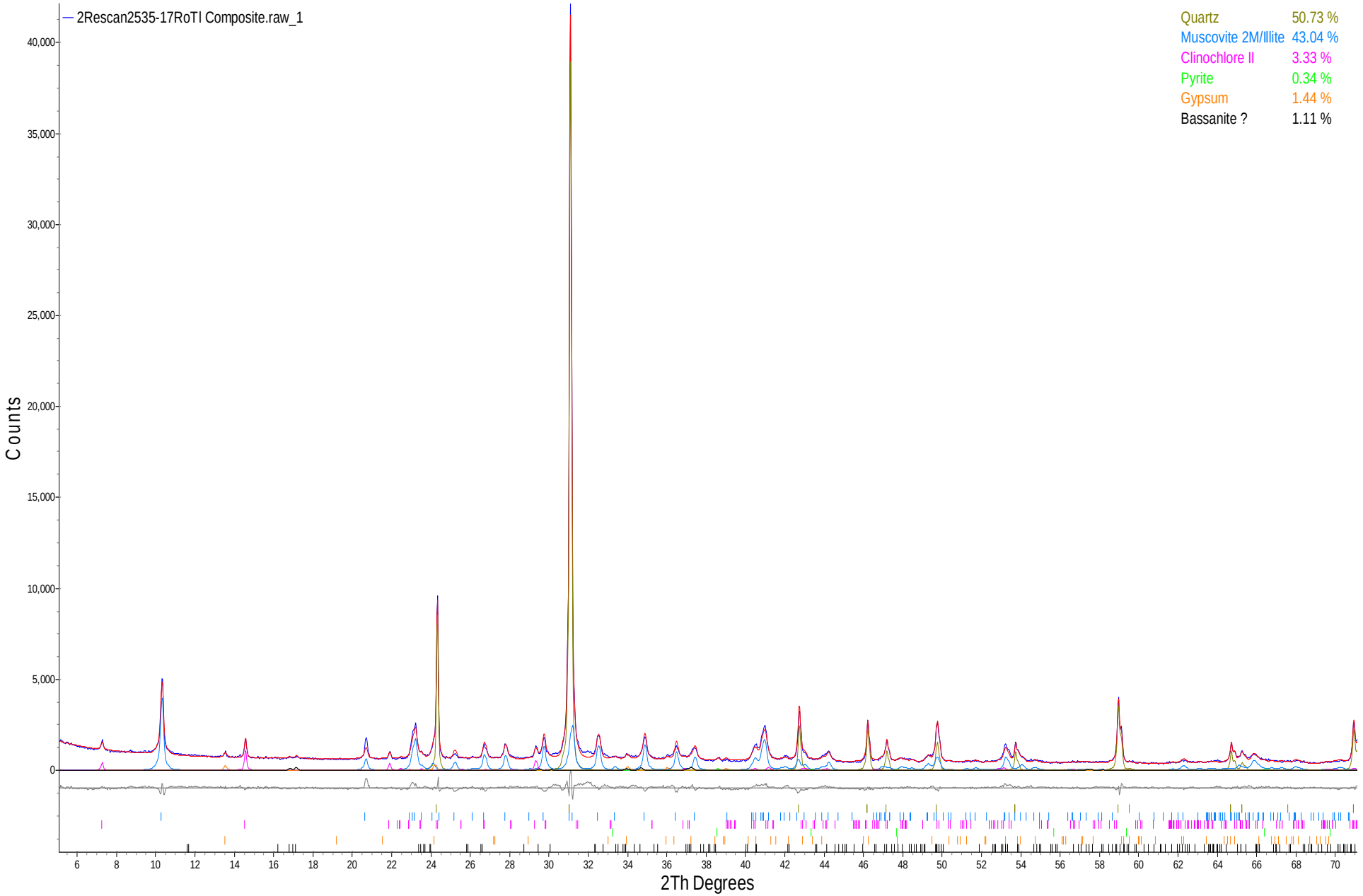


Figure 2. Rietveld refinement plot of sample **Rescan "2535-17 Ro Tl Composite"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

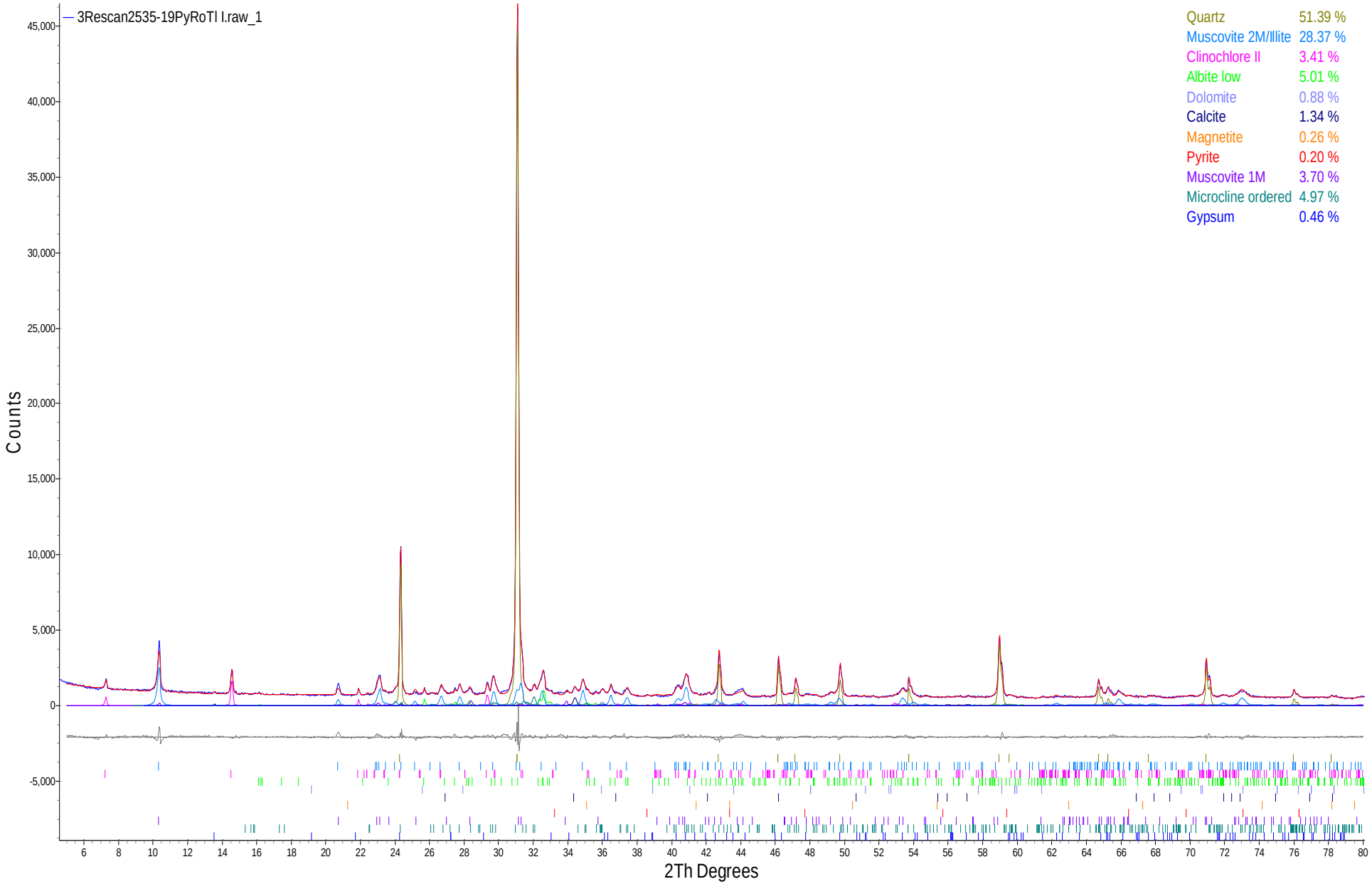


Figure 3. Rietveld refinement plot of sample **Rescan "2535-19 PyRoTl I"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

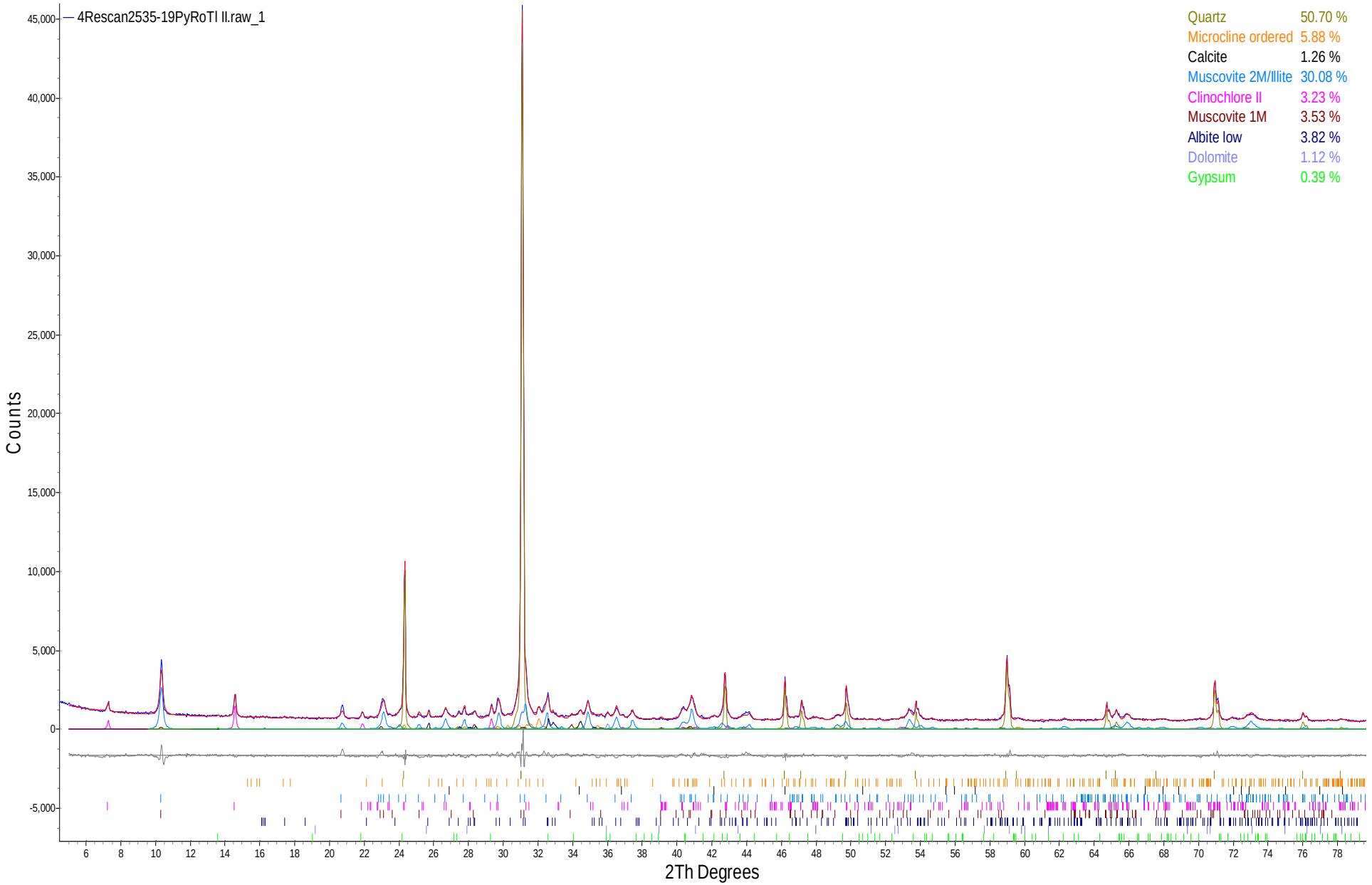


Figure 4. Rietveld refinement plot of sample **Rescan "2535-19 PyRoTl II"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

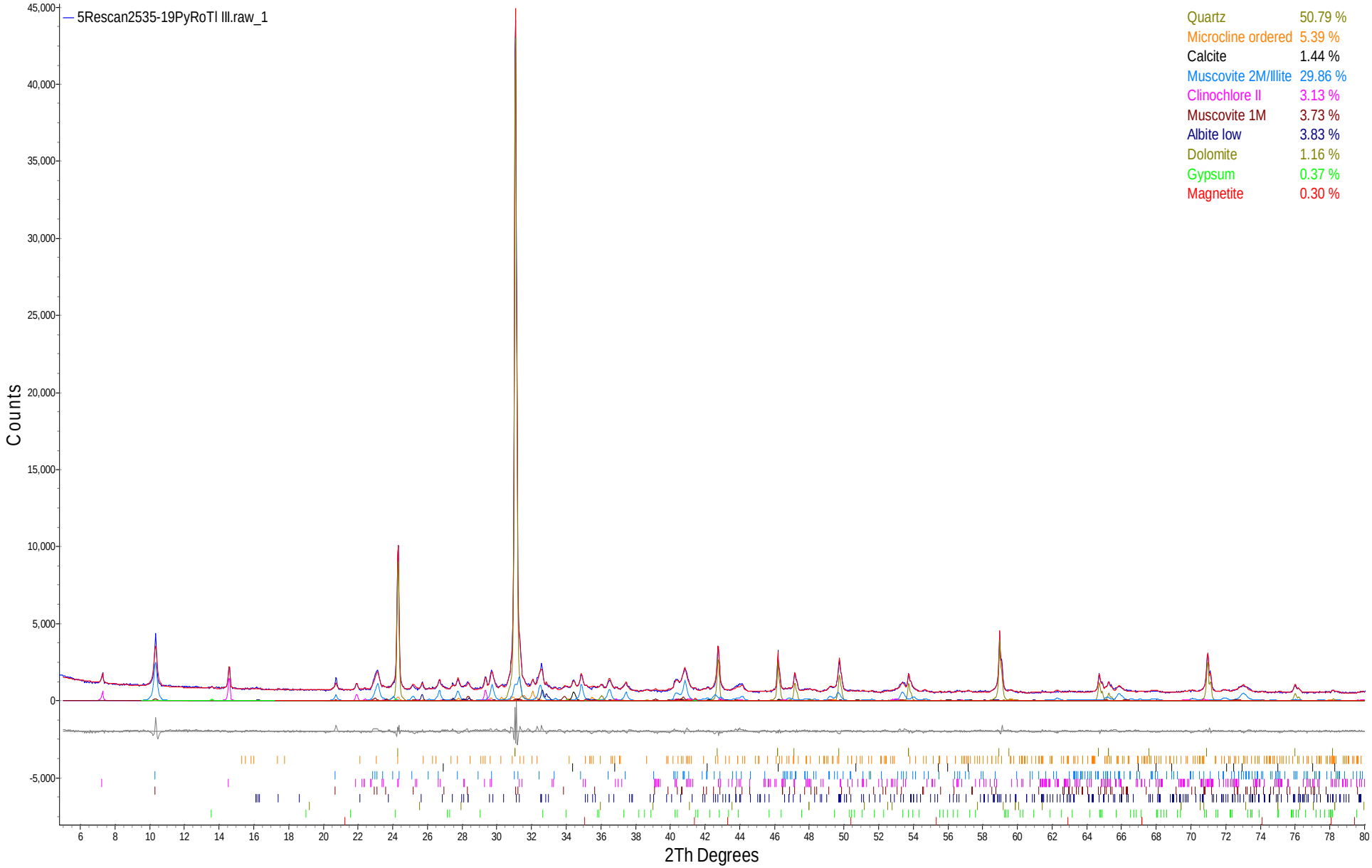


Figure 5. Rietveld refinement plot of sample **Rescan "2535-19 PyRoTl III"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

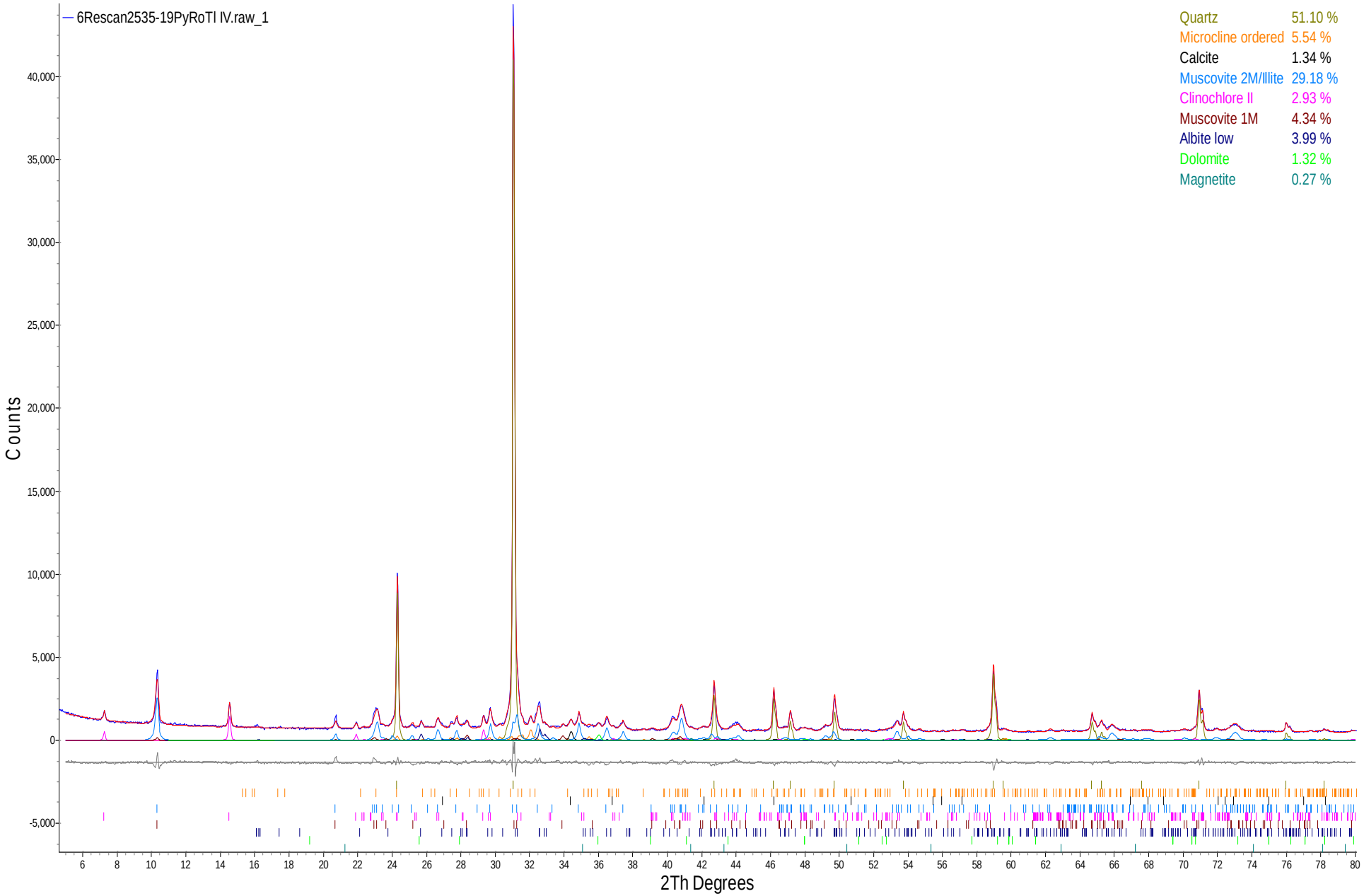


Figure 6. Rietveld refinement plot of sample **Rescan "2535-19 PyRoTl IV"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

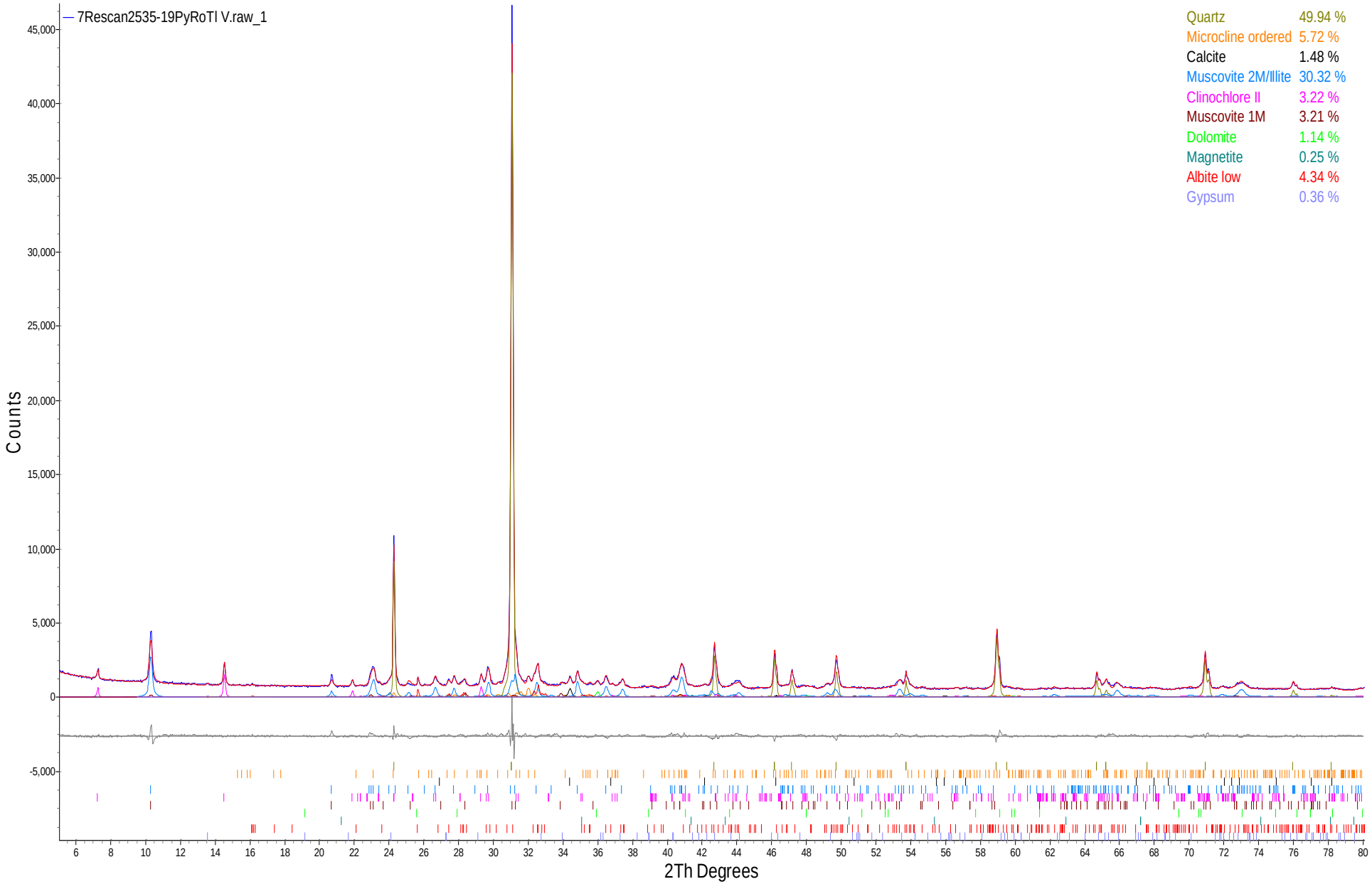


Figure 7. Rietveld refinement plot of sample **Rescan "2535-19 PyRoTl V"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

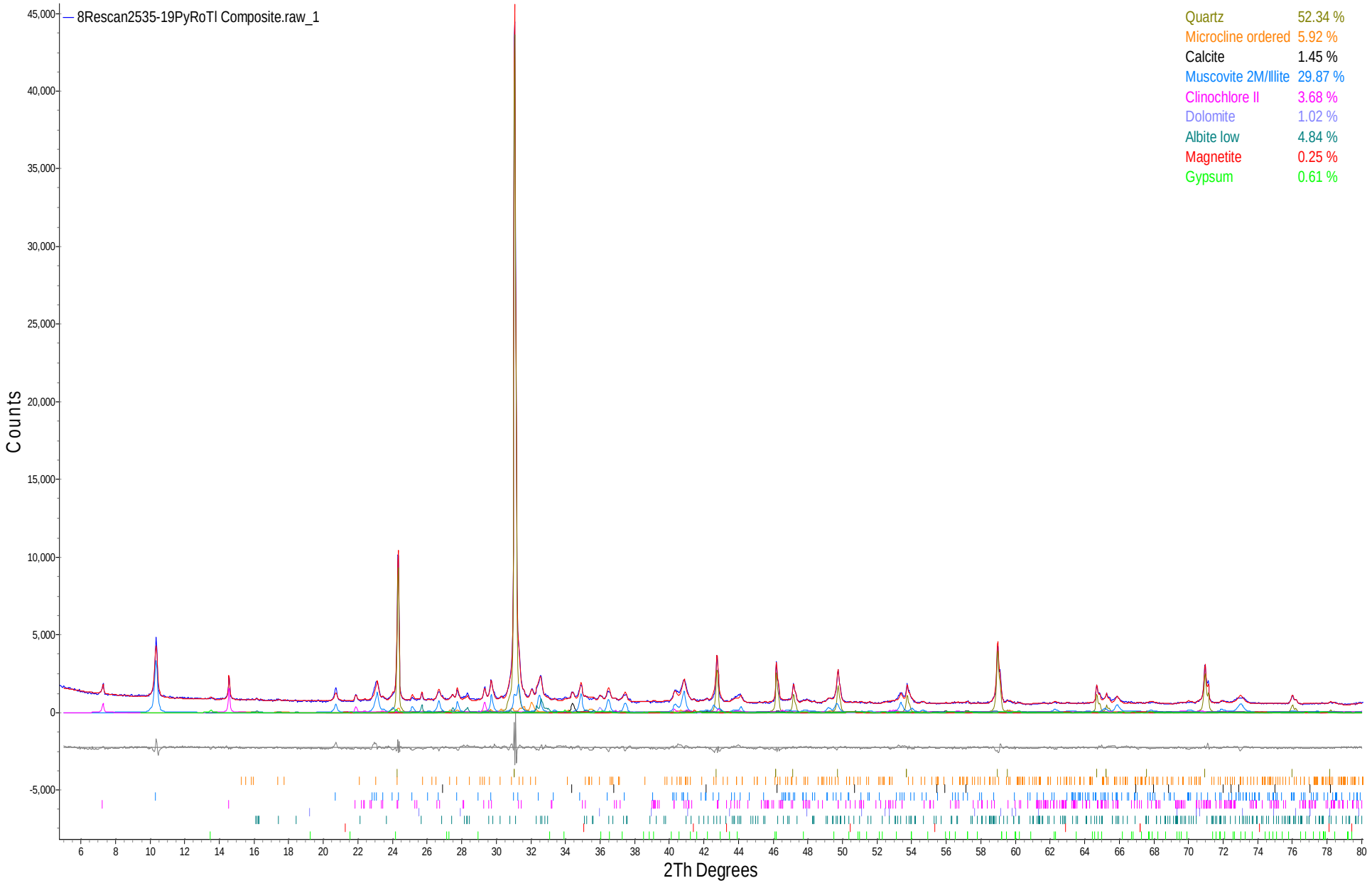


Figure 8. Rietveld refinement plot of sample **Rescan "2535-19 PyRoTl Composite"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

QUANTITATIVE PHASE ANALYSIS OF ONE POWDER SAMPLE USING THE RIETVELD METHOD AND X-RAY POWDER DIFFRACTION DATA.

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August 19, 2010

EXPERIMENTAL METHOD

The sample **KM2670 Rougher Tailings** was reduced to the optimum grain-size range for quantitative X-ray analysis (<10 μm) by grinding under ethanol in a vibratory McCrone Micronising Mill for 7 minutes. Step-scan X-ray powder-diffraction data were collected over a range 3-80°2θ with CoKa radiation on a Bruker D8 Focus Bragg-Brentano diffractometer equipped with an Fe monochromator foil, 0.6 mm (0.3°) divergence slit, incident- and diffracted-beam Soller slits and a LynxEye detector. The long fine-focus Co X-ray tube was operated at 35 kV and 40 mA, using a take-off angle of 6°.

RESULTS

The X-ray diffractogram was analyzed using the International Centre for Diffraction Database PDF-4 and Search-Match software by Siemens (Bruker). X-ray powder-diffraction data of the sample were refined with Rietveld program Topas 4.2 (Bruker AXS). The results of quantitative phase analysis by Rietveld refinements are given in Table 1. These amounts represent the relative amounts of crystalline phases normalized to 100%. The Rietveld refinement plot is shown in Figure 1.

Table 1. Results of quantitative phase analysis (wt.%)

Mineral	**Ideal Formula**	**KM2670 Rougher Tailings**
Quartz	SiO_2	43.8
Clinochlore	$(Mg,Fe^{2+})_5Al(Si_3Al)O_{10}(OH)_8$	5.6
Muscovite	$KAl_2(AlSi_3O_{10})(OH)_2$	23.4
K-feldspar	$KAlSi_3O_8$	13.4
Plagioclase	$NaAlSi_3O_8 – CaAl_2Si_2O_8$	8.2
Calcite	$CaCO_3$	3.9
Ankerite/Dolomite	$Ca(Fe^{2+},Mg,Mn)(CO_3)_2/CaMg(CO_3)_2$	1.1
Pyrite	FeS_2	0.2
Magnetite	Fe_3O_4	0.3
Total		100.0

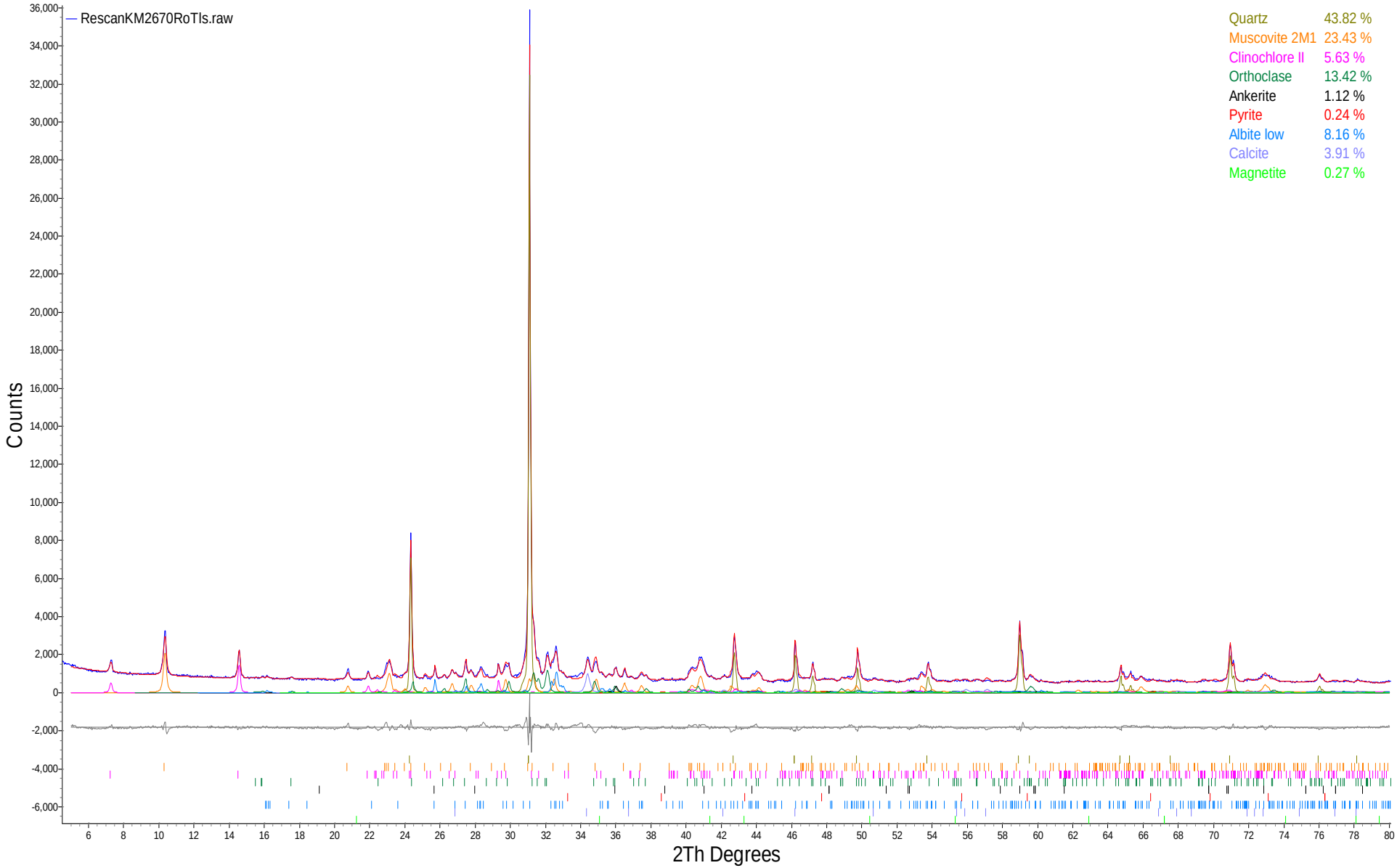


Figure 1. Rietveld refinement plot of sample **Rescan "KM2670 Rougher Tailings"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

QUANTITATIVE PHASE ANALYSIS OF FIVE POWDER SAMPLES USING THE RIETVELD METHOD AND X-RAY POWDER DIFFRACTION DATA.

(Project: Seabridge KSM)

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November 17, 2009

EXPERIMENTAL METHOD

The five samples of **Project Seabridge KSM** were reduced to the optimum grain-size range for quantitative X-ray analysis (<10 μm) by grinding under ethanol in a vibratory McCrone Micronising Mill for 7 minutes. Step-scan X-ray powder-diffraction data were collected over a range 3-80°2θ with CoKa radiation on a Bruker D8 Focus Bragg-Brentano diffractometer equipped with an Fe monochromator foil, 0.6 mm (0.3°) divergence slit, incident- and diffracted-beam Soller slits and a LynxEye detector. The long fine-focus Co X-ray tube was operated at 35 kV and 40 mA, using a take-off angle of 6°.

RESULTS

The X-ray diffractograms were analyzed using the International Centre for Diffraction Database PDF-4 using Search-Match software by Siemens (Bruker). X-ray powder-diffraction data of the samples were refined with Rietveld program Topas 3 (Bruker AXS). The results of quantitative phase analysis by Rietveld refinements are given in Table 1. These amounts represent the relative amounts of crystalline phases normalized to 100%. The Rietveld refinement plots are shown in Figures 1 – 5.

Table 1. Results of quantitative phase analysis (wt.%)

Mineral	**Ideal Formula**	**Sulphide Tailings**	**Rougher Sulphide Tailings**	**Rougher Fines**	**Rougher Coarse**	**Rougher Tailings**
Quartz	SiO_2	25.5	50.3	49.3	64.2	53.5
Clinochlore	$(Mg,Fe^{2+})_5Al(Si_3Al)O_{10}(OH)_8$	3.7	4.4	4.9	3.0	4.1
Muscovite	$KAl_2(AlSi_3O_{10})(OH)_2$	17.1	24.1	28.4	17.3	24.1
K-feldspar	$KAlSi_3O_8$	3.4	6.5	6.4	5.7	6.9
Plagioclase	$NaAlSi_3O_8 – CaAl_2Si_2O_8$	3.2	6.0	5.7	6.6	6.4
Gypsum	$CaSO_4 \cdot 2H_2O$	0.7	1.5	1.1	0.8	1.5
Calcite	$CaCO_3$	0.7	1.3	2.3	1.1	1.6
Ankerite/Dolomite	$Ca(Fe^{2+},Mg,Mn)(CO_3)_2/CaMg(CO_3)_2$	0.7	1.0	1.6	1.0	1.6
Pyrite	FeS_2	42.5	4.5	0.2		
Chalcopyrite	$CuFeS_2$	1.4	0.2			
Pyrophyllite	$Al_2Si_4O_{10}(OH)_2$	1.0				
Molybdenite	MoS_2	0.2				
Magnetite	Fe_3O_4		0.3	0.1	0.2	0.3
Total		100.0	100.0	100.0	100.0	100.0

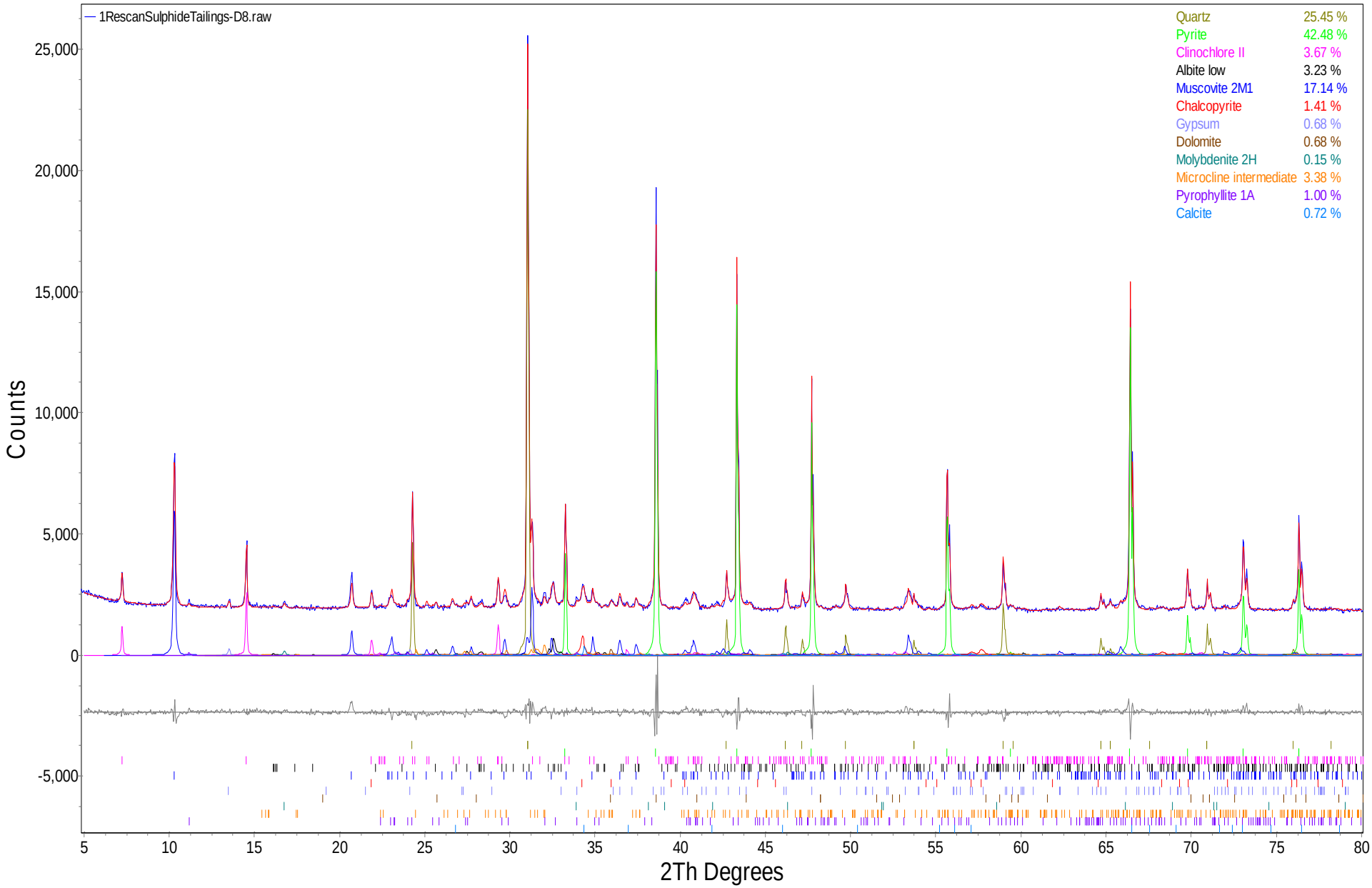


Figure 1. Rietveld refinement plot of sample **Rescan "Sulphide Tailings"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

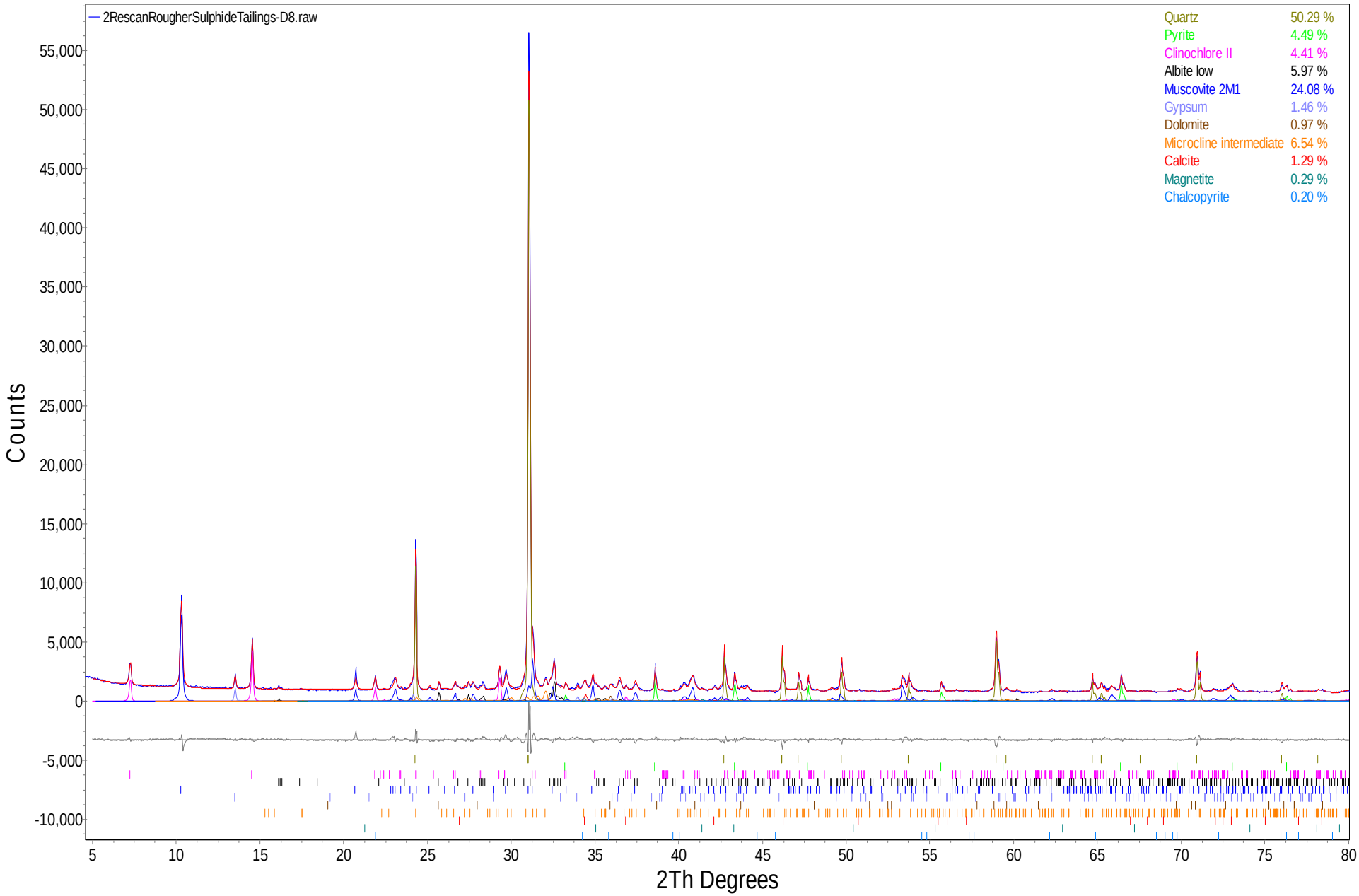


Figure 2. Rietveld refinement plot of sample **Rescan "Rougher - Sulphide Tailings"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

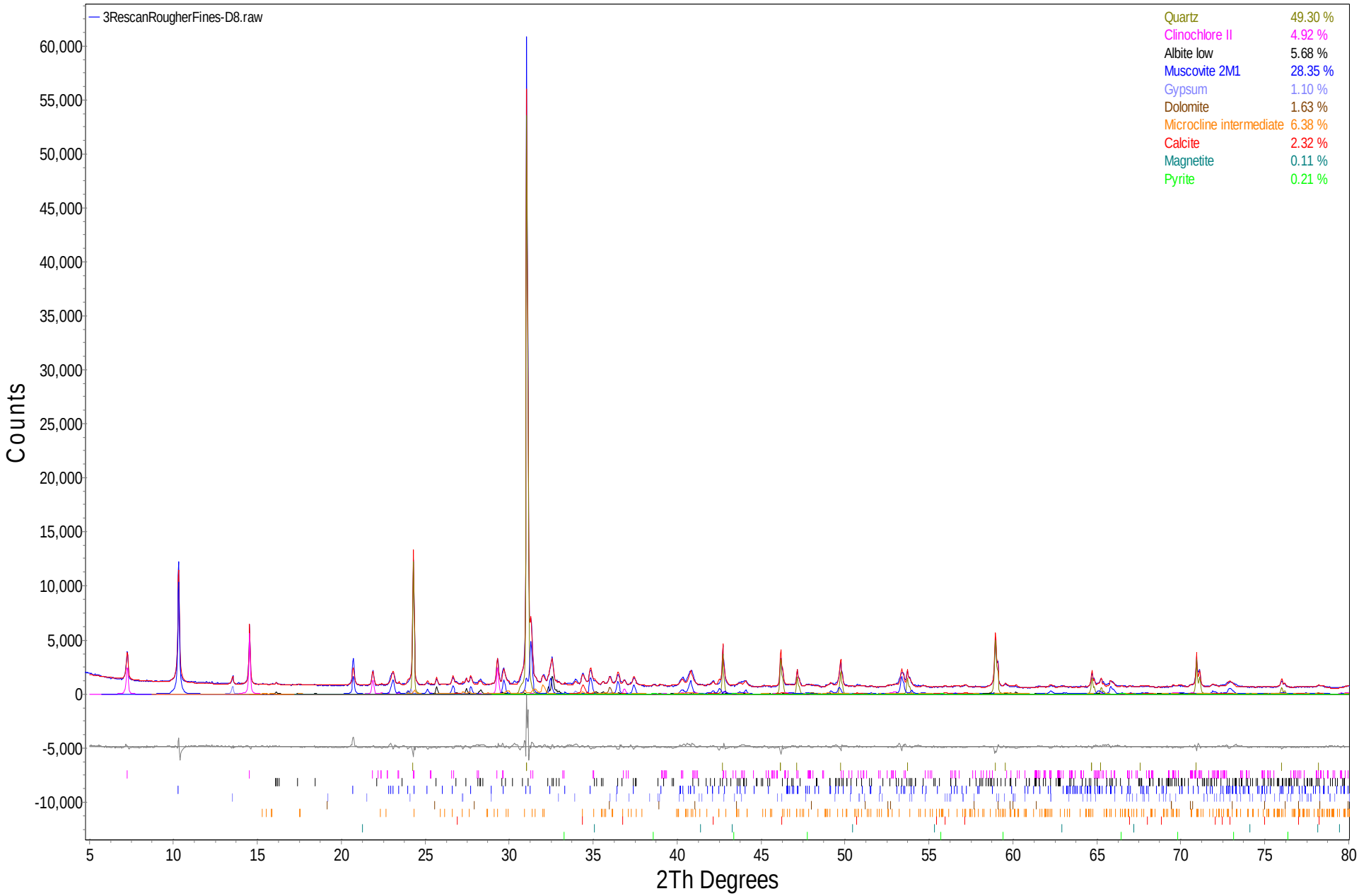


Figure 3. Rietveld refinement plot of sample **Rescan "Rougher Fines"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

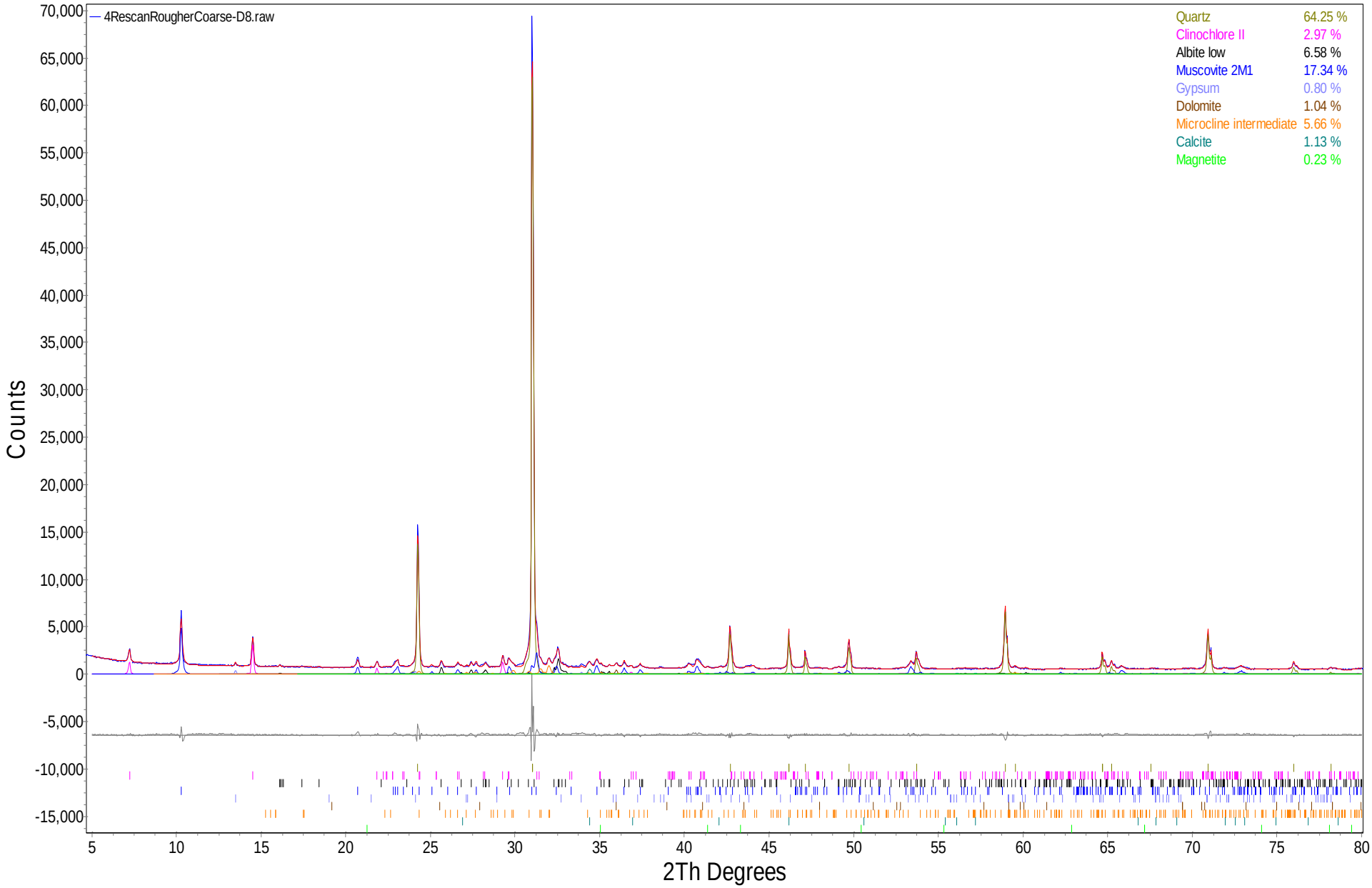


Figure 4. Rietveld refinement plot of sample **Rescan "Rougher Coarse"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

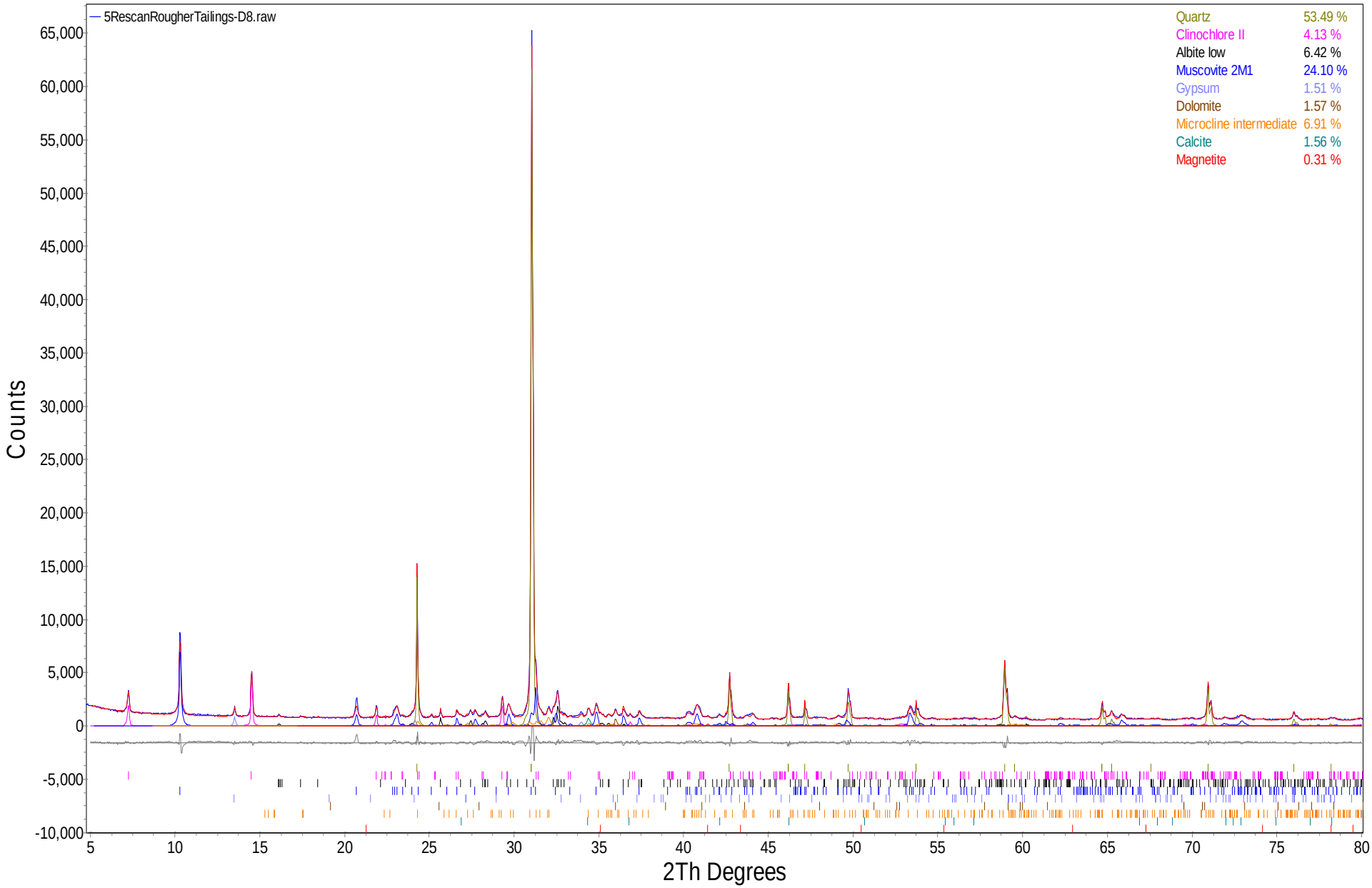


Figure 5. Rietveld refinement plot of sample **Rescan "Rougher Tailings"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

Appendix 6.1-3

QEMSCAN Analysis Results for the KSM Tailing

Rescan™
Engineers and Scientists

MINERALOGICAL ASSESSMENT OF TAILING SAMPLES

RESCAN ENVIRONMENTAL SERVICES LTD.

KM2539

January 26, 2010

G&T METALLURGICAL SERVICES LTD.

2957 Bowers Place, Kamloops, B.C. Canada V1S 1W5

E-mail: info@gtmet.com , Website: www.gtmet.com

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ISO 9001:2008
Certificate No. FS63170

January 26, 2010

Mr. Keith Mountjoy
Leader, Earth Sciences
Rescan Environmental Services Ltd.
Sixth Floor, 1111 West Hastings Street
Vancouver, BC
V6E 2J3

Dear Mr. Mountjoy,

Re: Mineralogical Assessment of Tailing Samples KM2539

We are pleased to inform you that we have completed a program to assess the mineral composition of Rescan tailing stream samples. The objective of this program was to identify and quantify the mineral composition of the samples provided.

To complete this program, samples from five tailing streams were received weighing a total of approximately 1.9 kilograms. Upon receipt, the samples were homogenized and assayed for elements of interest in this program. The composition of minerals in each sample was determined using particle mineral analysis (PMA) techniques by QEMSCAN. Spectra for each mineral present, as well as back scatter micrographs for mineral phases of interest were also detected per the proposal for this study. The analysis was performed on unsized samples, but provided useful quantitative measurements of mineral content.

A summary of the PMA results is displayed in Table 1. Chalcopyrite was the dominant copper sulphide mineral present in all samples, with values ranging between <0.1 and 1.5 percent. Pyrite was the dominant sulphide mineral in all samples. More than 50 percent of the sulphide tailings stream comprised of pyrite. The silicate minerals in the five

streams were dominated by quartz, with values ranging between 23 and 63 percent of the total samples by mass. Moderate levels of muscovite, feldspars and chlorite were also detected in these five samples.

TABLE 1
MINERAL COMPOSITION OF RESCAN TAILING SAMPLES

Minerals	Sulphide Tailings	Rougher /Sulphide	Rougher Fine	Rougher Coarse	Rougher Tailings
Chalcopyrite	1.5	0.1	<0.1	0.2	<0.1
Galena	<0.1	<0.1	<0.1	<0.1	<0.1
Sphalerite	0.1	<0.1	<0.1	<0.1	<0.1
Molybdenite	0.1	<0.1	<0.1	<0.1	<0.1
Pyrite	54.8	4.0	0.1	0.1	0.1
Hematite	0.4	0.8	1.0	0.6	0.6
Steel	0.3	0.1	<0.1	<0.1	0.1
Quartz	22.9	53.0	49.7	63.2	54.2
Muscovite	8.3	21.9	24.8	16.9	23.7
K-Feldspars	2.0	4.3	5.7	6.5	5.5
Feldspar_Albite	2.7	5.2	6.1	5.8	5.4
Chlorite	1.9	4.5	5.2	2.6	4.5
Calcite	0.8	1.1	2.3	0.9	1.8
Others	4.5	5.0	5.2	3.4	4.2
Total	100	100	100	100	100

Note: Detailed mineralogical data can be located in Appendix III.

A detailed list of minerals present, along with the requested spectra data can be located in Appendices II and III. Thank you for choosing G & T Metallurgical Services Ltd. for your testing requirements. If you have any questions regarding this test program, please do not hesitate to contact us directly.

Yours truly,

Tom Shouldice, P.Eng.
President

Aralia Pojhan, EIT
Project Metallurgist

January 26, 2010
KM2539

Report Distribution:
Keith Mountjoy, Rescan Environmental Services Ltd., Vancouver, BC – 1 Copy
G&T Metallurgical Services Ltd., Kamloops, BC – 1 Copy

APPENDIX I – KM2539

SAMPLE ORIGIN

1.0 Sample Origin

Five process tailing stream samples was received at G & T Metallurgical Services Ltd. on November 3, 2009. Upon receipt, the samples were homogenized with representative cuts removed for chemical analysis and mineralogical analysis. The results of the chemical analysis are summarized in Table I-1. The mineralogical analysis data are shown in Appendix III.

TABLE I-1
CHEMICAL COMPOSITION OF THE PROCESS TAILING SAMPLES
June 2009

No.	Product	Assays -percent					
		Cu	Pb	Zn	Fe	Al	Ca
#1	Sulphide Tailings	0.36	0.05	0.04	21.4	4.47	0.79
#2	Rougher/Sulphide	0.053	0.01	0.01	3.95	5.52	1.20
#3	Rougher Fine	0.015	0.03	0.02	2.00	6.23	1.51
#4	Rougher Coarse	0.023	0.03	0.01	1.38	4.66	0.84
#5	Rougher Tailings	0.015	0.01	<0.01	1.71	5.28	1.20

No.	Product	Assays -percent					
		Mg	Mo	Si	Na	S(t)	K
#1	Sulphide Tailings	0.67	0.029	14.7	0.24	22.9	2.06
#2	Rougher/Sulphide	0.97	0.005	33.7	0.64	2.91	3.24
#3	Rougher Fine	1.12	<0.001	33.64	0.73	0.24	3.51
#4	Rougher Coarse	0.72	0.001	37.1	0.60	0.17	2.44
#5	Rougher Tailings	0.96	<0.001	34.1	0.52	0.21	3.03

APPENDIX II – KM2539

SPECTRA DATA

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TABLE II-1
QEMSCAN X-RAY ANALYSIS ON CHALCOPYRITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Oxygen	K-series	4.8	5.0	13.6	0.8
	Copper	K-series	29.4	30.9	21.2	1.0
	Sulfur	K-series	28.1	29.5	40.0	1.0
	Iron	K-series	27.0	28.4	22.1	0.7
	Calcium	K-series	1.9	2.0	2.2	0.1
	Osmium	M-series	4.0	4.2	1.0	0.2
		Sum:	95.2	100	100	
2	Oxygen	K-series	3.7	4.2	11.5	0.7
	Copper	K-series	27.7	31.4	21.8	0.9
	Sulfur	K-series	27.9	31.7	43.6	1.0
	Iron	K-series	24.3	27.6	21.8	0.7
	Calcium	K-series	0.2	0.2	0.3	0.0
	Osmium	L-series	4.3	4.8	1.1	2.2
		Sum:	88.0	100	100	
3	Iron	K-series	27.1	30.7	25.7	0.7
	Copper	K-series	32.2	36.5	26.8	0.8
	Sulfur	K-series	28.8	32.7	47.5	1.1
		Sum:	88.0	100	100	
4	Iron	K-series	25.7	30.8	25.7	0.7
	Copper	K-series	30.3	36.3	26.6	0.8
	Sulfur	K-series	27.4	32.9	47.7	1.0
		Sum:	83.5	100	100	
5	Iron	K-series	26.9	32.0	26.5	0.7
	Copper	K-series	29.1	34.6	25.2	0.8
	Sulfur	K-series	28.1	33.4	48.2	1.1
		Sum:	84.1	100	100	
Average:	**Oxygen 3.1**	**Copper 34.0**	**Sulfur 32.0**	**Iron 29.9**	**Calcium 1.1**	**Osmium 4.5**

FIGURE II-1A
QEMSCAN X-RAY ANALYSIS ON CHALCOPYRITE PARTICLES

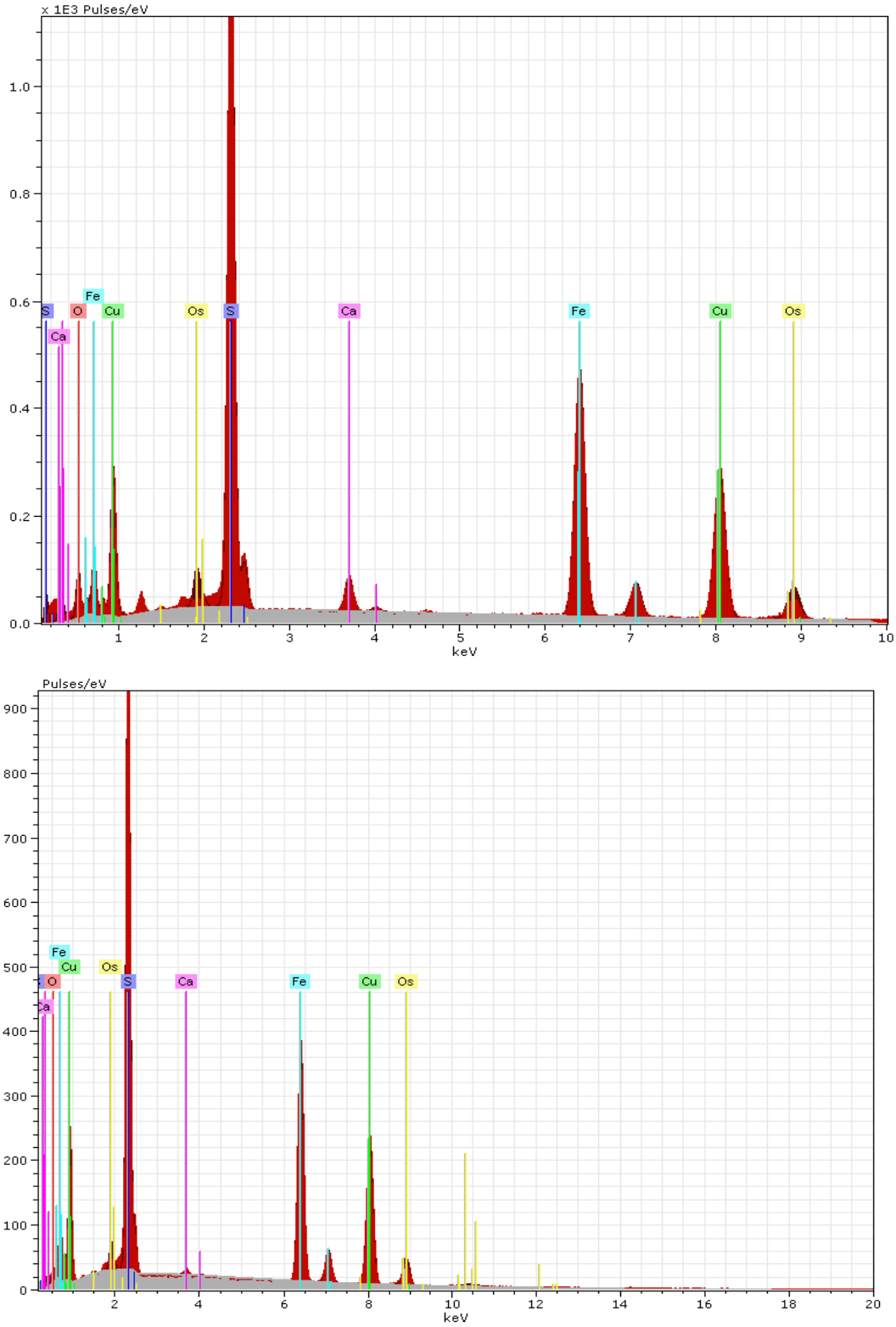
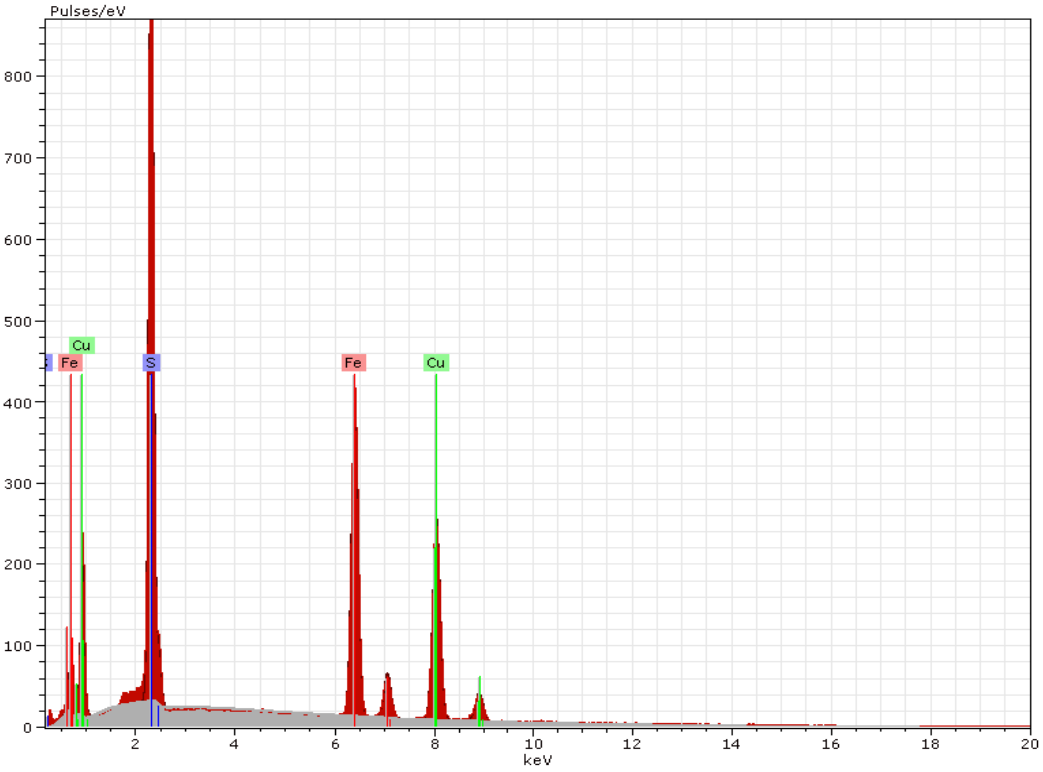


FIGURE II-1B
QEMSCAN X-RAY ANALYSIS ON CHALCOPYRITE PARTICLES



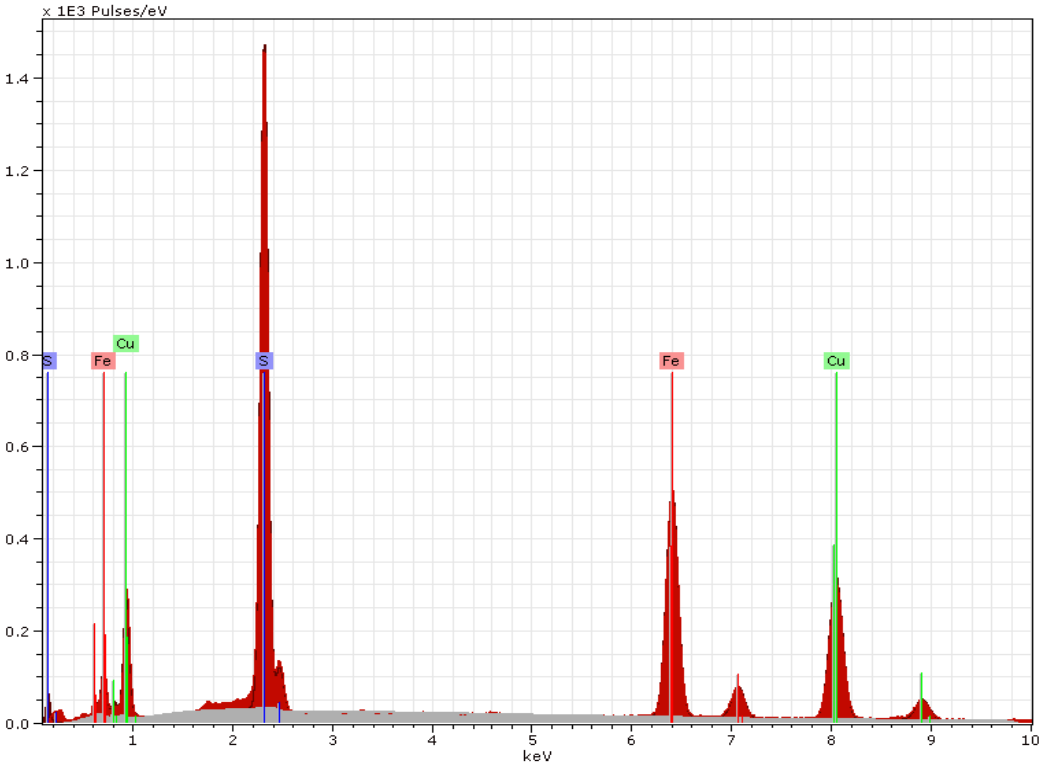


TABLE II-2
QEMSCAN X-RAY ANALYSIS ON TENNANTITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Copper	K-series	32.7	41.3	33.7	0.9
	Sulfur	K-series	21.2	26.8	43.3	0.8
	Arsenic	K-series	16.6	21.0	14.6	0.5
	Zinc	K-series	5.1	6.4	5.1	0.2
	Antimony	L-series	1.4	1.8	0.8	0.1
	Iron	K-series	2.1	2.7	2.5	0.1
Average:	**Copper 41.3**	**Sulfur 26.8**	**Arsenic 21.0**	**Antimony 1.8**	**Iron 2.7**	

FIGURE II-2
QEMSCAN X-RAY ANALYSIS ON TENNANTITE PARTICLES

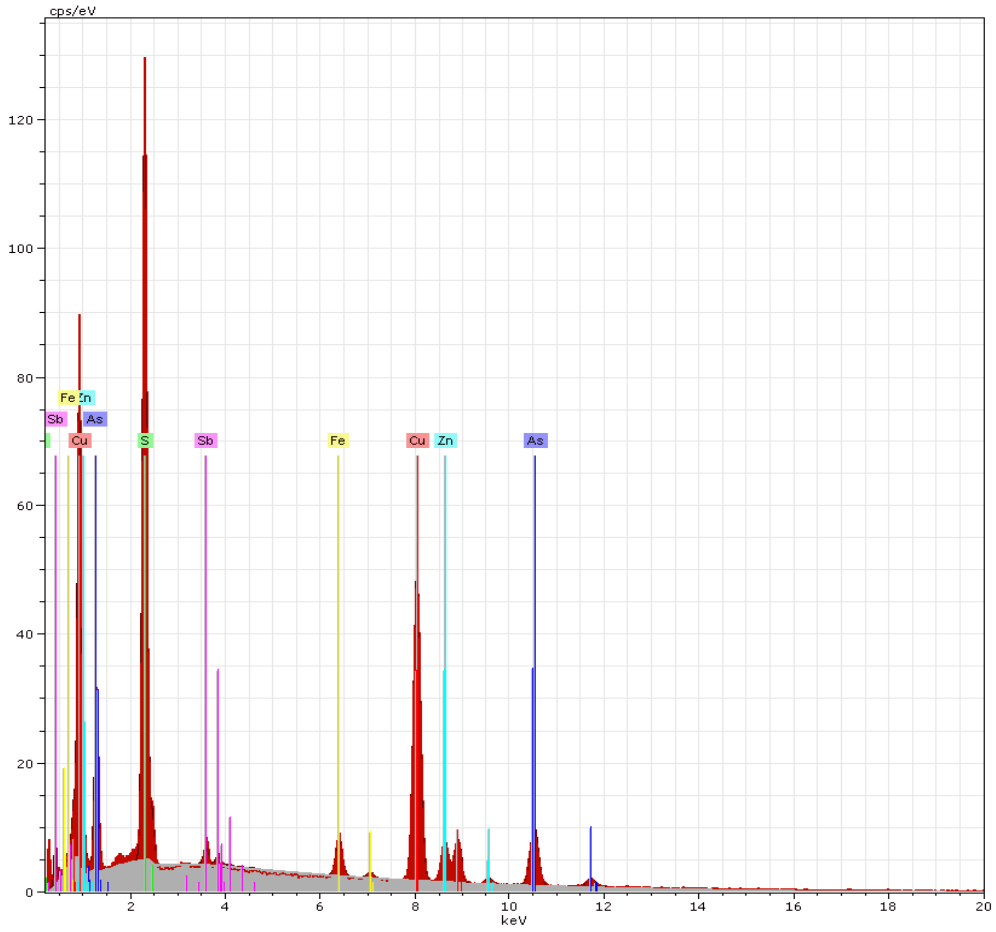


TABLE II-3
QEMSCAN X-RAY ANALYSIS ON GALENA PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Lead	L-series	85.4	93.1	68.6	2.3
	Sulfur	K-series	5.6	6.1	29.3	0.5
	Iron	K-series	0.7	0.8	2.2	0.1
		Sum:	91.8	100	100	
Average:	**Lead 93.1**	**Sulfur 6.1**	**Iron 0.8**			

FIGURE II-3
QEMSCAN X-RAY ANALYSIS ON GALENA PARTICLES

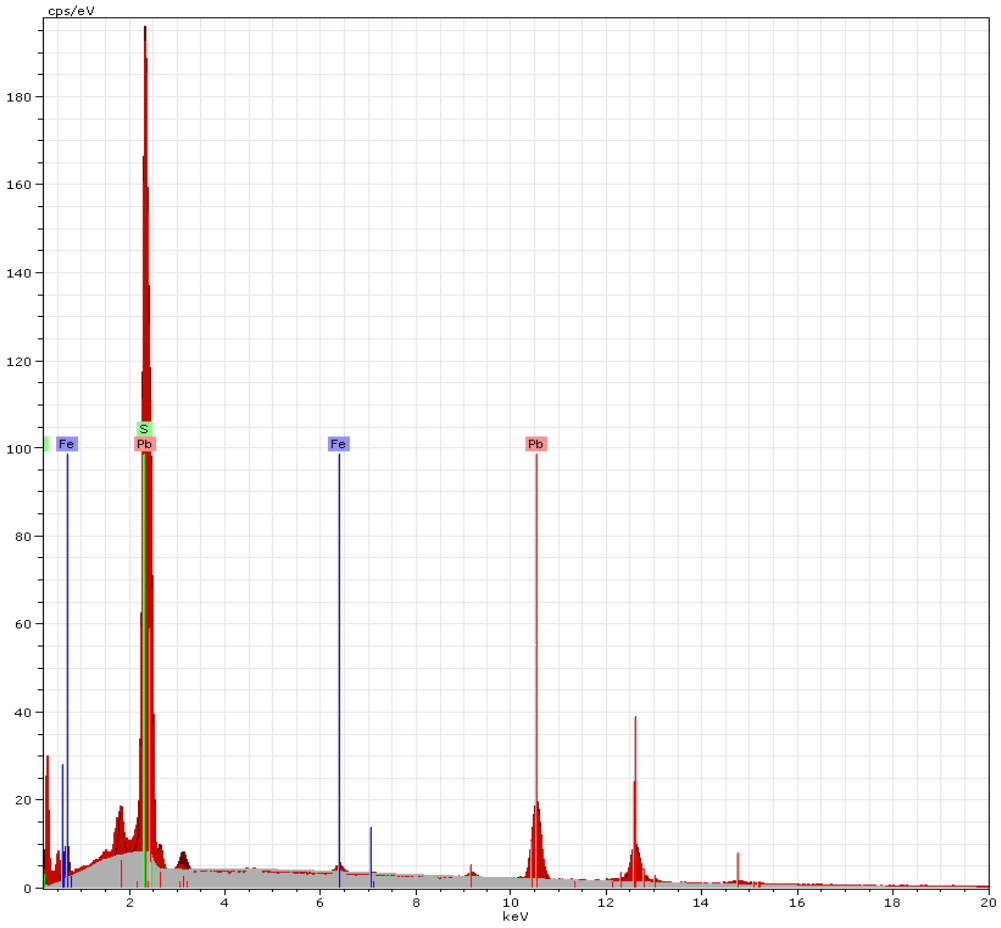


TABLE II-4
QEMSCAN X-RAY ANALYSIS ON SPHALERITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Zinc	K-series	55.8	68.4	51.8	1.4
	Sulfur	K-series	25.1	30.7	47.4	0.9
	Iron	K-series	0.7	0.9	0.8	0.1
		Sum:	81.7	100	100	
2	Zinc	K-series	53.4	67.8	51.1	1.4
	Sulfur	K-series	24.6	31.3	48.1	0.9
	Iron	K-series	0.7	0.9	0.8	0.1
		Sum:	78.7	100	100	
3	Zinc	K-series	50.4	66.2	49.2	1.3
	Sulfur	K-series	25.1	32.9	49.9	0.9
	Iron	K-series	0.7	1.0	0.8	0.1
		Sum:	76.2	100	100	
4	Zinc	K-series	47.6	64.5	47.4	1.2
	Sulfur	K-series	25.4	34.4	51.6	1.0
	Iron	K-series	0.8	1.1	0.9	0.1
		Sum:	73.8	100	100	
Average:	**Zinc**	**Sulfur**	**Iron**			
	66.7	**32.3**	**1.0**			

FIGURE II-4
QEMSCAN X-RAY ANALYSIS ON SPHALERITE PARTICLES

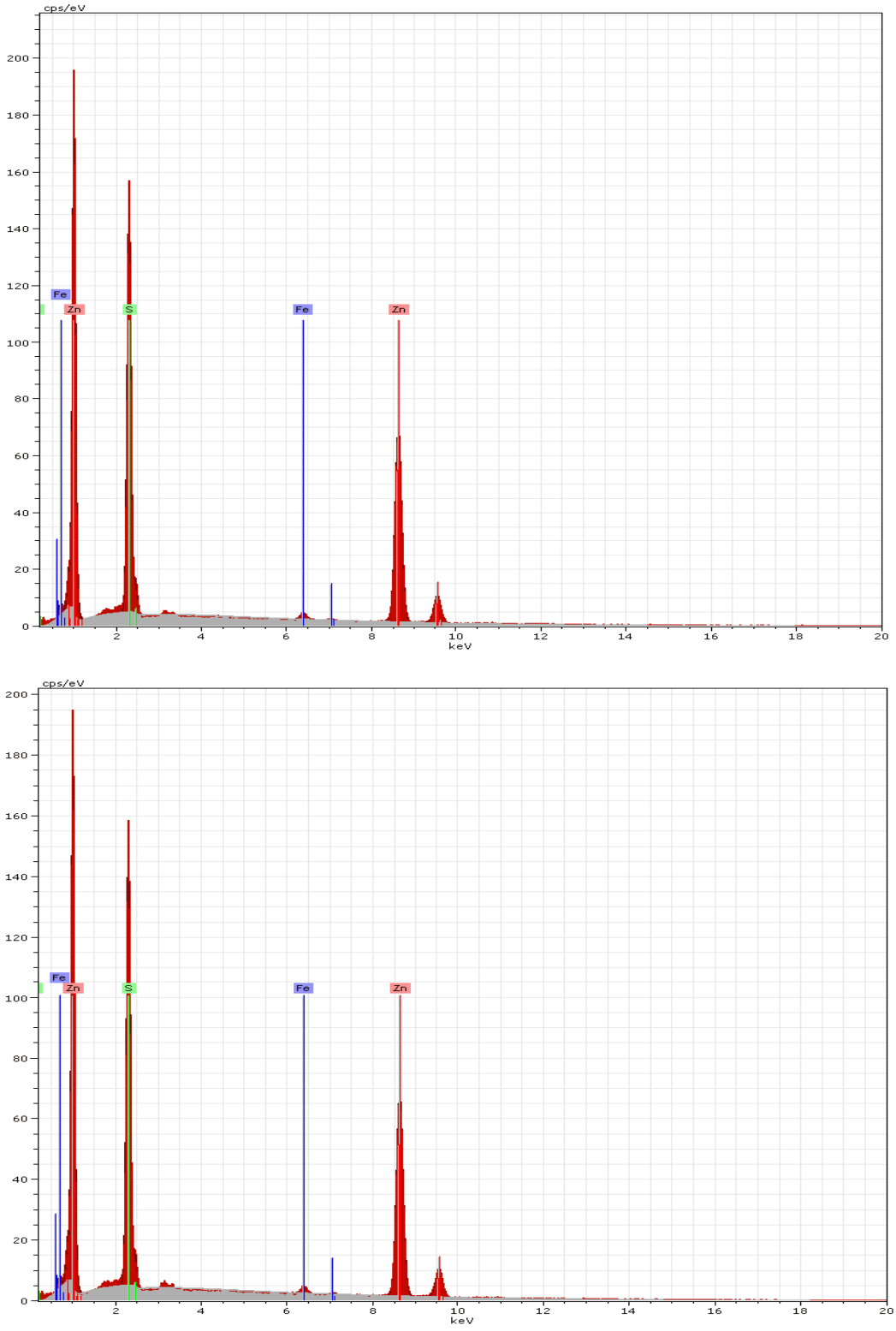


TABLE II-5
QEMSCAN X-RAY ANALYSIS ON MOLYBDENITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Sulfur	K-series	25.3	26.5	50.2	2.2
	Molybdenum	L-series	66.9	70.2	44.3	4.3
	Silicon	K-series	1.5	1.6	3.3	0.1
	Titanium	K-series	1.2	1.3	1.6	0.1
	Iron	K-series	0.5	0.5	0.5	0.0
Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atom Percent	Error in Percent
1	Sulfur	K-series	25.3	26.5	50.2	2.2
	Molybdenum	L-series	66.9	70.2	44.3	4.3
	Silicon	K-series	1.5	1.6	3.3	0.1
	Titanium	K-series	1.2	1.3	1.6	0.1
	Iron	K-series	0.5	0.5	0.5	0.0
Average:	**Iron**	**Molybdenum**	**Silicon**	**Titanium**		
	26.5	**70.2**	**1.6**	**1.3**		

FIGURE II-5
QEMSCAN X-RAY ANALYSIS ON MOLYBDENITE PARTICLES

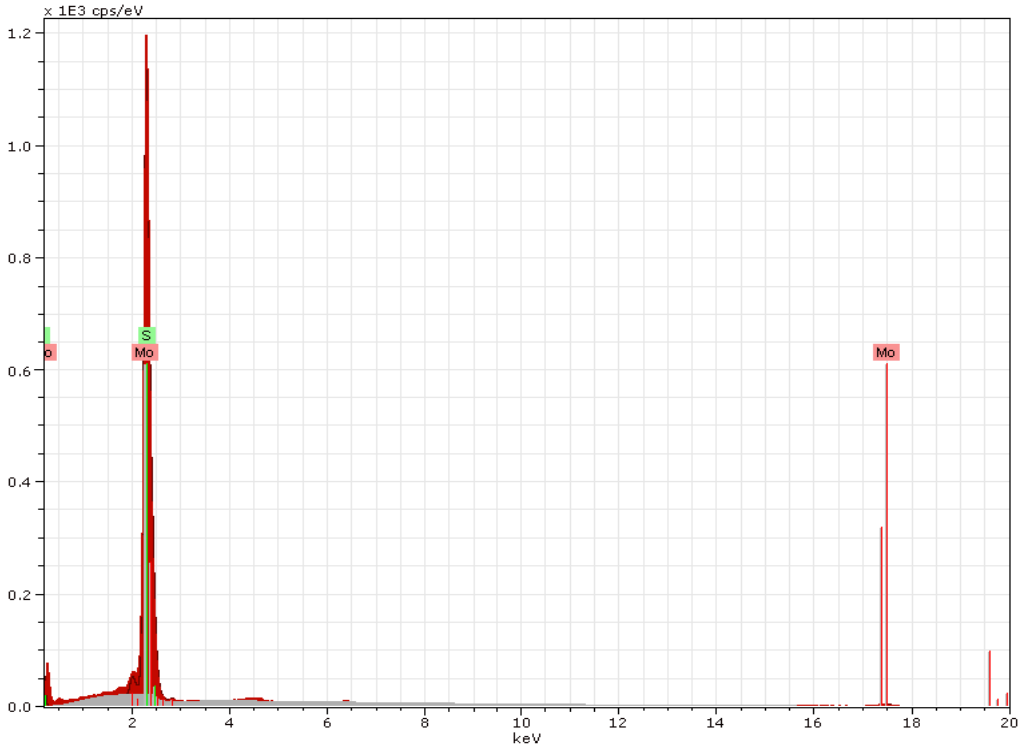
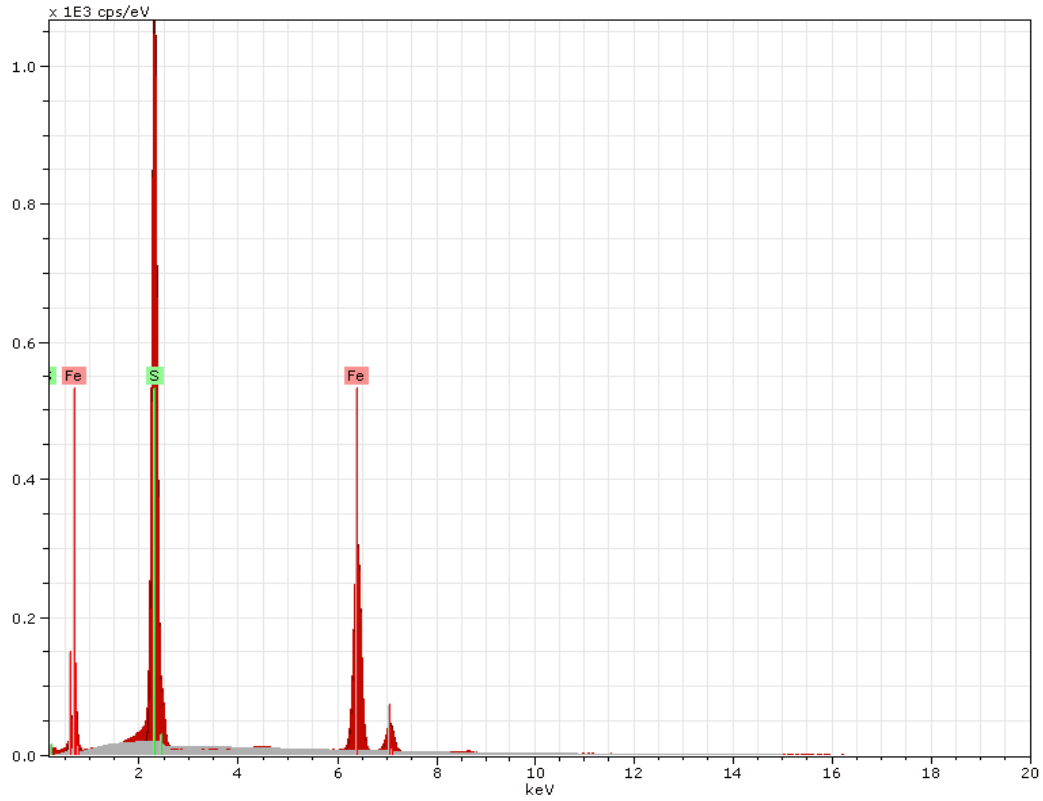


TABLE II-6
QEMSCAN X-RAY ANALYSIS ON PYRITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Iron	K-series	38.4	47.7	34.3	1.0
	Sulfur	K-series	42.1	52.3	65.7	1.6
		Sum:	80.5	100	100	
3	Sulfur	K-series	44.7	51.9	65.3	1.7
	Iron	K-series	41.5	48.1	34.7	1.1
		Sum:	86.2	100	100	
4	Sulfur	K-series	44.7	51.9	65.3	1.7
	Iron	K-series	41.5	48.1	34.7	1.1
		Sum:	86.2	100	100	
Average:	**Iron 48.0**	**Sulfur 52.0**				

FIGURE II-6A
QEMSCAN X-RAY ANALYSIS ON PYRITE PARTICLES



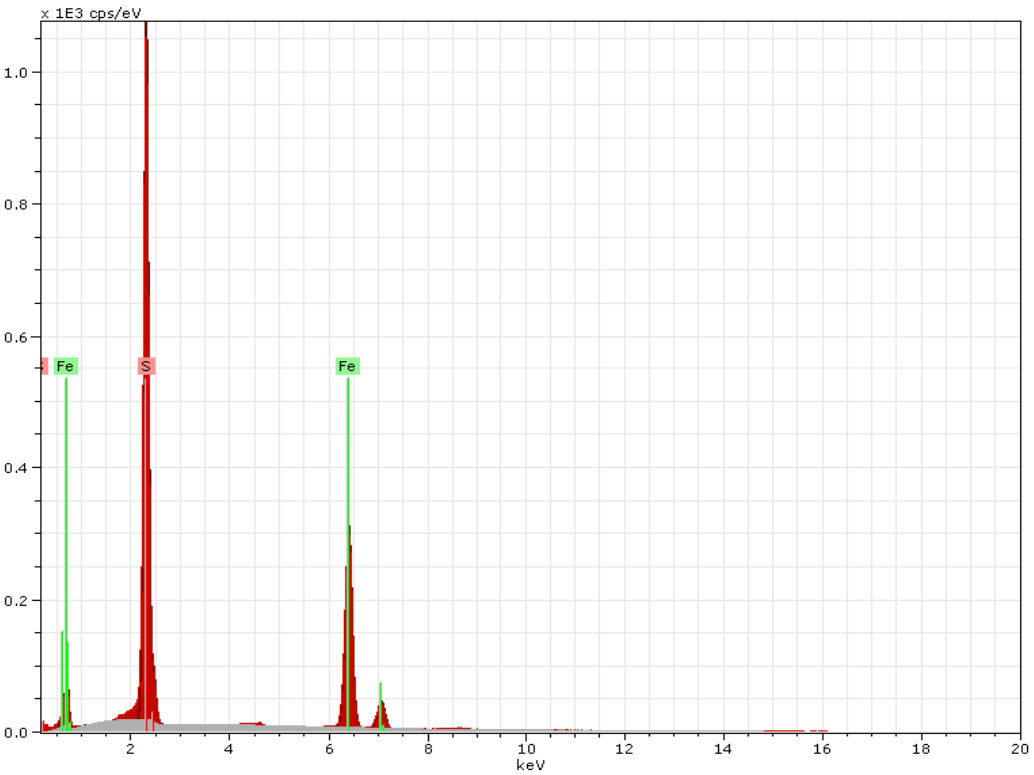
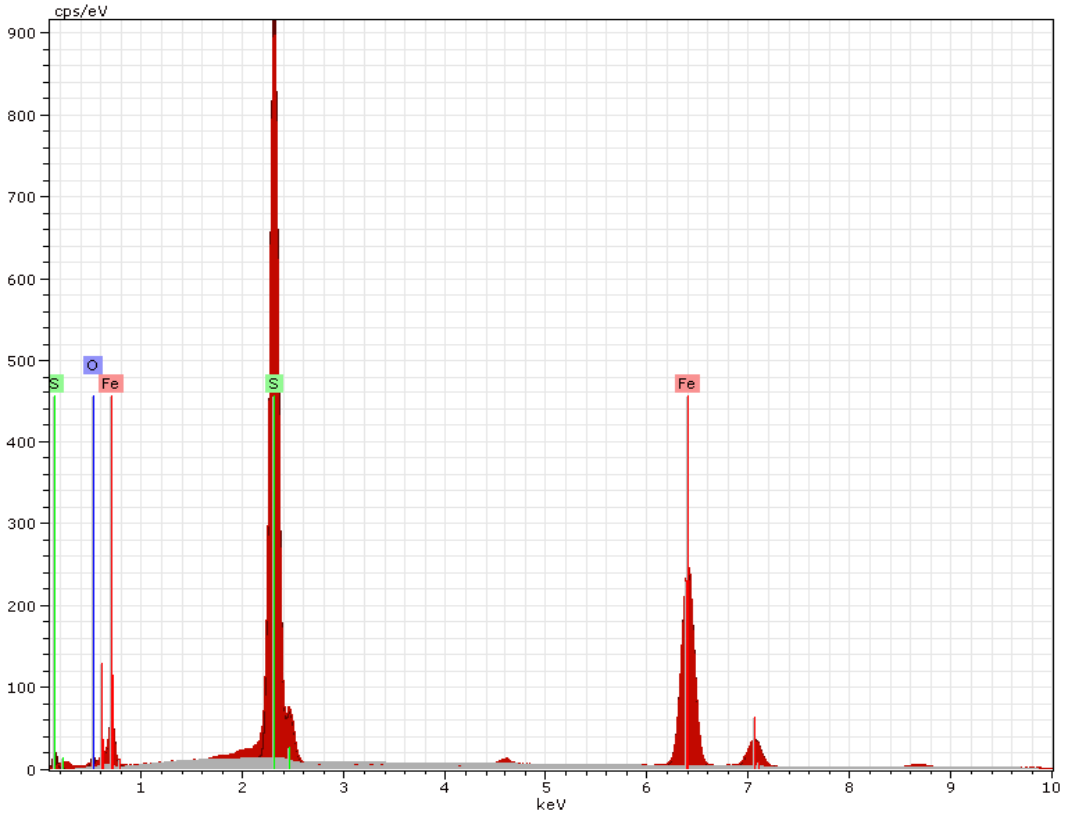


FIGURE II-6B
QEMSCAN X-RAY ANALYSIS ON PYRITE PARTICLES



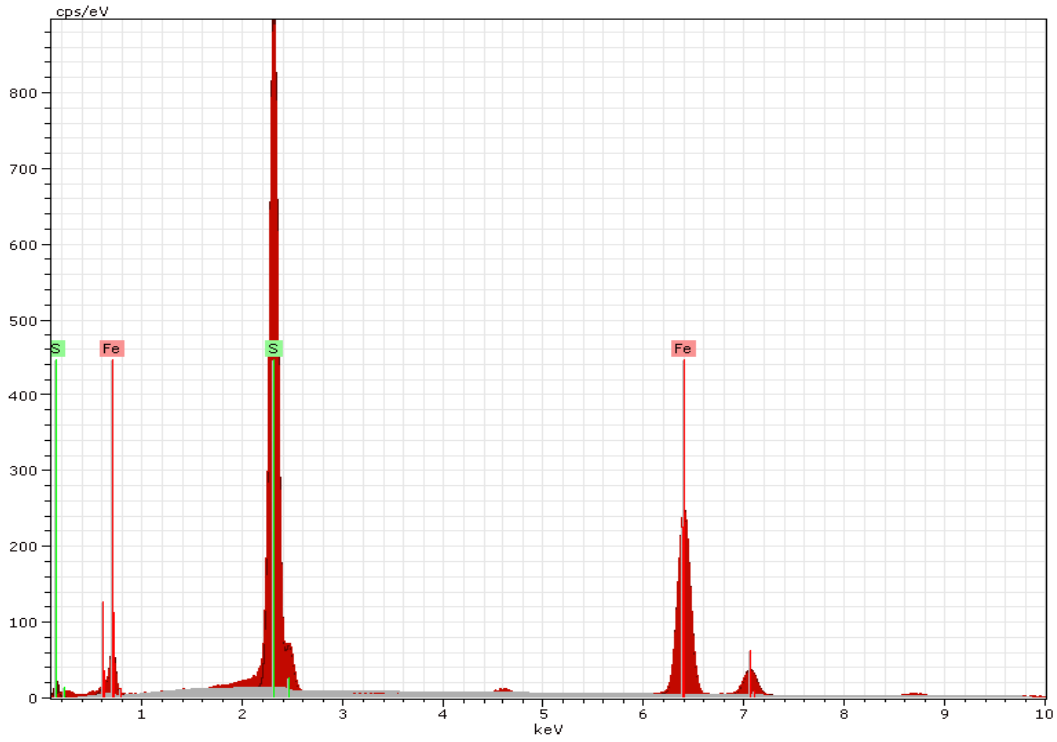


TABLE II-7
QEMSCAN X-RAY ANALYSIS ON BARITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Sulfur	K-series	8.2	9.2	8.4	0.3
	Oxygen	K-series	38.8	43.7	79.4	4.8
	Barium	L-series	39.3	44.3	9.4	1.1
	Silicon	K-series	2.4	2.7	2.8	0.1
		Sum:	88.8	100	100	
2	Sulfur	K-series	7.1	8.7	7.5	0.3
	Oxygen	K-series	39.5	48.2	83.7	5.0
	Barium	L-series	35.4	43.1	8.7	1.0
	Silicon	K-series	0.0	0.02	0.0	0.0
		Sum:	82.1	100	100	
3	Sulfur	K-series	6.9	8.4	7.2	0.3
	Oxygen	K-series	40.6	49.5	84.4	5.1
	Barium	L-series	34.6	42.1	8.4	1.0
		Sum:	82.2	100	100	
4	Sulfur	K-series	7.1	8.6	7.3	0.3
	Oxygen	K-series	40.8	49.5	84.4	5.1
	Barium	L-series	34.6	42.0	8.3	1.0
		Sum:	82.5	100	100	
Average:	**Sulfur 8.7**	**Oxygen 47.7**	**Barium 42.9**	**Silicon 1.4**		

FIGURE II-7A
QEMSCAN X-RAY ANALYSIS ON BARITE PARTICLES

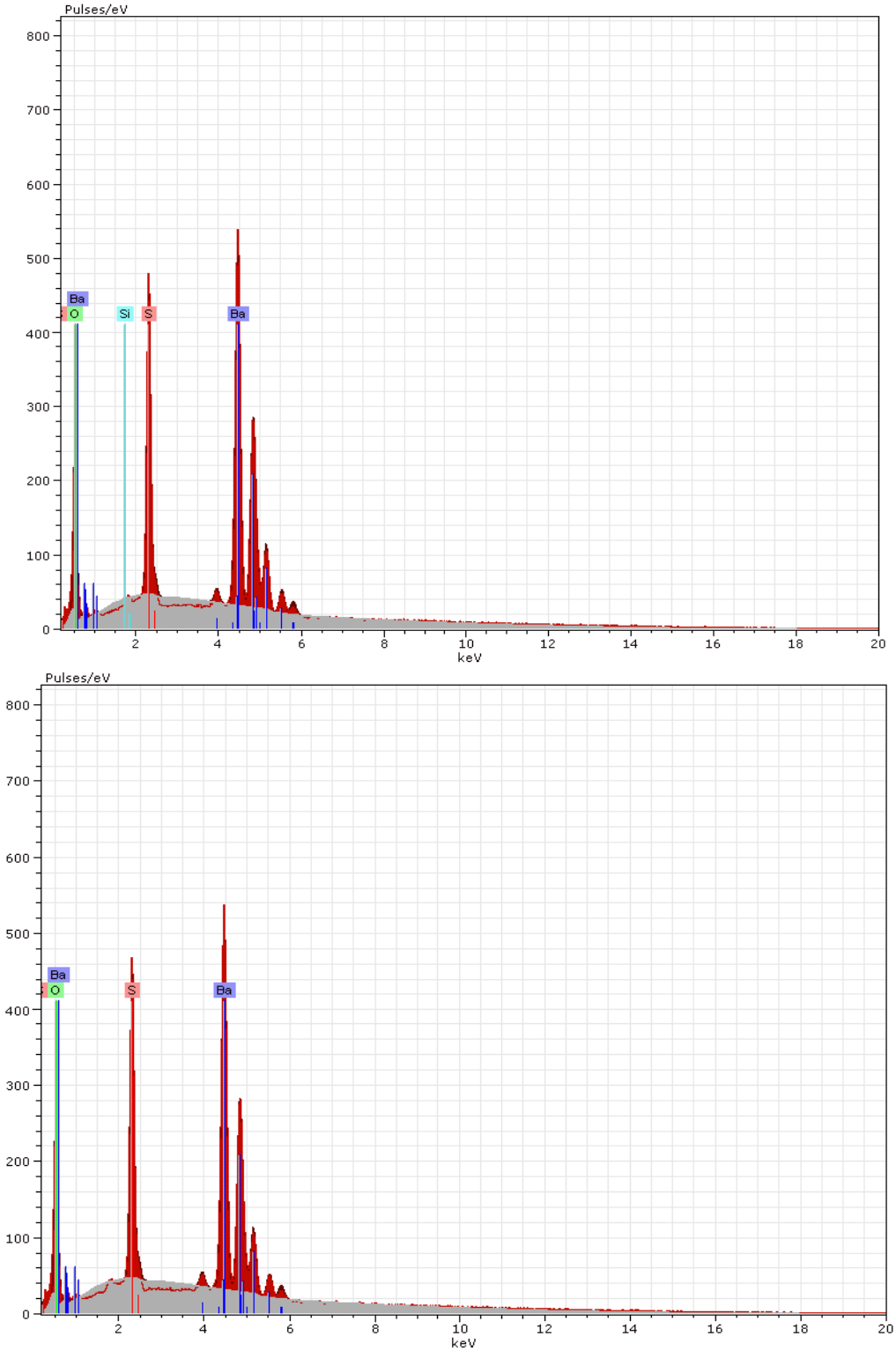


FIGURE II-7B
QEMSCAN X-RAY ANALYSIS ON BARITE PARTICLES

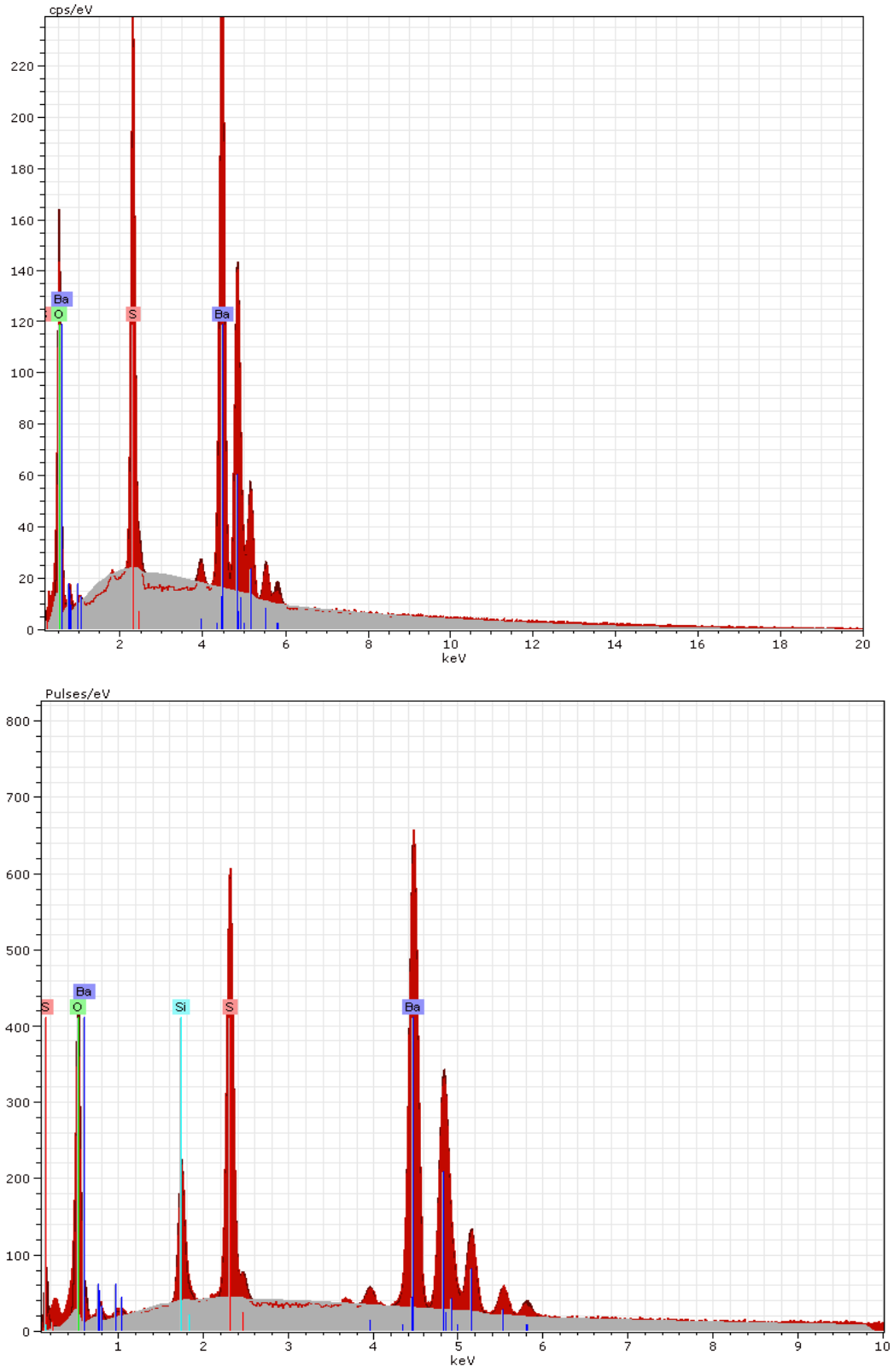


TABLE II-8
QEMSCAN X-RAY ANALYSIS ON HEMATITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Sulfur	K-series	1.1	1.3	1.3	0.1
	Oxygen	K-series	23.6	27.2	56.2	15.1
	Iron	K-series	61.9	71.1	42.2	1.6
	Titanium	K-series	0.4	0.5	0.3	0.0
		Sum:	87.0	100	100	
2	Oxygen	K-series	21.4	24.0	52.4	14.1
	Iron	K-series	67.4	75.6	47.3	1.8
	Titanium	K-series	0.4	0.45	0.3	0.0
		Sum:	89.2	100	100	
3	Titanium	K-series	1.1	1.2	0.9	0.1
	Iron	K-series	64.7	72.7	44.0	1.7
	Oxygen	K-series	23.2	26.1	55.1	14.8
		Sum:	89.0	100	100	
Average:	**Sulfur 1.3**	**Oxygen 25.7**	**Iron 73.1**	**Titanium 0.5**		

FIGURE II-8A
QEMSCAN X-RAY ANALYSIS ON HEMATITE PARTICLES

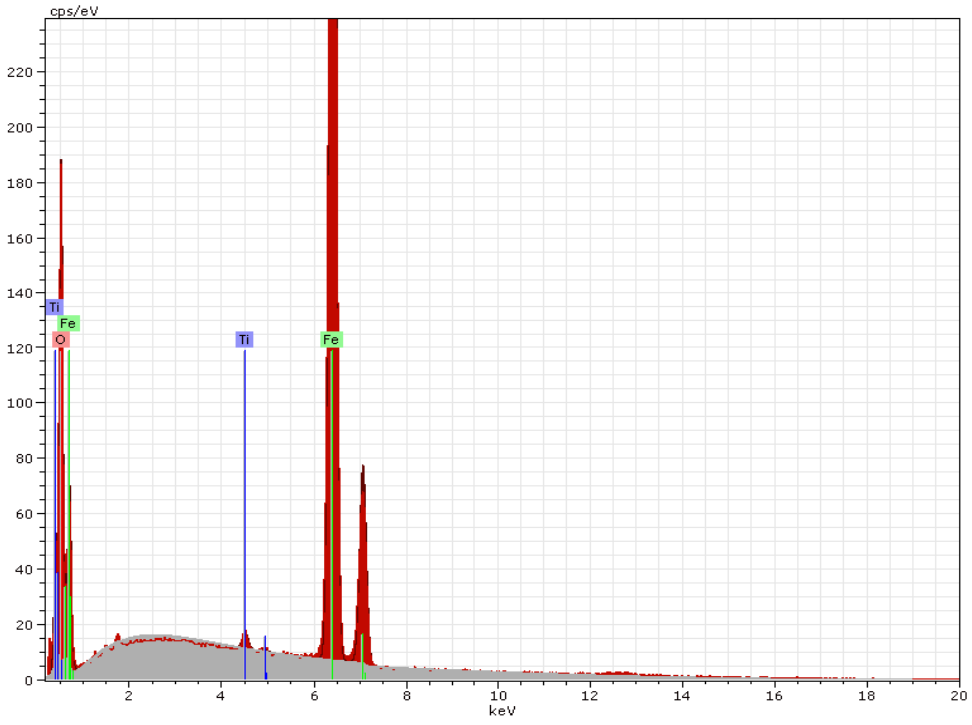
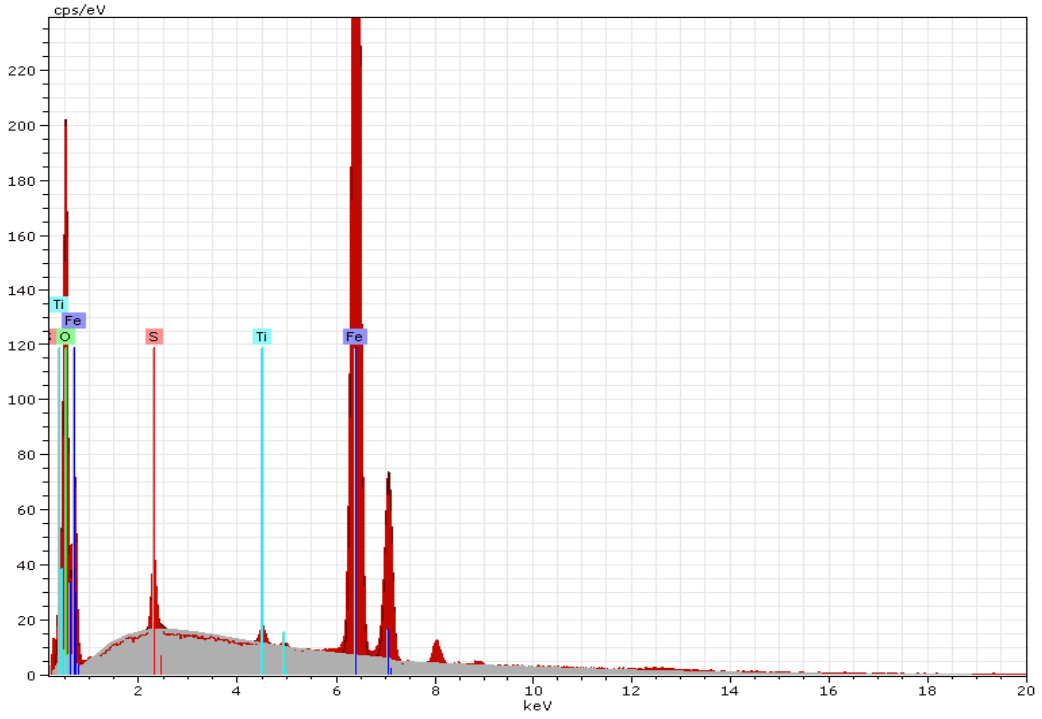


FIGURE II-8B
QEMSCAN X-RAY ANALYSIS ON HEMATITE PARTICLES



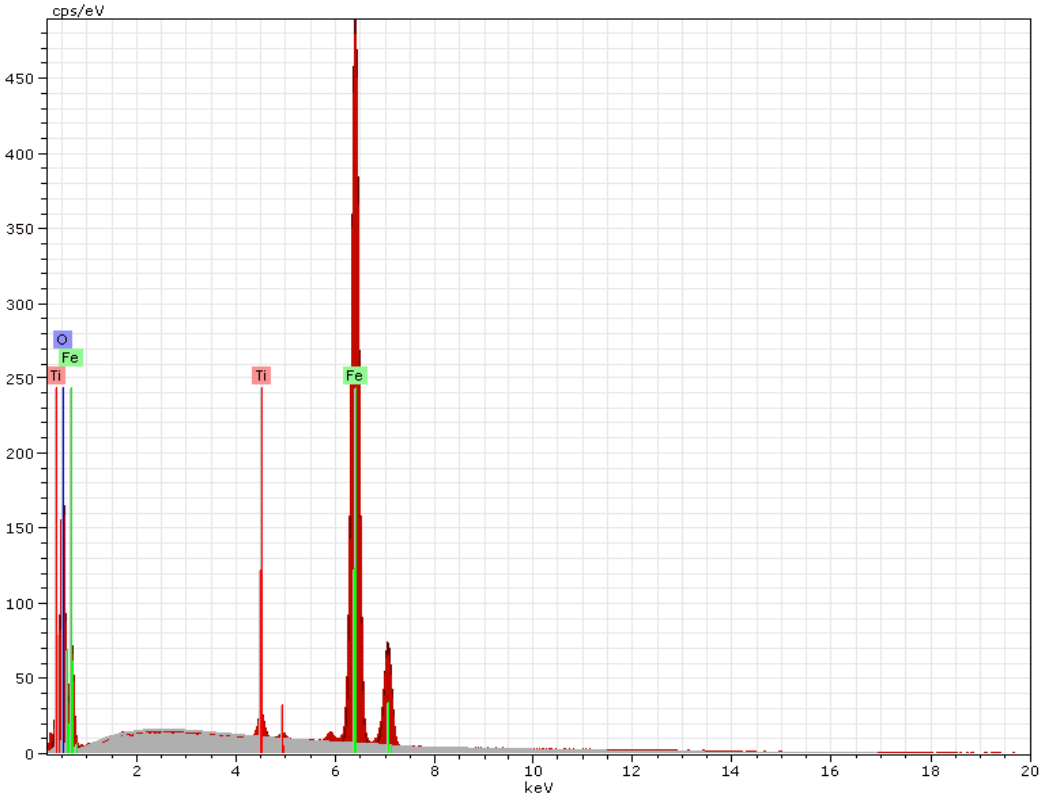


TABLE II-9
QEMSCAN X-RAY ANALYSIS ON STEEL PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Iron	K-series	58.0	69.9	60.9	1.5
	Chromium	K-series	14.6	17.6	16.4	0.4
	Nickel	K-series	6.8	8.2	6.8	0.2
	Silicon	K-series	0.6	0.8	1.3	0.1
	Carbon	K-series	3.0	3.6	14.6	0.5
		Sum:	83.1	100	100	

FIGURE II-9
QEMSCAN X-RAY ANALYSIS ON STEEL PARTICLES

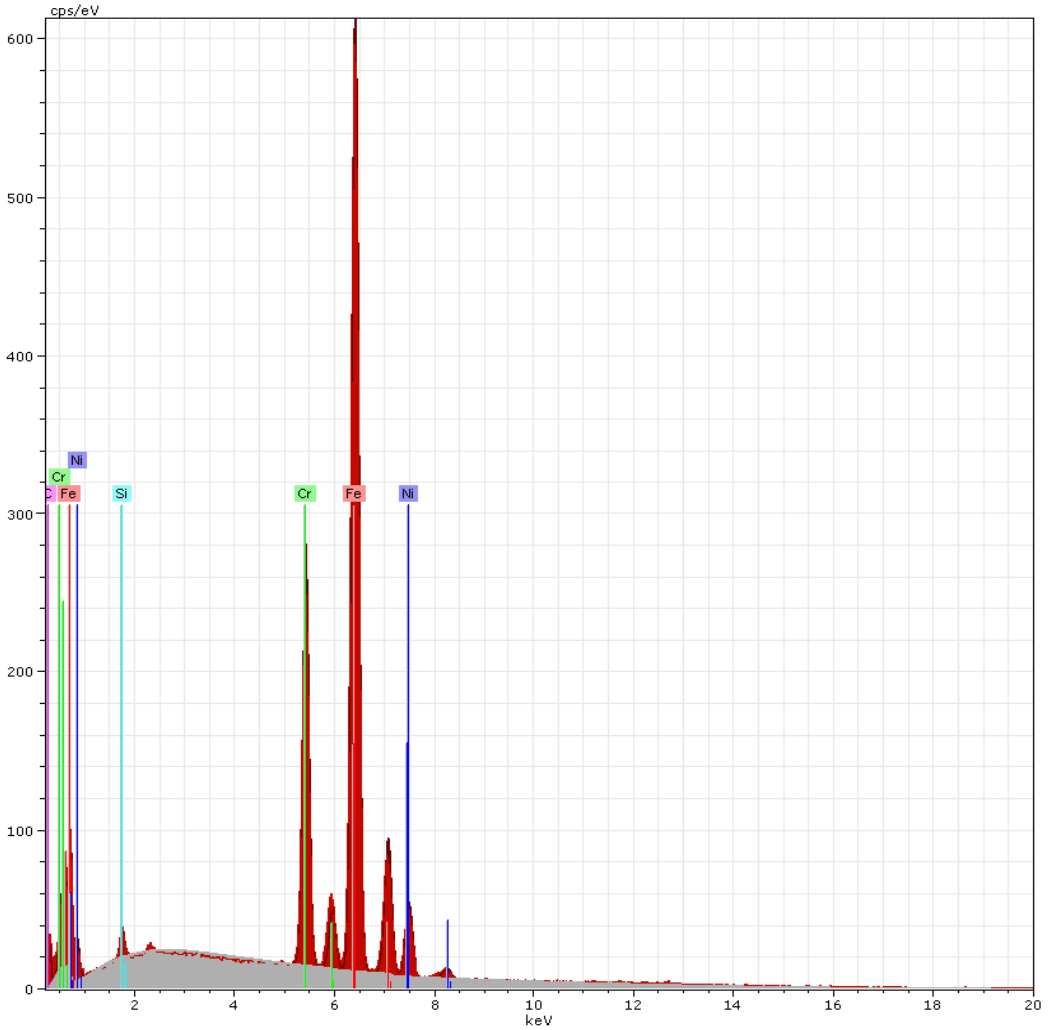


TABLE II-10
QEMSCAN X-RAY ANALYSIS ON QUARTZ PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Oxygen	K-series	46.1	57.1	70.4	4.9
	Silicon	K-series	33.8	41.9	29.4	1.5
	Tin	L-series	0.8	1.0	0.2	0.0
		Sum:	80.7	100	100	
2	Oxygen	K-series	43.3	55.7	69.3	4.6
	Silicon	K-series	33.6	43.2	30.6	1.5
	Tin	L-series	0.8	1.06	0.2	0.0
		Sum:	77.7	100	100	
3	Oxygen	K-series	43.9	57.7	70.8	5.3
	Silicon	K-series	31.6	41.6	29.1	1.4
	Tin	L-series	0.5	0.7	0.1	0.0
		Sum:	76.0	100	100	
Average:	**Oxygen 56.9**	**Silicon 42.2**	**Tin 0.9**			

FIGURE II-10A
QEMSCAN X-RAY ANALYSIS ON QUARTZ PARTICLES

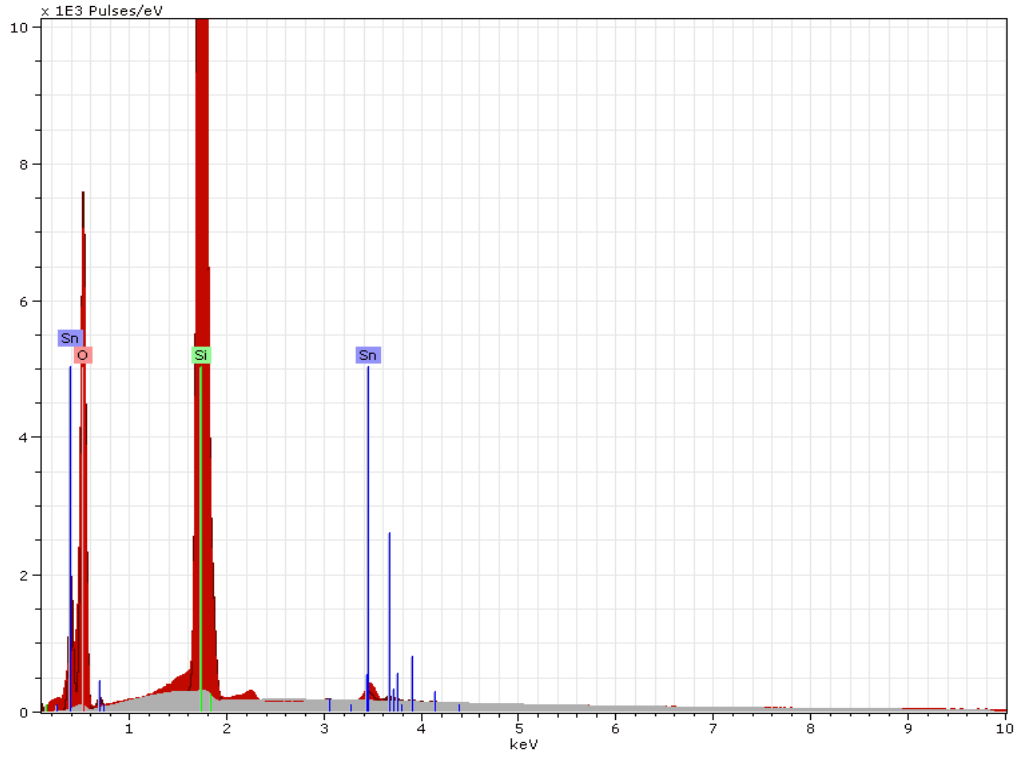
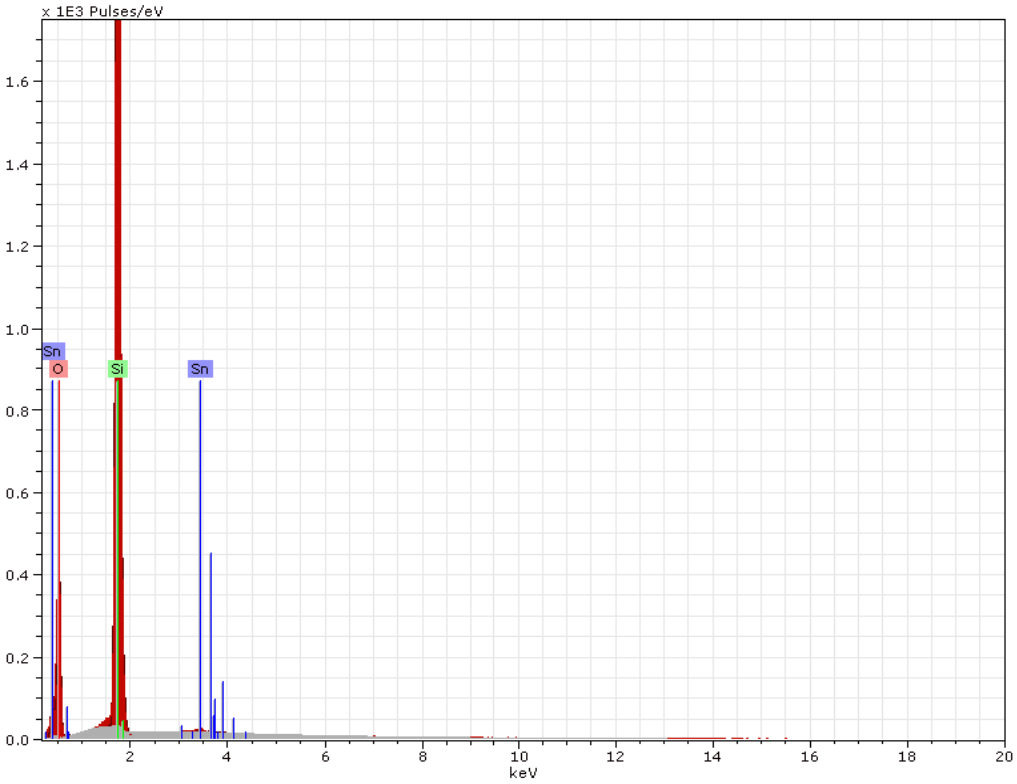


FIGURE II-10B
QEMSCAN X-RAY ANALYSIS ON QUARTZ PARTICLES



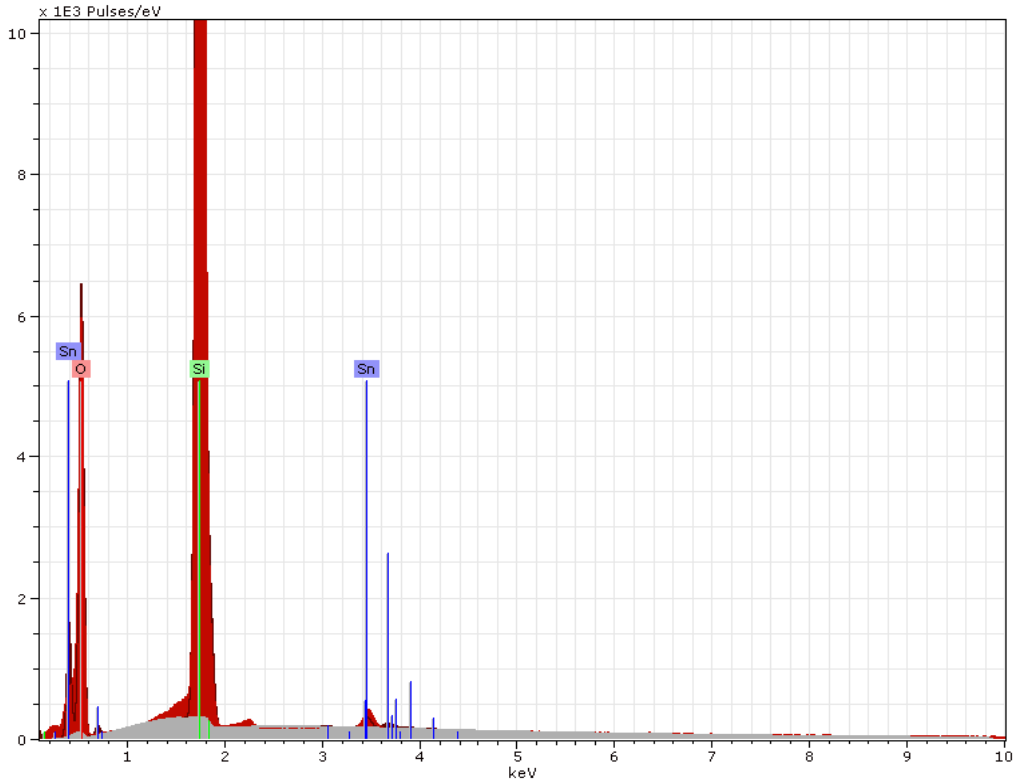


TABLE II-11
QEMSCAN X-RAY ANALYSIS ON MUSCOVITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Oxygen	K-series	40.7	50.8	65.9	4.4
	Silicon	K-series	14.6	18.2	13.4	0.7
	Aluminium	K-series	15.1	18.8	14.5	0.8
	Potassium	K-series	8.3	10.4	5.5	0.3
	Iron	K-series	1.5	1.8	0.7	0.1
		Sum:	80.2	100	100	
2	Oxygen	K-series	40.6	51.6	66.4	4.9
	Silicon	K-series	13.7	17.4	12.7	0.6
	Aluminium	K-series	14.4	18.3	14.0	0.7
	Iron	K-series	1.2	1.5	0.5	0.1
	Magnesium	K-series	1.1	1.4	1.2	0.1
	Potassium	K-series	7.7	9.8	5.2	0.3
		Sum:	78.7	100	100	
Average:	**Oxygen**	**Silicon**	**Aluminium**	**Potassium**	**Iron**	**Magnesium**
	34.1	**11.9**	**18.6**	**10.1**	**1.7**	**1.4**

FIGURE II-11
QEMSCAN X-RAY ANALYSIS ON MUSCOVITE PARTICLES

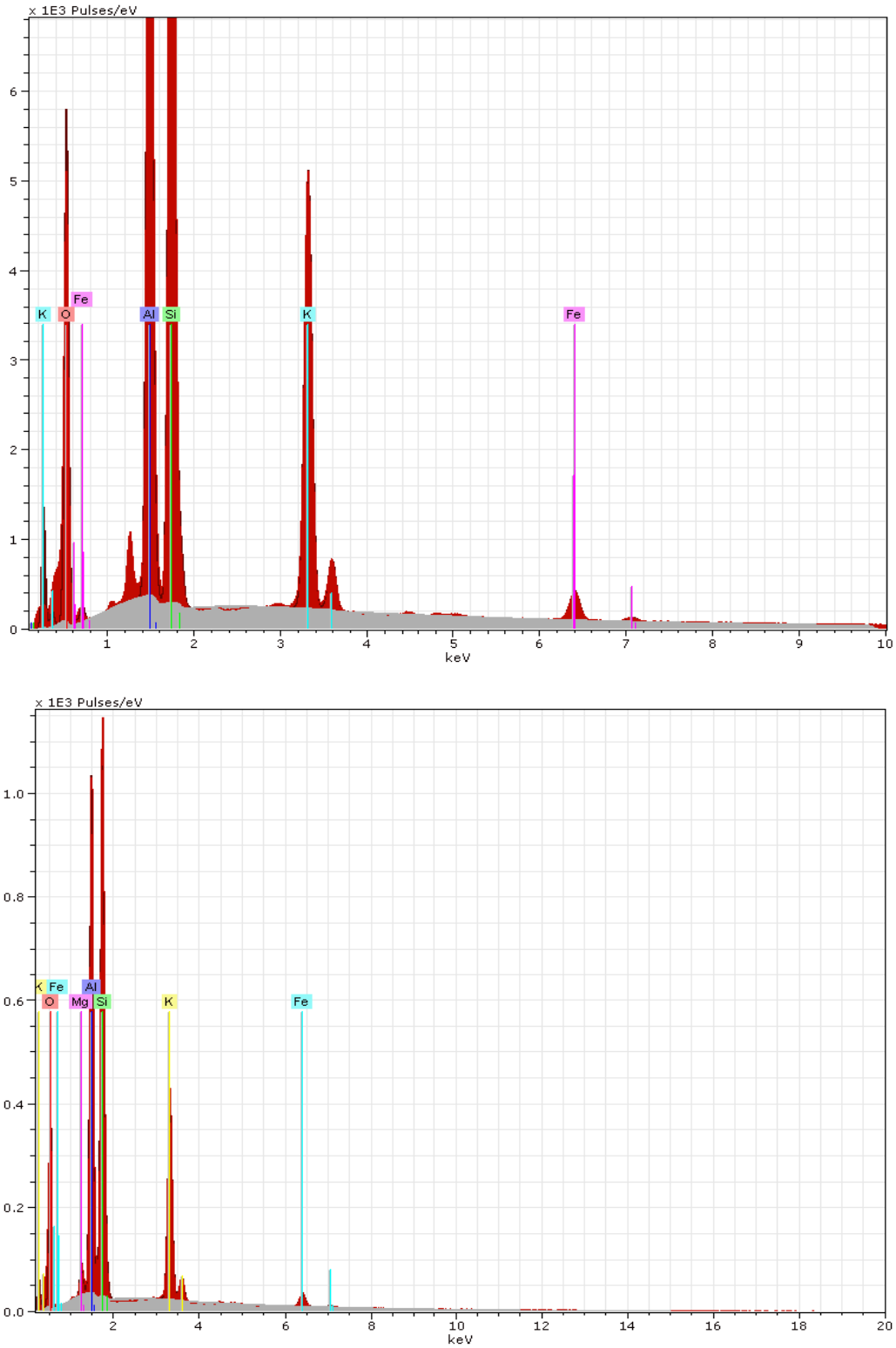


TABLE II-12
QEMSCAN X-RAY ANALYSIS ON BIOTITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Iron	K-series	8.8	12.1	4.8	0.3
	Oxygen	K-series	31.3	43.0	59.6	3.7
	Silicon	K-series	12.2	16.8	13.3	0.6
	Aluminium	K-series	10.7	14.7	12.1	0.6
	Magnesium	K-series	5.7	7.9	7.2	0.4
	Potassium	K-series	4.0	5.5	3.1	0.2
		Sum:	72.8	100	100	

FIGURE II-12
QEMSCAN X-RAY ANALYSIS ON BIOTITE PARTICLES

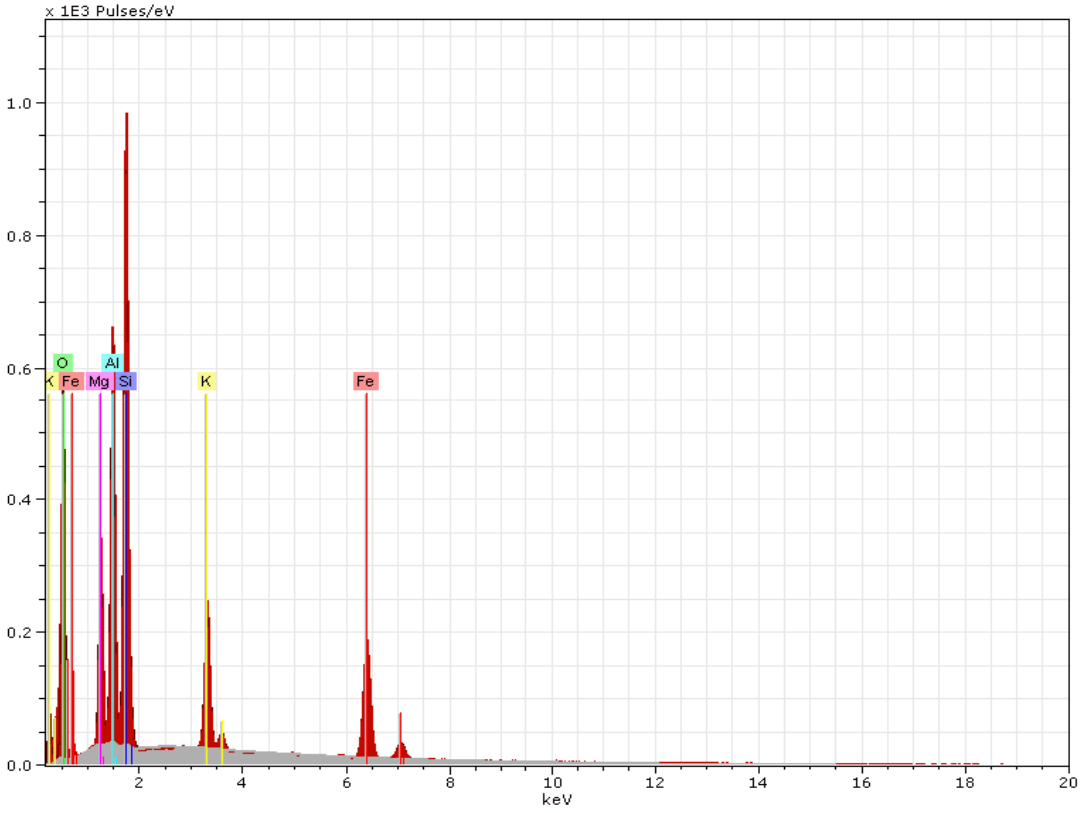
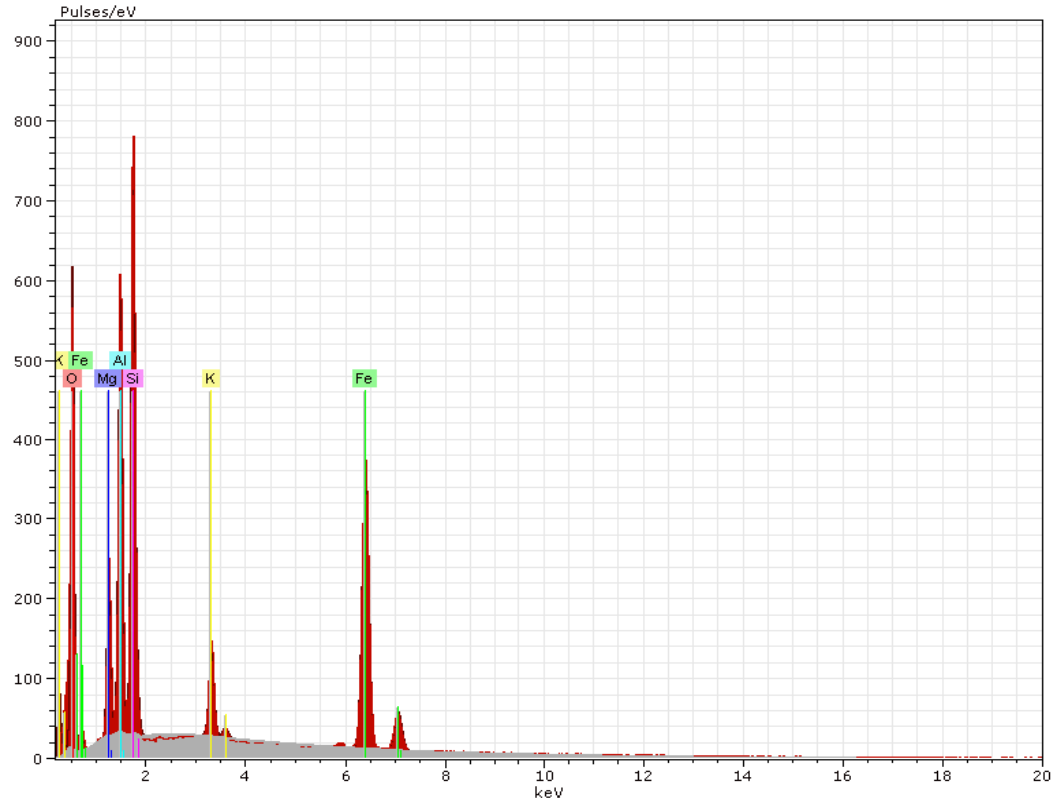


TABLE II-13
QEMSCAN X-RAY ANALYSIS ON BIOTITE,IRON,MICA PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Oxygen	K-series	32.7	39.7	58.4	3.9
	Iron	K-series	19.1	23.2	9.8	0.5
	Magnesium	K-series	5.3	6.4	6.2	0.3
	Aluminium	K-series	11.6	14.0	12.3	0.6
	Silicon	K-series	11.1	13.5	11.3	0.5
	Potassium	K-series	2.6	3.2	1.9	0.1
		Sum:	82.4	100	100	
2	Oxygen	K-series	34.8	43.5	62.3	4.1
	Iron	K-series	17.8	22.2	9.1	0.5
	Magnesium	K-series	4.8	6.0	5.7	0.3
	Aluminium	K-series	10.6	13.2	11.2	0.5
	Silicon	K-series	10.0	12.4	10.2	0.5
	Potassium	K-series	2.0	2.6	1.5	0.1
		Sum:	80.0	100	100	
Average:	**Oxygen**	**Iron**	**Magnesium**	**Aluminium**	**Silicon**	**Potassium**
	27.7	**15.1**	**6.2**	**13.6**	**13.0**	**2.9**

FIGURE II-13
QEMSCAN X-RAY ANALYSIS ON BIOTITE,IRON,MICA PARTICLES



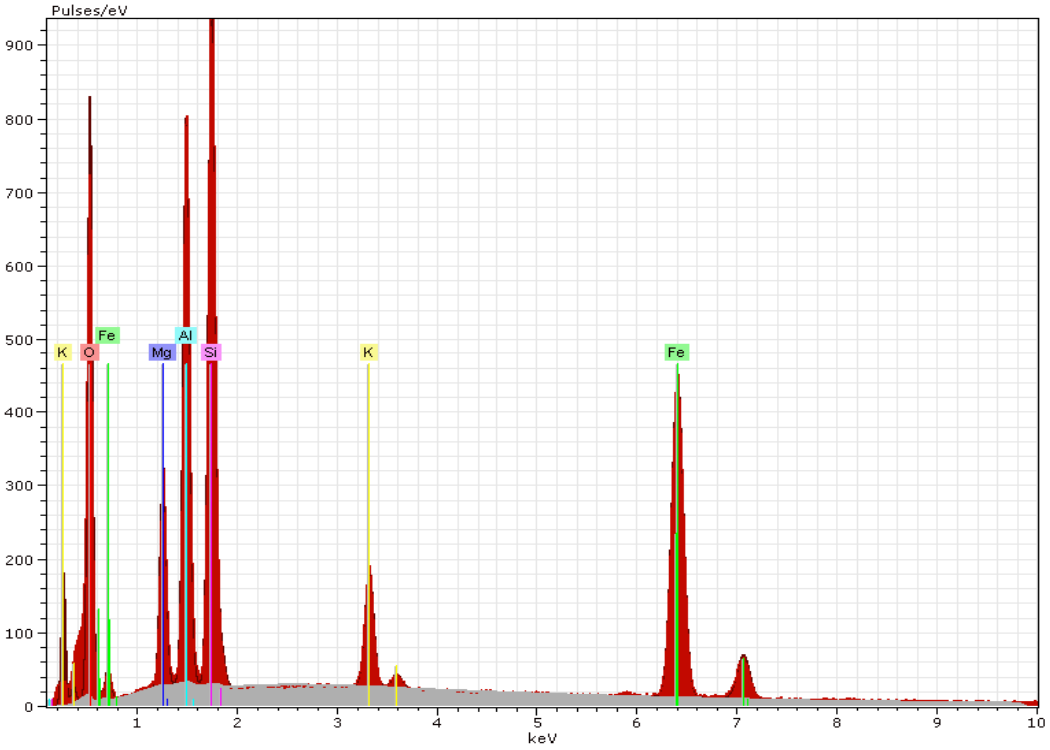


TABLE II-14
QEMSCAN X-RAY ANALYSIS ON K-FELDSPARS PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Oxygen	K-series	31.7	43.5	59.4	4.0
	Silicon	K-series	19.9	27.2	21.2	0.9
	Potassium	K-series	12.6	17.2	9.6	0.4
	Aluminium	K-series	8.8	12.1	9.8	0.5
		Sum:	73.0	100	100	
2	Oxygen	K-series	33.0	46.4	62.2	4.1
	Silicon	K-series	18.4	25.8	19.7	0.8
	Potassium	K-series	11.6	16.3	8.9	0.4
	Aluminium	K-series	8.2	11.56	9.2	0.4
		Sum:	71.2	100	100	
3	Oxygen	K-series	33.4	45.1	61.3	4.1
	Silicon	K-series	19.1	25.7	19.9	0.9
	Potassium	K-series	12.1	16.3	9.1	0.4
	Aluminium	K-series	8.7	11.8	9.5	0.5
	Barium	L-series	0.8	1.1	0.2	0.1
		Sum:	74.1	100	100	
Average:	**Oxygen**	**Silicon**	**Potassium**	**Aluminium**	**Barium**	
	45.0	**26.2**	**16.6**	**11.8**	**1.1**	

FIGURE II-14A
QEMSCAN X-RAY ANALYSIS ON K-FELDSPARS PARTICLES

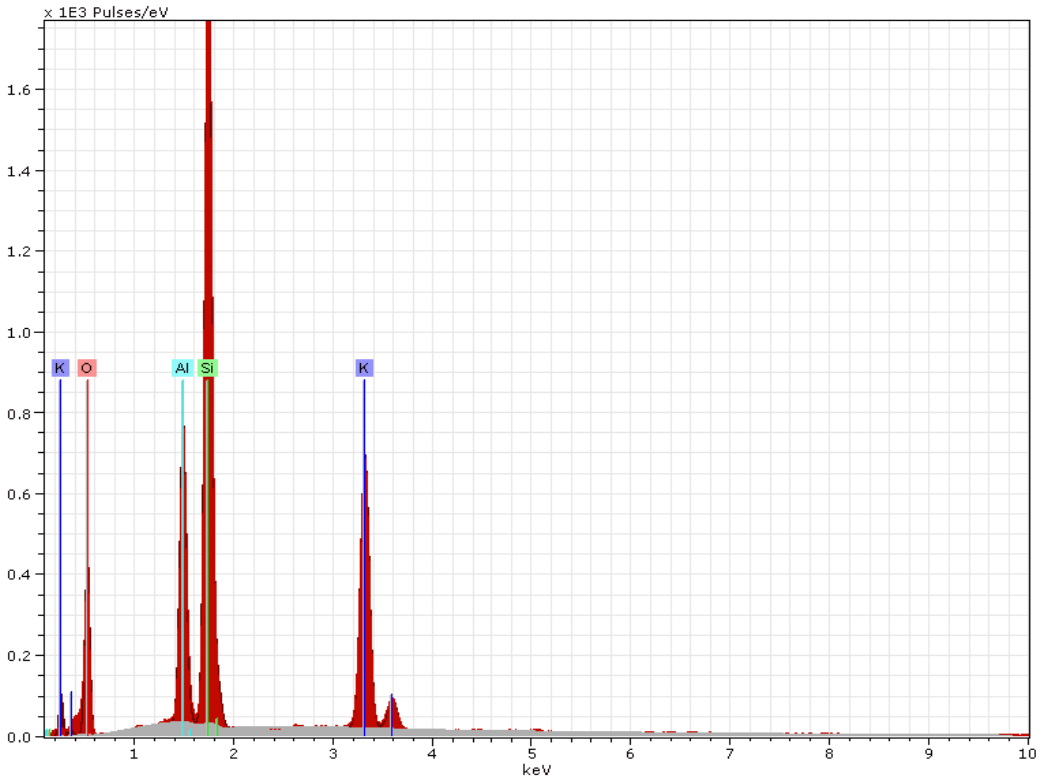
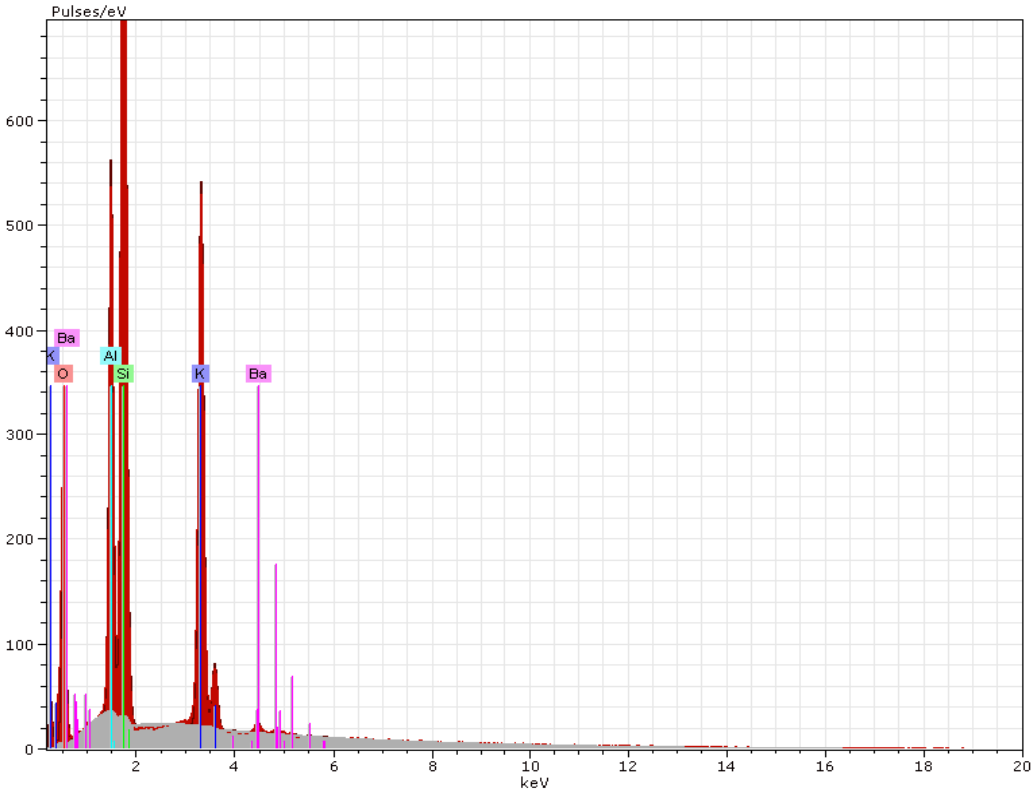


FIGURE II-14B
QEMSCAN X-RAY ANALYSIS ON K-FELDSPARS PARTICLES



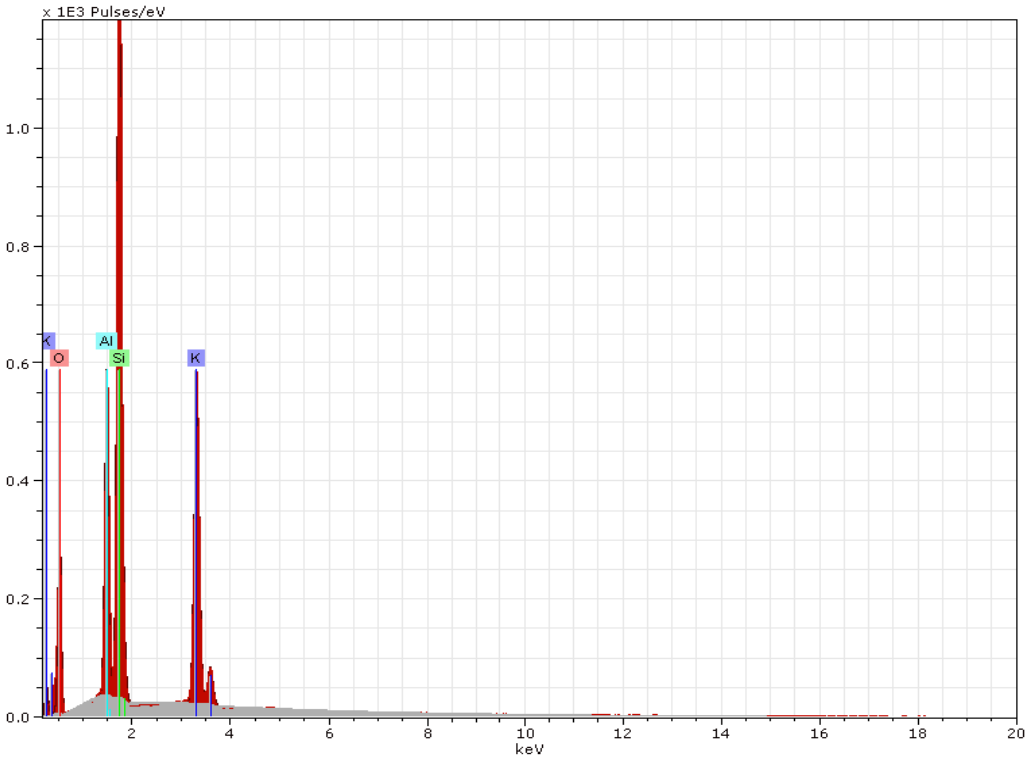


TABLE II-15
QEMSCAN X-RAY ANALYSIS ON FELDSPARS-ALBITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Oxygen	K-series	36.1	49.7	62.3	4.3
	Silicon	K-series	20.7	28.5	20.3	0.9
	Aluminium	K-series	9.2	12.6	9.4	0.5
	Sodium	K-series	6.7	9.2	8.0	0.5
		Sum:	72.7	100	100	
2	Oxygen	K-series	34.3	47.3	60.0	4.1
	Silicon	K-series	21.8	30.1	21.7	1.0
	Aluminium	K-series	9.7	13.3	10.0	0.5
	Sodium	K-series	6.8	9.4	8.3	0.5
		Sum:	72.6	100	100	
Average:	**Oxygen 32.3**	**Silicon 19.5**	**Aluminium 13.0**	**Sodium 9.3**		

FIGURE II-15
QEMSCAN X-RAY ANALYSIS ON FELDSPARS-ALBITE PARTICLES

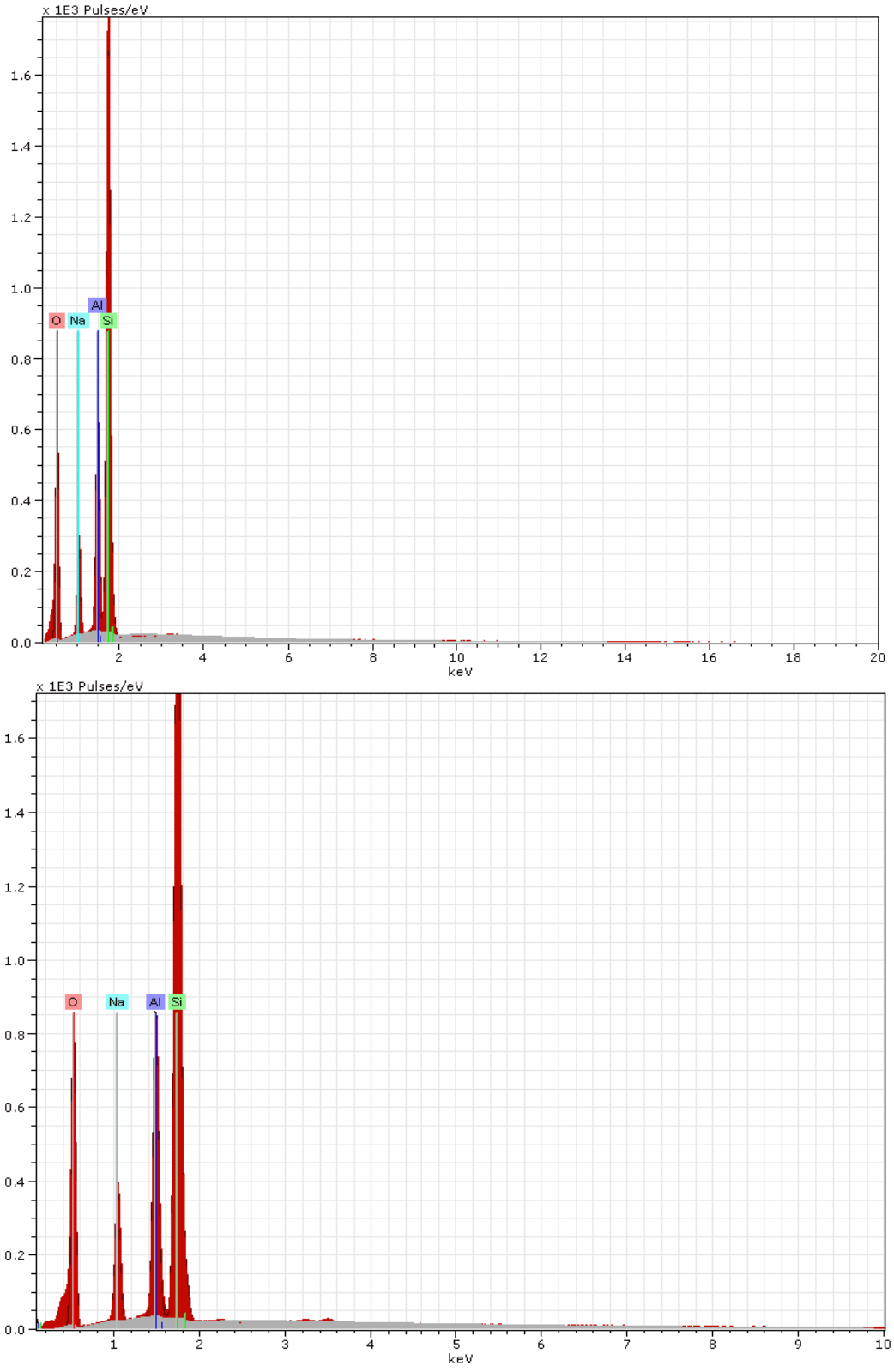


TABLE II-16
QEMSCAN X-RAY ANALYSIS ON ALKALI-FELDSPAR PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Oxygen	K-series	37.5	49.0	62.5	4.4
	Silicon	K-series	20.1	26.2	19.1	0.9
	Aluminium	K-series	9.1	11.9	9.0	0.5
	Sodium	K-series	5.8	7.6	6.7	0.4
	Potassium	K-series	4.0	5.2	2.7	0.1
		Sum:	76.4	100	100	
2	Oxygen	K-series	37.6	48.8	62.3	4.4
	Silicon	K-series	19.9	25.9	18.8	0.9
	Aluminium	K-series	9.0	11.7	8.9	0.5
	Sodium	K-series	6.4	8.3	7.3	0.5
	Potassium	K-series	4.1	5.29	2.8	0.2
		Sum:	77.0	100	100	
3	Oxygen	K-series	37.8	49.5	62.9	4.4
	Silicon	K-series	19.7	25.7	18.6	0.9
	Aluminium	K-series	8.9	11.7	8.8	0.5
	Sodium	K-series	6.2	8.2	7.2	0.4
	Potassium	K-series	3.7	4.9	2.5	0.1
		Sum:	76.4	100	100	
Average:	**Oxygen 49.1**	**Silicon 26.0**	**Aluminium 11.8**	**Sodium 8.0**	**Potassium 5.1**	

FIGURE II-16
QEMSCAN X-RAY ANALYSIS ON ALKALI-FELDSPAR PARTICLES

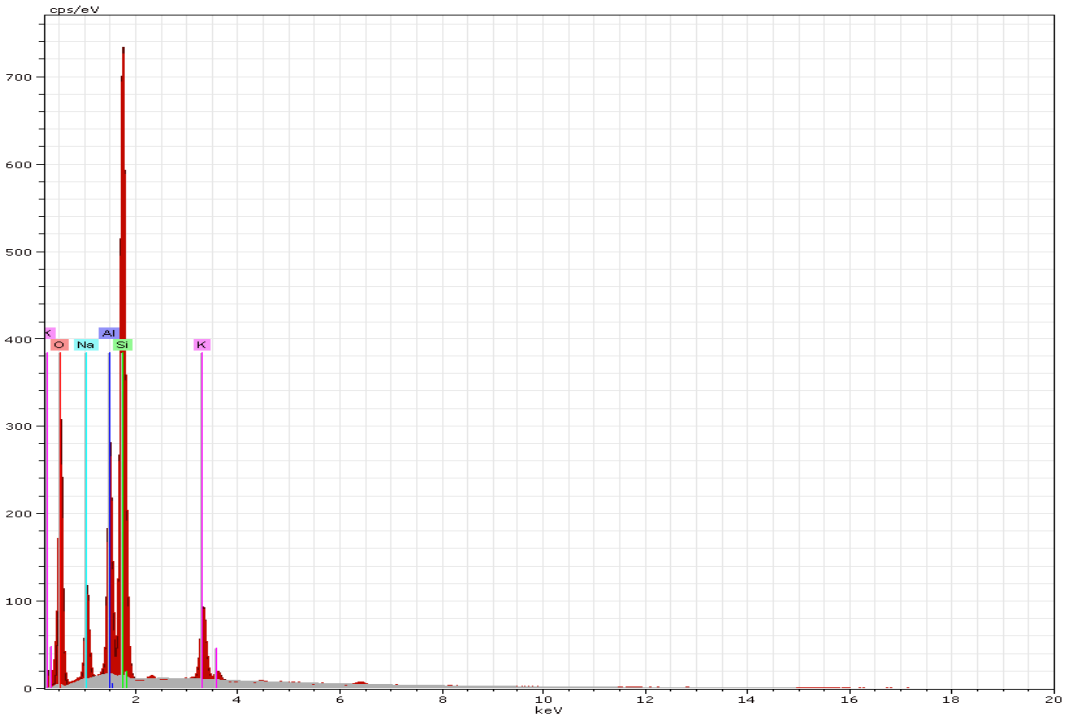


TABLE II-17
QEMSCAN X-RAY ANALYSIS ON PLAGIOCLASE FELDSPAR PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Oxygen	K-series	33.9	45.7	59.3	4.0
	Silicon	K-series	19.8	26.6	19.7	0.9
	Aluminium	K-series	11.1	15.0	11.5	0.6
	Sodium	K-series	5.7	7.6	6.9	0.4
	Calcium	K-series	3.2	4.3	2.2	0.1
	Potassium	K-series	0.6	0.8	0.4	0.0
		Sum:	74.2	100	100	
2	Oxygen	K-series	36.2	49.1	62.3	4.3
	Silicon	K-series	18.4	25.0	18.1	0.8
	Aluminium	K-series	10.4	14.1	10.6	0.5
	Sodium	K-series	6.0	8.1	7.1	0.4
	Calcium	K-series	2.2	2.9	1.5	0.1
	Potassium	K-series	0.5	0.71	0.4	0.0
		Sum:	73.7	100	100	
Average:	**Oxygen 47.4**	**Silicon 25.8**	**Aluminium 14.5**	**Calcium 3.6**	**Potassium 0.8**	

FIGURE II-17
QEMSCAN X-RAY ANALYSIS ON PLAGIOCLASE FELDSPAR PARTICLES

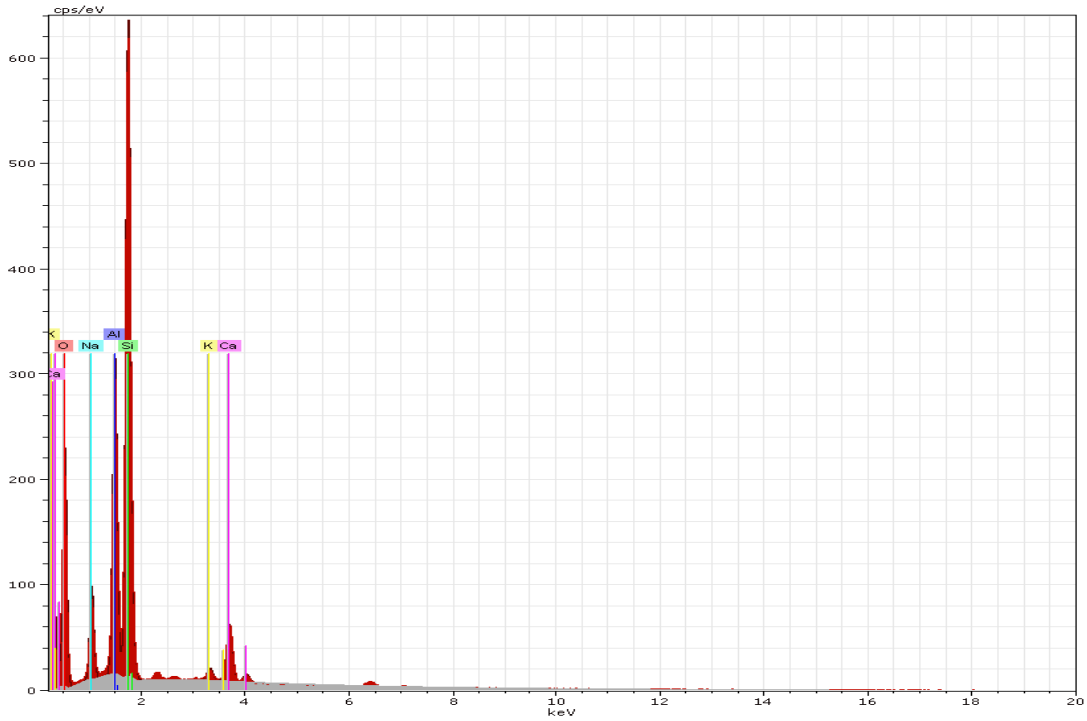


TABLE II-18
QEMSCAN X-RAY ANALYSIS ON CHLORITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Oxygen	K-series	37.0	44.9	62.4	3.9
	Silicon	K-series	8.8	10.7	8.5	0.4
	Aluminium	K-series	9.4	11.4	9.4	0.5
	Iron	K-series	16.6	20.1	8.0	0.4
	Magnesium	K-series	10.6	12.8	11.7	0.6
		Sum:	82.3	100	100	
2	Oxygen	K-series	39.4	48.1	65.4	4.6
	Silicon	K-series	8.2	10.0	7.7	0.4
	Aluminium	K-series	8.7	10.7	8.6	0.5
	Iron	K-series	15.6	19.1	7.4	0.4
	Magnesium	K-series	10.0	12.17	10.9	0.6
		Sum:	81.9	100	100	
3	Oxygen	K-series	46.0	54.7	68.6	5.3
	Silicon	K-series	11.0	13.1	9.4	0.5
	Aluminium	K-series	15.0	17.8	13.3	0.8
	Iron	K-series	5.8	6.9	2.5	0.2
	Magnesium	K-series	4.1	4.8	4.0	0.3
	Sodium	K-series	2.1	2.5	2.2	0.2
		Sum:	84.1	100	100	
Average:	**Oxygen 49.2**	**Silicon 11.3**	**Aluminium 13.3**	**Iron 15.4**	**Magnesium 9.9**	**Sodium 2.5**

FIGURE II-18A
QEMSCAN X-RAY ANALYSIS ON CHLORITE PARTICLES

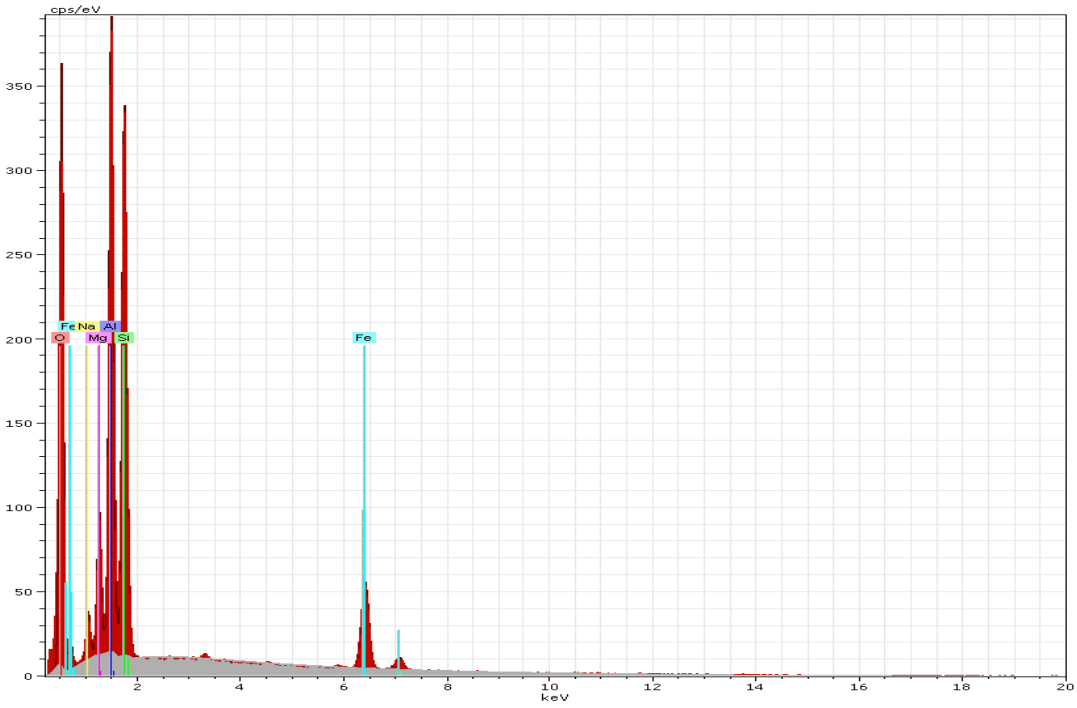


FIGURE II-18B
QEMSCAN X-RAY ANALYSIS ON CHLORITE PARTICLES

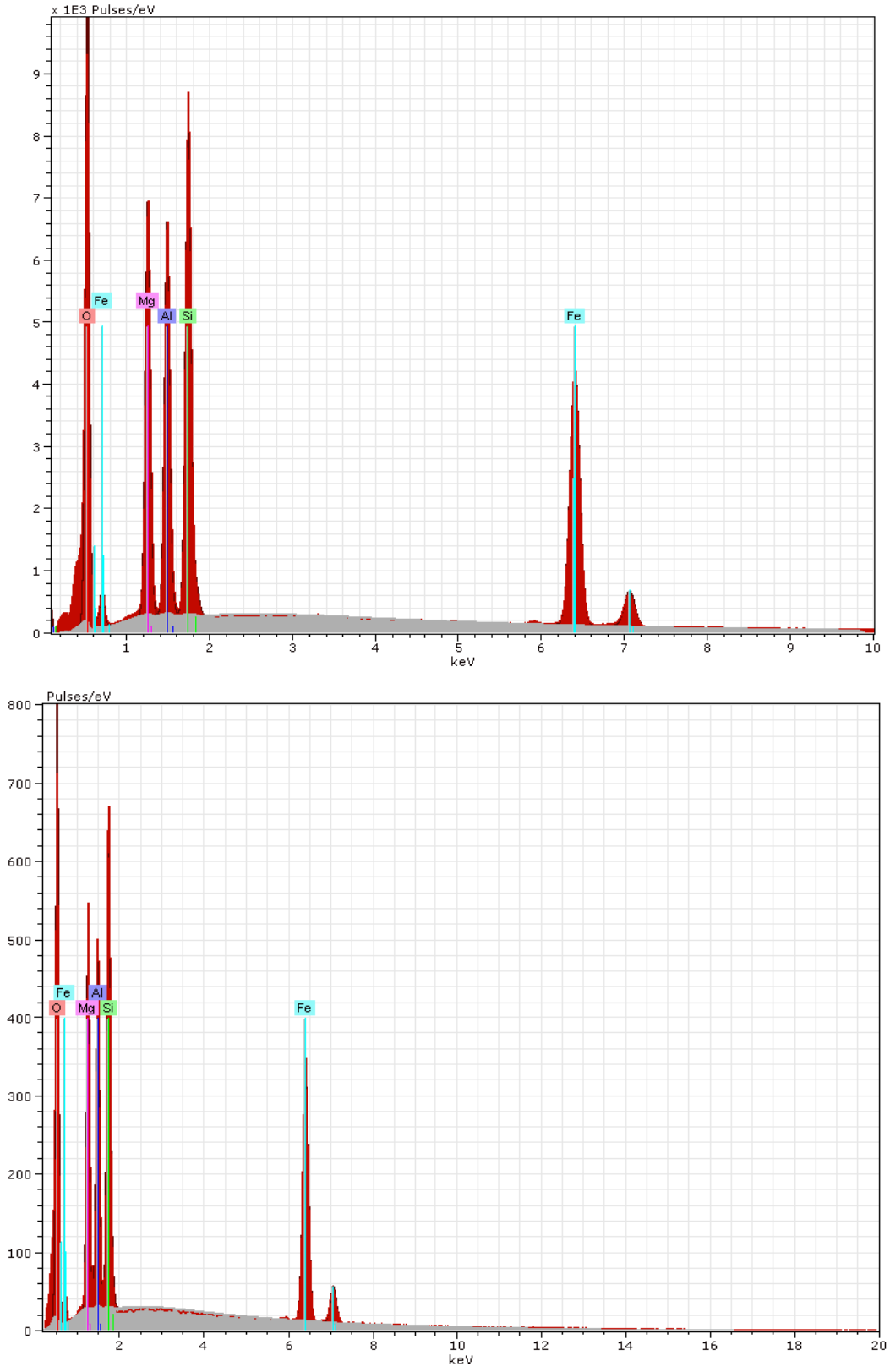


TABLE II-19
QEMSCAN X-RAY ANALYSIS ON KAOLINITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Oxygen	K-series	46.8	59.8	72.3	5.5
	Iron	K-series	1.2	1.5	0.5	0.1
	Silicon	K-series	14.5	18.6	12.8	0.7
	Aluminium	K-series	15.7	20.1	14.4	0.8
		Sum:	78.2	100	100	
2	Oxygen	K-series	42.8	57.9	70.9	5.1
	Iron	K-series	1.5	2.1	0.7	0.1
	Silicon	K-series	14.0	19.0	13.2	0.6
	Aluminium	K-series	15.1	20.4	14.8	0.8
	Potassium	K-series	0.5	0.69	0.3	0.0
		Sum:	74.0	100	100	
Average:	**Oxygen 58.8**	**Iron 1.8**	**Silicon 18.8**	**Aluminium 20.2**	**Potassium 0.7**	

FIGURE II-19
QEMSCAN X-RAY ANALYSIS ON KAOLINITE PARTICLES

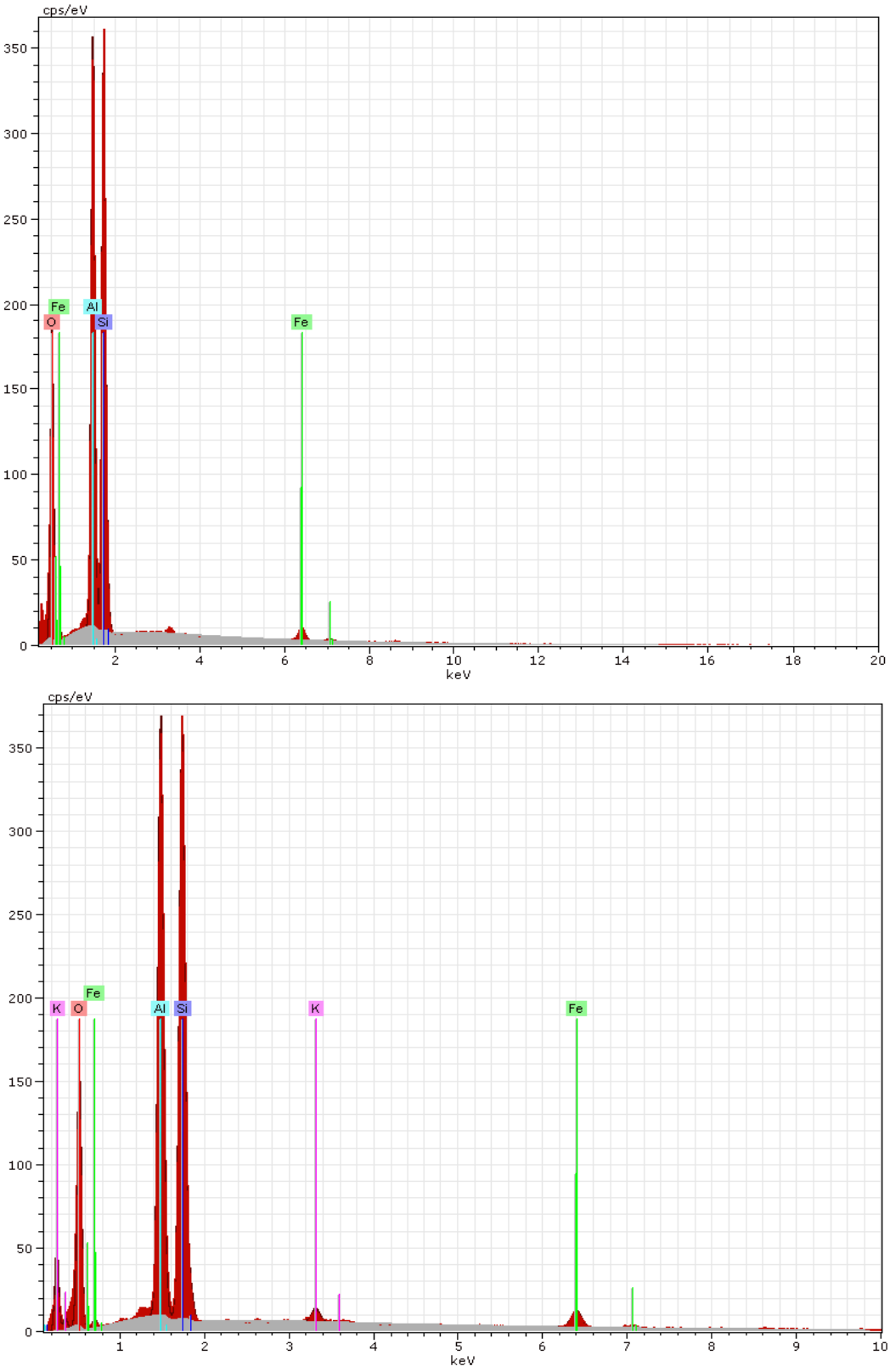


TABLE II-20
QEMSCAN X-RAY ANALYSIS ON GYPSUM PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Sulfur	K-series	19.9	23.0	16.7	0.8
	Oxygen	K-series	38.2	44.1	64.2	5.0
	Calcium	K-series	28.4	32.9	19.1	0.9
		Sum:	86.5	100	100	
2	Sulfur	K-series	19.1	23.0	16.7	0.7
	Oxygen	K-series	36.6	43.9	64.0	4.8
	Calcium	K-series	27.6	33.1	19.3	0.8
		Sum:	83.3	100	100	
Average:	**Sulfur 23.0**	**Oxygen 44.0**	**Calcium 22.0**			

FIGURE II-20
QEMSCAN X-RAY ANALYSIS ON GYPSUM PARTICLES

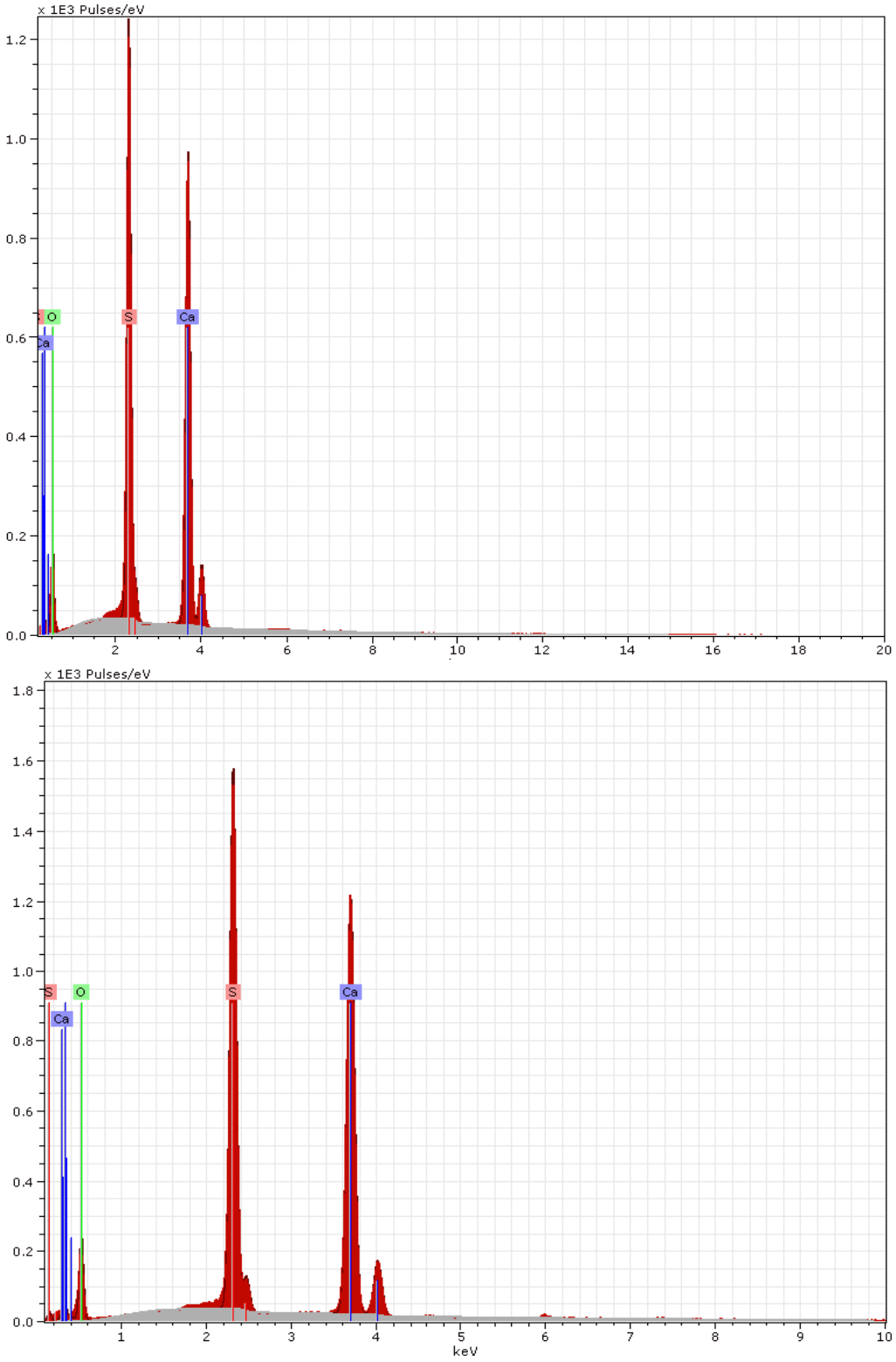
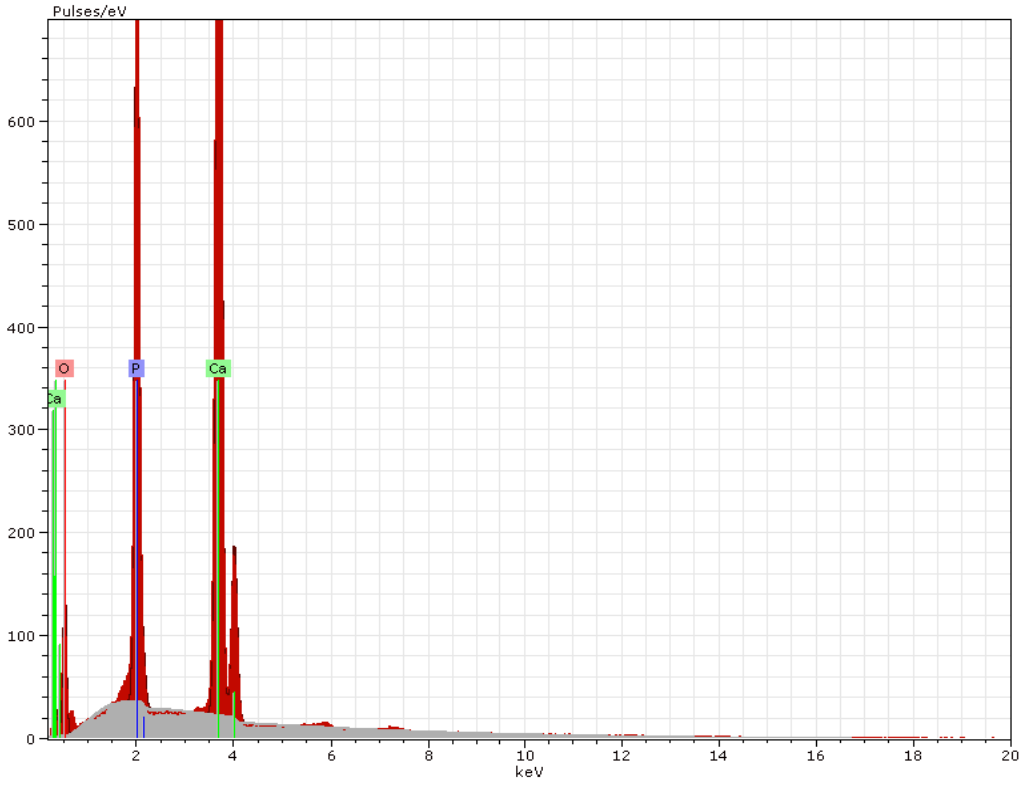


TABLE II-21
QEMSCAN X-RAY ANALYSIS ON APATITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Oxygen	K-series	34.9	40.6	61.3	4.7
	Calcium	K-series	36.5	42.6	25.6	1.1
	Phosphorus	K-series	14.4	16.8	13.1	0.6
		Sum:	85.9	100	100	
2	Oxygen	K-series	28.7	34.8	55.4	4.1
	Calcium	K-series	38.4	46.5	29.6	1.1
	Phosphorus	K-series	14.7	17.9	14.7	0.6
	Manganese	K-series	0.6	0.8	0.4	0.0
		Sum:	82.5	100	100	
Average:	**Oxygen 37.7**	**Calcium 44.5**	**Phosphorus 11.6**	**Manganese 0.8**		

FIGURE II-21
QEMSCAN X-RAY ANALYSIS ON GYPSUM PARTICLES



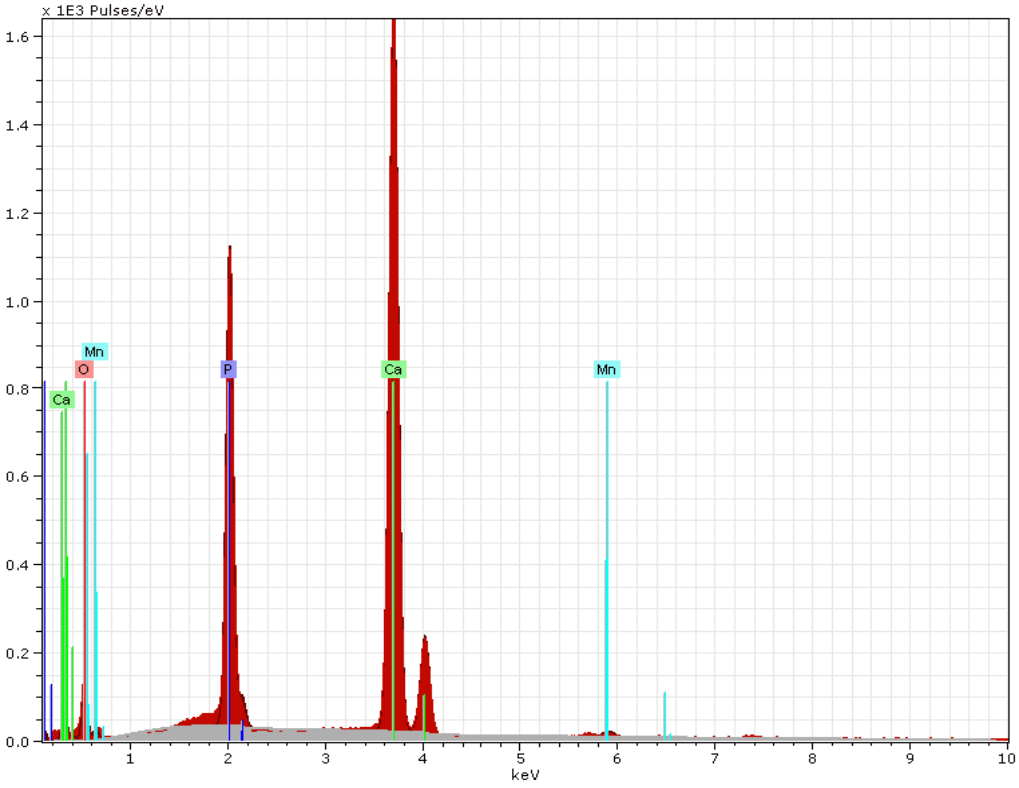


TABLE II-22
QEMSCAN X-RAY ANALYSIS ON ANDRADITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Iron	K-series	18.9	21.4	9.8	0.5
	Oxygen	K-series	32.6	36.9	59.3	4.2
	Calcium	K-series	24.1	27.3	17.5	0.7
	Silicon	K-series	11.1	12.5	11.5	0.5
	Aluminium	K-series	1.7	1.9	1.8	0.1
		Sum:	88.4	100	100	
2	Iron	K-series	17.8	20.6	9.3	0.5
	Oxygen	K-series	34.2	39.6	62.1	4.4
	Calcium	K-series	22.5	26.1	16.3	0.7
	Silicon	K-series	10.3	11.9	10.7	0.5
	Aluminium	K-series	1.5	1.74	1.6	0.1
		Sum:	86.4	100	100	
3	Iron	K-series	19.2	21.6	10.0	0.5
	Oxygen	K-series	32.5	36.5	58.9	4.2
	Calcium	K-series	24.4	27.3	17.6	0.7
	Silicon	K-series	11.2	12.6	11.6	0.5
	Aluminium	K-series	1.7	2.0	1.9	0.1
		Sum:	89.1	100	100	
Average:	**Iron**	**Oxygen**	**Calcium**	**Silicon**	**Aluminium**	
	21.2	**37.7**	**26.9**	**12.4**	**1.9**	

FIGURE II-22
QEMSCAN X-RAY ANALYSIS ON ANDRADITE PARTICLES

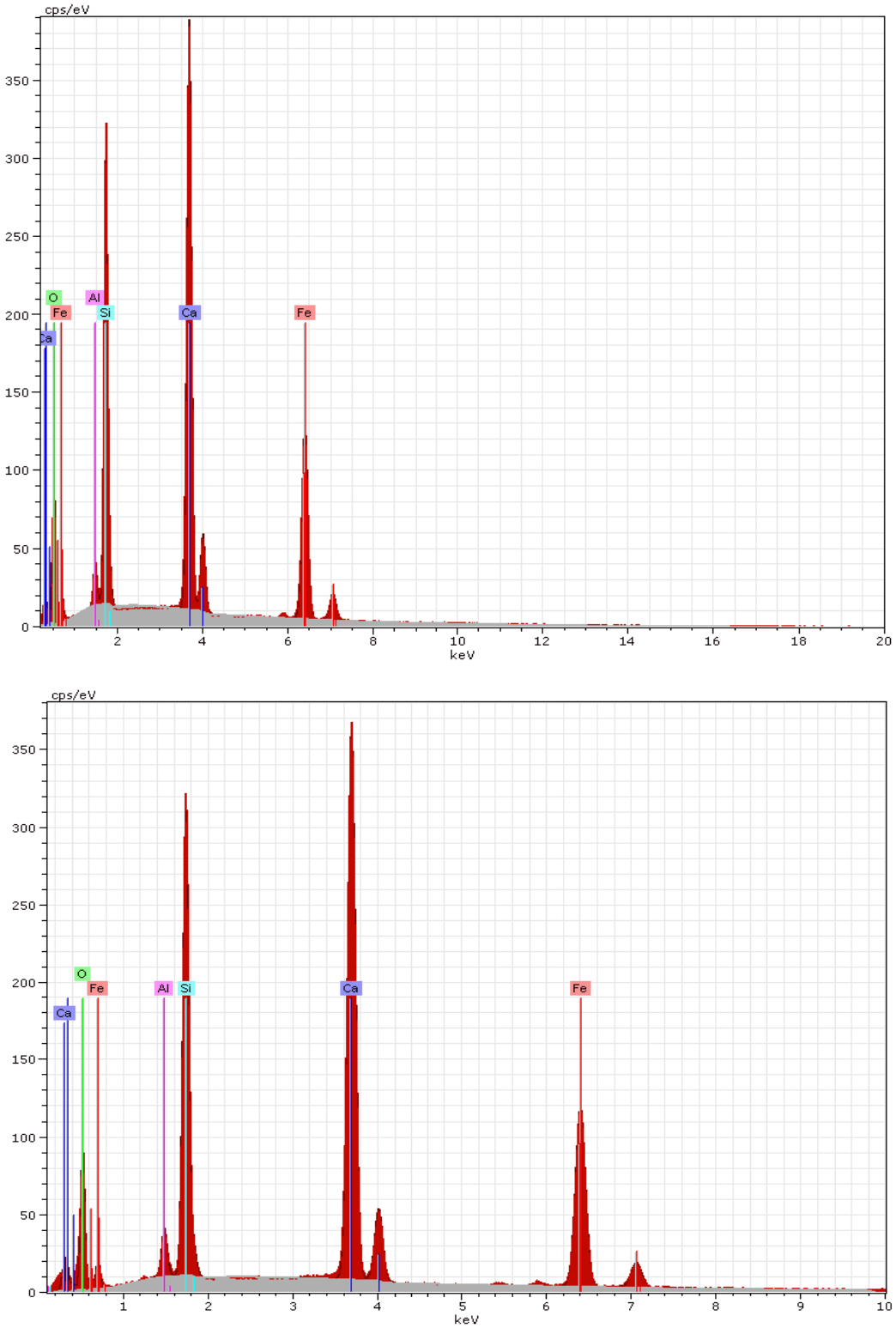


TABLE II-23
QEMSCAN X-RAY ANALYSIS ON CALCITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Oxygen	K-series	38.9	42.5	58.6	5.2
	Calcium	K-series	42.1	46.0	25.3	1.3
	Carbon	K-series	7.4	8.1	14.8	1.1
	Manganese	K-series	1.7	1.8	0.7	0.1
	Iron	K-series	1.0	1.1	0.4	0.1
	Strontium	L-series	0.4	0.4	0.1	0.0
		Sum:	91.5	100	100	
2	Oxygen	K-series	38.6	45.5	65.7	5.3
	Calcium	K-series	41.6	49.1	28.3	1.2
	Carbon	K-series	2.1	2.5	4.8	0.6
	Manganese	K-series	1.5	1.7	0.7	0.1
	Iron	K-series	1.0	1.19	0.5	0.1
		Sum:	84.8	100	100	
3	Oxygen	K-series	41.3	48.5	68.1	5.6
	Calcium	K-series	39.3	46.0	25.8	1.2
	Carbon	K-series	2.2	2.6	4.9	0.6
	Manganese	K-series	1.2	1.4	0.6	0.1
	Iron	K-series	1.3	1.5	0.6	0.1
		Sum:	85.3	100	100	
Average:	**Oxygen**	**Calcium**	**Carbon**	**Manganese**	**Iron**	**Strontium**
	45.5	**47.1**	**4.4**	**1.6**	**1.3**	**0.4**

FIGURE II-23A
QEMSCAN X-RAY ANALYSIS ON CALCITE PARTICLES

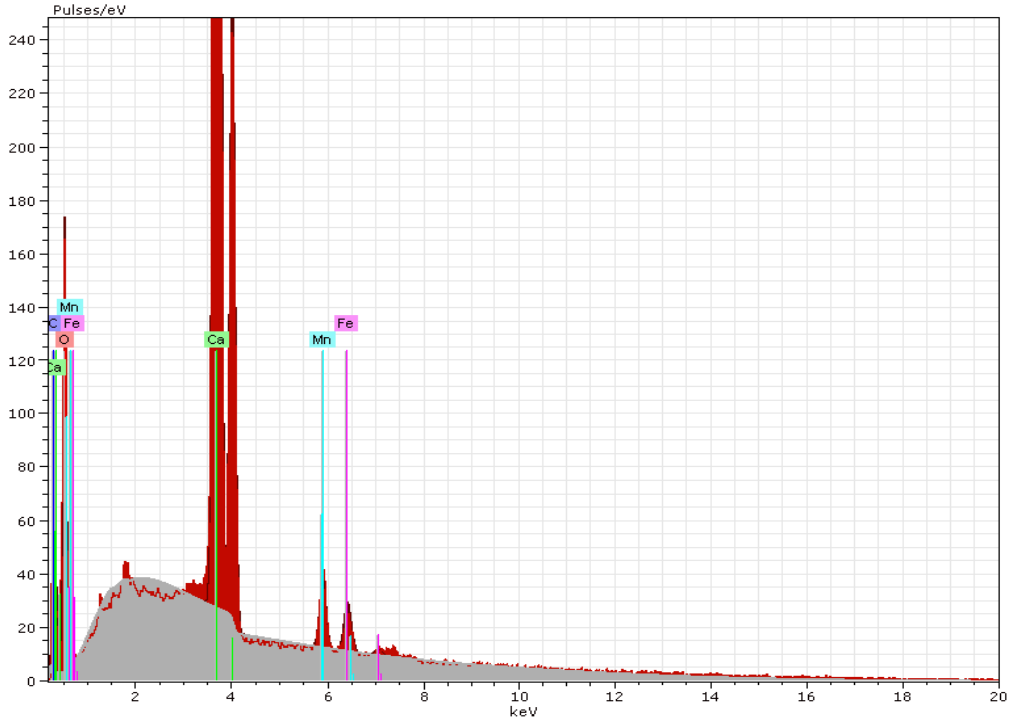
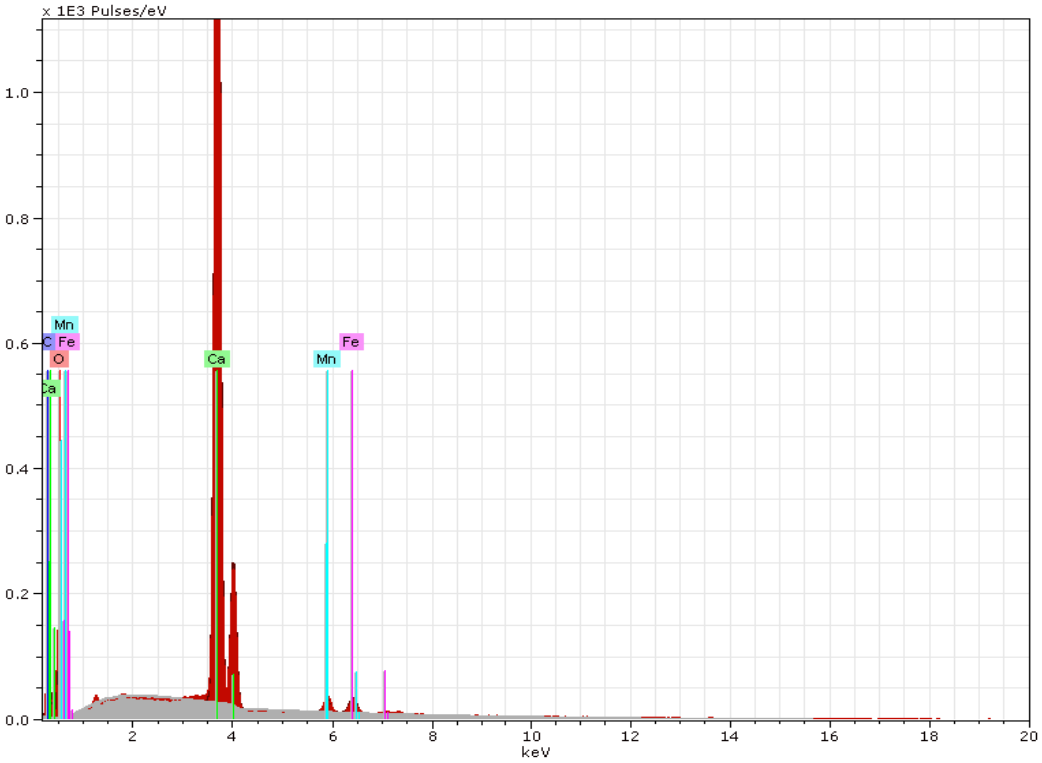


FIGURE II-23B
QEMSCAN X-RAY ANALYSIS ON CALCITE PARTICLES



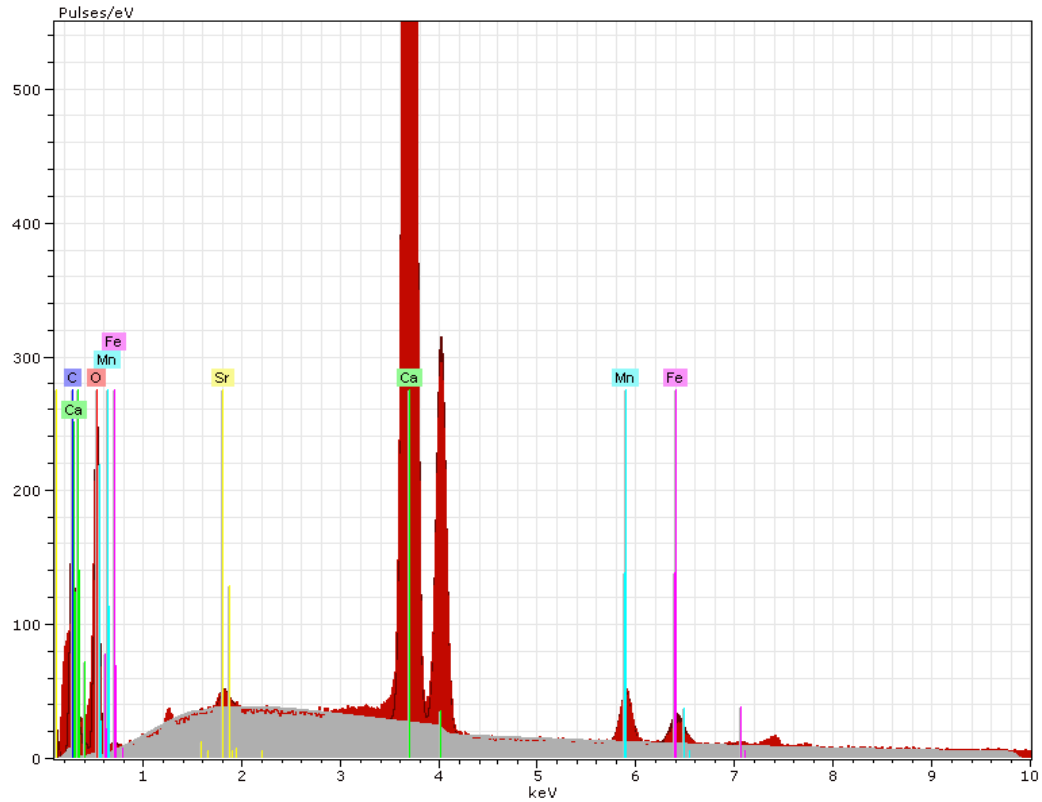


TABLE II-24
QEMSCAN X-RAY ANALYSIS ON ANKERITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Iron	K-series	7.1	8.2	3.2	0.2
	Oxygen	K-series	47.5	55.3	74.3	6.0
	Calcium	K-series	21.0	24.5	13.2	0.6
	Magnesium	K-series	7.0	8.2	7.2	0.4
	Manganese	K-series	2.9	3.4	1.3	0.1
	Carbon	K-series	0.4	0.4	0.7	0.6
		Sum:	85.9	100	100	
2	Iron	K-series	6.0	6.8	2.6	0.2
	Oxygen	K-series	49.0	55.8	74.5	6.1
	Calcium	K-series	22.5	25.6	13.6	0.7
	Magnesium	K-series	8.4	9.6	8.5	0.5
	Manganese	K-series	1.8	2.1	0.8	0.1
	Carbon	K-series	0.0	0.02	0.0	0.0
		Sum:	87.7	100	100	
3	Iron	K-series	4.5	5.2	2.0	0.1
	Oxygen	K-series	49.7	57.2	74.5	6.2
	Calcium	K-series	22.4	25.8	13.4	0.7
	Magnesium	K-series	9.5	10.9	9.4	0.6
	Manganese	K-series	0.5	0.6	0.2	0.1
	Carbon	K-series	0.3	0.3	0.6	0.5
		Sum:	86.9	100	100	
Average:	**Iron**	**Oxygen**	**Calcium**	**Magnesium**	**Manganese**	**Carbon**
	6.8	**56.1**	**25.3**	**9.6**	**2.0**	**0.3**

FIGURE II-24
QEMSCAN X-RAY ANALYSIS ON ANKERITE PARTICLES

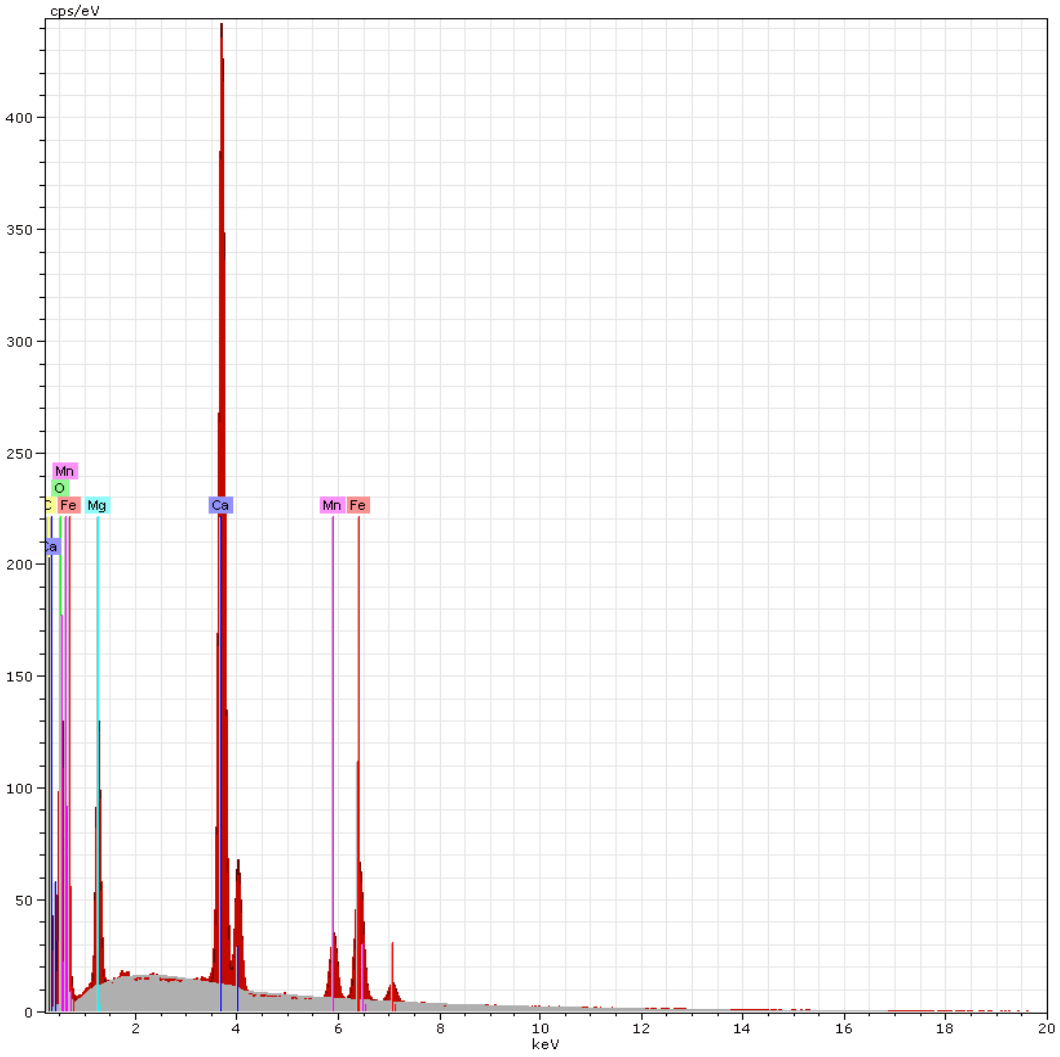


TABLE II-25
QEMSCAN X-RAY ANALYSIS ON DOLOMITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Oxygen	K-series	47.2	54.4	70.6	5.9
	Calcium	K-series	24.2	27.9	14.5	0.7
	Magnesium	K-series	9.3	10.7	9.2	0.6
	Iron	K-series	2.4	2.7	1.0	0.1
	Carbon	K-series	2.0	2.3	4.0	0.6
	Manganese	K-series	1.7	1.9	0.7	0.1
		Sum:	86.8	100	100	
2	Oxygen	K-series	46.8	51.3	64.3	5.7
	Calcium	K-series	24.6	27.0	13.5	0.7
	Magnesium	K-series	9.3	10.2	8.4	0.6
	Iron	K-series	2.3	2.5	0.9	0.1
	Carbon	K-series	6.7	7.4	12.3	1.0
	Manganese	K-series	1.5	1.61	0.6	0.1
		Sum:	91.2	100	100	
Average:	**Oxygen 52.9**	**Calcium 27.5**	**Magnesium 10.4**	**Iron 2.6**	**Carbon 4.8**	**Manganese 1.8**

FIGURE II-25
QEMSCAN X-RAY ANALYSIS ON DOLOMITE PARTICLES

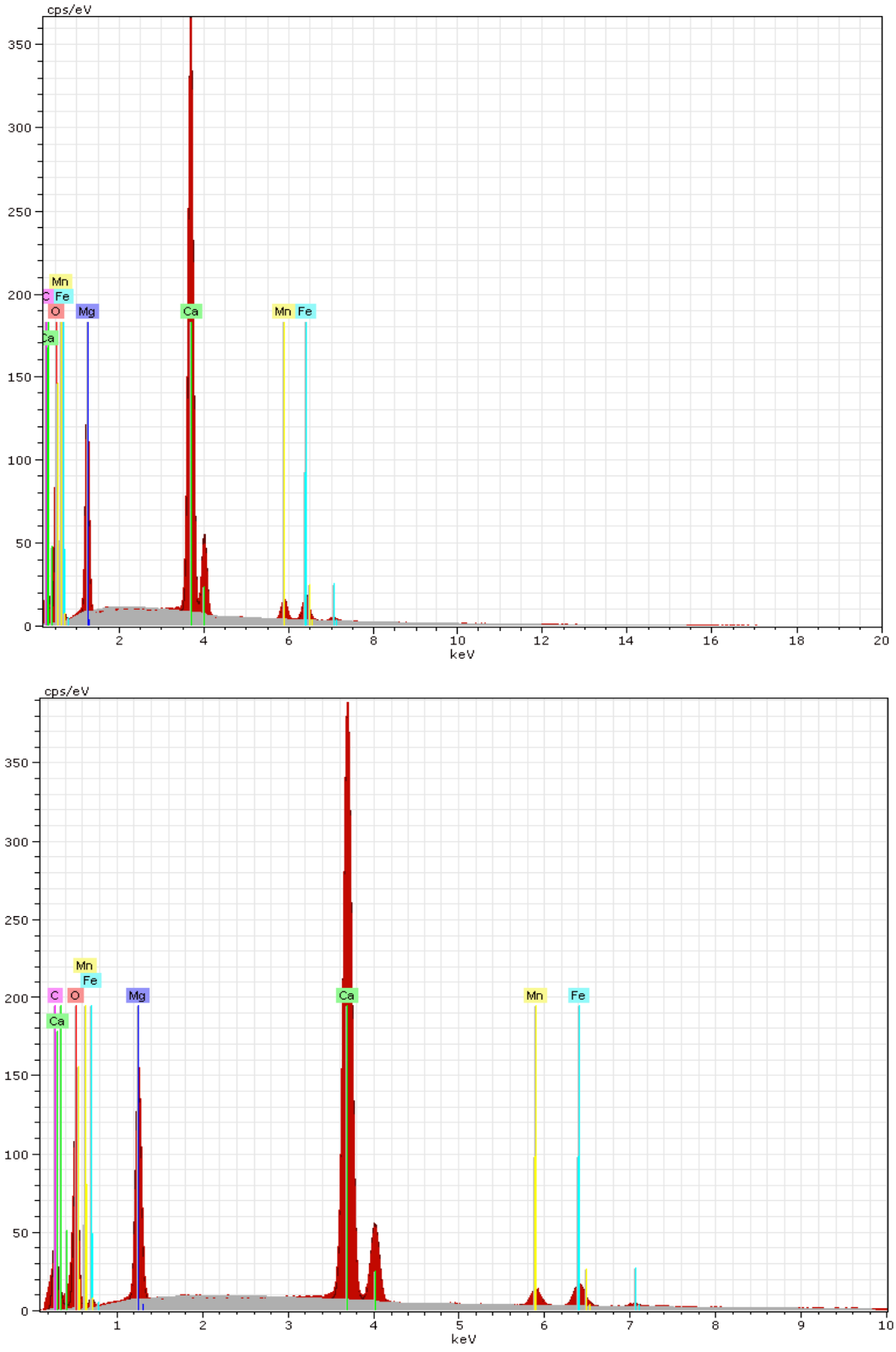


TABLE II-26
QEMSCAN X-RAY ANALYSIS ON RUTILE/ANATASE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Titanium	K-series	58.7	66.4	39.8	1.6
	Oxygen	K-series	29.7	33.6	60.2	34.4
		Sum:	88.4	100	100	
2	Titanium	K-series	60.8	67.9	41.5	1.7
	Oxygen	K-series	28.7	32.1	58.5	26.9
		Sum:	89.5	100	100	
3	Titanium	K-series	58.6	66.8	40.2	1.6
	Oxygen	K-series	29.2	33.2	59.8	27.2
		Sum:	87.8	100	100	
4	Titanium	K-series	61.4	66.9	40.3	1.7
	Oxygen	K-series	30.3	33.1	59.7	36.2
		Sum:	91.8	100	100	
Average:	**Titanium 67.0**	**Oxygen 33.0**				

FIGURE II-26A
QEMSCAN X-RAY ANALYSIS ON RUTILE/ANATASE PARTICLES

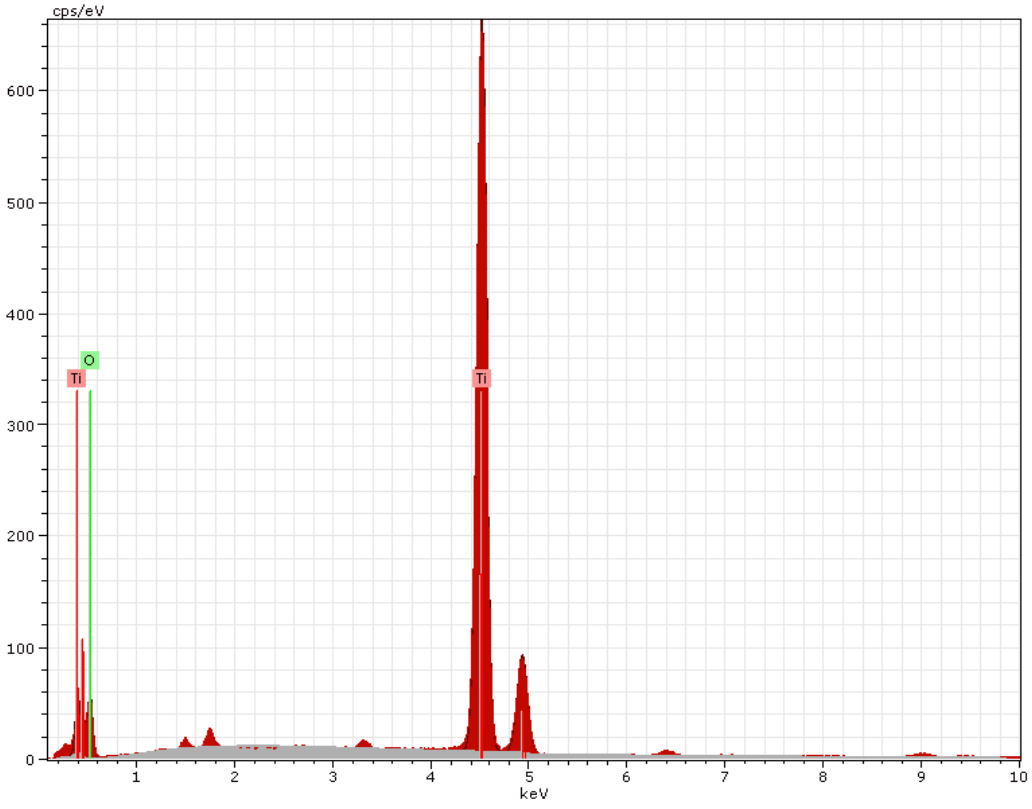
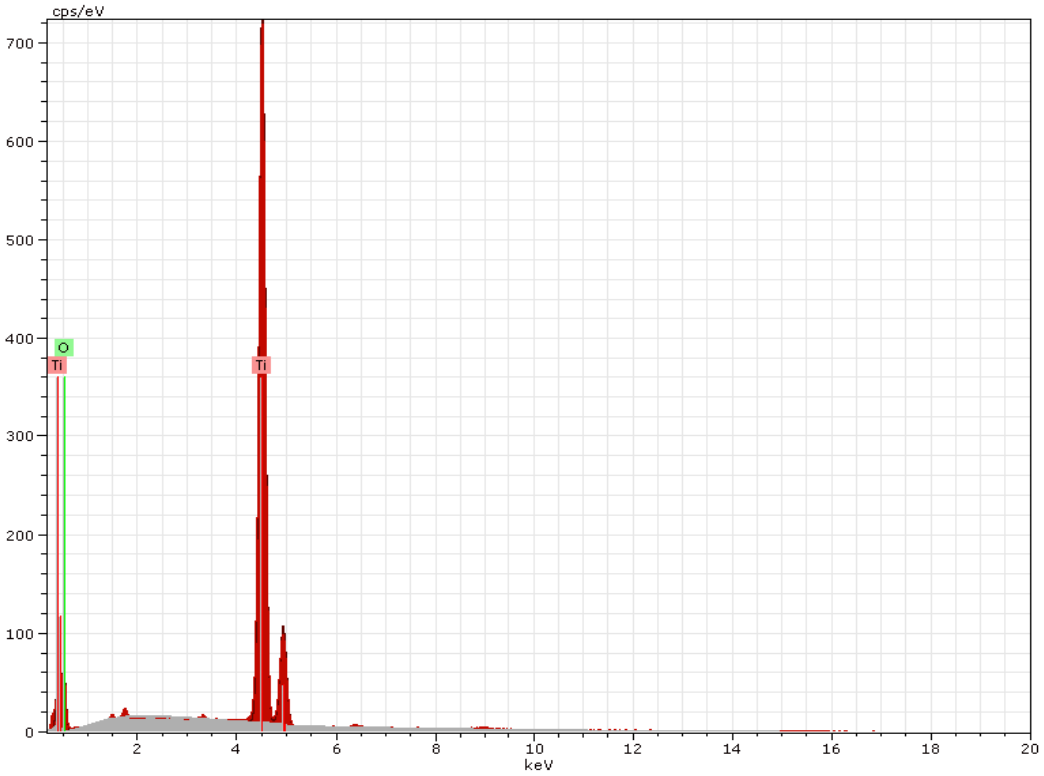


FIGURE II-26B
QEMSCAN X-RAY ANALYSIS ON RUTILE/ANATASE PARTICLES



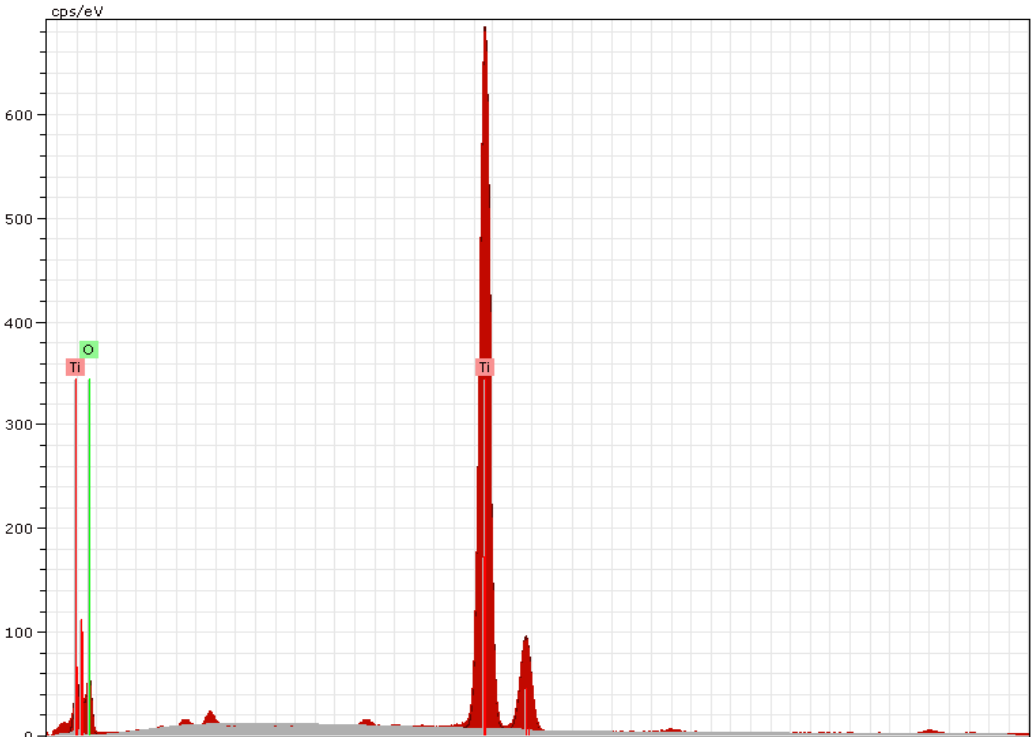


TABLE II-27
QEMSCAN X-RAY ANALYSIS ON SPHENE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Titanium	K-series	22.4	26.2	14.2	0.6
	Oxygen	K-series	26.9	31.5	51.1	21.4
	Calcium	K-series	21.5	25.2	16.3	0.7
	Silicon	K-series	9.6	11.3	10.4	0.4
	Aluminium	K-series	2.0	2.3	2.2	0.1
	Iron	K-series	0.9	1.0	0.5	0.1
	Carbon	K-series	2.1	2.4	5.3	0.4
		Sum:	85.4	100	100	
2	Titanium	K-series	20.0	24.4	12.7	0.6
	Oxygen	K-series	29.4	35.9	55.7	28.0
	Calcium	K-series	19.3	23.7	14.6	0.6
	Silicon	K-series	9.2	11.2	9.9	0.4
	Aluminium	K-series	1.9	2.4	2.2	0.1
	Carbon	K-series	2.0	2.41	5.0	0.5
		Sum:	81.8	100	100	
3	Titanium	K-series	22.6	27.2	14.6	0.6
	Oxygen	K-series	27.2	32.8	52.7	21.9
	Calcium	K-series	19.5	23.5	15.1	0.6
	Silicon	K-series	9.5	11.4	10.5	0.4
	Iron	K-series	1.8	2.2	1.0	0.1
	Carbon	K-series	2.4	2.8	6.1	0.4
		Sum:	83.0	100	100	
4	Titanium	K-series	22.4	27.7	15.0	0.6
	Oxygen	K-series	28.0	34.5	56.0	28.2
	Calcium	K-series	19.3	23.8	15.4	0.6
	Silicon	K-series	9.0	11.1	10.3	0.4
	Iron	K-series	1.5	1.8	0.8	0.1
	Carbon	K-series	0.9	1.2	2.5	0.3
		Sum:	81.1	100	100	
Average:	**Titanium 28.4**	**Oxygen 30.4**	**Calcium 16.9**	**Silicon 7.9**	**Aluminium 10.8**	**Iron 5.3**
	Carbon 16.9					

FIGURE II-27A
QEMSCAN X-RAY ANALYSIS ON SPHENE PARTICLES

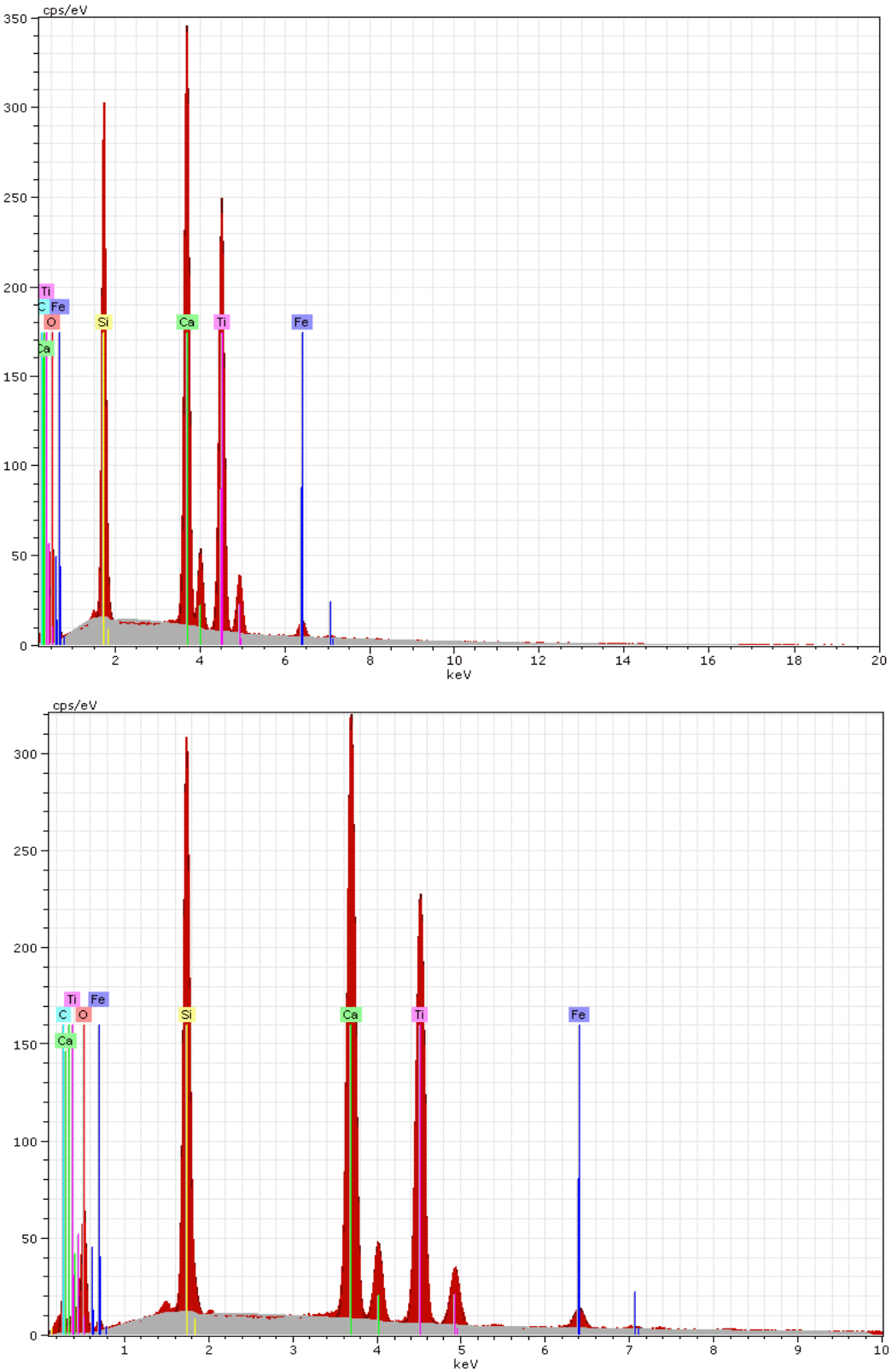
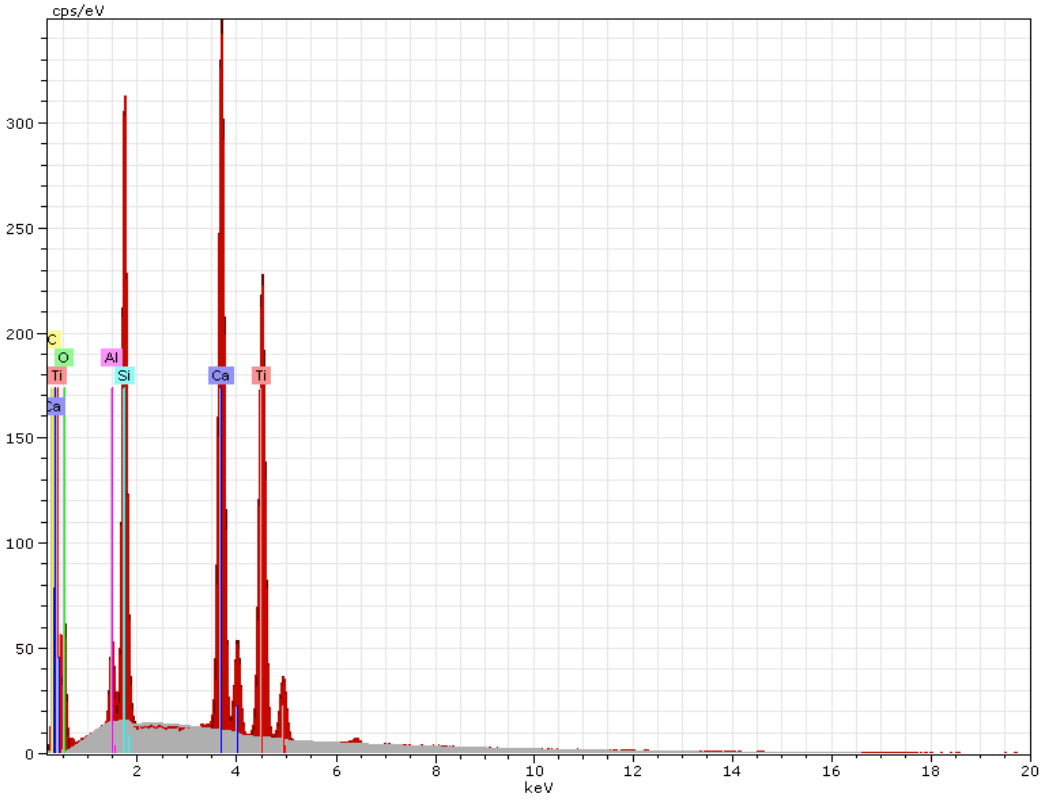


FIGURE II-27B
QEMSCAN X-RAY ANALYSIS ON SPHENE PARTICLES



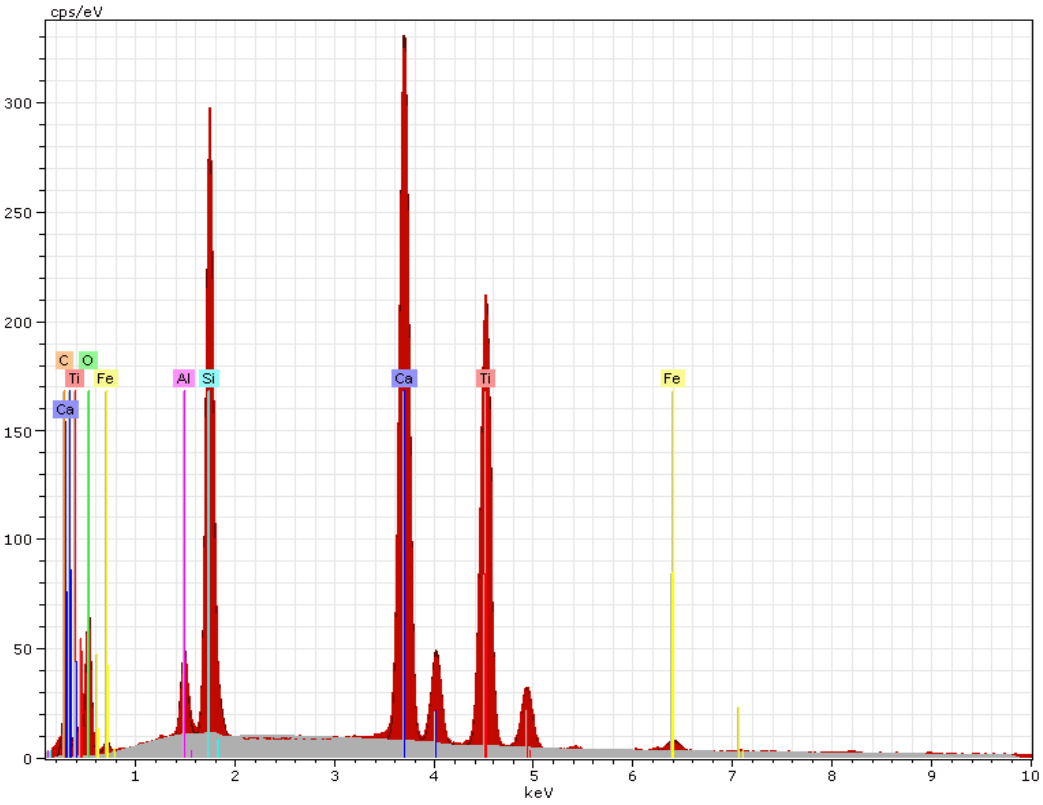


TABLE II-28
QEMSCAN X-RAY ANALYSIS ON TALC PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Oxygen	K-series	43.0	47.5	52.4	5.0
	Silicon	K-series	19.5	21.5	13.5	0.9
	Magnesium	K-series	14.0	15.5	11.2	0.8
	Carbon	K-series	14.1	15.6	22.9	1.7
		Sum:	90.6	100	100	
2	Oxygen	K-series	45.2	53.8	65.7	5.2
	Silicon	K-series	22.3	26.5	18.5	1.0
	Magnesium	K-series	16.5	19.7	15.8	1.0
		Sum:	84.0	100	100	
3	Oxygen	K-series	43.6	52.3	58.9	5.0
	Silicon	K-series	15.7	18.8	12.1	0.7
	Magnesium	K-series	14.3	17.1	12.7	0.8
	Carbon	K-series	8.9	10.7	16.0	1.2
	Iron	K-series	0.8	1.0	0.3	0.1
		Sum:	83.3	100	100	
Average:	**Oxygen 51.2**	**Silicon 22.3**	**Magnesium 17.4**	**Carbon 13.1**	**Iron 1.0**	

FIGURE II-28A
QEMSCAN X-RAY ANALYSIS ON TALC PARTICLES

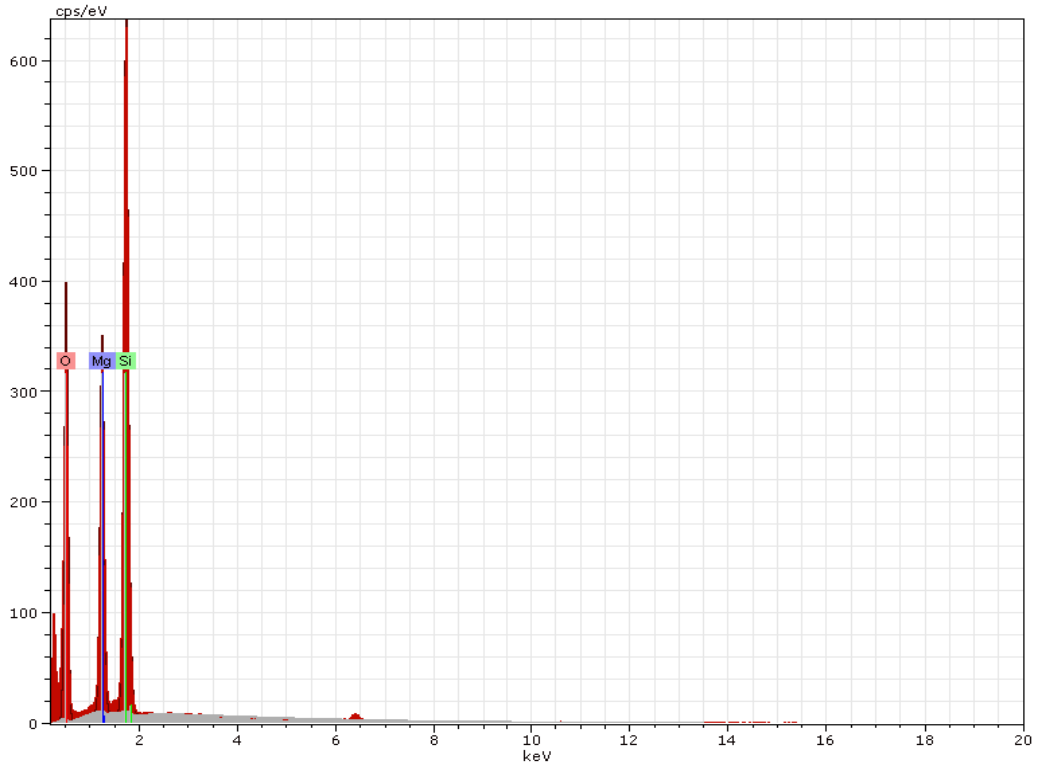
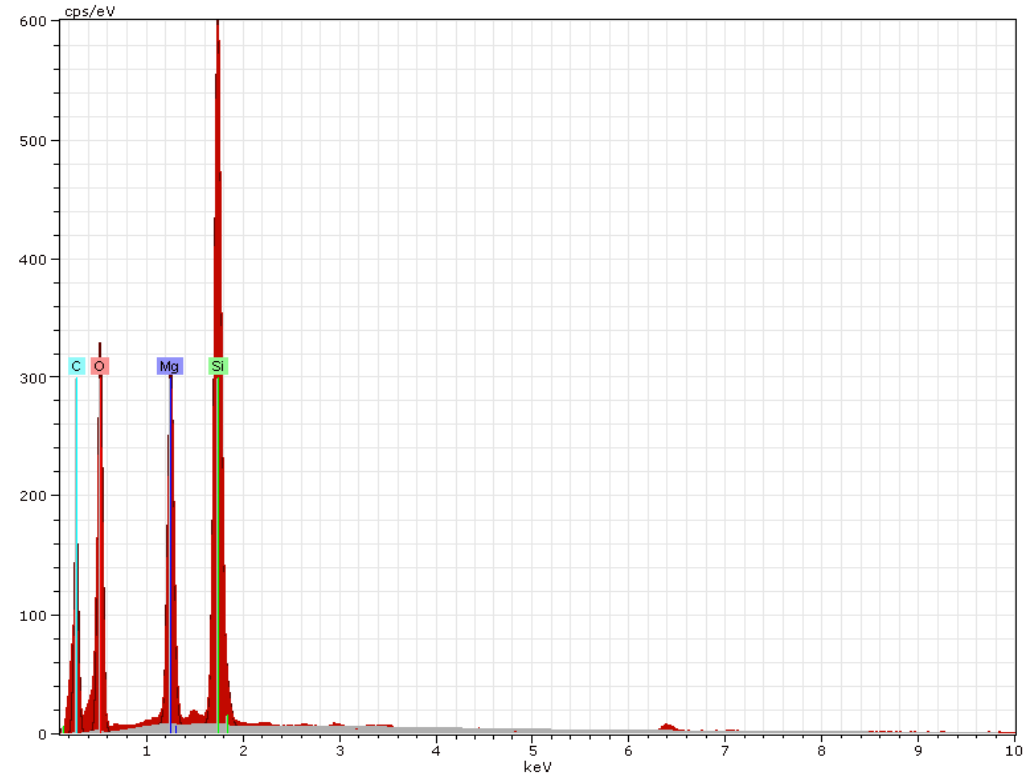


FIGURE II-28B
QEMSCAN X-RAY ANALYSIS ON TALC PARTICLES



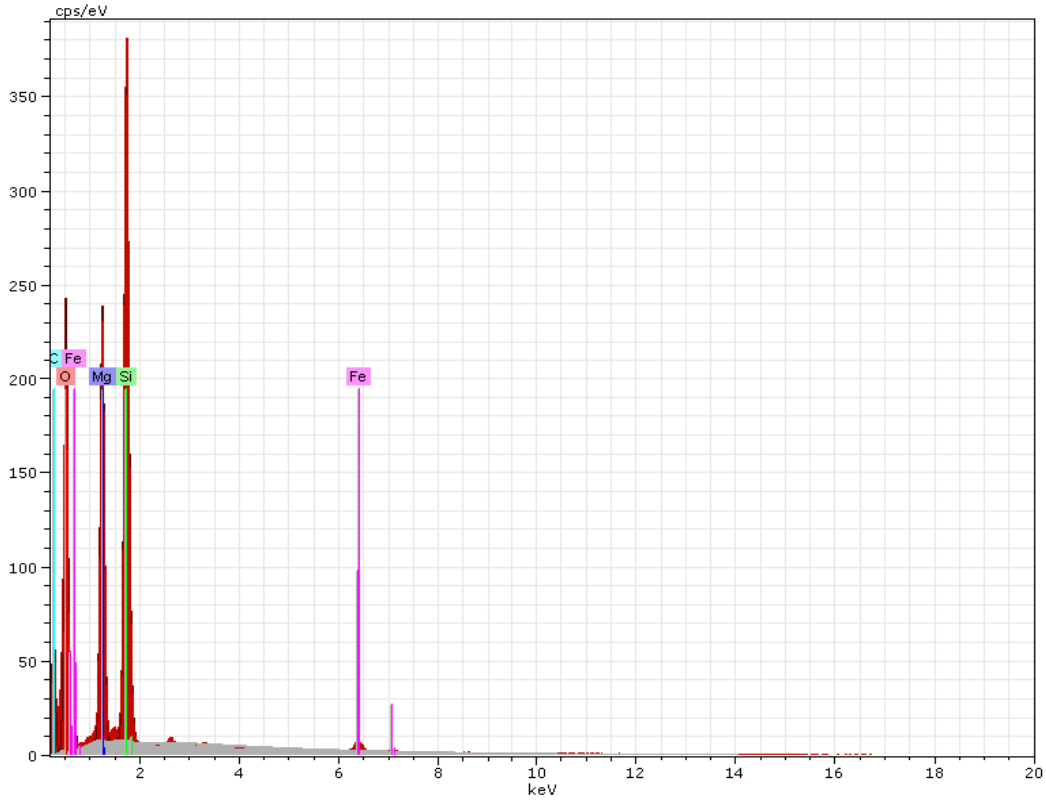


TABLE II-29
QEMSCAN X-RAY ANALYSIS ON AMPHIBOLE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Oxygen	K-series	44.7	51.5	71.6	5.5
	Calcium	K-series	21.9	25.3	14.0	0.7
	Iron	K-series	9.3	10.8	4.3	0.3
	Magnesium	K-series	6.6	7.6	7.0	0.4
	Silicon	K-series	2.6	3.0	2.3	0.1
	Manganese	K-series	1.6	1.9	0.8	0.1
		Sum:	86.8	100	100	

FIGURE II-29
QEMSCAN X-RAY ANALYSIS ON AMPHIBOLE PARTICLES

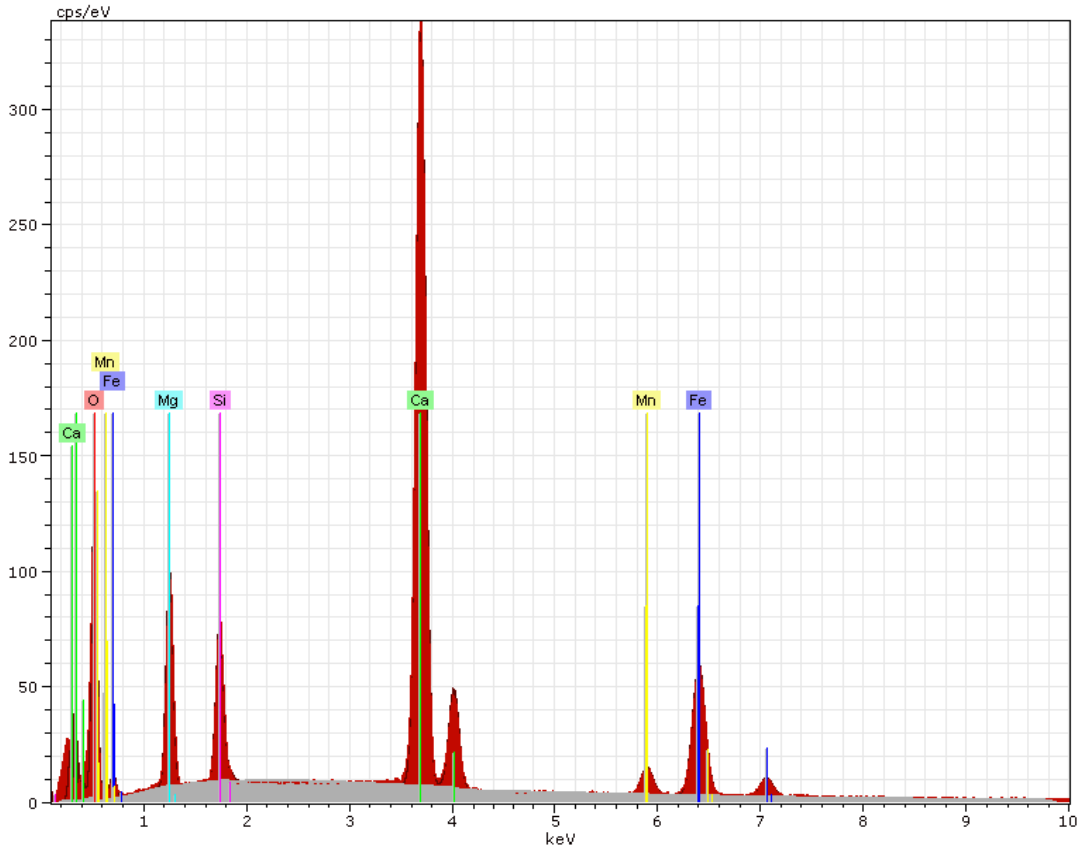
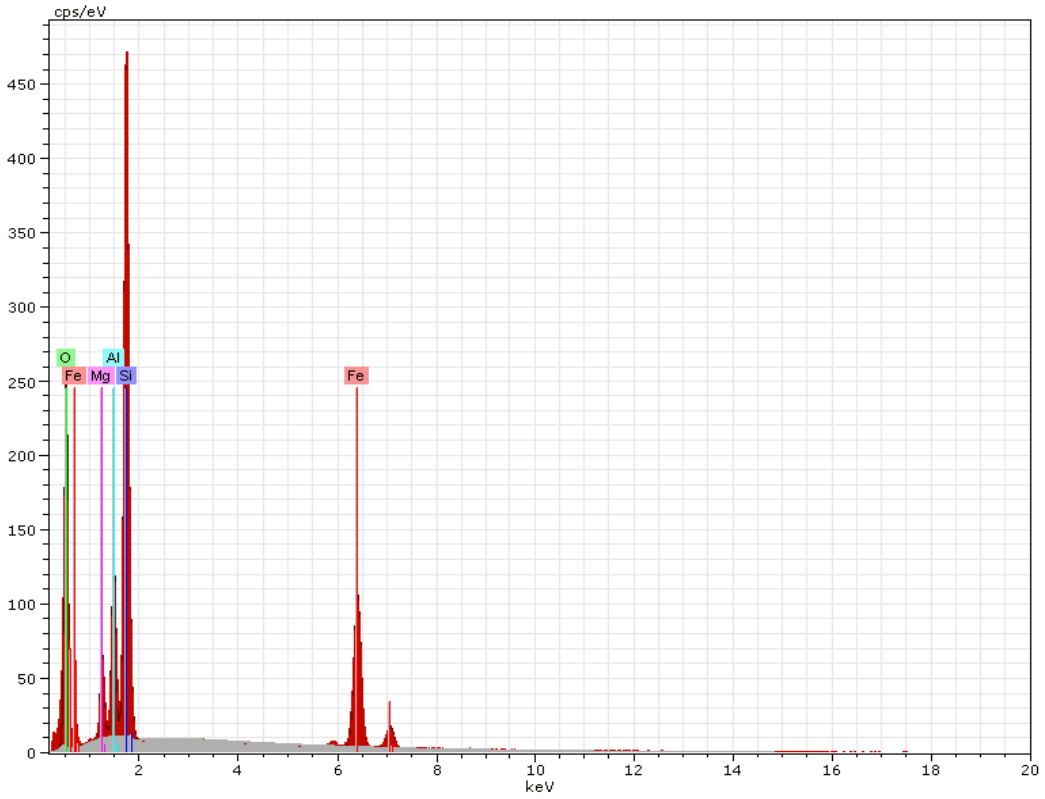


TABLE II-30
QEMSCAN X-RAY ANALYSIS ON PYROXENE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Iron	K-series	16.5	20.1	8.2	0.5
	Oxygen	K-series	34.7	42.3	60.3	4.1
	Silicon	K-series	19.7	24.0	19.5	0.9
	Aluminium	K-series	6.9	8.5	7.1	0.4
	Magnesium	K-series	4.2	5.1	4.8	0.3
		Sum:	82.1	100	100	
2	Iron	K-series	15.6	19.2	7.7	0.4
	Oxygen	K-series	37.0	45.4	63.3	4.3
	Silicon	K-series	18.5	22.7	18.1	0.8
	Aluminium	K-series	6.6	8.1	6.7	0.4
	Magnesium	K-series	3.8	4.63	4.3	0.2
		Sum:	81.5	100	100	
Average:	**Iron**	**Oxygen**	**Silicon**	**Aluminium**	**Magnesium**	
	19.6	**43.8**	**23.4**	**8.3**	**4.9**	

FIGURE II-30
QEMSCAN X-RAY ANALYSIS ON PYROXENE PARTICLES



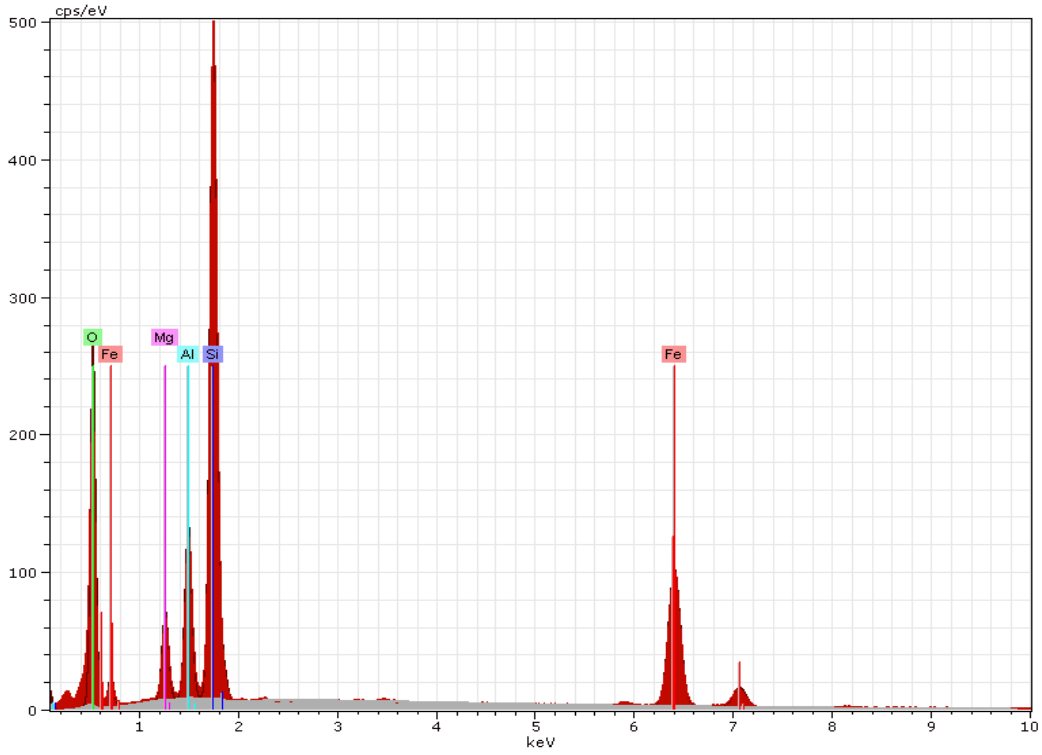


TABLE II-31
QEMSCAN X-RAY ANALYSIS ON WOLLASTONITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
	Oxygen	K-series	43.6	52.3	69.9	5.9
	Silicon	K-series	5.9	7.1	5.4	0.3
	Calcium	K-series	30.8	36.9	19.7	0.9
	Carbon	K-series	2.2	2.6	4.6	1.0
	Manganese	K-series	0.9	1.1	0.4	0.1
		Sum:	83.3	100	100	

FIGURE II-31
QEMSCAN X-RAY ANALYSIS ON WOLLASTONITE PARTICLES

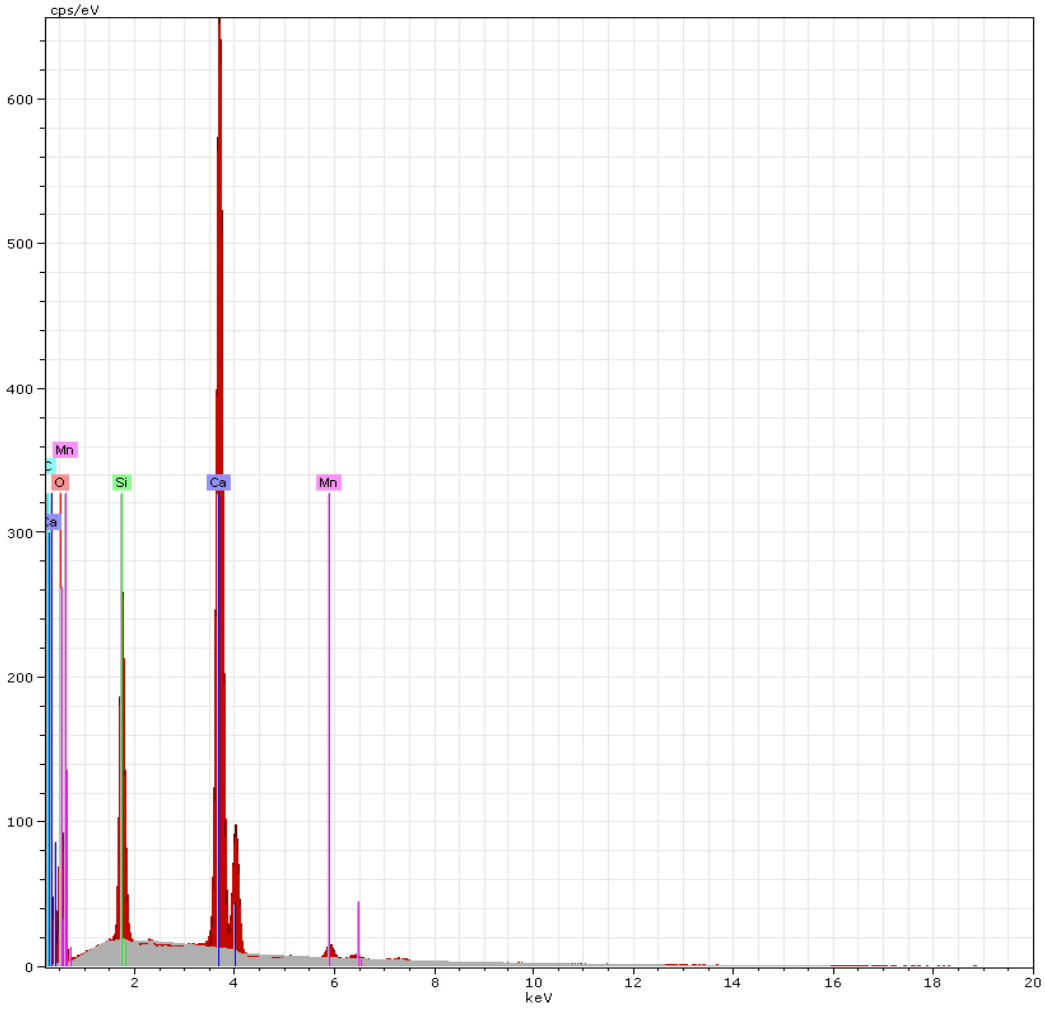


TABLE II-32
QEMSCAN X-RAY ANALYSIS ON EPIDOTE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Oxygen	K-series	37.9	44.0	62.8	4.7
	Calcium	K-series	16.8	19.5	11.1	0.5
	Iron	K-series	8.6	10.0	4.1	0.3
	Silicon	K-series	11.3	13.2	10.7	0.5
	Aluminium	K-series	11.4	13.3	11.2	0.6
		Sum:	86.0	100	100	
2	Oxygen	K-series	39.3	46.6	65.4	4.9
	Calcium	K-series	15.7	18.6	10.4	0.5
	Iron	K-series	8.5	10.1	4.1	0.2
	Silicon	K-series	10.5	12.5	10.0	0.5
	Aluminium	K-series	10.3	12.19	10.1	0.5
		Sum:	84.2	100	100	
Average:	**Oxygen 45.3**	**Calcium 19.0**	**Iron 10.1**	**Silicon 12.8**	**Aluminium 12.7**	

FIGURE II-32
QEMSCAN X-RAY ANALYSIS ON EPIDOTE PARTICLES

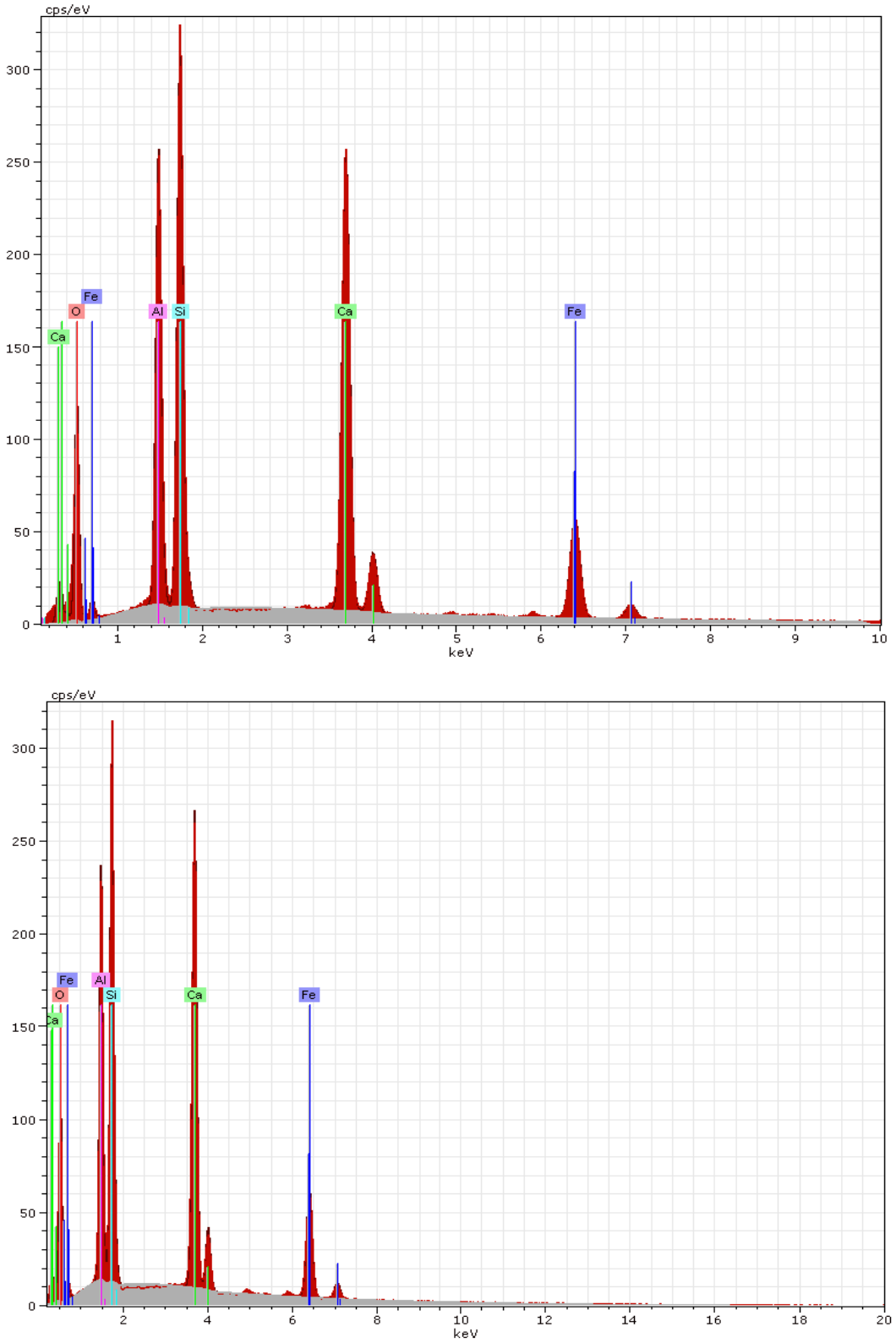
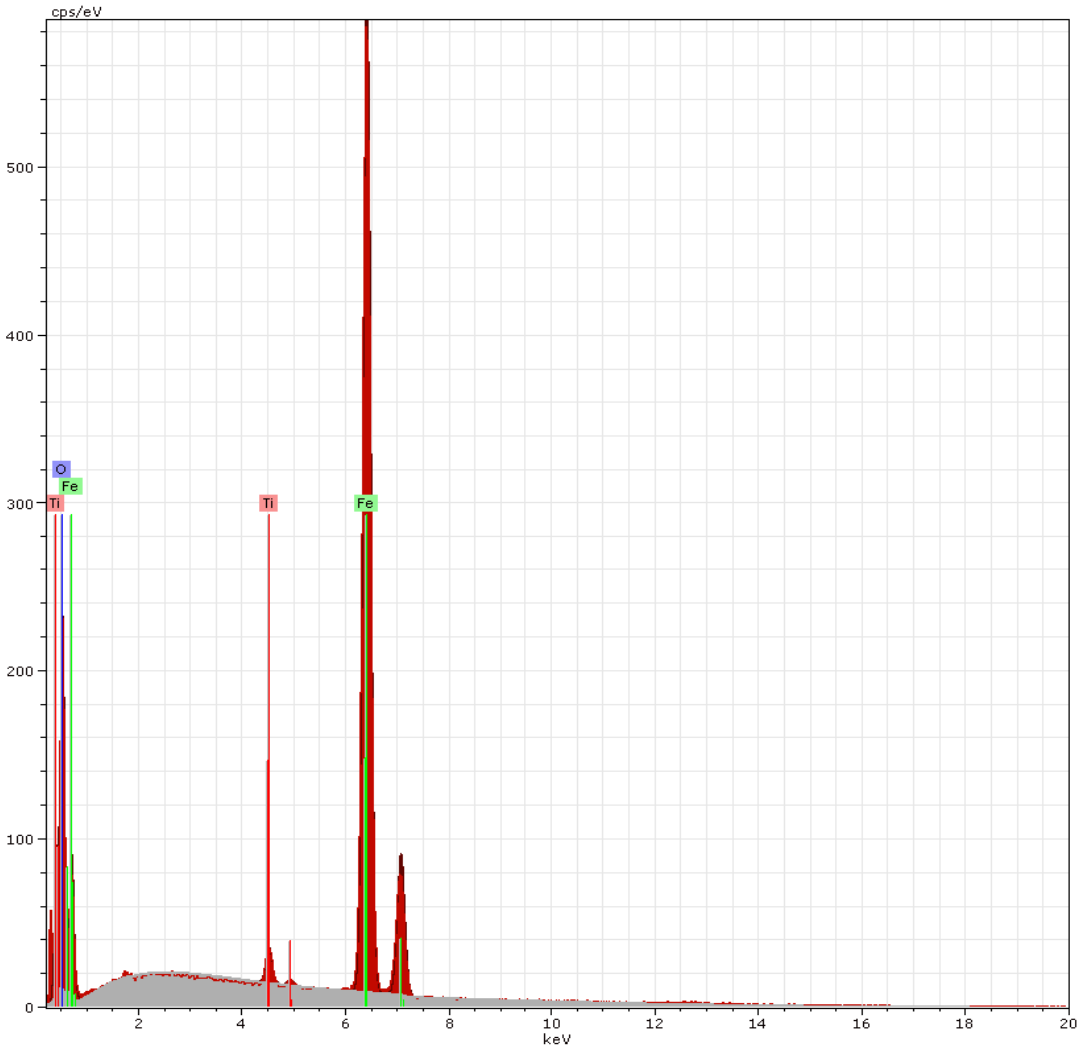


TABLE II-33
QEMSCAN X-RAY ANALYSIS ON TI-HEMATITE PARTICLES

Particle	Element	Series	Weight Percent	Normal Weight Percent	Normal Atomic Percent	Error in Percent
1	Titanium	K-series	1.1	1.3	0.9	0.1
	Iron	K-series	61.3	71.6	42.7	1.6
	Oxygen	K-series	23.2	27.1	56.3	15.9
		Sum:	85.6	100	100	

FIGURE II-33
QEMSCAN X-RAY ANALYSIS ON TI-HEMATITE PARTICLES



APPENDIX III – KM2539

QEMSCAN ANALYSIS DATA

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TABLE		PAGE
1	KM2539 Rescan Tailing Samples	1

TABLE 1A
MINERAL COMPOSITION OF RESCAN TAILING SAMPLES
KM2539

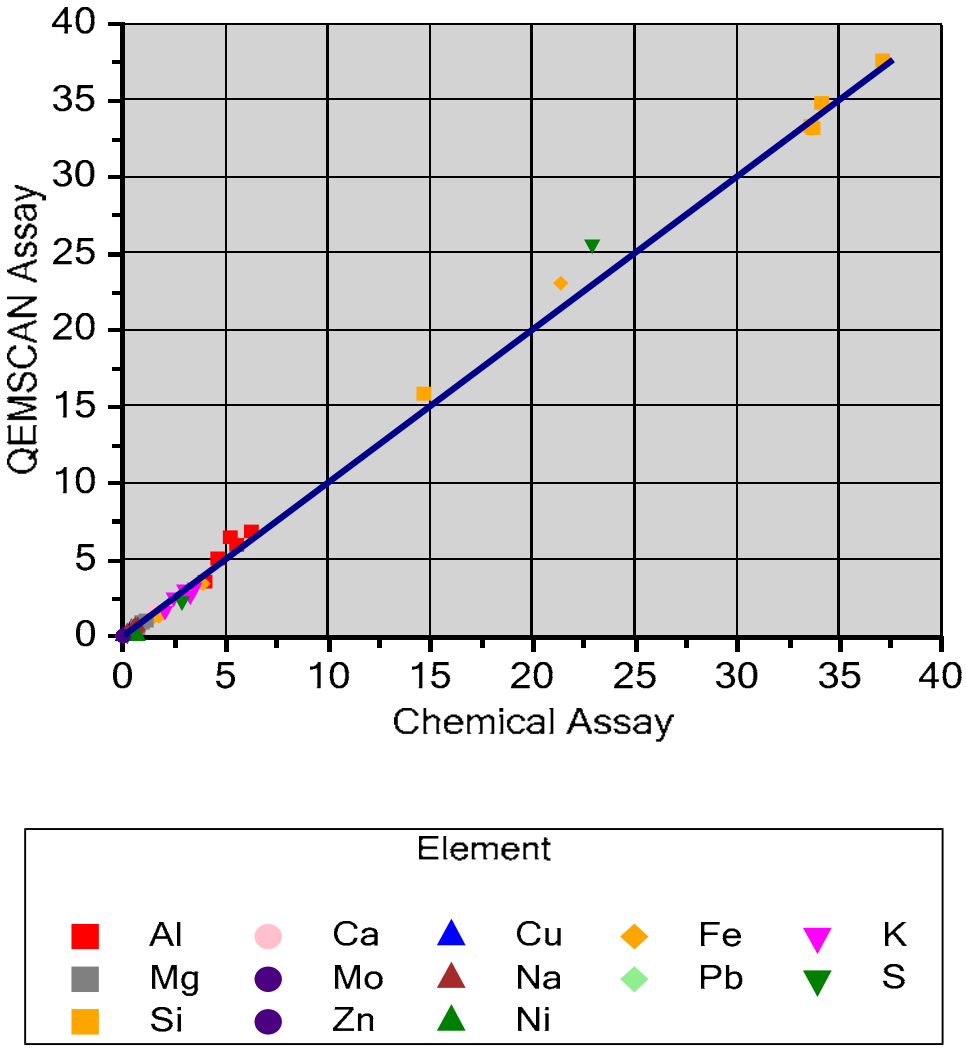
Minerals	#1 Sulphide Tailings	#2 Rougher/Sulphide	#3 Rougher Fine	#4 Rougher Coarse	#5 Rougher Tailings
Chalcopyrite	1.50	0.14	0.04	0.15	0.04
Tennantite	0.00	0.00	0.00	0.00	0.00
Galena	0.01	0.00	0.00	0.00	0.00
Sphalerite	0.13	0.01	0.00	0.00	0.00
Molybdenite	0.10	0.00	0.00	0.00	0.00
Pyrite	54.8	4.02	0.05	0.09	0.08
Barite	0.08	0.24	0.33	0.63	0.24
Hematite	0.38	0.76	0.95	0.59	0.5
Steel	0.25	0.08	0.01	0.00	0.07
Quartz	22.9	53.0	49.7	63.2	54.2
Muscovite	8.30	21.9	24.8	16.9	23.7
Biotite/Phlogopite	0.14	0.24	0.29	0.33	0.33
Biotite (Fe-Mica)	0.74	0.78	0.92	0.95	1.03
K-Feldspars	2.04	4.30	5.67	6.53	5.52
Feldspar_Albite	2.71	5.22	6.13	5.75	5.42
Alkali Feldspar	0.04	0.11	0.10	0.15	0.16
Plagioclase Feldspar	0.01	0.03	0.15	0.05	0.05
Chlorite	1.86	4.50	5.21	2.61	4.49
Kaolinite (clay)	0.21	0.17	0.22	0.06	0.16
Gypsum	0.17	0.02	0.04	0.01	0.02
Apatite	0.35	0.93	0.88	0.34	0.30
Garnet	0.17	0.09	0.13	0.03	0.10
Calcite	0.80	1.13	2.27	0.86	1.75
Ankerite	0.29	1.25	0.96	0.34	0.53
Dolomite	0.04	0.14	0.19	0.01	0.32
Rutile/Anatase	0.80	0.29	0.42	0.13	0.37
Sphene	0.15	0.16	0.09	0.04	0.14
Talc	0.01	0.07	0.05	0.06	0.09
Amphibole	0.05	0.07	0.09	0.04	0.08
Pyroxene (En-Fs)	0.05	0.07	0.08	0.05	0.04
Wollastonite	0.01	0.02	0.02	0.02	0.02
Epidote	0.04	0.05	0.03	0.01	0.02
Ti-Hematite	0.01	0.04	0.01	0.04	0.02
Others	0.90	0.18	0.23	0.13	0.16
Total	100	100	100	100	100

Note: 1) Others includes trace amounts of Ce-Phosphate (Monazite, Zr-oxide (Baddeleyite), V-Oxides and the unresolved mineral species.

TABLE 1B
CHEMICAL COMPOSITION OF RESCON TAILING SAMPLES
KM2539

Element	Assay Methods	#1 Sulphide Tailings	#2 Rougher/Sulphide	#3 Rougher Fine	#4 Rougher Coarse	#5 Rougher Tailings
Al	QEMSCAN	3.52	5.97	6.89	5.04	6.49
	Chemical	4.00	5.52	6.23	4.66	5.28
Ca	QEMSCAN	0.59	1.20	1.60	0.61	1.09
	Chemical	0.79	1.20	1.51	0.84	1.20
Cu	QEMSCAN	0.51	0.05	0.02	0.05	0.01
	Chemical	0.36	0.05	0.02	0.02	0.02
Fe	QEMSCAN	23.0	3.41	1.64	0.98	1.26
	Chemical	21.4	3.95	2.00	1.38	1.71
K	QEMSCAN	1.61	2.71	3.14	2.48	3.04
	Chemical	2.06	3.24	3.51	2.44	3.03
Mg	QEMSCAN	0.51	0.90	1.01	0.60	0.94
	Chemical	0.67	0.97	1.12	0.72	0.96
Mo	QEMSCAN	0.046	0.002	0.000	0.000	0.000
	Chemical	0.029	0.005	<0.001	0.001	<0.001
Na	QEMSCAN	0.20	0.51	0.62	0.62	0.56
	Chemical	0.24	0.64	0.73	0.60	0.52
Pb	QEMSCAN	0.01	0.00	0.00	0.00	0.00
	Chemical	0.05	0.01	0.03	0.03	0.01
S	QEMSCAN	25.6	2.26	0.10	0.19	0.10
	Chemical	22.9	2.91	0.24	0.17	0.21
Si	QEMSCAN	15.8	33.2	33.2	37.6	34.8
	Chemical	14.7	33.7	33.6	37.1	34.1
Zn	QEMSCAN	0.05	0.01	0.00	0.00	0.00
	Chemical	0.04	0.01	0.02	0.01	<0.01

FIGURE 1
ASSAY RECONCILIATION
KM2539



Appendix 6.1-4

Comparison of XRD and QEMSCAN Results

Rescan™
Engineers and Scientists

Appendix 6.1-4. Comparison of XRD and QEMSCAN Results

		Rietveld XRD					QEMScan					Difference				
Mineral	Ideal Formula	Sulphide Tailing	Rougher Sulphide Tailing	Rougher Fines Tailing	Rougher Coarse Tailing	Rougher Tailing	Sulphide Tailing	Rougher Sulphide Tailing	Rougher Fines Tailing	Rougher Coarse Tailing	Rougher Tailing	Sulphide Tailing	Rougher Sulphide Tailing	Rougher Fines Tailing	Rougher Coarse Tailing	Rougher Tailing
Quartz	SiO_2	25.5	50.3	49.3	64.2	53.5	22.9	53	49.7	63.2	54.2	2.6	-2.7	-0.4	1	-0.7
Clinochlore	$(Mg,Fe^{2+})_5Al(Si_3Al)O_{10}(OH)_8$	3.7	4.4	4.9	3	4.1	1.9	4.5	5.2	2.6	4.5	1.8	-0.1	-0.3	0.4	-0.4
Muscovite	$KAl_2(AlSi_3O_{10})(OH)_2$	17.1	24.1	28.4	17.3	24.1	8.3	21.9	24.8	16.9	23.7	8.8	2.2	3.6	0.4	0.4
K-feldspar	$KAlSi_3O_8$	3.4	6.5	6.4	5.7	6.9	2	4.3	5.7	6.5	5.5	1.4	2.2	0.7	-0.8	1.4
Plagioclase (Albite)	$NaAlSi_3O_8$ - $CaAl_2Si_2O_8$	3.2	6	5.7	6.6	6.4	2.7	5.2	6.1	5.8	5.4	0.5	0.8	-0.4	0.8	1
Gypsum	$CaSO_4{\cdot}2H_2O$	0.7	1.5	1.1	0.8	1.5						0.7	1.5	1.1	0.8	1.5
Calcite	$CaCO_3$	0.7	1.3	2.3	1.1	1.6	0.8	1.1	2.3	0.9	1.8	-0.1	0.2	0	0.2	-0.2
Ankerite/Dolomite	$Ca(Fe^{2+},Mg,Mn)(CO_3)_2/CaMg(CO_3)_2$	0.7	1	1.6	1	1.6						0.7	1	1.6	1	1.6
Pyrite	FeS_2	42.5	4.5	0.2			54.8	4	0.1	0.1	0.1	-12.3	0.5	0.1	-0.1	-0.1
Chalcopyrite	$CuFeS_2$	1.4	0.2				1.5	0.1	<0.1	0.2	<0.1	-0.1	0.1			
Sphalerite	ZnS						0.1	<0.1	<0.1	<0.1	<0.1					
Galena	PbS						0.1	<0.1	<0.1	<0.1	<0.1					
Pyrophyllite	$Al_2Si_4O_{10}(OH)_2$	1														
Molybdenite	MoS_2	0.2					0.1	<0.1	<0.1	<0.1	<0.1	0.1				
Magnetite	Fe_3O_4		0.3	0.1	0.2	0.3										
Hematite	Fe_2O_3						0.4	0.8	1	0.6	0.6					
Other							4.5	5	5.2	3.4	4.2	-4.5	-5	-5.2	-3.4	-4.2
Total		100.1	100.1	100	99.9	100	100.1	100.1	100.4	100.4	100.3	-0.4	0.7	0.8	0.3	0.3
Total Sulphur		22.4	3.13	0.38	0.21	0.38	22.4	3.13	0.38	0.21	0.38					
Sulphide Sulphur		20.2	2.38	0.04	0.08	0.07	20.2	2.38	0.04	0.08	0.07					
Sulphate Sulphur		0.38	0.40	0.37	0.15	0.32	0.38	0.40	0.37	0.15	0.32					
Barium Sulphate		0.02	0.00	0.07	0.04	0.06	0.02	0.00	0.07	0.04	0.06					
Sulphide + Sulphates		20.96	3.18	0.78	0.38	0.71	20.96	3.18	0.78	0.38	0.71					
Total - Sulphide + Sulphate		1.44	-0.05	-0.4	-0.17	-0.33	1.44	-0.05	-0.4	-0.17	-0.33					
Mineral Sulphide Sum		43.9	4.7	0.2	0	0	56.5	4.3	0.4	0.5	0.4					

Appendix 6.1-5

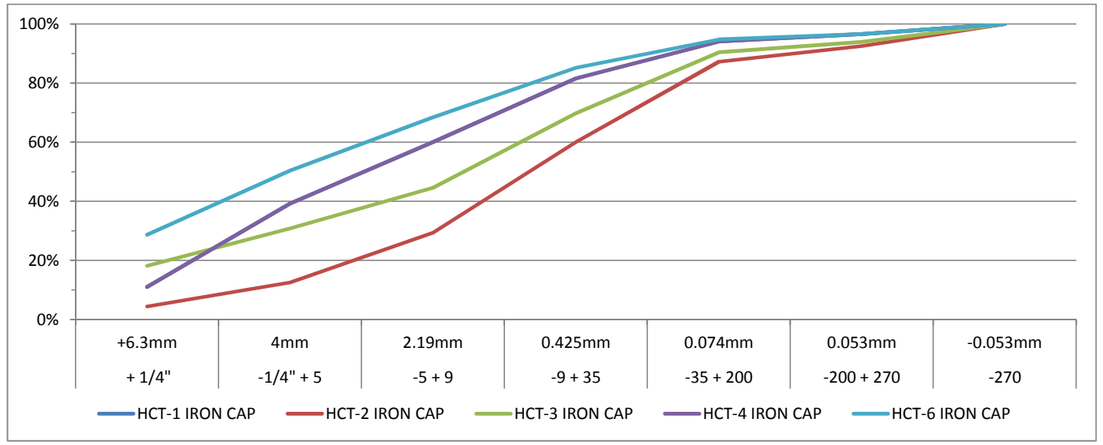
Particle Size Analysis Results for KSM Tailing

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Appendix 6.1-5. Particle Size Analysis Results for KSM Tailing

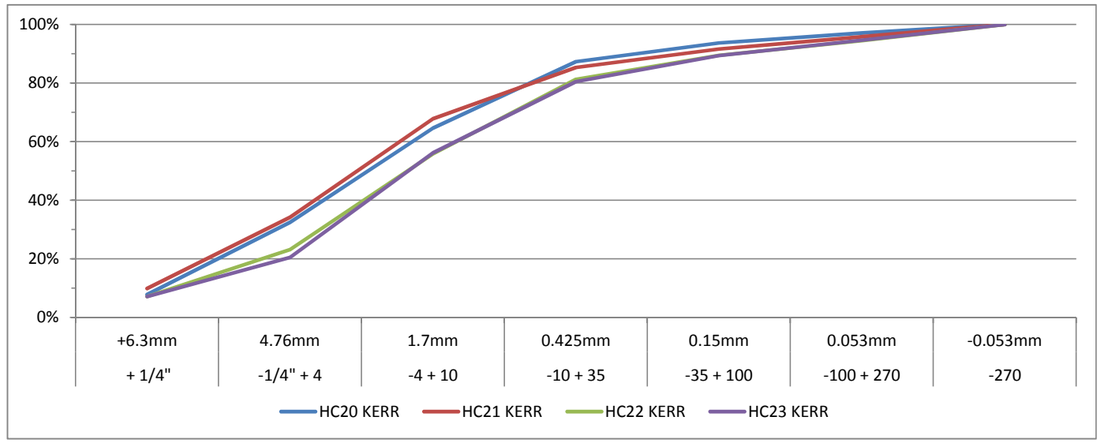
IRON CAP

Sieve Designation		+ 1/4"	-1/4" + 5	-5 + 9	-9 + 35	-35 + 200	-200 + 270	-270	
Aperature Size	(mm)	+6.3mm	4mm	2.19mm	0.425mm	0.074mm	0.053mm	-0.053mm	Total
HCT-1 IRON CAP	(g)	8.2	21	15.5	16	9.3	1.8	2.6	74.4
Iron Cap Zone, Rock Type = ?, Alteration = CL	(%)	11%	28%	21%	22%	13%	2%	3%	100%
	(%)	11%	39%	60%	82%	94%	97%	100%	
HCT-2 IRON CAP	(g)	4.94	8.9	18.6	33.92	29.92	5.86	8.28	110.42
Iron Cap Zone, Rock Type = ?, Alteration = CL	(%)	4%	8%	17%	31%	27%	5%	7%	100%
	(%)	4%	13%	29%	60%	87%	93%	100%	
HCT-3 IRON CAP	(g)	15.24	10.59	11.58	21.08	17.31	2.91	5.13	83.84
Iron Cap Zone, Rock Type = IBX, Alteration =QSP	(%)	18%	13%	14%	25%	21%	3%	6%	100%
	(%)	18%	31%	45%	70%	90%	94%	100%	
HCT-4 IRON CAP	(g)	15.58	12.48	19.99	28.28	17.72	3.28	5.56	102.89
Iron Cap Zone, Rock Type = IBX, Alteration =QSP	(%)	15%	12%	19%	27%	17%	3%	5%	100%
	(%)	15%	27%	47%	74%	91%	95%	100%	
HCT-5 IRON CAP	(g)	8.2	21	15.5	16	9.3	1.8	2.6	74.4
Iron Cap Zone, Rock Type = SEDS, Alteration = SIL	(%)	11%	28%	21%	22%	13%	2%	3%	100%
	(%)	11%	39%	60%	82%	94%	97%	100%	
HCT-6 IRON CAP	(g)	37.63	28.4	23.62	21.95	12.57	2.39	4.48	131.04
Iron Cap Zone, Rock Type = ?, Alteration = SIL	(%)	29%	22%	18%	17%	10%	2%	3%	100%
	(%)	29%	50%	68%	85%	95%	97%	100%	



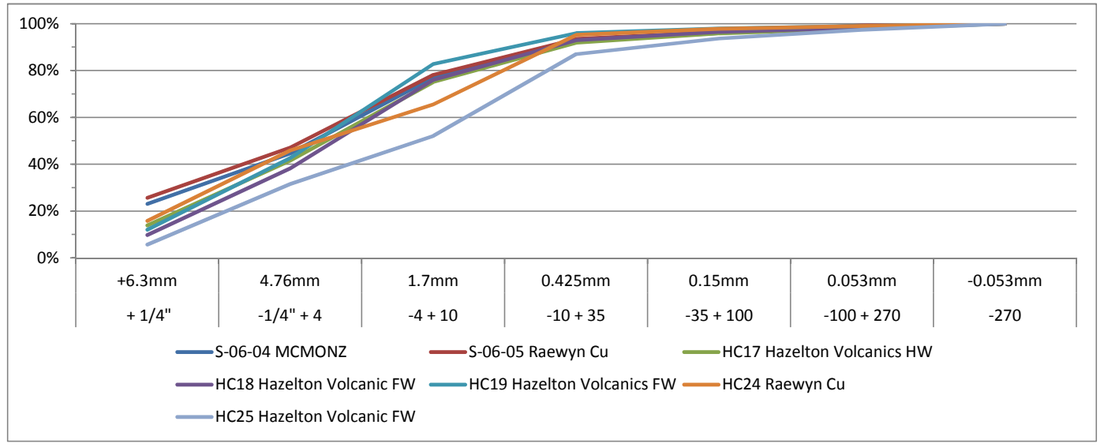
KERR

Sieve Designation		+ 1/4"	-1/4" + 4	-4 + 10	-10 + 35	-35 + 100	-100 + 270	-270	
Aperature Size	(mm)	+6.3mm	4.76mm	1.7mm	0.425mm	0.15mm	0.053mm	-0.053mm	Total
HC20 KERR	(g)	7.74	24.5	31.95	22.6	6.29	3.34	2.97	99.39
Kerr Zone, Rock Type = VU, Alteration = IARG	(%)	8%	25%	32%	23%	6%	3%	3%	100%
	(%)	8%	32%	65%	87%	94%	97%	100%	
HC21 KERR	(g)	9.81	24.18	33.46	17.44	6.31	4.08	4.24	99.52
Kerr Zone, Rock Type = VU, Alteration = IARG	(%)	10%	24%	34%	18%	6%	4%	4%	100%
	(%)	10%	34%	68%	85%	92%	96%	100%	
HC22 KERR	(g)	7.06	15.97	32.38	25.27	8.12	4.97	5.52	99.29
Kerr Zone, Rock Type = VU, Alteration = QSP	(%)	7%	16%	33%	25%	8%	5%	6%	100%
	(%)	7%	23%	56%	81%	89%	94%	100%	
HC23 KERR	(g)	7.05	13.34	35.41	24.17	8.84	5.27	5.32	99.4
Kerr Zone, Rock Type = VU, Alteration = QSP	(%)	7%	13%	36%	24%	9%	5%	5%	100%
	(%)	7%	21%	56%	80%	89%	95%	100%	



SULPHURETS

Sieve Designation		+ 1/4"	-1/4" + 4	-4 + 10	-10 + 35	-35 + 100	-100 + 270	-270	
Aperature Size	(mm)	+6.3mm	4.76mm	1.7mm	0.425mm	0.15mm	0.053mm	-0.053mm	Total
S-06-04 MCMONZ	(g)	221.3	207.3	310.4	149.6	32.4	26	12.8	959.8
Sulphurets Zone, Rock Type = PPFP, Alteration = PR	(%)	23%	22%	32%	16%	3%	3%	1%	100%
	(%)	23%	45%	77%	93%	96%	99%	100%	
S-06-05 Raewyn Cu	(g)	149.1	124.2	180.2	89.1	17	16	4.8	580.4
Sulphurets Zone, Rock Type = VU, Alteration = SIL	(%)	26%	21%	31%	15%	3%	3%	1%	100%
	(%)	26%	47%	78%	93%	96%	99%	100%	
HC17 Hazelton Volcanics HW	(g)	13.92	27.61	33.36	16.67	4.05	2.04	2.03	99.68
Sulphurets Zone, Rock Type = VUTF, Alteration = CL	(%)	14%	28%	33%	17%	4%	2%	2%	100%
	(%)	14%	42%	75%	92%	96%	98%	100%	
HC18 Hazelton Volcanic FW	(g)	9.8	28.38	37.59	16.91	3.52	1.79	1.72	99.71
Sulphurets Zone, Rock Type = PMON, Alteration = CL	(%)	10%	28%	38%	17%	4%	2%	2%	100%
	(%)	10%	38%	76%	93%	96%	98%	100%	
HC19 Hazelton Volcanics FW	(g)	12.04	30.45	39.89	13.12	1.97	1.11	0.95	99.53
Sulphurets Zone, Rock Type = VAAT, Alteration = CL	(%)	12%	31%	40%	13%	2%	1%	1%	100%
	(%)	12%	43%	83%	96%	98%	99%	100%	
HC24 Raewyn Cu	(g)	15.8	30	37.4	11.7	2.6	1.2	1	99.7
Sulphurets Zone, Rock Type = VU, Alteration = SIH	(%)	16%	30%	20%	12%	3%	1%	1%	82%
	(%)	16%	46%	66%	95%	98%	99%	100%	
HC25 Hazelton Volcanic FW	(g)	5.7	25.8	36.2	19.1	6.6	3.7	2.6	99.7
Sulphurets Zone, Rock Type = VU, Alteration = SIH	(%)	6%	26%	20%	19%	7%	4%	3%	84%
	(%)	6%	32%	52%	87%	94%	97%	100%	

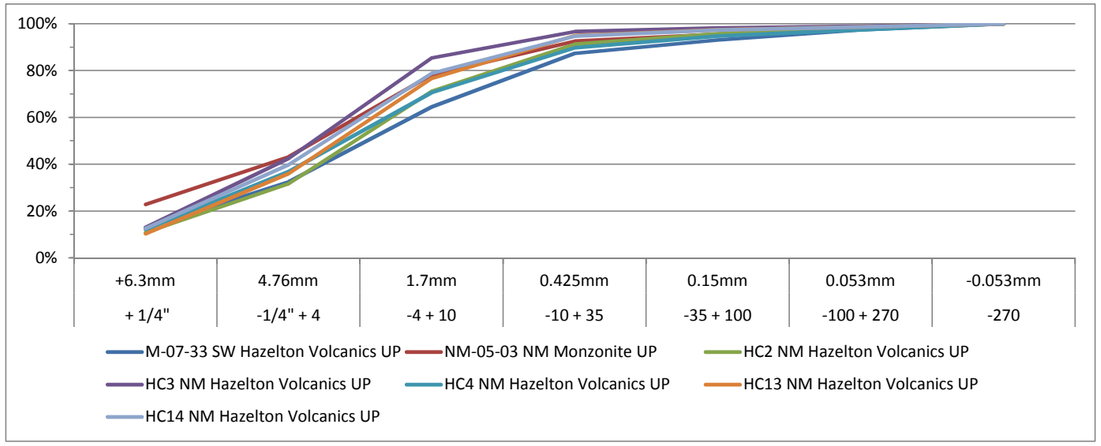


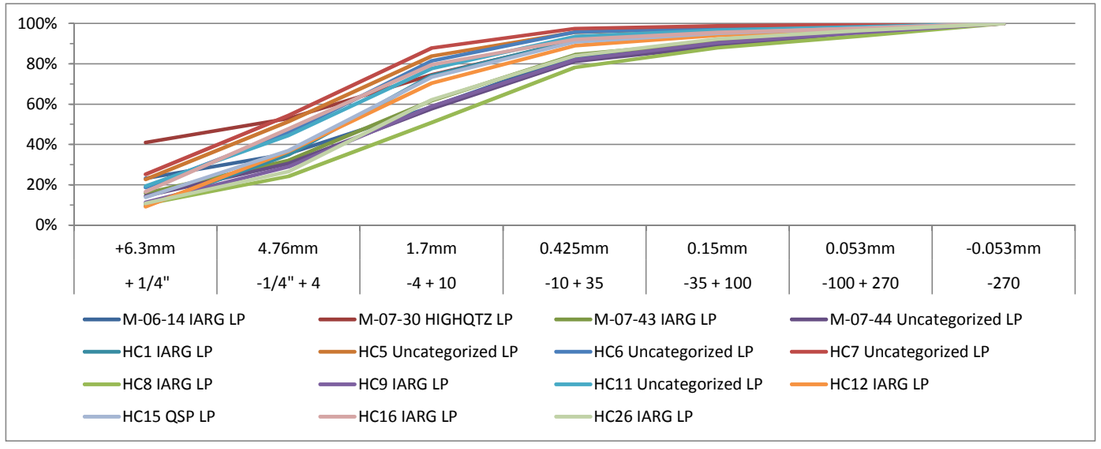
Appendix 6.1-5. Particle Size Analysis Results for KSM Tailing

MITCHELL

Sieve Designation		+ 1/4"	-1/4" + 4	-4 + 10	-10 + 35	-35 + 100	-100 + 270	-270	
Aperature Size	(mm)	+6.3mm	4.76mm	1.7mm	0.425mm	0.15mm	0.053mm	-0.053mm	Total
M-06-14 IARG LP	(g)	489.1	257.1	486.1	523	141.5	137.9	66.3	2101
Mitchell Zone, Rock Type = VALT, Alteration = IARG	(%)	23%	12%	23%	25%	7%	7%	3%	100%
	(%)	23%	36%	59%	84%	90%	97%	100%	
M-07-30 HIGHQTZ LP	(g)	168.2	48.7	89.2	68.1	15.5	13.9	6.5	410.1
Mitchell Zone, Rock Type = VULT, Aleration = FEOX	(%)	41%	12%	22%	17%	4%	3%	2%	100%
	(%)	41%	53%	75%	91%	95%	98%	100%	
M-07-33 SW Hazelton Volcanics UP	(g)	158.55	239.3	393.7	280.9	69.4	53.4	31.8	1227.05
Mitchell Zone, Rock Type = SEDS, Alteration = SIH	(%)	13%	20%	32%	23%	6%	4%	3%	100%
	(%)	13%	32%	65%	87%	93%	97%	100%	
M-07-43 IARG LP	(g)	238.6	244	447.1	340.1	95.2	87.7	49.6	1502.3
Mitchell Zone, Rock Type = VALT, Alteration = IARG	(%)	16%	16%	30%	23%	6%	6%	3%	100%
	(%)	16%	32%	62%	85%	91%	97%	100%	
M-07-44 Uncategorized LP	(g)	297.1	330.2	557	479.1	154.9	143	87.3	2048.6
Mitchell Zone, Rock Type = VATF, Alteration = IARG	(%)	15%	16%	27%	23%	8%	7%	4%	100%
	(%)	15%	31%	58%	81%	89%	96%	100%	
NM-05-03 NM Monzonite UP	(g)	625.1	554.9	958.4	389.7	81.3	86.1	37.7	2733.2
Mitchell Zone, Rock Type = PQMZ, Alteration = KP	(%)	23%	20%	35%	14%	3%	3%	1%	100%
	(%)	23%	43%	78%	92%	95%	99%	100%	
HC1 IARG LP	(g)	9.57	25.26	38.96	17.31	4.1	2.18	2.13	99.51
Mitchell Zone, Rock Type = IVOL, Alteration = QSP	(%)	10%	25%	39%	17%	4%	2%	2%	100%
	(%)	10%	35%	74%	92%	96%	98%	100%	
HC2 NM Hazelton Volcanics UP	(g)	10.81	20.79	39.22	19.97	4.4	2.15	2.19	99.53
Mitchell Zone, Rock Type = PMON, Alteration = KP	(%)	11%	21%	39%	20%	4%	2%	2%	100%
	(%)	11%	32%	71%	91%	96%	98%	100%	
HC3 NM Hazelton Volcanics UP	(g)	13.04	29.26	42.79	11.22	1.45	0.76	1.12	99.64
Mitchell Zone, Rock Type = PMON, Alteration = KP	(%)	13%	29%	43%	11%	1%	1%	1%	100%
	(%)	13%	42%	85%	97%	98%	99%	100%	
HC4 NM Hazelton Volcanics UP	(g)	12.14	24.56	33.68	18.94	4.97	2.66	2.63	99.58
Mitchell Zone, Rock Type = PMON, Alteration = PR	(%)	12%	25%	34%	19%	5%	3%	3%	100%
	(%)	12%	37%	71%	90%	95%	97%	100%	
HC5 Uncategorized LP	(g)	22.7	28.61	32.23	11.72	2.17	1.1	1.13	99.66
Mitchell Zone, Rock Type = ?, Alteration = ?	(%)	23%	29%	32%	12%	2%	1%	1%	100%
	(%)	23%	51%	84%	96%	98%	99%	100%	
HC6 Uncategorized LP	(g)	18.66	27	35.29	14.21	2.11	1.02	1.09	99.38
Mitchell Zone, Rock Type = PSBX, Alteration = SI	(%)	19%	27%	36%	14%	2%	1%	1%	100%
	(%)	19%	46%	81%	96%	98%	99%	100%	
HC7 Uncategorized LP	(g)	25.07	28.98	33.25	9.6	1.26	0.57	0.67	99.4
Mitchell Zone, Rock Type = SARG, Alteration = SIH	(%)	25%	29%	33%	10%	1%	1%	1%	100%
	(%)	25%	54%	88%	97%	99%	99%	100%	
HC8 IARG LP	(g)	10.5	13.65	26.52	27.1	9.81	5.65	6.26	99.49
Mitchell Zone, Rock Type = VU, Alteration = CL	(%)	11%	14%	27%	27%	10%	6%	6%	100%
	(%)	11%	24%	51%	78%	88%	94%	100%	
HC9 IARG LP	(g)	11.34	17.49	29.71	22.84	8.51	4.94	4.52	99.35
Mitchell Zone, Rock Type = VU, Alteration = CL	(%)	11%	18%	30%	23%	9%	5%	5%	100%
	(%)	11%	29%	59%	82%	90%	95%	100%	
HC10 NM Hazelton Volcanics UP	(g)	11.77	25.09	37.94	16.99	3.35	1.73	2.24	99.11
Mitchell Zone, Rock Type =VU, Alteration = SIH	(%)	12%	25%	38%	17%	3%	2%	2%	100%
	(%)	12%	37%	75%	93%	96%	98%	100%	
HC11 Uncategorized LP	(g)	19.22	25.03	32.93	15.67	3.03	1.58	1.8	99.26
Mitchell Zone, Rock Type = VU, Alteration = SIL	(%)	19%	25%	33%	16%	3%	2%	2%	100%
	(%)	19%	45%	78%	94%	97%	98%	100%	
HC12 IARG LP	(g)	9.19	27.3	33.68	18.54	5.11	2.71	3.12	99.65
Mitchell Zone, Rock Type = VU, Alteration = IARG	(%)	9%	27%	34%	19%	5%	3%	3%	100%
	(%)	9%	37%	70%	89%	94%	97%	100%	
HC13 NM Hazelton Volcanics UP	(g)	10.33	25.55	40.35	18.19	2.47	1.19	1.37	99.45
Mitchell Zone, Rock Type = PMON, Alteration = SIH	(%)	10%	26%	41%	18%	2%	1%	1%	100%
	(%)	10%	36%	77%	95%	97%	99%	100%	
HC14 NM Hazelton Volcanics UP	(g)	12.54	27.17	38.9	15.79	2.58	1.23	1.44	99.65

Sieve Designation		+ 1/4"	-1/4" + 4	-4 + 10	-10 + 35	-35 + 100	-100 + 270	-270	
Aperature Size	(mm)	+6.3mm	4.76mm	1.7mm	0.425mm	0.15mm	0.053mm	-0.053mm	Total
Mitchell Zone, Rock Type	(%)	13%	27%	39%	16%	3%	1%	1%	100%
	(%)	13%	40%	79%	95%	97%	99%	100%	
HC15 QSP LP	(g)	13.84	23.07	36.28	17.36	4.29	2.45	2.39	99.68
Mitchell Zone, Rock Type	(%)	14%	23%	36%	17%	4%	2%	2%	100%
	(%)	14%	37%	73%	91%	95%	98%	100%	
HC16 IARG LP	(g)	16.6	30.96	31.59	12.48	3.41	1.95	2.52	99.51
Mitchell Zone, Rock Type	(%)	17%	31%	32%	13%	3%	2%	3%	100%
	(%)	17%	48%	80%	92%	96%	97%	100%	
HC26 IARG LP	(g)	10.8	15.8	35.3	21.8	8.3	4.1	3.5	99.6
Mitchell Zone, Rock Type	(%)	11%	16%	35%	22%	8%	4%	4%	100%
	(%)	11%	27%	62%	84%	92%	96%	100%	





Appendix 6.2-1

Tailing Humidity Cell Leachate Concentrations

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Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

								Physical Tests					Anions		Dissolved Metals							
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In	Total Volume Out	Conductivity	pH	Acidity ($CaCO_3$)	Alkalinity, Total ($CaCO_3$)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Nitrite (NO_2)	Sulfate (SO_4)	Hardness	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)
										mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sulphide																						
0	0	SULPHIDE TAILINGS-0	23-Sep-09	L822242-1	Water	500	470	2800	8.40	6.43	154.01			0.220			838.73	380.5	0.128	0.0600	0.0058	0.038
1	1	SULPHIDE TAILINGS-1	30-Sep-09	L825179-1	Water	500	495	2380	7.85	11.23	95.31			0.187			841.73	596.6	0.099	0.0365	0.0010	0.026
2	2	SULPHIDE TAILINGS-2	7-Oct-09	L827682-1	Water	500	475	2020	7.80	10.53	91.51			0.176			815.73	835.5	0.087	0.0208	0.0005	0.023
3	3	SULPHIDE TAILINGS-3	14-Oct-09	L829834-1	Water	500	475	1940	7.84	10.73	81.31			0.174			827.73	1006.4	0.087	0.0145	0.0005	0.022
4	4	SULPHIDE TAILINGS-4	21-Oct-09	L832078-1	Water	500	470	2000	7.78	13.33	91.51			0.107			1074.73	1263.3	0.087	0.0122	0.0011	0.021
5	5	SULPHIDE TAILINGS-5	28-Oct-09	L834821-1	Water	500	470	2220	7.78	13.23	107.01			0.207			1474.73	1549.1	0.087	0.0092	0.0005	0.016
6	6	SULPHIDE TAILINGS-6	4-Nov-09	L836965-1	Water	500	455	2220	7.75	9.23	92.71			0.207			1494.73	1646.3	0.087	0.0075	0.0005	0.015
7	7	SULPHIDE TAILINGS-7	12-Nov-09	L839398-1	Water	500	470	2320	7.70	15.53	77.11			0.207			1664.73	1725.3	0.124	0.0045	0.0005	0.015
8	8	SULPHIDE TAILINGS-8	18-Nov-09	L841197-1	Water	500	450	2230	7.66	12.03	101.01			0.207			1534.73	1542.2	0.087	0.0032	0.0032	0.015
9	9	SULPHIDE TAILINGS-9	25-Nov-09	L843172-1	Water	500	460	2150	7.69	11.93	68.71			0.107			1484.73	1574.4	0.087	0.0020	0.0005	0.016
10	10	SULPHIDE TAILINGS-10	2-Dec-09	L845467-1	Water	500	465	2120	7.69	11.43	47.61			0.207			1494.73	1565.4	0.087	0.0024	0.0005	0.015
11	11	SULPHIDE TAILINGS-11	9-Dec-09	L847223-1	Water	500	480	2200	7.52	9.43	36.81			0.207			1594.73	1623.5	0.087	0.0012	0.0005	0.014
12	12	SULPHIDE TAILINGS-12	16-Dec-09	L848945-1	Water	500	475	2070	7.39	10.73	28.61			0.207			1574.73	1551.6	0.087	0.0005	0.0005	0.014
13	13	SULPHIDE TAILINGS-13	23-Dec-09	L850709-1	Water	500	450	2150	6.84	20.43	18.01			0.207			1434.73	1628.2	0.087	0.0005	0.0005	0.014
14	14	SULPHIDE TAILINGS-14	30-Dec-09	L851579-1	Water	500	450	2130	5.88	37.63	9.91			0.207			1544.73	1516.3	0.236	0.0005	0.0005	0.014
15	15	SULPHIDE TAILINGS-15	6-Jan-10	L852460-1	Water	500	450	2110	5.03	54.33	9.11			0.257			1654.73	1575.6	1.047	0.0005	0.0005	0.013
16	16	SULPHIDE TAILINGS-16	13-Jan-10	L854098-1	Water	500	450	2090	4.89	76.83	8.51			0.207			1514.73	1432.2	1.782	0.0005	0.0005	0.014
17	17	SULPHIDE TAILINGS-17	20-Jan-10	L855789-1	Water	500	460	2050	4.61	75.93	6.61			0.207			1494.73	1458.5	2.052	0.0005	0.0005	0.013
18	18	SULPHIDE TAILINGS-18	27-Jan-10	L857371-1	Water	500	475	2060	3.98	116.63	1.01			0.107			1444.73	1494.5	3.542	0.0005	0.0005	0.012
19	19	SULPHIDE TAILINGS-19	3-Feb-10	L859096-1	Water	500	455	1900	4.01	83.93	1.01			0.207			1324.73	1284.8	2.372	0.0005	0.0005	0.013
20	20	SULPHIDE TAILINGS-20	10-Feb-10	L861122-1	Water	500	475	2010	3.98	146.63	1.01			0.207			1414.73	1320.9	4.302	0.0005	0.0005	0.013
21	21	SULPHIDE TAILINGS-21	17-Feb-10	L862558-1	Water	500	475	1880	3.89	89.03	1.01			0.207			1314.73	1242.7	2.682	0.0005	0.0005	0.012
22	22	SULPHIDE TAILINGS-22	24-Feb-10	L864540-1	Water	500	480	1920	3.71	79.53	1.01			0.207			1324.73	1280.1	2.202	0.0005	0.0005	0.013
23	23	SULPHIDE TAILINGS-23	3-Mar-10	L866349-1	Water	500	490	1880	3.85	102.33	1.01			0.207			1324.73	1250.1	3.242	0.0005	0.0005	0.012
24	24	SULPHIDE TAILINGS-24	10-Mar-10	L868256-1	Water	500	470	2110	3.32	234.63	1.01			0.327			1444.73	1258.0	6.632	0.0005	0.0005	0.012
25	25	SULPHIDE TAILINGS-25	17-Mar-10	L869907-1	Water	500	460	2040	3.48	202.63	1.01			0.307			1384.73	1186.5	6.112	0.0005	0.0005	0.012
26	26	SULPHIDE TAILINGS-26	24-Mar-10	L871620-1	Water	500	455	2060	3.43	208.63	1.01			0.207			1444.73	1346.9	5.862	0.0005	0.0005	0.011
27	27	SULPHIDE TAILINGS-27	31-Mar-10	L873457-1	Water	500	450	1780	4.21	86.53	5.51			0.107			1314.73	1203.2	2.742	0.0005	0.0005	0.013
28	28	SULPHIDE TAILINGS-28	7-Apr-10	L874970-1	Water	500	450	1900	3.67	191.63	1.01			0.207			1194.73	1217.0	4.992	0.0005	0.0005	0.012
29	29	SULPHIDE TAILINGS-29	14-Apr-10	L877116-1	Water	500	480	1900	3.48	180.63	1.01			0.207			1284.73	1190.1	5.372	0.0005	0.0005	0.012
30	30	SULPHIDE TAILINGS-30	21-Apr-10	L879131-1	Water	500	490	2140	3.28	235.63	1.01			0.331			1484.73	1179.6	7.422	0.0005	0.0005	0.011
31	31	SULPHIDE TAILINGS-31	28-Apr-10	L881234-1	Water	500	450	1740	3.50	170.63	1.01			0.207			1094.73	967.7	4.562	0.0005	0.0005	0.013
32	32	SULPHIDE TAILINGS-32	5-May-10	L883239-1	Water	500	455	1780	3.59	242.63	1.01			0.370			1184.73	989.9	6.232	0.0005	0.0005	0.013
33	33	SULPHIDE TAILINGS-33	12-May-10	L885549-1	Water	500	480	1940	3.25	222.63	1.01			0.207			1224.73	1030.3	6.002	0.0005	0.0005	0.012
34	34	SULPHIDE TAILINGS-34	19-May-10	L888187-1	Water	500	470	1600	3.51	161.63	1.01			0.207			1014.73	813.7	3.312	0.0005	0.0005	0.013
35	35	SULPHIDE TAILINGS-35	26-May-10	L890291-1	Water	500	450	1850	3.30	218.63	1.01			0.207			1184.73	910.4	5.092	0.0005	0.0005	0.011
36	36	SULPHIDE TAILINGS-36	2-Jun-10	L892986-1	Water	500	485	1780	3.23	265.63	1.01			0.207			1084.73	849.4	6.242	0.0005	0.0005	0.012
37	37	SULPHIDE TAILINGS-37	9-Jun-10	L895622-1	Water	500	475	1480	3.25	218.63	1.01			0.207			865.73	648.5	4.252	0.0005	0.0005	0.013
38	38	SULPHIDE TAILINGS-38	16-Jun-10	L898149-1	Water	500	480	1730	3.12	412.63	1.01			0.207			1004.73	560.2	7.162	0.0005	0.0005	0.012
39	39	SULPHIDE TAILINGS-39	23-Jun-10	L900775-1	Water	500	480	1490	3.12	394.63	1.01			0.337			743.73	396.3	6.392	0.0005	0.0005	0.013
40	40	SULPHIDE TAILINGS-40	30-Jun-10	L903235-1	Water	500	475	1510	3.05	496.63	1.01			0.507			819.73	305.1	7.072	0.0005	0.0005	0.013
41	41	SULPHIDE TAILINGS-41	7-Jul-10	L905416-1	Water	500	480	1490	3.05	578.63	1.01			1.007			790.73	233.1	7.632	0.0005	0.0005	0.012
42	42	SULPHIDE TAILINGS-42	14-Jul-10	L908290-1	Water	500	465	1580	2.98	660.63	1.01			1.907			810.73	202.2	11.882	0.0005	0.0021	0.013
43	43	SULPHIDE TAILINGS-43	21-Jul-10	L910997-1	Water	500	480	1640	2.93	763.63	1.01			1.687			824.73	152.0	14.082	0.0010	0.0010	0.016
44	44	SULPHIDE TAILINGS-44	28-Jul-10	L913689-1	Water	500	475	1730	2.92	830.63	1.01			1.807			1074.73	137.4	14.282	0.0010	0.0010	0.012
45	45	SULPHIDE TAILINGS-45	4-Aug-10	L915978-1	Water	500	490	1700	2.95	850.63	1.01			1.607			949.73	123.6	17.782	0.0010	0.0010	0.013
46	46	SULPHIDE TAILINGS-46	11-Aug-10	L918804-1	Water	500	475	1690	2.88	852.63	1.01			1.307			902.73	101.6	18.982	0.0010	0.0010	0.012
47	47	SULPHIDE TAILINGS-47	18-Aug-10	L921398-1	Water	500	480	2360	2.57	1364.63	1.01			2.107			1314.73	107.4	24.882	0.0025	0.0025	0.015
48	48	SULPHIDE TAILINGS-48	25-Aug-10	L924204-1	Water	500	465	1840	2.73	968.63	1.01			1.307			979.73	83.1	21.982	0.0025	0.0025	0.012
49	49	SULPHIDE TAILINGS-49	1-Sep-10	L926708-1	Water	500	470	2330	2.58	1234.63	1.01			1.707			1254.73	111.3	29.682	0.0025	0.0025	0.010
50	50	SULPHIDE TAILINGS-50	8-Sep-10	L928948-1	Water	500	500	2250	2.59	1184.63	1.01			1.607			1164.73	111.7	30.882	0.0025	0.0025	0.012
51	51	SULPHIDE TAILINGS-51	15-Sep-10	L931580-1	Water	500	500	2420	2.61	1354.63	1.01			1.007			1364.73	106.8	33.782	0.0025	0.0025	0.015
52	52	SULPHIDE TAILINGS-52	22-Sep-10	L934339-1	Water	500	475	1840	2.80	1004.63	1.01			1.407			1124.73	95.7	22.982	0.0003	0.0022	0.012
53	53	SULPHIDE TAILINGS-53	29-Sep-10	L937156-1	Water	500	460	1870	2.87	1044.63	1.01			1.907			1124.73	122.5	23.882	0.0003	0.0025	0.012
54	54	SULPHIDE TAILINGS-54	6-Oct-10	L939969-1	Water	500	465	2350	2.60	1224.63	1.01			1.807			1304.73	135.3	35.082	0.0008	0.0035	0.011
55	55	SULPHIDE TAILINGS-55	13-Oct-10	L942326-1	Water	500	485	2440	2.60	1324.63	1.01			1.507			1334.73	102.5	36.182	0.0005	0.0041	0.011
56	56	SULPHIDE TAILINGS-56	20-Oct-10	L945041-1	Water	500	480	2820	2.48	1614.63	1.01			1.207			1634.73	109.2	35.982	0.0006	0.0045	0.010

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

								Physical Tests					Anions		Dissolved Metals							
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In	Total Volume Out	Conductivity	pH	Acidity (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Nitrite (NO_2)	Sulfate (SO_4)	Hardness	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)
												mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
57	57	SULPHIDE TAILINGS-57	27-Oct-10	L947663-1	Water	500	470	2860	2.51	1584.63	1.01			1.407			1634.73	109.4	40.682	0.0006	0.0044	0.010
58	58	SULPHIDE TAILINGS-58	3-Nov-10	L950195-1	Water	500	490	2770	2.53	1634.63	1.01			1.807			1624.73	115.0	39.282	0.0006	0.0045	0.011
59	59	SULPHIDE TAILINGS-59	10-Nov-10	L952749-1	Water	500	455	2200	2.71	1264.63	1.01			1.907			1244.73	112.7	23.182	0.0006	0.0026	0.011
60	60	SULPHIDE TAILINGS-60	17-Nov-10	L954872-1	Water	500	475	2350	2.67	1184.63	1.01			2.907			1274.73	144.8	29.982	0.0007	0.0034	0.011
61	61	SULPHIDE TAILINGS-61	24-Nov-10	L956852-1	Water	500	475	2630	2.52	1344.63	1.01			2.107			1384.73	120.7	31.782	0.0005	0.0035	0.010
62	62	SULPHIDE TAILINGS-62	1-Dec-10	L958928-1	Water	500	470	2730	2.50	1394.63	1.01			1.807			1454.73	108.7	28.982	0.0006	0.0038	0.010
63	63	SULPHIDE TAILINGS-63	8-Dec-10	L961066-1	Water	500	465	3010	2.48	1554.63	1.01			2.007			1654.73	137.3	30.982	0.0007	0.0043	0.010
64	64	SULPHIDE TAILINGS-64	15-Dec-10	L963010-1	Water	500	470	2870	2.50	1424.63	1.01			1.507			1584.73	132.5	27.482	0.0005	0.0034	0.011
65	65	SULPHIDE TAILINGS-65	22-Dec-10	L965051-1	Water	500	490	2780	2.53	1464.63	1.01			1.607			1514.73	129.6	27.882	0.0007	0.0035	0.010
66	66	SULPHIDE TAILINGS-66	29-Dec-10	L965956-1	Water	500	460	2400	2.57	1114.63	1.01			1.307			1194.73	118.9	23.282	0.0007	0.0028	0.011
67	67	SULPHIDE TAILINGS-67	5-Jan-11	L967289-1	Water	500	485	2460	2.57	1134.63	1.01			1.307			1234.73	125.3	20.982	0.0007	0.0031	0.011
68	68	SULPHIDE TAILINGS-68	12-Jan-11	L969116-1	Water	500	450	2780	2.47	1284.63	1.01			1.507			1424.73	137.6	24.382	0.0008	0.0037	0.011
69	69	SULPHIDE TAILINGS-69	19-Jan-11	L971359-1	Water	500	460	2600	2.48	1244.63	1.01			1.607			1304.73	113.5	22.082	0.0007	0.0033	0.011
70	70	SULPHIDE TAILINGS-70	26-Jan-11	L973154-1	Water	500	470	3240	2.39	1604.63	1.01			1.707			1754.73	125.1	28.382	0.0009	0.0063	0.010
71	71	SULPHIDE TAILINGS-71	2-Feb-11	L975057-1	Water	500	470	2940	2.44	1454.63	1.01			1.917			1554.73	117.1	28.682	0.0009	0.0052	0.011
72	72	SULPHIDE TAILINGS-72	9-Feb-11	L976968-1	Water	500	465	3130	2.44	1584.63	1.01			1.707			1644.73	116.1	26.082	0.0010	0.0044	0.009
73	73	SULPHIDE TAILINGS-73	16-Feb-11	L978743-1	Water	500	460	2800	2.53	1514.63	1.01			2.137			1494.73	132.0	30.082	0.0010	0.0046	0.010
74	74	SULPHIDE TAILINGS-74	23-Feb-11	L980552-1	Water	500	485	3270	2.42	1864.63	1.01			1.997			1854.73	120.1	35.282	0.0012	0.0124	0.010
Average									2.44	1604.63	1.01	#DIV/0!	#DIV/0!	1.680	#DIV/0!	#DIV/0!	1660.73	122.1	29.702	0.0010	0.0066	0.010
Rougher/Sulphide 90/10																						
0	0	ROUGHER/SULPHIDE 90/10-0	23-Sep-09	L822242-2	Water	500	480	2350	7.63	2.80	33.10			0.464			1550.00	1398.5	0.005	0.0064	0.0005	0.023
1	1	ROUGHER/SULPHIDE 90/10-1	30-Sep-09	L825179-2	Water	500	475	2300	7.74	6.30	36.50			0.296			1550.00	1524.1	0.005	0.0048	0.0005	0.015
2	2	ROUGHER/SULPHIDE 90/10-2	7-Oct-09	L827682-2	Water	500	480	2180	7.69	4.50	40.70			0.235			1450.00	1542.3	0.005	0.0033	0.0005	0.016
3	3	ROUGHER/SULPHIDE 90/10-3	14-Oct-09	L829834-2	Water	500	465	2220	7.74	5.80	43.50			0.215			1550.00	1577.1	0.005	0.0022	0.0005	0.015
4	4	ROUGHER/SULPHIDE 90/10-4	21-Oct-09	L832078-2	Water	500	475	2170	7.81	5.40	47.90			0.100			1500.00	1556.1	0.005	0.0014	0.0005	0.015
5	5	ROUGHER/SULPHIDE 90/10-5	28-Oct-09	L834821-2	Water	500	460	2140	7.80	6.40	76.40			0.200			1480.00	1622.8	0.005	0.0029	0.0005	0.014
6	6	ROUGHER/SULPHIDE 90/10-6	4-Nov-09	L836965-2	Water	500	465	2070	7.81	3.80	79.10			0.200			1410.00	1561.2	0.005	0.0005	0.0005	0.014
7	7	ROUGHER/SULPHIDE 90/10-7	12-Nov-09	L839398-2	Water	500	465	2060	7.83	8.00	73.80			0.100			1420.00	1548.8	0.005	0.0084	0.0005	0.014
8	8	ROUGHER/SULPHIDE 90/10-8	18-Nov-09	L841197-2	Water	500	455	2020	7.75	6.20	81.10			0.200			1380.00	1405.8	0.005	0.0005	0.0048	0.012
9	9	ROUGHER/SULPHIDE 90/10-9	25-Nov-09	L843172-2	Water	500	460	1950	7.78	6.40	77.90			0.100			1330.00	1451.2	0.005	0.0005	0.0005	0.014
10	10	ROUGHER/SULPHIDE 90/10-10	2-Dec-09	L845467-2	Water	500	465	1790	7.81	5.90	74.90			0.200			1200.00	1294.6	0.005	0.0005	0.0005	0.013
11	11	ROUGHER/SULPHIDE 90/10-11	9-Dec-09	L847223-2	Water	500	460	1870	7.80	5.00	74.30			0.200			1280.00	1362.4	0.005	0.0005	0.0005	0.013
12	12	ROUGHER/SULPHIDE 90/10-12	16-Dec-09	L848945-2	Water	500	450	1690	7.58	4.00	72.20			0.100			1130.00	1183.0	0.005	0.0005	0.0005	0.013
13	13	ROUGHER/SULPHIDE 90/10-13	23-Dec-09	L850709-2	Water	500	450	1730	7.75	7.20	65.30			0.100			1090.00	1258.2	0.005	0.0005	0.0005	0.013
14	14	ROUGHER/SULPHIDE 90/10-14	30-Dec-09	L851579-2	Water	500	455	1640	7.70	5.20	43.60			0.220			1060.00	1137.3	0.005	0.0005	0.0005	0.014
15	15	ROUGHER/SULPHIDE 90/10-15	6-Jan-10	L852460-2	Water	500	455	1620	7.70	4.20	47.80			0.100			1020.00	1197.7	0.005	0.0005	0.0005	0.013
16	16	ROUGHER/SULPHIDE 90/10-16	13-Jan-10	L854098-2	Water	500	490	1410	7.64	7.10	44.90			0.100			893.00	913.3	0.005	0.0005	0.0005	0.014
17	17	ROUGHER/SULPHIDE 90/10-17	20-Jan-10	L855789-2	Water	500	455	1420	7.81	6.00	43.90			0.177			853.00	985.1	0.005	0.0005	0.0005	0.014
18	18	ROUGHER/SULPHIDE 90/10-18	27-Jan-10	L857371-2	Water	500	470	1360	7.70	6.50	38.20			0.100			842.00	982.5	0.005	0.0005	0.0005	0.013
19	19	ROUGHER/SULPHIDE 90/10-19	3-Feb-10	L859096-2	Water	500	460	1230	7.73	7.60	45.90			0.100			733.00	822.3	0.005	0.0005	0.0005	0.014
20	20	ROUGHER/SULPHIDE 90/10-20	10-Feb-10	L861122-2	Water	500	470	1220	7.77	13.00	45.40			0.100			715.00	796.5	0.005	0.0005	0.0005	0.014
21	21	ROUGHER/SULPHIDE 90/10-21	17-Feb-10	L862558-2	Water	500	470	1190	7.50	8.50	47.40			0.100			698.00	754.0	0.005	0.0005	0.0005	0.014
22	22	ROUGHER/SULPHIDE 90/10-22	24-Feb-10	L864540-2	Water	500	470	1120	7.64	4.30	47.30			0.100			649.00	732.1	0.003	0.0003	0.0003	0.014
23	23	ROUGHER/SULPHIDE 90/10-23	3-Mar-10	L866349-2	Water	500	480	1100	7.66	5.80	47.50			0.100			630.00	721.5	0.005	0.0005	0.0005	0.014
24	24	ROUGHER/SULPHIDE 90/10-24	10-Mar-10	L868256-2	Water	500	455	1150	7.64	9.50	47.80			0.100			666.00	767.2	0.005	0.0005	0.0005	0.014
25	25	ROUGHER/SULPHIDE 90/10-25	17-Mar-10	L869907-2	Water	500	475	1060	7.76	10.70	43.60			0.100			609.00	654.8	0.005	0.0005	0.0005	0.015
26	26	ROUGHER/SULPHIDE 90/10-26	24-Mar-10	L871620-2	Water	500	455	1050	7.67	5.50	47.00			0.100			611.00	743.4	0.005	0.0005	0.0005	0.013
27	27	ROUGHER/SULPHIDE 90/10-27	31-Mar-10	L873457-2	Water	500	460	1000	7.76	4.30	45.80			0.100			573.00	629.3	0.005	0.0005	0.0005	0.014
28	28	ROUGHER/SULPHIDE 90/10-28	7-Apr-10	L874970-2	Water	500	455	1030	7.68	8.50	41.00			0.050			593.00	684.6	0.005	0.0005	0.0005	0.015
29	29	ROUGHER/SULPHIDE 90/10-29	14-Apr-10	L877116-2	Water	500	465	975	7.66	6.40	43.50			0.100			539.00	636.3	0.005	0.0005	0.0005	0.003
30	30	ROUGHER/SULPHIDE 90/10-30	21-Apr-10	L879131-2	Water	500	475	957	7.56	3.70	40.10			0.096			543.00	608.5	0.005	0.0005	0.0005	0.015
31	31	ROUGHER/SULPHIDE 90/10-31	28-Apr-10	L881234-2	Water	500	455	990	7.70	4.50	40.40			0.050			550.00	624.5	0.005	0.0005	0.0005	0.014
32	32	ROUGHER/SULPHIDE 90/10-32	5-May-10	L883239-2	Water	500	470	927	7.63	7.00	37.20			0.089			509.00	612.3	0.005	0.0005	0.0005	0.014
33	33	ROUGHER/SULPHIDE 90/10-33	12-May-10	L885549-2	Water	500	470	942	7.61	3.80	37.70			0.100			507.00	602.8	0.005	0.0005	0.0005	0.015
34	34	ROUGHER/SULPHIDE 90/10-34	19-May-10	L888187-2	Water	500	460	853	7.58	6.80	34.40			0.100			460.00	520.0	0.005	0.0005	0.0005	0.014
35	35	ROUGHER/SULPHIDE 90/10-35	26-May-10	L890291-2	Water	500	500	828	7.50	7.00	29.50			0.050			444.00	477.9	0.005	0.0005	0.0005	0.015
36	36	ROUGHER/SULPHIDE 90/10-36	2-Jun-10	L892986-2	Water	500	475	815	7.51	6.00	32.40			0.050			432.00	519.1	0.005	0.0005	0.0005	0.015
37	37	ROUGHER/SULPHIDE 90/10-37	9-Jun-10	L895622-2	Water	500	470	792	7.50	6.20	32.30			0.050			423.00	480.8	0.005	0.0005	0.0005	0.013

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

								Physical Tests					Anions		Dissolved Metals							
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In	Total Volume Out	Conductivity	pH	Acidity (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Nitrite (NO_2)	Sulfate (SO_4)	Hardness	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)
												mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
38	38	ROUGHER/SULPHIDE 90/10-38	16-Jun-10	L898149-2	Water	500	480	808	7.45	7.20	30.80			0.050			429.00	484.7	0.011	0.0005	0.0005	0.015
39	39	ROUGHER/SULPHIDE 90/10-39	23-Jun-10	L900775-2	Water	500	475	800	7.41	4.40	28.40			0.078			451.00	465.6	0.030	0.0005	0.0005	0.015
40	40	ROUGHER/SULPHIDE 90/10-40	30-Jun-10	L903235-2	Water	500	475	748	7.41	3.70	30.80			0.050			400.00	443.4	0.025	0.0005	0.0005	0.015
41	41	ROUGHER/SULPHIDE 90/10-41	7-Jul-10	L905416-2	Water	500	470	775	7.32	6.30	28.90			0.100			428.00	470.3	0.023	0.0005	0.0005	0.014
42	42	ROUGHER/SULPHIDE 90/10-42	14-Jul-10	L908290-2	Water	500	470	789	6.98	4.50	19.30			0.050			429.00	474.9	0.018	0.0005	0.0005	0.015
43	43	ROUGHER/SULPHIDE 90/10-43	21-Jul-10	L910997-2	Water	500	470	773	7.08	3.70	21.50			0.094			416.00	475.9	0.014	0.0005	0.0005	0.015
44	44	ROUGHER/SULPHIDE 90/10-44	28-Jul-10	L913689-2	Water	500	475	705	7.00	6.50	20.40			0.050			426.00	428.0	0.018	0.0005	0.0005	0.014
45	45	ROUGHER/SULPHIDE 90/10-45	4-Aug-10	L915978-2	Water	500	480	815	7.15	7.30	24.80			0.050			453.90	495.3	0.026	0.0005	0.0005	0.014
46	46	ROUGHER/SULPHIDE 90/10-46	11-Aug-10	L918804-2	Water	500	460	735	7.24	5.10	23.40			0.050			406.00	439.3	0.011	0.0005	0.0005	0.014
47	47	ROUGHER/SULPHIDE 90/10-47	18-Aug-10	L921398-2	Water	500	480	790	6.86	5.50	14.30			0.100			454.00	479.5	0.009	0.0005	0.0005	0.013
48	48	ROUGHER/SULPHIDE 90/10-48	25-Aug-10	L924204-2	Water	500	490	667	7.36	6.00	25.70			0.068			349.00	405.0	0.019	0.0005	0.0005	0.015
49	49	ROUGHER/SULPHIDE 90/10-49	1-Sep-10	L926708-2	Water	500	500	700	7.18	7.80	18.60			0.050			368.00	408.5	0.005	0.0005	0.0005	0.014
50	50	ROUGHER/SULPHIDE 90/10-50	8-Sep-10	L928948-2	Water	500	465	673	6.94	7.80	14.40			0.084			356.00	409.8	0.018	0.0005	0.0005	0.014
51	51	ROUGHER/SULPHIDE 90/10-51	15-Sep-10	L931580-2	Water	500	480	714	7.35	7.20	26.30			0.050			382.00	458.3	0.010	0.0005	0.0005	0.016
52	52	ROUGHER/SULPHIDE 90/10-52	22-Sep-10	L934339-2	Water	500	500	690	7.48	5.50	32.60			0.046			356.00	413.4	0.011	0.0001	0.0001	0.015
53	53	ROUGHER/SULPHIDE 90/10-53	29-Sep-10	L937156-2	Water	500	495	711	7.36	6.10	28.10			0.050			383.00	433.7	0.027	0.0001	0.0001	0.015
54	54	ROUGHER/SULPHIDE 90/10-54	6-Oct-10	L939969-2	Water	500	475	705	7.54	4.40	24.40			0.050			383.00	430.7	0.025	0.0001	0.0001	0.014
55	55	ROUGHER/SULPHIDE 90/10-55	13-Oct-10	L942326-2	Water	500	475	695	7.50	4.60	25.20			0.050			367.00	403.6	0.027	0.0001	0.0001	0.014
56	56	ROUGHER/SULPHIDE 90/10-56	20-Oct-10	L945041-2	Water	500	480	678	6.90	12.60	19.70			0.050			365.00	407.4	0.017	0.0001	0.0001	0.014
57	57	ROUGHER/SULPHIDE 90/10-57	27-Oct-10	L947663-2	Water	500	500	656	7.22	5.00	23.00			0.050			345.00	390.3	0.023	0.0001	0.0001	0.014
58	58	ROUGHER/SULPHIDE 90/10-58	3-Nov-10	L950195-2	Water	500	475	630	7.23	4.50	22.40			0.050			332.00	386.2	0.021	0.0001	0.0001	0.015
59	59	ROUGHER/SULPHIDE 90/10-59	10-Nov-10	L952749-2	Water	500	465	634	6.87	6.70	20.00			0.057			322.00	378.7	0.017	0.0001	0.0001	0.015
60	60	ROUGHER/SULPHIDE 90/10-60	17-Nov-10	L954872-2	Water	500	480	722	6.99	2.20	19.00			0.050			401.00	441.3	0.018	0.0001	0.0001	0.014
61	61	ROUGHER/SULPHIDE 90/10-61	24-Nov-10	L956852-2	Water	500	475	693	7.15	3.40	21.30			0.058			354.00	413.6	0.021	0.0001	0.0001	0.015
62	62	ROUGHER/SULPHIDE 90/10-62	1-Dec-10	L958928-2	Water	500	460	651	7.06	2.10	15.00			0.054			334.00	369.9	0.015	0.0001	0.0001	0.015
63	63	ROUGHER/SULPHIDE 90/10-63	8-Dec-10	L961066-2	Water	500	475	752	7.06	3.40	17.70			0.050			404.00	435.8	0.019	0.0001	0.0001	0.014
64	64	ROUGHER/SULPHIDE 90/10-64	15-Dec-10	L963010-2	Water	500	475	669	7.31	1.90	20.00			0.054			354.00	407.1	0.018	0.0001	0.0001	0.013
65	65	ROUGHER/SULPHIDE 90/10-65	22-Dec-10	L965051-2	Water	500	480	690	7.37	4.10	22.80			0.052			365.00	395.1	0.018	0.0001	0.0001	0.014
66	66	ROUGHER/SULPHIDE 90/10-66	29-Dec-10	L965956-2	Water	500	475	586	7.15	3.10	15.00			0.053			297.00	329.8	0.009	0.0001	0.0001	0.015
67	67	ROUGHER/SULPHIDE 90/10-67	5-Jan-11	L967289-2	Water	500	480	646	7.38	3.40	24.30			0.048			331.00	383.6	0.019	0.0001	0.0001	0.014
68	68	ROUGHER/SULPHIDE 90/10-68	12-Jan-11	L969116-2	Water	500	465	616	7.35	2.50	23.70			0.037			313.00	350.7	0.016	0.0001	0.0001	0.014
69	69	ROUGHER/SULPHIDE 90/10-69	19-Jan-11	L971359-2	Water	500	460	570	7.34	3.80	18.10			0.044			292.00	329.6	0.015	0.0001	0.0001	0.014
70	70	ROUGHER/SULPHIDE 90/10-70	26-Jan-11	L973154-2	Water	500	470	610	7.06	2.30	12.50			0.049			316.00	339.0	0.008	0.0001	0.0001	0.014
71	71	ROUGHER/SULPHIDE 90/10-71	2-Feb-11	L975057-2	Water	500	470	598	7.20	2.70	16.20			0.059			310.00	353.1	0.012	0.0001	0.0001	0.014
72	72	ROUGHER/SULPHIDE 90/10-72	9-Feb-11	L976968-2	Water	500	475	594	7.24	3.20	18.80			0.040			300.00	339.9	0.003	0.0001	0.0001	0.014
73	73	ROUGHER/SULPHIDE 90/10-73	16-Feb-11	L978743-2	Water	500	470	622	7.36	3.14	23.70			0.042			315.00	356.8	0.010	0.0001	0.0001	0.014
74	74	ROUGHER/SULPHIDE 90/10-74	23-Feb-11	L980552-2	Water	500	460	552	7.18	5.10	14.50			0.037			277.00	309.9	0.012	0.0001	0.0001	0.015
75	75	ROUGHER/SULPHIDE 90/10-75	2-Mar-11	L982652-2	Water	500	470	564	7.41	4.35	14.00			0.034			302.50	326.6	0.011	0.0001	0.0001	0.015
76	76	ROUGHER/SULPHIDE 90/10-76	9-Mar-11	L984578-2	Water	500	475	605	7.14	3.60	13.50			0.030			328.00	343.4	0.009	0.0001	0.0001	0.015
77	77	ROUGHER/SULPHIDE 90/10-77	16-Mar-11	L986512-2	Water	500	480	592	7.31	3.25	18.00			0.040			333.50	358.2	0.006	0.0001	0.0001	0.015
78	78	ROUGHER/SULPHIDE 90/10-78	23-Mar-11	L988507-2	Water	500	480	634	7.30	2.90	22.50			0.050			339.00	372.9	0.003	0.0001	0.0001	0.015
79	79	ROUGHER/SULPHIDE 90/10-79	30-Mar-11	L990432-2	Water	500	470	545	7.40	3.30	16.95			0.047			319.50	343.0	0.003	0.0001	0.0001	0.015
80	80	ROUGHER/SULPHIDE 90/10-80	6-Apr-11	L992447-2	Water	500	470	567	6.89	3.70	11.40			0.043			300.00	313.0	0.003	0.0001	0.0001	0.015
81	81	ROUGHER/SULPHIDE 90/10-81	13-Apr-11	L994936-2	Water	500	475	562	7.19	3.50	12.85			0.051			320.00	339.3	0.003	0.0001	0.0001	0.014
82	82	ROUGHER/SULPHIDE 90/10-82	20-Apr-11	L997033-2	Water	500	480	618	7.16	3.30	14.30			0.059			340.00	365.6	0.003	0.0001	0.0001	0.014
83	83	ROUGHER/SULPHIDE 90/10-83	27-Apr-11	L998879-2	Water	500	455	531	7.24	3.25	14.00			0.053			301.00	329.6	0.006	0.0001	0.0001	0.015
84	84	ROUGHER/SULPHIDE 90/10-84	4-May-11	L1001259-2	Water	500	475	523	7.13	3.20	13.70			0.046			262.00	293.6	0.010	0.0001	0.0001	0.016
85	85	ROUGHER/SULPHIDE 90/10-85	11-May-11	L1003822-2	Water	500	470	567	7.27	3.55	13.10			0.060			264.00	286.4	0.009	0.0001	0.0001	0.016
86	86	ROUGHER/SULPHIDE 90/10-86	18-May-11	L1006603-2	Water	500	470	505	7.27	3.90	12.50			0.074			266.00	279.3	0.008	0.0001	0.0001	0.016
87	87	ROUGHER/SULPHIDE 90/10-87	25-May-11	L1008953-2	Water	500	495	498	7.33	2.55	13.60			0.069			264.00	278.2	0.012	0.0001	0.0001	0.016
88	88	ROUGHER/SULPHIDE 90/10-88	1-Jun-11	L1008953-3	Water	500	500	510	7.33	1.20	14.70			0.063			262.00	277.1	0.016	0.0001	0.0001	0.016
89	89	ROUGHER/SULPHIDE 90/10-89	8-Jun-11	L1008953-4	Water	500	500	520	7.39	2.35	14.35			0.072			272.00	285.1	0.011	0.0001	0.0001	0.016
90	90	ROUGHER/SULPHIDE 90/10-90	15-Jun-11	L1008953-5	Water	500	480	515	7.36	3.50	14.00			0.080			282.00	293.2	0.006	0.0001	0.0001	0.016
91	91	ROUGHER/SULPHIDE 90/10-91	22-Jun-11	L1008953-6	Water	500	500	484	7.16	3.90	11.30			0.084			275.50	281.2	0.004	0.0001	0.0001	0.016
92	92	ROUGHER/SULPHIDE 90/10-92	29-Jun-11	L1008953-7	Water	500	500	494	6.86	4.30	8.60			0.088			269.00	269.2	0.003	0.0001	0.0001	0.016
93	93	ROUGHER/SULPHIDE 90/10-93	6-Jul-11	L1008953-8	Water	500	495	501	6.95	3.95	6.45			0.080			270.00	269.7	0.020	0.0001	0.0001	0.016
94	94	ROUGHER/SULPHIDE 90/10-94	13-Jul-11	L1008953-9	Water	500	490	493	6.18	3.60	4.30			0.071			271.00	270.3	0.038	0.0001	0.0001	0.016
95	95	ROUGHER/SULPHIDE 90/10-95	20-Jul-11	L1008953-10	Water	500	500	557	4.48	16.70	2.65			0.085			276.00	265.6	0.574	0.0001	0.0001	0.016

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

								Physical Tests					Anions		Dissolved Metals							
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In	Total Volume Out	Conductivity	pH	Acidity (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Nitrite (NO_2)	Sulfate (SO_4)	Hardness	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)
												mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
96	96	ROUGHER/SULPHIDE 90/10-96	27-Jul-11	L1008953-11	Water	500	480	569	3.81	29.80	1.00			0.099			281.00	260.9	1.110	0.0001	0.0002	0.017
97	97	ROUGHER/SULPHIDE 90/10-97	3-Aug-11	L1008953-12	Water	500	490	667	3.59	45.45	1.00			0.110			307.50	268.6	1.300	0.0001	0.0003	0.016
98	98	ROUGHER/SULPHIDE 90/10-98	10-Aug-11	L1008953-13	Water	500	465	758	3.31	61.10	1.00			0.120			334.00	276.4	1.490	0.0001	0.0004	0.016
99	99	ROUGHER/SULPHIDE 90/10-99	17-Aug-11	L1008953-14	Water	500	465	874	3.22	67.20	1.00			0.110			349.00	281.3	1.465	0.0001	0.0004	0.016
100	100	ROUGHER/SULPHIDE 90/10-100	24-Aug-11	L1008953-15	Water	500	470	843	3.16	73.30	1.00			0.100			364.00	286.2	1.440	0.0001	0.0004	0.016
101	101	ROUGHER/SULPHIDE 90/10-101	31-Aug-11	L1008953-16	Water	500	460	956	3.07	88.15	1.00			0.100			383.50	295.7	1.385	0.0001	0.0004	0.016
102	102	ROUGHER/SULPHIDE 90/10-102	7-Sep-11	L1008953-17	Water	500	460	934	3.08	103.00	1.00			0.100			403.00	305.2	1.330	0.0001	0.0004	0.016
103	103	ROUGHER/SULPHIDE 90/10-103	14-Sep-11	L1008953-18	Water	500	500	933	3.06	98.05	1.00			0.100			395.00	291.5	1.450	0.0001	0.0004	0.016
104	104	ROUGHER/SULPHIDE 90/10-104	21-Sep-11	L1008953-19	Water	500	450	920	3.06	93.10	1.00			0.100			387.00	277.8	1.570	0.0001	0.0005	0.016
105	105	ROUGHER/SULPHIDE 90/10-105	28-Sep-11	L1008953-20	Water	500	445	1050	2.97	114.55	1.00			0.100			415.00	289.1	1.750	0.0001	0.0005	0.015
106	106	ROUGHER/SULPHIDE 90/10-106	5-Oct-11	L1008953-21	Water	500	480	1080	2.93	136.00	1.00			0.100			443.00	300.5	1.930	0.0001	0.0006	0.013
107	107	ROUGHER/SULPHIDE 90/10-107	12-Oct-11	L1008953-22	Water	500	470	1110	2.97	124.50	1.00			0.100			431.50	302.3	1.760	0.0001	0.0006	0.014
108	108	ROUGHER/SULPHIDE 90/10-108	19-Oct-11	L1008953-23	Water	500	455	1000	3.01	113.00	1.00			0.100			420.00	304.1	1.590	0.0001	0.0006	0.015
109	109	ROUGHER/SULPHIDE 90/10-109	26-Oct-11	L1008953-24	Water	500	475	954	2.98	105.90	1.00			0.100			429.50	301.0	1.500	0.0001	0.0005	0.015
110	110	ROUGHER/SULPHIDE 90/10-110	2-Nov-11	L1008953-25	Water	500	465	961	2.99	98.80	1.00			0.100			439.00	297.9	1.410	0.0001	0.0005	0.016
111	111	ROUGHER/SULPHIDE 90/10-111	9-Nov-11	L1008953-26	Water	500	475	942	2.96	103.90	1.00			0.100			431.00	307.7	1.485	0.0001	0.0005	0.015
112	112	ROUGHER/SULPHIDE 90/10-112	16-Nov-11	L1008953-27	Water	500	475	965	3.01	109.00	1.00			0.100			423.00	317.5	1.560	0.0001	0.0004	0.015
113	113	ROUGHER/SULPHIDE 90/10-113	23-Nov-11	L1008953-28	Water	500	435	1040	2.90	109.50	1.00			0.100			417.00	311.8	1.485	0.0001	0.0004	0.015
114	114	ROUGHER/SULPHIDE 90/10-114	30-Nov-11	L1008953-29	Water	500	500	953	3.04	110.00	1.00			0.100			411.00	306.1	1.410	0.0001	0.0004	0.014
115	115	ROUGHER/SULPHIDE 90/10-115	7-Dec-11	L1008953-30	Water	500	450	1070	2.91	109.00	1.00			0.100			408.00	297.8	1.465	0.0001	0.0005	0.014
116	116	ROUGHER/SULPHIDE 90/10-116	14-Dec-11	L1008953-31	Water	500	450	1000	2.98	108.00	1.00			0.100			405.00	289.5	1.520	0.0001	0.0005	0.014
117	117	ROUGHER/SULPHIDE 90/10-117	21-Dec-11	L1008953-32	Water	500	470	1250	2.92	123.50	1.00			0.100			413.50	284.3	1.695	0.0001	0.0006	0.014
118	118	ROUGHER/SULPHIDE 90/10-118	28-Dec-11	L1008953-33	Water	500	440	1120	3.03	139.00	1.00			0.100			422.00	279.2	1.870	0.0001	0.0006	0.015
119	119	ROUGHER/SULPHIDE 90/10-119	4-Jan-12	L1008953-34	Water	500	445	1400	2.88	154.50	1.00			0.100			430.50	274.1	2.045	0.0001	0.0006	0.015
120	120	ROUGHER/SULPHIDE 90/10-120	11-Jan-12	L1008953-35	Water	500	450	1350	2.83	170.00	1.00			0.100			439.00	269.0	2.220	0.0001	0.0007	0.016
121	121	ROUGHER/SULPHIDE 90/10-121	18-Jan-12	L1008953-36	Water	500	440	1500	2.75	180.00	1.00			0.100			436.50	263.3	2.270	0.0001	0.0007	0.016
122	122	ROUGHER/SULPHIDE 90/10-122	25-Jan-12	L1008953-37	Water	500	460	1230	2.94	190.00	1.00			0.100			434.00	257.7	2.320	0.0001	0.0008	0.016
123	123	ROUGHER/SULPHIDE 90/10-123	1-Feb-12	L1008953-38	Water	500	425	1600	2.79	200.00	1.00			0.100			431.50	252.0	2.370	0.0001	0.0008	0.016
124	124	ROUGHER/SULPHIDE 90/10-124	8-Feb-12	L1008953-39	Water	500	425	1410	2.79	210.00	1.00			0.100			429.00	246.4	2.420	0.0001	0.0009	0.016
125	125	ROUGHER/SULPHIDE 90/10-125	15-Feb-12	L1008953-40	Water	500	410	1100	2.95	198.50	1.00			0.228			406.50	227.9	2.470	0.0001	0.0008	0.016
126	126	ROUGHER/SULPHIDE 90/10-126	22-Feb-12	L1008953-41	Water	500	475	1180	2.88	187.00	1.00			0.355			384.00	209.4	2.520	0.0001	0.0008	0.016
127	127	ROUGHER/SULPHIDE 90/10-127	29-Feb-12	L1008953-42	Water	500	490	1060	2.93	175.50	1.00			0.483			361.50	190.9	2.570	0.0001	0.0007	0.016
128	128	ROUGHER/SULPHIDE 90/10-128	7-Mar-12	L1008953-43	Water	500	450	1100	2.92	164.00	1.00			0.610			339.00	172.4	2.620	0.0001	0.0007	0.016
129	129	ROUGHER/SULPHIDE 90/10-129	14-Mar-12	L1008953-44	Water	500	445	1170	2.86	208.75	1.00			0.913			360.50	156.5	5.115	0.0002	0.0008	0.016
130	130	ROUGHER/SULPHIDE 90/10-130	21-Mar-12	L1008953-45	Water	500	480	1240	2.80	253.50	1.00			1.215			382.00	140.6	7.610	0.0003	0.0009	0.016
131	131	ROUGHER/SULPHIDE 90/10-131	28-Mar-12	L1008953-46	Water	500	0460	1110	2.90	298.25	1.00			1.518			403.50	124.7	10.105	0.0004	0.0010	0.015
132	132	ROUGHER/SULPHIDE 90/10-132	4-Apr-12	L1008953-47	Water	500	450	1300	2.80	343.00	1.00			1.820			425.00	108.8	12.600	0.0005	0.0011	0.015
133	133	ROUGHER/SULPHIDE 90/10-133	13-Apr-12	L1008953-48	Water	500	450	1590	2.67	372.25	1.00			1.873			456.50	107.5	14.800	0.0004	0.0014	0.015
134	134	ROUGHER/SULPHIDE 90/10-134	20-Apr-12	L1008953-49	Water	500	405	1700	2.65	401.50	1.00			1.925			488.00	106.3	17.000	0.0004	0.0017	0.015
135	135	ROUGHER/SULPHIDE 90/10-135	27-Apr-12	L1008953-50	Water	500	470	1660	2.65	430.75	1.00			1.978			519.50	105.1	19.200	0.0003	0.0021	0.014
136	136	ROUGHER/SULPHIDE 90/10-136	4-May-12	L1008953-51	Water	500	495	1590	2.68	460.00	1.00			2.030			551.00	103.9	21.400	0.0003	0.0024	0.014
137	137	ROUGHER/SULPHIDE 90/10-137	11-May-12	L1008953-52	Water	500	450	1680	2.63	509.25	1.00			1.895			601.25	97.4	23.000	0.0002	0.0026	0.014
138	138	ROUGHER/SULPHIDE 90/10-138	18-May-12	L1008953-53	Water	500	475	1810	2.62	558.50	1.00			1.760			651.50	91.0	24.600	0.0002	0.0027	0.013
139	139	ROUGHER/SULPHIDE 90/10-139	25-May-12	L1008953-54	Water	500	425	1900	2.60	607.75	1.00			1.625			701.75	84.5	26.200	0.0001	0.0029	0.013
140	140	ROUGHER/SULPHIDE 90/10-140	1-Jun-12	L1008953-55	Water	500	500	1790	2.62	657.00	1.00			1.490			752.00	78.0	27.800	0.0001	0.0031	0.012
141	141	ROUGHER/SULPHIDE 90/10-141	8-Jun-12	L1008953-56	Water	500	485	2090	2.60	885.25	1.00			1.323			959.00	82.8	29.625	0.0001	0.0033	0.012
142	142	ROUGHER/SULPHIDE 90/10-142	15-Jun-12	L1008953-57	Water	500	475	2410	2.48	1113.50	1.00			1.155			1166.00	87.7	31.450	0.0001	0.0036	0.011
143	143	ROUGHER/SULPHIDE 90/10-143	22-Jun-12	L1008953-58	Water	500	470	2510	2.47	1341.75	1.00			0.988			1373.00	92.5	33.275	0.0001	0.0038	0.011
144	144	ROUGHER/SULPHIDE 90/10-144	29-Jun-12	L1008953-59	Water	500	475	2720	2.44	1570.00	1.00			0.820			1580.00	97.3	35.100	0.0001	0.0040	0.010
145	145	ROUGHER/SULPHIDE 90/10-145	6-Jul-12	L1008953-60	Water	500	470	2550	2.43	1567.50	1.00			0.863			1557.50	95.9	32.825	0.0001	0.0036	0.010
146	146	ROUGHER/SULPHIDE 90/10-146	13-Jul-12	L1008953-61	Water	500	450	2830	2.36	1565.00	1.00			0.905			1535.00	94.4	30.550	0.0001	0.0032	0.011
147	147	ROUGHER/SULPHIDE 90/10-147	20-Jul-12	L1008953-62	Water	500	450	2810	2.40	1562.50	1.00			0.948			1512.50	93.0	28.275	0.0001	0.0028	0.011
148	148	ROUGHER/SULPHIDE 90/10-148	27-Jul-12	L1008953-63	Water	500	475	2630	2.44	1560.00	1.00		5.000	0.990			1490.00	91.6	26.000	0.0001	0.0024	0.011
149	149	ROUGHER/SULPHIDE 90/10-149	3-Aug-12	L1008953-64	Water	500	465	2800	2.43	1550.00	1.00		5.000	1.063			1482.50	98.1	26.300	0.0001	0.0024	0.011
150	150	ROUGHER/SULPHIDE 90/10-150	10-Aug-12	L1008953-65	Water	500	500	2880	2.41	1540.00	1.00		5.000	1.135			1475.00	104.7	26.600	0.0001	0.0024	0.011
151	151	ROUGHER/SULPHIDE 90/10-151	17-Aug-12	L1008953-66	Water	500	425	2850	2.38	1530.00	1.00		5.000	1.208			1467.50	111.2	26.900	0.0001	0.0024	0.011
152	152	ROUGHER/SULPHIDE 90/10-152	24-Aug-12	L1008953-67	Water	500	435	2730	2.45	1520.00	1.00		5.000	1.280			1460.00	117.8	27.200	0.0001	0.0024	0.010
153	153	ROUGHER/SULPHIDE 90/10-153	31-Aug-12	L1008953-68	Water	500	475	2530	2.48	1447.50	1.00		5.000	1.398			1420.00	118.9	27.000	0.0001	0.0024	0.011

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

								Physical Tests					Anions		Dissolved Metals							
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In	Total Volume Out	Conductivity	pH	Acidity (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Bromide (Br) mg/L	Chloride (Cl) mg/L	Fluoride (F) mg/L	Nitrate (NO_3) mg/L	Nitrite (NO_2) mg/L	Sulfate (SO_4) mg/L	Hardness mg/L	Aluminum (Al) mg/L	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L
154	154	ROUGHER/SULPHIDE 90/10-154	7-Sep-12	L1008953-69	Water	500	500	2570	2.44	1375.00	1.00		5.000	1.515			1380.00	120.0	26.800	0.0001	0.0023	0.011
155	155	ROUGHER/SULPHIDE 90/10-155	14-Sep-12	L1008953-70	Water	500	460	2420	2.48	1302.50	1.00		5.000	1.633			1340.00	121.1	26.600	0.0001	0.0023	0.011
156	156	ROUGHER/SULPHIDE 90/10-156	21-Sep-12	L1008953-71	Water	500	485	2330	2.40	1230.00	1.00	0.500	5.000	1.750	0.050	0.010	1300.00	122.2	26.400	0.0001	0.0023	0.011
157	157	ROUGHER/SULPHIDE 90/10-157	28-Sep-12	L1008953-72	Water	500	480	2480	2.41	1150.00	1.00	0.500	5.000	1.725	0.050	0.010	1223.00	118.8	24.900	0.0001	0.0021	0.011
158	158	ROUGHER/SULPHIDE 90/10-158	5-Oct-12	L1008953-73	Water	500	460	2050	2.51	1070.00	1.00	0.500	5.000	1.700	0.050	0.010	1146.00	115.5	23.400	0.0001	0.0020	0.011
159	159	ROUGHER/SULPHIDE 90/10-159	12-Oct-12	L1008953-74	Water	500	475	2470	2.44	990.00	1.00	0.500	5.000	1.675	0.050	0.010	1069.00	112.1	21.900	0.0001	0.0019	0.012
160	160	ROUGHER/SULPHIDE 90/10-160	19-Oct-12	L1008953-75	Water	500	480	2030	2.56	910.00	1.00	0.500	5.000	1.650	0.050	0.010	992.00	108.7	20.400	0.0001	0.0017	0.012
Average									2.86	253.50	1.00	0.500	5.000	1.553	0.050	0.010	382.00	140.6	7.610	0.0003	0.0009	0.016
Rougher=Fine																						
0	0	ROUGHER FINE-0	23-Sep-09	L822242-3	Water	500	510	2090	7.67	3.31	34.56			0.359			1420.06	1390.3	0.007	0.0005	0.0005	0.027
1	1	ROUGHER FINE-1	30-Sep-09	L825179-3	Water	500	480	2120	7.70	4.51	36.26			0.315			1460.06	1472.7	0.007	0.0005	0.0005	0.021
2	2	ROUGHER FINE-2	7-Oct-09	L827682-3	Water	500	460	2150	7.66	4.41	37.46			0.319			1450.06	1518.2	0.007	0.0005	0.0005	0.020
3	3	ROUGHER FINE-3	14-Oct-09	L829834-3	Water	500	470	2100	7.68	4.81	36.26			0.344			1450.06	1503.6	0.007	0.0005	0.0005	0.019
4	4	ROUGHER FINE-4	21-Oct-09	L832078-3	Water	500	450	2040	7.72	4.21	35.76			0.100			1410.06	1483.0	0.007	0.0005	0.0005	0.019
5	5	ROUGHER FINE-5	28-Oct-09	L834821-3	Water	500	475	2050	7.68	5.41	36.06			0.200			1420.06	1519.9	0.007	0.0005	0.0005	0.019
6	6	ROUGHER FINE-6	4-Nov-09	L836965-3	Water	500	460	1960	7.67	2.81	36.86			0.200			1310.06	1453.3	0.007	0.0005	0.0005	0.018
7	7	ROUGHER FINE-7	12-Nov-09	L839398-3	Water	500	480	1900	7.74	6.01	34.56			0.100			1300.06	1398.1	0.007	0.0005	0.0005	0.020
8	8	ROUGHER FINE-8	18-Nov-09	L841197-3	Water	500	460	1900	7.69	4.81	37.46			0.200			1300.06	1299.4	0.007	0.0005	0.0024	0.018
9	9	ROUGHER FINE-9	25-Nov-09	L843172-3	Water	500	455	1790	7.74	4.41	36.66			0.100			1220.06	1294.5	0.007	0.0005	0.0005	0.019
10	10	ROUGHER FINE-10	2-Dec-09	L845467-3	Water	500	450	1700	7.77	4.01	37.56			0.200			1140.06	1200.3	0.007	0.0005	0.0005	0.020
11	11	ROUGHER FINE-11	9-Dec-09	L847223-3	Water	500	450	1780	7.78	4.31	38.16			0.200			1210.06	1270.5	0.007	0.0005	0.0005	0.018
12	12	ROUGHER FINE-12	16-Dec-09	L848945-3	Water	500	455	1600	7.79	2.81	37.16			0.100			1050.06	1125.6	0.014	0.0005	0.0005	0.019
13	13	ROUGHER FINE-13	23-Dec-09	L850709-3	Water	500	460	1530	7.77	6.31	37.26			0.100			939.06	1091.7	0.007	0.0005	0.0005	0.019
14	14	ROUGHER FINE-14	30-Dec-09	L851579-3	Water	500	460	1400	7.75	3.81	36.46			0.240			870.06	978.3	0.007	0.0005	0.0005	0.020
15	15	ROUGHER FINE-15	6-Jan-10	L852460-3	Water	500	460	1290	7.73	3.11	36.86			0.100			775.06	901.4	0.007	0.0005	0.0005	0.021
16	16	ROUGHER FINE-16	13-Jan-10	L854098-3	Water	500	450	1110	7.83	4.71	36.56			0.100			696.06	706.3	0.007	0.0005	0.0005	0.022
17	17	ROUGHER FINE-17	20-Jan-10	L855789-3	Water	500	475	1010	7.83	4.01	37.26			0.210			567.06	647.2	0.007	0.0005	0.0005	0.022
18	18	ROUGHER FINE-18	27-Jan-10	L857371-3	Water	500	470	880	7.81	5.11	34.66			0.233			472.06	571.1	0.007	0.0005	0.0005	0.024
19	19	ROUGHER FINE-19	3-Feb-10	L859096-3	Water	500	450	702	7.83	5.61	38.56			0.160			354.06	414.5	0.007	0.0005	0.0005	0.027
20	20	ROUGHER FINE-20	10-Feb-10	L861122-3	Water	500	460	630	7.89	7.31	41.66			0.258			300.06	364.8	0.007	0.0005	0.0005	0.028
21	21	ROUGHER FINE-21	17-Feb-10	L862558-3	Water	500	460	481	7.91	4.41	45.26			0.242			206.06	263.3	0.014	0.0005	0.0005	0.038
22	22	ROUGHER FINE-22	24-Feb-10	L864540-3	Water	500	460	301	8.06	2.41	57.96			0.262			101.06	162.8	0.017	0.0004	0.0002	0.049
23	23	ROUGHER FINE-23	3-Mar-10	L866349-3	Water	500	500	267	8.02	2.91	49.96			0.225			84.06	140.6	0.017	0.0005	0.0005	0.050
24	24	ROUGHER FINE-24	10-Mar-10	L868256-3	Water	500	465	254	8.00	4.51	55.86			0.239			74.26	135.3	0.019	0.0005	0.0005	0.058
25	25	ROUGHER FINE-25	17-Mar-10	L869907-3	Water	500	460	229	8.09	4.51	57.36			0.160			59.16	115.9	0.019	0.0005	0.0005	0.077
26	26	ROUGHER FINE-26	24-Mar-10	L871620-3	Water	500	455	209	8.09	2.91	64.96			0.216			50.16	119.8	0.025	0.0005	0.0005	0.093
27	27	ROUGHER FINE-27	31-Mar-10	L873457-3	Water	500	450	175	8.16	2.11	66.16			0.182			31.46	91.0	0.023	0.0005	0.0002	0.101
28	28	ROUGHER FINE-28	7-Apr-10	L874970-3	Water	500	460	171	8.11	3.71	61.26			0.181			30.26	91.9	0.023	0.0005	0.0005	0.120
29	29	ROUGHER FINE-29	14-Apr-10	L877116-3	Water	500	475	156	8.17	3.01	58.86			0.165			23.86	82.4	0.025	0.0005	0.0005	0.166
30	30	ROUGHER FINE-30	21-Apr-10	L879131-3	Water	500	440	141	8.20	1.61	60.56			0.145			18.16	71.6	0.038	0.0005	0.0005	0.196
31	31	ROUGHER FINE-31	28-Apr-10	L881234-3	Water	500	490	138	8.21	2.11	55.66			0.127			15.76	67.5	0.039	0.0005	0.0005	0.190
32	32	ROUGHER FINE-32	5-May-10	L883239-3	Water	500	485	145	8.16	2.81	59.36			0.130			17.56	73.7	0.028	0.0005	0.0005	0.180
33	33	ROUGHER FINE-33	12-May-10	L885549-3	Water	500	455	139	8.17	1.51	62.06			0.115			14.36	69.2	0.054	0.0005	0.0005	0.161
34	34	ROUGHER FINE-34	19-May-10	L888187-3	Water	500	465	124	8.17	5.01	59.36			0.092			10.56	61.5	0.036	0.0005	0.0005	0.250
35	35	ROUGHER FINE-35	26-May-10	L890291-3	Water	500	480	128	8.15	2.41	60.56			0.092			11.06	63.6	0.042	0.0005	0.0005	0.252
36	36	ROUGHER FINE-36	2-Jun-10	L892986-3	Water	500	485	119	8.16	2.41	54.76			0.086			9.41	60.4	0.035	0.0005	0.0005	0.282
37	37	ROUGHER FINE-37	9-Jun-10	L895622-3	Water	500	475	118	8.13	3.31	62.76			0.073			9.14	60.3	0.029	0.0005	0.0005	0.278
38	38	ROUGHER FINE-38	16-Jun-10	L898149-3	Water	500	455	122	8.16	3.11	54.36			0.076			8.94	59.7	0.038	0.0005	0.0005	0.276
39	39	ROUGHER FINE-39	23-Jun-10	L900775-3	Water	500	490	125	8.13	2.31	55.16			0.080			9.27	62.2	0.031	0.0005	0.0005	0.246
40	40	ROUGHER FINE-40	30-Jun-10	L903235-3	Water	500	500	119	8.13	1.91	57.16			0.078			8.99	58.9	0.028	0.0005	0.0005	0.263
41	41	ROUGHER FINE-41	7-Jul-10	L905416-3	Water	500	480	113	8.08	2.71	52.16			0.065			8.19	57.7	0.029	0.0005	0.0005	0.245
42	42	ROUGHER FINE-42	14-Jul-10	L908290-3	Water	500	0465	122	8.11	2.21	54.96			0.040			7.60	62.7	0.028	0.0005	0.0005	0.295
43	43	ROUGHER FINE-43	21-Jul-10	L910997-3	Water	500	480	123	8.07	1.91	58.06			0.082			9.66	58.1	0.025	0.0005	0.0005	0.237
44	44	ROUGHER FINE-44	28-Jul-10	L913689-3	Water	500	480	114	8.08	3.81	54.76			0.052			8.42	56.7	0.031	0.0005	0.0005	0.304
45	45	ROUGHER FINE-45	4-Aug-10	L915978-3	Water	500	475	121	8.10	2.81	61.06			0.042			6.93	60.3	0.027	0.0005	0.0005	0.318
46	46	ROUGHER FINE-46	11-Aug-10	L918804-3	Water	500	475	109	8.06	2.81	51.66			0.036			6.70	54.9	0.027	0.0005	0.0005	0.295
47	47	ROUGHER FINE-47	18-Aug-10	L921398-3	Water	500	475	122	8.09	3.61	55.46			0.021			7.59	61.5	0.025	0.0005	0.0005	0.276
48	48	ROUGHER FINE-48	25-Aug-10	L924204-3	Water	500	500	108	8.03	2.71	54.06			0.029			6.34	54.7	0.028	0.0005	0.0005	0.318

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

								Physical Tests					Anions		Dissolved Metals							
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In	Total Volume Out	Conductivity	pH	Acidity (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Nitrite (NO_2)	Sulfate (SO_4)	Hardness	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)
												mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
49	49	ROUGHER FINE-49	1-Sep-10	L926708-3	Water	500	460	118	8.14	3.51	58.16			0.043			7.04	58.2	0.022	0.0005	0.0005	0.280
50	50	ROUGHER FINE-50	8-Sep-10	L928948-3	Water	500	500	111	8.21	5.01	57.06			0.030			6.26	53.7	0.051	0.0005	0.0005	0.304
51	51	ROUGHER FINE-51	15-Sep-10	L931580-3	Water	500	490	119	8.12	3.81	59.46			0.021			5.55	60.6	0.026	0.0005	0.0005	0.419
52	52	ROUGHER FINE-52	22-Sep-10	L934339-3	Water	500	460	109	8.02	3.31	56.36			0.022			5.75	55.7	0.027	0.0004	0.0002	0.419
53	53	ROUGHER FINE-53	29-Sep-10	L937156-3	Water	500	475	111	8.07	3.31	50.36			0.031			6.29	56.0	0.028	0.0004	0.0002	0.370
54	54	ROUGHER FINE-54	6-Oct-10	L939969-3	Water	500	470	111	8.09	1.91	53.86			0.021			5.41	57.4	0.031	0.0004	0.0002	0.406
55	55	ROUGHER FINE-55	13-Oct-10	L942326-3	Water	500	470	107	8.08	2.31	56.36			0.010			4.91	55.3	0.026	0.0004	0.0002	0.397
56	56	ROUGHER FINE-56	20-Oct-10	L945041-3	Water	500	480	110	8.01	3.91	55.46			0.010			4.87	59.2	0.029	0.0004	0.0002	0.471
57	57	ROUGHER FINE-57	27-Oct-10	L947663-3	Water	500	475	112	8.14	2.81	58.06			0.010			4.68	58.5	0.026	0.0004	0.0001	0.488
58	58	ROUGHER FINE-58	3-Nov-10	L950195-3	Water	500	495	104	8.05	2.51	54.46			0.010			4.65	55.0	0.031	0.0004	0.0001	0.451
59	59	ROUGHER FINE-59	10-Nov-10	L952749-3	Water	500	470	108	7.98	3.01	54.96			0.010			4.74	57.3	0.040	0.0004	0.0001	0.482
60	60	ROUGHER FINE-60	17-Nov-10	L954872-3	Water	500	440	113	8.10	1.21	59.76			0.010			4.68	59.1	0.055	0.0003	0.0002	0.518
61	61	ROUGHER FINE-61	24-Nov-10	L956852-3	Water	500	500	121	8.07	2.01	63.56			0.029			5.84	60.8	0.024	0.0004	0.0001	0.424
62	62	ROUGHER FINE-62	1-Dec-10	L958928-3	Water	500	470	108	8.08	1.71	52.86			0.010			4.64	54.9	0.030	0.0004	0.0002	0.474
63	63	ROUGHER FINE-63	8-Dec-10	L961066-3	Water	500	495	114	8.05	1.91	53.36			0.010			5.82	57.0	0.026	0.0004	0.0002	0.459
64	64	ROUGHER FINE-64	15-Dec-10	L963010-3	Water	500	470	109	8.07	3.41	53.96			0.010			5.01	55.9	0.028	0.0004	0.0002	0.443
65	65	ROUGHER FINE-65	22-Dec-10	L965051-3	Water	500	480	112	8.11	3.01	57.76			0.010			4.77	56.5	0.037	0.0004	0.0001	0.491
66	66	ROUGHER FINE-66	29-Dec-10	L965956-3	Water	500	475	105	8.06	1.71	49.96			0.010			4.55	52.3	0.029	0.0004	0.0002	0.430
67	67	ROUGHER FINE-67	5-Jan-11	L967289-3	Water	500	470	105	8.11	2.21	48.76			0.010			4.27	53.4	0.032	0.0004	0.0007	0.504
68	68	ROUGHER FINE-68	12-Jan-11	L969116-3	Water	500	475	106	8.13	1.11	58.96			0.010			4.22	53.6	0.027	0.0003	0.0001	0.479
69	69	ROUGHER FINE-69	19-Jan-11	L971359-3	Water	500	465	102	8.14	2.01	51.96			0.010			3.80	51.8	0.032	0.0003	0.0001	0.445
70	70	ROUGHER FINE-70	26-Jan-11	L973154-3	Water	500	465	107	8.05	1.61	51.86			0.010			3.99	54.6	0.032	0.0003	0.0001	0.470
71	71	ROUGHER FINE-71	2-Feb-11	L975057-3	Water	500	475	105	8.04	1.21	56.46			0.010			4.54	53.7	0.030	0.0003	0.0002	0.482
72	72	ROUGHER FINE-72	9-Feb-11	L976968-3	Water	500	475	103	8.01	3.81	47.86			0.010			4.25	54.3	0.038	0.0003	0.0002	0.563
73	73	ROUGHER FINE-73	16-Feb-11	L978743-3	Water	500	470	102	8.02	2.41	49.86			0.010			3.83	50.6	0.031	0.0003	0.0002	0.480
74	74	ROUGHER FINE-74	23-Feb-11	L980552-3	Water	500	460	109	8.19	1.71	63.06			0.010			4.06	54.4	0.036	0.0003	0.0002	0.542
Average									8.06	2.15	53.82	#DIV/0!	#DIV/0!	0.010	#DIV/0!	#DIV/0!	4.14	53.5	0.033	0.0003	0.0002	0.507
Rougher-Coarse																						
0	0	ROUGHER COARSE-0	23-Sep-09	L822242-4	Water	500	465	2220	7.66	3.61	37.57			0.398			1530.05	1517.9	0.008	0.0005	0.0005	0.024
1	1	ROUGHER COARSE-1	30-Sep-09	L825179-4	Water	500	460	2130	7.67	6.31	34.57			0.305			1460.05	1492.6	0.064	0.0005	0.0005	0.019
2	2	ROUGHER COARSE-2	7-Oct-09	L827682-4	Water	500	470	1500	7.68	4.01	37.97			0.268			896.05	988.2	0.008	0.0005	0.0005	0.021
3	3	ROUGHER COARSE-3	14-Oct-09	L829834-4	Water	500	465	1250	7.69	3.91	34.17			0.276			706.05	811.7	0.013	0.0005	0.0005	0.021
4	4	ROUGHER COARSE-4	21-Oct-09	L832078-4	Water	500	490	1210	7.74	3.31	34.87			0.100			726.05	815.7	0.021	0.0005	0.0005	0.021
5	5	ROUGHER COARSE-5	28-Oct-09	L834821-4	Water	500	460	1140	7.75	4.81	37.77			0.100			660.05	737.2	0.019	0.0005	0.0005	0.021
6	6	ROUGHER COARSE-6	4-Nov-09	L836965-4	Water	500	470	1090	7.71	2.11	34.97			0.200			622.05	722.4	0.008	0.0012	0.0005	0.020
7	7	ROUGHER COARSE-7	12-Nov-09	L839398-4	Water	500	470	1010	7.77	4.41	33.37			0.100			575.05	638.2	0.014	0.0015	0.0005	0.022
8	8	ROUGHER COARSE-8	18-Nov-09	L841197-4	Water	500	455	931	7.74	3.71	33.57			0.100			511.05	551.4	0.008	0.0021	0.0023	0.021
9	9	ROUGHER COARSE-9	25-Nov-09	L843172-4	Water	500	475	860	7.75	3.61	38.37			0.050			455.05	533.9	0.008	0.0023	0.0005	0.021
10	10	ROUGHER COARSE-10	2-Dec-09	L845467-4	Water	500	475	820	7.82	3.01	37.17			0.100			436.05	483.2	0.013	0.0027	0.0005	0.023
11	11	ROUGHER COARSE-11	9-Dec-09	L847223-4	Water	500	450	685	7.80	2.41	34.17			0.105			337.05	398.5	0.008	0.0026	0.0005	0.022
12	12	ROUGHER COARSE-12	16-Dec-09	L848945-4	Water	500	465	620	7.84	2.01	35.67			0.094			305.05	348.5	0.015	0.0032	0.0005	0.024
13	13	ROUGHER COARSE-13	23-Dec-09	L850709-4	Water	500	470	466	7.80	4.71	32.27			0.073			203.05	259.8	0.018	0.0029	0.0005	0.029
14	14	ROUGHER COARSE-14	30-Dec-09	L851579-4	Water	500	475	452	7.82	2.41	35.77			0.082			193.05	244.5	0.017	0.0030	0.0002	0.028
15	15	ROUGHER COARSE-15	6-Jan-10	L852460-4	Water	500	445	327	7.84	2.11	35.97			0.084			124.05	180.5	0.022	0.0027	0.0005	0.035
16	16	ROUGHER COARSE-16	13-Jan-10	L854098-4	Water	500	470	226	7.95	3.41	38.87			0.080			68.95	109.7	0.025	0.0025	0.0005	0.048
17	17	ROUGHER COARSE-17	20-Jan-10	L855789-4	Water	500	465	165	8.05	2.41	44.37			0.077			35.75	83.9	0.033	0.0023	0.0005	0.069
18	18	ROUGHER COARSE-18	27-Jan-10	L857371-4	Water	500	440	139	8.03	3.41	41.37			0.084			24.55	66.0	0.036	0.0023	0.0005	0.093
19	19	ROUGHER COARSE-19	3-Feb-10	L859096-4	Water	500	465	129	8.02	3.41	45.37			0.067			18.05	60.8	0.033	0.0023	0.0005	0.121
20	20	ROUGHER COARSE-20	10-Feb-10	L861122-4	Water	500	465	123	8.03	2.41	45.77			0.088			15.15	59.1	0.034	0.0023	0.0005	0.143
21	21	ROUGHER COARSE-21	17-Feb-10	L862558-4	Water	500	470	119	8.05	3.21	44.97			0.069			13.55	58.2	0.041	0.0024	0.0005	0.162
22	22	ROUGHER COARSE-22	24-Feb-10	L864540-4	Water	500	475	117	8.08	2.11	45.47			0.065			12.65	57.0	0.041	0.0025	0.0005	0.169
23	23	ROUGHER COARSE-23	3-Mar-10	L866349-4	Water	500	480	103	8.03	2.61	39.77			0.054			11.05	48.7	0.047	0.0023	0.0005	0.170
24	24	ROUGHER COARSE-24	10-Mar-10	L868256-4	Water	500	465	108	8.04	4.41	42.47			0.057			11.05	51.4	0.045	0.0025	0.0005	0.193
25	25	ROUGHER COARSE-25	17-Mar-10	L869907-4	Water	500	475	113	8.07	3.91	44.47			0.041			10.75	54.3	0.040	0.0026	0.0005	0.209
26	26	ROUGHER COARSE-26	24-Mar-10	L871620-4	Water	500	455	111	8.12	2.61	45.77			0.053			10.65	54.1	0.045	0.0026	0.0005	0.210
27	27	ROUGHER COARSE-27	31-Mar-10	L873457-4	Water	500	450	115	8.05	2.21	46.97			0.032			11.95	56.4	0.041	0.0027	0.0003	0.190
28	28	ROUGHER COARSE-28	7-Apr-10	L874970-4	Water	500	460	118	8.04	3.51	45.17			0.051			14.75	58.9	0.036	0.0024	0.0005	0.168
29	29	ROUGHER COARSE-29	14-Apr-10	L877116-4	Water	500	480	110	8.02	3.41	42.37			0.048			13.35	56.9	0.041	0.0022	0.0005	0.164

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

								Physical Tests					Anions		Dissolved Metals							
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In	Total Volume Out	Conductivity	pH	Acidity (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Nitrite (NO_2)	Sulfate (SO_4)	Hardness	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)
										mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
30	30	ROUGHER COARSE-30	21-Apr-10	L879131-4	Water	500	460	118	8.08	2.81	45.97			0.049			14.15	58.5	0.040	0.0022	0.0005	0.170
31	31	ROUGHER COARSE-31	28-Apr-10	L881234-4	Water	500	475	114	8.10	2.51	45.27			0.043			12.35	55.3	0.039	0.0020	0.0005	0.164
32	32	ROUGHER COARSE-32	5-May-10	L883239-4	Water	500	460	112	8.04	2.91	44.37			0.033			11.25	56.8	0.040	0.0019	0.0005	0.179
33	33	ROUGHER COARSE-33	12-May-10	L885549-4	Water	500	475	115	8.05	1.71	45.57			0.037			11.95	57.0	0.041	0.0022	0.0005	0.194
34	34	ROUGHER COARSE-34	19-May-10	L888187-4	Water	500	450	112	8.03	8.81	44.37			0.034			12.05	55.7	0.037	0.0020	0.0005	0.166
35	35	ROUGHER COARSE-35	26-May-10	L890291-4	Water	500	495	112	7.98	2.81	44.47			0.032			12.25	55.4	0.039	0.0020	0.0005	0.171
36	36	ROUGHER COARSE-36	2-Jun-10	L892986-4	Water	500	475	111	8.02	2.71	44.57			0.028			12.05	55.0	0.042	0.0021	0.0005	0.167
37	37	ROUGHER COARSE-37	9-Jun-10	L895622-4	Water	500	485	105	8.04	2.61	42.67			0.027			11.25	54.2	0.041	0.0020	0.0005	0.169
38	38	ROUGHER COARSE-38	16-Jun-10	L898149-4	Water	500	455	110	8.03	3.41	45.77			0.032			11.35	55.8	0.038	0.0021	0.0005	0.190
39	39	ROUGHER COARSE-39	23-Jun-10	L900775-4	Water	500	490	106	8.07	2.51	44.27			0.027			10.03	53.4	0.042	0.0021	0.0005	0.183
40	40	ROUGHER COARSE-40	30-Jun-10	L903235-4	Water	500	0480	107	8.03	1.91	45.17			0.035			10.15	53.7	0.042	0.0022	0.0005	0.210
41	41	ROUGHER COARSE-41	7-Jul-10	L905416-4	Water	500	475	109	8.00	2.61	45.87			0.034			9.91	55.0	0.042	0.0021	0.0005	0.198
42	42	ROUGHER COARSE-42	14-Jul-10	L908290-4	Water	500	470	108	8.10	2.21	46.57			0.022			9.07	55.2	0.047	0.0021	0.0005	0.239
43	43	ROUGHER COARSE-43	21-Jul-10	L910997-4	Water	500	460	107	8.01	2.01	44.47			0.032			9.30	51.4	0.040	0.0022	0.0005	0.229
44	44	ROUGHER COARSE-44	28-Jul-10	L913689-4	Water	500	470	105	8.04	3.61	45.97			0.030			9.63	52.7	0.049	0.0024	0.0005	0.264
45	45	ROUGHER COARSE-45	4-Aug-10	L915978-4	Water	500	480	107	8.03	2.81	45.97			0.022			7.71	53.3	0.044	0.0021	0.0005	0.255
46	46	ROUGHER COARSE-46	11-Aug-10	L918804-4	Water	500	475	102	8.03	2.61	44.77			0.021			7.74	51.5	0.039	0.0019	0.0005	0.246
47	47	ROUGHER COARSE-47	18-Aug-10	L921398-4	Water	500	495	103	8.12	4.71	46.87			0.021			7.58	54.3	0.041	0.0018	0.0005	0.276
48	48	ROUGHER COARSE-48	25-Aug-10	L924204-4	Water	500	495	102	8.05	2.51	46.37			0.020			7.21	51.6	0.042	0.0018	0.0005	0.288
49	49	ROUGHER COARSE-49	1-Sep-10	L926708-4	Water	500	475	101	8.11	3.41	46.37			0.010			6.75	50.6	0.041	0.0018	0.0005	0.287
50	50	ROUGHER COARSE-50	8-Sep-10	L928948-4	Water	500	475	101	8.10	3.61	46.27			0.010			6.30	49.5	0.048	0.0017	0.0005	0.229
51	51	ROUGHER COARSE-51	15-Sep-10	L931580-4	Water	500	490	100	8.00	3.61	46.27			0.010			6.39	51.1	0.041	0.0018	0.0005	0.313
52	52	ROUGHER COARSE-52	22-Sep-10	L934339-4	Water	500	480	99	7.99	3.01	44.77			0.010			6.44	49.6	0.048	0.0016	0.0002	0.338
53	53	ROUGHER COARSE-53	29-Sep-10	L937156-4	Water	500	490	98	8.01	3.51	45.07			0.010			6.30	49.7	0.047	0.0017	0.0002	0.344
54	54	ROUGHER COARSE-54	6-Oct-10	L939969-4	Water	500	485	99	8.04	2.01	45.57			0.010			6.00	51.1	0.040	0.0017	0.0002	0.346
55	55	ROUGHER COARSE-55	13-Oct-10	L942326-4	Water	500	470	96	8.03	2.21	44.97			0.010			5.57	48.2	0.044	0.0016	0.0002	0.334
56	56	ROUGHER COARSE-56	20-Oct-10	L945041-4	Water	500	465	87	7.93	2.31	41.27			0.010			4.89	45.9	0.049	0.0014	0.0002	0.397
57	57	ROUGHER COARSE-57	27-Oct-10	L947663-4	Water	500	500	95	8.07	2.51	44.57			0.010			5.16	48.7	0.043	0.0015	0.0002	0.398
58	58	ROUGHER COARSE-58	3-Nov-10	L950195-4	Water	500	500	95	8.04	2.71	45.67			0.010			5.31	49.9	0.040	0.0015	0.0002	0.405
59	59	ROUGHER COARSE-59	10-Nov-10	L952749-4	Water	500	470	93	7.97	3.21	44.47			0.010			5.20	48.5	0.054	0.0015	0.0002	0.406
60	60	ROUGHER COARSE-60	17-Nov-10	L954872-4	Water	500	470	98	8.07	1.41	46.57			0.010			5.77	50.5	0.062	0.0015	0.0002	0.402
61	61	ROUGHER COARSE-61	24-Nov-10	L956852-4	Water	500	475	105	8.06	2.21	47.57			0.010			6.27	51.3	0.039	0.0015	0.0002	0.400
62	62	ROUGHER COARSE-62	1-Dec-10	L958928-4	Water	500	470	104	8.04	1.51	47.17			0.010			6.57	52.1	0.045	0.0017	0.0002	0.396
63	63	ROUGHER COARSE-63	8-Dec-10	L961066-4	Water	500	470	101	8.00	3.31	44.57			0.010			6.30	49.5	0.044	0.0015	0.0002	0.374
64	64	ROUGHER COARSE-64	15-Dec-10	L963010-4	Water	500	470	99	8.00	2.31	43.57			0.010			5.53	49.3	0.046	0.0014	0.0002	0.375
65	65	ROUGHER COARSE-65	22-Dec-10	L965051-4	Water	500	470	98	8.07	3.01	44.67			0.010			5.44	47.9	0.056	0.0015	0.0002	0.411
66	66	ROUGHER COARSE-66	29-Dec-10	L965956-4	Water	500	480	96	8.06	1.71	43.27			0.010			5.05	47.4	0.051	0.0015	0.0002	0.394
67	67	ROUGHER COARSE-67	5-Jan-11	L967289-4	Water	500	470	98	8.08	2.31	43.77			0.010			5.03	47.8	0.045	0.0016	0.0002	0.428
68	68	ROUGHER COARSE-68	12-Jan-11	L969116-4	Water	500	470	100	8.13	1.11	46.97			0.010			4.91	49.5	0.052	0.0013	0.0002	0.440
69	69	ROUGHER COARSE-69	19-Jan-11	L971359-4	Water	500	475	96	8.03	2.21	43.07			0.010			4.83	48.3	0.043	0.0014	0.0002	0.434
70	70	ROUGHER COARSE-70	26-Jan-11	L973154-4	Water	500	470	97	8.06	0.51	45.17			0.010			4.68	48.9	0.054	0.0013	0.0002	0.432
71	71	ROUGHER COARSE-71	2-Feb-11	L975057-4	Water	500	450	99	8.05	1.21	47.37			0.010			4.80	49.7	0.075	0.0014	0.0002	0.461
72	72	ROUGHER COARSE-72	9-Feb-11	L976968-4	Water	500	460	96	8.05	1.81	43.87			0.010			4.85	47.5	0.046	0.0014	0.0002	0.425
73	73	ROUGHER COARSE-73	16-Feb-11	L978743-4	Water	500	470	95	8.08	1.71	42.17			0.010			4.48	46.7	0.068	0.0013	0.0002	0.437
74	74	ROUGHER COARSE-74	23-Feb-11	L980552-4	Water	500	475	95	8.08	1.91	45.27			0.010			4.50	46.3	0.060	0.0013	0.0002	0.455
Average									8.06	1.43	44.77	#DIV/0!	#DIV/0!	0.010	#DIV/0!	#DIV/0!	4.67	47.8	0.061	0.0013	0.0002	0.442
Rougher																						
0	0	ROUGHER-0	23-Feb-10	L864107-1	Water	500	425	2150	7.76	5.66	51.70			0.200			1440.10	1508.9	0.006	0.0005	0.0005	0.023
1	1	ROUGHER-1	2-Mar-10	L865982-1	Water	500	490	2180	7.88	5.16	44.40			0.282			1540.10	1630.4	0.006	0.0005	0.0005	0.023
2	2	ROUGHER-2	9-Mar-10	L867811-1	Water	500	470	2040	7.70	6.56	39.80			0.250			1470.10	1621.1	0.006	0.0005	0.0005	0.021
3	3	ROUGHER-3	16-Mar-10	L869628-1	Water	500	450	2090	7.72	8.56	38.60			0.240			1480.10	1519.9	0.006	0.0005	0.0005	0.021
4	4	ROUGHER-4	23-Mar-10	L871315-1	Water	500	470	2010	7.73	14.96	40.50			0.230			1460.10	1610.0	0.037	0.0005	0.0005	0.021
5	5	ROUGHER-5	30-Mar-10	L873173-1	Water	500	465	2110	7.87	4.16	41.40			0.230			1470.10	1607.9	0.006	0.0005	0.0005	0.021
6	6	ROUGHER-6	6-Apr-10	L874643-1	Water	500	470	2050	7.71	3.46	37.50			0.220			1520.10	1581.8	0.006	0.0005	0.0005	0.021
7	7	ROUGHER-7	13-Apr-10	L876783-1	Water	500	460	2080	7.83	6.96	41.30			0.200			1480.10	1634.7	0.006	0.0005	0.0005	0.020
8	8	ROUGHER-8	20-Apr-10	L878914-1	Water	500	475	2020	7.83	3.46	40.80			0.260			1490.10	1495.5	0.006	0.0005	0.0005	0.020
9	9	ROUGHER-9	27-Apr-10	L880949-1	Water	500	470	1810	7.81	4.66	39.40			0.280			1280.10	1359.8	0.006	0.0005	0.0005	0.021
10	10	ROUGHER-10	4-May-10	L883053-1	Water	500	460	1510	7.84	5.76	40.20			0.270			964.10	1082.9	0.006	0.0005	0.0005	0.022

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

								Physical Tests					Anions		Dissolved Metals							
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In	Total Volume Out	Conductivity	pH	Acidity (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Nitrite (NO_2)	Sulfate (SO_4)	Hardness	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)
												mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
11	11	ROUGHER-11	11-May-10	L884662-1	Water	500	465	1300	7.85	6.36	37.60			0.220			828.10	902.8	0.006	0.0005	0.0005	0.021
12	12	ROUGHER-12	18-May-10	L887254-1	Water	500	450	1140	7.80	6.26	36.00			0.210			698.10	768.2	0.006	0.0005	0.0005	0.021
13	13	ROUGHER-13	25-May-10	L889441-1	Water	500	475	885	7.81	4.06	33.20			0.170			497.10	574.6	0.006	0.0005	0.0005	0.024
14	14	ROUGHER-14	1-Jun-10	L891931-1	Water	500	485	905	7.76	3.96	33.90			0.100			517.10	592.3	0.006	0.0005	0.0005	0.028
15	15	ROUGHER-15	8-Jun-10	L894969-1	Water	500	480	785	7.76	2.66	35.00			0.100			413.10	487.8	0.006	0.0055	0.0005	0.024
16	16	ROUGHER-16	15-Jun-10	L897402-1	Water	500	0475	700	7.86	4.26	36.90			0.160			364.10	420.5	0.006	0.0005	0.0005	0.029
17	17	ROUGHER-17	22-Jun-10	L899632-1	Water	500	460	586	7.94	3.26	41.90			0.162			279.10	333.0	0.006	0.0005	0.0005	0.037
18	18	ROUGHER-18	29-Jun-10	L902544-1	Water	500	465	462	8.00	3.16	44.80			0.200			200.30	264.0	0.006	0.0005	0.0005	0.042
19	19	ROUGHER-19	6-Jul-10	L904356-1	Water	500	460	379	8.01	6.76	49.30			0.194			150.10	198.9	0.006	0.0005	0.0005	0.070
20	20	ROUGHER-20	13-Jul-10	L907375-1	Water	500	460	289	8.09	2.76	53.80			0.176			98.20	158.0	0.006	0.0005	0.0005	0.079
21	21	ROUGHER-21	20-Jul-10	L909882-1	Water	500	470	301	8.03	6.46	53.90			0.129			104.10	165.1	0.006	0.0005	0.0005	0.097
22	22	ROUGHER-22	27-Jul-10	L912873-1	Water	500	465	274	8.08	1.96	50.40			0.127			90.70	149.6	0.006	0.0005	0.0005	0.111
23	23	ROUGHER-23	3-Aug-10	L915180-1	Water	500	450	226	8.09	2.86	46.40			0.086			66.40	115.1	0.015	0.0005	0.0005	0.241
24	24	ROUGHER-24	10-Aug-10	L917847-1	Water	500	470	278	8.04	2.16	53.50			0.108			94.80	153.8	0.006	0.0005	0.0005	0.068
25	25	ROUGHER-25	17-Aug-10	L920355-1	Water	500	440	205	8.10	5.56	45.90			0.071			53.90	111.3	0.020	0.0005	0.0005	0.098
26	26	ROUGHER-26	24-Aug-10	L923022-1	Water	500	490	200	8.09	2.16	49.10			0.071			52.90	108.6	0.014	0.0005	0.0005	0.173
27	27	ROUGHER-27	31-Aug-10	L925560-1	Water	500	460	196	8.08	4.36	50.00			0.057			51.30	106.0	0.014	0.0005	0.0005	0.167
28	28	ROUGHER-28	7-Sep-10	L928205-1	Water	500	440	145	8.17	3.46	48.20			0.051			25.10	74.4	0.013	0.0005	0.0005	0.126
29	29	ROUGHER-29	14-Sep-10	L930864-1	Water	500	490	190	8.00	2.46	57.60			0.064			43.50	99.0	0.006	0.0005	0.0005	0.117
30	30	ROUGHER-30	21-Sep-10	L933453-1	Water	500	490	146	8.08	1.76	53.50			0.056			22.60	75.8	0.011	0.0003	0.0001	0.152
31	31	ROUGHER-31	28-Sep-10	L936155-1	Water	500	475	132	8.13	1.86	49.00			0.036			18.60	67.9	0.017	0.0003	0.0001	0.231
32	32	ROUGHER-32	5-Oct-10	L939027-1	Water	500	475	118	8.07	1.66	49.40			0.030			11.50	58.2	0.019	0.0003	0.0001	0.287
33	33	ROUGHER-33	12-Oct-10	L941593-1	Water	500	475	125	8.11	2.06	55.20			0.033			12.20	64.6	0.014	0.0003	0.0001	0.259
34	34	ROUGHER-34	19-Oct-10	L944047-1	Water	500	485	117	8.06	0.56	54.70			0.021			10.30	60.4	0.016	0.0003	0.0001	0.259
35	35	ROUGHER-35	26-Oct-10	L946706-1	Water	500	455	110	8.11	1.96	50.10			0.010			8.79	52.8	0.014	0.0003	0.0001	0.287
36	36	ROUGHER-36	2-Nov-10	L949284-1	Water	500	475	107	8.02	2.06	51.10			0.022			8.32	55.8	0.015	0.0003	0.0001	0.242
37	37	ROUGHER-37	9-Nov-10	L951778-1	Water	500	460	105	8.01	1.36	49.00			0.020			8.00	54.7	0.013	0.0003	0.0001	0.289
38	38	ROUGHER-38	16-Nov-10	L953975-1	Water	500	485	111	8.04	1.76	54.70			0.025			8.32	57.2	0.014	0.0003	0.0001	0.279
39	39	ROUGHER-39	23-Nov-10	L956068-1	Water	500	490	114	8.05	1.76	50.30			0.024			9.00	58.0	0.013	0.0003	0.0001	0.289
40	40	ROUGHER-40	30-Nov-10	L958470-1	Water	500	480	115	8.15	1.76	52.50			0.025			8.94	59.2	0.014	0.0003	0.0001	0.257
41	41	ROUGHER-41	7-Dec-10	L960208-1	Water	500	490	116	8.00	3.06	52.90			0.025			9.07	57.2	0.016	0.0003	0.0001	0.278
42	42	ROUGHER-42	14-Dec-10	L962607-1	Water	500	465	120	8.08	1.96	52.30			0.010			8.22	62.6	0.017	0.0003	0.0001	0.294
43	43	ROUGHER-43	21-Dec-10	L964636-1	Water	500	480	113	8.15	3.56	50.80			0.010			7.85	58.7	0.016	0.0003	0.0001	0.303
44	44	ROUGHER-44	28-Dec-10	L965690-1	Water	500	470	108	8.11	1.96	50.30			0.010			6.96	55.1	0.020	0.0003	0.0001	0.336
45	45	ROUGHER-45	4-Jan-11	L966818-1	Water	500	475	102	8.18	2.56	47.00			0.010			6.09	51.6	0.022	0.0003	0.0001	0.398
46	46	ROUGHER-46	11-Jan-11	L968780-1	Water	500	490	120	8.15	2.56	55.00			0.010			7.38	59.4	0.013	0.0003	0.0001	0.397
47	47	ROUGHER-47	18-Jan-11	L970941-1	Water	500	480	114	8.13	1.66	50.90			0.010			6.51	57.5	0.016	0.0003	0.0001	0.357
48	48	ROUGHER-48	25-Jan-11	L972807-1	Water	500	470	109	8.12	2.76	47.50			0.010			5.88	57.3	0.019	0.0003	0.0001	0.341
49	49	ROUGHER-49	1-Feb-11	L974617-1	Water	500	480	104	8.09	1.96	48.30			0.010			5.41	54.8	0.025	0.0003	0.0001	0.375
50	50	ROUGHER-50	8-Feb-11	L976579-1	Water	500	480	111	8.16	2.16	57.00			0.010			5.99	56.9	0.018	0.0003	0.0001	0.434
51	51	ROUGHER-51	15-Feb-11	L978394-1	Water	500	470	116	8.15	2.26	52.60			0.010			6.86	60.8	0.012	0.0003	0.0001	0.328
52	52	ROUGHER-52	22-Feb-11	L980079-1	Water	500	460	113	8.16	0.56	71.20			0.010			5.93	59.1	0.015	0.0003	0.0001	0.360
Average									8.14	1.94	55.32	#DIV/0!	#DIV/0!	0.010	#DIV/0!	#DIV/0!	6.02	57.8	0.018	0.0003	0.0001	0.367
Mitchell/Kerr																						
1	1	MITCHELL/KERR TAILING HC-1	14-May-10	L886545-1	Water	500	495	1700	7.77	5.51	23.99			0.100			1150.12	1313.1	0.098	0.0017	0.0012	0.031
2	2	MITCHELL/KERR TAILING HC-2	21-May-10	L889149-1	Water	500	475	1510	7.80	3.61	25.39			0.100			1020.12	1106.0	0.065	0.0013	0.0005	0.032
3	3	MITCHELL/KERR TAILING HC-3	28-May-10	L890749-1	Water	500	490	1480	7.74	5.21	27.19			0.100			985.12	1038.7	0.049	0.0005	0.0005	0.025
4	4	MITCHELL/KERR TAILING HC-4	4-Jun-10	L893287-1	Water	500	455	1490	7.76	4.61	27.09			0.100			953.12	1063.0	0.045	0.0005	0.0005	0.025
5	5	MITCHELL/KERR TAILING HC-5	11-Jun-10	L896418-1	Water	500	465	1500	7.78	5.21	28.39			0.220			1000.12	1063.5	0.040	0.0010	0.0005	0.025
6	6	MITCHELL/KERR TAILING HC-6	18-Jun-10	L899033-1	Water	500	475	1460	7.89	5.91	29.49			0.100			973.12	1000.2	0.037	0.0011	0.0005	0.026
7	7	MITCHELL/KERR TAILING HC-7	25-Jun-10	L902013-1	Water	500	480	1410	7.84	3.91	30.29			0.100			937.12	978.9	0.046	0.0005	0.0005	0.024
8	8	MITCHELL/KERR TAILING HC-8	2-Jul-10	L903886-1	Water	500	480	1260	7.80	4.31	30.29			0.220			802.12	801.3	0.034	0.0012	0.0005	0.026
9	9	MITCHELL/KERR TAILING HC-9	9-Jul-10	L906847-1	Water	500	465	1130	7.80	4.51	29.99			0.100			714.12	785.6	0.042	0.0013	0.0005	0.027
10	10	MITCHELL/KERR TAILING HC-10	16-Jul-10	L909379-1	Water	500	0475	1100	7.83	4.11	30.89			0.100			671.12	759.8	0.034	0.0011	0.0005	0.025
11	#######	MITCHELL/KERR TAILING HC-11	23-Jul-10	L912144-1	Water	14-May-01	14-Apr-01	1010	7.84	3.71	31.39			0.100			607.12	658.4	0.037	0.0014	0.0005	0.028
12	12	MITCHELL/KERR TAILING HC-12	30-Jul-10	L914935-1	Water	500	490	927	7.85	6.21	30.89			0.100			542.12	601.3	0.031	0.0013	0.0005	0.026
13	13	MITCHELL/KERR TAILING HC-13	6-Aug-10	L917292-1	Water	500	455	837	7.85	4.61	31.79			0.100			365.12	528.1	0.035	0.0013	0.0005	0.027
14	14	MITCHELL/KERR TAILING HC-14	13-Aug-10	L919820-1	Water	500	450	837	7.94	5.61	37.79			0.100			475.12	536.3	0.037	0.0013	0.0005	0.024

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

								Physical Tests					Anions		Dissolved Metals							
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In	Total Volume Out	Conductivity	pH	Acidity (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Nitrite (NO_2)	Sulfate (SO_4)	Hardness	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)
												mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
15	15	MITCHELL/KERR TAILING HC-15	20-Aug-10	L922621-1	Water	500	490	788	7.88	3.91	32.69			0.500			419.12	494.8	0.028	0.0011	0.0276	0.025
16	16	MITCHELL/KERR TAILING HC-16	27-Aug-10	L925183-1	Water	500	475	715	7.87	3.71	32.49			0.100			386.12	449.1	0.029	0.0012	0.0005	0.025
17	17	MITCHELL/KERR TAILING HC-17	3-Sep-10	L927838-1	Water	500	460	631	7.86	6.41	33.59			0.100			336.12	388.6	0.030	0.0013	0.0005	0.029
18	18	MITCHELL/KERR TAILING HC-18	10-Sep-10	L929982-1	Water	500	465	540	7.89	3.61	34.29			0.100			256.12	318.8	0.034	0.0012	0.0005	0.030
19	19	MITCHELL/KERR TAILING HC-19	17-Sep-10	L932708-1	Water	500	465	454	7.87	3.51	36.49			0.094			213.12	268.0	0.033	0.0013	0.0005	0.032
20	20	MITCHELL/KERR TAILING HC-20	24-Sep-10	L935603-1	Water	500	450	372	7.96	4.71	37.09			0.097			156.12	212.0	0.036	0.0012	0.0008	0.036
21	21	MITCHELL/KERR TAILING HC-21	1-Oct-10	L938231-1	Water	500	465	291	7.94	3.11	42.19			0.120			106.12	140.2	0.041	0.0013	0.0008	0.047
22	22	MITCHELL/KERR TAILING HC-22	8-Oct-10	L941167-1	Water	500	445	218	8.10	2.01	45.29			0.122			64.02	105.2	0.045	0.0012	0.0008	0.061
23	23	MITCHELL/KERR TAILING HC-23	15-Oct-10	L943528-1	Water	500	450	173	8.15	2.71	48.49			0.118			35.32	85.8	0.052	0.0013	0.0010	0.094
24	24	MITCHELL/KERR TAILING HC-24	22-Oct-10	L946037-1	Water	500	445	148	8.13	7.21	48.59			0.120			26.52	81.4	0.053	0.0014	0.0011	0.119
25	25	MITCHELL/KERR TAILING HC-25	29-Oct-10	L948703-1	Water	500	465	137	8.21	2.61	49.39			0.100			21.22	70.1	0.069	0.0013	0.0011	0.176
26	26	MITCHELL/KERR TAILING HC-26	5-Nov-10	L951250-1	Water	500	445	136	8.20	2.01	56.59			0.108			18.42	61.3	0.058	0.0015	0.0011	0.168
27	27	MITCHELL/KERR TAILING HC-27	12-Nov-10	L953413-1	Water	500	460	130	8.13	2.21	49.69			0.119			16.32	65.8	0.059	0.0015	0.0012	0.170
28	28	MITCHELL/KERR TAILING HC-28	19-Nov-10	L955632-1	Water	500	450	139	8.18	1.91	60.69			0.110			16.12	68.2	0.067	0.0016	0.0011	0.192
29	29	MITCHELL/KERR TAILING HC-29	26-Nov-10	L957661-1	Water	500	455	130	8.16	2.71	52.49			0.080			14.12	62.7	0.055	0.0017	0.0012	0.180
30	30	MITCHELL/KERR TAILING HC-30	3-Dec-10	L959746-1	Water	500	440	130	8.15	1.41	52.59			0.095			13.62	62.5	0.085	0.0016	0.0012	0.171
31	31	MITCHELL/KERR TAILING HC-31	10-Dec-10	L962031-1	Water	500	450	131	8.15	0.51	54.89			0.095			13.02	66.3	0.059	0.0017	0.0011	0.190
32	32	MITCHELL/KERR TAILING HC-32	17-Dec-10	L963820-1	Water	500	450	128	8.19	1.91	55.59			0.082			12.02	63.3	0.300	0.0016	0.0012	0.305
33	33	MITCHELL/KERR TAILING HC-33	24-Dec-10	L965662-1	Water	500	440	130	8.20	0.51	57.19			0.086			12.02	62.3	0.065	0.0018	0.0013	0.255
34	34	MITCHELL/KERR TAILING HC-34	31-Dec-10	L966484-1	Water	500	450	126	8.20	2.41	54.09			0.101			11.32	60.4	0.079	0.0019	0.0013	0.242
35	35	MITCHELL/KERR TAILING HC-35	7-Jan-11	L968137-1	Water	500	440	160	8.23	1.81	51.59			0.086			10.82	60.1	0.074	0.0017	0.0011	0.223
36	36	MITCHELL/KERR TAILING HC-36	14-Jan-11	L970080-1	Water	500	450	119	8.17	1.91	47.89			0.090			10.52	58.1	0.058	0.0018	0.0013	0.234
37	37	MITCHELL/KERR TAILING HC-37	21-Jan-11	L972109-1	Water	500	450	118	8.10	1.91	48.19			0.085			9.88	56.8	0.060	0.0020	0.0012	0.242
38	38	MITCHELL/KERR TAILING HC-38	28-Jan-11	L973945-1	Water	500	460	116	8.15	1.31	48.89			0.060			9.33	54.4	0.054	0.0019	0.0013	0.252
39	39	MITCHELL/KERR TAILING HC-39	4-Feb-11	L975788-1	Water	500	450	118	8.16	1.31	50.69			0.060			9.35	59.1	0.098	0.0017	0.0012	0.331
40	40	MITCHELL/KERR TAILING HC-40	11-Feb-11	L977680-1	Water	500	445	117	8.11	2.31	48.89			0.068			9.80	57.2	0.066	0.0019	0.0013	0.254
41	41	MITCHELL/KERR TAILING HC-41	18-Feb-11	L979639-1	Water	500	455	115	8.19	1.76	49.34			0.068			9.95	57.2	0.057	0.0018	0.0013	0.251
42	42	MITCHELL/KERR TAILING HC-42	25-Feb-11	L981425-1	Water	500	460	117	8.14	1.21	49.79			0.068			10.10	57.2	0.049	0.0017	0.0013	0.248
43	43	MITCHELL/KERR TAILING HC-43	4-Mar-11	L983358-1	Water	500	435	117	8.12	1.36	49.04			0.073			9.72	56.7	0.049	0.0017	0.0012	0.240
44	44	MITCHELL/KERR TAILING HC-44	11-Mar-11	L985342-1	Water	500	435	114	8.11	1.51	48.29			0.077			9.34	56.2	0.050	0.0017	0.0012	0.233
45	45	MITCHELL/KERR TAILING HC-45	18-Mar-11	L987482-1	Water	500	465	84	8.00	1.51	52.74			0.069			9.46	53.2	0.054	0.0017	0.0011	0.265
46	46	MITCHELL/KERR TAILING HC-46	25-Mar-11	L989265-1	Water	500	455	120	8.12	0.51	57.19			0.060			9.58	50.1	0.058	0.0017	0.0010	0.298
47	47	MITCHELL/KERR TAILING HC-47	1-Apr-11	L991381-1	Water	500	440	111	8.14	1.36	53.24			0.062			9.17	53.2	0.056	0.0015	0.0011	0.298
48	48	MITCHELL/KERR TAILING HC-48	8-Apr-11	L993289-1	Water	500	400	113	8.09	2.21	49.29			0.063			8.75	56.2	0.054	0.0014	0.0012	0.299
Average									8.09	1.42	52.15	#DIV/0!	#DIV/0!	0.067	#DIV/0!	#DIV/0!	9.26	53.8	0.054	0.0016	0.0011	0.279
Mitchell/Sulphurets																						
0	0	MITCHELL/SULPHURETS TAILING HC-0	13-Aug-10	L919826-1	Water	750	440	1220	11.30	0.50	183.00			0.340			419.00	577.6	2.490	0.0026	0.0013	0.056
1	1	MITCHELL/SULPHURETS TAILING HC-1	20-Aug-10	L922625-1	Water	500	475	725	9.15	0.50	26.90			0.500			364.00	405.3	0.565	0.0069	0.0282	0.020
2	2	MITCHELL/SULPHURETS TAILING HC-2	27-Aug-10	L925188-1	Water	500	500	675	8.27	3.80	19.70			0.230			350.00	380.4	0.379	0.0098	0.0005	0.019
3	3	MITCHELL/SULPHURETS TAILING HC-3	3-Sep-10	L927841-1	Water	500	475	492	7.72	6.90	16.80			0.376			234.00	258.3	0.226	0.0103	0.0018	0.023
4	4	MITCHELL/SULPHURETS TAILING HC-4	10-Sep-10	L929989-1	Water	500	480	348	7.66	3.40	17.10			0.174			148.00	175.8	0.151	0.0085	0.0027	0.026
5	5	MITCHELL/SULPHURETS TAILING HC-5	17-Sep-10	L932711-1	Water	500	470	273	7.67	3.30	18.50			0.193			113.00	133.6	0.122	0.0091	0.0030	0.030
6	6	MITCHELL/SULPHURETS TAILING HC-6	24-Sep-10	L935608-1	Water	500	435	164	8.13	3.90	22.40			0.159			53.20	75.2	0.115	0.0078	0.0037	0.064
7	7	MITCHELL/SULPHURETS TAILING HC-7	1-Oct-10	L938275-1	Water	500	495	151	8.13	4.10	34.30			0.239			39.10	63.5	0.099	0.0077	0.0039	0.075
8	8	MITCHELL/SULPHURETS TAILING HC-8	8-Oct-10	L941170-1	Water	500	480	139	8.22	1.90	42.60			0.248			26.80	56.0	0.096	0.0064	0.0033	0.092
9	9	MITCHELL/SULPHURETS TAILING HC-9	15-Oct-10	L943530-1	Water	500	500	130	8.35	2.00	45.90			0.231			20.30	59.4	0.076	0.0066	0.0032	0.122
10	10	MITCHELL/SULPHURETS TAILING HC-10	22-Oct-10	L946040-1	Water	455	455	131	8.29	4.00	47.00			0.244			18.20	61.6	0.090	0.0077	0.0033	0.147
11	11	MITCHELL/SULPHURETS TAILING HC-11	29-Oct-10	L948706-1	Water	480	475	131	8.29	2.00	50.20			0.244			16.00	61.8	0.067	0.0077	0.0029	0.160
12	12	MITCHELL/SULPHURETS TAILING HC-12	5-Nov-10	L951251-1	Water	500	445	126	8.33	2.10	56.50			0.214			13.70	54.5	0.152	0.0073	0.0029	0.198
13	13	MITCHELL/SULPHURETS TAILING HC-13	12-Nov-10	L953418-1	Water	500	475	121	8.30	2.90	49.90			0.181			11.50	58.6	0.218	0.0061	0.0023	0.231
14	14	MITCHELL/SULPHURETS TAILING HC-14	19-Nov-10	L955633-1	Water	500	460	138	8.24	1.90	58.40			0.227			13.20	64.5	0.162	0.0075	0.0026	0.182
15	15	MITCHELL/SULPHURETS TAILING HC-15	26-Nov-10	L957662-1	Water	500	475	132	8.29	2.10	54.70			0.196			12.70	61.7	0.066	0.0068	0.0026	0.196
16	16	MITCHELL/SULPHURETS TAILING HC-16	3-Dec-10	L959747-1	Water	500	450	138	8.26	1.30	55.40			0.204			14.90	65.1	0.118	0.0063	0.0025	0.177
17	17	MITCHELL/SULPHURETS TAILING HC-17	10-Dec-10	L962032-1	Water	500	450	146	8.24	0.50	54.00			0.201			17.40	71.7	0.102	0.0060	0.0023	0.170
18	18	MITCHELL/SULPHURETS TAILING HC-18	17-Dec-10	L963823-1	Water	500	475	138	8.20	1.70	53.30			0.184			16.30	66.9	0.142	0.0052	0.0024	0.175
19	19	MITCHELL/SULPHURETS TAILING HC-19	24-Dec-10	L965663-1	Water	500	450	139	8.33	0.50	61.50			0.199			16.30	65.7	0.150	0.0051	0.0020	0.174
20	20	MITCHELL/SULPHURETS TAILING HC-20	31-Dec-10	L966485-1	Water	500	470	129	8.31	2.10	52.50			0.147			13.70	63.4	0.455	0.0045	0.0020	0.227
21	21	MITCHELL/SULPHURETS TAILING HC-21	7-Jan-11	L968088-1	Water	500	455	125	8.18	1.40	60.00			0.190			15.40	69.2	0.104	0.0049	0.0023	0.192

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

								Physical Tests					Anions		Dissolved Metals							
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In	Total Volume Out	Conductivity	pH	Acidity (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Nitrite (NO_2)	Sulfate (SO_4)	Hardness	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)
												mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
22	22	MITCHELL/SULPHURETS TAILING HC-22	14-Jan-11	L970081-1	Water	500	460	138	8.27	1.70	59.20			0.183			14.90	66.8	0.093	0.0046	0.0021	0.178
23	23	MITCHELL/SULPHURETS TAILING HC-23	21-Jan-11	L972110-1	Water	500	470	137	8.22	1.40	59.70			0.190			14.50	65.6	0.109	0.0043	0.0020	0.172
24	24	MITCHELL/SULPHURETS TAILING HC-24	28-Jan-11	L973946-1	Water	500	465	132	8.29	0.50	58.00			0.155			12.90	62.3	0.107	0.0042	0.0021	0.179
25	25	MITCHELL/SULPHURETS TAILING HC-25	4-Feb-11	L975789-1	Water	500	460	137	8.14	1.30	56.90			0.177			13.60	67.4	0.065	0.0044	0.0020	0.179
26	26	MITCHELL/SULPHURETS TAILING HC-26	11-Feb-11	L977668-1	Water	500	435	123	8.22	2.70	49.80			0.146			11.50	59.5	0.176	0.0043	0.0021	0.225
27	27	MITCHELL/SULPHURETS TAILING HC-27	18-Feb-11	L979641-1	Water	500	475	127	8.33	2.05	52.10			0.148			11.65	61.1	0.140	0.0040	0.0021	0.219
28	28	MITCHELL/SULPHURETS TAILING HC-28	25-Feb-11	L981426-1	Water	500	455	130	8.24	1.40	54.40			0.149			11.80	62.6	0.103	0.0036	0.0021	0.213
29	29	MITCHELL/SULPHURETS TAILING HC-29	4-Mar-11	L983359-1	Water	500	455	129	8.29	1.70	60.15			0.151			11.55	62.0	0.131	0.0040	0.0020	0.231
30	30	MITCHELL/SULPHURETS TAILING HC-30	11-Mar-11	L985345-1	Water	500	450	126	8.34	2.00	65.90			0.153			11.30	61.3	0.159	0.0044	0.0020	0.248
31	31	MITCHELL/SULPHURETS TAILING HC-31	18-Mar-11	L987483-1	Water	500	440	129	8.25	1.25	62.95			0.144			11.45	58.1	0.167	0.0038	0.0020	0.239
32	32	MITCHELL/SULPHURETS TAILING HC-32	25-Mar-11	L989266-1	Water	500	450	131	8.20	0.50	60.00			0.134			11.60	54.8	0.175	0.0032	0.0021	0.229
33	33	MITCHELL/SULPHURETS TAILING HC-33	1-Apr-11	L991382-1	Water	500	450	97	8.40	1.95	62.00			0.136			11.55	61.7	0.131	0.0033	0.0020	0.238
34	34	MITCHELL/SULPHURETS TAILING HC-34	8-Apr-11	L993294-1	Water	500	425	136	8.18	3.40	64.00			0.138			11.50	68.5	0.086	0.0034	0.0020	0.247
35	35	MITCHELL/SULPHURETS TAILING HC-35	15-Apr-11	L995526-1	Water	500	455	122	8.19	2.55	56.65			0.119			10.41	63.4	0.084	0.0031	0.0020	0.239
36	36	MITCHELL/SULPHURETS TAILING HC-36	21-Apr-11	L997514-1	Water	500	475	118	8.15	1.70	49.30			0.100			9.31	58.4	0.082	0.0027	0.0020	0.231
37	37	MITCHELL/SULPHURETS TAILING HC-37	29-Apr-11	L999773-1	Water	500	475	124	8.12	1.85	52.75			0.101			9.18	60.9	0.087	0.0027	0.0019	0.230
38	38	MITCHELL/SULPHURETS TAILING HC-38	6-May-11	L1002301-1	Water	500	450	124	8.26	2.00	56.20			0.102			9.05	63.4	0.093	0.0026	0.0019	0.228
39	39	MITCHELL/SULPHURETS TAILING HC-39	13-May-11	L1005007-1	Water	500	465	119	8.25	1.25	56.85			0.095			8.33	62.3	0.110	0.0026	0.0019	0.276
40	40	MITCHELL/SULPHURETS TAILING HC-40	20-May-11	L1007752-1	Water	500	495	118	8.17	0.50	57.50			0.087			7.61	61.2	0.127	0.0026	0.0019	0.324
41	41	MITCHELL/SULPHURETS TAILING HC-41	27-May-11	L1010136-1	Water	500	445	107	8.22	1.15	56.50			0.084			7.19	59.3	0.140	0.0024	0.0019	0.323
42	42	MITCHELL/SULPHURETS TAILING HC-42	3-Jun-11	L1012369-1	Water	500	500	114	8.15	1.80	55.50			0.081			6.77	57.4	0.153	0.0023	0.0018	0.322
43	43	MITCHELL/SULPHURETS TAILING HC-43	10-Jun-11	L1015621-1	Water	500	470	114	8.20	1.60	59.15			0.082			6.84	57.1	0.109	0.0022	0.0018	0.313
44	44	MITCHELL/SULPHURETS TAILING HC-44	17-Jun-11	L1019174-1	Water	500	455	115	8.19	1.40	62.80			0.083			6.91	56.8	0.066	0.0021	0.0017	0.304
45	45	MITCHELL/SULPHURETS TAILING HC-45	24-Jun-11	L1022428-1	Water	500	500	114	8.19	1.80	60.40			0.082			6.92	57.2	0.066	0.0021	0.0017	0.323
46	46	MITCHELL/SULPHURETS TAILING HC-46	1-Jul-11	L1025725-1	Water	500	0450	116	8.17	2.20	58.00			0.081			6.92	57.7	0.067	0.0021	0.0017	0.341
47	47	MITCHELL/SULPHURETS TAILING HC-47	8-Jul-11	L1028340-1	Water	500	475	115	8.19	1.85	58.05			0.078			7.02	59.1	0.079	0.0021	0.0016	0.322
48	48	MITCHELL/SULPHURETS TAILING HC-48	15-Jul-11	L1031663-1	Water	500	500	111	8.21	1.50	58.10			0.074			7.12	60.5	0.090	0.0020	0.0016	0.303
49	49	MITCHELL/SULPHURETS TAILING HC-49	22-Jul-11	L1035224-1	Water	500	480	115	8.15	1.55	52.95			0.067			6.85	56.1	0.098	0.0019	0.0016	0.342
50	50	MITCHELL/SULPHURETS TAILING HC-50	29-Jul-11	L1037849-1	Water	500	460	104	8.25	1.60	47.80			0.059			6.58	51.7	0.105	0.0018	0.0016	0.380
51	51	MITCHELL/SULPHURETS TAILING HC-51	5-Aug-11	L1040531-1	Water	500	450	110	8.24	1.05	48.05			0.057			6.55	52.2	0.093	0.0018	0.0016	0.367
52	52	MITCHELL/SULPHURETS TAILING HC-52	12-Aug-11	L1043546-1	Water	500	450	104	8.25	0.50	48.30			0.054			6.51	52.7	0.081	0.0017	0.0016	0.354
53	53	MITCHELL/SULPHURETS TAILING HC-53	19-Aug-11	L1047036-1	Water	500	450	118	8.23	1.40	52.45			0.062			6.91	55.6	0.077	0.0019	0.0016	0.343
54	54	MITCHELL/SULPHURETS TAILING HC-54	26-Aug-11	L1050008-1	Water	500	455	113	8.20	2.30	56.60			0.069			7.30	58.5	0.074	0.0020	0.0016	0.331
55	55	MITCHELL/SULPHURETS TAILING HC-55	2-Sep-11	L1053174-1	Water	500	450	117	8.19	1.40	57.10			0.060			7.48	60.1	0.069	0.0019	0.0015	0.338
56	56	MITCHELL/SULPHURETS TAILING HC-56	9-Sep-11	L1055828-1	Water	500	450	118	8.18	0.50	57.60			0.051			7.65	61.8	0.065	0.0018	0.0015	0.344
57	57	MITCHELL/SULPHURETS TAILING HC-57	16-Sep-11	L1059175-1	Water	500	475	113	8.13	1.10	57.05			0.053			8.00	61.4	0.056	0.0018	0.0014	0.317
58	58	MITCHELL/SULPHURETS TAILING HC-58	23-Sep-11	L1062160-1	Water	500	475	119	8.21	1.70	56.50			0.054			8.35	61.0	0.047	0.0018	0.0014	0.290
59	59	MITCHELL/SULPHURETS TAILING HC-59	30-Sep-11	L1065543-1	Water	500	485	108	8.25	1.50	54.85			0.047			8.20	59.4	0.061	0.0017	0.0014	0.308
60	60	MITCHELL/SULPHURETS TAILING HC-60	7-Oct-11	L1068652-1	Water	500	450	111	8.23	1.30	53.20			0.039			8.05	57.8	0.075	0.0015	0.0014	0.325
61	61	MITCHELL/SULPHURETS TAILING HC-61	14-Oct-11	L1071469-1	Water	500	480	111	8.22	1.55	58.15			0.044			8.34	59.7	0.076	0.0017	0.0014	0.325
62	62	MITCHELL/SULPHURETS TAILING HC-62	21-Oct-11	L1074485-1	Water	500	470	118	8.23	1.80	63.10			0.049			8.63	61.6	0.076	0.0018	0.0014	0.324
63	63	MITCHELL/SULPHURETS TAILING HC-63	28-Oct-11	L1077691-1	Water	500	440	119	8.24	1.55	56.25			0.041			81.82	58.5	0.081	0.0016	0.0013	0.372
64	64	MITCHELL/SULPHURETS TAILING HC-64	4-Nov-11	L1080498-1	Water	500	500	108	8.23	1.30	49.40			0.033			155.00	55.4	0.087	0.0013	0.0012	0.420
65	65	MITCHELL/SULPHURETS TAILING HC-65	11-Nov-11	L1083516-1	Water	500	470	123	8.14	0.90	53.30			0.038			81.20	57.9	0.072	0.0014	0.0012	0.370
66	66	MITCHELL/SULPHURETS TAILING HC-66	18-Nov-11	L1085831-1	Water	500	430	115	8.15	0.50	57.20			0.042			7.39	60.5	0.058	0.0016	0.0013	0.319
67	67	MITCHELL/SULPHURETS TAILING HC-67	25-Nov-11	L1088923-1	Water	500	450	96	8.32	1.15	55.35			0.042			7.50	61.4	0.067	0.0015	0.0013	0.366
68	68	MITCHELL/SULPHURETS TAILING HC-68	2-Dec-11	L1091267-1	Water	500	425	116	8.14	1.80	53.50			0.042			7.60	62.3	0.076	0.0015	0.0013	0.412
69	69	MITCHELL/SULPHURETS TAILING HC-69	9-Dec-11	L1093468-1	Water	500	450	111	8.23	2.00	47.95			0.034			6.60	54.6	0.108	0.0013	0.0013	0.379
70	70	MITCHELL/SULPHURETS TAILING HC-70	16-Dec-11	L1096175-1	Water	500	440	101	8.37	2.20	42.40			0.025			5.59	46.9	0.141	0.0010	0.0012	0.346
71	71	MITCHELL/SULPHURETS TAILING HC-71	23-Dec-11	L1098610-1	Water	500	430	133	8.18	2.43	44.85			0.034			6.57	50.0	0.119	0.0012	0.0012	0.321
72	72	MITCHELL/SULPHURETS TAILING HC-72	30-Dec-11	L1099857-1	Water	500	425	103	8.41	2.65	47.30			0.044			7.56	53.1	0.097	0.0014	0.0012	0.295
73	73	MITCHELL/SULPHURETS TAILING HC-73	6-Jan-12	L1101484-1	Water	500	400	140	8.25	2.88	49.75			0.053			8.54	56.2	0.075	0.0016	0.0012	0.270
74	74	MITCHELL/SULPHURETS TAILING HC-74	13-Jan-12	L1103511-1	Water	500	475	127	8.17	3.10	52.20			0.062			9.52	59.3	0.053	0.0018	0.0011	0.244
75	75	MITCHELL/SULPHURETS TAILING HC-75	20-Jan-12	L1105855-1	Water	500	425	136	8.19	2.45	53.35			0.058			9.84	60.7	0.056	0.0018	0.0011	0.238
76	76	MITCHELL/SULPHURETS TAILING HC-76	27-Jan-12	L1108219-1	Water	500	450	145	8.13	1.80	54.50			0.054			10.16	62.1	0.059	0.0018	0.0011	0.231
77	77	MITCHELL/SULPHURETS TAILING HC-77	3-Feb-12	L1110548-1	Water	500	475	136	8.24	1.15	55.65			0.049			10.48	63.5	0.062	0.0017	0.0011	0.225
78	78	MITCHELL/SULPHURETS TAILING HC-78	10-Feb-12	L1112921-1	Water	500	420	137	8.23	0.50	56.80			0.045			10.80	64.9	0.065	0.0017	0.0011	0.218
79	79	MITCHELL/SULPHURETS TAILING HC-79	17-Feb-12	L1115366-1	Water	500	490	131	8.25	1.70	56.48			0.044			10.49	64.0	0.066	0.0017	0.0011	0.225

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

								Physical Tests					Anions		Dissolved Metals							
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In	Total Volume Out	Conductivity	pH	Acidity (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Nitrite (NO_2)	Sulfate (SO_4)	Hardness	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)
										mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
80	80	MITCHELL/SULPHURETS TAILING HC-80	24-Feb-12	L1116934-1	Water	500	400	122	8.23	2.90	56.15			0.042			10.18	63.1	0.067	0.0017	0.0012	0.231
81	81	MITCHELL/SULPHURETS TAILING HC-81	2-Mar-12	L1119872-1	Water	500	440	128	8.25	4.10	55.83			0.041			9.87	62.2	0.069	0.0017	0.0012	0.238
82	82	MITCHELL/SULPHURETS TAILING HC-82	9-Mar-12	L1122279-1	Water	500	465	128	8.25	5.30	55.50			0.039			9.56	61.4	0.070	0.0017	0.0012	0.244
83	83	MITCHELL/SULPHURETS TAILING HC-83	16-Mar-12	L1123862-1	Water	500	450	122	8.23	4.10	53.90			0.038			9.31	61.4	0.066	0.0016	0.0011	0.236
84	84	MITCHELL/SULPHURETS TAILING HC-84	23-Mar-12	L1126242-1	Water	500	450	125	8.22	2.90	52.30			0.036			9.06	61.4	0.063	0.0016	0.0011	0.228
85	85	MITCHELL/SULPHURETS TAILING HC-85	30-Mar-12	L1127580-1	Water	500	485	122	8.23	1.70	50.70			0.035			8.81	61.3	0.059	0.0015	0.0011	0.219
86	86	MITCHELL/SULPHURETS TAILING HC-86	6-Apr-12	L1131241-1	Water	500	425	122	8.26	0.50	49.10			0.033			8.56	61.3	0.056	0.0015	0.0010	0.211
87	87	MITCHELL/SULPHURETS TAILING HC-87	13-Apr-12	L1133742-1	Water	500	425	124	8.24	0.88	48.98			0.032			8.43	60.1	0.058	0.0015	0.0010	0.216
88	88	MITCHELL/SULPHURETS TAILING HC-88	20-Apr-12	L1136609-1	Water	500	460	120	8.29	1.25	48.85			0.032			8.30	58.9	0.059	0.0015	0.0010	0.221
89	89	MITCHELL/SULPHURETS TAILING HC-89	27-Apr-12	L1139510-1	Water	500	440	120	8.27	1.63	48.73			0.031			8.17	57.7	0.061	0.0015	0.0010	0.226
90	90	MITCHELL/SULPHURETS TAILING HC-90	4-May-12	L1142134-1	Water	500	425	118	8.24	2.00	48.60			0.030			8.04	56.4	0.062	0.0014	0.0010	0.231
91	91	MITCHELL/SULPHURETS TAILING HC-91	11-May-12	L1145887-1	Water	500	475	114	8.22	3.00	53.03			0.031			8.11	58.0	0.059	0.0015	0.0010	0.240
92	92	MITCHELL/SULPHURETS TAILING HC-92	18-May-12	L1148745-1	Water	500	420	115	8.28	4.00	57.45			0.031			8.18	59.6	0.056	0.0015	0.0010	0.249
93	93	MITCHELL/SULPHURETS TAILING HC-93	25-May-12	L1151869-1	Water	500	425	114	8.24	5.00	61.88			0.032			8.25	61.2	0.053	0.0015	0.0010	0.258
94	94	MITCHELL/SULPHURETS TAILING HC-94	1-Jun-12	L1154899-1	Water	500	425	127	8.24	6.00	66.30			0.032			8.32	62.8	0.050	0.0016	0.0010	0.267
95	95	MITCHELL/SULPHURETS TAILING HC-95	8-Jun-12	L1158690-1	Water	500	450	115	8.26	5.53	62.00			0.031			8.02	60.8	0.051	0.0015	0.0009	0.265
96	96	MITCHELL/SULPHURETS TAILING HC-96	15-Jun-12	L1162234-1	Water	500	445	119	8.27	5.05	57.70			0.030			7.72	58.8	0.052	0.0015	0.0009	0.262
97	97	MITCHELL/SULPHURETS TAILING HC-97	22-Jun-12	L1165811-1	Water	500	415	116	8.27	4.58	53.40			0.028			7.42	56.8	0.054	0.0014	0.0009	0.260
98	98	MITCHELL/SULPHURETS TAILING HC-98	29-Jun-12	L1169755-1	Water	500	425	116	8.29	4.10	49.10			0.027			7.12	54.9	0.055	0.0014	0.0009	0.257
99	99	MITCHELL/SULPHURETS TAILING HC-99	6-Jul-12	L1172252-1	Water	500	425	114	8.30	3.78	50.23			0.028			7.23	55.2	0.059	0.0013	0.0009	0.262
100	100	MITCHELL/SULPHURETS TAILING HC-100	13-Jul-12	L1176453-1	Water	500	425	119	8.28	3.45	51.35			0.029			7.33	55.5	0.063	0.0013	0.0009	0.267
101	101	MITCHELL/SULPHURETS TAILING HC-101	20-Jul-12	L1181301-1	Water	500	425	120	8.24	3.13	52.48			0.030			7.44	55.8	0.068	0.0013	0.0009	0.272
102	102	MITCHELL/SULPHURETS TAILING HC-102	27-Jul-12	L1184276-1	Water	500	435	114	8.26	2.80	53.60			0.031			7.54	56.1	0.072	0.0013	0.0009	0.277
103	103	MITCHELL/SULPHURETS TAILING HC-103	3-Aug-12	L1188266-1	Water	500	400	121	8.26	2.65	52.53			0.031			7.58	56.3	0.068	0.0013	0.0009	0.276
104	104	MITCHELL/SULPHURETS TAILING HC-104	10-Aug-12	L1191261-1	Water	500	400	117	8.30	2.50	51.45			0.030			7.62	56.6	0.063	0.0013	0.0009	0.274
105	105	MITCHELL/SULPHURETS TAILING HC-105	17-Aug-12	L1195071-1	Water	500	430	119	8.23	2.35	50.38			0.030			7.65	56.9	0.059	0.0013	0.0009	0.273
106	106	MITCHELL/SULPHURETS TAILING HC-106	24-Aug-12	L1198799-1	Water	500	420	116	8.30	2.20	49.30		0.250	0.029	0.013		7.69	57.2	0.055	0.0013	0.0009	0.271
107	107	MITCHELL/SULPHURETS TAILING HC-107	31-Aug-12	L1202775-1	Water	500	425	115	8.27	1.98	49.45		0.250	0.028	0.012		7.63	56.8	0.052	0.0013	0.0008	0.282
108	108	MITCHELL/SULPHURETS TAILING HC-108	7-Sep-12	L1205133-1	Water	500	375	116	8.27	1.75	49.60		0.250	0.028	0.012		7.56	56.5	0.048	0.0013	0.0008	0.294
109	109	MITCHELL/SULPHURETS TAILING HC-109	14-Sep-12	L1208691-1	Water	500	435	115	8.27	1.53	49.75		0.250	0.027	0.012		7.50	56.1	0.045	0.0012	0.0008	0.305
110	110	MITCHELL/SULPHURETS TAILING HC-110	21-Sep-12	L1212445-1	Water	500	475	118	8.27	1.30	49.90	0.025	0.250	0.026	0.012	0.001	7.43	55.8	0.042	0.0012	0.0008	0.316
111	111	MITCHELL/SULPHURETS TAILING HC-111	28-Sep-12	L1215925-1	Water	500	365	117	8.22	1.53	51.55	0.025	0.250	0.025	0.011	0.001	7.22	55.8	0.044	0.0012	0.0008	0.307
112	112	MITCHELL/SULPHURETS TAILING HC-112	5-Oct-12	L1218776-1	Water	500	410	111	8.22	1.75	53.20	0.025	0.250	0.025	0.010	0.001	7.02	55.9	0.047	0.0012	0.0008	0.298
113	113	MITCHELL/SULPHURETS TAILING HC-113	12-Oct-12	L1221741-1	Water	500	425	117	8.25	1.98	54.85	0.025	0.250	0.024	0.009	0.001	6.81	56.0	0.049	0.0012	0.0008	0.288
114	114	MITCHELL/SULPHURETS TAILING HC-114	19-Oct-12	L1225311-1	Water	500	400	113	8.28	2.20	56.50	0.025	0.250	0.023	0.008	0.001	6.60	56.0	0.052	0.0012	0.0008	0.279
Average									8.24	2.90	52.30	0.025	0.250	0.026	0.011	0.001	9.06	61.4	0.063	0.0016	0.0011	0.228
Iron Cap																						
0	0	2748-18-COMP-0	5-Nov-10	L951345-1	Water	750	520	595	8.43	2.70	29.50			0.810			273.00	247.9	0.057	0.0063	0.0019	0.049
1	1	2748-18-COMP-1	12-Nov-10	L953419-1	Water	500	455	461	8.31	3.60	22.80			0.648			205.00	223.6	0.072	0.0038	0.0009	0.034
2	2	2748-18-COMP-2	19-Nov-10	L955634-1	Water	500	475	455	8.02	2.80	34.60			0.770			194.00	214.3	0.045	0.0048	0.0008	0.035
3	3	2748-18-COMP-3	26-Nov-10	L957663-1	Water	500	0460	283	8.15	2.70	38.10			0.603			98.20	124.7	0.050	0.0040	0.0008	0.039
4	4	2748-18-COMP-4	3-Dec-10	L959748-1	Water	500	450	224	8.12	1.40	42.90			0.638			65.30	100.6	0.072	0.0044	0.0009	0.050
5	5	2748-18-COMP-5	10-Dec-10	L962033-1	Water	500	445	198	8.20	0.50	46.90			0.612			47.30	95.5	0.070	0.0059	0.0010	0.056
6	6	2748-18-COMP-6	17-Dec-10	L963824-1	Water	500	485	170	8.32	1.60	50.60			0.500			32.70	74.6	0.310	0.0057	0.0010	0.095
7	7	2748-18-COMP-7	24-Dec-10	L965664-1	Water	500	420	160	8.32	0.50	52.90			0.570			27.20	68.4	0.138	0.0062	0.0009	0.097
8	8	2748-18-COMP-8	31-Dec-10	L966486-1	Water	500	450	168	8.23	2.40	53.60			0.667			25.20	73.8	0.145	0.0076	0.0010	0.136
9	9	2748-18-COMP-9	7-Jan-11	L968089-1	Water	500	450	141	8.27	2.80	60.30			0.622			21.90	71.9	0.089	0.0072	0.0011	0.124
10	10	2748-18-COMP-10	14-Jan-11	L970083-1	Water	500	455	158	8.19	1.80	58.90			0.528			20.10	70.3	0.087	0.0087	0.0010	0.121
11	11	2748-18-COMP-11	21-Jan-11	L972112-1	Water	500	440	176	8.16	1.60	60.20			0.725			20.60	75.0	0.109	0.0093	0.0012	0.181
12	12	2748-18-COMP-12	28-Jan-11	L973947-1	Water	500	450	153	8.23	0.50	60.20			0.600			16.20	67.9	0.108	0.0082	0.0010	0.156
13	13	2748-18-COMP-13	4-Feb-11	L975790-1	Water	500	465	156	8.18	1.20	55.60			0.675			15.70	73.1	0.099	0.0081	0.0010	0.155
14	14	2748-18-COMP-14	11-Feb-11	L977669-1	Water	500	445	157	8.16	2.80	65.90			0.613			14.10	73.7	0.086	0.0064	0.0010	0.209
15	15	2748-18-COMP-15	18-Feb-11	L979643-1	Water	500	450	152	8.22	0.50	61.90			0.592			13.80	70.2	0.073	0.0071	0.0010	0.179
16	16	2748-18-COMP-16	25-Feb-11	L981427-1	Water	500	455	147	8.15	1.40	63.30			0.530			13.60	68.2	0.056	0.0074	0.0011	0.181
17	17	2748-18-COMP-17	4-Mar-11	L983360-1	Water	500	450	145	8.18	1.10	58.40			0.664			13.50	65.2	0.064	0.0077	0.0011	0.175
18	18	2748-18-COMP-18	11-Mar-11	L985346-1	Water	500	445	143	8.16	2.50	54.30			0.677			12.90	66.0	0.109	0.0086	0.0011	0.169
19	19	2748-18-COMP-19	18-Mar-11	L987484-1	Water	500	445	107	8.20	3.40	41.90			0.393			8.14	47.3	0.120	0.0051	0.0009	0.180
20	20	2748-18-COMP-20	25-Mar-11	L989268-1	Water	500	450	144	8.16	1.10	58.20			0.636			12.40	65.0	0.052	0.0102	0.0011	0.254

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

								Physical Tests					Anions		Dissolved Metals							
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In	Total Volume Out	Conductivity	pH	Acidity (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Nitrite (NO_2)	Sulfate (SO_4)	Hardness	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)
												mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
21	21	2748-18-COMP-21	1-Apr-11	L991383-1	Water	500	460	120	8.28	3.00	37.80			0.468			9.18	54.7	0.260	0.0057	0.0011	0.206
22	22	2748-18-COMP-22	8-Apr-11	L993297-1	Water	500	380	149	8.11	3.30	66.90			0.698			13.10	69.2	0.078	0.0084	0.0011	0.224
23	23	2748-18-COMP-23	15-Apr-11	L995527-1	Water	500	460	142	8.14	2.20	55.00			0.706			13.00	65.5	0.044	0.0082	0.0011	0.212
24	24	2748-18-COMP-24	21-Apr-11	L997515-1	Water	500	460	130	8.10	2.00	62.10			0.588			10.80	60.4	0.066	0.0075	0.0012	0.202
25	25	2748-18-COMP-25	29-Apr-11	L999774-1	Water	500	455	135	8.11	1.90	54.90			0.626			10.80	63.6	0.069	0.0076	0.0011	0.208
26	26	2748-18-COMP-26	6-May-11	L1002305-1	Water	500	490	134	8.12	2.30	58.40			0.655			10.10	64.3	0.065	0.0070	0.0011	0.225
27	27	2748-18-COMP-27	13-May-11	L1005010-1	Water	500	450	131	8.14	1.90	61.60			0.628			10.30	61.8	0.175	0.0066	0.0014	0.261
28	28	2748-18-COMP-28	20-May-11	L1007753-1	Water	500	480	128	8.14	0.50	56.20			0.652			9.55	62.2	0.046	0.0065	0.0012	0.266
29	29	2748-18-COMP-29	27-May-11	L1010137-1	Water	500	470	126	8.13	2.10	59.50			0.700			9.49	60.1	0.076	0.0061	0.0012	0.218
30	30	2748-18-COMP-30	3-Jun-11	L1012370-1	Water	500	475	126	8.15	2.00	53.50			0.683			9.43	61.2	0.071	0.0058	0.0011	0.249
31	31	2748-18-COMP-31	10-Jun-11	L1015622-1	Water	500	500	125	8.15	3.20	57.80			0.696			9.21	60.0	0.079	0.0054	0.0011	0.220
32	32	2748-18-COMP-32	17-Jun-11	L1019175-1	Water	500	470	126	8.16	0.50	58.20			0.690			9.06	59.5	0.054	0.0051	0.0011	0.231
33	33	2748-18-COMP-33	24-Jun-11	L1022429-1	Water	500	455	124	8.15	1.90	58.00			0.713			8.96	58.4	0.059	0.0056	0.0011	0.224
34	34	2748-18-COMP-34	1-Jul-11	L1025732-1	Water	500	500	117	8.20	0.50	49.60			0.669			8.32	55.1	0.040	0.0047	0.0012	0.229
35	35	2748-18-COMP-35	8-Jul-11	L1028342-1	Water	500	445	121	8.16	3.60	49.70			0.697			8.84	58.0	0.045	0.0048	0.0012	0.242
36	36	2748-18-COMP-36	15-Jul-11	L1031664-1	Water	500	455	116	8.18	1.90	54.30			0.681			8.19	58.7	0.058	0.0044	0.0012	0.243
37	37	2748-18-COMP-37	22-Jul-11	L1035225-1	Water	500	465	116	8.15	1.40	48.40			0.683			8.15	56.1	0.040	0.0045	0.0012	0.248
38	38	2748-18-COMP-38	29-Jul-11	L1037850-1	Water	500	480	118	8.12	2.60	49.20			0.697			8.06	55.9	0.041	0.0044	0.0011	0.281
39	39	2748-18-COMP-39	5-Aug-11	L1040537-1	Water	500	490	120	8.22	4.70	51.60			0.753			8.29	58.6	0.044	0.0043	0.0011	0.254
40	40	2748-18-COMP-40	12-Aug-11	L1043547-1	Water	500	480	123	8.15	1.80	57.60			0.738			8.62	59.3	0.037	0.0043	0.0011	0.292
41	41	2748-18-COMP-41	19-Aug-11	L1047038-1	Water	500	425	124	8.17	1.80	62.00			0.720			8.38	59.5	0.039	0.0043	0.0011	0.253
42	42	2748-18-COMP-42	26-Aug-11	L1050012-1	Water	500	460	116	8.12	2.80	53.40			0.721			7.82	57.1	0.045	0.0038	0.0011	0.240
43	43	2748-18-COMP-43	2-Sep-11	L1053175-1	Water	500	445	116	8.14	3.50	54.00			0.699			7.61	58.2	0.045	0.0038	0.0011	0.261
44	44	2748-18-COMP-44	9-Sep-11	L1055831-1	Water	500	450	119	8.12	1.90	56.00			0.707			7.74	59.0	0.060	0.0038	0.0013	0.298
45	45	2748-18-COMP-45	16-Sep-11	L1059176-1	Water	500	460	125	8.09	1.80	53.50			0.725			7.80	57.3	0.038	0.0039	0.0011	0.305
46	46	2748-18-COMP-46	23-Sep-11	L1062163-1	Water	500	490	116	8.14	0.50	53.70			0.733			7.65	56.4	0.038	0.0039	0.0011	0.273
47	47	2748-18-COMP-47	30-Sep-11	L1065544-1	Water	500	450	108	8.12	2.80	48.80			0.687			7.04	52.8	0.048	0.0034	0.0012	0.281
48	48	2748-18-COMP-48	7-Oct-11	L1068653-1	Water	500	450	101	8.10	1.70	44.20			0.546			6.54	50.0	0.041	0.0028	0.0010	0.295
49	49	2748-18-COMP-49	14-Oct-11	L1071470-1	Water	500	455	114	8.11	1.70	56.20			0.741			7.15	56.0	0.039	0.0034	0.0010	0.304
50	50	2748-18-COMP-50	21-Oct-11	L1074491-1	Water	500	475	116	8.14	2.60	60.70			0.745			7.41	58.4	0.042	0.0035	0.0010	0.340
51	51	2748-18-COMP-51	28-Oct-11	L1077692-1	Water	500	475	115	8.15	2.20	55.80			0.705			7.42	57.3	0.036	0.0035	0.0010	0.333
52	52	2748-18-COMP-52	4-Nov-11	L1080499-1	Water	500	475	111	8.09	1.30	48.00			0.010			39.40	53.5	0.040	0.0036	0.0010	0.304
53	53	2748-18-COMP-53	11-Nov-11	L1083517-1	Water	500	480	112	8.08	2.20	49.80			0.725			7.15	55.7	0.050	0.0037	0.0012	0.310
54	54	2748-18-COMP-54	18-Nov-11	L1085832-1	Water	500	475	110	8.09	0.50	49.20			0.688			6.84	54.5	0.049	0.0036	0.0010	0.302
55	55	2748-18-COMP-55	25-Nov-11	L1088924-1	Water	500	450	108	8.07	0.50	48.50			0.689			6.84	53.6	0.048	0.0038	0.0011	0.315
56	56	2748-18-COMP-56	2-Dec-11	L1091268-1	Water	500	465	110	8.09	1.90	49.00			0.678			6.40	55.9	0.063	0.0034	0.0010	0.322
57	57	2748-18-COMP-57	9-Dec-11	L1093469-1	Water	500	475	106	8.03	2.00	47.30			0.670			6.20	53.7	0.059	0.0037	0.0010	0.288
58	58	2748-18-COMP-58	16-Dec-11	L1096176-1	Water	500	425	131	8.12	2.20	54.40			0.756			7.11	59.1	0.036	0.0041	0.0014	0.357
59	59	2748-18-COMP-59	23-Dec-11	L1098611-1	Water	500	425	132	8.16	3.50	58.50			0.774			8.28	54.9	0.045	0.0046	0.0012	0.326
60	60	2748-18-COMP-60	30-Dec-11	L1099858-1	Water	500	500	120	8.16	1.40	45.90			0.687			8.87	50.6	0.055	0.0051	0.0010	0.295
61	61	2748-18-COMP-61	6-Jan-12	L1101486-1	Water	500	390	123	8.11	0.50	45.80			0.714			9.56	55.8	0.046	0.0059	0.0010	0.277
62	62	2748-18-COMP-62	13-Jan-12	L1103513-1	Water	500	425	126	8.04	3.10	49.60			0.734			11.20	61.0	0.037	0.0067	0.0010	0.258
63	63	2748-18-COMP-63	20-Jan-12	L1105856-1	Water	500	450	127	8.07	2.10	46.70			0.707			10.90	65.1	0.033	0.0079	0.0009	0.248
64	64	2748-18-COMP-64	27-Jan-12	L1108220-1	Water	500	450	149	8.09	0.50	58.70			0.807			14.40	69.2	0.030	0.0092	0.0009	0.238
65	65	2748-18-COMP-65	3-Feb-12	L1110549-1	Water	500	475	133	8.16	2.80	47.00			0.706			12.90	66.2	0.033	0.0093	0.0008	0.224
66	66	2748-18-COMP-66	10-Feb-12	L1112922-1	Water	500	435	139	8.11	2.50	48.30			0.731			13.50	63.3	0.037	0.0095	0.0008	0.210
67	67	2748-18-COMP-67	17-Feb-12	L1115368-1	Water	500	485	132	8.16	0.50	47.00			0.716			13.40	61.5	0.046	0.0096	0.0010	0.198
68	68	2748-18-COMP-68	24-Feb-12	L1116935-1	Water	500	435	132	8.15	0.50	46.70			0.720			13.00	59.7	0.055	0.0097	0.0011	0.186
69	69	2748-18-COMP-69	2-Mar-12	L1119873-1	Water	500	480	136	8.15	1.20	48.70			0.731			13.40	58.6	0.052	0.0088	0.0010	0.194
70	70	2748-18-COMP-70	9-Mar-12	L1122280-1	Water	500	430	125	8.16	3.70	44.50			0.642			11.60	57.5	0.049	0.0079	0.0009	0.202
71	71	2748-18-COMP-71	16-Mar-12	L1123864-1	Water	500	460	135	8.13	0.50	47.80			0.752			13.20	59.5	0.043	0.0077	0.0009	0.188
72	72	2748-18-COMP-72	23-Mar-12	L1126244-1	Water	500	450	131	8.14	2.60	47.80			0.737			12.40	61.5	0.038	0.0074	0.0009	0.174
73	73	2748-18-COMP-73	30-Mar-12	L1127581-1	Water	500	400	132	8.15	0.50	47.00			0.745			12.50	64.7	0.038	0.0076	0.0009	0.168
74	74	2748-18-COMP-74	6-Apr-12	L1131242-1	Water	500	425	133	8.14	0.50	47.10			0.711			13.50	67.9	0.038	0.0077	0.0009	0.162
75	75	2748-18-COMP-75	13-Apr-12	L1133745-1	Water	500	445	139	8.12	0.50	47.90			0.757			14.80	66.8	0.038	0.0078	0.0009	0.157
76	76	2748-18-COMP-76	20-Apr-12	L1136611-1	Water	500	450	139	8.18	0.75	47.50			0.747			15.10	65.6	0.038	0.0078	0.0009	0.152
77	77	2748-18-COMP-77	27-Apr-12	L1139511-1	Water	500	440	137	8.15	1.00	47.10			0.737			15.40	64.5	0.038	0.0078	0.0009	0.147
78	78	2748-18-COMP-78	4-May-12	L1142135-1	Water	500	430	137	8.16	2.50	46.90			0.737			15.60	63.3	0.038	0.0078	0.0009	0.142

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

								Physical Tests					Anions		Dissolved Metals							
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In	Total Volume Out	Conductivity	pH	Acidity (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Bromide (Br) mg/L	Chloride (Cl) mg/L	Fluoride (F) mg/L	Nitrate (NO_3) mg/L	Nitrite (NO_2) mg/L	Sulfate (SO_4) mg/L	Hardness mg/L	Aluminum (Al) mg/L	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L
79	79	2748-18-COMP-79	11-May-12	L1145889-1	Water	500	450	136	8.09	2.40	47.30			0.742			15.50	64.8	0.037	0.0077	0.0009	0.142
80	80	2748-18-COMP-80	18-May-12	L1148747-1	Water	500	420	136	8.16	1.50	47.60			0.780			16.00	66.4	0.036	0.0076	0.0009	0.142
81	81	2748-18-COMP-81	25-May-12	L1151870-1	Water	500	425	138	8.14	3.60	46.70			0.766			15.80	67.9	0.035	0.0076	0.0009	0.141
82	82	2748-18-COMP-82	1-Jun-12	L1154901-1	Water	500	415	143	8.15	4.80	48.10			0.784			16.50	69.4	0.034	0.0075	0.0009	0.141
83	83	2748-18-COMP-83	8-Jun-12	L1158691-1	Water	500	430	130	8.17	1.70	47.70			0.673			14.70	68.2	0.035	0.0074	0.0009	0.137
84	84	2748-18-COMP-84	15-Jun-12	L1162235-1	Water	500	425	138	8.16	2.40	48.50			0.759			15.90	66.9	0.035	0.0074	0.0009	0.133
85	85	2748-18-COMP-85	22-Jun-12	L1165812-1	Water	500	425	136	8.17	7.80	47.10			0.753			15.40	65.6	0.036	0.0073	0.0009	0.128
86	86	2748-18-COMP-86	29-Jun-12	L1169756-1	Water	500	430	135	8.18	3.40	47.20			0.755			15.10	64.3	0.036	0.0073	0.0009	0.124
87	87	2748-18-COMP-87	6-Jul-12	L1172255-1	Water	500	435	133	8.19	0.50	46.90			0.786			14.60	63.5	0.038	0.0072	0.0009	0.127
88	88	2748-18-COMP-88	13-Jul-12	L1176455-1	Water	500	475	132	8.17	2.30	46.60			0.786			13.90	62.6	0.040	0.0071	0.0009	0.129
89	89	2748-18-COMP-89	20-Jul-12	L1181302-1	Water	500	375	129	8.16	2.40	45.80			0.757			13.30	61.7	0.041	0.0070	0.0009	0.132
90	90	2748-18-COMP-90	27-Jul-12	L1184278-1	Water	500	425	129	8.19	2.70	46.60			0.801			13.70	60.8	0.043	0.0069	0.0009	0.134
91	91	2748-18-COMP-91	3-Aug-12	L1188268-1	Water	500	400	128	8.22	2.55	46.43		0.980	0.811			13.75	60.9	0.044	0.0069	0.0009	0.133
92	92	2748-18-COMP-92	10-Aug-12	L1191263-1	Water	500	390	125	8.21	2.40	46.25		0.980	0.822			13.80	60.9	0.044	0.0068	0.0009	0.133
93	93	2748-18-COMP-93	17-Aug-12	L1195073-1	Water	500	425	126	8.15	2.25	46.08		0.980	0.832			13.85	61.0	0.044	0.0068	0.0009	0.132
94	94	2748-18-COMP-94	24-Aug-12	L1198801-1	Water	500	400	128	8.23	2.10	45.90		0.980	0.842			13.90	61.1	0.045	0.0068	0.0009	0.131
95	95	2748-18-COMP-95	31-Aug-12	L1202776-1	Water	500	445	127	8.18	2.33	46.10		0.973	0.849			13.80	60.6	0.043	0.0068	0.0009	0.135
96	96	2748-18-COMP-96	7-Sep-12	L1205134-1	Water	500	400	127	8.15	2.55	46.30		0.965	0.857			13.70	60.1	0.041	0.0069	0.0009	0.139
97	97	2748-18-COMP-97	14-Sep-12	L1208692-1	Water	500	410	124	8.16	2.78	46.50		0.958	0.864			13.60	59.6	0.039	0.0069	0.0009	0.143
98	98	2748-18-COMP-98	21-Sep-12	L1212446-1	Water	500	425	127	8.16	3.00	46.70	0.025	0.950	0.871	0.011	0.002	13.50	59.2	0.037	0.0070	0.0009	0.147
99	99	2748-18-COMP-99	28-Sep-12	L1215927-1	Water	500	425	130	8.14	2.75	46.90	0.025	0.908	0.868	0.012	0.002	13.08	59.2	0.037	0.0070	0.0009	0.143
100	100	2748-18-COMP-100	5-Oct-12	L1218777-1	Water	500	400	127	8.16	2.50	47.10	0.025	0.865	0.864	0.014	0.002	12.65	59.3	0.038	0.0069	0.0009	0.139
101	101	2748-18-COMP-101	12-Oct-12	L1221744-1	Water	500	415	127	8.14	2.25	47.30	0.025	0.823	0.861	0.015	0.002	12.23	59.3	0.039	0.0069	0.0009	0.134
102	102	2748-18-COMP-102	19-Oct-12	L1225312-1	Water	500	410	125	8.20	2.00	47.50	0.025	0.780	0.857	0.016	0.002	11.80	59.4	0.040	0.0069	0.0009	0.130
Average									8.16	2.50	47.10	0.025	0.918	0.856	0.014	0.002	12.65	59.3	0.038	0.0069	0.0009	0.139

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals																	
Sample ID	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L
SULPHIDE TAILINGS-0	0.00252	0.00252	0.050	0.000902	145.08	0.00314	0.02295	1.02000	32.81	0.00358	0.0052	4.46	0.03	0.00	0.066	0.00309	0.15	40.21
SULPHIDE TAILINGS-1	0.00252	0.00252	0.050	0.000862	228.08	0.00314	0.01075	0.65990	4.23	0.00358	0.0052	6.61	0.09	0.00	0.068	0.00309	0.15	32.81
SULPHIDE TAILINGS-2	0.00252	0.00252	0.050	0.001212	319.08	0.00314	0.00515	0.61170	1.84	0.00358	0.0112	9.45	0.42	0.00	0.035	0.00309	0.15	28.91
SULPHIDE TAILINGS-3	0.00252	0.00252	0.050	0.001612	385.08	0.00314	0.00575	0.62220	1.46	0.00358	0.0142	10.94	1.05	0.00	0.024	0.00809	0.15	22.51
SULPHIDE TAILINGS-4	0.00252	0.00252	0.050	0.002342	486.08	0.00314	0.00755	0.62680	1.43	0.00358	0.0542	12.04	1.89	0.00	0.017	0.01389	0.15	17.21
SULPHIDE TAILINGS-5	0.00252	0.00252	0.050	0.003462	596.08	0.00314	0.00995	0.61420	1.43	0.00358	0.0102	14.74	3.17	0.00	0.011	0.02539	0.15	15.01
SULPHIDE TAILINGS-6	0.00252	0.00252	0.050	0.003522	632.08	0.00314	0.00965	0.61380	1.43	0.00358	0.0052	16.54	2.79	0.00	0.010	0.02589	0.15	11.41
SULPHIDE TAILINGS-7	0.00252	0.00252	0.050	0.005122	654.08	0.00314	0.01435	0.61280	1.43	0.00358	0.0052	22.54	3.88	0.00	0.007	0.03509	0.15	10.41
SULPHIDE TAILINGS-8	0.00252	0.00252	0.050	0.004612	583.08	0.00314	0.01295	0.61340	1.43	0.00358	0.0122	21.14	3.58	0.00	0.008	0.03819	0.15	8.18
SULPHIDE TAILINGS-9	0.00252	0.00252	0.050	0.005762	597.08	0.00314	0.01655	0.61220	1.43	0.00358	0.0132	20.44	3.79	0.00	0.006	0.04379	0.15	8.02
SULPHIDE TAILINGS-10	0.00252	0.00252	0.050	0.005122	587.08	0.00314	0.01305	0.60880	1.43	0.00358	0.0052	24.44	4.07	0.00	0.005	0.04439	0.15	7.12
SULPHIDE TAILINGS-11	0.00252	0.00252	0.050	0.015512	596.08	0.00314	0.03915	0.65010	1.43	0.00358	0.0052	33.34	8.31	0.00	0.002	0.09149	0.15	7.86
SULPHIDE TAILINGS-12	0.00252	0.00252	0.050	0.027012	565.08	0.00314	0.04375	0.83000	1.43	0.00358	0.0132	34.74	8.66	0.00	0.001	0.10959	0.15	7.23
SULPHIDE TAILINGS-13	0.00252	0.00252	0.050	0.051212	603.08	0.00314	0.05665	2.23600	1.43	0.00358	0.0132	30.14	7.70	0.00	0.001	0.15859	0.15	7.12
SULPHIDE TAILINGS-14	0.00252	0.00252	0.050	0.094512	556.08	0.00314	0.09115	11.29600	1.56	0.00395	0.0122	31.54	7.74	0.00	0.001	0.26259	0.15	6.98
SULPHIDE TAILINGS-15	0.00252	0.00252	0.050	0.131312	581.08	0.00314	0.10555	17.79600	3.32	0.00859	0.0052	30.74	6.96	0.00	0.000	0.31559	0.15	6.50
SULPHIDE TAILINGS-16	0.00252	0.00252	0.050	0.118312	531.08	0.00314	0.07225	19.79600	5.19	0.01050	0.0202	26.14	5.61	0.00	0.000	0.23759	0.15	5.70
SULPHIDE TAILINGS-17	0.00252	0.00252	0.050	0.097412	538.08	0.00314	0.05885	19.69600	5.95	0.01783	0.0182	28.34	6.31	0.00	0.000	0.21059	0.15	5.54
SULPHIDE TAILINGS-18	0.00252	0.00252	0.050	0.079212	554.08	0.00314	0.04755	25.59600	10.88	0.06173	0.0172	27.34	6.17	0.00	0.000	0.17159	0.15	5.30
SULPHIDE TAILINGS-19	0.00252	0.00252	0.050	0.037912	473.08	0.00314	0.02575	15.99600	8.56	0.06073	0.0162	25.54	5.89	0.00	0.000	0.09809	0.15	4.44
SULPHIDE TAILINGS-20	0.00252	0.00252	0.050	0.052112	486.08	0.00314	0.03315	23.79600	16.81	0.09593	0.0172	26.44	7.23	0.00	0.000	0.14059	0.15	4.69
SULPHIDE TAILINGS-21	0.00252	0.00252	0.050	0.031712	452.08	0.00314	0.02245	15.19600	10.48	0.07473	0.0172	28.14	6.86	0.00	0.000	0.09349	0.15	4.22
SULPHIDE TAILINGS-22	0.00252	0.00252	0.050	0.024112	466.08	0.00314	0.01815	12.99600	10.36	0.09413	0.0212	28.74	7.59	0.00	0.000	0.06679	0.15	4.09
SULPHIDE TAILINGS-23	0.00252	0.00252	0.050	0.031812	458.08	0.00314	0.02525	17.59600	14.71	0.10113	0.0172	26.24	8.17	0.00	0.001	0.08749	0.15	3.80
SULPHIDE TAILINGS-24	0.00252	0.00252	0.050	0.052512	453.08	0.02194	0.04235	30.39600	33.31	0.29033	0.0192	31.34	10.61	0.00	0.000	0.13459	0.15	4.27
SULPHIDE TAILINGS-25	0.00252	0.00252	0.050	0.040712	422.08	0.01594	0.03185	22.79600	31.81	0.26033	0.0162	32.84	10.71	0.00	0.000	0.10959	0.15	4.17
SULPHIDE TAILINGS-26	0.00252	0.00252	0.050	0.040812	490.08	0.01664	0.03475	23.49600	37.41	0.28533	0.0162	30.44	10.81	0.00	0.000	0.11759	0.15	3.53
SULPHIDE TAILINGS-27	0.00252	0.00252	0.050	0.048812	425.08	0.00314	0.04225	17.59600	12.81	0.03403	0.0152	35.14	13.51	0.00	0.000	0.13959	0.15	3.67
SULPHIDE TAILINGS-28	0.00252	0.00252	0.050	0.058312	427.08	0.00744	0.05325	29.79600	25.81	0.18433	0.0152	37.34	14.61	0.00	0.000	0.17659	0.15	3.77
SULPHIDE TAILINGS-29	0.00252	0.00252	0.050	0.044912	414.08	0.01704	0.04225	22.99600	33.11	0.28033	0.0172	38.74	16.21	0.00	0.000	0.12859	0.15	3.62
SULPHIDE TAILINGS-30	0.00252	0.00252	0.050	0.053312	405.08	0.03064	0.05195	26.49600	49.31	0.46433	0.0052	41.74	19.21	0.00	0.000	0.15659	0.15	3.79
SULPHIDE TAILINGS-31	0.00252	0.00252	0.050	0.045312	330.08	0.01664	0.05145	17.39600	37.11	0.22133	0.0152	35.64	19.21	0.00	0.000	0.14959	0.15	3.42
SULPHIDE TAILINGS-32	0.00252	0.00252	0.050	0.077112	324.08	0.01714	0.08285	26.69600	54.01	0.23733	0.0052	44.94	25.61	0.00	0.000	0.24459	0.15	3.68
SULPHIDE TAILINGS-33	0.00252	0.00252	0.050	0.072312	308.08	0.02554	0.09335	24.39600	48.31	0.42033	0.0052	65.04	34.71	0.00	0.000	0.27559	0.15	4.02
SULPHIDE TAILINGS-34	0.00252	0.00252	0.050	0.065012	234.08	0.00984	0.09965	15.69600	31.81	0.20733	0.0152	57.14	30.61	0.00	0.000	0.29059	0.15	2.99
SULPHIDE TAILINGS-35	0.00252	0.00252	0.050	0.064812	245.08	0.02234	0.11455	21.39600	42.31	0.38233	0.0232	74.44	35.01	0.00	0.000	0.32959	0.15	3.59
SULPHIDE TAILINGS-36	0.00252	0.00252	0.050	0.064912	231.08	0.03644	0.13255	19.79600	64.71	0.50533	0.0212	67.94	32.01	0.00	0.000	0.37159	0.15	3.84
SULPHIDE TAILINGS-37	0.00252	0.00252	0.050	0.086912	174.08	0.02704	0.20155	12.49600	44.81	0.34333	0.0182	53.34	29.41	0.00	0.000	0.51859	0.15	3.54
SULPHIDE TAILINGS-38	0.00252	0.00252	0.050	0.291312	155.08	0.05814	0.44955	19.89600	100.31	0.55933	0.0312	43.14	32.81	0.00	0.000	1.24059	0.15	4.30
SULPHIDE TAILINGS-39	0.00252	0.00252	0.050	0.443312	108.08	0.05914	0.54455	15.19600	109.41	0.54533	0.0242	31.54	26.41	0.00	0.000	1.70059	0.15	4.91
SULPHIDE TAILINGS-40	0.00252	0.00252	0.050	0.642312	84.88	0.06124	0.55155	17.39600	146.41	0.54733	0.0252	23.24	19.11	0.00	0.000	1.92059	0.15	5.03
SULPHIDE TAILINGS-41	0.00252	0.00252	0.050	0.599312	64.88	0.07054	0.47055	20.49600	188.41	0.60733	0.0272	17.74	12.31	0.00	0.001	1.69059	0.15	4.86
SULPHIDE TAILINGS-42	0.00252	0.00252	0.050	0.718312	51.38	0.07094	0.47655	48.19600	201.41	0.65833	0.0262	18.44	11.61	0.00	0.000	1.88059	0.15	5.76
SULPHIDE TAILINGS-43	0.00502	0.00502	0.050	0.554312	38.68	0.11864	0.37655	69.39600	229.41	0.65833	0.0212	13.84	6.82	0.00	0.001	1.50059	0.15	5.41
SULPHIDE TAILINGS-44	0.00502	0.00502	0.050	0.411312	35.08	0.10064	0.27955	54.39600	279.41	0.71933	0.0222	12.44	5.23	0.00	0.001	1.09059	0.15	4.21
SULPHIDE TAILINGS-45	0.00502	0.00502	0.050	0.376312	29.38	0.09864	0.28155	73.69600	286.41	0.68033	0.0212	12.54	4.60	0.00	0.001	1.09059	0.15	4.81
SULPHIDE TAILINGS-46	0.00502	0.00502	0.050	0.258312	24.28	0.12464	0.21955	85.89600	262.41	0.64133	0.0202	10.24	3.26	0.00	0.001	0.85459	0.15	3.81
SULPHIDE TAILINGS-47	0.01252	0.01252	0.050	0.237312	24.68	0.20764	0.22655	118.59600	336.41	0.76433	0.0232	11.44	2.84	0.00	0.003	0.75359	0.15	3.71
SULPHIDE TAILINGS-48	0.01252	0.01252	0.050	0.152312	19.68	0.12664	0.16955	98.59600	257.41	0.60733	0.0152	8.49	2.28	0.00	0.001	0.54559	0.15	3.11
SULPHIDE TAILINGS-49	0.01252	0.01252	0.050	0.161312	23.68	0.27464	0.20555	113.59600	345.41	0.92333	0.0222	13.04	2.55	0.00	0.001	0.58559	0.15	3.61
SULPHIDE TAILINGS-50	0.01252	0.01252	0.050	0.144312	24.78	0.19064	0.19155	113.59600	289.41	1.08333	0.0202	12.44	2.43	0.00	0.001	0.53559	0.15	3.61
SULPHIDE TAILINGS-51	0.01252	0.01252	0.050	0.144312	22.98	0.18664	0.20255	125.59600	381.41	0.82333	0.0232	12.34	2.38	0.00	0.001	0.53559	0.15	3.31
SULPHIDE TAILINGS-52	0.00452	0.00052	0.010	0.117312	20.78	0.07714	0.15455	87.29600	310.41	0.46233	0.0172	10.94	2.12	0.00	0.000	0.44059	0.15	3.19
SULPHIDE TAILINGS-53	0.00432	0.00127	0.025	0.126312	28.78	0.09284	0.15355	90.89600	345.41	0.51433	0.0127	12.64	2.43	0.00	0.000	0.46959	0.15	3.23
SULPHIDE TAILINGS-54	0.00472	0.00052	0.010	0.116312	30.38	0.21464	0.18455	104.59600	334.41	0.90033	0.0192	14.84	2.31	0.00	0.000	0.43459	0.15	3.08
SULPHIDE TAILINGS-55	0.00500	0.00027	0.005	0.111312	21.58	0.16064	0.18555	130.59600	328.41	0.82533	0.0206	12.14	1.99	0.00	0.000	0.41259	0.15	3.56
SULPHIDE TAILINGS-56	0.00422	0.00127	0.025	0.121312	21.38	0.19764	0.19255	145.59600	449.41	0.82733	0.0127	13.94	2.21	0.00	0.000	0.37159	0.15	3.02

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals																	
Sample ID	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L
SULPHIDE TAILINGS-57	0.00412	0.00052	0.010	0.124312	20.68	0.21464	0.22655	122.59600	469.41	0.68033	0.0212	14.44	2.16	0.00	0.000	0.36759	0.15	3.10
SULPHIDE TAILINGS-58	0.00372	0.00052	0.010	0.133312	23.08	0.20564	0.20555	117.59600	474.41	0.63633	0.0222	14.34	2.19	0.00	0.000	0.38359	0.15	3.03
SULPHIDE TAILINGS-59	0.00242	0.00052	0.010	0.099012	23.58	0.13764	0.14455	67.89600	420.41	0.35933	0.0192	13.44	2.00	0.00	0.000	0.28159	0.15	2.26
SULPHIDE TAILINGS-60	0.00272	0.00052	0.010	0.105312	33.88	0.16164	0.15355	79.59600	336.41	0.57333	0.0212	15.04	2.14	0.00	0.000	0.30959	0.15	2.41
SULPHIDE TAILINGS-61	0.00286	0.00027	0.005	0.106312	26.48	0.14664	0.17355	90.19600	376.41	0.56533	0.0208	13.64	1.94	0.00	0.000	0.28559	0.15	2.58
SULPHIDE TAILINGS-62	0.00242	0.00052	0.010	0.104312	23.28	0.14564	0.16755	93.99600	385.41	0.53533	0.0182	12.64	1.79	0.00	0.000	0.26259	0.15	2.40
SULPHIDE TAILINGS-63	0.00127	0.00127	0.025	0.115312	33.58	0.17164	0.18555	93.49600	454.41	0.50533	0.0127	13.34	2.03	0.00	0.000	0.27459	0.15	2.16
SULPHIDE TAILINGS-64	0.00252	0.00252	0.050	0.108312	31.68	0.15664	0.17255	78.39600	449.41	0.42733	0.0252	13.34	1.94	0.00	0.000	0.26059	0.15	2.22
SULPHIDE TAILINGS-65	0.00127	0.00127	0.025	0.110312	29.08	0.14364	0.16655	76.79600	441.41	0.40833	0.0127	14.24	2.06	0.00	0.000	0.25159	0.15	2.09
SULPHIDE TAILINGS-66	0.00127	0.00127	0.025	0.082412	26.88	0.12764	0.13855	65.79600	343.41	0.42733	0.0127	12.94	1.69	0.00	0.000	0.19359	0.15	1.94
SULPHIDE TAILINGS-67	0.00152	0.00052	0.010	0.086912	28.78	0.12164	0.14055	59.59600	364.41	0.36533	0.0172	13.34	1.78	0.00	0.000	0.21859	0.15	1.83
SULPHIDE TAILINGS-68	0.00142	0.00052	0.010	0.084412	32.28	0.13164	0.16155	61.99600	407.41	0.36933	0.0182	14.24	1.70	0.00	0.000	0.20359	0.15	1.94
SULPHIDE TAILINGS-69	0.00127	0.00127	0.025	0.077912	24.88	0.11664	0.13755	59.89600	380.41	0.36133	0.0127	12.84	1.53	0.00	0.000	0.17859	0.15	1.82
SULPHIDE TAILINGS-70	0.00127	0.00127	0.025	0.088112	26.48	0.17364	0.18455	73.09600	499.41	0.37733	0.0127	14.74	1.72	0.00	0.000	0.21159	0.46	1.93
SULPHIDE TAILINGS-71	0.00162	0.00052	0.010	0.090512	24.38	0.18964	0.17555	70.19600	473.41	0.39333	0.0202	14.04	1.73	0.00	0.000	0.19959	0.30	1.93
SULPHIDE TAILINGS-72	0.00127	0.00127	0.025	0.078912	24.48	0.17564	0.15555	62.19600	520.41	0.38833	0.0127	13.74	1.58	0.00	0.000	0.17459	0.36	1.57
SULPHIDE TAILINGS-73	0.00132	0.00052	0.010	0.087812	25.38	0.20664	0.16955	66.89600	496.41	0.32833	0.0202	17.14	1.95	0.00	0.000	0.20559	0.15	1.82
SULPHIDE TAILINGS-74	0.00127	0.00127	0.025	0.091312	24.78	0.33264	0.20755	79.09600	562.41	0.53433	0.0127	14.54	1.78	0.00	0.000	0.19459	1.20	1.93
	0.00135	0.00097	0.019	0.087332	25.10	0.21564	0.17855	70.29600	510.41	0.40433	0.0157	14.84	1.75	0.00	0.000	0.19719	0.50	1.84
ROUGHER/SULPHIDE 90/10-0	0.00250	0.00250	0.050	0.000250	550.00	0.00250	0.00130	0.00730	0.46	0.00025	0.0110	5.87	0.17	0.00	0.039	0.02530	0.15	39.60
ROUGHER/SULPHIDE 90/10-1	0.00250	0.00250	0.050	0.000250	601.00	0.00250	0.00050	0.00410	0.16	0.00025	0.0050	5.40	0.36	0.00	0.026	0.02970	0.15	25.10
ROUGHER/SULPHIDE 90/10-2	0.00250	0.00250	0.050	0.000250	608.00	0.00250	0.00050	0.00210	0.04	0.00025	0.0050	5.58	0.72	0.00	0.017	0.03660	0.15	19.20
ROUGHER/SULPHIDE 90/10-3	0.00250	0.00250	0.050	0.000510	622.00	0.00250	0.00130	0.00200	0.02	0.00025	0.0050	5.53	1.09	0.00	0.011	0.04530	0.15	13.30
ROUGHER/SULPHIDE 90/10-4	0.00250	0.00250	0.050	0.000630	613.00	0.00250	0.00150	0.00190	0.02	0.00025	0.0560	5.91	1.49	0.00	0.007	0.05300	0.15	10.80
ROUGHER/SULPHIDE 90/10-5	0.00250	0.00250	0.050	0.000680	639.00	0.00250	0.00210	0.00180	0.02	0.00025	0.0050	6.33	2.00	0.00	0.005	0.06080	0.15	8.71
ROUGHER/SULPHIDE 90/10-6	0.00250	0.00250	0.050	0.000800	613.00	0.00250	0.00350	0.00130	0.02	0.00025	0.0050	7.18	2.77	0.00	0.003	0.06520	0.15	7.40
ROUGHER/SULPHIDE 90/10-7	0.00250	0.00250	0.050	0.000870	606.00	0.00250	0.00390	0.00180	0.02	0.07870	0.0050	8.45	2.93	0.00	0.002	0.05800	0.15	6.84
ROUGHER/SULPHIDE 90/10-8	0.00250	0.00250	0.050	0.000810	550.00	0.00250	0.00400	0.00120	0.02	0.00025	0.0050	7.69	2.56	0.00	0.002	0.04900	0.15	5.31
ROUGHER/SULPHIDE 90/10-9	0.00250	0.00250	0.050	0.000770	565.00	0.00250	0.00410	0.00180	0.02	0.00025	0.0050	9.68	3.37	0.00	0.002	0.05240	0.15	5.53
ROUGHER/SULPHIDE 90/10-10	0.00250	0.00250	0.050	0.000630	504.00	0.00250	0.00330	0.00130	0.02	0.00025	0.0050	8.64	2.93	0.00	0.001	0.03890	0.15	4.82
ROUGHER/SULPHIDE 90/10-11	0.00250	0.00250	0.050	0.000870	528.00	0.00250	0.00560	0.00050	0.02	0.00025	0.0050	10.60	3.74	0.00	0.001	0.05100	0.15	5.25
ROUGHER/SULPHIDE 90/10-12	0.00250	0.00250	0.050	0.000850	458.00	0.00250	0.00430	0.00290	0.02	0.00025	0.0050	9.49	2.91	0.00	0.001	0.03290	0.15	4.36
ROUGHER/SULPHIDE 90/10-13	0.00250	0.00250	0.050	0.000830	486.00	0.00250	0.00490	0.00210	0.02	0.00025	0.0050	10.80	3.67	0.00	0.001	0.03350	0.15	4.48
ROUGHER/SULPHIDE 90/10-14	0.00250	0.00250	0.050	0.000850	437.00	0.00250	0.00490	0.00140	0.02	0.00025	0.0050	11.20	3.24	0.00	0.001	0.02500	0.15	4.12
ROUGHER/SULPHIDE 90/10-15	0.00250	0.00250	0.050	0.000950	461.00	0.00250	0.00530	0.00130	0.02	0.00025	0.0050	11.30	3.80	0.00	0.001	0.02840	0.15	3.96
ROUGHER/SULPHIDE 90/10-16	0.00250	0.00250	0.050	0.000850	352.00	0.00250	0.00490	0.00540	0.02	0.00025	0.0050	8.32	2.91	0.00	0.001	0.02450	0.15	3.19
ROUGHER/SULPHIDE 90/10-17	0.00250	0.00250	0.050	0.000630	379.00	0.00250	0.00440	0.00050	0.02	0.00025	0.0050	9.39	3.11	0.00	0.000	0.02170	0.15	3.30
ROUGHER/SULPHIDE 90/10-18	0.00250	0.00250	0.050	0.000680	379.00	0.00250	0.00370	0.00050	0.02	0.00025	0.0050	8.76	2.74	0.00	0.001	0.01890	0.15	3.08
ROUGHER/SULPHIDE 90/10-19	0.00250	0.00250	0.050	0.000580	317.00	0.00250	0.00380	0.00110	0.02	0.00025	0.0050	7.45	2.93	0.00	0.001	0.01890	0.15	2.75
ROUGHER/SULPHIDE 90/10-20	0.00250	0.00250	0.050	0.000590	308.00	0.00250	0.00370	0.00120	0.02	0.00025	0.0050	6.62	2.95	0.00	0.001	0.01910	0.15	2.52
ROUGHER/SULPHIDE 90/10-21	0.00250	0.00250	0.050	0.000980	288.00	0.00250	0.00620	0.00050	0.02	0.00025	0.0050	8.49	3.70	0.00	0.000	0.02710	0.15	2.75
ROUGHER/SULPHIDE 90/10-22	0.00125	0.00125	0.050	0.000710	283.00	0.00125	0.00397	0.01170	0.02	0.00013	0.0050	6.15	2.79	0.00	0.000	0.01890	0.15	2.36
ROUGHER/SULPHIDE 90/10-23	0.00250	0.00250	0.050	0.000790	278.00	0.00250	0.00480	0.00050	0.02	0.00025	0.0050	6.63	3.12	0.00	0.001	0.02180	0.15	2.25
ROUGHER/SULPHIDE 90/10-24	0.00250	0.00250	0.050	0.001010	293.00	0.00250	0.00600	0.00120	0.02	0.00025	0.0050	8.68	3.86	0.00	0.000	0.02470	0.15	2.42
ROUGHER/SULPHIDE 90/10-25	0.00250	0.00250	0.050	0.000800	249.00	0.00250	0.00490	0.00170	0.02	0.00025	0.0050	8.07	3.17	0.00	0.000	0.01920	0.15	2.32
ROUGHER/SULPHIDE 90/10-26	0.00250	0.00250	0.050	0.000930	285.00	0.00250	0.00560	0.00050	0.02	0.00025	0.0050	7.73	3.61	0.00	0.000	0.02630	0.15	2.04
ROUGHER/SULPHIDE 90/10-27	0.00250	0.00250	0.050	0.000930	240.00	0.00250	0.00540	0.00050	0.02	0.00025	0.0050	7.32	3.15	0.00	0.000	0.02160	0.15	2.04
ROUGHER/SULPHIDE 90/10-28	0.00250	0.00250	0.050	0.000800	260.00	0.00250	0.00510	0.00050	0.02	0.00025	0.0050	8.65	3.39	0.00	0.000	0.02010	0.15	2.00
ROUGHER/SULPHIDE 90/10-29	0.00250	0.00250	0.050	0.000250	252.00	0.00250	0.00130	0.00050	0.02	0.00025	0.0050	1.57	0.73	0.00	0.000	0.00250	0.15	0.25
ROUGHER/SULPHIDE 90/10-30	0.00250	0.00250	0.050	0.001170	230.00	0.00250	0.00670	0.00120	0.02	0.00025	0.0050	8.37	3.77	0.00	0.000	0.02410	0.15	1.94
ROUGHER/SULPHIDE 90/10-31	0.00250	0.00250	0.050	0.001110	237.00	0.00250	0.00680	0.00110	0.02	0.00025	0.0050	7.99	3.68	0.00	0.000	0.02400	0.15	2.02
ROUGHER/SULPHIDE 90/10-32	0.00250	0.00250	0.050	0.001620	232.00	0.00250	0.00830	0.00170	0.02	0.00025	0.0050	8.08	3.61	0.00	0.000	0.02620	0.15	1.85
ROUGHER/SULPHIDE 90/10-33	0.00250	0.00250	0.050	0.001940	228.00	0.00250	0.00890	0.00230	0.02	0.00025	0.0050	8.19	3.74	0.00	0.000	0.02710	0.15	1.75
ROUGHER/SULPHIDE 90/10-34	0.00250	0.00250	0.050	0.001920	197.00	0.00250	0.00840	0.00240	0.02	0.00025	0.0050	6.88	2.98	0.00	0.000	0.02480	0.15	1.57
ROUGHER/SULPHIDE 90/10-35	0.00250	0.00250	0.050	0.002070	180.00	0.00250	0.00900	0.00600	0.02	0.00025	0.0050	6.97	2.94	0.00	0.000	0.02490	0.15	1.62
ROUGHER/SULPHIDE 90/10-36	0.00250	0.00250	0.050	0.002080	197.00	0.00250	0.00890	0.00610	0.02	0.00025	0.0050	6.66	2.98	0.00	0.000	0.02490	0.15	1.68
ROUGHER/SULPHIDE 90/10-37	0.00250	0.00250	0.050	0.002490	184.00	0.00250	0.00750	0.04990	0.02	0.00025	0.0050	5.20	2.42	0.00	0.000	0.02090	0.15	1.17

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals																	
Sample ID	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L
ROUGHER/SULPHIDE 90/10-38	0.00250	0.00250	0.050	0.003160	184.00	0.00250	0.00920	0.09430	0.02	0.00025	0.0050	6.18	2.91	0.00	0.000	0.02650	0.15	1.39
ROUGHER/SULPHIDE 90/10-39	0.00250	0.00250	0.050	0.003840	176.00	0.00250	0.01050	0.21200	0.02	0.00025	0.0050	6.40	2.89	0.00	0.000	0.03030	0.15	1.48
ROUGHER/SULPHIDE 90/10-40	0.00250	0.00250	0.050	0.002290	168.00	0.00250	0.00630	0.15400	0.02	0.00025	0.0050	5.85	2.39	0.00	0.000	0.01840	0.15	1.32
ROUGHER/SULPHIDE 90/10-41	0.00250	0.00250	0.050	0.002320	179.00	0.00250	0.00690	0.17700	0.02	0.00025	0.0130	5.69	2.46	0.00	0.000	0.01930	0.15	1.23
ROUGHER/SULPHIDE 90/10-42	0.00250	0.00250	0.050	0.003720	179.00	0.00250	0.00990	0.27100	0.02	0.00025	0.0140	6.84	2.60	0.00	0.000	0.02810	0.15	1.33
ROUGHER/SULPHIDE 90/10-43	0.00250	0.00250	0.050	0.003180	181.00	0.00250	0.00820	0.08210	0.07	0.00025	0.0050	5.85	2.69	0.00	0.000	0.02250	0.15	1.05
ROUGHER/SULPHIDE 90/10-44	0.00250	0.00250	0.050	0.002520	162.00	0.00250	0.00680	0.25000	0.08	0.00025	0.0050	5.75	2.17	0.00	0.000	0.01890	0.15	1.12
ROUGHER/SULPHIDE 90/10-45	0.00250	0.00250	0.050	0.002260	187.00	0.00250	0.00690	0.20800	0.02	0.00025	0.0050	6.94	2.66	0.00	0.000	0.01930	0.15	1.17
ROUGHER/SULPHIDE 90/10-46	0.00250	0.00250	0.050	0.001520	164.00	0.00250	0.00550	0.03560	0.02	0.00025	0.0050	7.33	2.45	0.00	0.000	0.01540	0.15	1.07
ROUGHER/SULPHIDE 90/10-47	0.00250	0.00250	0.050	0.002080	178.00	0.00250	0.00760	0.19300	0.02	0.00025	0.0050	8.62	2.65	0.00	0.000	0.02020	0.15	1.12
ROUGHER/SULPHIDE 90/10-48	0.00250	0.00250	0.050	0.001050	151.00	0.00250	0.00410	0.02170	0.02	0.00025	0.0050	6.88	2.29	0.00	0.000	0.01020	0.15	1.05
ROUGHER/SULPHIDE 90/10-49	0.00250	0.00250	0.050	0.001310	153.00	0.00250	0.00510	0.02870	0.02	0.00025	0.0050	6.50	2.37	0.00	0.000	0.01160	0.15	0.88
ROUGHER/SULPHIDE 90/10-50	0.00250	0.00250	0.050	0.001370	155.00	0.00250	0.00540	0.12300	0.02	0.00025	0.0050	5.58	1.69	0.00	0.000	0.01110	0.15	1.05
ROUGHER/SULPHIDE 90/10-51	0.00250	0.00250	0.050	0.000920	170.00	0.00250	0.00380	0.02840	0.02	0.00025	0.0050	8.32	2.64	0.00	0.000	0.00840	0.15	1.10
ROUGHER/SULPHIDE 90/10-52	0.00025	0.00025	0.005	0.000913	152.00	0.00025	0.00383	0.03870	0.02	0.00003	0.0025	8.35	2.90	0.00	0.000	0.00913	0.15	0.99
ROUGHER/SULPHIDE 90/10-53	0.00025	0.00025	0.005	0.001160	157.00	0.00025	0.00524	0.06010	0.02	0.00005	0.0025	10.30	3.23	0.00	0.000	0.01200	0.15	1.05
ROUGHER/SULPHIDE 90/10-54	0.00025	0.00025	0.005	0.001200	155.00	0.00025	0.00573	0.07470	0.02	0.00003	0.0025	10.80	3.17	0.00	0.000	0.01250	0.15	1.00
ROUGHER/SULPHIDE 90/10-55	0.00025	0.00025	0.005	0.001000	144.00	0.00025	0.00449	0.06600	0.02	0.00003	0.0025	10.90	3.00	0.00	0.000	0.00994	0.15	1.03
ROUGHER/SULPHIDE 90/10-56	0.00025	0.00025	0.005	0.001120	146.00	0.00025	0.00540	0.11300	0.02	0.00003	0.0025	10.60	3.18	0.00	0.000	0.01100	0.15	0.94
ROUGHER/SULPHIDE 90/10-57	0.00025	0.00025	0.005	0.001060	139.00	0.00025	0.00486	0.07070	0.02	0.00003	0.0025	10.70	3.21	0.00	0.000	0.01000	0.15	0.96
ROUGHER/SULPHIDE 90/10-58	0.00025	0.00025	0.005	0.001070	139.00	0.00025	0.00485	0.06400	0.02	0.00003	0.0025	9.67	2.91	0.00	0.000	0.00987	0.15	0.90
ROUGHER/SULPHIDE 90/10-59	0.00025	0.00025	0.005	0.001050	135.00	0.00025	0.00505	0.07530	0.02	0.00003	0.0025	10.30	3.10	0.00	0.000	0.00997	0.15	0.91
ROUGHER/SULPHIDE 90/10-60	0.00025	0.00025	0.005	0.001190	157.00	0.00025	0.00556	0.08040	0.02	0.00003	0.0025	12.20	3.47	0.00	0.000	0.01160	0.15	0.96
ROUGHER/SULPHIDE 90/10-61	0.00025	0.00025	0.005	0.000967	148.00	0.00025	0.00445	0.04620	0.02	0.00003	0.0025	10.90	3.09	0.00	0.000	0.00878	0.15	0.89
ROUGHER/SULPHIDE 90/10-62	0.00025	0.00025	0.005	0.000964	131.00	0.00025	0.00477	0.05940	0.02	0.00003	0.0025	10.60	3.12	0.00	0.000	0.00972	0.15	0.89
ROUGHER/SULPHIDE 90/10-63	0.00025	0.00025	0.005	0.001110	154.00	0.00025	0.00543	0.06170	0.02	0.00003	0.0025	12.70	3.87	0.00	0.000	0.01140	0.15	0.92
ROUGHER/SULPHIDE 90/10-64	0.00025	0.00025	0.005	0.000975	143.00	0.00025	0.00492	0.05080	0.02	0.00003	0.0025	12.40	3.73	0.00	0.000	0.00989	0.15	0.95
ROUGHER/SULPHIDE 90/10-65	0.00025	0.00025	0.005	0.001100	139.00	0.00025	0.00482	0.04030	0.02	0.00003	0.0025	11.90	3.96	0.00	0.000	0.01160	0.15	0.86
ROUGHER/SULPHIDE 90/10-66	0.00025	0.00025	0.005	0.000980	116.00	0.00025	0.00512	0.07070	0.02	0.00003	0.0025	9.94	3.08	0.00	0.000	0.01090	0.15	0.83
ROUGHER/SULPHIDE 90/10-67	0.00025	0.00025	0.005	0.000756	136.00	0.00025	0.00335	0.02680	0.02	0.00003	0.0025	10.90	3.18	0.00	0.000	0.00763	0.15	0.80
ROUGHER/SULPHIDE 90/10-68	0.00025	0.00025	0.005	0.000849	123.00	0.00025	0.00400	0.02800	0.02	0.00003	0.0025	10.80	3.31	0.00	0.000	0.00837	0.15	0.80
ROUGHER/SULPHIDE 90/10-69	0.00025	0.00025	0.005	0.000877	116.00	0.00025	0.00437	0.04130	0.02	0.00003	0.0025	9.90	3.14	0.00	0.000	0.00893	0.15	0.74
ROUGHER/SULPHIDE 90/10-70	0.00025	0.00025	0.005	0.001030	118.00	0.00025	0.00534	0.07780	0.02	0.00003	0.0025	11.00	3.32	0.00	0.000	0.01030	0.15	0.77
ROUGHER/SULPHIDE 90/10-71	0.00025	0.00025	0.005	0.000928	123.00	0.00025	0.00465	0.04850	0.02	0.00003	0.0025	11.40	3.60	0.00	0.000	0.00929	0.15	0.78
ROUGHER/SULPHIDE 90/10-72	0.00025	0.00025	0.005	0.000840	119.00	0.00025	0.00405	0.01700	0.02	0.00003	0.0025	10.60	3.62	0.00	0.000	0.00894	0.15	0.74
ROUGHER/SULPHIDE 90/10-73	0.00025	0.00025	0.005	0.000917	124.00	0.00025	0.00410	0.02330	0.28	0.00007	0.0025	11.70	3.90	0.00	0.000	0.00970	0.15	0.76
ROUGHER/SULPHIDE 90/10-74	0.00025	0.00025	0.005	0.000784	108.00	0.00025	0.00413	0.03120	0.02	0.00003	0.0025	9.97	3.14	0.00	0.000	0.00765	0.15	0.75
ROUGHER/SULPHIDE 90/10-75	0.00025	0.00025	0.005	0.000870	113.00	0.00025	0.00446	0.05035	0.02	0.00003	0.0025	11.04	3.48	0.00	0.000	0.00830	0.15	0.74
ROUGHER/SULPHIDE 90/10-76	0.00025	0.00025	0.005	0.000956	118.00	0.00025	0.00479	0.06950	0.02	0.00003	0.0025	12.10	3.82	0.00	0.000	0.00895	0.15	0.73
ROUGHER/SULPHIDE 90/10-77	0.00025	0.00025	0.005	0.000904	121.50	0.00025	0.00439	0.04185	0.02	0.00003	0.0025	13.60	4.10	0.00	0.000	0.00904	0.15	0.74
ROUGHER/SULPHIDE 90/10-78	0.00025	0.00025	0.005	0.000851	125.00	0.00025	0.00398	0.01420	0.02	0.00003	0.0025	15.10	4.38	0.00	0.000	0.00913	0.15	0.75
ROUGHER/SULPHIDE 90/10-79	0.00025	0.00025	0.005	0.000904	113.50	0.00025	0.00444	0.02120	0.02	0.00003	0.0025	14.80	4.19	0.00	0.000	0.00916	0.15	0.73
ROUGHER/SULPHIDE 90/10-80	0.00025	0.00025	0.005	0.000956	102.00	0.00025	0.00489	0.02820	0.02	0.00003	0.0025	14.50	3.99	0.00	0.000	0.00918	0.15	0.71
ROUGHER/SULPHIDE 90/10-81	0.00025	0.00025	0.005	0.000913	111.00	0.00025	0.00464	0.03865	0.02	0.00003	0.0025	15.45	4.13	0.00	0.000	0.00893	0.15	0.72
ROUGHER/SULPHIDE 90/10-82	0.00025	0.00025	0.005	0.000870	120.00	0.00025	0.00439	0.04910	0.02	0.00003	0.0025	16.40	4.26	0.00	0.000	0.00867	0.15	0.73
ROUGHER/SULPHIDE 90/10-83	0.00025	0.00025	0.005	0.000928	105.35	0.00025	0.00451	0.04630	0.02	0.00003	0.0025	16.55	4.48	0.00	0.000	0.00876	0.15	0.72
ROUGHER/SULPHIDE 90/10-84	0.00025	0.00025	0.005	0.000985	90.70	0.00025	0.00463	0.04350	0.02	0.00003	0.0025	16.70	4.70	0.00	0.000	0.00884	0.15	0.72
ROUGHER/SULPHIDE 90/10-85	0.00025	0.00025	0.005	0.000893	88.00	0.00025	0.00433	0.03610	0.02	0.00003	0.0025	16.60	4.48	0.00	0.000	0.00828	0.15	0.70
ROUGHER/SULPHIDE 90/10-86	0.00025	0.00025	0.005	0.000801	85.30	0.00025	0.00402	0.02870	0.02	0.00003	0.0025	16.50	4.26	0.00	0.000	0.00772	0.15	0.69
ROUGHER/SULPHIDE 90/10-87	0.00015	0.00025	0.005	0.000793	83.75	0.00025	0.00391	0.03315	0.02	0.00003	0.0017	17.20	4.31	0.00	0.000	0.00752	0.15	0.68
ROUGHER/SULPHIDE 90/10-88	0.00005	0.00025	0.005	0.000784	82.20	0.00025	0.00380	0.03760	0.02	0.00003	0.0009	17.90	4.35	0.00	0.000	0.00731	0.15	0.66
ROUGHER/SULPHIDE 90/10-89	0.00005	0.00025	0.005	0.000769	83.25	0.00025	0.00399	0.03510	0.02	0.00003	0.0009	19.25	4.59	0.00	0.000	0.00758	0.15	0.67
ROUGHER/SULPHIDE 90/10-90	0.00005	0.00025	0.005	0.000753	84.30	0.00025	0.00418	0.03260	0.02	0.00003	0.0009	20.60	4.83	0.00	0.000	0.00785	0.15	0.69
ROUGHER/SULPHIDE 90/10-91	0.00005	0.00025	0.005	0.000798	80.15	0.00025	0.00435	0.07180	0.02	0.00003	0.0009	20.20	4.71	0.00	0.000	0.00809	0.15	0.66
ROUGHER/SULPHIDE 90/10-92	0.00005	0.00025	0.005	0.000842	76.00	0.00025	0.00452	0.11100	0.02	0.00003	0.0009	19.80	4.59	0.00	0.000	0.00833	0.15	0.62
ROUGHER/SULPHIDE 90/10-93	0.00005	0.00025	0.005	0.001056	75.65	0.00025	0.00595	0.35900	0.13	0.00003	0.0011	20.15	4.91	0.00	0.000	0.01082	0.15	0.66
ROUGHER/SULPHIDE 90/10-94	0.00005	0.00025	0.005	0.001270	75.30	0.00025	0.00737	0.60700	0.25	0.00003	0.0014	20.50	5.23	0.00	0.000	0.01330	0.15	0.69
ROUGHER/SULPHIDE 90/10-95	0.00014	0.00025	0.005	0.001350	72.30	0.00137	0.00829	0.68700	1.32	0.00171	0.0014	21.20	5.38	0.00	0.000	0.01460	0.15	0.70

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals																	
Sample ID	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L
ROUGHER/SULPHIDE 90/10-96	0.00022	0.00025	0.005	0.001430	69.30	0.00248	0.00921	0.76700	2.38	0.00339	0.0014	21.90	5.52	0.00	0.000	0.01590	0.15	0.71
ROUGHER/SULPHIDE 90/10-97	0.00023	0.00025	0.005	0.001650	70.65	0.00478	0.01156	0.75900	4.29	0.00740	0.0018	23.00	5.97	0.00	0.000	0.01855	0.15	0.74
ROUGHER/SULPHIDE 90/10-98	0.00024	0.00025	0.005	0.001870	72.00	0.00707	0.01390	0.75100	6.19	0.01140	0.0021	24.10	6.41	0.00	0.000	0.02120	0.15	0.77
ROUGHER/SULPHIDE 90/10-99	0.00022	0.00025	0.005	0.002095	73.15	0.00756	0.01475	0.83650	5.72	0.01255	0.0019	24.60	6.22	0.00	0.000	0.02195	0.15	0.77
ROUGHER/SULPHIDE 90/10-100	0.00019	0.00025	0.005	0.002320	74.30	0.00805	0.01560	0.92200	5.24	0.01370	0.0017	25.10	6.02	0.00	0.000	0.02270	0.15	0.77
ROUGHER/SULPHIDE 90/10-101	0.00025	0.00025	0.005	0.002705	75.70	0.00829	0.01665	1.25100	6.23	0.01430	0.0020	26.60	6.56	0.00	0.000	0.02495	0.15	0.79
ROUGHER/SULPHIDE 90/10-102	0.00031	0.00025	0.005	0.003090	77.10	0.00852	0.01770	1.58000	7.22	0.01490	0.0023	28.10	7.09	0.00	0.000	0.02720	0.15	0.80
ROUGHER/SULPHIDE 90/10-103	0.00029	0.00025	0.005	0.003140	72.75	0.00818	0.01840	1.55500	6.83	0.01290	0.0021	27.40	7.08	0.00	0.000	0.02845	0.15	0.80
ROUGHER/SULPHIDE 90/10-104	0.00027	0.00025	0.005	0.003190	68.40	0.00783	0.01910	1.53000	6.44	0.01090	0.0018	26.70	7.07	0.00	0.000	0.02970	0.15	0.79
ROUGHER/SULPHIDE 90/10-105	0.00034	0.00025	0.005	0.003175	71.65	0.00907	0.02115	1.46500	9.07	0.01630	0.0021	27.50	7.15	0.00	0.000	0.03100	0.15	0.83
ROUGHER/SULPHIDE 90/10-106	0.00040	0.00025	0.005	0.003160	74.90	0.01030	0.02320	1.40000	11.70	0.02170	0.0025	28.30	7.23	0.00	0.000	0.03230	0.15	0.86
ROUGHER/SULPHIDE 90/10-107	0.00039	0.00025	0.005	0.003185	75.70	0.00880	0.02280	1.43000	10.64	0.01950	0.0022	28.25	7.35	0.00	0.000	0.03255	0.15	0.85
ROUGHER/SULPHIDE 90/10-108	0.00037	0.00025	0.005	0.003210	76.50	0.00729	0.02240	1.46000	9.57	0.01730	0.0019	28.20	7.47	0.00	0.000	0.03280	0.15	0.85
ROUGHER/SULPHIDE 90/10-109	0.00032	0.00025	0.005	0.002925	74.15	0.00654	0.02115	1.17050	8.27	0.01575	0.0026	28.90	7.80	0.00	0.000	0.03130	0.15	0.83
ROUGHER/SULPHIDE 90/10-110	0.00026	0.00025	0.005	0.002640	71.80	0.00579	0.01990	0.88100	6.96	0.01420	0.0034	29.60	8.13	0.00	0.000	0.02980	0.15	0.82
ROUGHER/SULPHIDE 90/10-111	0.00026	0.00025	0.005	0.002710	76.35	0.00617	0.02035	0.89950	6.92	0.01320	0.0031	29.20	7.92	0.00	0.000	0.03070	0.15	0.81
ROUGHER/SULPHIDE 90/10-112	0.00026	0.00025	0.005	0.002780	80.90	0.00654	0.02080	0.91800	6.88	0.01220	0.0028	28.80	7.70	0.00	0.000	0.03160	0.15	0.80
ROUGHER/SULPHIDE 90/10-113	0.00025	0.00025	0.005	0.002655	77.75	0.00613	0.02020	0.90200	7.29	0.01320	0.0027	29.35	8.07	0.00	0.000	0.03150	0.15	0.80
ROUGHER/SULPHIDE 90/10-114	0.00023	0.00025	0.005	0.002530	74.60	0.00571	0.01960	0.88600	7.69	0.01420	0.0026	29.90	8.44	0.00	0.000	0.03140	0.15	0.81
ROUGHER/SULPHIDE 90/10-115	0.00022	0.00025	0.005	0.002895	74.15	0.00638	0.02135	0.81800	8.24	0.01505	0.0025	28.10	8.41	0.00	0.000	0.03455	0.15	0.82
ROUGHER/SULPHIDE 90/10-116	0.00020	0.00025	0.005	0.003260	73.70	0.00704	0.02310	0.75000	8.79	0.01590	0.0024	26.30	8.38	0.00	0.000	0.03770	0.15	0.84
ROUGHER/SULPHIDE 90/10-117	0.00027	0.00025	0.005	0.004530	72.25	0.00833	0.02848	0.93500	9.99	0.01688	0.0025	25.93	8.78	0.00	0.000	0.05093	0.15	0.85
ROUGHER/SULPHIDE 90/10-118	0.00034	0.00025	0.005	0.005800	70.80	0.00962	0.03385	1.12000	11.20	0.01785	0.0026	25.55	9.19	0.00	0.000	0.06415	0.15	0.86
ROUGHER/SULPHIDE 90/10-119	0.00040	0.00025	0.005	0.007070	69.35	0.01091	0.03923	1.30500	12.40	0.01883	0.0027	25.18	9.59	0.00	0.000	0.07738	0.15	0.88
ROUGHER/SULPHIDE 90/10-120	0.00047	0.00025	0.005	0.008340	67.90	0.01220	0.04460	1.49000	13.60	0.01980	0.0029	24.80	9.99	0.00	0.000	0.09060	0.15	0.89
ROUGHER/SULPHIDE 90/10-121	0.00054	0.00031	0.006	0.012880	66.53	0.01250	0.06420	1.78250	14.90	0.02148	0.0038	24.25	10.92	0.00	0.000	0.14195	0.15	1.02
ROUGHER/SULPHIDE 90/10-122	0.00061	0.00038	0.008	0.017420	65.15	0.01280	0.08380	2.07500	16.20	0.02315	0.0047	23.70	11.85	0.00	0.000	0.19330	0.15	1.14
ROUGHER/SULPHIDE 90/10-123	0.00068	0.00044	0.009	0.021960	63.78	0.01310	0.10340	2.36750	17.50	0.02483	0.0056	23.15	12.77	0.00	0.000	0.24465	0.15	1.27
ROUGHER/SULPHIDE 90/10-124	0.00075	0.00050	0.010	0.026500	62.40	0.01340	0.12300	2.66000	18.80	0.02650	0.0065	22.60	13.70	0.00	0.000	0.29600	0.15	1.40
ROUGHER/SULPHIDE 90/10-125	0.00148	0.00050	0.010	0.040650	58.80	0.01160	0.14250	5.59500	16.85	0.02540	0.0071	20.23	12.66	0.00	0.000	0.37325	0.15	1.65
ROUGHER/SULPHIDE 90/10-126	0.00222	0.00050	0.010	0.054800	55.20	0.00980	0.16200	8.53000	14.90	0.02430	0.0077	17.85	11.62	0.00	0.000	0.45050	0.15	1.90
ROUGHER/SULPHIDE 90/10-127	0.00295	0.00050	0.010	0.068950	51.60	0.00800	0.18150	11.46500	12.95	0.02320	0.0083	15.48	10.57	0.00	0.000	0.52775	0.15	2.14
ROUGHER/SULPHIDE 90/10-128	0.00368	0.00050	0.010	0.083100	48.00	0.00620	0.20100	14.40000	11.00	0.02210	0.0089	13.10	9.53	0.00	0.000	0.60500	0.15	2.39
ROUGHER/SULPHIDE 90/10-129	0.00569	0.00100	0.020	0.083100	43.60	0.00833	0.18900	22.25000	14.38	0.02488	0.0093	11.87	8.22	0.00	0.000	0.58500	0.15	2.54
ROUGHER/SULPHIDE 90/10-130	0.00769	0.00150	0.030	0.083100	39.20	0.01045	0.17700	30.10000	17.75	0.02765	0.0098	10.65	6.90	0.00	0.000	0.56500	0.15	2.70
ROUGHER/SULPHIDE 90/10-131	0.00970	0.00200	0.040	0.083100	34.80	0.01258	0.16500	37.95000	21.13	0.03043	0.0102	9.42	5.59	0.00	0.000	0.54500	0.15	2.85
ROUGHER/SULPHIDE 90/10-132	0.01170	0.00250	0.050	0.083100	30.40	0.01470	0.15300	45.80000	24.50	0.03320	0.0106	8.19	4.27	0.00	0.000	0.52500	0.15	3.00
ROUGHER/SULPHIDE 90/10-133	0.01066	0.00219	0.044	0.074225	29.98	0.02030	0.13968	43.02500	31.60	0.03590	0.0123	8.15	3.75	0.00	0.000	0.47800	0.15	2.94
ROUGHER/SULPHIDE 90/10-134	0.00963	0.00188	0.038	0.065350	29.55	0.02590	0.12635	40.25000	38.70	0.03860	0.0140	8.12	3.24	0.00	0.000	0.43100	0.15	2.88
ROUGHER/SULPHIDE 90/10-135	0.00859	0.00156	0.031	0.056475	29.13	0.03150	0.11303	37.47500	45.80	0.04130	0.0156	8.08	2.72	0.00	0.000	0.38400	0.15	2.82
ROUGHER/SULPHIDE 90/10-136	0.00755	0.00125	0.025	0.047600	28.70	0.03710	0.09970	34.70000	52.90	0.04400	0.0173	8.04	2.20	0.00	0.000	0.33700	0.15	2.76
ROUGHER/SULPHIDE 90/10-137	0.00646	0.00106	0.021	0.042825	25.45	0.06358	0.10078	30.25000	70.18	0.05095	0.0173	8.45	2.14	0.00	0.000	0.31600	0.15	2.66
ROUGHER/SULPHIDE 90/10-138	0.00537	0.00088	0.018	0.038050	22.20	0.09005	0.10185	25.80000	87.45	0.05790	0.0173	8.87	2.07	0.00	0.000	0.29500	0.15	2.55
ROUGHER/SULPHIDE 90/10-139	0.00427	0.00069	0.014	0.033275	18.95	0.11653	0.10293	21.35000	104.73	0.06485	0.0173	9.28	2.01	0.00	0.000	0.27400	0.15	2.45
ROUGHER/SULPHIDE 90/10-140	0.00318	0.00050	0.010	0.028500	15.70	0.14300	0.10400	16.90000	122.00	0.07180	0.0173	9.69	1.94	0.00	0.000	0.25300	0.15	2.34
ROUGHER/SULPHIDE 90/10-141	0.00309	0.00050	0.010	0.026200	14.83	0.21100	0.12425	14.85000	196.25	0.10985	0.0211	11.44	2.06	0.00	0.000	0.25925	0.15	2.47
ROUGHER/SULPHIDE 90/10-142	0.00301	0.00050	0.010	0.023900	13.95	0.27900	0.14450	12.80000	270.50	0.14790	0.0249	13.20	2.17	0.00	0.000	0.26550	0.15	2.60
ROUGHER/SULPHIDE 90/10-143	0.00292	0.00050	0.010	0.021600	13.08	0.34700	0.16475	10.75000	344.75	0.18595	0.0287	14.95	2.29	0.00	0.000	0.27175	0.15	2.72
ROUGHER/SULPHIDE 90/10-144	0.00283	0.00050	0.010	0.019300	12.20	0.41500	0.18500	8.70000	419.00	0.22400	0.0325	16.70	2.40	0.00	0.000	0.27800	0.15	2.85
ROUGHER/SULPHIDE 90/10-145	0.00259	0.00050	0.010	0.016673	12.03	0.38975	0.18025	7.48250	417.00	0.22325	0.0316	16.45	2.37	0.00	0.000	0.26400	0.15	2.63
ROUGHER/SULPHIDE 90/10-146	0.00235	0.00050	0.010	0.014045	11.85	0.36450	0.17550	6.26500	415.00	0.22250	0.0306	16.20	2.34	0.00	0.000	0.25000	0.15	2.42
ROUGHER/SULPHIDE 90/10-147	0.00211	0.00050	0.010	0.011418	11.68	0.33925	0.17075	5.04750	413.00	0.22175	0.0297	15.95	2.31	0.00	0.000	0.23600	0.15	2.20
ROUGHER/SULPHIDE 90/10-148	0.00187	0.00050	0.010	0.008790	11.50	0.31400	0.16600	3.83000	411.00	0.22100	0.0287	15.70	2.28	0.00	0.000	0.22200	0.15	1.98
ROUGHER/SULPHIDE 90/10-149	0.00183	0.00050	0.010	0.008260	12.73	0.30175	0.16675	3.63500	408.75	0.21425	0.0302	16.58	2.30	0.00	0.000	0.21925	0.15	1.93
ROUGHER/SULPHIDE 90/10-150	0.00178	0.00050	0.010	0.007730	13.95	0.28950	0.16750	3.44000	406.50	0.20750	0.0318	17.45	2.32	0.00	0.000	0.21650	0.15	1.89
ROUGHER/SULPHIDE 90/10-151	0.00174	0.00050	0.010	0.007200	15.18	0.27725	0.16825	3.24500	404.25	0.20075	0.0333	18.33	2.34	0.00	0.000	0.21375	0.15	1.84
ROUGHER/SULPHIDE 90/10-152	0.00169	0.00050	0.010	0.006670	16.40	0.26500	0.16900	3.05000	402.00	0.19400	0.0348	19.20	2.36	0.00	0.000	0.21100	0.15	1.79
ROUGHER/SULPHIDE 90/10-153	0.00160	0.00050	0.010	0.006170	17.00	0.24550	0.16075	2.88500	376.00	0.17925	0.0347	19.10	2.29	0.00	0.000	0.19625	0.15	1.71

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals																	
Sample ID	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L
ROUGHER/SULPHIDE 90/10-154	0.00151	0.00050	0.010	0.005670	17.60	0.22600	0.15250	2.72000	350.00	0.16450	0.0346	19.00	2.21	0.00	0.000	0.18150	0.15	1.64
ROUGHER/SULPHIDE 90/10-155	0.00142	0.00050	0.010	0.005170	18.20	0.20650	0.14425	2.55500	324.00	0.14975	0.0344	18.90	2.14	0.00	0.000	0.16675	0.15	1.56
ROUGHER/SULPHIDE 90/10-156	0.00133	0.00050	0.010	0.004670	18.80	0.18700	0.13600	2.39000	298.00	0.13500	0.0343	18.80	2.06	0.00	0.000	0.15200	0.15	1.48
ROUGHER/SULPHIDE 90/10-157	0.00119	0.00050	0.010	0.004303	18.65	0.17100	0.12800	2.21000	278.00	0.11685	0.0316	18.05	1.91	0.00	0.000	0.14000	0.15	1.36
ROUGHER/SULPHIDE 90/10-158	0.00105	0.00050	0.010	0.003935	18.50	0.15500	0.12000	2.03000	258.00	0.09870	0.0289	17.30	1.77	0.00	0.000	0.12800	0.15	1.24
ROUGHER/SULPHIDE 90/10-159	0.00090	0.00050	0.010	0.003568	18.35	0.13900	0.11200	1.85000	238.00	0.08055	0.0261	16.55	1.62	0.00	0.000	0.11600	0.15	1.12
ROUGHER/SULPHIDE 90/10-160	0.00076	0.00050	0.010	0.003200	18.20	0.12300	0.10400	1.67000	218.00	0.06240	0.0234	15.80	1.47	0.00	0.000	0.10400	0.15	1.00
	0.00769	0.00150	0.030	0.083100	39.20	0.01045	0.17700	30.10000	17.75	0.02765	0.0098	10.65	6.90	0.00	0.000	0.56500	0.15	2.70
ROUGHER FINE-0	0.00250	0.00250	0.050	0.000250	535.13	0.00250	0.00050	0.00532	0.02	0.00025	0.0150	13.12	0.14	0.00	0.014	0.00250	0.15	34.81
ROUGHER FINE-1	0.00250	0.00250	0.050	0.000250	571.13	0.00250	0.00050	0.00302	0.02	0.00025	0.0140	11.22	0.14	0.00	0.011	0.00250	0.15	24.01
ROUGHER FINE-2	0.00250	0.00250	0.050	0.000250	590.13	0.00250	0.00050	0.00182	0.02	0.00025	0.0120	10.72	0.16	0.00	0.011	0.00250	0.15	20.01
ROUGHER FINE-3	0.00250	0.00250	0.050	0.000250	586.13	0.00250	0.00050	0.00142	0.02	0.00025	0.0160	9.57	0.16	0.00	0.010	0.00250	0.15	15.41
ROUGHER FINE-4	0.00250	0.00250	0.050	0.000250	580.13	0.00250	0.00050	0.00162	0.02	0.00025	0.0580	8.16	0.17	0.00	0.008	0.00250	0.15	12.11
ROUGHER FINE-5	0.00250	0.00250	0.050	0.000250	596.13	0.00250	0.00050	0.00122	0.02	0.00025	0.0050	7.40	0.20	0.00	0.007	0.00250	0.15	9.93
ROUGHER FINE-6	0.00250	0.00250	0.050	0.000250	571.13	0.00250	0.00050	0.00102	0.02	0.00025	0.0050	6.36	0.20	0.00	0.006	0.00250	0.15	7.95
ROUGHER FINE-7	0.00250	0.00250	0.050	0.000250	549.13	0.00250	0.00050	0.00182	0.02	0.00025	0.0050	6.31	0.22	0.00	0.006	0.00250	0.15	7.54
ROUGHER FINE-8	0.00250	0.00250	0.050	0.000250	511.13	0.00250	0.00050	0.00192	0.02	0.00025	0.0050	5.39	0.22	0.00	0.005	0.00250	0.15	6.25
ROUGHER FINE-9	0.00250	0.00250	0.050	0.000250	509.13	0.00250	0.00050	0.00192	0.02	0.00025	0.0050	5.41	0.25	0.00	0.004	0.00250	0.15	5.54
ROUGHER FINE-10	0.00250	0.00250	0.050	0.000250	471.13	0.00250	0.00050	0.00192	0.02	0.00025	0.0050	5.63	0.30	0.00	0.004	0.00250	0.15	5.54
ROUGHER FINE-11	0.00250	0.00250	0.050	0.000250	499.13	0.00250	0.00050	0.00202	0.02	0.00025	0.0050	5.68	0.34	0.00	0.004	0.00250	0.15	5.74
ROUGHER FINE-12	0.00250	0.00250	0.050	0.000250	442.13	0.00250	0.00050	0.00332	0.02	0.00025	0.0050	5.08	0.28	0.00	0.004	0.00250	0.15	4.96
ROUGHER FINE-13	0.00250	0.00250	0.050	0.000250	428.13	0.00250	0.00050	0.00212	0.02	0.00025	0.0050	5.34	0.29	0.00	0.004	0.00250	0.15	4.85
ROUGHER FINE-14	0.00250	0.00250	0.050	0.000250	383.13	0.00250	0.00050	0.00202	0.02	0.00025	0.0050	5.11	0.26	0.00	0.005	0.00250	0.15	4.31
ROUGHER FINE-15	0.00250	0.00250	0.050	0.000250	352.13	0.00250	0.00050	0.00182	0.02	0.00025	0.0050	5.27	0.24	0.00	0.006	0.00250	0.15	4.08
ROUGHER FINE-16	0.00250	0.00250	0.050	0.000250	275.13	0.00250	0.00050	0.00322	0.02	0.00025	0.0050	4.61	0.21	0.00	0.006	0.00250	0.15	3.40
ROUGHER FINE-17	0.00250	0.00250	0.050	0.000250	251.13	0.00250	0.00050	0.00192	0.02	0.00025	0.0050	4.84	0.18	0.00	0.006	0.00250	0.15	3.17
ROUGHER FINE-18	0.00250	0.00250	0.050	0.000250	221.13	0.00250	0.00050	0.00132	0.02	0.00025	0.0050	4.57	0.16	0.00	0.007	0.00250	0.15	2.89
ROUGHER FINE-19	0.00250	0.00250	0.050	0.000250	159.13	0.00250	0.00050	0.00162	0.02	0.00025	0.0050	4.18	0.13	0.00	0.007	0.00250	0.15	2.48
ROUGHER FINE-20	0.00250	0.00250	0.050	0.000250	139.13	0.00250	0.00050	0.00172	0.02	0.00025	0.0050	4.25	0.11	0.00	0.007	0.00250	0.15	2.37
ROUGHER FINE-21	0.00250	0.00250	0.050	0.000250	99.23	0.00250	0.00050	0.00142	0.02	0.00025	0.0050	3.82	0.07	0.00	0.007	0.00250	0.15	1.99
ROUGHER FINE-22	0.00025	0.00025	0.050	0.000025	60.63	0.00025	0.00005	0.00133	0.02	0.00003	0.0050	2.81	0.03	0.00	0.007	0.00025	0.15	1.85
ROUGHER FINE-23	0.00250	0.00250	0.050	0.000250	51.13	0.00250	0.00050	0.00132	0.02	0.00025	0.0050	3.19	0.02	0.00	0.006	0.00250	0.15	1.80
ROUGHER FINE-24	0.00250	0.00250	0.050	0.000250	47.73	0.00250	0.00050	0.00142	0.02	0.00025	0.0050	4.00	0.01	0.00	0.006	0.00250	0.15	1.89
ROUGHER FINE-25	0.00250	0.00250	0.050	0.000250	40.53	0.00250	0.00050	0.00122	0.02	0.00025	0.0050	3.65	0.00	0.00	0.007	0.00250	0.15	1.76
ROUGHER FINE-26	0.00250	0.00250	0.050	0.000250	41.93	0.00250	0.00050	0.00112	0.02	0.00025	0.0050	3.75	0.00	0.00	0.008	0.00250	0.15	1.65
ROUGHER FINE-27	0.00025	0.00025	0.050	0.000025	30.63	0.00025	0.00005	0.00132	0.02	0.00003	0.0050	3.61	0.00	0.00	0.009	0.00025	0.15	1.72
ROUGHER FINE-28	0.00250	0.00250	0.050	0.000250	30.83	0.00250	0.00050	0.00052	0.02	0.00025	0.0050	3.72	0.00	0.00	0.009	0.00250	0.15	1.68
ROUGHER FINE-29	0.00250	0.00250	0.050	0.000250	27.03	0.00250	0.00050	0.00102	0.02	0.00025	0.0050	3.72	0.01	0.00	0.010	0.00250	0.15	1.59
ROUGHER FINE-30	0.00250	0.00250	0.050	0.000250	22.93	0.00250	0.00050	0.00142	0.02	0.00025	0.0050	3.56	0.01	0.00	0.009	0.00250	0.15	1.60
ROUGHER FINE-31	0.00250	0.00250	0.050	0.000250	21.83	0.00250	0.00050	0.00112	0.02	0.00025	0.0050	3.24	0.01	0.00	0.009	0.00250	0.15	1.53
ROUGHER FINE-32	0.00250	0.00250	0.050	0.000250	23.43	0.00250	0.00050	0.00102	0.02	0.00025	0.0050	3.79	0.00	0.00	0.012	0.00250	0.15	1.55
ROUGHER FINE-33	0.00250	0.00250	0.050	0.000250	21.83	0.00250	0.00050	0.00142	0.03	0.00025	0.0050	3.67	0.00	0.00	0.012	0.00250	0.15	1.56
ROUGHER FINE-34	0.00250	0.00250	0.050	0.000250	19.83	0.00250	0.00050	0.00102	0.02	0.00025	0.0050	2.99	0.01	0.00	0.009	0.00250	0.15	1.36
ROUGHER FINE-35	0.00250	0.00250	0.050	0.000250	20.13	0.00250	0.00050	0.00122	0.02	0.00025	0.0050	3.33	0.01	0.00	0.011	0.00250	0.15	1.40
ROUGHER FINE-36	0.00250	0.00250	0.050	0.000250	19.23	0.00250	0.00050	0.00102	0.02	0.00025	0.0050	3.09	0.01	0.00	0.010	0.00250	0.15	1.42
ROUGHER FINE-37	0.00250	0.00250	0.050	0.000250	19.23	0.00250	0.00050	0.00142	0.02	0.00025	0.0050	3.05	0.01	0.00	0.009	0.00250	0.15	1.26
ROUGHER FINE-38	0.00250	0.00250	0.050	0.000250	19.03	0.00250	0.00050	0.00122	0.02	0.00025	0.0050	3.04	0.01	0.00	0.010	0.00250	0.15	1.38
ROUGHER FINE-39	0.00250	0.00250	0.050	0.000250	19.43	0.00250	0.00050	0.00122	0.02	0.00025	0.0050	3.41	0.01	0.00	0.013	0.00250	0.15	1.45
ROUGHER FINE-40	0.00250	0.00250	0.050	0.000250	18.33	0.00250	0.00050	0.00122	0.02	0.00025	0.0050	3.26	0.00	0.00	0.010	0.00250	0.15	1.36
ROUGHER FINE-41	0.00250	0.00250	0.050	0.000250	18.43	0.00250	0.00050	0.00132	0.02	0.00025	0.0050	2.90	0.01	0.00	0.009	0.00250	0.15	1.29
ROUGHER FINE-42	0.00250	0.00250	0.050	0.000250	19.53	0.00250	0.00050	0.00292	0.02	0.00025	0.0050	3.46	0.00	0.00	0.010	0.00250	0.15	1.30
ROUGHER FINE-43	0.00250	0.00250	0.050	0.000250	18.23	0.00250	0.00050	0.00122	0.02	0.00025	0.0050	3.13	0.01	0.00	0.017	0.00250	0.15	1.16
ROUGHER FINE-44	0.00250	0.00250	0.050	0.000250	17.73	0.00250	0.00050	0.00112	0.02	0.00025	0.0050	3.10	0.00	0.00	0.011	0.00250	0.15	1.19
ROUGHER FINE-45	0.00250	0.00250	0.050	0.000250	18.83	0.00250	0.00050	0.00142	0.02	0.00025	0.0050	3.32	0.00	0.00	0.012	0.00250	0.15	1.25
ROUGHER FINE-46	0.00250	0.00250	0.050	0.000250	17.23	0.00250	0.00050	0.00132	0.02	0.00025	0.0050	2.95	0.01	0.00	0.009	0.00250	0.15	1.07
ROUGHER FINE-47	0.00250	0.00250	0.050	0.000250	18.23	0.00250	0.00050	0.00179	0.02	0.00025	0.0050	3.98	0.00	0.00	0.016	0.00250	0.15	1.20
ROUGHER FINE-48	0.00250	0.00250	0.050	0.000250	16.83	0.00250	0.00050	0.00182	0.02	0.00025	0.0050	3.15	0.01	0.00	0.010	0.00250	0.15	1.08

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals																	
Sample ID	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L
ROUGHER FINE-49	0.00250	0.00250	0.050	0.000250	18.13	0.00250	0.00050	0.00142	0.04	0.00025	0.0050	3.23	0.00	0.00	0.016	0.00250	0.15	1.00
ROUGHER FINE-50	0.00250	0.00250	0.050	0.000250	17.23	0.00250	0.00050	0.00122	0.02	0.00025	0.0050	2.66	0.01	0.00	0.013	0.00250	0.15	1.04
ROUGHER FINE-51	0.00250	0.00250	0.050	0.000250	18.83	0.00250	0.00050	0.00122	0.05	0.00025	0.0050	3.38	0.00	0.00	0.011	0.00250	0.15	1.04
ROUGHER FINE-52	0.00025	0.00025	0.005	0.000005	17.13	0.00025	0.00005	0.00316	0.02	0.00003	0.0025	3.22	0.01	0.00	0.010	0.00025	0.15	0.98
ROUGHER FINE-53	0.00025	0.00025	0.005	0.000005	16.83	0.00025	0.00005	0.00118	0.02	0.00003	0.0025	3.48	0.01	0.00	0.015	0.00025	0.15	1.04
ROUGHER FINE-54	0.00025	0.00025	0.005	0.000005	17.33	0.00025	0.00005	0.00114	0.02	0.00003	0.0025	3.52	0.01	0.00	0.012	0.00025	0.15	1.00
ROUGHER FINE-55	0.00025	0.00025	0.005	0.000011	16.73	0.00025	0.00005	0.00382	0.02	0.00003	0.0025	3.38	0.00	0.00	0.010	0.00025	0.15	0.96
ROUGHER FINE-56	0.00025	0.00025	0.005	0.000005	17.83	0.00025	0.00005	0.00157	0.02	0.00003	0.0025	3.65	0.00	0.00	0.011	0.00025	0.15	0.91
ROUGHER FINE-57	0.00025	0.00025	0.005	0.000005	17.73	0.00025	0.00005	0.00154	0.02	0.00003	0.0025	3.55	0.00	0.00	0.011	0.00025	0.15	0.94
ROUGHER FINE-58	0.00025	0.00025	0.005	0.000005	17.03	0.00025	0.00005	0.00117	0.02	0.00003	0.0025	3.11	0.00	0.00	0.010	0.00025	0.15	0.91
ROUGHER FINE-59	0.00025	0.00025	0.005	0.000005	17.63	0.00025	0.00005	0.00124	0.03	0.00009	0.0025	3.32	0.01	0.00	0.012	0.00025	0.15	0.91
ROUGHER FINE-60	0.00025	0.00025	0.005	0.000005	18.13	0.00025	0.00005	0.00153	0.02	0.00006	0.0025	3.45	0.00	0.00	0.012	0.00025	0.15	0.90
ROUGHER FINE-61	0.00025	0.00025	0.005	0.000005	18.33	0.00025	0.00005	0.00129	0.02	0.00003	0.0025	3.74	0.00	0.00	0.017	0.00025	0.15	1.00
ROUGHER FINE-62	0.00025	0.00025	0.005	0.000005	16.93	0.00025	0.00005	0.00099	0.02	0.00003	0.0025	3.15	0.00	0.00	0.011	0.00025	0.15	0.94
ROUGHER FINE-63	0.00025	0.00025	0.005	0.000005	17.73	0.00025	0.00005	0.00120	0.02	0.00003	0.0025	3.18	0.00	0.00	0.012	0.00025	0.15	0.90
ROUGHER FINE-64	0.00025	0.00025	0.005	0.000005	17.23	0.00025	0.00005	0.00099	0.02	0.00003	0.0025	3.22	0.00	0.00	0.011	0.00025	0.15	0.93
ROUGHER FINE-65	0.00025	0.00025	0.005	0.000005	17.63	0.00025	0.00005	0.00131	0.08	0.00003	0.0025	3.10	0.00	0.00	0.011	0.00025	0.15	0.87
ROUGHER FINE-66	0.00025	0.00025	0.005	0.000005	16.13	0.00025	0.00005	0.00115	0.02	0.00003	0.0025	3.00	0.00	0.00	0.012	0.00025	0.15	0.86
ROUGHER FINE-67	0.00025	0.00025	0.005	0.000005	16.63	0.00025	0.00005	0.00119	0.02	0.00003	0.0025	2.96	0.01	0.00	0.010	0.00025	0.15	0.82
ROUGHER FINE-68	0.00025	0.00025	0.005	0.000005	16.83	0.00025	0.00005	0.00098	0.02	0.00003	0.0025	2.89	0.00	0.00	0.010	0.00025	0.15	0.79
ROUGHER FINE-69	0.00025	0.00025	0.005	0.000005	16.43	0.00025	0.00005	0.00102	0.02	0.00003	0.0025	2.69	0.01	0.00	0.011	0.00025	0.15	0.74
ROUGHER FINE-70	0.00025	0.00025	0.005	0.000005	17.13	0.00025	0.00005	0.00113	0.02	0.00003	0.0025	2.94	0.00	0.00	0.013	0.00025	0.15	0.79
ROUGHER FINE-71	0.00025	0.00025	0.005	0.000005	16.83	0.00025	0.00005	0.00116	0.02	0.00003	0.0025	2.92	0.00	0.00	0.013	0.00025	0.15	0.80
ROUGHER FINE-72	0.00025	0.00025	0.005	0.000005	16.63	0.00025	0.00005	0.00109	0.02	0.00003	0.0025	3.18	0.00	0.00	0.011	0.00025	0.15	0.85
ROUGHER FINE-73	0.00025	0.00025	0.005	0.000005	15.93	0.00025	0.00005	0.00106	0.02	0.00003	0.0025	2.69	0.00	0.00	0.012	0.00025	0.15	0.71
ROUGHER FINE-74	0.00025	0.00025	0.005	0.000005	17.03	0.00025	0.00005	0.00133	0.02	0.00003	0.0025	2.95	0.01	0.00	0.013	0.00025	0.15	0.77
	0.00025	0.00025	0.005	0.000005	16.71	0.00025	0.00005	0.00116	0.02	0.00003	0.0025	2.93	0.00	0.00	0.012	0.00025	0.15	0.78
ROUGHER COARSE-0	0.00250	0.00250	0.050	0.000250	588.10	0.00250	0.00050	0.00613	0.02	0.00025	0.0190	11.91	0.35	0.00	0.011	0.02310	0.15	38.11
ROUGHER COARSE-1	0.00250	0.00250	0.050	0.000250	587.10	0.00250	0.00050	0.00383	0.02	0.00025	0.0130	6.22	0.28	0.00	0.007	0.01460	0.15	20.31
ROUGHER COARSE-2	0.00250	0.00250	0.050	0.000250	389.10	0.00250	0.00050	0.00233	0.02	0.00025	0.0050	3.86	0.22	0.00	0.006	0.01000	0.15	13.01
ROUGHER COARSE-3	0.00250	0.00250	0.050	0.000250	320.10	0.00250	0.00050	0.00183	0.02	0.00025	0.0050	2.86	0.19	0.00	0.005	0.00730	0.15	8.38
ROUGHER COARSE-4	0.00250	0.00250	0.050	0.000250	322.10	0.00250	0.00050	0.00183	0.02	0.00025	0.0330	2.60	0.20	0.00	0.004	0.00630	0.15	6.63
ROUGHER COARSE-5	0.00250	0.00250	0.050	0.000250	291.10	0.00250	0.00050	0.00173	0.02	0.00025	0.0050	2.36	0.24	0.00	0.003	0.00710	0.15	5.36
ROUGHER COARSE-6	0.00250	0.00250	0.050	0.000250	285.10	0.00250	0.00050	0.00153	0.02	0.00025	0.0050	2.42	0.25	0.00	0.005	0.00530	0.15	4.18
ROUGHER COARSE-7	0.00250	0.00250	0.050	0.000250	251.10	0.00250	0.00050	0.00173	0.02	0.00025	0.0050	2.61	0.27	0.00	0.007	0.00520	0.15	4.11
ROUGHER COARSE-8	0.00250	0.00250	0.050	0.000250	217.10	0.00250	0.00050	0.00183	0.02	0.00025	0.0050	2.17	0.24	0.00	0.007	0.00250	0.15	3.17
ROUGHER COARSE-9	0.00250	0.00250	0.050	0.000250	210.10	0.00250	0.00050	0.00253	0.02	0.00025	0.0050	2.16	0.28	0.00	0.007	0.00250	0.15	2.97
ROUGHER COARSE-10	0.00250	0.00250	0.050	0.000250	189.10	0.00250	0.00050	0.00293	0.02	0.00025	0.0050	2.61	0.31	0.00	0.007	0.00250	0.15	2.94
ROUGHER COARSE-11	0.00250	0.00250	0.050	0.000250	156.10	0.00250	0.00050	0.00263	0.02	0.00025	0.0050	2.06	0.24	0.00	0.007	0.00250	0.15	2.25
ROUGHER COARSE-12	0.00250	0.00250	0.050	0.000250	136.10	0.00250	0.00050	0.00273	0.02	0.00025	0.0050	2.05	0.21	0.00	0.007	0.00250	0.15	2.11
ROUGHER COARSE-13	0.00250	0.00250	0.050	0.000250	101.10	0.00250	0.00050	0.00203	0.02	0.00025	0.0050	1.76	0.16	0.00	0.006	0.00250	0.15	1.81
ROUGHER COARSE-14	0.00025	0.00025	0.050	0.000148	94.50	0.00025	0.00005	0.00226	0.02	0.00003	0.0050	2.05	0.17	0.00	0.007	0.00122	0.15	1.83
ROUGHER COARSE-15	0.00250	0.00250	0.050	0.000250	69.30	0.00250	0.00050	0.00233	0.02	0.00025	0.0050	1.80	0.13	0.00	0.006	0.00250	0.15	1.68
ROUGHER COARSE-16	0.00250	0.00250	0.050	0.000250	41.60	0.00250	0.00050	0.00213	0.02	0.00025	0.0050	1.43	0.10	0.00	0.006	0.00250	0.15	1.40
ROUGHER COARSE-17	0.00250	0.00250	0.050	0.000250	31.40	0.00250	0.00050	0.00223	0.02	0.00025	0.0050	1.36	0.08	0.00	0.006	0.00250	0.15	1.43
ROUGHER COARSE-18	0.00250	0.00250	0.050	0.000250	24.40	0.00250	0.00050	0.00223	0.02	0.00025	0.0050	1.26	0.08	0.00	0.005	0.00250	0.15	1.40
ROUGHER COARSE-19	0.00250	0.00250	0.050	0.000250	22.30	0.00250	0.00050	0.00193	0.02	0.00025	0.0050	1.25	0.08	0.00	0.005	0.00250	0.15	1.33
ROUGHER COARSE-20	0.00250	0.00250	0.050	0.000250	21.50	0.00250	0.00050	0.00213	0.02	0.00025	0.0050	1.33	0.09	0.00	0.005	0.00250	0.15	1.36
ROUGHER COARSE-21	0.00250	0.00250	0.050	0.000250	20.90	0.00250	0.00050	0.00223	0.02	0.00025	0.0050	1.49	0.09	0.00	0.005	0.00250	0.15	1.42
ROUGHER COARSE-22	0.00250	0.00250	0.050	0.000250	20.40	0.00250	0.00050	0.00233	0.02	0.00025	0.0050	1.50	0.09	0.00	0.005	0.00250	0.15	1.40
ROUGHER COARSE-23	0.00250	0.00250	0.050	0.000250	17.60	0.00250	0.00050	0.00233	0.02	0.00025	0.0050	1.17	0.07	0.00	0.004	0.00250	0.15	1.31
ROUGHER COARSE-24	0.00250	0.00250	0.050	0.000250	18.30	0.00250	0.00050	0.00213	0.02	0.00025	0.0050	1.42	0.08	0.00	0.004	0.00250	0.15	1.41
ROUGHER COARSE-25	0.00250	0.00250	0.050	0.000250	19.20	0.00250	0.00050	0.00243	0.02	0.00025	0.0050	1.58	0.09	0.00	0.005	0.00250	0.15	1.48
ROUGHER COARSE-26	0.00250	0.00250	0.050	0.000250	19.10	0.00250	0.00050	0.00243	0.02	0.00025	0.0050	1.58	0.08	0.00	0.004	0.00250	0.15	1.45
ROUGHER COARSE-27	0.00025	0.00025	0.050	0.000056	19.90	0.00025	0.00005	0.00235	0.02	0.00003	0.0050	1.65	0.08	0.00	0.005	0.00025	0.15	1.49
ROUGHER COARSE-28	0.00025	0.00025	0.050	0.000250	20.70	0.00025	0.00005	0.00213	0.02	0.00025	0.0050	1.78	0.09	0.00	0.006	0.00250	0.15	1.38
ROUGHER COARSE-29	0.00025	0.00025	0.050	0.000250	20.00	0.00025	0.00005	0.00193	0.02	0.00025	0.0050	1.72	0.07	0.00	0.006	0.00250	0.15	1.30

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals																	
Sample ID	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L
ROUGHER COARSE-30	0.00025	0.00025	0.050	0.000250	20.20	0.00025	0.00005	0.00243	0.02	0.00025	0.0050	1.99	0.07	0.00	0.007	0.00250	0.15	1.36
ROUGHER COARSE-31	0.00025	0.00025	0.050	0.000250	19.20	0.00025	0.00005	0.00203	0.02	0.00025	0.0050	1.82	0.06	0.00	0.006	0.00250	0.15	1.31
ROUGHER COARSE-32	0.00025	0.00025	0.050	0.000250	19.60	0.00025	0.00005	0.00223	0.02	0.00025	0.0050	1.94	0.06	0.00	0.006	0.00250	0.15	1.28
ROUGHER COARSE-33	0.00025	0.00025	0.050	0.000250	19.30	0.00025	0.00005	0.00213	0.02	0.00025	0.0050	2.19	0.05	0.00	0.008	0.00250	0.15	1.36
ROUGHER COARSE-34	0.00025	0.00025	0.050	0.000250	19.10	0.00025	0.00005	0.00193	0.02	0.00025	0.0050	1.98	0.04	0.00	0.012	0.00250	0.15	1.17
ROUGHER COARSE-35	0.00250	0.00250	0.050	0.000250	18.80	0.00250	0.00050	0.00173	0.02	0.00025	0.0050	2.10	0.04	0.00	0.018	0.00250	0.15	1.13
ROUGHER COARSE-36	0.00250	0.00250	0.050	0.000250	18.40	0.00250	0.00050	0.00243	0.02	0.00025	0.0050	2.24	0.03	0.00	0.027	0.00250	0.15	1.19
ROUGHER COARSE-37	0.00250	0.00250	0.050	0.000250	18.40	0.00250	0.00050	0.00173	0.02	0.00025	0.0050	2.04	0.03	0.00	0.029	0.00250	0.15	1.02
ROUGHER COARSE-38	0.00250	0.00250	0.050	0.000250	18.70	0.00250	0.00050	0.00163	0.02	0.00025	0.0050	2.27	0.03	0.00	0.039	0.00250	0.15	1.15
ROUGHER COARSE-39	0.00250	0.00250	0.050	0.000250	17.90	0.00250	0.00050	0.00173	0.02	0.00025	0.0050	2.17	0.02	0.00	0.035	0.00250	0.15	1.13
ROUGHER COARSE-40	0.00250	0.00250	0.050	0.000250	17.70	0.00250	0.00050	0.00173	0.02	0.00025	0.0050	2.37	0.02	0.00	0.032	0.00250	0.15	1.19
ROUGHER COARSE-41	0.00250	0.00250	0.050	0.000250	18.40	0.00250	0.00050	0.00173	0.02	0.00025	0.0050	2.25	0.02	0.00	0.034	0.00250	0.15	1.17
ROUGHER COARSE-42	0.00250	0.00250	0.050	0.000250	18.10	0.00250	0.00050	0.00213	0.02	0.00025	0.0050	2.48	0.02	0.00	0.034	0.00250	0.15	1.25
ROUGHER COARSE-43	0.00250	0.00250	0.050	0.000250	17.20	0.00250	0.00050	0.00173	0.02	0.00025	0.0050	2.10	0.02	0.00	0.036	0.00250	0.15	1.09
ROUGHER COARSE-44	0.00250	0.00250	0.050	0.000250	17.30	0.00250	0.00050	0.00203	0.02	0.00025	0.0050	2.36	0.02	0.00	0.036	0.00250	0.15	1.22
ROUGHER COARSE-45	0.00250	0.00250	0.050	0.000250	17.40	0.00250	0.00050	0.00213	0.02	0.00025	0.0050	2.44	0.01	0.00	0.034	0.00250	0.15	1.21
ROUGHER COARSE-46	0.00250	0.00250	0.050	0.000250	16.90	0.00250	0.00050	0.00183	0.02	0.00025	0.0050	2.32	0.01	0.00	0.032	0.00250	0.15	1.08
ROUGHER COARSE-47	0.00250	0.00250	0.050	0.000250	17.40	0.00250	0.00050	0.00207	0.02	0.00025	0.0050	2.70	0.02	0.00	0.030	0.00250	0.15	1.09
ROUGHER COARSE-48	0.00250	0.00250	0.050	0.000250	16.60	0.00250	0.00050	0.00193	0.02	0.00025	0.0050	2.52	0.02	0.00	0.029	0.00250	0.15	1.14
ROUGHER COARSE-49	0.00250	0.00250	0.050	0.000250	16.80	0.00250	0.00050	0.00183	0.02	0.00025	0.0050	2.16	0.01	0.00	0.027	0.00250	0.15	0.96
ROUGHER COARSE-50	0.00250	0.00250	0.050	0.000250	16.60	0.00250	0.00050	0.00173	0.02	0.00025	0.0050	1.99	0.02	0.00	0.025	0.00250	0.15	1.08
ROUGHER COARSE-51	0.00250	0.00250	0.050	0.000250	16.50	0.00250	0.00050	0.00173	0.02	0.00025	0.0050	2.45	0.01	0.00	0.026	0.00250	0.15	1.05
ROUGHER COARSE-52	0.00025	0.00025	0.005	0.000030	16.00	0.00025	0.00005	0.00189	0.02	0.00003	0.0025	2.40	0.01	0.00	0.025	0.00025	0.15	1.02
ROUGHER COARSE-53	0.00025	0.00025	0.005	0.000031	15.80	0.00025	0.00005	0.00194	0.02	0.00003	0.0025	2.55	0.01	0.00	0.025	0.00025	0.15	1.04
ROUGHER COARSE-54	0.00025	0.00025	0.005	0.000032	16.40	0.00025	0.00005	0.00151	0.02	0.00003	0.0025	2.52	0.01	0.00	0.024	0.00025	0.15	0.99
ROUGHER COARSE-55	0.00025	0.00025	0.005	0.000028	15.10	0.00025	0.00005	0.00180	0.02	0.00003	0.0025	2.62	0.01	0.00	0.021	0.00025	0.15	1.06
ROUGHER COARSE-56	0.00025	0.00025	0.005	0.000028	14.60	0.00025	0.00005	0.00161	0.02	0.00003	0.0025	2.35	0.01	0.00	0.017	0.00025	0.15	0.94
ROUGHER COARSE-57	0.00025	0.00025	0.005	0.000031	15.70	0.00025	0.00005	0.00153	0.02	0.00003	0.0025	2.37	0.01	0.00	0.020	0.00025	0.15	1.02
ROUGHER COARSE-58	0.00025	0.00025	0.005	0.000034	16.20	0.00025	0.00005	0.00142	0.02	0.00003	0.0025	2.35	0.01	0.00	0.018	0.00025	0.15	1.00
ROUGHER COARSE-59	0.00025	0.00025	0.005	0.000023	15.70	0.00025	0.00005	0.00164	0.02	0.00007	0.0025	2.30	0.01	0.00	0.018	0.00025	0.15	0.99
ROUGHER COARSE-60	0.00025	0.00025	0.005	0.000033	16.20	0.00025	0.00005	0.00176	0.02	0.00003	0.0025	2.50	0.01	0.00	0.021	0.00025	0.15	1.02
ROUGHER COARSE-61	0.00025	0.00025	0.005	0.000026	16.60	0.00025	0.00005	0.00144	0.02	0.00003	0.0025	2.44	0.01	0.00	0.023	0.00025	0.15	1.03
ROUGHER COARSE-62	0.00025	0.00025	0.005	0.000025	16.80	0.00025	0.00005	0.00147	0.02	0.00003	0.0025	2.53	0.01	0.00	0.028	0.00025	0.15	1.01
ROUGHER COARSE-63	0.00025	0.00025	0.005	0.000025	16.10	0.00025	0.00005	0.00136	0.02	0.00003	0.0025	2.30	0.01	0.00	0.024	0.00025	0.15	0.98
ROUGHER COARSE-64	0.00025	0.00025	0.005	0.000028	15.90	0.00025	0.00005	0.00127	0.02	0.00003	0.0025	2.38	0.01	0.00	0.022	0.00025	0.15	1.09
ROUGHER COARSE-65	0.00025	0.00025	0.005	0.000022	15.60	0.00025	0.00005	0.00134	0.02	0.00003	0.0025	2.23	0.01	0.00	0.021	0.00025	0.15	1.06
ROUGHER COARSE-66	0.00025	0.00025	0.005	0.000030	15.40	0.00025	0.00005	0.00148	0.02	0.00003	0.0025	2.23	0.01	0.00	0.019	0.00025	0.15	1.09
ROUGHER COARSE-67	0.00025	0.00025	0.005	0.000027	15.50	0.00025	0.00005	0.00134	0.02	0.00003	0.0025	2.27	0.01	0.00	0.018	0.00025	0.15	1.09
ROUGHER COARSE-68	0.00025	0.00025	0.005	0.000020	16.20	0.00025	0.00005	0.00159	0.02	0.00003	0.0025	2.25	0.01	0.00	0.014	0.00025	0.15	1.16
ROUGHER COARSE-69	0.00025	0.00025	0.005	0.000027	15.70	0.00025	0.00005	0.00123	0.02	0.00003	0.0025	2.27	0.01	0.00	0.015	0.00025	0.15	1.13
ROUGHER COARSE-70	0.00025	0.00025	0.005	0.000025	16.00	0.00025	0.00005	0.00137	0.02	0.00003	0.0025	2.23	0.01	0.00	0.015	0.00025	0.15	1.23
ROUGHER COARSE-71	0.00025	0.00025	0.005	0.000079	16.30	0.00025	0.00011	0.04073	0.02	0.00003	0.0025	2.24	0.01	0.00	0.014	0.00025	0.15	1.32
ROUGHER COARSE-72	0.00025	0.00025	0.005	0.000024	15.70	0.00025	0.00005	0.00118	0.02	0.00003	0.0025	2.05	0.01	0.00	0.013	0.00025	0.15	1.20
ROUGHER COARSE-73	0.00025	0.00025	0.005	0.000025	15.30	0.00025	0.00005	0.00150	0.02	0.00005	0.0025	2.10	0.01	0.00	0.012	0.00025	0.15	1.29
ROUGHER COARSE-74	0.00025	0.00025	0.005	0.000026	15.10	0.00025	0.00005	0.00169	0.02	0.00005	0.0025	2.13	0.01	0.00	0.012	0.00025	0.15	1.35
	0.00025	0.00025	0.005	0.000036	15.68	0.00025	0.00006	0.00929	0.02	0.00004	0.0025	2.15	0.01	0.00	0.013	0.00025	0.15	1.28
ROUGHER-0	0.00250	0.00250	0.050	0.000250	587.20	0.00250	0.00050	0.00331	0.02	0.00025	0.0050	10.22	0.55	0.00	0.006	0.01110	0.15	36.91
ROUGHER-1	0.00250	0.00250	0.050	0.000250	634.20	0.00250	0.00050	0.00131	0.02	0.00025	0.0120	11.22	0.70	0.00	0.006	0.00930	0.15	30.31
ROUGHER-2	0.00250	0.00250	0.050	0.000250	636.20	0.00250	0.00050	0.00101	0.02	0.00025	0.0110	7.65	0.73	0.00	0.005	0.00920	0.15	16.91
ROUGHER-3	0.00250	0.00250	0.050	0.000250	595.20	0.00250	0.00050	0.00051	0.02	0.00025	0.0130	7.97	0.78	0.00	0.006	0.00850	0.15	13.31
ROUGHER-4	0.00250	0.00250	0.050	0.000250	631.20	0.00250	0.00050	0.00051	0.02	0.00025	0.0110	8.01	0.79	0.00	0.005	0.01000	0.15	9.98
ROUGHER-5	0.00250	0.00250	0.050	0.000250	627.20	0.00250	0.00050	0.00051	0.02	0.00025	0.0120	9.97	0.97	0.00	0.007	0.00800	0.15	10.11
ROUGHER-6	0.00250	0.00250	0.050	0.000250	619.20	0.00250	0.00050	0.00051	0.02	0.00025	0.0100	8.44	0.92	0.00	0.004	0.00510	0.15	7.15
ROUGHER-7	0.00250	0.00250	0.050	0.000250	638.20	0.00250	0.00050	0.00271	0.02	0.00025	0.0200	9.79	0.94	0.00	0.006	0.00560	0.15	6.41
ROUGHER-8	0.00250	0.00250	0.050	0.000250	582.20	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	10.01	0.78	0.00	0.004	0.00780	0.15	6.28
ROUGHER-9	0.00250	0.00250	0.050	0.000250	530.20	0.00250	0.00050	0.00051	0.02	0.00025	0.0110	8.57	0.52	0.00	0.004	0.00250	0.15	5.55
ROUGHER-10	0.00250	0.00250	0.050	0.000250	419.20	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	8.72	0.39	0.00	0.004	0.00250	0.15	4.69

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals																	
Sample ID	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L
ROUGHER-11	0.00250	0.00250	0.050	0.000250	351.20	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	6.20	0.31	0.00	0.004	0.00250	0.15	3.36
ROUGHER-12	0.00250	0.00250	0.050	0.000250	297.20	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	6.31	0.24	0.00	0.005	0.00250	0.15	3.45
ROUGHER-13	0.00250	0.00250	0.050	0.000250	221.20	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	5.40	0.18	0.00	0.004	0.00250	0.15	2.61
ROUGHER-14	0.00250	0.00250	0.050	0.000250	227.20	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	6.08	0.21	0.00	0.004	0.00250	0.15	3.01
ROUGHER-15	0.00250	0.00250	0.050	0.000250	188.20	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	4.32	0.14	0.00	0.004	0.00250	0.15	2.09
ROUGHER-16	0.00250	0.00250	0.050	0.000250	160.20	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	4.99	0.15	0.00	0.004	0.00250	0.15	2.05
ROUGHER-17	0.00250	0.00250	0.050	0.000250	125.20	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	5.00	0.15	0.00	0.005	0.00250	0.15	2.13
ROUGHER-18	0.00250	0.00250	0.050	0.000250	99.20	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	4.00	0.10	0.00	0.005	0.00250	0.15	1.87
ROUGHER-19	0.00250	0.00250	0.050	0.000250	74.30	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	3.28	0.08	0.00	0.005	0.00250	0.15	1.76
ROUGHER-20	0.00250	0.00250	0.050	0.000250	57.90	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	3.30	0.07	0.00	0.005	0.00250	0.15	1.79
ROUGHER-21	0.00250	0.00250	0.050	0.000250	60.80	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	3.28	0.07	0.00	0.005	0.00250	0.15	1.75
ROUGHER-22	0.00250	0.00250	0.050	0.000250	54.40	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	3.41	0.06	0.00	0.004	0.00250	0.15	1.66
ROUGHER-23	0.00250	0.00250	0.050	0.000250	39.90	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	3.84	0.04	0.00	0.004	0.00250	0.15	2.06
ROUGHER-24	0.00250	0.00250	0.050	0.000250	55.60	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	3.70	0.06	0.00	0.004	0.00250	0.15	1.63
ROUGHER-25	0.00250	0.00250	0.050	0.000250	39.70	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	3.01	0.04	0.00	0.003	0.00250	0.15	1.31
ROUGHER-26	0.00250	0.00250	0.050	0.000250	37.70	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	3.59	0.05	0.00	0.003	0.00250	0.15	1.44
ROUGHER-27	0.00250	0.00250	0.050	0.000250	37.00	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	3.38	0.04	0.00	0.003	0.00250	0.15	1.41
ROUGHER-28	0.00250	0.00250	0.050	0.000250	25.30	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	2.79	0.04	0.00	0.003	0.00250	0.15	1.30
ROUGHER-29	0.00250	0.00250	0.050	0.000250	33.60	0.00250	0.00050	0.00051	0.02	0.00025	0.0050	3.76	0.05	0.00	0.003	0.00250	0.15	1.53
ROUGHER-30	0.00025	0.00025	0.005	0.000005	25.10	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	3.25	0.04	0.00	0.003	0.00025	0.15	1.40
ROUGHER-31	0.00025	0.00025	0.005	0.000005	22.70	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	2.79	0.04	0.00	0.003	0.00025	0.15	1.34
ROUGHER-32	0.00025	0.00025	0.005	0.000005	18.80	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	2.79	0.04	0.00	0.002	0.00025	0.15	1.25
ROUGHER-33	0.00025	0.00025	0.005	0.000005	20.70	0.00025	0.00005	0.00053	0.03	0.00003	0.0025	3.22	0.04	0.00	0.002	0.00025	0.15	1.27
ROUGHER-34	0.00025	0.00025	0.005	0.000005	19.40	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	2.97	0.05	0.00	0.002	0.00025	0.15	1.24
ROUGHER-35	0.00025	0.00025	0.005	0.000005	16.60	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	2.82	0.04	0.00	0.002	0.00025	0.15	1.21
ROUGHER-36	0.00025	0.00025	0.005	0.000005	18.20	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	2.57	0.04	0.00	0.002	0.00025	0.15	1.05
ROUGHER-37	0.00025	0.00025	0.005	0.000005	17.70	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	2.62	0.04	0.00	0.002	0.00025	0.15	1.09
ROUGHER-38	0.00025	0.00025	0.005	0.000005	18.30	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	2.87	0.04	0.00	0.002	0.00025	0.15	1.09
ROUGHER-39	0.00025	0.00025	0.005	0.000005	18.30	0.00025	0.00005	0.00026	0.02	0.00006	0.0025	3.07	0.04	0.00	0.002	0.00025	0.15	1.11
ROUGHER-40	0.00025	0.00025	0.005	0.000005	18.60	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	3.17	0.04	0.00	0.002	0.00025	0.15	1.12
ROUGHER-41	0.00025	0.00025	0.005	0.000005	18.30	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	2.85	0.05	0.00	0.002	0.00025	0.15	1.03
ROUGHER-42	0.00025	0.00025	0.005	0.000005	19.90	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	3.22	0.04	0.00	0.002	0.00025	0.15	1.07
ROUGHER-43	0.00025	0.00025	0.005	0.000005	18.70	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	2.98	0.04	0.00	0.002	0.00025	0.15	0.99
ROUGHER-44	0.00025	0.00025	0.005	0.000005	17.60	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	2.78	0.03	0.00	0.002	0.00025	0.15	0.93
ROUGHER-45	0.00025	0.00025	0.005	0.000005	16.60	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	2.53	0.03	0.00	0.001	0.00025	0.15	1.01
ROUGHER-46	0.00025	0.00025	0.005	0.000005	19.10	0.00025	0.00005	0.00053	0.02	0.00003	0.0025	2.91	0.04	0.00	0.002	0.00025	0.15	0.99
ROUGHER-47	0.00025	0.00025	0.005	0.000005	18.40	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	2.87	0.04	0.00	0.002	0.00025	0.15	1.03
ROUGHER-48	0.00025	0.00025	0.005	0.000005	18.50	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	2.76	0.04	0.00	0.002	0.00025	0.15	0.98
ROUGHER-49	0.00025	0.00025	0.005	0.000005	17.40	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	2.82	0.04	0.00	0.001	0.00025	0.15	0.93
ROUGHER-50	0.00025	0.00025	0.005	0.000005	18.50	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	2.67	0.03	0.00	0.002	0.00025	0.15	0.91
ROUGHER-51	0.00025	0.00025	0.005	0.000005	19.40	0.00025	0.00005	0.00026	0.02	0.00003	0.0025	3.08	0.04	0.00	0.002	0.00025	0.15	1.13
ROUGHER-52	0.00025	0.00025	0.005	0.000005	19.30	0.00025	0.00005	0.00067	0.02	0.00003	0.0025	2.72	0.05	0.00	0.002	0.00025	0.15	1.13
	0.00025	0.00025	0.005	0.000005	18.62	0.00025	0.00005	0.00035	0.02	0.00003	0.0025	2.81	0.04	0.00	0.002	0.00025	0.15	1.02
MITCHELL/KERR TAILING HC-1	0.00251	0.00251	0.050	0.000251	520.22	0.00251	0.00050	0.00161	0.02	0.00026	0.0051	3.14	0.03	0.00	0.027	0.00251	0.15	13.52
MITCHELL/KERR TAILING HC-2	0.00251	0.00251	0.050	0.000251	437.22	0.00251	0.00050	0.00071	0.02	0.00026	0.0001	3.23	0.07	0.00	0.020	0.00251	0.15	9.90
MITCHELL/KERR TAILING HC-3	0.00251	0.00251	0.050	0.000251	410.22	0.00251	0.00050	0.00071	0.02	0.00026	0.0121	3.30	0.07	0.00	0.016	0.00251	0.15	6.36
MITCHELL/KERR TAILING HC-4	0.00251	0.00251	0.050	0.000251	419.22	0.00251	0.00050	0.00071	0.02	0.00026	0.0301	3.74	0.10	0.00	0.019	0.00251	0.15	6.22
MITCHELL/KERR TAILING HC-5	0.00251	0.00251	0.050	0.000251	420.22	0.00251	0.00050	0.00071	0.02	0.00026	0.0251	3.24	0.10	0.00	0.020	0.00251	0.15	5.25
MITCHELL/KERR TAILING HC-6	0.00251	0.00251	0.050	0.000251	395.22	0.00251	0.00050	0.00071	0.02	0.00026	0.0051	3.03	0.12	0.00	0.019	0.00251	0.15	5.24
MITCHELL/KERR TAILING HC-7	0.00251	0.00251	0.050	0.000251	387.22	0.00251	0.00050	0.00201	0.02	0.00026	0.0181	2.71	0.11	0.00	0.014	0.00251	0.15	4.47
MITCHELL/KERR TAILING HC-8	0.00251	0.00251	0.050	0.000251	316.22	0.00251	0.00050	0.00071	0.02	0.00026	0.0051	2.70	0.09	0.00	0.009	0.00251	0.15	4.19
MITCHELL/KERR TAILING HC-9	0.00251	0.00251	0.050	0.000251	310.22	0.00251	0.00050	0.00071	0.02	0.00026	0.0051	2.51	0.09	0.00	0.007	0.00251	0.15	3.91
MITCHELL/KERR TAILING HC-10	0.00251	0.00251	0.050	0.000251	300.22	0.00251	0.00050	0.00071	0.02	0.00026	0.0191	2.32	0.08	0.00	0.007	0.00251	0.15	3.61
MITCHELL/KERR TAILING HC-11	0.00251	0.00251	0.050	0.000251	260.22	0.00251	0.00050	0.00171	0.02	0.00026	0.0221	1.96	0.08	0.00	0.006	0.00251	0.15	3.15
MITCHELL/KERR TAILING HC-12	0.00251	0.00251	0.050	0.000251	237.22	0.00251	0.00050	0.00071	0.02	0.00026	0.0051	2.06	0.07	0.00	0.005	0.00251	0.15	3.01
MITCHELL/KERR TAILING HC-13	0.00251	0.00251	0.050	0.000251	208.22	0.00251	0.00050	0.00071	0.02	0.00026	0.0051	1.89	0.07	0.00	0.005	0.00251	0.15	2.88
MITCHELL/KERR TAILING HC-14	0.00251	0.00251	0.050	0.000251	211.22	0.00251	0.00050	0.00171	0.02	0.00026	0.0051	2.07	0.08	0.00	0.005	0.00251	0.15	2.78

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals																	
Sample ID	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L
MITCHELL/KERR TAILING HC-15	0.00251	0.00251	0.050	0.000251	195.22	0.00251	0.00050	0.00191	0.02	0.00026	0.0051	1.70	0.08	0.00	0.006	0.00251	0.15	2.35
MITCHELL/KERR TAILING HC-16	0.00251	0.00251	0.050	0.000251	177.22	0.00251	0.00050	0.00141	0.02	0.00026	0.0051	1.51	0.07	0.00	0.004	0.00251	0.15	1.95
MITCHELL/KERR TAILING HC-17	0.00251	0.00251	0.050	0.000251	153.22	0.00251	0.00050	0.00131	0.02	0.00026	0.0051	1.39	0.07	0.00	0.004	0.00251	0.15	2.02
MITCHELL/KERR TAILING HC-18	0.00251	0.00251	0.050	0.000251	125.22	0.00251	0.00050	0.00131	0.02	0.00026	0.0051	1.43	0.06	0.00	0.004	0.00251	0.15	1.93
MITCHELL/KERR TAILING HC-19	0.00251	0.00251	0.050	0.000251	105.22	0.00251	0.00050	0.00131	0.02	0.00026	0.0051	1.25	0.05	0.00	0.004	0.00251	0.15	1.68
MITCHELL/KERR TAILING HC-20	0.00026	0.00026	0.012	0.000006	82.82	0.00026	0.00005	0.00164	0.02	0.00003	0.0026	1.25	0.05	0.00	0.004	0.00026	0.15	1.75
MITCHELL/KERR TAILING HC-21	0.00026	0.00026	0.005	0.000014	54.02	0.00026	0.00005	0.00170	0.02	0.00003	0.0026	1.30	0.04	0.00	0.006	0.00026	0.15	1.89
MITCHELL/KERR TAILING HC-22	0.00026	0.00026	0.005	0.000006	40.42	0.00026	0.00005	0.00167	0.02	0.00003	0.0026	1.05	0.04	0.00	0.003	0.00026	0.15	1.57
MITCHELL/KERR TAILING HC-23	0.00026	0.00026	0.005	0.000006	32.82	0.00026	0.00005	0.00175	0.02	0.00003	0.0026	0.94	0.03	0.00	0.003	0.00026	0.15	1.76
MITCHELL/KERR TAILING HC-24	0.00026	0.00026	0.005	0.000006	31.12	0.00026	0.00005	0.00168	0.02	0.00003	0.0026	0.91	0.03	0.00	0.003	0.00026	0.15	1.73
MITCHELL/KERR TAILING HC-25	0.00026	0.00026	0.005	0.000006	26.62	0.00026	0.00005	0.00149	0.02	0.00006	0.0026	0.88	0.02	0.00	0.003	0.00026	0.15	1.54
MITCHELL/KERR TAILING HC-26	0.00026	0.00026	0.005	0.000006	22.92	0.00026	0.00005	0.00161	0.02	0.00003	0.0026	0.99	0.03	0.00	0.003	0.00026	0.15	1.71
MITCHELL/KERR TAILING HC-27	0.00026	0.00026	0.005	0.000006	24.72	0.00026	0.00005	0.00287	0.02	0.00012	0.0026	1.01	0.03	0.00	0.003	0.00026	0.15	1.78
MITCHELL/KERR TAILING HC-28	0.00026	0.00026	0.005	0.000006	25.62	0.00026	0.00005	0.00188	0.02	0.00007	0.0026	1.04	0.03	0.00	0.003	0.00026	0.15	1.81
MITCHELL/KERR TAILING HC-29	0.00026	0.00026	0.005	0.000006	23.42	0.00026	0.00005	0.00166	0.02	0.00003	0.0026	1.04	0.03	0.00	0.003	0.00026	0.15	2.03
MITCHELL/KERR TAILING HC-30	0.00026	0.00026	0.005	0.000006	23.32	0.00026	0.00005	0.00221	0.02	0.00011	0.0026	1.05	0.03	0.00	0.003	0.00026	0.15	2.06
MITCHELL/KERR TAILING HC-31	0.00026	0.00026	0.005	0.000006	24.62	0.00026	0.00005	0.00209	0.02	0.00007	0.0026	1.18	0.04	0.00	0.003	0.00026	0.15	2.18
MITCHELL/KERR TAILING HC-32	0.00026	0.00026	0.005	0.000006	23.42	0.00026	0.00005	0.00394	0.14	0.00040	0.0026	1.20	0.03	0.00	0.003	0.00026	0.15	2.33
MITCHELL/KERR TAILING HC-33	0.00026	0.00026	0.005	0.000006	22.92	0.00026	0.00005	0.00180	0.02	0.00008	0.0026	1.24	0.03	0.00	0.003	0.00026	0.15	2.43
MITCHELL/KERR TAILING HC-34	0.00026	0.00026	0.005	0.000006	22.12	0.00026	0.00005	0.00219	0.02	0.00010	0.0026	1.27	0.04	0.00	0.003	0.00026	0.15	2.42
MITCHELL/KERR TAILING HC-35	0.00026	0.00026	0.005	0.000006	22.12	0.00026	0.00005	0.00229	0.02	0.00009	0.0026	1.19	0.03	0.00	0.002	0.00026	0.15	2.38
MITCHELL/KERR TAILING HC-36	0.00026	0.00026	0.005	0.000006	21.32	0.00026	0.00005	0.00199	0.02	0.00003	0.0026	1.19	0.04	0.00	0.002	0.00026	0.15	2.30
MITCHELL/KERR TAILING HC-37	0.00026	0.00026	0.005	0.000006	20.82	0.00026	0.00005	0.00224	0.02	0.00007	0.0026	1.20	0.04	0.00	0.003	0.00026	0.15	2.24
MITCHELL/KERR TAILING HC-38	0.00026	0.00026	0.005	0.000006	19.82	0.00026	0.00005	0.00206	0.02	0.00003	0.0026	1.22	0.04	0.00	0.003	0.00026	0.15	2.24
MITCHELL/KERR TAILING HC-39	0.00026	0.00026	0.005	0.000024	21.42	0.00026	0.00005	0.00258	0.02	0.00009	0.0026	1.38	0.04	0.00	0.003	0.00026	0.15	2.17
MITCHELL/KERR TAILING HC-40	0.00026	0.00026	0.005	0.000006	20.72	0.00026	0.00005	0.00211	0.02	0.00003	0.0026	1.34	0.04	0.00	0.002	0.00026	0.15	2.16
MITCHELL/KERR TAILING HC-41	0.00026	0.00026	0.005	0.000006	20.77	0.00026	0.00005	0.00199	0.02	0.00003	0.0026	1.31	0.04	0.00	0.003	0.00026	0.15	2.01
MITCHELL/KERR TAILING HC-42	0.00026	0.00026	0.005	0.000006	20.82	0.00026	0.00005	0.00187	0.02	0.00003	0.0026	1.28	0.04	0.00	0.003	0.00026	0.15	1.85
MITCHELL/KERR TAILING HC-43	0.00026	0.00026	0.005	0.000006	20.67	0.00026	0.00005	0.00179	0.02	0.00003	0.0026	1.26	0.04	0.00	0.003	0.00026	0.15	1.76
MITCHELL/KERR TAILING HC-44	0.00026	0.00026	0.005	0.000006	20.52	0.00026	0.00005	0.00171	0.02	0.00003	0.0026	1.23	0.04	0.00	0.003	0.00026	0.15	1.67
MITCHELL/KERR TAILING HC-45	0.00026	0.00026	0.005	0.000006	19.12	0.00026	0.00005	0.00197	0.02	0.00006	0.0026	1.35	0.05	0.00	0.004	0.00026	0.15	1.68
MITCHELL/KERR TAILING HC-46	0.00026	0.00026	0.005	0.000006	17.72	0.00026	0.00005	0.00224	0.02	0.00009	0.0026	1.46	0.05	0.00	0.004	0.00026	0.15	1.69
MITCHELL/KERR TAILING HC-47	0.00026	0.00026	0.005	0.000006	19.02	0.00026	0.00005	0.00186	0.02	0.00009	0.0026	1.41	0.05	0.00	0.004	0.00026	0.15	1.62
MITCHELL/KERR TAILING HC-48	0.00026	0.00026	0.005	0.000006	20.32	0.00026	0.00005	0.00149	0.02	0.00003	0.0026	1.36	0.05	0.00	0.003	0.00026	0.15	1.55
	0.00026	0.00026	0.005	0.000006	19.34	0.00026	0.00005	0.00185	0.02	0.00006	0.0026	1.36	0.05	0.00	0.004	0.00026	0.15	1.64
MITCHELL/SULPHURETS TAILING HC-0	0.00250	0.00250	0.050	0.000250	231.00	0.03610	0.00050	0.04620	0.02	0.00025	0.0050	0.03	0.00	0.00	0.183	0.00250	0.46	37.01
MITCHELL/SULPHURETS TAILING HC-1	0.00250	0.00250	0.050	0.000250	162.00	0.01860	0.00050	0.04190	0.02	0.00025	0.0050	0.07	0.01	0.00	0.127	0.00250	0.15	21.61
MITCHELL/SULPHURETS TAILING HC-2	0.00250	0.00250	0.050	0.000250	152.00	0.00650	0.00050	0.02200	0.02	0.00025	0.0050	0.10	0.01	0.00	0.082	0.00250	0.15	15.31
MITCHELL/SULPHURETS TAILING HC-3	0.00250	0.00250	0.050	0.000250	103.00	0.00250	0.00050	0.00790	0.02	0.00025	0.0050	0.20	0.00	0.00	0.048	0.00250	0.15	9.36
MITCHELL/SULPHURETS TAILING HC-4	0.00250	0.00250	0.050	0.000250	69.60	0.00250	0.00050	0.00390	0.02	0.00025	0.0050	0.46	0.01	0.00	0.035	0.00250	0.15	7.51
MITCHELL/SULPHURETS TAILING HC-5	0.00250	0.00250	0.050	0.000250	52.20	0.00250	0.00050	0.00340	0.02	0.00025	0.0050	0.78	0.01	0.00	0.028	0.00250	0.15	5.88
MITCHELL/SULPHURETS TAILING HC-6	0.00025	0.00025	0.022	0.000005	28.60	0.00025	0.00005	0.00214	0.02	0.00003	0.0025	0.93	0.01	0.00	0.017	0.00025	0.15	4.55
MITCHELL/SULPHURETS TAILING HC-7	0.00025	0.00025	0.019	0.000005	23.50	0.00025	0.00005	0.00230	0.02	0.00003	0.0025	1.19	0.02	0.00	0.016	0.00025	0.15	4.44
MITCHELL/SULPHURETS TAILING HC-8	0.00025	0.00025	0.019	0.000005	19.90	0.00025	0.00005	0.00356	0.02	0.00010	0.0025	1.55	0.02	0.00	0.013	0.00025	0.15	4.10
MITCHELL/SULPHURETS TAILING HC-9	0.00025	0.00025	0.015	0.000005	20.70	0.00025	0.00005	0.00247	0.02	0.00011	0.0025	1.90	0.02	0.00	0.011	0.00025	0.15	3.77
MITCHELL/SULPHURETS TAILING HC-10	0.00025	0.00025	0.013	0.000005	21.50	0.00025	0.00005	0.00274	0.02	0.00018	0.0025	1.97	0.02	0.00	0.011	0.00025	0.15	3.92
MITCHELL/SULPHURETS TAILING HC-11	0.00025	0.00025	0.012	0.000005	21.50	0.00025	0.00005	0.00181	0.02	0.00008	0.0025	2.02	0.02	0.00	0.010	0.00025	0.15	3.55
MITCHELL/SULPHURETS TAILING HC-12	0.00025	0.00025	0.011	0.000005	18.20	0.00025	0.00005	0.00193	0.02	0.00026	0.0025	2.26	0.02	0.00	0.009	0.00025	0.15	3.65
MITCHELL/SULPHURETS TAILING HC-13	0.00025	0.00025	0.005	0.000005	19.70	0.00025	0.00005	0.00225	0.08	0.00053	0.0025	2.34	0.01	0.00	0.008	0.00073	0.15	3.42
MITCHELL/SULPHURETS TAILING HC-14	0.00025	0.00025	0.005	0.000005	22.20	0.00025	0.00005	0.00178	0.05	0.00039	0.0025	2.26	0.02	0.00	0.009	0.00025	0.15	3.28
MITCHELL/SULPHURETS TAILING HC-15	0.00025	0.00025	0.005	0.000005	21.00	0.00025	0.00005	0.00106	0.02	0.00008	0.0025	2.31	0.02	0.00	0.010	0.00025	0.15	3.19
MITCHELL/SULPHURETS TAILING HC-16	0.00025	0.00025	0.005	0.000005	22.10	0.00025	0.00005	0.00142	0.02	0.00023	0.0025	2.46	0.02	0.00	0.014	0.00025	0.15	3.19
MITCHELL/SULPHURETS TAILING HC-17	0.00025	0.00025	0.005	0.000010	24.30	0.00025	0.00005	0.00130	0.02	0.00018	0.0025	2.74	0.03	0.00	0.017	0.00025	0.15	3.18
MITCHELL/SULPHURETS TAILING HC-18	0.00025	0.00025	0.005	0.000005	22.80	0.00025	0.00005	0.00142	0.04	0.00028	0.0025	2.47	0.03	0.00	0.014	0.00025	0.15	2.92
MITCHELL/SULPHURETS TAILING HC-19	0.00025	0.00025	0.005	0.000005	22.20	0.00025	0.00005	0.00128	0.05	0.00035	0.0025	2.56	0.02	0.00	0.014	0.00025	0.15	2.92
MITCHELL/SULPHURETS TAILING HC-20	0.00025	0.00025	0.005	0.000005	21.20	0.00025	0.00005	0.00284	0.09	0.00083	0.0025	2.60	0.02	0.00	0.012	0.00025	0.15	2.85
MITCHELL/SULPHURETS TAILING HC-21	0.00025	0.00025	0.005	0.000005	23.10	0.00025	0.00005	0.00139	0.02	0.00024	0.0025	2.87	0.03	0.00	0.012	0.00025	0.15	3.01

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals																	
Sample ID	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L
MITCHELL/SULPHURETS TAILING HC-22	0.00025	0.00025	0.005	0.000005	22.50	0.00025	0.00005	0.00126	0.04	0.00023	0.0025	2.63	0.03	0.00	0.011	0.00025	0.15	2.70
MITCHELL/SULPHURETS TAILING HC-23	0.00025	0.00025	0.005	0.000005	22.20	0.00025	0.00005	0.00115	0.02	0.00023	0.0025	2.53	0.03	0.00	0.011	0.00025	0.15	2.58
MITCHELL/SULPHURETS TAILING HC-24	0.00025	0.00025	0.005	0.000005	21.00	0.00025	0.00005	0.00121	0.02	0.00018	0.0025	2.45	0.03	0.00	0.010	0.00025	0.15	2.61
MITCHELL/SULPHURETS TAILING HC-25	0.00025	0.00025	0.005	0.000005	22.30	0.00025	0.00005	0.00094	0.02	0.00007	0.0025	2.91	0.03	0.00	0.010	0.00025	0.15	2.74
MITCHELL/SULPHURETS TAILING HC-26	0.00025	0.00025	0.005	0.000005	20.10	0.00025	0.00005	0.00178	0.06	0.00045	0.0025	2.32	0.02	0.00	0.010	0.00025	0.15	2.57
MITCHELL/SULPHURETS TAILING HC-27	0.00025	0.00025	0.005	0.000005	20.70	0.00025	0.00005	0.00154	0.05	0.00036	0.0025	2.33	0.03	0.00	0.010	0.00025	0.15	2.49
MITCHELL/SULPHURETS TAILING HC-28	0.00025	0.00025	0.005	0.000005	21.30	0.00025	0.00005	0.00130	0.04	0.00026	0.0025	2.34	0.03	0.00	0.010	0.00025	0.15	2.40
MITCHELL/SULPHURETS TAILING HC-29	0.00025	0.00025	0.005	0.000008	21.15	0.00025	0.00005	0.00158	0.04	0.00030	0.0025	2.28	0.03	0.00	0.012	0.00025	0.15	2.38
MITCHELL/SULPHURETS TAILING HC-30	0.00025	0.00025	0.005	0.000010	21.00	0.00025	0.00005	0.00185	0.05	0.00033	0.0025	2.21	0.02	0.00	0.014	0.00025	0.15	2.35
MITCHELL/SULPHURETS TAILING HC-31	0.00025	0.00025	0.005	0.000011	19.50	0.00025	0.00005	0.00168	0.03	0.00032	0.0025	2.34	0.03	0.00	0.012	0.00025	0.15	2.43
MITCHELL/SULPHURETS TAILING HC-32	0.00025	0.00025	0.005	0.000012	18.00	0.00025	0.00005	0.00150	0.02	0.00031	0.0025	2.46	0.03	0.00	0.010	0.00025	0.15	2.50
MITCHELL/SULPHURETS TAILING HC-33	0.00025	0.00025	0.005	0.000009	20.60	0.00025	0.00005	0.00112	0.02	0.00024	0.0025	2.54	0.03	0.00	0.011	0.00025	0.15	2.40
MITCHELL/SULPHURETS TAILING HC-34	0.00025	0.00025	0.005	0.000005	23.20	0.00025	0.00005	0.00073	0.02	0.00016	0.0025	2.62	0.04	0.00	0.012	0.00025	0.15	2.29
MITCHELL/SULPHURETS TAILING HC-35	0.00025	0.00025	0.005	0.000010	21.70	0.00025	0.00005	0.00088	0.02	0.00016	0.0025	2.30	0.04	0.00	0.010	0.00025	0.15	2.08
MITCHELL/SULPHURETS TAILING HC-36	0.00025	0.00025	0.005	0.000014	20.20	0.00025	0.00005	0.00102	0.02	0.00017	0.0025	1.97	0.04	0.00	0.008	0.00025	0.15	1.87
MITCHELL/SULPHURETS TAILING HC-37	0.00025	0.00025	0.005	0.000022	20.90	0.00025	0.00005	0.00106	0.02	0.00018	0.0025	2.16	0.04	0.00	0.008	0.00025	0.15	1.93
MITCHELL/SULPHURETS TAILING HC-38	0.00025	0.00025	0.005	0.000029	21.60	0.00025	0.00005	0.00110	0.02	0.00019	0.0025	2.34	0.04	0.00	0.008	0.00025	0.15	1.99
MITCHELL/SULPHURETS TAILING HC-39	0.00025	0.00025	0.005	0.000022	21.20	0.00025	0.00005	0.00117	0.02	0.00021	0.0025	2.33	0.04	0.00	0.007	0.00025	0.15	2.08
MITCHELL/SULPHURETS TAILING HC-40	0.00025	0.00025	0.005	0.000014	20.80	0.00025	0.00005	0.00123	0.03	0.00024	0.0025	2.31	0.04	0.00	0.007	0.00025	0.15	2.16
MITCHELL/SULPHURETS TAILING HC-41	0.00025	0.00025	0.005	0.000010	20.10	0.00025	0.00005	0.00132	0.04	0.00026	0.0025	2.27	0.04	0.00	0.007	0.00025	0.15	2.08
MITCHELL/SULPHURETS TAILING HC-42	0.00025	0.00025	0.005	0.000005	19.40	0.00025	0.00005	0.00140	0.04	0.00028	0.0025	2.22	0.03	0.00	0.007	0.00025	0.15	1.99
MITCHELL/SULPHURETS TAILING HC-43	0.00015	0.00025	0.005	0.000011	19.30	0.00025	0.00005	0.00162	0.03	0.00022	0.0019	2.21	0.03	0.00	0.020	0.00025	0.15	1.94
MITCHELL/SULPHURETS TAILING HC-44	0.00005	0.00025	0.005	0.000016	19.20	0.00025	0.00005	0.00183	0.02	0.00015	0.0013	2.19	0.03	0.00	0.032	0.00025	0.15	1.89
MITCHELL/SULPHURETS TAILING HC-45	0.00005	0.00025	0.005	0.000016	19.35	0.00025	0.00005	0.00136	0.02	0.00013	0.0013	2.21	0.04	0.00	0.040	0.00025	0.15	1.87
MITCHELL/SULPHURETS TAILING HC-46	0.00005	0.00025	0.005	0.000016	19.50	0.00025	0.00005	0.00088	0.02	0.00010	0.0013	2.23	0.04	0.00	0.049	0.00025	0.15	1.85
MITCHELL/SULPHURETS TAILING HC-47	0.00005	0.00025	0.005	0.000016	20.15	0.00025	0.00005	0.00099	0.02	0.00015	0.0013	2.18	0.04	0.00	0.042	0.00025	0.15	1.80
MITCHELL/SULPHURETS TAILING HC-48	0.00005	0.00025	0.005	0.000015	20.80	0.00025	0.00005	0.00110	0.02	0.00019	0.0014	2.12	0.03	0.00	0.035	0.00025	0.15	1.74
MITCHELL/SULPHURETS TAILING HC-49	0.00005	0.00025	0.005	0.000015	19.25	0.00025	0.00005	0.00111	0.03	0.00020	0.0014	2.00	0.03	0.00	0.032	0.00025	0.15	1.67
MITCHELL/SULPHURETS TAILING HC-50	0.00005	0.00025	0.005	0.000015	17.70	0.00025	0.00005	0.00112	0.04	0.00022	0.0015	1.87	0.03	0.00	0.030	0.00025	0.15	1.59
MITCHELL/SULPHURETS TAILING HC-51	0.00005	0.00025	0.005	0.000014	17.85	0.00025	0.00005	0.00102	0.03	0.00018	0.0014	1.90	0.03	0.00	0.028	0.00025	0.15	1.61
MITCHELL/SULPHURETS TAILING HC-52	0.00005	0.00025	0.005	0.000012	18.00	0.00025	0.00005	0.00092	0.02	0.00013	0.0013	1.93	0.03	0.00	0.026	0.00025	0.15	1.63
MITCHELL/SULPHURETS TAILING HC-53	0.00005	0.00025	0.005	0.000014	18.85	0.00025	0.00005	0.00095	0.02	0.00013	0.0013	2.12	0.03	0.00	0.028	0.00025	0.15	1.69
MITCHELL/SULPHURETS TAILING HC-54	0.00005	0.00025	0.005	0.000016	19.70	0.00025	0.00005	0.00097	0.02	0.00013	0.0013	2.30	0.03	0.00	0.031	0.00025	0.15	1.75
MITCHELL/SULPHURETS TAILING HC-55	0.00005	0.00025	0.005	0.000015	20.40	0.00025	0.00005	0.00182	0.02	0.00011	0.0012	2.29	0.03	0.00	0.031	0.00025	0.15	1.71
MITCHELL/SULPHURETS TAILING HC-56	0.00005	0.00025	0.005	0.000013	21.10	0.00025	0.00005	0.00267	0.02	0.00009	0.0010	2.27	0.03	0.00	0.031	0.00025	0.15	1.66
MITCHELL/SULPHURETS TAILING HC-57	0.00005	0.00025	0.005	0.000017	21.00	0.00025	0.00005	0.00172	0.02	0.00008	0.0010	2.23	0.02	0.00	0.041	0.00025	0.15	1.58
MITCHELL/SULPHURETS TAILING HC-58	0.00005	0.00025	0.005	0.000021	20.90	0.00025	0.00005	0.00077	0.02	0.00006	0.0011	2.18	0.02	0.00	0.051	0.00025	0.15	1.50
MITCHELL/SULPHURETS TAILING HC-59	0.00005	0.00025	0.005	0.000022	20.20	0.00025	0.00005	0.00091	0.02	0.00011	0.0009	2.23	0.02	0.00	0.059	0.00025	0.15	1.47
MITCHELL/SULPHURETS TAILING HC-60	0.00005	0.00025	0.005	0.000022	19.50	0.00025	0.00005	0.00105	0.02	0.00017	0.0008	2.27	0.02	0.00	0.067	0.00025	0.15	1.43
MITCHELL/SULPHURETS TAILING HC-61	0.00005	0.00025	0.005	0.000024	20.05	0.00025	0.00005	0.00099	0.02	0.00014	0.0010	2.40	0.01	0.00	0.078	0.00025	0.15	1.47
MITCHELL/SULPHURETS TAILING HC-62	0.00005	0.00025	0.005	0.000026	20.60	0.00025	0.00005	0.00093	0.02	0.00012	0.0012	2.52	0.01	0.00	0.089	0.00025	0.15	1.50
MITCHELL/SULPHURETS TAILING HC-63	0.00005	0.00025	0.005	0.000023	19.70	0.00025	0.00005	0.00126	0.02	0.00015	0.0010	2.31	0.01	0.00	0.081	0.00025	0.15	1.36
MITCHELL/SULPHURETS TAILING HC-64	0.00005	0.00025	0.005	0.000020	18.80	0.00025	0.00005	0.00158	0.02	0.00019	0.0007	2.10	0.00	0.00	0.074	0.00025	0.15	1.22
MITCHELL/SULPHURETS TAILING HC-65	0.00005	0.00025	0.005	0.000028	19.60	0.00025	0.00005	0.00122	0.02	0.00015	0.0008	2.24	0.01	0.00	0.076	0.00025	0.15	1.28
MITCHELL/SULPHURETS TAILING HC-66	0.00005	0.00025	0.005	0.000035	20.40	0.00025	0.00005	0.00085	0.02	0.00011	0.0010	2.37	0.01	0.00	0.079	0.00025	0.15	1.34
MITCHELL/SULPHURETS TAILING HC-67	0.00005	0.00025	0.005	0.000031	20.50	0.00025	0.00005	0.00093	0.02	0.00010	0.0008	2.54	0.01	0.00	0.074	0.00025	0.15	1.41
MITCHELL/SULPHURETS TAILING HC-68	0.00005	0.00025	0.005	0.000026	20.60	0.00025	0.00005	0.00101	0.02	0.00009	0.0006	2.70	0.01	0.00	0.070	0.00025	0.15	1.47
MITCHELL/SULPHURETS TAILING HC-69	0.00005	0.00025	0.005	0.000022	18.25	0.00025	0.00005	0.00145	0.04	0.00022	0.0004	2.25	0.01	0.00	0.061	0.00025	0.15	1.28
MITCHELL/SULPHURETS TAILING HC-70	0.00005	0.00025	0.005	0.000017	15.90	0.00025	0.00005	0.00188	0.06	0.00035	0.0003	1.79	0.00	0.00	0.052	0.00025	0.15	1.08
MITCHELL/SULPHURETS TAILING HC-71	0.00005	0.00025	0.005	0.000018	16.80	0.00025	0.00005	0.00162	0.05	0.00028	0.0004	2.00	0.00	0.00	0.063	0.00025	0.15	1.16
MITCHELL/SULPHURETS TAILING HC-72	0.00005	0.00025	0.005	0.000019	17.70	0.00025	0.00005	0.00135	0.04	0.00022	0.0005	2.21	0.00	0.00	0.075	0.00025	0.15	1.24
MITCHELL/SULPHURETS TAILING HC-73	0.00005	0.00025	0.005	0.000019	18.60	0.00025	0.00005	0.00109	0.03	0.00015	0.0006	2.42	0.00	0.00	0.086	0.00025	0.15	1.31
MITCHELL/SULPHURETS TAILING HC-74	0.00005	0.00025	0.005	0.000020	19.50	0.00025	0.00005	0.00082	0.02	0.00008	0.0007	2.63	0.00	0.00	0.097	0.00025	0.15	1.39
MITCHELL/SULPHURETS TAILING HC-75	0.00005	0.00025	0.005	0.000019	19.95	0.00025	0.00005	0.00084	0.02	0.00009	0.0007	2.70	0.00	0.00	0.093	0.00025	0.15	1.38
MITCHELL/SULPHURETS TAILING HC-76	0.00005	0.00025	0.005	0.000018	20.40	0.00025	0.00005	0.00086	0.02	0.00010	0.0008	2.77	0.01	0.00	0.089	0.00025	0.15	1.37
MITCHELL/SULPHURETS TAILING HC-77	0.00005	0.00025	0.005	0.000016	20.85	0.00025	0.00005	0.00087	0.02	0.00011	0.0008	2.83	0.01	0.00	0.085	0.00025	0.15	1.36
MITCHELL/SULPHURETS TAILING HC-78	0.00005	0.00025	0.005	0.000015	21.30	0.00025	0.00005	0.00089	0.02	0.00012	0.0009	2.90	0.01	0.00	0.081	0.00025	0.15	1.35
MITCHELL/SULPHURETS TAILING HC-79	0.00005	0.00025	0.005	0.000020	20.88	0.00025	0.00005	0.00086	0.02	0.00011	0.0010	2.95	0.01	0.00	0.082	0.00025	0.15	1.37

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals																	
Sample ID	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L
MITCHELL/SULPHURETS TAILING HC-80	0.00005	0.00025	0.005	0.000025	20.45	0.00025	0.00005	0.00084	0.02	0.00010	0.0011	3.00	0.01	0.00	0.083	0.00025	0.15	1.39
MITCHELL/SULPHURETS TAILING HC-81	0.00005	0.00025	0.005	0.000029	20.03	0.00025	0.00005	0.00081	0.02	0.00009	0.0012	3.04	0.01	0.00	0.084	0.00025	0.15	1.40
MITCHELL/SULPHURETS TAILING HC-82	0.00005	0.00025	0.005	0.000034	19.60	0.00025	0.00005	0.00078	0.02	0.00008	0.0013	3.09	0.01	0.00	0.085	0.00025	0.15	1.42
MITCHELL/SULPHURETS TAILING HC-83	0.00005	0.00025	0.005	0.000031	19.75	0.00025	0.00005	0.00075	0.02	0.00008	0.0012	3.00	0.01	0.00	0.083	0.00025	0.15	1.36
MITCHELL/SULPHURETS TAILING HC-84	0.00005	0.00025	0.005	0.000027	19.90	0.00025	0.00005	0.00071	0.02	0.00008	0.0011	2.90	0.01	0.00	0.081	0.00025	0.15	1.30
MITCHELL/SULPHURETS TAILING HC-85	0.00005	0.00025	0.005	0.000024	20.05	0.00025	0.00005	0.00068	0.02	0.00008	0.0010	2.81	0.00	0.00	0.079	0.00025	0.15	1.24
MITCHELL/SULPHURETS TAILING HC-86	0.00005	0.00025	0.005	0.000020	20.20	0.00025	0.00005	0.00064	0.02	0.00008	0.0009	2.71	0.00	0.00	0.077	0.00025	0.15	1.18
MITCHELL/SULPHURETS TAILING HC-87	0.00005	0.00025	0.005	0.000019	19.70	0.00025	0.00005	0.00062	0.02	0.00008	0.0009	2.72	0.00	0.00	0.077	0.00025	0.15	1.18
MITCHELL/SULPHURETS TAILING HC-88	0.00005	0.00025	0.005	0.000018	19.20	0.00025	0.00005	0.00059	0.02	0.00008	0.0009	2.72	0.00	0.00	0.078	0.00025	0.15	1.18
MITCHELL/SULPHURETS TAILING HC-89	0.00005	0.00025	0.005	0.000016	18.70	0.00025	0.00005	0.00057	0.02	0.00007	0.0009	2.73	0.00	0.00	0.078	0.00025	0.15	1.18
MITCHELL/SULPHURETS TAILING HC-90	0.00005	0.00025	0.005	0.000015	18.20	0.00025	0.00005	0.00054	0.02	0.00007	0.0009	2.73	0.00	0.00	0.079	0.00025	0.15	1.18
MITCHELL/SULPHURETS TAILING HC-91	0.00005	0.00025	0.005	0.000023	18.73	0.00025	0.00005	0.00060	0.02	0.00008	0.0009	2.80	0.00	0.00	0.085	0.00025	0.15	1.20
MITCHELL/SULPHURETS TAILING HC-92	0.00005	0.00025	0.005	0.000030	19.25	0.00025	0.00005	0.00067	0.02	0.00008	0.0008	2.87	0.01	0.00	0.091	0.00025	0.15	1.21
MITCHELL/SULPHURETS TAILING HC-93	0.00005	0.00025	0.005	0.000038	19.78	0.00025	0.00005	0.00073	0.02	0.00009	0.0008	2.94	0.01	0.00	0.097	0.00025	0.15	1.23
MITCHELL/SULPHURETS TAILING HC-94	0.00005	0.00025	0.005	0.000045	20.30	0.00025	0.00005	0.00079	0.02	0.00009	0.0007	3.01	0.01	0.00	0.103	0.00025	0.15	1.24
MITCHELL/SULPHURETS TAILING HC-95	0.00005	0.00025	0.005	0.000039	19.68	0.00025	0.00005	0.00078	0.02	0.00008	0.0007	2.91	0.01	0.00	0.094	0.00025	0.15	1.23
MITCHELL/SULPHURETS TAILING HC-96	0.00005	0.00025	0.005	0.000033	19.05	0.00025	0.00005	0.00076	0.02	0.00008	0.0008	2.80	0.00	0.00	0.085	0.00025	0.15	1.22
MITCHELL/SULPHURETS TAILING HC-97	0.00005	0.00025	0.005	0.000026	18.43	0.00025	0.00005	0.00075	0.02	0.00007	0.0008	2.70	0.00	0.00	0.077	0.00025	0.15	1.21
MITCHELL/SULPHURETS TAILING HC-98	0.00005	0.00025	0.005	0.000020	17.80	0.00025	0.00005	0.00073	0.02	0.00007	0.0008	2.59	0.00	0.00	0.068	0.00025	0.15	1.20
MITCHELL/SULPHURETS TAILING HC-99	0.00005	0.00025	0.006	0.000025	17.83	0.00025	0.00005	0.00075	0.02	0.00007	0.0009	2.65	0.00	0.00	0.066	0.00025	0.15	1.22
MITCHELL/SULPHURETS TAILING HC-100	0.00005	0.00025	0.008	0.000031	17.85	0.00025	0.00005	0.00077	0.03	0.00007	0.0009	2.71	0.00	0.00	0.064	0.00025	0.15	1.23
MITCHELL/SULPHURETS TAILING HC-101	0.00005	0.00025	0.009	0.000036	17.88	0.00025	0.00005	0.00078	0.04	0.00007	0.0009	2.77	0.00	0.00	0.062	0.00025	0.15	1.25
MITCHELL/SULPHURETS TAILING HC-102	0.00005	0.00025	0.010	0.000041	17.90	0.00025	0.00005	0.00080	0.04	0.00008	0.0009	2.83	0.00	0.00	0.059	0.00025	0.15	1.26
MITCHELL/SULPHURETS TAILING HC-103	0.00005	0.00025	0.009	0.000036	18.00	0.00025	0.00005	0.00079	0.04	0.00007	0.0008	2.84	0.00	0.00	0.059	0.00025	0.15	1.25
MITCHELL/SULPHURETS TAILING HC-104	0.00005	0.00025	0.008	0.000030	18.10	0.00025	0.00005	0.00079	0.03	0.00007	0.0007	2.84	0.00	0.00	0.058	0.00025	0.15	1.24
MITCHELL/SULPHURETS TAILING HC-105	0.00005	0.00025	0.006	0.000025	18.20	0.00025	0.00005	0.00078	0.02	0.00006	0.0007	2.85	0.00	0.00	0.058	0.00025	0.15	1.22
MITCHELL/SULPHURETS TAILING HC-106	0.00005	0.00025	0.005	0.000019	18.30	0.00025	0.00005	0.00077	0.02	0.00006	0.0006	2.85	0.00	0.00	0.057	0.00025	0.15	1.21
MITCHELL/SULPHURETS TAILING HC-107	0.00005	0.00025	0.005	0.000018	18.13	0.00025	0.00005	0.00064	0.02	0.00006	0.0007	2.87	0.00	0.00	0.056	0.00025	0.15	1.21
MITCHELL/SULPHURETS TAILING HC-108	0.00005	0.00025	0.005	0.000017	17.95	0.00025	0.00005	0.00051	0.02	0.00005	0.0008	2.90	0.00	0.00	0.055	0.00025	0.15	1.21
MITCHELL/SULPHURETS TAILING HC-109	0.00005	0.00025	0.005	0.000015	17.78	0.00025	0.00005	0.00038	0.02	0.00005	0.0009	2.92	0.01	0.00	0.054	0.00025	0.15	1.20
MITCHELL/SULPHURETS TAILING HC-110	0.00005	0.00025	0.005	0.000014	17.60	0.00025	0.00005	0.00025	0.02	0.00005	0.0011	2.94	0.01	0.00	0.052	0.00025	0.15	1.20
MITCHELL/SULPHURETS TAILING HC-111	0.00005	0.00025	0.005	0.000015	17.65	0.00025	0.00005	0.00032	0.02	0.00005	0.0009	2.93	0.01	0.00	0.052	0.00025	0.15	1.17
MITCHELL/SULPHURETS TAILING HC-112	0.00005	0.00025	0.005	0.000016	17.70	0.00025	0.00005	0.00038	0.02	0.00006	0.0007	2.91	0.01	0.00	0.051	0.00025	0.15	1.15
MITCHELL/SULPHURETS TAILING HC-113	0.00005	0.00025	0.005	0.000017	17.75	0.00025	0.00005	0.00045	0.02	0.00006	0.0005	2.90	0.01	0.00	0.050	0.00025	0.15	1.12
MITCHELL/SULPHURETS TAILING HC-114	0.00005	0.00025	0.005	0.000018	17.80	0.00025	0.00005	0.00051	0.02	0.00006	0.0003	2.88	0.01	0.00	0.049	0.00025	0.15	1.09
	0.00005	0.00025	0.005	0.000027	19.90	0.00025	0.00005	0.00071	0.02	0.00008	0.0011	2.90	0.01	0.00	0.081	0.00025	0.15	1.30
2748-18-COMP-0	0.00025	0.00025	0.017	0.000016	96.20	0.00025	0.00005	0.00217	0.02	0.00003	0.0025	1.85	0.01	0.00	0.030	0.00025	0.15	36.00
2748-18-COMP-1	0.00025	0.00025	0.015	0.000005	86.60	0.00025	0.00005	0.00025	0.02	0.00008	0.0025	1.78	0.02	0.00	0.013	0.00025	0.15	21.60
2748-18-COMP-2	0.00025	0.00025	0.017	0.000015	82.10	0.00025	0.00005	0.00052	0.02	0.00006	0.0025	2.26	0.04	0.00	0.012	0.00025	0.15	18.30
2748-18-COMP-3	0.00025	0.00025	0.013	0.000010	47.30	0.00025	0.00005	0.00025	0.02	0.00006	0.0025	1.62	0.04	0.00	0.010	0.00025	0.15	12.30
2748-18-COMP-4	0.00025	0.00025	0.013	0.000005	37.60	0.00025	0.00005	0.00025	0.02	0.00017	0.0025	1.65	0.04	0.00	0.008	0.00025	0.15	9.97
2748-18-COMP-5	0.00025	0.00025	0.015	0.000005	35.20	0.00025	0.00005	0.00051	0.02	0.00020	0.0025	1.87	0.03	0.00	0.006	0.00025	0.15	9.66
2748-18-COMP-6	0.00025	0.00025	0.011	0.000011	26.90	0.00025	0.00005	0.00115	0.08	0.00105	0.0025	1.83	0.02	0.00	0.004	0.00025	0.15	8.08
2748-18-COMP-7	0.00025	0.00025	0.005	0.000005	24.60	0.00025	0.00005	0.00057	0.02	0.00041	0.0025	1.73	0.02	0.00	0.003	0.00025	0.15	7.20
2748-18-COMP-8	0.00025	0.00025	0.011	0.000005	26.20	0.00025	0.00005	0.00085	0.04	0.00057	0.0025	2.07	0.02	0.00	0.003	0.00025	0.15	7.12
2748-18-COMP-9	0.00025	0.00025	0.005	0.000005	25.30	0.00025	0.00005	0.00103	0.02	0.00044	0.0025	2.17	0.03	0.00	0.003	0.00025	0.15	7.19
2748-18-COMP-10	0.00025	0.00025	0.005	0.000005	24.80	0.00025	0.00005	0.00086	0.04	0.00049	0.0025	2.07	0.03	0.00	0.002	0.00025	0.15	6.23
2748-18-COMP-11	0.00025	0.00025	0.011	0.000012	26.40	0.00025	0.00005	0.00523	0.05	0.00072	0.0025	2.26	0.03	0.00	0.003	0.00025	0.15	6.65
2748-18-COMP-12	0.00025	0.00025	0.005	0.000014	23.70	0.00025	0.00005	0.00130	0.02	0.00037	0.0025	2.15	0.03	0.00	0.002	0.00025	0.15	5.70
2748-18-COMP-13	0.00025	0.00025	0.005	0.000011	25.60	0.00025	0.00005	0.00116	0.02	0.00039	0.0025	2.28	0.04	0.00	0.002	0.00025	0.15	5.10
2748-18-COMP-14	0.00025	0.00025	0.005	0.000018	26.00	0.00025	0.00005	0.00126	0.02	0.00037	0.0025	2.18	0.04	0.00	0.003	0.00025	0.15	5.35
2748-18-COMP-15	0.00025	0.00025	0.005	0.000014	24.80	0.00025	0.00005	0.00114	0.02	0.00046	0.0025	2.05	0.04	0.00	0.003	0.00025	0.15	5.09
2748-18-COMP-16	0.00025	0.00025	0.005	0.000016	24.00	0.00025	0.00005	0.00101	0.02	0.00022	0.0025	2.04	0.05	0.00	0.002	0.00025	0.15	4.79
2748-18-COMP-17	0.00025	0.00025	0.005	0.000013	23.00	0.00025	0.00005	0.00107	0.02	0.00029	0.0025	1.93	0.05	0.00	0.002	0.00025	0.15	4.72
2748-18-COMP-18	0.00025	0.00025	0.005	0.000015	23.40	0.00025	0.00005	0.00122	0.03	0.00053	0.0025	1.88	0.05	0.00	0.002	0.00025	0.15	4.92
2748-18-COMP-19	0.00025	0.00025	0.005	0.000013	16.90	0.00025	0.00005	0.00095	0.02	0.00040	0.0025	1.26	0.06	0.00	0.001	0.00025	0.15	3.32
2748-18-COMP-20	0.00025	0.00025	0.005	0.000019	22.80	0.00025	0.00005	0.00103	0.02	0.00020	0.0025	2.01	0.04	0.00	0.003	0.00025	0.15	4.80

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals																	
Sample ID	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L
2748-18-COMP-21	0.00025	0.00025	0.005	0.000012	19.30	0.00025	0.00005	0.00197	0.17	0.00118	0.0025	1.61	0.03	0.00	0.002	0.00025	0.15	3.74
2748-18-COMP-22	0.00025	0.00025	0.005	0.000016	24.20	0.00025	0.00005	0.00096	0.02	0.00034	0.0025	2.18	0.05	0.00	0.002	0.00025	0.15	4.59
2748-18-COMP-23	0.00025	0.00025	0.005	0.000015	22.80	0.00025	0.00005	0.00103	0.02	0.00016	0.0025	2.13	0.05	0.00	0.002	0.00025	0.15	4.48
2748-18-COMP-24	0.00025	0.00025	0.005	0.000015	21.30	0.00025	0.00005	0.00111	0.02	0.00034	0.0025	1.79	0.05	0.00	0.002	0.00025	0.15	3.83
2748-18-COMP-25	0.00025	0.00025	0.005	0.000014	22.30	0.00025	0.00005	0.00104	0.02	0.00034	0.0025	1.96	0.05	0.00	0.002	0.00025	0.15	3.91
2748-18-COMP-26	0.00025	0.00025	0.005	0.000013	22.50	0.00025	0.00005	0.00095	0.02	0.00034	0.0025	2.00	0.05	0.00	0.002	0.00025	0.15	3.78
2748-18-COMP-27	0.00025	0.00025	0.005	0.000023	21.20	0.00025	0.00005	0.00192	0.05	0.00094	0.0025	2.20	0.05	0.00	0.002	0.00025	0.15	4.30
2748-18-COMP-28	0.00025	0.00025	0.005	0.000014	21.70	0.00025	0.00005	0.00081	0.02	0.00015	0.0025	1.99	0.05	0.00	0.002	0.00025	0.15	4.36
2748-18-COMP-29	0.00025	0.00025	0.005	0.000017	21.00	0.00025	0.00005	0.00105	0.02	0.00034	0.0025	1.91	0.05	0.00	0.002	0.00025	0.15	3.59
2748-18-COMP-30	0.00005	0.00025	0.005	0.000017	21.50	0.00025	0.00005	0.00101	0.02	0.00030	0.0015	1.86	0.05	0.00	0.002	0.00025	0.15	3.66
2748-18-COMP-31	0.00025	0.00025	0.005	0.000016	21.10	0.00025	0.00005	0.00118	0.02	0.00042	0.0025	1.81	0.05	0.00	0.001	0.00025	0.15	3.37
2748-18-COMP-32	0.00005	0.00025	0.005	0.000015	20.80	0.00025	0.00005	0.00090	0.02	0.00019	0.0014	1.87	0.05	0.00	0.001	0.00025	0.15	3.50
2748-18-COMP-33	0.00005	0.00025	0.005	0.000018	20.60	0.00025	0.00005	0.00100	0.02	0.00030	0.0017	1.73	0.06	0.00	0.002	0.00025	0.15	3.34
2748-18-COMP-34	0.00005	0.00025	0.005	0.000014	19.30	0.00025	0.00005	0.00076	0.02	0.00012	0.0012	1.72	0.05	0.00	0.001	0.00025	0.15	3.28
2748-18-COMP-35	0.00005	0.00025	0.005	0.000017	20.40	0.00025	0.00005	0.00087	0.02	0.00016	0.0010	1.75	0.05	0.00	0.001	0.00025	0.15	3.27
2748-18-COMP-36	0.00005	0.00025	0.005	0.000014	20.70	0.00025	0.00005	0.00099	0.02	0.00034	0.0013	1.74	0.05	0.00	0.001	0.00025	0.15	3.16
2748-18-COMP-37	0.00005	0.00025	0.005	0.000019	19.60	0.00025	0.00005	0.00076	0.02	0.00013	0.0012	1.78	0.06	0.00	0.001	0.00025	0.15	3.23
2748-18-COMP-38	0.00005	0.00025	0.005	0.000016	19.60	0.00025	0.00005	0.00077	0.02	0.00013	0.0015	1.73	0.06	0.00	0.002	0.00025	0.15	3.11
2748-18-COMP-39	0.00005	0.00025	0.005	0.000016	20.50	0.00025	0.00005	0.00077	0.02	0.00012	0.0016	1.83	0.05	0.00	0.002	0.00025	0.15	3.24
2748-18-COMP-40	0.00005	0.00025	0.005	0.000016	20.70	0.00025	0.00005	0.00078	0.02	0.00010	0.0013	1.88	0.06	0.00	0.002	0.00025	0.15	3.08
2748-18-COMP-41	0.00005	0.00025	0.005	0.000018	20.70	0.00025	0.00005	0.00089	0.02	0.00012	0.0013	1.94	0.06	0.00	0.002	0.00025	0.15	2.87
2748-18-COMP-42	0.00005	0.00025	0.005	0.000019	20.10	0.00025	0.00005	0.00081	0.02	0.00015	0.0012	1.71	0.06	0.00	0.002	0.00025	0.15	2.85
2748-18-COMP-43	0.00005	0.00025	0.005	0.000017	20.50	0.00025	0.00005	0.00111	0.02	0.00017	0.0012	1.73	0.06	0.00	0.002	0.00025	0.15	2.74
2748-18-COMP-44	0.00005	0.00025	0.005	0.000023	20.80	0.00025	0.00005	0.00104	0.02	0.00023	0.0010	1.76	0.07	0.00	0.003	0.00025	0.15	2.74
2748-18-COMP-45	0.00005	0.00025	0.005	0.000020	20.10	0.00025	0.00005	0.00089	0.02	0.00010	0.0019	1.76	0.07	0.00	0.004	0.00025	0.15	2.75
2748-18-COMP-46	0.00005	0.00025	0.005	0.000020	19.90	0.00025	0.00005	0.00082	0.02	0.00010	0.0011	1.66	0.07	0.00	0.004	0.00025	0.15	2.62
2748-18-COMP-47	0.00005	0.00025	0.005	0.000023	18.50	0.00025	0.00005	0.00084	0.02	0.00013	0.0003	1.63	0.07	0.00	0.004	0.00025	0.15	2.55
2748-18-COMP-48	0.00005	0.00025	0.005	0.000028	17.60	0.00025	0.00005	0.00095	0.02	0.00014	0.0008	1.50	0.08	0.00	0.005	0.00025	0.15	2.08
2748-18-COMP-49	0.00005	0.00025	0.005	0.000025	19.60	0.00025	0.00005	0.00086	0.02	0.00010	0.0014	1.74	0.07	0.00	0.006	0.00025	0.15	2.41
2748-18-COMP-50	0.00005	0.00025	0.005	0.000021	20.50	0.00025	0.00005	0.00086	0.02	0.00011	0.0013	1.78	0.07	0.00	0.007	0.00025	0.15	2.48
2748-18-COMP-51	0.00005	0.00025	0.005	0.000025	20.20	0.00025	0.00005	0.00093	0.02	0.00010	0.0015	1.71	0.07	0.00	0.007	0.00025	0.15	2.50
2748-18-COMP-52	0.00005	0.00025	0.005	0.000039	18.90	0.00025	0.00005	0.00144	0.02	0.00012	0.0008	1.57	0.08	0.00	0.008	0.00025	0.15	2.35
2748-18-COMP-53	0.00005	0.00025	0.005	0.000027	19.60	0.00025	0.00005	0.00112	0.02	0.00020	0.0003	1.67	0.08	0.00	0.008	0.00025	0.15	2.38
2748-18-COMP-54	0.00005	0.00025	0.005	0.000029	19.20	0.00025	0.00005	0.00116	0.02	0.00022	0.0010	1.62	0.07	0.00	0.008	0.00025	0.15	2.29
2748-18-COMP-55	0.00005	0.00025	0.005	0.000020	19.00	0.00025	0.00005	0.00104	0.02	0.00019	0.0012	1.53	0.08	0.00	0.007	0.00025	0.15	2.32
2748-18-COMP-56	0.00005	0.00025	0.005	0.000026	19.80	0.00025	0.00005	0.00123	0.02	0.00029	0.0008	1.59	0.09	0.00	0.006	0.00025	0.15	2.30
2748-18-COMP-57	0.00005	0.00025	0.005	0.000021	19.00	0.00025	0.00005	0.00101	0.02	0.00025	0.0012	1.55	0.08	0.00	0.006	0.00025	0.15	2.26
2748-18-COMP-58	0.00005	0.00025	0.005	0.000036	20.90	0.00025	0.00005	0.00209	0.02	0.00012	0.0009	1.72	0.08	0.00	0.007	0.00025	0.15	2.45
2748-18-COMP-59	0.00005	0.00025	0.005	0.000032	19.35	0.00025	0.00005	0.00159	0.02	0.00015	0.0008	1.62	0.08	0.00	0.006	0.00025	0.15	2.32
2748-18-COMP-60	0.00005	0.00025	0.005	0.000027	17.80	0.00025	0.00005	0.00108	0.02	0.00017	0.0008	1.52	0.07	0.00	0.005	0.00025	0.15	2.19
2748-18-COMP-61	0.00005	0.00025	0.005	0.000029	19.70	0.00025	0.00005	0.00108	0.02	0.00014	0.0007	1.63	0.08	0.00	0.006	0.00025	0.15	2.24
2748-18-COMP-62	0.00005	0.00025	0.005	0.000030	21.60	0.00025	0.00005	0.00108	0.02	0.00011	0.0007	1.74	0.09	0.00	0.006	0.00025	0.15	2.28
2748-18-COMP-63	0.00005	0.00025	0.005	0.000029	23.00	0.00025	0.00005	0.00111	0.02	0.00011	0.0009	1.89	0.09	0.00	0.007	0.00025	0.15	2.28
2748-18-COMP-64	0.00005	0.00025	0.005	0.000027	24.40	0.00025	0.00005	0.00114	0.02	0.00010	0.0010	2.04	0.09	0.00	0.007	0.00025	0.15	2.27
2748-18-COMP-65	0.00005	0.00025	0.005	0.000031	23.45	0.00025	0.00005	0.00112	0.02	0.00010	0.0008	1.90	0.09	0.00	0.006	0.00025	0.15	2.11
2748-18-COMP-66	0.00005	0.00025	0.005	0.000034	22.50	0.00025	0.00005	0.00110	0.02	0.00009	0.0007	1.75	0.09	0.00	0.005	0.00025	0.15	1.95
2748-18-COMP-67	0.00005	0.00025	0.005	0.000030	21.80	0.00025	0.00005	0.00119	0.02	0.00014	0.0006	1.74	0.09	0.00	0.005	0.00025	0.15	1.94
2748-18-COMP-68	0.00005	0.00025	0.005	0.000025	21.10	0.00025	0.00005	0.00127	0.02	0.00018	0.0006	1.73	0.08	0.00	0.005	0.00025	0.15	1.93
2748-18-COMP-69	0.00005	0.00025	0.005	0.000027	20.85	0.00025	0.00005	0.00123	0.02	0.00018	0.0007	1.62	0.08	0.00	0.004	0.00025	0.15	1.83
2748-18-COMP-70	0.00005	0.00025	0.005	0.000029	20.60	0.00025	0.00005	0.00119	0.02	0.00018	0.0008	1.50	0.08	0.00	0.004	0.00025	0.15	1.73
2748-18-COMP-71	0.00005	0.00025	0.005	0.000029	21.30	0.00025	0.00005	0.00115	0.02	0.00015	0.0008	1.57	0.08	0.00	0.004	0.00025	0.15	1.73
2748-18-COMP-72	0.00005	0.00025	0.005	0.000029	22.00	0.00025	0.00005	0.00110	0.02	0.00013	0.0009	1.63	0.08	0.00	0.004	0.00025	0.15	1.73
2748-18-COMP-73	0.00005	0.00025	0.005	0.000029	23.25	0.00025	0.00005	0.00103	0.02	0.00011	0.0009	1.65	0.07	0.00	0.005	0.00025	0.15	1.68
2748-18-COMP-74	0.00005	0.00025	0.005	0.000028	24.50	0.00025	0.00005	0.00096	0.02	0.00009	0.0008	1.67	0.07	0.00	0.006	0.00025	0.15	1.63
2748-18-COMP-75	0.00005	0.00025	0.005	0.000029	23.98	0.00025	0.00005	0.00096	0.02	0.00010	0.0008	1.71	0.06	0.00	0.008	0.00025	0.15	1.63
2748-18-COMP-76	0.00005	0.00025	0.005	0.000030	23.45	0.00025	0.00005	0.00097	0.02	0.00010	0.0008	1.75	0.06	0.00	0.009	0.00025	0.15	1.62
2748-18-COMP-77	0.00005	0.00025	0.005	0.000031	22.93	0.00025	0.00005	0.00097	0.02	0.00011	0.0007	1.79	0.06	0.00	0.010	0.00025	0.15	1.62
2748-18-COMP-78	0.00005	0.00025	0.005	0.000032	22.40	0.00025	0.00005	0.00097	0.02	0.00012	0.0007	1.83	0.06	0.00	0.012	0.00025	0.15	1.61

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals																	
Sample ID	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L
2748-18-COMP-79	0.00005	0.00025	0.005	0.000036	22.95	0.00025	0.00005	0.00102	0.02	0.00011	0.0007	1.87	0.06	0.00	0.012	0.00025	0.15	1.63
2748-18-COMP-80	0.00005	0.00025	0.005	0.000040	23.50	0.00025	0.00005	0.00106	0.02	0.00010	0.0006	1.91	0.06	0.00	0.013	0.00025	0.15	1.64
2748-18-COMP-81	0.00005	0.00025	0.005	0.000043	24.05	0.00025	0.00005	0.00111	0.02	0.00009	0.0006	1.94	0.06	0.00	0.013	0.00025	0.15	1.66
2748-18-COMP-82	0.00005	0.00025	0.005	0.000047	24.60	0.00025	0.00005	0.00115	0.02	0.00009	0.0005	1.98	0.05	0.00	0.014	0.00025	0.15	1.67
2748-18-COMP-83	0.00005	0.00025	0.005	0.000043	24.10	0.00025	0.00005	0.00113	0.02	0.00009	0.0006	1.98	0.05	0.00	0.014	0.00025	0.15	1.65
2748-18-COMP-84	0.00005	0.00025	0.005	0.000039	23.60	0.00025	0.00005	0.00111	0.02	0.00009	0.0007	1.97	0.05	0.00	0.014	0.00025	0.15	1.62
2748-18-COMP-85	0.00005	0.00025	0.005	0.000034	23.10	0.00025	0.00005	0.00109	0.02	0.00009	0.0007	1.97	0.04	0.00	0.014	0.00025	0.15	1.60
2748-18-COMP-86	0.00005	0.00025	0.005	0.000030	22.60	0.00025	0.00005	0.00107	0.02	0.00009	0.0008	1.96	0.04	0.00	0.014	0.00025	0.15	1.57
2748-18-COMP-87	0.00005	0.00025	0.007	0.000033	22.23	0.00025	0.00005	0.00111	0.02	0.00010	0.0008	1.97	0.04	0.00	0.013	0.00025	0.15	1.58
2748-18-COMP-88	0.00005	0.00025	0.008	0.000035	21.85	0.00025	0.00005	0.00115	0.02	0.00012	0.0008	1.99	0.04	0.00	0.013	0.00025	0.15	1.59
2748-18-COMP-89	0.00005	0.00025	0.010	0.000038	21.48	0.00025	0.00005	0.00119	0.02	0.00013	0.0008	2.00	0.04	0.00	0.013	0.00025	0.15	1.60
2748-18-COMP-90	0.00005	0.00025	0.011	0.000040	21.10	0.00025	0.00005	0.00123	0.02	0.00015	0.0008	2.01	0.04	0.00	0.013	0.00025	0.15	1.61
2748-18-COMP-91	0.00005	0.00025	0.010	0.000036	21.13	0.00025	0.00005	0.00121	0.02	0.00013	0.0007	2.01	0.03	0.00	0.013	0.00025	0.15	1.60
2748-18-COMP-92	0.00005	0.00025	0.008	0.000033	21.15	0.00025	0.00005	0.00118	0.02	0.00012	0.0005	2.02	0.03	0.00	0.014	0.00025	0.15	1.59
2748-18-COMP-93	0.00005	0.00025	0.007	0.000029	21.18	0.00025	0.00005	0.00116	0.02	0.00010	0.0004	2.02	0.03	0.00	0.014	0.00025	0.15	1.57
2748-18-COMP-94	0.00005	0.00025	0.005	0.000025	21.20	0.00025	0.00005	0.00113	0.02	0.00009	0.0003	2.02	0.03	0.00	0.014	0.00025	0.15	1.56
2748-18-COMP-95	0.00005	0.00025	0.005	0.000027	20.98	0.00025	0.00005	0.00114	0.02	0.00010	0.0004	2.04	0.03	0.00	0.014	0.00025	0.15	1.56
2748-18-COMP-96	0.00005	0.00025	0.005	0.000029	20.75	0.00025	0.00005	0.00114	0.02	0.00011	0.0006	2.06	0.03	0.00	0.014	0.00025	0.15	1.55
2748-18-COMP-97	0.00005	0.00025	0.005	0.000030	20.53	0.00025	0.00005	0.00115	0.02	0.00012	0.0007	2.08	0.03	0.00	0.014	0.00025	0.15	1.55
2748-18-COMP-98	0.00005	0.00025	0.005	0.000032	20.30	0.00025	0.00005	0.00115	0.02	0.00013	0.0009	2.10	0.03	0.00	0.015	0.00025	0.15	1.54
2748-18-COMP-99	0.00005	0.00025	0.005	0.000031	20.33	0.00025	0.00005	0.00118	0.02	0.00012	0.0007	2.10	0.03	0.00	0.014	0.00025	0.15	1.51
2748-18-COMP-100	0.00005	0.00025	0.005	0.000030	20.35	0.00025	0.00005	0.00121	0.02	0.00011	0.0006	2.10	0.03	0.00	0.014	0.00025	0.15	1.48
2748-18-COMP-101	0.00005	0.00025	0.005	0.000029	20.38	0.00025	0.00005	0.00124	0.02	0.00010	0.0004	2.10	0.02	0.00	0.014	0.00025	0.15	1.45
2748-18-COMP-102	0.00005	0.00025	0.005	0.000028	20.40	0.00025	0.00005	0.00127	0.02	0.00009	0.0003	2.10	0.02	0.00	0.014	0.00025	0.15	1.42
	0.00005	0.00025	0.005	0.000030	20.35	0.00025	0.00005	0.00121	0.02	0.00011	0.0006	2.10	0.03	0.00	0.014	0.00025	0.15	1.48

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals											
Sample ID	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulfur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
SULPHIDE TAILINGS-0	0.02203	1.63	0.012700	539.00	1.12		0.0005	0.0005	0.010	0.0017	0.0050	0.022
SULPHIDE TAILINGS-1	0.01503	1.42	0.013100	312.00	1.46		0.0005	0.0005	0.012	0.0026	0.0050	0.022
SULPHIDE TAILINGS-2	0.01103	1.65	0.005230	158.00	1.79		0.0005	0.0005	0.005	0.0029	0.0050	0.022
SULPHIDE TAILINGS-3	0.01203	1.86	0.003750	82.80	1.95		0.0005	0.0005	0.017	0.0028	0.0050	0.030
SULPHIDE TAILINGS-4	0.00503	2.19	0.001450	42.30	2.15		0.0005	0.0005	0.005	0.0031	0.0050	0.044
SULPHIDE TAILINGS-5	0.00503	2.44	0.000050	23.60	2.51		0.0005	0.0005	0.019	0.0027	0.0050	0.057
SULPHIDE TAILINGS-6	0.00503	2.44	0.000050	12.60	2.41		0.0005	0.0005	0.013	0.0022	0.0050	0.065
SULPHIDE TAILINGS-7	0.00503	2.52	0.000050	8.43	2.44		0.0005	0.0005	0.013	0.0016	0.0050	0.093
SULPHIDE TAILINGS-8	0.00503	2.39	0.000050	5.17	2.12		0.0005	0.0005	0.015	0.0019	0.0050	0.084
SULPHIDE TAILINGS-9	0.00503	2.61	0.000050	4.02	2.06		0.0005	0.0005	0.005	0.0014	0.0050	0.111
SULPHIDE TAILINGS-10	0.00503	2.29	0.000050	2.67	2.15		0.0005	0.0005	0.005	0.0012	0.0050	0.093
SULPHIDE TAILINGS-11	0.01103	2.98	0.000050	2.33	2.39		0.0005	0.0005	0.005	0.0007	0.0050	0.428
SULPHIDE TAILINGS-12	0.01103	4.34	0.000050	1.76	2.01		0.0005	0.0005	0.005	0.0004	0.0050	1.049
SULPHIDE TAILINGS-13	0.01603	5.66	0.000050	1.52	2.10		0.0005	0.0005	0.005	0.0003	0.0050	2.149
SULPHIDE TAILINGS-14	0.02203	7.39	0.000050	1.44	1.92		0.0005	0.0005	0.005	0.0020	0.0050	3.789
SULPHIDE TAILINGS-15	0.02603	9.26	0.000050	1.24	1.89		0.0005	0.0005	0.005	0.0042	0.0050	5.179
SULPHIDE TAILINGS-16	0.02803	10.20	0.000050	1.05	1.62		0.0005	0.0005	0.005	0.0051	0.0050	4.709
SULPHIDE TAILINGS-17	0.02903	10.40	0.000050	1.01	1.60		0.0005	0.0005	0.005	0.0056	0.0050	3.989
SULPHIDE TAILINGS-18	0.03003	10.50	0.000050	1.18	1.50		0.0005	0.0005	0.005	0.0075	0.0050	3.399
SULPHIDE TAILINGS-19	0.02303	7.52	0.000050	0.86	1.40		0.0005	0.0005	0.005	0.0048	0.0050	1.759
SULPHIDE TAILINGS-20	0.02503	10.90	0.000050	0.81	1.45		0.0005	0.0005	0.017	0.0079	0.0050	2.589
SULPHIDE TAILINGS-21	0.02103	7.93	0.000050	0.82	1.32		0.0005	0.0005	0.017	0.0042	0.0050	1.639
SULPHIDE TAILINGS-22	0.01803	7.48	0.000050	0.85	1.33		0.0005	0.0005	0.005	0.0031	0.0050	1.219
SULPHIDE TAILINGS-23	0.01603	8.68	0.000050	0.85	1.22		0.0005	0.0005	0.005	0.0045	0.0050	1.689
SULPHIDE TAILINGS-24	0.02103	11.10	0.000050	0.82	1.29		0.0005	0.0005	0.011	0.0074	0.0050	2.729
SULPHIDE TAILINGS-25	0.01803	11.30	0.000050	0.77	1.32		0.0005	0.0005	0.005	0.0055	0.0050	2.089
SULPHIDE TAILINGS-26	0.02003	12.70	0.000050	0.67	1.27		0.0005	0.0005	0.005	0.0056	0.0050	2.249
SULPHIDE TAILINGS-27	0.01603	10.10	0.000050	0.67	1.31		0.0005	0.0005	0.005	0.0035	0.0050	2.109
SULPHIDE TAILINGS-28	0.02103	11.20	0.000050	0.67	1.34		0.0005	0.0005	0.005	0.0047	0.0050	2.899
SULPHIDE TAILINGS-29	0.01603	9.80	0.000050	0.65	1.36		0.0005	0.0005	0.005	0.0044	0.0050	2.379
SULPHIDE TAILINGS-30	0.01903	13.10	0.000050	0.73	1.40		0.0005	0.0046	0.005	0.0056	0.0050	2.779
SULPHIDE TAILINGS-31	0.01503	11.20	0.000050	0.65	1.10		0.0005	0.0005	0.005	0.0040	0.0050	2.039
SULPHIDE TAILINGS-32	0.02103	14.70	0.000050	0.66	1.11		0.0005	0.0005	0.005	0.0055	0.0050	3.329
SULPHIDE TAILINGS-33	0.02103	14.10	0.000050	0.75	1.19		0.0005	0.0005	0.005	0.0047	0.0050	3.069
SULPHIDE TAILINGS-34	0.01503	10.50	0.000050	0.57	0.95		0.0005	0.0005	0.005	0.0029	0.0050	2.349
SULPHIDE TAILINGS-35	0.01703	13.20	0.000250	0.71	1.00		0.0005	0.0005	0.005	0.0036	0.0050	2.799
SULPHIDE TAILINGS-36	0.01503	14.40	0.000050	0.78	0.90		0.0005	0.0005	0.005	0.0042	0.0050	3.119
SULPHIDE TAILINGS-37	0.01203	13.90	0.000050	0.73	0.83		0.0005	0.0005	0.005	0.0028	0.0050	4.199
SULPHIDE TAILINGS-38	0.01503	25.00	0.000050	0.90	0.96		0.0005	0.0005	0.005	0.0048	0.0050	13.419
SULPHIDE TAILINGS-39	0.01003	26.60	0.000050	1.19	0.89		0.0005	0.0005	0.005	0.0039	0.0050	19.219
SULPHIDE TAILINGS-40	0.01203	33.40	0.000050	0.91	0.86		0.0005	0.0005	0.005	0.0046	0.0050	26.519
SULPHIDE TAILINGS-41	0.00503	39.40	0.000050	0.91	0.73		0.0005	0.0005	0.005	0.0050	0.0050	25.219
SULPHIDE TAILINGS-42	0.01203	43.00	0.000180	0.91	0.71		0.0010	0.0005	0.005	0.0089	0.0050	25.619
SULPHIDE TAILINGS-43	0.01003	38.90	0.000100	1.20	0.54		0.0010	0.0010	0.005	0.0106	0.0100	18.819
SULPHIDE TAILINGS-44	0.01003	43.50	0.000100	0.50	0.42		0.0010	0.0010	0.005	0.0097	0.0100	16.919
SULPHIDE TAILINGS-45	0.01003	43.70	0.000100	0.50	0.37		0.0010	0.0010	0.005	0.0126	0.0100	14.719
SULPHIDE TAILINGS-46	0.01003	43.20	0.000100	0.50	0.28		0.0010	0.0010	0.005	0.0122	0.0100	11.519
SULPHIDE TAILINGS-47	0.02503	49.60	0.000250	1.25	0.24		0.0025	0.0025	0.005	0.0150	0.0250	11.219
SULPHIDE TAILINGS-48	0.02503	42.80	0.000250	1.25	0.18		0.0025	0.0025	0.005	0.0131	0.0250	8.049
SULPHIDE TAILINGS-49	0.02503	48.20	0.000250	1.25	0.18		0.0025	0.0025	0.005	0.0155	0.0250	8.189
SULPHIDE TAILINGS-50	0.02503	48.10	0.000250	1.25	0.16		0.0025	0.0025	0.005	0.0154	0.0250	7.879
SULPHIDE TAILINGS-51	0.02503	51.80	0.000250	1.25	0.13		0.0025	0.0025	0.005	0.0186	0.0250	8.809
SULPHIDE TAILINGS-52	0.00249	41.80	0.000048	0.56	0.10		0.0007	0.0001	0.005	0.0108	0.0010	6.689
SULPHIDE TAILINGS-53	0.00193	45.30	0.000060	0.72	0.12		0.0007	0.0003	0.005	0.0110	0.0025	7.579
SULPHIDE TAILINGS-54	0.00258	50.80	0.000047	0.61	0.12		0.0008	0.0001	0.005	0.0145	0.0060	7.349
SULPHIDE TAILINGS-55	0.00401	45.90	0.000062	0.57	0.09		0.0003	0.0001	0.005	0.0162	0.0072	7.779
SULPHIDE TAILINGS-56	0.00442	47.70	0.000025	0.49	0.09		0.0011	0.0003	0.005	0.0139	0.0149	8.459

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals											
	Selenium (Se)	Silicon (Si)	Silver (Ag)	Sodium (Na)	Strontium (Sr)	Sulfur (S)	Thallium (Tl)	Tin (Sn)	Titanium (Ti)	Uranium (U)	Vanadium (V)	Zinc (Zn)
Sample ID	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SULPHIDE TAILINGS-57	0.00447	48.60	0.000058	0.59	0.09		0.0012	0.0001	0.005	0.0141	0.0194	8.079
SULPHIDE TAILINGS-58	0.00466	53.50	0.000083	0.63	0.09		0.0012	0.0001	0.005	0.0155	0.0175	8.509
SULPHIDE TAILINGS-59	0.00289	41.30	0.000066	0.48	0.09		0.0009	0.0001	0.005	0.0076	0.0201	6.219
SULPHIDE TAILINGS-60	0.00264	47.10	0.000132	0.52	0.11		0.0011	0.0001	0.005	0.0097	0.0080	6.639
SULPHIDE TAILINGS-61	0.00428	46.20	0.000151	0.57	0.09		0.0008	0.0001	0.005	0.0103	0.0110	6.989
SULPHIDE TAILINGS-62	0.00500	44.60	0.000263	0.53	0.09		0.0008	0.0001	0.005	0.0103	0.0134	6.649
SULPHIDE TAILINGS-63	0.00493	43.30	0.000233	0.62	0.09		0.0007	0.0003	0.005	0.0105	0.0196	6.989
SULPHIDE TAILINGS-64	0.00393	44.40	0.000200	0.56	0.10		0.0005	0.0005	0.005	0.0087	0.0210	6.779
SULPHIDE TAILINGS-65	0.00364	48.60	0.000262	0.81	0.10		0.0007	0.0003	0.005	0.0079	0.0187	6.839
SULPHIDE TAILINGS-66	0.00329	41.20	0.000198	0.58	0.09		0.0007	0.0003	0.005	0.0064	0.0166	5.729
SULPHIDE TAILINGS-67	0.00285	42.90	0.000299	0.57	0.10		0.0007	0.0001	0.005	0.0057	0.0172	5.819
SULPHIDE TAILINGS-68	0.00326	42.60	0.000421	0.64	0.10		0.0006	0.0001	0.005	0.0056	0.0230	5.509
SULPHIDE TAILINGS-69	0.00291	38.20	0.000487	0.59	0.09		0.0005	0.0003	0.005	0.0056	0.0188	5.249
SULPHIDE TAILINGS-70	0.00397	44.30	0.000687	0.56	0.09		0.0006	0.0003	0.011	0.0066	0.0305	5.569
SULPHIDE TAILINGS-71	0.00338	44.70	0.000476	0.56	0.09		0.0008	0.0001	0.005	0.0066	0.0311	5.999
SULPHIDE TAILINGS-72	0.00219	44.20	0.000759	0.48	0.09		0.0007	0.0003	0.005	0.0062	0.0273	5.589
SULPHIDE TAILINGS-73	0.00223	45.90	0.000572	0.59	0.09		0.0006	0.0001	0.005	0.0056	0.0270	6.269
SULPHIDE TAILINGS-74	0.00351	45.70	0.001090	0.63	0.09		0.0007	0.0003	0.013	0.0084	0.0265	6.049
	0.00305	44.96	0.000717	0.57	0.09		0.0007	0.0002	0.008	0.0067	0.0285	5.895
ROUGHER/SULPHIDE 90/10-0	0.00500	0.98	0.000180	74.00	6.20		0.0005	0.0005	0.012	0.0009	0.0050	0.003
ROUGHER/SULPHIDE 90/10-1	0.00500	1.10	0.000050	31.50	5.32		0.0005	0.0011	0.013	0.0012	0.0050	0.003
ROUGHER/SULPHIDE 90/10-2	0.00500	1.12	0.000050	14.00	4.85		0.0005	0.0005	0.005	0.0013	0.0050	0.003
ROUGHER/SULPHIDE 90/10-3	0.00500	1.25	0.000050	6.31	4.08		0.0005	0.0005	0.017	0.0013	0.0050	0.003
ROUGHER/SULPHIDE 90/10-4	0.00500	1.13	0.000050	3.36	3.96		0.0005	0.0005	0.005	0.0014	0.0050	0.003
ROUGHER/SULPHIDE 90/10-5	0.00500	1.16	0.000050	1.78	4.12		0.0005	0.0005	0.020	0.0015	0.0050	0.003
ROUGHER/SULPHIDE 90/10-6	0.00500	1.14	0.000050	1.19	4.09		0.0005	0.0005	0.014	0.0013	0.0050	0.003
ROUGHER/SULPHIDE 90/10-7	0.00500	1.12	0.000050	0.93	4.07		0.0005	0.0005	0.013	0.0011	0.0050	0.003
ROUGHER/SULPHIDE 90/10-8	0.00500	1.11	0.000050	0.66	3.38		0.0005	0.0005	0.014	0.0011	0.0050	0.003
ROUGHER/SULPHIDE 90/10-9	0.00500	1.14	0.000050	0.59	3.92		0.0005	0.0005	0.005	0.0010	0.0050	0.003
ROUGHER/SULPHIDE 90/10-10	0.00500	1.14	0.000050	0.58	3.41		0.0005	0.0005	0.005	0.0009	0.0050	0.003
ROUGHER/SULPHIDE 90/10-11	0.00500	1.00	0.000050	0.52	3.56		0.0005	0.0005	0.005	0.0008	0.0050	0.003
ROUGHER/SULPHIDE 90/10-12	0.00500	1.13	0.000050	0.25	2.72		0.0005	0.0005	0.005	0.0007	0.0050	0.003
ROUGHER/SULPHIDE 90/10-13	0.00500	1.11	0.000050	0.25	2.93		0.0005	0.0005	0.005	0.0007	0.0050	0.003
ROUGHER/SULPHIDE 90/10-14	0.00500	1.05	0.000050	0.25	2.68		0.0005	0.0005	0.005	0.0005	0.0050	0.003
ROUGHER/SULPHIDE 90/10-15	0.00500	1.14	0.000050	0.25	2.67		0.0005	0.0005	0.005	0.0006	0.0050	0.003
ROUGHER/SULPHIDE 90/10-16	0.00500	1.12	0.000050	0.25	2.03		0.0005	0.0005	0.005	0.0004	0.0050	0.003
ROUGHER/SULPHIDE 90/10-17	0.00500	1.05	0.000050	0.25	2.07		0.0005	0.0005	0.005	0.0004	0.0050	0.003
ROUGHER/SULPHIDE 90/10-18	0.00500	1.01	0.000050	0.56	1.86		0.0005	0.0005	0.005	0.0004	0.0050	0.003
ROUGHER/SULPHIDE 90/10-19	0.00500	1.08	0.000050	0.25	1.71		0.0005	0.0005	0.005	0.0004	0.0050	0.003
ROUGHER/SULPHIDE 90/10-20	0.00500	1.03	0.000050	0.25	1.58		0.0005	0.0005	0.015	0.0003	0.0050	0.003
ROUGHER/SULPHIDE 90/10-21	0.00500	1.08	0.000050	0.25	1.66		0.0005	0.0005	0.015	0.0003	0.0050	0.003
ROUGHER/SULPHIDE 90/10-22	0.00250	1.04	0.000025	0.13	1.43		0.0003	0.0003	0.005	0.0003	0.0025	0.003
ROUGHER/SULPHIDE 90/10-23	0.00500	1.01	0.000050	0.25	1.30		0.0005	0.0005	0.005	0.0003	0.0050	0.003
ROUGHER/SULPHIDE 90/10-24	0.00500	1.09	0.000050	0.25	1.47		0.0005	0.0005	0.005	0.0003	0.0050	0.003
ROUGHER/SULPHIDE 90/10-25	0.00500	1.01	0.000050	0.25	1.35		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER/SULPHIDE 90/10-26	0.00500	1.13	0.000050	0.25	1.26		0.0005	0.0005	0.005	0.0003	0.0050	0.003
ROUGHER/SULPHIDE 90/10-27	0.00500	1.05	0.000050	0.25	1.15		0.0005	0.0005	0.005	0.0002	0.0050	0.005
ROUGHER/SULPHIDE 90/10-28	0.00500	1.04	0.000050	0.25	1.23		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER/SULPHIDE 90/10-29	0.00500	1.14	0.000050	0.25	0.24		0.0005	0.0005	0.005	0.0001	0.0050	0.006
ROUGHER/SULPHIDE 90/10-30	0.00500	1.05	0.000050	0.25	1.15		0.0005	0.0015	0.005	0.0002	0.0050	0.008
ROUGHER/SULPHIDE 90/10-31	0.00500	1.10	0.000050	0.25	1.09		0.0005	0.0005	0.005	0.0002	0.0050	0.006
ROUGHER/SULPHIDE 90/10-32	0.00500	1.17	0.000050	0.25	1.01		0.0005	0.0005	0.005	0.0002	0.0050	0.016
ROUGHER/SULPHIDE 90/10-33	0.00500	1.27	0.000050	0.25	1.03		0.0005	0.0005	0.005	0.0002	0.0050	0.022
ROUGHER/SULPHIDE 90/10-34	0.00500	1.27	0.000050	0.25	0.91		0.0005	0.0005	0.005	0.0001	0.0050	0.024
ROUGHER/SULPHIDE 90/10-35	0.00500	1.28	0.000050	0.25	0.90		0.0005	0.0005	0.005	0.0002	0.0050	0.032
ROUGHER/SULPHIDE 90/10-36	0.00500	1.28	0.000050	0.25	0.90		0.0005	0.0005	0.005	0.0002	0.0050	0.033
ROUGHER/SULPHIDE 90/10-37	0.00500	1.49	0.000050	0.25	0.73		0.0005	0.0005	0.005	0.0002	0.0050	0.064

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals											
Sample ID	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulfur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
ROUGHER/SULPHIDE 90/10-38	0.00500	1.50	0.000050	0.25	0.81		0.0005	0.0005	0.005	0.0003	0.0050	0.079
ROUGHER/SULPHIDE 90/10-39	0.00500	1.70	0.000050	0.25	0.79		0.0005	0.0005	0.005	0.0005	0.0050	0.112
ROUGHER/SULPHIDE 90/10-40	0.00500	1.44	0.000050	0.25	0.72		0.0005	0.0005	0.005	0.0004	0.0050	0.065
ROUGHER/SULPHIDE 90/10-41	0.00500	1.52	0.000050	0.25	0.72		0.0005	0.0005	0.005	0.0004	0.0050	0.065
ROUGHER/SULPHIDE 90/10-42	0.00500	1.95	0.000050	0.25	0.77		0.0005	0.0005	0.005	0.0004	0.0050	0.114
ROUGHER/SULPHIDE 90/10-43	0.00500	1.81	0.000050	0.25	0.71		0.0005	0.0005	0.005	0.0004	0.0050	0.085
ROUGHER/SULPHIDE 90/10-44	0.00500	1.92	0.000050	0.25	0.62		0.0005	0.0005	0.005	0.0004	0.0050	0.085
ROUGHER/SULPHIDE 90/10-45	0.00500	1.62	0.000050	0.25	0.72		0.0005	0.0005	0.011	0.0005	0.0050	0.060
ROUGHER/SULPHIDE 90/10-46	0.00500	1.51	0.000050	0.25	0.68		0.0005	0.0005	0.005	0.0002	0.0050	0.030
ROUGHER/SULPHIDE 90/10-47	0.00500	1.84	0.000050	0.25	0.74		0.0005	0.0005	0.005	0.0002	0.0050	0.065
ROUGHER/SULPHIDE 90/10-48	0.00500	1.44	0.000050	0.25	0.65		0.0005	0.0005	0.010	0.0002	0.0050	0.016
ROUGHER/SULPHIDE 90/10-49	0.00500	1.51	0.000050	0.25	0.64		0.0005	0.0005	0.012	0.0001	0.0050	0.029
ROUGHER/SULPHIDE 90/10-50	0.00500	1.80	0.000050	0.25	0.48		0.0005	0.0005	0.011	0.0002	0.0050	0.035
ROUGHER/SULPHIDE 90/10-51	0.00500	1.33	0.000050	0.25	0.70		0.0005	0.0005	0.005	0.0002	0.0050	0.019
ROUGHER/SULPHIDE 90/10-52	0.00119	1.17	0.000013	0.21	0.69		0.0001	0.0001	0.005	0.0002	0.0005	0.013
ROUGHER/SULPHIDE 90/10-53	0.00162	1.34	0.000013	0.24	0.68		0.0001	0.0001	0.005	0.0002	0.0005	0.022
ROUGHER/SULPHIDE 90/10-54	0.00163	1.37	0.000013	0.19	0.71	1.37	0.0001	0.0001	0.005	0.0002	0.0005	0.025
ROUGHER/SULPHIDE 90/10-55	0.00162	1.20	0.000018	0.19	0.68	1.20	0.0001	0.0001	0.005	0.0002	0.0005	0.022
ROUGHER/SULPHIDE 90/10-56	0.00158	1.32	0.000005	0.16	0.63	1.32	0.0001	0.0001	0.005	0.0001	0.0005	0.027
ROUGHER/SULPHIDE 90/10-57	0.00142	1.20	0.000011	0.19	0.65	1.20	0.0001	0.0001	0.011	0.0001	0.0005	0.022
ROUGHER/SULPHIDE 90/10-58	0.00144	1.25	0.000005	0.17	0.60	1.25	0.0001	0.0001	0.005	0.0001	0.0005	0.023
ROUGHER/SULPHIDE 90/10-59	0.00151	1.24	0.000005	0.17	0.60	1.24	0.0001	0.0001	0.005	0.0001	0.0005	0.023
ROUGHER/SULPHIDE 90/10-60	0.00140	1.34	0.000005	0.20	0.64	1.34	0.0001	0.0001	0.005	0.0001	0.0005	0.025
ROUGHER/SULPHIDE 90/10-61	0.00133	1.27	0.000005	0.18	0.61	1.27	0.0001	0.0001	0.005	0.0001	0.0005	0.018
ROUGHER/SULPHIDE 90/10-62	0.00143	1.19	0.000005	0.18	0.58	1.19	0.0001	0.0001	0.005	0.0001	0.0005	0.020
ROUGHER/SULPHIDE 90/10-63	0.00135	1.30	0.000005	0.23	0.61	1.30	0.0001	0.0001	0.005	0.0001	0.0005	0.022
ROUGHER/SULPHIDE 90/10-64	0.00129	1.28	0.000005	0.18	0.56	1.28	0.0001	0.0001	0.005	0.0001	0.0005	0.021
ROUGHER/SULPHIDE 90/10-65	0.00122	1.29	0.000005	0.18	0.60	1.29	0.0001	0.0001	0.005	0.0001	0.0005	0.022
ROUGHER/SULPHIDE 90/10-66	0.00133	1.36	0.000005	0.17	0.48	1.36	0.0001	0.0001	0.005	0.0001	0.0005	0.025
ROUGHER/SULPHIDE 90/10-67	0.00115	1.12	0.000005	0.18	0.55	1.12	0.0001	0.0001	0.005	0.0001	0.0005	0.011
ROUGHER/SULPHIDE 90/10-68	0.00114	1.11	0.000005	0.24	0.52	1.11	0.0001	0.0001	0.013	0.0001	0.0005	0.015
ROUGHER/SULPHIDE 90/10-69	0.00142	1.20	0.000005	0.15	0.48	1.20	0.0001	0.0001	0.011	0.0001	0.0005	0.020
ROUGHER/SULPHIDE 90/10-70	0.00130	1.37	0.000005	0.18	0.44	1.37	0.0001	0.0001	0.012	0.0000	0.0005	0.027
ROUGHER/SULPHIDE 90/10-71	0.00130	1.31	0.000005	0.16	0.48	1.31	0.0001	0.0001	0.011	0.0000	0.0005	0.020
ROUGHER/SULPHIDE 90/10-72	0.00116	1.15	0.000005	0.18	0.50	1.15	0.0001	0.0001	0.005	0.0000	0.0005	0.014
ROUGHER/SULPHIDE 90/10-73	0.00120	1.18	0.000005	0.16	0.49	1.18	0.0001	0.0001	0.010	0.0000	0.0005	0.014
ROUGHER/SULPHIDE 90/10-74	0.00133	1.19	0.000005	0.16	0.45	1.19	0.0001	0.0001	0.012	0.0000	0.0005	0.017
ROUGHER/SULPHIDE 90/10-75	0.00137	1.25	0.000005	0.17	0.45	1.25	0.0001	0.0001	0.012	0.0000	0.0005	0.020
ROUGHER/SULPHIDE 90/10-76	0.00141	1.30	0.000005	0.17	0.46	1.30	0.0001	0.0001	0.012	0.0000	0.0005	0.024
ROUGHER/SULPHIDE 90/10-77	0.00128	1.21	0.000005	0.18	0.49	1.21	0.0001	0.0001	0.014	0.0000	0.0005	0.018
ROUGHER/SULPHIDE 90/10-78	0.00114	1.11	0.000005	0.19	0.52	1.11	0.0001	0.0001	0.015	0.0000	0.0005	0.011
ROUGHER/SULPHIDE 90/10-79	0.00127	1.19	0.000005	0.18	0.49	1.19	0.0001	0.0001	0.010	0.0000	0.0005	0.016
ROUGHER/SULPHIDE 90/10-80	0.00139	1.26	0.000005	0.17	0.45	1.26	0.0001	0.0001	0.005	0.0000	0.0005	0.020
ROUGHER/SULPHIDE 90/10-81	0.00140	1.29	0.000005	0.18	0.48	1.29	0.0001	0.0001	0.005	0.0000	0.0005	0.019
ROUGHER/SULPHIDE 90/10-82	0.00141	1.32	0.000005	0.19	0.50	1.32	0.0001	0.0001	0.005	0.0000	0.0005	0.017
ROUGHER/SULPHIDE 90/10-83	0.00141	1.28	0.000005	0.17	0.46	1.28	0.0001	0.0001	0.005	0.0000	0.0005	0.018
ROUGHER/SULPHIDE 90/10-84	0.00141	1.23	0.000005	0.16	0.43	1.23	0.0001	0.0001	0.005	0.0000	0.0005	0.019
ROUGHER/SULPHIDE 90/10-85	0.00134	1.28	0.000005	0.16	0.37	1.28	0.0001	0.0001	0.005	0.0000	0.0005	0.017
ROUGHER/SULPHIDE 90/10-86	0.00126	1.32	0.000005	0.16	0.32	1.32	0.0001	0.0001	0.005	0.0000	0.0005	0.015
ROUGHER/SULPHIDE 90/10-87	0.00121	1.28	0.000005	0.15	0.34	1.28	0.0000	0.0001	0.005	0.0000	0.0005	0.015
ROUGHER/SULPHIDE 90/10-88	0.00116	1.23	0.000005	0.15	0.36	1.23	0.0000	0.0001	0.005	0.0000	0.0005	0.016
ROUGHER/SULPHIDE 90/10-89	0.00113	1.27	0.000005	0.16	0.37	1.27	0.0000	0.0001	0.005	0.0000	0.0005	0.016
ROUGHER/SULPHIDE 90/10-90	0.00110	1.30	0.000005	0.18	0.38	1.30	0.0000	0.0001	0.005	0.0000	0.0005	0.016
ROUGHER/SULPHIDE 90/10-91	0.00110	1.28	0.000005	0.17	0.37	1.28	0.0000	0.0001	0.005	0.0000	0.0005	0.019
ROUGHER/SULPHIDE 90/10-92	0.00109	1.25	0.000005	0.16	0.35	1.25	0.0000	0.0001	0.005	0.0000	0.0005	0.022
ROUGHER/SULPHIDE 90/10-93	0.00110	1.43	0.000005	0.17	0.33	1.43	0.0000	0.0001	0.005	0.0001	0.0005	0.031
ROUGHER/SULPHIDE 90/10-94	0.00111	1.61	0.000005	0.18	0.30	1.61	0.0000	0.0001	0.005	0.0002	0.0005	0.039
ROUGHER/SULPHIDE 90/10-95	0.00115	1.71	0.000016	0.18	0.30	1.71	0.0000	0.0001	0.005	0.0007	0.0005	0.041

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals											
Sample ID	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulfur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
ROUGHER/SULPHIDE 90/10-96	0.00118	1.81	0.000026	0.18	0.30	1.81	0.0000	0.0001	0.005	0.0012	0.0005	0.043
ROUGHER/SULPHIDE 90/10-97	0.00111	2.18	0.000027	0.20	0.31	2.18	0.0000	0.0001	0.005	0.0013	0.0005	0.052
ROUGHER/SULPHIDE 90/10-98	0.00103	2.55	0.000027	0.22	0.33	2.55	0.0000	0.0001	0.005	0.0014	0.0005	0.061
ROUGHER/SULPHIDE 90/10-99	0.00095	2.59	0.000030	0.22	0.31	2.59	0.0000	0.0001	0.005	0.0013	0.0005	0.067
ROUGHER/SULPHIDE 90/10-100	0.00087	2.62	0.000032	0.22	0.29	2.62	0.0000	0.0001	0.005	0.0012	0.0005	0.074
ROUGHER/SULPHIDE 90/10-101	0.00081	2.78	0.000033	0.22	0.31	2.78	0.0000	0.0001	0.005	0.0015	0.0005	0.089
ROUGHER/SULPHIDE 90/10-102	0.00074	2.93	0.000033	0.23	0.32	2.93	0.0000	0.0001	0.005	0.0018	0.0005	0.105
ROUGHER/SULPHIDE 90/10-103	0.00074	2.96	0.000031	0.24	0.26	2.96	0.0000	0.0001	0.005	0.0017	0.0005	0.101
ROUGHER/SULPHIDE 90/10-104	0.00074	2.98	0.000029	0.25	0.20	2.98	0.0000	0.0001	0.005	0.0016	0.0005	0.097
ROUGHER/SULPHIDE 90/10-105	0.00064	3.19	0.000060	0.26	0.23	3.19	0.0000	0.0001	0.005	0.0021	0.0005	0.099
ROUGHER/SULPHIDE 90/10-106	0.00053	3.40	0.000090	0.28	0.27	3.40	0.0001	0.0001	0.005	0.0027	0.0005	0.100
ROUGHER/SULPHIDE 90/10-107	0.00050	3.52	0.000063	0.27	0.28	3.52	0.0001	0.0001	0.005	0.0026	0.0005	0.096
ROUGHER/SULPHIDE 90/10-108	0.00046	3.63	0.000035	0.27	0.30	3.63	0.0001	0.0001	0.005	0.0025	0.0005	0.091
ROUGHER/SULPHIDE 90/10-109	0.00057	3.32	0.000031	0.30	0.28	3.32	0.0001	0.0001	0.005	0.0018	0.0005	0.079
ROUGHER/SULPHIDE 90/10-110	0.00068	3.01	0.000027	0.32	0.26	3.01	0.0001	0.0001	0.005	0.0012	0.0005	0.067
ROUGHER/SULPHIDE 90/10-111	0.00064	3.00	0.000026	0.28	0.26	3.00	0.0000	0.0001	0.005	0.0014	0.0005	0.066
ROUGHER/SULPHIDE 90/10-112	0.00059	2.98	0.000024	0.25	0.25	2.98	0.0000	0.0001	0.005	0.0017	0.0005	0.065
ROUGHER/SULPHIDE 90/10-113	0.00051	3.03	0.000024	0.26	0.27	3.03	0.0001	0.0001	0.005	0.0016	0.0005	0.062
ROUGHER/SULPHIDE 90/10-114	0.00043	3.07	0.000024	0.28	0.28	3.07	0.0001	0.0001	0.005	0.0015	0.0005	0.058
ROUGHER/SULPHIDE 90/10-115	0.00071	3.13	0.000030	0.27	0.26	3.13	0.0001	0.0001	0.005	0.0014	0.0005	0.062
ROUGHER/SULPHIDE 90/10-116	0.00099	3.18	0.000035	0.26	0.23	3.18	0.0001	0.0001	0.005	0.0014	0.0005	0.065
ROUGHER/SULPHIDE 90/10-117	0.00101	3.46	0.000037	0.26	0.22	3.46	0.0001	0.0001	0.005	0.0017	0.0005	0.087
ROUGHER/SULPHIDE 90/10-118	0.00103	3.75	0.000039	0.26	0.22	3.75	0.0001	0.0001	0.005	0.0020	0.0005	0.110
ROUGHER/SULPHIDE 90/10-119	0.00104	4.03	0.000040	0.27	0.21	4.03	0.0001	0.0001	0.005	0.0023	0.0005	0.132
ROUGHER/SULPHIDE 90/10-120	0.00106	4.31	0.000042	0.27	0.20	4.31	0.0001	0.0001	0.005	0.0026	0.0005	0.154
ROUGHER/SULPHIDE 90/10-121	0.00138	5.00	0.000065	0.31	0.21	5.00	0.0001	0.0001	0.005	0.0027	0.0006	0.253
ROUGHER/SULPHIDE 90/10-122	0.00170	5.69	0.000089	0.36	0.22	5.69	0.0001	0.0001	0.005	0.0028	0.0008	0.352
ROUGHER/SULPHIDE 90/10-123	0.00201	6.37	0.000112	0.40	0.23	6.37	0.0001	0.0001	0.005	0.0029	0.0009	0.451
ROUGHER/SULPHIDE 90/10-124	0.00233	7.06	0.000135	0.44	0.25	7.06	0.0001	0.0001	0.005	0.0030	0.0010	0.550
ROUGHER/SULPHIDE 90/10-125	0.00206	8.77	0.000125	0.48	0.26	8.77	0.0001	0.0001	0.005	0.0040	0.0010	0.945
ROUGHER/SULPHIDE 90/10-126	0.00179	10.48	0.000116	0.53	0.27	10.48	0.0001	0.0001	0.005	0.0051	0.0010	1.340
ROUGHER/SULPHIDE 90/10-127	0.00151	12.19	0.000106	0.57	0.28	12.19	0.0001	0.0001	0.005	0.0061	0.0010	1.735
ROUGHER/SULPHIDE 90/10-128	0.00124	13.90	0.000096	0.61	0.29	13.90	0.0001	0.0001	0.005	0.0071	0.0010	2.130
ROUGHER/SULPHIDE 90/10-129	0.00106	15.18	0.000152	0.63	0.27	15.18	0.0001	0.0002	0.005	0.0134	0.0020	2.350
ROUGHER/SULPHIDE 90/10-130	0.00087	16.45	0.000208	0.65	0.24	16.45	0.0001	0.0003	0.005	0.0197	0.0030	2.570
ROUGHER/SULPHIDE 90/10-131	0.00069	17.73	0.000264	0.67	0.22	17.73	0.0001	0.0004	0.005	0.0259	0.0040	2.790
ROUGHER/SULPHIDE 90/10-132	0.00050	19.00	0.000320	0.69	0.20	19.00	0.0001	0.0005	0.005	0.0322	0.0050	3.010
ROUGHER/SULPHIDE 90/10-133	0.00044	20.75	0.000328	0.69	0.18	20.75	0.0001	0.0004	0.005	0.0310	0.0044	2.793
ROUGHER/SULPHIDE 90/10-134	0.00038	22.50	0.000335	0.69	0.17	22.50	0.0001	0.0004	0.005	0.0297	0.0038	2.575
ROUGHER/SULPHIDE 90/10-135	0.00031	24.25	0.000343	0.69	0.15	24.25	0.0001	0.0003	0.005	0.0285	0.0031	2.358
ROUGHER/SULPHIDE 90/10-136	0.00025	26.00	0.000350	0.69	0.14	26.00	0.0001	0.0003	0.005	0.0272	0.0025	2.140
ROUGHER/SULPHIDE 90/10-137	0.00029	27.68	0.000377	0.70	0.12	27.68	0.0001	0.0002	0.005	0.0274	0.0021	1.900
ROUGHER/SULPHIDE 90/10-138	0.00032	29.35	0.000404	0.71	0.11	29.35	0.0001	0.0002	0.005	0.0275	0.0018	1.660
ROUGHER/SULPHIDE 90/10-139	0.00036	31.03	0.000430	0.72	0.09	31.03	0.0001	0.0001	0.005	0.0277	0.0014	1.420
ROUGHER/SULPHIDE 90/10-140	0.00039	32.70	0.000457	0.73	0.08	32.70	0.0001	0.0001	0.005	0.0278	0.0010	1.180
ROUGHER/SULPHIDE 90/10-141	0.00045	35.15	0.000548	0.81	0.07	35.15	0.0001	0.0001	0.005	0.0261	0.0015	1.094
ROUGHER/SULPHIDE 90/10-142	0.00050	37.60	0.000639	0.89	0.07	37.60	0.0001	0.0001	0.005	0.0245	0.0021	1.008
ROUGHER/SULPHIDE 90/10-143	0.00056	40.05	0.000730	0.97	0.06	40.05	0.0001	0.0001	0.005	0.0228	0.0026	0.921
ROUGHER/SULPHIDE 90/10-144	0.00061	42.50	0.000821	1.05	0.06	42.50	0.0001	0.0001	0.005	0.0211	0.0031	0.835
ROUGHER/SULPHIDE 90/10-145	0.00060	41.63	0.000876	1.02	0.06	41.63	0.0002	0.0001	0.005	0.0186	0.0032	0.776
ROUGHER/SULPHIDE 90/10-146	0.00059	40.75	0.000931	1.00	0.05	40.75	0.0002	0.0001	0.005	0.0161	0.0034	0.716
ROUGHER/SULPHIDE 90/10-147	0.00057	39.88	0.000985	0.97	0.05	39.88	0.0002	0.0001	0.005	0.0135	0.0035	0.657
ROUGHER/SULPHIDE 90/10-148	0.00056	39.00	0.001040	0.94	0.05	39.00	0.0002	0.0001	0.005	0.0110	0.0036	0.597
ROUGHER/SULPHIDE 90/10-149	0.00054	39.63	0.001218	0.96	0.05	39.63	0.0002	0.0001	0.005	0.0103	0.0036	0.610
ROUGHER/SULPHIDE 90/10-150	0.00052	40.25	0.001395	0.99	0.05	40.25	0.0002	0.0001	0.005	0.0097	0.0036	0.623
ROUGHER/SULPHIDE 90/10-151	0.00050	40.88	0.001573	1.01	0.06	40.88	0.0002	0.0001	0.005	0.0090	0.0035	0.635
ROUGHER/SULPHIDE 90/10-152	0.00048	41.50	0.001750	1.03	0.06	41.50	0.0002	0.0001	0.005	0.0084	0.0035	0.648
ROUGHER/SULPHIDE 90/10-153	0.00047	40.45	0.001735	1.02	0.06	40.45	0.0002	0.0001	0.005	0.0078	0.0029	0.623

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals											
Sample ID	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulfur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
ROUGHER/SULPHIDE 90/10-154	0.00047	39.40	0.001720	1.00	0.06	39.40	0.0002	0.0001	0.005	0.0072	0.0023	0.599
ROUGHER/SULPHIDE 90/10-155	0.00046	38.35	0.001705	0.99	0.06	38.35	0.0002	0.0001	0.005	0.0066	0.0016	0.574
ROUGHER/SULPHIDE 90/10-156	0.00045	37.30	0.001690	0.97	0.07	37.30	0.0002	0.0001	0.005	0.0060	0.0010	0.549
ROUGHER/SULPHIDE 90/10-157	0.00041	35.33	0.001610	0.93	0.06	35.33	0.0001	0.0001	0.005	0.0054	0.0013	0.516
ROUGHER/SULPHIDE 90/10-158	0.00036	33.35	0.001530	0.88	0.06	33.35	0.0001	0.0001	0.005	0.0047	0.0016	0.483
ROUGHER/SULPHIDE 90/10-159	0.00032	31.38	0.001450	0.84	0.06	31.38	0.0001	0.0001	0.005	0.0041	0.0019	0.450
ROUGHER/SULPHIDE 90/10-160	0.00027	29.40	0.001370	0.79	0.06	29.40	0.0001	0.0001	0.005	0.0034	0.0022	0.417
	0.00087	16.45	0.000208	0.65	0.24	16.45	0.0001	0.0003	0.005	0.0197	0.0030	2.570
ROUGHER FINE-0	0.00501	1.45	0.000050	16.80	4.30		0.0005	0.0005	0.013	0.0031	0.0050	0.003
ROUGHER FINE-1	0.00501	1.59	0.000050	9.04	4.71		0.0005	0.0005	0.014	0.0031	0.0050	0.003
ROUGHER FINE-2	0.00501	1.72	0.000050	5.19	5.29		0.0005	0.0005	0.005	0.0034	0.0050	0.003
ROUGHER FINE-3	0.00501	1.92	0.000050	2.94	5.19		0.0005	0.0005	0.018	0.0029	0.0050	0.003
ROUGHER FINE-4	0.00501	1.84	0.000050	1.73	5.09		0.0005	0.0005	0.005	0.0028	0.0050	0.003
ROUGHER FINE-5	0.00501	1.83	0.000050	1.11	5.42		0.0005	0.0005	0.020	0.0027	0.0050	0.003
ROUGHER FINE-6	0.00501	1.78	0.000050	0.78	4.94		0.0005	0.0005	0.014	0.0025	0.0050	0.003
ROUGHER FINE-7	0.00501	1.82	0.000050	0.69	4.93		0.0005	0.0005	0.013	0.0023	0.0050	0.003
ROUGHER FINE-8	0.00501	1.85	0.000050	0.55	4.40		0.0005	0.0005	0.014	0.0023	0.0050	0.003
ROUGHER FINE-9	0.00501	1.90	0.000050	0.25	4.57		0.0005	0.0005	0.005	0.0021	0.0050	0.003
ROUGHER FINE-10	0.00501	1.87	0.000050	0.57	4.57		0.0005	0.0005	0.005	0.0022	0.0050	0.003
ROUGHER FINE-11	0.00501	1.87	0.000050	0.52	4.69		0.0005	0.0005	0.005	0.0024	0.0050	0.003
ROUGHER FINE-12	0.00501	1.98	0.000050	0.25	3.86		0.0005	0.0005	0.005	0.0018	0.0050	0.003
ROUGHER FINE-13	0.00501	1.95	0.000050	0.25	3.86		0.0005	0.0005	0.005	0.0018	0.0050	0.003
ROUGHER FINE-14	0.00501	1.92	0.000050	0.25	3.31		0.0005	0.0005	0.005	0.0016	0.0050	0.003
ROUGHER FINE-15	0.00501	1.94	0.000050	0.25	3.12		0.0005	0.0005	0.005	0.0014	0.0050	0.003
ROUGHER FINE-16	0.00501	1.87	0.000050	0.25	2.53		0.0005	0.0005	0.005	0.0012	0.0050	0.003
ROUGHER FINE-17	0.00501	1.81	0.000050	0.25	2.21		0.0005	0.0005	0.005	0.0011	0.0050	0.003
ROUGHER FINE-18	0.00501	1.71	0.000050	0.53	2.04		0.0005	0.0005	0.005	0.0009	0.0050	0.003
ROUGHER FINE-19	0.00501	1.76	0.000050	0.25	1.62		0.0005	0.0005	0.005	0.0008	0.0050	0.003
ROUGHER FINE-20	0.00501	1.71	0.000050	0.25	1.51		0.0005	0.0005	0.012	0.0008	0.0050	0.003
ROUGHER FINE-21	0.00501	1.65	0.000050	0.25	1.22		0.0005	0.0005	0.011	0.0007	0.0050	0.003
ROUGHER FINE-22	0.00051	1.65	0.000005	0.24	1.02		0.0001	0.0001	0.005	0.0004	0.0005	0.003
ROUGHER FINE-23	0.00501	1.55	0.000050	0.25	0.90		0.0005	0.0005	0.005	0.0005	0.0050	0.003
ROUGHER FINE-24	0.00501	1.61	0.000050	0.25	1.01		0.0005	0.0005	0.005	0.0004	0.0050	0.003
ROUGHER FINE-25	0.00501	1.52	0.000050	0.25	0.98		0.0005	0.0005	0.005	0.0004	0.0050	0.003
ROUGHER FINE-26	0.00501	1.48	0.000050	0.25	0.97		0.0005	0.0005	0.005	0.0004	0.0050	0.003
ROUGHER FINE-27	0.00051	1.55	0.000005	0.27	0.89		0.0001	0.0001	0.005	0.0003	0.0005	0.003
ROUGHER FINE-28	0.00501	1.46	0.000050	0.25	0.95		0.0005	0.0005	0.005	0.0003	0.0050	0.003
ROUGHER FINE-29	0.00501	1.47	0.000050	0.25	0.94		0.0005	0.0005	0.005	0.0003	0.0050	0.003
ROUGHER FINE-30	0.00501	1.44	0.000050	0.25	0.92		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-31	0.00501	1.44	0.000050	0.25	0.83		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-32	0.00501	1.44	0.000050	0.25	0.88		0.0005	0.0005	0.005	0.0003	0.0050	0.003
ROUGHER FINE-33	0.00501	1.57	0.000050	0.25	0.87		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-34	0.00501	1.43	0.000050	0.25	0.75		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-35	0.00501	1.43	0.000050	0.25	0.81		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-36	0.00501	1.32	0.000050	0.25	0.76		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-37	0.00501	1.37	0.000050	0.25	0.75		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-38	0.00501	1.44	0.000050	0.25	0.77		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-39	0.00501	1.35	0.000050	0.25	0.78		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-40	0.00501	1.37	0.000050	0.25	0.76		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-41	0.00501	1.41	0.000050	0.25	0.69		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-42	0.00501	1.43	0.000050	0.25	0.76		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-43	0.00501	1.39	0.000050	0.25	0.76		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-44	0.00501	1.34	0.000050	0.25	0.73		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-45	0.00501	1.37	0.000050	0.25	0.72		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-46	0.00501	1.28	0.000050	0.25	0.64		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-47	0.00501	1.35	0.000050	0.25	0.80		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-48	0.00501	1.28	0.000050	0.25	0.67		0.0005	0.0005	0.005	0.0002	0.0050	0.003

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals											
Sample ID	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulfur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
ROUGHER FINE-49	0.00501	1.30	0.000050	0.25	0.72		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-50	0.00501	1.22	0.000050	0.25	0.50		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-51	0.00501	1.39	0.000050	0.25	0.73		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER FINE-52	0.00052	1.26	0.000005	0.13	0.65		0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER FINE-53	0.00060	1.26	0.000014	0.16	0.66		0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER FINE-54	0.00054	1.28	0.000005	0.13	0.66	1.97	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER FINE-55	0.00051	1.21	0.000012	0.11	0.65	1.84	0.0001	0.0001	0.005	0.0001	0.0005	0.002
ROUGHER FINE-56	0.00046	1.21	0.000005	0.11	0.64	1.78	0.0001	0.0001	0.005	0.0001	0.0005	0.002
ROUGHER FINE-57	0.00044	1.20	0.000005	0.12	0.70	1.75	0.0001	0.0001	0.005	0.0001	0.0005	0.002
ROUGHER FINE-58	0.00048	1.18	0.000005	0.11	0.60	1.61	0.0001	0.0001	0.005	0.0001	0.0005	0.002
ROUGHER FINE-59	0.00043	1.20	0.000005	0.12	0.63	1.65	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER FINE-60	0.00042	1.26	0.000005	0.13	0.61	1.73	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER FINE-61	0.00046	1.32	0.000005	0.14	0.66	2.08	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER FINE-62	0.00046	1.17	0.000005	0.13	0.57	1.58	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER FINE-63	0.00046	1.20	0.000005	0.16	0.56	2.06	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER FINE-64	0.00046	1.18	0.000005	0.11	0.55	1.77	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER FINE-65	0.00044	1.23	0.000005	0.10	0.57	1.62	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER FINE-66	0.00048	1.12	0.000005	0.10	0.51	1.67	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER FINE-67	0.00047	1.16	0.000005	0.11	0.52	1.58	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER FINE-68	0.00040	1.12	0.000005	0.10	0.46	1.59	0.0001	0.0001	0.005	0.0001	0.0005	0.002
ROUGHER FINE-69	0.00045	1.05	0.000005	0.09	0.50	1.45	0.0001	0.0001	0.005	0.0001	0.0005	0.002
ROUGHER FINE-70	0.00044	1.12	0.000005	0.10	0.51	1.51	0.0001	0.0001	0.005	0.0001	0.0005	0.002
ROUGHER FINE-71	0.00045	1.14	0.000005	0.09	0.49	1.47	0.0001	0.0001	0.005	0.0001	0.0005	0.002
ROUGHER FINE-72	0.00041	1.08	0.000005	0.12	0.48	1.43	0.0001	0.0001	0.005	0.0001	0.0005	0.002
ROUGHER FINE-73	0.00048	1.06	0.000005	0.09	0.44	1.41	0.0001	0.0001	0.005	0.0001	0.0005	0.002
ROUGHER FINE-74	0.00041	1.10	0.000005	0.10	0.50	1.33	0.0001	0.0001	0.005	0.0002	0.0005	0.002
	0.00044	1.10	0.000005	0.10	0.48	1.43	0.0001	0.0001	0.005	0.0001	0.0005	0.002
ROUGHER COARSE-0	0.00501	2.02	0.000050	13.90	4.44		0.0005	0.0005	0.013	0.0038	0.0050	0.003
ROUGHER COARSE-1	0.00501	1.88	0.000050	5.63	3.71		0.0005	0.0005	0.014	0.0026	0.0050	0.003
ROUGHER COARSE-2	0.00501	1.89	0.000050	2.49	2.93		0.0005	0.0005	0.005	0.0022	0.0050	0.003
ROUGHER COARSE-3	0.00501	1.83	0.000050	1.12	2.58		0.0005	0.0005	0.017	0.0013	0.0050	0.003
ROUGHER COARSE-4	0.00501	1.84	0.000050	0.66	2.70		0.0005	0.0005	0.005	0.0013	0.0050	0.003
ROUGHER COARSE-5	0.00501	1.75	0.000050	0.25	2.60		0.0005	0.0005	0.019	0.0013	0.0050	0.003
ROUGHER COARSE-6	0.00501	1.63	0.000050	0.25	2.36		0.0005	0.0005	0.013	0.0011	0.0050	0.003
ROUGHER COARSE-7	0.00501	1.59	0.000050	0.25	2.24		0.0005	0.0005	0.012	0.0009	0.0050	0.003
ROUGHER COARSE-8	0.00501	1.48	0.000050	0.25	1.83		0.0005	0.0005	0.012	0.0007	0.0050	0.003
ROUGHER COARSE-9	0.00501	1.56	0.000050	0.25	1.82		0.0005	0.0005	0.005	0.0007	0.0050	0.003
ROUGHER COARSE-10	0.00501	1.55	0.000050	0.25	1.81		0.0005	0.0005	0.005	0.0007	0.0050	0.003
ROUGHER COARSE-11	0.00501	1.33	0.000050	0.25	1.42		0.0005	0.0005	0.005	0.0005	0.0050	0.003
ROUGHER COARSE-12	0.00501	1.47	0.000050	0.25	1.15		0.0005	0.0005	0.005	0.0004	0.0050	0.003
ROUGHER COARSE-13	0.00501	1.25	0.000050	0.25	0.94		0.0005	0.0005	0.005	0.0003	0.0050	0.003
ROUGHER COARSE-14	0.00051	1.37	0.000005	0.17	0.85		0.0001	0.0001	0.005	0.0003	0.0005	0.003
ROUGHER COARSE-15	0.00501	1.31	0.000050	0.25	0.69		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER COARSE-16	0.00501	1.25	0.000050	0.25	0.54		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-17	0.00501	1.21	0.000050	0.25	0.50		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-18	0.00501	1.15	0.000050	0.25	0.53		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-19	0.00501	1.20	0.000050	0.25	0.53		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-20	0.00501	1.14	0.000050	0.25	0.52		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-21	0.00501	1.12	0.000050	0.25	0.53		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-22	0.00501	1.14	0.000050	0.25	0.51		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-23	0.00501	0.98	0.000050	0.25	0.43		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-24	0.00501	1.06	0.000050	0.25	0.47		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-25	0.00501	1.08	0.000050	0.25	0.49		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-26	0.00501	1.11	0.000050	0.25	0.47		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-27	0.00051	1.16	0.000005	0.17	0.44		0.0001	0.0001	0.005	0.0001	0.0005	0.003
ROUGHER COARSE-28	0.00051	1.12	0.000005	0.25	0.43		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-29	0.00051	1.06	0.000005	0.25	0.39		0.0005	0.0005	0.005	0.0001	0.0050	0.003

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals											
Sample ID	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulfur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
ROUGHER COARSE-30	0.00051	1.10	0.000005	0.25	0.42		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-31	0.00051	1.08	0.000005	0.25	0.36		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-32	0.00051	1.05	0.000005	0.25	0.35		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-33	0.00051	1.09	0.000005	0.25	0.37		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-34	0.00051	1.03	0.000005	0.25	0.31		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-35	0.00501	1.01	0.000050	0.25	0.31		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-36	0.00501	1.00	0.000050	0.25	0.30		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-37	0.00501	0.98	0.000050	0.25	0.27		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-38	0.00501	1.08	0.000050	0.25	0.29		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-39	0.00501	0.98	0.000050	0.25	0.26		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-40	0.00501	1.02	0.000050	0.25	0.28		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-41	0.00501	1.08	0.000050	0.25	0.27		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-42	0.00501	1.04	0.000050	0.25	0.28		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-43	0.00501	1.05	0.000050	0.25	0.26		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-44	0.00501	1.05	0.000050	0.25	0.27		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-45	0.00501	1.03	0.000050	0.25	0.25		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-46	0.00501	0.98	0.000050	0.25	0.24		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-47	0.00501	0.98	0.000050	0.25	0.27		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-48	0.00501	0.99	0.000050	0.25	0.26		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-49	0.00501	0.93	0.000050	0.25	0.24		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-50	0.00501	0.94	0.000050	0.25	0.19		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-51	0.00501	0.99	0.000050	0.25	0.25		0.0005	0.0005	0.005	0.0001	0.0050	0.003
ROUGHER COARSE-52	0.00054	0.91	0.000005	0.10	0.24		0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-53	0.00054	0.91	0.000005	0.11	0.22		0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-54	0.00050	0.92	0.000005	0.09	0.24	2.10	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-55	0.00051	0.89	0.000005	0.10	0.23	1.96	0.0001	0.0002	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-56	0.00050	0.84	0.000005	0.07	0.20	1.71	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-57	0.00048	0.89	0.000005	0.10	0.24	1.83	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-58	0.00050	0.92	0.000005	0.09	0.22	1.84	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-59	0.00042	0.91	0.000005	0.09	0.22	1.81	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-60	0.00045	0.95	0.000005	0.10	0.22	1.97	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-61	0.00047	0.89	0.000005	0.10	0.21	2.10	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-62	0.00045	0.91	0.000005	0.11	0.21	2.21	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-63	0.00043	0.87	0.000005	0.13	0.19	2.15	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-64	0.00042	0.88	0.000005	0.10	0.19	1.91	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-65	0.00043	0.90	0.000005	0.10	0.20	1.82	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-66	0.00040	0.91	0.000005	0.11	0.18	1.79	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-67	0.00045	0.95	0.000005	0.12	0.19	1.80	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-68	0.00040	0.95	0.000005	0.12	0.17	1.73	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-69	0.00044	0.90	0.000005	0.11	0.18	1.72	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-70	0.00040	0.95	0.000005	0.13	0.18	1.67	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-71	0.00032	1.01	0.000005	0.17	0.18	1.65	0.0001	0.0001	0.005	0.0000	0.0005	0.004
ROUGHER COARSE-72	0.00036	0.96	0.000005	0.14	0.18	1.69	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-73	0.00039	0.99	0.000005	0.13	0.17	1.58	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER COARSE-74	0.00036	1.00	0.000005	0.13	0.18	1.56	0.0001	0.0001	0.005	0.0000	0.0005	0.002
	0.00036	0.98	0.000005	0.14	0.18	1.63	0.0001	0.0001	0.005	0.0000	0.0005	0.002
ROUGHER-0	0.00501	1.00	0.000610	12.00	9.89		0.0005	0.0005	0.005	0.0033	0.0050	0.003
ROUGHER-1	0.00501	1.22	0.000250	7.52	8.48		0.0005	0.0005	0.005	0.0032	0.0050	0.003
ROUGHER-2	0.00501	1.19	0.000050	2.52	5.79		0.0005	0.0005	0.005	0.0030	0.0050	0.003
ROUGHER-3	0.00501	1.22	0.000050	1.33	5.36		0.0005	0.0005	0.005	0.0027	0.0050	0.003
ROUGHER-4	0.00501	1.19	0.000050	0.88	4.58		0.0005	0.0005	0.005	0.0024	0.0050	0.003
ROUGHER-5	0.00501	1.24	0.000050	1.54	4.75		0.0005	0.0005	0.005	0.0027	0.0050	0.003
ROUGHER-6	0.00501	1.15	0.000050	0.25	3.94		0.0005	0.0005	0.005	0.0020	0.0050	0.003
ROUGHER-7	0.00501	1.35	0.000050	0.25	3.81		0.0005	0.0005	0.005	0.0025	0.0050	0.003
ROUGHER-8	0.00501	1.15	0.000050	0.25	3.48		0.0005	0.0005	0.005	0.0024	0.0050	0.003
ROUGHER-9	0.00501	1.07	0.000050	0.25	2.85		0.0005	0.0005	0.005	0.0018	0.0050	0.003
ROUGHER-10	0.00501	1.01	0.000050	0.25	2.54		0.0005	0.0005	0.005	0.0015	0.0050	0.003

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals											
Sample ID	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulfur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
ROUGHER-11	0.00501	1.02	0.000050	0.25	2.30		0.0005	0.0005	0.005	0.0012	0.0050	0.003
ROUGHER-12	0.00501	0.96	0.000050	0.25	2.16		0.0005	0.0005	0.005	0.0009	0.0050	0.003
ROUGHER-13	0.00501	0.91	0.000050	0.25	1.55		0.0005	0.0005	0.005	0.0006	0.0050	0.003
ROUGHER-14	0.00501	0.90	0.000050	0.25	1.78		0.0005	0.0005	0.005	0.0007	0.0050	0.003
ROUGHER-15	0.00501	0.92	0.000050	0.25	1.39		0.0005	0.0005	0.005	0.0005	0.0050	0.003
ROUGHER-16	0.00501	0.90	0.000050	0.25	1.41		0.0005	0.0005	0.005	0.0006	0.0050	0.003
ROUGHER-17	0.00501	0.98	0.000050	0.25	1.26		0.0005	0.0005	0.005	0.0005	0.0050	0.003
ROUGHER-18	0.00501	0.99	0.000050	0.25	1.14		0.0005	0.0005	0.005	0.0004	0.0050	0.003
ROUGHER-19	0.00501	0.92	0.000050	0.25	0.98		0.0005	0.0005	0.005	0.0004	0.0050	0.003
ROUGHER-20	0.00501	0.97	0.000050	0.25	1.02		0.0005	0.0005	0.005	0.0003	0.0050	0.003
ROUGHER-21	0.00501	0.91	0.000050	0.25	0.98		0.0005	0.0005	0.005	0.0003	0.0050	0.003
ROUGHER-22	0.00501	0.91	0.000050	0.25	0.98		0.0005	0.0005	0.005	0.0003	0.0050	0.003
ROUGHER-23	0.00501	0.93	0.000050	0.25	1.29		0.0005	0.0005	0.005	0.0004	0.0050	0.003
ROUGHER-24	0.00501	0.95	0.000050	0.25	0.97		0.0005	0.0005	0.005	0.0003	0.0050	0.003
ROUGHER-25	0.00501	0.83	0.000050	0.25	0.82		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER-26	0.00501	0.83	0.000050	0.25	0.91		0.0005	0.0005	0.005	0.0003	0.0050	0.003
ROUGHER-27	0.00501	0.90	0.000050	0.25	0.86		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER-28	0.00501	0.78	0.000050	0.25	0.71		0.0005	0.0005	0.005	0.0002	0.0050	0.003
ROUGHER-29	0.00501	0.94	0.000050	0.25	0.93		0.0005	0.0005	0.005	0.0003	0.0050	0.003
ROUGHER-30	0.00052	0.86	0.000005	0.16	0.83		0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-31	0.00048	0.86	0.000005	0.15	0.84		0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-32	0.00041	0.77	0.000005	0.16	0.70	4.09	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-33	0.00045	0.87	0.000005	0.16	0.77	4.20	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-34	0.00046	0.77	0.000005	0.13	0.69	3.46	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-35	0.00044	0.79	0.000005	0.13	0.69	3.43	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-36	0.00042	0.76	0.000005	0.14	0.63	2.84	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-37	0.00044	0.74	0.000005	0.11	0.63	2.78	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-38	0.00042	0.80	0.000005	0.12	0.62	2.81	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-39	0.00046	0.80	0.000005	0.15	0.61	3.02	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-40	0.00045	0.81	0.000005	0.13	0.63	3.04	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-41	0.00045	0.79	0.000005	0.12	0.61	3.05	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-42	0.00043	0.86	0.000005	0.14	0.66	2.80	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-43	0.00043	0.79	0.000005	0.11	0.64	2.61	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-44	0.00044	0.76	0.000005	0.10	0.59	2.42	0.0001	0.0011	0.005	0.0002	0.0005	0.002
ROUGHER-45	0.00041	0.76	0.000005	0.16	0.50	2.11	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-46	0.00047	0.85	0.000005	0.13	0.63	2.49	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-47	0.00045	0.81	0.000005	0.12	0.53	2.31	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-48	0.00046	0.80	0.000005	0.12	0.52	2.12	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-49	0.00041	0.77	0.000005	0.11	0.49	1.94	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-50	0.00040	0.79	0.000005	0.12	0.50	2.08	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-51	0.00043	0.85	0.000005	0.15	0.48	2.38	0.0001	0.0001	0.005	0.0002	0.0005	0.002
ROUGHER-52	0.00038	0.87	0.000005	0.17	0.51	2.03	0.0001	0.0001	0.005	0.0002	0.0005	0.002
	0.00042	0.82	0.000005	0.13	0.50	2.11	0.0001	0.0001	0.005	0.0002	0.0005	0.002
MITCHELL/KERR TAILING HC-1	0.00503	1.30	0.000050	3.77	3.84		0.0005	0.0005	0.005	0.0009	0.0050	0.003
MITCHELL/KERR TAILING HC-2	0.00503	1.23	0.000050	2.12	4.05		0.0005	0.0005	0.005	0.0011	0.0050	0.003
MITCHELL/KERR TAILING HC-3	0.00503	1.19	0.000050	1.04	3.71		0.0005	0.0005	0.020	0.0012	0.0050	0.003
MITCHELL/KERR TAILING HC-4	0.00503	1.33	0.000050	0.85	4.15		0.0005	0.0005	0.005	0.0012	0.0050	0.003
MITCHELL/KERR TAILING HC-5	0.00503	1.33	0.000050	0.59	4.20		0.0005	0.0005	0.005	0.0014	0.0050	0.003
MITCHELL/KERR TAILING HC-6	0.00503	1.31	0.000050	0.56	4.10		0.0005	0.0005	0.005	0.0016	0.0050	0.003
MITCHELL/KERR TAILING HC-7	0.00503	1.47	0.000050	0.54	3.87		0.0005	0.0005	0.005	0.0016	0.0050	0.003
MITCHELL/KERR TAILING HC-8	0.00503	1.38	0.000050	0.25	3.67		0.0005	0.0005	0.005	0.0013	0.0050	0.003
MITCHELL/KERR TAILING HC-9	0.00503	1.36	0.000050	0.25	3.29		0.0005	0.0005	0.005	0.0012	0.0050	0.003
MITCHELL/KERR TAILING HC-10	0.00503	1.53	0.000050	0.25	3.06		0.0005	0.0005	0.005	0.0011	0.0050	0.003
MITCHELL/KERR TAILING HC-11	0.00503	1.50	0.000050	0.25	2.66		0.0005	0.0005	0.005	0.0011	0.0050	0.003
MITCHELL/KERR TAILING HC-12	0.00503	1.50	0.000050	0.25	2.38		0.0005	0.0005	0.005	0.0009	0.0050	0.003
MITCHELL/KERR TAILING HC-13	0.00503	1.53	0.000050	0.25	2.21		0.0005	0.0005	0.013	0.0008	0.0050	0.003
MITCHELL/KERR TAILING HC-14	0.00503	1.57	0.000050	0.25	2.26		0.0005	0.0005	0.010	0.0010	0.0050	0.003

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals											
Sample ID	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulfur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
MITCHELL/KERR TAILING HC-15	0.00503	1.29	0.000050	0.25	1.85		0.0005	0.0005	0.005	0.0008	0.0050	0.003
MITCHELL/KERR TAILING HC-16	0.00503	1.42	0.000050	0.25	1.67		0.0005	0.0005	0.012	0.0007	0.0050	0.003
MITCHELL/KERR TAILING HC-17	0.00503	1.39	0.000050	0.25	1.53		0.0005	0.0005	0.005	0.0007	0.0050	0.003
MITCHELL/KERR TAILING HC-18	0.00503	1.39	0.000050	0.25	1.37		0.0005	0.0005	0.005	0.0005	0.0050	0.003
MITCHELL/KERR TAILING HC-19	0.00503	1.35	0.000050	0.25	1.19		0.0005	0.0005	0.005	0.0004	0.0050	0.003
MITCHELL/KERR TAILING HC-20	0.00127	1.37	0.000005	0.30	1.05		0.0001	0.0001	0.005	0.0003	0.0005	0.002
MITCHELL/KERR TAILING HC-21	0.00135	1.38	0.000005	1.12	1.00		0.0001	0.0001	0.005	0.0003	0.0005	0.002
MITCHELL/KERR TAILING HC-22	0.00128	1.27	0.000005	0.23	0.77	23.90	0.0001	0.0001	0.005	0.0002	0.0005	0.002
MITCHELL/KERR TAILING HC-23	0.00149	1.33	0.000005	0.32	0.81	14.30	0.0001	0.0001	0.005	0.0002	0.0005	0.002
MITCHELL/KERR TAILING HC-24	0.00149	1.26	0.000005	0.27	0.79	8.87	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-25	0.00139	1.29	0.000005	0.19	0.78	7.18	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-26	0.00136	1.32	0.000005	0.25	0.83	6.95	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-27	0.00142	1.30	0.000005	0.26	0.80	5.61	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-28	0.00143	1.36	0.000005	0.27	0.81	5.33	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-29	0.00153	1.36	0.000005	0.29	0.81	4.71	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-30	0.00157	1.40	0.000005	0.27	0.76	4.50	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-31	0.00138	1.45	0.000005	0.30	0.80	4.53	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-32	0.00121	1.95	0.000005	0.27	0.79	4.00	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-33	0.00125	1.53	0.000005	0.36	0.77	4.02	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-34	0.00125	1.43	0.000005	0.33	0.77	3.75	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-35	0.00135	1.44	0.000005	0.31	0.71	3.60	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-36	0.00132	1.39	0.000005	0.29	0.69	3.52	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-37	0.00129	1.37	0.000005	0.23	0.75	3.34	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-38	0.00122	1.28	0.000005	0.20	0.70	3.36	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-39	0.00115	1.31	0.000005	0.23	0.69	3.18	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-40	0.00123	1.34	0.000005	0.21	0.62	3.36	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-41	0.00122	1.31	0.000005	0.19	0.63	3.43	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-42	0.00122	1.29	0.000005	0.17	0.63	3.50	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-43	0.00116	1.26	0.000005	0.16	0.61	3.42	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-44	0.00110	1.24	0.000005	0.14	0.58	3.33	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-45	0.00112	1.25	0.000005	0.17	0.65	3.90	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-46	0.00114	1.27	0.000005	0.19	0.71	4.46	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-47	0.00108	1.25	0.000005	0.18	0.63	3.85	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/KERR TAILING HC-48	0.00102	1.24	0.000005	0.17	0.56	3.24	0.0001	0.0001	0.005	0.0001	0.0005	0.002
	0.00109	1.25	0.000005	0.17	0.63	8.58	0.0001	0.0001	0.005	0.0001	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-0	0.01600	4.44	0.000050	13.00	1.53		0.0005	0.0005	0.010	0.0001	0.0050	0.003
MITCHELL/SULPHURETS TAILING HC-1	0.01500	5.02	0.000050	6.79	1.18		0.0005	0.0005	0.005	0.0001	0.0140	0.003
MITCHELL/SULPHURETS TAILING HC-2	0.01700	3.80	0.000050	4.25	1.02		0.0005	0.0005	0.012	0.0001	0.0120	0.003
MITCHELL/SULPHURETS TAILING HC-3	0.01300	2.70	0.000050	1.97	0.77		0.0005	0.0005	0.005	0.0001	0.0050	0.003
MITCHELL/SULPHURETS TAILING HC-4	0.00500	2.48	0.000050	1.46	0.66		0.0005	0.0005	0.005	0.0002	0.0050	0.003
MITCHELL/SULPHURETS TAILING HC-5	0.00500	2.66	0.000050	1.20	0.55		0.0005	0.0005	0.005	0.0003	0.0050	0.003
MITCHELL/SULPHURETS TAILING HC-6	0.00327	2.70	0.000005	0.81	0.44	2.70	0.0001	0.0001	0.005	0.0004	0.0024	0.002
MITCHELL/SULPHURETS TAILING HC-7	0.00210	3.02	0.000005	0.70	0.51	3.02	0.0001	0.0001	0.005	0.0006	0.0018	0.002
MITCHELL/SULPHURETS TAILING HC-8	0.00143	3.02	0.000005	0.60	0.47	3.02	0.0001	0.0001	0.005	0.0007	0.0013	0.002
MITCHELL/SULPHURETS TAILING HC-9	0.00143	3.20	0.000005	0.52	0.52	3.20	0.0001	0.0001	0.005	0.0007	0.0011	0.002
MITCHELL/SULPHURETS TAILING HC-10	0.00149	3.26	0.000005	0.48	0.54	3.26	0.0001	0.0001	0.005	0.0007	0.0013	0.002
MITCHELL/SULPHURETS TAILING HC-11	0.00133	3.22	0.000005	0.41	0.57	3.22	0.0001	0.0001	0.005	0.0007	0.0011	0.002
MITCHELL/SULPHURETS TAILING HC-12	0.00118	3.05	0.000005	0.41	0.58	3.05	0.0001	0.0001	0.005	0.0007	0.0011	0.002
MITCHELL/SULPHURETS TAILING HC-13	0.00115	3.19	0.000005	0.34	0.59	3.19	0.0001	0.0001	0.005	0.0006	0.0013	0.002
MITCHELL/SULPHURETS TAILING HC-14	0.00118	3.35	0.000005	0.35	0.58	3.35	0.0001	0.0001	0.005	0.0007	0.0012	0.002
MITCHELL/SULPHURETS TAILING HC-15	0.00116	3.02	0.000005	0.31	0.58	3.02	0.0001	0.0001	0.005	0.0007	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-16	0.00120	3.07	0.000005	0.30	0.56	3.07	0.0001	0.0001	0.005	0.0008	0.0011	0.002
MITCHELL/SULPHURETS TAILING HC-17	0.00109	3.18	0.000005	0.31	0.59	3.18	0.0001	0.0001	0.005	0.0011	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-18	0.00102	3.02	0.000005	0.26	0.53	3.02	0.0001	0.0001	0.005	0.0009	0.0010	0.002
MITCHELL/SULPHURETS TAILING HC-19	0.00095	3.01	0.000005	0.27	0.54	3.01	0.0001	0.0001	0.005	0.0010	0.0011	0.002
MITCHELL/SULPHURETS TAILING HC-20	0.00090	2.70	0.000005	0.26	0.56	2.70	0.0001	0.0001	0.005	0.0009	0.0018	0.002
MITCHELL/SULPHURETS TAILING HC-21	0.00115	3.02	0.000005	0.29	0.53	3.02	0.0001	0.0001	0.005	0.0009	0.0011	0.002

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals											
Sample ID	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulfur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
MITCHELL/SULPHURETS TAILING HC-22	0.00090	2.99	0.000005	0.27	0.52	2.99	0.0001	0.0001	0.005	0.0009	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-23	0.00092	2.94	0.000005	0.23	0.49	2.94	0.0001	0.0001	0.005	0.0009	0.0010	0.002
MITCHELL/SULPHURETS TAILING HC-24	0.00089	2.75	0.000005	0.22	0.47	2.75	0.0001	0.0001	0.005	0.0008	0.0011	0.002
MITCHELL/SULPHURETS TAILING HC-25	0.00095	2.94	0.000005	0.24	0.53	2.94	0.0001	0.0001	0.005	0.0010	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-26	0.00089	2.90	0.000005	0.23	0.53	2.90	0.0001	0.0001	0.005	0.0009	0.0013	0.002
MITCHELL/SULPHURETS TAILING HC-27	0.00088	2.83	0.000005	0.22	0.51	2.83	0.0001	0.0001	0.005	0.0009	0.0012	0.002
MITCHELL/SULPHURETS TAILING HC-28	0.00086	2.76	0.000005	0.21	0.49	2.76	0.0001	0.0001	0.005	0.0008	0.0011	0.002
MITCHELL/SULPHURETS TAILING HC-29	0.00081	2.72	0.000005	0.21	0.52	2.72	0.0001	0.0001	0.005	0.0009	0.0011	0.002
MITCHELL/SULPHURETS TAILING HC-30	0.00076	2.67	0.000005	0.21	0.56	2.67	0.0001	0.0001	0.005	0.0010	0.0010	0.002
MITCHELL/SULPHURETS TAILING HC-31	0.00081	2.61	0.000005	0.22	0.51	2.61	0.0001	0.0001	0.005	0.0010	0.0012	0.002
MITCHELL/SULPHURETS TAILING HC-32	0.00086	2.54	0.000005	0.23	0.46	2.54	0.0001	0.0001	0.005	0.0009	0.0013	0.002
MITCHELL/SULPHURETS TAILING HC-33	0.00086	2.65	0.000005	0.23	0.47	2.65	0.0001	0.0001	0.005	0.0009	0.0012	0.002
MITCHELL/SULPHURETS TAILING HC-34	0.00085	2.75	0.000005	0.23	0.48	2.75	0.0001	0.0001	0.005	0.0009	0.0010	0.002
MITCHELL/SULPHURETS TAILING HC-35	0.00085	2.58	0.000005	0.19	0.44	2.58	0.0001	0.0001	0.005	0.0008	0.0011	0.002
MITCHELL/SULPHURETS TAILING HC-36	0.00085	2.41	0.000005	0.16	0.41	2.41	0.0001	0.0001	0.005	0.0007	0.0011	0.002
MITCHELL/SULPHURETS TAILING HC-37	0.00083	2.43	0.000005	0.19	0.41	2.43	0.0001	0.0001	0.005	0.0007	0.0008	0.002
MITCHELL/SULPHURETS TAILING HC-38	0.00080	2.45	0.000005	0.22	0.41	2.45	0.0001	0.0001	0.005	0.0007	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-39	0.00080	2.39	0.000005	0.24	0.40	2.39	0.0001	0.0001	0.005	0.0006	0.0008	0.002
MITCHELL/SULPHURETS TAILING HC-40	0.00080	2.32	0.000005	0.26	0.40	2.32	0.0001	0.0001	0.005	0.0005	0.0011	0.002
MITCHELL/SULPHURETS TAILING HC-41	0.00079	2.31	0.000005	0.22	0.40	2.31	0.0001	0.0001	0.005	0.0005	0.0012	0.002
MITCHELL/SULPHURETS TAILING HC-42	0.00078	2.29	0.000005	0.17	0.40	2.29	0.0001	0.0001	0.005	0.0005	0.0012	0.002
MITCHELL/SULPHURETS TAILING HC-43	0.00081	2.24	0.000005	0.17	0.40	2.24	0.0000	0.0001	0.005	0.0005	0.0009	0.002
MITCHELL/SULPHURETS TAILING HC-44	0.00083	2.18	0.000005	0.17	0.39	2.18	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-45	0.00079	2.13	0.000005	0.19	0.42	2.13	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-46	0.00075	2.07	0.000005	0.20	0.45	2.07	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-47	0.00068	2.10	0.000005	0.17	0.41	2.10	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-48	0.00061	2.13	0.000005	0.15	0.36	2.13	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-49	0.00060	2.02	0.000005	0.14	0.37	2.02	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-50	0.00058	1.90	0.000005	0.14	0.37	1.90	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-51	0.00057	1.92	0.000005	0.14	0.35	1.92	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-52	0.00055	1.94	0.000005	0.15	0.34	1.94	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-53	0.00061	1.99	0.000005	0.17	0.35	1.99	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-54	0.00066	2.04	0.000005	0.20	0.36	2.04	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-55	0.00064	2.06	0.000005	0.18	0.37	2.06	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-56	0.00062	2.08	0.000005	0.17	0.38	2.08	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-57	0.00064	2.05	0.000005	0.16	0.36	2.05	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-58	0.00066	2.01	0.000005	0.15	0.34	2.01	0.0000	0.0001	0.005	0.0007	0.0005	0.003
MITCHELL/SULPHURETS TAILING HC-59	0.00063	1.92	0.000005	0.15	0.32	1.92	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-60	0.00060	1.82	0.000005	0.15	0.30	1.82	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-61	0.00064	1.91	0.000005	0.15	0.31	1.91	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-62	0.00067	1.99	0.000005	0.15	0.32	1.99	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-63	0.00058	1.79	0.000005	0.14	0.29	1.79	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-64	0.00049	1.58	0.000005	0.13	0.25	1.58	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-65	0.00050	1.66	0.000005	0.13	0.26	1.66	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-66	0.00050	1.74	0.000005	0.13	0.27	1.74	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-67	0.00049	1.70	0.000005	0.14	0.26	1.70	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-68	0.00047	1.65	0.000005	0.16	0.25	1.65	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-69	0.00045	1.55	0.000005	0.16	0.23	1.55	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-70	0.00042	1.45	0.000005	0.15	0.21	1.45	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-71	0.00046	1.51	0.000005	0.15	0.21	1.51	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-72	0.00050	1.56	0.000005	0.16	0.22	1.56	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-73	0.00054	1.62	0.000005	0.16	0.22	1.62	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-74	0.00058	1.67	0.000005	0.17	0.23	1.67	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-75	0.00057	1.69	0.000005	0.16	0.23	1.69	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-76	0.00056	1.72	0.000005	0.16	0.24	1.72	0.0000	0.0001	0.005	0.0007	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-77	0.00055	1.74	0.000005	0.16	0.24	1.74	0.0000	0.0001	0.005	0.0007	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-78	0.00054	1.76	0.000005	0.16	0.24	1.76	0.0000	0.0001	0.005	0.0007	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-79	0.00053	1.72	0.000005	0.16	0.23	1.72	0.0000	0.0001	0.005	0.0007	0.0005	0.002

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals											
Sample ID	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulfur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
MITCHELL/SULPHURETS TAILING HC-80	0.00052	1.68	0.000005	0.16	0.23	1.68	0.0000	0.0001	0.005	0.0007	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-81	0.00051	1.63	0.000005	0.15	0.22	1.63	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-82	0.00050	1.59	0.000005	0.15	0.21	1.59	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-83	0.00051	1.58	0.000005	0.15	0.21	1.58	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-84	0.00051	1.57	0.000005	0.14	0.20	1.57	0.0000	0.0001	0.005	0.0006	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-85	0.00052	1.55	0.000005	0.13	0.19	1.55	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-86	0.00052	1.54	0.000005	0.13	0.19	1.54	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-87	0.00052	1.52	0.000005	0.12	0.19	1.52	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-88	0.00051	1.51	0.000005	0.12	0.19	1.51	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-89	0.00051	1.49	0.000005	0.12	0.19	1.49	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-90	0.00050	1.47	0.000005	0.12	0.19	1.47	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-91	0.00051	1.49	0.000005	0.13	0.19	1.49	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-92	0.00052	1.51	0.000005	0.13	0.20	1.51	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-93	0.00053	1.53	0.000005	0.14	0.20	1.53	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-94	0.00054	1.55	0.000005	0.14	0.21	1.55	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-95	0.00052	1.52	0.000005	0.14	0.20	1.52	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-96	0.00049	1.49	0.000005	0.14	0.19	1.49	0.0000	0.0001	0.005	0.0005	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-97	0.00046	1.46	0.000005	0.14	0.18	1.46	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-98	0.00043	1.43	0.000005	0.13	0.18	1.43	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-99	0.00043	1.44	0.000005	0.14	0.18	1.44	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-100	0.00042	1.45	0.000005	0.14	0.18	1.45	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-101	0.00042	1.46	0.000005	0.14	0.18	1.46	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-102	0.00041	1.47	0.000005	0.15	0.18	1.47	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-103	0.00042	1.48	0.000005	0.15	0.18	1.48	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-104	0.00043	1.49	0.000005	0.15	0.18	1.49	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-105	0.00044	1.49	0.000005	0.15	0.18	1.49	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-106	0.00045	1.50	0.000005	0.15	0.19	1.50	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-107	0.00044	1.49	0.000005	0.15	0.18	1.49	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-108	0.00043	1.47	0.000005	0.14	0.18	1.47	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-109	0.00042	1.46	0.000005	0.14	0.18	1.46	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-110	0.00041	1.44	0.000005	0.14	0.18	1.44	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-111	0.00042	1.42	0.000005	0.13	0.18	1.42	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-112	0.00042	1.39	0.000005	0.13	0.18	1.39	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-113	0.00042	1.37	0.000005	0.13	0.18	1.37	0.0000	0.0001	0.005	0.0004	0.0005	0.002
MITCHELL/SULPHURETS TAILING HC-114	0.00042	1.34	0.000005	0.13	0.18	1.34	0.0000	0.0001	0.005	0.0004	0.0005	0.002
	0.00051	1.57	0.000005	0.14	0.20	1.72	0.0000	0.0001	0.005	0.0006	0.0005	0.002
2748-18-COMP-0	0.02190	2.36	0.000080	9.69	1.04		0.0002	0.0001	0.005	0.0034	0.0005	0.002
2748-18-COMP-1	0.00633	1.67	0.000005	4.81	0.88	1.67	0.0001	0.0001	0.005	0.0014	0.0005	0.002
2748-18-COMP-2	0.00349	1.97	0.000005	3.41	0.92	1.97	0.0001	0.0001	0.005	0.0026	0.0005	0.002
2748-18-COMP-3	0.00277	1.81	0.000005	1.63	0.66	1.81	0.0001	0.0001	0.005	0.0018	0.0005	0.002
2748-18-COMP-4	0.00411	2.02	0.000005	1.15	0.54	2.02	0.0001	0.0001	0.005	0.0017	0.0005	0.002
2748-18-COMP-5	0.00422	2.32	0.000005	0.89	0.56	2.32	0.0001	0.0001	0.005	0.0019	0.0005	0.002
2748-18-COMP-6	0.00330	2.59	0.000005	0.64	0.56	2.59	0.0001	0.0001	0.005	0.0016	0.0010	0.002
2748-18-COMP-7	0.00306	2.35	0.000005	0.54	0.53	2.35	0.0001	0.0001	0.005	0.0017	0.0005	0.002
2748-18-COMP-8	0.00292	2.40	0.000005	0.54	0.60	2.40	0.0001	0.0001	0.005	0.0019	0.0005	0.002
2748-18-COMP-9	0.00306	2.43	0.000005	0.49	0.56	2.43	0.0001	0.0001	0.005	0.0017	0.0005	0.002
2748-18-COMP-10	0.00293	2.51	0.000005	0.42	0.56	2.51	0.0001	0.0001	0.005	0.0018	0.0005	0.002
2748-18-COMP-11	0.00297	2.68	0.000005	1.82	0.62	2.68	0.0001	0.0006	0.005	0.0022	0.0005	0.002
2748-18-COMP-12	0.00374	2.28	0.000005	0.34	0.57	2.28	0.0001	0.0001	0.005	0.0016	0.0005	0.002
2748-18-COMP-13	0.00381	2.46	0.000005	0.31	0.60	2.46	0.0001	0.0001	0.005	0.0019	0.0005	0.002
2748-18-COMP-14	0.00321	2.36	0.000005	0.41	0.60	2.36	0.0001	0.0001	0.005	0.0018	0.0005	0.002
2748-18-COMP-15	0.00299	2.40	0.000005	0.36	0.59	2.40	0.0001	0.0001	0.005	0.0017	0.0005	0.002
2748-18-COMP-16	0.00285	2.32	0.000005	0.32	0.56	2.32	0.0001	0.0001	0.005	0.0017	0.0005	0.002
2748-18-COMP-17	0.00284	2.29	0.000005	0.32	0.52	2.29	0.0001	0.0001	0.005	0.0017	0.0005	0.002
2748-18-COMP-18	0.00269	2.43	0.000005	0.31	0.53	2.43	0.0001	0.0001	0.005	0.0017	0.0005	0.002
2748-18-COMP-19	0.00196	1.62	0.000005	0.21	0.36	1.62	0.0001	0.0001	0.005	0.0010	0.0005	0.002
2748-18-COMP-20	0.00264	2.19	0.000005	0.34	0.61	2.19	0.0001	0.0001	0.005	0.0022	0.0005	0.002

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals											
	Selenium (Se)	Silicon (Si)	Silver (Ag)	Sodium (Na)	Strontium (Sr)	Sulfur (S)	Thallium (Tl)	Tin (Sn)	Titanium (Ti)	Uranium (U)	Vanadium (V)	Zinc (Zn)
Sample ID	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
2748-18-COMP-21	0.00213	2.22	0.000005	0.22	0.44	2.22	0.0001	0.0001	0.005	0.0014	0.0005	0.002
2748-18-COMP-22	0.00246	2.41	0.000005	0.34	0.55	2.41	0.0001	0.0001	0.005	0.0021	0.0005	0.002
2748-18-COMP-23	0.00259	2.27	0.000005	0.29	0.50	2.27	0.0001	0.0001	0.005	0.0019	0.0005	0.002
2748-18-COMP-24	0.00261	2.20	0.000005	0.24	0.46	2.20	0.0001	0.0001	0.005	0.0016	0.0005	0.002
2748-18-COMP-25	0.00257	2.30	0.000005	0.24	0.49	2.30	0.0001	0.0001	0.005	0.0017	0.0005	0.002
2748-18-COMP-26	0.00236	2.21	0.000005	0.25	0.47	2.21	0.0001	0.0001	0.005	0.0016	0.0005	0.002
2748-18-COMP-27	0.00254	2.40	0.000005	0.23	0.50	2.40	0.0001	0.0001	0.005	0.0017	0.0005	0.002
2748-18-COMP-28	0.00246	2.10	0.000005	0.26	0.46	2.10	0.0001	0.0001	0.005	0.0013	0.0005	0.002
2748-18-COMP-29	0.00272	2.24	0.000005	0.23	0.46	2.24	0.0001	0.0001	0.005	0.0016	0.0005	0.002
2748-18-COMP-30	0.00226	2.23	0.000005	0.24	0.48	2.23	0.0000	0.0001	0.005	0.0016	0.0005	0.002
2748-18-COMP-31	0.00233	2.20	0.000005	0.21	0.43	2.20	0.0001	0.0001	0.005	0.0014	0.0005	0.002
2748-18-COMP-32	0.00221	2.18	0.000005	0.23	0.44	2.18	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-33	0.00217	2.11	0.000005	0.28	0.52	2.11	0.0000	0.0001	0.005	0.0017	0.0005	0.002
2748-18-COMP-34	0.00218	2.01	0.000005	0.24	0.47	2.01	0.0000	0.0001	0.005	0.0014	0.0005	0.002
2748-18-COMP-35	0.00226	2.09	0.000005	0.20	0.44	2.09	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-36	0.00211	2.11	0.000005	0.19	0.40	2.11	0.0000	0.0001	0.005	0.0014	0.0005	0.002
2748-18-COMP-37	0.00213	2.03	0.000005	0.20	0.42	2.03	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-38	0.00215	2.08	0.000005	0.20	0.46	2.08	0.0000	0.0001	0.005	0.0014	0.0005	0.002
2748-18-COMP-39	0.00210	2.13	0.000005	0.21	0.42	2.13	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-40	0.00205	2.13	0.000005	0.20	0.45	2.13	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-41	0.00210	2.09	0.000005	0.19	0.42	2.09	0.0000	0.0001	0.005	0.0016	0.0005	0.002
2748-18-COMP-42	0.00193	2.02	0.000005	0.17	0.39	2.02	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-43	0.00202	2.09	0.000005	0.18	0.40	2.09	0.0000	0.0001	0.005	0.0014	0.0005	0.002
2748-18-COMP-44	0.00183	2.06	0.000005	0.21	0.43	2.06	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-45	0.00190	2.04	0.000005	0.21	0.41	2.04	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-46	0.00184	1.99	0.000005	0.18	0.38	1.99	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-47	0.00176	1.92	0.000005	0.17	0.36	1.92	0.0000	0.0001	0.005	0.0013	0.0005	0.002
2748-18-COMP-48	0.00186	1.50	0.000005	0.15	0.33	1.50	0.0000	0.0001	0.005	0.0012	0.0005	0.002
2748-18-COMP-49	0.00155	1.89	0.000005	0.19	0.38	1.89	0.0000	0.0001	0.005	0.0014	0.0005	0.002
2748-18-COMP-50	0.00173	2.00	0.000005	0.17	0.39	2.00	0.0000	0.0001	0.005	0.0014	0.0005	0.002
2748-18-COMP-51	0.00163	1.94	0.000005	0.17	0.38	1.94	0.0000	0.0001	0.005	0.0014	0.0005	0.002
2748-18-COMP-52	0.00161	1.83	0.000005	0.17	0.34	1.83	0.0000	0.0001	0.005	0.0013	0.0005	0.002
2748-18-COMP-53	0.00167	1.86	0.000005	0.21	0.37	1.86	0.0000	0.0001	0.005	0.0014	0.0005	0.002
2748-18-COMP-54	0.00155	1.84	0.000005	0.15	0.34	1.84	0.0000	0.0001	0.005	0.0014	0.0005	0.002
2748-18-COMP-55	0.00160	1.74	0.000005	0.16	0.41	1.74	0.0000	0.0001	0.005	0.0014	0.0005	0.002
2748-18-COMP-56	0.00145	1.81	0.000005	0.16	0.33	1.81	0.0000	0.0001	0.005	0.0013	0.0005	0.002
2748-18-COMP-57	0.00135	1.83	0.000005	0.17	0.31	1.83	0.0000	0.0001	0.005	0.0013	0.0005	0.002
2748-18-COMP-58	0.00142	1.90	0.000005	0.36	0.39	1.90	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-59	0.00153	1.78	0.000005	0.26	0.35	1.78	0.0000	0.0001	0.005	0.0016	0.0005	0.002
2748-18-COMP-60	0.00163	1.65	0.000005	0.15	0.32	1.65	0.0000	0.0001	0.005	0.0016	0.0005	0.002
2748-18-COMP-61	0.00142	1.72	0.000005	0.15	0.32	1.72	0.0000	0.0001	0.005	0.0018	0.0005	0.002
2748-18-COMP-62	0.00120	1.78	0.000005	0.15	0.31	1.78	0.0000	0.0001	0.005	0.0020	0.0005	0.002
2748-18-COMP-63	0.00126	1.83	0.000005	0.15	0.33	1.83	0.0000	0.0001	0.005	0.0024	0.0005	0.002
2748-18-COMP-64	0.00132	1.88	0.000005	0.16	0.34	1.88	0.0000	0.0001	0.005	0.0027	0.0005	0.002
2748-18-COMP-65	0.00124	1.78	0.000005	0.15	0.32	1.78	0.0000	0.0001	0.005	0.0025	0.0005	0.002
2748-18-COMP-66	0.00115	1.68	0.000005	0.13	0.30	1.68	0.0000	0.0001	0.005	0.0022	0.0005	0.002
2748-18-COMP-67	0.00119	1.66	0.000005	0.13	0.28	1.66	0.0000	0.0001	0.005	0.0022	0.0005	0.002
2748-18-COMP-68	0.00123	1.64	0.000005	0.13	0.26	1.64	0.0000	0.0001	0.005	0.0022	0.0005	0.002
2748-18-COMP-69	0.00115	1.56	0.000005	0.12	0.25	1.56	0.0000	0.0001	0.005	0.0020	0.0005	0.002
2748-18-COMP-70	0.00107	1.47	0.000005	0.11	0.24	1.47	0.0000	0.0001	0.005	0.0018	0.0005	0.002
2748-18-COMP-71	0.00112	1.54	0.000005	0.11	0.24	1.54	0.0000	0.0001	0.005	0.0019	0.0005	0.002
2748-18-COMP-72	0.00116	1.61	0.000005	0.12	0.24	1.61	0.0000	0.0001	0.005	0.0020	0.0005	0.002
2748-18-COMP-73	0.00114	1.62	0.000005	0.11	0.24	1.62	0.0000	0.0001	0.005	0.0020	0.0005	0.002
2748-18-COMP-74	0.00112	1.62	0.000005	0.11	0.24	1.62	0.0000	0.0001	0.005	0.0021	0.0005	0.002
2748-18-COMP-75	0.00112	1.59	0.000005	0.11	0.23	1.59	0.0000	0.0001	0.005	0.0021	0.0005	0.002
2748-18-COMP-76	0.00113	1.56	0.000005	0.11	0.23	1.56	0.0000	0.0001	0.005	0.0021	0.0005	0.002
2748-18-COMP-77	0.00113	1.52	0.000005	0.11	0.23	1.52	0.0000	0.0001	0.005	0.0022	0.0005	0.002
2748-18-COMP-78	0.00113	1.49	0.000005	0.11	0.23	1.49	0.0000	0.0001	0.005	0.0022	0.0005	0.002

Appendix 6.2-1. Tailing Humidity Cell Leachate Concentrations

	Dissolved Metals											
Sample ID	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulfur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
2748-18-COMP-79	0.00112	1.52	0.000005	0.12	0.23	1.52	0.0000	0.0001	0.005	0.0022	0.0005	0.002
2748-18-COMP-80	0.00111	1.54	0.000005	0.13	0.23	1.54	0.0000	0.0001	0.005	0.0022	0.0005	0.002
2748-18-COMP-81	0.00110	1.57	0.000005	0.14	0.23	1.57	0.0000	0.0001	0.005	0.0022	0.0005	0.002
2748-18-COMP-82	0.00109	1.59	0.000005	0.15	0.23	1.59	0.0000	0.0001	0.005	0.0022	0.0005	0.002
2748-18-COMP-83	0.00108	1.58	0.000005	0.14	0.22	1.58	0.0000	0.0001	0.005	0.0021	0.0005	0.002
2748-18-COMP-84	0.00107	1.57	0.000005	0.13	0.21	1.57	0.0000	0.0001	0.005	0.0020	0.0005	0.002
2748-18-COMP-85	0.00105	1.56	0.000005	0.12	0.20	1.56	0.0000	0.0001	0.005	0.0019	0.0005	0.002
2748-18-COMP-86	0.00104	1.55	0.000005	0.12	0.19	1.55	0.0000	0.0001	0.005	0.0018	0.0005	0.002
2748-18-COMP-87	0.00103	1.54	0.000005	0.12	0.20	1.54	0.0000	0.0001	0.005	0.0018	0.0005	0.002
2748-18-COMP-88	0.00101	1.53	0.000005	0.12	0.20	1.53	0.0000	0.0001	0.005	0.0017	0.0005	0.002
2748-18-COMP-89	0.00100	1.51	0.000005	0.12	0.20	1.51	0.0000	0.0001	0.005	0.0017	0.0005	0.002
2748-18-COMP-90	0.00098	1.50	0.000005	0.13	0.20	1.50	0.0000	0.0001	0.005	0.0016	0.0005	0.002
2748-18-COMP-91	0.00099	1.52	0.000005	0.13	0.20	1.52	0.0000	0.0001	0.005	0.0016	0.0005	0.002
2748-18-COMP-92	0.00100	1.53	0.000005	0.13	0.19	1.53	0.0000	0.0001	0.005	0.0016	0.0005	0.002
2748-18-COMP-93	0.00100	1.55	0.000005	0.13	0.19	1.55	0.0000	0.0001	0.005	0.0016	0.0005	0.002
2748-18-COMP-94	0.00101	1.56	0.000005	0.13	0.19	1.56	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-95	0.00099	1.55	0.000005	0.13	0.19	1.55	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-96	0.00097	1.55	0.000005	0.14	0.19	1.55	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-97	0.00094	1.54	0.000005	0.14	0.19	1.54	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-98	0.00092	1.53	0.000005	0.14	0.19	1.53	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-99	0.00093	1.50	0.000005	0.14	0.19	1.50	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-100	0.00093	1.46	0.000005	0.13	0.19	1.46	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-101	0.00094	1.43	0.000005	0.12	0.19	1.43	0.0000	0.0001	0.005	0.0015	0.0005	0.002
2748-18-COMP-102	0.00094	1.39	0.000005	0.11	0.19	1.39	0.0000	0.0001	0.005	0.0015	0.0005	0.002
	0.00093	1.46	0.000005	0.13	0.19	1.46	0.0000	0.0001	0.005	0.0015	0.0005	0.002

Appendix 6.2-2

Tailing Humidity Cell Leach Rates for Additional Parameters

Rescan™
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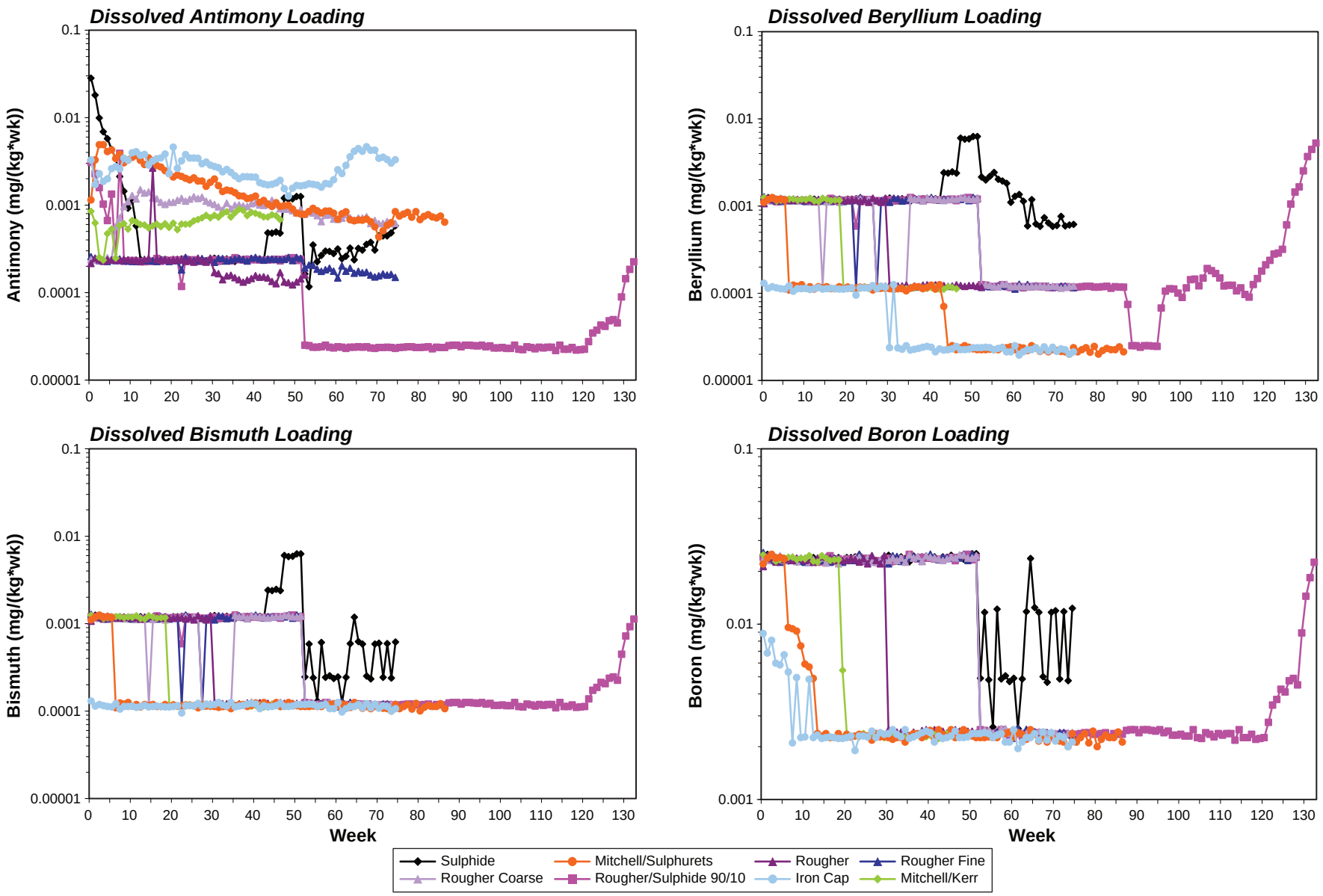


Figure 1

SEABRIDGE GOLD
KSM PROJECT

Antimony, Beryllium, Bismuth, and Boron Leach Rates, Tailing Humidity Cells

Figure 1

Rescan™ Engineers & Scientists

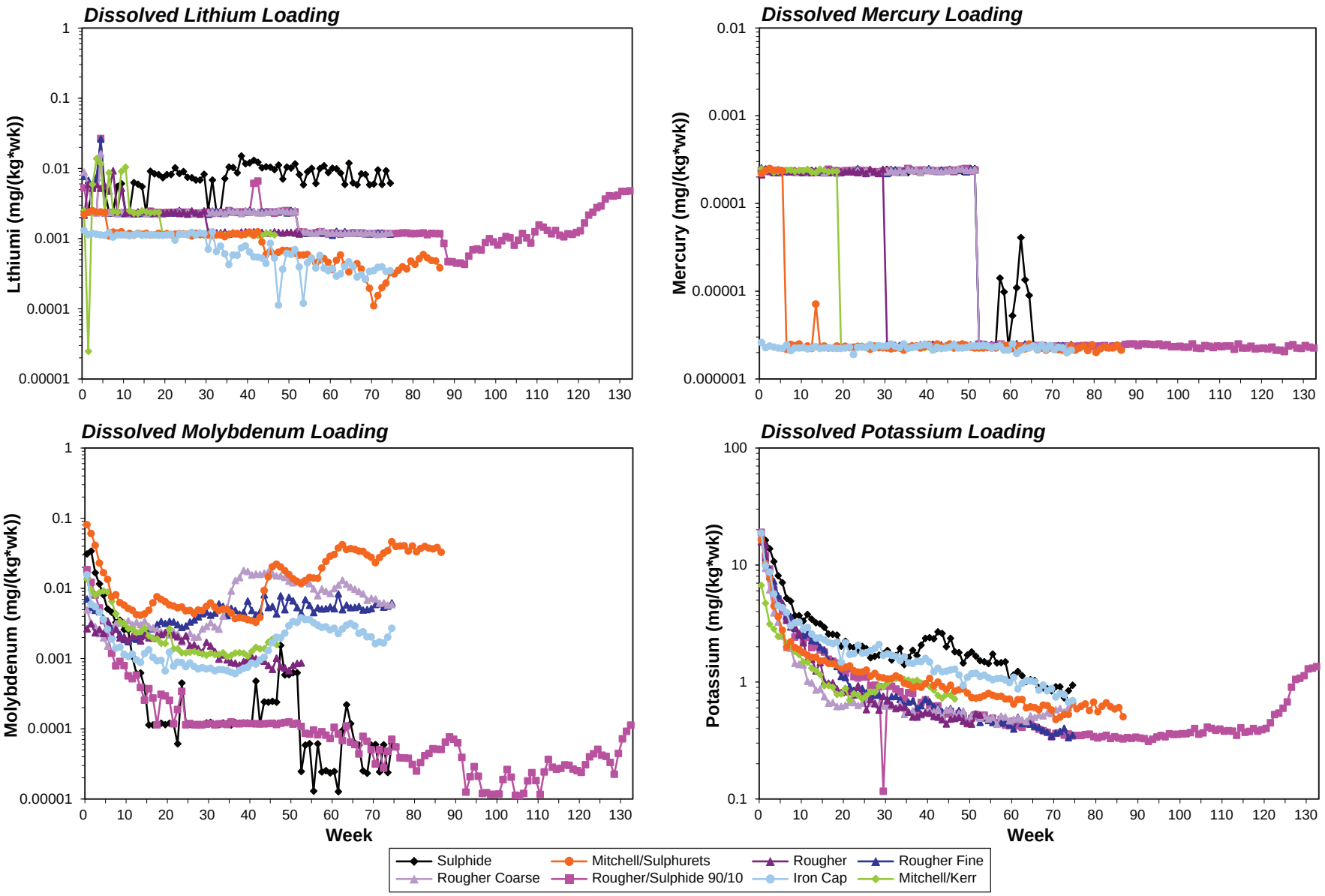


Figure 2

SEABRIDGE GOLD
KSM PROJECT

Lithium, Mercury, Molybdenum, and Potassium Leach Rates, Tailing Humidity Cells

Figure 2

Rescan™ Engineers & Scientists

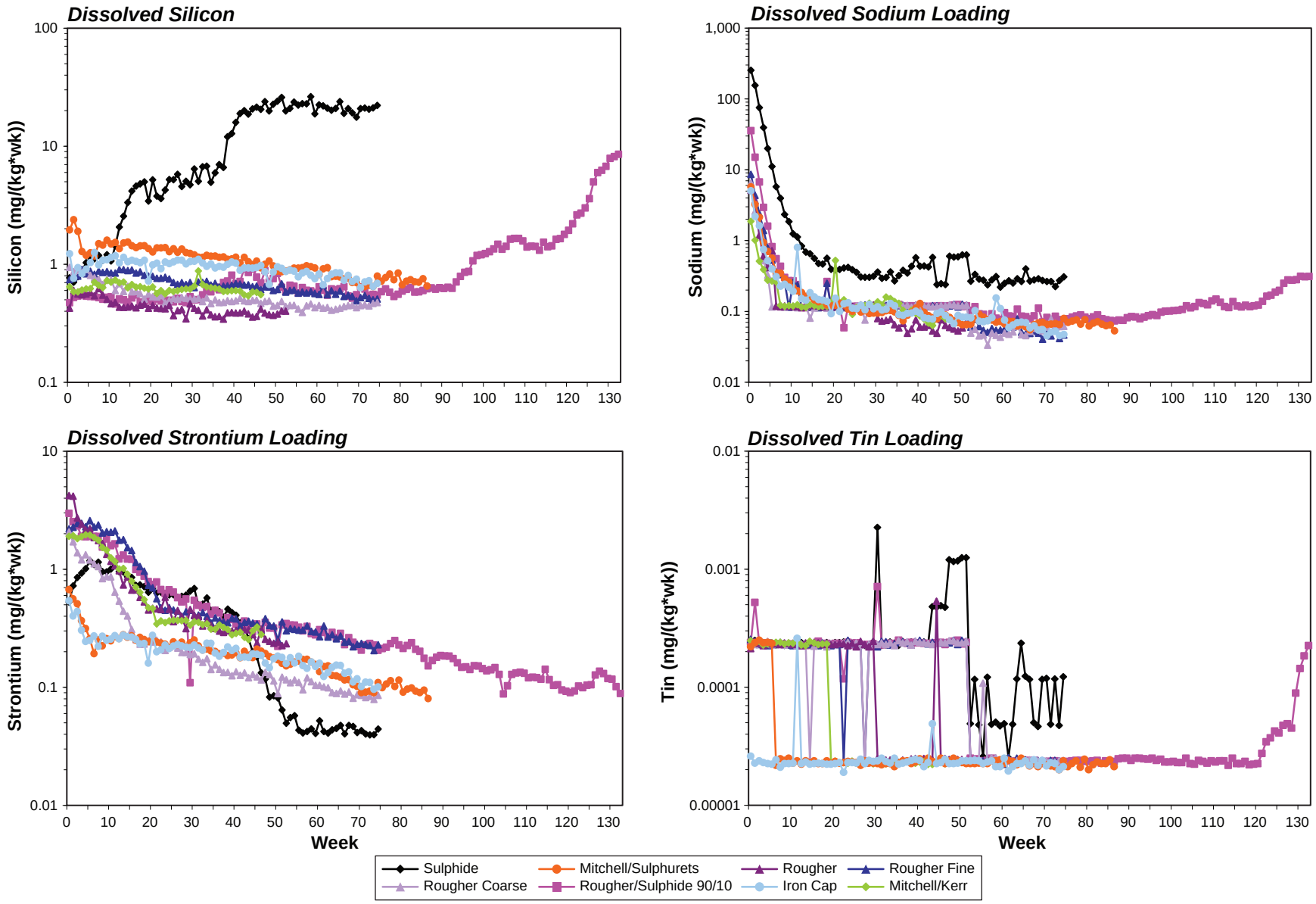


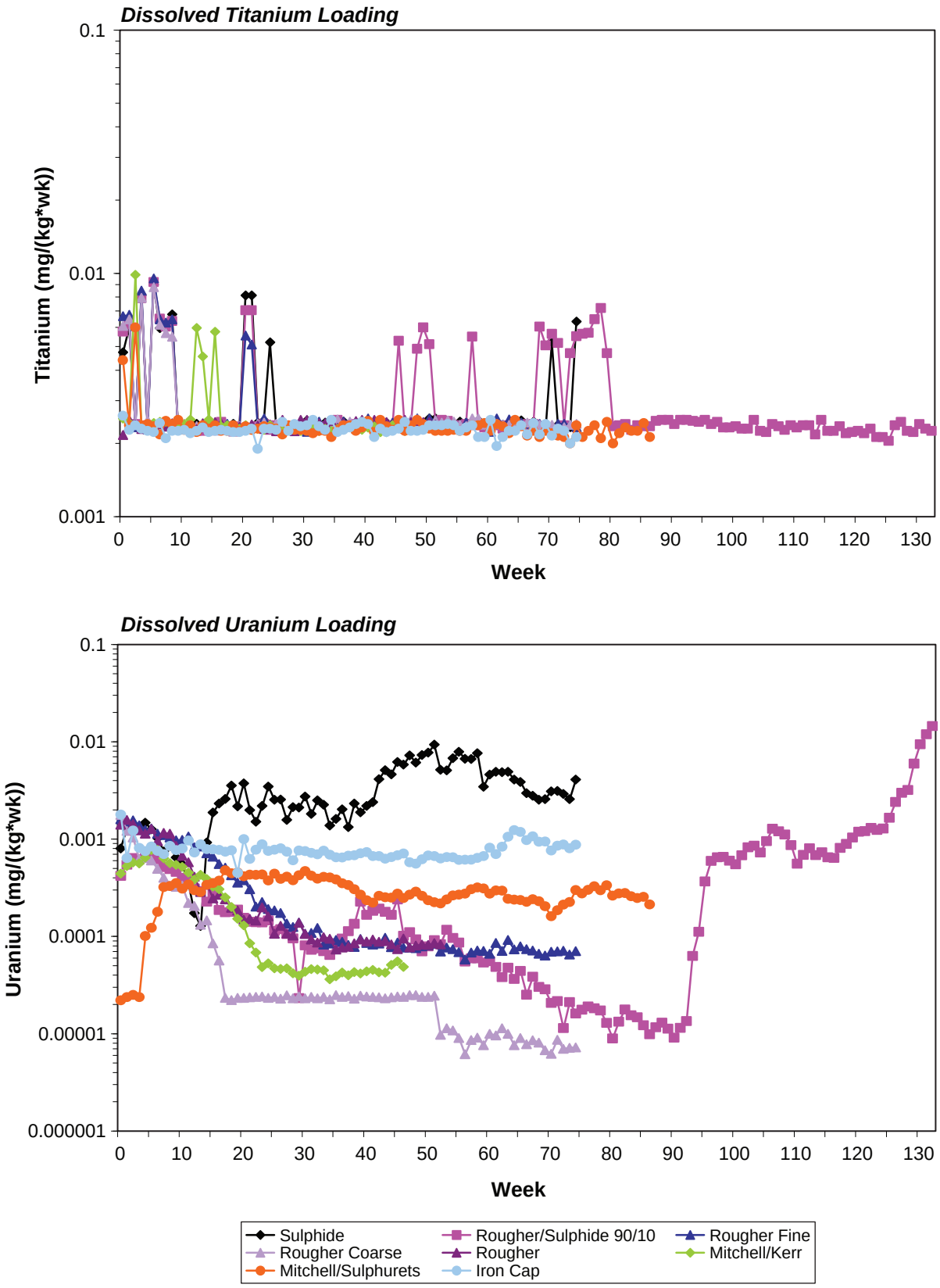
Figure 3

SEABRIDGE GOLD
KSM PROJECT

Silicon, Sodium, Strontium, and Tin Leach Rates, Tailing Humidity Cells

Figure 3

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SEABRIDGE GOLD
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Titanium and Uranium Leach Rates, Tailing Humidity Cells

Figure 4

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Appendix 6.2-3

Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

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Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
				ALS		Total Volume In	Total Volume Out	Conductivity		Acidity (as $CaCO_3$)	Total (as CaCO3)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrite (as N)	Nitrate (as N)	Sulfate (SO_4)	Sulfide as S	Hardness	Aluminum (Al)
Week	Cycle	Sample ID	Date Sampled	Sample ID	Matrix	mL	mL	uS/cm	pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	**0**	**M_Rougher Top**	**15-Oct-09**																	
1	1	ROUGHER-TOP-1	22-Oct-09	L832849-1	Water	255	255	1190	7.38	3.1	19.4		2.5	0.1			701		771.62	0.005
2	2	ROUGHER-TOP-2	29-Oct-09	L835334-1	Water	250	250	772	7.52	4.7	17		1.25	0.05			409		467.7	0.005
3	3	ROUGHER-TOP-3	5-Nov-09	L837392-1	Water	250	250	889	7.48	1.6	20		1.25	0.05			489		535.76	0.005
4	4	ROUGHER-TOP-4	12-Nov-09	L839409-1	Water	250	250	511	7.49	3.7	16.2		0.25	0.065			244		288.248	0.005
5	5	ROUGHER-TOP-5	19-Nov-09	L841495-1	Water	250	250	398	7.38	8	16.4		0.25	0.051			182		198.76	0.005
6	6	ROUGHER-TOP-6	26-Nov-09	L844163-1	Water	250	250	345	7.45	3	16.2		0.25	0.046			155		179.432	0.005
7	7	ROUGHER-TOP-7	3-Dec-09	L845880-1	Water	250	250	438	7.66	1.9	25.9		0.25	0.055			200		237.56	0.005
8	8	ROUGHER-TOP-8	10-Dec-09	L847563-1	Water	250	250	285	7.6	1.9	18.7		0.25	0.037			118		136.96	0.011
9	9	ROUGHER-TOP-9	17-Dec-09	L849344-1	Water	250	250	276	7.64	3.5	21.3		0.25	0.036			114		139.204	0.013
10	10	ROUGHER-TOP-10	24-Dec-09	L851012-1	Water	250	250	238	7.59	5.8	20.3		0.25	0.027			94.9		123.146	0.014
11	11	ROUGHER-TOP-11	31-Dec-09	L851767-1	Water	250	250	229	7.7	1.9	20.9		0.25	0.025			87.6		112.86	0.013
12	12	ROUGHER-TOP-12	7-Jan-10	L852812-1	Water	250	250	212	7.65	2	21.3		0.25	0.026			77		102.72	0.013
13	13	ROUGHER-TOP-13	14-Jan-10	L854404-1	Water	250	250	203	7.74	3.1	22.3		0.25	0.025			73.7		95.1	0.014
14	14	ROUGHER-TOP-14	21-Jan-10	L856203-1	Water	250	250	188	7.77	3.3	24.3		0.25	0.028			65.5		93.63	0.014
15	15	ROUGHER-TOP-15	28-Jan-10	L858179-1	Water	250	250	167	7.73	2.5	21.8		0.25	0.029			58.8		83.52	0.014
16	16	ROUGHER-TOP-16	4-Feb-10	L859495-1	Water	250	250	154	7.74	3.9	22.2		0.25	0.01			49.3		70.81	0.015
17	17	ROUGHER-TOP-17	11-Feb-10	L861368-1	Water	250	250	142	7.73	1.7	22.8		0.25	0.031			41.9		64.84	0.016
18	18	ROUGHER-TOP-18	18-Feb-10	L862989-1	Water	250	250	129	7.78	3	23.4		0.25	0.022			38.2		60.31	0.015
19	19	ROUGHER-TOP-19	25-Feb-10	L864820-1	Water	250	250	124	7.84	2.4	25.1		0.25	0.01			33		58.3	0.016
20	20	ROUGHER-TOP-20	4-Mar-10	L866636-1	Water	250	250	114	7.85	4.3	25.2		0.25	0.02			28.1		51.9	0.016
21	21	ROUGHER-TOP-21	11-Mar-10	L868410-1	Water	250	250	106	7.83	4.7	25.4		0.25	0.01			24.5		48.03	0.016
22	22	ROUGHER-TOP-22	18-Mar-10	L870452-1	Water	250	250	101	7.8	2	25.6		0.25	0.01			21.8		47.63	0.017
23	23	ROUGHER-TOP-23	25-Mar-10	L872047-1	Water	250	250	94.2	7.83	3.1	26.9		0.25	0.01			18.8		44.89	0.016
24	24	ROUGHER-TOP-24	1-Apr-10	L873939-1	Water	250	250	88	7.82	2.1	27.1		0.25	0.01			15.9		41.56	0.016
25	25	ROUGHER-TOP-25	8-Apr-10	L875479-1	Water	250	250	83.6	7.78	2.7	26.3		0.25	0.01			14		38.32	0.015
26	26	ROUGHER-TOP-26	15-Apr-10	L877521-1	Water	250	250	77.5	7.83	2.2	25.2		0.25	0.01			11.5		36.52	0.016
27	27	ROUGHER-TOP-27	22-Apr-10	L879806-1	Water	250	250	74.5	7.83	1.8	27		0.25	0.01			10.1		35.94	0.016
28	28	ROUGHER-TOP-28	29-Apr-10	L881581-1	Water	250	250	70.7	7.85	2.2	26.3		0.25	0.01			8.89		33.87	0.015
29	29	ROUGHER-TOP-29	6-May-10	L883853-1	Water	250	250	69.3	7.82	2.4	26.1		0.25	0.01			7.63		33.74	0.017
30	30	ROUGHER-TOP-30	13-May-10	L886019-1	Water	250	250	66.2	7.83	1.5	26.3		0.25	0.01			6.83		34.01	0.017
31	31	ROUGHER-TOP-31	20-May-10	L888668-1	Water	250	250	64.2	7.9	0.5	25		0.25	0.01			5.98		31.54	0.017
32	32	ROUGHER-TOP-32	27-May-10	L890721-1	Water	250	250	65.6	7.9	2	27		0.25	0.01			5.74		31.91	0.022
33	33	ROUGHER-TOP-33	3-Jun-10	L893264-1	Water	250	250	64.8	7.85	2.1	27.4		0.25	0.01			4.91		31.676	0.022
34	34	ROUGHER-TOP-34	10-Jun-10	L895934-1	Water	250	250	64.1	7.85	3.1	28.7		0.25	0.01			4.45		31.996	0.021
35	35	ROUGHER-TOP-35	17-Jun-10	L898537-1	Water	250	250	62.2	7.87	3.2	27.7		0.25	0.01			4.03		30.396	0.022
36	36	ROUGHER-TOP-36	24-Jun-10	L901179-1	Water	250	250	60.2	7.88	3.8	26.3		0.25	0.01			4.15		28.89	0.022
37	37	ROUGHER-TOP-37	1-Jul-10	L903293-1	Water	250	250	56.6	7.83	2	25		0.25	0.01			3.82		27.532	0.021
38	38	ROUGHER-TOP-38	8-Jul-10	L906231-1	Water	250	250	54.2	7.73	2.2	23.8		0.25	0.01			3.65		27.227	0.021
39	39	ROUGHER-TOP-39	15-Jul-10	L909161-1	Water	250	250	53.9	7.84	1.9	23.5		0.25	0.01			3.14		27.196	0.021
40	40	ROUGHER-TOP-40	22-Jul-10	L911860-1	Water	250	250	51.5	7.75	2.3	21.5		0.25	0.01			3.28		25.478	0.02
41	41	ROUGHER-TOP-41	29-Jul-10	L914475-1	Water	250	250	51	7.83	3.2	22.3		0.25	0.01			3.43		24.985	0.02
42	42	ROUGHER-TOP-42	5-Aug-10	L916790-1	Water	250	250	49.2	7.75	2.1	21		0.25	0.01			3.01		23.498	0.018
43	43	ROUGHER-TOP-43	12-Aug-10	L919396-1	Water	250	250	51	7.84	2.7	22.7		0.25	0.01			2.8		24.728	0.019
44	44	ROUGHER-TOP-44	19-Aug-10	L922150-1	Water	250	250	49.7	7.84	1.4	24.1		0.25	0.01			2.77		24.572	0.018
45	45	ROUGHER-TOP-45	26-Aug-10	L924778-1	Water	250	250	50	7.8	3.1	23.4		0.25	0.01			2.61		25.873	0.018
46	46	ROUGHER-TOP-46	2-Sep-10	L927316-1	Water	250	250	49.8	7.82	3.3	23.3		0.25	0.01			2.48		25.023	0.018
47	47	ROUGHER-TOP-47	9-Sep-10	L929600-1	Water	250	250	61.4	7.91	2.5	29.3		0.25	0.01			3.03		31.26	0.017
48	48	ROUGHER-TOP-48	16-Sep-10	L932186-1	Water	250	250	51.9	7.85	5.4	24.6		0.25	0.01			2.59		26.195	0.017
49	49	ROUGHER-TOP-49	23-Sep-10	L935034-1	Water	250	250	74.2	7.8	3.1	25.1	0.025	0.25	0.01	0.0025	0.0005	12.7		35.886	0.0161
50	50	ROUGHER-TOP-50	30-Sep-10	L937658-1	Water	250	250	51.4	7.75	3.5	23.2	0.025	0.25	0.01	0.0025	0.0005	2.57		24.69	0.0179
51	51	ROUGHER-TOP-51	7-Oct-10	L940567-1	Water	250	250	49.8	7.73	1.9	23.6	0.025	0.25	0.01	0.0025	0.0005	2.37		24.787	0.0163
52	52	ROUGHER-TOP-52	14-Oct-10	L942881-1	Water	250	250	49.7	7.76	1.7	23.3	0.025	0.25	0.01	0.0025	0.0005	2.63		23.628	0.0186
53	53	ROUGHER-TOP-53	21-Oct-10	L945548-1	Water	250	250	46.7	7.75	1.3	21.9	0.025	0.25	0.01	0.0025	0.0005	2.13		22.463	0.0162
54	54	ROUGHER-TOP-54	28-Oct-10	L948179-1	Water	250	250	46.7	7.77	0.5	21.9	0.025	0.25	0.01	0.0025	0.0005	2.08		23.224	0.017
55	55	ROUGHER-TOP-55	4-Nov-10	L950720-1	Water	250	250	46	7.79	2.5	21.5	0.025	0.25	0.01	0.0025	0.0005	2		22.709	0.0164
56	56	ROUGHER-TOP-56	11-Nov-10	L952756-1	Water	250	250	40.9	7.54	1.8	22.5	0.025	0.25	0.01	0.0025	0.0005	2.04		23.8	0.0167
57	57	ROUGHER-TOP-57	18-Nov-10	L955247-1	Water	250	250	47.5	7.74	1.4	22	0.025	0.25	0.01	0.0025	0.0005	2.01		22.69	0.0148
58	58	ROUGHER-TOP-58	25-Nov-10	L957278-1	Water	250	250	46.7	7.7	2.7	22.6	0.025	0.25	0.01	0.0025	0.0005	1.85		22.89	0.0167

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In mL	Total Volume Out mL	Conductivity uS/cm	pH	Acidity (as $CaCO_3$) mg/L	Total (as CaCO3) mg/L	Bromide (Br) mg/L	Chloride (Cl) mg/L	Fluoride (F) mg/L	Nitrite (as N) mg/L	Nitrate (as N) mg/L	Sulfate (SO_4) mg/L	Sulfide as S mg/L	Hardness mg/L	Aluminum (Al) mg/L
59	59	ROUGHER-TOP-59	2-Dec-10	L959371-1	Water	250	250	46.7	7.69	1.8	22.6	0.025	0.25	0.01	0.0025	0.0005	1.77		22.379	0.0133
60	60	ROUGHER-TOP-60	9-Dec-10	L961481-1	Water	250	250	47.6	7.8	0.5	21.6	0.025	0.25	0.01	0.0025	0.0005	1.8		23.201	0.0145
61	61	ROUGHER-TOP-61	16-Dec-10	L963379-1	Water	250	250	47	7.79	2.2	21.5	0.025	0.25	0.01	0.0025	0.0005	1.9		22.813	0.0169
62	62	ROUGHER-TOP-62	23-Dec-10	L965465-1	Water	250	250	47.3	7.79	3.4	22	0.025	0.25	0.01	0.0025	0.0005	1.81		22.66	0.0147
63	63	ROUGHER-TOP-63	30-Dec-10	L966298-1	Water	250	250	46.9	7.8	2.6	21.4	0.025	0.25	0.01	0.0025	0.0005	1.85		22.389	0.0123
64	64	ROUGHER-TOP-64	6-Jan-11	L967673-1	Water	250	250	46.3	7.69	2.7	22.3	0.025	0.25	0.01	0.0065	0.0005	1.85		22.378	0.0137
65	65	ROUGHER-TOP-65	13-Jan-11	L969702-1	Water	250	250	45.6	7.79	1.7	20.9	0.025	0.25	0.01	0.0025	0.0005	1.74		22.097	0.0141
66	66	ROUGHER-TOP-66	20-Jan-11	L971731-1	Water	250	250	46.4	7.69	2.2	20.4	0.025	0.25	0.01	0.0025	0.0005	1.75		22.282	0.0131
67	67	ROUGHER-TOP-67	27-Jan-11	L973582-1	Water	250	250	46	7.75	1.2	20.6	0.025	0.25	0.01	0.0058	0.0005	1.76		22.065	0.0132
68	68	ROUGHER-TOP-68	3-Feb-11	L975416-1	Water	250	250	44.2	7.76	1.3	21.3	0.025	0.25	0.01	0.0025	0.0005	1.64		21.286	0.011
69	69	ROUGHER-TOP-69	10-Feb-11	L977328-1	Water	250	250	43.3	7.73	1.5	19.9	0.025	0.25	0.01	0.0025	0.0005	1.62		20.915	0.0133
70	70	ROUGHER-TOP-70	17-Feb-11	L979178-1	Water	250	250	43.5	7.72	0.5	22.2	0.025	0.25	0.01	0.0025	0.0005	1.51		21.443	0.0112
71	71	ROUGHER-TOP-71	24-Feb-11	L980989-1	Water	250	250	43.2	7.66	1.6	19.8	0.025	0.25	0.01	0.0025	0.0005	1.4		20.64	0.0124
72	72	ROUGHER-TOP-72-Final	3-Mar-11	L983006-1	Water	-	250	64	7.7	1.8	29.9	0.025	0.25	0.01	0.0366	0.0005	2.8		31.14	0.0245
Mean								47.64	7.714	1.34	22.62	#DIV/0!	0.25	0.01	#DIV/0!	#DIV/0!	1.794	#DIV/0!	23.0848	0.01448
0	**0**	**M_Rougher Bottom**	**15-Oct-09**																	
1	1	ROUGHER-BOTTOM-1	22-Oct-09	L832849-2	Water	265	265	2340	7.59	4.9	46.6		14.1	0.29			1580		1598	0.005
2	2	ROUGHER-BOTTOM-2	29-Oct-09	L835334-2	Water	250	250	2390	7.63	6.9	42.8		16	0.2			1700		1659.1	0.005
3	3	ROUGHER-BOTTOM-3	5-Nov-09	L837392-2	Water	250	250	2400	7.57	3.7	82.5		15	0.738			1640		1625.7	0.005
4	4	ROUGHER-BOTTOM-4	12-Nov-09	L839409-2	Water	250	250	2400	7.57	9.8	88.5		13	0.712			1660		1676.6	0.005
5	5	ROUGHER-BOTTOM-5	19-Nov-09	L841495-2	Water	250	250	2390	7.61	8.9	92.7		15	0.773			1650		1577.9	0.038
6	6	ROUGHER-BOTTOM-6	26-Nov-09	L844163-2	Water	250	250	2340	7.6	8.3	97.9		5	0.739			1630		1604.3	0.005
7	7	ROUGHER-BOTTOM-7	3-Dec-09	L845880-2	Water	250	250	2320	7.61	6.2	91.1		5	0.5			1630		1562.4	0.005
8	8	ROUGHER-BOTTOM-8	10-Dec-09	L847563-2	Water	250	250	2290	7.63	6.8	79.4		5	0.915			1640		1558.6	0.005
9	9	ROUGHER-BOTTOM-9	17-Dec-09	L849344-2	Water	250	250	2270	7.66	4.8	47.3		5	1.02			1630		1581.3	0.005
10	10	ROUGHER-BOTTOM-10	24-Dec-09	L851012-2	Water	250	250	2240	7.62	9.3	48.9		5	0.78			1620		1646.4	0.005
11	11	ROUGHER-BOTTOM-11	31-Dec-09	L851767-2	Water	250	250	2220	7.61	4.5	47.4		5	0.93			1580		1584	0.005
12	12	ROUGHER-BOTTOM-12	7-Jan-10	L852812-2	Water	250	250	2190	7.59	4.8	47.8		2.5	0.63			1450		1565.4	0.005
13	13	ROUGHER-BOTTOM-13	14-Jan-10	L854404-2	Water	250	250	2180	7.58	5.8	44.4		2.5	1.03			1530		1509.12	0.005
14	14	ROUGHER-BOTTOM-14	21-Jan-10	L856203-2	Water	250	250	2170	7.58	5.8	43.7		2.5	0.62			1560		1593.78	0.005
15	15	ROUGHER-BOTTOM-15	28-Jan-10	L858179-2	Water	250	250	2160	7.65	5.2	40.4		2.5	0.923			1580		1599.72	0.005
16	16	ROUGHER-BOTTOM-16	4-Feb-10	L859495-2	Water	250	250	2120	7.6	6.9	38.4		5	0.92			1550		1551.18	0.005
17	17	ROUGHER-BOTTOM-17	11-Feb-10	L861368-2	Water	250	250	2120	7.58	4.2	32.5		5	1.26			1540		1504.9	0.005
18	18	ROUGHER-BOTTOM-18	18-Feb-10	L862989-2	Water	250	250	2110	7.61	5.6	34.4		5	0.68			1590		1568.02	0.005
19	19	ROUGHER-BOTTOM-19	25-Feb-10	L864820-2	Water	250	250	2140	7.63	4	31.9		2.5	0.1			1550		1625.64	0.005
20	20	ROUGHER-BOTTOM-20	4-Mar-10	L866636-2	Water	250	250	2110	7.6	7.7	28.6		5	0.729			1550		1548.38	0.005
21	21	ROUGHER-BOTTOM-21	11-Mar-10	L868410-2	Water	250	250	2110	7.62	10	28.7		5	0.57			1570		1521.92	0.005
22	22	ROUGHER-BOTTOM-22	18-Mar-10	L870452-2	Water	250	250	2100	7.6	6.1	28.6		5	0.5			1580		1540.74	0.005
23	23	ROUGHER-BOTTOM-23	25-Mar-10	L872047-2	Water	250	250	2090	7.62	7	30.1		2.5	0.56			1470		1803	0.005
24	24	ROUGHER-BOTTOM-24	1-Apr-10	L873939-2	Water	250	250	2090	7.62	4	30.1		5	0.2			1620		1605.42	0.005
25	25	ROUGHER-BOTTOM-25	8-Apr-10	L875479-2	Water	250	250	2070	7.59	6.1	29.2		5	0.54			1560		1618.32	0.005
26	26	ROUGHER-BOTTOM-26	15-Apr-10	L877521-2	Water	250	250	2070	7.6	4.3	24.8		5	0.49			1540		1474.76	0.005
27	27	ROUGHER-BOTTOM-27	22-Apr-10	L879806-2	Water	250	250	2050	7.58	3.1	23.8		5	0.45			1520		1497.06	0.005
28	28	ROUGHER-BOTTOM-28	29-Apr-10	L881581-2	Water	250	250	2060	7.58	4.3	25.6		5	0.5			1540		1535.98	0.005
29	29	ROUGHER-BOTTOM-29	6-May-10	L883853-2	Water	250	250	2050	7.62	5.1	25		5	0.51			1540		1589	0.005
30	30	ROUGHER-BOTTOM-30	13-May-10	L886019-2	Water	250	250	2050	7.62	2.9	26.8		5	0.41			1530		1749.86	0.005
31	31	ROUGHER-BOTTOM-31	20-May-10	L888668-2	Water	250	250	2050	7.61	3.3	27.4		5	0.41			1550		1659.96	0.005
32	32	ROUGHER-BOTTOM-32	27-May-10	L890721-2	Water	250	250	2050	7.59	4.2	26.6		5	0.59			1580		1520.92	0.005
33	33	ROUGHER-BOTTOM-33	3-Jun-10	L893264-2	Water	250	250	2040	7.57	3.3	23.9		2.5	0.49			1430		1527.76	0.005
34	34	ROUGHER-BOTTOM-34	10-Jun-10	L895934-2	Water	250	250	2010	7.58	4.4	24.5		2.5	0.49			1490		1518.22	0.005
35	35	ROUGHER-BOTTOM-35	17-Jun-10	L898537-2	Water	250	250	2020	7.62	5.5	26.4		5	0.2			1540		1488.2	0.005
36	36	ROUGHER-BOTTOM-36	24-Jun-10	L901179-2	Water	250	250	2030	7.6	7.2	28.3		5	0.42			1540		1496.6	0.013
37	37	ROUGHER-BOTTOM-37	1-Jul-10	L903293-2	Water	250	250	2030	7.58	3.6	27.8		5	0.2			1330		1519.94	0.005
38	38	ROUGHER-BOTTOM-38	8-Jul-10	L906231-2	Water	250	250	1990	7.55	4.8	28.4		5	0.42			1550		1466.7	0.005
39	39	ROUGHER-BOTTOM-39	15-Jul-10	L909161-2	Water	250	250	2010	7.62	3.8	28.4		5	0.2			1510		1564.5	0.005
40	40	ROUGHER-BOTTOM-40	22-Jul-10	L911860-2	Water	250	250	2010	7.63	3.9	29.5		12.5	0.5			1530		1596.72	0.005
41	41	ROUGHER-BOTTOM-41	29-Jul-10	L914475-2	Water	250	250	2000	7.64	6.3	30.3		5	0.2			1720		1600.98	0.005
42	42	ROUGHER-BOTTOM-42	5-Aug-10	L916790-2	Water	250	250	2000	7.64	4.1	31.4		5	0.2			1550		1533.04	0.005
43	43	ROUGHER-BOTTOM-43	12-Aug-10	L919396-2	Water	250	250	1980	7.61	5.1	29.5		5	0.2			1520		1567.68	0.026

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In mL	Total Volume Out mL	Conductivity uS/cm	pH	Acidity (as $CaCO_3$) mg/L	Total (as CaCO3) mg/L	Bromide (Br) mg/L	Chloride (Cl) mg/L	Fluoride (F) mg/L	Nitrite (as N) mg/L	Nitrate (as N) mg/L	Sulfate (SO_4) mg/L	Sulfide as S mg/L	Hardness mg/L	Aluminum (Al) mg/L
44	44	ROUGHER-BOTTOM-44	19-Aug-10	L922150-2	Water	250	250	1970	7.6	5.5	28.3		5	0.2			1520		1527.86	0.005
45	45	ROUGHER-BOTTOM-45	26-Aug-10	L924778-2	Water	250	250	1980	7.6	4.5	27		5	0.2			1510		1597.74	0.005
46	46	ROUGHER-BOTTOM-46	2-Sep-10	L927316-2	Water	250	250	1970	7.56	6.8	25.9		5	0.2			1470		1537.94	0.005
47	47	ROUGHER-BOTTOM-47	9-Sep-10	L929600-2	Water	250	250	1950	7.58	4.1	26.6		12.5	0.5			1420		1555.44	0.005
48	48	ROUGHER-BOTTOM-48	16-Sep-10	L932186-2	Water	250	250	1960.00	7.63	7.6	25.4	0.5	5	0.2	0.05	0.01	1560		1488.28	0.005
49	49	ROUGHER-BOTTOM-49	23-Sep-10	L935034-2	Water	250	250	1970.00	7.58	4.3	24.4	0.5	5	0.2	0.05	0.01	1570		1560.94	0.0025
50	50	ROUGHER-BOTTOM-50	30-Sep-10	L937658-2	Water	250	250	1940.00	7.53	5.2	24.7	0.5	5	0.2	0.05	0.01	1470		1532.6	0.005
51	51	ROUGHER-BOTTOM-51	7-Oct-10	L940567-2	Water	250	250	1950.00	7.53	3	23.2	0.5	5	0.2	0.18	0.023	1500		1523.42	0.005
52	52	ROUGHER-BOTTOM-52	14-Oct-10	L942881-2	Water	250	250	1930.00	7.5	3.2	21	0.5	5	0.2	0.05	0.01	1460		1441.12	0.005
53	53	ROUGHER-BOTTOM-53	21-Oct-10	L945548-2	Water	250	250	1900.00	7.46	6.3	19.7	0.5	5	0.2	0.05	0.01	1600		1518.84	0.005
54	54	ROUGHER-BOTTOM-54	28-Oct-10	L948179-2	Water	250	250	1920.00	7.4	7.8	20.3	0.5	5	0.2	0.05	0.01	1490		1538.2	0.005
55	55	ROUGHER-BOTTOM-55	4-Nov-10	L950720-2	Water	250	250	1920.00	7.47	11	19.8	0.5	5	0.2	0.05	0.01	1460		1486.28	0.005
56	56	ROUGHER-BOTTOM-56	11-Nov-10	L952756-2	Water	250	250	1850.00	7.25	7.1	19.7	0.5	5	0.2	0.05	0.01	1500		1520.46	0.005
57	57	ROUGHER-BOTTOM-57	18-Nov-10	L955247-2	Water	250	250	2010.00	7.35	2.5	18.4	0.5	5	0.2	0.85	0.01	1480		1526.04	0.005
58	58	ROUGHER-BOTTOM-58	25-Nov-10	L957278-2	Water	250	250	1990.00	7.36	3.5	10.6	0.5	5	0.2	0.05	0.01	1500		1603.06	0.005
59	59	ROUGHER-BOTTOM-59	2-Dec-10	L959371-2	Water	250	250	2010.00	7.42	2.8	10.8	0.5	5	0.2	0.05	0.01	1510		1490.36	0.005
60	60	ROUGHER-BOTTOM-60	9-Dec-10	L961481-2	Water	250	250	1970.00	7.46	1.6	18.2	0.5	5	0.2	0.05	0.01	1490		1514.72	0.005
61	61	ROUGHER-BOTTOM-61	16-Dec-10	L963379-2	Water	250	250	1980.00	7.38	3.6	18.2	0.5	5	0.2	0.05	0.01	1500		1492.22	0.005
62	62	ROUGHER-BOTTOM-62	23-Dec-10	L965465-2	Water	250	250	1970.00	7.47	4.9	18.9	0.5	5	0.2	0.05	0.01	1490		1499.2	0.005
63	63	ROUGHER-BOTTOM-63	30-Dec-10	L966298-2	Water	250	250	1980.00	7.56	4	21.4	0.5	5	0.2	0.05	0.01	1490		1541.34	0.005
64	64	ROUGHER-BOTTOM-64	6-Jan-11	L967673-2	Water	250	250	1980.00	7.49	5.3	22.5	0.25	2.5	0.21	0.025	0.005	1470		1523.58	0.005
65	65	ROUGHER-BOTTOM-65	13-Jan-11	L969702-2	Water	250	250	1980.00	7.6	3.4	22.7	0.5	5	0.2	0.05	0.01	1480		1481.3	0.005
66	66	ROUGHER-BOTTOM-66	20-Jan-11	L971731-2	Water	250	250	1980.00	7.61	4.4	25.4	0.5	5	0.2	0.05	0.01	1480		1534.92	0.005
67	67	ROUGHER-BOTTOM-67	27-Jan-11	L973582-2	Water	250	250	1960.00	7.63	3	26	0.5	5	0.2	0.05	0.01	1480		1471.24	0.005
68	68	ROUGHER-BOTTOM-68	3-Feb-11	L975416-2	Water	250	250	1980.00	7.65	3.5	25.9	0.5	5	0.2	0.05	0.01	1500		1560.74	0.005
69	69	ROUGHER-BOTTOM-69	10-Feb-11	L977328-2	Water	250	250	1980.00	7.59	4.2	24.8	0.5	5	0.2	0.05	0.01	1460		1490.02	0.005
70	70	ROUGHER-BOTTOM-70	17-Feb-11	L979178-2	Water	250	250	1970.00	7.69	5.1	27.9	0.5	5	0.2	0.05	0.01	1490		1576.86	0.005
71	71	ROUGHER-BOTTOM-71	24-Feb-11	L980989-2	Water	250	250	1980.00	7.72	5.9	29.2	0.5	5	0.2	0.05	0.01	1470		1508.68	0.005
72	72	ROUGHER-BOTTOM-72-Final	3-Mar-11	L983006-2	Water	-	400	2260.00	7.65	3.4	29.2	0.5	5	0.2	0.05	0.01	1490		1450.26	0.005
Mean									7.66	4.42	27.4	#DIV/0!	5	0.2	#DIV/0!	#DIV/0!	1482	#DIV/0!	1517.312	0.005
0	**0**	**M_Sulphide Top**	**15-Oct-09**																**0.0000**	
1	1	SULPHIDE-TOP-1	22-Oct-09	L832849-3	Water	260	260	1130	8.2	2	45.8		2.5	0.1			318		172.96	0.048
2	2	SULPHIDE-TOP-2	29-Oct-09	L835334-3	Water	250	250	630	7.87	3.6	35.6		1.25	0.05			168		95.626	0.044
3	3	SULPHIDE-TOP-3	5-Nov-09	L837392-3	Water	250	250	728	7.73	1.4	39		1.25	0.05			214		143.73	0.0343
4	4	SULPHIDE-TOP-4	12-Nov-09	L839409-3	Water	250	250	439	7.37	1.7	24.6		0.63	0.052			139		104.21	0.02
5	5	SULPHIDE-TOP-5	19-Nov-09	L841495-3	Water	250	250	359	7.45	1.8	24.7		0.25	0.048			124		91.064	0.016
6	6	SULPHIDE-TOP-6	26-Nov-09	L844163-3	Water	250	250	323	7.6	2.6	29		0.25	0.047			106		105.76	0.02
7	7	SULPHIDE-TOP-7	3-Dec-09	L845880-3	Water	250	250	396	7.86	1.8	42.8		0.25	0.056			134		134.81	0.016
8	8	SULPHIDE-TOP-8	10-Dec-09	L847563-3	Water	250	250	265	7.86	1.8	32.2		0.25	0.045			82.6		97.032	0.019
9	9	SULPHIDE-TOP-9	17-Dec-09	L849344-3	Water	250	250	267	7.78	2.6	36.1		0.25	0.046			83.2		106.618	0.005
10	10	SULPHIDE-TOP-10	24-Dec-09	L851012-3	Water	250	250	250	7.66	4	34.9		0.25	0.037			79.4		110.56	0.005
11	11	SULPHIDE-TOP-11	31-Dec-09	L851767-3	Water	250	250	238	7.75	2.2	33.1		0.25	0.033			78.1		104.318	0.005
12	12	SULPHIDE-TOP-12	7-Jan-10	L852812-3	Water	250	250	237	7.68	2	32.2		0.25	0.034			78.9		102.09	0.005
13	13	SULPHIDE-TOP-13	14-Jan-10	L854404-3	Water	250	250	247	7.61	3.3	29.6		0.25	0.033			86.8		104.54	0.005
14	14	SULPHIDE-TOP-14	21-Jan-10	L856203-3	Water	250	250	242	7.56	3.1	27.2		0.25	0.032			90.3		108.88	0.005
15	15	SULPHIDE-TOP-15	28-Jan-10	L858179-3	Water	250	250	218	7.63	2.7	22.3		0.25	0.022			78		98.71	0.005
16	16	SULPHIDE-TOP-16	4-Feb-10	L859495-3	Water	250	250	221	7.61	4.1	23.9		0.25	0.01			79.1		98.82	0.005
17	17	SULPHIDE-TOP-17	11-Feb-10	L861368-3	Water	250	250	215	7.62	1.9	21.5		0.25	0.031			80		100.3	0.005
18	18	SULPHIDE-TOP-18	18-Feb-10	L862989-3	Water	250	250	199	7.51	3	19.3		0.25	0.032			76.1		93.04	0.005
19	19	SULPHIDE-TOP-19	25-Feb-10	L864820-3	Water	250	250	198	7.41	2.7	16.2		0.25	0.026			74.3		94.74	0.005
20	20	SULPHIDE-TOP-20	4-Mar-10	L866636-3	Water	250	250	192	7.28	4.9	12.9		0.25	0.031			75.4		84.16	0.005
21	21	SULPHIDE-TOP-21	11-Mar-10	L868410-3	Water	250	250	195	7.15	4.3	8.9		0.25	0.026			80.7		84.79	0.005
22	22	SULPHIDE-TOP-22	18-Mar-10	L870452-3	Water	250	250	193	6.85	1.9	6.4		0.25	0.024			81.5		85.06	0.005
23	23	SULPHIDE-TOP-23	25-Mar-10	L872047-3	Water	250	250	187	6.6	2.5	3.9		0.25	0.023			80.6		94.38	0.005
24	24	SULPHIDE-TOP-24	1-Apr-10	L873939-3	Water	250	250	175	6.46	2.8	3		0.25	0.01			77.8		71.45	0.005
25	25	SULPHIDE-TOP-25	8-Apr-10	L875479-3	Water	250	250	171	6.21	3.7	1		0.25	0.022			73.8		69.46	0.005
26	26	SULPHIDE-TOP-26	15-Apr-10	L877521-3	Water	250	250	171	5.67	4.3	1		0.25	0.01			73.6		68.99	0.005
27	27	SULPHIDE-TOP-27	22-Apr-10	L879806-3	Water	250	250	163	5.9	3.3	1		0.25	0.021			70.4		68.29	0.005
28	28	SULPHIDE-TOP-28	29-Apr-10	L881581-3	Water	250	250	158	5.78	6.6	1		0.25	0.03			68.3		66.01	0.005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In mL	Total Volume Out mL	Conductivity uS/cm	pH	Acidity (as $CaCO_3$) mg/L	Total (as CaCO3) mg/L	Bromide (Br) mg/L	Chloride (Cl) mg/L	Fluoride (F) mg/L	Nitrite (as N) mg/L	Nitrate (as N) mg/L	Sulfate (SO_4) mg/L	Sulfide as S mg/L	Hardness mg/L	Aluminum (Al) mg/L
29	29	SULPHIDE-TOP-29	6-May-10	L883853-3	Water	250	250	156	5.76	5.8	1		0.25	0.03			67.1		64.13	0.005
30	30	SULPHIDE-TOP-30	13-May-10	L886019-3	Water	250	250	149	5.64	2.6	1		0.25	0.023			63.7		63.75	0.005
31	31	SULPHIDE-TOP-31	20-May-10	L888668-3	Water	250	250	138	5.91	1.7	1		0.25	0.028			57.7		60.3	0.005
32	32	SULPHIDE-TOP-32	27-May-10	L890721-3	Water	250	250	155	7.24	2.3	9.7		0.25	0.052			61.5		68.38	0.005
33	33	SULPHIDE-TOP-33	3-Jun-10	L893264-3	Water	250	250	146	7.36	2.2	13.4		0.25	0.042			53.4		68.87	0.005
34	34	SULPHIDE-TOP-34	10-Jun-10	L895934-3	Water	250	250	140	7.27	2.6	13		0.25	0.035			50.7		64.05	0.005
35	35	SULPHIDE-TOP-35	17-Jun-10	L898537-3	Water	250	250	134	7.35	5.1	11.8		0.25	0.029			49.2		58.53	0.005
36	36	SULPHIDE-TOP-36	24-Jun-10	L901179-3	Water	250	250	128	7.33	4.6	9.8		0.25	0.028			47.8		54.24	0.005
37	37	SULPHIDE-TOP-37	1-Jul-10	L903293-3	Water	250	250	117	7.29	2.2	7.7		0.25	0.024			44.5		49.98	0.005
38	38	SULPHIDE-TOP-38	8-Jul-10	L906231-3	Water	250	250	122	7.04	2.3	4.7		0.25	0.024			49.4		53.01	0.005
39	39	SULPHIDE-TOP-39	15-Jul-10	L909161-3	Water	250	250	116	6.58	3.2	3.2		0.25	0.023			46.55		50.73	0.005
40	40	SULPHIDE-TOP-40	22-Jul-10	L911860-3	Water	250	250	108	6.62	2.4	2.3		0.25	0.022			43.7		44.43	0.005
41	41	SULPHIDE-TOP-41	29-Jul-10	L914475-3	Water	250	250	105	6.35	3.5	2.6		0.25	0.023			48.9		43.3	0.005
42	42	SULPHIDE-TOP-42	5-Aug-10	L916790-3	Water	250	250	102	6.38	2.6	1		0.25	0.023			41.9		41.81	0.005
43	43	SULPHIDE-TOP-43	12-Aug-10	L919396-3	Water	250	250	110	5.3	4	1		0.25	0.01			47.3		45.18	0.005
44	44	SULPHIDE-TOP-44	19-Aug-10	L922150-3	Water	250	250	113	5.25	3.8	1		0.25	0.026			47.5		47.04	0.016
45	45	SULPHIDE-TOP-45	26-Aug-10	L924778-3	Water	250	250	119	4.9	5.1	1		0.25	0.023			49.4		48.41	0.022
46	46	SULPHIDE-TOP-46	2-Sep-10	L927316-3	Water	250	250	120	5	5.6	1		0.25	0.026			50		48.4	0.028
47	47	SULPHIDE-TOP-47	9-Sep-10	L929600-3	Water	250	250	168	4.75	7.1	1		0.25	0.039			73.7		70.98	0.055
48	48	SULPHIDE-TOP-48	16-Sep-10	L932186-3	Water	250	250	137.00	4.78	8	1	0.025	0.25	0.037	0.00	0.0005	60.1		57.62	0.042
49	49	SULPHIDE-TOP-49	23-Sep-10	L935034-3	Water	250	250	136.00	4.73	7.1	1	0.025	0.25	0.034	0.00	0.0005	56.4		52.87	0.0483
50	50	SULPHIDE-TOP-50	30-Sep-10	L937658-3	Water	250	250	131.00	4.78	8.2	1	0.025	0.25	0.037	0.00	0.0005	55.3		51.66	0.047
51	51	SULPHIDE-TOP-51	7-Oct-10	L940567-3	Water	250	250	132.00	4.74	5.6	1	0.025	0.25	0.046	0.00	0.0005	55.7		51.25	0.0535
52	52	SULPHIDE-TOP-52	14-Oct-10	L942881-3	Water	250	250	123.00	4.84	5	1	0.025	0.25	0.04	0.00	0.0005	48.6		47.16	0.0452
53	53	SULPHIDE-TOP-53	21-Oct-10	L945548-3	Water	250	250	122.00	4.74	7.2	1	0.025	0.25	0.033	0.00	0.0005	50.9		45.4	0.052
54	54	SULPHIDE-TOP-54	28-Oct-10	L948179-3	Water	250	250	116.00	4.69	9.7	1	0.025	0.25	0.044	0.00	0.0005	48.7		44.94	0.051
55	55	SULPHIDE-TOP-55	4-Nov-10	L950720-3	Water	250	250	117.00	4.69	10.3	1	0.025	0.25	0.044	0.00	0.0005	48.1		44.66	0.0524
56	56	SULPHIDE-TOP-56	11-Nov-10	L952756-3	Water	250	250	113.00	4.59	10	1	0.025	0.25	0.048	0.00	0.0005	51.3		46.72	0.0657
57	57	SULPHIDE-TOP-57	18-Nov-10	L955247-3	Water	250	250	123.00	4.54	6.7	1	0.025	0.25	0.048	0.00	0.0005	48.7		44.08	0.0617
58	58	SULPHIDE-TOP-58	25-Nov-10	L957278-3	Water	250	250	123.00	4.48	7.4	1	0.025	0.25	0.045	0.00	0.0005	48.6		44.75	0.0654
59	59	SULPHIDE-TOP-59	2-Dec-10	L959371-3	Water	250	250	138.00	4.42	7.6	1	0.025	0.25	0.055	0.00	0.0005	56		48.93	0.088
60	60	SULPHIDE-TOP-60	9-Dec-10	L961481-3	Water	250	250	145.00	4.31	7.7	1	0.025	0.25	0.052	0.00	0.0005	57.2		50.55	0.092
61	61	SULPHIDE-TOP-61	16-Dec-10	L963379-3	Water	250	250	161.00	3.98	11.7	1	0.025	0.25	0.065	0.00	0.0005	60.1		50.46	0.131
62	62	SULPHIDE-TOP-62	23-Dec-10	L965465-3	Water	250	250	172.00	3.98	13.9	1	0.025	0.25	0.077	0.0025	0.0005	64.7		51.01	0.171
63	63	SULPHIDE-TOP-63	30-Dec-10	L966298-3	Water	250	250	182.00	3.93	14.1	1	0.025	0.25	0.095	0.0025	0.0005	65		53.62	0.226
64	64	SULPHIDE-TOP-64	6-Jan-11	L967673-3	Water	250	250	186.00	3.86	15.1	1	0.025	0.25	0.106	0.0025	0.0005	67.5		54.03	0.268
65	65	SULPHIDE-TOP-65	13-Jan-11	L969702-3	Water	250	250	191.00	3.87	14.4	1	0.025	0.25	0.116	0.0025	0.0005	68.1		54.71	0.266
66	66	SULPHIDE-TOP-66	20-Jan-11	L971731-3	Water	250	250	195.00	3.85	17.3	1	0.025	0.25	0.145	0.0025	0.0005	68.2		57.23	0.327
67	67	SULPHIDE-TOP-67	27-Jan-11	L973582-3	Water	250	250	194.00	3.85	15.5	1	0.025	0.25	0.155	0.0025	0.0005	69.5		58.59	0.367
68	68	SULPHIDE-TOP-68	3-Feb-11	L975416-3	Water	250	250	200.00	3.8	17.3	1	0.025	0.25	0.149	0.0051	0.0005	70.9		55.88	0.33
69	69	SULPHIDE-TOP-69	10-Feb-11	L977328-3	Water	250	250	205.00	3.78	18.3	1	0.025	0.25	0.134	0.0025	0.0005	69.2		58.72	0.448
70	70	SULPHIDE-TOP-70	17-Feb-11	L979178-3	Water	250	250	209.00	3.78	20.1	1	0.025	0.25	0.162	0.0025	0.0005	71.8		58.92	0.44
71	71	SULPHIDE-TOP-71	24-Feb-11	L980989-3	Water	250	250	208.00	3.74	18.4	1	0.025	0.25	0.134	0.0025	0.0005	69.7		55.76	0.435
72	72	SULPHIDE-TOP-72	3-Mar-11	L983006-3	Water	250	250	204.00	3.73	17.3	1	0.025	0.25	0.15	0.0025	0.0005	68.6		55.04	0.469
73	73	SULPHIDE-TOP-73	10-Mar-11	L985123-3	Water	250	250	203.00	3.75	18.7	1	0.025	0.25	0.138	0.0025	0.0005	68.9		54.26	0.472
74	74	SULPHIDE-TOP-74	17-Mar-11	L986965-3	Water	250	250	205.00	3.75	18.1	1	0.025	0.25	0.136	0.0093	0.0005	70.6		53.84	0.479
75	75	SULPHIDE-TOP-75	24-Mar-11	L988827-3	Water	250	250	207.00	3.71	19.6	1	0.175	0.25	0.131	0.0025	0.0005	69.6		54.1	0.477
76	76	SULPHIDE-TOP-76	31-Mar-11	L990988-3	Water	250	250	190.00	3.79	25.5	1	0.025	0.25	0.119	0.0025	0.0005	59.8		46.87	0.427
77	77	SULPHIDE-TOP-77	7-Apr-11	L992884-3	Water	250	250	194.00	3.77	23	1	0.025	0.25	0.102	0.0025	0.0005	63.9		49.48	0.451
78	78	SULPHIDE-TOP-Final Leach	14-Apr-11	L995107-3	Water	250	250	202.00	3.76	20.6	1	0.025	0.25	0.167	0.0058	0.0005	67.2		53.24	0.526
Mean									3.756	21.36	1	#DIV/0!	0.25	0.131	#DIV/0!	#DIV/0!	66.22	#DIV/0!	51.506	0.472
0	**0**	**M_Sulphide Bottom**	**15-Oct-09**																	
1	1	SULPHIDE-BOTTOM-1	22-Oct-09	L832849-4	Water	245	245	6250	7.69	6.2	215		12.5	0.229			2390		1359.4	0.01
2	2	SULPHIDE-BOTTOM-2	29-Oct-09	L835334-4	Water	250	250	6010	7.94	8.6	206		14	0.2			2350		1289.7	0.01
3	3	SULPHIDE-BOTTOM-3	5-Nov-09	L837392-4	Water	250	250	5800	7.83	4.4	143		16	0.2			2340		1199.7	0.01
4	4	SULPHIDE-BOTTOM-4	12-Nov-09	L839409-4	Water	250	250	5750	7.7	7.5	140		13	0.2			2310		1179.8	0.01
5	5	SULPHIDE-BOTTOM-5	19-Nov-09	L841495-4	Water	250	250	5620	7.72	5.1	141		14	0.2			2280		1104.8	0.01
6	6	SULPHIDE-BOTTOM-6	26-Nov-09	L844163-4	Water	250	250	5270	7.79	6.1	128		10	0.2			2150		958.5	0.005
7	7	SULPHIDE-BOTTOM-7	3-Dec-09	L845880-4	Water	250	250	4590	8.23	4	130		5	0.2			1770		783.5	0.01

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
						Total Volume In	Total Volume Out	Conductivity		Acidity ($CaCO_3$)	Total (as CaCO3)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrite (as N)	Nitrate (as N)	Sulfate (SO_4)	Sulfide as S	Hardness	Aluminum (Al)
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	mL	mL	uS/cm	pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
8	8	SULPHIDE-BOTTOM-8	10-Dec-09	L847563-4	Water	250	250	3630	8.28	5.2	111		5	0.2			1390		558.6	0.005
9	9	SULPHIDE-BOTTOM-9	17-Dec-09	L849344-4	Water	250	250	2760	8.28	2.9	108		5	0.2			990		397	0.005
10	10	SULPHIDE-BOTTOM-10	24-Dec-09	L851012-4	Water	250	250	2150	8.12	5.9	98.9		5	0.2			707		296.44	0.01
11	11	SULPHIDE-BOTTOM-11	31-Dec-09	L851767-4	Water	250	250	1630	8.46	1.9	106		5	0.2			483		231.14	0.005
12	12	SULPHIDE-BOTTOM-12	7-Jan-10	L852812-4	Water	250	250	1320	8.52	0.5	101		2.5	0.25			351		196.32	0.005
13	13	SULPHIDE-BOTTOM-13	14-Jan-10	L854404-4	Water	250	250	1150	8.11	3.1	93.7		1.25	0.32			324		208.31	0.005
14	14	SULPHIDE-BOTTOM-14	21-Jan-10	L856203-4	Water	250	250	981	8.38	3.3	82.7		0.25	0.265			273		205.74	0.005
15	15	SULPHIDE-BOTTOM-15	28-Jan-10	L858179-4	Water	250	250	883	8.3	4.4	78.6		0.25	0.374			248		210.31	0.005
16	16	SULPHIDE-BOTTOM-16	4-Feb-10	L859495-4	Water	250	250	764	8.26	4.1	69.2		1.25	0.368			203		194.49	0.005
17	17	SULPHIDE-BOTTOM-17	11-Feb-10	L861368-4	Water	250	250	720	8.18	3	71		2.5	0.28			196		210.13	0.005
18	18	SULPHIDE-BOTTOM-18	18-Feb-10	L862989-4	Water	250	250	713	8.1	4.1	73		1.25	0.28			210		238.22	0.005
19	19	SULPHIDE-BOTTOM-19	25-Feb-10	L864820-4	Water	250	250	710	8.06	3	80.4		0.25	0.292			209		274.7	0.005
20	20	SULPHIDE-BOTTOM-20	4-Mar-10	L866636-4	Water	250	250	730	7.96	6.3	79.5		1.25	0.31			228		283.9	0.005
21	21	SULPHIDE-BOTTOM-21	11-Mar-10	L868410-4	Water	250	250	653	8.05	6.6	67.2		0.25	0.278			190		245.76	0.005
22	22	SULPHIDE-BOTTOM-22	18-Mar-10	L870452-4	Water	250	250	621	8.03	4.2	64.7		0.25	0.267			182		237.45	0.005
23	23	SULPHIDE-BOTTOM-23	25-Mar-10	L872047-4	Water	250	250	596	8.04	4.9	71.8		0.25	0.254			176		269.21	0.005
24	24	SULPHIDE-BOTTOM-24	1-Apr-10	L873939-4	Water	250	250	576	8.02	3.2	69.2		0.25	0.288			180		235.58	0.005
25	25	SULPHIDE-BOTTOM-25	8-Apr-10	L875479-4	Water	250	250	563	8	4.1	63.9		0.25	0.249			170		237.3	0.005
26	26	SULPHIDE-BOTTOM-26	15-Apr-10	L877521-4	Water	250	250	545	7.99	2.2	60.3		0.25	0.248			166		214.54	0.005
27	27	SULPHIDE-BOTTOM-27	22-Apr-10	L879806-4	Water	250	250	530	8.01	2.7	58.1		0.25	0.245			164		221.96	0.005
28	28	SULPHIDE-BOTTOM-28	29-Apr-10	L881581-4	Water	250	250	538	7.99	5	63.6		0.25	0.265			172		233.77	0.005
29	29	SULPHIDE-BOTTOM-29	6-May-10	L883853-4	Water	250	250	523	8	4.6	60.6		0.25	0.099			164		236.13	0.005
30	30	SULPHIDE-BOTTOM-30	13-May-10	L886019-4	Water	250	250	518	8.01	2.2	60.1		0.25	0.241			164		251.45	0.005
31	31	SULPHIDE-BOTTOM-31	20-May-10	L888668-4	Water	250	250	510	7.99	2.1	65		0.25	0.234			164		234.46	0.005
32	32	SULPHIDE-BOTTOM-32	27-May-10	L890721-4	Water	250	250	548	7.95	4.1	67.7		0.25	0.282			190		246.9	0.005
33	33	SULPHIDE-BOTTOM-33	3-Jun-10	L893264-4	Water	250	250	546	7.98	3.2	64.7		0.25	0.239			179		255.82	0.005
34	34	SULPHIDE-BOTTOM-34	10-Jun-10	L895934-4	Water	250	250	507	7.97	3.2	64.9		0.25	0.22			162		226.71	0.005
35	35	SULPHIDE-BOTTOM-35	17-Jun-10	L898537-4	Water	250	250	494	7.96	4.8	64.6		0.25	0.209			158		219.84	0.005
36	36	SULPHIDE-BOTTOM-36	24-Jun-10	L901179-4	Water	250	250	502	7.96	5.6	65.6		0.25	0.252			160		221.43	0.005
37	37	SULPHIDE-BOTTOM-37	1-Jul-10	L903293-4	Water	250	250	501	7.96	2.9	60.9		0.25	0.255			154		227.03	0.005
38	38	SULPHIDE-BOTTOM-38	8-Jul-10	L906231-4	Water	250	250	488	7.92	3.7	59		0.25	0.242			158		219.01	0.005
39	39	SULPHIDE-BOTTOM-39	15-Jul-10	L909161-4	Water	250	250	496	7.9	3.1	59.6		0.25	0.213			162		238.31	0.005
40	40	SULPHIDE-BOTTOM-40	22-Jul-10	L911860-4	Water	250	250	520	7.85	5.4	58.2		0.25	0.237			173		254.27	0.005
41	41	SULPHIDE-BOTTOM-41	29-Jul-10	L914475-4	Water	250	250	502	7.9	5	68.7		0.25	0.247			186		252.63	0.005
42	42	SULPHIDE-BOTTOM-42	5-Aug-10	L916790-4	Water	250	250	478	7.87	4.6	65.2		0.25	0.222			151		222.62	0.005
43	43	SULPHIDE-BOTTOM-43	12-Aug-10	L919396-4	Water	250	250	461	7.9	5.5	66.9		0.25	0.186			148		221.25	0.005
44	44	SULPHIDE-BOTTOM-44	19-Aug-10	L922150-4	Water	250	250	458	7.9	4.1	58.8		0.25	0.202			148		223.36	0.005
45	45	SULPHIDE-BOTTOM-45	26-Aug-10	L924778-4	Water	250	250	534	7.8	4.3	75.4		0.58	0.186			178		281.5	0.005
46	46	SULPHIDE-BOTTOM-46	2-Sep-10	L927316-4	Water	250	250	450	7.81	4.9	71.7		0.25	0.213			138		219.9	0.005
47	47	SULPHIDE-BOTTOM-47	9-Sep-10	L929600-4	Water	250	250	436	7.85	4.5	65.7		0.51	0.226			138		216.6	0.005
48	48	SULPHIDE-BOTTOM-48	16-Sep-10	L932186-4	Water	250	250	438.00	7.81	6.5	62.1		0.57	0.23			144		211.86	0.005
49	49	SULPHIDE-BOTTOM-49	23-Sep-10	L935034-4	Water	250	250	434.00	7.79	3.7	61.2	0.025	0.67	0.192	0.00	0.0005	143		217.4	0.0025
50	50	SULPHIDE-BOTTOM-50	30-Sep-10	L937658-4	Water	250	250	399.00	7.89	4.7	64.2	0.025	0.25	0.19	0.01	0.0005	127		197.43	0.0025
51	51	SULPHIDE-BOTTOM-51	7-Oct-10	L940567-4	Water	250	250	386.00	7.95	2.6	54.8	0.025	0.25	0.178	0.00	0.001	121		183.78	0.0025
52	52	SULPHIDE-BOTTOM-52	14-Oct-10	L942881-4	Water	250	250	381.00	7.92	2.6	53.5	0.025	0.25	0.182	0.01	0.0005	123		177.37	0.0025
53	53	SULPHIDE-BOTTOM-53	21-Oct-10	L945548-4	Water	250	250	389.00	7.92	5.1	46.8	0.025	0.25	0.147	0.00	0.0005	127		192.75	0.0025
54	54	SULPHIDE-BOTTOM-54	28-Oct-10	L948179-4	Water	250	250	370.00	7.94	7.5	47.6	0.025	0.25	0.18	0.00	0.0005	117		183.16	0.0025
55	55	SULPHIDE-BOTTOM-55	4-Nov-10	L950720-4	Water	250	250	366.00	7.91	8.2	47.1	0.025	0.25	0.177	0.00	0.0005	121		183.23	0.0025
56	56	SULPHIDE-BOTTOM-56	11-Nov-10	L952756-4	Water	250	250	336.00	7.92	5.7	49.4	0.025	0.25	0.168	0.00	0.0005	113		176.69	0.0025
57	57	SULPHIDE-BOTTOM-57	18-Nov-10	L955247-4	Water	250	250	376.00	7.92	2.6	46.3	0.025	0.25	0.181	0.00	0.0005	121		177.87	0.0025
58	58	SULPHIDE-BOTTOM-58	25-Nov-10	L957278-4	Water	250	250	367.00	7.85	3.4	43.7	0.025	0.25	0.154	0.00	0.0005	113		182.64	0.0025
59	59	SULPHIDE-BOTTOM-59	2-Dec-10	L959371-4	Water	250	250	371.00	7.8	1.7	41.6	0.025	0.25	0.172	0.00	0.0005	126		175.18	0.0025
60	60	SULPHIDE-BOTTOM-60	9-Dec-10	L961481-4	Water	250	250	360.00	7.9	1.5	45.1	0.025	0.25	0.132	0.00	0.0005	122		173.85	0.0025
61	61	SULPHIDE-BOTTOM-61	16-Dec-10	L963379-4	Water	250	250	380.00	7.93	3.5	45.4	0.025	0.25	0.174	0.00	0.0005	126		185.01	0.0025
62	62	SULPHIDE-BOTTOM-62	23-Dec-10	L965465-4	Water	250	250	365.00	7.93	5	46.6	0.025	0.25	0.126	0.0091	0.0005	117		169.62	0.0025
63	63	SULPHIDE-BOTTOM-63	30-Dec-10	L966298-4	Water	250	250	356.00	7.92	3.9	44.3	0.025	0.25	0.147	0.0025	0.0005	111		172.43	0.0025
64	64	SULPHIDE-BOTTOM-64	6-Jan-11	L967673-4	Water	250	250	356.00	7.91	4.4	44.5	0.025	0.25	0.143	0.0025	0.0005	108		174.27	0.0025
65	65	SULPHIDE-BOTTOM-65	13-Jan-11	L969702-4	Water	250	250	384.00	7.86	2.7	44.9	0.025	0.25	0.134	0.0025	0.0005	131		187.61	0.0025
66	66	SULPHIDE-BOTTOM-66	20-Jan-11	L971731-4	Water	250	250	376.00	8.01	4	43.9	0.025	0.25	0.155	0.0025	0.0005	123		188.43	0.0025

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In mL	Total Volume Out mL	Conductivity uS/cm	pH	Acidity (as $CaCO_3$) mg/L	Total (as CaCO3) mg/L	Bromide (Br) mg/L	Chloride (Cl) mg/L	Fluoride (F) mg/L	Nitrite (as N) mg/L	Nitrate (as N) mg/L	Sulfate (SO_4) mg/L	Sulfide as S mg/L	Hardness mg/L	Aluminum (Al) mg/L
67	67	SULPHIDE-BOTTOM-67	27-Jan-11	L973582-4	Water	250	250	370.00	7.95	2.4	45.2	0.025	0.25	0.13	0.0051	0.0005	121		180.39	0.0025
68	68	SULPHIDE-BOTTOM-68	3-Feb-11	L975416-4	Water	250	250	396.00	7.77	3.5	43.4	0.025	0.25	0.129	0.0025	0.0005	139		201.8	0.0025
69	69	SULPHIDE-BOTTOM-69	10-Feb-11	L977328-4	Water	250	250	376.00	7.97	4.6	44.1	0.025	0.25	0.101	0.0025	0.0005	132		179.5	0.0025
70	70	SULPHIDE-BOTTOM-70	17-Feb-11	L979178-4	Water	250	250	422.00	7.8	2.5	42.8	0.025	0.25	0.122	0.0025	0.0005	160		222.33	0.0025
71	71	SULPHIDE-BOTTOM-71	24-Feb-11	L980989-4	Water	250	250	515.00	7.6	6.4	46.5	0.025	0.53	0.104	0.0056	0.0005	205		267.91	0.0025
72	72	SULPHIDE-BOTTOM-72	3-Mar-11	L983006-4	Water	250	250	433.00	7.82	2.5	56.2	0.025	0.25	0.131	0.0025	0.0005	156		221.18	0.0025
73	73	SULPHIDE-BOTTOM-73	10-Mar-11	L985123-4	Water	250	250	406.00	7.85	2.7	45.5	0.025	0.25	0.096	0.0025	0.0005	149		207.55	0.0025
74	74	SULPHIDE-BOTTOM-74	17-Mar-11	L986965-4	Water	250	250	400.00	7.85	2.3	41.3	0.025	0.25	0.121	0.0025	0.0005	148		202.38	0.0025
75	75	SULPHIDE-BOTTOM-75	24-Mar-11	L988827-4	Water	250	250	491.00	7.61	4	44.1	0.475	0.25	0.102	0.0025	0.0005	190		262.34	0.0025
76	76	SULPHIDE-BOTTOM-76	31-Mar-11	L990988-4	Water	250	250	412.00	7.86	2.3	44.8	0.162	0.25	0.119	0.0052	0.0005	150		209.35	0.0025
77	77	SULPHIDE-BOTTOM-77	7-Apr-11	L992884-4	Water	250	250	404.00	7.92	10.7	45.3	0.025	0.25	0.1	0.0025	0.0005	151		206.26	0.0025
78	78	SULPHIDE-BOTTOM-Final Leach	14-Apr-11	L995107-4	Water	250	250	421	8.12	4.5	43.1	0.025	0.25	0.148	0.0083	0.0005	161	0.0025	217.54	0.0025
Mean									7.872	4.76	43.72	#DIV/0!	0.25	0.118	#DIV/0!	#DIV/0!	160	#DIV/0!	219.574	0.0025
0	**0**	**M_Rougher/Sulphide 90/10 Top**	**15-Oct-09**																	
1	1	ROUGHER-SULPHIDE-90/10-TOP-1	22-Oct-09	L832849-5	Water	270	270	1160	7.5	2.6	23.8		2.5	0.1			651		647.38	0.005
2	2	ROUGHER-SULPHIDE-90/10-TOP-2	29-Oct-09	L835334-5	Water	250	250	813	7.53	4.6	21.3		1.25	0.05			421		401.36	0.005
3	3	ROUGHER-SULPHIDE-90/10-TOP-3	5-Nov-09	L837392-5	Water	250	250	1000	7.44	1.7	24.2		2.5	0.1			575		621.48	0.0025
4	4	ROUGHER-SULPHIDE-90/10-TOP-4	12-Nov-09	L839409-5	Water	250	250	656	7.47	3.4	19.6		0.25	0.074			327		378.9	0.005
5	5	ROUGHER-SULPHIDE-90/10-TOP-5	19-Nov-09	L841495-5	Water	250	250	427	7.44	2.4	18.5		0.25	0.049			198		215.142	0.005
6	6	ROUGHER-SULPHIDE-90/10-TOP-6	26-Nov-09	L844163-5	Water	250	250	304	7.48	2.6	17.5		0.25	0.038			127		156.23	0.005
7	7	ROUGHER-SULPHIDE-90/10-TOP-7	3-Dec-09	L845880-5	Water	250	250	423	7.68	1.8	29.2		0.25	0.032			184		215.912	0.005
8	8	ROUGHER-SULPHIDE-90/10-TOP-8	10-Dec-09	L847563-5	Water	250	250	274	7.66	1.6	23.5		0.25	0.042			125		146.612	0.005
9	9	ROUGHER-SULPHIDE-90/10-TOP-9	17-Dec-09	L849344-5	Water	250	250	293	7.7	2.5	27.3		0.25	0.038			117		148.812	0.005
10	10	ROUGHER-SULPHIDE-90/10-TOP-10	24-Dec-09	L851012-5	Water	250	250	281	7.7	3.9	29.1		5	0.2			107		143.314	0.005
11	11	ROUGHER-SULPHIDE-90/10-TOP-11	31-Dec-09	L851767-5	Water	250	250	278	7.8	1.9	30		0.25	0.029			106		145.374	0.005
12	12	ROUGHER-SULPHIDE-90/10-TOP-12	7-Jan-10	L852812-5	Water	250	250	285	7.81	2	32.6		0.25	0.031			108		143.862	0.005
13	13	ROUGHER-SULPHIDE-90/10-TOP-13	14-Jan-10	L854404-5	Water	250	250	286	7.76	3.3	34.4		0.25	0.029			106		139.27	0.0018
14	14	ROUGHER-SULPHIDE-90/10-TOP-14	21-Jan-10	L856203-5	Water	250	250	268	7.8	3.1	35.5		0.25	0.028			99.9		140.842	0.005
15	15	ROUGHER-SULPHIDE-90/10-TOP-15	28-Jan-10	L858179-5	Water	250	250	241	7.81	3.2	32		0.25	0.025			82.5		124.55	0.005
16	16	ROUGHER-SULPHIDE-90/10-TOP-16	4-Feb-10	L859495-5	Water	250	250	233	7.8	4.3	33.1		0.25	0.01			80.1		119.034	0.005
17	17	ROUGHER-SULPHIDE-90/10-TOP-17	11-Feb-10	L861368-5	Water	250	250	215	7.78	1.8	32.5		0.25	0.024			71		111.226	0.005
18	18	ROUGHER-SULPHIDE-90/10-TOP-18	18-Feb-10	L862989-5	Water	250	250	203	7.76	3.1	30.8		0.25	0.024			69.1		98.62	0.005
19	19	ROUGHER-SULPHIDE-90/10-TOP-19	25-Feb-10	L864820-5	Water	250	250	200	7.73	2.6	31		0.25	0.01			64.9		105	0.005
20	20	ROUGHER-SULPHIDE-90/10-TOP-20	4-Mar-10	L866636-5	Water	250	250	193	7.76	4.9	30.9		0.25	0.021			65		95.91	0.005
21	21	ROUGHER-SULPHIDE-90/10-TOP-21	11-Mar-10	L868410-5	Water	250	250	199	7.86	4.4	35.4		0.25	0.01			61		97.79	0.005
22	22	ROUGHER-SULPHIDE-90/10-TOP-22	18-Mar-10	L870452-5	Water	250	250	191	7.8	5.1	34.9		0.25	0.01			57.9		96.74	0.005
23	23	ROUGHER-SULPHIDE-90/10-TOP-23	25-Mar-10	L872047-5	Water	250	250	192	7.8	2.9	35.9		0.25	0.01			57.7		111.86	0.005
24	24	ROUGHER-SULPHIDE-90/10-TOP-24	1-Apr-10	L873939-5	Water	250	250	185	7.78	2.5	35.1		0.25	0.01			56.4		98.23	0.005
25	25	ROUGHER-SULPHIDE-90/10-TOP-25	8-Apr-10	L875479-5	Water	250	250	184	7.78	3.6	33.8		0.25	0.01			55.7		96.95	0.005
26	26	ROUGHER-SULPHIDE-90/10-TOP-26	15-Apr-10	L877521-5	Water	250	250	177	7.8	2.2	31.6		0.25	0.01			53.2		84.38	0.005
27	27	ROUGHER-SULPHIDE-90/10-TOP-27	22-Apr-10	L879806-5	Water	250	250	171	7.77	2.1	32.5		0.25	0.01			51.7		86.95	0.005
28	28	ROUGHER-SULPHIDE-90/10-TOP-28	29-Apr-10	L881581-5	Water	250	250	170	7.74	4.2	30.6		0.25	0.01			51.7		87.89	0.005
29	29	ROUGHER-SULPHIDE-90/10-TOP-29	6-May-10	L883853-5	Water	250	250	168	7.72	3.3	30.5		0.25	0.01			50.3		92.49	0.005
30	30	ROUGHER-SULPHIDE-90/10-TOP-30	13-May-10	L886019-5	Water	250	250	164	7.73	1.7	30.6		0.25	0.01			49		89.05	0.005
31	31	ROUGHER-SULPHIDE-90/10-TOP-31	20-May-10	L888668-5	Water	250	250	150	7.7	0.5	28.7		0.25	0.01			43.7		79.05	0.005
32	32	ROUGHER-SULPHIDE-90/10-TOP-32	27-May-10	L890721-5	Water	250	250	151	7.68	2.8	28.9		0.25	0.01			45.2		71.93	0.005
33	33	ROUGHER-SULPHIDE-90/10-TOP-33	3-Jun-10	L893264-5	Water	250	250	157	7.66	2.5	30.7		0.25	0.01			45.3		79.88	0.005
34	34	ROUGHER-SULPHIDE-90/10-TOP-34	10-Jun-10	L895934-5	Water	250	250	144	7.64	2.7	28.5		0.25	0.01			39.9		69.94	0.005
35	35	ROUGHER-SULPHIDE-90/10-TOP-35	17-Jun-10	L898537-5	Water	250	250	135	7.61	3.7	27.1		0.25	0.01			37.3		62.7	0.005
36	36	ROUGHER-SULPHIDE-90/10-TOP-36	24-Jun-10	L901179-5	Water	250	250	127	7.64	4.7	25.6		0.25	0.01			35.1		59.5	0.005
37	37	ROUGHER-SULPHIDE-90/10-TOP-37	1-Jul-10	L903293-5	Water	250	250	116	7.7	2	23.3		0.25	0.01			31.7		54.54	0.005
38	38	ROUGHER-SULPHIDE-90/10-TOP-38	8-Jul-10	L906231-5	Water	250	250	114	7.64	2.3	22.6		0.25	0.01			30.8		53.38	0.005
39	39	ROUGHER-SULPHIDE-90/10-TOP-39	15-Jul-10	L909161-5	Water	250	250	111	7.59	2.1	22.5		0.25	0.01			29.5		54.08	0.005
40	40	ROUGHER-SULPHIDE-90/10-TOP-40	22-Jul-10	L911860-5	Water	250	250	105	7.58	3.9	20.8		0.25	0.01			28.2		48.89	0.005
41	41	ROUGHER-SULPHIDE-90/10-TOP-41	29-Jul-10	L914475-5	Water	250	250	106	7.7	3.4	21.3		0.25	0.01			32.7		49.36	0.005
42	42	ROUGHER-SULPHIDE-90/10-TOP-42	5-Aug-10	L916790-5	Water	250	250	104	7.65	3.2	19.9		1.56	0.01			28.9		47.85	0.005
43	43	ROUGHER-SULPHIDE-90/10-TOP-43	12-Aug-10	L919396-5	Water	250	250	113	7.6	4.1	20.5		0.25	0.01			32.8		51.85	0.005
44	44	ROUGHER-SULPHIDE-90/10-TOP-44	19-Aug-10	L922150-5	Water	250	250	113	7.53	1.7	19.4		0.25	0.01			33.8		54.42	0.005
45	45	ROUGHER-SULPHIDE-90/10-TOP-45	26-Aug-10	L924778-5	Water	250	250	115	7.51	2.8	18.9		0.25	0.01			35.8		55.49	0.005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In mL	Total Volume Out mL	Conductivity uS/cm	pH	Acidity (as $CaCO_3$) mg/L	Total (as CaCO3) mg/L	Bromide (Br) mg/L	Chloride (Cl) mg/L	Fluoride (F) mg/L	Nitrite (as N) mg/L	Nitrate (as N) mg/L	Sulfate (SO_4) mg/L	Sulfide as S mg/L	Hardness mg/L	Aluminum (Al) mg/L
46	46	ROUGHER-SULPHIDE-90/10-TOP-46	2-Sep-10	L927316-5	Water	250	250	118	7.4	3.9	18.1		0.25	0.01			37.4		55.25	0.005
47	47	ROUGHER-SULPHIDE-90/10-TOP-47	9-Sep-10	L929600-5	Water	250	250	151	7.55	2.9	20.9		0.25	0.01			51.3		72.56	0.005
48	48	ROUGHER-SULPHIDE-90/10-TOP-48	16-Sep-10	L932186-5	Water	250	250	128.00	7.35	5.4	16.3		0.25	0.01			44.9		61.72	0.005
49	49	ROUGHER-SULPHIDE-90/10-TOP-49	23-Sep-10	L935034-5	Water	250	250	138.00	7.3	3.2	14.3	0.025	0.25	0.01	0.00	0.0005	49.9		64.25	0.0025
50	50	ROUGHER-SULPHIDE-90/10-TOP-50	30-Sep-10	L937658-5	Water	250	250	126.00	7.29	4	14	0.025	0.25	0.01	0.00	0.0005	44.8		57.49	0.0025
51	51	ROUGHER-SULPHIDE-90/10-TOP-51	7-Oct-10	L940567-5	Water	250	250	120.00	7.12	2.2	12	0.025	0.25	0.01	0.00	0.0005	44.3		54.95	0.0025
52	52	ROUGHER-SULPHIDE-90/10-TOP-52	14-Oct-10	L942881-5	Water	250	250	111.00	7.2	2	11.7	0.025	0.25	0.01	0.00	0.0005	40		49.32	0.0068
53	53	ROUGHER-SULPHIDE-90/10-TOP-53	21-Oct-10	L945548-5	Water	250	250	111.00	7.3	3.3	11	0.025	0.25	0.01	0.00	0.0005	40.6		48.55	0.0025
54	54	ROUGHER-SULPHIDE-90/10-TOP-54	28-Oct-10	L948179-5	Water	250	250	106.00	7.2	2.7	10	0.025	0.25	0.01	0.00	0.0005	39.4		48.64	0.0025
55	55	ROUGHER-SULPHIDE-90/10-TOP-55	4-Nov-10	L950720-5	Water	250	250	105.00	7.28	2.5	8.5	0.025	0.25	0.01	0.00	0.0005	39.4		47.2	0.0025
56	56	ROUGHER-SULPHIDE-90/10-TOP-56	11-Nov-10	L952756-5	Water	250	250	104.00	7.02	2.9	7.9	0.025	0.25	0.01	0.00	0.0005	42.3		49.21	0.0025
57	57	ROUGHER-SULPHIDE-90/10-TOP-57	18-Nov-10	L955247-5	Water	250	250	109.00	7.25	1.8	6.9	0.025	0.25	0.01	0.00	0.0005	41.1		46.05	0.0025
58	58	ROUGHER-SULPHIDE-90/10-TOP-58	25-Nov-10	L957278-5	Water	250	250	103.00	6.96	2.3	4.8	0.025	0.25	0.01	0.00	0.0005	39.8		45.19	0.0025
59	59	ROUGHER-SULPHIDE-90/10-TOP-59	2-Dec-10	L959371-5	Water	250	250	111.00	7.02	0.5	3.9	0.025	0.25	0.01	0.00	0.0005	43.3		46.71	0.0025
60	60	ROUGHER-SULPHIDE-90/10-TOP-60	9-Dec-10	L961481-5	Water	250	250	109.00	6.99	0.5	5.1	0.025	0.25	0.01	0.0025	0.0005	43		46.27	0.0025
61	61	ROUGHER-SULPHIDE-90/10-TOP-61	16-Dec-10	L963379-5	Water	250	250	105.00	6.8	2.5	4.5	0.025	0.25	0.01	0.00	0.0005	41.7		44.27	0.0025
62	62	ROUGHER-SULPHIDE-90/10-TOP-62	23-Dec-10	L965465-5	Water	250	250	104.00	6.81	3.7	4.3	0.025	0.25	0.01	0.0025	0.0005	41.4		42.27	0.0025
63	63	ROUGHER-SULPHIDE-90/10-TOP-63	30-Dec-10	L966298-5	Water	250	250	99.50	6.81	3.6	3.3	0.025	0.25	0.01	0.0025	0.0005	39.7		41.1	0.0025
64	64	ROUGHER-SULPHIDE-90/10-TOP-64	6-Jan-11	L967673-5	Water	250	250	96.00	6.45	3.1	3.1	0.025	0.25	0.027	0.0025	0.0005	38.1		39.67	0.0025
65	65	ROUGHER-SULPHIDE-90/10-TOP-65	13-Jan-11	L969702-5	Water	250	250	92.60	6.38	2.1	2.9	0.025	0.25	0.029	0.0025	0.0005	37		38.5	0.0025
66	66	ROUGHER-SULPHIDE-90/10-TOP-66	20-Jan-11	L971731-5	Water	250	250	90.30	6.3	2.3	2.2	0.025	0.25	0.029	0.0025	0.0005	36.2		36.64	0.0025
67	67	ROUGHER-SULPHIDE-90/10-TOP-67	27-Jan-11	L973582-5	Water	250	250	88.80	6.4	1.6	2.4	0.025	0.25	0.039	0.0025	0.0005	35.9		36.43	0.0025
68	68	ROUGHER-SULPHIDE-90/10-TOP-68	3-Feb-11	L975416-5	Water	250	250	86.30	6.37	1.8	2.2	0.025	0.25	0.032	0.0025	0.0005	34.7		35.13	0.0025
69	69	ROUGHER-SULPHIDE-90/10-TOP-69	10-Feb-11	L977328-5	Water	250	250	90.00	6.32	2	1	0.025	0.25	0.033	0.0025	0.0005	36.4		36.29	0.0025
70	70	ROUGHER-SULPHIDE-90/10-TOP-70	17-Feb-11	L979178-5	Water	250	250	87.10	6.27	1.4	1	0.025	0.25	0.037	0.0057	0.0005	34.8		35.77	0.0025
71	71	ROUGHER-SULPHIDE-90/10-TOP-71	24-Feb-11	L980989-5	Water	250	250	85.80	6.16	1.8	1	0.025	0.25	0.033	0.0057	0.0005	33.9		34.82	0.0025
72	72	ROUGHER-SULPHIDE-90/10-TOP-72	3-Mar-11	L983006-5	Water	250	250	83.00	6.15	1.6	2.4	0.025	0.25	0.029	0.0025	0.0005	33.8		32.96	0.0025
73	73	ROUGHER-SULPHIDE-90/10-TOP-73	10-Mar-11	L985123-5	Water	250	250	82.00	6.11	2.1	1	0.025	0.25	0.038	0.0025	0.0005	33.7		32.55	0.0025
74	74	ROUGHER-SULPHIDE-90/10-TOP-74	17-Mar-11	L986965-5	Water	250	250	80.00	6.11	1.5	1	0.025	0.25	0.042	0.0025	0.0005	31.9		31.06	0.0025
75	75	ROUGHER-SULPHIDE-90/10-TOP-75	24-Mar-11	L988827-5	Water	250	250	78.00	5.83	1.9	1	0.08	0.25	0.047	0.0025	0.0005	32		31.55	0.0025
76	76	ROUGHER-SULPHIDE-90/10-TOP-76	31-Mar-11	L990988-5	Water	250	250	69.20	5.7	2.5	1	0.025	0.25	0.038	0.0025	0.0005	26.8		26.685	0.0025
77	77	ROUGHER-SULPHIDE-90/10-TOP-77	7-Apr-11	L992884-5	Water	250	250	71.10	5.73	4.5	1	0.025	0.25	0.022	0.0025	0.0005	28.4		27.61	0.0025
78	78	ROUGHER-SULPHIDE-90/10-TOP-78	14-Apr-11	L995107-5	Water	250	250	73.70	6.12	2.8	1	0.025	0.25	0.054	0.0077	0.0005	30.1		28.81	0.0025
79	79	ROUGHER-SULPHIDE-90/10-TOP-79	21-Apr-11	L997533-5	Water	250	250	68.80	5.95	3.5	2.5	0.025	0.25	0.053	0.0025	0.0005	29.8		28.95	0.0025
80	80	ROUGHER-SULPHIDE-90/10-TOP-80	28-Apr-11	L999339-5	Water	250	250	68.90	5.9	3.3	1	0.025	0.25	0.043	0.012	0.0005	29.5		29.19	0.0025
81	81	ROUGHER-SULPHIDE-90/10-TOP-81	5-May-11	L1001799-5	Water	250	250	75.10	5.95	3.2	1	0.025	0.25	0.05	0.0025	0.0005	29.4		31.67	0.0025
82	82	ROUGHER-SULPHIDE-90/10-TOP-82	12-May-11	L1004451-5	Water	250	250	71.70	5.9	3	1	0.025	0.25	0.041	0.0025	0.0005	30		30.25	0.0025
83	83	ROUGHER-SULPHIDE-90/10-TOP-83	19-May-11	L1007192-5	Water	250	250	61.20	5.84	3.2	1	0.025	0.25	0.04	0.0025	0.0005	30.2		29.985	0.0055
84	84	ROUGHER-SULPHIDE-90/10-TOP-84	26-May-11	L1009607-5	Water	250	250	58.00	5.81	3.5	1	0.025	0.25	0.045	0.0025	0.0005	30		29.09	0.0055
85	85	ROUGHER-SULPHIDE-90/10-TOP-85	2-Jun-11	L1012268-5	Water	250	250	61.80	5.83	2.8	1	0.025	0.25	0.038	0.0025	0.0005	31		28.285	0.0058
86	86	ROUGHER-SULPHIDE-90/10-TOP-86	9-Jun-11	L1014823-5	Water	250	250	66.30	5.68	3.4	1	0.025	0.25	0.048	0.0025	0.0005	31.5		29.36	0.0468
87	87	ROUGHER-SULPHIDE-90/10-TOP-87	16-Jun-11	L1018793-5	Water	250	250	86.50	5.7	3.6	1	0.025	0.25	0.035	0.0025	0.0005	41.9		37.53	0.0095
88	88	ROUGHER-SULPHIDE-90/10-TOP-88	23-Jun-11	L1021681-5	Water	250	250	58.00	5.6	3.2	1	0.025	0.25	0.042	0.0025	0.0005	29.2		28.1	0.0078
89	89	ROUGHER-SULPHIDE-90/10-TOP-89	30-Jun-11	L1025010-5	Water	250	250	56.00	5.54	1.6	1	0.025	0.25	0.046	0.0005	0.0025	28.3		26.815	0.008
90	90	ROUGHER-SULPHIDE-90/10-TOP-90	7-Jul-11	L1027702-5	Water	250	250	67.20	5.69	3.4	1	0.025	0.25	0.045	0.0005	0.0025	28.9		27.63	0.0086
91	91	ROUGHER-SULPHIDE-90/10-TOP-91	14-Jul-11	L1030954-5	Water	250	250	56.10	5.49	2.7	1	0.025	0.25	0.047	0.0005	0.0025	28.6		26.985	0.0105
92	92	ROUGHER-SULPHIDE-90/10-TOP-92	21-Jul-11	L1034015-5	Water	250	250	61.90	5.57	6.7	1	0.025	0.25	0.049	0.0019	0.0051	28		26.045	0.0112
93	93	ROUGHER-SULPHIDE-90/10-TOP-93	28-Jul-11	L1037215-5	Water	250	250	65.80	5.77	4.2	1	0.025	0.25	0.045	0.0005	0.0025	27.8		25.405	0.0113
94	94	ROUGHER-SULPHIDE-90/10-TOP-94	4-Aug-11	L1039950-5	Water	250	250	67.10	5.54	3.3	1	0.025	0.25	0.048	0.0005	0.0125	26.9		25.555	0.0122
95	95	ROUGHER-SULPHIDE-90/10-TOP-95	11-Aug-11	L1042924-5	Water	250	250	69.00	5.72	3.8	1	0.025	0.25	0.048	0.0005	0.0025	28.1		26.48	0.0154
96	96	ROUGHER-SULPHIDE-90/10-TOP-96	18-Aug-11	L1046295-5	Water	250	250	67.30	5.4	3.5	1	0.025	0.25	0.049	0.0005	0.0025	27.8		27.305	0.014
97	97	ROUGHER-SULPHIDE-90/10-TOP-97	25-Aug-11	L1049365-5	Water	250	250	65.60	5.49	4.2	1	0.025	0.25	0.049	0.0081	0.0005	26.8		25.08	0.0146
98	98	ROUGHER-SULPHIDE-90/10-TOP-98	1-Sep-11	L1052576-5	Water	250	250	65.80	5.25	4.7	1	0.025	0.25	0.048	0.0025	0.0005	25.7		24.781	0.0147
99	99	ROUGHER-SULPHIDE-90/10-TOP-99	8-Sep-11	L1055185-5	Water	250	250	69.40	5.14	4.5	1	0.025	0.25	0.048	0.0025	0.0005	28		26.19	0.0161
100	100	ROUGHER-SULPHIDE-90/10-TOP-100	15-Sep-11	L1058405-5	Water	250	250	63.60	5.37	3.9	1	0.025	0.25	0.046	0.0217	0.0005	25.3		24.565	0.0153
101	101	ROUGHER-SULPHIDE-90/10-TOP-101	22-Sep-11	L1061629-5	Water	250	250	62.60	5.28	4.3	1	0.025	0.25	0.047	0.0082	0.0005	24.6		23.831	0.0181
102	102	ROUGHER-SULPHIDE-90/10-TOP-102	29-Sep-11	L1064808-5	Water	250	250	63.30	5.24	4.5	1	0.025	0.25	0.044	0.0147	0.0005	25.2		23.481	0.0202
103	103	ROUGHER-SULPHIDE-90/10-TOP-103	6-Oct-11	L1068074-5	Water	250	250	64.10	5.17	4.1	1	0.025	0.25	0.049	0.0025	0.0005	25.5		23.491	0.0221
104	104	ROUGHER-SULPHIDE-90/10-TOP-104	13-Oct-11	L1070775-5	Water	250	250	57.10	5.15	3.9	1	0.025	0.25	0.041	0.0025	0.0005	22		20.382	0.0322

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In mL	Total Volume Out mL	Conductivity uS/cm	pH	Acidity (as $CaCO_3$) mg/L	Total (as CaCO3) mg/L	Bromide (Br) mg/L	Chloride (Cl) mg/L	Fluoride (F) mg/L	Nitrite (as N) mg/L	Nitrate (as N) mg/L	Sulfate (SO_4) mg/L	Sulfide as S mg/L	Hardness mg/L	Aluminum (Al) mg/L
105	105	ROUGHER-SULPHIDE-90/10-TOP-105	20-Oct-11	L1073874-5	Water	250	250	64.70	5.04	4.9	1	0.025	0.25	0.047	0.0065	0.0005	25.1		24.185	0.0327
106	106	ROUGHER-SULPHIDE-90/10-TOP-106	27-Oct-11	L1077167-5	Water	250	250	59.80	5.25	5.1	1	0.025	0.25	0.044	0.0051	0.0005	23.6		22.04	0.0262
107	107	ROUGHER-SULPHIDE-90/10-TOP-107	3-Nov-11	L1079963-5	Water	250	250	59.00	5.06	3.3	1	0.025	0.25	0.046	0.0025	0.0005	23		21.031	0.0257
108	108	ROUGHER-SULPHIDE-90/10-TOP-108	10-Nov-11	L1082900-5	Water	250	250	58.10	5.1	2	1	0.025	0.25	0.044	0.0025	0.0005	20.7		19.487	0.0233
109	109	ROUGHER-SULPHIDE-90/10-TOP-109	17-Nov-11	L1085268-5	Water	250	250	52.80	5.17	3.6	1	0.025	0.25	0.047	0.0025	0.0005	20.7		18.831	0.0237
110	110	ROUGHER-SULPHIDE-90/10-TOP-110	24-Nov-11	L1088455-5	Water	250	250	53.00	5.27	4.3	1	0.025	0.25	0.045	0.0025	0.0005	19.5		17.385	0.0197
111	111	ROUGHER-SULPHIDE-90/10-TOP-111	1-Dec-11	L1090932-5	Water	250	250	46.40	5.4	4.7	1	0.025	0.25	0.042	0.0005	0.0025	17.5		15.855	0.0175
112	112	ROUGHER-SULPHIDE-90/10-TOP-112	8-Dec-11	L1092879-5	Water	250	250	44.70	5.16	4.3	1	0.025	0.25	0.04	0.0005	0.0025	17		15.715	0.0166
113	113	ROUGHER-SULPHIDE-90/10-TOP-113	15-Dec-11	L1095555-5	Water	250	250	50.60	5.04	3.9	1	0.025	0.25	0.043	0.0005	0.006	17.3		16.362	0.018
114	114	ROUGHER-SULPHIDE-90/10-TOP-114	22-Dec-11	L1098183-5	Water	250	250	51.80	5.07	3.95	1	0.025	0.25	0.04325	0.0005	0.006275	17.225		16.30075	0.017575
115	115	ROUGHER-SULPHIDE-90/10-TOP-115	29-Dec-11	L1099609-5	Water	250	250	50.90	5.02	4	1	0.025	0.25	0.0435	0.0005	0.00655	17.15		16.2395	0.01715
116	116	ROUGHER-SULPHIDE-90/10-TOP-116	5-Jan-12	L1101158-5	Water	250	250	48.50	5.02	4.05	1	0.025	0.25	0.04375	0.0005	0.006825	17.075		16.17825	0.016725
117	117	ROUGHER-SULPHIDE-90/10-TOP-117	12-Jan-12	L1103216-5	Water	250	250	48.70	5.18	4.1	1	0.025	0.25	0.044	0.0005	0.0071	17		16.117	0.0163
118	118	ROUGHER-SULPHIDE-90/10-TOP-118	19-Jan-12	L1105372-5	Water	250	250	50.30	5.03	4.425	1	0.025	0.25	0.044	0.0005	0.00595	17.35		16.4475	0.0181
119	119	ROUGHER-SULPHIDE-90/10-TOP-119	26-Jan-12	L1107922-5	Water	250	250	52.60	4.98	4.75	1	0.025	0.25	0.044	0.0005	0.0048	17.7		16.778	0.0199
120	120	ROUGHER-SULPHIDE-90/10-TOP-120	2-Feb-12	L1109667-5	Water	250	250	51.60	4.95	5.075	1	0.025	0.25	0.044	0.0005	0.00365	18.05		17.1085	0.0217
121	121	ROUGHER-SULPHIDE-90/10-TOP-121	9-Feb-12	L1112607-5	Water	250	250	51.90	5.13	5.4	1	0.025	0.25	0.044	0.0005	0.0025	18.4		17.439	0.0235
122	122	ROUGHER-SULPHIDE-90/10-TOP-123	16-Feb-12	L1116430-5	Water	250	250	59.90	4.89	4.725	1	0.025	0.25	0.044	0.0005	0.0025	19.125		17.8255	0.0261
123	123	ROUGHER-SULPHIDE-90/10-TOP-123	23-Feb-12	L1116430-5	Water	250	250	59.90	4.89	4.05	1	0.025	0.25	0.044	0.0005	0.0025	19.85		18.212	0.0287
124	124	ROUGHER-SULPHIDE-90/10-TOP-124	1-Mar-12	L1119456-5	Water	250	250	60.90	4.89	3.375	1	0.025	0.25	0.044	0.0005	0.0025	20.575		18.5985	0.0313
125	125	ROUGHER-SULPHIDE-90/10-TOP-125	8-Mar-12	L1121841-5	Water	250	250	62.50	4.85	2.7	1	0.025	0.25	0.044	0.0005	0.0025	21.3		18.985	0.0339
126	126	ROUGHER-SULPHIDE-90/10-TOP-126	15-Mar-12	L1123337-5	Water	250	250	62.50	4.86	3.3	1	0.025	0.25	0.044	0.0005	0.0025	21.45		18.9085	0.035175
127	127	ROUGHER-SULPHIDE-90/10-TOP-127	22-Mar-12	L1125890-5	Water	250	250	63.50	4.86	3.9	1	0.025	0.25	0.044	0.0005	0.0025	21.6		18.832	0.03645
128	128	ROUGHER-SULPHIDE-90/10-TOP-128	29-Mar-12	L1127568-5	Water	250	250	66.10	4.83	4.5	1	0.025	0.25	0.044	0.0005	0.0025	21.75		18.7555	0.037725
129	129	ROUGHER-SULPHIDE-90/10-TOP-129	5-Apr-12	L1131090-5	Water	250	250	63.60	4.85	5.1	1	0.025	0.25	0.044	0.0005	0.0025	21.9		20.101	0.039
130	130	ROUGHER-SULPHIDE-90/10-TOP-130	12-Apr-12	L1133713-5	Water	250	250	66.4	4.85	5.1	1	0.025	0.25	0.044	0.0005	0.0025	21.9		20.101	0.039025
131	131	ROUGHER-SULPHIDE-90/10-TOP-131	19-Apr-12	L1136016-5	Water	250	250	66.9	4.83	5.1	1	0.025	0.25	0.044	0.0005	0.0025	21.9		20.101	0.03905
132	132	ROUGHER-SULPHIDE-90/10-TOP-132	26-Apr-12	L1138912-5	Water	250	250	65.6	4.83	5.1	1	0.025	0.25	0.044	0.0005	0.0025	21.9		20.101	0.039075
133	133	ROUGHER-SULPHIDE-90/10-TOP-133	3-May-12	L1141949-5	Water	250	250	64.5	4.8	5.6	1	0.025	0.25	0.052	0.0005	0.0025	22.7		20.577	0.0391
134	134	ROUGHER-SULPHIDE-90/10-TOP-134	10-May-12	L1144818-5	Water	250	250	66	4.83	5.75	1	0.025	0.25	0.053	0.0005	0.004475	22.95		424.58275	0.04015
135	135	ROUGHER-SULPHIDE-90/10-TOP-135	17-May-12	L1148016-5	Water	250	250	65.4	4.8	5.9	1	0.025	0.25	0.054	0.0005	0.00645	23.2		828.5885	0.0412
136	136	ROUGHER-SULPHIDE-90/10-TOP-136	24-May-12	L1150667-5	Water	250	250	66	4.8	6.05	1	0.025	0.25	0.055	0.0005	0.008425	23.45		1232.59425	0.04225
137	137	ROUGHER-SULPHIDE-90/10-TOP-137	31-May-12	L1154633-5	Water	250	250	66.5	4.81	6.2	1	0.025	0.25	0.056	0.0005	0.0104	23.7		22.242	0.0433
138	138	ROUGHER-SULPHIDE-90/10-TOP-138	7-Jun-12	L1157995-5	Water	250	250	67.1	4.81	6.125	1	0.025	0.25	0.056	0.0005	0.008425	23.8		395.7815	0.04525
139	139	ROUGHER-SULPHIDE-90/10-TOP-139	14-Jun-12	L1161535-5	Water	250	250	67.2	4.77	6.05	1	0.025	0.25	0.056	0.0005	0.00645	23.9		769.321	0.0472
140	140	ROUGHER-SULPHIDE-90/10-TOP-140	21-Jun-12	L1165016-5	Water	250	250	64.7	4.79	5.975	1	0.025	0.25	0.056	0.0005	0.004475	24		1142.8605	0.04915
141	141	ROUGHER-SULPHIDE-90/10-TOP-141	28-Jun-12	L1168782-5	Water	250	250	64.7	4.75	5.9	1	0.025	0.25	0.056	0.0005	0.0025	24.1		21.32	0.0511
142	142	ROUGHER-SULPHIDE-90/10-TOP-142	5-Jul-12	L1171975-5	Water	250	250	66.5	4.8	5.675	1	0.025	0.25	0.058	0.0005	0.0025	23.525		399.195	0.051575
143	143	ROUGHER-SULPHIDE-90/10-TOP-143	12-Jul-12	L1175593-5	Water	250	250	63.2	4.74	5.45	1	0.025	0.25	0.06	0.0005	0.0025	22.95		777.07	0.05205
144	144	ROUGHER-SULPHIDE-90/10-TOP-144	19-Jul-12	L1180176-5	Water	250	250	64.1	4.8	5.225	1	0.025	0.25	0.062	0.0005	0.0025	22.375		1154.945	0.052525
145	145	ROUGHER-SULPHIDE-90/10-TOP-145	26-Jul-12	L1183274-5	Water	250	250	64.3	4.76	5.4	1	0.025	0.25	0.06	0.0005	0.0025	23		20.234	0.0459
146	146	ROUGHER-SULPHIDE-90/10-TOP-146	02-AUG-12	L1186476-5	Water	250	250	62.9	4.77	5.4	1	0.025	0.25	0.06	0.0005	0.0025	23		400.5055	0.0459
147	147	ROUGHER-SULPHIDE-90/10-TOP-147	09-AUG-12	L1191165-5	Water	250	250	61.3	4.72	5.4	1	0.025	0.25	0.06	0.0005	0.0025	23		780.777	0.0459
148	148	ROUGHER-SULPHIDE-90/10-TOP-148	16-AUG-12	L1194387-5	Water	250	250	58.4	4.76	5.4	1	0.025	0.25	0.06	0.0005	0.0025	23		1161.0485	0.0459
149	149	ROUGHER-SULPHIDE-90/10-TOP-149	23-AUG-12	L1197926-5	Water	250	250	63.7	4.73	5.5	1	0.025	0.25	0.055	0.0005	0.0025	21.4		20.673	0.0505
150	150	ROUGHER-SULPHIDE-90/10-TOP-150	30-AUG-12	L1202315-5	Water	250	250	60.3	4.78	6.4	21.875	0.025	3.1875	0.20125	0.0005	0.0025	468.55		398.98975	0.039125
151	151	ROUGHER-SULPHIDE-90/10-TOP-151	06-SEP-12	L1204409-5	Water	250	250	61.5	4.74	7.3	42.75	0.025	6.125	0.3475	0.0005	0.0025	915.7		777.3065	0.02775
152	152	ROUGHER-SULPHIDE-90/10-TOP-152	13-SEP-12	L1208248-5	Water	250	250	62.7	4.74	8.2	63.625	0.025	9.0625	0.49375	0.0005	0.0025	1362.85		1155.62325	0.016375
153	153	ROUGHER-SULPHIDE-90/10-TOP-153	20-SEP-12	L1211679-5	Water	250	250	62.4	4.69	5.3	1	0.025	0.25	0.062	0.0005	0.0054	22.3		19.817	0.0513
154	154	ROUGHER-SULPHIDE-90/10-TOP-154	27-SEP-12	L1214835-5	Water	250	250	61.3	4.71	5.7	19.7	0.025	1.4375	0.249	0.0005	0.0054	431.725		404.42275	0.039725
155	155	ROUGHER-SULPHIDE-90/10-TOP-155	04-OCT-12	L1218049-5	Water	250	250	63.5	4.73	6.1	38.4	0.025	2.625	0.436	0.0005	0.0054	841.15		789.0285	0.02815
156	156	ROUGHER-SULPHIDE-90/10-TOP-156	11-OCT-12	L1220828-5	Water	250	250	64.2	4.69	6.5	57.1	0.025	3.8125	0.623	0.0005	0.0054	1250.575		1173.63425	0.016575
157	157	ROUGHER-SULPHIDE-90/10-TOP-157	18-OCT-12	L1225290-5	Water	250	250	61.8	4.74	5	1	0.025	0.25	0.064	0.0005	0.0025	21.8		18.679	0.053
Mean									4.712	5.72	23.44	0.025	1.675	0.2868	0.0005	0.0025	513.51	#DIV/0!	481.1163	0.03775
0	**0**	**M_Rougher/Sulphide 90/10 Bottom**	**40101**																	
1	1	ROUGHER-SULPHIDE-90/10-BOTTOM-1	22-Oct-09	L832849-6	Water	275	275	2730	7.85	4.7	96.1		15	0.2			1730		1439.7	0.014
2	2	ROUGHER-SULPHIDE-90/10-BOTTOM-2	29-Oct-09	L835334-6	Water	250	250	2830	7.56	8.4	96.7		14	0.2			1830		1425.1	0.005
3	3	ROUGHER-SULPHIDE-90/10-BOTTOM-3	5-Nov-09	L837392-6	Water	250	250	2840	7.73	3.6	80.8		18	0.61			1800		1644.4	0.005
4	4	ROUGHER-SULPHIDE-90/10-BOTTOM-4	12-Nov-09	L839409-6	Water	250	250	2650	7.54	9.1	84.5		12	0.64			1810		1636.6	0.005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In mL	Total Volume Out mL	Conductivity uS/cm	pH	Acidity (as $CaCO_3$) mg/L	Total (as CaCO3) mg/L	Bromide (Br) mg/L	Chloride (Cl) mg/L	Fluoride (F) mg/L	Nitrite (as N) mg/L	Nitrate (as N) mg/L	Sulfate (SO_4) mg/L	Sulfide as S mg/L	Hardness mg/L	Aluminum (Al) mg/L
5	5	ROUGHER-SULPHIDE-90/10-BOTTOM-5	19-Nov-09	L841495-6	Water	250	250	2670	7.71	5	91.8		15	0.79			1800		1532.1	0.005
6	6	ROUGHER-SULPHIDE-90/10-BOTTOM-6	26-Nov-09	L844163-6	Water	250	250	2570	7.58	7.7	89.2		5	0.65			1730		1655.2	0.005
7	7	ROUGHER-SULPHIDE-90/10-BOTTOM-7	3-Dec-09	L845880-6	Water	250	250	2440	7.68	6	86.9		5	0.46			1720		1555.4	0.005
8	8	ROUGHER-SULPHIDE-90/10-BOTTOM-8	10-Dec-09	L847563-6	Water	250	250	2260	7.56	6.9	75.8		5	0.81			1660		1516.4	0.005
9	9	ROUGHER-SULPHIDE-90/10-BOTTOM-9	17-Dec-09	L849344-6	Water	250	250	2320	7.67	4.6	44.9		5	0.9			1650		1566.34	0.005
10	10	ROUGHER-SULPHIDE-90/10-BOTTOM-10	24-Dec-09	L851012-6	Water	250	250	2300	7.59	7.4	46		5	0.83			1620		1576.58	0.005
11	11	ROUGHER-SULPHIDE-90/10-BOTTOM-11	31-Dec-09	L851767-6	Water	250	250	2220	7.6	3.7	39.7		5	0.92			1570		1559.08	0.005
12	12	ROUGHER-SULPHIDE-90/10-BOTTOM-12	7-Jan-10	L852812-6	Water	250	250	2220	7.6	3.7	35.5		2.5	0.59			1460		1532.82	0.005
13	13	ROUGHER-SULPHIDE-90/10-BOTTOM-13	14-Jan-10	L854404-6	Water	250	250	2200	7.59	5.2	38.2		2.5	1.01			1540		1501.86	0.005
14	14	ROUGHER-SULPHIDE-90/10-BOTTOM-14	21-Jan-10	L856203-6	Water	250	250	2200	7.46	5.6	40.4		2.5	0.59			1510		1581.32	0.005
15	15	ROUGHER-SULPHIDE-90/10-BOTTOM-15	28-Jan-10	L858179-6	Water	250	250	2180	7.6	5.6	41.8		2.5	0.48			1360		1609	0.005
16	16	ROUGHER-SULPHIDE-90/10-BOTTOM-16	4-Feb-10	L859495-6	Water	250	250	2150	7.59	6.5	40		5	0.728			1560		1541.32	0.005
17	17	ROUGHER-SULPHIDE-90/10-BOTTOM-17	11-Feb-10	L861368-6	Water	250	250	2150	7.43	5.1	39.6		5	0.54			1530		1512.04	0.005
18	18	ROUGHER-SULPHIDE-90/10-BOTTOM-18	18-Feb-10	L862989-6	Water	250	250	2150	7.47	6	39.4		5	0.5			1580		1588.54	0.005
19	19	ROUGHER-SULPHIDE-90/10-BOTTOM-19	25-Feb-10	L864820-6	Water	250	250	2150	7.58	4.2	36.9		2.5	0.48			1510		1658.6	0.005
20	20	ROUGHER-SULPHIDE-90/10-BOTTOM-20	4-Mar-10	L866636-6	Water	250	250	2130.00	7.61	9.6	33.4		5	0.49			1540		1533.94	0.005
21	21	ROUGHER-SULPHIDE-90/10-BOTTOM-21	11-Mar-10	L868410-6	Water	250	250	2120.00	7.62	7.5	31.9		5	0.42			1580		1532.6	0.005
22	22	ROUGHER-SULPHIDE-90/10-BOTTOM-22	18-Mar-10	L870452-6	Water	250	250	2120.00	7.59	8.7	31.1		5	0.2			1590		1542.52	0.005
23	23	ROUGHER-SULPHIDE-90/10-BOTTOM-23	25-Mar-10	L872047-6	Water	250	250	2120.00	7.55	6.4	34		2.5	0.39			1530		1809.28	0.005
24	24	ROUGHER-SULPHIDE-90/10-BOTTOM-24	1-Apr-10	L873939-6	Water	250	250	2100.00	7.55	5.3	34.1		5	0.2			1750		1558.24	0.005
25	25	ROUGHER-SULPHIDE-90/10-BOTTOM-25	8-Apr-10	L875479-6	Water	250	250	2090.00	7.54	5.9	32.7		5	0.2			1560		1633.92	0.005
26	26	ROUGHER-SULPHIDE-90/10-BOTTOM-26	15-Apr-10	L877521-6	Water	250	250	2080.00	7.61	4.3	30.4		5	0.2			1530		1468.736	0.005
27	27	ROUGHER-SULPHIDE-90/10-BOTTOM-27	22-Apr-10	L879806-6	Water	250	250	2060.00	7.6	3.3	29.3		5	0.375			1530		1529.46	0.005
28	28	ROUGHER-SULPHIDE-90/10-BOTTOM-28	29-Apr-10	L881581-6	Water	250	250	2070.00	7.53	5.4	29.6		5	0.2			1550		1556.64	0.005
29	29	ROUGHER-SULPHIDE-90/10-BOTTOM-29	6-May-10	L883853-6	Water	250	250	2070.00	7.57	5.3	27.6		5	0.2			1540		1610.84	0.005
30	30	ROUGHER-SULPHIDE-90/10-BOTTOM-30	13-May-10	L886019-6	Water	250	250	2050.00	7.57	2.9	28.5		5	0.2			1530		1629.26	0.005
31	31	ROUGHER-SULPHIDE-90/10-BOTTOM-31	20-May-10	L888668-6	Water	250	250	2060.00	7.55	5.6	29.7		5	0.2			1540		1631.88	0.005
32	32	ROUGHER-SULPHIDE-90/10-BOTTOM-32	27-May-10	L890721-6	Water	250	250	2050.00	7.55	4.7	30		5	0.2			1580		1537.44	0.005
33	33	ROUGHER-SULPHIDE-90/10-BOTTOM-33	3-Jun-10	L893264-6	Water	250	250	2060.00	7.58	3.8	29.6		2.5	0.28			1510		1572.84	0.005
34	34	ROUGHER-SULPHIDE-90/10-BOTTOM-34	10-Jun-10	L895934-6	Water	250	250	2050.00	7.57	4.1	31.2		2.5	0.25			1500		1566.88	0.005
35	35	ROUGHER-SULPHIDE-90/10-BOTTOM-35	17-Jun-10	L898537-6	Water	250	250	2050.00	7.52	5.9	33.1		5	0.2			1540		1523.88	0.005
36	36	ROUGHER-SULPHIDE-90/10-BOTTOM-36	24-Jun-10	L901179-6	Water	250	250	2040.00	7.59	7.2	33.7		5	0.2			1540		1499.16	0.005
37	37	ROUGHER-SULPHIDE-90/10-BOTTOM-37	1-Jul-10	L903293-6	Water	250	250	2040.00	7.59	3.6	32.1		5	0.2			1550		1518.84	0.005
38	38	ROUGHER-SULPHIDE-90/10-BOTTOM-38	8-Jul-10	L906231-6	Water	250	250	2050.00	7.55	5	34.6		5	0.2			1560		1498.4	0.005
39	39	ROUGHER-SULPHIDE-90/10-BOTTOM-39	15-Jul-10	L909161-6	Water	250	250	2030.00	7.54	4.3	34.8		5	0.2			1510		1591.34	0.005
40	40	ROUGHER-SULPHIDE-90/10-BOTTOM-40	22-Jul-10	L911860-6	Water	250	250	2030.00	7.54	6.5	34.3		5	0.2			1560		1623.36	0.005
41	41	ROUGHER-SULPHIDE-90/10-BOTTOM-41	29-Jul-10	L914475-6	Water	250	250	2030.00	7.48	6.4	35.2		5	0.2			1680		1631.36	0.005
42	42	ROUGHER-SULPHIDE-90/10-BOTTOM-42	5-Aug-10	L916790-6	Water	250	250	2040.00	7.52	5.3	36.6		5	0.47			1560		1549.6	0.005
43	43	ROUGHER-SULPHIDE-90/10-BOTTOM-43	12-Aug-10	L919396-6	Water	250	250	2000.00	7.47	5.9	35.9		2.5	0.1			1500		1589.44	0.005
44	44	ROUGHER-SULPHIDE-90/10-BOTTOM-44	19-Aug-10	L922150-6	Water	250	250	2010.00	7.54	6.1	34.1		5	0.2			1550		1549.68	0.005
45	45	ROUGHER-SULPHIDE-90/10-BOTTOM-45	26-Aug-10	L924778-6	Water	250	250	2000.00	7.52	4.6	33.9		5	0.2			1530		1623.8	0.005
46	46	ROUGHER-SULPHIDE-90/10-BOTTOM-46	2-Sep-10	L927316-6	Water	250	250	1980.00	7.47	6	32.8		5	0.2			1490		1556.58	0.005
47	47	ROUGHER-SULPHIDE-90/10-BOTTOM-47	9-Sep-10	L929600-6	Water	250	250	1980.00	7.47	4.5	32.6		12.5	0.5			1420		1599.36	0.005
48	48	ROUGHER-SULPHIDE-90/10-BOTTOM-48	16-Sep-10	L932186-6	Water	250	250	2000.00	7.44	7.8	32.9		5	0.2			1560		1571.34	0.005
49	49	ROUGHER-SULPHIDE-90/10-BOTTOM-49	23-Sep-10	L935034-6	Water	250	250	1980.00	7.37	4.6	33.5	0.5	5	0.2	0.05	0.01	1600		1565.2	0.0025
50	50	ROUGHER-SULPHIDE-90/10-BOTTOM-50	30-Sep-10	L937658-6	Water	250	250	1980.00	7.41	5.9	33.8	0.5	5	0.2	0.05	0.01	1490		1588.4	0.005
51	51	ROUGHER-SULPHIDE-90/10-BOTTOM-51	7-Oct-10	L940567-6	Water	250	250	1970.00	7.53	3.5	29.1	0.5	5	0.2	0.19	0.01	1520		1541	0.005
52	52	ROUGHER-SULPHIDE-90/10-BOTTOM-52	14-Oct-10	L942881-6	Water	250	250	1940.00	7.5	3.3	29	0.5	5	0.2	0.05	0.01	1470		1416.74	0.005
53	53	ROUGHER-SULPHIDE-90/10-BOTTOM-53	21-Oct-10	L945548-6	Water	250	250	1940.00	7.57	6.4	26.3	0.5	5	0.2	0.05	0.01	1580		1567.6	0.005
54	54	ROUGHER-SULPHIDE-90/10-BOTTOM-54	28-Oct-10	L948179-6	Water	250	250	1940.00	7.51	8.9	26.5	0.5	5	0.2	0.05	0.01	1480		1531.3	0.005
55	55	ROUGHER-SULPHIDE-90/10-BOTTOM-55	4-Nov-10	L950720-6	Water	250	250	1940.00	7.52	10.5	27	0.5	5	0.2	0.05	0.01	1450		1488.04	0.005
56	56	ROUGHER-SULPHIDE-90/10-BOTTOM-56	11-Nov-10	L952756-6	Water	250	250	1810.00	7.42	7.4	27.4	0.5	5	0.2	0.05	0.01	1500		1547.98	0.005
57	57	ROUGHER-SULPHIDE-90/10-BOTTOM-57	18-Nov-10	L955247-6	Water	250	250	2040.00	7.53	3.2	28.4	0.5	5	0.2	0.05	0.01	1500		1542.18	0.005
58	58	ROUGHER-SULPHIDE-90/10-BOTTOM-58	25-Nov-10	L957278-6	Water	250	250	2010.00	7.49	3.7	23.3	0.5	5	0.2	0.05	0.01	1490		1599.98	0.005
59	59	ROUGHER-SULPHIDE-90/10-BOTTOM-59	2-Dec-10	L959371-6	Water	250	250	2010.00	7.42	2.5	22.9	0.5	5	0.2	0.05	0.01	1500		1504.82	0.005
60	60	ROUGHER-SULPHIDE-90/10-BOTTOM-60	9-Dec-10	L961481-6	Water	250	250	1990.00	7.54	2.2	27.3	0.5	5	0.2	0.05	0.01	1500		1492.72	0.005
61	61	ROUGHER-SULPHIDE-90/10-BOTTOM-61	16-Dec-10	L963379-6	Water	250	250	2010.00	7.61	4.1	27.4	0.5	5	0.2	0.05	0.01	1500		1498.04	0.005
62	62	ROUGHER-SULPHIDE-90/10-BOTTOM-62	23-Dec-10	L965465-6	Water	250	250	2010.00	7.58	5.2	30.1	0.5	5	0.2	0.05	0.01	1500		1493.08	0.005
63	63	ROUGHER-SULPHIDE-90/10-BOTTOM-63	30-Dec-10	L966298-6	Water	250	250	2020.00	7.73	4.9	31.3	0.5	5	0.2	0.05	0.01	1490		1540.46	0.005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In mL	Total Volume Out mL	Conductivity uS/cm	pH	Acidity (as $CaCO_3$) mg/L	Total (as CaCO3) mg/L	Bromide (Br) mg/L	Chloride (Cl) mg/L	Fluoride (F) mg/L	Nitrite (as N) mg/L	Nitrate (as N) mg/L	Sulfate (SO_4) mg/L	Sulfide as S mg/L	Hardness mg/L	Aluminum (Al) mg/L
64	64	ROUGHER-SULPHIDE-90/10-BOTTOM-64	6-Jan-11	L967673-6	Water	250	250	1990.00	7.59	4.8	30.5	0.25	2.5	0.1	0.025	0.005	1480		1528	0.005
65	65	ROUGHER-SULPHIDE-90/10-BOTTOM-65	13-Jan-11	L969702-6	Water	250	250	2000.00	7.58	3.8	33.6	0.5	5	0.2	0.05	0.01	1490		1464.24	0.005
66	66	ROUGHER-SULPHIDE-90/10-BOTTOM-66	20-Jan-11	L971731-6	Water	250	250	2010.00	7.59	5.4	33.1	0.5	5	0.2	0.05	0.01	1480		1566.1	0.005
67	67	ROUGHER-SULPHIDE-90/10-BOTTOM-67	27-Jan-11	L973582-6	Water	250	250	1990.00	7.57	4	34.6	0.5	5	0.2	0.05	0.01	1510		1486.06	0.005
68	68	ROUGHER-SULPHIDE-90/10-BOTTOM-68	3-Feb-11	L975416-6	Water	250	250	1990.00	7.67	4.2	33.5	0.5	5	0.2	0.05	0.01	1500		1581	0.005
69	69	ROUGHER-SULPHIDE-90/10-BOTTOM-69	10-Feb-11	L977328-6	Water	250	250	2010.00	7.61	5.7	35.1	0.5	5	0.2	0.05	0.01	1420		1519.94	0.005
70	70	ROUGHER-SULPHIDE-90/10-BOTTOM-70	17-Feb-11	L979178-6	Water	250	250	2000.00	7.58	4.3	37.3	0.5	5	0.2	0.05	0.01	1500		1569.2	0.005
71	71	ROUGHER-SULPHIDE-90/10-BOTTOM-71	24-Feb-11	L980989-6	Water	250	250	2010.00	7.48	7.6	40	0.5	5	0.2	0.05	0.01	1500		1537.74	0.005
72	72	ROUGHER-SULPHIDE-90/10-BOTTOM-72	3-Mar-11	L983006-6	Water	250	250	2000.00	7.52	4.4	41.7	0.5	5	0.2	0.05	0.01	1470		1545.98	0.005
73	73	ROUGHER-SULPHIDE-90/10-BOTTOM-73	10-Mar-11	L985123-6	Water	250	250	2000.00	7.57	4.1	38.7	0.5	5	0.2	0.05	0.01	1480		1537.12	0.005
74	74	ROUGHER-SULPHIDE-90/10-BOTTOM-74	17-Mar-11	L986965-6	Water	250	250	1980.00	7.55	3.7	39.8	3.75	5	0.2	0.05	0.01	1500		1535.18	0.005
75	75	ROUGHER-SULPHIDE-90/10-BOTTOM-75	24-Mar-11	L988827-6	Water	250	250	2010.00	7.38	6.5	37.4	3.75	5	0.2	0.05	0.01	1490		1596.12	0.0125
76	76	ROUGHER-SULPHIDE-90/10-BOTTOM-76	31-Mar-11	L990988-6	Water	250	250	1960.00	7.59	1.8	31.6	3.7	5	0.2	0.05	0.01	1480		1540.2	0.005
77	77	ROUGHER-SULPHIDE-90/10-BOTTOM-77	7-Apr-11	L992884-6	Water	250	250	1960.00	7.65	15.3	40.5	3.65	5	0.2	0.17	0.01	1450		1529.52	0.005
78	78	ROUGHER-SULPHIDE-90/10-BOTTOM-78	14-Apr-11	L995107-6	Water	250	250	1980.00	7.51	9.4	41	0.5	5	0.2	0.05	0.01	1500		1539.18	0.005
79	79	ROUGHER-SULPHIDE-90/10-BOTTOM-79	21-Apr-11	L997533-6	Water	250	250	1710.00	7.29	6	41.9	0.5	5	0.2	0.05	0.01	1530		1612.52	0.005
80	80	ROUGHER-SULPHIDE-90/10-BOTTOM-80	28-Apr-11	L999339-6	Water	250	250	1820.00	7.53	5.2	44.9	0.25	2.5	0.27	0.025	0.005	1460		1518.94	0.005
81	81	ROUGHER-SULPHIDE-90/10-BOTTOM-81	5-May-11	L1001799-6	Water	250	250	1990.00	7.54	5.1	39.5	0.5	5	0.2	0.05	0.01	1500		1585.92	0.0125
82	82	ROUGHER-SULPHIDE-90/10-BOTTOM-82	12-May-11	L1004451-6	Water	250	250	1790.00	7.48	4.7	40.5	0.5	5	0.2	0.05	0.01	1600		1488.54	0.0125
83	83	ROUGHER-SULPHIDE-90/10-BOTTOM-83	19-May-11	L1007192-6	Water	250	250	1710.00	7.38	4.2	42	0.5	5	0.2	0.05	0.01	1510		1561.58	0.005
84	84	ROUGHER-SULPHIDE-90/10-BOTTOM-84	26-May-11	L1009607-6	Water	250	250	1610.00	7.49	0.5	45.4	0.5	5	0.51	0.05	0.01	1530		1562.44	0.005
85	85	ROUGHER-SULPHIDE-90/10-BOTTOM-85	2-Jun-11	L1012268-6	Water	250	250	1890.00	7.59	4	43.2	0.5	5	0.47	0.05	0.01	1510		1493.28	0.0125
86	86	ROUGHER-SULPHIDE-90/10-BOTTOM-86	9-Jun-11	L1014823-6	Water	250	250	1680.00	7.69	3.3	41.4	0.5	5	0.2	0.05	0.01	1520		1534.16	0.0125
87	87	ROUGHER-SULPHIDE-90/10-BOTTOM-87	16-Jun-11	L1018793-6	Water	250	250	1800.00	7.7	4.6	43.5	0.5	5	0.2	0.05	0.01	1550		1554.38	0.0125
88	88	ROUGHER-SULPHIDE-90/10-BOTTOM-88	23-Jun-11	L1021681-6	Water	250	250	1750.00	7.59	3.6	42.4	0.5	5	0.2	0.05	0.01	1500		1560.12	0.0125
89	89	ROUGHER-SULPHIDE-90/10-BOTTOM-89	30-Jun-11	L1025010-6	Water	250	250	1710.00	7.83	4.2	41.7	0.5	5	0.49	0.01	0.05	1540		1637.66	0.0125
90	90	ROUGHER-SULPHIDE-90/10-BOTTOM-90	7-Jul-11	L1027702-6	Water	250	250	1770.00	7.85	4	40.7	0.5	5	0.2	0.01	0.05	1540		1581.72	0.0125
91	91	ROUGHER-SULPHIDE-90/10-BOTTOM-91	14-Jul-11	L1030954-6	Water	250	250	1720.00	7.82	4.3	40.7	0.5	5	0.2	0.01	0.05	1540		1547.78	0.0125
92	92	ROUGHER-SULPHIDE-90/10-BOTTOM-92	21-Jul-11	L1034015-6	Water	250	250	1790.00	7.63	8.2	43.6	0.5	5	0.4	0.01	0.05	1570		1583.8	0.0125
93	93	ROUGHER-SULPHIDE-90/10-BOTTOM-93	28-Jul-11	L1037215-6	Water	250	250	1820.00	7.84	5.8	42.3	0.5	5	0.45	0.01	0.05	1570		1556.06	0.0125
94	94	ROUGHER-SULPHIDE-90/10-BOTTOM-94	4-Aug-11	L1039950-6	Water	250	250	1960.00	7.67	7.8	41.8	0.5	5	0.46	0.01	0.05	1470		1528.32	0.0125
95	95	ROUGHER-SULPHIDE-90/10-BOTTOM-95	11-Aug-11	L1042924-6	Water	250	250	1840.00	7.82	5.1	46.3	0.025	0.5	0.341	0.0005	0.0092	1410		1528.44	0.0125
96	96	ROUGHER-SULPHIDE-90/10-BOTTOM-96	18-Aug-11	L1046295-6	Water	250	250	1930.00	7.66	4.6	43.9	0.5	5	0.4	0.01	0.05	1460		1537.06	0.0125
97	97	ROUGHER-SULPHIDE-90/10-BOTTOM-97	25-Aug-11	L1049365-6	Water	250	250	1920.00	7.51	4.9	44.3	0.5	5	0.2	0.05	0.01	1470		1533.88	0.0125
98	98	ROUGHER-SULPHIDE-90/10-BOTTOM-98	1-Sep-11	L1052576-6	Water	250	250	1900.00	7.7	5.7	43.6	0.5	5	0.2	0.05	0.01	1430		1501.76	0.0125
99	99	ROUGHER-SULPHIDE-90/10-BOTTOM-99	8-Sep-11	L1055185-6	Water	250	250	1890.00	7.68	8.3	41.9	0.5	5	0.2	0.05	0.01	1480		1508.32	0.0125
100	100	ROUGHER-SULPHIDE-90/10-BOTTOM-100	15-Sep-11	L1058405-6	Water	250	250	1900.00	7.51	3.1	40.2	0.5	5	0.2	0.13	0.01	1480		1529.8	0.0125
101	101	ROUGHER-SULPHIDE-90/10-BOTTOM-101	22-Sep-11	L1061629-6	Water	250	250	1900.00	7.55	9	42.7	0.5	5	0.65	0.05	0.01	1420		1408.62	0.005
102	102	ROUGHER-SULPHIDE-90/10-BOTTOM-102	29-Sep-11	L1064808-6	Water	250	250	1900	7.64	5.5	42.8	0.5	5	0.2	0.11	0.01	1360		1513.16	0.0125
103	103	ROUGHER-SULPHIDE-90/10-BOTTOM-103	6-Oct-11	L1068074-6	Water	250	250	1880	7.6	5.7	43.1	0.5	5	0.2	0.05	0.01	1360		1499.08	0.005
104	104	ROUGHER-SULPHIDE-90/10-BOTTOM-104	13-Oct-11	L1070775-6	Water	250	250	1850	7.7	5.2	44.6	0.5	5	0.2	0.05	0.01	1427		1460.42	0.0125
105	105	ROUGHER-SULPHIDE-90/10-BOTTOM-105	20-Oct-11	L1073874-6	Water	250	250	1740	7.71	6.3	47.5	0.5	5	0.2	0.05	0.01	1290		1339.84	0.0125
106	106	ROUGHER-SULPHIDE-90/10-BOTTOM-106	27-Oct-11	L1077167-6	Water	250	250	1670	7.6	6.2	42.3	0.5	5	0.2	0.05	0.01	1220		1324.3	0.0125
107	107	ROUGHER-SULPHIDE-90/10-BOTTOM-107	3-Nov-11	L1079963-6	Water	250	250	1650	7.75	4.2	47.2	0.5	5	0.2	0.12	0.01	1230		1243.68	0.0125
108	108	ROUGHER-SULPHIDE-90/10-BOTTOM-108	10-Nov-11	L1082900-6	Water	250	250	1670	7.91	6.9	74	0.5	5	0.2	0.05	0.01	1140		1132.04	0.005
109	109	ROUGHER-SULPHIDE-90/10-BOTTOM-109	17-Nov-11	L1085268-6	Water	250	250	1190	7.96	5.8	49.8	0.25	2.5	0.34	0.025	0.005	745		782.44	0.005
110	110	ROUGHER-SULPHIDE-90/10-BOTTOM-110	24-Nov-11	L1088455-6	Water	250	250	1110	7.87	3.4	49.5	0.25	2.5	0.35	0.074	0.005	629		741.32	0.0025
111	111	ROUGHER-SULPHIDE-90/10-BOTTOM-111	1-Dec-11	L1090932-6	Water	250	250	817	7.93	6	64	0.25	2.5	0.43	0.005	0.025	463		538.22	0.0025
112	112	ROUGHER-SULPHIDE-90/10-BOTTOM-112	8-Dec-11	L1092879-6	Water	250	250	649	7.91	3.3	67.3	0.025	0.25	0.416	0.0005	0.0077	323		407.7	0.0025
113	113	ROUGHER-SULPHIDE-90/10-BOTTOM-113	15-Dec-11	L1095555-6	Water	250	250	564	7.93	3.3	61.1	0.025	0.25	0.388	0.0005	0.0025	215		308.3	0.0025
114	114	ROUGHER-SULPHIDE-90/10-BOTTOM-114	22-Dec-11	L1098183-6	Water	250	250	407	8.12	3.225	62.775	0.025	0.25	0.38275	0.000775	0.0025	182.1		269.105	0.0025
115	115	ROUGHER-SULPHIDE-90/10-BOTTOM-115	29-Dec-11	L1099609-6	Water	250	250	326	7.93	3.15	64.45	0.025	0.25	0.3775	0.00105	0.0025	149.2		229.91	0.0025
116	116	ROUGHER-SULPHIDE-90/10-BOTTOM-116	5-Jan-12	L1101158-6	Water	250	250	353	7.95	3.075	66.125	0.025	0.25	0.37225	0.001325	0.0025	116.3		190.715	0.0025
117	117	ROUGHER-SULPHIDE-90/10-BOTTOM-117	12-Jan-12	L1103216-6	Water	250	250	309	8.14	3	67.8	0.025	0.25	0.367	0.0016	0.0025	83.4		151.52	0.0025
118	118	ROUGHER-SULPHIDE-90/10-BOTTOM-118	19-Jan-12	L1105372-6	Water	500	250	327	7.84	3.1	65.85	0.025	0.25	0.359	0.0015	0.0025	85.625		151.5025	0.0025
119	119	ROUGHER-SULPHIDE-90/10-BOTTOM-119	26-Jan-12	L1107922-6	Water	250	250	323	7.88	3.2	63.9	0.025	0.25	0.351	0.0014	0.0025	87.85		151.485	0.0025
120	120	ROUGHER-SULPHIDE-90/10-BOTTOM-120	2-Feb-12	L1109667-6	Water	250	250	414	7.93	3.3	61.95	0.025	0.25	0.343	0.0013	0.0025	90.075		151.4675	0.0025
121	121	ROUGHER-SULPHIDE-90/10-BOTTOM-121	9-Feb-12	L1112607-6	Water	250	250	322	7.92	3.4	60	0.025	0.25	0.335	0.0012	0.0025	92.3		151.45	0.0025
122	122	ROUGHER-SULPHIDE-90/10-BOTTOM-122	16-Feb-12	L1114856-6	Water	250	250	314	7.81	2.825	61.4	0.025	0.25	0.33375	0.001025	0.0025	89.325		147.4075	0.0025

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
				ALS		Total Volume In	Total Volume Out	Conductivity		Acidity (as $CaCO_3$)	Total (as CaCO3)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrite (as N)	Nitrate (as N)	Sulfate (SO_4)	Sulfide as S	Hardness	Aluminum (Al)
Week	Cycle	Sample ID	Date Sampled	Sample ID	Matrix	mL	mL	uS/cm	pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
123	123	ROUGHER-SULPHIDE-90/10-BOTTOM-123	23-Feb-12	L1116430-6	Water	250	250	331	8.05	2.25	62.8	0.025	0.25	0.3325	0.00085	0.0025	86.35		143.365	0.0025
124	124	ROUGHER-SULPHIDE-90/10-BOTTOM-124	1-Mar-12	L1119456-6	Water	250	250	287	7.69	1.675	64.2	0.025	0.25	0.33125	0.000675	0.0025	83.375		139.3225	0.0025
125	125	ROUGHER-SULPHIDE-90/10-BOTTOM-125	8-Mar-12	L1121841-6	Water	250	250	294	7.95	1.1	65.6	0.025	0.25	0.33	0.0005	0.0025	80.4		135.28	0.0025
126	126	ROUGHER-SULPHIDE-90/10-BOTTOM-126	15-Mar-12	L1123337-6	Water	250	250	308	7.76	2.5	62.3	0.025	0.25	0.325	0.0005	0.0025	85.05		125.375	0.0025
127	127	ROUGHER-SULPHIDE-90/10-BOTTOM-127	22-Mar-12	L1125890-6	Water	250	250	327	7.79	3.9	59	0.025	0.25	0.32	0.0005	0.0025	89.7		115.47	0.0025
128	128	ROUGHER-SULPHIDE-90/10-BOTTOM-128	29-Mar-12	L1127568-6	Water	250	250	347	7.96	5.3	55.7	0.025	0.25	0.315	0.0005	0.0025	94.35		105.565	0.0025
129	129	ROUGHER-SULPHIDE-90/10-BOTTOM-129	5-Apr-12	L1131090-6	Water	250	250	325	7.77	6.7	52.4	0.025	0.25	0.31	0.0005	0.0025	99		158.08	0.0025
130	130	ROUGHER-SULPHIDE-90/10-BOTTOM-130	12-Apr-12	L1133713-6	Water	250	250	337	7.8	6.4	53.425	0.025	0.25	0.30875	0.0005	0.0025	96.6		158.08	0.0025
131	131	ROUGHER-SULPHIDE-90/10-BOTTOM-131	19-Apr-12	L1136016-6	Water	250	250	324	7.85	6.1	54.45	0.025	0.25	0.3075	0.0005	0.0025	94.2		158.08	0.0025
132	132	ROUGHER-SULPHIDE-90/10-BOTTOM-132	26-Apr-12	L1138912-6	Water	250	250	307	7.89	5.8	55.475	0.025	0.25	0.30625	0.0005	0.0025	91.8		158.08	0.0025
133	133	ROUGHER-SULPHIDE-90/10-BOTTOM-133	3-May-12	L1141949-6	Water	250	250	309	7.77	5.5	56.5	0.025	0.25	0.305	0.0005	0.0025	89.4		153.39	0.0025
134	134	ROUGHER-SULPHIDE-90/10-BOTTOM-134	10-May-12	L1144818-6	Water	250	250	306	7.71	5.575	57.4	0.025	0.25	0.30425	0.0005	0.0025	86.45		211.6535	0.0025
135	135	ROUGHER-SULPHIDE-90/10-BOTTOM-135	17-May-12	L1148016-6	Water	250	250	300	7.93	5.65	58.3	0.025	0.25	0.3035	0.0005	0.0025	83.5		269.917	0.0025
136	136	ROUGHER-SULPHIDE-90/10-BOTTOM-136	24-May-12	L1150667-6	Water	250	250	291	7.93	5.725	59.2	0.025	0.25	0.30275	0.0005	0.0025	80.55		328.1805	0.0025
137	137	ROUGHER-SULPHIDE-90/10-BOTTOM-137	31-May-12	L1154633-6	Water	250	250	279	7.94	5.8	60.1	0.025	0.25	0.302	0.0005	0.0025	77.6		136.93	0.0025
138	138	ROUGHER-SULPHIDE-90/10-BOTTOM-138	7-Jun-12	L1157995-6	Water	250	250	254	7.96	5.65	57.55	0.025	0.25	0.30225	0.0005	0.0025	73.9		150.5015	0.0025
139	139	ROUGHER-SULPHIDE-90/10-BOTTOM-139	14-Jun-12	L1161535-6	Water	250	250	242	7.99	5.5	55	0.025	0.25	0.3025	0.0005	0.0025	70.2		164.073	0.0025
140	140	ROUGHER-SULPHIDE-90/10-BOTTOM-140	21-Jun-12	L1165016-6	Water	250	250	240	7.99	5.35	52.45	0.025	0.25	0.30275	0.0005	0.0025	66.5		177.6445	0.0025
141	141	ROUGHER-SULPHIDE-90/10-BOTTOM-141	28-Jun-12	L1168782-6	Water	250	250	241	7.94	5.2	49.9	0.025	0.25	0.303	0.0005	0.0025	62.8		116.92	0.0025
142	142	ROUGHER-SULPHIDE-90/10-BOTTOM-142	5-Jul-12	L1171975-6	Water	250	250	223	7.94	4.6	49.05	0.025	0.25	0.28975	0.0005	0.0025	59.975		113.6305	0.0025
143	143	ROUGHER-SULPHIDE-90/10-BOTTOM-143	12-Jul-12	L1175593-6	Water	250	250	208	8	4	48.2	0.025	0.25	0.2765	0.0005	0.0025	57.15		110.341	0.0025
144	144	ROUGHER-SULPHIDE-90/10-BOTTOM-144	19-Jul-12	L1180176-6	Water	250	250	230	7.86	3.4	47.35	0.025	0.25	0.26325	0.0005	0.0025	54.325		107.0515	0.0025
145	145	ROUGHER-SULPHIDE-90/10-BOTTOM-145	26-Jul-12	L1183274-6	Water	250	250	247	7.84	5.2	46.9	0.025	0.25	0.26	0.0005	0.0025	69.7		117.57	0.0025
146	146	ROUGHER-SULPHIDE-90/10-BOTTOM-146	2-Aug-12	L1186476-6	Water	250	250	238	7.88	5.2	46.9	0.025	0.25	0.26	0.0005	0.0025	69.7		109.1105	0.0025
147	147	ROUGHER-SULPHIDE-90/10-BOTTOM-147	9-Aug-12	L1191165-6	Water	250	250	230	7.94	5.2	46.9	0.025	0.25	0.26	0.0005	0.0025	69.7		100.651	0.0025
148	148	ROUGHER-SULPHIDE-90/10-BOTTOM-148	16-Aug-12	L1194387-6	Water	250	250	226	7.98	5.2	46.9	0.025	0.25	0.26	0.0005	0.0025	69.7		92.1915	0.0025
149	149	ROUGHER-SULPHIDE-90/10-BOTTOM-149	23-Aug-12	L1197926-6	Water	250	250	221	7.97	4.2	48.9	0.025	0.25	0.296	0.0005	0.0025	56		105.12	0.0025
150	150	ROUGHER-SULPHIDE-90/10-BOTTOM-150	30-Aug-12	L1202315-6	Water	250	250	204	7.93	3.975	40.8	0.025	0.3275	0.234	0.0005	0.0025	128.75		93.8735	0.014375
151	151	ROUGHER-SULPHIDE-90/10-BOTTOM-151	6-Sep-12	L1204409-6	Water	250	250	205	7.98	3.75	32.7	0.025	0.405	0.172	0.0005	0.0025	201.5		82.627	0.02625
152	152	ROUGHER-SULPHIDE-90/10-BOTTOM-152	13-Sep-12	L1208248-6	Water	250	250	215	7.97	3.525	24.6	0.025	0.4825	0.11	0.0005	0.0025	274.25		71.3805	0.038125
153	153	ROUGHER-SULPHIDE-90/10-BOTTOM-153	20-Sep-12	L1211679-6	Water	250	250	209	7.92	5	44.5	0.025	0.25	0.266	0.0005	0.0025	52.9		100.04	0.0025
154	154	ROUGHER-SULPHIDE-90/10-BOTTOM-154	27-Sep-12	L1214835-6	Water	250	250	193	7.94	4.325	36.925	0.025	0.25	0.20575	0.0005	0.0025	83.425		84.6365	0.013625
155	155	ROUGHER-SULPHIDE-90/10-BOTTOM-155	4-Oct-12	L1218049-6	Water	250	250	221	7.98	3.65	29.35	0.025	0.25	0.1455	0.0005	0.0025	113.95		69.233	0.02475
156	156	ROUGHER-SULPHIDE-90/10-BOTTOM-156	11-Oct-12	L1220828-6	Water	250	250	212	7.91	2.975	21.775	0.025	0.25	0.08525	0.0005	0.0025	144.475		53.8295	0.035875
157	157	ROUGHER-SULPHIDE-90/10-BOTTOM-157	18-Oct-12	L1225290-6	Water	250	250	204	8.06	2.8	46.5	0.025	0.25	0.25	0.0005	0.0025	51.5		95.66	0.0025
Mean									7.962	3.75	35.81	0.025	0.25	0.1905	0.0005	0.0025	89.25	#DIV/0!	80.6798	0.01585
0	**0**	**M/K_Rougher Top**																		
1	1	KSM MITCHELL/KERR TAILINGS SAC-TOP-1	20-May-10	L888694-1	Water	250	250	2340	7.54	4.9	30.9		5	0.2			1800		1904.2	0.076
2	2	KSM MITCHELL/KERR TAILINGS SAC-TOP-2	27-May-10	L890728-1	Water	250	250	994	7.63	3.3	18.7		2.5	0.1			614		614.18	0.069
3	3	KSM MITCHELL/KERR TAILINGS SAC-TOP-3	3-Jun-10	L893265-1	Water	250	250	801	7.47	2.8	16.8		0.8	0.061			439		490.12	0.056
4	4	KSM MITCHELL/KERR TAILINGS SAC-TOP-4	10-Jun-10	L895935-1	Water	250	250	667	7.48	3.3	16.5		0.56	0.048			347		386.444	0.05
5	5	KSM MITCHELL/KERR TAILINGS SAC-TOP-5	17-Jun-10	L898550-1	Water	250	250	557	7.45	5.8	15.8		0.25	0.038			282		308.036	0.047
6	6	KSM MITCHELL/KERR TAILINGS SAC-TOP-6	24-Jun-10	L901185-1	Water	250	250	465	7.52	4.9	14.7		0.25	0.034			234		243.788	0.05
7	7	KSM MITCHELL/KERR TAILINGS SAC-TOP-7	1-Jul-10	L903325-1	Water	250	250	391	7.49	2.6	14.4		0.25	0.029			186		202.378	0.049
8	8	KSM MITCHELL/KERR TAILINGS SAC-TOP-8	8-Jul-10	L906234-1	Water	250	250	375	7.35	2.3	14.2		0.25	0.025			175		191.216	0.047
9	9	KSM MITCHELL/KERR TAILINGS SAC-TOP-9	15-Jul-10	L909163-1	Water	250	250	312	7.54	2.2	13.7		0.25	0.01			140		170.026	0.043
10	10	KSM MITCHELL/KERR TAILINGS SAC-TOP-10	22-Jul-10	L911861-1	Water	250	250	271	7.47	3.7	13.1		0.25	0.01			118		138.326	0.039
11	11	KSM MITCHELL/KERR TAILINGS SAC-TOP-11	29-Jul-10	L914479-1	Water	250	250	245	7.55	3.4	13.5		0.25	0.01			117		124.35	0.044
12	12	KSM MITCHELL/KERR TAILINGS SAC-TOP-12	5-Aug-10	L916791-1	Water	250	250	213	7.55	2.4	12.6		0.25	0.01			87.5		103.762	0.045
13	13	KSM MITCHELL/KERR TAILINGS SAC-TOP-13	12-Aug-10	L919398-1	Water	250	250	202	7.61	3.4	14.6		0.25	0.01			85		107.912	0.044
14	14	KSM MITCHELL/KERR TAILINGS SAC-TOP-14	19-Aug-10	L922154-1	Water	250	250	185	7.6	1.3	14.9		0.25	0.01			73.7		94.096	0.047
15	15	KSM MITCHELL/KERR TAILINGS SAC-TOP-15	26-Aug-10	L924781-1	Water	250	250	178	7.6	2.6	14.7		0.25	0.01			69.1		96.374	0.049
16	16	KSM MITCHELL/KERR TAILINGS SAC-TOP-16	2-Sep-10	L927328-1	Water	250	250	166	7.56	3.6	15.7		0.25	0.01			62		83.732	0.052
17	17	KSM MITCHELL/KERR TAILINGS SAC-TOP-17	9-Sep-10	L929601-1	Water	250	250	197	7.7	2.7	19.6		0.25	0.01			75		102.816	0.055
18	18	KSM MITCHELL/KERR TAILINGS SAC-TOP-18	16-Sep-10	L932188-1	Water	250	250	156	7.65	4.1	17.9		0.25	0.01			57.2		78.352	0.061
19	19	KSM MITCHELL/KERR TAILINGS SAC-TOP-19	23-Sep-10	L935038-1	Water	250	250	141	7.61	3.5	18.5		0.25	0.01			48		66.396	0.0652
20	20	KSM MITCHELL/KERR TAILINGS SAC-TOP-20	30-Sep-10	L937674-1	Water	250	250	127	7.57	3.5	18.4		0.25	0.01			41.3		60.134	0.0669
21	21	KSM MITCHELL/KERR TAILINGS SAC-TOP-21	7-Oct-10	L940573-1	Water	250	250	117	7.61	1.7	18.7		0.25	0.01			24.7		54.626	0.0608
22	22	KSM MITCHELL/KERR TAILINGS SAC-TOP-22	14-Oct-10	L942882-1	Water	250	250	104	7.62	1.8	18.4		0.25	0.01			28.7		44.518	0.062

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
						Total Volume In	Total Volume Out	Conductivity		Acidity ($CaCO_3$)	Total (as CaCO3)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrite (as N)	Nitrate (as N)	Sulfate (SO_4)	Sulfide as S	Hardness	Aluminum (Al)
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	mL	mL	uS/cm	pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
23	23	KSM MITCHELL/KERR TAILINGS SAC-TOP-23	21-Oct-10	L945549-1	Water	250	250	92	7.71	1.2	17.5		0.25	0.01			24.9		43.116	0.0639
24	24	KSM MITCHELL/KERR TAILINGS SAC-TOP-24	28-Oct-10	L948181-1	Water	250	250	81.2	7.65	0.5	17.8		0.25	0.01			21.1		38.426	0.0645
25	25	KSM MITCHELL/KERR TAILINGS SAC-TOP-25	4-Nov-10	L950721-1	Water	250	250	75.8	7.78	0.5	17.4		0.25	0.01			17.6		33.774	0.0626
26	26	KSM MITCHELL/KERR TAILINGS SAC-TOP-26	11-Nov-10	L952757-1	Water	250	250	68.5	7.79	0.5	19.1		0.25	0.01			15.3		33.736	0.0724
27	27	KSM MITCHELL/KERR TAILINGS SAC-TOP-27	18-Nov-10	L955248-1	Water	250	250	67.6	7.76	1.5	18.8		0.25	0.01			12.9		30.286	0.0691
28	28	KSM MITCHELL/KERR TAILINGS SAC-TOP-28	25-Nov-10	L957279-1	Water	250	250	62	7.65	2.1	17.9		0.25	0.01			10.7		29.98	0.0677
29	29	KSM MITCHELL/KERR TAILINGS SAC-TOP-29	2-Dec-10	L959372-1	Water	250	250	59.9	7.74	0.5	18.1		0.25	0.01			9.08		26.952	0.0694
30	30	KSM MITCHELL/KERR TAILINGS SAC-TOP-30	9-Dec-10	L961482-1	Water	250	250	58	7.74	0.5	19.6		0.25	0.01			7.87		27.27	0.0698
31	31	KSM MITCHELL/KERR TAILINGS SAC-TOP-31	16-Dec-10	L963380-1	Water	250	250	55.8	7.73	2.3	19.7		0.25	0.01			6.95		27.604	0.0769
32	32	KSM MITCHELL/KERR TAILINGS SAC-TOP-32	23-Dec-10	L965466-1	Water	250	250	54.6	7.78	3.2	21.9		0.25	0.01			5.99		24.096	0.0787
33	33	KSM MITCHELL/KERR TAILINGS SAC-TOP-33	30-Dec-10	L966299-1	Water	250	250	52	7.71	2.9	19.6		0.25	0.01			5.33		24.702	0.0674
34	34	KSM MITCHELL/KERR TAILINGS SAC-TOP-34	6-Jan-11	L967675-1	Water	250	250	49.8	7.6	2.5	19.1		0.25	0.01			4.54		23.659	0.0748
35	35	KSM MITCHELL/KERR TAILINGS SAC-TOP-35	13-Jan-11	L969703-1	Water	250	250	48.6	7.58	1.5	20.3		0.25	0.01			3.97		24.379	0.0646
36	36	KSM MITCHELL/KERR TAILINGS SAC-TOP-36	20-Jan-11	L971732-1	Water	250	250	48.5	7.66	1.5	19.1		0.25	0.01			3.68		22.919	0.0653
37	37	KSM MITCHELL/KERR TAILINGS SAC-TOP-37	27-Jan-11	L973583-1	Water	250	250	47.8	7.75	1.7	19.5		0.25	0.01			3.37		23.194	0.0708
38	38	KSM MITCHELL/KERR TAILINGS SAC-TOP-38	3-Feb-11	L975417-1	Water	250	250	46	7.73	0.5	20.1		0.25	0.01			2.87		21.955	0.0706
39	39	KSM MITCHELL/KERR TAILINGS SAC-TOP-39	10-Feb-11	L977329-1	Water	250	250	44.2	7.68	0.5	19.4		0.25	0.01			2.77		21.19	0.0583
40	40	KSM MITCHELL/KERR TAILINGS SAC-TOP-40	17-Feb-11	L979179-1	Water	250	250	44.4	7.73	0.5	19.4		0.25	0.01			2.4		22.08	0.0665
41	41	KSM MITCHELL/KERR TAILINGS SAC-TOP-41	24-Feb-11	L980991-1	Water	250	250	43.5	7.67	0.8	19.75		0.25	0.01			2.345		21.381	0.06535
42	42	KSM MITCHELL/KERR TAILINGS SAC-TOP-42	3-Mar-11	L983008-1	Water	250	250	44.2	7.78	1.1	20.1		0.25	0.01			2.29		20.682	0.0642
43	43	KSM MITCHELL/KERR TAILINGS SAC-TOP-43	10-Mar-11	L985009-1	Water	250	250	43.2	7.76	1.15	19.9		0.25	0.01			2.075		20.4615	0.06385
44	44	KSM MITCHELL/KERR TAILINGS SAC-TOP-44	17-Mar-11	L986966-1	Water	250	250	43.3	7.77	1.2	19.7		0.25	0.01			1.86		20.241	0.0635
45	45	KSM MITCHELL/KERR TAILINGS SAC-TOP-45	24-Mar-11	L988828-1	Water	250	250	41.8	7.73	2.2	16.45		0.25	0.01			1.84		18.9875	0.06445
46	46	KSM MITCHELL/KERR TAILINGS SAC-TOP-46	31-Mar-11	L990989-1	Water	250	250	38.2	7.62	3.2	13.2		0.25	0.01			1.82		17.734	0.0654
47	47	KSM MITCHELL/KERR TAILINGS SAC-TOP-47	7-Apr-11	L992885-1	Water	250	250	38.4	7.58	2.55	15.35		0.25	0.01			1.845		18.4475	0.0628
48	48	KSM MITCHELL/KERR TAILINGS SAC-TOP-Final Leach	14-Apr-11	L995108-1	Water	250	250	39.4	7.6	1.9	17.5		0.25	0.01			1.87		19.161	0.0602
Mean									7.732	1.29	19.18	0.025	0.25	0.01	0.0005	0.0025	1.977	#DIV/0!	20.3506	0.064
0	**0**	**M/K_Rougher Bottom**																		
1	1	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-1	20-May-10	L888694-2	Water	250	250	2220	7.7	5.1	34.8		5	0.2			1630		1774.64	0.036
2	2	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-2	27-May-10	L890728-2	Water	250	250	2190	7.72	4.7	35.2		5	0.2			1660		1561.78	0.032
3	3	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-3	3-Jun-10	L893265-2	Water	250	250	2170	7.68	3.9	37.1		7.2	0.1			1580		1586.66	0.019
4	4	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-4	10-Jun-10	L895935-2	Water	250	250	2180	7.66	4.2	38.5		6.5	0.1			1590		1540.1	0.016
5	5	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-5	17-Jun-10	L898550-2	Water	250	250	2160	7.65	6.5	37		5.9	0.171			1580		1551.26	0.016
6	6	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-6	24-Jun-10	L901185-2	Water	250	250	2180	7.66	7.3	36.9		5	0.2			1560		1529.14	0.017
7	7	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-7	1-Jul-10	L903325-2	Water	250	250	2160	7.61	4	33		5	0.2			1620		1540.54	0.02
8	8	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-8	8-Jul-10	L906234-2	Water	250	250	2140	7.72	4.7	30.3		2.5	0.1			1580		1519.2	0.027
9	9	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-9	15-Jul-10	L909163-2	Water	250	250	2130	7.5	3.8	28.4		5	0.2			1590		1635.94	0.005
10	10	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-10	22-Jul-10	L911861-2	Water	250	250	2100	7.51	6	28.1		5	0.2			1590		1571.02	0.018
11	11	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-11	29-Jul-10	L914479-2	Water	250	250	2100	7.46	5.3	24.9		5	0.2			1810		1599.74	0.017
12	12	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-12	5-Aug-10	L916791-2	Water	250	250	2080	7.44	3.9	22.8		5	0.2			1600		1536.78	0.023
13	13	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-13	12-Aug-10	L919398-2	Water	250	250	2070	7.4	4.6	21.5		5	0.2			1580		1586.94	0.023
14	14	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-14	19-Aug-10	L922154-2	Water	250	250	2060	7.43	3.8	19.9		5	0.2			1600		1500.74	0.029
15	15	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-15	26-Aug-10	L924781-2	Water	250	250	2060	7.43	3.7	19.7		5	0.2			1600		1650.52	0.033
16	16	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-16	2-Sep-10	L927328-2	Water	250	250	2030	7.46	4.9	19.6		5	0.2			1540		1586.56	0.032
17	17	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-17	9-Sep-10	L929601-2	Water	250	250	2020	7.52	3.6	19.4		12.5	0.5			1480		1579.52	0.027
18	18	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-18	16-Sep-10	L932188-2	Water	250	250	2040	7.43	6.7	18.3		5	0.2			1630		1582.16	0.02
19	19	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-19	23-Sep-10	L935038-2	Water	250	250	2010	7.38	4	18.9		5	0.2			1640		1574.08	0.0161
20	20	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-20	30-Sep-10	L937674-2	Water	250	250	2000	7.32	4.7	19.1		5	0.2			1520		1594.74	0.02
21	21	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-21	7-Oct-10	L940573-2	Water	250	250	2020	7.29	2.6	18.4		5	0.2			1470		1575.52	0.015
22	22	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-22	14-Oct-10	L942882-2	Water	250	250	2010	7.29	2.7	19.5		5	0.2			1590		1492.78	0.011
23	23	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-23	21-Oct-10	L945549-2	Water	250	250	2010	7.28	5.7	18.4		5	0.2			1630		1600.16	0.014
24	24	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-24	28-Oct-10	L948181-2	Water	250	250	2000	7.35	8.2	19.9		5	0.2			1550		1575.3	0.017
25	25	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-25	4-Nov-10	L950721-2	Water	250	250	1990	7.29	8.8	18.7		5	0.2			1510		1523.18	0.016
26	26	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-26	11-Nov-10	L952757-2	Water	250	250	1910	7.2	6.4	18.9		5	0.2			1560		1554.34	0.015
27	27	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-27	18-Nov-10	L955248-2	Water	250	250	2070	7.3	2.5	18.3		5	0.2			1550		1571.66	0.016
28	28	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-28	25-Nov-10	L957279-2	Water	250	250	2070	7.3	3.2	11.3		5	0.2			1560		1621.38	0.01
29	29	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-29	2-Dec-10	L959372-2	Water	250	250	2070	7.4	2	13.8		5	0.2			1550		1527.42	0.005
30	30	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-30	9-Dec-10	L961482-2	Water	250	250	2060	7.4	1.9	21.6		5	0.2			1570		1549.76	0.005
31	31	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-31	16-Dec-10	L963380-2	Water	250	250	2060	7.45	3.7	22.5		5	0.2			1560		1565.9	0.01

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
						Total Volume In	Total Volume Out	Conductivity		Acidity ($CaCO_3$)	Total (as CaCO3)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrite (as N)	Nitrate (as N)	Sulfate (SO_4)	Sulfide as S	Hardness	Aluminum (Al)
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	mL	mL	uS/cm	pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
32	32	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-32	23-Dec-10	L965466-2	Water	250	250	2060	7.48	4.7	24.5		2.5	0.1			1540		1460.78	0.011
33	33	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-33	30-Dec-10	L966299-2	Water	250	250	2060	7.55	4.3	21.5		5	0.2			1560		1620.58	0.005
34	34	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-34	6-Jan-11	L967675-2	Water	250	250	2060	7.48	4.3	22.5		5	0.2			1560		1589.96	0.022
35	35	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-35	13-Jan-11	L969703-2	Water	250	250	2070	7.45	3.1	23.1		5	0.2			1550		1545.62	0.005
36	36	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-36	20-Jan-11	L971732-2	Water	250	250	2050	7.54	4.3	24.4		5	0.2			1540		1610.82	0.005
37	37	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-37	27-Jan-11	L973583-2	Water	250	250	2040	7.49	3	24.2		5	0.2			1520		1543.2	0.011
38	38	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-38	3-Feb-11	L975417-2	Water	250	250	2060	7.46	3.4	22.8		5	0.2			1570		1586.48	0.0094
39	39	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-39	10-Feb-11	L977329-2	Water	250	250	2040	7.43	4.1	21.4		2.5	0.1			1450		1531.86	0.005
40	40	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-40	17-Feb-11	L979179-2	Water	250	250	2040	7.46	2.9	22.7		5	0.2			1560		1606.88	0.013
41	41	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-41	24-Feb-11	L980991-2	Water	250	250	2050	7.6	2.95	23.25		5	0.2			1545		1600.25	0.009
42	42	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-42	3-Mar-11	L983008-2	Water	250	250	2020	7.5	3	23.8		5	0.2			1530		1593.62	0.005
43	43	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-43	10-Mar-11	L985009-2	Water	250	250	2030	7.55	2.75	23.2		5	0.2			1550		1580.94	0.005
44	44	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-44	17-Mar-11	L986966-2	Water	250	250	2040	7.52	2.5	22.6		5	0.2			1570		1568.26	0.005
45	45	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-45	24-Mar-11	L988828-2	Water	250	250	2030	7.4	5.1	19.85		5	0.2			1530		1569.4	0.005
46	46	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-46	31-Mar-11	L990989-2	Water	250	250	2010	7.4	7.7	17.1		5	0.2			1490		1570.54	0.005
47	47	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-47	7-Apr-11	L992885-2	Water	250	250	2020	7.38	6.75	20		5	0.2			1530		1577.09	0.005
48	48	KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-Final Leach	14-Apr-11	L995108-2	Water	250	250	2040	7.53	5.8	22.9		5	0.2			1570	0.0025	1583.64	0.005
Mean									7.474	3.26	22.54	#DIV/0!	5	0.2	#DIV/0!	#DIV/0!	1534	#DIV/0!	1582.494	0.005
0	**0**	**M/S_Rougher Top**																		
1	1	MITCHELL/SULPHURETS TAILING SAC - TOP-1	19-Aug-10	L922160-1	Water	250	250	396	10.08	0.5	37.6		1.17	0.209			165		183.85	1.96
2	2	MITCHELL/SULPHURETS TAILING SAC - TOP-2	26-Aug-10	L924785-1	Water	250	250	323	8.48	2	23.9		0.89	0.141			134		145.6	0.947
3	3	MITCHELL/SULPHURETS TAILING SAC - TOP-3	2-Sep-10	L927331-1	Water	250	250	266	7.9	3.7	19.6		0.67	0.128			108		117.61	0.394
4	4	MITCHELL/SULPHURETS TAILING SAC - TOP-4	9-Sep-10	L929603-1	Water	250	250	247	7.86	2.6	19.5		0	0			0		110.746	0.214
5	5	MITCHELL/SULPHURETS TAILING SAC - TOP-5	16-Sep-10	L932189-1	Water	250	250	179	8.19	7	20.8		0.25	0.105			64.8		78.028	0.21
6	6	MITCHELL/SULPHURETS TAILING SAC - TOP-6	23-Sep-10	L935043-1	Water	250	250	151	8.03	2.9	22.8		0.25	0.079			47.3		63.07	0.21
7	7	MITCHELL/SULPHURETS TAILING SAC - TOP-7	30-Sep-10	L937677-1	Water	250	250	131	8.05	3.4	23.1	0.025	0.25	0.084	0.0025	0.0018	36.9		52.37	0.199
8	8	MITCHELL/SULPHURETS TAILING SAC - TOP-8	7-Oct-10	L940580-1	Water	250	250	113	7.81	1.6	24.2	0.025	0.25	0.085	0.0025	0.007	29.9		47.448	0.169
9	9	MITCHELL/SULPHURETS TAILING SAC - TOP-9	14-Oct-10	L942884-1	Water	250	250	91	7.76	1.8	19.9	0.025	0.25	0.073	0.0025	0.003	22.4		36.784	0.146
10	10	MITCHELL/SULPHURETS TAILING SAC - TOP-10	21-Oct-10	L945550-1	Water	250	250	80	7.85	6.4	19.5	0.025	0.25	0.063	0.0025	0.0013	17.5		32.106	0.151
11	11	MITCHELL/SULPHURETS TAILING SAC - TOP-11	28-Oct-10	L948182-1	Water	250	250	71	7.79	0.5	20	0.025	0.25	0.07	0.0025	0.0014	14.4		30.306	0.165
12	12	MITCHELL/SULPHURETS TAILING SAC - TOP-12	4-Nov-10	L950722-1	Water	250	250	67	7.82	0.5	20.2	0.025	0.25	0.067	0.0025	0.0005	11.9		28.048	0.148
13	13	MITCHELL/SULPHURETS TAILING SAC - TOP-13	11-Nov-10	L952758-1	Water	250	250	62.3	7.89	0.5	22.1	0.025	0.25	0.067	0.0025	0.0005	10.2		28.86	0.16
14	14	MITCHELL/SULPHURETS TAILING SAC - TOP-14	18-Nov-10	L955249-1	Water	250	250	63.1	7.85	1.5	21.9	0.025	0.25	0.063	0.0025	0.0014	8.69		27.028	0.154
15	15	MITCHELL/SULPHURETS TAILING SAC - TOP-15	25-Nov-10	L957280-1	Water	250	250	59	7.8	2	22.2	0.025	0.25	0.06	0.0025	0.0005	7.14		26.701	0.144
16	16	MITCHELL/SULPHURETS TAILING SAC - TOP-16	2-Dec-10	L959373-1	Water	250	250	58.6	7.88	0.5	22.9	0.025	0.25	0.055	0.0025	0.0005	6.18		24.912	0.137
17	17	MITCHELL/SULPHURETS TAILING SAC - TOP-17	9-Dec-10	L961483-1	Water	250	250	56.2	7.78	0.5	22.7	0.025	0.25	0.046	0.0025	0.0012	5.47		25.741	0.138
18	18	MITCHELL/SULPHURETS TAILING SAC - TOP-18	16-Dec-10	L963382-1	Water	250	250	57.4	7.84	2.3	23.5	0.025	0.25	0.051	0.0025	0.0005	5.02		26.124	0.116
19	19	MITCHELL/SULPHURETS TAILING SAC - TOP-19	23-Dec-10	L965467-1	Water	250	250	57.5	7.85	3.1	25.5	0.025	0.25	0.042	0.0025	0.0005	4.42		24.078	0.119
20	20	MITCHELL/SULPHURETS TAILING SAC - TOP-20	30-Dec-10	L966301-1	Water	250	250	57.2	7.95	2.5	24.5	0.025	0.25	0.04	0.0025	0.0005	4.03		26.122	0.121
21	21	MITCHELL/SULPHURETS TAILING SAC - TOP-21	6-Jan-11	L967676-1	Water	250	250	57	7.86	2.6	26.3	0.025	0.25	0.038	0.0025	0.0005	3.52		26.627	0.126
22	22	MITCHELL/SULPHURETS TAILING SAC - TOP-22	13-Jan-11	L969704-1	Water	250	250	56.3	7.99	1.4	25	0.025	0.25	0.036	0.0025	0.0005	3.13		26.683	0.119
23	23	MITCHELL/SULPHURETS TAILING SAC - TOP-23	20-Jan-11	L971733-1	Water	250	250	56.5	7.9	1.6	26.2	0.025	0.25	0.041	0.0025	0.0005	3		26.492	0.117
24	24	MITCHELL/SULPHURETS TAILING SAC - TOP-24	27-Jan-11	L973584-1	Water	250	250	54.6	7.97	0.5	24.2	0.025	0.25	0.047	0.0025	0.0005	2.81		26.538	0.127
25	25	MITCHELL/SULPHURETS TAILING SAC - TOP-25	3-Feb-11	L975418-1	Water	250	250	53.4	7.96	1.3	25.2	0.025	0.25	0.031	0.0025	0.0005	2.27		25.379	0.113
26	26	MITCHELL/SULPHURETS TAILING SAC - TOP-26	10-Feb-11	L977332-1	Water	250	250	58.8	7.87	1.4	27.9	0.025	0.25	0.026	0.0025	0.0012	2.55		28.186	0.105
27	27	MITCHELL/SULPHURETS TAILING SAC - TOP-27	17-Feb-11	L979180-1	Water	250	250	55.9	7.88	0.5	26.3	0.025	0.25	0.025	0.0068	0.0005	2.11		28.568	0.117
28	28	MITCHELL/SULPHURETS TAILING SAC - TOP-28	24-Feb-11	L980992-1	Water	250	250	55.2	7.82	0.85	25.8	0.025	0.25	0.0175	0.00465	0.0005	2.085		26.905	0.1105
29	29	MITCHELL/SULPHURETS TAILING SAC - TOP-29	3-Mar-11	L983009-1	Water	250	250	53.8	7.92	1.2	25.3	0.025	0.25	0.01	0.0025	0.0005	2.06		25.242	0.104
30	30	MITCHELL/SULPHURETS TAILING SAC - TOP-30	10-Mar-11	L985018-1	Water	250	250	53	7.94	1.3	24.6	0.025	0.25	0.0175	0.0025	0.0005	1.865		25.579	0.1016
31	31	MITCHELL/SULPHURETS TAILING SAC - TOP-31	17-Mar-11	L986967-1	Water	250	250	52	7.92	1.4	23.9	0.025	0.25	0.025	0.0025	0.0005	1.67		25.916	0.0992
32	32	MITCHELL/SULPHURETS TAILING SAC - TOP-32	24-Mar-11	L988832-1	Water	250	250	51.4	7.88	2.4	21.45	0.025	0.25	0.0175	0.0025	0.0005	1.655		26.167	0.09655
33	33	MITCHELL/SULPHURETS TAILING SAC - TOP-33	31-Mar-11	L990990-1	Water	250	250	49	7.81	3.4	19	0.025	0.25	0.01	0.0025	0.0005	1.64		26.418	0.0939
34	34	MITCHELL/SULPHURETS TAILING SAC - TOP-34	7-Apr-11	L992886-1	Water	250	250	48.8	7.71	2.6	21.3	0.025	0.25	0.0155	0.0025	0.0005	1.74		25.1665	0.09365
35	35	MITCHELL/SULPHURETS TAILING SAC - TOP-35	14-Apr-11	L995109-1	Water	250	250	50.2	7.77	1.8	23.6	0.025	0.25	0.021	0.0025	0.0005	1.84		23.915	0.0934
36	36	MITCHELL/SULPHURETS TAILING SAC - TOP-36	21-Apr-11	L997505-1	Water	250	250	44.1	7.89	1.85	24.2	0.025	0.25	0.0155	0.0025	0.0005	1.605		24.074	0.09385
37	37	MITCHELL/SULPHURETS TAILING SAC - TOP-37	28-Apr-11	L999342-1	Water	250	250	43.9	7.94	1.9	24.8	0.025	0.25	0.01	0.0025	0.0005	1.37		24.233	0.0943
38	38	MITCHELL/SULPHURETS TAILING SAC - TOP-38	5-May-11	L1001800-1	Water	250	250	50.8	7.85	3	25.4	0.025	0.25	0.01	0.0025	0.0005	1.335		24.8545	0.0921
39	39	MITCHELL/SULPHURETS TAILING SAC - TOP-39	12-May-11	L1004453-1	Water	250	250	46	7.87	4.1	26	0.025	0.25	0.01	0.0025	0.0005	1.3		25.476	0.0899
40	40	MITCHELL/SULPHURETS TAILING SAC - TOP-40	19-May-11	L1007193-1	Water	250	250	36.8	7.92	3.2	25.3	0.025	0.25	0.01	0.0025	0.0005	1.325		25.4935	0.0881

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
						Total Volume In	Total Volume Out	Conductivity		Acidity (as $CaCO_3$)	Total (as CaCO3)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrite (as N)	Nitrate (as N)	Sulfate (SO_4)	Sulfide as S	Hardness	Aluminum (Al)
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	mL	mL	uS/cm	pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
41	41	MITCHELL/SULPHURETS TAILING SAC - TOP-41	26-May-11	L1009613-1	Water	250	250	48.3	7.98	2.3	24.6	0.025	0.25	0.01	0.0025	0.0005	1.35		25.511	0.0863
42	42	MITCHELL/SULPHURETS TAILING SAC - TOP-42	2-Jun-11	L1012269-1	Water	250	250	48.1	7.99	2.9	24.85	0.025	0.25	0.01	0.0025	0.0005	1.42		25.3335	0.08535
43	43	MITCHELL/SULPHURETS TAILING SAC - TOP-43	9-Jun-11	L1014824-1	Water	250	250	42.8	7.94	3.5	25.1	0.025	0.25	0.01	0.0025	0.0005	1.49		25.156	0.0844
44	44	MITCHELL/SULPHURETS TAILING SAC - TOP-44	16-Jun-11	L1018795-1	Water	250	250	55.4	8.03	2.7	24	0.025	0.25	0.01	0.0025	0.0005	1.37		24.515	0.08215
45	45	MITCHELL/SULPHURETS TAILING SAC - TOP-45	23-Jun-11	L1021683-1	Water	250	250	44.1	8.03	1.9	22.9	0.025	0.25	0.01	0.0025	0.0005	1.25		23.874	0.0799
46	46	MITCHELL/SULPHURETS TAILING SAC - TOP-46	30-Jun-11	L1025012-1	Water	250	250	46.9	7.97	1.8	23.4	0.025	0.25	0.01	0.0015	0.0042	1.345		23.826	0.0824
47	47	MITCHELL/SULPHURETS TAILING SAC - TOP-47	7-Jul-11	L1027703-1	Water	250	250	46.1	8	1.7	23.9	0.025	0.25	0.01	0.0005	0.0079	1.44		23.778	0.0849
48	48	MITCHELL/SULPHURETS TAILING SAC - TOP-48	14-Jul-11	L1030957-1	Water	250	250	42.3	8.04	2.8	24.75	0.025	0.25	0.01	0.0005	0.0052	1.405		24.7345	0.08375
49	49	MITCHELL/SULPHURETS TAILING SAC - TOP-49	21-Jul-11	L1034024-1	Water	250	250	44.7	7.96	3.9	25.6	0.025	0.25	0.01	0.0005	0.0025	1.37		25.691	0.0826
50	50	MITCHELL/SULPHURETS TAILING SAC - TOP-50	28-Jul-11	L1037218-1	Water	250	250	43.9	7.91	2.2	24.95	0.025	0.25	0.01	0.0005	0.0075	1.34		25.1225	0.07915
51	51	MITCHELL/SULPHURETS TAILING SAC - TOP-51	4-Aug-11	L1039951-1	Water	250	250	48.6	7.82	0.5	24.3	0.025	0.25	0.01	0.0005	0.0125	1.31		24.554	0.0757
52	52	MITCHELL/SULPHURETS TAILING SAC - TOP-52	11-Aug-11	L1042927-1	Water	250	250	49.7	7.9	0.85	24.45	0.025	0.25	0.01	0.0005	0.00915	1.31		25.1975	0.07595
53	53	MITCHELL/SULPHURETS TAILING SAC - TOP-53	18-Aug-11	L1046298-1	Water	250	250	54.2	8.25	1.2	24.6	0.025	0.25	0.01	0.0005	0.0058	1.31		25.841	0.0762
54	54	MITCHELL/SULPHURETS TAILING SAC - TOP-54	25-Aug-11	L1049366-1	Water	250	250	52.6	8.19	2.85	23.15	0.025	0.25	0.01	0.00335	0.0034	1.255		24.0035	0.0722
55	55	MITCHELL/SULPHURETS TAILING SAC - TOP-55	1-Sep-11	L1052577-1	Water	250	250	51.7	7.83	4.5	21.7	0.025	0.25	0.01	0.0062	0.001	1.2		22.166	0.0682
56	56	MITCHELL/SULPHURETS TAILING SAC - TOP-56	8-Sep-11	L1055187-1	Water	250	250	46.8	7.88	3.3	21.8	0.025	0.25	0.01	0.00825	0.00075	1.25		22.424	0.0697
57	57	MITCHELL/SULPHURETS TAILING SAC - TOP-57	15-Sep-11	L1058407-1	Water	250	250	43.9	7.83	2.1	21.9	0.025	0.25	0.01	0.0103	0.0005	1.3		22.682	0.0712
58	58	MITCHELL/SULPHURETS TAILING SAC - TOP-58	22-Sep-11	L1061630-1	Water	250	250	45.5	7.83	2.1	22.25	0.025	0.25	0.01	0.0098	0.0005	1.3		22.19	0.0709
59	59	MITCHELL/SULPHURETS TAILING SAC - TOP-59	29-Sep-11	L1064809-1	Water	250	250	44.8	7.8	2.1	22.6	0.025	0.25	0.01	0.0093	0.0005	1.3		21.698	0.0706
60	60	MITCHELL/SULPHURETS TAILING SAC - TOP-60	6-Oct-11	L1068075-1	Water	250	250	44.3	7.76	1.95	23.05	0.025	0.25	0.01	0.008	0.0008	1.305		22.189	0.0694
61	61	MITCHELL/SULPHURETS TAILING SAC - TOP-61	13-Oct-11	L1070776-1	Water	250	250	45.4	7.93	1.8	23.5	0.025	0.25	0.01	0.0067	0.0011	1.31		22.68	0.0682
62	62	MITCHELL/SULPHURETS TAILING SAC - TOP-62	20-Oct-11	L1073876-1	Water	250	250	45.7	7.91	1.95	23.5	0.025	0.25	0.01	0.00675	0.0008	1.31		22.233	0.06625
63	63	MITCHELL/SULPHURETS TAILING SAC - TOP-63	27-Oct-11	L1077168-1	Water	250	250	44.5	7.89	2.1	23.5	0.025	0.25	0.01	0.0068	0.0005	1.31		21.786	0.0643
64	64	MITCHELL/SULPHURETS TAILING SAC - TOP-64	3-Nov-11	L1079964-1	Water	250	250	44.4	7.77	1.75	23	0.025	0.25	0.01	0.01055	0.0005	1.27		21.644	0.06435
65	65	MITCHELL/SULPHURETS TAILING SAC - TOP-65	10-Nov-11	L1082903-1	Water	250	250	44.9	7.75	1.4	22.5	0.025	0.25	0.01	0.0143	0.0005	1.23		21.502	0.0644
66	66	MITCHELL/SULPHURETS TAILING SAC - TOP-66	17-Nov-11	L1085269-1	Water	250	250	43.9	7.75	1.5	22.4	0.025	0.25	0.01	0.0108	0.0005	1.3		21.6615	0.06385
67	67	MITCHELL/SULPHURETS TAILING SAC - TOP-67	24-Nov-11	L1088457-1	Water	250	250	46.1	7.84	1.6	22.3	0.025	0.25	0.01	0.0073	0.0005	1.37		21.821	0.0633
68	68	MITCHELL/SULPHURETS TAILING SAC - TOP-68	1-Dec-11	L1090933-1	Water	250	250	42.9	7.71	2	22.35	0.025	0.25	0.01	0.0039	0.003	1.24		21.2025	0.06045
69	69	MITCHELL/SULPHURETS TAILING SAC - TOP-69	8-Dec-11	L1092880-1	Water	250	250	43.4	7.84	2.4	22.4	0.025	0.25	0.01	0.0005	0.0055	1.11		20.584	0.0576
70	70	MITCHELL/SULPHURETS TAILING SAC - TOP-70	15-Dec-11	L1095556-1	Water	250	250	45.3	7.69	2.2	20.3	0.025	0.25	0.01	0.0005	0.0025	1.09		21.149	0.0549
71	71	MITCHELL/SULPHURETS TAILING SAC - TOP-71	22-Dec-11	L1098130-1	Water	250	250	45.6	7.76	2.325	20.35	0.025	0.25	0.01	0.000875	0.0025	1.07		20.879	0.052775
72	72	MITCHELL/SULPHURETS TAILING SAC - TOP-72	29-Dec-11	L1099504-1	Water	250	250	44.6	7.85	2.45	20.4	0.025	0.25	0.01	0.00125	0.0025	1.05		20.609	0.05065
73	73	MITCHELL/SULPHURETS TAILING SAC - TOP-73	5-Jan-12	L1101160-1	Water	250	250	46.1	7.84	2.575	20.45	0.025	0.25	0.01	0.001625	0.0025	1.03		20.339	0.048525
74	74	MITCHELL/SULPHURETS TAILING SAC - TOP-74	12-Jan-12	L1103217-1	Water	250	250	44.4	7.65	2.7	20.5	0.025	0.25	0.01	0.002	0.0025	1.01		20.069	0.0464
75	75	MITCHELL/SULPHURETS TAILING SAC - TOP-75	19-Jan-12	L1105373-1	Water	500	250	45.2	7.71	2.475	20.875	0.025	0.25	0.01	0.001975	0.0025	1.03		20.26925	0.047525
76	76	MITCHELL/SULPHURETS TAILING SAC - TOP-76	26-Jan-12	L1107923-1	Water	250	250	47.2	7.82	2.25	21.25	0.025	0.25	0.01	0.00195	0.0025	1.05		20.4695	0.04865
77	77	MITCHELL/SULPHURETS TAILING SAC - TOP-77	2-Feb-12	L1109668-1	Water	250	250	45.8	7.8	2.025	21.625	0.025	0.25	0.01	0.001925	0.0025	1.07		20.66975	0.049775
78	78	MITCHELL/SULPHURETS TAILING SAC - TOP-78	9-Feb-12	L1112608-1	Water	250	250	44.5	7.88	1.8	22	0.025	0.25	0.01	0.0019	0.0025	1.09		20.87	0.0509
79	79	MITCHELL/SULPHURETS TAILING SAC - TOP-79	16-Feb-12	L1114857-1	Water	250	250	43.6	7.83	1.475	21.3	0.025	0.25	0.01	0.001875	0.003675	1.075		20.48175	0.05055
80	80	MITCHELL/SULPHURETS TAILING SAC - TOP-80	23-Feb-12	L1116432-1	Water	250	250	43.5	7.88	1.15	20.6	0.025	0.25	0.01	0.00185	0.00485	1.06		20.0935	0.0502
81	81	MITCHELL/SULPHURETS TAILING SAC - TOP-81	1-Mar-12	L1119457-1	Water	250	250	41.3	7.82	0.825	19.9	0.025	0.25	0.01	0.001825	0.006025	1.045		19.70525	0.04985
82	82	MITCHELL/SULPHURETS TAILING SAC - TOP-82	8-Mar-12	L1121843-1	Water	250	250	42.9	7.84	0.5	19.2	0.025	0.25	0.01	0.0018	0.0072	1.03		19.317	0.0495
83	83	MITCHELL/SULPHURETS TAILING SAC - TOP-83	15-Mar-12	L1123340-1	Water	250	250	42.1	7.86	0.5	19.25	0.025	0.25	0.01	0.001475	0.006025	1.0175		19.2165	0.049675
84	84	MITCHELL/SULPHURETS TAILING SAC - TOP-84	22-Mar-12	L1125891-1	Water	250	250	42.6	7.88	0.5	19.3	0.025	0.25	0.01	0.00115	0.00485	1.005		19.116	0.04985
85	85	MITCHELL/SULPHURETS TAILING SAC - TOP-85	29-Mar-12	L1127569-1	Water	250	250	43.9	7.94	0.5	19.35	0.025	0.25	0.01	0.000825	0.003675	0.9925		19.0155	0.050025
86	86	MITCHELL/SULPHURETS TAILING SAC - TOP-86	5-Apr-12	L1131092-1	Water	250	250	41.2	7.85	0.5	19.4	0.025	0.25	0.01	0.0005	0.0025	0.98		18.915	0.0502
87	87	MITCHELL/SULPHURETS TAILING SAC - TOP-87	12-Apr-12	L1133715-1	Water	250	250	43.3	7.92	0.875	19.425	0.025	0.25	0.01	0.0005	0.0025	0.9875		19.174	0.049225
88	88	MITCHELL/SULPHURETS TAILING SAC - TOP-88	19-Apr-12	L1136017-1	Water	250	250	43.9	7.91	1.25	19.45	0.025	0.25	0.01	0.0005	0.0025	0.995		19.433	0.04825
89	89	MITCHELL/SULPHURETS TAILING SAC - TOP-89	26-Apr-12	L1138913-1	Water	250	250	43.2	7.89	1.625	19.475	0.025	0.25	0.01	0.0005	0.0025	1.0025		19.692	0.047275
90	90	MITCHELL/SULPHURETS TAILING SAC - TOP-90	3-May-12	L1141951-1	Water	250	250	42.8	7.87	2	19.5	0.025	0.25	0.01	0.0005	0.0025	1.01		19.951	0.0463
91	91	MITCHELL/SULPHURETS TAILING SAC - TOP-91	10-May-12	L1144819-1	Water	250	250	44	7.88	1.85	19.65	0.025	0.25	0.01	0.0007	0.0025	1.03		20.38	0.046425
92	92	MITCHELL/SULPHURETS TAILING SAC - TOP-92	17-May-12	L1148018-1	Water	250	250	43.8	7.88	1.7	19.8	0.025	0.25	0.01	0.0009	0.0025	1.05		20.809	0.04655
93	93	MITCHELL/SULPHURETS TAILING SAC - TOP-93	24-May-12	L1150670-1	Water	250	250	43.1	7.88	1.55	19.95	0.025	0.25	0.01	0.0011	0.0025	1.07		21.238	0.046675
94	94	MITCHELL/SULPHURETS TAILING SAC - TOP-94	31-May-12	L1154635-1	Water	250	250	44.6	7.85	1.4	20.1	0.025	0.25	0.01	0.0013	0.0025	1.09		21.667	0.0468
95	95	MITCHELL/SULPHURETS TAILING SAC - TOP-95	7-Jun-12	L1157996-1	Water	250	250	44.7	7.89	1.175	20.45	0.025	0.25	0.01	0.00125	0.00315	1.085		21.32625	0.047175
96	96	MITCHELL/SULPHURETS TAILING SAC - TOP-96	14-Jun-12	L1161536-1	Water	250	250	44.1	7.9	0.95	20.8	0.025	0.25	0.01	0.0012	0.0038	1.08		20.9855	0.04755
97	97	MITCHELL/SULPHURETS TAILING SAC - TOP-97	21-Jun-12	L1165017-1	Water	250	250	43.6	7.89	0.725	21.15	0.025	0.25	0.01	0.00115	0.00445	1.075		20.64475	0.047925
98	98	MITCHELL/SULPHURETS TAILING SAC - TOP-98	28-Jun-12	L1168785-1	Water	250	250	42.1	7.91	0.5	21.5	0.025	0.25	0.01	0.0011	0.0051	1.07		20.304	0.0483
99	99	MITCHELL/SULPHURETS TAILING SAC - TOP-99	5-Jul-12	L1171983-1	Water	250	250	44.1	7.94	0.9	21.25	0.025	0.25	0.01	0.00095	0.00445	1.0525		20.25875	0.04625

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
						Total Volume In	Total Volume Out	Conductivity		Acidity (as $CaCO_3$)	Total (as CaCO3)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrite (as N)	Nitrate (as N)	Sulfate (SO_4)	Sulfide as S	Hardness	Aluminum (Al)
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	mL	mL	uS/cm	pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
100	100	MITCHELL/SULPHURETS TAILING SAC - TOP-100	12-Jul-12	L1175601-1	Water	250	250	42.8	7.89	1.3	21	0.025	0.25	0.01	0.0008	0.0038	1.035		20.2135	0.0442
101	101	MITCHELL/SULPHURETS TAILING SAC - TOP-101	19-Jul-12	L1180180-1	Water	250	250	41.7	7.86	1.7	20.75	0.025	0.25	0.01	0.00065	0.00315	1.0175		20.16825	0.04215
102	102	MITCHELL/SULPHURETS TAILING SAC - TOP-102	26-Jul-12	L1183282-1	Water	250	250	42.6	7.87	2.1	20.7	0.025	0.25	0.01	0.0005	0.0025	1.04		19.415	0.0447
103	103	MITCHELL/SULPHURETS TAILING SAC - TOP-103	2-Aug-12	L1186485-1	Water	250	250	41.9	7.9	2.1	20.7	0.025	0.25	0.01	0.0005	0.0025	1.04		19.415	0.0447
104	104	MITCHELL/SULPHURETS TAILING SAC - TOP-104	9-Aug-12	L1191171-1	Water	250	250	41	7.88	2.1	20.7	0.025	0.25	0.01	0.0005	0.0025	1.04		19.415	0.0447
105	105	MITCHELL/SULPHURETS TAILING SAC - TOP-105	16-Aug-12	L1194397-1	Water	250	250	41.3	7.85	2.1	20.7	0.025	0.25	0.01	0.0005	0.0025	1.04		19.415	0.0447
106	106	MITCHELL/SULPHURETS TAILING SAC - TOP-106	23-Aug-12	L1197932-1	Water	250	250	43.8	7.92	2.7	21.1	0.025	0.25	0.01	0.0005	0.0025	1.12		20.315	0.0463
107	107	MITCHELL/SULPHURETS TAILING SAC - TOP-107	30-Aug-12	L1202321-1	Water	250	250	41.8	7.91	2.15	38.775	0.025	0.1875	0.0325	0.0005	0.0025	0.84		248.38625	0.111475
108	108	MITCHELL/SULPHURETS TAILING SAC - TOP-108	6-Sep-12	L1204439-1	Water	250	250	42.6	7.88	1.6	56.45	0.025	0.125	0.055	0.0005	0.0025	0.56		476.4575	0.17665
109	109	MITCHELL/SULPHURETS TAILING SAC - TOP-109	13-Sep-12	L1208258-1	Water	250	250	41.9	7.87	1.05	74.125	0.025	0.0625	0.0775	0.0005	0.0025	0.28		704.52875	0.241825
110	110	MITCHELL/SULPHURETS TAILING SAC - TOP-110	20-Sep-12	L1211689-1	Water	250	250	38.3	7.82	5.7	19.3	0.025	0.25	0.01	0.0005	0.0025	1.01		20.336	0.0384
111	111	MITCHELL/SULPHURETS TAILING SAC - TOP-111	27-Sep-12	L1214844-1	Water	250	250	42	7.85	4.4	33.3	0.14375	1.4375	0.0575	0.012875	0.004375	226.5075		229.027	0.07605
112	112	MITCHELL/SULPHURETS TAILING SAC - TOP-112	4-Oct-12	L1218683-1	Water	250	250	42.4	7.87	3.1	47.3	0.2625	2.625	0.105	0.02525	0.00625	452.005		437.718	0.1137
113	113	MITCHELL/SULPHURETS TAILING SAC - TOP-113	11-Oct-12	L1220861-1	Water	250	250	42.9	7.83	1.8	61.3	0.38125	3.8125	0.1525	0.037625	0.008125	677.5025		646.409	0.15135
114	114	MITCHELL/SULPHURETS TAILING SAC - TOP-114	18-Oct-12	L1225294-1	Water	250	250	42.2	7.74	2.1	20.5	0.025	0.25	0.01	0.0005	0.0025	1		20.123	0.0401
Mean									7.858	2.98	44.39	0.025	0.4125	0.061	0.00053	0.00263	136.0725	#DIV/0!	335.7471	0.124265
0	**0**	**M/S_Rougher Bottom**																		
1	1	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-1	19-Aug-10	L922160-2	Water	250	250	1410	11.03	0.5	119		23	0.2			716		767.6	0.899
2	2	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-2	26-Aug-10	L924785-2	Water	250	250	1450	10.85	0.5	101		6.5	0.1			783		847.6	0.501
3	3	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-3	2-Sep-10	L927331-2	Water	250	250	1540	10.71	0.5	92.2		5	0.2			870		907.6	0.353
4	4	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-4	9-Sep-10	L929603-2	Water	250	250	1580	10.66	0.5	91.8		0	0.1			0		932.6	0.307
5	5	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-5	16-Sep-10	L932189-2	Water	250	250	1590	10.46	0.5	78.6		5	1.41			1000		955.1	0.249
6	6	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-6	23-Sep-10	L935043-2	Water	250	250	1600	10.42	0.5	89.9		5	0.2			1020		970.1144	0.224
7	7	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-7	30-Sep-10	L937677-2	Water	250	250	1530	10.44	0.5	80.4	0.5	5	0.2	0.05	0.01	926		940.1224	0.206
8	8	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-8	7-Oct-10	L940580-2	Water	250	250	1430	10.47	0.5	75.3	0.5	5	0.2	0.05	0.01	903		855.1	0.189
9	9	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-9	14-Oct-10	L942884-2	Water	250	250	1280	10.39	0.5	70.5	0.5	5	0.2	0.12	0.021	664		747.6044	0.172
10	10	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-10	21-Oct-10	L945550-2	Water	250	250	1150	10.33	0.5	63.5	0.5	5	0.2	0.05	0.01	703		675.0904	0.166
11	11	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-11	28-Oct-10	L948182-2	Water	250	250	1040	10.43	0.5	72.9	0.5	5	0.2	0.05	0.01	574		615.0728	0.168
12	12	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-12	4-Nov-10	L950722-2	Water	250	250	930	10.54	0.5	69.8	0.5	5	0.2	0.05	0.01	478		522.5724	0.164
13	13	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-13	11-Nov-10	L952758-2	Water	250	250	754	10.5	0.5	67.3	0.25	2.5	0.1	0.025	0.005	406		445.0616	0.173
14	14	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-14	18-Nov-10	L955249-2	Water	250	250	736	10.4	0.5	67.8	0.25	2.5	0.1	0.025	0.005	338		392.5532	0.173
15	15	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-15	25-Nov-10	L957280-2	Water	250	250	640	10.47	0.5	69.5	0.025	0.25	0.195	0.0025	0.0022	263		342.5496	0.158
16	16	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-16	2-Dec-10	L959373-2	Water	250	250	588	10.54	0.5	62.6	0.025	0.25	0.16	0.0025	0.001	219		280.032	0.178
17	17	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-17	9-Dec-10	L961483-2	Water	250	250	510	10.53	0.5	77.7	0.025	0.25	0.172	0.0068	0.0005	181		250.0572	0.176
18	18	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-18	16-Dec-10	L963382-2	Water	250	250	472	10.54	0.5	70.6	0.025	0.25	0.149	0.0025	0.0014	158		226.7812	0.167
19	19	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-19	23-Dec-10	L965467-2	Water	250	250	456	10.61	0.5	76.7	0.025	0.25	0.172	0.0025	0.0014	139		202.274	0.153
20	20	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-20	30-Dec-10	L966301-2	Water	250	250	447	10.7	0.5	80	0.025	0.25	0.207	0.0025	0.0005	125		200.5284	0.169
21	21	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-21	6-Jan-11	L967676-2	Water	250	250	414	10.58	0.5	74.8	0.025	0.25	0.187	0.0025	0.0015	116		199.2764	0.172
22	22	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-22	13-Jan-11	L969704-2	Water	250	250	442	10.8	0.5	85.8	0.025	0.25	0.148	0.0025	0.0014	108		179.01	0.174
23	23	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-23	20-Jan-11	L971733-2	Water	250	250	387	10.56	0.5	77.1	0.025	0.25	0.203	0.0025	0.0005	101		189.0228	0.161
24	24	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-24	27-Jan-11	L973584-2	Water	250	250	411	10.75	0.5	87	0.025	0.25	0.23	0.0053	0.0005	98.7		178.7884	0.188
25	25	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-25	3-Feb-11	L975418-2	Water	250	250	374	10.55	0.5	80.2	0.025	0.25	0.199	0.0025	0.0005	97.1		179.5248	0.146
26	26	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-26	10-Feb-11	L977332-2	Water	250	250	351	10.46	0.5	72.3	0.025	0.25	0.15	0.005	0.0005	91.8		167.76	0.151
27	27	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-27	17-Feb-11	L979180-2	Water	250	250	337	10.37	0.5	75.3	0.025	0.25	0.194	0.0025	0.0005	91.1		177.2728	0.169
28	28	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-28	24-Feb-11	L980992-2	Water	250	250	413	10.86	0.5	81.85	0.025	0.25	0.182	0.0025	0.0005	88.8		173.2738	0.166
29	29	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-29	3-Mar-11	L983009-2	Water	250	250	358	10.68	0.5	88.4	0.025	0.25	0.17	0.0025	0.0005	86.5		169.2748	0.163
30	30	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-30	10-Mar-11	L985018-2	Water	250	250	334	10.54	0.5	73.4	0.025	0.25	0.1845	0.0025	0.0005	86.15		167.7728	0.164
31	31	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-31	17-Mar-11	L986967-2	Water	250	250	323	10.44	0.5	58.4	0.025	0.25	0.199	0.0025	0.0005	85.8		166.2708	0.165
32	32	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-32	24-Mar-11	L988832-2	Water	250	250	365	10.77	0.5	57.5	0.025	0.25	0.206	0.0025	0.0005	78.7		160.3966	0.172
33	33	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-33	31-Mar-11	L990990-2	Water	250	250	349	10.74	0.5	56.6	0.025	0.25	0.213	0.0025	0.0005	71.6		154.5224	0.179
34	34	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-34	7-Apr-11	L992886-2	Water	250	250	312	10.61	0.5	54.4	0.025	0.25	0.271	0.0049	0.0005	76.55		157.2738	0.175
35	35	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-35	14-Apr-11	L995109-2	Water	250	250	336	10.66	0.5	52.2	0.025	0.25	0.329	0.0073	0.0005	81.5		160.0252	0.171
36	36	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-36	21-Apr-11	L997505-2	Water	250	250	243	10.59	0.5	56.6	0.025	0.25	0.3245	0.0049	0.0005	79.2		160.0234	0.1765
37	37	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-37	28-Apr-11	L999342-2	Water	250	250	219	10.56	0.5	61	0.025	0.25	0.32	0.0025	0.0005	76.9		160.0216	0.182
38	38	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-38	5-May-11	L1001800-2	Water	250	250	346	10.68	0.5	62.45	0.025	0.25	0.3235	0.0025	0.0005	76.85		153.9014	0.1855
39	39	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-39	12-May-11	L1004453-2	Water	250	250	237	10.58	0.5	63.9	0.025	0.25	0.327	0.0025	0.0005	76.8		147.7812	0.189
40	40	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-40	19-May-11	L1007193-2	Water	250	250	270	10.55	0.5	61.35	0.025	0.25	0.362	0.0025	0.0005	77.45		155.1516	0.196
41	41	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-41	26-May-11	L1009613-2	Water	250	250	236	10.69	0.5	58.8	0.025	0.25	0.397	0.0025	0.0005	78.1		162.522	0.203
42	42	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-42	2-Jun-11	L1012269-2	Water	250	250	244	10.64	0.5	49.4	0.025	0.25	0.434	0.0025	0.001	79.1		148.654	0.2095

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
						Total Volume In	Total Volume Out	Conductivity		Acidity (as $CaCO_3$)	Total (as CaCO3)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrite (as N)	Nitrate (as N)	Sulfate (SO_4)	Sulfide as S	Hardness	Aluminum (Al)
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	mL	mL	uS/cm	pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
43	43	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-43	9-Jun-11	L1014824-2	Water	250	250	227	10.29	0.5	40	0.025	0.25	0.471	0.0025	0.0015	80.1		134.786	0.216
44	44	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-44	16-Jun-11	L1018795-2	Water	250	250	221	10.61	0.5	46.2	0.025	0.25	0.4875	0.0025	0.001	77.8		144.6612	0.226
45	45	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-45	23-Jun-11	L1021683-2	Water	250	250	288	10.76	0.5	52.4	0.025	0.25	0.504	0.0025	0.0005	75.5		154.5364	0.236
46	46	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-46	30-Jun-11	L1025012-2	Water	250	250	214	10.61	0.5	50.45	0.025	0.25	0.546	0.0015	0.0015	74.75		149.5338	0.2495
47	47	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-47	7-Jul-11	L1027703-2	Water	250	250	206	10.45	0.5	48.5	0.025	0.25	0.588	0.0005	0.0025	74		144.5312	0.263
48	48	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-48	14-Jul-11	L1030957-2	Water	250	250	229	10.63	0.5	59.8	0.025	0.25	0.6005	0.0012	0.0038	72.7		145.4028	0.2785
49	49	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-49	21-Jul-11	L1034024-2	Water	250	250	216	10.54	0.5	71.1	0.025	0.25	0.613	0.0019	0.0051	71.4		146.2744	0.294
50	50	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-50	28-Jul-11	L1037218-2	Water	250	250	218	10.68	0.5	69.9	0.025	0.25	0.655	0.0012	0.0088	71.25		146.2758	0.3015
51	51	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-51	4-Aug-11	L1039951-2	Water	250	250	305	10.67	0.5	68.7	0.025	0.25	0.697	0.0005	0.0125	71.1		146.2772	0.309
52	52	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-52	11-Aug-11	L1042927-2	Water	250	250	254	10.48	0.5	60.85	0.025	0.25	0.706	0.00115	0.0075	72.75		142.278	0.3225
53	53	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-53	18-Aug-11	L1046298-2	Water	250	250	258	10.55	0.5	53	0.025	0.25	0.715	0.0018	0.0025	74.4		138.2788	0.336
54	54	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-54	25-Aug-11	L1049366-2	Water	250	250	252	10.52	0.5	58.25	0.025	0.25	0.7305	0.0084	0.00215	71.16		138.0276	0.363
55	55	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-55	1-Sep-11	L1052577-2	Water	250	250	266	10.41	0.5	63.5	0.025	0.25	0.746	0.015	0.0018	67.92		137.7764	0.39
56	56	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-56	8-Sep-11	L1055187-2	Water	250	250	273	10.61	0.5	61.95	0.025	0.25	0.765	0.0142	0.00215	66.36		136.153	0.3905
57	57	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-57	15-Sep-11	L1058407-2	Water	250	250	245	10.46	0.5	60.4	0.025	0.25	0.784	0.0134	0.0025	64.8		134.5296	0.391
58	58	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-58	22-Sep-11	L1061630-2	Water	250	250	247	10.6	0.5	60.8	0.025	0.25	0.8055	0.00795	0.0019	63.05		129.4036	0.425
59	59	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-59	29-Sep-11	L1064809-2	Water	250	250	270	10.65	0.5	61.2	0.025	0.25	0.827	0.0025	0.0013	61.3		124.2776	0.459
60	60	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-60	6-Oct-11	L1068075-2	Water	250	250	285	10.73	0.5	63.1	0.025	0.25	0.8185	0.0025	0.0015	61.2		124.5374	0.458
61	61	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-61	13-Oct-11	L1070776-2	Water	250	250	267	10.69	0.5	65	0.025	0.25	0.81	0.0025	0.0017	61.1		124.7972	0.457
62	62	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-62	20-Oct-11	L1073876-2	Water	250	250	239	10.68	0.5	62.85	0.025	0.25	0.812	0.00405	0.0011	60.45		123.9338	0.473
63	63	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-63	27-Oct-11	L1077168-2	Water	250	250	230	10.69	0.5	60.7	0.025	0.25	0.814	0.0056	0.0005	59.8		123.0704	0.489
64	64	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-64	3-Nov-11	L1079964-2	Water	250	250	234	10.53	0.5	60.1	0.025	0.25	0.8125	0.00545	0.0005	57.3		116.0488	0.5165
65	65	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-65	10-Nov-11	L1082903-2	Water	250	250	254	10.57	0.5	59.5	0.025	0.25	0.811	0.0053	0.0005	54.8		109.0272	0.544
66	66	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-66	17-Nov-11	L1085269-2	Water	250	250	208	10.3	0.5	54.35	0.025	0.805	0.828	0.0326	0.0165	53.55		108.779	0.57
67	67	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-67	24-Nov-11	L1088457-2	Water	250	250	228	10.4	0.5	49.2	0.025	1.36	0.845	0.0599	0.0325	52.3		108.5308	0.596
68	68	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-68	1-Dec-11	L1090933-2	Water	250	250	192	10.17	0.5	47.9	0.025	0.805	0.821	0.03045	0.01915	50.5		102.7804	0.6015
69	69	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-69	8-Dec-11	L1092880-2	Water	250	250	190	10.21	0.5	46.6	0.025	0.25	0.797	0.001	0.0058	48.7		97.03	0.607
70	70	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-70	15-Dec-11	L1095556-2	Water	250	250	231	10.42	0.5	43.7	0.025	0.25	0.794	0.0005	0.0025	48.3		103.5312	0.615
71	71	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-71	22-Dec-11	L1098130-2	Water	250	250	204	10.25	0.5	43.05	0.025	0.25	0.795	0.0005	0.003775	47.65		100.8451	0.63375
72	72	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-72	29-Dec-11	L1099504-2	Water	250	250	209	10.21	0.5	42.4	0.025	0.25	0.796	0.0005	0.00505	47		98.159	0.6525
73	73	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-73	5-Jan-12	L1101160-2	Water	250	250	211	10.31	0.5	41.75	0.025	0.25	0.797	0.0005	0.006325	46.35		95.4729	0.67125
74	74	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-74	12-Jan-12	L1103217-2	Water	250	250	214	10.36	0.5	41.1	0.025	0.25	0.798	0.0005	0.0076	45.7		92.7868	0.69
75	75	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-75	19-Jan-12	L1105373-2	Water	500	250	217	10.42	0.5	37.975	0.025	0.25	0.7805	0.000775	0.006325	44.075		85.7869	0.6985
76	76	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-76	26-Jan-12	L1107923-2	Water	250	250	218	10.44	0.5	34.85	0.025	0.25	0.763	0.00105	0.00505	42.45		78.787	0.707
77	77	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-77	2-Feb-12	L1109668-2	Water	250	250	203	10.37	0.5	31.725	0.025	0.25	0.7455	0.001325	0.003775	40.825		71.7871	0.7155
78	78	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-78	9-Feb-12	L1112608-2	Water	250	250	156	10.03	0.5	28.6	0.025	0.25	0.728	0.0016	0.0025	39.2		64.7872	0.724
79	79	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-79	16-Feb-12	L1114857-2	Water	250	250	168	10.09	0.5	28.525	0.025	0.25	0.713	0.001325	0.0025	38.45		63.4151	0.752
80	80	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-80	23-Feb-12	L1116432-2	Water	250	250	168	10.22	0.5	28.45	0.025	0.25	0.698	0.00105	0.0025	37.7		62.043	0.78
81	81	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-81	1-Mar-12	L1119457-2	Water	250	250	160	10.18	0.5	28.375	0.025	0.25	0.683	0.000775	0.0025	36.95		60.6709	0.808
82	82	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-82	8-Mar-12	L1121843-2	Water	250	250	151	9.98	0.5	28.3	0.025	0.25	0.668	0.0005	0.0025	36.2		59.2988	0.836
83	83	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-83	15-Mar-12	L1123340-2	Water	250	250	145	9.85	0.775	27.4	0.025	0.25	0.64725	0.0005	0.0025	35		57.3065	0.84275
84	84	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-84	22-Mar-12	L1125891-2	Water	250	250	145	9.68	1.05	26.5	0.025	0.25	0.6265	0.0005	0.0025	33.8		55.3142	0.8495
85	85	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-85	29-Mar-12	L1127569-2	Water	250	250	144	9.99	1.325	25.6	0.025	0.25	0.60575	0.0005	0.0025	32.6		53.3219	0.85625
86	86	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-86	5-Apr-12	L1131092-2	Water	250	250	128	9.68	1.6	24.7	0.025	0.25	0.585	0.0005	0.0025	31.4		51.3296	0.863
87	87	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-87	12-Apr-12	L1133715-2	Water	250	250	133	9.88	1.325	24.3	0.025	0.25	0.55975	0.0005	0.0025	30.15		50.2777	0.82875
88	88	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-88	19-Apr-12	L1136017-2	Water	250	250	130	9.98	1.05	23.9	0.025	0.25	0.5345	0.0005	0.0025	28.9		49.2258	0.7945
89	89	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-89	26-Apr-12	L1138913-2	Water	250	250	123	9.93	0.775	23.5	0.025	0.25	0.50925	0.0005	0.0025	27.65		48.1739	0.76025
90	90	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-90	3-May-12	L1141951-2	Water	250	250	117	9.79	0.5	23.1	0.025	0.25	0.484	0.0005	0.0025	26.4		47.122	0.726
91	91	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-91	10-May-12	L1144819-2	Water	250	250	112	9.73	1.325	21.8	0.025	0.25	0.47075	0.000825	0.003225	25.7		45.5822	0.68425
92	92	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-92	17-May-12	L1148018-2	Water	250	250	104	9.58	2.15	20.5	0.025	0.25	0.4575	0.00115	0.00395	25		44.0424	0.6425
93	93	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-93	24-May-12	L1150670-2	Water	250	250	110	9.64	2.975	19.2	0.025	0.25	0.44425	0.001475	0.004675	24.3		42.5026	0.60075
94	94	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-94	31-May-12	L1154635-2	Water	250	250	99.9	9.57	3.8	17.9	0.025	0.25	0.431	0.0018	0.0054	23.6		40.9628	0.559
95	95	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-95	7-Jun-12	L1157996-2	Water	250	250	97.2	9.32	3.75	18.275	0.025	0.25	0.43075	0.001675	0.004675	23.3		40.1895	0.5325
96	96	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-96	14-Jun-12	L1161536-2	Water	250	250	94.9	9.34	3.7	18.65	0.025	0.25	0.4305	0.00155	0.00395	23		39.4162	0.506
97	97	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-97	21-Jun-12	L1165017-2	Water	250	250	93.5	9.37	3.65	19.025	0.025	0.25	0.43025	0.001425	0.003225	22.7		38.6429	0.4795
98	98	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-98	28-Jun-12	L1168785-2	Water	250	250	91.5	9.48	3.6	19.4	0.025	0.25	0.43	0.0013	0.0025	22.4		37.8696	0.453
99	99	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-99	5-Jul-12	L1171983-2	Water	250	250	96.8	9.32	3.275	19.475	0.025	0.25	0.4385	0.0011	0.005875	20.975		37.0772	0.391
100	100	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-100	12-Jul-12	L1175601-2	Water	250	250	94.5	9.41	2.95	19.55	0.025	0.25	0.447	0.0009	0.00925	19.55		36.2848	0.329
101	101	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-101	19-Jul-12	L1180180-2	Water	250	250	92.1	9.4	2.625	19.625	0.025	0.25	0.4555	0.0007	0.012625	18.125		35.4924	0.267

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
						Total Volume In	Total Volume Out	Conductivity		Acidity (as $CaCO_3$)	Total (as CaCO3)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrite (as N)	Nitrate (as N)	Sulfate (SO_4)	Sulfide as S	Hardness	Aluminum (Al)
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	mL	mL	uS/cm	pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
102	102	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-102	26-Jul-12	L1183282-2	Water	250	250	90.1	9.45	0.5	18.2	0.025	0.25	0.443	0.0005	0.0025	20.8		34.596	0.346
103	103	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-103	2-Aug-12	L1186485-2	Water	250	250	89.9	9.43	0.5	18.2	0.025	0.25	0.443	0.0005	0.0025	20.8		34.596	0.346
104	104	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-104	9-Aug-12	L1191171-2	Water	250	250	90.5	9.19	0.5	18.2	0.025	0.25	0.443	0.0005	0.0025	20.8		34.596	0.346
105	105	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-105	16-Aug-12	L1194397-2	Water	250	250	89.4	9.13	0.5	18.2	0.025	0.25	0.443	0.0005	0.0025	20.8		34.596	0.346
106	106	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-106	23-Aug-12	L1197932-2	Water	250	250	83.7	9.25	2.7	17.4	0.025	0.25	0.438	0.0005	0.0025	20.2		34.646	0.277
107	107	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-107	30-Aug-12	L1202321-2	Water	250	250	85.1	9.12	2.15	18.85	0.025	0.25	0.39575	0.001	0.002	33.275		45.86	0.23275
108	108	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-108	6-Sep-12	L1204439-2	Water	250	250	84.1	9.05	1.6	20.3	0.025	0.25	0.3535	0.0015	0.0015	46.35		57.074	0.1885
109	109	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-109	13-Sep-12	L1208258-2	Water	250	250	79.9	9.07	1.05	21.75	0.025	0.25	0.31125	0.002	0.001	59.425		68.288	0.14425
110	110	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-110	20-Sep-12	L1211689-2	Water	250	250	80.1	9.08	9.1	15.7	0.025	0.25	0.449	0.0005	0.0025	18.3		33.296	0.227
111	111	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-111	27-Sep-12	L1214844-2	Water	250	250	79.5	8.91	7.45	16.475	0.025	0.25	0.37775	0.001	0.002	21.025		35.3355	0.19325
112	112	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-112	4-Oct-12	L1218683-2	Water	250	250	77.9	8.97	5.8	17.25	0.025	0.25	0.3065	0.0015	0.0015	23.75		37.375	0.1595
113	113	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-113	11-Oct-12	L1220861-2	Water	250	250	80	8.91	4.15	18.025	0.025	0.25	0.23525	0.002	0.001	26.475		39.4145	0.12575
114	114	MITCHELL/SULPHURETS TAILING SAC - BOTTOM-114	18-Oct-12	L1225294-2	Water	250	250	81.8	8.95	2.3	19.7	0.025	0.25	0.464	0.0005	0.016	16.7		34.7	0.205
Mean									9.016	4.27	18.615	0.025	0.25	0.3596	0.00054	0.004525	33.77	#DIV/0!	47.9707	0.16995
0	**0**	**Iron Cap Top**																		
1	1	2748-18-COMP-TOP-1	11-Nov-10	L952759-1	Water	250	250	246	8.02	4.8	14.8	0.025	0.92	0.397	0.0025	0.0005	105		103.302	0.119
2	2	2748-18-COMP-TOP-2	18-Nov-10	L955251-1	Water	250	250	265	7.85	1.8	15.8	0.025	0.79	0.381	0.0025	0.0005	103		103.292	0.103
3	3	2748-18-COMP-TOP-3	25-Nov-10	L957281-1	Water	250	250	232	7.62	2.2	15.9	0.025	0.61	0.299	0.0025	0.0005	88.7		96.648	0.101
4	4	2748-18-COMP-TOP-4	2-Dec-10	L959374-1	Water	250	250	205	7.8	0.5	23.2	0.025	0.25	0.269	0.0025	0.0005	72.5		79.502	0.1
5	5	2748-18-COMP-TOP-5	9-Dec-10	L961485-1	Water	250	250	172	7.83	0.5	18.6	0.025	0.25	0.225	0.0025	0.0005	58.3		65.804	0.0928
6	6	2748-18-COMP-TOP-6	16-Dec-10	L963383-1	Water	250	250	147	7.89	2.4	19.5	0.025	0.25	0.216	0.0025	0.0005	46.2		59.066	0.0957
7	7	2748-18-COMP-TOP-7	23-Dec-10	L965468-1	Water	250	250	128	7.87	3	20.7	0.025	0.25	0.169	0.0025	0.0005	36.9		46.192	0.084
8	8	2748-18-COMP-TOP-8	30-Dec-10	L966302-1	Water	250	250	107	7.73	2.5	18.8	0.025	0.25	0.164	0.0025	0.0005	29.2		41.454	0.092
9	9	2748-18-COMP-TOP-9	6-Jan-11	L967677-1	Water	250	250	94.4	7.66	2.2	18.1	0.025	0.25	0.147	0.0025	0.0005	23.2		36.998	0.0944
10	10	2748-18-COMP-TOP-10	13-Jan-11	L969705-1	Water	250	250	83.3	7.8	1.3	19.4	0.025	0.25	0.153	0.0025	0.0005	18.6		31.862	0.0842
11	11	2748-18-COMP-TOP-11	20-Jan-11	L971735-1	Water	250	250	77.7	7.8	3.3	19.4	0.025	0.25	0.165	0.0025	0.0005	15.8		31.182	0.104
12	12	2748-18-COMP-TOP-12	27-Jan-11	L973585-1	Water	250	250	74.8	7.85	0.5	19.6	0.025	0.25	0.186	0.0025	0.0005	12.9		29.1	0.0993
13	13	2748-18-COMP-TOP-13	3-Feb-11	L975421-1	Water	250	250	64.9	7.77	0.5	19.8	0.025	0.25	0.149	0.0025	0.0005	10.3		27.076	0.1
14	14	2748-18-COMP-TOP-14	10-Feb-11	L977333-1	Water	250	250	60	7.76	0.5	19.7	0.025	0.25	0.152	0.0025	0.0005	8.85		25.342	0.087
15	15	2748-18-COMP-TOP-15	17-Feb-11	L979183-1	Water	250	250	61	7.89	0.5	21.8	0.025	0.25	0.155	0.0025	0.0005	7.1		24.973	0.0989
16	16	2748-18-COMP-TOP-16	24-Feb-11	L980993-1	Water	250	250	54.7	7.73	1.4	19.9	0.025	0.25	0.164	0.0025	0.0005	5.89		23.903	0.0938
17	17	2748-18-COMP-TOP-17	3-Mar-11	L983010-1	Water	250	250	58	7.96	0.5	22.6	0.025	0.25	0.182	0.0025	0.0005	5.8		23.507	0.0975
18	18	2748-18-COMP-TOP-18	10-Mar-11	L985022-1	Water	250	250	53.5	7.85	1.3	20.2	0.025	0.25	0.146	0.0025	0.0005	5.33		23.384	0.0949
19	19	2748-18-COMP-TOP-19	17-Mar-11	L986969-1	Water	250	250	54.5	7.98	1.2	20.4	0.025	0.25	0.155	0.0025	0.0005	4.31		22.995	0.095
20	20	2748-18-COMP-TOP-20	24-Mar-11	L988833-1	Water	250	250	50.2	7.81	1.2	20	0.025	0.25	0.171	0.0025	0.0005	4.27		22.068	0.0844
21	21	2748-18-COMP-TOP-21	31-Mar-11	L990993-1	Water	250	250	46.4	7.8	3.3	14.6	0.025	0.25	0.157	0.0025	0.0005	3.53		20.846	0.0878
22	22	2748-18-COMP-TOP-22	7-Apr-11	L992887-1	Water	250	250	45	7.69	0.5	18.4	0.025	0.25	0.154	0.0025	0.0005	3.38		20.122	0.0864
23	23	2748-18-COMP-TOP-23	14-Apr-11	L995110-1	Water	250	250	50.1	7.82	2.5	20.1	0.025	0.25	0.24	0.0025	0.0005	3.48		22.467	0.0985
24	24	2748-18-COMP-TOP-24	21-Apr-11	L997506-1	Water	250	250	47.6	8.08	2.2	21.3	0.025	0.25	0.237	0.0025	0.0005	3.19		23.402	0.0871
25	25	2748-18-COMP-TOP-25	28-Apr-11	L999346-1	Water	250	250	51.1	8.12	1.3	22	0.025	0.25	0.23	0.0025	0.0005	2.85		23.919	0.0887
26	26	2748-18-COMP-TOP-26	5-May-11	L1001802-1	Water	250	250	50.1	7.91	2.2	21.8	0.025	0.25	0.255	0.0025	0.0005	2.85		23.865	0.0875
27	27	2748-18-COMP-TOP-27	12-May-11	L1004455-1	Water	250	250	48.2	8.15	0.5	22.2	0.025	0.25	0.234	0.0055	0.0005	2.55		24.03	0.0907
28	28	2748-18-COMP-TOP-28	19-May-11	L1007194-1	Water	250	250	46.3	8.12	2	23	0.025	0.25	0.248	0.0025	0.0005	2.59		24.242	0.0865
29	29	2748-18-COMP-TOP-29	26-May-11	L1009614-1	Water	250	250	48.6	7.89	1.9	22.2	0.025	0.25	0.262	0.0103	0.0005	2.6		24.501	0.0835
30	30	2748-18-COMP-TOP-30	2-Jun-11	L1012270-1	Water	250	250	47.6	8.13	2.1	22.1	0.025	0.25	0.272	0.0025	0.0005	2.62		22.332	0.0823
31	31	2748-18-COMP-TOP-31	9-Jun-11	L1014825-1	Water	250	250	48.4	8.05	1.7	23	0.025	0.25	0.29	0.0025	0.0005	2.69		23.82	0.0742
32	32	2748-18-COMP-TOP-32	16-Jun-11	L1018796-1	Water	250	250	50.4	8.08	2.3	28.5	0.025	0.25	0.321	0.0025	0.0005	3.2		31.504	0.074
33	33	2748-18-COMP-TOP-33	23-Jun-11	L1021686-1	Water	250	250	41.4	8.09	0.5	19.5	0.025	0.25	0.236	0.0025	0.0005	2.09		20.88	0.0581
34	34	2748-18-COMP-TOP-34	30-Jun-11	L1025013-1	Water	250	250	43.5	8.02	0.5	19.1	0.025	0.25	0.258	0.0005	0.0025	2.16		20.587	0.0591
35	35	2748-18-COMP-TOP-35	7-Jul-11	L1027705-1	Water	250	250	44.9	8.13	1.7	21.2	0.025	0.25	0.278	0.0005	0.0025	2.31		22.202	0.0712
36	36	2748-18-COMP-TOP-36	14-Jul-11	L1030959-1	Water	250	250	42.8	8.13	1.3	21.6	0.025	0.25	0.292	0.0005	0.0025	2.27		23.006	0.0755
37	37	2748-18-COMP-TOP-37	21-Jul-11	L1034025-1	Water	250	250	48.6	8.07	0.5	22.6	0.025	0.25	0.265	0.0005	0.0025	2.2		23.023	0.0741
38	38	2748-18-COMP-TOP-38	28-Jul-11	L1037219-1	Water	250	250	51	8.08	4.2	23.3	0.025	0.25	0.306	0.0005	0.0025	2.39		23.985	0.0734
39	39	2748-18-COMP-TOP-39	4-Aug-11	L1039952-1	Water	250	250	53.2	7.97	0.5	23.8	0.025	0.25	0.33	0.0005	0.0025	2.14		24.405	0.0668
40	40	2748-18-COMP-TOP-40	11-Aug-11	L1042929-1	Water	250	250	52.3	7.85	2.2	24.9	0.025	0.25	0.324	0.0025	0.0005	2.23		26.036	0.068
41	41	2748-18-COMP-TOP-41	18-Aug-11	L1046300-1	Water	250	250	47.4	7.76	0.5	22.8	0.025	0.25	0.319	0.0097	0.0005	2.06		24.572	0.0654
42	42	2748-18-COMP-TOP-42	25-Aug-11	L1049367-1	Water	250	250	48.8	7.81	2.5	22.5	0.025	0.25	0.327	0.0025	0.0005	2.08		24.341	0.067
43	43	2748-18-COMP-TOP-43	1-Sep-11	L1052579-1	Water	250	250	47.9	7.95	0.5	21.5	0.025	0.25	0.321	0.0073	0.0005	2.04		22.471	0.061
44	44	2748-18-COMP-TOP-44	8-Sep-11	L1055188-1	Water	250	250	50.2	7.81	1.6	22	0.025	0.25	0.327	0.0025	0.0005	2.12		24.059	0.0636

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
						Total Volume In	Total Volume Out	Conductivity		Acidity (as $CaCO_3$)	Total (as CaCO3)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrite (as N)	Nitrate (as N)	Sulfate (SO_4)	Sulfide as S	Hardness	Aluminum (Al)
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	mL	mL	uS/cm	pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
45	45	2748-18-COMP-TOP-45	15-Sep-11	L1058412-1	Water	250	250	50.6	7.99	0.5	21.4	0.025	0.25	0.344	0.0109	0.0005	2.01		22.854	0.0604
46	46	2748-18-COMP-TOP-46	22-Sep-11	L1061631-1	Water	250	250	42.9	7.9	0.5	20.6	0.025	0.25	0.305	0.0089	0.0005	1.89		22.449	0.061
47	47	2748-18-COMP-TOP-47	29-Sep-11	L1064810-1	Water	250	250	47.1	7.91	2.8	21.2	0.025	0.25	0.303	0.0077	0.0005	1.95		21.108	0.0657
48	48	2748-18-COMP-TOP-48	6-Oct-11	L1068076-1	Water	250	250	47.7	7.99	2.1	20.4	0.025	0.25	0.3	0.0119	0.0005	1.92		21.247	0.0616
49	49	2748-18-COMP-TOP-49	13-Oct-11	L1070777-1	Water	250	250	43.7	7.83	1.2	20.1	0.025	0.25	0.266	0.007	0.0005	1.81		20.132	0.0571
50	50	2748-18-COMP-TOP-50	20-Oct-11	L1073877-1	Water	250	250	43.9	7.93	2.2	20.2	0.025	0.25	0.296	0.0072	0.0005	1.81		21.024	0.0655
51	51	2748-18-COMP-TOP-51	27-Oct-11	L1077169-1	Water	250	250	45.8	7.91	0.5	21	0.025	0.25	0.301	0.0062	0.0005	1.94		21.368	0.0607
52	52	2748-18-COMP-TOP-52	3-Nov-11	L1079967-1	Water	250	250	42.9	7.92	1.6	18.9	0.025	0.25	0.29	0.0025	0.0005	1.7		20.49	0.0548
53	53	2748-18-COMP-TOP-53	10-Nov-11	L1082904-1	Water	250	250	48.8	7.88	0.5	20.4	0.025	0.25	0.293	0.0053	0.0005	1.76		20.951	0.0602
54	54	2748-18-COMP-TOP-54	17-Nov-11	L1085271-1	Water	250	250	43.6	7.86	0.5	19	0.025	0.25	0.285	0.0025	0.0005	1.69		20.481	0.0581
55	55	2748-18-COMP-TOP-55	24-Nov-11	L1088458-1	Water	250	250	47.4	7.98	1.8	19.9	0.025	0.25	0.289	0.0068	0.0005	1.92		19.905	0.0608
56	56	2748-18-COMP-TOP-56	1-Dec-11	L1090934-1	Water	250	250	40.1	7.62	2.3	18.8	0.025	0.25	0.265	0.0005	0.0025	1.54		19.106	0.0512
57	57	2748-18-COMP-TOP-57	8-Dec-11	L1092883-1	Water	250	250	39.5	7.82	2.1	19.6	0.025	0.25	0.25	0.0005	0.0025	1.47		18.665	0.051
58	58	2748-18-COMP-TOP-58	15-Dec-11	L1095557-1	Water	250	250	42.2	7.66	1.8	17.8	0.025	0.25	0.258	0.0005	0.0066	1.45		18.838	0.0525
59	59	2748-18-COMP-TOP-59	22-Dec-11	L1098132-1	Water	250	250	40	7.8	3.3	17.5	0.025	0.25	0.257	0.0005	0.0025	1.42		18.065	0.051
60	60	2748-18-COMP-TOP-60	29-Dec-11	L1099505-1	Water	250	250	40.2	7.76	2.2	17.7	0.025	0.25	0.244	0.0005	0.0025	1.38		17.292	0.0495
61	61	2748-18-COMP-TOP-61	5-Jan-12	L1101161-1	Water	250	250	41.4	7.89	2.1	18.4	0.025	0.25	0.258	0.0005	0.0143	1.43		18.173	0.0552
62	62	2748-18-COMP-TOP-62	12-Jan-12	L1103218-1	Water	250	250	43	7.73	2.3	18.6	0.025	0.25	0.273	0.0005	0.0025	1.42		20.511	0.0519
63	63	2748-18-COMP-TOP-63	19-Jan-12	L1105374-1	Water	500	250	44.2	7.79	2.6	19.5	0.025	0.25	0.283	0.0005	0.0025	1.49		21.171	0.0577
64	64	2748-18-COMP-TOP-64	26-Jan-12	L1107925-1	Water	250	250	49.5	7.86	2.4	21.4	0.025	0.25	0.314	0.0005	0.0025	1.6		22.449	0.0623
65	65	2748-18-COMP-TOP-65	2-Feb-12	L1109671-1	Water	250	250	49.2	7.86	3.9	22.5	0.025	0.25	0.312	0.0005	0.0025	1.56		23.557	0.0581
66	66	2748-18-COMP-TOP-66	9-Feb-12	L1112610-1	Water	250	250	47.8	7.97	0.5	22.4	0.025	0.25	0.292	0.0005	0.0025	1.46		22.538	0.0495
67	67	2748-18-COMP-TOP-67	16-Feb-12	L1114860-1	Water	250	250	45.4	7.83	2.5	19.8	0.025	0.25	0.294	0.0005	0.0025	1.38		21.388	0.0471
68	68	2748-18-COMP-TOP-68	23-Feb-12	L1116437-1	Water	250	250	44	7.85	1.6	18.9	0.025	0.25	0.289	0.0005	0.0158	1.36		20.292	0.0533
69	69	2748-18-COMP-TOP-69	1-Mar-12	L1119458-1	Water	250	250	42	7.89	1.6	18.1	0.025	0.25	0.276	0.0005	0.0025	1.27		19.255	0.0416
70	70	2748-18-COMP-TOP-70	8-Mar-12	L1121845-1	Water	250	250	42.1	7.79	1	18	0.025	0.25	0.281	0.0005	0.0025	1.31		18.64	0.0447
71	71	2748-18-COMP-TOP-71	15-Mar-12	L1123341-1	Water	250	250	42.2	7.86	1.9	18.4	0.025	0.25	0.279	0.0005	0.0025	1.3		19	0.0441
72	72	2748-18-COMP-TOP-72	22-Mar-12	L1125893-1	Water	250	250	40.9	7.84	1.9	17.4	0.025	0.25	0.273	0.0005	0.0065	1.26		19.126	0.0421
73	73	2748-18-COMP-TOP-73	29-Mar-12	L1127571-1	Water	250	250	42.7	7.89	1.2	18.9	0.025	0.25	0.286	0.0005	0.0059	1.33		19.44	0.0464
74	74	2748-18-COMP-TOP-74	5-Apr-12	L1131093-1	Water	250	250	40.8	7.83	0.5	17.4	0.025	0.25	0.269	0.0005	0.0025	1.28		18.458	0.0447
75	75	2748-18-COMP-TOP-75	12-Apr-12	L1133717-1	Water	250	250	42.9	7.89	0.5	18.7	0.025	0.25	0.289	0.0005	0.0025	1.31		19.478	0.0493
76	76	2748-18-COMP-TOP-76	19-Apr-12	L1136018-1	Water	250	250	44.1	7.9	0.5	18.7	0.025	0.25	0.29	0.0005	0.0025	1.295		19.7575	0.04655
77	77	2748-18-COMP-TOP-77	26-Apr-12	L1138914-1	Water	250	250	43.4	7.94	0.5	18.7	0.025	0.25	0.29	0.0005	0.0025	1.295		19.7575	0.04655
78	78	2748-18-COMP-TOP-78	3-May-12	L1141952-1	Water	250	250	43.5	7.89	0.5	18.7	0.025	0.25	0.291	0.0005	0.0025	1.28		20.037	0.0438
79	79	2748-18-COMP-TOP-79	10-May-12	L1144821-1	Water	250	250	43.6	7.89	1.125	18.725	0.025	0.25	0.29475	0.0005	0.00315	1.3025		20.38975	0.043575
80	80	2748-18-COMP-TOP-80	17-May-12	L1148020-1	Water	250	250	43.6	7.89	1.75	18.75	0.025	0.25	0.2985	0.0005	0.0038	1.325		20.7425	0.04335
81	81	2748-18-COMP-TOP-81	24-May-12	L1150672-1	Water	250	250	43	7.85	2.375	18.775	0.025	0.25	0.30225	0.0005	0.00445	1.3475		21.09525	0.043125
82	82	2748-18-COMP-TOP-82	31-May-12	L1154637-1	Water	250	250	44.7	7.87	3	18.8	0.025	0.25	0.306	0.0005	0.0051	1.37		21.448	0.0429
83	83	2748-18-COMP-TOP-83	7-Jun-12	L1157997-1	Water	250	250	44.4	7.88	2.375	19.075	0.025	0.25	0.30625	0.0005	0.00445	1.3675		21.07275	0.0428
84	84	2748-18-COMP-TOP-84	14-Jun-12	L1161537-1	Water	250	250	44.2	7.81	1.75	19.35	0.025	0.25	0.3065	0.0005	0.0038	1.365		20.6975	0.0427
85	85	2748-18-COMP-TOP-85	21-Jun-12	L1165019-1	Water	250	250	41.8	7.91	1.125	19.625	0.025	0.25	0.30675	0.0005	0.00315	1.3625		20.32225	0.0426
86	86	2748-18-COMP-TOP-86	28-Jun-12	L1168786-1	Water	250	250	43.1	7.97	0.5	19.9	0.025	0.25	0.307	0.0005	0.0025	1.36		19.947	0.0425
87	87	2748-18-COMP-TOP-87	5-Jul-12	L1171985-1	Water	250	250	41.8	7.82	1.425	19.425	0.025	0.25	0.29875	0.0005	0.0025	1.34		19.703	0.050325
88	88	2748-18-COMP-TOP-88	12-Jul-12	L1175602-1	Water	250	250	41.3	7.87	2.35	18.95	0.025	0.25	0.2905	0.0005	0.0025	1.32		19.459	0.05815
89	89	2748-18-COMP-TOP-89	19-Jul-12	L1180182-1	Water	250	250	42.1	7.86	3.275	18.475	0.025	0.25	0.28225	0.0005	0.0025	1.3		19.215	0.065975
90	90	2748-18-COMP-TOP-90	26-Jul-12	L1183284-1	Water	250	250	41.3	7.86	2.7	18.7	0.025	0.25	0.3	0.0005	0.0025	1.32		19.055	0.0417
91	91	2748-18-COMP-TOP-91	2-Aug-12	L1186487-1	Water	250	250	39.4	7.84	2.7	18.7	0.025	0.25	0.3	0.0005	0.0025	1.32		19.055	0.0417
92	92	2748-18-COMP-TOP-92	9-Aug-12	L1191172-1	Water	250	250	38.4	7.87	2.7	18.7	0.025	0.25	0.3	0.0005	0.0025	1.32		19.055	0.0417
93	93	2748-18-COMP-TOP-93	16-Aug-12	L1194400-1	Water	250	250	40	7.84	2.7	18.7	0.025	0.25	0.3	0.0005	0.0025	1.32		19.055	0.0417
94	94	2748-18-COMP-TOP-94	23-Aug-12	L1197933-1	Water	250	250	42.1	7.9	2.4	18.5	0.025	0.25	0.303	0.0005	0.0025	1.43		19.268	0.0413
95	95	2748-18-COMP-TOP-95	30-Aug-12	L1202323-1	Water	250	250	40.5	7.79	2.225	17.925	0.08125	0.8125	0.63225	0.006625	0.003125	192.3225		196.141	0.037825
96	96	2748-18-COMP-TOP-96	6-Sep-12	L1204442-1	Water	250	250	40.6	7.85	2.05	17.35	0.1375	1.375	0.9615	0.01275	0.00375	383.215		373.014	0.03435
97	97	2748-18-COMP-TOP-97	13-Sep-12	L1208259-1	Water	250	250	39.8	7.85	1.875	16.775	0.19375	1.9375	1.29075	0.018875	0.004375	574.1075		549.887	0.030875
98	98	2748-18-COMP-TOP-98	20-Sep-12	L1211696-1	Water	250	250	40.1	7.72	2.8	17.1	0.025	0.25	0.29	0.0005	0.0025	1.3		19.403	0.038
99	99	2748-18-COMP-TOP-99	27-Sep-12	L1214847-1	Water	250	250	36	7.76	3.05	17.075	0.08125	0.8125	0.6875	0.006625	0.003125	142.975		151.98225	0.0363
100	100	2748-18-COMP-TOP-100	4-Oct-12	L1218688-1	Water	250	250	38.4	7.85	3.3	17.05	0.1375	1.375	1.085	0.01275	0.00375	284.65		284.5615	0.0346
101	101	2748-18-COMP-TOP-101	11-Oct-12	L1220864-1	Water	250	250	39.3	7.8	3.55	17.025	0.19375	1.9375	1.4825	0.018875	0.004375	426.325		417.14075	0.0329
102	102	2748-18-COMP-TOP-102	18-Oct-12	L1225295-1	Water	250	250	39.7	7.8	4.2	18	0.025	0.25	0.274	0.0005	0.0025	1.28		18.971	0.0738
Mean									7.806	2.4	17.245	0.10375	1.0375	0.86295	0.009075	0.003375	277.2495	#DIV/0!	258.08545	0.034535

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In mL	Total Volume Out mL	Conductivity uS/cm	pH	Acidity (as $CaCO_3$) mg/L	Total (as CaCO3) mg/L	Bromide (Br) mg/L	Chloride (Cl) mg/L	Fluoride (F) mg/L	Nitrite (as N) mg/L	Nitrate (as N) mg/L	Sulfate (SO_4) mg/L	Sulfide as S mg/L	Hardness mg/L	Aluminum (Al) mg/L
0	0	Iron Cap Bottom																		
1	1	2748-18-COMP-BOTTOM-1	11-Nov-10	L952759-2	Water	250	250	1080	7.74	9.8	22.6	0.25	2.5	1.74	0.025	0.005	655		623.46	0.083
2	2	2748-18-COMP-BOTTOM-2	18-Nov-10	L955251-2	Water	250	250	1250	7.78	2.1	21.8	0.25	5.2	2.05	0.089	0.005	723		690.48	0.0534
3	3	2748-18-COMP-BOTTOM-3	25-Nov-10	L957281-2	Water	250	250	1240	7.78	3.1	15	0.25	2.5	1.87	0.025	0.005	725		720.76	0.045
4	4	2748-18-COMP-BOTTOM-4	2-Dec-10	L959374-2	Water	250	250	1280	7.64	1.7	16.2	0.25	2.5	1.62	0.025	0.005	765		726.76	0.0274
5	5	2748-18-COMP-BOTTOM-5	9-Dec-10	L961485-2	Water	250	250	1280	7.62	1.7	21	0.25	2.5	1.66	0.025	0.012	776		734.82	0.0377
6	6	2748-18-COMP-BOTTOM-6	16-Dec-10	L963383-2	Water	250	250	1270	7.5	4.3	19.7	0.25	2.5	2.01	0.025	0.005	758		729.14	0.0407
7	7	2748-18-COMP-BOTTOM-7	23-Dec-10	L965468-2	Water	250	250	1150	7.7	4.4	18	0.25	2.5	1.79	0.025	0.005	667		612.62	0.044
8	8	2748-18-COMP-BOTTOM-8	30-Dec-10	L966302-2	Water	250	250	1000	7.51	3.8	17	0.25	2.5	1.88	0.025	0.005	568		549.72	0.0312
9	9	2748-18-COMP-BOTTOM-9	6-Jan-11	L967677-2	Water	250	250	830	7.89	3.6	14.7	0.25	2.5	1.72	0.025	0.005	439		423.876	0.0413
10	10	2748-18-COMP-BOTTOM-10	13-Jan-11	L969705-2	Water	250	250	654	8.05	2	14.2	0.025	0.56	2.07	0.0025	0.0005	323		300.736	0.0514
11	11	2748-18-COMP-BOTTOM-11	20-Jan-11	L971735-2	Water	250	250	499	7.5	2.7	13.3	0.025	0.25	1.99	0.0025	0.0005	227		221.404	0.0599
12	12	2748-18-COMP-BOTTOM-12	27-Jan-11	L973585-2	Water	250	250	378	7.63	1.1	14.8	0.025	0.25	2.02	0.0025	0.0005	161		156.102	0.0722
13	13	2748-18-COMP-BOTTOM-13	3-Feb-11	L975421-2	Water	250	250	282	7.78	1.8	15.7	0.025	0.25	1.83	0.0025	0.0005	112		110.586	0.0825
14	14	2748-18-COMP-BOTTOM-14	10-Feb-11	L977333-2	Water	250	250	231	8.51	0.5	15.4	0.025	0.25	1.54	0.0025	0.0005	84.5		81.822	0.0848
15	15	2748-18-COMP-BOTTOM-15	17-Feb-11	L979183-2	Water	250	250	213	8.06	1.1	17.2	0.025	0.25	1.35	0.0025	0.0005	74.6		76.74	0.0898
16	16	2748-18-COMP-BOTTOM-16	24-Feb-11	L980993-2	Water	250	250	200	8.58	2.1	16.4	0.025	0.25	1.16	0.0025	0.0005	66.6		64.042	0.084
17	17	2748-18-COMP-BOTTOM-17	3-Mar-11	L983010-2	Water	250	250	182	8.67	1.4	17.3	0.025	0.25	1.07	0.0025	0.0005	59.1		57.494	0.0919
18	18	2748-18-COMP-BOTTOM-18	10-Mar-11	L985022-2	Water	250	250	170	8.55	2.1	16.4	0.025	0.25	0.978	0.0025	0.0005	54.8		52.688	0.0911
19	19	2748-18-COMP-BOTTOM-19	17-Mar-11	L986969-2	Water	250	250	162	8.48	1.4	16.3	0.025	0.25	0.938	0.0025	0.0005	51		49.688	0.0942
20	20	2748-18-COMP-BOTTOM-20	24-Mar-11	L988833-2	Water	250	250	150	8.36	1.8	17.1	0.85	0.25	0.853	0.0025	0.0005	47.1		46.14	0.102
21	21	2748-18-COMP-BOTTOM-21	31-Mar-11	L990993-2	Water	250	250	142	8.4	1.8	13.9	0.025	0.25	0.795	0.0025	0.0005	41.1		43.366	0.112
22	22	2748-18-COMP-BOTTOM-22	7-Apr-11	L992887-2	Water	250	250	140	7.88	0.5	16.3	0.025	0.25	0.631	0.0025	0.0005	41		42.926	0.109
23	23	2748-18-COMP-BOTTOM-23	14-Apr-11	L995110-2	Water	250	250	148	8.08	1.8	21	0.025	0.25	0.778	0.0058	0.0005	42.4		49.272	0.0785
24	24	2748-18-COMP-BOTTOM-24	21-Apr-11	L997506-2	Water	250	250	119	8.2	2.4	21.5	0.025	0.25	0.714	0.0025	0.0005	39.8		46.49	0.0815
25	25	2748-18-COMP-BOTTOM-25	28-Apr-11	L999346-2	Water	250	250	118	8.14	2.5	23.4	0.025	0.25	0.719	0.0025	0.0005	38.4		45.96	0.0903
26	26	2748-18-COMP-BOTTOM-26	5-May-11	L1001802-2	Water	250	250	138	8.13	2.8	21.4	0.025	0.25	0.681	0.0025	0.0005	34.2		43.754	0.0789
27	27	2748-18-COMP-BOTTOM-27	12-May-11	L1004455-2	Water	250	250	137	8.05	2.4	25.2	0.025	0.57	0.698	0.0025	0.0005	34.4		46.394	0.0771
28	28	2748-18-COMP-BOTTOM-28	19-May-11	L1007194-2	Water	250	250	140	8.11	1.3	26.8	0.025	0.7	0.685	0.0025	0.0005	35.9		49.31	0.0759
29	29	2748-18-COMP-BOTTOM-29	26-May-11	L1009614-2	Water	250	250	140	8.09	2.9	21	0.025	0.72	0.692	0.0025	0.0005	37.1		53.1	0.0717
30	30	2748-18-COMP-BOTTOM-30	2-Jun-11	L1012270-2	Water	250	250	122	8.08	2.3	28.6	0.025	0.77	0.729	0.0025	0.0005	35.7		47.97	0.0673
31	31	2748-18-COMP-BOTTOM-31	9-Jun-11	L1014825-2	Water	250	250	104	8.13	1.2	28.6	0.025	0.78	0.747	0.0025	0.0005	34.5		47.258	0.0574
32	32	2748-18-COMP-BOTTOM-32	16-Jun-11	L1018796-2	Water	250	250	130	8.18	1.3	29.4	0.025	0.78	0.661	0.0025	0.0005	34		49.86	0.0604
33	33	2748-18-COMP-BOTTOM-33	23-Jun-11	L1021686-2	Water	250	250	117	8.18	1.1	29.3	0.025	0.65	0.706	0.0025	0.0005	33.9		50.126	0.0615
34	34	2748-18-COMP-BOTTOM-34	30-Jun-11	L1025013-2	Water	250	250	118	8.11	1	30.4	0.025	0.71	0.722	0.0005	0.0025	32.5		48.392	0.057
35	35	2748-18-COMP-BOTTOM-35	7-Jul-11	L1027705-2	Water	250	250	129	8.16	2.5	31.9	0.025	0.76	0.732	0.0005	0.0025	33.2		51.276	0.0643
36	36	2748-18-COMP-BOTTOM-36	14-Jul-11	L1030959-2	Water	250	250	113	8.13	1.9	32.5	0.025	0.71	0.741	0.0005	0.0025	33.1		50.75	0.0542
37	37	2748-18-COMP-BOTTOM-37	21-Jul-11	L1034025-2	Water	250	250	118	8.08	2	32.2	0.025	0.65	0.727	0.0005	0.0025	32.2		49.54	0.0567
38	38	2748-18-COMP-BOTTOM-38	28-Jul-11	L1037219-2	Water	250	250	123	8.13	3.4	33.6	0.025	0.78	0.752	0.0005	0.0066	31.3		48.79	0.0624
39	39	2748-18-COMP-BOTTOM-39	4-Aug-11	L1039952-2	Water	250	250	145	8.17	2	34.3	0.025	0.78	0.799	0.0005	0.0125	31.5		52.37	0.0637
40	40	2748-18-COMP-BOTTOM-40	11-Aug-11	L1042929-2	Water	250	250	140	8.1	1.3	35.8	0.025	0.82	0.752	0.0066	0.0005	32.9		53.73	0.0497
41	41	2748-18-COMP-BOTTOM-41	18-Aug-11	L1046300-2	Water	250	250	143	8.22	1.4	34.2	0.025	0.73	0.778	0.0025	0.0005	32.4		54.44	0.0518
42	42	2748-18-COMP-BOTTOM-42	25-Aug-11	L1049367-2	Water	250	250	138	8.09	3	33.8	0.025	0.72	0.804	0.0025	0.0005	32.1		52.64	0.054
43	43	2748-18-COMP-BOTTOM-43	1-Sep-11	L1052579-2	Water	250	250	141	8.14	3.3	33.2	0.025	0.72	0.818	0.0025	0.0005	31.1		52.56	0.0543
44	44	2748-18-COMP-BOTTOM-44	8-Sep-11	L1055188-2	Water	250	250	139	8.04	3.9	32.3	0.025	0.72	0.848	0.0025	0.0005	31.1		51.6	0.0575
45	45	2748-18-COMP-BOTTOM-45	15-Sep-11	L1058412-2	Water	250	250	129	8.12	1.2	30.9	0.025	0.65	0.84	0.0025	0.0005	28.9		49.2	0.0556
46	46	2748-18-COMP-BOTTOM-46	22-Sep-11	L1061631-2	Water	250	250	121	8.05	3.9	30.8	0.025	0.59	0.837	0.0025	0.0005	29.3		49.57	0.0535
47	47	2748-18-COMP-BOTTOM-47	29-Sep-11	L1064810-2	Water	250	250	131	8.15	4.3	31.5	0.025	0.73	0.849	0.0052	0.0005	29		48.95	0.0577
48	48	2748-18-COMP-BOTTOM-48	6-Oct-11	L1068076-2	Water	250	250	134	8.27	3	32	0.025	0.69	0.844	0.0092	0.0011	29.8		50.82	0.0506
49	49	2748-18-COMP-BOTTOM-49	13-Oct-11	L1070777-2	Water	250	250	131	8.24	2.3	33.3	0.025	0.64	0.852	0.0025	0.0005	28.8		49.36	0.0514
50	50	2748-18-COMP-BOTTOM-50	20-Oct-11	L1073877-2	Water	250	250	127	8.28	3.4	31	0.025	0.58	0.859	0.0025	0.0005	27.6		47.41	0.055
51	51	2748-18-COMP-BOTTOM-51	27-Oct-11	L1077169-2	Water	250	250	122	8.18	2.7	31.2	0.025	0.63	0.854	0.0077	0.0005	26.4		45.75	0.054
52	52	2748-18-COMP-BOTTOM-52	3-Nov-11	L1079967-2	Water	250	250	124	8.3	1.8	30.1	0.025	0.59	0.867	0.0025	0.0005	26.4		46.87	0.0592
53	53	2748-18-COMP-BOTTOM-53	10-Nov-11	L1082904-2	Water	250	250	133	8.05	1.7	30.1	0.025	0.55	0.863	0.0069	0.0005	25.4		45.198	0.0555
54	54	2748-18-COMP-BOTTOM-54	17-Nov-11	L1085271-2	Water	250	250	117	8.1	5.4	29.1	0.025	0.52	0.868	0.0025	0.0005	24.1		44	0.0598
55	55	2748-18-COMP-BOTTOM-55	24-Nov-11	L1088458-2	Water	250	250	121	8.18	2.5	29.5	0.025	0.52	0.874	0.0025	0.0005	23.5		41.48	0.0599
56	56	2748-18-COMP-BOTTOM-56	1-Dec-11	L1090934-2	Water	250	250	111	8.01	3.6	29.1	0.025	0.25	0.863	0.0005	0.0025	22.1		40.73	0.0584
57	57	2748-18-COMP-BOTTOM-57	8-Dec-11	L1092883-2	Water	250	250	108	8.15	2.4	28.8	0.025	0.25	0.874	0.0005	0.0025	21.3		39.586	0.0628
58	58	2748-18-COMP-BOTTOM-58	15-Dec-11	L1095557-2	Water	250	250	115	8	2.1	27.3	0.025	0.25	0.874	0.0005	0.0025	20.8		39.692	0.0655

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

						Sample Preparation		Physical Tests			Anions and Nutrients									
Week	Cycle	Sample ID	Date Sampled	ALS Sample ID	Matrix	Total Volume In mL	Total Volume Out mL	Conductivity uS/cm	pH	Acidity (as $CaCO_3$) mg/L	Total (as CaCO3) mg/L	Bromide (Br) mg/L	Chloride (Cl) mg/L	Fluoride (F) mg/L	Nitrite (as N) mg/L	Nitrate (as N) mg/L	Sulfate (SO_4) mg/L	Sulfide as S mg/L	Hardness mg/L	Aluminum (Al) mg/L
59	59	2748-18-COMP-BOTTOM-59	22-Dec-11	L1098132-2	Water	250	250	113	8.11	3.6	27.8	0.025	0.25	0.89	0.0005	0.0025	20.4		38.09	0.06715
60	60	2748-18-COMP-BOTTOM-60	29-Dec-11	L1099505-2	Water	250	250	112	8	2.6	27.9	0.025	0.25	0.858	0.0005	0.0025	19.8		36.488	0.0688
61	61	2748-18-COMP-BOTTOM-61	5-Jan-12	L1101161-2	Water	250	250	109	8.09	1.2	27.9	0.025	0.25	0.885	0.0005	0.0025	19.5		36.944	0.0637
62	62	2748-18-COMP-BOTTOM-62	12-Jan-12	L1103218-2	Water	250	250	110	8.13	2.8	27.2	0.025	0.25	0.908	0.0005	0.0025	19.1		38.82	0.0704
63	63	2748-18-COMP-BOTTOM-63	19-Jan-12	L1105374-2	Water	250	250	122	8.23	2.7	28.8	0.025	0.72	0.879	0.0005	0.0059	21.2		42.974	0.0604
64	64	2748-18-COMP-BOTTOM-64	26-Jan-12	L1107925-2	Water	250	250	130	8.18	2.7	31.8	0.025	0.63	0.883	0.0005	0.0025	23.3		46.514	0.0558
65	65	2748-18-COMP-BOTTOM-65	2-Feb-12	L1109671-2	Water	250	250	129	8.19	3	33.1	0.025	0.57	0.901	0.0005	0.0082	22.5		47.948	0.0558
66	66	2748-18-COMP-BOTTOM-66	9-Feb-12	L1112610-2	Water	250	250	126	7.98	1.9	33.4	0.025	0.25	0.937	0.0005	0.0025	21		44.878	0.053
67	67	2748-18-COMP-BOTTOM-67	16-Feb-12	L1114860-2	Water	250	250	126	8.03	3.6	33.9	0.025	0.25	0.924	0.0005	0.0065	20.9		46.37	0.0543
68	68	2748-18-COMP-BOTTOM-68	23-Feb-12	L1116437-2	Water	250	250	127	7.99	2.2	33.3	0.025	0.25	0.945	0.0005	0.0025	20.9		46.96	0.0545
69	69	2748-18-COMP-BOTTOM-69	1-Mar-12	L1119458-2	Water	250	250	121	8.05	2.8	32.6	0.025	0.25	0.924	0.0005	0.0062	19.1		43.804	0.0637
70	70	2748-18-COMP-BOTTOM-70	8-Mar-12	L1121845-2	Water	250	250	126	8.02	1.1	34.3	0.025	0.25	0.918	0.0005	0.0025	20.2		45.32	0.0517
71	71	2748-18-COMP-BOTTOM-71	15-Mar-12	L1123341-2	Water	250	250	126	8.01	5.5	35.2	0.025	0.25	0.926	0.0005	0.0025	19.8		45.33	0.0512
72	72	2748-18-COMP-BOTTOM-72	22-Mar-12	L1125893-2	Water	250	250	125	8.06	2.6	34.5	0.025	0.25	0.929	0.0005	0.0025	19.3		46.4	0.0537
73	73	2748-18-COMP-BOTTOM-73	29-Mar-12	L1127571-2	Water	250	250	123	8.12	1.8	35.1	0.025	0.25	0.944	0.0005	0.0025	18.9		45.28	0.057
74	74	2748-18-COMP-BOTTOM-74	5-Apr-12	L1131093-2	Water	250	250	122	8.06	3.6	34.1	0.025	0.25	0.933	0.0005	0.0025	18.6		44.36	0.0566
75	75	2748-18-COMP-BOTTOM-75	12-Apr-12	L1133717-2	Water	250	250	123	8.08	1.6	35.6	0.025	0.25	0.97	0.0005	0.0025	18.6		45.15	0.058
76	76	2748-18-COMP-BOTTOM-76	19-Apr-12	L1136018-2	Water	250	250	122	8.11	2.2	34.8	0.025	0.25	0.965	0.0005	0.0025	18.15		44.5	0.057
77	77	2748-18-COMP-BOTTOM-77	26-Apr-12	L1138914-2	Water	250	250	121	8.1	2.2	34.8	0.025	0.25	0.965	0.0005	0.0025	18.15		44.5	0.057
78	78	2748-18-COMP-BOTTOM-78	3-May-12	L1141952-2	Water	250	250	120	8.11	2.8	34	0.025	0.25	0.96	0.0005	0.0025	17.7		43.85	0.056
79	79	2748-18-COMP-BOTTOM-79	10-May-12	L1144821-2	Water	250	250	118	8.06	2.875	34.2	0.025	0.25	0.965	0.0005	0.00425	17.6		44.175	0.055275
80	80	2748-18-COMP-BOTTOM-80	17-May-12	L1148020-2	Water	250	250	119	8.04	2.95	34.4	0.025	0.25	0.97	0.0005	0.006	17.5		44.5	0.05455
81	81	2748-18-COMP-BOTTOM-81	24-May-12	L1150672-2	Water	250	250	119	8.12	3.025	34.6	0.025	0.25	0.975	0.0005	0.00775	17.4		44.825	0.053825
82	82	2748-18-COMP-BOTTOM-82	31-May-12	L1154637-2	Water	250	250	120	8.01	3.1	34.8	0.025	0.25	0.98	0.0005	0.0095	17.3		45.15	0.0531
83	83	2748-18-COMP-BOTTOM-83	7-Jun-12	L1157997-2	Water	250	250	118	8.01	2.95	35.15	0.025	0.25	0.9875	0.0005	0.00775	17.05		44.4725	0.053725
84	84	2748-18-COMP-BOTTOM-84	14-Jun-12	L1161537-2	Water	250	250	116	8.04	2.8	35.5	0.025	0.25	0.995	0.0005	0.006	16.8		43.795	0.05435
85	85	2748-18-COMP-BOTTOM-85	21-Jun-12	L1165019-2	Water	250	250	115	8.14	2.65	35.85	0.025	0.25	1.0025	0.0005	0.00425	16.55		43.1175	0.054975
86	86	2748-18-COMP-BOTTOM-86	28-Jun-12	L1168786-2	Water	250	250	117	8.15	2.5	36.2	0.025	0.25	1.01	0.0005	0.0025	16.3		42.44	0.0556
87	87	2748-18-COMP-BOTTOM-87	5-Jul-12	L1171985-2	Water	250	250	117	8	2.675	36.45	0.025	0.25	1.01	0.0005	0.003825	15.375		42.085	0.055425
88	88	2748-18-COMP-BOTTOM-88	12-Jul-12	L1175602-2	Water	250	250	117	8.08	2.85	36.7	0.025	0.25	1.01	0.0005	0.00515	14.45		41.73	0.05525
89	89	2748-18-COMP-BOTTOM-89	19-Jul-12	L1180182-2	Water	250	250	112	8.1	3.025	36.95	0.025	0.25	1.01	0.0005	0.006475	13.525		41.375	0.055075
90	90	2748-18-COMP-BOTTOM-90	26-Jul-12	L1183284-2	Water	250	250	115	8.12	3.1	36.9	0.025	0.25	1.01	0.0005	0.0025	15		41.56	0.0555
91	91	2748-18-COMP-BOTTOM-91	2-Aug-12	L1186487-2	Water	250	250	118	8.09	3.1	36.9	0.025	0.25	1.01	0.0005	0.0025	15		41.56	0.0555
92	92	2748-18-COMP-BOTTOM-92	9-Aug-12	L1191172-2	Water	250	250	117	8.11	3.1	36.9	0.025	0.25	1.01	0.0005	0.0025	15		41.56	0.0555
93	93	2748-18-COMP-BOTTOM-93	16-Aug-12	L1194400-2	Water	250	250	114	8	3.1	36.9	0.025	0.25	1.01	0.0005	0.0025	15		41.56	0.0555
94	94	2748-18-COMP-BOTTOM-94	23-Aug-12	L1197933-2	Water	250	250	117	8.1	2.2	38	0.025	0.25	1.02	0.0005	0.0025	14.9		42.4	0.0555
95	95	2748-18-COMP-BOTTOM-95	30-Aug-12	L1202323-2	Water	250	250	114	8.18	2.2	38	0.025	0.25	1.02	0.0005	0.0025	14.9		42.4	0.0555
96	96	2748-18-COMP-BOTTOM-96	6-Sep-12	L1204442-2	Water	250	250	117	8.1	2.2	38	0.025	0.25	1.02	0.0005	0.0025	14.9		42.4	0.0555
97	97	2748-18-COMP-BOTTOM-97	13-Sep-12	L1208259-2	Water	250	250	114	8.1	2.2	38	0.025	0.25	1.02	0.0005	0.0025	14.9		42.4	0.0555
98	98	2748-18-COMP-BOTTOM-98	20-Sep-12	L1211696-2	Water	500	500	113	8.08	2.2	36	0.025	0.25	1.03	0.0005	0.0025	13.7		41.85	0.0514
99	99	2748-18-COMP-BOTTOM-99	27-Sep-12	L1214847-2	Water	250	325	112	8.09	2.2	36	0.025	0.25	1.03	0.0005	0.0025	13.7		41.85	0.0514
100	100	2748-18-COMP-BOTTOM-100	4-Oct-12	L1218688-2	Water	250	250	109	8.08	2.2	36	0.025	0.25	1.03	0.0005	0.0025	13.7		41.85	0.0514
101	101	2748-18-COMP-BOTTOM-101	11-Oct-12	L1220864-2	Water	250	250	111	8.07	2.2	36	0.025	0.25	1.03	0.0005	0.0025	13.7		41.85	0.0514
102	102	2748-18-COMP-BOTTOM-102	18-Oct-12	L1225295-2	Water	250	250	109	8.02	3.2	37.2	0.025	0.25	1.01	0.0005	0.0078	12.6		41.02	0.0549
Mean									8.09	2.2	37.2	0.025	0.25	1.026	0.0005	0.0025	14.18	#DIV/0!	42.18	0.05222

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals																
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
M_Rougher Top																	
ROUGHER-TOP-1	0.0005	0.0005	0.0157	0.0025	0.0025	0.05	0.00025	305	0.0025	0.0005	0.0005	0.015	0.00025	0.03	2.28	0.169	0.0005
ROUGHER-TOP-2	0.0005	0.0005	0.019	0.0025	0.0025	0.05	0.00025	185	0.0025	0.0005	0.0005	0.015	0.00025	0.016	1.3	0.141	0.0005
ROUGHER-TOP-3	0.0005	0.0005	0.0168	0.0025	0.0025	0.05	0.00025	212	0.0025	0.0005	0.0005	0.015	0.00025	0.019	1.44	0.188	0.0005
ROUGHER-TOP-4	0.0005	0.0005	0.0209	0.0025	0.0025	0.05	0.00025	114	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.812	0.102	0.0005
ROUGHER-TOP-5	0.0005	0.0005	0.0222	0.0025	0.0025	0.05	0.00025	78.4	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.69	0.0975	0.0005
ROUGHER-TOP-6	0.0005	0.0005	0.0255	0.0025	0.0025	0.05	0.00025	70.6	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.733	0.101	0.0005
ROUGHER-TOP-7	0.0005	0.0042	0.0217	0.0025	0.0025	0.05	0.00025	93.2	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.14	0.145	0.0005
ROUGHER-TOP-8	0.0005	0.0005	0.0306	0.0025	0.0025	0.05	0.00025	53.4	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.865	0.0961	0.0005
ROUGHER-TOP-9	0.0005	0.0005	0.0313	0.0025	0.0025	0.05	0.00025	54.2	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.926	0.0802	0.0005
ROUGHER-TOP-10	0.0005	0.0005	0.0356	0.0025	0.0025	0.05	0.00025	47.7	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.974	0.0764	0.0005
ROUGHER-TOP-11	0.0005	0.0005	0.0318	0.0025	0.0025	0.05	0.00025	43.4	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.09	0.0814	0.0005
ROUGHER-TOP-12	0.0005	0.0005	0.0343	0.0025	0.0025	0.05	0.00025	39.2	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.18	0.0773	0.0005
ROUGHER-TOP-13	0.0005	0.0005	0.0404	0.0025	0.0025	0.05	0.00025	36.2	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.15	0.0701	0.0005
ROUGHER-TOP-14	0.0005	0.0005	0.0422	0.0025	0.0025	0.05	0.00025	35.5	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.22	0.0685	0.0005
ROUGHER-TOP-15	0.0005	0.0005	0.0444	0.0025	0.0025	0.05	0.00025	31.6	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.13	0.065	0.0005
ROUGHER-TOP-16	0.0005	0.0005	0.0507	0.0025	0.0025	0.05	0.00025	26.5	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.14	0.0654	0.0005
ROUGHER-TOP-17	0.0005	0.0005	0.0601	0.0025	0.0025	0.05	0.00025	24	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.21	0.0634	0.0005
ROUGHER-TOP-18	0.0005	0.0005	0.0662	0.0025	0.0025	0.05	0.00025	22.3	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.14	0.0529	0.0005
ROUGHER-TOP-19	0.0005	0.0005	0.0732	0.0025	0.0025	0.05	0.00025	21.4	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.2	0.0548	0.0005
ROUGHER-TOP-20	0.0005	0.0005	0.0793	0.0025	0.0025	0.05	0.00025	19	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.1	0.0481	0.0005
ROUGHER-TOP-21	0.0005	0.0005	0.0846	0.0025	0.0025	0.05	0.00025	17.5	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.07	0.0435	0.0005
ROUGHER-TOP-22	0.0005	0.0005	0.108	0.0025	0.0025	0.05	0.00025	17.1	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.22	0.0424	0.0005
ROUGHER-TOP-23	0.0005	0.0005	0.112	0.0025	0.0025	0.05	0.00025	16.1	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.16	0.0368	0.0005
ROUGHER-TOP-24	0.0005	0.0005	0.126	0.0025	0.0025	0.05	0.00025	14.8	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.14	0.0314	0.0005
ROUGHER-TOP-25	0.0005	0.0005	0.138	0.0025	0.0025	0.05	0.00025	13.6	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.08	0.0231	0.0005
ROUGHER-TOP-26	0.0005	0.0005	0.16	0.0025	0.0025	0.05	0.00025	12.8	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.13	0.0201	0.0005
ROUGHER-TOP-27	0.0005	0.0005	0.181	0.0025	0.0025	0.05	0.00025	12.6	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.11	0.012	0.0005
ROUGHER-TOP-28	0.0005	0.0005	0.184	0.0025	0.0025	0.05	0.00025	11.9	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.03	0.00606	0.0005
ROUGHER-TOP-29	0.0005	0.0005	0.214	0.0025	0.0025	0.05	0.00025	11.8	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.06	0.00227	0.0005
ROUGHER-TOP-30	0.0005	0.0005	0.244	0.0025	0.0025	0.05	0.00025	11.7	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.19	0.00198	0.0005
ROUGHER-TOP-31	0.0005	0.0005	0.251	0.0025	0.0025	0.05	0.00025	11	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.01	0.00242	0.0005
ROUGHER-TOP-32	0.0005	0.0005	0.286	0.0025	0.0025	0.05	0.00025	11.1	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.04	0.00295	0.0005
ROUGHER-TOP-33	0.0005	0.0005	0.283	0.0025	0.0025	0.05	0.00025	11.2	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.919	0.00234	0.0005
ROUGHER-TOP-34	0.0005	0.0005	0.337	0.0025	0.0025	0.05	0.00025	11.2	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.999	0.00229	0.0005
ROUGHER-TOP-35	0.0005	0.0005	0.33	0.0025	0.0025	0.05	0.00025	10.6	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.974	0.00224	0.0005
ROUGHER-TOP-36	0.0005	0.0005	0.342	0.0025	0.0025	0.05	0.00025	10.1	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.91	0.0018	0.0005
ROUGHER-TOP-37	0.0005	0.0005	0.377	0.0025	0.0025	0.05	0.00025	9.48	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.958	0.00123	0.0005
ROUGHER-TOP-38	0.0005	0.0005	0.393	0.0025	0.0025	0.05	0.00025	9.35	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.963	0.00104	0.0005
ROUGHER-TOP-39	0.0005	0.0005	0.386	0.0025	0.0025	0.05	0.00025	9.36	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.949	0.00094	0.0005
ROUGHER-TOP-40	0.0005	0.0005	0.361	0.0025	0.0025	0.05	0.00025	8.7	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.932	0.00084	0.0005
ROUGHER-TOP-41	0.0005	0.0005	0.41	0.0025	0.0025	0.05	0.00025	8.53	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.915	0.00073	0.0005
ROUGHER-TOP-42	0.0005	0.0005	0.402	0.0025	0.0025	0.05	0.00025	8.02	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.862	0.00063	0.0005
ROUGHER-TOP-43	0.0005	0.0005	0.418	0.0025	0.0025	0.05	0.00025	8.44	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.907	0.0007	0.0005
ROUGHER-TOP-44	0.0005	0.0005	0.432	0.0025	0.0025	0.05	0.00025	8.36	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.918	0.00094	0.0005
ROUGHER-TOP-45	0.0005	0.0005	0.433	0.0025	0.0025	0.05	0.00025	8.93	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.887	0.00068	0.0005
ROUGHER-TOP-46	0.0005	0.0005	0.426	0.0025	0.0025	0.05	0.00025	8.51	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.937	0.00076	0.0005
ROUGHER-TOP-47	0.0005	0.0005	0.516	0.0025	0.0025	0.05	0.00025	10.6	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.19	0.00073	0.0005
ROUGHER-TOP-48	0.0005	0.0005	0.446	0.0025	0.0025	0.05	0.00025	8.99	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.93	0.00074	0.0005
ROUGHER-TOP-49	0.00013	0.00005	0.459	0.00025	0.00025	0.005	0.000005	12.9	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.909	0.00217	0.000005
ROUGHER-TOP-50	0.00013	0.00005	0.47	0.00025	0.00025	0.005	0.000005	8.38	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.935	0.00105	0.000005
ROUGHER-TOP-51	0.00014	0.00005	0.493	0.00025	0.00025	0.005	0.000005	8.47	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.903	0.000801	0.000005
ROUGHER-TOP-52	0.00013	0.00005	0.555	0.00025	0.00025	0.005	0.000014	8	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.907	0.0011	0.000005
ROUGHER-TOP-53	0.00011	0.00005	0.549	0.00025	0.00025	0.005	0.000005	7.59	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.872	0.000706	0.000005
ROUGHER-TOP-54	0.00012	0.00005	0.49	0.00025	0.00025	0.005	0.000005	7.84	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.906	0.000981	0.000005
ROUGHER-TOP-55	0.00011	0.00005	0.506	0.00025	0.00025	0.005	0.000005	7.61	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.921	0.00074	0.000005
ROUGHER-TOP-56	0.00005	0.00005	0.551	0.00025	0.00025	0.005	0.000005	8.04	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.925	0.000756	0.000005
ROUGHER-TOP-57	0.0001	0.00005	0.503	0.00025	0.00025	0.005	0.000005	7.74	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.835	0.000736	0.000005
ROUGHER-TOP-58	0.00005	0.00005	0.521	0.00025	0.00025	0.005	0.000005	7.82	0.00025	0.00005	0.00025	0.015	0.000086	0.0025	0.835	0.000743	0.000005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals																
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
ROUGHER-TOP-59	0.00005	0.00005	0.511	0.00025	0.00025	0.005	0.000005	7.67	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.801	0.000631	0.000005
ROUGHER-TOP-60	0.00005	0.00005	0.534	0.00025	0.00025	0.005	0.000005	7.93	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.844	0.000657	0.000005
ROUGHER-TOP-61	0.00005	0.00005	0.512	0.00025	0.00025	0.005	0.000005	7.65	0.00053	0.00005	0.00025	0.015	0.000025	0.0025	0.922	0.000678	0.000005
ROUGHER-TOP-62	0.00005	0.00005	0.527	0.00025	0.00025	0.005	0.000005	7.64	0.00052	0.00005	0.00025	0.015	0.000025	0.0025	0.89	0.000534	0.000005
ROUGHER-TOP-63	0.00005	0.00005	0.532	0.00025	0.00025	0.005	0.000005	7.61	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.841	0.000598	0.000005
ROUGHER-TOP-64	0.00005	0.00005	0.543	0.00025	0.00025	0.005	0.000005	7.54	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.882	0.000729	0.000005
ROUGHER-TOP-65	0.00005	0.00005	0.557	0.00025	0.00025	0.005	0.000005	7.49	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.843	0.00066	0.000005
ROUGHER-TOP-66	0.00005	0.00005	0.518	0.00025	0.00025	0.005	0.000005	7.54	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.858	0.000522	0.000005
ROUGHER-TOP-67	0.00005	0.00015	0.575	0.00025	0.00025	0.005	0.000005	7.45	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.86	0.000593	0.000005
ROUGHER-TOP-68	0.00005	0.00005	0.538	0.00025	0.00025	0.005	0.000005	7.26	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.784	0.000614	0.000005
ROUGHER-TOP-69	0.00005	0.00005	0.52	0.00025	0.00025	0.005	0.00001	7.11	0.00025	0.00005	0.00064	0.015	0.000025	0.0025	0.785	0.000519	0.000005
ROUGHER-TOP-70	0.00005	0.00005	0.565	0.00025	0.00025	0.005	0.000005	7.19	0.00053	0.00005	0.00067	0.015	0.000025	0.0025	0.867	0.000461	0.000005
ROUGHER-TOP-71	0.00005	0.00005	0.556	0.00025	0.00025	0.005	0.000005	6.92	0.00025	0.00005	0.0006	0.015	0.000025	0.0025	0.835	0.000495	0.000005
ROUGHER-TOP-72-Final	0.00013	0.00005	0.566	0.00025	0.00025	0.005	0.000017	10.6	0.00025	0.00005	0.00156	0.015	0.000025	0.0025	1.16	0.0251	0.000005
	0.000066	0.00005	0.549	0.00025	0.00025	0.005	0.0000084	7.816	0.000306	0.00005	0.000744	0.015	0.000025	0.0025	0.8862	0.0054378	0.000005
M_Rougher Bottom																	
ROUGHER-BOTTOM-1	0.0005	0.0005	0.0115	0.0025	0.0025	0.05	0.00025	616	0.0025	0.0005	0.0005	0.015	0.00025	0.066	14.5	0.937	0.0005
ROUGHER-BOTTOM-2	0.0005	0.0005	0.0101	0.0025	0.0025	0.05	0.00025	639	0.0025	0.0005	0.0005	0.015	0.00025	0.012	15.4	1.04	0.0005
ROUGHER-BOTTOM-3	0.0005	0.0005	0.01	0.0025	0.0025	0.05	0.00025	625	0.0025	0.0005	0.0005	0.015	0.00025	0.016	15.8	1.29	0.0005
ROUGHER-BOTTOM-4	0.0005	0.0005	0.00924	0.0025	0.0025	0.05	0.00025	646	0.0025	0.0005	0.0005	0.049	0.00025	0.018	15.4	1.51	0.0005
ROUGHER-BOTTOM-5	0.0005	0.0005	0.00942	0.0025	0.0025	0.05	0.00025	607	0.0025	0.0005	0.0005	0.04	0.00025	0.019	15.1	1.39	0.0005
ROUGHER-BOTTOM-6	0.0005	0.0005	0.0105	0.0025	0.0025	0.05	0.0009	619	0.0025	0.0005	0.0005	0.015	0.00025	0.028	14.2	1.53	0.0005
ROUGHER-BOTTOM-7	0.0005	0.0099	0.0106	0.0025	0.0025	0.05	0.00025	600	0.0025	0.0005	0.0005	0.081	0.00025	0.064	15.6	1.47	0.0005
ROUGHER-BOTTOM-8	0.0005	0.0005	0.0104	0.0025	0.0025	0.05	0.00025	598	0.0025	0.0005	0.0005	0.115	0.00025	0.012	15.9	1.61	0.0005
ROUGHER-BOTTOM-9	0.0005	0.0005	0.0111	0.0025	0.0025	0.05	0.00025	613	0.0025	0.0005	0.0005	0.112	0.00025	0.014	12.2	1.01	0.0005
ROUGHER-BOTTOM-10	0.0005	0.0005	0.0108	0.0025	0.0025	0.05	0.00025	640	0.0025	0.0005	0.0005	0.044	0.00025	0.015	11.6	1.09	0.0005
ROUGHER-BOTTOM-11	0.0005	0.0005	0.0111	0.0025	0.0025	0.05	0.00025	616	0.0025	0.0005	0.0005	0.015	0.00025	0.014	11	1.08	0.0005
ROUGHER-BOTTOM-12	0.0005	0.0005	0.0113	0.0025	0.0025	0.05	0.00025	610	0.0025	0.0005	0.0005	0.015	0.00025	0.02	10.1	1.05	0.0005
ROUGHER-BOTTOM-13	0.0005	0.0005	0.0111	0.0025	0.0025	0.05	0.00025	590	0.0025	0.0005	0.0005	0.015	0.00025	0.019	8.53	0.923	0.0005
ROUGHER-BOTTOM-14	0.0005	0.0005	0.0104	0.0025	0.0025	0.05	0.00025	625	0.0025	0.0005	0.0005	0.015	0.00025	0.018	7.82	0.937	0.0005
ROUGHER-BOTTOM-15	0.0005	0.0005	0.0116	0.0025	0.0025	0.05	0.00025	628	0.0025	0.0005	0.0005	0.015	0.00025	0.018	7.43	0.842	0.0005
ROUGHER-BOTTOM-16	0.0005	0.0005	0.0108	0.0025	0.0025	0.05	0.00025	609	0.0025	0.0005	0.0005	0.015	0.00025	0.019	7.17	0.826	0.0005
ROUGHER-BOTTOM-17	0.0005	0.0005	0.0111	0.0025	0.0025	0.05	0.00025	591	0.0025	0.0005	0.001	0.015	0.00025	0.019	6.85	0.732	0.0005
ROUGHER-BOTTOM-18	0.0005	0.0005	0.0108	0.0025	0.0025	0.05	0.00025	617	0.0025	0.0005	0.0005	0.015	0.00025	0.016	6.38	0.718	0.0005
ROUGHER-BOTTOM-19	0.0005	0.0005	0.0115	0.0025	0.0025	0.05	0.00025	640	0.0025	0.0005	0.0005	0.015	0.00025	0.021	6.41	0.662	0.0005
ROUGHER-BOTTOM-20	0.0005	0.0005	0.0106	0.0025	0.0025	0.05	0.00025	611	0.0025	0.0005	0.0005	0.015	0.00025	0.015	5.22	0.545	0.0005
ROUGHER-BOTTOM-21	0.0005	0.0005	0.0109	0.0025	0.0025	0.05	0.00025	600	0.0025	0.0005	0.0005	0.015	0.00025	0.015	5.48	0.627	0.0005
ROUGHER-BOTTOM-22	0.0005	0.0005	0.0116	0.0025	0.0025	0.05	0.00025	607	0.0025	0.0005	0.0005	0.015	0.00025	0.013	5.81	0.639	0.0005
ROUGHER-BOTTOM-23	0.0005	0.0005	0.0108	0.0025	0.0025	0.05	0.00025	712	0.0025	0.0005	0.0005	0.015	0.00025	0.012	5.75	0.633	0.0005
ROUGHER-BOTTOM-24	0.0005	0.0005	0.0117	0.0025	0.0025	0.05	0.00025	633	0.0025	0.0005	0.0005	0.015	0.00025	0.013	5.73	0.642	0.0005
ROUGHER-BOTTOM-25	0.0005	0.0005	0.011	0.0025	0.0025	0.05	0.00025	638	0.0025	0.0005	0.0005	0.015	0.00025	0.012	5.83	0.634	0.0005
ROUGHER-BOTTOM-26	0.0005	0.0005	0.0106	0.0025	0.0025	0.05	0.00025	582	0.0025	0.0005	0.0005	0.015	0.00025	0.013	4.94	0.561	0.0005
ROUGHER-BOTTOM-27	0.0005	0.0005	0.0116	0.0025	0.0025	0.05	0.00025	591	0.0025	0.0005	0.0017	0.015	0.00025	0.013	4.89	0.475	0.0005
ROUGHER-BOTTOM-28	0.0005	0.0005	0.0111	0.0025	0.0025	0.05	0.00025	607	0.0025	0.0005	0.0021	0.015	0.00025	0.005	4.62	0.53	0.0005
ROUGHER-BOTTOM-29	0.0005	0.0005	0.0105	0.0025	0.0025	0.05	0.00025	628	0.0025	0.0005	0.0005	0.015	0.00025	0.005	4.75	0.507	0.0005
ROUGHER-BOTTOM-30	0.0005	0.0005	0.0106	0.0025	0.0025	0.05	0.00025	691	0.0025	0.0005	0.0005	0.015	0.00025	0.005	5.59	0.523	0.0005
ROUGHER-BOTTOM-31	0.0005	0.0005	0.0109	0.0025	0.0025	0.05	0.00025	656	0.0025	0.0005	0.0005	0.015	0.00025	0.005	4.99	0.558	0.0005
ROUGHER-BOTTOM-32	0.0005	0.0005	0.0116	0.0025	0.0025	0.05	0.00025	600	0.0025	0.0005	0.0005	0.015	0.00025	0.019	5.23	0.557	0.0005
ROUGHER-BOTTOM-33	0.0005	0.0005	0.0118	0.0025	0.0025	0.05	0.00025	604	0.0025	0.0005	0.0005	0.015	0.00025	0.01	4.44	0.465	0.0005
ROUGHER-BOTTOM-34	0.0005	0.0005	0.0111	0.0025	0.0025	0.05	0.00025	601	0.0025	0.0005	0.0005	0.015	0.00025	0.031	3.93	0.438	0.0005
ROUGHER-BOTTOM-35	0.0005	0.0005	0.012	0.0025	0.0025	0.05	0.00025	588	0.0025	0.0005	0.0005	0.015	0.00025	0.01	4.55	0.492	0.0005
ROUGHER-BOTTOM-36	0.0005	0.0005	0.0116	0.0025	0.0025	0.05	0.00025	590	0.0025	0.0005	0.0018	0.015	0.00025	0.005	5.4	0.568	0.0005
ROUGHER-BOTTOM-37	0.0005	0.0005	0.0115	0.0025	0.0025	0.05	0.00025	599	0.0025	0.0005	0.0005	0.015	0.00025	0.01	5.61	0.583	0.0005
ROUGHER-BOTTOM-38	0.0005	0.0029	0.0132	0.0025	0.0025	0.05	0.00025	577	0.0025	0.0005	0.0005	0.015	0.00025	0.005	6.05	0.616	0.0005
ROUGHER-BOTTOM-39	0.0005	0.0005	0.0126	0.0025	0.0025	0.05	0.00025	617	0.0025	0.0005	0.0005	0.015	0.00025	0.047	5.5	0.572	0.0005
ROUGHER-BOTTOM-40	0.0005	0.0005	0.0114	0.0025	0.0025	0.05	0.00025	630	0.0025	0.0005	0.0005	0.015	0.00025	0.005	5.43	0.584	0.0005
ROUGHER-BOTTOM-41	0.0005	0.0005	0.0139	0.0025	0.0025	0.05	0.00025	631	0.0025	0.0005	0.0005	0.015	0.00025	0.013	5.87	0.631	0.0005
ROUGHER-BOTTOM-42	0.0005	0.0005	0.0112	0.0025	0.0025	0.05	0.00025	604	0.0025	0.0005	0.0005	0.015	0.00025	0.014	5.76	0.605	0.0005
ROUGHER-BOTTOM-43	0.0012	0.0005	0.0128	0.0025	0.0025	0.05	0.00025	616	0.0025	0.0005	0.0005	0.015	0.00025	0.005	6.92	0.138	0.0005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals																
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
ROUGHER-BOTTOM-44	0.0005	0.0005	0.0141	0.0025	0.0025	0.05	0.00025	603	0.0025	0.0005	0.0005	0.015	0.00025	0.012	5.09	0.538	0.0005
ROUGHER-BOTTOM-45	0.0005	0.0017	0.012	0.0025	0.0025	0.05	0.00025	631	0.0025	0.0005	0.0005	0.015	0.00025	0.005	5.06	0.522	0.0005
ROUGHER-BOTTOM-46	0.0005	0.0005	0.011	0.0025	0.0025	0.05	0.00025	607	0.0025	0.0005	0.0005	0.015	0.00025	0.005	5.11	0.525	0.0005
ROUGHER-BOTTOM-47	0.0005	0.0005	0.0109	0.0025	0.0025	0.05	0.00025	614	0.0025	0.0005	0.0005	0.015	0.00025	0.014	5.11	0.511	0.0005
ROUGHER-BOTTOM-48	0.0005	0.0005	0.0124	0.0025	0.0025	0.05	0.00025	588	0.0025	0.0005	0.0005	0.015	0.00025	0.015	4.57	0.476	0.0005
ROUGHER-BOTTOM-49	0.00014	0.00025	0.011	0.00025	0.00025	0.014	0.00004	617	0.00025	0.00011	0.00025	0.015	0.000025	0.0025	4.61	0.476	0.000005
ROUGHER-BOTTOM-50	0.0001	0.00023	0.0106	0.0005	0.0005	0.01	0.000035	606	0.0005	0.0001	0.0005	0.015	0.00005	0.005	4.4	0.446	0.000005
ROUGHER-BOTTOM-51	0.0001	0.0002	0.0103	0.0005	0.0005	0.01	0.00003	603	0.0005	0.0001	0.0005	0.015	0.00005	0.005	3.98	0.454	0.000005
ROUGHER-BOTTOM-52	0.0001	0.00023	0.0102	0.0005	0.0005	0.01	0.00001	570	0.0005	0.0001	0.0005	0.015	0.00005	0.005	4.03	0.48	0.000005
ROUGHER-BOTTOM-53	0.0001	0.00024	0.0103	0.0005	0.0005	0.01	0.00001	602	0.0005	0.0001	0.0005	0.015	0.00005	0.005	3.46	0.445	0.000005
ROUGHER-BOTTOM-54	0.0001	0.00021	0.0102	0.0005	0.0005	0.01	0.00001	610	0.0005	0.0001	0.0005	0.015	0.00005	0.005	3.3	0.42	0.000005
ROUGHER-BOTTOM-55	0.0001	0.0002	0.00914	0.0005	0.0005	0.02	0.00001	590	0.0005	0.0001	0.0005	0.015	0.00005	0.005	2.82	0.375	0.000005
ROUGHER-BOTTOM-56	0.0001	0.00026	0.011	0.0005	0.0005	0.01	0.00001	603	0.0005	0.0001	0.009	0.015	0.00005	0.005	3.24	0.422	0.000005
ROUGHER-BOTTOM-57	0.0001	0.00023	0.0103	0.0005	0.0005	0.01	0.00001	606	0.0005	0.0001	0.0005	0.015	0.00005	0.005	2.76	0.387	0.000005
ROUGHER-BOTTOM-58	0.0001	0.00023	0.0106	0.0005	0.0005	0.01	0.00001	637	0.0005	0.0001	0.0005	0.015	0.00005	0.005	2.64	0.359	0.000005
ROUGHER-BOTTOM-59	0.0001	0.0001	0.0098	0.0005	0.0005	0.01	0.00001	592	0.0005	0.0001	0.0005	0.015	0.00005	0.005	2.59	0.359	0.000005
ROUGHER-BOTTOM-60	0.0001	0.0001	0.00994	0.0005	0.0005	0.01	0.00001	602	0.0005	0.0001	0.0005	0.015	0.00005	0.005	2.43	0.334	0.000005
ROUGHER-BOTTOM-61	0.0001	0.0001	0.00978	0.0005	0.0005	0.02	0.00001	593	0.0005	0.0001	0.0005	0.015	0.00005	0.005	2.43	0.354	0.000005
ROUGHER-BOTTOM-62	0.0001	0.0001	0.0104	0.0005	0.0005	0.01	0.00001	596	0.0005	0.0001	0.0005	0.015	0.00005	0.005	2.3	0.343	0.000005
ROUGHER-BOTTOM-63	0.0001	0.00021	0.00998	0.0005	0.0005	0.01	0.000033	613	0.0005	0.0001	0.0005	0.015	0.00005	0.005	2.21	0.384	0.000005
ROUGHER-BOTTOM-64	0.0001	0.0001	0.0121	0.0005	0.0005	0.01	0.000058	605	0.0005	0.0001	0.0005	0.015	0.00005	0.005	2.77	0.486	0.000005
ROUGHER-BOTTOM-65	0.0001	0.0001	0.01	0.0005	0.0005	0.01	0.000029	589	0.0005	0.0001	0.0005	0.015	0.00005	0.005	2.2	0.456	0.000005
ROUGHER-BOTTOM-66	0.0001	0.0001	0.00982	0.0005	0.0005	0.01	0.000042	610	0.0005	0.0001	0.0005	0.015	0.00005	0.005	2.48	0.503	0.000005
ROUGHER-BOTTOM-67	0.0001	0.00021	0.0102	0.0005	0.0005	0.01	0.00004	584	0.0005	0.00026	0.0005	0.015	0.00005	0.005	2.81	0.558	0.000005
ROUGHER-BOTTOM-68	0.0001	0.0001	0.00901	0.0005	0.0005	0.01	0.000044	621	0.0005	0.0001	0.0005	0.015	0.00005	0.005	2.06	0.612	0.000005
ROUGHER-BOTTOM-69	0.0001	0.0001	0.0105	0.0005	0.0005	0.01	0.000036	593	0.0005	0.0001	0.0005	0.015	0.00005	0.005	1.88	0.655	0.000005
ROUGHER-BOTTOM-70	0.0001	0.0001	0.0105	0.0005	0.0005	0.01	0.000058	627	0.0005	0.0001	0.0005	0.015	0.00005	0.005	2.34	0.789	0.000005
ROUGHER-BOTTOM-71	0.0001	0.0001	0.00973	0.0005	0.0005	0.01	0.000042	600	0.0005	0.0001	0.0005	0.043	0.00005	0.005	2.17	0.766	0.000005
ROUGHER-BOTTOM-72-Final	0.0001	0.00024	0.012	0.0005	0.0005	0.01	0.000046	577	0.0005	0.0001	0.0033	0.015	0.00005	0.005	1.94	0.841	0.000005
	0.0001	0.000128	0.010348	0.0005	0.0005	0.01	0.0000452	603.6	0.0005	0.0001	0.00106	0.0206	0.00005	0.005	2.078	0.7326	0.000005
M_Sulphide Top																	
SULPHIDE-TOP-1	0.0253	0.0036	0.034	0.0025	0.0025	0.05	0.00025	66.8	0.0025	0.0054	0.0015	7.86	0.00025	0.011	1.49	0.0157	0.0005
SULPHIDE-TOP-2	0.0169	0.0023	0.0402	0.0025	0.0025	0.05	0.00025	36.9	0.0025	0.0031	0.0366	2.91	0.00025	0.005	0.844	0.0146	0.0005
SULPHIDE-TOP-3	0.0227	0.0024	0.0274	0.0025	0.0025	0.05	0.00025	55.7	0.0025	0.0029	0.0318	2.94	0.00025	0.005	1.12	0.0164	0.0005
SULPHIDE-TOP-4	0.0156	0.0019	0.0384	0.0025	0.0025	0.05	0.00025	40.5	0.0025	0.0015	0.0116	1.2	0.00025	0.005	0.74	0.0165	0.0005
SULPHIDE-TOP-5	0.0122	0.0012	0.0355	0.0025	0.0025	0.05	0.00025	35.4	0.0025	0.0011	0.005	0.604	0.00025	0.005	0.641	0.0323	0.0005
SULPHIDE-TOP-6	0.0121	0.0005	0.0386	0.0025	0.0025	0.05	0.00025	41.2	0.0025	0.0005	0.0043	0.193	0.00025	0.005	0.69	0.0725	0.0005
SULPHIDE-TOP-7	0.0151	0.0016	0.0345	0.0025	0.0025	0.05	0.00025	52.1	0.0025	0.0005	0.0042	0.08	0.00025	0.005	1.14	0.0682	0.0005
SULPHIDE-TOP-8	0.0108	0.0005	0.0485	0.0025	0.0025	0.05	0.00025	37.4	0.0025	0.0005	0.0024	0.038	0.00025	0.005	0.883	0.0619	0.0005
SULPHIDE-TOP-9	0.0101	0.0005	0.0467	0.0025	0.0025	0.05	0.00025	41.3	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.842	0.0814	0.0005
SULPHIDE-TOP-10	0.0085	0.0005	0.0479	0.0025	0.0025	0.05	0.00025	42.8	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.89	0.0936	0.0005
SULPHIDE-TOP-11	0.0069	0.0005	0.0408	0.0025	0.0025	0.05	0.00025	40.3	0.0025	0.0005	0.0018	0.015	0.00025	0.005	0.892	0.123	0.0005
SULPHIDE-TOP-12	0.0057	0.0005	0.0417	0.0025	0.0025	0.05	0.00025	39.3	0.0025	0.0005	0.002	0.015	0.00025	0.005	0.96	0.162	0.0005
SULPHIDE-TOP-13	0.0041	0.0005	0.0428	0.0025	0.0025	0.05	0.00025	40.2	0.0025	0.0005	0.003	0.015	0.00025	0.005	1.01	0.24	0.0005
SULPHIDE-TOP-14	0.0032	0.0005	0.0395	0.0025	0.0025	0.05	0.00025	41.6	0.0025	0.001	0.0045	0.015	0.00025	0.005	1.22	0.329	0.0005
SULPHIDE-TOP-15	0.0032	0.0005	0.0381	0.0025	0.0025	0.05	0.00025	37.5	0.0025	0.0005	0.0049	0.015	0.00025	0.005	1.24	0.309	0.0005
SULPHIDE-TOP-16	0.0033	0.0005	0.0424	0.0025	0.0025	0.05	0.00025	37.4	0.0025	0.0005	0.006	0.015	0.00025	0.005	1.33	0.31	0.0005
SULPHIDE-TOP-17	0.0024	0.0005	0.0406	0.0025	0.0025	0.05	0.00025	37.8	0.0025	0.0005	0.0044	0.015	0.00025	0.005	1.45	0.365	0.0005
SULPHIDE-TOP-18	0.0016	0.0005	0.0428	0.0025	0.0025	0.05	0.00025	34.8	0.0025	0.001	0.0079	0.015	0.00025	0.005	1.51	0.364	0.0005
SULPHIDE-TOP-19	0.0011	0.0005	0.0401	0.0025	0.0025	0.05	0.00025	35	0.0025	0.0015	0.0095	0.015	0.00025	0.005	1.81	0.435	0.0005
SULPHIDE-TOP-20	0.0005	0.0005	0.0388	0.0025	0.0025	0.05	0.00054	30.8	0.0025	0.0019	0.0141	0.015	0.00025	0.005	1.79	0.455	0.0005
SULPHIDE-TOP-21	0.0005	0.0005	0.0381	0.0025	0.0025	0.05	0.00089	30.7	0.0025	0.0028	0.0266	0.015	0.00025	0.005	2.01	0.52	0.0005
SULPHIDE-TOP-22	0.0005	0.0005	0.0375	0.0025	0.0025	0.05	0.00115	30.6	0.0025	0.0034	0.0447	0.015	0.00025	0.005	2.14	0.56	0.0005
SULPHIDE-TOP-23	0.0005	0.0005	0.0353	0.0025	0.0025	0.05	0.00148	34.6	0.0025	0.0036	0.11	0.015	0.00025	0.005	1.97	0.558	0.0005
SULPHIDE-TOP-24	0.0005	0.0005	0.0361	0.0025	0.0025	0.05	0.00161	25.7	0.0025	0.0037	0.162	0.015	0.00025	0.005	1.8	0.495	0.0005
SULPHIDE-TOP-25	0.0005	0.0005	0.0373	0.0025	0.0025	0.05	0.00169	25	0.0025	0.0037	0.212	0.015	0.00025	0.005	1.74	0.483	0.0005
SULPHIDE-TOP-26	0.0005	0.0005	0.0373	0.0025	0.0025	0.05	0.00274	24.7	0.0025	0.0046	0.538	0.015	0.00025	0.005	1.81	0.56	0.0005
SULPHIDE-TOP-27	0.0005	0.0005	0.0371	0.0025	0.0025	0.05	0.00255	24.5	0.0025	0.0043	0.506	0.015	0.00025	0.005	1.76	0.517	0.0005
SULPHIDE-TOP-28	0.0005	0.0005	0.0382	0.0025	0.0025	0.05	0.00251	23.7	0.0025	0.0044	0.42	0.015	0.00025	0.005	1.69	0.518	0.0005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
SULPHIDE-TOP-29	0.0005	0.0005	0.0389	0.0025	0.0025	0.05	0.00203	22.9	0.0025	0.004	0.416	0.015	0.00025	0.005	1.72	0.509	0.0005
SULPHIDE-TOP-30	0.0005	0.0005	0.0399	0.0025	0.0025	0.05	0.0019	22.7	0.0025	0.004	0.453	0.015	0.00025	0.005	1.75	0.529	0.0005
SULPHIDE-TOP-31	0.0005	0.0005	0.0397	0.0025	0.0025	0.05	0.00156	21.8	0.0025	0.0034	0.328	0.015	0.00025	0.005	1.45	0.468	0.0005
SULPHIDE-TOP-32	0.0005	0.0005	0.0444	0.0025	0.0025	0.05	0.00025	25	0.0025	0.002	0.0085	0.015	0.00025	0.005	1.47	0.464	0.0005
SULPHIDE-TOP-33	0.0011	0.0005	0.0491	0.0025	0.0025	0.05	0.00025	25.5	0.0025	0.0005	0.0045	0.015	0.00025	0.005	1.28	0.336	0.0005
SULPHIDE-TOP-34	0.0005	0.0005	0.0479	0.0025	0.0025	0.05	0.00025	23.7	0.0025	0.0005	0.0048	0.015	0.00025	0.005	1.2	0.332	0.0005
SULPHIDE-TOP-35	0.0005	0.0005	0.0504	0.0025	0.0025	0.05	0.00025	21.3	0.0025	0.0011	0.0052	0.015	0.00025	0.005	1.32	0.418	0.0005
SULPHIDE-TOP-36	0.0005	0.0005	0.0508	0.0025	0.0025	0.05	0.00025	19.6	0.0025	0.0013	0.0064	0.015	0.00025	0.005	1.31	0.426	0.0005
SULPHIDE-TOP-37	0.0005	0.0005	0.0527	0.0025	0.0025	0.05	0.00055	17.8	0.0025	0.0016	0.008	0.015	0.00025	0.005	1.37	0.455	0.0005
SULPHIDE-TOP-38	0.0005	0.0005	0.0535	0.0025	0.0025	0.05	0.00091	18.9	0.0025	0.0024	0.0327	0.015	0.00025	0.005	1.44	0.511	0.0005
SULPHIDE-TOP-39	0.0005	0.0005	0.0503	0.0025	0.0025	0.05	0.00157	18.1	0.0025	0.0035	0.0942	0.015	0.00025	0.005	1.37	0.52	0.0005
SULPHIDE-TOP-40	0.0005	0.0005	0.0508	0.0025	0.0025	0.05	0.00123	15.9	0.0025	0.0028	0.0687	0.015	0.00025	0.005	1.17	0.436	0.0005
SULPHIDE-TOP-41	0.0005	0.0005	0.0562	0.0025	0.0025	0.05	0.00124	15.4	0.0025	0.0028	0.115	0.015	0.00025	0.005	1.2	0.462	0.0005
SULPHIDE-TOP-42	0.0005	0.0005	0.0538	0.0025	0.0025	0.05	0.00126	14.9	0.0025	0.0029	0.105	0.015	0.00025	0.005	1.14	0.434	0.0005
SULPHIDE-TOP-43	0.0005	0.0005	0.0533	0.0025	0.0025	0.05	0.00177	16.2	0.0025	0.0036	0.454	0.015	0.00025	0.005	1.17	0.481	0.0005
SULPHIDE-TOP-44	0.0005	0.0005	0.045	0.0025	0.0025	0.05	0.00269	16.8	0.0025	0.0043	0.98	0.015	0.00025	0.005	1.26	0.506	0.0005
SULPHIDE-TOP-45	0.0005	0.0005	0.0472	0.0025	0.0025	0.05	0.00267	17.3	0.0025	0.0044	1.03	0.039	0.00025	0.005	1.29	0.535	0.0005
SULPHIDE-TOP-46	0.0005	0.0005	0.0462	0.0025	0.0025	0.05	0.00338	17.2	0.0025	0.005	1.26	0.055	0.00025	0.005	1.35	0.551	0.0005
SULPHIDE-TOP-47	0.0005	0.0005	0.04	0.0025	0.0025	0.05	0.00469	25	0.0025	0.007	1.77	0.122	0.00064	0.005	2.12	0.818	0.0005
SULPHIDE-TOP-48	0.0005	0.0005	0.0422	0.0025	0.0025	0.05	0.00366	20.6	0.0025	0.0052	1.42	0.102	0.00062	0.005	1.53	0.627	0.0005
SULPHIDE-TOP-49	0.00005	0.00005	0.0442	0.00025	0.00025	0.005	0.00342	18.7	0.00025	0.00526	1.51	0.126	0.000639	0.0025	1.53	0.649	0.000005
SULPHIDE-TOP-50	0.00005	0.00005	0.0406	0.00025	0.00025	0.005	0.00314	18.2	0.00025	0.00462	1.39	0.118	0.000623	0.0025	1.54	0.631	0.000005
SULPHIDE-TOP-51	0.00005	0.00005	0.0416	0.00025	0.00025	0.005	0.00297	18.1	0.00025	0.00456	1.37	0.147	0.000781	0.0025	1.5	0.63	0.000005
SULPHIDE-TOP-52	0.00005	0.00005	0.0483	0.00025	0.00025	0.005	0.00268	16.4	0.00025	0.00393	1.31	0.097	0.000573	0.0025	1.54	0.611	0.000005
SULPHIDE-TOP-53	0.00005	0.00005	0.0409	0.00025	0.00025	0.005	0.00257	16	0.00025	0.00399	1.4	0.137	0.000716	0.0025	1.35	0.654	0.000005
SULPHIDE-TOP-54	0.00005	0.00005	0.0424	0.00025	0.00025	0.005	0.00265	15.8	0.00025	0.00409	1.24	0.147	0.000784	0.0025	1.36	0.561	0.000005
SULPHIDE-TOP-55	0.00005	0.00005	0.0423	0.00025	0.00025	0.005	0.00264	15.8	0.00025	0.00389	1.16	0.184	0.000797	0.0025	1.29	0.555	0.000005
SULPHIDE-TOP-56	0.00005	0.00005	0.0442	0.00025	0.00025	0.005	0.00299	16.4	0.00025	0.00452	1.29	0.21	0.000953	0.0025	1.43	0.618	0.000005
SULPHIDE-TOP-57	0.00005	0.00005	0.0416	0.00025	0.00025	0.005	0.0029	15.6	0.00025	0.00427	1.21	0.233	0.00107	0.0025	1.27	0.537	0.000005
SULPHIDE-TOP-58	0.00005	0.00005	0.0413	0.00025	0.00025	0.005	0.00307	15.9	0.00025	0.00447	1.24	0.264	0.00122	0.0025	1.25	0.542	0.000005
SULPHIDE-TOP-59	0.00005	0.00005	0.0384	0.00025	0.00025	0.005	0.00457	17.3	0.00025	0.00551	1.47	0.346	0.00155	0.0025	1.42	0.641	0.000005
SULPHIDE-TOP-60	0.00005	0.00012	0.0385	0.00025	0.00025	0.005	0.00358	17.9	0.00025	0.00511	1.36	0.177	0.00175	0.0025	1.45	0.643	0.000005
SULPHIDE-TOP-61	0.00005	0.0002	0.0369	0.00025	0.00025	0.005	0.00302	17.8	0.00025	0.00565	1.43	0.17	0.00316	0.0025	1.49	0.71	0.000005
SULPHIDE-TOP-62	0.00005	0.00019	0.0368	0.00025	0.00025	0.005	0.00329	18.1	0.00025	0.00656	1.34	0.18	0.00427	0.0025	1.44	0.71	0.000005
SULPHIDE-TOP-63	0.00005	0.00014	0.0353	0.00025	0.00025	0.005	0.00338	19	0.00025	0.00731	1.19	0.21	0.00539	0.0025	1.53	0.737	0.000005
SULPHIDE-TOP-64	0.00005	0.00013	0.0351	0.00025	0.00025	0.005	0.00353	19.1	0.00025	0.00757	1.09	0.17	0.00641	0.0025	1.57	0.756	0.000005
SULPHIDE-TOP-65	0.00005	0.00005	0.0338	0.00025	0.00025	0.005	0.00332	19.5	0.00025	0.00752	0.936	0.166	0.00792	0.0025	1.49	0.732	0.000005
SULPHIDE-TOP-66	0.00005	0.00005	0.0326	0.00025	0.00025	0.005	0.00356	20.3	0.00025	0.00809	0.859	0.177	0.00829	0.0025	1.62	0.82	0.000005
SULPHIDE-TOP-67	0.00005	0.00013	0.0341	0.00025	0.00025	0.005	0.00388	20.7	0.00025	0.00879	0.853	0.169	0.0105	0.0025	1.71	0.846	0.000005
SULPHIDE-TOP-68	0.00005	0.00005	0.0322	0.00025	0.00025	0.005	0.00334	20	0.00025	0.00768	0.696	0.166	0.0126	0.0025	1.47	0.743	0.000005
SULPHIDE-TOP-69	0.00005	0.00005	0.0394	0.00025	0.00025	0.005	0.00502	20.4	0.00025	0.0105	0.868	0.197	0.0142	0.0025	1.93	0.971	0.000005
SULPHIDE-TOP-70	0.00005	0.00005	0.0328	0.00025	0.00025	0.005	0.00402	20.8	0.00025	0.00933	0.726	0.181	0.0165	0.0025	1.73	0.847	0.000005
SULPHIDE-TOP-71	0.00005	0.00005	0.0317	0.00025	0.00025	0.005	0.0039	19.6	0.00025	0.00886	0.662	0.184	0.017	0.0025	1.69	0.792	0.000005
SULPHIDE-TOP-72	0.00005	0.00005	0.0342	0.00025	0.00025	0.005	0.00434	19.2	0.00025	0.0096	0.716	0.18	0.0194	0.0025	1.76	0.883	0.000005
SULPHIDE-TOP-73	0.00005	0.00005	0.0318	0.00025	0.00025	0.005	0.00393	19	0.00025	0.00918	0.634	0.182	0.0214	0.0025	1.69	0.796	0.000005
SULPHIDE-TOP-74	0.00005	0.00005	0.0319	0.00025	0.00025	0.005	0.00399	18.8	0.00025	0.00926	0.647	0.228	0.0242	0.0025	1.71	0.838	0.000005
SULPHIDE-TOP-75	0.00005	0.00005	0.0308	0.00025	0.00025	0.005	0.00397	19	0.00025	0.00908	0.623	0.2	0.0333	0.0025	1.65	0.789	0.000005
SULPHIDE-TOP-76	0.00005	0.00005	0.0338	0.00025	0.00025	0.005	0.00409	16.3	0.00025	0.00838	0.526	0.194	0.0268	0.0025	1.53	0.679	0.000005
SULPHIDE-TOP-77	0.00005	0.00005	0.0322	0.00025	0.00025	0.005	0.00382	17.2	0.00025	0.00865	0.5	0.18	0.0281	0.0025	1.62	0.691	0.000005
SULPHIDE-TOP-Final Leach	0.00005	0.00012	0.0316	0.00025	0.00025	0.005	0.00404	18.4	0.00025	0.00946	0.512	0.157	0.0329	0.0025	1.81	0.775	0.000005
	0.00005	0.000064	0.03206	0.00025	0.00025	0.005	0.003982	17.94	0.00025	0.008966	0.5616	0.1918	0.02906	0.0025	1.664	0.7544	0.000005
M_Sulphide Bottom																	
SULPHIDE-BOTTOM-1	0.0167	0.001	0.016	0.005	0.005	0.25	0.0005	518	0.005	0.0415	0.0075	19.6	0.0005	0.025	16.1	0.0394	0.0005
SULPHIDE-BOTTOM-2	0.027	0.001	0.0167	0.005	0.005	0.15	0.0005	485	0.005	0.0561	0.0332	25.9	0.0005	0.015	19.3	0.156	0.0005
SULPHIDE-BOTTOM-3	0.0421	0.001	0.0146	0.005	0.005	0.1	0.0005	449	0.005	0.0428	0.0868	13.2	0.0005	0.01	19.3	0.0786	0.0005
SULPHIDE-BOTTOM-4	0.0371	0.001	0.0129	0.005	0.005	0.15	0.0015	442	0.005	0.04	0.39	13.9	0.0005	0.015	18.7	0.0789	0.0005
SULPHIDE-BOTTOM-5	0.0367	0.001	0.0127	0.005	0.005	0.15	0.0012	412	0.005	0.042	0.01	11.9	0.0005	0.015	18.7	0.0758	0.0005
SULPHIDE-BOTTOM-6	0.0238	0.001	0.0139	0.0025	0.0025	0.1	0.00025	357	0.0025	0.0382	0.021	9.52	0.00025	0.02	16.5	0.0455	0.0016
SULPHIDE-BOTTOM-7	0.0376	0.0221	0.0139	0.005	0.005	0.1	0.0005	287	0.005	0.0337	0.154	8.79	0.0005	0.01	16.5	0.0565	0.0005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals																
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
SULPHIDE-BOTTOM-8	0.047	0.0015	0.0146	0.0025	0.0025	0.1	0.00025	202	0.0025	0.027	0.0275	6.11	0.00025	0.01	13.4	0.082	0.0005
SULPHIDE-BOTTOM-9	0.0466	0.0013	0.0157	0.0025	0.0025	0.05	0.00077	146	0.0025	0.0169	0.01	4.32	0.00025	0.019	8	0.0731	0.0005
SULPHIDE-BOTTOM-10	0.0473	0.001	0.0172	0.005	0.005	0.05	0.0005	108	0.005	0.0121	0.0237	3.24	0.0005	0.01	6.61	0.0663	0.0005
SULPHIDE-BOTTOM-11	0.0464	0.0013	0.0181	0.0025	0.0025	0.05	0.00025	85.8	0.0025	0.0076	0.114	4.04	0.00025	0.005	4.16	0.0599	0.0005
SULPHIDE-BOTTOM-12	0.0478	0.0012	0.0228	0.0025	0.0025	0.05	0.000425	72	0.0025	0.0065	0.0865	3.53	0.00025	0.005	4.08	0.0626	0.0005
SULPHIDE-BOTTOM-13	0.0345	0.0005	0.0204	0.0025	0.0025	0.05	0.00025	76.7	0.0025	0.0044	0.0177	0.34	0.00025	0.013	4.14	0.086	0.0005
SULPHIDE-BOTTOM-14	0.0406	0.0005	0.0236	0.0025	0.0025	0.05	0.00025	75.8	0.0025	0.0047	0.123	0.968	0.00025	0.011	4.06	0.0708	0.0005
SULPHIDE-BOTTOM-15	0.0408	0.0012	0.0276	0.0025	0.0025	0.05	0.00025	77.1	0.0025	0.004	0.0416	0.56	0.00025	0.011	4.39	0.0821	0.0005
SULPHIDE-BOTTOM-16	0.0419	0.0005	0.028	0.0025	0.0025	0.05	0.00025	71.3	0.0025	0.0035	0.161	1.03	0.00025	0.012	4.06	0.0685	0.0005
SULPHIDE-BOTTOM-17	0.0377	0.0011	0.0315	0.0025	0.0025	0.05	0.00025	76.5	0.0025	0.0029	0.0869	0.4	0.00025	0.012	4.72	0.0862	0.0005
SULPHIDE-BOTTOM-18	0.0311	0.001	0.0296	0.0025	0.0025	0.05	0.00025	87.8	0.0025	0.0023	0.0183	0.093	0.00025	0.013	4.68	0.113	0.0005
SULPHIDE-BOTTOM-19	0.0298	0.0011	0.031	0.0025	0.0025	0.05	0.00025	101	0.0025	0.0026	0.0684	0.045	0.00025	0.017	5.55	0.198	0.0005
SULPHIDE-BOTTOM-20	0.0228	0.0005	0.0257	0.0025	0.0025	0.05	0.00025	105	0.0025	0.0019	0.0364	0.015	0.00025	0.014	5.35	0.29	0.0005
SULPHIDE-BOTTOM-21	0.027	0.0005	0.0299	0.0025	0.0025	0.05	0.00025	90.4	0.0025	0.0026	0.054	0.015	0.00025	0.012	4.94	0.192	0.0005
SULPHIDE-BOTTOM-22	0.0256	0.0005	0.0282	0.0025	0.0025	0.05	0.00025	87.7	0.0025	0.0022	0.0378	0.015	0.00025	0.013	4.55	0.149	0.0005
SULPHIDE-BOTTOM-23	0.0281	0.0012	0.0307	0.0025	0.0025	0.05	0.00054	99.7	0.0025	0.0024	0.0438	0.033	0.00025	0.011	4.99	0.154	0.0005
SULPHIDE-BOTTOM-24	0.0256	0.0005	0.0287	0.0025	0.0025	0.05	0.00025	87.4	0.0025	0.002	0.0359	0.031	0.00025	0.012	4.27	0.129	0.0005
SULPHIDE-BOTTOM-25	0.0263	0.0005	0.0287	0.0025	0.0025	0.05	0.00025	87.8	0.0025	0.002	0.0274	0.052	0.00025	0.012	4.45	0.126	0.0005
SULPHIDE-BOTTOM-26	0.0271	0.0005	0.0291	0.0025	0.0025	0.05	0.00025	78.6	0.0025	0.0019	0.0196	0.043	0.00025	0.013	4.51	0.122	0.0005
SULPHIDE-BOTTOM-27	0.0264	0.0005	0.0291	0.0025	0.0025	0.05	0.00025	81.6	0.0025	0.0019	0.0255	0.049	0.00025	0.005	4.49	0.115	0.0005
SULPHIDE-BOTTOM-28	0.0245	0.0005	0.0303	0.0025	0.0025	0.05	0.00025	86.9	0.0025	0.0016	0.0284	0.015	0.00025	0.005	4.13	0.148	0.0005
SULPHIDE-BOTTOM-29	0.0252	0.0005	0.0286	0.0025	0.0025	0.05	0.00025	87.7	0.0025	0.0018	0.0233	0.015	0.00025	0.012	4.22	0.122	0.0005
SULPHIDE-BOTTOM-30	0.0248	0.0005	0.0288	0.0025	0.0025	0.05	0.00025	93.7	0.0025	0.0017	0.0205	0.036	0.00025	0.013	4.3	0.131	0.0005
SULPHIDE-BOTTOM-31	0.0241	0.0005	0.0284	0.0025	0.0025	0.05	0.00025	87.4	0.0025	0.0015	0.0134	0.03	0.00025	0.005	3.99	0.119	0.0005
SULPHIDE-BOTTOM-32	0.021	0.0005	0.0289	0.0025	0.0025	0.05	0.00025	91.4	0.0025	0.0013	0.0225	0.015	0.00025	0.014	4.6	0.222	0.0005
SULPHIDE-BOTTOM-33	0.0225	0.0005	0.0306	0.0025	0.0025	0.05	0.00025	94.6	0.0025	0.0016	0.0229	0.015	0.00025	0.005	4.83	0.229	0.0005
SULPHIDE-BOTTOM-34	0.0206	0.0005	0.0258	0.0025	0.0025	0.05	0.00025	84.7	0.0025	0.0015	0.0169	0.015	0.00025	0.014	3.74	0.148	0.0005
SULPHIDE-BOTTOM-35	0.0222	0.0005	0.0279	0.0025	0.0025	0.05	0.00025	82	0.0025	0.0017	0.0156	0.015	0.00025	0.012	3.71	0.137	0.0005
SULPHIDE-BOTTOM-36	0.0211	0.0005	0.0285	0.0025	0.0025	0.05	0.00025	82.3	0.0025	0.0015	0.0209	0.015	0.00025	0.013	3.92	0.161	0.0005
SULPHIDE-BOTTOM-37	0.0216	0.0005	0.0302	0.0025	0.0025	0.05	0.00025	83.9	0.0025	0.0015	0.0224	0.015	0.00025	0.014	4.32	0.164	0.0005
SULPHIDE-BOTTOM-38	0.0213	0.0005	0.0315	0.0025	0.0025	0.05	0.00025	80.9	0.0025	0.0014	0.0232	0.015	0.00025	0.011	4.19	0.185	0.0005
SULPHIDE-BOTTOM-39	0.0196	0.0005	0.0309	0.0025	0.0025	0.05	0.00025	88.7	0.0025	0.0013	0.0223	0.015	0.00025	0.016	4.14	0.216	0.0005
SULPHIDE-BOTTOM-40	0.0164	0.0005	0.0302	0.0025	0.0025	0.05	0.00025	95.1	0.0025	0.0013	0.016	0.015	0.00025	0.013	4.13	0.264	0.0005
SULPHIDE-BOTTOM-41	0.0188	0.0005	0.0322	0.0025	0.0025	0.05	0.00025	93.9	0.0025	0.0015	0.0195	0.015	0.00056	0.014	4.47	0.274	0.0005
SULPHIDE-BOTTOM-42	0.0202	0.0005	0.032	0.0025	0.0025	0.05	0.00025	82.2	0.0025	0.0018	0.0297	0.015	0.00025	0.013	4.28	0.199	0.0005
SULPHIDE-BOTTOM-43	0.018	0.0005	0.0289	0.0025	0.0025	0.05	0.00025	82.5	0.0025	0.0014	0.0242	0.015	0.00025	0.012	3.75	0.172	0.0005
SULPHIDE-BOTTOM-44	0.0178	0.0005	0.0301	0.0025	0.0025	0.05	0.00025	82.8	0.0025	0.0014	0.021	0.015	0.00025	0.011	4.09	0.196	0.0005
SULPHIDE-BOTTOM-45	0.011	0.0012	0.0253	0.0025	0.0025	0.05	0.00063	105	0.0025	0.002	0.0095	0.015	0.00025	0.012	4.75	0.511	0.0005
SULPHIDE-BOTTOM-46	0.0134	0.0005	0.0294	0.0025	0.0025	0.05	0.00025	81.8	0.0025	0.0016	0.0169	0.015	0.00025	0.01	3.85	0.275	0.0005
SULPHIDE-BOTTOM-47	0.0148	0.0005	0.0305	0.0025	0.0025	0.05	0.00025	80	0.0025	0.0015	0.0234	0.015	0.00025	0.012	4.15	0.235	0.0005
SULPHIDE-BOTTOM-48	0.0146	0.0005	0.0301	0.0025	0.0025	0.05	0.00025	78.6	0.0025	0.0015	0.0245	0.015	0.00025	0.012	3.84	0.221	0.0005
SULPHIDE-BOTTOM-49	0.0146	0.00042	0.0328	0.00025	0.00025	0.018	0.000403	80	0.00025	0.00155	0.03	0.015	0.000025	0.0085	4.35	0.275	0.000015
SULPHIDE-BOTTOM-50	0.0167	0.00044	0.0304	0.00025	0.00025	0.023	0.000243	72.3	0.00025	0.00131	0.0349	0.015	0.000025	0.0089	4.17	0.168	0.000005
SULPHIDE-BOTTOM-51	0.0198	0.00054	0.0326	0.00025	0.00025	0.018	0.000187	67.4	0.00025	0.00243	0.0677	0.031	0.000025	0.0078	3.82	0.106	0.000005
SULPHIDE-BOTTOM-52	0.019	0.00052	0.0338	0.00025	0.00025	0.02	0.000172	64.5	0.00025	0.00209	0.0576	0.046	0.000025	0.009	4.03	0.106	0.000005
SULPHIDE-BOTTOM-53	0.0175	0.00044	0.0343	0.00025	0.00025	0.017	0.000171	70.3	0.00025	0.00146	0.0265	0.015	0.000025	0.0085	4.25	0.119	0.000005
SULPHIDE-BOTTOM-54	0.0212	0.00055	0.0324	0.00025	0.00025	0.02	0.00016	67.2	0.00025	0.00203	0.0341	0.089	0.000025	0.0084	3.79	0.0958	0.000005
SULPHIDE-BOTTOM-55	0.0204	0.00046	0.0311	0.00025	0.00025	0.02	0.00015	67.5	0.00025	0.00148	0.0219	0.175	0.000025	0.0089	3.62	0.0834	0.000005
SULPHIDE-BOTTOM-56	0.0215	0.00058	0.0353	0.00025	0.00025	0.019	0.000164	64.5	0.00025	0.00177	0.0267	0.28	0.000025	0.0083	3.86	0.0824	0.000005
SULPHIDE-BOTTOM-57	0.0211	0.00054	0.0338	0.00025	0.00025	0.017	0.000153	65.5	0.00025	0.00153	0.0158	0.339	0.000025	0.0082	3.53	0.0774	0.000005
SULPHIDE-BOTTOM-58	0.0225	0.00061	0.0372	0.00025	0.00025	0.016	0.000152	67.6	0.00025	0.00128	0.00878	0.29	0.000025	0.0078	3.41	0.0763	0.000005
SULPHIDE-BOTTOM-59	0.0213	0.00064	0.0335	0.00025	0.00025	0.019	0.000074	64.6	0.00025	0.00124	0.00417	0.272	0.000025	0.0084	3.42	0.0701	0.000005
SULPHIDE-BOTTOM-60	0.0204	0.00061	0.0356	0.00025	0.00025	0.019	0.000189	64.1	0.00025	0.00145	0.0154	0.522	0.000025	0.0083	3.4	0.0769	0.000005
SULPHIDE-BOTTOM-61	0.019	0.00051	0.0372	0.00025	0.00025	0.02	0.000148	67.7	0.00025	0.00117	0.0117	0.205	0.000025	0.0113	3.94	0.095	0.000005
SULPHIDE-BOTTOM-62	0.0214	0.00058	0.0364	0.00025	0.00025	0.018	0.000167	62.6	0.00025	0.00121	0.0304	0.307	0.000025	0.0086	3.28	0.079	0.000005
SULPHIDE-BOTTOM-63	0.0223	0.00064	0.035	0.00025	0.00025	0.022	0.00015	63.5	0.00025	0.00127	0.0137	0.389	0.000025	0.0101	3.42	0.0689	0.000005
SULPHIDE-BOTTOM-64	0.0213	0.00065	0.0373	0.00025	0.00025	0.019	0.000161	63.9	0.00025	0.00129	0.0148	0.428	0.000025	0.0082	3.63	0.0713	0.000005
SULPHIDE-BOTTOM-65	0.0183	0.00044	0.0401	0.00025	0.00025	0.02	0.000134	68.9	0.00025	0.00106	0.0112	0.072	0.000025	0.0089	3.84	0.104	0.000005
SULPHIDE-BOTTOM-66	0.0202	0.00051	0.0353	0.00025	0.00025	0.016	0.000128	69.5	0.00025	0.00106	0.00992	0.164	0.000025	0.0081	3.67	0.0903	0.000005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
SULPHIDE-BOTTOM-67	0.0195	0.0006	0.038	0.00025	0.00025	0.017	0.000168	65.9	0.00025	0.00126	0.0329	0.225	0.000025	0.0078	3.91	0.0931	0.000005
SULPHIDE-BOTTOM-68	0.0194	0.00041	0.034	0.00025	0.00025	0.015	0.000151	74.8	0.00025	0.00086	0.00292	0.041	0.000025	0.0082	3.7	0.125	0.000005
SULPHIDE-BOTTOM-69	0.0203	0.00061	0.0336	0.00025	0.00025	0.013	0.00017	66.2	0.00025	0.00132	0.0548	0.123	0.000025	0.0068	3.5	0.0884	0.000005
SULPHIDE-BOTTOM-70	0.0157	0.00035	0.0375	0.00025	0.00025	0.018	0.000298	81.3	0.00025	0.0009	0.0138	0.015	0.000025	0.0091	4.77	0.239	0.000005
SULPHIDE-BOTTOM-71	0.00991	0.00026	0.0279	0.00025	0.00025	0.019	0.00088	97.9	0.00025	0.00274	0.0119	0.015	0.000025	0.0103	5.79	0.538	0.00001
SULPHIDE-BOTTOM-72	0.0144	0.00028	0.0273	0.00025	0.00025	0.02	0.000349	80.6	0.00025	0.00114	0.0238	0.015	0.000025	0.0079	4.92	0.211	0.000005
SULPHIDE-BOTTOM-73	0.0156	0.00035	0.0268	0.00025	0.00025	0.017	0.000258	76.3	0.00025	0.00119	0.04	0.015	0.000074	0.0077	4.2	0.135	0.000005
SULPHIDE-BOTTOM-74	0.0175	0.0004	0.0275	0.00025	0.00025	0.018	0.000226	74.2	0.00025	0.00122	0.0612	0.015	0.000025	0.0081	4.22	0.108	0.000005
SULPHIDE-BOTTOM-75	0.0143	0.00027	0.0266	0.00025	0.00025	0.019	0.000791	96.2	0.00025	0.00276	0.0193	0.015	0.000053	0.0118	5.46	0.458	0.000034
SULPHIDE-BOTTOM-76	0.0128	0.00035	0.0264	0.00025	0.00025	0.013	0.000283	76.7	0.00025	0.00098	0.0225	0.015	0.000025	0.0079	4.4	0.161	0.000005
SULPHIDE-BOTTOM-77	0.0142	0.00033	0.0253	0.00025	0.00025	0.015	0.000232	75.8	0.00025	0.00098	0.0327	0.015	0.000025	0.0076	4.19	0.12	0.000005
SULPHIDE-BOTTOM-Final Leach	0.0148	0.0005	0.0275	0.00025	0.00025	0.02	0.000174	79.8	0.00025	0.00096	0.0139	0.015	0.000025	0.0087	4.51	0.126	0.000005
	0.01472	0.00037	0.02666	0.00025	0.00025	0.017	0.0003412	80.54	0.00025	0.00138	0.02992	0.015	0.0000306	0.00882	4.556	0.1946	0.0000108
M_Rougher/Sulphide 90/10 Top																	
ROUGHER-SULPHIDE-90/10-TOP-1	0.0015	0.0005	0.0192	0.0025	0.0025	0.05	0.00025	255	0.0025	0.0005	0.0016	0.07	0.016	0.025	2.47	0.116	0.0005
ROUGHER-SULPHIDE-90/10-TOP-2	0.001	0.0005	0.0203	0.0025	0.0025	0.05	0.00025	158	0.0025	0.0005	0.0016	0.015	0.00025	0.015	1.59	0.158	0.0005
ROUGHER-SULPHIDE-90/10-TOP-3	0.00106	0.00025	0.0172	0.00125	0.00125	0.05	0.000125	246	0.00125	0.00025	0.00149	0.015	0.000125	0.021	1.62	0.213	0.0005
ROUGHER-SULPHIDE-90/10-TOP-4	0.0005	0.0005	0.0213	0.0025	0.0025	0.05	0.00025	150	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.975	0.143	0.0005
ROUGHER-SULPHIDE-90/10-TOP-5	0.0005	0.0005	0.0257	0.0025	0.0025	0.05	0.00025	84.9	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.723	0.127	0.0005
ROUGHER-SULPHIDE-90/10-TOP-6	0.0005	0.0005	0.0305	0.0025	0.0025	0.05	0.00025	61.7	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.495	0.115	0.0005
ROUGHER-SULPHIDE-90/10-TOP-7	0.0005	0.0045	0.0236	0.0025	0.0025	0.05	0.00025	85	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.853	0.164	0.0005
ROUGHER-SULPHIDE-90/10-TOP-8	0.0005	0.0005	0.0323	0.0025	0.0025	0.05	0.00025	57.6	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.653	0.144	0.0005
ROUGHER-SULPHIDE-90/10-TOP-9	0.0005	0.0005	0.0297	0.0025	0.0025	0.05	0.00025	58.6	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.578	0.149	0.0005
ROUGHER-SULPHIDE-90/10-TOP-10	0.0005	0.0005	0.0317	0.0025	0.0025	0.05	0.00025	56.3	0.0025	0.0005	0.037	0.015	0.00296	0.005	0.641	0.176	0.0005
ROUGHER-SULPHIDE-90/10-TOP-11	0.0005	0.0005	0.0269	0.0025	0.0025	0.05	0.00025	57.1	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.656	0.237	0.0005
ROUGHER-SULPHIDE-90/10-TOP-12	0.0005	0.0005	0.0275	0.0025	0.0025	0.05	0.00025	56.3	0.0025	0.0005	0.0012	0.015	0.00025	0.005	0.778	0.337	0.0005
ROUGHER-SULPHIDE-90/10-TOP-13	0.0002	0.00005	0.0307	0.00025	0.00025	0.05	0.000051	54.5	0.00025	0.0002	0.00087	0.015	0.000025	0.005	0.755	0.35	0.0005
ROUGHER-SULPHIDE-90/10-TOP-14	0.0005	0.0005	0.0316	0.0025	0.0025	0.05	0.00025	54.9	0.0025	0.0005	0.0011	0.015	0.00025	0.005	0.898	0.427	0.0005
ROUGHER-SULPHIDE-90/10-TOP-15	0.0005	0.0005	0.0336	0.0025	0.0025	0.05	0.00025	48.5	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.825	0.384	0.0005
ROUGHER-SULPHIDE-90/10-TOP-16	0.0005	0.0005	0.0363	0.0025	0.0025	0.05	0.00025	46.1	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.946	0.445	0.0005
ROUGHER-SULPHIDE-90/10-TOP-17	0.0005	0.0005	0.0381	0.0025	0.0025	0.05	0.00025	42.9	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.994	0.433	0.0005
ROUGHER-SULPHIDE-90/10-TOP-18	0.0005	0.0005	0.0412	0.0025	0.0025	0.2	0.00025	37.8	0.0025	0.0005	0.0005	0.06	0.00025	0.02	1.03	0.431	0.0005
ROUGHER-SULPHIDE-90/10-TOP-19	0.0005	0.0005	0.0399	0.0025	0.0025	0.05	0.00025	40	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.25	0.482	0.0005
ROUGHER-SULPHIDE-90/10-TOP-20	0.0005	0.0005	0.0417	0.0025	0.0025	0.05	0.00025	36.3	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.29	0.487	0.0005
ROUGHER-SULPHIDE-90/10-TOP-21	0.0005	0.0005	0.0438	0.0025	0.0025	0.05	0.00025	37.1	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.26	0.42	0.0005
ROUGHER-SULPHIDE-90/10-TOP-22	0.0005	0.0005	0.0476	0.0025	0.0025	0.05	0.00025	36.6	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.31	0.485	0.0005
ROUGHER-SULPHIDE-90/10-TOP-23	0.0005	0.0005	0.0462	0.0025	0.0025	0.05	0.00025	42.6	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.34	0.508	0.0005
ROUGHER-SULPHIDE-90/10-TOP-24	0.0005	0.0005	0.047	0.0025	0.0025	0.05	0.00025	37.1	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.37	0.48	0.0005
ROUGHER-SULPHIDE-90/10-TOP-25	0.0005	0.0005	0.0473	0.0025	0.0025	0.05	0.00025	36.3	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.55	0.482	0.0005
ROUGHER-SULPHIDE-90/10-TOP-26	0.0005	0.0005	0.046	0.0025	0.0025	0.05	0.00025	31	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.72	0.517	0.0005
ROUGHER-SULPHIDE-90/10-TOP-27	0.0005	0.0005	0.0477	0.0025	0.0025	0.05	0.00025	31.9	0.0025	0.0005	0.001	0.015	0.00025	0.005	1.8	0.501	0.0005
ROUGHER-SULPHIDE-90/10-TOP-28	0.0005	0.0005	0.0443	0.0025	0.0025	0.05	0.00025	32.5	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.66	0.449	0.0005
ROUGHER-SULPHIDE-90/10-TOP-29	0.0005	0.0005	0.0479	0.0025	0.0025	0.05	0.00025	34.1	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.81	0.482	0.0005
ROUGHER-SULPHIDE-90/10-TOP-30	0.0005	0.0005	0.0497	0.0025	0.0025	0.05	0.00025	32.5	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.95	0.499	0.0005
ROUGHER-SULPHIDE-90/10-TOP-31	0.0005	0.0005	0.0507	0.0025	0.0025	0.05	0.00025	28.9	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.7	0.444	0.0005
ROUGHER-SULPHIDE-90/10-TOP-32	0.0005	0.0005	0.0515	0.0025	0.0025	0.05	0.00025	26.1	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.67	0.446	0.0005
ROUGHER-SULPHIDE-90/10-TOP-33	0.0005	0.0005	0.0544	0.0025	0.0025	0.05	0.00025	29.2	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.72	0.505	0.0005
ROUGHER-SULPHIDE-90/10-TOP-34	0.0005	0.0005	0.0509	0.0025	0.0025	0.05	0.00025	25.4	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.61	0.476	0.0005
ROUGHER-SULPHIDE-90/10-TOP-35	0.0005	0.0005	0.0541	0.0025	0.0025	0.05	0.00025	22.6	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.55	0.481	0.0005
ROUGHER-SULPHIDE-90/10-TOP-36	0.0005	0.0005	0.0573	0.0025	0.0025	0.05	0.00025	21.4	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.5	0.452	0.0005
ROUGHER-SULPHIDE-90/10-TOP-37	0.0005	0.0005	0.0609	0.0025	0.0025	0.05	0.00025	19.4	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.51	0.437	0.0005
ROUGHER-SULPHIDE-90/10-TOP-38	0.0005	0.0005	0.0618	0.0025	0.0025	0.05	0.00025	19	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.47	0.419	0.0005
ROUGHER-SULPHIDE-90/10-TOP-39	0.0005	0.0005	0.0678	0.0025	0.0025	0.05	0.00025	19.2	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.52	0.452	0.0005
ROUGHER-SULPHIDE-90/10-TOP-40	0.0005	0.0005	0.0615	0.0025	0.0025	0.05	0.00025	17.3	0.0025	0.0005	0.0022	0.015	0.00025	0.005	1.41	0.388	0.0005
ROUGHER-SULPHIDE-90/10-TOP-41	0.0005	0.0005	0.0659	0.0025	0.0025	0.05	0.00025	17.2	0.0025	0.0005	0.0023	0.015	0.00025	0.005	1.59	0.419	0.0005
ROUGHER-SULPHIDE-90/10-TOP-42	0.0005	0.0005	0.0667	0.0025	0.0025	0.05	0.00025	16.5	0.0025	0.0005	0.0019	0.015	0.00025	0.005	1.65	0.418	0.0005
ROUGHER-SULPHIDE-90/10-TOP-43	0.0005	0.0005	0.0651	0.0025	0.0025	0.05	0.00025	17.7	0.0025	0.0005	0.0013	0.015	0.00025	0.005	1.9	0.501	0.0005
ROUGHER-SULPHIDE-90/10-TOP-44	0.0005	0.0005	0.0559	0.0025	0.0025	0.05	0.00025	18.6	0.0025	0.0005	0.0011	0.015	0.00025	0.005	1.98	0.544	0.0005
ROUGHER-SULPHIDE-90/10-TOP-45	0.0005	0.0005	0.056	0.0025	0.0025	0.05	0.00025	18.9	0.0025	0.0005	0.0005	0.015	0.00025	0.005	2.06	0.566	0.0005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals																
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
ROUGHER-SULPHIDE-90/10-TOP-46	0.0005	0.0005	0.0544	0.0025	0.0025	0.05	0.00025	18.5	0.0025	0.0005	0.0005	0.015	0.00025	0.005	2.25	0.604	0.0005
ROUGHER-SULPHIDE-90/10-TOP-47	0.0005	0.0005	0.0507	0.0025	0.0025	0.05	0.00025	24	0.0025	0.0005	0.0005	0.015	0.00025	0.005	3.14	0.749	0.0005
ROUGHER-SULPHIDE-90/10-TOP-48	0.0005	0.0005	0.047	0.0025	0.0025	0.05	0.00025	20.8	0.0025	0.0005	0.0005	0.015	0.00025	0.005	2.43	0.613	0.0005
ROUGHER-SULPHIDE-90/10-TOP-49	0.00005	0.00005	0.0513	0.00025	0.00025	0.005	0.000171	21.7	0.00025	0.00079	0.00089	0.015	0.000025	0.0025	2.5	0.686	0.000005
ROUGHER-SULPHIDE-90/10-TOP-50	0.00005	0.00005	0.0479	0.00025	0.00025	0.005	0.000167	18.9	0.00025	0.00083	0.00076	0.015	0.000025	0.0025	2.56	0.654	0.000005
ROUGHER-SULPHIDE-90/10-TOP-51	0.00005	0.00005	0.0476	0.00025	0.00025	0.005	0.000195	17.9	0.00025	0.00092	0.00106	0.015	0.000025	0.0025	2.55	0.666	0.000005
ROUGHER-SULPHIDE-90/10-TOP-52	0.00005	0.00005	0.0551	0.00025	0.00025	0.005	0.000201	15.6	0.00025	0.00087	0.00142	0.015	0.000025	0.0025	2.58	0.657	0.000005
ROUGHER-SULPHIDE-90/10-TOP-53	0.00005	0.00005	0.0469	0.00025	0.00025	0.005	0.000207	15.1	0.00025	0.00095	0.00083	0.015	0.000025	0.0025	2.7	0.728	0.000005
ROUGHER-SULPHIDE-90/10-TOP-54	0.00005	0.00005	0.0468	0.00025	0.00025	0.005	0.000221	15.6	0.00025	0.00109	0.00076	0.015	0.000025	0.0025	2.41	0.684	0.000005
ROUGHER-SULPHIDE-90/10-TOP-55	0.00005	0.00005	0.0469	0.00025	0.00025	0.005	0.000237	15.2	0.00025	0.00113	0.00079	0.015	0.000025	0.0025	2.3	0.631	0.000005
ROUGHER-SULPHIDE-90/10-TOP-56	0.00005	0.00005	0.0501	0.00025	0.00025	0.005	0.00029	15.7	0.00025	0.00141	0.00096	0.015	0.000025	0.0025	2.49	0.698	0.000005
ROUGHER-SULPHIDE-90/10-TOP-57	0.00005	0.00005	0.0452	0.00025	0.00025	0.005	0.000302	14.9	0.00025	0.00145	0.00111	0.015	0.000025	0.0025	2.2	0.637	0.000005
ROUGHER-SULPHIDE-90/10-TOP-58	0.00005	0.00005	0.0458	0.00025	0.00025	0.005	0.000343	14.7	0.00025	0.00159	0.00113	0.015	0.000025	0.0025	2.11	0.623	0.000005
ROUGHER-SULPHIDE-90/10-TOP-59	0.00005	0.00005	0.0472	0.00025	0.00025	0.005	0.00042	15.1	0.00025	0.00194	0.00132	0.015	0.000025	0.0025	2.24	0.658	0.000005
ROUGHER-SULPHIDE-90/10-TOP-60	0.00005	0.00005	0.0442	0.00025	0.00025	0.005	0.000387	15.1	0.00025	0.00172	0.0014	0.015	0.000025	0.0025	2.13	0.621	0.000005
ROUGHER-SULPHIDE-90/10-TOP-61	0.00005	0.00005	0.0444	0.00025	0.00025	0.005	0.000407	14.3	0.00025	0.00187	0.00159	0.015	0.000025	0.0025	2.13	0.661	0.000005
ROUGHER-SULPHIDE-90/10-TOP-62	0.00005	0.00005	0.046	0.00025	0.00025	0.005	0.000464	13.9	0.00025	0.00194	0.00209	0.015	0.000025	0.0025	1.88	0.591	0.000005
ROUGHER-SULPHIDE-90/10-TOP-63	0.00005	0.00005	0.0464	0.00025	0.00025	0.005	0.000505	13.4	0.00025	0.00207	0.00249	0.015	0.000025	0.0025	1.9	0.554	0.000005
ROUGHER-SULPHIDE-90/10-TOP-64	0.00005	0.00005	0.0535	0.00025	0.00025	0.005	0.000605	12.7	0.00025	0.00226	0.00326	0.015	0.000025	0.0025	1.98	0.599	0.000005
ROUGHER-SULPHIDE-90/10-TOP-65	0.00005	0.00005	0.0492	0.00025	0.00025	0.005	0.00053	12.6	0.00025	0.00214	0.0036	0.015	0.000025	0.0025	1.75	0.548	0.000005
ROUGHER-SULPHIDE-90/10-TOP-66	0.00005	0.00005	0.0462	0.00025	0.00025	0.005	0.000506	12	0.00025	0.00208	0.00414	0.015	0.000025	0.0025	1.66	0.505	0.000005
ROUGHER-SULPHIDE-90/10-TOP-67	0.00005	0.00005	0.0495	0.00025	0.00025	0.005	0.000599	11.9	0.00025	0.00226	0.00599	0.015	0.000025	0.0025	1.67	0.52	0.000005
ROUGHER-SULPHIDE-90/10-TOP-68	0.00005	0.00005	0.0433	0.00025	0.00025	0.005	0.000532	11.7	0.00025	0.00197	0.00578	0.015	0.000025	0.0025	1.47	0.471	0.000005
ROUGHER-SULPHIDE-90/10-TOP-69	0.00005	0.00005	0.0481	0.00025	0.00025	0.005	0.000587	12.1	0.00025	0.00209	0.00885	0.015	0.000025	0.0025	1.51	0.488	0.000005
ROUGHER-SULPHIDE-90/10-TOP-70	0.00005	0.00005	0.05	0.00025	0.00025	0.005	0.000614	11.7	0.00025	0.00221	0.00987	0.015	0.000025	0.0025	1.63	0.522	0.000005
ROUGHER-SULPHIDE-90/10-TOP-71	0.00005	0.00005	0.0492	0.00025	0.00025	0.005	0.000635	11.4	0.00025	0.00213	0.0121	0.015	0.000025	0.0025	1.58	0.508	0.000005
ROUGHER-SULPHIDE-90/10-TOP-72	0.00005	0.00005	0.0518	0.00025	0.00025	0.005	0.000606	10.8	0.00025	0.00211	0.0141	0.015	0.000025	0.0025	1.49	0.508	0.000005
ROUGHER-SULPHIDE-90/10-TOP-73	0.00005	0.00005	0.0511	0.00025	0.00025	0.005	0.000603	10.7	0.00025	0.00204	0.0169	0.015	0.000025	0.0025	1.45	0.49	0.000005
ROUGHER-SULPHIDE-90/10-TOP-74	0.00005	0.00005	0.0512	0.00025	0.00025	0.005	0.000592	10.2	0.00025	0.00198	0.0197	0.015	0.000025	0.0025	1.39	0.468	0.000005
ROUGHER-SULPHIDE-90/10-TOP-75	0.00005	0.00005	0.0573	0.00025	0.00025	0.005	0.000704	10.3	0.00025	0.00214	0.0263	0.015	0.000025	0.0025	1.45	0.49	0.000005
ROUGHER-SULPHIDE-90/10-TOP-76	0.00005	0.00005	0.0559	0.00025	0.00025	0.005	0.000559	8.85	0.00025	0.00174	0.0296	0.015	0.000025	0.0025	1.14	0.381	0.000005
ROUGHER-SULPHIDE-90/10-TOP-77	0.00005	0.00005	0.0561	0.00025	0.00025	0.005	0.000516	9.14	0.00025	0.00168	0.0331	0.015	0.000025	0.0025	1.19	0.377	0.000005
ROUGHER-SULPHIDE-90/10-TOP-78	0.00005	0.00005	0.0564	0.00025	0.00025	0.005	0.00054	9.46	0.00025	0.00176	0.0346	0.015	0.000025	0.0025	1.29	0.41	0.000005
ROUGHER-SULPHIDE-90/10-TOP-79	0.00005	0.00005	0.0536	0.00025	0.00025	0.005	0.000525	9.66	0.00025	0.00173	0.0354	0.015	0.000025	0.0025	1.2	0.415	0.000005
ROUGHER-SULPHIDE-90/10-TOP-80	0.00005	0.00005	0.0541	0.00025	0.00025	0.005	0.000514	9.74	0.00025	0.00173	0.0388	0.015	0.000025	0.0025	1.21	0.406	0.000005
ROUGHER-SULPHIDE-90/10-TOP-81	0.00005	0.00005	0.0591	0.00025	0.00025	0.005	0.000577	10.3	0.00025	0.00193	0.0452	0.015	0.000025	0.0025	1.48	0.522	0.000005
ROUGHER-SULPHIDE-90/10-TOP-82	0.00005	0.00005	0.0546	0.00025	0.00025	0.005	0.0005	10.1	0.00025	0.0017	0.0425	0.015	0.000025	0.0025	1.25	0.424	0.000005
ROUGHER-SULPHIDE-90/10-TOP-83	0.00005	0.00005	0.0555	0.00025	0.00025	0.005	0.000514	9.93	0.00025	0.00172	0.0485	0.015	0.000025	0.0025	1.29	0.428	0.000005
ROUGHER-SULPHIDE-90/10-TOP-84	0.00005	0.00005	0.0528	0.00025	0.00025	0.005	0.000499	9.7	0.00025	0.00169	0.0548	0.015	0.000025	0.0025	1.21	0.398	0.000005
ROUGHER-SULPHIDE-90/10-TOP-85	0.00005	0.00005	0.0493	0.00005	0.00025	0.005	0.000483	9.17	0.00025	0.00167	0.0559	0.015	0.000025	0.00065	1.34	0.438	0.000005
ROUGHER-SULPHIDE-90/10-TOP-86	0.00005	0.00005	0.0568	0.00025	0.00025	0.005	0.00047	9.84	0.00025	0.0016	0.0595	0.015	0.000025	0.0025	1.19	0.429	0.000005
ROUGHER-SULPHIDE-90/10-TOP-87	0.00005	0.00005	0.0552	0.00005	0.00025	0.005	0.00061	12.5	0.00025	0.0021	0.0783	0.015	0.000025	0.00053	1.57	0.534	0.000005
ROUGHER-SULPHIDE-90/10-TOP-88	0.00013	0.00005	0.0555	0.00005	0.00025	0.005	0.000478	9.4	0.00025	0.00165	0.0747	0.015	0.000025	0.00025	1.15	0.4	0.000005
ROUGHER-SULPHIDE-90/10-TOP-89	0.00005	0.00005	0.053	0.00005	0.00025	0.005	0.000435	9.03	0.00025	0.00157	0.0786	0.015	0.000025	0.00025	1.06	0.362	0.000005
ROUGHER-SULPHIDE-90/10-TOP-90	0.00005	0.00005	0.0574	0.00005	0.00025	0.005	0.000455	9.26	0.00025	0.00155	0.0778	0.015	0.000025	0.00025	1.12	0.365	0.000005
ROUGHER-SULPHIDE-90/10-TOP-91	0.00005	0.00005	0.058	0.00005	0.00025	0.005	0.000463	8.97	0.00025	0.00165	0.0904	0.015	0.000025	0.00025	1.14	0.39	0.000005
ROUGHER-SULPHIDE-90/10-TOP-92	0.00005	0.00005	0.0592	0.00005	0.00025	0.005	0.000434	8.69	0.00025	0.0016	0.0965	0.015	0.000025	0.00025	1.08	0.371	0.000005
ROUGHER-SULPHIDE-90/10-TOP-93	0.00005	0.00005	0.0621	0.00005	0.00025	0.005	0.000445	8.45	0.00025	0.00167	0.103	0.015	0.000025	0.00051	1.07	0.36	0.000005
ROUGHER-SULPHIDE-90/10-TOP-94	0.00005	0.00005	0.058	0.00005	0.00025	0.005	0.000435	8.59	0.00025	0.00157	0.106	0.015	0.000025	0.00025	1.02	0.355	0.000005
ROUGHER-SULPHIDE-90/10-TOP-95	0.00005	0.00005	0.0629	0.00005	0.00025	0.005	0.000451	8.8	0.00025	0.00171	0.122	0.015	0.000025	0.00025	1.12	0.381	0.000005
ROUGHER-SULPHIDE-90/10-TOP-96	0.00005	0.00005	0.0568	0.00005	0.00025	0.005	0.000428	9.21	0.00025	0.00159	0.116	0.015	0.000025	0.00025	1.07	0.364	0.000005
ROUGHER-SULPHIDE-90/10-TOP-97	0.00005	0.00005	0.0613	0.00005	0.00025	0.005	0.000445	8.4	0.00025	0.00166	0.13	0.015	0.000025	0.00025	1.02	0.366	0.000005
ROUGHER-SULPHIDE-90/10-TOP-98	0.00005	0.00005	0.0552	0.00005	0.00025	0.005	0.000404	8.33	0.00025	0.00152	0.125	0.015	0.000025	0.00025	0.989	0.339	0.000005
ROUGHER-SULPHIDE-90/10-TOP-99	0.00005	0.00005	0.0622	0.00005	0.00025	0.005	0.000423	8.78	0.00025	0.00162	0.145	0.015	0.000025	0.00025	1.06	0.359	0.000005
ROUGHER-SULPHIDE-90/10-TOP-100	0.00005	0.00005	0.0611	0.00005	0.00025	0.005	0.000383	8.29	0.00025	0.00157	0.156	0.015	0.000025	0.00054	0.96	0.336	0.000005
ROUGHER-SULPHIDE-90/10-TOP-101	0.00005	0.00005	0.0619	0.00005	0.00025	0.005	0.000372	7.95	0.00025	0.00156	0.194	0.015	0.000025	0.00025	0.989	0.336	0.000005
ROUGHER-SULPHIDE-90/10-TOP-102	0.00005	0.00005	0.0593	0.00005	0.00025	0.005	0.000395	7.93	0.00025	0.00156	0.243	0.015	0.000055	0.00025	0.914	0.329	0.000005
ROUGHER-SULPHIDE-90/10-TOP-103	0.00005	0.00005	0.0602	0.00005	0.00025	0.005	0.000406	7.91	0.00025	0.00168	0.273	0.015	0.000073	0.00025	0.929	0.338	0.000005
ROUGHER-SULPHIDE-90/10-TOP-104	0.00005	0.00005	0.0598	0.00005	0.00025	0.005	0.000394	6.86	0.00025	0.00161	0.265	0.015	0.000063	0.00025	0.808	0.302	0.000005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals																
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
ROUGHER-SULPHIDE-90/10-TOP-105	0.00005	0.0001	0.068	0.00005	0.00025	0.005	0.000496	7.85	0.00025	0.0021	0.33	0.015	0.00006	0.00025	1.14	0.421	0.000005
ROUGHER-SULPHIDE-90/10-TOP-106	0.00005	0.00005	0.0608	0.00005	0.00025	0.005	0.000406	7.44	0.00025	0.00173	0.255	0.015	0.000054	0.00025	0.86	0.312	0.000005
ROUGHER-SULPHIDE-90/10-TOP-107	0.00005	0.00005	0.0587	0.00005	0.00025	0.005	0.000426	7.07	0.00025	0.00167	0.256	0.015	0.000099	0.00025	0.839	0.314	0.000005
ROUGHER-SULPHIDE-90/10-TOP-108	0.00005	0.00005	0.0587	0.00005	0.00025	0.005	0.00037	6.59	0.00025	0.00152	0.217	0.015	0.000052	0.00025	0.753	0.284	0.000005
ROUGHER-SULPHIDE-90/10-TOP-109	0.00005	0.00005	0.0597	0.00005	0.00025	0.019	0.000341	6.31	0.00172	0.00148	0.2	0.015	0.000025	0.00025	0.764	0.289	0.000005
ROUGHER-SULPHIDE-90/10-TOP-110	0.00005	0.0001	0.0615	0.00005	0.00025	0.005	0.000338	5.89	0.00025	0.00136	0.181	0.015	0.000025	0.00025	0.665	0.252	0.000005
ROUGHER-SULPHIDE-90/10-TOP-111	0.00005	0.00005	0.062	0.00005	0.00025	0.005	0.000305	5.35	0.00025	0.0013	0.172	0.015	0.000025	0.00025	0.62	0.235	0.000005
ROUGHER-SULPHIDE-90/10-TOP-112	0.00005	0.00005	0.0699	0.00005	0.00025	0.005	0.000271	5.31	0.00025	0.00123	0.159	0.015	0.000025	0.00025	0.61	0.226	0.000005
ROUGHER-SULPHIDE-90/10-TOP-113	0.00005	0.00005	0.0676	0.00005	0.00025	0.005	0.000282	5.54	0.00025	0.00125	0.147	0.015	0.000025	0.00025	0.628	0.228	0.000005
ROUGHER-SULPHIDE-90/10-TOP-114	0.00005	0.00005	0.0641	0.00005	0.00025	0.005	0.0002775	5.5275	0.00025	0.0012375	0.1425	0.015	0.000025	0.00025	0.6205	0.22675	0.000005
ROUGHER-SULPHIDE-90/10-TOP-115	0.00005	0.00005	0.0606	0.00005	0.00025	0.005	0.000273	5.515	0.00025	0.001225	0.138	0.015	0.000025	0.00025	0.613	0.2255	0.000005
ROUGHER-SULPHIDE-90/10-TOP-116	0.00005	0.00005	0.0571	0.00005	0.00025	0.005	0.0002685	5.5025	0.00025	0.0012125	0.1335	0.015	0.000025	0.00025	0.6055	0.22425	0.000005
ROUGHER-SULPHIDE-90/10-TOP-117	0.00005	0.00005	0.0536	0.00005	0.00025	0.005	0.000264	5.49	0.00025	0.0012	0.129	0.015	0.000025	0.00025	0.598	0.223	0.000005
ROUGHER-SULPHIDE-90/10-TOP-118	0.00005	0.00005	0.0569	0.00005	0.00025	0.005	0.0002665	5.615	0.00025	0.0012275	0.131	0.015	0.0000375	0.00025	0.6025	0.22475	0.000005
ROUGHER-SULPHIDE-90/10-TOP-119	0.00005	0.00005	0.0602	0.00005	0.00025	0.005	0.000269	5.74	0.00025	0.001255	0.133	0.015	0.00005	0.00025	0.607	0.2265	0.000005
ROUGHER-SULPHIDE-90/10-TOP-120	0.00005	0.00005	0.0635	0.00005	0.00025	0.005	0.0002715	5.865	0.00025	0.0012825	0.135	0.015	0.0000625	0.00025	0.6115	0.22825	0.000005
ROUGHER-SULPHIDE-90/10-TOP-121	0.00005	0.00005	0.0668	0.00005	0.00025	0.005	0.000274	5.99	0.00025	0.00131	0.137	0.015	0.000075	0.00025	0.616	0.23	0.000005
ROUGHER-SULPHIDE-90/10-TOP-123	0.00005	0.00005	0.0661	0.00005	0.00025	0.005	0.000306	6.095	0.00025	0.001425	0.16	0.015	0.0000705	0.00025	0.647	0.247	0.000005
ROUGHER-SULPHIDE-90/10-TOP-123	0.00005	0.00005	0.0654	0.00005	0.00025	0.005	0.000338	6.2	0.00025	0.00154	0.183	0.015	0.000066	0.00025	0.678	0.264	0.000005
ROUGHER-SULPHIDE-90/10-TOP-124	0.00005	0.00005	0.0647	0.00005	0.00025	0.005	0.00037	6.305	0.00025	0.001655	0.206	0.015	0.0000615	0.00025	0.709	0.281	0.000005
ROUGHER-SULPHIDE-90/10-TOP-125	0.00005	0.00005	0.064	0.00005	0.00025	0.005	0.000402	6.41	0.00025	0.00177	0.229	0.015	0.000057	0.00025	0.74	0.298	0.000005
ROUGHER-SULPHIDE-90/10-TOP-126	0.00005	0.00005	0.0633	0.00005	0.00025	0.005	0.000405	6.5	0.00025	0.00177	0.22925	0.015	0.0000595	0.00025	0.7535	0.30075	0.000005
ROUGHER-SULPHIDE-90/10-TOP-127	0.00005	0.00005	0.0626	0.00005	0.00025	0.005	0.000408	6.59	0.00025	0.00177	0.2295	0.015	0.000062	0.00025	0.767	0.3035	0.000005
ROUGHER-SULPHIDE-90/10-TOP-128	0.00005	0.00005	0.0619	0.00005	0.00025	0.005	0.000411	6.68	0.00025	0.00177	0.22975	0.015	0.0000645	0.00025	0.7805	0.30625	0.000005
ROUGHER-SULPHIDE-90/10-TOP-129	0.00005	0.00005	0.0612	0.00005	0.00025	0.005	0.000414	6.77	0.00025	0.00177	0.23	0.015	0.000067	0.00025	0.794	0.309	0.000005
ROUGHER-SULPHIDE-90/10-TOP-130	0.00005	0.00005	0.0624	0.00005	0.00025	0.005	0.0004235	6.82	0.00025	0.00179	0.231	0.015	0.0000565	0.00025	0.7925	0.31075	0.000005
ROUGHER-SULPHIDE-90/10-TOP-131	0.00005	0.00005	0.0636	0.00005	0.00025	0.005	0.000433	6.87	0.00025	0.00181	0.232	0.015	0.000046	0.00025	0.791	0.3125	0.000005
ROUGHER-SULPHIDE-90/10-TOP-132	0.00005	0.00005	0.0648	0.00005	0.00025	0.005	0.0004425	6.92	0.00025	0.00183	0.233	0.015	0.0000355	0.00025	0.7895	0.31425	0.000005
ROUGHER-SULPHIDE-90/10-TOP-133	0.00005	0.00005	0.066	0.00005	0.00025	0.005	0.000452	6.97	0.00025	0.00185	0.234	0.015	0.000025	0.00025	0.788	0.316	0.000005
ROUGHER-SULPHIDE-90/10-TOP-134	0.00005	0.00005	0.06625	0.00005	0.00025	0.005	0.0004455	7.1425	0.00025	0.0018375	0.2305	0.015	0.00003675	0.00025	0.78425	0.31775	0.000005
ROUGHER-SULPHIDE-90/10-TOP-135	0.00005	0.00005	0.0665	0.00005	0.00025	0.005	0.000439	7.315	0.00025	0.001825	0.227	0.015	0.0000485	0.00025	0.7805	0.3195	0.000005
ROUGHER-SULPHIDE-90/10-TOP-136	0.00005	0.00005	0.06675	0.00005	0.00025	0.005	0.0004325	7.4875	0.00025	0.0018125	0.2235	0.015	0.00006025	0.00025	0.77675	0.32125	0.000005
ROUGHER-SULPHIDE-90/10-TOP-137	0.00005	0.00005	0.067	0.00005	0.00025	0.005	0.000426	7.66	0.00025	0.0018	0.22	0.015	0.000072	0.00025	0.773	0.323	0.000005
ROUGHER-SULPHIDE-90/10-TOP-138	0.00005	0.00005	0.067225	0.00005	0.00025	0.005	0.00042875	7.565	0.00025	0.0018275	0.21725	0.015	0.000071	0.00025	0.77475	0.32225	0.000005
ROUGHER-SULPHIDE-90/10-TOP-139	0.00005	0.00005	0.06745	0.00005	0.00025	0.005	0.0004315	7.47	0.00025	0.001855	0.2145	0.015	0.00007	0.00025	0.7765	0.3215	0.000005
ROUGHER-SULPHIDE-90/10-TOP-140	0.00005	0.00005	0.067675	0.00005	0.00025	0.005	0.00043425	7.375	0.00025	0.0018825	0.21175	0.015	0.000069	0.00025	0.77825	0.32075	0.000005
ROUGHER-SULPHIDE-90/10-TOP-141	0.00005	0.00005	0.0679	0.00005	0.00025	0.005	0.000437	7.28	0.00025	0.00191	0.209	0.015	0.000068	0.00025	0.78	0.32	0.000005
ROUGHER-SULPHIDE-90/10-TOP-142	0.00005	0.00005	0.0671	0.00005	0.00025	0.005	0.000423	7.0575	0.00025	0.001885	0.2	0.015	0.000071	0.00025	0.754	0.30875	0.000005
ROUGHER-SULPHIDE-90/10-TOP-143	0.00005	0.00005	0.0663	0.00005	0.00025	0.005	0.000409	6.835	0.00025	0.00186	0.191	0.015	0.000074	0.00025	0.728	0.2975	0.000005
ROUGHER-SULPHIDE-90/10-TOP-144	0.00005	0.00005	0.0655	0.00005	0.00025	0.005	0.000395	6.6125	0.00025	0.001835	0.182	0.015	0.000077	0.00025	0.702	0.28625	0.000005
ROUGHER-SULPHIDE-90/10-TOP-145	0.00005	0.00005	0.0616	0.00005	0.00025	0.005	0.000413	6.86	0.00025	0.0018	0.184	0.015	0.000083	0.00025	0.771	0.29	0.000005
ROUGHER-SULPHIDE-90/10-TOP-146	0.00005	0.00005	0.0616	0.00005	0.00025	0.005	0.000413	6.86	0.00025	0.0018	0.184	0.015	0.000083	0.00025	0.771	0.29	0.000005
ROUGHER-SULPHIDE-90/10-TOP-147	0.00005	0.00005	0.0616	0.00005	0.00025	0.005	0.000413	6.86	0.00025	0.0018	0.184	0.015	0.000083	0.00025	0.771	0.29	0.000005
ROUGHER-SULPHIDE-90/10-TOP-148	0.00005	0.00005	0.0616	0.00005	0.00025	0.005	0.000413	6.86	0.00025	0.0018	0.184	0.015	0.000083	0.00025	0.771	0.29	0.000005
ROUGHER-SULPHIDE-90/10-TOP-149	0.00005	0.00005	0.0756	0.00005	0.00025	0.005	0.000388	7.13	0.00025	0.00177	0.166	0.015	0.000078	0.00025	0.712	0.297	0.000005
ROUGHER-SULPHIDE-90/10-TOP-150	0.0004125	0.0001625	0.059045	0.0006625	0.0008125	0.01625	0.000461	163.8475	0.0008125	0.0018275	0.12645	0.015	0.000121	0.0046875	3.759	0.57775	0.00012875
ROUGHER-SULPHIDE-90/10-TOP-151	0.000775	0.000275	0.04249	0.001275	0.001375	0.0275	0.000534	320.565	0.001375	0.001885	0.0869	0.015	0.000164	0.009125	6.806	0.8585	0.0002525
ROUGHER-SULPHIDE-90/10-TOP-152	0.0011375	0.0003875	0.025935	0.0018875	0.0019375	0.03875	0.000607	477.2825	0.0019375	0.0019425	0.04735	0.015	0.000207	0.0135625	9.853	1.13925	0.00037625
ROUGHER-SULPHIDE-90/10-TOP-153	0.00005	0.00005	0.0648	0.00005	0.00025	0.005	0.000376	6.81	0.00025	0.00181	0.177	0.015	0.000076	0.00025	0.698	0.274	0.000005
ROUGHER-SULPHIDE-90/10-TOP-154	0.0001625	0.0001625	0.051325	0.0006625	0.0008125	0.01625	0.000432	152.1075	0.0008125	0.0017325	0.133725	0.015	0.0001195	0.0014375	3.4235	0.638	0.00012875
ROUGHER-SULPHIDE-90/10-TOP-155	0.000275	0.000275	0.03785	0.001275	0.001375	0.0275	0.000488	297.405	0.001375	0.001655	0.09045	0.015	0.000163	0.002625	6.149	1.002	0.0002525
ROUGHER-SULPHIDE-90/10-TOP-156	0.0003875	0.0003875	0.024375	0.0018875	0.0019375	0.03875	0.000544	442.7025	0.0019375	0.0015775	0.047175	0.015	0.0002065	0.0038125	8.8745	1.366	0.00037625
ROUGHER-SULPHIDE-90/10-TOP-157	0.00005	0.00005	0.0647	0.00005	0.00025	0.005	0.000381	6.39	0.00025	0.00181	0.173	0.015	0.00008	0.00025	0.676	0.275	0.000005
	0.000185	0.000185	0.04861	0.000785	0.000925	0.0185	0.0004442	181.083	0.000925	0.001717	0.12427	0.015	0.000129	0.001675	3.9642	0.711	0.0001535
M_Rougher/Sulphide 90/10 Bottom																	
ROUGHER-SULPHIDE-90/10-BOTTOM-1	0.003	0.0005	0.012	0.0025	0.0025	0.05	0.00025	553	0.0025	0.0016	0.0334	0.052	0.00025	0.059	14.3	0.887	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-2	0.0022	0.0005	0.0104	0.0025	0.0025	0.05	0.0008	543	0.0025	0.0032	0.0107	0.015	0.00025	0.017	16.9	1.67	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-3	0.0018	0.0005	0.0101	0.0025	0.0025	0.05	0.00058	636	0.0025	0.002	0.0114	0.015	0.00025	0.078	13.6	1.16	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-4	0.0015	0.0005	0.00938	0.0025	0.0025	0.05	0.00068	634	0.0025	0.002	0.0078	0.015	0.00025	0.018	12.9	1.42	0.0005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals																
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
ROUGHER-SULPHIDE-90/10-BOTTOM-5	0.0014	0.0005	0.00963	0.0025	0.0025	0.05	0.00058	593	0.0025	0.0017	0.0075	0.015	0.00025	0.019	12.4	1.28	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-6	0.001	0.0005	0.0108	0.0025	0.0025	0.05	0.00079	644	0.0025	0.0023	0.0073	0.015	0.00025	0.03	11.3	1.59	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-7	0.0012	0.01	0.0108	0.0025	0.0025	0.05	0.00072	602	0.0025	0.0022	0.0047	0.015	0.00025	0.063	12.6	1.86	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-8	0.0005	0.0005	0.0109	0.0025	0.0025	0.05	0.0006	588	0.0025	0.0015	0.0039	0.015	0.00025	0.005	11.6	1.73	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-9	0.0005	0.0005	0.0111	0.0025	0.0025	0.05	0.00025	613	0.0025	0.0005	0.0031	0.015	0.00025	0.013	8.46	1.06	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-10	0.0005	0.0005	0.0111	0.0025	0.0025	0.05	0.00025	617	0.0025	0.0005	0.0033	0.015	0.00025	0.014	8.52	1.16	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-11	0.001	0.0005	0.0117	0.0025	0.0025	0.05	0.00025	612	0.0025	0.0005	0.0064	0.015	0.00025	0.012	7.27	0.96	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-12	0.0005	0.0005	0.0119	0.0025	0.0025	0.05	0.00025	603	0.0025	0.0005	0.0099	0.015	0.00025	0.018	6.33	0.767	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-13	0.0005	0.0005	0.0111	0.0025	0.0025	0.05	0.00025	593	0.0025	0.0005	0.0048	0.015	0.00025	0.018	4.84	0.756	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-14	0.0005	0.0005	0.0112	0.0025	0.0025	0.05	0.00025	624	0.0025	0.0005	0.0026	0.015	0.00025	0.018	5.33	1.05	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-15	0.0005	0.0005	0.012	0.0025	0.0025	0.05	0.00025	636	0.0025	0.0011	0.0022	0.015	0.00025	0.017	4.75	1.09	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-16	0.0005	0.0005	0.0119	0.0025	0.0025	0.05	0.00025	610	0.0025	0.0005	0.0114	0.015	0.00025	0.017	4.08	0.951	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-17	0.0005	0.0005	0.0115	0.0025	0.0025	0.05	0.00025	598	0.0025	0.0005	0.0033	0.015	0.00025	0.02	4.26	1.04	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-18	0.0005	0.0005	0.0114	0.0025	0.0025	0.05	0.00025	629	0.0025	0.0005	0.0023	0.015	0.00025	0.016	4.01	0.985	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-19	0.0005	0.0005	0.0122	0.0025	0.0025	0.05	0.00025	658	0.0025	0.0005	0.0127	0.015	0.00025	0.022	3.4	0.711	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-20	0.0005	0.0005	0.0123	0.0025	0.0025	0.05	0.00025	609	0.0025	0.0005	0.0111	0.044	0.00025	0.015	2.86	0.607	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-21	0.0005	0.0005	0.0117	0.0025	0.0025	0.05	0.00025	608	0.0025	0.0005	0.0081	0.052	0.00025	0.014	3.15	0.652	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-22	0.0005	0.0005	0.0125	0.0025	0.0025	0.05	0.00025	612	0.0025	0.0005	0.0057	0.111	0.00025	0.013	3.13	0.595	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-23	0.0005	0.0005	0.0117	0.0025	0.0025	0.05	0.00025	718	0.0025	0.0005	0.0022	0.058	0.00025	0.013	3.57	0.741	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-24	0.0005	0.0005	0.0117	0.0025	0.0025	0.05	0.00025	618	0.0025	0.0005	0.0071	0.071	0.00025	0.013	3.31	0.677	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-25	0.0005	0.0005	0.0121	0.0025	0.0025	0.05	0.00025	648	0.0025	0.0005	0.0148	0.099	0.00025	0.013	3.48	0.697	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-26	0.0005	0.0005	0.00112	0.0025	0.0025	0.05	0.00025	587	0.0025	0.0005	0.0005	0.13	0.00025	0.014	0.309	0.0608	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-27	0.0005	0.0005	0.0117	0.0025	0.0025	0.05	0.00025	607	0.0025	0.0005	0.0157	0.177	0.00025	0.014	2.99	0.531	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-28	0.0005	0.0005	0.0115	0.0025	0.0025	0.05	0.00025	618	0.0025	0.0005	0.0075	0.161	0.00025	0.005	2.91	0.558	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-29	0.0005	0.0005	0.0115	0.0025	0.0025	0.05	0.00025	640	0.0025	0.0005	0.0096	0.225	0.00025	0.011	2.71	0.47	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-30	0.0005	0.0005	0.0112	0.0025	0.0025	0.05	0.00025	647	0.0025	0.0005	0.0111	0.183	0.00025	0.011	2.94	0.496	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-31	0.0005	0.0005	0.0112	0.0025	0.0025	0.05	0.00025	648	0.0025	0.0005	0.0016	0.152	0.00025	0.012	2.97	0.548	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-32	0.0005	0.0005	0.0109	0.0025	0.0025	0.05	0.00025	610	0.0025	0.0005	0.0021	0.127	0.00025	0.02	3.11	0.574	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-33	0.0005	0.0005	0.0116	0.0025	0.0025	0.05	0.00025	624	0.0025	0.0005	0.0046	0.138	0.00025	0.014	3.21	0.586	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-34	0.0005	0.0005	0.0106	0.0025	0.0025	0.05	0.00025	622	0.0025	0.0005	0.0015	0.101	0.00025	0.033	2.97	0.604	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-35	0.0005	0.0005	0.0108	0.0025	0.0025	0.05	0.00025	604	0.0025	0.0005	0.0012	0.041	0.00025	0.012	3.47	0.75	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-36	0.0005	0.0005	0.0115	0.0025	0.0025	0.05	0.00025	594	0.0025	0.0005	0.0026	0.047	0.00025	0.011	3.54	0.743	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-37	0.0005	0.0005	0.0115	0.0025	0.0025	0.05	0.00025	602	0.0025	0.0005	0.0031	0.064	0.00025	0.01	3.46	0.685	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-38	0.0005	0.0025	0.0114	0.0025	0.0025	0.05	0.00051	592	0.0025	0.0011	0.0012	0.032	0.00025	0.005	4.6	1.12	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-39	0.0005	0.0005	0.0116	0.0025	0.0025	0.05	0.00025	631	0.0025	0.0005	0.0024	0.032	0.00025	0.048	3.46	0.836	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-40	0.0005	0.0005	0.0113	0.0025	0.0025	0.05	0.00025	644	0.0025	0.0005	0.0029	0.034	0.00025	0.005	3.34	0.754	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-41	0.0005	0.0005	0.0126	0.0025	0.0025	0.05	0.00054	646	0.0025	0.0005	0.0005	0.015	0.00025	0.016	4.09	1.05	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-42	0.0005	0.0005	0.0118	0.0025	0.0025	0.05	0.00025	614	0.0025	0.0005	0.0013	0.015	0.00025	0.016	3.65	0.903	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-43	0.0005	0.0005	0.0109	0.0025	0.0025	0.05	0.00051	630	0.0025	0.001	0.0017	0.015	0.00025	0.005	3.61	0.993	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-44	0.0005	0.0005	0.0107	0.0025	0.0025	0.05	0.0005	614	0.0025	0.0005	0.0014	0.015	0.00025	0.015	3.67	0.953	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-45	0.0005	0.0005	0.0113	0.0025	0.0025	0.05	0.00025	644	0.0025	0.0005	0.0012	0.015	0.00025	0.005	3.45	0.894	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-46	0.0005	0.0005	0.0113	0.0025	0.0025	0.05	0.00025	617	0.0025	0.0005	0.0014	0.015	0.00025	0.005	3.52	0.865	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-47	0.0005	0.0005	0.0109	0.0025	0.0025	0.05	0.00025	634	0.0025	0.0005	0.0011	0.015	0.00025	0.018	3.59	0.886	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-48	0.0005	0.0005	0.0109	0.0025	0.0025	0.05	0.00025	623	0.0025	0.0005	0.0012	0.015	0.00025	0.018	3.46	0.864	0.0005
ROUGHER-SULPHIDE-90/10-BOTTOM-49	0.00051	0.00005	0.0113	0.00025	0.00025	0.016	0.000536	620	0.00025	0.00129	0.00122	0.015	0.000025	0.0063	3.8	1.1	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-50	0.00056	0.0001	0.0104	0.0005	0.0005	0.01	0.000375	630	0.0005	0.00077	0.002	0.037	0.00005	0.005	3.35	0.835	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-51	0.00072	0.0001	0.0106	0.0005	0.0005	0.01	0.000255	612	0.0005	0.00054	0.0083	0.107	0.00005	0.005	2.75	0.61	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-52	0.00064	0.0001	0.0104	0.0005	0.0005	0.01	0.000154	563	0.0005	0.00033	0.0115	0.398	0.00005	0.005	2.31	0.428	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-53	0.00054	0.0001	0.00904	0.0005	0.0005	0.01	0.000118	624	0.0005	0.0001	0.0114	0.614	0.00005	0.005	1.9	0.332	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-54	0.00067	0.0001	0.0106	0.0005	0.0005	0.01	0.000143	609	0.0005	0.00026	0.0153	0.278	0.00005	0.005	2.2	0.436	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-55	0.00061	0.0001	0.00876	0.0005	0.0005	0.01	0.000209	592	0.0005	0.00031	0.0019	0.081	0.00005	0.005	2.01	0.458	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-56	0.00071	0.0001	0.0111	0.0005	0.0005	0.01	0.000236	615	0.0005	0.00042	0.0091	0.059	0.00005	0.005	2.62	0.564	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-57	0.00062	0.0001	0.0111	0.0005	0.0005	0.01	0.000299	613	0.0005	0.0006	0.0013	0.03	0.00005	0.005	2.42	0.661	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-58	0.00079	0.0001	0.0102	0.0005	0.0005	0.01	0.000199	637	0.0005	0.00035	0.0028	0.087	0.00005	0.005	1.87	0.461	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-59	0.0008	0.0001	0.0102	0.0005	0.0005	0.01	0.00021	599	0.0005	0.00033	0.0013	0.078	0.00005	0.005	1.83	0.467	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-60	0.00072	0.0001	0.0107	0.0005	0.0005	0.01	0.000178	594	0.0005	0.00036	0.0074	0.055	0.00005	0.005	1.93	0.439	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-61	0.00067	0.0001	0.0103	0.0005	0.0005	0.021	0.00016	596	0.0005	0.00027	0.0103	0.123	0.00005	0.005	2.01	0.389	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-62	0.00068	0.0001	0.0108	0.0005	0.0005	0.01	0.000326	594	0.0005	0.00059	0.0022	0.015	0.00005	0.005	2.02	0.621	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-63	0.00066	0.0001	0.0104	0.0005	0.0005	0.01	0.000342	613	0.0005	0.00063	0.0015	0.015	0.00005	0.005	1.99	0.634	0.000005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals																
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
ROUGHER-SULPHIDE-90/10-BOTTOM-64	0.0006	0.0001	0.0093	0.0005	0.0005	0.01	0.000288	608	0.0005	0.00051	0.0028	0.015	0.00005	0.005	2	0.609	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-65	0.00058	0.0001	0.0111	0.0005	0.0005	0.01	0.000386	582	0.0005	0.00081	0.0014	0.015	0.00005	0.005	2.31	0.84	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-66	0.00052	0.0001	0.00987	0.0005	0.0005	0.01	0.000346	623	0.0005	0.00076	0.0016	0.015	0.00005	0.005	2.15	0.843	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-67	0.00056	0.0001	0.0109	0.0005	0.0005	0.01	0.000333	591	0.0005	0.00078	0.0033	0.015	0.00005	0.005	2.14	0.855	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-68	0.00067	0.0001	0.00942	0.0005	0.0005	0.01	0.000283	630	0.0005	0.00058	0.001	0.015	0.00005	0.005	1.5	0.736	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-69	0.00051	0.0001	0.0104	0.0005	0.0005	0.01	0.000432	605	0.0005	0.00092	0.0019	0.015	0.00005	0.005	1.86	1.01	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-70	0.00043	0.0001	0.0109	0.0005	0.0005	0.01	0.000589	624	0.0005	0.00163	0.0017	0.015	0.00005	0.005	2.3	1.45	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-71	0.00038	0.0001	0.0105	0.0005	0.0005	0.01	0.000696	611	0.0005	0.00237	0.0019	0.015	0.00005	0.005	2.56	1.68	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-72	0.00041	0.0001	0.0107	0.0005	0.0005	0.022	0.000544	615	0.0005	0.00166	0.002	0.015	0.00005	0.005	2.12	1.62	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-73	0.00037	0.0001	0.0106	0.0005	0.0005	0.01	0.000503	612	0.0005	0.00142	0.0019	0.015	0.00005	0.005	1.78	1.51	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-74	0.00033	0.0001	0.0103	0.0005	0.0005	0.01	0.000568	611	0.0005	0.00186	0.0017	0.015	0.00005	0.005	1.92	1.65	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-75	0.00025	0.00025	0.0101	0.00125	0.00125	0.025	0.000482	636	0.00125	0.0016	0.00125	0.015	0.000125	0.0125	1.53	1.65	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-76	0.00031	0.0001	0.0106	0.0005	0.0005	0.01	0.000402	614	0.0005	0.00119	0.0014	0.015	0.00005	0.005	1.3	1.45	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-77	0.00034	0.0001	0.0107	0.0005	0.0005	0.01	0.000384	610	0.0005	0.00104	0.002	0.015	0.00005	0.005	1.13	1.43	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-78	0.0003	0.00026	0.0104	0.0005	0.0005	0.01	0.000554	613	0.0005	0.002	0.0014	0.015	0.00005	0.005	1.67	1.87	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-79	0.00026	0.0001	0.0105	0.0005	0.0005	0.01	0.000623	642	0.0005	0.00246	0.0018	0.056	0.00005	0.005	1.88	2.06	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-80	0.00026	0.0001	0.0102	0.0005	0.0005	0.01	0.000455	605	0.0005	0.00161	0.0014	0.033	0.00005	0.005	1.61	1.83	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-81	0.00025	0.00025	0.0109	0.00125	0.00125	0.025	0.000701	630	0.00125	0.00362	0.00125	0.031	0.000125	0.0125	2.73	2.8	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-82	0.00025	0.00025	0.00992	0.00125	0.00125	0.025	0.000744	591	0.00125	0.00426	0.00125	0.015	0.000125	0.0125	2.76	2.6	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-83	0.00021	0.0001	0.0104	0.0005	0.0005	0.01	0.000683	621	0.0005	0.00312	0.0018	0.015	0.00005	0.005	2.27	2.3	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-84	0.0002	0.0001	0.0102	0.0005	0.0005	0.01	0.000473	622	0.0005	0.00194	0.0018	0.015	0.00005	0.005	1.86	1.87	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-85	0.00025	0.00025	0.0105	0.00025	0.00125	0.025	0.000465	594	0.00125	0.00212	0.00125	0.015	0.000125	0.004	2.07	1.96	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-86	0.00025	0.00025	0.0108	0.00125	0.00125	0.025	0.000533	610	0.00125	0.00295	0.00125	0.015	0.000125	0.0125	2.29	2.02	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-87	0.00025	0.00025	0.0103	0.00025	0.00125	0.025	0.00062	617	0.00125	0.00395	0.00125	0.015	0.000125	0.0033	2.97	2.31	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-88	0.00025	0.00025	0.0101	0.00025	0.00125	0.025	0.000615	620	0.00125	0.00363	0.00125	0.015	0.000125	0.00125	2.53	2.03	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-89	0.00025	0.00025	0.0105	0.00025	0.00125	0.025	0.000516	651	0.00125	0.00351	0.00125	0.015	0.000125	0.00125	2.54	1.99	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-90	0.00025	0.00025	0.00985	0.00025	0.00125	0.025	0.000505	628	0.00125	0.00388	0.00125	0.015	0.000125	0.00125	2.93	2.02	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-91	0.00025	0.00025	0.00988	0.00025	0.00125	0.025	0.000554	615	0.00125	0.00371	0.00125	0.015	0.000125	0.00125	2.57	1.98	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-92	0.00025	0.00025	0.0107	0.00025	0.00125	0.025	0.000496	630	0.00125	0.00297	0.00125	0.015	0.000125	0.00125	2.2	1.72	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-93	0.00025	0.00025	0.0109	0.00025	0.00125	0.025	0.000413	619	0.00125	0.00259	0.00125	0.015	0.000125	0.003	2.14	1.53	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-94	0.00025	0.00025	0.00998	0.00025	0.00125	0.025	0.000438	608	0.00125	0.00271	0.00125	0.015	0.000125	0.00125	2.08	1.45	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-95	0.00025	0.00025	0.011	0.00025	0.00125	0.025	0.000387	608	0.00125	0.00234	0.00125	0.015	0.000125	0.0033	2.11	1.41	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-96	0.00025	0.00025	0.0101	0.00025	0.00125	0.025	0.000347	611	0.00125	0.00238	0.00125	0.015	0.000125	0.00125	2.39	1.38	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-97	0.00025	0.00025	0.0107	0.00025	0.00125	0.025	0.000444	610	0.00125	0.00279	0.00125	0.015	0.000125	0.00125	2.22	1.39	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-98	0.00025	0.00025	0.0103	0.00025	0.00125	0.025	0.000436	596	0.00125	0.00354	0.00125	0.015	0.000125	0.00125	2.94	1.51	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-99	0.00025	0.00025	0.0108	0.00025	0.00125	0.025	0.000432	598	0.00125	0.00418	0.00125	0.015	0.000125	0.00125	3.33	1.58	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-100	0.00025	0.00025	0.0104	0.00025	0.00125	0.025	0.000458	608	0.00125	0.00339	0.0029	0.015	0.000125	0.00125	2.45	1.37	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-101	0.0001	0.0001	0.0107	0.0001	0.0005	0.01	0.000362	559	0.0005	0.00299	0.0019	0.015	0.00005	0.002	2.78	1.35	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-102	0.00025	0.00025	0.0105	0.00025	0.00125	0.025	0.000328	602	0.00125	0.00232	0.0027	0.015	0.000125	0.00125	2.04	1.09	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-103	0.0001	0.0001	0.0101	0.0001	0.0005	0.01	0.000332	596	0.0005	0.00241	0.0027	0.015	0.00005	0.0012	2.27	1.07	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-104	0.00025	0.00025	0.0119	0.00025	0.00125	0.025	0.000295	581	0.00125	0.00226	0.00125	0.015	0.000125	0.00125	1.98	0.959	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-105	0.00025	0.00025	0.0116	0.00025	0.00125	0.025	0.000288	532	0.00125	0.00283	0.0066	0.015	0.000125	0.00125	2.46	1.05	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-106	0.00025	0.00025	0.012	0.00025	0.00125	0.025	0.000334	527	0.00125	0.00237	0.00125	0.015	0.000125	0.00125	1.7	0.752	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-107	0.00025	0.00025	0.0113	0.00025	0.00125	0.025	0.000233	494	0.00125	0.00185	0.00125	0.015	0.000125	0.00125	2.17	0.719	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-108	0.0001	0.0001	0.0112	0.0001	0.0005	0.01	0.000139	450	0.0005	0.00104	0.0013	0.015	0.00005	0.0018	1.76	0.522	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-109	0.0001	0.0001	0.0131	0.0001	0.0005	0.01	0.000119	310	0.0005	0.00104	0.0013	0.015	0.00005	0.0016	1.86	0.486	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-110	0.00013	0.00005	0.0135	0.00005	0.00025	0.005	0.000108	294	0.00025	0.0009	0.00132	0.015	0.000025	0.0012	1.58	0.381	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-111	0.00016	0.00005	0.0156	0.00005	0.00025	0.005	0.000072	213	0.00025	0.0005	0.00163	0.015	0.000025	0.00105	1.43	0.253	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-112	0.00015	0.00005	0.0184	0.00005	0.00025	0.005	0.000049	161	0.00025	0.00031	0.00103	0.015	0.000025	0.00146	1.3	0.177	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-113	0.00015	0.00005	0.0227	0.00005	0.00025	0.005	0.000049	121	0.00025	0.00034	0.00104	0.015	0.000025	0.00082	1.45	0.172	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-114	0.0001525	0.00005	0.0264	0.00005	0.00025	0.005	0.0000465	105.05	0.00025	0.00035	0.0010675	0.015	0.000025	0.000905	1.62	0.18575	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-115	0.000155	0.00005	0.0301	0.00005	0.00025	0.005	0.000044	89.1	0.00025	0.00036	0.001095	0.015	0.000025	0.00099	1.79	0.1995	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-116	0.0001575	0.00005	0.0338	0.00005	0.00025	0.005	0.0000415	73.15	0.00025	0.00037	0.0011225	0.015	0.000025	0.001075	1.96	0.21325	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-117	0.00016	0.00005	0.0375	0.00005	0.00025	0.005	0.000039	57.2	0.00025	0.00038	0.00115	0.015	0.000025	0.00116	2.13	0.227	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-118	0.00016	0.00005	0.037875	0.00005	0.00025	0.005	0.00004475	57.125	0.00025	0.000445	0.0012575	0.015	0.000025	0.00122	2.1725	0.24575	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-119	0.00016	0.00005	0.03825	0.00005	0.00025	0.005	0.0000505	57.05	0.00025	0.00051	0.001365	0.015	0.000025	0.00128	2.215	0.2645	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-120	0.00016	0.00005	0.038625	0.00005	0.00025	0.005	0.00005625	56.975	0.00025	0.000575	0.0014725	0.015	0.000025	0.00134	2.2575	0.28325	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-121	0.00016	0.00005	0.039	0.00005	0.00025	0.005	0.000062	56.9	0.00025	0.00064	0.00158	0.015	0.000025	0.0014	2.3	0.302	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-122	0.0001575	0.00005	0.0397	0.00005	0.00025	0.005	0.00005975	55.275	0.00025	0.0006225	0.001525	0.015	0.000025	0.0014625	2.305	0.2995	0.000005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals																
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
ROUGHER-SULPHIDE-90/10-BOTTOM-123	0.000155	0.00005	0.0404	0.00005	0.00025	0.005	0.0000575	53.65	0.00025	0.000605	0.00147	0.015	0.000025	0.001525	2.31	0.297	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-124	0.0001525	0.00005	0.0411	0.00005	0.00025	0.005	0.00005525	52.025	0.00025	0.0005875	0.001415	0.015	0.000025	0.0015875	2.315	0.2945	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-125	0.00015	0.00005	0.0418	0.00005	0.00025	0.005	0.000053	50.4	0.00025	0.00057	0.00136	0.015	0.000025	0.00165	2.32	0.292	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-126	0.000145	0.00005	0.039975	0.00005	0.00025	0.005	0.000065	52.4	0.00025	0.0007125	0.001425	0.015	0.000025	0.0016025	2.495	0.33875	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-127	0.00014	0.00005	0.03815	0.00005	0.00025	0.005	0.000077	54.4	0.00025	0.000855	0.00149	0.015	0.000025	0.001555	2.67	0.3855	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-128	0.000135	0.00005	0.036325	0.00005	0.00025	0.005	0.000089	56.4	0.00025	0.0009975	0.001555	0.015	0.000025	0.0015075	2.845	0.43225	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-129	0.00013	0.00005	0.0345	0.00005	0.00025	0.005	0.000101	58.4	0.00025	0.00114	0.00162	0.015	0.000025	0.00146	3.02	0.479	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-130	0.000135	0.00005	0.034875	0.00005	0.00025	0.005	0.0000995	57.975	0.00025	0.0010975	0.0016225	0.015	0.000025	0.0014325	2.9925	0.47075	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-131	0.00014	0.00005	0.03525	0.00005	0.00025	0.005	0.000098	57.55	0.00025	0.001055	0.001625	0.015	0.000025	0.001405	2.965	0.4625	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-132	0.000145	0.00005	0.035625	0.00005	0.00025	0.005	0.0000965	57.125	0.00025	0.0010125	0.0016275	0.015	0.000025	0.0013775	2.9375	0.45425	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-133	0.00015	0.00005	0.036	0.00005	0.00025	0.005	0.000095	56.7	0.00025	0.00097	0.00163	0.015	0.000025	0.00135	2.91	0.446	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-134	0.00015	0.00005	0.037725	0.00005	0.00025	0.005	0.000091	55.15	0.00025	0.000905	0.001625	0.015	0.000025	0.00136	2.85	0.431	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-135	0.00015	0.00005	0.03945	0.00005	0.00025	0.005	0.000087	53.6	0.00025	0.00084	0.00162	0.015	0.000025	0.00137	2.79	0.416	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-136	0.00015	0.00005	0.041175	0.00005	0.00025	0.005	0.000083	52.05	0.00025	0.000775	0.001615	0.015	0.000025	0.00138	2.73	0.401	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-137	0.00015	0.00005	0.0429	0.00005	0.00025	0.005	0.000079	50.5	0.00025	0.00071	0.00161	0.015	0.000025	0.00139	2.67	0.386	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-138	0.0001625	0.00005	0.044525	0.00005	0.00025	0.005	0.00007375	48.675	0.00025	0.0006225	0.00159	0.015	0.000025	0.0013925	2.56	0.347	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-139	0.000175	0.00005	0.04615	0.00005	0.00025	0.005	0.0000685	46.85	0.00025	0.000535	0.00157	0.015	0.000025	0.001395	2.45	0.308	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-140	0.0001875	0.00005	0.047775	0.00005	0.00025	0.005	0.00006325	45.025	0.00025	0.0004475	0.00155	0.015	0.000025	0.0013975	2.34	0.269	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-141	0.0002	0.00005	0.0494	0.00005	0.00025	0.005	0.000058	43.2	0.00025	0.00036	0.00153	0.015	0.000025	0.0014	2.23	0.23	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-142	0.0002225	0.00005	0.049875	0.00005	0.00025	0.005	0.0000505	41.15	0.00025	0.0003025	0.00152	0.015	0.000025	0.001335	2.1825	0.2115	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-143	0.000245	0.00005	0.05035	0.00005	0.00025	0.005	0.000043	39.1	0.00025	0.000245	0.00151	0.015	0.000025	0.00127	2.135	0.193	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-144	0.0002675	0.00005	0.050825	0.00005	0.00025	0.005	0.0000355	37.05	0.00025	0.0001875	0.0015	0.015	0.000025	0.001205	2.0875	0.1745	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-145	0.00019	0.00005	0.046	0.00005	0.00025	0.005	0.000057	43.3	0.00025	0.00041	0.00158	0.015	0.000025	0.00092	2.33	0.3	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-146	0.00019	0.00005	0.046	0.00005	0.00025	0.005	0.000057	43.3	0.00025	0.00041	0.00158	0.015	0.000025	0.00092	2.33	0.3	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-147	0.00019	0.00005	0.046	0.00005	0.00025	0.005	0.000057	43.3	0.00025	0.00041	0.00158	0.015	0.000025	0.00092	2.33	0.3	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-148	0.00019	0.00005	0.046	0.00005	0.00025	0.005	0.000057	43.3	0.00025	0.00041	0.00158	0.015	0.000025	0.00092	2.33	0.3	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-149	0.00027	0.00005	0.0538	0.00005	0.00025	0.005	0.000032	38.8	0.00025	0.00022	0.00158	0.015	0.000025	0.00135	2.03	0.182	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-150	0.0003275	0.0001625	0.045425	0.0006625	0.0008125	0.01625	0.0000865	67.35	0.0008125	0.00029	0.00131	0.015	0.00008125	0.0022625	1.769	0.1424	0.00012875
ROUGHER-SULPHIDE-90/10-BOTTOM-151	0.000385	0.000275	0.03705	0.001275	0.001375	0.0275	0.000141	95.9	0.001375	0.00036	0.00104	0.015	0.0001375	0.003175	1.508	0.1028	0.0002525
ROUGHER-SULPHIDE-90/10-BOTTOM-152	0.0004425	0.0003875	0.028675	0.0018875	0.0019375	0.03875	0.0001955	124.45	0.0019375	0.00043	0.00077	0.015	0.00019375	0.0040875	1.247	0.0632	0.00037625
ROUGHER-SULPHIDE-90/10-BOTTOM-153	0.00029	0.00005	0.0532	0.00005	0.00025	0.005	0.000033	36.8	0.00025	0.00016	0.00146	0.015	0.000025	0.00116	2.01	0.155	0.000005
ROUGHER-SULPHIDE-90/10-BOTTOM-154	0.0003425	0.0001625	0.046025	0.0006625	0.0008125	0.01625	0.00008725	46.5	0.0008125	0.000245	0.00122	0.015	0.00008125	0.00212	1.646	0.1271	0.00012875
ROUGHER-SULPHIDE-90/10-BOTTOM-155	0.000395	0.000275	0.03885	0.001275	0.001375	0.0275	0.0001415	56.2	0.001375	0.00033	0.00098	0.015	0.0001375	0.00308	1.282	0.0992	0.0002525
ROUGHER-SULPHIDE-90/10-BOTTOM-156	0.0004475	0.0003875	0.031675	0.0018875	0.0019375	0.03875	0.00019575	65.9	0.0019375	0.000415	0.00074	0.015	0.00019375	0.00404	0.918	0.0713	0.00037625
ROUGHER-SULPHIDE-90/10-BOTTOM-157	0.00029	0.00005	0.0513	0.00005	0.00025	0.005	0.000028	35	0.00025	0.00013	0.00149	0.015	0.000025	0.00114	2.04	0.156	0.000005
	0.000353	0.000185	0.04421	0.000785	0.000925	0.0185	0.0000971	48.08	0.000925	0.000256	0.001178	0.015	0.0000925	0.002308	1.5792	0.12172	0.0001535
M/K_Rougher Top																	
KSM MITCHELL/KERR TAILINGS SAC-TOP-1	0.0018	0.0012	0.0274	0.0025	0.0025	0.05	0.00025	754	0.0025	0.0005	0.0022	0.015	0.00025	0.005	4.8	0.0319	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-2	0.0005	0.0012	0.0191	0.0025	0.0025	0.05	0.00025	243	0.0025	0.0005	0.0012	0.015	0.00025	0.005	1.67	0.0315	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-3	0.0005	0.0005	0.02	0.0025	0.0025	0.05	0.00025	194	0.0025	0.0005	0.0005	0.015	0.00025	0.005	1.28	0.025	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-4	0.0005	0.0005	0.0203	0.0025	0.0025	0.05	0.00025	153	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.986	0.0236	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-5	0.0005	0.0005	0.0203	0.0025	0.0025	0.05	0.00025	122	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.759	0.0237	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-6	0.0005	0.0005	0.0242	0.0025	0.0025	0.05	0.00025	96.4	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.697	0.0316	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-7	0.0005	0.0005	0.0259	0.0025	0.0025	0.05	0.00025	80.1	0.0025	0.0005	0.0291	0.015	0.00229	0.005	0.532	0.0366	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-8	0.0005	0.0005	0.0245	0.0025	0.0025	0.05	0.00025	75.6	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.554	0.0434	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-9	0.0005	0.0005	0.0281	0.0025	0.0025	0.05	0.00025	67.3	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.444	0.0436	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-10	0.0005	0.0005	0.0316	0.0025	0.0025	0.05	0.00025	54.7	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.394	0.0465	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-11	0.0005	0.0005	0.0388	0.0025	0.0025	0.05	0.00025	49.1	0.0025	0.0005	0.0015	0.015	0.00025	0.005	0.4	0.0507	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-12	0.0005	0.0005	0.04	0.0025	0.0025	0.05	0.00025	40.9	0.0025	0.0005	0.0014	0.015	0.00025	0.005	0.378	0.05	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-13	0.0005	0.0005	0.0417	0.0025	0.0025	0.05	0.00025	42.6	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.353	0.0453	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-14	0.0005	0.0005	0.0426	0.0025	0.0025	0.05	0.00025	37	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.399	0.0487	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-15	0.0005	0.0005	0.0463	0.0025	0.0025	0.05	0.00025	37.9	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.406	0.0491	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-16	0.0005	0.0005	0.0494	0.0025	0.0025	0.05	0.00025	32.8	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.433	0.0514	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-17	0.0005	0.0005	0.0496	0.0025	0.0025	0.05	0.00025	40.2	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.579	0.0576	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-18	0.0005	0.0005	0.0543	0.0025	0.0025	0.05	0.00025	30.6	0.0025	0.0005	0.0005	0.015	0.00025	0.005	0.463	0.0473	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-19	0.00036	0.00061	0.0656	0.00025	0.00025	0.005	0.000005	25.8	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.474	0.0508	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-20	0.00034	0.00058	0.0671	0.00025	0.00025	0.005	0.000005	23.3	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.471	0.0482	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-21	0.00033	0.00061	0.075	0.00025	0.00025	0.005	0.000005	21.1	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.469	0.0491	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-22	0.00033	0.00055	0.0771	0.00025	0.00025	0.005	0.000005	17.1	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.442	0.0472	0.000005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
KSM MITCHELL/KERR TAILINGS SAC-TOP-23	0.0003	0.00059	0.105	0.00025	0.00025	0.005	0.000011	16.6	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.404	0.0402	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-24	0.00031	0.00061	0.0992	0.00025	0.00025	0.005	0.000005	14.7	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.419	0.0411	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-25	0.00029	0.00059	0.117	0.00025	0.00025	0.005	0.000005	12.9	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.381	0.0348	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-26	0.00027	0.00061	0.141	0.00025	0.00025	0.005	0.000005	12.8	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.434	0.0361	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-27	0.00025	0.00063	0.138	0.00025	0.00025	0.005	0.000005	11.5	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.384	0.0332	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-28	0.00022	0.00063	0.15	0.00025	0.00025	0.005	0.000005	11.4	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.37	0.0301	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-29	0.00022	0.00065	0.166	0.00025	0.00025	0.005	0.000005	10.2	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.363	0.0296	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-30	0.00022	0.00063	0.197	0.00025	0.00025	0.005	0.000005	10.3	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.38	0.0286	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-31	0.00021	0.00062	0.21	0.00025	0.00025	0.005	0.000005	10.4	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.401	0.0277	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-32	0.00022	0.00065	0.271	0.00025	0.00025	0.005	0.000005	8.92	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.449	0.0298	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-33	0.0002	0.00055	0.257	0.00025	0.00025	0.005	0.000005	9.22	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.413	0.0238	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-34	0.00017	0.00062	0.325	0.00025	0.00025	0.005	0.000005	8.71	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.471	0.0264	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-35	0.00018	0.00054	0.327	0.00025	0.00025	0.005	0.000005	9.07	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.426	0.0244	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-36	0.00016	0.00059	0.317	0.00025	0.00025	0.005	0.000005	8.47	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.436	0.022	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-37	0.00017	0.0005	0.356	0.00025	0.00025	0.005	0.000005	8.54	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.461	0.0229	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-38	0.00016	0.00048	0.377	0.00025	0.00025	0.005	0.000005	8.03	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.47	0.0226	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-39	0.00015	0.00048	0.39	0.00025	0.00025	0.005	0.000005	7.82	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.41	0.0187	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-40	0.00015	0.00046	0.429	0.00025	0.00025	0.005	0.000005	8.08	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.47	0.0197	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-41	0.000145	0.000445	0.4325	0.00025	0.00025	0.005	0.000005	7.81	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.464	0.018	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-42	0.00014	0.00043	0.436	0.00025	0.00025	0.005	0.000005	7.54	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.458	0.0163	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-43	0.00014	0.00042	0.467	0.00025	0.00025	0.005	0.000005	7.415	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.481	0.01585	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-44	0.00014	0.00041	0.498	0.00025	0.00025	0.005	0.000005	7.29	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.504	0.0154	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-45	0.000095	0.00041	0.4875	0.00025	0.00025	0.005	0.000005	6.835	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.475	0.0137	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-46	0.00005	0.00041	0.477	0.00025	0.00025	0.005	0.000005	6.38	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.446	0.012	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-47	0.000085	0.00039	0.505	0.00025	0.00025	0.005	0.000005	6.635	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.465	0.0112	0.000005
KSM MITCHELL/KERR TAILINGS SAC-TOP-Final Leach	0.00012	0.00037	0.533	0.00025	0.00025	0.005	0.000005	6.89	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.484	0.0104	0.000005
	0.000113	0.000408	0.4731	0.00025	0.00025	0.005	0.000005	7.378	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.4764	0.01465	0.000005
M/K_Rougher Bottom																	
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-1	0.0022	0.0013	0.0241	0.0025	0.0025	0.05	0.00025	698	0.0025	0.0005	0.0039	0.015	0.00025	0.005	7.41	0.05	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-2	0.0026	0.0015	0.0187	0.0025	0.0025	0.05	0.00025	611	0.0025	0.0005	0.0084	0.015	0.00025	0.018	8.57	0.0862	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-3	0.0025	0.0011	0.0167	0.0025	0.0025	0.05	0.00025	621	0.0025	0.0005	0.0035	0.015	0.00025	0.01	8.54	0.123	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-4	0.0025	0.001	0.0149	0.0025	0.0025	0.05	0.00025	603	0.0025	0.0005	0.0027	0.015	0.00025	0.038	8.15	0.13	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-5	0.0022	0.0005	0.0134	0.0025	0.0025	0.05	0.00025	609	0.0025	0.0005	0.0012	0.015	0.00025	0.005	7.19	0.143	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-6	0.0023	0.001	0.0141	0.0025	0.0025	0.05	0.00025	599	0.0025	0.0005	0.0018	0.015	0.00025	0.005	7.91	0.208	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-7	0.0022	0.0005	0.0143	0.0025	0.0025	0.05	0.00025	603	0.0025	0.0005	0.0005	0.133	0.00025	0.005	8.26	0.248	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-8	0.0022	0.0031	0.0138	0.0025	0.0025	0.05	0.00025	594	0.0025	0.0005	0.0005	0.015	0.00025	0.005	8.55	0.236	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-9	0.0013	0.0005	0.0137	0.0025	0.0025	0.05	0.00025	641	0.0025	0.0005	0.0012	0.015	0.00025	0.047	8.36	0.371	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-10	0.0018	0.0005	0.0137	0.0025	0.0025	0.05	0.00025	615	0.0025	0.0005	0.0005	0.055	0.00025	0.005	8.38	0.336	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-11	0.0017	0.0005	0.0148	0.0025	0.0025	0.05	0.00025	627	0.0025	0.0005	0.0005	0.066	0.00025	0.005	8.06	0.266	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-12	0.0012	0.0005	0.0131	0.0025	0.0025	0.05	0.00025	603	0.0025	0.0005	0.0005	0.048	0.00025	0.005	7.32	0.179	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-13	0.001	0.0005	0.0115	0.0025	0.0025	0.05	0.00025	625	0.0025	0.0005	0.0005	0.042	0.00025	0.005	6.11	0.128	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-14	0.0011	0.0005	0.0128	0.0025	0.0025	0.05	0.00025	589	0.0025	0.0005	0.0005	0.015	0.00025	0.005	7.06	0.11	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-15	0.0011	0.0025	0.0118	0.0025	0.0025	0.05	0.00025	650	0.0025	0.0005	0.0005	0.015	0.00025	0.005	6.38	0.0907	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-16	0.0012	0.0005	0.0129	0.0025	0.0025	0.05	0.00025	624	0.0025	0.0005	0.0005	0.015	0.00025	0.005	6.64	0.0883	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-17	0.0012	0.0005	0.012	0.0025	0.0025	0.05	0.00025	622	0.0025	0.0005	0.0005	0.015	0.00025	0.01	6.13	0.077	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-18	0.0013	0.0005	0.012	0.0025	0.0025	0.05	0.00025	624	0.0025	0.0005	0.0005	0.015	0.00025	0.011	5.54	0.102	0.0005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-19	0.00149	0.00041	0.0124	0.00025	0.00025	0.026	0.000005	620	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	6.02	0.14	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-20	0.00121	0.00047	0.0116	0.0005	0.0005	0.028	0.00001	629	0.0005	0.0001	0.0005	0.015	0.00005	0.005	5.56	0.12	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-21	0.00125	0.00045	0.0115	0.0005	0.0005	0.027	0.00001	622	0.0005	0.0001	0.0005	0.015	0.00005	0.005	5.13	0.122	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-22	0.00144	0.00037	0.0111	0.0005	0.0005	0.026	0.000053	589	0.0005	0.0001	0.0005	0.015	0.00005	0.005	5.07	0.154	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-23	0.00144	0.00031	0.0118	0.0005	0.0005	0.026	0.000032	632	0.0005	0.0001	0.0005	0.015	0.00005	0.005	5.04	0.169	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-24	0.00128	0.00034	0.011	0.0005	0.0005	0.025	0.00001	623	0.0005	0.0001	0.0005	0.015	0.00005	0.005	4.45	0.149	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-25	0.00131	0.00042	0.0112	0.0005	0.0005	0.023	0.000027	603	0.0005	0.0001	0.0005	0.015	0.00005	0.005	3.92	0.122	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-26	0.00121	0.0003	0.0115	0.0005	0.0005	0.025	0.00001	615	0.0005	0.0001	0.0058	0.015	0.00005	0.005	4.21	0.108	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-27	0.00114	0.0003	0.0108	0.0005	0.0005	0.023	0.00001	623	0.0005	0.0001	0.0005	0.015	0.00005	0.005	3.54	0.115	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-28	0.00104	0.00028	0.0103	0.0005	0.0005	0.02	0.000054	643	0.0005	0.0001	0.0005	0.015	0.00005	0.005	3.47	0.128	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-29	0.00115	0.0003	0.0108	0.0005	0.0005	0.025	0.000063	605	0.0005	0.0001	0.0005	0.015	0.00005	0.005	3.73	0.2	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-30	0.00107	0.00027	0.0106	0.0005	0.0005	0.023	0.000053	614	0.0005	0.0001	0.0012	0.015	0.00005	0.005	3.69	0.232	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-31	0.00092	0.00026	0.00886	0.0005	0.0005	0.021	0.000049	621	0.0005	0.0001	0.0019	0.015	0.00005	0.005	3.35	0.22	0.000005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals																
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-32	0.001	0.00046	0.0106	0.0005	0.0005	0.01	0.000057	579	0.0005	0.0001	0.0017	0.015	0.00005	0.005	3.32	0.243	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-33	0.00116	0.00025	0.0103	0.0005	0.0005	0.01	0.000048	643	0.0005	0.0001	0.0012	0.015	0.00005	0.005	3.27	0.223	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-34	0.00125	0.00026	0.0109	0.0005	0.0005	0.026	0.000053	630	0.0005	0.0001	0.0011	0.015	0.00005	0.005	3.74	0.263	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-35	0.0013	0.0001	0.0104	0.0005	0.0005	0.021	0.000044	613	0.0005	0.0001	0.0012	0.051	0.00005	0.005	3.28	0.252	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-36	0.00108	0.00022	0.0103	0.0005	0.0005	0.01	0.000054	639	0.0005	0.0001	0.0014	0.015	0.00005	0.005	3.33	0.275	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-37	0.00106	0.00021	0.0104	0.0005	0.0005	0.025	0.000052	612	0.0005	0.0001	0.0014	0.015	0.00005	0.005	3.3	0.288	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-38	0.00111	0.00022	0.0106	0.0005	0.0005	0.01	0.000045	630	0.00025	0.0001	0.0014	0.015	0.00005	0.005	2.87	0.26	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-39	0.00114	0.00025	0.0102	0.0005	0.0005	0.01	0.000041	609	0.0005	0.0001	0.0016	0.015	0.00005	0.005	2.34	0.207	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-40	0.0011	0.00022	0.0114	0.0005	0.0005	0.01	0.000052	638	0.0005	0.0001	0.0017	0.015	0.00005	0.005	2.97	0.267	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-41	0.00111	0.00025	0.01085	0.0005	0.0005	0.01	0.0000535	635.5	0.0005	0.0001	0.0019	0.015	0.00005	0.005	2.875	0.265	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-42	0.00112	0.00028	0.0103	0.0005	0.0005	0.01	0.000055	633	0.0005	0.0001	0.0021	0.015	0.00005	0.005	2.78	0.263	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-43	0.00109	0.00024	0.01015	0.0005	0.0005	0.01	0.000064	628	0.0005	0.0001	0.0021	0.015	0.00005	0.005	2.735	0.2625	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-44	0.00106	0.0002	0.01	0.0005	0.0005	0.01	0.000073	623	0.0005	0.0001	0.0021	0.015	0.00005	0.005	2.69	0.262	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-45	0.001065	0.00026	0.01025	0.0005	0.0005	0.01	0.0000575	624	0.0005	0.0001	0.00175	0.015	0.00005	0.005	2.35	0.241	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-46	0.00107	0.00032	0.0105	0.0005	0.0005	0.01	0.000042	625	0.0005	0.0001	0.0014	0.015	0.00005	0.005	2.01	0.22	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-47	0.00112	0.00043	0.0105	0.0005	0.0005	0.01	0.0000485	627.5	0.0005	0.0001	0.0014	0.015	0.00005	0.005	2.085	0.225	0.000005
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-Final Leach	0.00117	0.00054	0.0105	0.0005	0.0005	0.01	0.000055	630	0.0005	0.0001	0.0014	0.015	0.00005	0.005	2.16	0.23	0.000005
	0.001081	0.00029	0.01024	0.0005	0.0005	0.01	0.000057	628.7	0.0005	0.0001	0.00175	0.015	0.00005	0.005	2.686	0.2497	0.000005
M/S_Rougher Top																	
MITCHELL/SULPHURETS TAILING SAC - TOP-1	0.0046	0.0005	0.0291	0.0025	0.0025	0.05	0.00025	73.5	0.0106	0.0005	0.0072	0.015	0.00025	0.005	0.025	0.00025	0.0005
MITCHELL/SULPHURETS TAILING SAC - TOP-2	0.0038	0.0005	0.0297	0.0025	0.0025	0.05	0.00025	58.2	0.0087	0.0005	0.0046	0.015	0.00025	0.005	0.025	0.00076	0.0005
MITCHELL/SULPHURETS TAILING SAC - TOP-3	0.0037	0.0022	0.0361	0.0025	0.0025	0.05	0.00025	46.9	0.0071	0.0005	0.0034	0.015	0.00025	0.005	0.09	0.00319	0.0005
MITCHELL/SULPHURETS TAILING SAC - TOP-4	0.0037	0.0023	0.0307	0.0025	0.0025	0.05	0.00025	43.9	0.0057	0.0005	0.0031	0.015	0.00025	0.005	0.249	0.0023	0.0005
MITCHELL/SULPHURETS TAILING SAC - TOP-5	0.0028	0.002	0.0468	0.0025	0.0025	0.05	0.00025	30.8	0.0025	0.0005	0.0021	0.015	0.00025	0.005	0.257	0.00608	0.0005
MITCHELL/SULPHURETS TAILING SAC - TOP-6	0.0027	0.0023	0.0602	0.00025	0.00025	0.005	0.000005	24.7	0.00252	0.00005	0.00178	0.015	0.000025	0.0025	0.33	0.00778	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-7	0.00251	0.00206	0.0666	0.00025	0.00025	0.005	0.000005	20.3	0.00195	0.00005	0.00144	0.015	0.000025	0.0025	0.405	0.00737	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-8	0.00239	0.0018	0.0816	0.00025	0.00025	0.005	0.000005	18.2	0.0014	0.00005	0.0012	0.015	0.000025	0.0025	0.487	0.0125	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-9	0.00209	0.00156	0.0823	0.00025	0.00025	0.005	0.000016	14	0.00111	0.00005	0.00092	0.015	0.000025	0.0025	0.446	0.0147	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-10	0.0018	0.00153	0.12	0.00025	0.00025	0.005	0.000005	12.1	0.00075	0.00005	0.00076	0.015	0.000025	0.0025	0.464	0.0113	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-11	0.00184	0.00163	0.116	0.00025	0.00025	0.005	0.000005	11.3	0.00063	0.00005	0.00069	0.015	0.000025	0.0025	0.514	0.0122	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-12	0.00172	0.00146	0.142	0.00025	0.00025	0.005	0.000005	10.4	0.00056	0.00005	0.00057	0.015	0.000025	0.0025	0.512	0.0121	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-13	0.00155	0.00164	0.167	0.00025	0.00025	0.005	0.000005	10.6	0.00025	0.00005	0.00054	0.015	0.000025	0.0025	0.59	0.015	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-14	0.00146	0.00146	0.174	0.00025	0.00025	0.005	0.000005	9.92	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.557	0.0154	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-15	0.00119	0.00147	0.197	0.00025	0.00025	0.005	0.000005	9.81	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.544	0.0173	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-16	0.00114	0.00135	0.214	0.00025	0.00025	0.005	0.000005	9.12	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.528	0.0184	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-17	0.00114	0.00126	0.238	0.00025	0.00025	0.005	0.000005	9.41	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.554	0.0203	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-18	0.00103	0.00102	0.233	0.00025	0.00025	0.005	0.000005	9.64	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.506	0.0213	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-19	0.00101	0.00112	0.294	0.00025	0.00025	0.005	0.000005	8.74	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.557	0.0255	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-20	0.00095	0.00116	0.321	0.00025	0.00025	0.005	0.000005	9.5	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.593	0.0284	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-21	0.00092	0.00109	0.361	0.00025	0.00025	0.005	0.000005	9.67	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.613	0.0341	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-22	0.0009	0.00094	0.359	0.00025	0.00025	0.005	0.000005	9.79	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.552	0.0311	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-23	0.00091	0.00097	0.371	0.00025	0.00025	0.005	0.000005	9.64	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.598	0.0338	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-24	0.00075	0.00102	0.431	0.00025	0.00025	0.005	0.000005	9.62	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.622	0.0361	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-25	0.00075	0.00082	0.412	0.00025	0.00025	0.005	0.000005	9.27	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.551	0.0336	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-26	0.00066	0.00076	0.481	0.00025	0.00025	0.005	0.000005	10.3	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.609	0.0431	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-27	0.00064	0.00072	0.498	0.00025	0.00025	0.005	0.000005	10.4	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.642	0.0433	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-28	0.0006	0.0007	0.489	0.00025	0.00025	0.005	0.000005	9.79	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.6075	0.04115	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-29	0.00056	0.00068	0.48	0.00025	0.00025	0.005	0.000005	9.18	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.573	0.039	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-30	0.00056	0.00066	0.5125	0.00025	0.00025	0.005	0.000005	9.29	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.5885	0.03875	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-31	0.00056	0.00064	0.545	0.00025	0.00025	0.005	0.000005	9.4	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.604	0.0385	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-32	0.00051	0.00063	0.54	0.00025	0.00025	0.005	0.000005	9.55	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.573	0.036	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-33	0.00046	0.00062	0.535	0.00025	0.00025	0.005	0.000005	9.7	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.542	0.0335	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-34	0.00047	0.000575	0.558	0.00025	0.00025	0.005	0.0000085	9.165	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.5635	0.0325	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-35	0.00048	0.00053	0.581	0.00025	0.00025	0.005	0.000012	8.63	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.585	0.0315	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-36	0.000475	0.00049	0.5905	0.00025	0.00025	0.005	0.0000085	8.68	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.5935	0.0301	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-37	0.00047	0.00045	0.6	0.00025	0.00025	0.005	0.000005	8.73	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.602	0.0287	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-38	0.000475	0.00046	0.598	0.00025	0.00025	0.005	0.000005	8.965	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.6105	0.0282	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-39	0.00048	0.00047	0.596	0.00025	0.00025	0.005	0.000005	9.2	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.619	0.0277	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-40	0.00047	0.000455	0.5955	0.00025	0.00025	0.005	0.000005	9.195	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.6265	0.02645	0.000005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals																
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
MITCHELL/SULPHURETS TAILING SAC - TOP-41	0.00046	0.00044	0.595	0.00025	0.00025	0.005	0.000005	9.19	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.634	0.0252	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-42	0.00047	0.00044	0.629	0.00025	0.00025	0.005	0.000005	9.115	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.6365	0.02395	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-43	0.00048	0.00044	0.663	0.00025	0.00025	0.005	0.000005	9.04	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.639	0.0227	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-44	0.00045	0.000435	0.65	0.00015	0.00025	0.005	0.000005	8.81	0.00025	0.00005	0.00025	0.015	0.000025	0.001375	0.6225	0.02445	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-45	0.00042	0.00043	0.637	0.00005	0.00025	0.005	0.000005	8.58	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.606	0.0262	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-46	0.000435	0.00041	0.7285	0.00005	0.00025	0.005	0.000005	8.54	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.619	0.02305	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-47	0.00045	0.00039	0.82	0.00005	0.00025	0.005	0.000005	8.5	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.632	0.0199	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-48	0.00045	0.000375	0.7755	0.00005	0.00025	0.005	0.000005	8.825	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.668	0.0195	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-49	0.00045	0.00036	0.731	0.00005	0.00025	0.005	0.000005	9.15	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.704	0.0191	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-50	0.000425	0.00033	0.705	0.00005	0.00025	0.005	0.000005	8.945	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.69	0.017	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-51	0.0004	0.0003	0.679	0.00005	0.00025	0.005	0.000005	8.74	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.676	0.0149	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-52	0.00041	0.0003	0.66	0.00005	0.00025	0.005	0.000005	8.955	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.7025	0.01325	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-53	0.00042	0.0003	0.641	0.00005	0.00025	0.005	0.000005	9.17	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.729	0.0116	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-54	0.000405	0.000275	0.6085	0.00005	0.00025	0.005	0.000005	8.455	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.7165	0.010225	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-55	0.00039	0.00025	0.576	0.00005	0.00025	0.005	0.000005	7.74	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.704	0.00885	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-56	0.000395	0.00026	0.6335	0.00005	0.00025	0.005	0.000005	7.82	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.7185	0.00802	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-57	0.0004	0.00027	0.691	0.00005	0.00025	0.005	0.000005	7.9	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.733	0.00719	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-58	0.00039	0.00027	0.6385	0.00005	0.00025	0.005	0.000005	7.7	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.735	0.006985	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-59	0.00038	0.00027	0.586	0.00005	0.00025	0.005	0.000005	7.5	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.737	0.00678	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-60	0.00038	0.000265	0.6395	0.00005	0.00025	0.005	0.000005	7.67	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.7535	0.00623	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-61	0.00038	0.00026	0.693	0.00005	0.00025	0.005	0.000005	7.84	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.77	0.00568	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-62	0.000375	0.000245	0.6485	0.00005	0.00025	0.005	0.000005	7.65	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.777	0.005355	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-63	0.00037	0.00023	0.604	0.00005	0.00025	0.005	0.000005	7.46	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.784	0.00503	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-64	0.000365	0.00023	0.6795	0.00005	0.00025	0.005	0.000005	7.4	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.786	0.00507	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-65	0.00036	0.00023	0.755	0.00005	0.00025	0.005	0.000005	7.34	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.788	0.00511	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-66	0.00033	0.00024	0.7	0.00005	0.00025	0.005	0.000005	7.455	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.756	0.005685	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-67	0.0003	0.00025	0.645	0.00005	0.00025	0.005	0.000005	7.57	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.724	0.00626	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-68	0.000285	0.00023	0.665	0.00005	0.00025	0.005	0.000005	7.305	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.735	0.006255	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-69	0.00027	0.00021	0.685	0.00005	0.00025	0.005	0.000005	7.04	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.746	0.00625	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-70	0.00027	0.00018	0.603	0.00005	0.00025	0.005	0.000005	7.25	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.756	0.00565	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-71	0.0002575	0.00017	0.61975	0.00005	0.00025	0.005	0.000005	7.14	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.75725	0.0053825	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-72	0.000245	0.00016	0.6365	0.00005	0.00025	0.005	0.000005	7.03	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.7585	0.005115	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-73	0.0002325	0.00015	0.65325	0.00005	0.00025	0.005	0.000005	6.92	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.75975	0.0048475	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-74	0.00022	0.00014	0.67	0.00005	0.00025	0.005	0.000005	6.81	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.761	0.00458	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-75	0.0002275	0.0001425	0.65275	0.00005	0.00025	0.005	0.000005	6.9025	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.75325	0.0041025	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-76	0.000235	0.000145	0.6355	0.00005	0.00025	0.005	0.000005	6.995	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.7455	0.003625	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-77	0.0002425	0.0001475	0.61825	0.00005	0.00025	0.005	0.000005	7.0875	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.73775	0.0031475	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-78	0.00025	0.00015	0.601	0.00005	0.00025	0.005	0.000005	7.18	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.73	0.00267	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-79	0.0002425	0.0001525	0.6185	0.00005	0.00025	0.005	0.000005	7.0175	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.7345	0.002485	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-80	0.000235	0.000155	0.636	0.00005	0.00025	0.005	0.000005	6.855	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.739	0.0023	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-81	0.0002275	0.0001575	0.6535	0.00005	0.00025	0.005	0.000005	6.6925	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.7435	0.002115	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-82	0.00022	0.00016	0.671	0.00005	0.00025	0.005	0.000005	6.53	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.748	0.00193	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-83	0.0002125	0.0001525	0.658	0.00005	0.00025	0.005	0.000005	6.495	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.74475	0.001795	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-84	0.000205	0.000145	0.645	0.00005	0.00025	0.005	0.000005	6.46	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.7415	0.00166	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-85	0.0001975	0.0001375	0.632	0.00005	0.00025	0.005	0.000005	6.425	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.73825	0.001525	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-86	0.00019	0.00013	0.619	0.00005	0.00025	0.005	0.000005	6.39	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.735	0.00139	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-87	0.0001975	0.000135	0.62475	0.00005	0.00025	0.005	0.000005	6.48	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.7435	0.0013775	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-88	0.000205	0.00014	0.6305	0.00005	0.00025	0.005	0.000005	6.57	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.752	0.001365	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-89	0.0002125	0.000145	0.63625	0.00005	0.00025	0.005	0.000005	6.66	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.7605	0.0013525	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-90	0.00022	0.00015	0.642	0.00005	0.00025	0.005	0.000005	6.75	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.769	0.00134	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-91	0.0002175	0.0001425	0.65625	0.00005	0.00025	0.005	0.000005	6.92	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.77	0.0013425	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-92	0.000215	0.000135	0.6705	0.00005	0.00025	0.005	0.000005	7.09	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.771	0.001345	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-93	0.0002125	0.0001275	0.68475	0.00005	0.00025	0.005	0.000005	7.26	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.772	0.0013475	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-94	0.00021	0.00012	0.699	0.00005	0.00025	0.005	0.000005	7.43	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.773	0.00135	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-95	0.0002125	0.000125	0.6935	0.00005	0.00025	0.005	0.000005	7.2825	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.78	0.001295	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-96	0.000215	0.00013	0.688	0.00005	0.00025	0.005	0.000005	7.135	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.787	0.00124	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-97	0.0002175	0.000135	0.6825	0.00005	0.00025	0.005	0.000005	6.9875	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.794	0.001185	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-98	0.00022	0.00014	0.677	0.00005	0.00025	0.005	0.000005	6.84	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.801	0.00113	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-99	0.0002125	0.00013	0.68775	0.00005	0.00025	0.005	0.000005	6.8175	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.80375	0.001025	0.000005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals																
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
MITCHELL/SULPHURETS TAILING SAC - TOP-100	0.000205	0.00012	0.6985	0.00005	0.00025	0.005	0.000005	6.795	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.8065	0.00092	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-101	0.0001975	0.00011	0.70925	0.00005	0.00025	0.005	0.000005	6.7725	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.80925	0.000815	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-102	0.00022	0.00014	0.677	0.00005	0.00025	0.005	0.000005	6.47	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.81	0.00106	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-103	0.00022	0.00014	0.677	0.00005	0.00025	0.005	0.000005	6.47	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.81	0.00106	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-104	0.00022	0.00014	0.677	0.00005	0.00025	0.005	0.000005	6.47	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.81	0.00106	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-105	0.00022	0.00014	0.677	0.00005	0.00025	0.005	0.000005	6.47	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.81	0.00106	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-106	0.00025	0.00011	0.774	0.00005	0.00025	0.005	0.000005	6.87	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.785	0.000907	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-107	0.0005625	0.0012825	0.5848	0.0006625	0.0008125	0.01625	0.00006625	98.4025	0.0136875	0.0001625	0.0124125	0.015	0.00008125	0.0014375	0.595	0.00074275	0.00012875
MITCHELL/SULPHURETS TAILING SAC - TOP-108	0.000875	0.002455	0.3956	0.001275	0.001375	0.0275	0.0001275	189.935	0.027125	0.000275	0.024575	0.015	0.0001375	0.002625	0.405	0.0005785	0.0002525
MITCHELL/SULPHURETS TAILING SAC - TOP-109	0.0011875	0.0036275	0.2064	0.0018875	0.0019375	0.03875	0.00018875	281.4675	0.0405625	0.0003875	0.0367375	0.015	0.00019375	0.0038125	0.215	0.00041425	0.00037625
MITCHELL/SULPHURETS TAILING SAC - TOP-110	0.0002	0.00012	0.722	0.00005	0.00025	0.005	0.000005	6.88	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.784	0.000847	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-111	0.0004775	0.0013775	0.54555	0.0001625	0.0003125	0.00625	0.00001475	90.66	0.0048625	0.0000625	0.0080625	0.015	0.00003125	0.0014375	0.59425	0.00064775	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-112	0.000755	0.002635	0.3691	0.000275	0.000375	0.0075	0.0000245	174.44	0.009475	0.000075	0.015875	0.015	0.0000375	0.002625	0.4045	0.0004485	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-113	0.0010325	0.0038925	0.19265	0.0003875	0.0004375	0.00875	0.00003425	258.22	0.0140875	0.0000875	0.0236875	0.015	0.00004375	0.0038125	0.21475	0.00024925	0.000005
MITCHELL/SULPHURETS TAILING SAC - TOP-114	0.00019	0.0001	0.72	0.00005	0.00025	0.005	0.000005	6.75	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.812	0.00071	0.000005
	0.000699	0.0023305	0.44773	0.00073	0.0009375	0.01325	0.00005345	133.469	0.0138475	0.00017	0.0169225	0.015	0.00006625	0.00215	0.51865	0.0005872	0.00007925
M/S_Rougher Bottom																	
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-1	0.0017	0.0032	0.0218	0.0025	0.0025	0.05	0.00025	307	0.0578	0.0005	0.0447	0.015	0.00025	0.005	0.025	0.00025	0.0005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-2	0.002	0.0049	0.0201	0.0025	0.0025	0.05	0.00025	339	0.0616	0.0005	0.045	0.015	0.00025	0.005	0.025	0.00025	0.0005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-3	0.0017	0.0046	0.0178	0.0025	0.0025	0.05	0.00025	363	0.0592	0.0005	0.0466	0.015	0.00025	0.005	0.025	0.00025	0.0005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-4	0.0015	0.0048	0.0172	0.0025	0.0025	0.05	0.00025	373	0.054	0.0005	0.0489	0.015	0.00025	0.005	0.025	0.00025	0.0005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-5	0.0014	0.005	0.0163	0.0025	0.0025	0.05	0.00025	382	0.0484	0.0005	0.0464	0.015	0.00025	0.005	0.025	0.00025	0.0005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-6	0.00138	0.00573	0.0169	0.00025	0.00025	0.005	0.000071	388	0.0447	0.00005	0.0483	0.015	0.000025	0.0025	0.0286	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-7	0.0013	0.0054	0.0159	0.00025	0.00025	0.012	0.00003	376	0.0312	0.00005	0.0406	0.015	0.000025	0.0025	0.0306	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-8	0.00131	0.00515	0.0162	0.0005	0.0005	0.01	0.000044	342	0.0187	0.0001	0.0315	0.015	0.00005	0.005	0.025	0.00005	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-9	0.00127	0.00488	0.0157	0.00025	0.00025	0.012	0.00002	299	0.0089	0.00005	0.0217	0.015	0.000025	0.0025	0.0261	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-10	0.00122	0.00444	0.0166	0.00025	0.00025	0.005	0.000027	270	0.00432	0.00005	0.0156	0.015	0.000025	0.0025	0.0226	0.00008	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-11	0.00137	0.00465	0.0181	0.00025	0.00025	0.011	0.000019	246	0.00187	0.00005	0.0125	0.015	0.000025	0.0025	0.0182	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-12	0.00152	0.00454	0.0197	0.00025	0.00025	0.012	0.000012	209	0.00091	0.00005	0.00949	0.015	0.000025	0.0025	0.0181	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-13	0.00155	0.00384	0.0204	0.00025	0.00025	0.011	0.000013	178	0.0006	0.00005	0.00795	0.015	0.000025	0.0025	0.0154	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-14	0.00182	0.00465	0.0226	0.00025	0.00025	0.01	0.000011	157	0.00025	0.00005	0.00716	0.015	0.000025	0.0025	0.0133	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-15	0.00195	0.00425	0.0249	0.00025	0.00025	0.011	0.000005	137	0.00025	0.00005	0.00641	0.015	0.000025	0.0025	0.0124	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-16	0.00208	0.00496	0.026	0.00025	0.00025	0.013	0.000005	112	0.00025	0.00005	0.00558	0.015	0.000025	0.0025	0.008	0.000052	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-17	0.00244	0.00477	0.0287	0.00025	0.00025	0.013	0.000012	100	0.00025	0.00005	0.00488	0.015	0.000025	0.0025	0.0143	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-18	0.0027	0.00442	0.0298	0.00025	0.00025	0.015	0.000005	90.7	0.00025	0.00005	0.0047	0.015	0.000025	0.0025	0.0078	0.000073	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-19	0.00328	0.00508	0.0332	0.00025	0.00025	0.015	0.000005	80.9	0.00025	0.00005	0.00425	0.015	0.000025	0.0025	0.006	0.000061	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-20	0.00361	0.00552	0.0342	0.00025	0.00025	0.018	0.000005	80.2	0.00025	0.00005	0.00404	0.015	0.000025	0.0025	0.0071	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-21	0.0035	0.0057	0.0366	0.00025	0.00025	0.019	0.000005	79.7	0.00025	0.00005	0.0038	0.015	0.000025	0.0025	0.0066	0.000076	0.000089
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-22	0.00392	0.00578	0.0379	0.00025	0.00025	0.019	0.000005	71.6	0.00025	0.00005	0.00365	0.015	0.000025	0.0025	0.0025	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-23	0.00391	0.00551	0.0358	0.00025	0.00025	0.021	0.000005	75.6	0.00025	0.00005	0.00319	0.015	0.000025	0.0025	0.0057	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-24	0.00428	0.00616	0.0407	0.00025	0.00025	0.023	0.000005	71.5	0.00025	0.00005	0.00343	0.015	0.000025	0.0025	0.0096	0.000078	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-25	0.00494	0.00533	0.0384	0.00025	0.00025	0.023	0.000005	71.8	0.00025	0.00005	0.0028	0.015	0.000025	0.0025	0.0062	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-26	0.00504	0.00564	0.039	0.00025	0.00025	0.022	0.000005	67.1	0.00025	0.00005	0.00292	0.015	0.000025	0.0025	0.0025	0.000068	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-27	0.00543	0.00618	0.0417	0.00025	0.00025	0.029	0.000005	70.9	0.00025	0.00005	0.00297	0.015	0.000025	0.0025	0.0057	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-28	0.00576	0.006225	0.04105	0.00025	0.00025	0.03	0.000005	69.3	0.00025	0.00005	0.002855	0.015	0.000025	0.0025	0.00595	0.0000405	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-29	0.00609	0.00627	0.0404	0.00025	0.00025	0.031	0.000005	67.7	0.00025	0.00005	0.00274	0.015	0.000025	0.0025	0.0062	0.000056	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-30	0.00646	0.00615	0.0414	0.00025	0.00025	0.0305	0.000005	67.1	0.00025	0.00005	0.0027	0.015	0.000025	0.0025	0.0057	0.0000405	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-31	0.00683	0.00603	0.0424	0.00025	0.00025	0.03	0.000005	66.5	0.00025	0.00005	0.00266	0.015	0.000025	0.0025	0.0052	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-32	0.00761	0.006165	0.0435	0.00025	0.00025	0.033	0.000005	64.15	0.00025	0.00005	0.00227	0.015	0.000025	0.0025	0.0054	0.00004	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-33	0.00839	0.0063	0.0446	0.00025	0.00025	0.036	0.000005	61.8	0.00025	0.00005	0.00188	0.015	0.000025	0.0025	0.0056	0.000055	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-34	0.008765	0.00627	0.04515	0.00025	0.00025	0.038	0.000005	62.9	0.00025	0.00005	0.001995	0.015	0.000025	0.0025	0.00595	0.00004	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-35	0.00914	0.00624	0.0457	0.00025	0.00025	0.04	0.000005	64	0.00025	0.00005	0.00211	0.015	0.000025	0.0025	0.0063	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-36	0.00946	0.00613	0.04425	0.00025	0.00025	0.041	0.000005	64	0.00025	0.00005	0.002075	0.015	0.000025	0.0025	0.00585	0.0000405	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-37	0.00978	0.00602	0.0428	0.00025	0.00025	0.042	0.000005	64	0.00025	0.00005	0.00204	0.015	0.000025	0.0025	0.0054	0.000056	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-38	0.01039	0.005885	0.04235	0.00025	0.00025	0.0435	0.000005	61.55	0.00039	0.00005	0.002055	0.015	0.000025	0.0025	0.0066	0.0000605	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-39	0.011	0.00575	0.0419	0.00025	0.00025	0.045	0.000005	59.1	0.00053	0.00005	0.00207	0.015	0.000025	0.0025	0.0078	0.000065	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-40	0.01125	0.006035	0.04305	0.00025	0.00025	0.044	0.000005	62.05	0.00039	0.00005	0.00208	0.015	0.000025	0.0025	0.00665	0.000045	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-41	0.0115	0.00632	0.0442	0.00025	0.00025	0.043	0.000005	65	0.00025	0.00005	0.00209	0.015	0.000025	0.0025	0.0055	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-42	0.012	0.005275	0.04305	0.00025	0.00025	0.043	0.000005	59.45	0.00025	0.00005	0.00232	0.015	0.0000445	0.0025	0.00725	0.0000525	0.000005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals																
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-43	0.0125	0.00423	0.0419	0.00025	0.00025	0.043	0.000005	53.9	0.00025	0.00005	0.00255	0.015	0.000064	0.0025	0.009	0.00008	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-44	0.0134	0.004995	0.0436	0.00015	0.00025	0.0435	0.000005	57.85	0.00025	0.00005	0.00219	0.015	0.0000445	0.001375	0.00905	0.000069	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-45	0.0143	0.00576	0.0453	0.00005	0.00025	0.044	0.000005	61.8	0.00025	0.00005	0.00183	0.015	0.000025	0.00025	0.0091	0.000058	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-46	0.01455	0.005355	0.04535	0.00005	0.00025	0.0455	0.000005	59.8	0.00025	0.00005	0.001785	0.015	0.000025	0.00025	0.00845	0.0000415	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-47	0.0148	0.00495	0.0454	0.00005	0.00025	0.047	0.000005	57.8	0.00025	0.00005	0.00174	0.015	0.000025	0.00025	0.0078	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-48	0.01525	0.00525	0.0463	0.00005	0.00025	0.0455	0.000005	58.15	0.00025	0.00005	0.001715	0.015	0.000025	0.00025	0.00695	0.0000755	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-49	0.0157	0.00555	0.0472	0.00005	0.00025	0.044	0.000005	58.5	0.00025	0.00005	0.00169	0.015	0.000025	0.00025	0.0061	0.000126	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-50	0.01615	0.0054	0.04745	0.00005	0.00025	0.0455	0.000005	58.5	0.00025	0.00005	0.001635	0.015	0.000025	0.00025	0.00645	0.0001035	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-51	0.0166	0.00525	0.0477	0.00005	0.00025	0.047	0.000005	58.5	0.00025	0.00005	0.00158	0.015	0.000025	0.00025	0.0068	0.000081	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-52	0.01725	0.00491	0.0484	0.00005	0.00025	0.047	0.000005	56.9	0.00025	0.00005	0.001645	0.015	0.000025	0.00025	0.007	0.000096	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-53	0.0179	0.00457	0.0491	0.00005	0.00025	0.047	0.000005	55.3	0.00025	0.00005	0.00171	0.015	0.000025	0.00025	0.0072	0.000111	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-54	0.018	0.00506	0.04865	0.00005	0.00025	0.048	0.000005	55.2	0.00025	0.00005	0.00165	0.015	0.000025	0.00025	0.0069	0.0000835	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-55	0.0181	0.00555	0.0482	0.00005	0.00025	0.049	0.000005	55.1	0.00025	0.00005	0.00159	0.015	0.000025	0.00025	0.0066	0.000056	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-56	0.01875	0.00518	0.04825	0.00005	0.00025	0.049	0.000005	54.45	0.00025	0.00005	0.001535	0.015	0.000025	0.00025	0.007	0.000061	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-57	0.0194	0.00481	0.0483	0.00005	0.00025	0.049	0.000005	53.8	0.00025	0.00005	0.00148	0.015	0.000025	0.00025	0.0074	0.000066	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-58	0.0203	0.00482	0.0497	0.00005	0.00025	0.048	0.000005	51.75	0.00025	0.00005	0.001385	0.015	0.000025	0.00025	0.00715	0.0000685	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-59	0.0212	0.00483	0.0511	0.00005	0.00025	0.047	0.000005	49.7	0.00025	0.00005	0.00129	0.015	0.000025	0.00025	0.0069	0.000071	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-60	0.02125	0.005	0.05325	0.00005	0.00025	0.0435	0.000005	49.8	0.00025	0.00005	0.00146	0.015	0.000025	0.00025	0.00935	0.000065	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-61	0.0213	0.00517	0.0554	0.00005	0.00025	0.04	0.000005	49.9	0.00025	0.00005	0.00163	0.015	0.000025	0.00025	0.0118	0.000059	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-62	0.02165	0.00486	0.05715	0.00005	0.00025	0.0415	0.000005	49.55	0.00025	0.00005	0.001445	0.015	0.000025	0.00025	0.0147	0.000076	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-63	0.022	0.00455	0.0589	0.00005	0.00025	0.043	0.000005	49.2	0.00025	0.00005	0.00126	0.015	0.000025	0.00025	0.0176	0.000093	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-64	0.02285	0.00461	0.05775	0.00005	0.00025	0.046	0.000005	46.4	0.00025	0.00005	0.00118	0.015	0.000025	0.00025	0.0122	0.000088	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-65	0.0237	0.00467	0.0566	0.00005	0.00025	0.049	0.000005	43.6	0.00025	0.00005	0.0011	0.015	0.000025	0.00025	0.0068	0.000083	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-66	0.0235	0.004665	0.0567	0.00005	0.00025	0.046	0.000005	43.5	0.00025	0.00005	0.001065	0.015	0.000025	0.00025	0.00725	0.000068	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-67	0.0233	0.00466	0.0568	0.00005	0.00025	0.043	0.000005	43.4	0.00025	0.00005	0.00103	0.015	0.000025	0.00025	0.0077	0.000053	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-68	0.02325	0.00458	0.0588	0.00005	0.00025	0.0415	0.000005	41.1	0.00025	0.00005	0.000995	0.015	0.000025	0.00025	0.0076	0.0002315	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-69	0.0232	0.0045	0.0608	0.00005	0.00025	0.04	0.000005	38.8	0.00025	0.00005	0.00096	0.015	0.000025	0.00025	0.0075	0.00041	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-70	0.0239	0.00457	0.0624	0.00005	0.00025	0.042	0.000005	41.4	0.00025	0.00005	0.00095	0.015	0.000025	0.00025	0.0078	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-71	0.023875	0.00438	0.062925	0.00005	0.00025	0.0415	0.000005	40.325	0.00025	0.00005	0.00095	0.015	0.000025	0.00025	0.00815	0.00003525	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-72	0.02385	0.00419	0.06345	0.00005	0.00025	0.041	0.000005	39.25	0.00025	0.00005	0.00095	0.015	0.000025	0.00025	0.0085	0.0000455	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-73	0.023825	0.004	0.063975	0.00005	0.00025	0.0405	0.000005	38.175	0.00025	0.00005	0.00095	0.015	0.000025	0.00025	0.00885	0.00005575	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-74	0.0238	0.00381	0.0645	0.00005	0.00025	0.04	0.000005	37.1	0.00025	0.00005	0.00095	0.015	0.000025	0.00025	0.0092	0.000066	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-75	0.024075	0.0035925	0.0644	0.00005	0.00025	0.03825	0.000005	34.3	0.00025	0.00005	0.00089	0.015	0.000025	0.00025	0.009225	0.00005575	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-76	0.02435	0.003375	0.0643	0.00005	0.00025	0.0365	0.000005	31.5	0.00025	0.00005	0.00083	0.015	0.000025	0.00025	0.00925	0.0000455	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-77	0.024625	0.0031575	0.0642	0.00005	0.00025	0.03475	0.000005	28.7	0.00025	0.00005	0.00077	0.015	0.000025	0.00025	0.009275	0.00003525	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-78	0.0249	0.00294	0.0641	0.00005	0.00025	0.033	0.000005	25.9	0.00025	0.00005	0.00071	0.015	0.000025	0.00025	0.0093	0.000025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-79	0.02465	0.0031325	0.0671	0.00005	0.00025	0.032	0.000005	25.35	0.00025	0.00005	0.000705	0.015	0.000025	0.00025	0.010025	0.000047	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-80	0.0244	0.003325	0.0701	0.00005	0.00025	0.031	0.000005	24.8	0.00025	0.00005	0.0007	0.015	0.000025	0.00025	0.01075	0.000069	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-81	0.02415	0.0035175	0.0731	0.00005	0.00025	0.03	0.000005	24.25	0.00025	0.00005	0.000695	0.015	0.000025	0.00025	0.011475	0.000091	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-82	0.0239	0.00371	0.0761	0.00005	0.00025	0.029	0.000005	23.7	0.00025	0.00005	0.00069	0.015	0.000025	0.00025	0.0122	0.000113	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-83	0.02365	0.0038775	0.076225	0.00005	0.00025	0.02775	0.00000975	22.9	0.00025	0.00005	0.00069	0.015	0.000025	0.00025	0.014125	0.0001175	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-84	0.0234	0.004045	0.07635	0.00005	0.00025	0.0265	0.0000145	22.1	0.00025	0.00005	0.00069	0.015	0.000025	0.00025	0.01605	0.000122	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-85	0.02315	0.0042125	0.076475	0.00005	0.00025	0.02525	0.00001925	21.3	0.00025	0.00005	0.00069	0.015	0.000025	0.00025	0.017975	0.0001265	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-86	0.0229	0.00438	0.0766	0.00005	0.00025	0.024	0.000024	20.5	0.00025	0.00005	0.00069	0.015	0.000025	0.00025	0.0199	0.000131	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-87	0.02285	0.0046975	0.0783	0.00005	0.00025	0.0225	0.00001925	20.075	0.00025	0.00005	0.0006825	0.015	0.000025	0.00025	0.02255	0.00014825	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-88	0.0228	0.005015	0.08	0.00005	0.00025	0.021	0.0000145	19.65	0.00025	0.00005	0.000675	0.015	0.000025	0.00025	0.0252	0.0001655	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-89	0.02275	0.0053325	0.0817	0.00005	0.00025	0.0195	0.00000975	19.225	0.00025	0.00005	0.0006675	0.015	0.000025	0.00025	0.02785	0.00018275	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-90	0.0227	0.00565	0.0834	0.00005	0.00025	0.018	0.000005	18.8	0.00025	0.00005	0.00066	0.015	0.000025	0.00025	0.0305	0.0002	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-91	0.02215	0.0056925	0.086825	0.00005	0.00025	0.0165	0.00001025	18.175	0.00025	0.00005	0.0006325	0.015	0.000025	0.00025	0.036175	0.00023025	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-92	0.0216	0.005735	0.09025	0.00005	0.00025	0.015	0.0000155	17.55	0.00025	0.00005	0.000605	0.015	0.000025	0.00025	0.04185	0.0002605	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-93	0.02105	0.0057775	0.093675	0.00005	0.00025	0.0135	0.00002075	16.925	0.00025	0.00005	0.0005775	0.015	0.000025	0.00025	0.047525	0.00029075	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-94	0.0205	0.00582	0.0971	0.00005	0.00025	0.012	0.000026	16.3	0.00025	0.00005	0.00055	0.015	0.000025	0.00025	0.0532	0.000321	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-95	0.0205	0.006005	0.098825	0.00005	0.00025	0.01175	0.000025	15.975	0.00025	0.00005	0.00056	0.015	0.000025	0.000335	0.063	0.0003115	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-96	0.0205	0.00619	0.10055	0.00005	0.00025	0.0115	0.000024	15.65	0.00025	0.00005	0.00057	0.015	0.000025	0.00042	0.0728	0.000302	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-97	0.0205	0.006375	0.102275	0.00005	0.00025	0.01125	0.000023	15.325	0.00025	0.00005	0.00058	0.015	0.000025	0.000505	0.0826	0.0002925	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-98	0.0205	0.00656	0.104	0.00005	0.00025	0.011	0.000022	15	0.00025	0.00005	0.00059	0.015	0.000025	0.00059	0.0924	0.000283	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-99	0.019325	0.006715	0.109	0.00005	0.00025	0.0095	0.00001775	14.55	0.00025	0.00005	0.00067	0.015	0.00006925	0.000725	0.17555	0.00153975	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-100	0.01815	0.00687	0.114	0.00005	0.00025	0.008	0.0000135	14.1	0.00025	0.00005	0.00075	0.015	0.0001135	0.00086	0.2587	0.0027965	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-101	0.016975	0.007025	0.119	0.00005	0.00025	0.0065	0.00000925	13.65	0.00025	0.00005	0.00083	0.015	0.00015775	0.000995	0.34185	0.00405325	0.000005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals																
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-102	0.0199	0.00691	0.103	0.00005	0.00025	0.014	0.000011	13.6	0.00025	0.00005	0.00061	0.015	0.000057	0.00025	0.149	0.00043	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-103	0.0199	0.00691	0.103	0.00005	0.00025	0.014	0.000011	13.6	0.00025	0.00005	0.00061	0.015	0.000057	0.00025	0.149	0.00043	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-104	0.0199	0.00691	0.103	0.00005	0.00025	0.014	0.000011	13.6	0.00025	0.00005	0.00061	0.015	0.000057	0.00025	0.149	0.00043	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-105	0.0199	0.00691	0.103	0.00005	0.00025	0.014	0.000011	13.6	0.00025	0.00005	0.00061	0.015	0.000057	0.00025	0.149	0.00043	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-106	0.0199	0.00778	0.126	0.00005	0.00025	0.005	0.000005	13.5	0.00025	0.00005	0.0006	0.015	0.000075	0.00078	0.224	0.0012	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-107	0.0156875	0.00632	0.104125	0.0001	0.00025	0.005	0.000005	17.9	0.00025	0.00005	0.0005775	0.015	0.0000625	0.00121	0.2775	0.004525	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-108	0.011475	0.00486	0.08225	0.00015	0.00025	0.005	0.000005	22.3	0.00025	0.00005	0.000555	0.015	0.00005	0.00164	0.331	0.00785	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-109	0.0072625	0.0034	0.060375	0.0002	0.00025	0.005	0.000005	26.7	0.00025	0.00005	0.0005325	0.015	0.0000375	0.00207	0.3845	0.011175	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-110	0.0176	0.00732	0.116	0.00005	0.00025	0.005	0.000005	12.8	0.00054	0.00005	0.00062	0.077	0.000131	0.00111	0.324	0.002	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-111	0.0137625	0.0058575	0.1019	0.0001	0.00025	0.005	0.000005	13.575	0.0004675	0.00005	0.0005275	0.0615	0.0001045	0.0014575	0.3495	0.008175	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-112	0.009925	0.004395	0.0878	0.00015	0.00025	0.005	0.000005	14.35	0.000395	0.00005	0.000435	0.046	0.000078	0.001805	0.375	0.01435	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-113	0.0060875	0.0029325	0.0737	0.0002	0.00025	0.005	0.000005	15.125	0.0003225	0.00005	0.0003425	0.0305	0.0000515	0.0021525	0.4005	0.020525	0.000005
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-114	0.0158	0.00718	0.124	0.00005	0.00025	0.005	0.000005	13.2	0.00025	0.00005	0.00091	0.015	0.000202	0.00113	0.425	0.00531	0.000005
	0.012005	0.004781	0.089665	0.00013	0.00025	0.005	0.000005	18.655	0.000395	0.00005	0.0004915	0.046	0.0000805	0.0016165	0.3333	0.00871	0.000005
Iron Cap Top																	
2748-18-COMP-TOP-1	0.00307	0.00336	0.0858	0.00025	0.00025	0.005	0.000019	40.9	0.00025	0.00005	0.0008	0.015	0.000058	0.0025	0.263	0.00864	0.000005
2748-18-COMP-TOP-2	0.00332	0.00276	0.0443	0.00025	0.00025	0.005	0.000014	40.8	0.00025	0.00005	0.00067	0.015	0.000052	0.0025	0.323	0.0151	0.000005
2748-18-COMP-TOP-3	0.00306	0.00241	0.0412	0.00025	0.00025	0.005	0.000014	38	0.00025	0.00005	0.00061	0.015	0.000025	0.0025	0.412	0.0116	0.000005
2748-18-COMP-TOP-4	0.00305	0.00194	0.0385	0.00025	0.00025	0.005	0.000005	31.1	0.00025	0.00005	0.00051	0.015	0.000025	0.0025	0.438	0.0145	0.000005
2748-18-COMP-TOP-5	0.00287	0.00169	0.0415	0.00025	0.00025	0.005	0.00001	25.6	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.451	0.0187	0.000005
2748-18-COMP-TOP-6	0.00254	0.00163	0.0471	0.00025	0.00025	0.005	0.000005	22.9	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.454	0.022	0.000005
2748-18-COMP-TOP-7	0.00249	0.00151	0.0525	0.00025	0.00025	0.005	0.000005	17.8	0.00025	0.00005	0.0007	0.015	0.000025	0.0025	0.423	0.0242	0.000005
2748-18-COMP-TOP-8	0.00225	0.00147	0.0596	0.00025	0.00025	0.005	0.000005	15.9	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.426	0.0267	0.000005
2748-18-COMP-TOP-9	0.00195	0.00136	0.0708	0.00025	0.00025	0.005	0.000005	14.1	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.437	0.0302	0.000005
2748-18-COMP-TOP-10	0.00213	0.0013	0.0768	0.00025	0.00025	0.005	0.000015	12.1	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.403	0.0306	0.000005
2748-18-COMP-TOP-11	0.0019	0.00153	0.0984	0.00025	0.00025	0.005	0.000005	11.7	0.00025	0.00005	0.00025	0.015	0.000052	0.0025	0.483	0.0356	0.000005
2748-18-COMP-TOP-12	0.00168	0.00121	0.0997	0.00025	0.00025	0.005	0.000005	11	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.4	0.0343	0.000005
2748-18-COMP-TOP-13	0.00161	0.00118	0.113	0.00025	0.00025	0.005	0.000023	10.2	0.00025	0.00005	0.00025	0.015	0.000052	0.0025	0.394	0.0386	0.000005
2748-18-COMP-TOP-14	0.00143	0.00102	0.125	0.00025	0.00025	0.005	0.000005	9.58	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.348	0.0361	0.000005
2748-18-COMP-TOP-15	0.00145	0.00112	0.155	0.00025	0.00025	0.005	0.000005	9.37	0.00025	0.00005	0.00025	0.015	0.00006	0.0025	0.387	0.0414	0.000005
2748-18-COMP-TOP-16	0.00136	0.00089	0.161	0.00025	0.00025	0.005	0.000005	8.99	0.00025	0.00005	0.00025	0.015	0.000068	0.0025	0.357	0.0402	0.000005
2748-18-COMP-TOP-17	0.00132	0.00093	0.177	0.00025	0.00025	0.005	0.000005	8.83	0.00025	0.00005	0.00025	0.015	0.000068	0.0025	0.358	0.0396	0.000005
2748-18-COMP-TOP-18	0.00121	0.00089	0.196	0.00025	0.00025	0.005	0.000005	8.76	0.00025	0.00005	0.00025	0.015	0.000066	0.0025	0.371	0.0407	0.000005
2748-18-COMP-TOP-19	0.0013	0.00086	0.219	0.00025	0.00025	0.005	0.000005	8.59	0.00025	0.00005	0.00025	0.015	0.000064	0.0025	0.38	0.0422	0.000005
2748-18-COMP-TOP-20	0.00149	0.00078	0.218	0.00025	0.00025	0.005	0.000005	8.24	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.367	0.0437	0.000005
2748-18-COMP-TOP-21	0.00106	0.00073	0.219	0.00025	0.00025	0.005	0.000005	7.78	0.00025	0.00005	0.00025	0.015	0.000057	0.0025	0.349	0.0403	0.000005
2748-18-COMP-TOP-22	0.00101	0.00068	0.244	0.00025	0.00025	0.005	0.000005	7.5	0.00025	0.00005	0.00025	0.015	0.000068	0.0025	0.343	0.0346	0.000005
2748-18-COMP-TOP-23	0.00116	0.00074	0.294	0.00025	0.00025	0.005	0.000005	8.35	0.00025	0.00005	0.00025	0.015	0.000064	0.0025	0.398	0.0376	0.000005
2748-18-COMP-TOP-24	0.00114	0.00065	0.316	0.00025	0.00025	0.005	0.000005	8.74	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.388	0.0404	0.000005
2748-18-COMP-TOP-25	0.00112	0.00061	0.322	0.00025	0.00025	0.005	0.000005	8.91	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.411	0.04	0.000005
2748-18-COMP-TOP-26	0.0011	0.00061	0.308	0.00025	0.00025	0.005	0.000005	8.89	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.41	0.0407	0.000005
2748-18-COMP-TOP-27	0.00108	0.00061	0.319	0.00025	0.00025	0.005	0.000005	8.94	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.42	0.0385	0.000005
2748-18-COMP-TOP-28	0.00114	0.00061	0.35	0.00025	0.00025	0.005	0.000005	8.98	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.448	0.0382	0.000005
2748-18-COMP-TOP-29	0.00114	0.00052	0.329	0.00025	0.00025	0.005	0.000005	9.09	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.444	0.0344	0.000005
2748-18-COMP-TOP-30	0.00114	0.00048	0.319	0.00005	0.00025	0.005	0.000005	8.16	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.483	0.0387	0.000005
2748-18-COMP-TOP-31	0.00112	0.00047	0.361	0.00025	0.00025	0.005	0.000005	8.8	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.455	0.0339	0.000005
2748-18-COMP-TOP-32	0.00145	0.00053	0.42	0.00005	0.00025	0.005	0.000005	11.6	0.00025	0.00005	0.00025	0.015	0.000025	0.0005	0.626	0.0462	0.000005
2748-18-COMP-TOP-33	0.00103	0.00044	0.305	0.00005	0.00025	0.005	0.000005	7.72	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.395	0.0323	0.000005
2748-18-COMP-TOP-34	0.00092	0.00034	0.327	0.00005	0.00025	0.005	0.000005	7.63	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.378	0.0269	0.000005
2748-18-COMP-TOP-35	0.00099	0.00044	0.352	0.00005	0.00025	0.005	0.000005	8.18	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.438	0.0245	0.000005
2748-18-COMP-TOP-36	0.00099	0.00054	0.36	0.00005	0.00025	0.005	0.000005	8.46	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.464	0.0236	0.000005
2748-18-COMP-TOP-37	0.00103	0.00044	0.391	0.00005	0.00025	0.005	0.000005	8.43	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.487	0.0222	0.000005
2748-18-COMP-TOP-38	0.00095	0.00039	0.447	0.00005	0.00025	0.005	0.000005	8.81	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.49	0.0205	0.000005
2748-18-COMP-TOP-39	0.00095	0.00038	0.412	0.00005	0.00025	0.005	0.000005	8.97	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.495	0.0215	0.000005
2748-18-COMP-TOP-40	0.00097	0.00035	0.456	0.00005	0.00025	0.005	0.000005	9.56	0.00025	0.00005	0.00025	0.015	0.000409	0.00025	0.534	0.0206	0.000005
2748-18-COMP-TOP-41	0.00095	0.00047	0.378	0.00005	0.00025	0.005	0.000005	9	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.518	0.0176	0.000005
2748-18-COMP-TOP-42	0.00094	0.00035	0.425	0.00005	0.00025	0.005	0.000005	8.89	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.529	0.0172	0.000005
2748-18-COMP-TOP-43	0.00089	0.00035	0.361	0.00005	0.00025	0.005	0.000005	8.19	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.499	0.0159	0.000005
2748-18-COMP-TOP-44	0.00094	0.00038	0.474	0.00005	0.00025	0.005	0.000005	8.75	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.546	0.0151	0.000005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
2748-18-COMP-TOP-45	0.00089	0.00032	0.413	0.00005	0.00025	0.005	0.000005	8.3	0.00025	0.00005	0.00025	0.015	0.000025	0.00064	0.526	0.0158	0.000005
2748-18-COMP-TOP-46	0.00087	0.00042	0.412	0.00005	0.00025	0.005	0.000005	8.13	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.531	0.0153	0.000005
2748-18-COMP-TOP-47	0.00088	0.00032	0.34	0.00005	0.00025	0.005	0.000005	7.64	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.502	0.0147	0.000005
2748-18-COMP-TOP-48	0.00086	0.00036	0.4	0.00005	0.00025	0.005	0.000005	7.71	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.493	0.0153	0.000005
2748-18-COMP-TOP-49	0.00081	0.00029	0.365	0.00005	0.00025	0.005	0.000005	7.28	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.483	0.0181	0.000005
2748-18-COMP-TOP-50	0.00081	0.00033	0.355	0.00005	0.00025	0.005	0.000005	7.6	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.506	0.0165	0.000005
2748-18-COMP-TOP-51	0.00087	0.00031	0.36	0.00005	0.00025	0.005	0.000005	7.72	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.517	0.0143	0.000005
2748-18-COMP-TOP-52	0.00077	0.00033	0.376	0.00005	0.00025	0.005	0.000005	7.42	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.485	0.0142	0.000005
2748-18-COMP-TOP-53	0.00088	0.00038	0.44	0.00005	0.00025	0.005	0.000005	7.55	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.519	0.0131	0.000005
2748-18-COMP-TOP-54	0.00076	0.00027	0.383	0.00005	0.00025	0.005	0.000005	7.37	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.514	0.0138	0.000005
2748-18-COMP-TOP-55	0.00078	0.00029	0.379	0.00005	0.00025	0.005	0.000005	7.21	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.47	0.0127	0.000005
2748-18-COMP-TOP-56	0.00073	0.00036	0.356	0.00005	0.00025	0.005	0.000005	6.9	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.464	0.0145	0.000005
2748-18-COMP-TOP-57	0.00066	0.00027	0.379	0.00005	0.00025	0.005	0.000005	6.73	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.46	0.0134	0.000005
2748-18-COMP-TOP-58	0.00061	0.00013	0.364	0.00005	0.00025	0.005	0.000005	6.82	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.447	0.0148	0.000005
2748-18-COMP-TOP-59	0.0006	0.000175	0.3475	0.00005	0.00025	0.005	0.000005	6.51	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.4475	0.0138	0.000005
2748-18-COMP-TOP-60	0.00059	0.00022	0.331	0.00005	0.00025	0.005	0.000005	6.2	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.448	0.0128	0.000005
2748-18-COMP-TOP-61	0.00062	0.00027	0.343	0.00005	0.00025	0.005	0.000005	6.53	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.462	0.0126	0.000005
2748-18-COMP-TOP-62	0.00059	0.0002	0.429	0.00005	0.00025	0.005	0.000005	7.43	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.484	0.0138	0.000005
2748-18-COMP-TOP-63	0.0006	0.00024	0.435	0.00005	0.00025	0.005	0.000005	7.67	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.499	0.0106	0.000005
2748-18-COMP-TOP-64	0.00067	0.00024	0.424	0.00005	0.00025	0.005	0.000005	8.09	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.556	0.00986	0.000005
2748-18-COMP-TOP-65	0.00061	0.00021	0.437	0.00005	0.00025	0.005	0.000005	8.53	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.558	0.00918	0.000005
2748-18-COMP-TOP-66	0.00063	0.00019	0.414	0.00005	0.00025	0.005	0.000005	8.18	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.522	0.00815	0.000005
2748-18-COMP-TOP-67	0.00058	0.00019	0.453	0.00005	0.00025	0.005	0.000005	7.68	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.547	0.00693	0.000005
2748-18-COMP-TOP-68	0.00055	0.00017	0.386	0.00005	0.00025	0.005	0.000005	7.32	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.498	0.00538	0.000005
2748-18-COMP-TOP-69	0.00056	0.00017	0.377	0.00005	0.00025	0.005	0.000005	6.91	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.495	0.00495	0.000005
2748-18-COMP-TOP-70	0.00058	0.00015	0.416	0.00005	0.00025	0.005	0.000005	6.64	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.51	0.00425	0.000005
2748-18-COMP-TOP-71	0.00054	0.00017	0.369	0.00005	0.00025	0.005	0.000005	6.8	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.5	0.0034	0.000005
2748-18-COMP-TOP-72	0.00053	0.00015	0.378	0.00005	0.00025	0.005	0.000005	6.82	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.519	0.00318	0.000005
2748-18-COMP-TOP-73	0.00054	0.00019	0.439	0.00005	0.00025	0.005	0.000005	6.92	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.535	0.00316	0.000005
2748-18-COMP-TOP-74	0.00053	0.00016	0.405	0.00005	0.00025	0.005	0.000005	6.54	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.527	0.00278	0.000005
2748-18-COMP-TOP-75	0.00055	0.0002	0.435	0.00005	0.00025	0.005	0.000005	6.9	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.557	0.00276	0.000005
2748-18-COMP-TOP-76	0.00058	0.000175	0.44	0.00005	0.00025	0.005	0.000005	6.995	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.5675	0.002865	0.000005
2748-18-COMP-TOP-77	0.00058	0.000175	0.44	0.00005	0.00025	0.005	0.000005	6.995	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.5675	0.002865	0.000005
2748-18-COMP-TOP-78	0.00061	0.00015	0.445	0.00005	0.00025	0.005	0.000005	7.09	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.578	0.00297	0.000005
2748-18-COMP-TOP-79	0.0006125	0.0001475	0.448	0.00005	0.00025	0.005	0.000005	7.2275	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.58025	0.002875	0.000005
2748-18-COMP-TOP-80	0.000615	0.000145	0.451	0.00005	0.00025	0.005	0.000005	7.365	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.5825	0.00278	0.000005
2748-18-COMP-TOP-81	0.0006175	0.0001425	0.454	0.00005	0.00025	0.005	0.000005	7.5025	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.58475	0.002685	0.000005
2748-18-COMP-TOP-82	0.00062	0.00014	0.457	0.00005	0.00025	0.005	0.000005	7.64	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.587	0.00259	0.000005
2748-18-COMP-TOP-83	0.0006275	0.000145	0.44575	0.00005	0.00025	0.005	0.000005	7.4775	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.59475	0.00249	0.000005
2748-18-COMP-TOP-84	0.000635	0.00015	0.4345	0.00005	0.00025	0.005	0.000005	7.315	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.6025	0.00239	0.000005
2748-18-COMP-TOP-85	0.0006425	0.000155	0.42325	0.00005	0.00025	0.005	0.000005	7.1525	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.61025	0.00229	0.000005
2748-18-COMP-TOP-86	0.00065	0.00016	0.412	0.00005	0.00025	0.005	0.000005	6.99	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.618	0.00219	0.000005
2748-18-COMP-TOP-87	0.00065	0.0001625	0.4345	0.00005	0.00025	0.005	0.000005	6.87	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.632	0.00203	0.000005
2748-18-COMP-TOP-88	0.00065	0.000165	0.457	0.00005	0.00025	0.005	0.000005	6.75	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.646	0.00187	0.000005
2748-18-COMP-TOP-89	0.00065	0.0001675	0.4795	0.00005	0.00025	0.005	0.000005	6.63	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.66	0.00171	0.000005
2748-18-COMP-TOP-90	0.00069	0.00014	0.421	0.00005	0.00025	0.005	0.000005	6.63	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.62	0.00191	0.000005
2748-18-COMP-TOP-91	0.00069	0.00014	0.421	0.00005	0.00025	0.005	0.000005	6.63	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.62	0.00191	0.000005
2748-18-COMP-TOP-92	0.00069	0.00014	0.421	0.00005	0.00025	0.005	0.000005	6.63	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.62	0.00191	0.000005
2748-18-COMP-TOP-93	0.00069	0.00014	0.421	0.00005	0.00025	0.005	0.000005	6.63	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.62	0.00191	0.000005
2748-18-COMP-TOP-94	0.00075	0.00011	0.467	0.00005	0.00025	0.005	0.000005	6.76	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.592	0.00158	0.000005
2748-18-COMP-TOP-95	0.0037375	0.001	0.3562	0.0001	0.00025	0.011	0.00002325	77.07	0.00025	0.00005	0.00086	0.015	0.000025	0.0008125	0.8665	0.040435	0.000005
2748-18-COMP-TOP-96	0.006725	0.00189	0.2454	0.00015	0.00025	0.017	0.0000415	147.38	0.00025	0.00005	0.00147	0.015	0.000025	0.001375	1.141	0.07929	0.000005
2748-18-COMP-TOP-97	0.0097125	0.00278	0.1346	0.0002	0.00025	0.023	0.00005975	217.69	0.00025	0.00005	0.00208	0.015	0.000025	0.0019375	1.4155	0.118145	0.000005
2748-18-COMP-TOP-98	0.00068	0.00014	0.447	0.00005	0.00025	0.005	0.000005	6.79	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.607	0.00151	0.000005
2748-18-COMP-TOP-99	0.003885	0.001295	0.34055	0.0001	0.00025	0.011	0.0000135	59.5925	0.00025	0.00005	0.0004875	0.015	0.000025	0.0008125	0.75025	0.0118825	0.000005
2748-18-COMP-TOP-100	0.00709	0.00245	0.2341	0.00015	0.00025	0.017	0.000022	112.395	0.00025	0.00005	0.000725	0.015	0.000025	0.001375	0.8935	0.022255	0.000005
2748-18-COMP-TOP-101	0.010295	0.003605	0.12765	0.0002	0.00025	0.023	0.0000305	165.1975	0.00025	0.00005	0.0009625	0.015	0.000025	0.0019375	1.03675	0.0326275	0.000005
2748-18-COMP-TOP-102	0.00065	0.00017	0.502	0.00005	0.00025	0.005	0.000005	6.51	0.00025	0.00005	0.00025	0.015	0.000025	0.00025	0.674	0.00155	0.000005
	0.0056185	0.002054	0.28033	0.00013	0.00025	0.0158	0.00002615	101.7045	0.00025	0.00005	0.000901	0.015	0.000025	0.00115	0.95605	0.0466165	0.000005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals																
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
Iron Cap Bottom																	
2748-18-COMP-BOTTOM-1	0.0115	0.00469	0.0367	0.00025	0.00025	0.028	0.00004	247	0.00025	0.00005	0.00446	0.015	0.000025	0.0025	1.49	0.00655	0.000005
2748-18-COMP-BOTTOM-2	0.013	0.00439	0.0297	0.00025	0.00025	0.026	0.00003	274	0.00025	0.00005	0.00302	0.015	0.000025	0.0025	1.37	0.00733	0.000005
2748-18-COMP-BOTTOM-3	0.0121	0.00437	0.0259	0.0005	0.0005	0.026	0.000052	286	0.0005	0.0001	0.0019	0.015	0.00005	0.005	1.44	0.0457	0.000005
2748-18-COMP-BOTTOM-4	0.0127	0.00367	0.0238	0.00025	0.00025	0.029	0.000078	288	0.00025	0.00005	0.00269	0.015	0.000025	0.0025	1.69	0.157	0.000005
2748-18-COMP-BOTTOM-5	0.0128	0.00363	0.0217	0.00025	0.00025	0.031	0.00003	291	0.00025	0.00005	0.00175	0.015	0.000025	0.0025	1.83	0.0565	0.000005
2748-18-COMP-BOTTOM-6	0.0123	0.0046	0.0201	0.00025	0.00025	0.029	0.000048	289	0.00025	0.00005	0.00159	0.015	0.000025	0.0025	1.66	0.0287	0.000005
2748-18-COMP-BOTTOM-7	0.0133	0.00529	0.0197	0.00025	0.00025	0.027	0.00002	243	0.00025	0.00005	0.00151	0.015	0.000025	0.0025	1.28	0.0139	0.000005
2748-18-COMP-BOTTOM-8	0.0135	0.00476	0.0212	0.00025	0.00025	0.029	0.000039	218	0.00025	0.00005	0.0012	0.015	0.000025	0.0025	1.18	0.043	0.000005
2748-18-COMP-BOTTOM-9	0.0138	0.00478	0.0202	0.00025	0.00025	0.032	0.00002	168	0.00025	0.00005	0.00062	0.015	0.000025	0.0025	0.969	0.0152	0.000005
2748-18-COMP-BOTTOM-10	0.0152	0.00566	0.0217	0.00025	0.00025	0.032	0.000005	119	0.00025	0.00005	0.00059	0.015	0.000025	0.0025	0.809	0.00878	0.000005
2748-18-COMP-BOTTOM-11	0.014	0.00699	0.0239	0.00025	0.00025	0.033	0.000005	87.6	0.00025	0.00005	0.00051	0.015	0.000025	0.0025	0.601	0.00552	0.000005
2748-18-COMP-BOTTOM-12	0.0161	0.00864	0.0269	0.00025	0.00025	0.037	0.000005	61.7	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.463	0.00311	0.000005
2748-18-COMP-BOTTOM-13	0.0208	0.0101	0.029	0.00025	0.00025	0.043	0.000005	43.7	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.334	0.00294	0.000005
2748-18-COMP-BOTTOM-14	0.0195	0.0109	0.0309	0.00025	0.00025	0.034	0.000005	32.3	0.00025	0.00005	0.00025	0.015	0.000025	0.0025	0.268	0.00149	0.000005
2748-18-COMP-BOTTOM-15	0.0204	0.0111	0.0368	0.00025	0.00025	0.04	0.000005	30.2	0.00025	0.00005	0.00091	0.015	0.000025	0.0025	0.31	0.00232	0.000005
2748-18-COMP-BOTTOM-16	0.0203	0.00986	0.0357	0.00025	0.00025	0.038	0.000005	25.1	0.00025	0.00005	0.0006	0.015	0.000025	0.0025	0.323	0.00344	0.000005
2748-18-COMP-BOTTOM-17	0.0211	0.0115	0.037	0.00025	0.00025	0.037	0.000005	22.5	0.00025	0.00005	0.00053	0.015	0.000059	0.0025	0.311	0.00219	0.000005
2748-18-COMP-BOTTOM-18	0.0201	0.0124	0.0396	0.00025	0.00025	0.036	0.000012	20.6	0.00025	0.00005	0.00025	0.015	0.000074	0.0025	0.297	0.00182	0.000005
2748-18-COMP-BOTTOM-19	0.021	0.0132	0.0434	0.00025	0.00025	0.031	0.000005	19.4	0.00025	0.00005	0.00025	0.015	0.000088	0.0025	0.297	0.00357	0.000005
2748-18-COMP-BOTTOM-20	0.0257	0.014	0.0441	0.00025	0.00025	0.035	0.000005	18	0.00025	0.00005	0.00025	0.015	0.000067	0.0025	0.285	0.00224	0.000005
2748-18-COMP-BOTTOM-21	0.0198	0.015	0.0475	0.00025	0.00025	0.027	0.000005	16.9	0.00025	0.00005	0.00025	0.015	0.000093	0.0025	0.279	0.00257	0.000005
2748-18-COMP-BOTTOM-22	0.0197	0.0138	0.0499	0.00025	0.00025	0.026	0.000005	16.7	0.00025	0.00005	0.00025	0.015	0.000167	0.0025	0.294	0.00212	0.000005
2748-18-COMP-BOTTOM-23	0.0207	0.0107	0.0589	0.00025	0.00025	0.028	0.000005	19	0.00025	0.00005	0.00063	0.015	0.00013	0.0025	0.443	0.0028	0.000005
2748-18-COMP-BOTTOM-24	0.0205	0.0101	0.0573	0.00025	0.00025	0.025	0.000005	17.9	0.00025	0.00005	0.00054	0.015	0.000152	0.0025	0.435	0.00906	0.000005
2748-18-COMP-BOTTOM-25	0.0202	0.00983	0.057	0.00025	0.00025	0.025	0.000005	17.6	0.00025	0.00005	0.00079	0.015	0.000278	0.0025	0.49	0.0183	0.000005
2748-18-COMP-BOTTOM-26	0.02	0.0114	0.0557	0.00025	0.00025	0.026	0.000005	16.7	0.00025	0.00005	0.00067	0.015	0.00022	0.0025	0.501	0.0154	0.000005
2748-18-COMP-BOTTOM-27	0.0201	0.011	0.0629	0.00025	0.00025	0.026	0.000005	17.7	0.00025	0.00005	0.00074	0.015	0.000338	0.0025	0.536	0.0272	0.000005
2748-18-COMP-BOTTOM-28	0.02	0.00929	0.0701	0.00025	0.00025	0.024	0.000005	18.7	0.00025	0.00005	0.0007	0.015	0.000354	0.0025	0.64	0.0337	0.000005
2748-18-COMP-BOTTOM-29	0.0202	0.00838	0.0721	0.00025	0.00025	0.023	0.000005	20	0.00025	0.00005	0.00056	0.015	0.000191	0.0025	0.775	0.0419	0.000005
2748-18-COMP-BOTTOM-30	0.021	0.00845	0.0729	0.00005	0.00025	0.025	0.000005	17.9	0.00025	0.00005	0.00051	0.015	0.000166	0.00221	0.805	0.0407	0.000005
2748-18-COMP-BOTTOM-31	0.0196	0.00865	0.0691	0.00025	0.00025	0.021	0.000005	17.7	0.00025	0.00005	0.00025	0.015	0.00013	0.0025	0.752	0.034	0.000005
2748-18-COMP-BOTTOM-32	0.0207	0.0086	0.0757	0.00005	0.00025	0.023	0.000011	18.6	0.00025	0.00005	0.00054	0.015	0.000199	0.00193	0.84	0.0345	0.000005
2748-18-COMP-BOTTOM-33	0.0199	0.00824	0.0769	0.00005	0.00025	0.019	0.000005	18.7	0.00025	0.00005	0.00025	0.015	0.000164	0.00116	0.844	0.0375	0.000005
2748-18-COMP-BOTTOM-34	0.0192	0.00751	0.0737	0.00005	0.00025	0.018	0.000014	18	0.00025	0.00005	0.00025	0.015	0.000191	0.00173	0.848	0.035	0.000005
2748-18-COMP-BOTTOM-35	0.0199	0.00746	0.0776	0.00005	0.00025	0.02	0.000005	19	0.00025	0.00005	0.00054	0.015	0.000212	0.00183	0.944	0.0384	0.000005
2748-18-COMP-BOTTOM-36	0.0199	0.00754	0.0791	0.00005	0.00025	0.02	0.000005	18.7	0.00025	0.00005	0.00052	0.015	0.00014	0.00169	1	0.0389	0.000005
2748-18-COMP-BOTTOM-37	0.02	0.00754	0.078	0.00005	0.00025	0.018	0.000005	18.2	0.00025	0.00005	0.00025	0.015	0.000133	0.00142	1.01	0.0365	0.000005
2748-18-COMP-BOTTOM-38	0.0188	0.0076	0.0793	0.00005	0.00025	0.018	0.000012	17.9	0.00025	0.00005	0.00061	0.015	0.000294	0.00205	1.01	0.0408	0.000005
2748-18-COMP-BOTTOM-39	0.0185	0.00665	0.0792	0.00005	0.00025	0.019	0.000005	19.3	0.00025	0.00005	0.00054	0.015	0.00024	0.00161	1.03	0.0361	0.000005
2748-18-COMP-BOTTOM-40	0.02	0.00671	0.0837	0.00005	0.00025	0.018	0.000005	19.7	0.00025	0.00005	0.00055	0.015	0.000306	0.00162	1.12	0.042	0.000005
2748-18-COMP-BOTTOM-41	0.0192	0.00663	0.0812	0.00005	0.00025	0.017	0.000005	20	0.00025	0.00005	0.00051	0.015	0.000154	0.00192	1.11	0.038	0.000005
2748-18-COMP-BOTTOM-42	0.0193	0.00674	0.0824	0.00005	0.00025	0.018	0.00001	19.2	0.00025	0.00005	0.00052	0.015	0.000121	0.00195	1.16	0.0425	0.000005
2748-18-COMP-BOTTOM-43	0.0181	0.00709	0.0782	0.00005	0.00025	0.016	0.000013	19.2	0.00025	0.00005	0.00025	0.015	0.000129	0.00188	1.14	0.0402	0.000005
2748-18-COMP-BOTTOM-44	0.0189	0.00723	0.079	0.00005	0.00025	0.017	0.000013	18.8	0.00025	0.00005	0.00025	0.015	0.000117	0.00163	1.15	0.0363	0.000005
2748-18-COMP-BOTTOM-45	0.0177	0.00748	0.0759	0.00005	0.00025	0.019	0.000011	18	0.00025	0.00005	0.00051	0.015	0.000145	0.00189	1.05	0.0331	0.000005
2748-18-COMP-BOTTOM-46	0.0171	0.00786	0.0793	0.00005	0.00025	0.016	0.00001	18.1	0.00025	0.00005	0.00025	0.015	0.000078	0.00166	1.08	0.0375	0.000005
2748-18-COMP-BOTTOM-47	0.0178	0.00758	0.0755	0.00005	0.00025	0.016	0.000005	17.9	0.00025	0.00005	0.00052	0.015	0.000199	0.00141	1.05	0.0327	0.000005
2748-18-COMP-BOTTOM-48	0.0174	0.00709	0.0824	0.00005	0.00025	0.015	0.000005	18.6	0.00025	0.00005	0.00062	0.015	0.000139	0.00109	1.08	0.0309	0.000005
2748-18-COMP-BOTTOM-49	0.0182	0.00752	0.0802	0.00005	0.00025	0.015	0.000012	18	0.00025	0.00005	0.00058	0.015	0.000138	0.00063	1.09	0.033	0.000005
2748-18-COMP-BOTTOM-50	0.0163	0.00759	0.0767	0.00005	0.00025	0.014	0.000005	17.3	0.00025	0.00005	0.00025	0.015	0.000153	0.00076	1.04	0.0296	0.000005
2748-18-COMP-BOTTOM-51	0.0166	0.00769	0.0786	0.00005	0.00025	0.016	0.00001	16.7	0.00025	0.00005	0.00025	0.015	0.000171	0.00123	1	0.0294	0.000005
2748-18-COMP-BOTTOM-52	0.0161	0.00814	0.0845	0.00005	0.00025	0.015	0.000005	17.1	0.00025	0.00005	0.00025	0.015	0.000118	0.00148	1.03	0.0315	0.000005
2748-18-COMP-BOTTOM-53	0.017	0.00772	0.0817	0.00005	0.00025	0.018	0.000005	16.5	0.00025	0.00005	0.00025	0.015	0.000087	0.00125	0.987	0.0271	0.000005
2748-18-COMP-BOTTOM-54	0.0153	0.00813	0.0829	0.00005	0.00025	0.016	0.000005	16	0.00025	0.00005	0.00025	0.015	0.000098	0.00117	1	0.0301	0.000005
2748-18-COMP-BOTTOM-55	0.0153	0.0083	0.0828	0.00005	0.00025	0.015	0.000005	15.2	0.00025	0.00005	0.00025	0.015	0.000089	0.00085	0.87	0.0223	0.000005
2748-18-COMP-BOTTOM-56	0.0147	0.0091	0.0813	0.00005	0.00025	0.013	0.000005	14.9	0.00025	0.00005	0.00053	0.015	0.00006	0.00082	0.87	0.0223	0.000005
2748-18-COMP-BOTTOM-57	0.0141	0.0095	0.085	0.00005	0.00025	0.021	0.000005	14.5	0.00025	0.00005	0.00058	0.015	0.000083	0.00101	0.834	0.0194	0.000005
2748-18-COMP-BOTTOM-58	0.0134	0.0098	0.0844	0.00005	0.00025	0.015	0.000005	14.6	0.00025	0.00005	0.00025	0.015	0.000061	0.00085	0.798	0.0175	0.000005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals																
Sample ID	Antimony (Sb) mg/L	Arsenic (As) mg/L	Barium (Ba) mg/L	Beryllium (Be) mg/L	Bismuth (Bi) mg/L	Boron (B) mg/L	Cadmium (Cd) mg/L	Calcium (Ca) mg/L	Chromium (Cr) mg/L	Cobalt (Co) mg/L	Copper (Cu) mg/L	Iron (Fe) mg/L	Lead (Pb) mg/L	Lithium (Li) mg/L	Magnesium (Mg) mg/L	Manganese (Mn) mg/L	Mercury (Hg) mg/L
2748-18-COMP-BOTTOM-59	0.01335	0.00972	0.0846	0.00005	0.00025	0.014	0.000005	14	0.00025	0.00005	0.000395	0.015	0.0000675	0.000795	0.7725	0.01605	0.000005
2748-18-COMP-BOTTOM-60	0.0133	0.00964	0.0848	0.00005	0.00025	0.013	0.000005	13.4	0.00025	0.00005	0.00054	0.015	0.000074	0.00074	0.747	0.0146	0.000005
2748-18-COMP-BOTTOM-61	0.0131	0.00974	0.0868	0.00005	0.00025	0.014	0.000005	13.6	0.00025	0.00005	0.00025	0.015	0.000025	0.00081	0.736	0.0144	0.000005
2748-18-COMP-BOTTOM-62	0.0126	0.00963	0.0924	0.00005	0.00025	0.013	0.000005	14.4	0.00025	0.00005	0.00058	0.015	0.00009	0.00092	0.705	0.0138	0.000005
2748-18-COMP-BOTTOM-63	0.0118	0.0072	0.11	0.00005	0.00025	0.011	0.000005	15.9	0.00025	0.00005	0.00057	0.015	0.000066	0.00115	0.806	0.0209	0.000005
2748-18-COMP-BOTTOM-64	0.0122	0.00606	0.112	0.00005	0.00025	0.013	0.000012	17.1	0.00025	0.00005	0.00025	0.015	0.000089	0.00123	0.941	0.0244	0.000005
2748-18-COMP-BOTTOM-65	0.0117	0.00594	0.119	0.00005	0.00025	0.011	0.000005	17.6	0.00025	0.00005	0.00025	0.015	0.000066	0.00151	0.987	0.0281	0.000005
2748-18-COMP-BOTTOM-66	0.0125	0.00577	0.112	0.00005	0.00025	0.012	0.00001	16.5	0.00025	0.00005	0.00025	0.015	0.000078	0.0017	0.907	0.0312	0.000005
2748-18-COMP-BOTTOM-67	0.0119	0.00572	0.128	0.00005	0.00025	0.011	0.000016	16.9	0.00025	0.00005	0.00063	0.015	0.000084	0.0014	1.03	0.0348	0.000005
2748-18-COMP-BOTTOM-68	0.0119	0.00572	0.116	0.00005	0.00025	0.011	0.000005	17.2	0.00025	0.00005	0.00025	0.015	0.000075	0.00165	0.99	0.0296	0.000005
2748-18-COMP-BOTTOM-69	0.0113	0.00562	0.114	0.00005	0.00025	0.005	0.000005	16	0.00025	0.00005	0.00025	0.015	0.000091	0.00148	0.951	0.0322	0.000005
2748-18-COMP-BOTTOM-70	0.0111	0.00533	0.124	0.00005	0.00025	0.012	0.000005	16.4	0.00025	0.00005	0.00025	0.015	0.000084	0.00178	1.08	0.038	0.000005
2748-18-COMP-BOTTOM-71	0.011	0.00495	0.112	0.00005	0.00025	0.012	0.000005	16.5	0.00025	0.00005	0.00025	0.015	0.000095	0.00176	1.02	0.036	0.000005
2748-18-COMP-BOTTOM-72	0.0109	0.00518	0.117	0.00005	0.00025	0.012	0.000005	16.8	0.00025	0.00005	0.00025	0.015	0.000099	0.00191	1.1	0.0345	0.000005
2748-18-COMP-BOTTOM-73	0.0104	0.00492	0.126	0.00005	0.00025	0.012	0.000019	16.4	0.00025	0.00005	0.00025	0.015	0.000105	0.00157	1.07	0.0361	0.000005
2748-18-COMP-BOTTOM-74	0.00989	0.00483	0.121	0.00005	0.00025	0.011	0.000016	16	0.00025	0.00005	0.00025	0.015	0.000079	0.00171	1.09	0.0321	0.000005
2748-18-COMP-BOTTOM-75	0.00982	0.00479	0.121	0.00005	0.00025	0.011	0.00001	16.3	0.00025	0.00005	0.00025	0.015	0.0001	0.00181	1.1	0.034	0.000005
2748-18-COMP-BOTTOM-76	0.009745	0.004725	0.1215	0.00005	0.00025	0.008	0.0000075	16	0.00025	0.00005	0.00025	0.015	0.000095	0.001915	1.125	0.0322	0.000005
2748-18-COMP-BOTTOM-77	0.009745	0.004725	0.1215	0.00005	0.00025	0.008	0.0000075	16	0.00025	0.00005	0.00025	0.015	0.000095	0.001915	1.125	0.0322	0.000005
2748-18-COMP-BOTTOM-78	0.00967	0.00466	0.122	0.00005	0.00025	0.005	0.000005	15.7	0.00025	0.00005	0.00025	0.015	0.00009	0.00202	1.15	0.0304	0.000005
2748-18-COMP-BOTTOM-79	0.00935	0.00453	0.12475	0.00005	0.00025	0.005	0.000008	15.85	0.00025	0.00005	0.00025	0.015	0.000081	0.0020375	1.1375	0.029375	0.000005
2748-18-COMP-BOTTOM-80	0.00903	0.0044	0.1275	0.00005	0.00025	0.005	0.000011	16	0.00025	0.00005	0.00025	0.015	0.000072	0.002055	1.125	0.02835	0.000005
2748-18-COMP-BOTTOM-81	0.00871	0.00427	0.13025	0.00005	0.00025	0.005	0.000014	16.15	0.00025	0.00005	0.00025	0.015	0.000063	0.0020725	1.1125	0.027325	0.000005
2748-18-COMP-BOTTOM-82	0.00839	0.00414	0.133	0.00005	0.00025	0.005	0.000017	16.3	0.00025	0.00005	0.00025	0.015	0.000054	0.00209	1.1	0.0263	0.000005
2748-18-COMP-BOTTOM-83	0.0081775	0.0041325	0.132	0.00005	0.00025	0.005	0.000014	16.025	0.00025	0.00005	0.00025	0.015	0.00006275	0.002115	1.1025	0.0266	0.000005
2748-18-COMP-BOTTOM-84	0.007965	0.004125	0.131	0.00005	0.00025	0.005	0.000011	15.75	0.00025	0.00005	0.00025	0.015	0.0000715	0.00214	1.105	0.0269	0.000005
2748-18-COMP-BOTTOM-85	0.0077525	0.0041175	0.13	0.00005	0.00025	0.005	0.000008	15.475	0.00025	0.00005	0.00025	0.015	0.00008025	0.002165	1.1075	0.0272	0.000005
2748-18-COMP-BOTTOM-86	0.00754	0.00411	0.129	0.00005	0.00025	0.005	0.000005	15.2	0.00025	0.00005	0.00025	0.015	0.000089	0.00219	1.11	0.0275	0.000005
2748-18-COMP-BOTTOM-87	0.006795	0.0040025	0.136	0.00005	0.00025	0.005	0.000005	15.05	0.00025	0.00005	0.00025	0.015	0.000073	0.0023525	1.115	0.025775	0.000005
2748-18-COMP-BOTTOM-88	0.00605	0.003895	0.143	0.00005	0.00025	0.005	0.000005	14.9	0.00025	0.00005	0.00025	0.015	0.000057	0.002515	1.12	0.02405	0.000005
2748-18-COMP-BOTTOM-89	0.005305	0.0037875	0.15	0.00005	0.00025	0.005	0.000005	14.75	0.00025	0.00005	0.00025	0.015	0.000041	0.0026775	1.125	0.022325	0.000005
2748-18-COMP-BOTTOM-90	0.0069	0.00389	0.137	0.00005	0.00025	0.011	0.00001	14.8	0.00025	0.00005	0.00025	0.015	0.000066	0.00249	1.14	0.0277	0.000005
2748-18-COMP-BOTTOM-91	0.0069	0.00389	0.137	0.00005	0.00025	0.011	0.00001	14.8	0.00025	0.00005	0.00025	0.015	0.000066	0.00249	1.14	0.0277	0.000005
2748-18-COMP-BOTTOM-92	0.0069	0.00389	0.137	0.00005	0.00025	0.011	0.00001	14.8	0.00025	0.00005	0.00025	0.015	0.000066	0.00249	1.14	0.0277	0.000005
2748-18-COMP-BOTTOM-93	0.0069	0.00389	0.137	0.00005	0.00025	0.011	0.00001	14.8	0.00025	0.00005	0.00025	0.015	0.000066	0.00249	1.14	0.0277	0.000005
2748-18-COMP-BOTTOM-94	0.00644	0.00387	0.158	0.00005	0.00025	0.005	0.000005	15.2	0.00025	0.00005	0.00025	0.015	0.000054	0.00312	1.1	0.0256	0.000005
2748-18-COMP-BOTTOM-95	0.00644	0.00387	0.158	0.00005	0.00025	0.005	0.000005	15.2	0.00025	0.00005	0.00025	0.015	0.000054	0.00312	1.1	0.0256	0.000005
2748-18-COMP-BOTTOM-96	0.00644	0.00387	0.158	0.00005	0.00025	0.005	0.000005	15.2	0.00025	0.00005	0.00025	0.015	0.000054	0.00312	1.1	0.0256	0.000005
2748-18-COMP-BOTTOM-97	0.00644	0.00387	0.158	0.00005	0.00025	0.005	0.000005	15.2	0.00025	0.00005	0.00025	0.015	0.000054	0.00312	1.1	0.0256	0.000005
2748-18-COMP-BOTTOM-98	0.00511	0.00362	0.152	0.00005	0.00025	0.005	0.000005	14.9	0.00025	0.00005	0.00025	0.015	0.00016	0.00308	1.15	0.0204	0.000005
2748-18-COMP-BOTTOM-99	0.00511	0.00362	0.152	0.00005	0.00025	0.005	0.000005	14.9	0.00025	0.00005	0.00025	0.015	0.00016	0.00308	1.15	0.0204	0.000005
2748-18-COMP-BOTTOM-100	0.00511	0.00362	0.152	0.00005	0.00025	0.005	0.000005	14.9	0.00025	0.00005	0.00025	0.015	0.00016	0.00308	1.15	0.0204	0.000005
2748-18-COMP-BOTTOM-101	0.00511	0.00362	0.152	0.00005	0.00025	0.005	0.000005	14.9	0.00025	0.00005	0.00025	0.015	0.00016	0.00308	1.15	0.0204	0.000005
2748-18-COMP-BOTTOM-102	0.00456	0.00368	0.157	0.00005	0.00025	0.005	0.000005	14.6	0.00025	0.00005	0.00025	0.015	0.000025	0.00284	1.13	0.0206	0.000005
	0.005642	0.00367	0.1544	0.00005	0.00025	0.005	0.000005	15.08	0.00025	0.00005	0.00025	0.015	0.0001388	0.003096	1.12	0.02248	0.000005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
M_Rougher Top																
ROUGHER-TOP-1	0.00636	0.0025	0.15	12.3	0.005	0.615	0.00005	3.92	2.68		0.0005	0.0005	0.005	0.0003	0.005	0.0025
ROUGHER-TOP-2	0.00451	0.0025	0.15	6.88	0.005	0.412	0.00005	1.74	1.64		0.0005	0.0005	0.005	0.00018	0.005	0.0025
ROUGHER-TOP-3	0.00427	0.0025	0.15	6.66	0.005	0.548	0.00005	1.61	1.88		0.0005	0.0005	0.005	0.00024	0.005	0.0025
ROUGHER-TOP-4	0.00209	0.0025	0.15	3.72	0.005	0.333	0.00005	0.79	0.892		0.0005	0.0005	0.005	0.00011	0.005	0.0025
ROUGHER-TOP-5	0.0018	0.0025	0.15	3.02	0.005	0.276	0.00005	0.63	0.64		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-6	0.00173	0.0025	0.15	2.61	0.005	0.278	0.00005	0.58	0.558		0.0005	0.0005	0.005	0.00012	0.005	0.0025
ROUGHER-TOP-7	0.00214	0.0025	0.15	3.02	0.005	0.438	0.00005	0.59	0.802		0.0005	0.0005	0.005	0.00023	0.005	0.0025
ROUGHER-TOP-8	0.00133	0.0025	0.15	1.95	0.005	0.302	0.00005	0.25	0.51		0.0005	0.0005	0.005	0.0001	0.005	0.0025
ROUGHER-TOP-9	0.00128	0.0025	0.15	1.68	0.005	0.322	0.00005	0.25	0.463		0.0005	0.0005	0.005	0.00011	0.005	0.0025
ROUGHER-TOP-10	0.00106	0.0025	0.15	1.55	0.005	0.333	0.00005	0.25	0.417		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-11	0.00101	0.0025	0.15	1.27	0.005	0.337	0.00005	0.25	0.372		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-12	0.00092	0.0025	0.15	1.12	0.005	0.335	0.00005	0.25	0.344		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-13	0.00093	0.0025	0.15	1.04	0.005	0.364	0.00005	0.25	0.326		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-14	0.00085	0.0025	0.15	0.93	0.005	0.346	0.00005	0.25	0.31		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-15	0.00083	0.0025	0.15	0.9	0.005	0.312	0.00005	0.25	0.286		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-16	0.00079	0.0025	0.15	0.81	0.005	0.328	0.00005	0.25	0.285		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-17	0.00081	0.0025	0.15	0.76	0.005	0.319	0.00005	0.25	0.272		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-18	0.00076	0.0025	0.15	0.67	0.005	0.317	0.00005	0.25	0.26		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-19	0.00083	0.0025	0.15	0.68	0.005	0.329	0.00005	0.25	0.258		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-20	0.00078	0.0025	0.15	0.61	0.005	0.318	0.00005	0.25	0.233		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-21	0.00081	0.0025	0.15	0.57	0.005	0.296	0.00005	0.25	0.218		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-22	0.00088	0.0025	0.15	0.6	0.005	0.308	0.00005	0.25	0.25		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-23	0.00085	0.0025	0.15	0.54	0.005	0.303	0.00005	0.25	0.231		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-24	0.00089	0.0025	0.15	0.52	0.005	0.305	0.00005	0.25	0.214		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-25	0.00088	0.0025	0.15	0.25	0.005	0.285	0.00005	0.25	0.202		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-26	0.00082	0.0025	0.15	0.25	0.005	0.284	0.00005	0.25	0.208		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-27	0.00081	0.0025	0.15	0.25	0.005	0.283	0.00005	0.25	0.208		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-28	0.00082	0.0025	0.15	0.25	0.005	0.27	0.00005	0.25	0.192		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-29	0.00084	0.0025	0.15	0.25	0.005	0.268	0.00005	0.25	0.195		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-30	0.0009	0.0025	0.15	0.25	0.005	0.275	0.00005	0.25	0.212		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-31	0.0009	0.0025	0.15	0.25	0.005	0.256	0.00005	0.25	0.187		0.0005	0.0014	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-32	0.00095	0.0025	0.15	0.25	0.005	0.279	0.00005	0.25	0.206		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-33	0.00087	0.0025	0.15	0.25	0.005	0.279	0.00005	0.25	0.182		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-34	0.00095	0.0025	0.15	0.25	0.005	0.301	0.00005	0.25	0.193		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-35	0.00108	0.0025	0.15	0.25	0.005	0.277	0.00005	0.25	0.188		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-36	0.00117	0.0025	0.15	0.25	0.005	0.258	0.00005	0.25	0.174		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-37	0.00123	0.0025	0.15	0.25	0.005	0.254	0.00005	0.25	0.182		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-38	0.00128	0.0025	0.15	0.25	0.005	0.263	0.00005	0.25	0.171		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-39	0.00127	0.0025	0.15	0.25	0.005	0.246	0.00005	0.25	0.165		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-40	0.00136	0.0025	0.15	0.25	0.005	0.257	0.00005	0.25	0.147		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-41	0.00153	0.0025	0.15	0.25	0.005	0.25	0.00005	0.25	0.156		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-42	0.00146	0.0025	0.15	0.25	0.005	0.225	0.00005	0.25	0.143		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-43	0.00155	0.0025	0.15	0.25	0.005	0.25	0.00005	0.25	0.155		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-44	0.0015	0.0025	0.15	0.25	0.005	0.231	0.00005	0.25	0.154		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-45	0.00148	0.0025	0.15	0.25	0.005	0.262	0.00005	0.25	0.143		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-46	0.00153	0.0025	0.15	0.25	0.005	0.224	0.00005	0.25	0.145		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-47	0.00185	0.0025	0.15	0.25	0.005	0.277	0.00005	0.25	0.173		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-48	0.00148	0.0025	0.15	0.25	0.005	0.219	0.00005	0.25	0.144	4.32	0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-TOP-49	0.00147	0.00025	0.15	0.249	0.00016	0.224	0.000005	0.025	0.173	4.32	0.00005	0.00005	0.005	0.000014	0.0005	0.0005
ROUGHER-TOP-50	0.00144	0.00025	0.15	0.245	0.00017	0.214	0.000005	0.025	0.142	0.93	0.00005	0.00005	0.005	0.00002	0.0005	0.0015
ROUGHER-TOP-51	0.00146	0.00025	0.15	0.23	0.00017	0.224	0.000005	0.025	0.142	0.84	0.00005	0.00005	0.005	0.000014	0.0005	0.0015
ROUGHER-TOP-52	0.00139	0.00025	0.15	0.239	0.00016	0.207	0.000005	0.025	0.134	0.94	0.00005	0.00005	0.005	0.000011	0.0005	0.0015
ROUGHER-TOP-53	0.00133	0.00025	0.15	0.238	0.00015	0.209	0.000005	0.025	0.127	0.82	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
ROUGHER-TOP-54	0.00134	0.00025	0.15	0.244	0.00017	0.197	0.000005	0.025	0.133	0.73	0.00005	0.00005	0.005	0.000014	0.0005	0.0015
ROUGHER-TOP-55	0.0013	0.00025	0.15	0.224	0.00018	0.189	0.000005	0.025	0.131	0.72	0.00005	0.00005	0.005	0.000014	0.0005	0.0015
ROUGHER-TOP-56	0.00126	0.00025	0.15	0.232	0.00015	0.198	0.000005	0.025	0.132	0.73	0.00005	0.00005	0.005	0.000012	0.0005	0.0015
ROUGHER-TOP-57	0.00114	0.00025	0.15	0.209	0.00013	0.189	0.000005	0.025	0.118	0.67	0.00005	0.00005	0.005	0.00001	0.0005	0.0015
ROUGHER-TOP-58	0.00114	0.00025	0.15	0.199	0.00014	0.186	0.000005	0.025	0.118	0.68	0.00005	0.00005	0.005	0.000005	0.0005	0.0015

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
ROUGHER-TOP-59	0.00112	0.00025	0.15	0.191	0.00013	0.19	0.000005	0.025	0.118	0.61	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
ROUGHER-TOP-60	0.00109	0.00025	0.15	0.212	0.00013	0.184	0.000005	0.062	0.117	0.59	0.00005	0.00005	0.005	0.000011	0.0005	0.0015
ROUGHER-TOP-61	0.00119	0.00025	0.15	0.255	0.00012	0.176	0.000005	0.11	0.114	0.63	0.00005	0.00005	0.005	0.000012	0.0005	0.0015
ROUGHER-TOP-62	0.00106	0.00025	0.15	0.232	0.00012	0.181	0.000005	0.088	0.114	0.63	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
ROUGHER-TOP-63	0.00115	0.00025	0.15	0.195	0.00017	0.183	0.000005	0.025	0.118	0.61	0.00005	0.00005	0.005	0.00001	0.0005	0.0015
ROUGHER-TOP-64	0.0011	0.00025	0.15	0.195	0.00015	0.178	0.000005	0.025	0.115	0.68	0.00005	0.00005	0.005	0.000011	0.0005	0.0015
ROUGHER-TOP-65	0.00104	0.00025	0.15	0.189	0.00013	0.184	0.000005	0.025	0.11	0.61	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
ROUGHER-TOP-66	0.00104	0.00025	0.15	0.192	0.00016	0.181	0.000005	0.025	0.106	0.63	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
ROUGHER-TOP-67	0.00104	0.00025	0.15	0.186	0.00014	0.175	0.000005	0.025	0.108	0.59	0.00005	0.00005	0.005	0.000011	0.0005	0.0015
ROUGHER-TOP-68	0.00101	0.00025	0.15	0.164	0.00013	0.17	0.000005	0.025	0.108	0.62	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
ROUGHER-TOP-69	0.000923	0.00025	0.15	0.174	0.00016	0.166	0.000005	0.025	0.101	0.57	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
ROUGHER-TOP-70	0.000976	0.00025	0.15	0.179	0.00013	0.169	0.000005	0.025	0.101	0.54	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
ROUGHER-TOP-71	0.000971	0.00025	0.15	0.19	0.00012	0.164	0.000005	0.025	0.102	0.51	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
ROUGHER-TOP-72-Final	0.00168	0.00025	0.15	0.487	0.00022	0.255	0.000005	0.273	0.151	1.08	0.00005	0.00005	0.005	0.000063	0.0005	0.0015
	0.001112	0.00025	0.15	0.2388	0.000152	0.1848	0.000005	0.0746	0.1126		0.00005	0.00005	0.005	0.0000166	0.0005	0.0015
M_Rougher Bottom																
ROUGHER-BOTTOM-1	0.0133	0.0088	0.6	58.7	0.005	1.35	0.00005	25.8	11.2		0.0005	0.0005	0.017	0.00134	0.005	0.0025
ROUGHER-BOTTOM-2	0.0192	0.0051	0.86	60.8	0.005	1.43	0.00005	27.6	12.5		0.0005	0.0005	0.015	0.00069	0.005	0.0069
ROUGHER-BOTTOM-3	0.0163	0.0099	0.41	54.8	0.005	1.45	0.00005	27.8	12.3		0.0005	0.0005	0.015	0.0009	0.005	0.0025
ROUGHER-BOTTOM-4	0.014	0.0091	0.69	53.4	0.005	1.76	0.00005	25.7	12.4		0.0005	0.0005	0.014	0.00062	0.005	0.0025
ROUGHER-BOTTOM-5	0.015	0.0075	0.56	54.3	0.005	1.53	0.00005	24.1	12.2		0.0005	0.0005	0.018	0.00043	0.005	0.0025
ROUGHER-BOTTOM-6	0.0135	0.0083	0.35	56.8	0.005	1.87	0.00005	20.7	12.1		0.0005	0.0005	0.005	0.00046	0.005	0.0025
ROUGHER-BOTTOM-7	0.0178	0.0072	0.15	53.3	0.005	1.7	0.00005	15.2	13.3		0.0005	0.0005	0.005	0.00032	0.005	0.0169
ROUGHER-BOTTOM-8	0.0168	0.0064	0.15	55.9	0.005	1.73	0.00005	11.7	14.6		0.0005	0.0005	0.013	0.00022	0.005	0.0071
ROUGHER-BOTTOM-9	0.0239	0.0064	0.15	46.6	0.005	1.49	0.00005	8.53	13.2		0.0005	0.0005	0.005	0.00015	0.005	0.0067
ROUGHER-BOTTOM-10	0.0229	0.0056	0.15	42.4	0.005	1.69	0.00005	7.12	13		0.0005	0.0005	0.005	0.00021	0.005	0.0108
ROUGHER-BOTTOM-11	0.0222	0.0055	0.15	39	0.005	1.71	0.00005	6.41	12.5		0.0005	0.0005	0.005	0.00036	0.005	0.0025
ROUGHER-BOTTOM-12	0.0245	0.0051	0.15	35.2	0.005	1.64	0.00005	5.54	12.1		0.0005	0.0005	0.005	0.00027	0.005	0.0025
ROUGHER-BOTTOM-13	0.0247	0.0062	0.15	30.7	0.005	1.63	0.00005	4.85	11		0.0005	0.0005	0.005	0.00035	0.005	0.0025
ROUGHER-BOTTOM-14	0.0243	0.0068	0.15	26.2	0.005	1.59	0.00005	4.28	10.4		0.0005	0.0005	0.005	0.00031	0.005	0.0025
ROUGHER-BOTTOM-15	0.0289	0.0075	0.15	26.2	0.005	1.52	0.00005	4.65	10.4		0.0005	0.0005	0.005	0.00027	0.005	0.0025
ROUGHER-BOTTOM-16	0.0289	0.0025	0.15	23	0.005	1.55	0.00005	3.9	10.2		0.0005	0.0005	0.005	0.00024	0.005	0.0025
ROUGHER-BOTTOM-17	0.0318	0.0025	0.15	21	0.005	1.44	0.00005	3.83	10.4		0.0005	0.0005	0.016	0.00021	0.005	0.0025
ROUGHER-BOTTOM-18	0.0293	0.0025	0.15	18.5	0.005	1.54	0.00005	3.44	9.62		0.0005	0.0005	0.005	0.0002	0.005	0.0025
ROUGHER-BOTTOM-19	0.0318	0.0025	0.15	18.2	0.005	1.47	0.00005	3.52	9.87		0.0005	0.0005	0.005	0.00016	0.005	0.0025
ROUGHER-BOTTOM-20	0.0306	0.0025	0.15	16	0.005	1.42	0.00005	3.04	9.1		0.0005	0.0005	0.005	0.00013	0.005	0.0025
ROUGHER-BOTTOM-21	0.0295	0.0025	0.15	15.5	0.005	1.45	0.00005	3.21	9.23		0.0005	0.0005	0.005	0.00013	0.005	0.0025
ROUGHER-BOTTOM-22	0.0295	0.0025	0.15	15.3	0.005	1.44	0.00005	3.32	10		0.0005	0.0005	0.005	0.00012	0.005	0.0025
ROUGHER-BOTTOM-23	0.0259	0.0025	0.15	13.9	0.005	1.43	0.00005	3.17	9.59		0.0005	0.0005	0.005	0.00016	0.005	0.0025
ROUGHER-BOTTOM-24	0.0251	0.0025	0.15	12.9	0.005	1.38	0.00005	3.07	9		0.0005	0.0005	0.005	0.00019	0.005	0.0025
ROUGHER-BOTTOM-25	0.0235	0.0025	0.15	11.7	0.005	1.36	0.00005	3.02	9.19		0.0005	0.0005	0.005	0.00022	0.005	0.0025
ROUGHER-BOTTOM-26	0.0245	0.0025	0.15	11.1	0.005	1.32	0.00005	2.83	9.05		0.0005	0.0005	0.012	0.00018	0.005	0.0025
ROUGHER-BOTTOM-27	0.0239	0.0025	0.15	10.6	0.005	1.34	0.00005	2.97	9.04		0.0005	0.0038	0.005	0.00012	0.005	0.0025
ROUGHER-BOTTOM-28	0.0225	0.0025	0.15	10.4	0.005	1.37	0.00005	2.94	8.85		0.0005	0.0005	0.005	0.00018	0.005	0.0025
ROUGHER-BOTTOM-29	0.02	0.0025	0.15	9.56	0.005	1.37	0.00005	2.81	8.43		0.0005	0.0005	0.005	0.00017	0.005	0.0025
ROUGHER-BOTTOM-30	0.0201	0.0025	0.15	9.3	0.005	1.37	0.00005	2.95	8.89		0.0005	0.0005	0.005	0.00019	0.005	0.0025
ROUGHER-BOTTOM-31	0.018	0.0025	0.46	8.44	0.005	1.32	0.00005	2.64	7.66		0.0005	0.0005	0.005	0.00025	0.005	0.0025
ROUGHER-BOTTOM-32	0.0181	0.0025	0.15	8.41	0.005	1.25	0.00005	2.76	7.88		0.0005	0.0005	0.018	0.00022	0.005	0.0025
ROUGHER-BOTTOM-33	0.0169	0.0025	0.15	7.64	0.005	1.31	0.00005	2.6	6.79		0.0005	0.0005	0.005	0.00019	0.005	0.0025
ROUGHER-BOTTOM-34	0.0155	0.0025	0.15	6.88	0.005	1.3	0.00005	2.33	6.73		0.0005	0.0005	0.005	0.00018	0.005	0.0025
ROUGHER-BOTTOM-35	0.015	0.0064	0.15	6.99	0.005	1.3	0.00005	2.51	6.72		0.0005	0.0005	0.005	0.00025	0.005	0.0025
ROUGHER-BOTTOM-36	0.0148	0.0056	0.15	7.35	0.005	1.31	0.00005	2.83	6.44		0.0005	0.0005	0.005	0.00032	0.005	0.0025
ROUGHER-BOTTOM-37	0.0154	0.0052	0.15	7.37	0.005	1.34	0.00005	2.55	6.93		0.0005	0.0005	0.005	0.00031	0.005	0.0025
ROUGHER-BOTTOM-38	0.0153	0.0025	0.15	7.54	0.005	1.39	0.00005	2.73	7.33		0.0005	0.0005	0.005	0.00036	0.005	0.0025
ROUGHER-BOTTOM-39	0.0132	0.0025	0.15	7	0.005	1.39	0.00005	2.65	6.31		0.0005	0.0005	0.005	0.0003	0.005	0.0025
ROUGHER-BOTTOM-40	0.0133	0.0025	0.15	6.62	0.005	1.48	0.00005	2.67	5.71		0.0005	0.0005	0.005	0.00039	0.005	0.0025
ROUGHER-BOTTOM-41	0.0143	0.0025	0.15	6.57	0.005	1.4	0.00005	2.7	6.17		0.0005	0.0005	0.01	0.00046	0.005	0.0025
ROUGHER-BOTTOM-42	0.0116	0.0025	0.15	6.44	0.005	1.39	0.00005	2.7	5.72		0.0005	0.0005	0.014	0.00044	0.005	0.0025
ROUGHER-BOTTOM-43	0.0133	0.0025	0.15	20.2	0.005	1.34	0.00005	9.58	7.76		0.0005	0.0005	0.005	0.00012	0.005	0.0025

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
ROUGHER-BOTTOM-44	0.0125	0.0025	0.15	5.61	0.005	1.28	0.00005	2.29	5.67		0.0005	0.0005	0.005	0.00038	0.005	0.0025
ROUGHER-BOTTOM-45	0.0119	0.0025	0.15	5.47	0.005	1.38	0.00005	2.3	5.45		0.0005	0.0005	0.005	0.00035	0.005	0.0025
ROUGHER-BOTTOM-46	0.0124	0.0025	0.15	5.68	0.005	1.27	0.00005	2.28	5.44		0.0005	0.0005	0.005	0.0003	0.005	0.0025
ROUGHER-BOTTOM-47	0.0109	0.0025	0.15	5.56	0.005	1.27	0.00026	2.3	5.25		0.0005	0.0005	0.011	0.00036	0.005	0.0025
ROUGHER-BOTTOM-48	0.0106	0.0059	0.15	5.05	0.005	1.21	0.00005	1.86	5.05	492	0.0005	0.0005	0.012	0.00034	0.005	0.0025
ROUGHER-BOTTOM-49	0.0102	0.00189	0.15	5.34	0.00033	1.33	0.000005	2.08	5.05	492	0.00005	0.00005	0.005	0.000287	0.0005	0.0005
ROUGHER-BOTTOM-50	0.00999	0.0016	0.15	4.82	0.0001	1.23	0.00001	1.92	4.91	487	0.0001	0.0001	0.011	0.000255	0.001	0.003
ROUGHER-BOTTOM-51	0.00991	0.0012	0.15	4.84	0.0001	1.24	0.00001	1.82	4.8	481	0.0001	0.0001	0.005	0.000212	0.001	0.003
ROUGHER-BOTTOM-52	0.00944	0.0011	0.15	5.14	0.0001	1.19	0.00001	1.81	4.75	465	0.0001	0.0001	0.011	0.000129	0.001	0.003
ROUGHER-BOTTOM-53	0.00922	0.0005	0.15	4.57	0.0001	1.24	0.000021	1.72	5.05	510	0.0001	0.0001	0.005	0.000136	0.001	0.003
ROUGHER-BOTTOM-54	0.00895	0.0005	0.15	4.47	0.0001	1.21	0.00001	1.6	4.92	481	0.0001	0.0001	0.019	0.000128	0.001	0.003
ROUGHER-BOTTOM-55	0.0079	0.0005	0.15	3.84	0.0001	1.18	0.00001	1.5	4.43	472	0.0001	0.0001	0.005	0.000111	0.001	0.003
ROUGHER-BOTTOM-56	0.00777	0.0013	0.15	4.56	0.0001	1.23	0.00001	1.55	4.65	487	0.0001	0.0001	0.013	0.000112	0.001	0.003
ROUGHER-BOTTOM-57	0.00737	0.0005	0.15	4.19	0.0001	1.25	0.00001	1.41	4.51	487	0.0001	0.0001	0.005	0.000101	0.001	0.003
ROUGHER-BOTTOM-58	0.00694	0.0005	0.15	4.18	0.0001	1.31	0.00001	1.33	4.4	491	0.0001	0.0001	0.005	0.000096	0.001	0.003
ROUGHER-BOTTOM-59	0.00674	0.0005	0.15	3.9	0.0001	1.26	0.00001	1.24	4.39	473	0.0001	0.0001	0.005	0.000093	0.001	0.003
ROUGHER-BOTTOM-60	0.00608	0.0005	0.15	3.87	0.0001	1.29	0.00001	1.21	4.27	463	0.0001	0.0001	0.005	0.000089	0.001	0.003
ROUGHER-BOTTOM-61	0.00575	0.0005	0.15	4.08	0.0001	1.3	0.00001	1.3	4.15	474	0.0001	0.0001	0.005	0.000097	0.001	0.003
ROUGHER-BOTTOM-62	0.00544	0.0011	0.15	3.99	0.0001	1.36	0.00001	1.25	4.1	472	0.0001	0.0001	0.005	0.000106	0.001	0.003
ROUGHER-BOTTOM-63	0.00534	0.0017	0.15	3.8	0.00021	1.43	0.00001	1.13	4.34	491	0.0001	0.0001	0.015	0.000201	0.001	0.003
ROUGHER-BOTTOM-64	0.00482	0.0022	0.15	4.4	0.00022	1.46	0.00001	1.21	4.08	472	0.0001	0.0001	0.005	0.000195	0.001	0.003
ROUGHER-BOTTOM-65	0.00499	0.0014	0.15	3.82	0.0001	1.52	0.00001	0.98	4.35	466	0.0001	0.0001	0.005	0.00023	0.001	0.003
ROUGHER-BOTTOM-66	0.00437	0.0018	0.15	3.8	0.00033	1.56	0.00001	0.98	3.87	476	0.0001	0.0001	0.018	0.000257	0.001	0.003
ROUGHER-BOTTOM-67	0.00456	0.002	0.15	4.07	0.00042	1.52	0.00001	1.06	4.01	472	0.0001	0.0001	0.005	0.000299	0.001	0.003
ROUGHER-BOTTOM-68	0.00468	0.0015	0.15	3.49	0.00029	1.65	0.00001	0.86	4.23	475	0.0001	0.0001	0.014	0.000302	0.001	0.003
ROUGHER-BOTTOM-69	0.0043	0.0017	0.15	3.56	0.0001	1.62	0.00001	0.88	3.78	477	0.0001	0.0001	0.013	0.000297	0.001	0.003
ROUGHER-BOTTOM-70	0.0044	0.0023	0.15	3.96	0.00034	1.74	0.00001	0.93	3.95	478	0.0001	0.0001	0.014	0.000385	0.001	0.003
ROUGHER-BOTTOM-71	0.00409	0.0024	0.15	3.71	0.00033	1.77	0.00001	0.83	3.61	472	0.0001	0.0001	0.022	0.000418	0.001	0.003
ROUGHER-BOTTOM-72-Final	0.0041	0.0061	0.15	3.7	0.00022	1.72	0.00001	0.89	3.69	455	0.0001	0.0001	0.022	0.000484	0.001	0.003
	0.004314	0.0028	0.15	3.684	0.000256	1.7	0.00001	0.878	3.852	#DIV/0!	0.0001	0.0001	0.017	0.0003772	0.001	0.003
M_Sulphide Top																
SULPHIDE-TOP-1	0.0318	0.0025	0.15	13.8	0.005	0.919	0.00035	153	0.426		0.0005	0.0005	0.005	0.00041	0.005	0.0092
SULPHIDE-TOP-2	0.0189	0.0025	0.15	8.87	0.005	0.607	0.00061	84.2	0.279		0.0005	0.0005	0.005	0.00029	0.005	0.0025
SULPHIDE-TOP-3	0.019	0.0025	0.15	9.54	0.005	0.916	0.00082	85.6	0.35		0.0005	0.0005	0.005	0.00054	0.005	0.0025
SULPHIDE-TOP-4	0.0104	0.0025	0.15	6	0.005	0.706	0.00018	43.9	0.25		0.0005	0.0005	0.005	0.0003	0.005	0.0025
SULPHIDE-TOP-5	0.0075	0.0025	0.15	5.04	0.005	0.613	0.00005	32.2	0.204		0.0005	0.0005	0.005	0.00019	0.005	0.0025
SULPHIDE-TOP-6	0.00706	0.0025	0.15	4.66	0.005	0.727	0.00005	25.7	0.206		0.0005	0.0005	0.005	0.0002	0.005	0.0025
SULPHIDE-TOP-7	0.00871	0.0025	0.15	5.42	0.005	0.87	0.00005	26.1	0.311		0.0005	0.0005	0.005	0.0004	0.005	0.0025
SULPHIDE-TOP-8	0.00574	0.0025	0.15	3.92	0.005	0.722	0.00005	13.5	0.248		0.0005	0.0005	0.005	0.0002	0.005	0.0025
SULPHIDE-TOP-9	0.00569	0.0025	0.15	3.24	0.005	0.769	0.00005	9.6	0.244		0.0005	0.0005	0.005	0.00018	0.005	0.0025
SULPHIDE-TOP-10	0.0051	0.0025	0.15	3.04	0.005	0.805	0.00005	7.58	0.24		0.0005	0.0005	0.005	0.00012	0.005	0.0025
SULPHIDE-TOP-11	0.00475	0.0025	0.15	2.61	0.005	0.773	0.00005	5.69	0.223		0.0005	0.0005	0.005	0.00005	0.005	0.0025
SULPHIDE-TOP-12	0.00435	0.0025	0.15	2.45	0.005	0.755	0.00005	4.34	0.226		0.0005	0.0005	0.005	0.00005	0.005	0.0025
SULPHIDE-TOP-13	0.00311	0.0025	0.15	2.24	0.005	0.82	0.00005	3.28	0.224		0.0005	0.0005	0.005	0.00005	0.005	0.0025
SULPHIDE-TOP-14	0.00259	0.0025	0.15	2.06	0.005	0.816	0.00005	2.6	0.217		0.0005	0.0005	0.005	0.00005	0.005	0.0025
SULPHIDE-TOP-15	0.00299	0.0025	0.15	2.03	0.005	0.76	0.00005	2.17	0.204		0.0005	0.0005	0.005	0.00005	0.005	0.0025
SULPHIDE-TOP-16	0.00327	0.0025	0.15	2.02	0.005	0.791	0.00005	1.87	0.211		0.0005	0.0005	0.005	0.00005	0.005	0.0025
SULPHIDE-TOP-17	0.00285	0.0025	0.15	1.76	0.005	0.795	0.00005	1.49	0.204		0.0005	0.0005	0.005	0.00005	0.005	0.0025
SULPHIDE-TOP-18	0.00246	0.0025	0.15	1.6	0.005	0.843	0.00005	1.18	0.191		0.0005	0.0005	0.005	0.00005	0.005	0.0063
SULPHIDE-TOP-19	0.00157	0.0025	0.15	1.56	0.005	0.855	0.00005	1.01	0.183		0.0005	0.0005	0.005	0.00005	0.005	0.0097
SULPHIDE-TOP-20	0.00092	0.0052	0.15	1.38	0.005	0.843	0.00005	0.76	0.169		0.0005	0.0005	0.005	0.00005	0.005	0.0149
SULPHIDE-TOP-21	0.00025	0.0073	0.15	1.34	0.005	0.89	0.00005	0.65	0.167		0.0005	0.0005	0.005	0.00005	0.005	0.0265
SULPHIDE-TOP-22	0.00025	0.0085	0.15	1.31	0.005	0.919	0.00005	0.58	0.177		0.0005	0.0005	0.005	0.00005	0.005	0.0379
SULPHIDE-TOP-23	0.00025	0.0092	0.15	1.16	0.005	0.967	0.00005	0.25	0.171		0.0005	0.0005	0.005	0.00005	0.005	0.0546
SULPHIDE-TOP-24	0.00025	0.0095	0.15	1.07	0.005	0.917	0.00005	0.25	0.154		0.0005	0.0005	0.005	0.00005	0.005	0.0619
SULPHIDE-TOP-25	0.00025	0.0093	0.15	1.02	0.005	0.992	0.00005	0.25	0.148		0.0005	0.0005	0.005	0.00005	0.005	0.069
SULPHIDE-TOP-26	0.00025	0.012	0.15	0.95	0.005	1.11	0.00005	0.25	0.162		0.0005	0.0005	0.005	0.00005	0.005	0.108
SULPHIDE-TOP-27	0.00025	0.0117	0.15	0.87	0.005	1.1	0.00005	0.25	0.15		0.0005	0.0005	0.005	0.00005	0.005	0.109
SULPHIDE-TOP-28	0.00025	0.0127	0.15	0.84	0.005	1.1	0.00005	0.25	0.144		0.0005	0.0005	0.005	0.00005	0.005	0.111

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
SULPHIDE-TOP-29	0.00025	0.0118	0.15	0.78	0.005	1.09	0.00005	0.25	0.14		0.0005	0.0005	0.005	0.00005	0.005	0.101
SULPHIDE-TOP-30	0.00025	0.0113	0.15	0.75	0.005	1.08	0.00005	0.25	0.148		0.0005	0.0005	0.005	0.00005	0.005	0.0995
SULPHIDE-TOP-31	0.00025	0.0102	0.15	0.65	0.005	1.01	0.00005	0.25	0.124		0.0005	0.0005	0.005	0.00005	0.005	0.0916
SULPHIDE-TOP-32	0.00025	0.007	0.15	0.64	0.005	0.744	0.00005	0.25	0.139		0.0005	0.0005	0.005	0.00005	0.005	0.0142
SULPHIDE-TOP-33	0.00118	0.0025	0.15	0.61	0.005	0.667	0.00005	0.25	0.13		0.0005	0.0005	0.005	0.00005	0.005	0.0025
SULPHIDE-TOP-34	0.00109	0.0025	0.15	0.55	0.005	0.625	0.00005	0.25	0.125		0.0005	0.0005	0.005	0.00005	0.005	0.0025
SULPHIDE-TOP-35	0.00074	0.0025	0.15	0.56	0.005	0.617	0.00005	0.25	0.123		0.0005	0.0005	0.005	0.00005	0.005	0.0053
SULPHIDE-TOP-36	0.00025	0.0025	0.15	0.53	0.005	0.603	0.00005	0.25	0.106		0.0005	0.0005	0.005	0.00005	0.005	0.0065
SULPHIDE-TOP-37	0.00025	0.0025	0.15	0.51	0.005	0.605	0.00005	0.25	0.11		0.0005	0.0005	0.005	0.00005	0.005	0.0102
SULPHIDE-TOP-38	0.00025	0.0074	0.15	0.52	0.005	0.781	0.00005	0.25	0.118		0.0005	0.0005	0.005	0.00005	0.005	0.0242
SULPHIDE-TOP-39	0.00025	0.0103	0.15	0.5	0.005	0.784	0.00005	0.25	0.109		0.0005	0.0005	0.005	0.00005	0.005	0.0482
SULPHIDE-TOP-40	0.00025	0.0081	0.15	0.25	0.005	0.786	0.00005	0.25	0.0938		0.0005	0.0005	0.005	0.00005	0.005	0.0366
SULPHIDE-TOP-41	0.00025	0.0087	0.15	0.25	0.005	0.808	0.00005	0.25	0.105		0.0005	0.0005	0.005	0.00005	0.005	0.0395
SULPHIDE-TOP-42	0.00025	0.0086	0.15	0.25	0.005	0.77	0.00005	0.25	0.103		0.0005	0.0005	0.005	0.00005	0.005	0.0434
SULPHIDE-TOP-43	0.00025	0.0105	0.15	0.25	0.005	1.02	0.00005	0.25	0.109		0.0005	0.0005	0.005	0.00005	0.005	0.0787
SULPHIDE-TOP-44	0.00025	0.0127	0.15	0.25	0.005	1.07	0.00005	0.25	0.11		0.0005	0.0005	0.005	0.00005	0.005	0.112
SULPHIDE-TOP-45	0.00025	0.0137	0.15	0.25	0.005	1.2	0.00005	0.25	0.107		0.0005	0.0005	0.005	0.00005	0.005	0.129
SULPHIDE-TOP-46	0.00025	0.0152	0.15	0.25	0.005	1.13	0.00005	0.25	0.107		0.0005	0.0005	0.005	0.00005	0.005	0.141
SULPHIDE-TOP-47	0.00025	0.0222	0.15	0.6	0.005	1.61	0.00005	0.25	0.145		0.0005	0.0005	0.005	0.00005	0.005	0.218
SULPHIDE-TOP-48	0.00025	0.0167	0.15	0.25	0.005	1.22	0.00005	0.25	0.109	19.4	0.0005	0.0005	0.005	0.00005	0.005	0.182
SULPHIDE-TOP-49	0.000025	0.0169	0.15	0.465	0.00172	1.26	0.000005	0.098	0.114	19.4	0.00005	0.00005	0.005	0.00006	0.0005	0.165
SULPHIDE-TOP-50	0.000025	0.015	0.15	0.422	0.00173	1.22	0.000005	0.082	0.105	18.9	0.00005	0.00005	0.005	0.000064	0.0005	0.152
SULPHIDE-TOP-51	0.000025	0.0145	0.15	0.411	0.00173	1.27	0.000005	0.068	0.103	18.3	0.00005	0.00005	0.005	0.000069	0.0005	0.162
SULPHIDE-TOP-52	0.000025	0.0126	0.15	0.385	0.00168	1.12	0.000005	0.074	0.0969	16.7	0.00005	0.00005	0.005	0.000048	0.0005	0.144
SULPHIDE-TOP-53	0.000025	0.0124	0.15	0.391	0.00156	1.21	0.000005	0.065	0.0961	18.6	0.00005	0.00005	0.005	0.00005	0.0005	0.143
SULPHIDE-TOP-54	0.000025	0.0123	0.15	0.379	0.00165	1.11	0.000005	0.073	0.0969	16.3	0.00005	0.00005	0.005	0.000064	0.0005	0.153
SULPHIDE-TOP-55	0.000025	0.0117	0.15	0.339	0.00157	1.11	0.000005	0.071	0.0953	16.6	0.00005	0.00005	0.005	0.000064	0.0005	0.138
SULPHIDE-TOP-56	0.000025	0.0135	0.15	0.405	0.00169	1.18	0.000005	0.057	0.0961	17	0.00005	0.00005	0.005	0.000073	0.0005	0.163
SULPHIDE-TOP-57	0.000025	0.0128	0.15	0.356	0.00161	1.14	0.000005	0.068	0.0855	16.3	0.00005	0.00005	0.005	0.000078	0.0005	0.162
SULPHIDE-TOP-58	0.000025	0.0127	0.15	0.353	0.00173	1.16	0.000005	0.066	0.0812	16.8	0.00005	0.00005	0.005	0.000084	0.0005	0.164
SULPHIDE-TOP-59	0.000025	0.0169	0.15	0.369	0.0018	1.35	0.000005	0.072	0.0912	18.4	0.00005	0.00005	0.005	0.000101	0.0005	0.189
SULPHIDE-TOP-60	0.000025	0.0159	0.15	0.364	0.00147	1.31	0.000005	0.074	0.0905	18.7	0.00005	0.00005	0.005	0.000103	0.0005	0.177
SULPHIDE-TOP-61	0.000025	0.0159	0.15	0.416	0.00088	1.37	0.000019	0.106	0.093	20.4	0.00005	0.00005	0.005	0.000147	0.0005	0.188
SULPHIDE-TOP-62	0.000025	0.019	0.15	0.396	0.00051	1.58	0.000024	0.08	0.102	20.4	0.00005	0.00033	0.005	0.000167	0.0005	0.208
SULPHIDE-TOP-63	0.000025	0.0204	0.15	0.416	0.0003	1.8	0.000042	0.118	0.0983	22.3	0.00005	0.00005	0.005	0.000163	0.0005	0.224
SULPHIDE-TOP-64	0.000025	0.0216	0.15	0.401	0.00021	1.87	0.000039	0.072	0.0922	21.8	0.00005	0.00005	0.005	0.000154	0.0005	0.217
SULPHIDE-TOP-65	0.000025	0.0207	0.15	0.38	0.00005	2	0.000044	0.074	0.0964	22.4	0.00005	0.00005	0.005	0.000159	0.0005	0.203
SULPHIDE-TOP-66	0.000025	0.0217	0.15	0.43	0.00005	2.11	0.000046	0.07	0.0875	23.2	0.00005	0.00005	0.005	0.000139	0.0005	0.213
SULPHIDE-TOP-67	0.000025	0.0235	0.15	0.448	0.00005	2.04	0.000055	0.085	0.0925	23.1	0.00005	0.00005	0.005	0.000143	0.0005	0.212
SULPHIDE-TOP-68	0.000025	0.0202	0.15	0.367	0.00005	2.07	0.000067	0.071	0.0923	23.1	0.00005	0.00005	0.005	0.00015	0.0005	0.182
SULPHIDE-TOP-69	0.000025	0.0274	0.15	0.506	0.00005	2.14	0.000064	0.104	0.085	23.4	0.00005	0.00005	0.005	0.000148	0.0005	0.25
SULPHIDE-TOP-70	0.000025	0.0235	0.15	0.442	0.00005	2.2	0.000066	0.077	0.0888	23.8	0.00005	0.00005	0.005	0.000214	0.0005	0.207
SULPHIDE-TOP-71	0.000025	0.023	0.15	0.442	0.00005	2.17	0.000057	0.073	0.0887	23.1	0.00005	0.00005	0.005	0.000161	0.0005	0.193
SULPHIDE-TOP-72	0.000025	0.0239	0.15	0.452	0.00005	2.2	0.000063	0.078	0.0883	23.2	0.00005	0.00005	0.005	0.000154	0.0005	0.206
SULPHIDE-TOP-73	0.000025	0.0232	0.15	0.431	0.00005	2.22	0.000077	0.068	0.0811	23.1	0.00005	0.00005	0.005	0.000151	0.0005	0.185
SULPHIDE-TOP-74	0.000025	0.0231	0.15	0.459	0.00005	2.22	0.000084	0.133	0.0853	22.7	0.00005	0.00005	0.005	0.000156	0.0005	0.191
SULPHIDE-TOP-75	0.000025	0.023	0.15	0.44	0.00005	2.2	0.000075	0.068	0.097	23.3	0.00005	0.00005	0.005	0.000199	0.0005	0.189
SULPHIDE-TOP-76	0.000025	0.021	0.15	0.391	0.00005	2.01	0.0001	0.06	0.0715	20.7	0.00005	0.00005	0.005	0.000137	0.0005	0.168
SULPHIDE-TOP-77	0.000025	0.0224	0.15	0.412	0.00005	2.11	0.000085	0.069	0.076	21	0.00005	0.00005	0.005	0.000133	0.0005	0.177
SULPHIDE-TOP-Final Leach	0.000025	0.0246	0.15	0.446	0.00005	2.28	0.000099	0.074	0.0814	22.5	0.00005	0.00005	0.005	0.000138	0.0005	0.182
	0.000025	0.02282	0.15	0.4296	0.00005	2.164	0.0000886	0.0808	0.08224	#DIV/0!	0.00005	0.00005	0.005	0.0001526	0.0005	0.1814
M_Sulphide Bottom																
SULPHIDE-BOTTOM-1	0.0493	0.005	0.75	73.1	0.01	2.25	0.013	993	3.35		0.001	0.0038	0.062	0.00493	0.01	0.0125
SULPHIDE-BOTTOM-2	0.0869	0.005	0.45	83.7	0.01	2.28	0.0163	1050	3.85		0.001	0.001	0.036	0.00589	0.01	0.0075
SULPHIDE-BOTTOM-3	0.155	0.005	0.3	68.5	0.01	1.26	0.0522	1000	3.38		0.001	0.001	0.025	0.00387	0.01	0.005
SULPHIDE-BOTTOM-4	0.157	0.005	0.45	64.3	0.01	1.34	0.0544	915	3.03		0.001	0.001	0.037	0.00328	0.01	0.0075
SULPHIDE-BOTTOM-5	0.126	0.005	0.45	66	0.01	1.53	0.0238	962	2.75		0.001	0.001	0.015	0.00322	0.01	0.0075
SULPHIDE-BOTTOM-6	0.113	0.0025	0.3	66.3	0.005	1.69	0.0136	981	2.44		0.0005	0.0005	0.01	0.00323	0.005	0.005
SULPHIDE-BOTTOM-7	0.128	0.005	0.3	58.4	0.01	2	0.00631	875	2.21		0.001	0.001	0.01	0.00345	0.01	0.005

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
SULPHIDE-BOTTOM-8	0.226	0.0025	0.3	56	0.005	1.85	0.00329	703	1.83		0.0005	0.0005	0.01	0.00304	0.005	0.005
SULPHIDE-BOTTOM-9	0.249	0.0025	0.15	39.1	0.005	1.91	0.00233	454	1.11		0.0005	0.0005	0.005	0.00253	0.005	0.0025
SULPHIDE-BOTTOM-10	0.25	0.005	0.15	34.8	0.01	2.06	0.00154	369	0.886		0.001	0.001	0.005	0.00215	0.01	0.0025
SULPHIDE-BOTTOM-11	0.21	0.0025	0.15	25.7	0.005	2.21	0.00039	267	0.621		0.0005	0.0005	0.005	0.00179	0.005	0.0025
SULPHIDE-BOTTOM-12	0.191	0.0025	0.15	26.5	0.005	2.24	0.00022	194	0.593		0.0005	0.0005	0.005	0.00139	0.005	0.0025
SULPHIDE-BOTTOM-13	0.155	0.0025	0.15	24.4	0.005	2.07	0.00013	139	0.628		0.0005	0.0005	0.005	0.00108	0.005	0.0025
SULPHIDE-BOTTOM-14	0.147	0.0025	0.15	25.4	0.005	2.27	0.00012	113	0.59		0.0005	0.0005	0.005	0.00101	0.005	0.0025
SULPHIDE-BOTTOM-15	0.148	0.0025	0.15	27.6	0.005	2.19	0.00018	98.9	0.696		0.0005	0.0005	0.005	0.00089	0.005	0.0025
SULPHIDE-BOTTOM-16	0.137	0.0025	0.15	27.5	0.005	2.39	0.00005	75.1	0.637		0.0005	0.0005	0.005	0.00063	0.005	0.0025
SULPHIDE-BOTTOM-17	0.129	0.0025	0.15	26.4	0.005	2.24	0.00005	59.3	0.695		0.0005	0.0005	0.005	0.00065	0.005	0.0025
SULPHIDE-BOTTOM-18	0.112	0.0025	0.15	24.9	0.005	2.33	0.00005	43.6	0.714		0.0005	0.0005	0.005	0.00061	0.005	0.0025
SULPHIDE-BOTTOM-19	0.118	0.0025	0.15	26.8	0.005	2.34	0.0001	38.3	0.785		0.0005	0.0005	0.005	0.0006	0.005	0.0025
SULPHIDE-BOTTOM-20	0.0991	0.0025	0.15	24.2	0.005	2.24	0.00012	28	0.81		0.0005	0.0005	0.005	0.00057	0.005	0.0052
SULPHIDE-BOTTOM-21	0.117	0.0025	0.15	26.1	0.005	2.2	0.00013	25.3	0.733		0.0005	0.0005	0.005	0.00056	0.005	0.0025
SULPHIDE-BOTTOM-22	0.113	0.0025	0.15	23	0.005	2.25	0.00011	20.2	0.721		0.0005	0.0005	0.005	0.00046	0.005	0.0025
SULPHIDE-BOTTOM-23	0.121	0.0025	0.15	24.5	0.005	2.25	0.00005	19.2	0.775		0.0005	0.0005	0.005	0.00045	0.005	0.0025
SULPHIDE-BOTTOM-24	0.114	0.0025	0.15	21.3	0.005	2.14	0.00005	14.3	0.679		0.0005	0.0005	0.005	0.00041	0.005	0.0025
SULPHIDE-BOTTOM-25	0.11	0.0025	0.15	21.1	0.005	2.27	0.00005	13.1	0.722		0.0005	0.0005	0.005	0.0004	0.005	0.0025
SULPHIDE-BOTTOM-26	0.11	0.0025	0.15	20.8	0.005	2.27	0.00005	11.7	0.743		0.0005	0.0005	0.005	0.00042	0.005	0.0025
SULPHIDE-BOTTOM-27	0.106	0.0025	0.15	20.1	0.005	2.33	0.00005	10.4	0.73		0.0005	0.0005	0.005	0.00039	0.005	0.0025
SULPHIDE-BOTTOM-28	0.102	0.0025	0.15	19.7	0.005	2.31	0.00005	8.44	0.739		0.0005	0.0005	0.005	0.00042	0.005	0.0025
SULPHIDE-BOTTOM-29	0.0987	0.0025	0.15	19.6	0.005	2.34	0.00005	8.01	0.718		0.0005	0.0005	0.005	0.00042	0.005	0.0025
SULPHIDE-BOTTOM-30	0.0946	0.0025	0.15	18.8	0.005	2.38	0.00005	7.2	0.741		0.0005	0.0005	0.005	0.00041	0.005	0.0025
SULPHIDE-BOTTOM-31	0.092	0.0025	0.15	17.3	0.005	2.36	0.00005	6.28	0.686		0.0005	0.0005	0.005	0.0004	0.005	0.0025
SULPHIDE-BOTTOM-32	0.0842	0.0025	0.15	17.4	0.005	2.24	0.00005	6.16	0.765		0.0005	0.0005	0.012	0.00042	0.005	0.0058
SULPHIDE-BOTTOM-33	0.0899	0.0025	0.15	19.4	0.005	2.51	0.00005	6.14	0.797		0.0005	0.0005	0.005	0.00048	0.005	0.0059
SULPHIDE-BOTTOM-34	0.0763	0.0025	0.15	15.2	0.005	2.44	0.00005	4.49	0.642		0.0005	0.0005	0.005	0.0004	0.005	0.0025
SULPHIDE-BOTTOM-35	0.0794	0.0025	0.15	15.4	0.005	2.38	0.00005	4.51	0.688		0.0005	0.0005	0.005	0.0004	0.005	0.0025
SULPHIDE-BOTTOM-36	0.0785	0.0025	0.15	16	0.005	2.32	0.00005	4.41	0.662		0.0005	0.0005	0.005	0.00037	0.005	0.0025
SULPHIDE-BOTTOM-37	0.08	0.0025	0.15	16.3	0.005	2.45	0.00005	4.37	0.754		0.0005	0.0005	0.005	0.00037	0.005	0.0025
SULPHIDE-BOTTOM-38	0.0778	0.0025	0.15	15.6	0.005	2.52	0.00005	3.99	0.771		0.0005	0.0005	0.005	0.00038	0.005	0.0052
SULPHIDE-BOTTOM-39	0.071	0.0025	0.15	14.8	0.005	2.43	0.00005	3.7	0.745		0.0005	0.0005	0.005	0.00036	0.005	0.0074
SULPHIDE-BOTTOM-40	0.0656	0.0025	0.15	14.1	0.005	2.68	0.00005	3.38	0.747		0.0005	0.0005	0.005	0.00037	0.005	0.0111
SULPHIDE-BOTTOM-41	0.0729	0.0025	0.15	14.8	0.005	2.6	0.00005	3.67	0.77		0.0005	0.0005	0.005	0.00041	0.005	0.0098
SULPHIDE-BOTTOM-42	0.0745	0.0025	0.15	15.1	0.005	2.45	0.00005	3.69	0.722		0.0005	0.0005	0.005	0.00043	0.005	0.0068
SULPHIDE-BOTTOM-43	0.0708	0.0025	0.15	13.1	0.005	2.44	0.00005	3.16	0.674		0.0005	0.0005	0.005	0.00041	0.005	0.0059
SULPHIDE-BOTTOM-44	0.073	0.0025	0.15	12.8	0.005	2.46	0.00005	3.16	0.752		0.0005	0.0005	0.005	0.00037	0.005	0.0068
SULPHIDE-BOTTOM-45	0.0446	0.0025	0.15	11.5	0.005	2.7	0.00005	2.76	0.763		0.0005	0.0005	0.005	0.00039	0.005	0.0266
SULPHIDE-BOTTOM-46	0.0682	0.0025	0.15	12.6	0.005	2.34	0.00005	2.77	0.664		0.0005	0.0005	0.005	0.00045	0.005	0.0106
SULPHIDE-BOTTOM-47	0.0663	0.0025	0.15	12.2	0.005	2.35	0.00005	2.69	0.68		0.0005	0.0005	0.005	0.00044	0.005	0.0078
SULPHIDE-BOTTOM-48	0.061	0.0025	0.15	11	0.005	2.29	0.00005	2.42	0.675	66.7	0.0005	0.0005	0.005	0.00039	0.005	0.008
SULPHIDE-BOTTOM-49	0.0602	0.00254	0.15	12.2	0.00114	2.49	0.000075	2.68	0.73	66.7	0.00005	0.00005	0.005	0.000356	0.0005	0.0096
SULPHIDE-BOTTOM-50	0.0688	0.00156	0.15	11.3	0.00112	2.32	0.000026	2.54	0.661	59.6	0.00005	0.00005	0.005	0.000408	0.0005	0.0051
SULPHIDE-BOTTOM-51	0.0714	0.0006	0.15	11	0.00131	2.45	0.000015	2.44	0.646	78.7	0.00005	0.00005	0.005	0.000495	0.0005	0.0015
SULPHIDE-BOTTOM-52	0.0701	0.00061	0.15	11.3	0.00136	2.31	0.000005	2.26	0.677	70	0.00005	0.00005	0.005	0.00035	0.0005	0.0015
SULPHIDE-BOTTOM-53	0.0653	0.00076	0.15	11.9	0.00162	2.41	0.000005	2.13	0.693	71.5	0.00005	0.00005	0.005	0.000298	0.0005	0.0015
SULPHIDE-BOTTOM-54	0.0602	0.00025	0.15	11.3	0.00199	2.33	0.000005	2.34	0.694	66.8	0.00005	0.00005	0.005	0.000458	0.0005	0.0015
SULPHIDE-BOTTOM-55	0.055	0.00025	0.15	9.91	0.00218	2.35	0.000005	2.02	0.699	70.3	0.00005	0.00005	0.005	0.000407	0.0005	0.0015
SULPHIDE-BOTTOM-56	0.0523	0.00025	0.15	10.9	0.00233	2.38	0.000005	2.15	0.67	91.6	0.00005	0.00005	0.005	0.00043	0.0005	0.0015
SULPHIDE-BOTTOM-57	0.0499	0.00025	0.15	9.84	0.00238	2.37	0.000005	1.94	0.656	111	0.00005	0.00005	0.005	0.000411	0.0005	0.0015
SULPHIDE-BOTTOM-58	0.0459	0.00025	0.15	9.87	0.00234	2.48	0.000005	1.8	0.629	64.9	0.00005	0.00005	0.005	0.000377	0.0005	0.0015
SULPHIDE-BOTTOM-59	0.0472	0.00025	0.15	9.05	0.00213	2.45	0.000005	1.76	0.644	52.5	0.00005	0.00005	0.005	0.000347	0.0005	0.0015
SULPHIDE-BOTTOM-60	0.042	0.00025	0.15	8.74	0.00224	2.38	0.000005	1.65	0.641	50	0.00005	0.00005	0.005	0.00038	0.0005	0.0015
SULPHIDE-BOTTOM-61	0.0391	0.00025	0.15	9.56	0.00213	2.36	0.000005	1.81	0.691	55.6	0.00005	0.00005	0.005	0.000364	0.0005	0.0015
SULPHIDE-BOTTOM-62	0.0423	0.00065	0.15	8.07	0.00213	2.41	0.000005	1.52	0.687	58.9	0.00005	0.00005	0.005	0.000402	0.0005	0.0015
SULPHIDE-BOTTOM-63	0.0416	0.00025	0.15	7.79	0.00219	2.49	0.000005	1.55	0.678	107	0.00005	0.00005	0.005	0.000407	0.0005	0.0015
SULPHIDE-BOTTOM-64	0.0396	0.00025	0.15	8.3	0.002	2.46	0.000005	1.56	0.666	77	0.00005	0.00005	0.005	0.000393	0.0005	0.0015
SULPHIDE-BOTTOM-65	0.0353	0.00025	0.15	7.92	0.00188	2.5	0.000005	1.55	0.713	58.5	0.00005	0.00005	0.005	0.000341	0.0005	0.0042
SULPHIDE-BOTTOM-66	0.0371	0.00025	0.15	7.85	0.002	2.61	0.000013	1.47	0.699	63.9	0.00005	0.00005	0.01	0.000395	0.0005	0.0015

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
SULPHIDE-BOTTOM-67	0.0361	0.00025	0.15	8.26	0.00185	2.47	0.000005	1.5	0.692	85	0.00005	0.00005	0.005	0.000382	0.0005	0.0015
SULPHIDE-BOTTOM-68	0.0333	0.00025	0.15	7.06	0.00118	2.55	0.000005	1.32	0.745	63.5	0.00005	0.00005	0.005	0.000355	0.0005	0.0015
SULPHIDE-BOTTOM-69	0.0333	0.00025	0.15	7.18	0.00083	2.52	0.000005	1.31	0.664	59.9	0.00005	0.00005	0.005	0.000375	0.0005	0.0015
SULPHIDE-BOTTOM-70	0.0281	0.00141	0.15	8.5	0.00054	2.55	0.000005	1.45	0.801	62.8	0.00005	0.00005	0.005	0.000283	0.0005	0.0057
SULPHIDE-BOTTOM-71	0.018	0.00599	0.15	7.76	0.00071	2.8	0.000017	1.41	0.963	82.8	0.00005	0.00005	0.012	0.00029	0.0005	0.0368
SULPHIDE-BOTTOM-72	0.0336	0.00226	0.15	7.58	0.00044	2.61	0.000034	1.36	0.841	66.6	0.00005	0.00005	0.005	0.000478	0.0005	0.0084
SULPHIDE-BOTTOM-73	0.0338	0.00195	0.15	7.18	0.0005	2.5	0.000021	1.3	0.703	59.4	0.00005	0.00005	0.005	0.000475	0.0005	0.0048
SULPHIDE-BOTTOM-74	0.0349	0.00166	0.15	7.51	0.00069	2.44	0.000013	1.29	0.754	58.5	0.00005	0.00005	0.005	0.000494	0.0005	0.0039
SULPHIDE-BOTTOM-75	0.0228	0.00562	0.15	7.26	0.00076	2.79	0.000045	1.27	1.03	78.9	0.00005	0.00005	0.013	0.000355	0.0005	0.0366
SULPHIDE-BOTTOM-76	0.0308	0.0024	0.15	7.06	0.00042	2.46	0.00004	1.15	0.714	63.3	0.00005	0.00005	0.005	0.000362	0.0005	0.007
SULPHIDE-BOTTOM-77	0.0319	0.0016	0.15	6.7	0.00048	2.29	0.000024	1.12	0.723	58.8	0.00005	0.00005	0.005	0.00043	0.0005	0.0055
SULPHIDE-BOTTOM-Final Leach	0.0311	0.00123	0.15	6.79	0.00061	2.37	0.000005	1.18	0.778	76.6	0.00005	0.00005	0.005	0.000437	0.0005	0.0015
	0.0303	0.002502	0.15	7.064	0.000592	2.47	0.0000254	1.202	0.7998	#DIV/0!	0.00005	0.00005	0.0066	0.0004156	0.0005	0.0109
M_Rougher/Sulphide 90/10 Top																
ROUGHER-SULPHIDE-90/10-TOP-1	0.00735	0.0057	0.15	14.8	0.005	0.58	0.00005	21.2	2.65		0.0005	0.0005	0.005	0.00021	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-2	0.00553	0.0069	0.15	10.3	0.005	0.404	0.00005	11.6	1.82		0.0005	0.0005	0.005	0.00015	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-3	0.00528	0.0087	0.15	8.87	0.0025	0.613	0.000025	9.03	1.96		0.00025	0.00025	0.005	0.000288	0.0025	0.0025
ROUGHER-SULPHIDE-90/10-TOP-4	0.00296	0.0055	0.15	4.6	0.005	0.41	0.00005	3.98	1.19		0.0005	0.0005	0.005	0.00021	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-5	0.00201	0.0025	0.15	3.17	0.005	0.29	0.00005	2.55	0.698		0.0005	0.0005	0.005	0.00011	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-6	0.00147	0.0025	0.15	2.44	0.005	0.257	0.00005	1.91	0.473		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-7	0.00283	0.0064	0.15	3.04	0.005	0.394	0.00005	1.79	0.795		0.0005	0.0005	0.005	0.00026	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-8	0.00171	0.0025	0.15	1.94	0.005	0.326	0.00005	0.92	0.558		0.0005	0.0005	0.005	0.00011	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-9	0.00165	0.0025	0.15	1.53	0.005	0.347	0.00005	0.64	0.471		0.0005	0.0005	0.005	0.00012	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-10	0.00147	0.0025	0.15	1.34	0.005	0.384	0.00005	0.52	0.437		0.0005	0.0013	0.005	0.00011	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-11	0.00119	0.0025	0.15	1.15	0.005	0.401	0.00005	0.25	0.411		0.0005	0.0005	0.005	0.0001	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-12	0.00101	0.0025	0.15	1.08	0.005	0.4	0.00005	0.25	0.426		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-13	0.000744	0.00332	0.15	0.933	0.0005	0.407	0.000005	0.242	0.376		0.00005	0.00005	0.005	0.000064	0.0005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-14	0.00066	0.0025	0.15	0.89	0.005	0.393	0.00005	0.25	0.366		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-15	0.0006	0.0025	0.15	0.8	0.005	0.367	0.00005	0.25	0.323		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-16	0.0006	0.0025	0.15	0.8	0.005	0.397	0.00005	0.25	0.333		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-17	0.00025	0.0025	0.15	0.68	0.005	0.373	0.00005	0.25	0.3		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-18	0.00025	0.0025	0.6	0.63	0.005	0.38	0.00005	0.25	0.278		0.0005	0.0005	0.02	0.00005	0.005	0.01
ROUGHER-SULPHIDE-90/10-TOP-19	0.00025	0.0025	0.15	0.61	0.005	0.387	0.00005	0.25	0.267		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-20	0.00025	0.0025	0.15	0.56	0.005	0.393	0.00005	0.25	0.244		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-21	0.00059	0.0025	0.15	0.6	0.005	0.391	0.00005	0.25	0.255		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-22	0.00051	0.0025	0.15	0.58	0.005	0.379	0.00005	0.25	0.261		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-23	0.00025	0.0025	0.15	0.52	0.005	0.375	0.00005	0.25	0.247		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-24	0.00025	0.0025	0.15	0.5	0.005	0.359	0.00005	0.25	0.222		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-25	0.00025	0.0025	0.15	0.25	0.005	0.366	0.00005	0.25	0.212		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-26	0.00025	0.0025	0.15	0.25	0.005	0.343	0.00005	0.25	0.214		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-27	0.00025	0.0025	0.15	0.25	0.005	0.358	0.00005	0.25	0.212		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-28	0.00025	0.0025	0.15	0.25	0.005	0.344	0.00005	0.25	0.189		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-29	0.00025	0.0025	0.15	0.25	0.005	0.345	0.00005	0.25	0.189		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-30	0.00025	0.0025	0.15	0.25	0.005	0.332	0.00005	0.25	0.198		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-31	0.00025	0.0025	0.15	0.25	0.005	0.316	0.00005	0.25	0.164		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-32	0.00025	0.0025	0.15	0.25	0.005	0.356	0.00005	0.25	0.178		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-33	0.00025	0.0025	0.15	0.25	0.005	0.399	0.00005	0.25	0.172		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-34	0.00025	0.0025	0.15	0.25	0.005	0.345	0.00005	0.25	0.156		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-35	0.00025	0.0025	0.15	0.25	0.005	0.338	0.00005	0.25	0.15		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-36	0.00025	0.0025	0.15	0.25	0.005	0.32	0.00005	0.25	0.132		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-37	0.00025	0.0025	0.15	0.25	0.005	0.306	0.00005	0.25	0.133		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-38	0.00025	0.0025	0.15	0.25	0.005	0.331	0.00005	0.25	0.132		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-39	0.00025	0.0025	0.15	0.25	0.005	0.336	0.00005	0.25	0.13		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-40	0.00025	0.0025	0.15	0.25	0.005	0.329	0.00005	0.25	0.11		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-41	0.00025	0.0025	0.15	0.25	0.005	0.328	0.00005	0.25	0.12		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-42	0.00025	0.0025	0.15	0.25	0.005	0.307	0.00005	0.25	0.114		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-43	0.00025	0.0025	0.15	0.25	0.005	0.369	0.00005	0.25	0.121		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-44	0.00025	0.0025	0.15	0.25	0.005	0.36	0.00005	0.25	0.122		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-45	0.00025	0.0025	0.15	0.25	0.005	0.384	0.00005	0.25	0.113		0.0005	0.0005	0.005	0.00005	0.005	0.0025

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
ROUGHER-SULPHIDE-90/10-TOP-46	0.00025	0.0025	0.15	0.25	0.005	0.345	0.00005	0.25	0.115		0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-47	0.00025	0.0025	0.15	0.25	0.005	0.424	0.00005	0.25	0.138		0.0005	0.0005	0.005	0.00005	0.005	0.0371
ROUGHER-SULPHIDE-90/10-TOP-48	0.00025	0.0025	0.15	0.25	0.005	0.352	0.00005	0.25	0.108	17	0.0005	0.0005	0.005	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-TOP-49	0.000107	0.00449	0.15	0.268	0.00016	0.373	0.000005	0.025	0.128	17	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-TOP-50	0.000025	0.00461	0.15	0.244	0.00023	0.364	0.000005	0.025	0.11	15.2	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-TOP-51	0.000025	0.00486	0.15	0.239	0.00017	0.373	0.000005	0.025	0.1	14.7	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-TOP-52	0.000025	0.0046	0.15	0.219	0.00016	0.338	0.000005	0.025	0.092	13.3	0.00005	0.00005	0.005	0.000005	0.0005	0.003
ROUGHER-SULPHIDE-90/10-TOP-53	0.000025	0.00508	0.15	0.232	0.00018	0.374	0.000005	0.025	0.0931	14.9	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-TOP-54	0.000066	0.00546	0.15	0.232	0.00018	0.349	0.000005	0.025	0.0937	13.3	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-TOP-55	0.000082	0.00547	0.15	0.202	0.00018	0.346	0.000005	0.025	0.0928	13.4	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-TOP-56	0.000077	0.00682	0.15	0.247	0.00017	0.372	0.000005	0.025	0.0911	14.1	0.00005	0.00005	0.005	0.000005	0.0005	0.0033
ROUGHER-SULPHIDE-90/10-TOP-57	0.000025	0.00685	0.15	0.212	0.00018	0.358	0.000005	0.025	0.0837	13.4	0.00005	0.00005	0.005	0.000005	0.0005	0.0041
ROUGHER-SULPHIDE-90/10-TOP-58	0.000093	0.00716	0.15	0.201	0.00018	0.365	0.000005	0.025	0.0783	13.5	0.00005	0.00005	0.005	0.000005	0.0005	0.0043
ROUGHER-SULPHIDE-90/10-TOP-59	0.000103	0.00868	0.15	0.214	0.00024	0.388	0.000005	0.025	0.0798	14.2	0.00005	0.00005	0.005	0.000005	0.0005	0.0055
ROUGHER-SULPHIDE-90/10-TOP-60	0.000025	0.00792	0.15	0.193	0.00021	0.373	0.000005	0.025	0.0764	13.9	0.00005	0.00005	0.005	0.000005	0.0005	0.0057
ROUGHER-SULPHIDE-90/10-TOP-61	0.000056	0.00807	0.15	0.222	0.00023	0.369	0.000005	0.062	0.075	13.7	0.00005	0.00005	0.005	0.000005	0.0005	0.0061
ROUGHER-SULPHIDE-90/10-TOP-62	0.000025	0.00829	0.15	0.199	0.00027	0.384	0.000005	0.025	0.0788	13.6	0.00005	0.00005	0.005	0.000005	0.0005	0.0077
ROUGHER-SULPHIDE-90/10-TOP-63	0.000025	0.00828	0.15	0.203	0.00026	0.388	0.000005	0.054	0.074	13.5	0.00005	0.00005	0.005	0.000005	0.0005	0.0081
ROUGHER-SULPHIDE-90/10-TOP-64	0.000025	0.00921	0.15	0.205	0.00027	0.38	0.000005	0.025	0.0718	12.4	0.00005	0.00005	0.005	0.000005	0.0005	0.0096
ROUGHER-SULPHIDE-90/10-TOP-65	0.000025	0.0084	0.15	0.178	0.00032	0.403	0.000005	0.025	0.0732	12.3	0.00005	0.00005	0.005	0.000005	0.0005	0.0101
ROUGHER-SULPHIDE-90/10-TOP-66	0.000141	0.00774	0.15	0.182	0.00034	0.403	0.000005	0.025	0.0722	12.2	0.00005	0.00005	0.005	0.000005	0.0005	0.0108
ROUGHER-SULPHIDE-90/10-TOP-67	0.000025	0.00823	0.15	0.179	0.00029	0.383	0.000005	0.025	0.0657	11.8	0.00005	0.00005	0.005	0.000005	0.0005	0.0132
ROUGHER-SULPHIDE-90/10-TOP-68	0.000025	0.00695	0.15	0.161	0.00034	0.389	0.000005	0.025	0.0656	11.6	0.00005	0.00005	0.005	0.000005	0.0005	0.0117
ROUGHER-SULPHIDE-90/10-TOP-69	0.000025	0.00734	0.15	0.165	0.00036	0.395	0.000005	0.025	0.0631	12	0.00005	0.00005	0.005	0.000005	0.0005	0.0141
ROUGHER-SULPHIDE-90/10-TOP-70	0.000025	0.00749	0.15	0.189	0.0004	0.389	0.000005	0.025	0.0638	11.6	0.00005	0.00005	0.005	0.000005	0.0005	0.0163
ROUGHER-SULPHIDE-90/10-TOP-71	0.000025	0.00722	0.15	0.186	0.0004	0.386	0.000005	0.025	0.0636	11.4	0.00005	0.00005	0.005	0.000005	0.0005	0.0193
ROUGHER-SULPHIDE-90/10-TOP-72	0.000025	0.0069	0.15	0.217	0.00038	0.379	0.000005	0.025	0.0634	11.1	0.00005	0.00005	0.005	0.000005	0.0005	0.0153
ROUGHER-SULPHIDE-90/10-TOP-73	0.000025	0.00664	0.15	0.159	0.00044	0.381	0.000005	0.025	0.0592	10.9	0.00005	0.00005	0.005	0.000005	0.0005	0.0153
ROUGHER-SULPHIDE-90/10-TOP-74	0.000025	0.00629	0.15	0.17	0.00038	0.368	0.000005	0.055	0.059	10.4	0.00005	0.00005	0.005	0.000005	0.0005	0.0157
ROUGHER-SULPHIDE-90/10-TOP-75	0.000079	0.00671	0.15	0.185	0.00042	0.368	0.000005	0.025	0.0684	10.6	0.00005	0.00005	0.005	0.000005	0.0005	0.0178
ROUGHER-SULPHIDE-90/10-TOP-76	0.000025	0.00548	0.15	0.147	0.00043	0.336	0.000005	0.025	0.05	9.11	0.00005	0.00005	0.005	0.000005	0.0005	0.0157
ROUGHER-SULPHIDE-90/10-TOP-77	0.000025	0.00551	0.15	0.155	0.00045	0.328	0.000005	0.025	0.0535	9.22	0.00005	0.00005	0.005	0.000005	0.0005	0.0156
ROUGHER-SULPHIDE-90/10-TOP-78	0.000025	0.00577	0.15	0.16	0.00047	0.347	0.000005	0.025	0.0559	9.5	0.00005	0.00005	0.005	0.000005	0.0005	0.0149
ROUGHER-SULPHIDE-90/10-TOP-79	0.000025	0.00546	0.15	0.151	0.0005	0.349	0.000005	0.025	0.0561	9.63	0.00005	0.00005	0.005	0.000005	0.0005	0.0159
ROUGHER-SULPHIDE-90/10-TOP-80	0.000025	0.00534	0.15	0.141	0.00053	0.352	0.000005	0.025	0.0529	9.81	0.00005	0.00005	0.005	0.000005	0.0005	0.0135
ROUGHER-SULPHIDE-90/10-TOP-81	0.000025	0.00602	0.15	0.199	0.00057	0.355	0.000005	0.07	0.0616	10.2	0.00005	0.00005	0.005	0.000005	0.0005	0.0164
ROUGHER-SULPHIDE-90/10-TOP-82	0.000025	0.00518	0.15	0.176	0.00051	0.356	0.000005	0.134	0.0526	9.9	0.00005	0.00005	0.005	0.000005	0.0005	0.0138
ROUGHER-SULPHIDE-90/10-TOP-83	0.000025	0.00521	0.15	0.158	0.00058	0.358	0.000005	0.025	0.0571	9.89	0.00005	0.00005	0.005	0.000005	0.0005	0.0146
ROUGHER-SULPHIDE-90/10-TOP-84	0.000025	0.00507	0.15	0.146	0.00057	0.352	0.000005	0.025	0.0548	9.77	0.00005	0.00005	0.005	0.000005	0.0005	0.0134
ROUGHER-SULPHIDE-90/10-TOP-85	0.000025	0.00506	0.15	0.168	0.00056	0.346	0.000005	0.025	0.0516	9.44	0.000005	0.00005	0.005	0.000005	0.0005	0.0144
ROUGHER-SULPHIDE-90/10-TOP-86	0.000025	0.00483	0.15	0.151	0.00056	0.37	0.000046	0.025	0.0548	9.77	0.00005	0.00005	0.005	0.000005	0.0005	0.014
ROUGHER-SULPHIDE-90/10-TOP-87	0.000025	0.00635	0.15	0.184	0.00075	0.461	0.000005	0.059	0.0669	12.6	0.000005	0.00005	0.005	0.000005	0.0005	0.0174
ROUGHER-SULPHIDE-90/10-TOP-88	0.000025	0.00521	0.15	0.148	0.00056	0.349	0.000005	0.025	0.0501	9.29	0.000005	0.00005	0.005	0.000005	0.0005	0.0148
ROUGHER-SULPHIDE-90/10-TOP-89	0.000025	0.00456	0.15	0.14	0.00054	0.35	0.000005	0.025	0.0526	9.34	0.000005	0.00005	0.005	0.000005	0.0005	0.0145
ROUGHER-SULPHIDE-90/10-TOP-90	0.000025	0.00454	0.15	0.149	0.00057	0.364	0.000005	0.025	0.062	9.24	0.000005	0.00005	0.005	0.000005	0.0005	0.0128
ROUGHER-SULPHIDE-90/10-TOP-91	0.000025	0.00464	0.15	0.151	0.00058	0.36	0.000005	0.025	0.0538	9.12	0.000005	0.00005	0.005	0.000005	0.0005	0.0141
ROUGHER-SULPHIDE-90/10-TOP-92	0.000025	0.00469	0.15	0.145	0.00056	0.345	0.000005	0.025	0.0523	8.86	0.000005	0.00005	0.005	0.000005	0.0005	0.0146
ROUGHER-SULPHIDE-90/10-TOP-93	0.000322	0.00447	0.15	0.152	0.00054	0.353	0.000005	0.025	0.0502	8.81	0.000005	0.00005	0.005	0.000005	0.0005	0.0132
ROUGHER-SULPHIDE-90/10-TOP-94	0.000025	0.00425	0.15	0.144	0.00051	0.375	0.000005	0.025	0.0509	8.78	0.000005	0.00005	0.005	0.000005	0.0005	0.0135
ROUGHER-SULPHIDE-90/10-TOP-95	0.000025	0.00471	0.15	0.163	0.00055	0.398	0.000005	0.072	0.0538	8.86	0.000005	0.00005	0.005	0.000005	0.0005	0.0139
ROUGHER-SULPHIDE-90/10-TOP-96	0.000025	0.00426	0.15	0.152	0.00054	0.385	0.000005	0.078	0.0517	9.03	0.000005	0.00005	0.005	0.000005	0.0005	0.0125
ROUGHER-SULPHIDE-90/10-TOP-97	0.000025	0.00446	0.15	0.155	0.00055	0.376	0.000005	0.025	0.0516	8.73	0.000005	0.00005	0.005	0.000005	0.0005	0.0132
ROUGHER-SULPHIDE-90/10-TOP-98	0.000025	0.00413	0.15	0.148	0.00049	0.373	0.000005	0.025	0.0492	8.45	0.000005	0.00005	0.005	0.000005	0.0005	0.0119
ROUGHER-SULPHIDE-90/10-TOP-99	0.000025	0.00431	0.15	0.151	0.00051	0.395	0.000005	0.025	0.057	8.89	0.000005	0.00005	0.005	0.000005	0.0005	0.0125
ROUGHER-SULPHIDE-90/10-TOP-100	0.000025	0.00406	0.15	0.153	0.00043	0.394	0.000005	0.025	0.0495	8.45	0.000005	0.00005	0.005	0.000005	0.0005	0.0124
ROUGHER-SULPHIDE-90/10-TOP-101	0.000025	0.0041	0.15	0.155	0.0004	0.388	0.000005	0.025	0.0466	8.34	0.000005	0.00005	0.005	0.000005	0.0005	0.0125
ROUGHER-SULPHIDE-90/10-TOP-102	0.000025	0.00401	0.15	0.152	0.00039	0.39	0.000005	0.085	0.0483	8.32	0.000005	0.00005	0.005	0.000005	0.0005	0.0191
ROUGHER-SULPHIDE-90/10-TOP-103	0.000025	0.00409	0.15	0.15	0.00039	0.39	0.000005	0.025	0.0487	8.39	0.000005	0.00005	0.005	0.000005	0.0005	0.0147
ROUGHER-SULPHIDE-90/10-TOP-104	0.000025	0.00403	0.15	0.15	0.00037	0.35	0.000066	0.025	0.0412	7.27	0.000005	0.00005	0.005	0.000005	0.0005	0.0137

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
ROUGHER-SULPHIDE-90/10-TOP-105	0.000025	0.00511	0.15	0.2	0.00039	0.402	0.000005	0.061	0.0456	8.1	0.000005	0.00005	0.005	0.000011	0.0005	0.0175
ROUGHER-SULPHIDE-90/10-TOP-106	0.000025	0.00414	0.15	0.151	0.00042	0.392	0.000005	0.025	0.0436	7.8	0.000005	0.00005	0.005	0.00001	0.0005	0.0148
ROUGHER-SULPHIDE-90/10-TOP-107	0.000025	0.00413	0.15	0.146	0.00036	0.378	0.000005	0.025	0.0425	7.55	0.000005	0.00005	0.005	0.000005	0.0005	0.0142
ROUGHER-SULPHIDE-90/10-TOP-108	0.000025	0.00377	0.15	0.138	0.00033	0.348	0.000005	0.025	0.0371	6.81	0.000005	0.00005	0.005	0.00001	0.0005	0.0132
ROUGHER-SULPHIDE-90/10-TOP-109	0.00009	0.00447	0.15	0.133	0.00029	0.316	0.000005	0.056	0.0394	6.63	0.000005	0.00005	0.005	0.000005	0.0005	0.0122
ROUGHER-SULPHIDE-90/10-TOP-110	0.000025	0.00371	0.15	0.144	0.00027	0.311	0.000005	0.055	0.037	6.11	0.000005	0.00005	0.005	0.000005	0.0005	0.0107
ROUGHER-SULPHIDE-90/10-TOP-111	0.000025	0.00331	0.15	0.124	0.0003	0.289	0.000005	0.025	0.0359	5.64	0.000005	0.00005	0.005	0.000005	0.0005	0.0125
ROUGHER-SULPHIDE-90/10-TOP-112	0.000025	0.00296	0.15	0.17	0.00023	0.291	0.000005	0.061	0.0352	5.22	0.000005	0.00005	0.005	0.000005	0.0005	0.0099
ROUGHER-SULPHIDE-90/10-TOP-113	0.000025	0.00302	0.15	0.129	0.00023	0.3	0.000005	0.025	0.0354	5.69	0.000005	0.00005	0.005	0.000005	0.0005	0.0104
ROUGHER-SULPHIDE-90/10-TOP-114	0.000025	0.00297	0.15	0.12525	0.0002375	0.30075	0.000005	0.025	0.035525	5.6625	0.000005	0.00005	0.005	0.000005	0.0005	0.01005
ROUGHER-SULPHIDE-90/10-TOP-115	0.000025	0.00292	0.15	0.1215	0.000245	0.3015	0.000005	0.025	0.03565	5.635	0.000005	0.00005	0.005	0.000005	0.0005	0.0097
ROUGHER-SULPHIDE-90/10-TOP-116	0.000025	0.00287	0.15	0.11775	0.0002525	0.30225	0.000005	0.025	0.035775	5.6075	0.000005	0.00005	0.005	0.000005	0.0005	0.00935
ROUGHER-SULPHIDE-90/10-TOP-117	0.000025	0.00282	0.15	0.114	0.00026	0.303	0.000005	0.025	0.0359	5.58	0.000005	0.00005	0.005	0.000005	0.0005	0.009
ROUGHER-SULPHIDE-90/10-TOP-118	0.000025	0.002835	0.15	0.11675	0.0002625	0.31225	0.0000065	0.025	0.0374	5.705	0.000005	0.00012	0.005	0.000005	0.0005	0.0092
ROUGHER-SULPHIDE-90/10-TOP-119	0.000025	0.00285	0.15	0.1195	0.000265	0.3215	0.000008	0.025	0.0389	5.83	0.000005	0.00019	0.005	0.000005	0.0005	0.0094
ROUGHER-SULPHIDE-90/10-TOP-120	0.000025	0.002865	0.15	0.12225	0.0002675	0.33075	0.0000095	0.025	0.0404	5.955	0.000005	0.00026	0.005	0.000005	0.0005	0.0096
ROUGHER-SULPHIDE-90/10-TOP-121	0.000025	0.00288	0.15	0.125	0.00027	0.34	0.000011	0.025	0.0419	6.08	0.000005	0.00033	0.005	0.000005	0.0005	0.0098
ROUGHER-SULPHIDE-90/10-TOP-123	0.000025	0.0032625	0.15	0.129	0.0003075	0.34375	0.00001325	0.025	0.042125	6.2075	0.000005	0.00026	0.005	0.0000065	0.0005	0.0109
ROUGHER-SULPHIDE-90/10-TOP-123	0.000025	0.003645	0.15	0.133	0.000345	0.3475	0.0000155	0.025	0.04235	6.335	0.000005	0.00019	0.005	0.000008	0.0005	0.012
ROUGHER-SULPHIDE-90/10-TOP-124	0.000025	0.0040275	0.15	0.137	0.0003825	0.35125	0.00001775	0.025	0.042575	6.4625	0.000005	0.00012	0.005	0.0000095	0.0005	0.0131
ROUGHER-SULPHIDE-90/10-TOP-125	0.000025	0.00441	0.15	0.141	0.00042	0.355	0.00002	0.025	0.0428	6.59	0.000005	0.00005	0.005	0.000011	0.0005	0.0142
ROUGHER-SULPHIDE-90/10-TOP-126	0.000025	0.0044025	0.15	0.141	0.00042	0.3585	0.0000205	0.025	0.04225	6.715	0.000005	0.00005	0.005	0.0000115	0.0005	0.0142
ROUGHER-SULPHIDE-90/10-TOP-127	0.000025	0.004395	0.15	0.141	0.00042	0.362	0.000021	0.025	0.0417	6.84	0.000005	0.00005	0.005	0.000012	0.0005	0.0142
ROUGHER-SULPHIDE-90/10-TOP-128	0.000025	0.0043875	0.15	0.141	0.00042	0.3655	0.0000215	0.025	0.04115	6.965	0.000005	0.00005	0.005	0.0000125	0.0005	0.0142
ROUGHER-SULPHIDE-90/10-TOP-129	0.000025	0.00438	0.15	0.141	0.00042	0.369	0.000022	0.025	0.0406	7.09	0.000005	0.00005	0.005	0.000013	0.0005	0.0142
ROUGHER-SULPHIDE-90/10-TOP-130	0.000025	0.00444	0.15	0.142	0.000445	0.37175	0.00002325	0.025	0.0414	7.2275	0.000005	0.0000675	0.005	0.000011	0.0005	0.01435
ROUGHER-SULPHIDE-90/10-TOP-131	0.000025	0.0045	0.15	0.143	0.00047	0.3745	0.0000245	0.025	0.0422	7.365	0.000005	0.000085	0.005	0.000009	0.0005	0.0145
ROUGHER-SULPHIDE-90/10-TOP-132	0.000025	0.00456	0.15	0.144	0.000495	0.37725	0.00002575	0.025	0.043	7.5025	0.000005	0.0001025	0.005	0.000007	0.0005	0.01465
ROUGHER-SULPHIDE-90/10-TOP-133	0.000025	0.00462	0.15	0.145	0.00052	0.38	0.000027	0.025	0.0438	7.64	0.000005	0.00012	0.005	0.000005	0.0005	0.0148
ROUGHER-SULPHIDE-90/10-TOP-134	0.000025	0.00461	0.15	0.143	0.0005225	0.38675	0.000028	0.033	0.043	7.75	0.000005	0.00012	0.005	0.00000725	0.0005	0.01465
ROUGHER-SULPHIDE-90/10-TOP-135	0.000025	0.0046	0.15	0.141	0.000525	0.3935	0.000029	0.041	0.0422	7.86	0.000005	0.00012	0.005	0.0000095	0.0005	0.0145
ROUGHER-SULPHIDE-90/10-TOP-136	0.000025	0.00459	0.15	0.139	0.0005275	0.40025	0.00003	0.049	0.0414	7.97	0.000005	0.00012	0.005	0.00001175	0.0005	0.01435
ROUGHER-SULPHIDE-90/10-TOP-137	0.000025	0.00458	0.15	0.137	0.00053	0.407	0.000031	0.057	0.0406	8.08	0.000005	0.00012	0.005	0.000014	0.0005	0.0142
ROUGHER-SULPHIDE-90/10-TOP-138	0.000025	0.0046125	0.15	0.14025	0.0005325	0.40625	0.0000305	0.0575	0.041425	7.9675	0.000005	0.000135	0.005	0.000014	0.0005	0.014325
ROUGHER-SULPHIDE-90/10-TOP-139	0.000025	0.004645	0.15	0.1435	0.000535	0.4055	0.00003	0.058	0.04225	7.855	0.000005	0.00015	0.005	0.000014	0.0005	0.01445
ROUGHER-SULPHIDE-90/10-TOP-140	0.000025	0.0046775	0.15	0.14675	0.0005375	0.40475	0.0000295	0.0585	0.043075	7.7425	0.000005	0.000165	0.005	0.000014	0.0005	0.014575
ROUGHER-SULPHIDE-90/10-TOP-141	0.000025	0.00471	0.15	0.15	0.00054	0.404	0.000029	0.059	0.0439	7.63	0.000005	0.00018	0.005	0.000014	0.0005	0.0147
ROUGHER-SULPHIDE-90/10-TOP-142	0.000025	0.004655	0.15	0.14225	0.0005325	0.40725	0.00003025	0.0505	0.04285	7.43	0.000005	0.000215	0.005	0.0000145	0.0005	0.0144
ROUGHER-SULPHIDE-90/10-TOP-143	0.000025	0.0046	0.15	0.1345	0.000525	0.4105	0.0000315	0.042	0.0418	7.23	0.000005	0.00025	0.005	0.000015	0.0005	0.0141
ROUGHER-SULPHIDE-90/10-TOP-144	0.000025	0.004545	0.15	0.12675	0.0005175	0.41375	0.00003275	0.0335	0.04075	7.03	0.000005	0.000285	0.005	0.0000155	0.0005	0.0138
ROUGHER-SULPHIDE-90/10-TOP-145	0.000025	0.00449	0.15	0.143	0.00049	0.403	0.000038	0.057	0.0426	7.26	0.000005	0.00022	0.005	0.000015	0.0005	0.0151
ROUGHER-SULPHIDE-90/10-TOP-146	0.000025	0.00449	0.15	0.143	0.00049	0.403	0.000038	0.057	0.0426	7.26	0.000005	0.00022	0.005	0.000015	0.0005	0.0151
ROUGHER-SULPHIDE-90/10-TOP-147	0.000025	0.00449	0.15	0.143	0.00049	0.403	0.000038	0.057	0.0426	7.26	0.000005	0.00022	0.005	0.000015	0.0005	0.0151
ROUGHER-SULPHIDE-90/10-TOP-148	0.000025	0.00449	0.15	0.143	0.00049	0.403	0.000038	0.057	0.0426	7.26	0.000005	0.00022	0.005	0.000015	0.0005	0.0151
ROUGHER-SULPHIDE-90/10-TOP-149	0.000025	0.00433	0.15	0.151	0.00054	0.448	0.000038	0.052	0.0477	7.33	0.000005	0.00043	0.005	0.000014	0.0005	0.0137
ROUGHER-SULPHIDE-90/10-TOP-150	0.00606875	0.0107975	0.15	16.83825	0.001655	0.716	0.000041	32.289	3.035775	7.33	0.00012875	0.0004475	0.00725	0.000123	0.001625	0.012075
ROUGHER-SULPHIDE-90/10-TOP-151	0.0121125	0.017265	0.15	33.5255	0.00277	0.984	0.000044	64.526	6.02385	7.33	0.0002525	0.000465	0.0095	0.000232	0.00275	0.01045
ROUGHER-SULPHIDE-90/10-TOP-152	0.01815625	0.0237325	0.15	50.21275	0.003885	1.252	0.000047	96.763	9.011925	7.33	0.00037625	0.0004825	0.01175	0.000341	0.003875	0.008825
ROUGHER-SULPHIDE-90/10-TOP-153	0.000025	0.00456	0.15	0.134	0.00052	0.44	0.000034	0.052	0.0419	7.16	0.000005	0.00039	0.005	0.000015	0.0005	0.0141
ROUGHER-SULPHIDE-90/10-TOP-154	0.00546875	0.00807	0.15	17.0255	0.00164	0.7025	0.000038	7.864	3.381425	7.16	0.00012875	0.0004175	0.007	0.00008125	0.001625	0.0138
ROUGHER-SULPHIDE-90/10-TOP-155	0.0109125	0.01158	0.15	33.917	0.00276	0.965	0.000042	15.676	6.72095	7.16	0.0002525	0.000445	0.009	0.0001475	0.00275	0.0135
ROUGHER-SULPHIDE-90/10-TOP-156	0.01635625	0.01509	0.15	50.8085	0.00388	1.2275	0.000046	23.488	10.060475	7.16	0.00037625	0.0004725	0.011	0.00021375	0.003875	0.0132
ROUGHER-SULPHIDE-90/10-TOP-157	0.000025	0.00449	0.15	0.119	0.00051	0.417	0.000034	0.025	0.0397	6.83	0.000005	0.00032	0.005	0.000016	0.0005	0.0135
	0.0065575	0.008758	0.15	20.4008	0.001862	0.7504	0.0000388	9.421	4.04889	7.214	0.0001535	0.000409	0.0074	0.0000947	0.00185	0.01362
M_Rougher/Sulphide 90/10 Bottom																
ROUGHER-SULPHIDE-90/10-BOTTOM-1	0.0176	0.0462	0.15	65.3	0.005	1.43	0.00073	141	9.96		0.0005	0.0013	0.005	0.0022	0.005	0.007
ROUGHER-SULPHIDE-90/10-BOTTOM-2	0.0247	0.0658	0.15	75.4	0.005	1.55	0.00005	164	12.4		0.0005	0.0005	0.015	0.00111	0.005	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-3	0.0266	0.0287	0.15	69.3	0.005	1.62	0.00005	147	11.6		0.0005	0.0005	0.015	0.00064	0.005	0.0058
ROUGHER-SULPHIDE-90/10-BOTTOM-4	0.0242	0.0302	0.15	66.9	0.005	1.52	0.00005	129	12		0.0005	0.0005	0.014	0.00045	0.005	0.0072

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
ROUGHER-SULPHIDE-90/10-BOTTOM-5	0.0273	0.0218	0.15	70.4	0.005	1.38	0.00005	112	11.5		0.0005	0.0005	0.019	0.00032	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-6	0.0212	0.0252	0.15	70.1	0.005	1.73	0.00011	82.4	11.4		0.0005	0.0005	0.005	0.00037	0.005	0.0078
ROUGHER-SULPHIDE-90/10-BOTTOM-7	0.0179	0.0223	0.15	65.1	0.005	1.54	0.00005	51.9	12.4		0.0005	0.0005	0.005	0.00037	0.005	0.0159
ROUGHER-SULPHIDE-90/10-BOTTOM-8	0.0218	0.0186	0.15	67.7	0.005	1.49	0.00005	31.3	13.4		0.0005	0.0005	0.013	0.00028	0.005	0.0129
ROUGHER-SULPHIDE-90/10-BOTTOM-9	0.0284	0.0127	0.15	52.6	0.005	1.48	0.00005	18.8	11.5		0.0005	0.0005	0.005	0.00022	0.005	0.0054
ROUGHER-SULPHIDE-90/10-BOTTOM-10	0.0278	0.0123	0.15	49	0.005	1.58	0.00005	15	11		0.0005	0.0005	0.005	0.00023	0.005	0.0059
ROUGHER-SULPHIDE-90/10-BOTTOM-11	0.0365	0.0087	0.15	46.4	0.005	1.5	0.00005	11.9	11.2		0.0005	0.0005	0.005	0.00022	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-12	0.0438	0.0075	0.15	42	0.005	1.45	0.00005	9.6	10.9		0.0005	0.0005	0.005	0.00017	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-13	0.039	0.0088	0.15	33.2	0.005	1.59	0.00005	7.32	8.9		0.0005	0.0005	0.005	0.00017	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-14	0.0358	0.0138	0.15	32.6	0.005	1.64	0.00005	7.02	9.3		0.0005	0.0005	0.005	0.00018	0.005	0.0057
ROUGHER-SULPHIDE-90/10-BOTTOM-15	0.0333	0.0146	0.15	30	0.005	1.65	0.00005	6.73	8.93		0.0005	0.0005	0.005	0.0002	0.005	0.0062
ROUGHER-SULPHIDE-90/10-BOTTOM-16	0.0446	0.0063	0.15	27.9	0.005	1.6	0.00005	6.21	9.03		0.0005	0.0005	0.005	0.00021	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-17	0.037	0.0094	0.15	23.5	0.005	1.65	0.00005	5.5	8.54		0.0005	0.0005	0.016	0.00018	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-18	0.0354	0.0092	0.15	21.7	0.005	1.76	0.00005	5.05	8.19		0.0005	0.0005	0.005	0.00021	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-19	0.0478	0.0025	0.15	20.3	0.005	1.64	0.00005	5.17	7.97		0.0005	0.0005	0.005	0.0002	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-20	0.0484	0.0025	0.15	18.4	0.005	1.58	0.00005	4.38	7.56		0.0005	0.0005	0.005	0.00013	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-21	0.0472	0.0025	0.15	17.8	0.005	1.61	0.00005	4.47	7.4		0.0005	0.0005	0.005	0.00015	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-22	0.0513	0.0074	0.15	17.5	0.005	1.61	0.00005	4.57	8.32		0.0005	0.0005	0.005	0.00014	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-23	0.0368	0.0077	0.15	15.3	0.005	1.7	0.00005	4.27	7.96		0.0005	0.0005	0.005	0.00018	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-24	0.038	0.0055	0.15	13.5	0.005	1.51	0.00005	3.8	7.23		0.0005	0.0005	0.005	0.00022	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-25	0.0376	0.0025	0.15	13.4	0.005	1.61	0.00005	3.92	7.95		0.0005	0.0005	0.005	0.00022	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-26	0.00353	0.0025	0.15	1.22	0.005	1.63	0.00005	0.25	0.777		0.0005	0.0005	0.011	0.00005	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-27	0.0355	0.0094	0.15	11.8	0.005	1.69	0.00005	3.88	7.87		0.0005	0.0045	0.005	0.00016	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-28	0.0319	0.0025	0.15	11	0.005	1.67	0.00005	3.35	7.37		0.0005	0.0005	0.005	0.00012	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-29	0.0312	0.0025	0.15	10.2	0.005	1.7	0.00005	3.17	7.45		0.0005	0.0005	0.005	0.00012	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-30	0.0295	0.0059	0.15	9.74	0.005	1.65	0.00005	3.32	7.86		0.0005	0.0005	0.005	0.00011	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-31	0.0246	0.0025	0.15	8.82	0.005	1.73	0.00005	2.99	6.93		0.0005	0.0005	0.005	0.00011	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-32	0.023	0.0025	0.15	8.71	0.005	1.65	0.00005	3.05	7.13		0.0005	0.0005	0.017	0.00015	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-33	0.0236	0.0025	0.15	8.8	0.005	1.8	0.00005	3.2	7.17		0.0005	0.0005	0.005	0.00017	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-34	0.0184	0.0062	0.15	7.68	0.005	1.79	0.00005	2.59	6.78		0.0005	0.0005	0.005	0.00018	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-35	0.0149	0.008	0.15	7.46	0.005	1.77	0.00005	2.73	6.75		0.0005	0.0005	0.005	0.00016	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-36	0.0173	0.0074	0.15	7.57	0.005	1.66	0.00005	3.01	6.39		0.0005	0.0005	0.005	0.00024	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-37	0.0183	0.0063	0.15	7.57	0.005	1.69	0.00005	2.74	7.06		0.0005	0.0005	0.005	0.00023	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-38	0.012	0.0114	0.15	7.67	0.005	1.86	0.00005	2.92	7.25		0.0005	0.0005	0.005	0.00036	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-39	0.0141	0.0077	0.15	7	0.005	1.7	0.00005	2.69	6.72		0.0005	0.0005	0.005	0.00024	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-40	0.0148	0.0025	0.15	6.57	0.005	1.81	0.00005	2.65	6.13		0.0005	0.0005	0.005	0.00031	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-41	0.0112	0.009	0.15	6.83	0.005	1.86	0.00005	2.81	6.7		0.0005	0.0005	0.011	0.00024	0.005	0.0054
ROUGHER-SULPHIDE-90/10-BOTTOM-42	0.0114	0.0076	0.15	6.36	0.005	1.73	0.00005	2.52	6.23		0.0005	0.0005	0.014	0.00027	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-43	0.0101	0.0109	0.15	6.22	0.005	1.76	0.00005	3.41	6.45		0.0005	0.0005	0.005	0.00027	0.005	0.0051
ROUGHER-SULPHIDE-90/10-BOTTOM-44	0.0105	0.0081	0.15	5.86	0.005	1.75	0.00005	2.36	6.83		0.0005	0.0005	0.005	0.00025	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-45	0.0104	0.0065	0.15	5.48	0.005	1.83	0.00005	2.3	6.21		0.0005	0.0005	0.005	0.00023	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-46	0.011	0.0063	0.15	5.74	0.005	1.63	0.00005	2.23	6.32		0.0005	0.0005	0.005	0.00024	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-47	0.00855	0.0072	0.15	5.53	0.005	1.7	0.00018	2.22	6.08		0.0005	0.0005	0.011	0.00022	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-48	0.00863	0.0073	0.15	5.25	0.005	1.63	0.00005	1.93	6.28	496	0.0005	0.0005	0.011	0.0002	0.005	0.0025
ROUGHER-SULPHIDE-90/10-BOTTOM-49	0.0066	0.00697	0.15	5.69	0.0005	1.79	0.000012	2.04	6.33	496	0.00005	0.00005	0.005	0.000205	0.0005	0.008
ROUGHER-SULPHIDE-90/10-BOTTOM-50	0.00827	0.0044	0.15	5.09	0.00036	1.68	0.000023	1.99	6.07	496	0.0001	0.0001	0.01	0.000206	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-51	0.0104	0.004	0.15	4.98	0.0004	1.64	0.000064	1.78	5.87	490	0.0001	0.0001	0.005	0.000208	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-52	0.0119	0.0034	0.15	4.49	0.00043	1.53	0.000027	1.5	5.81	490	0.0001	0.0001	0.011	0.000158	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-53	0.01	0.0032	0.15	4.05	0.00038	1.65	0.000027	1.48	5.24	516	0.0001	0.0001	0.005	0.000128	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-54	0.00986	0.0029	0.15	4.73	0.0006	1.57	0.00001	1.58	6.02	479	0.0001	0.0001	0.019	0.000152	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-55	0.00766	0.0025	0.15	3.89	0.00034	1.55	0.00001	1.34	5.29	472	0.0001	0.0005	0.005	0.000141	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-56	0.00786	0.0032	0.15	4.93	0.00027	1.68	0.00001	1.51	5.77	490	0.0001	0.0001	0.013	0.000161	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-57	0.0062	0.0039	0.15	4.54	0.00033	1.73	0.00001	1.35	5.46	486	0.0001	0.0001	0.005	0.000149	0.001	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-58	0.00718	0.0027	0.15	4.41	0.00031	1.75	0.00001	1.21	5.39	500	0.0001	0.0001	0.005	0.000152	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-59	0.00699	0.0025	0.15	4.16	0.00027	1.7	0.00001	1.14	5.25	472	0.0001	0.0001	0.005	0.000144	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-60	0.00638	0.0033	0.15	4.2	0.00041	1.61	0.000029	1.04	4.94	464	0.0001	0.0001	0.005	0.00017	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-61	0.00654	0.0043	0.15	4.38	0.00035	1.72	0.000022	1.22	5.07	478	0.0001	0.0001	0.005	0.00018	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-62	0.00477	0.0051	0.15	4.01	0.00036	1.83	0.00001	1.12	5.38	469	0.0001	0.0001	0.005	0.000197	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-63	0.00473	0.0042	0.15	3.75	0.0003	1.89	0.00001	1.1	5.31	499	0.0001	0.0001	0.015	0.000216	0.001	0.003

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
ROUGHER-SULPHIDE-90/10-BOTTOM-64	0.00501	0.0035	0.15	3.86	0.00034	1.84	0.00001	1.06	4.96	474	0.0001	0.0001	0.005	0.000236	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-65	0.00423	0.0056	0.15	4.22	0.00027	1.94	0.00001	1.11	5.03	471	0.0001	0.0001	0.005	0.000229	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-66	0.00396	0.0052	0.15	3.94	0.00032	2.02	0.00001	1.04	4.58	475	0.0001	0.0001	0.018	0.000229	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-67	0.00452	0.0053	0.15	4.21	0.00032	1.9	0.00001	1.14	4.68	477	0.0001	0.0001	0.005	0.000257	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-68	0.0054	0.0041	0.15	3.38	0.00025	2	0.00001	0.89	5.51	477	0.0001	0.0001	0.015	0.000296	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-69	0.00351	0.007	0.15	3.64	0.00031	2.11	0.00001	0.99	4.52	484	0.0001	0.0001	0.013	0.000254	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-70	0.00273	0.011	0.15	4.01	0.0004	2.17	0.00001	1.08	4.55	481	0.0001	0.0001	0.014	0.000246	0.001	0.0081
ROUGHER-SULPHIDE-90/10-BOTTOM-71	0.0021	0.0149	0.15	3.91	0.00059	2.23	0.00001	1.05	4.62	482	0.0001	0.0001	0.023	0.000304	0.001	0.0114
ROUGHER-SULPHIDE-90/10-BOTTOM-72	0.00278	0.0105	0.15	3.84	0.0004	2.12	0.00001	1.08	4.67	487	0.0001	0.0001	0.023	0.000364	0.001	0.0077
ROUGHER-SULPHIDE-90/10-BOTTOM-73	0.0028	0.0099	0.15	3.7	0.00041	2.11	0.00001	1.01	4.05	478	0.0001	0.0001	0.024	0.000318	0.001	0.0065
ROUGHER-SULPHIDE-90/10-BOTTOM-74	0.00252	0.012	0.15	3.58	0.00048	2.16	0.00001	0.99	4.29	474	0.0001	0.0001	0.005	0.000306	0.001	0.0101
ROUGHER-SULPHIDE-90/10-BOTTOM-75	0.00278	0.0122	0.15	3.36	0.00025	2.2	0.000025	0.9	4.01	489	0.00025	0.00025	0.026	0.000273	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-76	0.00339	0.0085	0.15	3.19	0.00039	2.08	0.00001	0.76	3.75	464	0.0001	0.0001	0.005	0.000337	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-77	0.00368	0.0082	0.15	3.1	0.00037	2.13	0.00001	0.81	3.8	470	0.0001	0.0001	0.005	0.000374	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-78	0.00258	0.0135	0.15	3.21	0.00068	2.32	0.00001	0.89	3.88	479	0.0001	0.0001	0.005	0.000283	0.001	0.0088
ROUGHER-SULPHIDE-90/10-BOTTOM-79	0.00218	0.016	0.15	2.96	0.00068	2.34	0.00001	0.95	3.82	475	0.0001	0.0001	0.005	0.000278	0.001	0.0117
ROUGHER-SULPHIDE-90/10-BOTTOM-80	0.00264	0.0112	0.15	3.01	0.00049	2.19	0.00001	0.85	3.68	477	0.0001	0.0001	0.013	0.000327	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-81	0.00222	0.0221	0.15	3.38	0.00081	2.38	0.000025	1.07	4.03	480	0.00025	0.00025	0.005	0.00026	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-82	0.00155	0.0237	0.15	3.23	0.00113	2.38	0.000025	1.02	3.77	486	0.00025	0.00025	0.005	0.000284	0.0025	0.017
ROUGHER-SULPHIDE-90/10-BOTTOM-83	0.00142	0.0172	0.15	2.9	0.00092	2.22	0.00001	0.93	3.89	477	0.0001	0.0001	0.005	0.000268	0.001	0.0107
ROUGHER-SULPHIDE-90/10-BOTTOM-84	0.0019	0.012	0.15	2.66	0.00076	2.33	0.00001	0.89	3.73	492	0.0001	0.0001	0.15	0.000354	0.001	0.0061
ROUGHER-SULPHIDE-90/10-BOTTOM-85	0.00202	0.0127	0.15	2.98	0.00083	2.27	0.000025	0.99	3.62	480	0.000025	0.00025	0.015	0.000298	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-86	0.00182	0.0159	0.15	2.59	0.00104	2.37	0.000025	0.97	3.77	480	0.00025	0.00025	0.013	0.000252	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-87	0.00209	0.0194	0.15	2.84	0.00132	2.4	0.000025	1.08	3.9	486	0.000025	0.00025	0.005	0.000311	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-88	0.00151	0.0173	0.15	2.6	0.00119	2.37	0.000025	1.01	3.56	477	0.000025	0.00025	0.005	0.000236	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-89	0.00157	0.0166	0.15	2.49	0.00132	2.24	0.000025	1.08	3.64	477	0.000025	0.00025	0.005	0.000271	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-90	0.0018	0.0175	0.15	2.59	0.00151	2.37	0.000025	1.04	4.55	480	0.000025	0.00025	0.005	0.0003	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-91	0.00145	0.0156	0.15	2.43	0.00135	2.27	0.000025	0.97	3.72	472	0.000025	0.00025	0.005	0.00024	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-92	0.00135	0.013	0.15	2.88	0.001	2.24	0.000025	1.12	3.64	472	0.000025	0.00025	0.005	0.000259	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-93	0.00144	0.0118	0.15	2.41	0.00119	2.25	0.000025	1.03	3.68	485	0.000025	0.00025	0.005	0.000258	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-94	0.00144	0.0116	0.15	2.28	0.00104	2.36	0.000025	0.98	3.52	479	0.000025	0.00025	0.005	0.000249	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-95	0.00175	0.0105	0.15	2.28	0.00093	2.51	0.000025	1.06	3.6	482	0.000025	0.00025	0.005	0.000277	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-96	0.00204	0.0111	0.15	2.13	0.00109	2.46	0.000025	1.19	3.4	479	0.000025	0.00025	0.005	0.000295	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-97	0.0018	0.0123	0.15	2.22	0.00122	2.45	0.000025	1.09	3.5	481	0.000025	0.00025	0.005	0.000246	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-98	0.00223	0.0145	0.15	2.15	0.0015	2.5	0.000025	1.18	3.63	461	0.000025	0.00025	0.005	0.000261	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-99	0.00236	0.0169	0.15	2.21	0.00168	2.51	0.000025	1.22	3.76	468	0.000025	0.00025	0.019	0.000285	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-100	0.00152	0.0131	0.15	1.97	0.00159	2.48	0.000025	1.1	3.32	474	0.000025	0.00025	0.02	0.00022	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-101	0.00225	0.0165	0.15	2.04	0.00141	2.48	0.00001	1.19	3.4	484	0.00001	0.0001	0.026	0.000244	0.001	0.0116
ROUGHER-SULPHIDE-90/10-BOTTOM-102	0.00194	0.0095	0.15	1.84	0.00103	2.33	0.000061	1.11	3.09	474	0.000025	0.00025	0.005	0.000259	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-103	0.00189	0.0095	0.15	1.71	0.00138	2.33	0.00001	1.16	3.29	457	0.00001	0.00035	0.005	0.000239	0.001	0.0062
ROUGHER-SULPHIDE-90/10-BOTTOM-104	0.0024	0.0088	0.15	1.7	0.00096	2.36	0.000107	1.17	3.08	460	0.000025	0.00025	0.005	0.000221	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-105	0.00321	0.011	0.15	1.83	0.00144	2.51	0.000025	1.21	2.85	414	0.000025	0.00025	0.005	0.000287	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-106	0.00225	0.0084	0.15	1.43	0.00098	2.27	0.000025	1.05	2.65	388	0.000025	0.00025	0.005	0.00019	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-107	0.00271	0.007	0.15	1.4	0.00133	2.28	0.000025	1.15	3.41	390	0.000025	0.00025	0.02	0.000253	0.0025	0.0075
ROUGHER-SULPHIDE-90/10-BOTTOM-108	0.00326	0.0043	0.15	1.24	0.00073	2.06	0.00001	1.08	2.53	354	0.00001	0.0001	0.005	0.000311	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-109	0.00429	0.0044	0.15	1.17	0.00078	2.04	0.00001	1.08	2.35	242	0.00001	0.0001	0.005	0.00019	0.001	0.003
ROUGHER-SULPHIDE-90/10-BOTTOM-110	0.00374	0.00348	0.15	1.09	0.00064	1.99	0.000005	1.05	2.05	205	0.000005	0.00005	0.005	0.000165	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-111	0.00549	0.00204	0.15	0.984	0.00053	1.83	0.000005	1.08	1.73	155	0.000005	0.00005	0.016	0.000156	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-112	0.00627	0.00133	0.15	0.922	0.00038	1.68	0.000005	1.04	1.51	106	0.000005	0.00005	0.013	0.000137	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-113	0.0063	0.00144	0.15	0.912	0.00053	1.74	0.000005	1.06	1.34	73.9	0.000005	0.00005	0.005	0.000091	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-114	0.0062075	0.0014525	0.15	0.91825	0.000555	1.745	0.000005	1.0675	1.315	62.45	0.000005	0.00005	0.005	0.00008025	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-115	0.006115	0.001465	0.15	0.9245	0.00058	1.75	0.000005	1.075	1.29	51	0.000005	0.00005	0.005	0.0000695	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-116	0.0060225	0.0014775	0.15	0.93075	0.000605	1.755	0.000005	1.0825	1.265	39.55	0.000005	0.00005	0.005	0.00005875	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-117	0.00593	0.00149	0.15	0.937	0.00063	1.76	0.000005	1.09	1.24	28.1	0.000005	0.00005	0.005	0.000048	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-118	0.005505	0.00166	0.15	0.935	0.00065	1.7825	0.000005	1.0775	1.28	28.9	0.0000065	0.00005	0.005	0.0000465	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-119	0.00508	0.00183	0.15	0.933	0.00067	1.805	0.000005	1.065	1.32	29.7	0.000008	0.00005	0.005	0.000045	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-120	0.004655	0.002	0.15	0.931	0.00069	1.8275	0.000005	1.0525	1.36	30.5	0.0000095	0.00005	0.005	0.0000435	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-121	0.00423	0.00217	0.15	0.929	0.00071	1.85	0.000005	1.04	1.4	31.3	0.000011	0.00005	0.005	0.000042	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-122	0.0042375	0.0021775	0.15	0.96425	0.0007	1.81	0.000005	1.06	1.3925	29.85	0.00001175	0.00005	0.005	0.0000425	0.0005	0.0015

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
ROUGHER-SULPHIDE-90/10-BOTTOM-123	0.004245	0.002185	0.15	0.9995	0.00069	1.77	0.000005	1.08	1.385	28.4	0.0000125	0.00005	0.005	0.000043	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-124	0.0042525	0.0021925	0.15	1.03475	0.00068	1.73	0.000005	1.1	1.3775	26.95	0.00001325	0.00005	0.005	0.0000435	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-125	0.00426	0.0022	0.15	1.07	0.00067	1.69	0.000005	1.12	1.37	25.5	0.000014	0.00005	0.005	0.000044	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-126	0.003905	0.00259	0.15	1.085	0.000705	1.6975	0.000005	1.12	1.3825	27.25	0.0000145	0.00005	0.005	0.00004225	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-127	0.00355	0.00298	0.15	1.1	0.00074	1.705	0.000005	1.12	1.395	29	0.000015	0.00005	0.005	0.0000405	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-128	0.003195	0.00337	0.15	1.115	0.000775	1.7125	0.000005	1.12	1.4075	30.75	0.0000155	0.00005	0.005	0.00003875	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-129	0.00284	0.00376	0.15	1.13	0.00081	1.72	0.000005	1.12	1.42	32.5	0.000016	0.00005	0.005	0.000037	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-130	0.0029325	0.0036725	0.15	1.12	0.00084	1.7125	0.000005	1.1175	1.44	32.025	0.00001525	0.00005	0.005	0.00003075	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-131	0.003025	0.003585	0.15	1.11	0.00087	1.705	0.000005	1.115	1.46	31.55	0.0000145	0.00005	0.005	0.0000245	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-132	0.0031175	0.0034975	0.15	1.1	0.0009	1.6975	0.000005	1.1125	1.48	31.075	0.00001375	0.00005	0.005	0.00001825	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-133	0.00321	0.00341	0.15	1.09	0.00093	1.69	0.000005	1.11	1.5	30.6	0.000013	0.00005	0.005	0.000012	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-134	0.003305	0.003185	0.15	1.085	0.0008725	1.695	0.000005	1.11	1.4475	29.55	0.000013	0.00005	0.005	0.00001725	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-135	0.0034	0.00296	0.15	1.08	0.000815	1.7	0.000005	1.11	1.395	28.5	0.000013	0.00005	0.005	0.0000225	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-136	0.003495	0.002735	0.15	1.075	0.0007575	1.705	0.000005	1.11	1.3425	27.45	0.000013	0.00005	0.005	0.00002775	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-137	0.00359	0.00251	0.15	1.07	0.0007	1.71	0.000005	1.11	1.29	26.4	0.000013	0.00005	0.005	0.000033	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-138	0.00427	0.002255	0.15	1.0775	0.0006575	1.6775	0.000005	1.1425	1.2775	24.875	0.00001225	0.00005	0.005	0.00003425	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-139	0.00495	0.002	0.15	1.085	0.000615	1.645	0.000005	1.175	1.265	23.35	0.0000115	0.00005	0.005	0.0000355	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-140	0.00563	0.001745	0.15	1.0925	0.0005725	1.6125	0.000005	1.2075	1.2525	21.825	0.00001075	0.00005	0.005	0.00003675	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-141	0.00631	0.00149	0.15	1.1	0.00053	1.58	0.000005	1.24	1.24	20.3	0.00001	0.00005	0.005	0.000038	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-142	0.0071525	0.00134	0.15	1.0775	0.0005125	1.6	0.000005	1.23	1.2075	19.25	0.00000875	0.00005	0.005	0.0000415	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-143	0.007995	0.00119	0.15	1.055	0.000495	1.62	0.000005	1.22	1.175	18.2	0.0000075	0.00005	0.005	0.000045	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-144	0.0088375	0.00104	0.15	1.0325	0.0004775	1.64	0.000005	1.21	1.1425	17.15	0.00000625	0.00005	0.005	0.0000485	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-145	0.00505	0.0021	0.15	1.08	0.00068	1.85	0.000005	1.22	1.34	23.2	0.000005	0.00005	0.005	0.000036	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-146	0.00505	0.0021	0.15	1.08	0.00068	1.85	0.000005	1.22	1.34	23.2	0.000005	0.00005	0.005	0.000036	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-147	0.00505	0.0021	0.15	1.08	0.00068	1.85	0.000005	1.22	1.34	23.2	0.000005	0.00005	0.005	0.000036	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-148	0.00505	0.0021	0.15	1.08	0.00068	1.85	0.000005	1.22	1.34	23.2	0.000005	0.00005	0.005	0.000036	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-149	0.0103	0.00126	0.15	1.12	0.00058	1.79	0.000005	1.28	1.35	18.6	0.000005	0.00005	0.005	0.000051	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-150	0.009735	0.00157	0.15	2.22	0.001685	1.471	0.00001625	1.405	1.26075	18.6	0.00012875	0.0001625	0.005	0.00010575	0.001625	0.00175
ROUGHER-SULPHIDE-90/10-BOTTOM-151	0.00917	0.00188	0.15	3.32	0.00279	1.152	0.0000275	1.53	1.1715	18.6	0.0002525	0.000275	0.005	0.0001605	0.00275	0.002
ROUGHER-SULPHIDE-90/10-BOTTOM-152	0.008605	0.00219	0.15	4.42	0.003895	0.833	0.00003875	1.655	1.08225	18.6	0.00037625	0.0003875	0.005	0.00021525	0.003875	0.00225
ROUGHER-SULPHIDE-90/10-BOTTOM-153	0.0105	0.00108	0.15	1.08	0.00043	1.74	0.000005	1.32	1.18	17.7	0.000005	0.00005	0.005	0.000046	0.0005	0.0015
ROUGHER-SULPHIDE-90/10-BOTTOM-154	0.008615	0.001435	0.15	1.42	0.0015725	1.41925	0.00001625	1.1375	1.04825	17.7	0.00012875	0.0001625	0.005	0.0000695	0.001625	0.00175
ROUGHER-SULPHIDE-90/10-BOTTOM-155	0.00673	0.00179	0.15	1.76	0.002715	1.0985	0.0000275	0.955	0.9165	17.7	0.0002525	0.000275	0.005	0.000093	0.00275	0.002
ROUGHER-SULPHIDE-90/10-BOTTOM-156	0.004845	0.002145	0.15	2.1	0.0038575	0.77775	0.00003875	0.7725	0.78475	17.7	0.00037625	0.0003875	0.005	0.0001165	0.003875	0.00225
ROUGHER-SULPHIDE-90/10-BOTTOM-157	0.00968	0.00089	0.15	1.01	0.00046	1.66	0.000005	1.2	1.11	16.1	0.000005	0.00005	0.005	0.000052	0.0005	0.0015
	0.008074	0.001468	0.15	1.474	0.001807	1.3391	0.0000185	1.077	1.0079	21.99	0.0001535	0.000185	0.005	0.0000754	0.00185	0.0018
M/K_Rougher Top																
KSM MITCHELL/KERR TAILINGS SAC-TOP-1	0.0437	0.0025	0.41	28.2	0.005	1.13	0.00005	11.1	3.04		0.0005	0.0005	0.005	0.00307	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-2	0.0156	0.0025	0.15	9.26	0.005	0.603	0.00005	3.53	1.39		0.0005	0.0005	0.018	0.0005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-3	0.0112	0.0025	0.15	7.15	0.005	0.575	0.00005	2.65	1.11		0.0005	0.0005	0.005	0.00035	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-4	0.00804	0.0025	0.15	5.52	0.005	0.514	0.00005	1.78	0.993		0.0005	0.0005	0.005	0.00027	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-5	0.00593	0.0025	0.15	4.18	0.005	0.493	0.00005	1.35	0.81		0.0005	0.0005	0.005	0.00019	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-6	0.00475	0.0025	0.15	3.63	0.005	0.439	0.00005	1.11	0.698		0.0005	0.0005	0.005	0.00017	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-7	0.00364	0.0025	0.15	2.9	0.005	0.403	0.00005	0.77	0.596		0.0005	0.0017	0.005	0.00011	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-8	0.00296	0.0025	0.15	2.44	0.005	0.457	0.00005	0.59	0.653		0.0005	0.0005	0.005	0.00014	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-9	0.00208	0.0025	0.15	1.93	0.005	0.415	0.00005	0.25	0.501		0.0005	0.0005	0.005	0.00005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-10	0.00169	0.0025	0.15	1.63	0.005	0.387	0.00005	0.25	0.41		0.0005	0.0005	0.005	0.00005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-11	0.00146	0.0025	0.15	1.51	0.005	0.385	0.00005	0.25	0.42		0.0005	0.0005	0.005	0.00005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-12	0.00115	0.0025	0.15	1.3	0.005	0.374	0.00005	0.25	0.359		0.0005	0.0005	0.005	0.00005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-13	0.00094	0.0025	0.15	1.07	0.005	0.427	0.00005	0.25	0.362		0.0005	0.0005	0.005	0.00005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-14	0.00088	0.0025	0.15	1.01	0.005	0.412	0.00005	0.25	0.366		0.0005	0.0005	0.005	0.00005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-15	0.0008	0.0025	0.15	0.9	0.005	0.456	0.00005	0.25	0.345		0.0005	0.0005	0.005	0.00005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-16	0.0008	0.0025	0.15	0.9	0.005	0.42	0.00005	0.25	0.346		0.0005	0.0005	0.005	0.00005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-17	0.00098	0.0025	0.15	1	0.005	0.537	0.00005	0.25	0.42		0.0005	0.0005	0.005	0.00005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-18	0.00076	0.0025	0.15	0.75	0.005	0.435	0.00005	0.25	0.328		0.0005	0.0005	0.005	0.00005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-TOP-19	0.000723	0.00025	0.15	0.734	0.00044	0.455	0.000005	0.082	0.317	16.1	0.00005	0.00005	0.005	0.000057	0.0005	0.0005
KSM MITCHELL/KERR TAILINGS SAC-TOP-20	0.000682	0.00025	0.15	0.621	0.0004	0.445	0.000005	0.067	0.291	14.2	0.00005	0.00005	0.005	0.000051	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-21	0.000702	0.00025	0.15	0.61	0.00038	0.445	0.000005	0.062	0.285	12.1	0.00005	0.00005	0.005	0.000046	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-22	0.000664	0.00025	0.15	0.569	0.00037	0.401	0.000005	0.058	0.274	10	0.00005	0.00005	0.005	0.00004	0.0005	0.0015

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
KSM MITCHELL/KERR TAILINGS SAC-TOP-23	0.000615	0.00025	0.15	0.494	0.00036	0.409	0.000005	0.025	0.247	8.76	0.00005	0.00005	0.005	0.000026	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-24	0.000657	0.00025	0.15	0.485	0.00037	0.38	0.000005	0.025	0.248	7.15	0.00005	0.00005	0.005	0.00003	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-25	0.000676	0.00025	0.15	0.41	0.00037	0.35	0.000005	0.025	0.244	6.48	0.00005	0.00005	0.005	0.000026	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-26	0.000603	0.00025	0.15	0.457	0.00037	0.377	0.000005	0.025	0.234	5.27	0.00005	0.00005	0.005	0.000023	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-27	0.00056	0.00025	0.15	0.397	0.00032	0.353	0.000005	0.025	0.211	4.32	0.00005	0.00005	0.005	0.00002	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-28	0.000517	0.00025	0.15	0.364	0.00035	0.359	0.000005	0.025	0.205	4.09	0.00005	0.00005	0.005	0.000017	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-29	0.000533	0.00025	0.15	0.354	0.00034	0.344	0.000005	0.025	0.206	3.03	0.00005	0.00005	0.005	0.000015	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-30	0.000503	0.00025	0.15	0.338	0.00031	0.345	0.000005	0.025	0.202	2.68	0.00005	0.00005	0.005	0.000014	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-31	0.000534	0.00025	0.15	0.361	0.00032	0.339	0.000005	0.025	0.203	2.93	0.00005	0.00005	0.005	0.000012	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-32	0.000538	0.00025	0.15	0.409	0.00032	0.31	0.000005	0.057	0.206	1.92	0.00005	0.00005	0.005	0.000012	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-33	0.000545	0.00025	0.15	0.307	0.00028	0.332	0.000005	0.025	0.207	1.87	0.00005	0.00005	0.005	0.000011	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-34	0.000516	0.00025	0.15	0.345	0.00028	0.313	0.000005	0.025	0.191	1.57	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-35	0.000515	0.00025	0.15	0.31	0.00027	0.31	0.000005	0.025	0.198	3.23	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-36	0.000472	0.00025	0.15	0.303	0.00031	0.317	0.000005	0.025	0.177	1.35	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-37	0.000453	0.00025	0.15	0.312	0.00025	0.292	0.000005	0.097	0.168	1.27	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-38	0.000474	0.00025	0.15	0.3	0.00026	0.288	0.000005	0.025	0.178	1.04	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-39	0.00044	0.00025	0.15	0.255	0.00021	0.268	0.000005	0.025	0.17	1.02	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-40	0.000474	0.00025	0.15	0.29	0.00023	0.273	0.000005	0.025	0.175	1.08	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-41	0.000464	0.00025	0.15	0.2795	0.00022	0.272	0.000005	0.025	0.173	0.935	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-42	0.000454	0.00025	0.15	0.269	0.00021	0.271	0.000005	0.025	0.171	0.79	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-43	0.0005515	0.00025	0.15	0.2715	0.000205	0.264	0.000005	0.025	0.172	0.745	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-44	0.000649	0.00025	0.15	0.274	0.0002	0.257	0.000005	0.025	0.173	0.7	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-45	0.0005175	0.00025	0.15	0.2495	0.00018	0.2345	0.000005	0.025	0.158	0.655	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-46	0.000386	0.00025	0.15	0.225	0.00016	0.212	0.000005	0.025	0.143	0.61	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-47	0.0003955	0.00025	0.15	0.227	0.000165	0.2235	0.000005	0.025	0.145	0.705	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-TOP-Final Leach	0.000405	0.00025	0.15	0.229	0.00017	0.235	0.000005	0.025	0.147	0.8	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
	0.0004999	0.00025	0.15	0.2687	0.000182	0.2597	0.000005	0.025	0.1694	6.396	0.00005	0.00005	0.005	0.000005	0.0005	0.0015
M/K_Rougher Bottom																
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-1	0.0653	0.0025	0.46	36.5	0.012	1.37	0.00005	15.5	4.46		0.0005	0.0005	0.005	0.00977	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-2	0.0995	0.0025	0.52	31.8	0.005	1.68	0.00005	17.6	5.87		0.0005	0.0005	0.018	0.00289	0.005	0.0054
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-3	0.1	0.0025	0.49	29.5	0.005	2.05	0.00005	17.2	6.33		0.0005	0.0005	0.005	0.00172	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-4	0.0981	0.0025	0.5	26.6	0.005	2.09	0.00005	15.4	6.82		0.0005	0.0005	0.005	0.00106	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-5	0.0949	0.0025	0.53	24	0.005	2.01	0.00005	15	6.4		0.0005	0.0005	0.005	0.00059	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-6	0.0965	0.0025	0.49	25.9	0.005	1.99	0.00005	15.9	6.69		0.0005	0.0005	0.005	0.00041	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-7	0.081	0.0025	0.41	26.6	0.005	1.88	0.00005	14.4	7.33		0.0005	0.0005	0.005	0.00013	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-8	0.0685	0.0025	0.15	25.3	0.005	1.74	0.00005	11.4	7.74		0.0005	0.0005	0.005	0.0001	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-9	0.0435	0.0025	0.15	23.8	0.005	1.58	0.00005	8.45	7.58		0.0005	0.0005	0.005	0.00019	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-10	0.0311	0.0025	0.15	24.4	0.005	1.59	0.00005	6.88	7.35		0.0005	0.0005	0.005	0.00024	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-11	0.0215	0.0025	0.15	23.1	0.005	1.45	0.00005	5.37	8.11		0.0005	0.0005	0.01	0.00011	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-12	0.0135	0.0025	0.15	21	0.005	1.28	0.00005	4.11	7.55		0.0005	0.0005	0.014	0.00005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-13	0.0114	0.0025	0.15	18.4	0.005	1.12	0.00005	3.97	7.26		0.0005	0.0005	0.005	0.00005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-14	0.0116	0.0025	0.15	18.7	0.005	0.949	0.00005	3.03	8.19		0.0005	0.0005	0.005	0.00005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-15	0.011	0.0025	0.15	16.8	0.005	0.971	0.00005	2.76	7.75		0.0005	0.0005	0.005	0.00005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-16	0.0131	0.0025	0.15	18.6	0.005	0.899	0.00005	2.72	8.36		0.0005	0.0005	0.005	0.00005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-17	0.0127	0.0025	0.15	15.7	0.005	0.88	0.00012	2.56	7.8		0.0005	0.0005	0.012	0.00005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-18	0.0138	0.0025	0.15	13.9	0.005	0.873	0.00005	2.07	7.81		0.0005	0.0005	0.011	0.00005	0.005	0.0025
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-19	0.0153	0.00025	0.15	14.7	0.00033	0.951	0.000005	2.35	8.27	512	0.00005	0.00005	0.005	0.00004	0.0005	0.0015
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-20	0.0154	0.0005	0.15	13.2	0.00026	0.938	0.00001	2.13	7.97	507	0.0001	0.0001	0.005	0.000036	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-21	0.016	0.0005	0.15	12.5	0.00025	0.962	0.00001	2.02	8	504	0.0001	0.0001	0.005	0.000034	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-22	0.017	0.0005	0.15	12.8	0.00032	0.917	0.00001	2.07	8.44	518	0.0001	0.0001	0.011	0.000046	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-23	0.0173	0.0005	0.15	12.6	0.00035	0.915	0.00001	2.04	9.23	524	0.0001	0.0001	0.005	0.000056	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-24	0.0168	0.0005	0.15	10.6	0.00027	0.88	0.00001	1.83	8.75	497	0.0001	0.0001	0.019	0.000059	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-25	0.0161	0.0005	0.15	9.38	0.00021	0.858	0.00001	1.67	8.69	492	0.0001	0.0001	0.005	0.000042	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-26	0.0155	0.0005	0.15	9.96	0.00025	0.877	0.00001	1.81	8.4	506	0.0001	0.0001	0.013	0.000047	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-27	0.0152	0.0005	0.15	8.82	0.00022	0.872	0.00001	1.6	8.18	504	0.0001	0.0001	0.005	0.000053	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-28	0.0145	0.0005	0.15	8.42	0.00024	0.895	0.00001	1.55	7.74	508	0.0001	0.0001	0.005	0.000055	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-29	0.0192	0.0005	0.15	8.11	0.00033	0.829	0.00001	1.5	8.11	476	0.0001	0.0001	0.005	0.00015	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-30	0.0194	0.0005	0.15	8.04	0.00035	0.798	0.00001	1.46	7.98	492	0.0001	0.0001	0.005	0.000248	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-31	0.0164	0.0011	0.15	7.02	0.00037	0.82	0.00001	1.35	6.89	496	0.0001	0.0001	0.005	0.000292	0.001	0.003

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-32	0.016	0.0005	0.15	7.18	0.00045	0.762	0.00001	1.36	7.27	484	0.0001	0.0001	0.005	0.00032	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-33	0.0175	0.0005	0.15	6.61	0.00043	0.853	0.00001	1.29	8.29	527	0.0001	0.0001	0.015	0.000406	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-34	0.0188	0.0005	0.15	7.42	0.0005	0.819	0.00001	1.41	8.7	484	0.0001	0.0001	0.005	0.000472	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-35	0.0191	0.0005	0.15	6.69	0.00053	0.85	0.00001	1.23	8.7	493	0.0001	0.0001	0.005	0.000555	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-36	0.016	0.0005	0.15	6.7	0.00054	0.868	0.00001	1.26	7.73	484	0.0001	0.0001	0.018	0.000555	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-37	0.0162	0.0005	0.15	6.8	0.0005	0.853	0.00001	1.34	7.87	504	0.0001	0.0001	0.005	0.000573	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-38	0.0128	0.0005	0.15	6.35	0.00048	0.827	0.00001	1.15	7.73	503	0.0001	0.0001	0.016	0.000528	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-39	0.0096	0.0005	0.15	5.57	0.0005	0.798	0.00001	0.99	7.47	497	0.0001	0.0001	0.013	0.000403	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-40	0.0105	0.0005	0.15	6.25	0.00053	0.855	0.00001	1.1	7.54	497	0.0001	0.0001	0.014	0.000524	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-41	0.01185	0.0005	0.15	5.995	0.000555	0.8725	0.00001	1.045	7.52	498.5	0.0001	0.0001	0.018	0.0005295	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-42	0.0132	0.0005	0.15	5.74	0.00058	0.89	0.00001	0.99	7.5	500	0.0001	0.0001	0.022	0.000535	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-43	0.0123	0.0005	0.15	5.59	0.00058	0.866	0.00001	0.985	7.43	494	0.0001	0.0001	0.0135	0.000534	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-44	0.0114	0.0005	0.15	5.44	0.00058	0.842	0.00001	0.98	7.36	488	0.0001	0.0001	0.005	0.000533	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-45	0.009535	0.0005	0.15	5.185	0.000525	0.832	0.00001	0.875	7.06	497.5	0.0001	0.0001	0.005	0.0004645	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-46	0.00767	0.0005	0.15	4.93	0.00047	0.822	0.00001	0.77	6.76	507	0.0001	0.0001	0.005	0.000396	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-47	0.0085	0.0005	0.15	4.835	0.000545	0.8225	0.00001	0.77	6.84	503.5	0.0001	0.0001	0.005	0.0004065	0.001	0.003
KSM MITCHELL/KERR TAILINGS SAC-BOTTOM-Final Leach	0.00933	0.0005	0.15	4.74	0.00062	0.823	0.00001	0.77	6.92	500	0.0001	0.0001	0.005	0.000417	0.001	0.003
	0.009881	0.0005	0.15	5.59	0.00054	0.8605	0.00001	0.975	7.374	504.6	0.0001	0.0001	0.0101	0.0004668	0.001	0.003
M/S_Rougher Top																
MITCHELL/SULPHURETS TAILING SAC - TOP-1	0.0583	0.0025	0.15	15	0.005	2.66	0.00005	4.71	0.643		0.0005	0.0005	0.005	0.00005	0.005	0.0025
MITCHELL/SULPHURETS TAILING SAC - TOP-2	0.0466	0.0025	0.15	12.2	0.005	2.12	0.00005	4.03	0.516		0.0005	0.0005	0.005	0.00005	0.005	0.0025
MITCHELL/SULPHURETS TAILING SAC - TOP-3	0.0383	0.0025	0.15	10.6	0.005	1.6	0.00005	3.36	0.442		0.0005	0.0005	0.005	0.00011	0.005	0.0025
MITCHELL/SULPHURETS TAILING SAC - TOP-4	0.0317	0.0025	0.15	8.9	0.005	1.52	0.00005	2.97	0.423		0.0005	0.0005	0.005	0.00026	0.005	0.0025
MITCHELL/SULPHURETS TAILING SAC - TOP-5	0.0193	0.0025	0.15	5.67	0.005	1.36	0.00005	1.76	0.309		0.0005	0.0005	0.005	0.00022	0.005	0.0025
MITCHELL/SULPHURETS TAILING SAC - TOP-6	0.016	0.00025	0.15	5.02	0.00265	1.44	0.000005	1.43	0.289	16.4	0.00005	0.00005	0.005	0.000239	0.0019	0.0005
MITCHELL/SULPHURETS TAILING SAC - TOP-7	0.0122	0.00025	0.15	4.01	0.00216	1.32	0.000005	1.11	0.251	12.5	0.00005	0.00005	0.005	0.000228	0.0018	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-8	0.00995	0.00025	0.15	3.52	0.0018	1.39	0.000005	0.894	0.246	9.82	0.00005	0.00005	0.005	0.00024	0.0014	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-9	0.00788	0.00025	0.15	2.89	0.00134	1.2	0.000005	0.692	0.21	7.68	0.00005	0.00005	0.005	0.000189	0.0012	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-10	0.00613	0.00025	0.15	2.39	0.00116	1.21	0.000005	0.458	0.207	6.46	0.00005	0.00005	0.005	0.000134	0.0012	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-11	0.00558	0.00025	0.15	2.26	0.00107	1.13	0.000005	0.454	0.217	4.89	0.00005	0.00005	0.005	0.000155	0.0013	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-12	0.00465	0.00025	0.15	1.87	0.00089	1.05	0.000005	0.343	0.211	4.06	0.00005	0.00005	0.005	0.000131	0.0011	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-13	0.00381	0.00025	0.15	1.87	0.00076	1.1	0.000005	0.312	0.206	3.52	0.00005	0.00005	0.005	0.000126	0.0011	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-14	0.00326	0.00025	0.15	1.65	0.0007	1.04	0.000005	0.259	0.195	2.92	0.00005	0.00005	0.005	0.000119	0.001	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-15	0.00277	0.00025	0.15	1.47	0.00066	0.985	0.000005	0.209	0.185	2.76	0.00005	0.00005	0.005	0.000096	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-16	0.00249	0.00025	0.15	1.27	0.00057	0.966	0.000005	0.166	0.188	2.1	0.00005	0.00005	0.005	0.000084	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-17	0.00231	0.00025	0.15	1.25	0.0005	0.962	0.000005	0.154	0.187	1.87	0.00005	0.00005	0.005	0.000085	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-18	0.00199	0.00025	0.15	1.04	0.00046	0.928	0.000005	0.127	0.186	2.09	0.00005	0.00005	0.005	0.000086	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-19	0.00197	0.00025	0.15	1.06	0.00042	0.86	0.000005	0.117	0.201	1.43	0.00005	0.00005	0.005	0.000081	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-20	0.00174	0.00025	0.15	0.983	0.00039	0.908	0.000005	0.106	0.195	1.32	0.00005	0.00005	0.005	0.000079	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-21	0.00166	0.00025	0.15	0.988	0.00037	0.873	0.000005	0.097	0.198	1.25	0.00005	0.00005	0.005	0.000079	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-22	0.00157	0.00025	0.15	0.852	0.00038	0.839	0.000005	0.081	0.203	1.42	0.00005	0.00005	0.005	0.00008	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-23	0.00169	0.00025	0.15	0.859	0.00036	0.868	0.000005	0.071	0.219	1.12	0.00005	0.00005	0.005	0.000083	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-24	0.00147	0.00025	0.15	0.869	0.0004	0.808	0.000005	0.08	0.189	1.32	0.00005	0.00005	0.005	0.000066	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-25	0.00134	0.00025	0.15	0.727	0.00026	0.792	0.000005	0.061	0.195	0.89	0.00005	0.00005	0.005	0.000064	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-26	0.00127	0.00025	0.15	0.741	0.00026	0.791	0.000005	0.07	0.186	1.04	0.00005	0.00005	0.005	0.000055	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-27	0.00122	0.00025	0.15	0.789	0.00026	0.751	0.000005	0.066	0.18	0.99	0.00005	0.00005	0.005	0.000058	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-28	0.001185	0.00025	0.15	0.738	0.00025	0.731	0.000005	0.0455	0.1755	0.845	0.00005	0.00005	0.005	0.0000545	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-29	0.00115	0.00025	0.15	0.687	0.00024	0.711	0.000005	0.025	0.171	0.7	0.00005	0.00005	0.005	0.000051	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-30	0.001155	0.00025	0.15	0.672	0.000225	0.702	0.000005	0.0435	0.1745	0.75	0.00005	0.00005	0.005	0.000049	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-31	0.00116	0.00025	0.15	0.657	0.00021	0.693	0.000005	0.062	0.178	0.8	0.00005	0.00005	0.005	0.000047	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-32	0.001065	0.00025	0.15	0.606	0.0002	0.6505	0.000005	0.0435	0.166	0.93	0.00005	0.00005	0.005	0.0000435	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-33	0.00097	0.00025	0.15	0.555	0.00019	0.608	0.000005	0.025	0.154	1.06	0.00005	0.00005	0.005	0.00004	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-34	0.00101	0.00025	0.15	0.5585	0.00019	0.6005	0.000005	0.025	0.157	0.805	0.00005	0.00005	0.005	0.0000415	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-35	0.00105	0.00025	0.15	0.562	0.00019	0.593	0.000005	0.025	0.16	0.55	0.00005	0.00005	0.005	0.000043	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-36	0.00109	0.00025	0.15	0.5505	0.00018	0.592	0.000005	0.025	0.159	0.535	0.00005	0.00005	0.005	0.000041	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-37	0.00113	0.00025	0.15	0.539	0.00017	0.591	0.000005	0.025	0.158	0.52	0.00005	0.00005	0.005	0.000039	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-38	0.00113	0.00025	0.15	0.548	0.000175	0.5905	0.000005	0.039	0.157	0.645	0.00005	0.00005	0.005	0.00004	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-39	0.00113	0.00025	0.15	0.557	0.00018	0.59	0.000005	0.053	0.156	0.77	0.00005	0.00005	0.005	0.000041	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-40	0.001135	0.00025	0.15	0.522	0.00017	0.586	0.000005	0.039	0.154	0.77	0.00005	0.00005	0.005	0.000041	0.0005	0.0015

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
MITCHELL/SULPHURETS TAILING SAC - TOP-41	0.00114	0.00025	0.15	0.487	0.00016	0.582	0.000005	0.025	0.152	0.77	0.00005	0.00005	0.005	0.000041	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-42	0.00116	0.00025	0.15	0.468	0.000155	0.571	0.000005	0.025	0.152	0.79	0.00005	0.00005	0.005	0.00004	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-43	0.00118	0.00025	0.15	0.449	0.00015	0.56	0.000005	0.025	0.152	0.81	0.00005	0.00005	0.005	0.000039	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-44	0.001125	0.000585	0.15	0.4545	0.000145	0.54	0.000005	0.025	0.1515	0.67	0.0000275	0.00005	0.005	0.0000385	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-45	0.00107	0.00092	0.15	0.46	0.00014	0.52	0.000005	0.025	0.151	0.53	0.000005	0.00005	0.005	0.000038	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-46	0.001095	0.000585	0.15	0.4475	0.00014	0.5135	0.000005	0.025	0.161	0.39	0.000005	0.00005	0.005	0.0000385	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-47	0.00112	0.00025	0.15	0.435	0.00014	0.507	0.000005	0.025	0.171	0.25	0.000005	0.00005	0.005	0.000039	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-48	0.001145	0.00025	0.15	0.4495	0.00015	0.5055	0.000005	0.025	0.1605	0.62	0.000005	0.00005	0.005	0.0000385	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-49	0.00117	0.00025	0.15	0.464	0.00016	0.504	0.000005	0.025	0.15	0.99	0.000005	0.00005	0.005	0.000038	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-50	0.001155	0.00025	0.15	0.445	0.00015	0.5	0.000005	0.025	0.145	0.915	0.000005	0.00005	0.005	0.0000375	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-51	0.00114	0.00025	0.15	0.426	0.00014	0.496	0.000005	0.025	0.14	0.84	0.000005	0.00005	0.005	0.000037	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-52	0.001185	0.00025	0.15	0.4235	0.000135	0.4995	0.000005	0.0385	0.139	0.545	0.000005	0.00005	0.005	0.000038	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-53	0.00123	0.00025	0.15	0.421	0.00013	0.503	0.000005	0.052	0.138	0.25	0.000005	0.00005	0.005	0.000039	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-54	0.00118	0.00025	0.15	0.407	0.000115	0.4795	0.000005	0.0385	0.129	0.25	0.000005	0.00005	0.005	0.0000355	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-55	0.00113	0.00025	0.15	0.393	0.0001	0.456	0.000005	0.025	0.12	0.25	0.000005	0.00005	0.005	0.000032	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-56	0.00115	0.00025	0.15	0.3985	0.00011	0.4685	0.000005	0.025	0.123	0.25	0.000005	0.00005	0.005	0.0000325	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-57	0.00117	0.00025	0.15	0.404	0.00012	0.481	0.000005	0.025	0.126	0.25	0.000005	0.00005	0.005	0.000033	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-58	0.00115	0.00025	0.15	0.391	0.00012	0.4585	0.000005	0.025	0.122	0.44	0.000005	0.00005	0.005	0.000033	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-59	0.00113	0.00025	0.15	0.378	0.00012	0.436	0.000005	0.025	0.118	0.63	0.000005	0.00005	0.005	0.000033	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-60	0.001145	0.00025	0.15	0.381	0.00012	0.4365	0.0000435	0.025	0.119	0.69	0.000005	0.00005	0.005	0.000032	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-61	0.00116	0.00025	0.15	0.384	0.00012	0.437	0.000082	0.025	0.12	0.75	0.000005	0.00005	0.005	0.000031	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-62	0.00115	0.00025	0.15	0.375	0.000115	0.435	0.0000435	0.025	0.117	0.655	0.000005	0.00005	0.005	0.0000295	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-63	0.00114	0.00025	0.15	0.366	0.00011	0.433	0.000005	0.025	0.114	0.56	0.000005	0.00005	0.005	0.000028	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-64	0.001155	0.00025	0.15	0.3655	0.00011	0.419	0.000005	0.025	0.1255	0.405	0.000005	0.00005	0.005	0.000028	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-65	0.00117	0.00025	0.15	0.365	0.00011	0.405	0.000005	0.025	0.137	0.25	0.000005	0.00005	0.005	0.000028	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-66	0.001095	0.00025	0.15	0.352	0.00008	0.398	0.000005	0.025	0.1255	0.405	0.000005	0.00005	0.005	0.000027	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-67	0.00102	0.00025	0.15	0.339	0.00005	0.391	0.000005	0.025	0.114	0.56	0.000005	0.00005	0.005	0.000026	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-68	0.000976	0.00025	0.15	0.342	0.00005	0.3835	0.000005	0.025	0.1105	0.405	0.000005	0.00005	0.005	0.0000245	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-69	0.000932	0.00025	0.15	0.345	0.00005	0.376	0.000005	0.025	0.107	0.25	0.000005	0.00005	0.005	0.000023	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-70	0.00096	0.00025	0.15	0.323	0.00005	0.369	0.000005	0.025	0.104	0.25	0.000005	0.00005	0.005	0.000022	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-71	0.00092475	0.00025	0.15	0.31875	0.00005	0.365	0.000005	0.025	0.101325	0.25	0.000005	0.00005	0.005	0.00002125	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-72	0.0008895	0.00025	0.15	0.3145	0.00005	0.361	0.000005	0.025	0.09865	0.25	0.000005	0.00005	0.005	0.0000205	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-73	0.00085425	0.00025	0.15	0.31025	0.00005	0.357	0.000005	0.025	0.095975	0.25	0.000005	0.00005	0.005	0.00001975	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-74	0.000819	0.00025	0.15	0.306	0.00005	0.353	0.000005	0.025	0.0933	0.25	0.000005	0.00005	0.005	0.000019	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-75	0.0008585	0.00025	0.15	0.30025	0.00005	0.35775	0.000005	0.025	0.095225	0.25	0.000005	0.00005	0.005	0.00002	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-76	0.000898	0.00025	0.15	0.2945	0.00005	0.3625	0.000005	0.025	0.09715	0.25	0.000005	0.00005	0.005	0.000021	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-77	0.0009375	0.00025	0.15	0.28875	0.00005	0.36725	0.000005	0.025	0.099075	0.25	0.000005	0.00005	0.005	0.000022	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-78	0.000977	0.00025	0.15	0.283	0.00005	0.372	0.000005	0.025	0.101	0.25	0.000005	0.00005	0.005	0.000023	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-79	0.0009515	0.00025	0.15	0.2835	0.00005	0.3615	0.000005	0.025	0.099425	0.25	0.000005	0.00005	0.005	0.0000225	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-80	0.000926	0.00025	0.15	0.284	0.00005	0.351	0.000005	0.025	0.09785	0.25	0.000005	0.00005	0.005	0.000022	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-81	0.0009005	0.00025	0.15	0.2845	0.00005	0.3405	0.000005	0.025	0.096275	0.25	0.000005	0.00005	0.005	0.0000215	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-82	0.000875	0.00025	0.15	0.285	0.00005	0.33	0.000005	0.025	0.0947	0.25	0.000005	0.00005	0.005	0.000021	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-83	0.00087625	0.00025	0.15	0.28125	0.00005	0.325	0.000005	0.025	0.093225	0.25	0.000005	0.00005	0.005	0.00002075	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-84	0.0008775	0.00025	0.15	0.2775	0.00005	0.32	0.000005	0.025	0.09175	0.25	0.000005	0.00005	0.005	0.0000205	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-85	0.00087875	0.00025	0.15	0.27375	0.00005	0.315	0.000005	0.025	0.090275	0.25	0.000005	0.00005	0.005	0.00002025	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-86	0.00088	0.00025	0.15	0.27	0.00005	0.31	0.000005	0.025	0.0888	0.25	0.000005	0.00005	0.005	0.00002	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-87	0.00090475	0.00025	0.15	0.2705	0.00005	0.31275	0.000005	0.025	0.090025	0.25	0.000005	0.00005	0.005	0.00002025	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-88	0.0009295	0.00025	0.15	0.271	0.00005	0.3155	0.000005	0.025	0.09125	0.25	0.000005	0.00005	0.005	0.0000205	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-89	0.00095425	0.00025	0.15	0.2715	0.00005	0.31825	0.000005	0.025	0.092475	0.25	0.000005	0.00005	0.005	0.00002075	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-90	0.000979	0.00025	0.15	0.272	0.00005	0.321	0.000005	0.025	0.0937	0.25	0.000005	0.00005	0.005	0.000021	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-91	0.00100425	0.00025	0.15	0.2695	0.00005	0.3265	0.000005	0.025	0.093525	0.25	0.000005	0.00005	0.005	0.0000205	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-92	0.0010295	0.00025	0.15	0.267	0.00005	0.332	0.000005	0.025	0.09335	0.25	0.000005	0.00005	0.005	0.00002	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-93	0.00105475	0.00025	0.15	0.2645	0.00005	0.3375	0.000005	0.025	0.093175	0.25	0.000005	0.00005	0.005	0.0000195	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-94	0.00108	0.00025	0.15	0.262	0.00005	0.343	0.000005	0.025	0.093	0.25	0.000005	0.00005	0.005	0.000019	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-95	0.0011175	0.00025	0.15	0.266	0.00005	0.33575	0.000005	0.025	0.09285	0.25	0.000005	0.00005	0.005	0.000019	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-96	0.001155	0.00025	0.15	0.27	0.00005	0.3285	0.000005	0.025	0.0927	0.25	0.000005	0.00005	0.005	0.000019	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-97	0.0011925	0.00025	0.15	0.274	0.00005	0.32125	0.000005	0.025	0.09255	0.25	0.000005	0.00005	0.005	0.000019	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-98	0.00123	0.00025	0.15	0.278	0.00005	0.314	0.000005	0.025	0.0924	0.25	0.000005	0.00005	0.005	0.000019	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-99	0.0013475	0.00025	0.15	0.26725	0.00005	0.31525	0.000005	0.025	0.089475	0.25	0.000005	0.00005	0.005	0.000018	0.0005	0.0015

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
MITCHELL/SULPHURETS TAILING SAC - TOP-100	0.001465	0.00025	0.15	0.2565	0.00005	0.3165	0.000005	0.025	0.08655	0.25	0.000005	0.00005	0.005	0.000017	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-101	0.0015825	0.00025	0.15	0.24575	0.00005	0.31775	0.000005	0.025	0.083625	0.25	0.000005	0.00005	0.005	0.000016	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-102	0.00133	0.00025	0.15	0.264	0.00005	0.323	0.000005	0.025	0.088	0.25	0.000005	0.00005	0.005	0.00002	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-103	0.00133	0.00025	0.15	0.264	0.00005	0.323	0.000005	0.025	0.088	0.25	0.000005	0.00005	0.005	0.00002	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-104	0.00133	0.00025	0.15	0.264	0.00005	0.323	0.000005	0.025	0.088	0.25	0.000005	0.00005	0.005	0.00002	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-105	0.00133	0.00025	0.15	0.264	0.00005	0.323	0.000005	0.025	0.088	0.25	0.000005	0.00005	0.005	0.00002	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-106	0.0016	0.00025	0.15	0.286	0.00005	0.344	0.000005	0.025	0.098	0.25	0.000005	0.00005	0.005	0.000019	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-107	0.1092	0.0008125	0.295	13.3645	0.0070375	2.438	0.00005375	8.51875	0.841	0.25	0.00012875	0.0001625	0.007	0.00002675	0.006875	0.00175
MITCHELL/SULPHURETS TAILING SAC - TOP-108	0.2168	0.001375	0.44	26.443	0.014025	4.532	0.0001025	17.0125	1.584	0.25	0.0002525	0.000275	0.009	0.0000345	0.01325	0.002
MITCHELL/SULPHURETS TAILING SAC - TOP-109	0.3244	0.0019375	0.585	39.5215	0.0210125	6.626	0.00015125	25.50625	2.327	0.25	0.00037625	0.0003875	0.011	0.00004225	0.019625	0.00225
MITCHELL/SULPHURETS TAILING SAC - TOP-110	0.00166	0.00025	0.15	0.252	0.00005	0.322	0.000005	0.025	0.0874	0.25	0.000005	0.00005	0.005	0.000014	0.0005	0.0015
MITCHELL/SULPHURETS TAILING SAC - TOP-111	0.065245	0.0003125	0.2225	11.164	0.0044375	2.8165	0.00000625	6.11875	0.77555	74.4375	0.00002875	0.0000625	0.005	0.000013	0.00795	0.001875
MITCHELL/SULPHURETS TAILING SAC - TOP-112	0.12883	0.000375	0.295	22.076	0.008825	5.311	0.0000075	12.2125	1.4637	148.625	0.0000525	0.000075	0.005	0.000012	0.0154	0.00225
MITCHELL/SULPHURETS TAILING SAC - TOP-113	0.192415	0.0004375	0.3675	32.988	0.0132125	7.8055	0.00000875	18.30625	2.15185	222.8125	0.00007625	0.0000875	0.005	0.000011	0.02285	0.002625
MITCHELL/SULPHURETS TAILING SAC - TOP-114	0.0017	0.00025	0.15	0.235	0.00005	0.319	0.000005	0.025	0.0807	0.25	0.000005	0.00005	0.005	0.000015	0.0005	0.0015
	0.14251	0.0006625	0.3385	18.149	0.0095075	3.3469	0.00003575	11.43625	1.12299	0.25	0.00010775	0.0001875	0.007	0.00001845	0.00964	0.0021
M/S_Rougher Bottom																
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-1	0.363	0.0025	0.71	43.9	0.025	6.32	0.00005	21.8	2.37		0.0005	0.0005	0.005	0.00005	0.014	0.0172
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-2	0.405	0.0025	0.75	46.2	0.028	8.16	0.00005	24.5	2.55		0.0005	0.0005	0.005	0.00005	0.018	0.0025
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-3	0.431	0.0025	0.76	49.7	0.026	8.3	0.00005	28.3	2.78		0.0005	0.0005	0.005	0.00005	0.024	0.0025
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-4	0.432	0.0025	0.73	52.6	0.028	8.72	0.0002	34	3.07		0.0005	0.0005	0.013	0.00005	0.026	0.0025
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-5	0.428	0.0025	0.74	48.3	0.027	8.73	0.00005	31.2	3.03		0.0005	0.0005	0.012	0.00005	0.027	0.0063
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-6	0.436	0.00123	0.73	51.3	0.0269	9.9	0.000014	34.2	3.21	339	0.00005	0.00005	0.005	0.000005	0.0301	0.0018
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-7	0.345	0.00099	0.61	47.6	0.0237	9.76	0.000005	29.3	3	318	0.00005	0.00005	0.011	0.000005	0.03	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-8	0.256	0.0005	0.44	43.9	0.0176	10.3	0.00001	24.4	2.84	297	0.0001	0.0001	0.005	0.00001	0.0303	0.003
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-9	0.167	0.00025	0.15	42.7	0.0134	10.8	0.000005	19.2	2.61	263	0.00005	0.00005	0.011	0.000005	0.0316	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-10	0.137	0.00025	0.15	42.6	0.0104	11.5	0.000005	13.9	2.35	241	0.00005	0.00005	0.005	0.000005	0.0302	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-11	0.0993	0.00025	0.15	36.8	0.00869	11.4	0.000005	11.4	2.23	198	0.00005	0.00005	0.018	0.000005	0.0329	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-12	0.0791	0.00025	0.15	31.5	0.00725	11.9	0.000005	8.36	1.97	167	0.00005	0.00005	0.005	0.000005	0.0337	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-13	0.0618	0.00025	0.15	30.6	0.00624	12.7	0.000005	7.09	1.67	141	0.00005	0.00005	0.011	0.000005	0.0357	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-14	0.0556	0.00025	0.15	26.3	0.00522	13.4	0.000005	5.73	1.48	120	0.00005	0.00005	0.005	0.000005	0.0366	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-15	0.0506	0.00025	0.15	22.1	0.00486	15	0.00002	4.32	1.35	96.7	0.00005	0.00005	0.005	0.000005	0.038	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-16	0.0457	0.00025	0.15	21	0.00417	14.5	0.000005	3.8	1.14	76.3	0.00005	0.00005	0.005	0.000005	0.0411	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-17	0.0426	0.00025	0.15	19.5	0.00385	15.4	0.000005	3.33	1.04	62.5	0.00005	0.00005	0.005	0.000005	0.0407	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-18	0.0397	0.00025	0.15	18.4	0.00389	16.9	0.000005	2.99	0.963	60.5	0.00005	0.00005	0.005	0.000005	0.0428	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-19	0.0401	0.00025	0.15	16.4	0.00383	15.1	0.000005	2.38	0.991	49.7	0.00005	0.00005	0.005	0.000005	0.0414	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-20	0.0373	0.00025	0.15	15.7	0.00395	16.4	0.000005	2.28	0.936	62.2	0.00005	0.00433	0.005	0.000005	0.0428	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-21	0.0333	0.00025	0.15	16.2	0.00426	16.5	0.000005	2.14	0.875	48.3	0.00005	0.00005	0.005	0.000005	0.0455	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-22	0.0324	0.00025	0.15	14.5	0.00432	16.6	0.000005	1.87	0.882	40.7	0.00005	0.00005	0.005	0.000005	0.0448	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-23	0.0297	0.00025	0.15	14.2	0.0048	17.6	0.000005	1.73	0.852	39.4	0.00005	0.00005	0.011	0.000005	0.0439	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-24	0.0314	0.00025	0.15	14.7	0.0058	16.9	0.000005	1.7	0.865	43	0.00005	0.00005	0.005	0.000005	0.0495	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-25	0.0316	0.00025	0.15	12.3	0.00579	17.3	0.000005	1.4	0.9	36.8	0.00005	0.00005	0.005	0.000005	0.0425	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-26	0.0286	0.00025	0.15	12	0.00601	17	0.000005	1.37	0.827	35.2	0.00005	0.00005	0.005	0.000005	0.0421	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-27	0.0305	0.00025	0.15	13.1	0.00674	17	0.000005	1.43	0.842	33.2	0.00005	0.00005	0.005	0.000005	0.046	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-28	0.0299	0.00025	0.15	11.9	0.007575	17	0.000005	1.325	0.8335	35	0.00005	0.00005	0.005	0.000005	0.04435	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-29	0.0293	0.00025	0.15	10.7	0.00841	17	0.000005	1.22	0.825	36.8	0.00005	0.00005	0.005	0.000005	0.0427	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-30	0.0299	0.00025	0.15	10.7	0.00904	16.8	0.000005	1.18	0.8325	39.35	0.00005	0.00005	0.005	0.000005	0.04165	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-31	0.0305	0.00025	0.15	10.7	0.00967	16.6	0.000005	1.14	0.84	41.9	0.00005	0.00005	0.005	0.000005	0.0406	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-32	0.02675	0.00025	0.15	10.215	0.010685	16.85	0.000005	1.038	0.8145	35.85	0.00005	0.00005	0.005	0.000005	0.04005	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-33	0.023	0.00025	0.15	9.73	0.0117	17.1	0.000005	0.936	0.789	29.8	0.00005	0.00005	0.005	0.000005	0.0395	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-34	0.02405	0.00025	0.15	9.41	0.0124	16.75	0.000005	0.933	0.8135	33.35	0.00005	0.00005	0.005	0.000005	0.0382	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-35	0.0251	0.00025	0.15	9.09	0.0131	16.4	0.000005	0.93	0.838	36.9	0.00005	0.00005	0.005	0.000005	0.0369	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-36	0.02545	0.00025	0.15	8.8	0.0132	16	0.000005	0.8995	0.8245	33.7	0.00005	0.00005	0.005	0.000005	0.0356	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-37	0.0258	0.00025	0.15	8.51	0.0133	15.6	0.000005	0.869	0.811	30.5	0.00005	0.00005	0.005	0.000005	0.0343	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-38	0.027	0.00025	0.15	8.335	0.0139	15.55	0.000005	0.8675	0.802	31.7	0.00005	0.00005	0.005	0.000005	0.03375	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-39	0.0282	0.00025	0.15	8.16	0.0145	15.5	0.000005	0.866	0.793	32.9	0.00005	0.00005	0.005	0.000005	0.0332	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-40	0.0295	0.00025	0.15	7.96	0.0151	15.35	0.000005	0.8605	0.8025	30.95	0.00005	0.00005	0.005	0.000005	0.0327	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-41	0.0308	0.00025	0.15	7.76	0.0157	15.2	0.000005	0.855	0.812	29	0.00005	0.00005	0.005	0.000005	0.0322	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-42	0.0299	0.00025	0.15	7.405	0.0151	14.8	0.000005	0.8305	0.8005	29.95	0.00005	0.00005	0.005	0.000005	0.0315	0.0015

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-43	0.029	0.00025	0.15	7.05	0.0145	14.4	0.000005	0.806	0.789	30.9	0.00005	0.00005	0.005	0.000005	0.0308	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-44	0.02895	0.000555	0.15	6.9	0.01485	14.2	0.000005	0.797	0.818	30.1	0.0000275	0.00005	0.005	0.000005	0.03075	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-45	0.0289	0.00086	0.15	6.75	0.0152	14	0.000005	0.788	0.847	29.3	0.000005	0.00005	0.005	0.000005	0.0307	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-46	0.02855	0.000555	0.15	6.53	0.01515	13.7	0.000005	0.7665	0.901	27.95	0.000005	0.00005	0.005	0.000005	0.03035	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-47	0.0282	0.00025	0.15	6.31	0.0151	13.4	0.000005	0.745	0.955	26.6	0.000005	0.00005	0.005	0.000005	0.03	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-48	0.0276	0.00025	0.15	6.33	0.0152	12.85	0.000005	0.747	0.872	29	0.000005	0.00005	0.005	0.000005	0.02975	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-49	0.027	0.00025	0.15	6.35	0.0153	12.3	0.000005	0.749	0.789	31.4	0.000005	0.00005	0.005	0.000005	0.0295	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-50	0.0283	0.00025	0.15	6.015	0.01525	12.3	0.000005	0.7195	0.7905	28.65	0.000005	0.00005	0.005	0.000005	0.02855	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-51	0.0296	0.00025	0.15	5.68	0.0152	12.3	0.000005	0.69	0.792	25.9	0.000005	0.00005	0.005	0.000005	0.0276	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-52	0.03045	0.00025	0.15	5.59	0.0154	11.75	0.000005	0.701	0.7815	29.75	0.000005	0.00005	0.005	0.000005	0.02725	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-53	0.0313	0.00025	0.15	5.5	0.0156	11.2	0.000005	0.712	0.771	33.6	0.000005	0.00005	0.005	0.000005	0.0269	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-54	0.0308	0.00025	0.15	5.415	0.01585	11	0.000005	0.66	0.757	29.7	0.000005	0.00005	0.005	0.000005	0.02695	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-55	0.0303	0.00025	0.15	5.33	0.0161	10.8	0.000005	0.608	0.743	25.8	0.000005	0.00005	0.005	0.000005	0.027	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-56	0.02995	0.00025	0.15	5.035	0.01525	10.65	0.000005	0.6205	0.7365	24.7	0.000005	0.00005	0.005	0.000005	0.02665	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-57	0.0296	0.00025	0.15	4.74	0.0144	10.5	0.000005	0.633	0.73	23.6	0.000005	0.00005	0.005	0.000005	0.0263	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-58	0.0284	0.00025	0.15	4.66	0.01475	10.08	0.000005	0.623	0.699	22.75	0.000005	0.00005	0.005	0.000005	0.0259	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-59	0.0272	0.00025	0.15	4.58	0.0151	9.66	0.000005	0.613	0.668	21.9	0.000005	0.00005	0.005	0.000005	0.0255	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-60	0.029	0.00025	0.15	4.445	0.0162	9.28	0.000005	0.628	0.679	23.4	0.000005	0.00005	0.005	0.000005	0.02575	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-61	0.0308	0.00025	0.15	4.31	0.0173	8.9	0.000005	0.643	0.69	24.9	0.000005	0.00005	0.005	0.000005	0.026	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-62	0.0309	0.00025	0.15	4.23	0.01625	8.695	0.000005	0.6015	0.674	23.6	0.000005	0.00005	0.005	0.000005	0.02485	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-63	0.031	0.00025	0.15	4.15	0.0152	8.49	0.000005	0.56	0.658	22.3	0.000005	0.00005	0.005	0.000005	0.0237	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-64	0.0309	0.00025	0.15	3.995	0.01475	8.16	0.000005	0.551	0.7075	21.55	0.000005	0.00005	0.005	0.000005	0.0234	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-65	0.0308	0.00025	0.15	3.84	0.0143	7.83	0.000005	0.542	0.757	20.8	0.000005	0.00005	0.005	0.000005	0.0231	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-66	0.0292	0.00025	0.15	3.74	0.0139	7.75	0.000005	0.5295	0.699	21.6	0.000005	0.00005	0.005	0.000005	0.023	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-67	0.0276	0.00025	0.15	3.64	0.0135	7.67	0.000005	0.517	0.641	22.4	0.000005	0.00005	0.005	0.000005	0.0229	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-68	0.02705	0.00025	0.15	3.505	0.01325	7.58	0.000005	0.5165	0.6205	21.75	0.000005	0.00005	0.005	0.000005	0.0227	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-69	0.0265	0.00025	0.15	3.37	0.013	7.49	0.000005	0.516	0.6	21.1	0.000005	0.00005	0.005	0.000005	0.0225	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-70	0.028	0.00025	0.15	3.24	0.0129	7	0.000005	0.5	0.586	19.1	0.000005	0.00005	0.005	0.000005	0.0218	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-71	0.028	0.00025	0.15	3.1975	0.01275	6.82	0.000005	0.49675	0.58575	18.7	0.000005	0.00005	0.005	0.000005	0.0214	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-72	0.028	0.00025	0.15	3.155	0.0126	6.64	0.000005	0.4935	0.5855	18.3	0.000005	0.00005	0.005	0.000005	0.021	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-73	0.028	0.00025	0.15	3.1125	0.01245	6.46	0.000005	0.49025	0.58525	17.9	0.000005	0.00005	0.005	0.000005	0.0206	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-74	0.028	0.00025	0.15	3.07	0.0123	6.28	0.000005	0.487	0.585	17.5	0.000005	0.00005	0.005	0.000005	0.0202	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-75	0.0284	0.00025	0.15	2.92	0.01175	6.07	0.000005	0.4685	0.56575	17.7	0.000005	0.00005	0.005	0.000005	0.019725	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-76	0.0288	0.00025	0.15	2.77	0.0112	5.86	0.000005	0.45	0.5465	17.9	0.000005	0.00005	0.005	0.000005	0.01925	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-77	0.0292	0.00025	0.15	2.62	0.01065	5.65	0.000005	0.4315	0.52725	18.1	0.000005	0.00005	0.005	0.000005	0.018775	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-78	0.0296	0.00025	0.15	2.47	0.0101	5.44	0.000005	0.413	0.508	18.3	0.000005	0.00005	0.005	0.000005	0.0183	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-79	0.029125	0.00025	0.15	2.455	0.0099175	5.265	0.000005	0.4225	0.5035	17.325	0.000005	0.00005	0.005	0.000005	0.018175	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-80	0.02865	0.00025	0.15	2.44	0.009735	5.09	0.000005	0.432	0.499	16.35	0.000005	0.00005	0.005	0.000005	0.01805	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-81	0.028175	0.00025	0.15	2.425	0.0095525	4.915	0.000005	0.4415	0.4945	15.375	0.000005	0.00005	0.005	0.000005	0.017925	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-82	0.0277	0.00025	0.15	2.41	0.00937	4.74	0.000005	0.451	0.49	14.4	0.000005	0.00005	0.005	0.000005	0.0178	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-83	0.02775	0.00025	0.15	2.3675	0.0087975	4.6275	0.000005	0.4435	0.47375	13.775	0.000005	0.00005	0.005	0.000005	0.017475	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-84	0.0278	0.00025	0.15	2.325	0.008225	4.515	0.000005	0.436	0.4575	13.15	0.000005	0.00005	0.005	0.000005	0.01715	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-85	0.02785	0.00025	0.15	2.2825	0.0076525	4.4025	0.000005	0.4285	0.44125	12.525	0.000005	0.00005	0.005	0.000005	0.016825	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-86	0.0279	0.00025	0.15	2.24	0.00708	4.29	0.000005	0.421	0.425	11.9	0.000005	0.00005	0.005	0.000005	0.0165	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-87	0.028325	0.00025	0.15	2.1975	0.006635	4.2675	0.000005	0.421	0.41975	11.75	0.000005	0.00005	0.005	0.000005	0.016225	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-88	0.02875	0.00025	0.15	2.155	0.00619	4.245	0.000005	0.421	0.4145	11.6	0.000005	0.00005	0.005	0.000005	0.01595	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-89	0.029175	0.00025	0.15	2.1125	0.005745	4.2225	0.000005	0.421	0.40925	11.45	0.000005	0.00005	0.005	0.000005	0.015675	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-90	0.0296	0.00025	0.15	2.07	0.0053	4.2	0.000005	0.421	0.404	11.3	0.000005	0.00005	0.005	0.000005	0.0154	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-91	0.029475	0.00025	0.15	2.045	0.0047925	4.1775	0.000005	0.417	0.39375	11.35	0.000005	0.00005	0.005	0.000005	0.01495	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-92	0.02935	0.00025	0.15	2.02	0.004285	4.155	0.000005	0.413	0.3835	11.4	0.000005	0.00005	0.005	0.000005	0.0145	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-93	0.029225	0.00025	0.15	1.995	0.0037775	4.1325	0.000005	0.409	0.37325	11.45	0.000005	0.00005	0.005	0.000005	0.01405	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-94	0.0291	0.00025	0.15	1.97	0.00327	4.11	0.000005	0.405	0.363	11.5	0.000005	0.00005	0.005	0.000005	0.0136	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-95	0.0291	0.00025	0.15	1.9625	0.00311	4.06	0.000005	0.413	0.36625	10.945	0.000005	0.00005	0.005	0.000005	0.013475	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-96	0.0291	0.00025	0.15	1.955	0.00295	4.01	0.000005	0.421	0.3695	10.39	0.000005	0.00005	0.005	0.000005	0.01335	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-97	0.0291	0.00025	0.15	1.9475	0.00279	3.96	0.000005	0.429	0.37275	9.835	0.000005	0.00005	0.005	0.000005	0.013225	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-98	0.0291	0.00025	0.15	1.94	0.00263	3.91	0.000005	0.437	0.376	9.28	0.000005	0.00005	0.005	0.000005	0.0131	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-99	0.02845	0.00025	0.15	1.8675	0.0023225	3.8475	0.000005	0.418	0.3695	8.3675	0.000005	0.00005	0.005	0.0000175	0.01165	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-100	0.0278	0.00025	0.15	1.795	0.002015	3.785	0.000005	0.399	0.363	7.455	0.000005	0.00005	0.005	0.00003	0.0102	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-101	0.02715	0.00025	0.15	1.7225	0.0017075	3.7225	0.000005	0.38	0.3565	6.5425	0.000005	0.00005	0.005	0.0000425	0.00875	0.0015

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-102	0.0275	0.00025	0.15	1.78	0.00213	3.85	0.000005	0.409	0.365	6.91	0.000005	0.00005	0.005	0.000014	0.0118	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-103	0.0275	0.00025	0.15	1.78	0.00213	3.85	0.000005	0.409	0.365	6.91	0.000005	0.00005	0.005	0.000014	0.0118	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-104	0.0275	0.00025	0.15	1.78	0.00213	3.85	0.000005	0.409	0.365	6.91	0.000005	0.00005	0.005	0.000014	0.0118	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-105	0.0275	0.00025	0.15	1.78	0.00213	3.85	0.000005	0.409	0.365	6.91	0.000005	0.00005	0.005	0.000014	0.0118	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-106	0.0296	0.00025	0.15	1.83	0.00209	3.75	0.000005	0.39	0.395	7.35	0.000005	0.00005	0.005	0.000015	0.0102	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-107	0.0251	0.00025	0.15	3.4925	0.0028925	3.125	0.000005	0.8075	0.37775	11.3875	0.00001625	0.00005	0.005	0.000185	0.007775	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-108	0.0206	0.00025	0.15	5.155	0.003695	2.5	0.000005	1.225	0.3605	15.425	0.0000275	0.00005	0.005	0.000355	0.00535	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-109	0.0161	0.00025	0.15	6.8175	0.0044975	1.875	0.000005	1.6425	0.34325	19.4625	0.00003875	0.00005	0.005	0.000525	0.002925	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-110	0.0287	0.00054	0.15	1.75	0.00175	3.64	0.000005	0.391	0.377	6.22	0.000005	0.00005	0.005	0.00003	0.0089	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-111	0.0227375	0.0004675	0.15	2.295	0.001945	2.9825	0.000005	0.48925	0.339	7.13	0.00001625	0.00005	0.005	0.0001545	0.0068	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-112	0.016775	0.000395	0.15	2.84	0.00214	2.325	0.000005	0.5875	0.301	8.04	0.0000275	0.00005	0.005	0.000279	0.0047	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-113	0.0108125	0.0003225	0.15	3.385	0.002335	1.6675	0.000005	0.68575	0.263	8.95	0.00003875	0.00005	0.005	0.0004035	0.0026	0.0015
MITCHELL/SULPHURETS TAILING SAC - BOTTOM-114	0.0265	0.00025	0.15	1.65	0.0014	3.66	0.000005	0.361	0.35	5.63	0.000005	0.00005	0.005	0.000055	0.0073	0.0015
	0.019025	0.000395	0.15	3.902	0.0025335	2.8245	0.000005	0.91105	0.3595	6.998	0.00002525	0.00005	0.005	0.0002784	0.00635	0.0015
Iron Cap Top																
2748-18-COMP-TOP-1	0.0185	0.00025	0.15	15.7	0.0087	1.38	0.000005	4.1	0.429	36.5	0.00005	0.00005	0.005	0.000176	0.0015	0.0015
2748-18-COMP-TOP-2	0.017	0.00025	0.15	12.3	0.00753	1.29	0.000005	3.34	0.391	34.3	0.00005	0.00005	0.005	0.000432	0.0005	0.0015
2748-18-COMP-TOP-3	0.0141	0.00025	0.15	11.3	0.00656	1.32	0.000005	2.8	0.36	29.9	0.00005	0.00032	0.005	0.000622	0.0005	0.0015
2748-18-COMP-TOP-4	0.0116	0.00025	0.15	8.48	0.0053	1.25	0.000005	2.06	0.326	23.5	0.00005	0.00005	0.005	0.000695	0.0005	0.0015
2748-18-COMP-TOP-5	0.00924	0.00025	0.15	7.14	0.00412	1.21	0.000005	1.65	0.287	19.3	0.00005	0.00005	0.005	0.00068	0.0005	0.0015
2748-18-COMP-TOP-6	0.00701	0.00025	0.15	5.95	0.00355	1.21	0.000005	1.31	0.254	15.9	0.00005	0.00005	0.005	0.000662	0.0005	0.0015
2748-18-COMP-TOP-7	0.00589	0.00025	0.15	4.89	0.00313	1.04	0.000005	0.981	0.243	11.9	0.00005	0.00005	0.005	0.000601	0.0005	0.0015
2748-18-COMP-TOP-8	0.00485	0.00025	0.15	3.93	0.00253	1.01	0.000005	0.784	0.225	9.86	0.00005	0.00005	0.005	0.000528	0.0005	0.0015
2748-18-COMP-TOP-9	0.00373	0.00025	0.15	3.68	0.00211	0.941	0.000005	0.666	0.195	7.72	0.00005	0.00005	0.005	0.000446	0.0005	0.0015
2748-18-COMP-TOP-10	0.00337	0.00025	0.15	3.03	0.0019	0.887	0.000005	0.488	0.201	6.33	0.00005	0.00005	0.005	0.000446	0.0005	0.0015
2748-18-COMP-TOP-11	0.00272	0.00025	0.15	3.18	0.00181	0.877	0.000005	0.472	0.189	5.2	0.00005	0.00005	0.005	0.000374	0.0005	0.0015
2748-18-COMP-TOP-12	0.00219	0.00025	0.15	2.43	0.00122	0.816	0.000005	0.321	0.173	4.21	0.00005	0.00005	0.005	0.000313	0.0005	0.0015
2748-18-COMP-TOP-13	0.00176	0.00025	0.15	2.19	0.00123	0.812	0.000005	0.288	0.169	3.48	0.00005	0.00005	0.005	0.000289	0.0005	0.0015
2748-18-COMP-TOP-14	0.00142	0.00025	0.15	1.71	0.0011	0.739	0.000005	0.204	0.159	2.84	0.00005	0.00005	0.005	0.000245	0.0005	0.0015
2748-18-COMP-TOP-15	0.00133	0.00025	0.15	1.78	0.00102	0.738	0.000005	0.188	0.163	2.45	0.00005	0.00005	0.005	0.000238	0.0005	0.0015
2748-18-COMP-TOP-16	0.00115	0.00025	0.15	1.51	0.00093	0.701	0.000005	0.147	0.158	2.21	0.00005	0.00005	0.005	0.000205	0.0005	0.0015
2748-18-COMP-TOP-17	0.00109	0.00025	0.15	1.42	0.00089	0.695	0.000005	0.127	0.159	1.92	0.00005	0.00005	0.005	0.000204	0.0005	0.0015
2748-18-COMP-TOP-18	0.000996	0.00025	0.15	1.33	0.00088	0.699	0.000005	0.116	0.153	1.7	0.00005	0.00005	0.005	0.000181	0.0005	0.0015
2748-18-COMP-TOP-19	0.000972	0.00025	0.15	1.31	0.00084	0.684	0.000005	0.108	0.164	1.59	0.00005	0.00005	0.005	0.000193	0.0005	0.0015
2748-18-COMP-TOP-20	0.000996	0.00025	0.15	1.22	0.00079	0.615	0.000005	0.085	0.178	1.46	0.00005	0.00005	0.005	0.000204	0.0005	0.0015
2748-18-COMP-TOP-21	0.000782	0.00025	0.15	1.05	0.0007	0.598	0.000005	0.069	0.144	1.32	0.00005	0.00005	0.005	0.000144	0.0005	0.0015
2748-18-COMP-TOP-22	0.000744	0.00025	0.15	0.939	0.00067	0.546	0.000005	0.067	0.144	1.03	0.00005	0.00005	0.005	0.000136	0.0005	0.0015
2748-18-COMP-TOP-23	0.000801	0.00025	0.15	1.02	0.00073	0.616	0.000005	0.063	0.163	1.14	0.00005	0.00005	0.005	0.000175	0.0005	0.0015
2748-18-COMP-TOP-24	0.000795	0.00025	0.15	0.923	0.00066	0.594	0.000005	0.064	0.166	1.09	0.00005	0.00005	0.005	0.000179	0.0005	0.0015
2748-18-COMP-TOP-25	0.000803	0.00025	0.15	0.924	0.00068	0.614	0.000005	0.058	0.168	1.08	0.00005	0.00005	0.005	0.000182	0.0005	0.0015
2748-18-COMP-TOP-26	0.000774	0.00025	0.15	0.895	0.00059	0.574	0.000005	0.073	0.161	1.1	0.00005	0.00005	0.005	0.000182	0.0005	0.0015
2748-18-COMP-TOP-27	0.000795	0.00025	0.15	0.912	0.00061	0.585	0.000005	0.055	0.163	0.98	0.00005	0.00005	0.005	0.000185	0.0005	0.0015
2748-18-COMP-TOP-28	0.000808	0.00025	0.15	0.867	0.00058	0.577	0.000005	0.053	0.168	1	0.00005	0.00005	0.005	0.000192	0.0005	0.0015
2748-18-COMP-TOP-29	0.000862	0.00025	0.15	0.841	0.00067	0.589	0.000005	0.062	0.162	1.01	0.00005	0.00005	0.005	0.0002	0.0005	0.0015
2748-18-COMP-TOP-30	0.000829	0.00025	0.15	0.867	0.00056	0.547	0.000005	0.057	0.154	0.85	0.000005	0.00005	0.005	0.000178	0.0005	0.0015
2748-18-COMP-TOP-31	0.000923	0.00025	0.15	0.735	0.00057	0.554	0.000005	0.054	0.165	0.88	0.00005	0.00005	0.005	0.000184	0.0005	0.0015
2748-18-COMP-TOP-32	0.00113	0.00025	0.15	0.977	0.00065	0.674	0.000005	0.07	0.203	1.5	0.000012	0.00005	0.005	0.000267	0.0005	0.0015
2748-18-COMP-TOP-33	0.000959	0.00089	0.15	0.67	0.00047	0.483	0.000005	0.05	0.15	0.71	0.000005	0.00005	0.005	0.000158	0.0005	0.0015
2748-18-COMP-TOP-34	0.000759	0.00025	0.15	0.637	0.00047	0.473	0.000005	0.025	0.138	0.77	0.000005	0.00005	0.005	0.000145	0.0005	0.0015
2748-18-COMP-TOP-35	0.000863	0.00025	0.15	0.681	0.0005	0.49	0.000005	0.025	0.179	0.73	0.000005	0.00005	0.005	0.000171	0.0005	0.0015
2748-18-COMP-TOP-36	0.000898	0.00025	0.15	0.693	0.0005	0.495	0.000005	0.025	0.146	0.82	0.000005	0.00005	0.005	0.000185	0.0005	0.0015
2748-18-COMP-TOP-37	0.000937	0.00025	0.15	0.722	0.00047	0.49	0.000005	0.055	0.159	0.81	0.000005	0.00005	0.005	0.00018	0.0005	0.0015
2748-18-COMP-TOP-38	0.000918	0.00025	0.15	0.686	0.00045	0.482	0.000005	0.025	0.16	1.07	0.000005	0.00005	0.005	0.000185	0.0005	0.0015
2748-18-COMP-TOP-39	0.000951	0.00025	0.15	0.653	0.00072	0.517	0.000005	0.025	0.157	0.71	0.000005	0.00005	0.005	0.000182	0.0005	0.0015
2748-18-COMP-TOP-40	0.000997	0.00025	0.15	0.686	0.00045	0.529	0.000005	0.062	0.16	1.06	0.00001	0.00005	0.005	0.000176	0.0005	0.0015
2748-18-COMP-TOP-41	0.00098	0.00025	0.15	0.634	0.00044	0.489	0.000005	0.025	0.152	0.74	0.000005	0.00005	0.005	0.000189	0.0005	0.0015
2748-18-COMP-TOP-42	0.000997	0.00025	0.15	0.666	0.00044	0.471	0.000005	0.025	0.151	0.72	0.000005	0.00005	0.005	0.00018	0.0005	0.0015
2748-18-COMP-TOP-43	0.000972	0.00025	0.15	0.587	0.00044	0.447	0.000005	0.025	0.135	0.65	0.000005	0.00005	0.005	0.000163	0.0005	0.0015
2748-18-COMP-TOP-44	0.000967	0.00025	0.15	0.639	0.00041	0.467	0.000005	0.025	0.157	0.69	0.000005	0.00005	0.005	0.000168	0.0005	0.0015

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
2748-18-COMP-TOP-45	0.00106	0.00025	0.15	0.592	0.00041	0.479	0.000005	0.052	0.141	0.69	0.000005	0.00005	0.005	0.000158	0.0005	0.0051
2748-18-COMP-TOP-46	0.000988	0.00025	0.15	0.579	0.00037	0.443	0.000005	0.025	0.141	0.81	0.000005	0.00005	0.005	0.000139	0.0005	0.0015
2748-18-COMP-TOP-47	0.000983	0.00025	0.15	0.562	0.00039	0.444	0.000005	0.025	0.128	0.64	0.000005	0.00005	0.005	0.000146	0.0005	0.0015
2748-18-COMP-TOP-48	0.000992	0.00025	0.15	0.543	0.00039	0.432	0.000005	0.025	0.136	0.58	0.000005	0.00005	0.005	0.000136	0.0005	0.0015
2748-18-COMP-TOP-49	0.000979	0.00025	0.15	0.491	0.00041	0.404	0.000005	0.025	0.123	0.62	0.000005	0.00005	0.005	0.000126	0.0005	0.0015
2748-18-COMP-TOP-50	0.000925	0.00025	0.15	0.532	0.00035	0.428	0.000005	0.025	0.118	0.61	0.000005	0.00005	0.005	0.000127	0.0005	0.0015
2748-18-COMP-TOP-51	0.00105	0.00025	0.15	0.522	0.00038	0.432	0.000005	0.025	0.124	0.59	0.000005	0.00005	0.005	0.000127	0.0005	0.0015
2748-18-COMP-TOP-52	0.000968	0.00025	0.15	0.5	0.00034	0.403	0.000005	0.025	0.145	0.57	0.000005	0.00005	0.005	0.000112	0.0005	0.0015
2748-18-COMP-TOP-53	0.00114	0.00025	0.15	0.506	0.00034	0.396	0.000005	0.025	0.147	0.52	0.000005	0.00005	0.005	0.00013	0.0005	0.0015
2748-18-COMP-TOP-54	0.000978	0.00025	0.15	0.485	0.00032	0.381	0.000005	0.025	0.129	0.56	0.000005	0.00005	0.005	0.000112	0.0005	0.0015
2748-18-COMP-TOP-55	0.00103	0.00025	0.15	0.469	0.00033	0.389	0.000005	0.025	0.121	0.52	0.000005	0.00005	0.005	0.000115	0.0005	0.0015
2748-18-COMP-TOP-56	0.00094	0.00025	0.15	0.434	0.00032	0.358	0.000005	0.025	0.112	0.58	0.000005	0.00005	0.005	0.000097	0.0005	0.0015
2748-18-COMP-TOP-57	0.000934	0.00025	0.15	0.446	0.0003	0.35	0.000005	0.025	0.107	0.25	0.000005	0.00005	0.005	0.000082	0.0005	0.0015
2748-18-COMP-TOP-58	0.000864	0.00025	0.15	0.433	0.00024	0.351	0.000005	0.025	0.115	0.25	0.000005	0.00005	0.005	0.000081	0.0005	0.0015
2748-18-COMP-TOP-59	0.0008595	0.00025	0.15	0.416	0.00023	0.331	0.000005	0.025	0.1057	0.25	0.000005	0.00005	0.005	0.000079	0.0005	0.0015
2748-18-COMP-TOP-60	0.000855	0.00025	0.15	0.399	0.00022	0.311	0.000005	0.025	0.0964	0.25	0.000005	0.00005	0.005	0.000077	0.0005	0.0015
2748-18-COMP-TOP-61	0.000915	0.00025	0.15	0.419	0.00023	0.328	0.000005	0.025	0.101	0.25	0.000005	0.00005	0.005	0.000087	0.0005	0.0015
2748-18-COMP-TOP-62	0.0009	0.00025	0.15	0.415	0.00023	0.34	0.000005	0.025	0.115	0.25	0.000005	0.00005	0.005	0.000085	0.0005	0.0015
2748-18-COMP-TOP-63	0.000917	0.00025	0.15	0.417	0.00022	0.374	0.000005	0.025	0.112	0.65	0.000005	0.00005	0.005	0.000089	0.0005	0.0015
2748-18-COMP-TOP-64	0.00101	0.00025	0.15	0.454	0.00025	0.373	0.000005	0.025	0.12	0.54	0.000005	0.00005	0.005	0.000116	0.0005	0.0015
2748-18-COMP-TOP-65	0.000963	0.00025	0.15	0.433	0.00022	0.369	0.000005	0.025	0.116	0.53	0.000005	0.00005	0.005	0.000106	0.0005	0.0015
2748-18-COMP-TOP-66	0.000967	0.00025	0.15	0.392	0.00021	0.353	0.000005	0.025	0.119	0.51	0.000005	0.00005	0.005	0.000104	0.0005	0.0015
2748-18-COMP-TOP-67	0.000935	0.00025	0.15	0.395	0.00019	0.32	0.000005	0.025	0.119	0.25	0.000005	0.00005	0.005	0.000085	0.0005	0.0015
2748-18-COMP-TOP-68	0.000879	0.00025	0.15	0.375	0.0002	0.304	0.000005	0.025	0.103	0.25	0.000005	0.00005	0.005	0.000091	0.0005	0.0015
2748-18-COMP-TOP-69	0.000864	0.00025	0.15	0.36	0.00017	0.304	0.000005	0.025	0.1	0.25	0.000005	0.00005	0.005	0.000086	0.0005	0.0015
2748-18-COMP-TOP-70	0.000932	0.00025	0.15	0.369	0.00021	0.304	0.000005	0.025	0.103	0.25	0.000005	0.00005	0.005	0.000085	0.0005	0.0015
2748-18-COMP-TOP-71	0.000826	0.00025	0.15	0.369	0.00018	0.299	0.000005	0.025	0.0966	0.25	0.000005	0.00005	0.005	0.000085	0.0005	0.0015
2748-18-COMP-TOP-72	0.000849	0.00025	0.15	0.358	0.00019	0.299	0.000005	0.025	0.0985	0.25	0.000005	0.00005	0.005	0.000077	0.0005	0.0015
2748-18-COMP-TOP-73	0.000885	0.00025	0.15	0.366	0.00016	0.301	0.000005	0.025	0.107	0.25	0.000005	0.00005	0.005	0.000078	0.0005	0.0015
2748-18-COMP-TOP-74	0.000863	0.00025	0.15	0.351	0.00018	0.291	0.000005	0.025	0.0977	0.25	0.000005	0.00005	0.005	0.000076	0.0005	0.0015
2748-18-COMP-TOP-75	0.000903	0.00025	0.15	0.364	0.00017	0.292	0.000005	0.025	0.102	0.25	0.000005	0.00005	0.005	0.00008	0.0005	0.0015
2748-18-COMP-TOP-76	0.0009445	0.00025	0.15	0.36	0.00018	0.2955	0.000005	0.025	0.103	0.25	0.000005	0.00005	0.005	0.000082	0.0005	0.0015
2748-18-COMP-TOP-77	0.0009445	0.00025	0.15	0.36	0.00018	0.2955	0.000005	0.025	0.103	0.25	0.000005	0.00005	0.005	0.000082	0.0005	0.0015
2748-18-COMP-TOP-78	0.000986	0.00025	0.15	0.356	0.00019	0.299	0.000005	0.025	0.104	0.25	0.000005	0.00005	0.005	0.000084	0.0005	0.0015
2748-18-COMP-TOP-79	0.000997	0.00025	0.15	0.35325	0.000185	0.301	0.000005	0.025	0.10325	0.3125	0.000005	0.00005	0.005	0.000081	0.0005	0.0015
2748-18-COMP-TOP-80	0.001008	0.00025	0.15	0.3505	0.00018	0.303	0.000005	0.025	0.1025	0.375	0.000005	0.00005	0.005	0.000078	0.0005	0.0015
2748-18-COMP-TOP-81	0.001019	0.00025	0.15	0.34775	0.000175	0.305	0.000005	0.025	0.10175	0.4375	0.000005	0.00005	0.005	0.000075	0.0005	0.0015
2748-18-COMP-TOP-82	0.00103	0.00025	0.15	0.345	0.00017	0.307	0.000005	0.025	0.101	0.5	0.000005	0.00005	0.005	0.000072	0.0005	0.0015
2748-18-COMP-TOP-83	0.001045	0.00025	0.15	0.34525	0.00016	0.30475	0.000005	0.025	0.10075	0.4375	0.000005	0.00005	0.005	0.00007325	0.0005	0.0015
2748-18-COMP-TOP-84	0.00106	0.00025	0.15	0.3455	0.00015	0.3025	0.000005	0.025	0.1005	0.375	0.000005	0.00005	0.005	0.0000745	0.0005	0.0015
2748-18-COMP-TOP-85	0.001075	0.00025	0.15	0.34575	0.00014	0.30025	0.000005	0.025	0.10025	0.3125	0.000005	0.00005	0.005	0.00007575	0.0005	0.0015
2748-18-COMP-TOP-86	0.00109	0.00025	0.15	0.346	0.00013	0.298	0.000005	0.025	0.1	0.25	0.000005	0.00005	0.005	0.000077	0.0005	0.0015
2748-18-COMP-TOP-87	0.00112	0.00025	0.15	0.34275	0.0001325	0.29525	0.000005	0.025	0.097125	0.25	0.000005	0.00005	0.005	0.00007025	0.0005	0.0015
2748-18-COMP-TOP-88	0.00115	0.00025	0.15	0.3395	0.000135	0.2925	0.000005	0.025	0.09425	0.25	0.000005	0.00005	0.005	0.0000635	0.0005	0.0015
2748-18-COMP-TOP-89	0.00118	0.00025	0.15	0.33625	0.0001375	0.28975	0.000005	0.025	0.091375	0.25	0.000005	0.00005	0.005	0.00005675	0.0005	0.0015
2748-18-COMP-TOP-90	0.00117	0.00025	0.15	0.337	0.00015	0.304	0.000005	0.054	0.0955	0.25	0.000005	0.00005	0.005	0.000073	0.0005	0.0015
2748-18-COMP-TOP-91	0.00117	0.00025	0.15	0.337	0.00015	0.304	0.000005	0.054	0.0955	0.25	0.000005	0.00005	0.005	0.000073	0.0005	0.0015
2748-18-COMP-TOP-92	0.00117	0.00025	0.15	0.337	0.00015	0.304	0.000005	0.054	0.0955	0.25	0.000005	0.00005	0.005	0.000073	0.0005	0.0015
2748-18-COMP-TOP-93	0.00117	0.00025	0.15	0.337	0.00015	0.304	0.000005	0.054	0.0955	0.25	0.000005	0.00005	0.005	0.000073	0.0005	0.0015
2748-18-COMP-TOP-94	0.0012	0.00025	0.15	0.344	0.00015	0.313	0.000005	0.025	0.0916	0.25	0.000005	0.00005	0.005	0.000063	0.0005	0.0015
2748-18-COMP-TOP-95	0.0354	0.0003175	0.22	11.708	0.0096625	0.86225	0.0000275	4.34375	0.6912	62.6875	0.00002875	0.00005	0.005	0.00035475	0.0005	0.0015
2748-18-COMP-TOP-96	0.0696	0.000385	0.29	23.072	0.019175	1.4115	0.00005	8.6625	1.2908	125.125	0.0000525	0.00005	0.005	0.0006465	0.0005	0.0015
2748-18-COMP-TOP-97	0.1038	0.0004525	0.36	34.436	0.0286875	1.96075	0.0000725	12.98125	1.8904	187.5625	0.00007625	0.00005	0.005	0.00093825	0.0005	0.0015
2748-18-COMP-TOP-98	0.00128	0.00025	0.15	0.317	0.00015	0.301	0.000005	0.025	0.0936	0.25	0.000005	0.00005	0.005	0.000053	0.0005	0.0015
2748-18-COMP-TOP-99	0.01846	0.00025	0.15	9.11275	0.0041625	0.88575	0.00000825	3.04375	0.5652	50.4375	0.00001625	0.00005	0.00675	0.00016375	0.0005	0.0015
2748-18-COMP-TOP-100	0.03564	0.00025	0.15	17.9085	0.008175	1.4705	0.0000115	6.0625	1.0368	100.625	0.0000275	0.00005	0.0085	0.0002745	0.0005	0.0015
2748-18-COMP-TOP-101	0.05282	0.00025	0.15	26.70425	0.0121875	2.05525	0.00001475	9.08125	1.5084	150.8125	0.00003875	0.00005	0.01025	0.00038525	0.0005	0.0015
2748-18-COMP-TOP-102	0.00121	0.00025	0.15	0.333	0.00014	0.287	0.000005	0.025	0.0885	0.25	0.000005	0.00005	0.005	0.00005	0.0005	0.0015
	0.0424	0.0002905	0.22	15.72915	0.0106725	1.08425	0.0000224	5.81125	0.90624	85.2125	0.00003275	0.00005	0.00605	0.00036295	0.0005	0.0015

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
Iron Cap Bottom																
2748-18-COMP-BOTTOM-1	0.123	0.00061	0.47	54.1	0.0444	2.34	0.000223	18.6	2.18	238	0.0001	0.00005	0.012	0.000407	0.0014	0.0131
2748-18-COMP-BOTTOM-2	0.141	0.00025	0.52	48.6	0.042	2.32	0.0002	18.2	2.35	257	0.00005	0.00005	0.005	0.000506	0.001	0.0015
2748-18-COMP-BOTTOM-3	0.131	0.0005	0.49	49.7	0.0388	2.48	0.000051	17.9	2.26	257	0.0001	0.0001	0.005	0.000608	0.001	0.003
2748-18-COMP-BOTTOM-4	0.138	0.00052	0.43	45.8	0.0382	2.51	0.000095	17.3	2.49	250	0.0001	0.00005	0.005	0.00123	0.0005	0.0015
2748-18-COMP-BOTTOM-5	0.146	0.00053	0.47	47.4	0.0366	2.49	0.000068	18.1	2.53	255	0.00005	0.00005	0.005	0.00116	0.0005	0.0015
2748-18-COMP-BOTTOM-6	0.128	0.00068	0.46	46.1	0.0338	2.63	0.000038	17.7	2.41	260	0.00005	0.00005	0.005	0.000557	0.0005	0.0015
2748-18-COMP-BOTTOM-7	0.101	0.00025	0.35	41.7	0.0249	2.43	0.000024	14.8	2.28	222	0.00005	0.00005	0.005	0.000344	0.0005	0.0015
2748-18-COMP-BOTTOM-8	0.07	0.00025	0.15	35.5	0.0162	2.64	0.000018	12.1	1.98	201	0.00005	0.00005	0.012	0.000496	0.0005	0.0015
2748-18-COMP-BOTTOM-9	0.0393	0.00025	0.15	30.5	0.00933	2.55	0.000014	8.65	1.49	147	0.00005	0.00005	0.005	0.000477	0.0005	0.0015
2748-18-COMP-BOTTOM-10	0.0308	0.00025	0.15	28.7	0.00742	2.62	0.000005	6.96	1.3	107	0.00005	0.00005	0.005	0.000317	0.0012	0.0015
2748-18-COMP-BOTTOM-11	0.022	0.00025	0.15	24	0.00652	2.7	0.000005	5.32	0.891	78.5	0.00005	0.00005	0.005	0.000204	0.0015	0.0015
2748-18-COMP-BOTTOM-12	0.0203	0.00025	0.15	21.7	0.00578	2.89	0.000005	4.46	0.714	57.8	0.00005	0.00005	0.005	0.000198	0.002	0.0015
2748-18-COMP-BOTTOM-13	0.0185	0.00025	0.15	17.6	0.0054	3.14	0.000005	3.66	0.623	37.9	0.00005	0.00005	0.005	0.0002	0.0022	0.0015
2748-18-COMP-BOTTOM-14	0.014	0.00025	0.15	14.8	0.00476	3.19	0.000005	3.02	0.478	29.2	0.00005	0.00005	0.005	0.000187	0.0021	0.0015
2748-18-COMP-BOTTOM-15	0.0134	0.00025	0.15	15.9	0.00467	3.14	0.000018	3.16	0.468	25.7	0.00005	0.00005	0.005	0.000303	0.0025	0.0015
2748-18-COMP-BOTTOM-16	0.0123	0.00025	0.15	13.4	0.00447	3.07	0.000005	2.8	0.437	23.5	0.00005	0.00005	0.005	0.000395	0.0024	0.0015
2748-18-COMP-BOTTOM-17	0.0113	0.00025	0.15	12.6	0.00416	3.14	0.000005	2.46	0.41	21.2	0.00005	0.00005	0.005	0.000394	0.0026	0.0015
2748-18-COMP-BOTTOM-18	0.0109	0.00025	0.15	12.4	0.004	3.18	0.000005	2.36	0.395	19.5	0.00005	0.00005	0.005	0.000363	0.0025	0.0015
2748-18-COMP-BOTTOM-19	0.0108	0.00025	0.15	12.9	0.00353	3.21	0.000005	2.34	0.407	17.4	0.00005	0.00005	0.005	0.000387	0.0023	0.0015
2748-18-COMP-BOTTOM-20	0.0112	0.00025	0.15	12.9	0.00359	3.25	0.000005	2.25	0.441	16.3	0.00005	0.00005	0.005	0.000496	0.0023	0.0015
2748-18-COMP-BOTTOM-21	0.00907	0.00025	0.15	12.1	0.00306	3.38	0.000005	1.86	0.369	14.9	0.00005	0.00005	0.005	0.000404	0.0021	0.0015
2748-18-COMP-BOTTOM-22	0.00871	0.00025	0.15	11	0.00286	3.21	0.000005	1.68	0.38	13.6	0.00005	0.00005	0.005	0.000474	0.0018	0.0015
2748-18-COMP-BOTTOM-23	0.0104	0.00025	0.15	11.9	0.00409	2.99	0.000092	1.76	0.435	18.2	0.00005	0.00005	0.005	0.000857	0.0014	0.0015
2748-18-COMP-BOTTOM-24	0.0104	0.00025	0.15	10.5	0.00416	2.86	0.000037	1.57	0.408	14.6	0.00005	0.00005	0.005	0.000924	0.0015	0.0015
2748-18-COMP-BOTTOM-25	0.0104	0.00025	0.15	10.8	0.0039	2.89	0.000052	1.5	0.402	13	0.00005	0.00005	0.005	0.00104	0.0014	0.0015
2748-18-COMP-BOTTOM-26	0.0104	0.00025	0.15	10.6	0.00338	2.87	0.000016	1.55	0.384	11.9	0.00005	0.00005	0.005	0.00112	0.0016	0.0015
2748-18-COMP-BOTTOM-27	0.0108	0.00025	0.15	10.9	0.00324	3.05	0.000034	1.49	0.401	12.3	0.00005	0.00005	0.005	0.00117	0.0015	0.0015
2748-18-COMP-BOTTOM-28	0.0119	0.00025	0.15	11	0.00348	2.87	0.000052	1.47	0.44	12.9	0.00005	0.00005	0.005	0.00132	0.0013	0.0015
2748-18-COMP-BOTTOM-29	0.0133	0.00025	0.15	11	0.00381	2.91	0.000051	1.46	0.454	13.5	0.00005	0.00005	0.005	0.00163	0.0011	0.0015
2748-18-COMP-BOTTOM-30	0.0138	0.00025	0.15	11.3	0.00386	2.8	0.000022	1.36	0.433	12.1	0.000031	0.00005	0.005	0.00161	0.0011	0.0015
2748-18-COMP-BOTTOM-31	0.0141	0.00025	0.15	9.87	0.00354	2.81	0.000005	1.26	0.438	11.2	0.00005	0.00005	0.005	0.00164	0.001	0.0015
2748-18-COMP-BOTTOM-32	0.0154	0.00025	0.15	10.5	0.00335	2.89	0.000028	1.26	0.449	11.7	0.000032	0.00005	0.005	0.00185	0.0011	0.0015
2748-18-COMP-BOTTOM-33	0.016	0.00064	0.15	10.4	0.00335	2.84	0.000031	1.22	0.473	11.5	0.000031	0.00005	0.005	0.00181	0.001	0.0015
2748-18-COMP-BOTTOM-34	0.016	0.00025	0.15	10.3	0.00311	2.78	0.000016	1.37	0.45	11.3	0.000035	0.00005	0.005	0.00175	0.0005	0.0015
2748-18-COMP-BOTTOM-35	0.0175	0.00025	0.15	10.2	0.00321	2.88	0.000018	1.17	0.576	11	0.000036	0.00005	0.005	0.00189	0.0005	0.0015
2748-18-COMP-BOTTOM-36	0.0188	0.00025	0.15	10.4	0.00329	2.75	0.000018	1.17	0.456	11.1	0.000035	0.00005	0.005	0.002	0.0005	0.0015
2748-18-COMP-BOTTOM-37	0.0191	0.00025	0.15	10.8	0.00321	2.7	0.000011	1.14	0.483	10.8	0.000032	0.00005	0.005	0.00194	0.0005	0.0015
2748-18-COMP-BOTTOM-38	0.0188	0.00025	0.15	10.1	0.00302	2.69	0.000005	1.1	0.477	10.1	0.000035	0.00005	0.005	0.00189	0.0005	0.0015
2748-18-COMP-BOTTOM-39	0.0203	0.00025	0.15	9.84	0.00302	2.87	0.000021	1.08	0.498	10.8	0.000036	0.00005	0.005	0.00207	0.0005	0.0015
2748-18-COMP-BOTTOM-40	0.022	0.00025	0.15	10.1	0.00302	2.99	0.000012	1.06	0.511	11	0.00004	0.00005	0.005	0.00197	0.0005	0.0015
2748-18-COMP-BOTTOM-41	0.0228	0.00025	0.15	9.5	0.00294	2.78	0.00002	1.12	0.496	11.1	0.000039	0.00005	0.005	0.00214	0.0005	0.0015
2748-18-COMP-BOTTOM-42	0.0235	0.00025	0.15	9.99	0.00313	2.77	0.000013	1.09	0.501	10.9	0.000038	0.00005	0.005	0.002	0.0005	0.0015
2748-18-COMP-BOTTOM-43	0.0228	0.00025	0.15	9.52	0.00296	2.79	0.000005	1.07	0.482	10.5	0.000036	0.00005	0.005	0.00193	0.0005	0.0015
2748-18-COMP-BOTTOM-44	0.0226	0.00025	0.15	9.16	0.0028	2.78	0.000005	1.09	0.518	10	0.000039	0.00005	0.005	0.0019	0.0005	0.0015
2748-18-COMP-BOTTOM-45	0.0224	0.00025	0.15	8.63	0.00249	2.9	0.000005	1.08	0.467	9.72	0.000036	0.00005	0.005	0.00177	0.0005	0.0015
2748-18-COMP-BOTTOM-46	0.022	0.00025	0.15	8.6	0.00242	2.83	0.000005	1.05	0.495	9.85	0.000034	0.00005	0.005	0.00162	0.0005	0.0015
2748-18-COMP-BOTTOM-47	0.0212	0.00025	0.15	8.16	0.00218	2.78	0.000005	1.11	0.464	9.54	0.000036	0.00005	0.005	0.00166	0.0005	0.0015
2748-18-COMP-BOTTOM-48	0.0225	0.00025	0.15	8.13	0.00221	2.74	0.000005	1.12	0.52	9.88	0.000034	0.00005	0.005	0.00173	0.0005	0.0015
2748-18-COMP-BOTTOM-49	0.0236	0.00025	0.15	7.92	0.00235	2.71	0.000005	1.17	0.503	9.62	0.000035	0.00005	0.005	0.00167	0.0005	0.0015
2748-18-COMP-BOTTOM-50	0.0207	0.00025	0.15	7.53	0.00194	2.74	0.000005	1.13	0.453	8.98	0.000034	0.00005	0.005	0.00149	0.0005	0.0015
2748-18-COMP-BOTTOM-51	0.0212	0.00025	0.15	7.29	0.00193	2.73	0.000005	1.14	0.453	8.73	0.000034	0.00005	0.005	0.00144	0.0005	0.0015
2748-18-COMP-BOTTOM-52	0.0209	0.00025	0.15	7.65	0.0019	2.73	0.000005	1.18	0.585	8.86	0.000032	0.00005	0.005	0.00141	0.0005	0.0015
2748-18-COMP-BOTTOM-53	0.0224	0.00025	0.15	7.11	0.00176	2.58	0.000005	1.17	0.559	8.35	0.000033	0.00005	0.005	0.00147	0.0005	0.0015
2748-18-COMP-BOTTOM-54	0.0201	0.00025	0.15	7.2	0.00161	2.57	0.000005	1.21	0.514	7.96	0.000031	0.00005	0.005	0.00129	0.0005	0.0036
2748-18-COMP-BOTTOM-55	0.0197	0.00025	0.15	6.85	0.00155	2.56	0.000005	1.17	0.474	7.47	0.000028	0.00005	0.005	0.00125	0.0005	0.0015
2748-18-COMP-BOTTOM-56	0.019	0.00025	0.15	6.47	0.00145	2.57	0.000005	1.19	0.471	7.5	0.00003	0.00005	0.005	0.00114	0.0005	0.0015
2748-18-COMP-BOTTOM-57	0.0172	0.00025	0.15	6.36	0.00118	2.59	0.000005	1.17	0.455	6.98	0.000028	0.00005	0.005	0.000985	0.0005	0.0015
2748-18-COMP-BOTTOM-58	0.0173	0.00025	0.15	6.7	0.00106	2.59	0.000005	1.15	0.497	7.17	0.000028	0.00005	0.005	0.000917	0.001	0.0015

Appendix 6.2-3. Tailing Subaqueous Column Supernatant and Porewater Concentrations - Data

	Dissolved Metals															
Sample ID	Molybdenum (Mo) mg/L	Nickel (Ni) mg/L	Phosphorus (P) mg/L	Potassium (K) mg/L	Selenium (Se) mg/L	Silicon (Si) mg/L	Silver (Ag) mg/L	Sodium (Na) mg/L	Strontium (Sr) mg/L	Sulphur (S) mg/L	Thallium (Tl) mg/L	Tin (Sn) mg/L	Titanium (Ti) mg/L	Uranium (U) mg/L	Vanadium (V) mg/L	Zinc (Zn) mg/L
2748-18-COMP-BOTTOM-59	0.01705	0.00025	0.15	6.39	0.00098	2.515	0.000005	1.13	0.4715	6.585	0.0000275	0.00005	0.005	0.000852	0.00075	0.0015
2748-18-COMP-BOTTOM-60	0.0168	0.00025	0.15	6.08	0.0009	2.44	0.000005	1.11	0.446	6	0.000027	0.00005	0.005	0.000787	0.0005	0.0015
2748-18-COMP-BOTTOM-61	0.0166	0.00025	0.15	6.64	0.00082	2.44	0.000005	1.14	0.463	6.61	0.000027	0.00005	0.005	0.000731	0.0005	0.0015
2748-18-COMP-BOTTOM-62	0.0165	0.00025	0.15	6.27	0.0008	2.48	0.000005	1.1	0.496	6.21	0.000029	0.00005	0.005	0.000841	0.0005	0.0033
2748-18-COMP-BOTTOM-63	0.0164	0.00025	0.15	6.42	0.00117	2.43	0.000005	1.1	0.525	7.3	0.000033	0.00005	0.005	0.00138	0.0005	0.0015
2748-18-COMP-BOTTOM-64	0.0187	0.00025	0.15	6.76	0.00144	2.46	0.000005	1.14	0.565	7.95	0.000035	0.00005	0.005	0.00134	0.0005	0.0015
2748-18-COMP-BOTTOM-65	0.0172	0.00025	0.15	6.94	0.00146	2.37	0.000014	1.15	0.549	7.65	0.000035	0.00005	0.005	0.00125	0.0005	0.0015
2748-18-COMP-BOTTOM-66	0.0169	0.00025	0.15	6.12	0.00155	2.36	0.000005	1.01	0.565	7.13	0.000038	0.00005	0.005	0.00125	0.0005	0.0015
2748-18-COMP-BOTTOM-67	0.0155	0.00025	0.15	7.07	0.0015	2.23	0.000005	1.08	0.604	7.16	0.000034	0.00005	0.005	0.00115	0.0005	0.0015
2748-18-COMP-BOTTOM-68	0.0155	0.00025	0.15	6.47	0.00161	2.23	0.000005	1.02	0.559	7.22	0.00004	0.00005	0.005	0.00126	0.0005	0.0015
2748-18-COMP-BOTTOM-69	0.0139	0.00025	0.15	6.44	0.00158	2.21	0.000005	1.01	0.536	6.45	0.000037	0.00005	0.005	0.00111	0.0005	0.0015
2748-18-COMP-BOTTOM-70	0.0147	0.00025	0.15	6.79	0.00158	2.15	0.000005	1.04	0.592	6.41	0.000039	0.00005	0.005	0.00119	0.0005	0.0015
2748-18-COMP-BOTTOM-71	0.0143	0.00025	0.15	6.3	0.00155	2.12	0.000005	0.991	0.559	6.7	0.000035	0.00005	0.005	0.0012	0.0005	0.0015
2748-18-COMP-BOTTOM-72	0.0146	0.00025	0.15	6.61	0.00153	2.13	0.000005	0.973	0.58	6.62	0.000036	0.00005	0.005	0.00116	0.0005	0.0015
2748-18-COMP-BOTTOM-73	0.0141	0.00025	0.15	6.51	0.00144	2.07	0.000005	0.949	0.603	6.42	0.000036	0.00005	0.005	0.00109	0.0005	0.0015
2748-18-COMP-BOTTOM-74	0.0135	0.00025	0.15	6.61	0.00142	2.03	0.000005	0.965	0.573	6.27	0.000036	0.00005	0.005	0.00111	0.0005	0.0015
2748-18-COMP-BOTTOM-75	0.0132	0.00025	0.15	6.62	0.00143	2	0.000005	0.927	0.581	6.36	0.000035	0.00005	0.005	0.00107	0.0005	0.0015
2748-18-COMP-BOTTOM-76	0.0133	0.00025	0.15	6.715	0.001455	1.955	0.000005	0.9225	0.5935	6.22	0.0000365	0.00005	0.005	0.001075	0.0005	0.0015
2748-18-COMP-BOTTOM-77	0.0133	0.00025	0.15	6.715	0.001455	1.955	0.000005	0.9225	0.5935	6.22	0.0000365	0.00005	0.005	0.001075	0.0005	0.0015
2748-18-COMP-BOTTOM-78	0.0134	0.00025	0.15	6.81	0.00148	1.91	0.000005	0.918	0.606	6.08	0.000038	0.00005	0.005	0.00108	0.0005	0.0015
2748-18-COMP-BOTTOM-79	0.0133	0.00025	0.15	6.79	0.0014175	1.9075	0.000005	0.90225	0.604	6.085	0.00003775	0.00005	0.005	0.001043	0.0005	0.0015
2748-18-COMP-BOTTOM-80	0.0132	0.00025	0.15	6.77	0.001355	1.905	0.000005	0.8865	0.602	6.09	0.0000375	0.00005	0.005	0.001006	0.0005	0.0015
2748-18-COMP-BOTTOM-81	0.0131	0.00025	0.15	6.75	0.0012925	1.9025	0.000005	0.87075	0.6	6.095	0.00003725	0.00005	0.005	0.000969	0.0005	0.0015
2748-18-COMP-BOTTOM-82	0.013	0.00025	0.15	6.73	0.00123	1.9	0.000005	0.855	0.598	6.1	0.000037	0.00005	0.005	0.000932	0.0005	0.0015
2748-18-COMP-BOTTOM-83	0.012825	0.00025	0.15	6.7575	0.0012	1.8775	0.000005	0.8515	0.60225	5.9225	0.00003725	0.00005	0.005	0.000937	0.0005	0.0015
2748-18-COMP-BOTTOM-84	0.01265	0.00025	0.15	6.785	0.00117	1.855	0.000005	0.848	0.6065	5.745	0.0000375	0.00005	0.005	0.000942	0.0005	0.0015
2748-18-COMP-BOTTOM-85	0.012475	0.00025	0.15	6.8125	0.00114	1.8325	0.000005	0.8445	0.61075	5.5675	0.00003775	0.00005	0.005	0.000947	0.0005	0.0015
2748-18-COMP-BOTTOM-86	0.0123	0.00025	0.15	6.84	0.00111	1.81	0.000005	0.841	0.615	5.39	0.000038	0.00005	0.005	0.000952	0.0005	0.0015
2748-18-COMP-BOTTOM-87	0.0121	0.00025	0.15	6.8975	0.0010375	1.8	0.000005	0.80425	0.641	5.09	0.000038	0.00005	0.005	0.00091575	0.0005	0.0015
2748-18-COMP-BOTTOM-88	0.0119	0.00025	0.15	6.955	0.000965	1.79	0.000005	0.7675	0.667	4.79	0.000038	0.00005	0.005	0.0008795	0.0005	0.0015
2748-18-COMP-BOTTOM-89	0.0117	0.00025	0.15	7.0125	0.0008925	1.78	0.000005	0.73075	0.693	4.49	0.000038	0.00005	0.005	0.00084325	0.0005	0.0015
2748-18-COMP-BOTTOM-90	0.0122	0.00025	0.15	7.15	0.00095	1.83	0.000005	0.831	0.629	5.05	0.000034	0.00005	0.005	0.000888	0.0005	0.0015
2748-18-COMP-BOTTOM-91	0.0122	0.00025	0.15	7.15	0.00095	1.83	0.000005	0.831	0.629	5.05	0.000034	0.00005	0.005	0.000888	0.0005	0.0015
2748-18-COMP-BOTTOM-92	0.0122	0.00025	0.15	7.15	0.00095	1.83	0.000005	0.831	0.629	5.05	0.000034	0.00005	0.005	0.000888	0.0005	0.0015
2748-18-COMP-BOTTOM-93	0.0122	0.00025	0.15	7.15	0.00095	1.83	0.000005	0.831	0.629	5.05	0.000034	0.00005	0.005	0.000888	0.0005	0.0015
2748-18-COMP-BOTTOM-94	0.013	0.00025	0.15	7.15	0.00086	1.89	0.000005	0.853	0.712	4.9	0.000039	0.00005	0.005	0.000918	0.0005	0.0015
2748-18-COMP-BOTTOM-95	0.013	0.00025	0.15	7.15	0.00086	1.89	0.000005	0.853	0.712	4.9	0.000039	0.00005	0.005	0.000918	0.0005	0.0015
2748-18-COMP-BOTTOM-96	0.013	0.00025	0.15	7.15	0.00086	1.89	0.000005	0.853	0.712	4.9	0.000039	0.00005	0.005	0.000918	0.0005	0.0015
2748-18-COMP-BOTTOM-97	0.013	0.00025	0.15	7.15	0.00086	1.89	0.000005	0.853	0.712	4.9	0.000039	0.00005	0.005	0.000918	0.0005	0.0015
2748-18-COMP-BOTTOM-98	0.0124	0.00025	0.15	7.5	0.00087	1.78	0.000005	0.882	0.724	4.64	0.00004	0.00005	0.005	0.000814	0.0005	0.0015
2748-18-COMP-BOTTOM-99	0.0124	0.00025	0.15	7.5	0.00087	1.78	0.000005	0.882	0.724	4.64	0.00004	0.00005	0.005	0.000814	0.0005	0.0015
2748-18-COMP-BOTTOM-100	0.0124	0.00025	0.15	7.5	0.00087	1.78	0.000005	0.882	0.724	4.64	0.00004	0.00005	0.005	0.000814	0.0005	0.0015
2748-18-COMP-BOTTOM-101	0.0124	0.00025	0.15	7.5	0.00087	1.78	0.000005	0.882	0.724	4.64	0.00004	0.00005	0.005	0.000814	0.0005	0.0015
2748-18-COMP-BOTTOM-102	0.0115	0.00025	0.15	7.07	0.00082	1.77	0.000005	0.694	0.719	4.19	0.000038	0.00005	0.005	0.000807	0.0005	0.0015
	0.01252	0.00025	0.15	7.29	0.000868	1.846	0.000005	0.8646	0.7168	4.796	0.0000398	0.00005	0.005	0.0008348	0.0005	0.0015

Appendix 6.2-4

Tailings Subaqueous Column Supernatant and Porewater Concentrations - Graphs

Rescan™
Engineers and Scientists

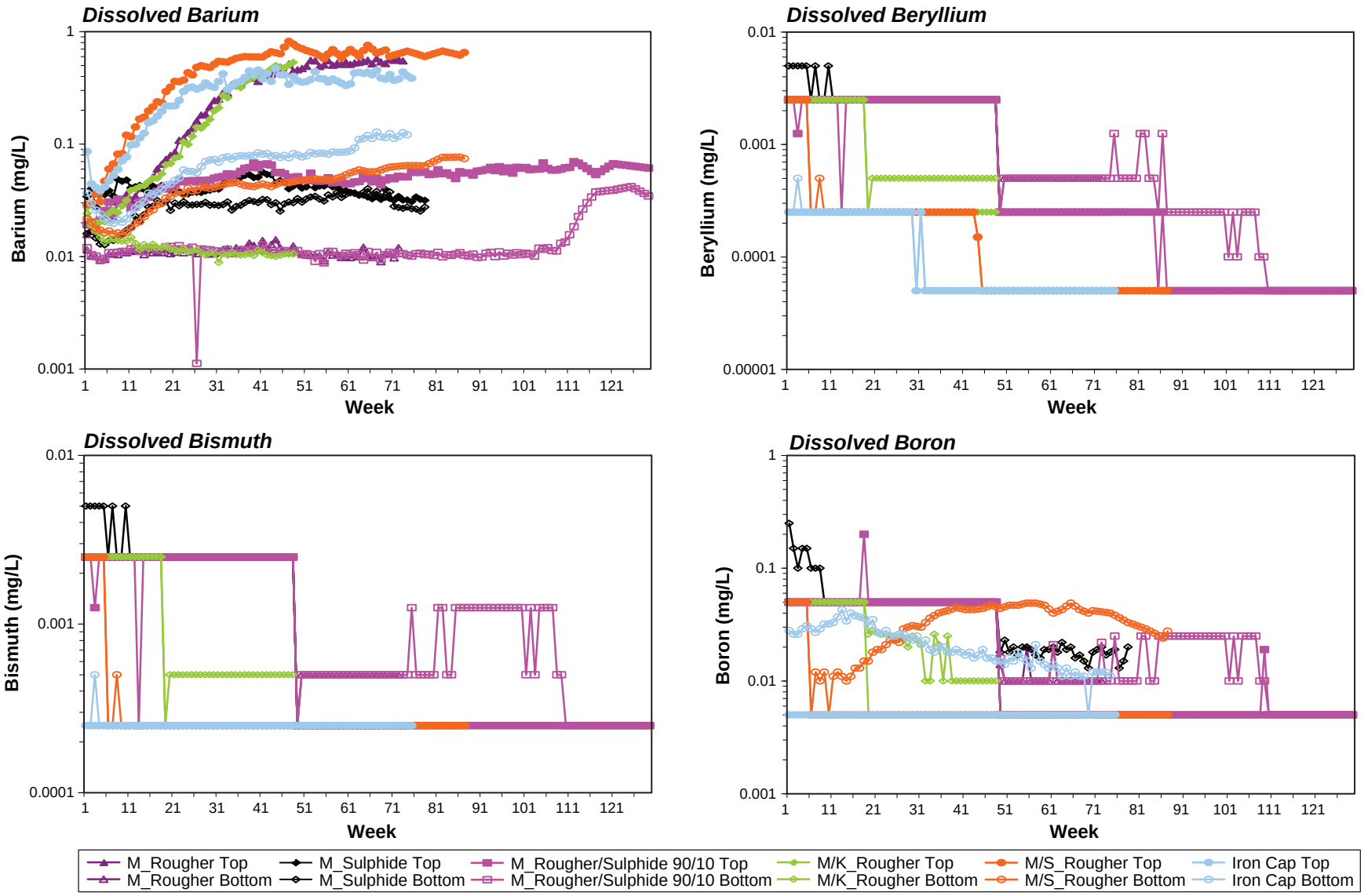


Figure 1

SEABRIDGE GOLD
KSM PROJECT

Barium, Beryllium, Bismuth, and Boron, Subaqueous Tailing

Figure 1

Rescan™ Engineers & Scientists

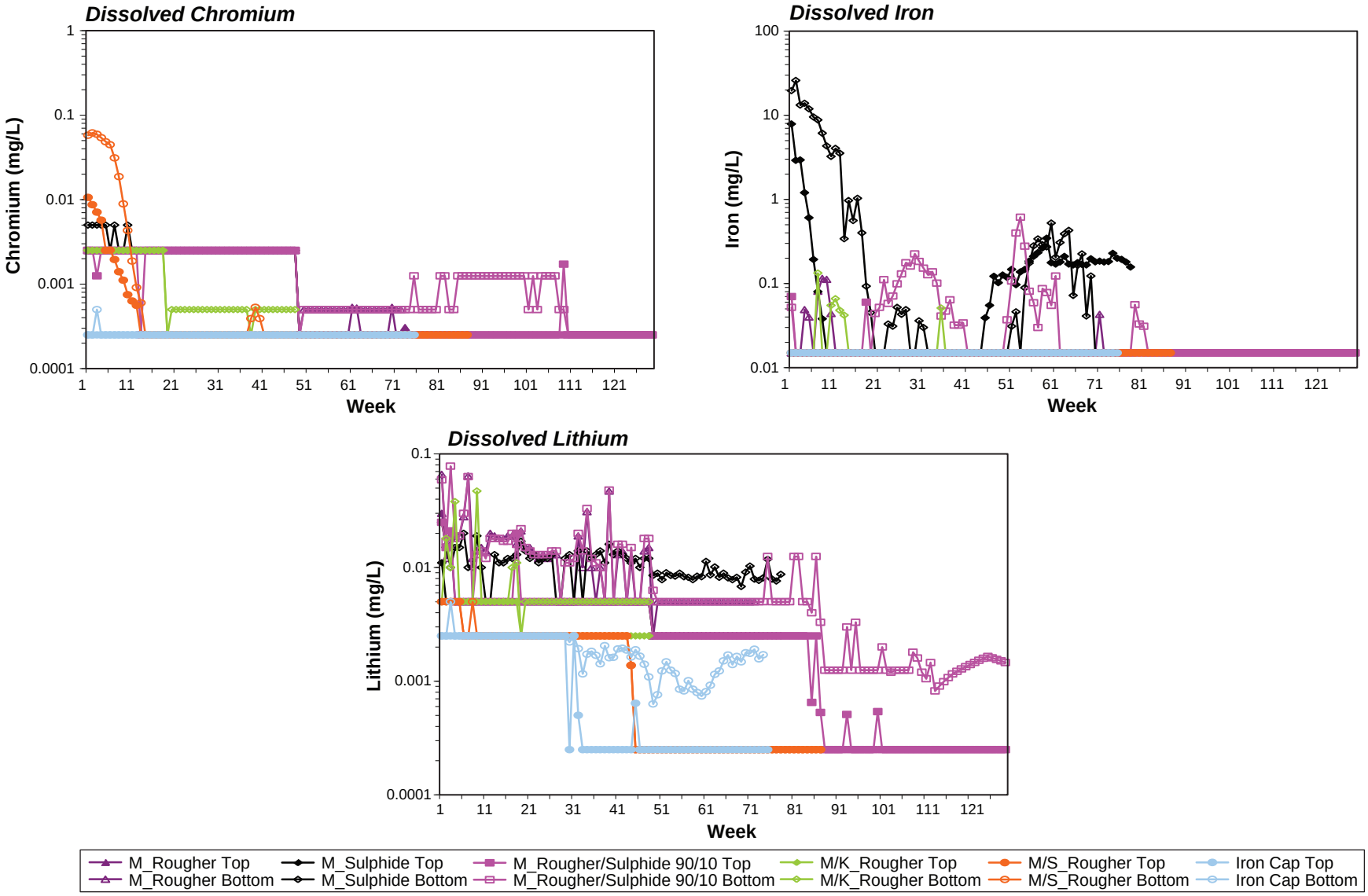


Figure 2

SEABRIDGE GOLD
KSM PROJECT

Chromium, Iron, and Lithium, Subaqueous Tailing

Figure 2

Rescan™ Engineers & Scientists

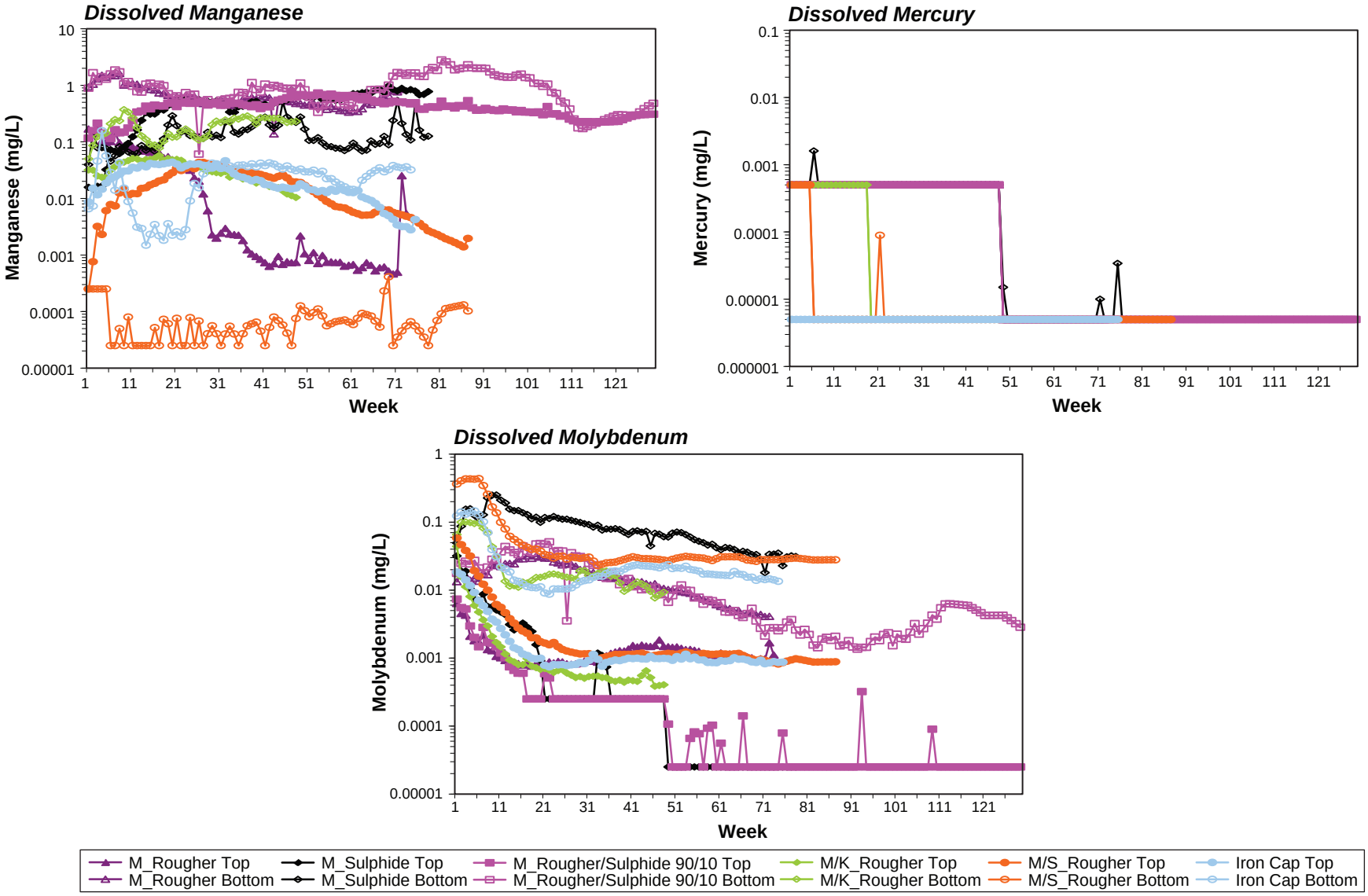


Figure 3

SEABRIDGE GOLD
KSM PROJECT

Manganese, Mercury, and Molybdenum, Subaqueous Tailing

Figure 3

Rescan™ Engineers & Scientists

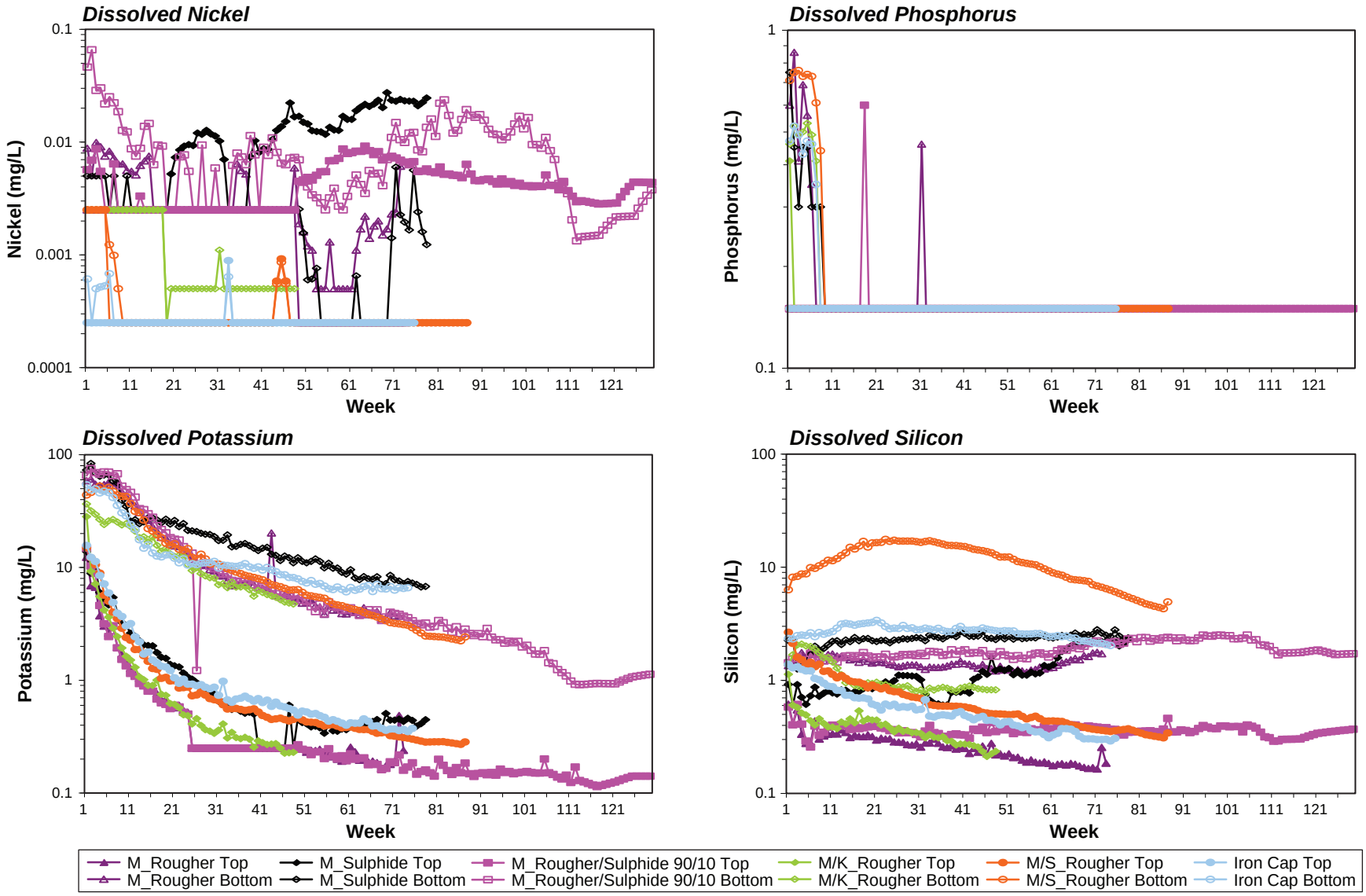


Figure 4

SEABRIDGE GOLD
KSM PROJECT

Nickel, Phosphorus, Potassium, and Silicon, Subaqueous Tailing

Figure 4

Rescan™ Engineers & Scientists

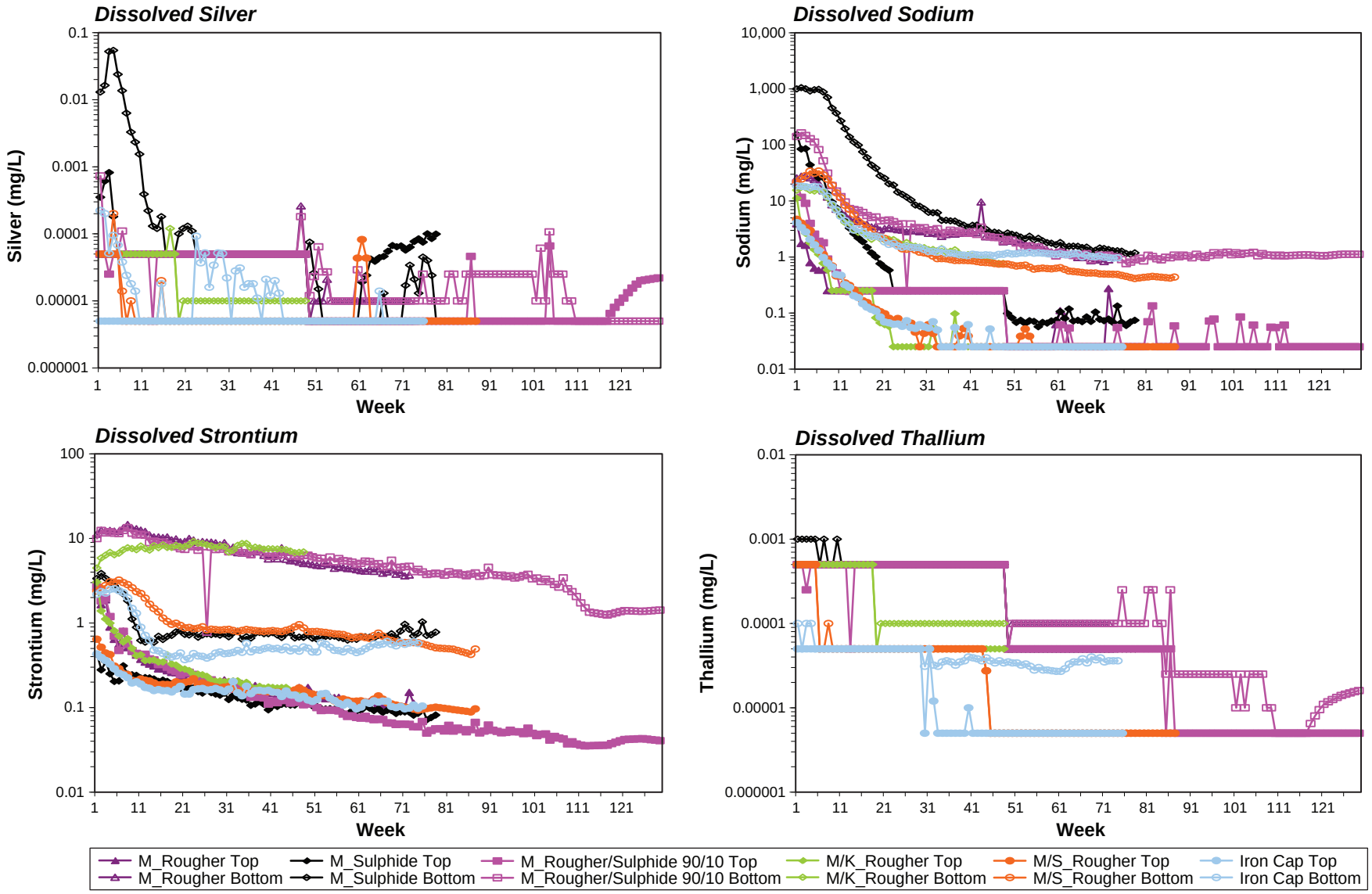


Figure 5

SEABRIDGE GOLD
KSM PROJECT

Silver, Sodium, Strontium, and Thallium, Subaqueous Tailing

Figure 5

Rescan™ Engineers & Scientists

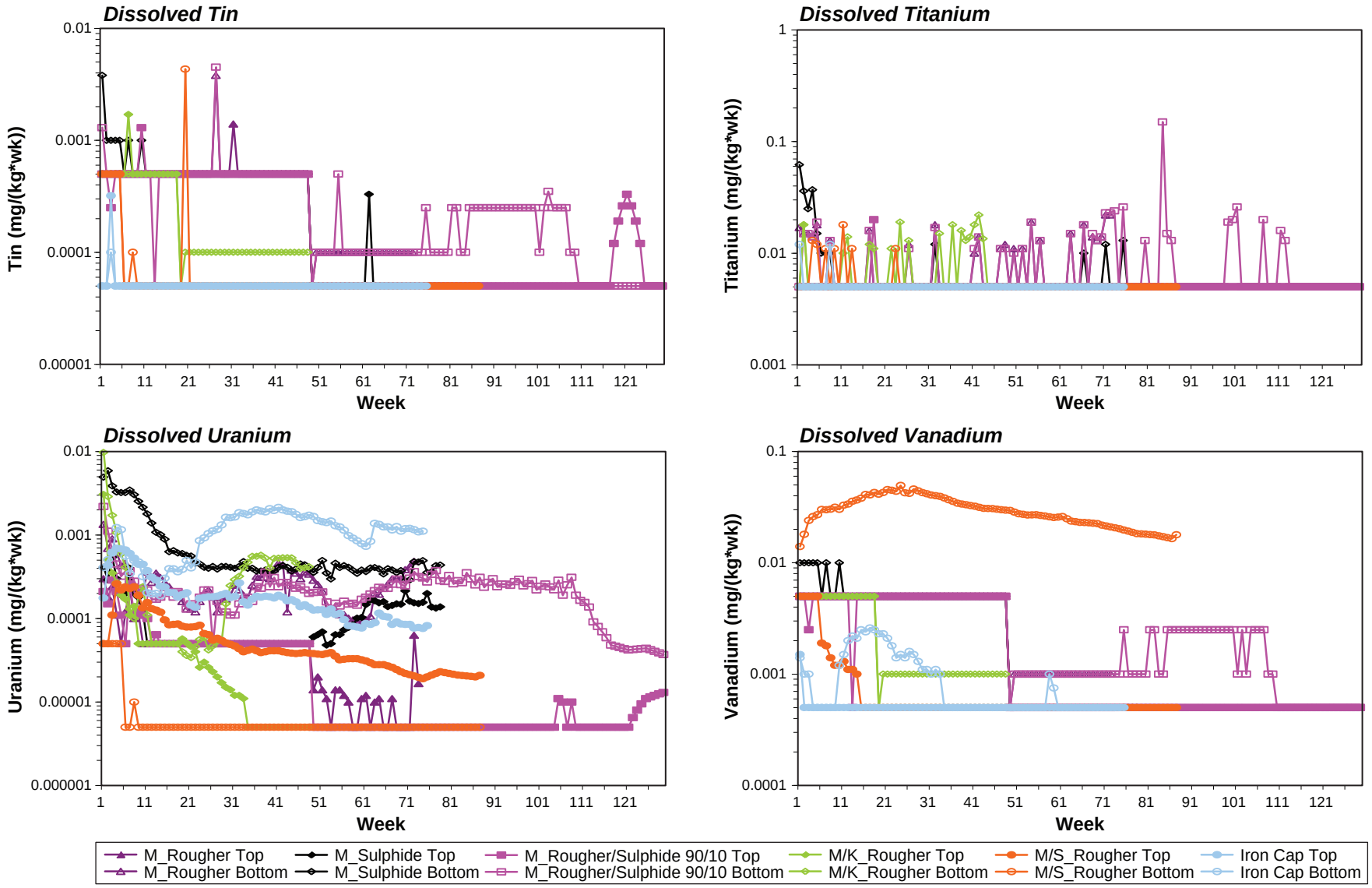


Figure 6

SEABRIDGE GOLD
KSM PROJECT

Tin, Titanium, Uranium, and Vanadium, Subaqueous Tailing

Figure 6

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Appendix 6.2-5

Tailing Aging Tests Supernatant Concentrations - Data

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Appendix 6.2-5. Tailing Aging Tests Supernatant Concentrations - Data

Sample ID	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher	Rougher	Rougher	Rougher	Rougher	Sulphide	Sulphide	Sulphide	Sulphide	Sulphide	Sulphide	Sulphide	Sulphide
Days	0	1	7	14	29	60	90	120	0	1	7	14	30	0	1	7	14	29	60	90	120
Date Sampled	11-Sep-09	16-Sep-09	22-Sep-09	29-Sep-09	15-Oct-09	15-Nov-09	14-Dec-09	12-Jan-09	28-Jul-09	4-Aug-09	11-Aug-09	18-Aug-09	4-Sep-09	11-Sep-09	16-Sep-09	22-Sep-09	29-Sep-09	15-Oct-09	15-Nov-09	14-Dec-09	12-Jan-09
ALS Sample ID	L817366-1	L818926-1	L821541-1	L824404-1	L830304-1	L840459-1	L848338-1	L853729-1	L797886-1	L800596-1	L803854-1	L807084-1	L814896-1	L817366-2	L818962-1	L821544-1	L824400-1	L830309-1	L840458-1	L848337-1	L853733-1
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Physical Tests																					
Conductivity	2430	3030	3090	3160	3470	3260	3350	3760	2390	2650	2740	2860	3000	5220	5470	5470	5570	5920	5740	6250	7230
Hardness (as $CaCO_3$)	1570	1380	1480	1630	1620	1530	1590	1410	1490	1730	1710	1870	1740	452	504	531	570	449	557	587	961
pH	7.25	7.76	7.43	7.94	7.74	8.13	7.69	6.86	7.72	7.41	7.37	7.69	7.76	8.42	8.53	8.15	7.91	7.88	7.8	7.79	7.8
Total Suspended Solids	3.1	8.3	7.3	9.3	3.3	5	6	103	5.7	37	12800	491	8.2	6.4	7	5.3	1.5	1.5	2.5	2.5	4
Total Dissolved Solids	2460	2530	3230	2950	3340	3180	3260	3610	2280	2590	2740	2850	3080	4700	4570	4490	4680	5110	5490	6390	6420
Turbidity	0.65	11.2	0.34	2.95	2.47	2.26	2.18	77.9	3.2	44.9	>4000	320	1.69	7.65	7.02	3.65	2.65	1.89	1.49	2	4.64
Anions and Nutrients																					
Acidity (as $CaCO_3$)	6.3	2.9	5.7	5.9	7.5	4	6.2	15.6	8.1	2.9	-	4.2	5.4	0.5	0.5	0.5	3	4.7	5.7	6.3	9.8
Alkalinity, Bicarbonate (as $CaCO_3$)	0	-	-	-	-	-	-	-	0	31.6	31.9	37.5	47	0	-	-	-	-	-	-	-
Alkalinity, Carbonate (as $CaCO_3$)	0	-	-	-	-	-	-	-	0	1	1	1	1	0	-	-	-	-	-	-	-
Alkalinity, Hydroxide (as	0	-	-	-	-	-	-	-	0	1	1	1	1	0	-	-	-	-	-	-	-
Alkalinity, Total (as $CaCO_3$)	31.4	46.3	97.4	118	101	99.7	79.6	45.1	21.9	31.6	31.9	37.5	47	235	263	271	266	259	258	227	205
Ammonia as N	0.01	8.04	8.44	7.93	7.44	6.81	61.3	23.1	0.048	0.0025	0.01	0.01	0.0025	71.3	61.4	68.6	62.1	70.8	11	59	50
Bromide (Br)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.25	0.25	0.25	0.5	0.25	0.5	0.5	1.25	1.25	1.25	0.5	0.5	0.5	0.5
Chloride (Cl)	16	17	21	20	24	18	21	31.6	13.1	16.8	20	16.9	23	13	12.5	29	12.5	17	14	16	19
Fluoride (F)	0.72	0.47	0.2	0.329	0.617	0.669	0.72	1.06	0.4	0.61	0.43	0.43	0.68	0.2	0.354	0.354	0.56	0.347	0.371	0.365	0.449
Nitrate (as N)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.025	0.16	0.025	0.05	0.025	0.05	0.05	0.125	0.125	0.125	0.05	0.05	0.05	0.05
Nitrite (as N)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.005	0.057	0.005	0.01	0.005	0.01	0.01	0.025	0.025	0.025	0.046	0.01	0.01	0.01
Total Kjeldahl Nitrogen	0	-	-	-	-	-	-	-	0	0.088	-	0.271	-	0	-	-	-	-	-	-	-
Total Nitrogen	0.05	45	35.4	30	29.7	26.4	28.9	24.8	2.07	0.088	0.11	0.271	0.11	332	422	344	339	394	332	366	403
Total Phosphate as P	0.264	0.145	0.09	0.0971	0.127	0.117	0.1	0.203	2.05	0.186	4.68	0.411	0.119	0.076	0.0254	0.0392	0.02	0.0057	0.0045	0.0034	0.0031
Sulfate (SO_4)	1650	1710	1760	1820	2100	2080	2140	2410	1470	1710	1780	1880	1940	1620	1650	1660	1720	1950	2080	2320	3230
Cyanides																					
Cyanide, Weak Acid Diss	-	0.0506	0.0581	0.0283	0.0224	0.0543	0.0337	0.0101	-	-	-	-	-	2.21	1.25	1.69	1.45	0.456	0.211	0.203	0.361
Cyanide, Total	-	14	14.4	7.6	2.45	0.0644	0.0677	0.0154	-	-	-	-	-	244	236	133	237	264	224	186	142
Thiocyanate (SCN)	-	33.3	33.1	32.1	32.7	36.8	23.4	0.6	-	-	-	-	-	234	226	250	268	272	310	332	325
Cyanide, Free	-	0.0236	0.0231	0.0068	0.0065	0.0091	0.0069	0.0025	-	-	-	-	-	0.0248	0.0545	0.0181	0.248	0.0627	0.151	0.0813	0.054
Organic / Inorganic Carbon																					
Total Organic Carbon	30.6	43.6	33.9	19.6	19.2	19.4	13.4	6.66	15.4	47.8	31.6	11.4	6.32	175	189	185	170	194	185	199	211
Total Metals																					
Aluminum	0.005	0.106	0.005	0.005	0.018	0.005	0.005	1.6	0.114	0.986	0.651	3.38	0.005	0.157	0.187	0.038	0.027	0.01	0.259	0.01	0.02
Antimony	0.0005	0.0106	0.013	0.0134	0.0098	0.0035	0.0021	0.0023	0.0005	0.0005	0.0005	0.0005	0.0005	0.142	0.0976	0.15	0.143	0.0902	0.068	0.0197	0.0436
Arsenic	0.0005	0.001	0.0005	0.0011	0.0005	0.0005	0.0005	0.0058	0.0005	0.0005	0.0005	0.0016	0.0005	0.0216	0.0104	0.0084	0.0057	0.001	0.001	0.001	0.001
Barium	0.0173	0.0289	0.018	0.016	0.0115	0.00953	0.0103	0.227	0.061	0.155	0.108	0.465	0.0117	0.044	0.0486	0.0404	0.0291	0.015	0.0126	0.013	0.013
Beryllium	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.005	0.005	0.0025	0.005	0.005	0.005	0.005	0.005
Bismuth	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.005	0.005	0.0025	0.005	0.005	0.005	0.005	0.005
Boron	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Cadmium	0.00005	0.00017	0.00027	0.0004	0.00054	0.00092	0.00094	0.00109	0.00012	0.00005	0.0002	0.00016	0.00005	0.00065	0.00155	0.00103	0.0008	0.00072	0.00034	0.00017	0.00086
Calcium	613	579	581	610	674	615	633	495	560	672	672	723	739	167	187	200	209	154	209	230	350
Chromium	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0071	0.0025	0.005	0.005	0.0059	0.005	0.005	0.005	0.005	0.005
Cobalt	0.0005	0.0034	0.0037	0.0033	0.0026	0.0033	0.0039	0.0069	0.0005	0.0005	0.0005	0.0005	0.0005	0.0228	0.0296	0.0337	0.0419	0.0316	0.0432	0.0474	0.0544
Copper	0.0005	0.0265	0.0237	0.0133	0.0127	0.0147	0.0101	0.226	0.0013	0.0086	0.0051	0.0245	0.0016	3.96	2.46	1.82	1.08	0.215	0.0692	0.01	0.13
Iron	0.015	6.9	5.37	3.24	0.974	0.141	0.084	11.5	0.077	2.17	1.26	7.6	0.015	83.2	88.3	95.9	84.2	82	74.5	60.8	47.4
Lead	0.00025	0.00113	0.00025	0.00025	0.00025	0.00025	0.00025	0.0112	0.00025	0.00257	0.0013	0.00636	0.00025	0.0005	0.0005	0.00025	0.0005	0.0005	0.0005	0.0005	0.0005

Appendix 6.2-5. Tailing Aging Tests Supernatant Concentrations - Data

Sample ID	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher	Rougher	Rougher	Rougher	Rougher	Sulphide	Sulphide	Sulphide	Sulphide	Sulphide	Sulphide	Sulphide	Sulphide
Days	0	1	7	14	29	60	90	120	0	1	7	14	30	0	1	7	14	29	60	90	120
Date Sampled	11-Sep-09	16-Sep-09	22-Sep-09	29-Sep-09	15-Oct-09	15-Nov-09	14-Dec-09	12-Jan-09	28-Jul-09	4-Aug-09	11-Aug-09	18-Aug-09	4-Sep-09	11-Sep-09	16-Sep-09	22-Sep-09	29-Sep-09	15-Oct-09	15-Nov-09	14-Dec-09	12-Jan-09
ALS Sample ID	L817366-1	L818926-1	L821541-1	L824404-1	L830304-1	L840459-1	L848338-1	L853729-1	L797886-1	L800596-1	L803854-1	L807084-1	L814896-1	L817366-2	L818962-1	L821544-1	L824400-1	L830309-1	L840458-1	L848337-1	L853733-1
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Total Metals *(continued)*																					
Lithium	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.05	0.05	0.025	0.05	0.05	0.05	0.05	0.05
Magnesium	7.38	9.51	9.81	10.3	12.4	14.3	16.4	24.2	3.63	10.9	10.8	14.3	15.6	3.52	4.38	4.36	5.22	4.63	7.39	9.37	14.3
Manganese	0.312	0.181	0.307	0.502	0.711	1.17	1.89	2.64	0.0507	0.504	0.453	0.872	1.23	0.02	0.0336	0.0807	0.0387	0.0086	0.0172	0.0027	0.167
Mercury	0.000005	0.000025	0.000025	0.000005	0.000005	0.000057	0.00005	0.000018	0.000005	0.000005	0.000005	0.000005	0.000005	0.00005	0.0005	0.0005	0.00005	0.00013	0.005	0.0005	0.000154
Molybdenum	0.0259	0.0435	0.047	0.0512	0.044	0.0353	0.0285	0.0284	0.0242	0.0215	0.0222	0.0224	0.0183	0.143	0.139	0.174	0.185	0.136	0.211	0.0167	0.251
Nickel	0.0025	0.0103	0.0078	0.0058	0.0025	0.0066	0.0064	0.0111	0.0025	0.0172	0.008	0.014	0.0106	0.005	0.005	0.009	0.005	0.005	0.005	0.005	0.005
Phosphorus	0.31	0.15	0.15	0.15	0.15	0.15	0.15	0.15	1.13	0.15	0.15	0.15	0.15	0.3	0.45	0.75	0.3	0.3	0.3	0.3	0.3
Potassium	63.8	67	64.7	61.8	74.5	78.7	84.2	103	48.8	74.8	72.9	78	91.1	63.6	65	67.4	69.3	54.5	71.5	77	83.7
Selenium	0.0073	0.0083	0.0049	0.0044	0.0027	0.0032	0.0031	0.0038	0.0082	0.0018	0.0012	0.0016	0.0034	0.0882	0.0754	0.0755	0.0799	0.0336	0.0209	0.0198	0.0191
Silicon	0.888	1.65	1.62	2.1	2.18	1.57	1.67	4.85	0.797	3.35	2.08	6.59	1.59	1.67	2.3	1.84	1.69	1.35	1.17	1.44	2.41
Silver	0.00005	0.00005	0.00047	0.00005	0.00005	0.00017	0.00024	0.0009	0.00005	0.00005	0.00005	0.00012	0.00005	0.00689	0.00606	0.00662	0.0144	0.0124	0.00695	0.00564	0.0025
Sodium	38.5	174	170	177	216	208	222	315	25.1	26.8	30.2	32.2	36.4	1070	1180	1140	1080	1190	1230	1280	1550
Strontium	10.3	7.58	8.06	9.18	9.38	10.2	11.4	13.9	3.18	7.07	8.01	8.81	11	1.43	1.47	1.5	1.93	1.49	1.89	2.2	2.8
Sulfur	na	611	-	641	715	649	717	753	470	-	-	-	-	na	978	1010	1200	1140	1180	1480	1610
Thallium	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.0005	0.001	0.001	0.001	0.001	0.001
Tin	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.0005	0.001	0.001	0.001	0.001	0.001
Titanium	0.005	0.005	0.011	0.005	0.016	0.015	0.005	0.039	0.014	0.042	0.027	0.061	0.005	0.01	0.015	0.025	0.01	0.01	0.01	0.01	0.01
Uranium	0.00054	0.00077	0.0006	0.00056	0.00093	0.00095	0.00059	0.00051	0.00041	0.00138	0.00084	0.00139	0.00151	0.00159	0.00214	0.00242	0.00287	0.00303	0.00338	0.00363	0.0054
Vanadium	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.01	0.01	0.01
Zinc	0.005	0.005	0.005	0.005	0.005	0.014	0.005	0.033	0.028	0.005	0.005	0.017	0.005	0.01	0.01	0.005	0.01	0.01	0.01	0.01	0.01
Dissolved Metals																					
Aluminum	0.005	0.005	0.017	0.005	0.005	0.005	0.005	0.005	0.078	0.005	0.005	0.005	0.005	0.06	0.04	0.034	0.026	0.01	0.027	0.01	0.01
Antimony	0.0005	0.0097	0.0132	0.0137	0.0094	0.0036	0.0019	0.0011	0.0005	0.0005	0.0005	0.0005	0.0005	0.176	-	0.141	0.152	0.107	0.0676	0.0371	0.0451
Arsenic	0.0005	0.0005	0.0005	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0179	0.0087	0.0075	0.0048	0.001	0.001	0.001	0.001
Barium	0.0188	0.0176	0.0179	0.0163	0.0108	0.00928	0.00944	0.00788	0.0614	0.0174	0.0146	0.0132	0.0106	0.045	0.0437	0.0403	0.0306	0.0157	0.0123	0.0121	0.0112
Beryllium	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.005	0.005	0.0025	0.005	0.005	0.005	0.005	0.005
Bismuth	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.005	0.005	0.0025	0.005	0.005	0.005	0.005	0.005
Boron	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Cadmium	0.00011	0.00018	0.00028	0.00025	0.0005	0.00092	0.0009	0.00071	0.0001	0.00005	0.00005	0.00005	0.00005	0.0001	0.00055	0.00014	0.00051	0.00091	0.00032	0.00017	0.001
Calcium	618	538	577	633	627	591	611	523	589	676	668	728	673	175	195	205	219	172	211	220	361
Chromium	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.005	0.005	0.0025	0.005	0.005	0.005	0.005	0.005
Cobalt	0.0005	0.003	0.0035	0.0033	0.0025	0.0032	0.0038	0.0045	0.0005	0.0005	0.0005	0.0005	0.0005	0.0334	0.035	0.0367	0.0439	0.0356	0.0429	0.0452	0.0547
Copper	0.0005	0.0071	0.0103	0.005	0.0055	0.0095	0.0047	0.0038	0.0005	0.0005	0.0005	0.0005	0.0005	0.506	1.48	1.46	1.18	0.308	0.0576	0.02	0.0454
Iron	0.015	6.51	5.54	3.09	0.875	0.106	0.015	0.015	0.015	0.015	0.015	0.015	0.015	83.3	90.3	93.1	84.3	83.4	77.4	61.2	46.9
Lead	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.0005	0.0005	0.00025	0.0005	0.0005	0.0005	0.0005	0.0005
Lithium	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.05	0.05	0.025	0.05	0.05	0.05	0.05	0.05
Magnesium	7.41	8.75	9.74	10.8	11.8	13.5	16	25.2	3.75	10.4	10.1	11.9	14.4	3.65	4.43	4.46	5.45	5.02	7.41	8.87	14.8
Manganese	0.316	0.165	0.294	0.518	0.691	1.16	1.83	2.69	0.0529	0.447	0.413	0.652	1.14	0.0128	0.0188	0.0333	0.041	0.0232	0.0181	0.0047	0.083
Mercury	0.000005	0.000025	0.000005	0.000005	0.000015	0.00003	0.00005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00018	0.0005	0.0005	0.00005	0.00016	0.005	0.0005	0.000128
Molybdenum	0.026	0.0418	0.0469	0.0528	0.0421	0.0344	0.0273	0.0264	0.0249	0.0219	0.0221	0.0221	0.0163	0.113	0.145	0.167	0.204	0.216	0.214	0.0531	0.155
Nickel	0.0025	0.0099	0.007	0.0076	0.0025	0.0061	0.0066	0.0083	0.0025	0.0155	0.0087	0.0108	0.0107	0.005	0.005	0.0051	0.005	0.005	0.005	0.005	0.005
Phosphorus	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	2.19	0.15	0.15	0.15	0.15	0.3	0.45	0.75	0.3	0.3	0.3	0.3	0.3
Potassium	64.8	61.8	65.1	64.9	69.2	76.8	81.5	108	51.6	76.1	72.3	78.6	83.7	66.1	67.4	69.5	72	59.6	71.1	73.6	85.3
Selenium	0.0072	0.0084	0.0051	0.0044	0.0027	0.0025	0.0026	0.0031	0.0091	0.0023	0.0013	0.0011	0.001	0.159	0.104	0.087	0.073	0.0406	0.0216	0.0201	0.0174

Appendix 6.2-5. Tailing Aging Tests Supernatant Concentrations - Data

Sample ID	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher-Sulphide	Rougher	Rougher	Rougher	Rougher	Rougher	Sulphide	Sulphide	Sulphide	Sulphide	Sulphide	Sulphide	Sulphide	Sulphide
Days	0	1	7	14	29	60	90	120	0	1	7	14	30	0	1	7	14	29	60	90	120
Date Sampled	11-Sep-09	16-Sep-09	22-Sep-09	29-Sep-09	15-Oct-09	15-Nov-09	14-Dec-09	12-Jan-09	28-Jul-09	4-Aug-09	11-Aug-09	18-Aug-09	4-Sep-09	11-Sep-09	16-Sep-09	22-Sep-09	29-Sep-09	15-Oct-09	15-Nov-09	14-Dec-09	12-Jan-09
ALS Sample ID	L817366-1	L818926-1	L821541-1	L824404-1	L830304-1	L840459-1	L848338-1	L853729-1	L797886-1	L800596-1	L803854-1	L807084-1	L814896-1	L817366-2	L818962-1	L821544-1	L824400-1	L830309-1	L840458-1	L848337-1	L853733-1
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Dissolved Metals *(continued)*																					
Silicon	0.879	1.33	1.68	2.15	2.28	1.62	1.64	1.63	0.768	0.973	0.927	1.24	1.62	1.41	1.76	1.77	1.68	1.35	1.19	1.41	2.39
Silver	0.00005	0.00005	0.00049	0.00011	0.00005	0.00012	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0278	0.00835	0.00805	0.0154	0.0162	0.00732	0.00609	0.0026
Sodium	38.8	176	179	179	213	215	218	335	24.4	27.2	28.8	33.8	36.5	1040	1180	1090	1090	1210	1270	1270	1570
Strontium	10.3	7.29	7.92	9.49	8.97	9.99	10.9	15	3.28	7.02	7.92	8.92	10.2	1.5	1.52	1.53	2	1.55	1.9	1.98	2.82
Sulfur	na	682	-	650	727	689	713	806	497	-	-	-	-	na	1120	1340	1220	1250	1320	1470	1680
Thallium	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.0005	0.001	0.001	0.001	0.001	0.001
Tin	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.0005	0.001	0.001	0.001	0.001	0.001
Titanium	0.005	0.005	0.011	0.005	0.016	0.015	0.005	0.005	0.014	0.019	0.018	0.005	0.005	0.01	0.015	0.025	0.01	0.01	0.01	0.01	0.01
Uranium	0.00056	0.00069	0.00058	0.00054	0.00087	0.00093	0.00056	0.00039	0.00038	0.00122	0.00078	0.00114	0.0014	0.00165	0.00227	0.00247	0.00314	0.00265	0.00341	0.00381	0.0052
Vanadium	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.01	0.01	0.01
Zinc	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.025	0.005	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.01	0.01	0.01

Appendix 6.2-6

Tailing Aging Tests Supernatant Concentrations - Graphs

Rescan™
Engineers and Scientists

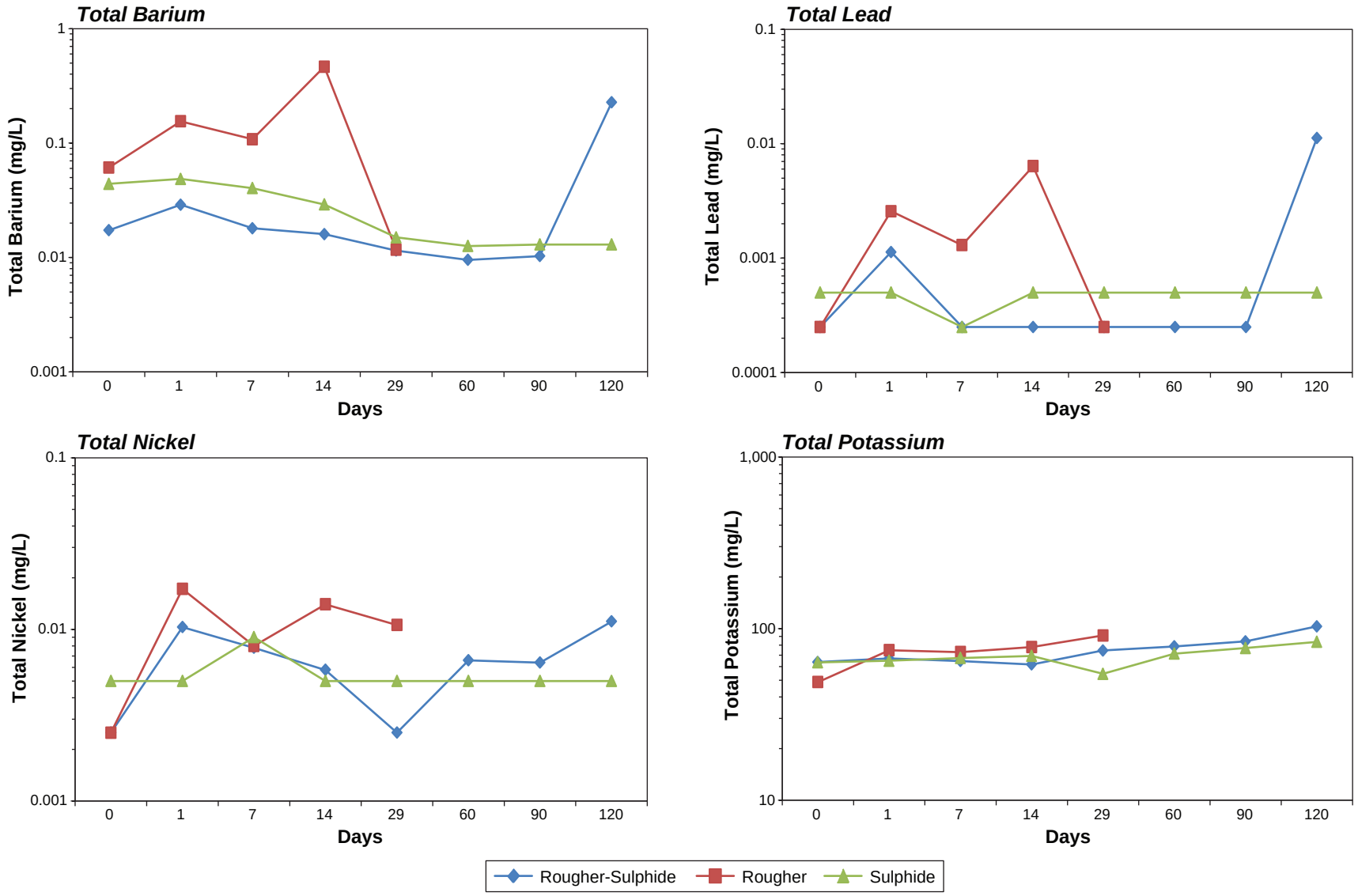


Figure 1

SEABRIDGE GOLD
KSM PROJECT

Total Barium, Total Lead, Total Nickel, and Total Potassium, Tailing Aging Tests

Figure 1

Rescan™ Engineers & Scientists

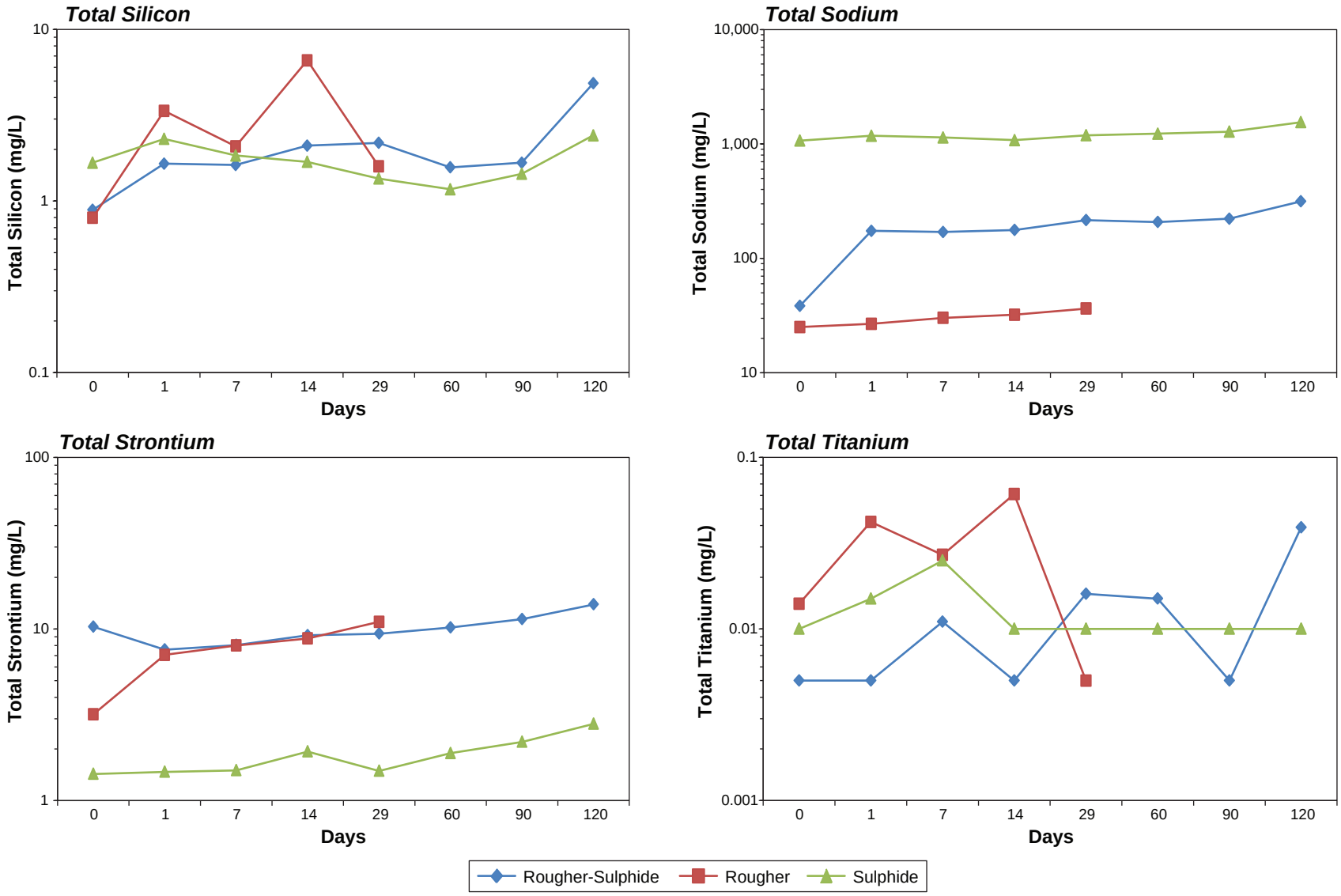


Figure 2

SEABRIDGE GOLD
KSM PROJECT

Total Silicon, Total Sodium, Total Strontium, and Total Titanium, Tailing Aging Tests

Figure 2

Rescan™ Engineers & Scientists

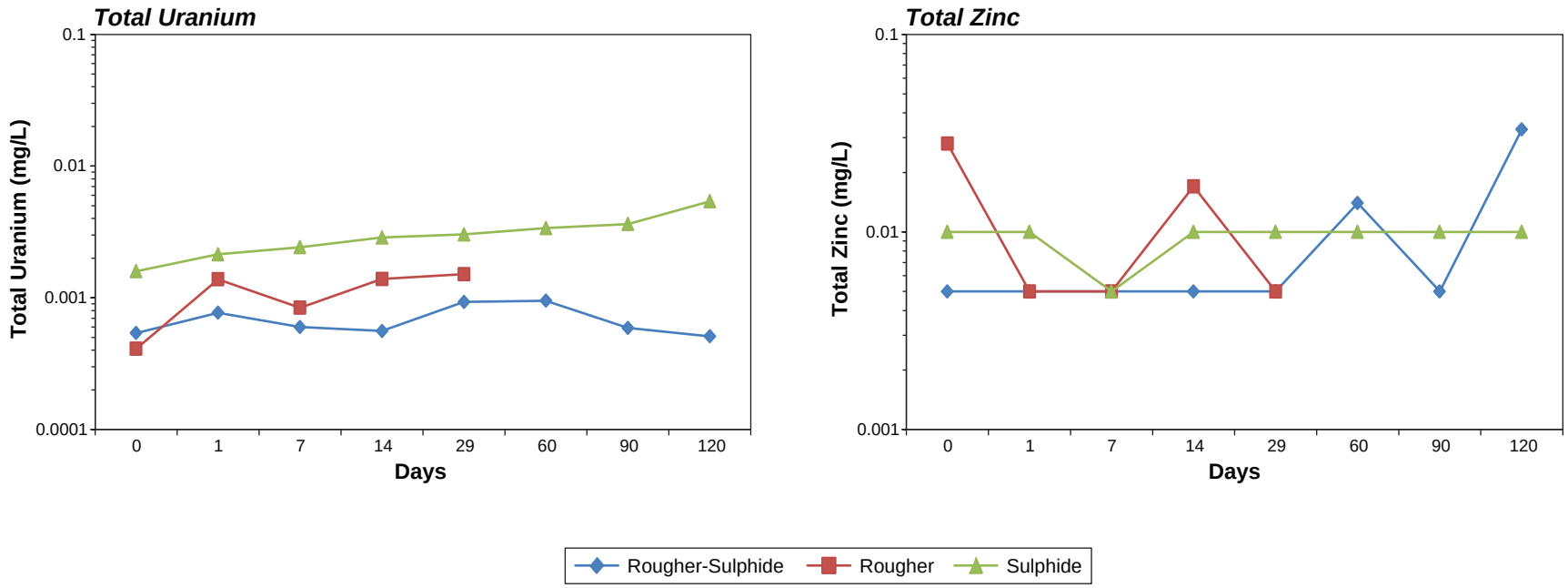


Figure 3

SEABRIDGE GOLD
KSM PROJECT

Total Uranium and Total Zinc, Tailing Aging Tests

Figure 3

Rescan™ Engineers & Scientists

Appendix 7-1

Static Test Results for Non-Deposit Samples – Data

Rescan™
Engineers and Scientists

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID												Total-S	Sulphide-S	Sulphide-S	Sulphide-S	Sulphate-S $NaCO_3$	Sulphate-S HCl
Typical Detection Limit			Date		Collection				Overburden			0.01	0.01	Calc	+ S del	0.01	0.01
Units	Location	Purpose	Collected	Type	Method	Strat Unit	Formation	Rock Type	Type	NP Method	Paste pH	%	%	%	%	%	%
S 021	CCAR	CCAR-OVB	30/09/10	Overburden	Grab	Qal	Morainal			Sobek	8.8	0.04	0.03	0.04	0.04	0.02	0.01
S 001	CCAR	CCAR-RX	30/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	6.7	0.04	0.02	0.04	0.04	0.02	0.01
S 002	CCAR	CCAR-RX	30/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	7.1	0.17	0.10	0.15	0.18	0.04	0.02
S 003	CCAR	CCAR-RX	30/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	5.8	0.79	0.47	0.61	0.74	0.20	0.18
S 004	CCAR	CCAR-RX	30/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	9.0	0.06	0.03	0.04	0.05	0.01	0.02
S 005	CCAR	CCAR-RX	30/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	6.9	0.10	0.06	0.07	0.07	0.06	0.03
S 006	CCAR	CCAR-RX	30/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	6.3	0.06	0.03	0.04	0.04	0.03	0.02
S 007	CCAR	CCAR-RX	30/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	5.4	0.31	0.05	0.04	0.04	0.29	0.27
S 008	CCAR	CCAR-RX	30/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	7.6	0.10	0.07	0.08	0.08	0.03	0.02
S 010	CCAR	CCAR-RX	30/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	6.2	0.07	0.03	0.06	0.06	0.04	0.01
S 009	CCAR	CCAR-RX	30/09/10	Rock	Grab	lJHva	Hazelton Group			Sobek	6.4	0.04	0.02	0.02	0.02	0.01	0.02
S 023	CCAR	CCAR-RX	30/09/10	Rock	Grab	lJHva	Hazelton Group			Sobek	8.0	0.02	0.02	-0.01	0.00	0.01	0.03
S 024	CCAR	CCAR-RX	30/09/10	Rock	Grab	lJHva	Hazelton Group			Sobek	7.7	0.05	0.03	0.03	0.03	0.01	0.02
S 025	CCAR	CCAR-RX	30/09/10	Rock	Grab	lJHva	Hazelton Group			Sobek	7.1	0.02	0.02	0.00	0.00	0.01	0.02
S 026	CCAR	CCAR-RX	30/09/10	Rock	Grab	lJHva	Hazelton Group			Sobek	8.7	0.02	0.01	0.01	0.01	0.01	0.01
S 027	CCAR	CCAR-RX	30/09/10	Rock	Grab	lJHva	Hazelton Group			Sobek	7.3	0.54	0.38	0.54	0.68	0.03	0.01
S 028	CCAR	CCAR-RX	30/09/10	Rock	Grab	lJHva	Hazelton Group			Sobek	8.3	0.04	0.05	0.04	0.04	0.01	0.01
S 034	CCAR	CCAR-RX	30/09/10	Rock	Grab	lJHva	Hazelton Group			Sobek	8.8	0.01	0.02	0.00	0.00	0.01	0.01
S 037	CCAR	CCAR-RX	30/09/10	Rock	Grab	lJHva	Hazelton Group			Sobek	8.7	0.73	0.73	0.72	0.72	0.01	0.01
S 038	CCAR	CCAR-RX	30/09/10	Rock	Grab	lJHva	Hazelton Group			Sobek	8.5	0.05	0.03	0.05	0.06	0.01	0.01
S 040	CCAR	CCAR-RX	30/09/10	Rock	Grab	lJHva	Hazelton Group			Sobek	6.7	0.47	0.26	0.35	0.38	0.14	0.12
S 046	CCAR	CCAR-RX	30/09/10	Rock	Grab	lJHva	Hazelton Group			Sobek	7.5	1.22	1.15	1.21	1.25	0.06	0.01
S 047	CCAR	CCAR-RX	30/09/10	Rock	Grab	lJHva	Hazelton Group			Sobek	8.4	0.43	0.37	0.43	0.46	0.01	0.01
S 011	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHs	Hazelton Group			Sobek	6.5	0.05	0.02	0.02	0.02	0.03	0.03
S 012	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHs	Hazelton Group			Sobek	8.4	0.71	0.58	0.61	0.62	0.10	0.10
S 013	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHs	Hazelton Group			Sobek	7.8	0.32	0.26	0.31	0.31	0.01	0.01
S 014	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHs	Hazelton Group			Sobek	6.7	0.29	0.22	0.29	0.33	0.04	0.01
S 015	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHs	Hazelton Group			Sobek	5.1	0.23	0.16	0.23	0.26	0.05	0.01
S 016	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHs	Hazelton Group			Sobek	7.1	0.38	0.29	0.38	0.44	0.03	0.01
S 017	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHs	Hazelton Group			Sobek	7.7	0.09	0.08	0.06	0.06	0.01	0.03
S 018	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHs	Hazelton Group			Sobek	5.0	0.05	0.03	0.05	0.05	0.03	0.01
S 019	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHs	Hazelton Group			Sobek	7.9	0.07	0.06	0.04	0.04	0.01	0.03
S 020	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHs	Hazelton Group			Sobek	7.5	0.04	0.04	0.03	0.03	0.01	0.01
S 022	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHs	Hazelton Group			Sobek	7.9	0.02	0.01	0.01	0.01	0.01	0.01
S 029	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHs	Hazelton Group			Sobek	8.4	0.06	0.06	0.06	0.06	0.02	0.01
S 030	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHs	Hazelton Group			Sobek	6.7	0.02	0.02	0.02	0.02	0.01	0.01
S 031	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHs	Hazelton Group			Sobek	8.6	0.05	0.04	0.04	0.04	0.01	0.01
S 032	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHs	Hazelton Group			Sobek	7.5	0.01	0.01	0.00	0.00	0.01	0.01
S 033	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHs	Hazelton Group			Sobek	7.5	0.50	0.42	0.49	0.54	0.01	0.01
S 035	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHSvb	Hazelton Group - Salmon River Formation			Sobek	7.8	0.14	0.06	0.14	0.19	0.02	0.01
S 036	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHSvb	Hazelton Group - Salmon River Formation			Sobek	8.7	0.03	0.04	0.03	0.03	0.01	0.01
S 039	CCAR	CCAR-RX	30/09/10	Rock	Grab	muJHSvb	Hazelton Group - Salmon River Formation			Sobek	8.8	0.13	0.10	0.13	0.13	0.01	0.01
S 041	CCAR	CCAR-RX	30/09/10	Rock	Grab	uTrSsv	Stuhini Group			Sobek	8.6	0.06	0.04	0.04	0.04	0.02	0.02
S 042	CCAR	CCAR-RX	30/09/10	Rock	Grab	uTrSsv	Stuhini Group			Sobek	8.9	0.12	0.11	0.12	0.12	0.01	0.01
S 043	CCAR	CCAR-RX	30/09/10	Rock	Grab	uTrSsv	Stuhini Group			Sobek	7.2	1.38	0.69	1.19	1.68	0.25	0.19
S 044	CCAR	CCAR-RX	30/09/10	Rock	Grab	uTrSsv	Stuhini Group			Sobek	8.8	0.14	0.11	0.13	0.13	0.01	0.01
S 045	CCAR	CCAR-RX	30/09/10	Rock	Grab	uTrSsv	Stuhini Group			Sobek	8.4	0.29	0.22	0.28	0.31	0.01	0.01
S 048	CCAR	CCAR-RX	30/09/10	Rock	Grab	uTrSsv	Stuhini Group			Sobek	8.6	0.03	0.03	0.02	0.02	0.01	0.01

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID												Total-S	Sulphide-S	Sulphide-S	Sulphide-S	Sulphate-S $NaCO_3$	Sulphate-S HCl
Typical Detection Limit									Overburden			0.01	0.01	Calc	+ S del	0.01	0.01
Units	Location	Purpose	Date Collected	Type	Collection Method	Strat Unit	Formation	Rock Type	Type	NP Method	Paste pH	%	%	%	%	%	%
WP09-79	Kerr Haul Rd	Kerr Haul Rd-OVB	14-Jan-10	Overburden	Grab	Qal	Colluvium		GM	Sobek	8.8	0.96	0.85	0.93	0.89	0.96	0.03
WP09-80	Kerr Haul Rd	Kerr Haul Rd-OVB	14-Jan-10	Overburden	Grab	Qal	Colluvium		SM	Sobek	8.8	1.18	1.06	1.16	1.11	1.18	0.02
WP09-74	Kerr Haul Rd	Kerr Haul Rd-OVB	14-Jan-10	Overburden	Grab	Qal	Glaciofluvial		GW-GM	Sobek	8.3	0.07	0.03	0.04	0.03	0.07	0.03
WP09-75	Kerr Haul Rd	Kerr Haul Rd-OVB	14-Jan-10	Overburden	Grab	Qal	Glaciofluvial		SW-SM	Sobek	8.2	0.07	0.05	0.05	0.05	0.07	0.02
M -009	MDT	MDT-RX	2008?	Rock	Grab	EJZ	Zippa Mountain Plutonic Complex		QSP	Sobek	9.1	0.03	0.02	0.01	0.01	0.01	0.02
M -007	MDT	MDT-RX	2008?	Rock	Grab	lJHU	Hazelton Group - Unuk River Formation	Hornfels		Sobek	9.0	0.73	0.64	0.71	0.74	0.01	0.02
M -008	MDT	MDT-RX	2008?	Rock	Grab	lJHU	Hazelton Group - Unuk River Formation	Hornfels		Sobek	9.3	2.37	2.19	2.36	2.51	0.02	0.01
M -008a	MDT	MDT-RX	2008?	Rock	Grab	lJHU	Hazelton Group - Unuk River Formation	QSP		Sobek	9.0	2.42	2.22	2.42	2.60	0.02	0.01
KC11-44 89.22-89.9	MDT	MDT-RX	2011	Rock	Grab	JrH	Hazelton Group - Unuk River Formation			Sobek	8.6	5.54	4.94	5.51	6.08		0.03
KC11-45 143.6-144.0	MDT	MDT-RX	2011	Rock	Grab	JrH	Hazelton Group - Unuk River Formation			Sobek	6.2	5.71	4.96	5.69	6.42		0.02
KC11-45 111.08-111.34	MDT	MDT-RX	2011	Rock	Grab	JrH	Hazelton Group - Unuk River Formation			Sobek	6.2	5.30	4.61	5.28	5.95		0.02
KC11-44 113.02-113.58	MDT	MDT-RX	2011	Rock	Grab	JrH	Hazelton Group - Unuk River Formation			Sobek	8.2	13.07	10.37	13.03	15.69		0.04
Res-019	MDT	MDT-RX	2008?	Rock	Grab	lJHU	Hazelton Group - Unuk River Formation			Sobek	7.1	1.14	1.00	1.11	1.19	0.04	0.03
Res-020	MDT	MDT-RX	2008?	Rock	Grab	lJHU	Hazelton Group - Unuk River Formation			Sobek	9.2	0.02	0.02	0.01	0.01	0.01	0.01
Res-021	MDT	MDT-RX	2008?	Rock	Grab	lJHU	Hazelton Group - Unuk River Formation			Sobek	9.2	0.54	0.48	0.52	0.52	0.01	0.02
Res-022	MDT	MDT-RX	2008?	Rock	Grab	lJHU	Hazelton Group - Unuk River Formation			Sobek	6.7	2.39	2.22	2.37	2.51	0.02	0.02
Res-017	MDT	MDT-RX	2008?	Rock	Grab	uTrSsv	Stuhini Group			Sobek	9.2	1.20	1.12	1.20	1.24	0.03	0.01
Res-018	MDT	MDT-RX	2008?	Rock	Grab	uTrSsv	Stuhini Group			Sobek	8.6	1.92	1.89	1.92	1.92	0.05	0.01
M -005	MDT	MDT-RX	2008?	Rock	Grab	uTrSsv	Stuhini Group			Sobek	8.9	0.83	0.52	0.61	0.61	0.29	0.22
M -005a	MDT	MDT-RX	2008?	Rock	Grab	uTrSsv	Stuhini Group			Sobek	5.6	0.68	0.52	0.55	0.55	0.13	0.13
M -006	MDT	MDT-RX	2008?	Rock	Grab	uTrSsv	Stuhini Group			Sobek	8.5	1.65	1.48	1.53	1.57	0.12	0.12
WP09-38	MP	MP-OVB	14-Jan-10	Overburden	Grab	Qal	Bedrock		SC	Sobek	6.3	6.78	6.10	6.70	6.69	0.07	0.08
WP09-39	MP	MP-OVB	14-Jan-10	Overburden	Grab	Qal	Morainal		-	Sobek	8.2	0.05	0.05	0.04	0.05	0.01	0.01
WP09-77	MP	MP-OVB	14-Jan-10	Overburden	Grab	Qal	Morainal		SC	Sobek	5.9	2.04	1.53	1.73	1.70	2.04	0.31
WP09-78	MP	MP-OVB	14-Jan-10	Overburden	Grab	Qal	Morainal		GW-GM	Sobek	8.1	0.39	0.28	0.34	0.28	0.39	0.05
KSMMNRX001	MP	MP-RX	Oct-10	Rock	Grab		Stuhini Group	ANDS		Sobek	9.1	0.01	0.01	0.01	0.01	0.01	0.01
KSMMNRX002	MP	MP-RX	Oct-10	Rock	Grab		Stuhini Group	SEDS		Sobek	8.8	0.38	0.37	0.37	0.37	0.01	0.01
KSMMNRX003	MP	MP-RX	Oct-10	Rock	Grab		Stuhini Group	VU/uncat		Sobek	8.9	0.28	0.26	0.28	0.28	0.01	0.01
KSMMNRX004	MP	MP-RX	Oct-10	Rock	Grab		Stuhini Group	VU/uncat		Sobek	8.4	0.50	0.18	0.48	0.75	0.01	0.02
KSMMNRX005	MP	MP-RX	Oct-10	Rock	Grab		Stuhini Group	SEDS		Sobek	8.3	3.79	3.21	3.78	4.35	0.01	0.01
KSMMNRX006	MP	MP-RX	Oct-10	Rock	Grab		Stuhini Group	DDRT		Sobek	8.5	0.19	0.08	0.16	0.23	0.01	0.03
KSMMNRX007	MP	MP-RX	Oct-10	Rock	Grab		Stuhini Group	ANDS		Sobek	8.9	0.30	0.27	0.29	0.29	0.01	0.01
KSMMNRX008	MP	MP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	VU/uncat		Sobek	7.2	2.02	1.60	1.83	2.06	0.01	0.19
KSMMNRX009	MP	MP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	ANDS		Sobek	5.5	0.50	0.29	0.29	0.29	0.01	0.21
KSMMNRX010	MP	MP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	VU/uncat		Sobek	4.9	1.15	0.87	0.94	1.00	0.01	0.21
KSMMSRX001	MP	MP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	VU/uncat		Sobek	5.1	0.39	0.30	0.30	0.30	0.01	0.09
KSMMSRX002	MP	MP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	VU/uncat		Sobek	4.4	1.06	0.85	0.88	0.90	0.01	0.18
KSMMSRX003	MP	MP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	ANDS		Sobek	7.0	0.68	0.62	0.62	0.62	0.01	0.06
KSMMSRX004	MP	MP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	VU/uncat		Sobek	5.2	0.18	0.10	0.10	0.10	0.01	0.08
KSMMSRX005	MP	MP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	VU/uncat		Sobek	7.2	0.81	0.73	0.74	0.74	0.01	0.07
KSMMSRX006	MP	MP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	VU/uncat		Sobek	8.4	0.49	0.46	0.48	0.48	0.01	0.01
KSMMSRX007	MP	MP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	ANDS		Sobek	9.2	0.32	0.23	0.23	0.23	0.01	0.09
KSMMSRX008	MP	MP-RX	Oct-10	Rock	Grab	EJZ	Zippa Mountain Plutonic Complex	PMON		Sobek	9.2	0.04	0.03	0.03	0.03	0.01	0.01
KSMMSRX009	MP	MP-RX	Oct-10	Rock	Grab	EJZ	Zippa Mountain Plutonic Complex	DDRT		Sobek	5.6	0.37	0.25	0.25	0.25	0.01	0.12
KSMMSRX010	MP	MP-RX	Oct-10	Rock	Grab		Stuhini Group	ANDS		Sobek	8.7	0.06	0.05	0.05	0.05	0.01	0.01
KSMMSRX011	MP	MP-RX	Oct-10	Rock	Grab		Stuhini Group	ANDS		Sobek	9.2	0.08	0.04	0.04	0.04	0.01	0.04
KSMMSRX012	MP	MP-RX	Oct-10	Rock	Grab		Stuhini Group	ANDS		Sobek	8.7	0.91	0.90	0.90	0.90	0.01	0.01
KSMMSRX013	MP	MP-RX	Oct-10	Rock	Grab		Stuhini Group	VU/uncat		Sobek	5.0	0.79	0.44	0.44	0.44	0.01	0.35
KSMMSRX014	MP	MP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	DDRT		Sobek	8.8	0.04	0.03	0.03	0.03	0.01	0.01
KSMMSRX015	MP	MP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	VU/uncat		Sobek	6.2	6.61	6.32	6.51	6.70	0.01	0.10
KSMMSRX016	MP	MP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	VU/uncat		Sobek	9.0	1.28	1.25	1.25	1.25	0.01	0.03

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID												Total-S	Sulphide-S	Sulphide-S	Sulphide-S	Sulphate-S $NaCO_3$	Sulphate-S HCl
Typical Detection Limit									Overburden			0.01	0.01	Calc	+ S del	0.01	0.01
Units	Location	Purpose	Date Collected	Type	Collection Method	Strat Unit	Formation	Rock Type	Type	NP Method	Paste pH	%	%	%	%	%	%
KSMMSRX017	MP	MP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	VU/uncat		Sobek	9.0	1.77	1.76	1.76	1.76	0.01	0.01
WP09-42	MRSF	MRSF-OVB	14-Jan-10	Overburden	Grab	Qal	Colluvium		SM	Sobek	6.4	0.03	0.02	0.01	0.02	0.01	0.02
WP09-37	MRSF	MRSF-OVB	14-Jan-10	Overburden	Grab	Qal	Fluvial		CL	Sobek	8.0	0.71	0.57	0.69	0.65	0.04	0.02
WP09-53A	MRSF	MRSF-OVB	14-Jan-10	Overburden	Grab	Qal	Glaciofluvial		SW-SM	Sobek	8.1	0.07	0.06	0.06	0.06	0.01	0.01
WP09-53B	MRSF	MRSF-OVB	14-Jan-10	Overburden	Grab	Qal	Glaciofluvial		CL	Sobek	8.0	0.86	0.73	0.82	0.77	0.05	0.04
WP09-72	MRSF	MRSF-OVB	14-Jan-10	Overburden	Grab	Qal	Glaciofluvial		GP-GM	Sobek	8.9	0.01	0.01	-0.02	0.01	0.01	0.02
WP09-76	MRSF	MRSF-OVB	14-Jan-10	Overburden	Grab	Qal	Glaciofluvial		GP-GM	Sobek	8.9	0.04	0.02	0.03	0.02	0.04	0.01
KC09-09 1-2.4	MRSF	MRSF-OVB	2009	Overburden	Drill core	Qal	Morainal		GP	Sobek	8.4	0.14	0.09	0.12	0.09	0.01	0.02
KC09-09 15.53-16.0	MRSF	MRSF-OVB	2009	Overburden	Drill core	Qal	Morainal		GP	Sobek	8.6	0.04	0.03	0.03	0.03	0.03	0.01
KC09-09 18.93-19.27	MRSF	MRSF-OVB	2009	Overburden	Drill core	Qal	Morainal		GW	Sobek	9.0	0.01	0.01	0.00	0.01	0.01	0.01
KC09-09 28.7-29.8	MRSF	MRSF-OVB	2009	Overburden	Drill core	Qal	Morainal		GW	Sobek	8.5	0.16	0.15	0.15	0.15	0.01	0.01
KC09-09 33.2-33.6	MRSF	MRSF-OVB	2009	Overburden	Drill core	Qal	Morainal		GP	Sobek	8.5	0.04	0.03	0.02	0.03	0.01	0.02
KC09-09 40.8-41.03	MRSF	MRSF-OVB	2009	Overburden	Drill core	Qal	Morainal		GP	Sobek	8.5	0.20	0.16	0.19	0.16	0.02	0.01
KC09-09 50.6-51.0	MRSF	MRSF-OVB	2009	Overburden	Drill core	Qal	Morainal		GP	Sobek	8.5	0.27	0.21	0.26	0.24	0.02	0.01
KC09-09 54.7-55.2	MRSF	MRSF-OVB	2009	Overburden	Drill core	Qal	Morainal		GP	Sobek	8.8	0.07	0.05	0.05	0.05	0.01	0.02
KC09-09 6.23-6.75	MRSF	MRSF-OVB	2009	Overburden	Drill core	Qal	Morainal		GP	Sobek	8.6	0.11	0.08	0.09	0.08	0.03	0.02
KC09-09 60.9-61.6	MRSF	MRSF-OVB	2009	Overburden	Drill core	Qal	Morainal		GP	Sobek	8.5	0.53	0.45	0.51	0.49	0.03	0.02
KC09-09 64.6-66.03	MRSF	MRSF-OVB	2009	Overburden	Drill core	Qal	Morainal		GP	Sobek	8.4	0.39	0.32	0.38	0.36	0.03	0.01
KC09-09 74.5-75.25	MRSF	MRSF-OVB	2009	Overburden	Drill core	Qal	Morainal		SP	Sobek	8.0	4.59	4.56	4.56	4.56	0.08	0.03
KC09-09 75.6-76.5	MRSF	MRSF-OVB	2009	Overburden	Drill core	Qal	Morainal		GW	Sobek	7.7	3.45	3.38	3.42	3.42	0.06	0.03
KC09-09 80.5-81.47	MRSF	MRSF-OVB	2009	Overburden	Drill core	Qal	Morainal		GW	Sobek	7.8	3.09	3.00	3.08	3.08	0.03	0.01
KC09-09 89.3-90.86	MRSF	MRSF-OVB	2009	Overburden	Drill core	Qal	Morainal		GW	Sobek	8.6	0.83	0.79	0.80	0.79	0.03	0.03
KC09-09 9.27-10.25	MRSF	MRSF-OVB	2009	Overburden	Drill core	Qal	Morainal		GP	Sobek	8.6	0.15	0.12	0.12	0.12	0.02	0.03
WP09-31	MRSF	MRSF-OVB	14-Jan-10	Overburden	Grab	Qal	Morainal		GW-GM	Sobek	8.6	0.06	0.03	0.05	0.03	0.01	0.01
WP09-36	MRSF	MRSF-OVB	14-Jan-10	Overburden	Grab	Qal	Morainal		GP-GC	Sobek	9.1	0.05	0.03	0.04	0.03	0.01	0.01
KC10-OVB21 45.2-47	MRSF	MRSF-OVB	2-Jul-05	Overburden	Drill core					Sobek	9.0	1.25	1.16	1.24	1.22		0.01
Res-001	MTDT	MTDT-RX	2008?	Rock	Grab	uTrSsv	Stuhini Group			Sobek	7.7	0.05	0.03	0.02	0.02	0.03	0.03
Res-002	MTDT	MTDT-RX	2008?	Rock	Grab	uTrSsv	Stuhini Group			Sobek	8.4	0.09	0.05	0.08	0.08	0.02	0.01
Res-003	MTDT	MTDT-RX	2008?	Rock	Grab	uTrSsv	Stuhini Group			Sobek	8.3	0.10	0.08	0.09	0.09	0.01	0.01
Res-004	MTDT	MTDT-RX	2008?	Rock	Grab	uTrSsv	Stuhini Group			Sobek	8.8	0.13	0.09	0.13	0.13	0.01	0.01
Res-005	MTDT	MTDT-RX	2008?	Rock	Grab	uTrSsv	Stuhini Group			Sobek	8.9	0.08	0.06	0.08	0.08	0.01	0.01
WP09-83	MTRSF	MTRSF-OVB	14-Jan-10	Overburden	Grab	Qal	Bedrock		GM	Sobek	9.0	0.03	0.02	0.02	0.02	0.03	0.01
WP09-84	MTRSF	MTRSF-OVB	14-Jan-10	Overburden	Grab	Qal	Morainal		GM	Sobek	9.0	0.04	0.03	0.04	0.03	0.04	0.01
KC11-40 62.05-62.35	MTRSF	MTRSF-RX	3-Jul-05	Rock	Drill core	TrSs	Stuhini Group			Sobek	9.5	0.25	0.07	0.24	0.21		0.01
KC11-41 77.4-77.6	MTRSF	MTRSF-RX	3-Jul-05	Rock	Drill core	TrSs	Stuhini Group			Sobek	9.3	0.23	0.02	0.21	0.19		0.02
Res-016	MTT	MTT-RX	2008?	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	7.9	0.89	0.79	0.88	0.94	0.05	0.01
Res-008	MTT	MTT-RX	2008?	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	6.7	0.73	0.60	0.71	0.80	0.03	0.02
M -001	MTT	MTT-RX	2008?	Rock	Grab	lJHU	Hazelton Group - Unuk River Formation	monzonite		Sobek	7.5	0.93	0.70	0.77	0.78	0.16	0.16
M -002	MTT	MTT-RX	2008?	Rock	Grab	lJHU	Hazelton Group - Unuk River Formation	volcanics		Sobek	8.9	0.09	0.07	0.09	0.09	0.01	0.01
M -004	MTT	MTT-RX	2008?	Rock	Grab	lJHU	Hazelton Group - Unuk River Formation	monzonite		Sobek	9.4	0.04	0.03	0.02	0.02	0.01	0.02
Res-012	MTT	MTT-RX	2008?	Rock	Grab	lJHva	Hazelton Group			Sobek	8.8	0.01	0.01	-0.01	0.00	0.01	0.01
Res-013	MTT	MTT-RX	2008?	Rock	Grab	lJHva	Hazelton Group			Sobek	8.4	0.66	0.48	0.48	0.48	0.19	0.18
Res-014	MTT	MTT-RX	2008?	Rock	Grab	lJHva	Hazelton Group			Sobek	7.8	0.40	0.32	0.37	0.37	0.04	0.03
Res-011	MTT	MTT-RX	2008?	Rock	Grab	muJHM	Hazelton Group - Mount Dilworth Formation			Sobek	7.1	0.01	0.01	-0.01	0.00	0.01	0.01
Res-009	MTT	MTT-RX	2008?	Rock	Grab	muJHs	Hazelton Group			Sobek	8.5	0.02	0.01	0.01	0.01	0.01	0.01
Res-010	MTT	MTT-RX	2008?	Rock	Grab	muJHs	Hazelton Group			Sobek	8.4	0.03	0.02	0.01	0.01	0.02	0.02
Res-015	MTT	MTT-RX	2008?	Rock	Grab	uTrSsv	Stuhini Group			Sobek	9.3	0.01	0.01	0.00	0.00	0.01	0.01
M -003	MTT	MTT-RX	2008?	Rock	Grab	uTrSsv	Stuhini Group	volcanics		Sobek	8.8	0.01	0.01	0.00	0.00	0.01	0.01
Res-006	MTT	MTT-RX	2008?	Rock	Grab	uTrSsv	Stuhini Group			Sobek	6.8	0.88	0.67	0.80	0.89	0.07	0.08
KC12-61 ABA1 458.2-459.2	MTT	MTT-RX	2012	Rock	Drill core					Sobek	9.3	5.34	3.55	5.33	5.33		0.01
KC12-61 ABA2 479-480	MTT	MTT-RX	2012	Rock	Drill core					Sobek	9.4	2.99	2.21	2.97	2.97		0.02

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID												Total-S	Sulphide-S	Sulphide-S	Sulphide-S	Sulphate-S $NaCO_3$	Sulphate-S HCl
Typical Detection Limit									Overburden			0.01	0.01	Calc	+ S del	0.01	0.01
Units	Location	Purpose	Date Collected	Type	Collection Method	Strat Unit	Formation	Rock Type	Type	NP Method	Paste pH	%	%	%	%	%	%
KC12-61 ABA3 484.6-485.6	MTT	MTT-RX	2012	Rock	Drill core					Sobek	9.5	3.19	2.38	3.16	3.16		0.03
KC12-61 ABA4 489.5-490.4	MTT	MTT-RX	2012	Rock	Drill core					Sobek	9.4	3.21	2.17	3.20	3.20		0.01
KC12-61 ABA5 495.5-496.6	MTT	MTT-RX	2012	Rock	Drill core					Sobek	9.5	2.62	1.85	2.60	2.60		0.02
KC12-61 ABA6 500.3-501.2	MTT	MTT-RX	2012	Rock	Drill core					Sobek	9.5	2.47	1.72	2.44	2.44		0.03
KC10-14 72.6-74.8	MTT	MTT-RX	2010	Rock	Drill core	TrSs7	Stuhini Group	seds		Sobek	8.6	0.13	0.08	0.12	0.10		0.01
Res-007	MTT	MTT-RX	2008?	Rock	Grab	uTrSsv	Stuhini Group			Sobek	8.7	0.02	0.02	0.02	0.02	0.01	0.01
KSMSURX001	SP	SP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	ANDS		Sobek	5.0	0.51	0.42	0.42	0.42	0.01	0.09
KSMSURX002	SP	SP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	VU/uncat		Sobek	5.6	1.23	0.99	0.99	0.99	0.01	0.24
KSMSURX003	SP	SP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	DDRT		Sobek	8.4	0.95	0.93	0.93	0.93	0.01	0.02
KSMSURX004	SP	SP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	ANDS		Sobek	9.5	0.01	0.01	0.00	0.00	0.01	0.01
KSMSURX005	SP	SP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	DDRT		Sobek	9.1	0.01	0.01	0.00	0.00	0.01	0.01
KSMSURX006	SP	SP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	DDRT		Sobek	9.1	0.06	0.06	0.06	0.06	0.01	0.01
KSMSURX007	SP	SP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	ANDS		Sobek	9.2	0.04	0.04	0.04	0.04	0.01	0.01
KSMSURX008	SP	SP-RX	Oct-10	Rock	Grab		Stuhini Group	ANDS		Sobek	8.4	0.16	0.16	0.16	0.16	0.01	0.01
KSMSURX009	SP	SP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	DDRT		Sobek	8.9	2.88	2.87	2.87	2.87	0.01	0.01
KSMSURX010	SP	SP-RX	Oct-10	Rock	Grab		Hazelton Group - Unuk River Formation	VU/uncat		Sobek	8.3	0.77	0.74	0.74	0.74	0.01	0.03
KSMSURX011	SP	SP-RX	Oct-10	Rock	Grab		Stuhini Group	VU/uncat		Sobek	5.6	3.20	3.04	3.13	3.22	0.01	0.07
KSMSURX012	SP	SP-RX	Oct-10	Rock	Grab		Stuhini Group	VU/uncat		Sobek	5.4	2.34	2.19	2.27	2.34	0.01	0.07
KSMSURX013	SP	SP-RX	Oct-10	Rock	Grab		Stuhini Group	DDRT		Sobek	9.0	0.01	0.01	-0.01	0.00	0.01	0.02
KSMSURX014	SP	SP-RX	Oct-10	Rock	Grab		Stuhini Group	VU/uncat		Sobek	9.0	0.65	0.62	0.62	0.62	0.01	0.03
KC09-10 1.35-2.4	SRSF	SRSF-OVB	2009	Overburden	Drill core	Qal	Morainal		GP	Sobek	8.1	0.05	0.02	0.03	0.03	0.01	0.02
KC09-10 4.56-6.6	SRSF	SRSF-RX	2009	Rock	Drill core	uTrSsv	Stuhini Group	seds		Sobek	8.5	0.30	0.18	0.27	0.34	0.02	0.03
KC09-11 1.2-2.4	SRSF	SRSF-RX	2009	Rock	Drill core	uTrSsv	Stuhini Group	seds		Sobek	8.2	0.40	0.32	0.37	0.38	0.02	0.03
KC09-11 2.4-4.5	SRSF	SRSF-RX	2009	Rock	Drill core	uTrSsv	Stuhini Group	seds		Sobek	7.8	0.75	0.59	0.73	0.84	0.03	0.02
T001	TAR	TAR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	7.5	0.43	0.33	0.43	0.50	0.03	0.01
T002	TAR	TAR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	6.8	0.25	0.14	0.19	0.22	0.06	0.06
T003	TAR	TAR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	6.9	0.29	0.19	0.28	0.35	0.06	0.01
T004	TAR	TAR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	7.3	0.06	0.04	0.03	0.03	0.02	0.03
T005	TAR	TAR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	5.7	0.59	0.45	0.58	0.68	0.09	0.01
T006	TAR	TAR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	8.1	0.10	0.09	0.10	0.10	0.02	0.01
T007	TAR	TAR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	6.5	0.74	0.62	0.74	0.83	0.05	0.01
T008	TAR	TAR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	8.7	0.24	0.15	0.24	0.31	0.02	0.01
T009	TAR	TAR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	8.8	0.04	0.03	0.04	0.04	0.01	0.01
T010	TAR	TAR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	6.7	0.05	0.02	0.05	0.05	0.02	0.01
T011	TAR	TAR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	8.1	0.11	0.08	0.10	0.10	0.02	0.01
T012	TAR	TAR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	8.4	0.10	0.07	0.10	0.10	0.04	0.01
T013	TAR	TAR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	4.5	0.35	0.15	0.23	0.29	0.14	0.12
KSM TAR07	TCAR	TCAR-OVB	Oct-11	Overburden	Grab	Qal	Fluvial			Mod Sobek	8.0	0.22		0.22	0.22		0.01
KSM TAR08	TCAR	TCAR-OVB	Oct-11	Overburden	Grab	Qal	Fluvial			Mod Sobek	7.9	0.06		0.05	0.05		0.01
KSM TAR09	TCAR	TCAR-OVB	Oct-11	Overburden	Grab	Qal	Fluvial			Mod Sobek	7.8	0.05		0.04	0.04		0.01
KSM TAR01	TCAR	TCAR-RX	Oct-11	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Mod Sobek	7.9	0.04		0.04	0.04		0.01
KSM TAR04	TCAR	TCAR-RX	Oct-11	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Mod Sobek	7.8	0.33		0.31	0.31		0.02
KSM TAR05	TCAR	TCAR-RX	Oct-11	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Mod Sobek	8.6	0.08		0.07	0.07		0.01
KSM TAR06	TCAR	TCAR-RX	Oct-11	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Mod Sobek	8.7	0.26		0.24	0.24		0.02
KSMNTAR01	NTCAR	TCAR-RX	Jul-12	Rock	Grab	JrB	Bowser Lake Group			Sobek	8.7	0.23	0.00	0.21	0.19		0.02
KSMNTAR02	NTCAR	TCAR-RX	Jul-12	Rock	Grab	JrB	Bowser Lake Group			Sobek	8.0	0.08	0.00	0.07	0.06		0.01
KSMNTAR03	NTCAR	TCAR-RX	Jul-12	Rock	Grab	JrB	Bowser Lake Group			Sobek	8.8	0.12	0.00	0.11	0.09		0.01
KSMNTAR04	NTCAR	TCAR-RX	Jul-12	Rock	Grab	JrB	Bowser Lake Group			Sobek	6.6	0.09	0.00	0.06	0.05		0.03
KSM TAR02	TCAR	TCAR-RX	Oct-11	Rock	Grab	muJHs	Hazelton Group			Mod Sobek	9.3	0.10		0.10	0.10		0.01
KSM TAR03	TCAR	TCAR-RX	Oct-11	Rock	Grab	muJHs	Hazelton Group			Mod Sobek	7.3	0.24		0.19	0.19		0.05
TS014	TDPR	TDPR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	8.1	0.14	0.11	0.12	0.12	0.04	0.02

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID												Total-S	Sulphide-S	Sulphide-S	Sulphide-S	Sulphate-S $NaCO_3$	Sulphate-S HCl
Typical Detection Limit			Date		Collection				Overburden			0.01	0.01	Calc	+ S del	0.01	0.01
Units	Location	Purpose	Collected	Type	Method	Strat Unit	Formation	Rock Type	Type	NP Method	Paste pH	%	%	%	%	%	%
TS015	TDPR	TDPR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	6.6	0.23	0.17	0.22	0.26	0.04	0.01
TS016	TDPR	TDPR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	8.0	0.13	0.09	0.12	0.14	0.02	0.01
TS017	TDPR	TDPR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	8.2	0.17	0.12	0.15	0.17	0.06	0.02
TS019	TDPR	TDPR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	8.2	0.30	0.21	0.29	0.36	0.04	0.01
TS020	TDPR	TDPR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	8.5	0.17	0.16	0.16	0.16	0.03	0.01
TS021	TDPR	TDPR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	7.3	0.04	0.02	0.04	0.04	0.02	0.01
TS022	TDPR	TDPR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	6.6	0.26	0.16	0.25	0.32	0.05	0.01
TS023	TDPR	TDPR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	8.1	0.02	0.01	0.01	0.01	0.01	0.01
TS024	TDPR	TDPR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	6.2	0.06	0.03	0.01	0.01	0.04	0.05
TS025	TDPR	TDPR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	7.7	0.29	0.18	0.29	0.37	0.04	0.01
TS026	TDPR	TDPR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	8.7	0.13	0.09	0.12	0.14	0.02	0.01
TS027	TDPR	TDPR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	7.4	0.03	0.02	0.01	0.01	0.02	0.02
TS028	TDPR	TDPR-RX	25/09/10	Rock	Grab	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage			Sobek	7.8	0.32	0.27	0.32	0.35	0.02	0.01
TS018	TDPR	TDPR-RX	25/09/10	Rock	Grab	#N/A	#N/A			Sobek	8.1	0.05	0.02	0.05	0.05	0.06	0.01
G1	Ted Morris	Ted Morris-OVB	2009	Overburden	Grab	Qal	#N/A			Sobek	7.4	0.05	0.03	0.04	0.04	0.01	0.01
G2	Ted Morris	Ted Morris-OVB	2009	Overburden	Grab	Qal	#N/A			Sobek	8.3	0.03	0.02	0.03	0.03	0.01	0.01
G3	Ted Morris	Ted Morris-OVB	2009	Overburden	Grab	Qal	#N/A			Sobek	7.4	0.02	0.01	0.02	0.02	0.01	0.01
G4	Ted Morris	Ted Morris-OVB	2009	Overburden	Grab	Qal	#N/A			Sobek	7.2	0.05	0.05	0.05	0.05	0.01	0.01
G5	Ted Morris	Ted Morris-OVB	2009	Overburden	Grab	Qal	#N/A			Sobek	8.3	0.17	0.14	0.17	0.17	0.01	0.01
TG01	Teigen	Teigen-OVB	2009	Overburden	Grab	Qal	#N/A			Sobek	8.2	0.11	0.07	0.11	0.12	0.03	0.01
TG02	Teigen	Teigen-OVB	2009	Overburden	Grab	Qal	#N/A			Sobek	7.1	0.02	0.02	0.00	0.00	0.02	0.02
TG03	Teigen	Teigen-OVB	2009	Overburden	Grab	Qal	#N/A			Sobek	7.2	0.02	0.02	0.02	0.02	0.01	0.01
TG04	Teigen	Teigen-OVB	2009	Overburden	Grab	Qal	#N/A			Sobek	7.4	0.02	0.02	0.00	0.00	0.01	0.02
TG05	Teigen	Teigen-OVB	2009	Overburden	Grab	Qal	#N/A			Sobek	7.4	0.02	0.03	0.01	0.01	0.01	0.01
TG06	Teigen	Teigen-OVB	2009	Overburden	Grab	Qal	#N/A			Sobek	8.1	0.04	0.04	0.04	0.04	0.01	0.01
RES-MW-02A 1.1-32.9M	TMF	TMF-OVB		Overburden	Drill core	Qal	Colluvium			Sobek	8.1	0.17	0.12	0.16	0.14	0.01	0.01
RES-MW-01A 4.27-5.49M	TMF	TMF-OVB		Overburden	Drill core	Qal	Morainal			Sobek	8.3	0.22	0.17	0.21	0.20	0.01	0.01
RES-MW-01A 11.18-11.38M	TMF	TMF-RX		Rock	Drill core	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage	Seds		Sobek	8.8	0.52	0.40	0.51	0.60	0.01	0.01
KC11-36 89.56-89-69	TMF	TMF-RX	2011	Rock	Drill core	JrB	Bowser Lake Group			Sobek	8.9	0.37	0.31	0.36	0.34		0.01
KC11-37 56.24-56-44	TMF	TMF-RX	2011	Rock	Drill core	JrB	Bowser Lake Group			Sobek	8.9	0.29	0.19	0.28	0.26		0.01
KC11-38 43.55-43.68	TMF	TMF-RX	2011	Rock	Drill core	JrB	Bowser Lake Group			Sobek	8.7	0.63	0.53	0.62	0.60		0.01
KC10-20 64.62-65.29	TMF	TMF-RX	2010	Rock	Drill core	JrB	Bowser Lake Group			Sobek	9.3	0.64	0.47	0.64	0.62		0.01
KC10-20 97.55-98.14	TMF	TMF-RX	2010	Rock	Drill core	JrB	Bowser Lake Group			Sobek	9.3	1.02	0.74	1.02	1.00		0.01
KC10-25 20.2-20.7	TMF	TMF-RX	2010	Rock	Drill core	JrB	Bowser Lake Group			Sobek	9.1	0.88	0.68	0.88	0.86		0.01
KC10-25 48.72-49.32	TMF	TMF-RX	2010	Rock	Drill core	JrB	Bowser Lake Group			Sobek	9.2	0.44	0.35	0.43	0.41		0.01
KC10-31 79.42-79.92	TMF	TMF-RX	2010	Rock	Drill core	JrB	Bowser Lake Group			Sobek	8.9	0.92	0.71	0.91	0.90		0.01
KC10-31 99.18-99.72	TMF	TMF-RX	2010	Rock	Drill core	JrB	Bowser Lake Group			Sobek	8.8	0.92	0.67	0.91	0.89		0.01
KC10-23 18.07-18.67	TMF	TMF-RX	2010	Rock	Drill core	JrB	Bowser Lake Group			Sobek	9.3	0.11	0.07	0.11	0.09		0.01
KC10-23 47.03-47.63	TMF	TMF-RX	2010	Rock	Drill core	JrB	Bowser Lake Group			Sobek	9.3	0.15	0.10	0.15	0.13		0.01
KC11-35 98.68-99.28	TMF	TMF-RX	2011	Rock	Drill core	JrB	Bowser Lake Group			Sobek	9.3	0.27	0.17	0.27	0.25		0.01
KC11-35 84.68-85.18	TMF	TMF-RX	2011	Rock	Drill core	JrB	Bowser Lake Group			Sobek	8.9	0.21	0.14	0.19	0.17		0.02
KC10-OVB32 26.5-31.0	TMF	TMF-RX	2010	Rock	Drill core	JrB	Bowser Lake Group			Sobek	9.0	0.41	0.33	0.41	0.39		0.01
KC10-OVB14 34.68-35.06	TMF	TMF-RX	2010	Rock	Drill core	JrB	Bowser Lake Group			Sobek	8.1	0.22	0.14	0.20	0.18		0.02
KC10-OVB1 15.1-15.7	TMF	TMF-RX	2010	Rock	Drill core	JrB	Bowser Lake Group			Sobek	9.1	0.08	0.05	0.08	0.06		0.01
KC10-OVB3 21.02-21.49	TMF	TMF-RX	2010	Rock	Drill core	JrB	Bowser Lake Group			Sobek	8.9	0.31	0.18	0.31	0.28		0.01
KC10-OVB6 11.35-12.15	TMF	TMF-RX	2010	Rock	Drill core	JrB	Bowser Lake Group			Sobek	9.2	0.18	0.11	0.18	0.16		0.01
KC10-OVB7 19.5-20.11	TMF	TMF-RX	2010	Rock	Drill core	JrB	Bowser Lake Group			Sobek	8.8	0.83	0.64	0.83	0.81		0.01
KC10-OVB29 12.78-13.28	TMF	TMF-RX	2010	Rock	Drill core	JrB	Bowser Lake Group			Sobek	9.0	0.77	0.60	0.77	0.75		0.01
KC10-OVB31 23.46-23.91	TMF	TMF-RX	2010	Rock	Drill core	JrB	Bowser Lake Group			Sobek	9.3	0.24	0.16	0.24	0.22		0.01
RES-MW-03A 0.05-0.25M	TMF	TMF-RX		Rock	Drill core	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage	Seds		Sobek	6.9	0.02	0.02	0.01	0.01	0.01	0.01
RES-MW-03A 1.89-2.04	TMF	TMF-RX		Rock	Drill core	JBRA	Bowser Lake Group - Ritchie-Alger Assemblage	Seds		Sobek	8.8	0.13	0.09	0.12	0.13	0.01	0.01

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID												Total-S	Sulphide-S	Sulphide-S	Sulphide-S	Sulphate-S $NaCO_3$	Sulphate-S HCl
Typical Detection Limit			Date		Collection				Overburden			0.01	0.01	Calc	+ S del	0.01	0.01
Units	Location	Purpose	Collected	Type	Method	Strat Unit	Formation	Rock Type	Type	NP Method	Paste pH	%	%	%	%	%	%
KC09-12 0-4.34	WSF	WSF-OVB	2009	Overburden	Drill core	Qal	Glaciofluvial		SW	Sobek	7.9	0.11	0.04	0.10	0.06	0.03	0.01
KC09-12 19.3-20.79	WSF	WSF-OVB	2009	Overburden	Drill core	Qal	Glaciofluvial		CL	Sobek	8.2	0.21	0.17	0.19	0.17	0.02	0.02
KC09-12 20.79-22.16	WSF	WSF-OVB	2009	Overburden	Drill core	Qal	Glaciofluvial		SW	Sobek	8.4	0.52	0.43	0.50	0.48	0.03	0.02
KC09-12 25.21-25.7	WSF	WSF-OVB	2009	Overburden	Drill core	Qal	Glaciofluvial		GP	Sobek	8.4	0.27	0.20	0.25	0.21	0.05	0.02
KC09-12 6.01-7.16	WSF	WSF-OVB	2009	Overburden	Drill core	Qal	Glaciofluvial		SW	Sobek	8.1	0.11	0.05	0.09	0.05	0.02	0.02
KC09-12 9.5-10.53	WSF	WSF-OVB	2009	Overburden	Drill core	Qal	Glaciofluvial		SW	Sobek	8.0	0.06	0.01	0.04	0.01	0.01	0.02
WP09-56	WSF	WSF-OVB	14-Jan-10	Overburden	Grab	Qal	Glaciofluvial		CL	Sobek	7.4	0.71	0.59	0.67	0.63	0.06	0.04
WP09-56A	WSF	WSF-OVB	14-Jan-10	Overburden	Grab	Qal	Glaciofluvial		CL	Sobek	8.1	0.10	0.08	0.09	0.08	0.02	0.01
KC10-OVB23 43.08-47.64	WSF	WSF-OVB	2-Jul-05	Overburden	Drill core					Sobek	8.3	1.47	1.18	1.45	1.45		0.02
WP09-57	WSF	WSF-OVB	14-Jan-10	Overburden	Grab	Qal	Glaciofluvial		CL	Sobek	8.3	0.69	0.54	0.64	0.61	0.04	0.05
KC10-18B 46-48	WSF	WSF-RX	2-Jul-05	Rock	Drill core	TrSsm	Stuhini Group			Sobek	8.9	1.68	1.53	1.67	1.67		0.01
KC10-32 16.6-18.7	WSF	WSF-RX	2-Jul-05	Rock	Drill core	TrSsm	Stuhini Group			Sobek	9.1	0.02	0.05	0.01	0.05		0.01
M -010				Rock	Grab	#N/A				Sobek	9.5	0.07	0.06	0.06	0.06	0.01	0.01

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP = poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID						NP		Total-C	Inorganic-C	Inorganic CO_2											
Typical Detection Limit	Barite-S	S del	S del Calc	TAP	SAP	1	NP_ADJ	0.01	0.05	0.2	C del	C del Calc	Total-CANP	Inorganic-CANP	Ca-CANP	CaMg-CANP	TNNP	TNNP_Adj	SNNP	SNNP_Adj	TCNNP	
Units	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	TNPR
S 021	0.00	0.00	0.00	1.25	1.11	263.00	263.00	3.59	2.29	8.40	1.30	1.30	81.65	191.04	151.58	225.35	261.75	261.75	261.89	261.89		210.40
S 001	0.02	-0.01	0.00	1.25	1.09	4.00	-5.00	0.97	0.03	0.10	0.95	0.95	22.06	2.27	2.75	46.39	2.75	-6.25	2.91	-6.09		3.20
S 002	0.02	0.03	0.03	5.31	5.60	9.00	0.00	0.59	0.03	0.10	0.57	0.57	13.42	2.27	4.99	49.54	3.69	-5.31	3.40	-5.60		1.69
S 003	0.01	0.13	0.13	24.69	23.09	3.00	-6.00	1.68	0.03	0.20	1.66	1.66	38.21	4.55	8.74	36.65	-21.69	-30.69	-20.09	-29.09		0.12
S 004	0.00	0.01	0.01	1.88	1.45	781.00	772.00	10.80	9.00	33.00	1.80	1.80	245.62	750.50	384.58	686.09	779.13	770.13	779.55	770.55		416.53
S 005	0.03	-0.02	0.00	3.13	2.19	5.00	-4.00	0.87	0.03	0.10	0.85	0.85	19.79	2.27	4.25	47.25	1.88	-7.13	2.81	-6.19		1.60
S 006	0.02	-0.01	0.00	1.88	1.25	4.00	-5.00	1.55	0.03	0.10	1.53	1.53	35.25	2.27	3.50	37.51	2.13	-6.88	2.75	-6.25		2.13
S 007	0.02	-0.03	0.00	9.69	1.25	2.00	-7.00	2.66	0.03	0.20	2.64	2.64	60.50	4.55	3.75	17.75	-7.69	-16.69	0.75	-8.25		0.21
S 008	0.02	-0.01	0.00	3.13	2.50	10.00	1.00	0.39	0.03	0.10	0.37	0.37	8.87	2.27	10.49	52.97	6.88	-2.13	7.50	-1.50		3.20
S 010	0.03	0.00	0.00	2.19	1.96	2.00	-7.00	1.51	0.03	0.10	1.49	1.49	34.34	2.27	1.00	28.35	-0.19	-9.19	0.04	-8.96		0.91
S 009	0.02	-0.02	0.00	1.25	0.63	3.00	-6.00	1.32	0.03	0.10	1.30	1.30	30.02	2.27	1.75	25.77	1.75	-7.25	2.38	-6.63		2.40
S 023	0.01	-0.04	0.00	0.63	0.00	26.00	17.00	0.38	0.09	0.30	0.29	0.29	8.64	6.82	73.67	145.18	25.38	16.38	26.00	17.00		41.60
S 024	0.02	-0.02	0.00	1.56	0.94	13.00	4.00	0.16	0.03	0.10	0.14	0.14	3.64	2.27	122.12	201.59	11.44	2.44	12.06	3.06		8.32
S 025	0.01	-0.03	0.00	0.63	0.00	10.00	1.00	0.55	0.03	0.10	0.53	0.53	12.51	2.27	124.11	225.93	9.38	0.38	10.00	1.00		16.00
S 026	0.01	-0.01	0.00	0.63	0.31	21.00	12.00	0.15	0.06	0.20	0.09	0.09	3.41	4.55	86.16	155.20	20.38	11.38	20.69	11.69		33.60
S 027	0.01	0.14	0.14	16.88	21.18	14.00	5.00	1.71	0.12	0.40	1.59	1.59	38.89	9.10	24.97	53.26	-2.88	-11.88	-7.18	-16.18		0.83
S 028	0.01	-0.03	0.00	1.25	1.09	28.00	19.00	0.26	0.17	0.60	0.09	0.09	5.91	13.65	117.87	219.06	26.75	17.75	26.91	17.91		22.40
S 034	0.01	-0.03	0.00	0.31	0.00	26.00	17.00	0.25	0.20	0.70	0.05	0.05	5.69	15.92	157.08	275.47	25.69	16.69	26.00	17.00		83.20
S 037	0.04	-0.05	0.00	22.81	22.50	141.00	132.00	1.65	1.37	5.00	0.28	0.28	37.53	113.71	123.86	189.28	118.19	109.19	118.50	109.50		6.18
S 038	0.00	0.01	0.01	1.56	1.79	20.00	11.00	0.14	0.08	0.30	0.06	0.06	3.18	6.82	145.09	287.21	18.44	9.44	18.21	9.21		12.80
S 040	0.06	0.03	0.03	14.69	11.79	5.00	-4.00	0.09	0.03	0.10	0.07	0.07	2.05	2.27	4.74	12.89	-9.69	-18.69	-6.79	-15.79		0.34
S 046	0.02	0.04	0.04	38.13	38.93	26.00	17.00	2.45	0.24	0.90	2.21	2.21	55.72	20.47	29.97	63.86	-12.13	-21.13	-12.93	-21.93		0.68
S 047	0.02	0.04	0.04	13.44	14.53	312.00	303.00	5.92	3.74	13.70	2.18	2.18	134.64	311.57	308.41	373.11	298.56	289.56	297.47	288.47		23.22
S 011	0.02	-0.02	0.00	1.56	0.63	3.00	-6.00	1.37	0.03	0.10	1.35	1.35	31.16	2.27	1.75	30.93	1.44	-7.56	2.38	-6.63		1.92
S 012	0.02	0.01	0.01	22.19	19.45	53.00	44.00	1.67	0.60	2.20	1.07	1.07	37.98	50.03	35.96	53.26	30.81	21.81	33.55	24.55		2.39
S 013	0.05	0.00	0.00	10.00	9.73	43.00	34.00	1.22	0.43	1.60	0.79	0.79	27.75	36.39	34.21	69.87	33.00	24.00	33.27	24.27		4.30
S 014	0.02	0.05	0.05	9.06	10.43	6.00	-3.00	0.93	0.03	0.10	0.91	0.91	21.15	2.27	8.49	26.63	-3.06	-12.06	-4.43	-13.43		0.66
S 015	0.03	0.03	0.03	7.19	8.00	1.00	-8.00	1.84	0.03	0.10	1.82	1.82	41.85	2.27	2.00	18.61	-6.19	-15.19	-7.00	-16.00		0.14
S 016	0.02	0.07	0.07	11.88	13.78	11.00	2.00	1.41	0.09	0.30	1.32	1.32	32.07	6.82	9.99	31.78	-0.88	-9.88	-2.78	-11.78		0.93
S 017	0.02	-0.04	0.00	2.81	1.88	27.00	18.00	0.94	0.15	0.60	0.79	0.79	21.38	13.65	26.72	86.19	24.19	15.19	25.13	16.13		9.60
S 018	0.03	-0.01	0.00	1.56	1.41	3.00	-6.00	1.46	0.03	0.10	1.44	1.44	33.20	2.27	3.75	31.78	1.44	-7.56	1.59	-7.41		1.92
S 019	0.03	-0.05	0.00	2.19	1.25	14.00	5.00	0.29	0.08	0.30	0.21	0.21	6.60	6.82	14.23	41.52	11.81	2.81	12.75	3.75		6.40
S 020	0.04	-0.05	0.00	1.25	0.94	9.00	0.00	0.16	0.03	0.10	0.14	0.14	3.64	2.27	10.99	37.51	7.75	-1.25	8.06	-0.94		7.20
S 022	0.01	-0.01	0.00	0.63	0.31	13.00	4.00	0.13	0.03	0.10	0.11	0.11	2.96	2.27	26.72	145.75	12.38	3.38	12.69	3.69		20.80
S 029	0.02	-0.02	0.00	1.88	1.72	25.00	16.00	0.20	0.17	0.60	0.03	0.03	4.55	13.65	98.64	225.64	23.13	14.13	23.28	14.28		13.33
S 030	0.02	-0.02	0.00	0.63	0.47	4.00	-5.00	1.05	0.03	0.10	1.03	1.03	23.88	2.27	4.00	25.77	3.38	-5.63	3.53	-5.47		6.40
S 031	0.02	-0.02	0.00	1.56	1.25	14.00	5.00	0.16	0.09	0.30	0.07	0.07	3.64	6.82	17.48	46.39	12.44	3.44	12.75	3.75		8.96
S 032	0.02	-0.03	0.00	0.31	0.00	3.00	-6.00	0.21	0.03	0.10	0.19	0.19	4.78	2.27	2.75	8.88	2.69	-6.31	3.00	-6.00		9.60
S 033	0.02	0.05	0.05	15.63	16.85	7.00	-2.00	0.66	0.06	0.20	0.60	0.60	15.01	4.55	15.98	31.78	-8.63	-17.63	-9.85	-18.85		0.45
S 035	0.02	0.06	0.06	4.38	5.99	14.00	5.00	0.21	0.07	0.20	0.14	0.14	4.78	4.55	143.09	241.96	9.63	0.63	8.01	-0.99		3.20
S 036	0.01	-0.02	0.00	0.94	0.78	32.00	23.00	0.44	0.32	1.20	0.12	0.12	10.01	27.29	122.12	212.76	31.06	22.06	31.22	22.22		34.13
S 039	0.04	-0.02	0.00	4.06	3.91	102.00	93.00	1.04	0.91	3.30	0.13	0.13	23.65	75.05	80.41	180.68	97.94	88.94	98.09	89.09		25.11
S 041	0.05	-0.05	0.00	1.88	1.25	50.00	41.00	0.69	0.38	1.40	0.31	0.31	15.69	31.84	46.70	85.62	48.13	39.13	48.75	39.75		26.67
S 042	0.03	-0.03	0.00	3.75	3.59	81.00	72.00	0.85	0.65	2.40	0.20	0.20	19.33	54.58	114.37	211.32	77.25	68.25	77.41	68.41		21.60
S 043	0.01	0.49	0.49	43.13	52.37	117.00	108.00	3.11	1.25	4.60	1.86	1.86	70.73	104.62	134.10	183.83	73.88	64.88	64.63	55.63		2.71
S 044	0.04	-0.02	0.00	4.38	4.06	75.00	66.00	0.89	0.66	2.40	0.23	0.23	20.24	54.58	90.40	141.74	70.63	61.63	70.94	61.94		17.14
S 045	0.03	0.03	0.03	9.06	9.56	75.00	66.00	0.86	0.60	2.20	0.26	0.26	19.56	50.03	81.91	141.17	65.94	56.94	65.44	56.44		8.28
S 048	0.06	-0.07	0.00	0.94	0.63	32.00	23.00	0.55	0.22	0.80	0.33	0.33	12.51	18.19	34.21	86.19	31.06	22.06	31.38	22.38		34.13

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID						NP		Total-C	Inorganic-C	Inorganic CO_2											
Typical Detection Limit	Barite-S	S del	S del Calc	TAP	SAP	1	NP_ADJ	0.01	0.05	0.2	C del	C del Calc	Total-CANP	Inorganic-CANP	Ca-CANP	CaMg-CANP	TNNP	TNNP_Adj	SNNP	SNNP_Adj	TCNNP	
Units	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	TNPR
WP09-79	0.04	0.04	0.04	30.00	27.66	43.00	43.00	0.51	0.48	1.80	0.03	0.03	42.50	40.91	59.68	101.94	13.00	13.00	15.34	15.34	12.50	1.43
WP09-80	0.05	0.05	0.05	36.88	34.78	60.00	60.00	0.72	0.66	2.40	0.06	0.06	60.00	54.54	101.64	183.55	23.13	23.13	25.22	25.22	23.13	1.63
WP09-74	0.04	-0.03	0.00	2.19	0.94	10.00	10.00	0.09	0.05	0.20	0.04	0.04	7.50	4.55	41.20	91.63	7.81	7.81	9.06	9.06	5.31	4.57
WP09-75	0.04	-0.04	0.00	2.19	1.56	11.00	11.00	0.16	0.05	0.20	0.11	0.11	13.33	4.55	36.96	83.04	8.81	8.81	9.44	9.44	11.15	5.03
M -009	0.10	-0.11	0.00	0.94	0.31	42.00	27.00	0.45	0.42	1.50	0.03	0.03	10.23	34.11	40.71	65.00	41.06	26.06	41.69	26.69		44.80
M -007	0.04	0.03	0.03	22.81	23.12	69.00	54.00	0.77	0.70	2.60	0.07	0.07	17.51	59.13	76.67	139.74	46.19	31.19	45.88	30.88		3.02
M -008	0.02	0.15	0.15	74.06	78.46	67.00	52.00	0.82	0.77	2.80	0.05	0.05	18.65	63.68	37.21	70.44	-7.06	-22.06	-11.46	-26.46		0.90
M -008a	0.01	0.18	0.18	75.63	81.18	41.00	26.00	0.50	0.48	1.80	0.02	0.02	11.37	40.94	29.97	41.52	-34.63	-49.63	-40.18	-55.18		0.54
	0.00	0.57	0.57	173.13	189.98	73.60	58.60	0.39		1.06	0.10	0.10	8.87	24.11	38.71	77.31	-99.53	-114.53	-116.38	-131.38		0.43
	0.00	0.73	0.73	178.44	200.61	2.80	-12.20	0.02		0.01	0.02	0.02	0.45	0.23	1.25	8.88	-175.64	-190.64	-197.81	-212.81		0.02
	0.00	0.67	0.67	165.63	185.92	7.10	-7.90	0.02		0.01	0.02	0.02	0.45	0.23	9.24	21.76	-158.53	-173.53	-178.82	-193.82		0.04
	0.00	2.66	2.66	408.44	490.30	57.10	42.10	0.54		1.58	0.11	0.11	12.28	35.93	51.44	84.47	-351.34	-366.34	-433.20	-448.20		0.14
Res-019	0.03	0.08	0.08	35.63	37.28	5.00	-10.00	0.03	0.03	0.20	0.01	0.01	0.68	4.55	3.25	10.31	-30.63	-45.63	-32.28	-47.28		0.14
Res-020	0.13	-0.14	0.00	0.63	0.31	55.00	40.00	0.60	0.55	2.00	0.05	0.05	13.65	45.49	64.18	99.93	54.38	39.38	54.69	39.69		88.00
Res-021	0.10	-0.06	0.00	16.88	16.25	81.00	66.00	0.98	0.90	3.30	0.08	0.08	22.29	75.05	76.67	128.28	64.13	49.13	64.75	49.75		4.80
Res-022	0.01	0.14	0.14	74.69	78.44	8.00	-7.00	0.01	0.03	0.10	-0.02	0.00	0.11	2.27	7.24	30.35	-66.69	-81.69	-70.44	-85.44		0.11
Res-017	0.03	0.04	0.04	37.50	38.71	189.00	174.00	2.11	2.01	7.40	0.10	0.10	47.99	168.29	164.07	220.49	151.50	136.50	150.29	135.29		5.04
Res-018	0.02	0.00	0.00	60.00	59.87	26.00	11.00	0.24	0.24	0.90	0.00	0.00	5.46	20.47	26.72	47.53	-34.00	-49.00	-33.87	-48.87		0.43
M -005	0.15	-0.06	0.00	25.94	19.06	44.00	29.00	0.39	0.37	1.30	0.02	0.02	8.87	29.57	55.44	130.00	18.06	3.06	24.94	9.94		1.70
M -005a	0.05	-0.02	0.00	21.25	17.19	9.00	-6.00	0.03	0.03	0.10	0.01	0.01	0.68	2.27	12.24	76.17	-12.25	-27.25	-8.19	-23.19		0.42
M -006	0.01	0.04	0.04	51.56	48.92	46.00	31.00	0.47	0.43	1.60	0.04	0.04	10.69	36.39	43.70	96.21	-5.56	-20.56	-2.92	-17.92		0.89
WP09-38	0.01	0.59	0.59	211.88	209.14	11.00	11.00	0.40	0.08	0.30	0.32	0.32	33.34	6.82	13.24	54.12	-200.88	-200.88	-198.14	-198.14	-178.54	0.05
WP09-39	0.01	-0.02	0.00	1.56	1.56	17.00	17.00	0.25	0.05	0.20	0.20	0.20	20.83	4.55	134.60	250.27	15.44	15.44	15.44	15.44	19.27	10.88
WP09-77	0.03	0.17	0.17	63.75	53.17	9.00	9.00	0.11	0.10	0.40	0.01	0.01	9.17	9.09	26.47	60.42	-54.75	-54.75	-44.17	-44.17	-54.58	0.14
WP09-78	0.06	0.00	0.00	12.19	8.75	9.00	9.00	0.08	0.07	0.30	0.01	0.01	6.67	6.82	11.74	49.25	-3.19	-3.19	0.25	0.25	-5.52	0.74
KSMMNRX001	0.04	-0.04	0.00	0.31	0.16	134.71	119.71	0.42		1.58	-0.01	0.00	9.55	35.93	140.85	379.12	134.40	119.40	134.56	119.56		431.08
KSMMNRX002	0.03	-0.03	0.00	11.88	11.56	174.19	159.19	1.05		3.28	0.15	0.15	23.88	74.60	96.39	614.50	162.31	147.31	162.62	147.62		14.67
KSMMNRX003	0.02	0.00	0.00	8.75	8.59	335.21	320.21	3.71		13.90	-0.08	0.00	84.37	316.12	255.72	651.15	326.46	311.46	326.62	311.62		38.31
KSMMNRX004	0.03	0.27	0.27	15.63	23.40	275.69	260.69	1.11		4.14	-0.02	0.00	25.24	94.15	104.39	709.57	260.06	245.06	252.29	237.29		17.64
KSMMNRX005	0.00	0.57	0.57	118.44	135.90	139.10	124.10	0.95		3.57	-0.02	0.00	21.61	81.19	89.15	400.03	20.66	5.66	3.20	-11.80		1.17
KSMMNRX006	0.01	0.07	0.07	5.94	7.06	176.69	161.69	0.40		1.33	0.04	0.04	9.10	30.25	192.04	515.14	170.75	155.75	169.63	154.63		29.76
KSMMNRX007	0.04	-0.02	0.00	9.38	9.06	222.43	207.43	1.55		5.39	0.08	0.08	35.25	122.58	111.63	354.21	213.06	198.06	213.37	198.37		23.73
KSMMNRX008	0.00	0.23	0.23	63.13	64.30	3.39	-11.61	0.04		0.10	0.01	0.01	0.91	2.27	3.50	201.59	-59.73	-74.73	-60.91	-75.91		0.05
KSMMNRX009	0.03	-0.03	0.00	15.63	9.06	1.13	-13.87	0.03		0.06	0.01	0.01	0.68	1.36	3.50	89.91	-14.49	-29.49	-7.93	-22.93		0.07
KSMMNRX010	0.01	0.06	0.06	35.94	31.37	3.77	-11.23	0.01		0.03	0.00	0.00	0.23	0.68	4.00	110.53	-32.17	-47.17	-27.60	-42.60		0.10
KSMMSRX001	0.04	-0.04	0.00	12.19	9.38	8.29	-6.71	0.04		0.05	0.03	0.03	0.91	1.14	109.63	380.55	-3.90	-18.90	-1.08	-16.08		0.68
KSMMSRX002	0.01	0.02	0.02	33.13	28.24	2.39	-12.61	0.01		0.04	0.00	0.00	0.23	0.91	62.43	309.25	-30.74	-45.74	-25.86	-40.86		0.07
KSMMSRX003	0.01	-0.01	0.00	21.25	19.38	8.79	-6.21	0.09		0.24	0.02	0.02	2.05	5.46	9.74	194.43	-12.46	-27.46	-10.58	-25.58		0.41
KSMMSRX004	0.05	-0.05	0.00	5.63	3.13	0.50	-14.50	0.04		0.04	0.03	0.03	0.91	0.91	1.00	98.50	-5.12	-20.12	-2.62	-17.62		0.09
KSMMSRX005	0.01	0.00	0.00	25.31	23.27	14.32	-0.68	0.15		0.45	0.03	0.03	3.41	10.23	20.48	226.79	-10.99	-25.99	-8.95	-23.95		0.57
KSMMSRX006	0.02	0.00	0.00	15.31	15.00	52.01	37.01	0.21		0.75	0.01	0.01	4.78	17.06	16.98	237.10	36.69	21.69	37.01	22.01		3.40
KSMMSRX007	0.02	-0.02	0.00	10.00	7.19	65.16	50.16	0.56		2.16	-0.03	0.00	12.74	49.12	52.19	266.02	55.16	40.16	57.98	42.98		6.52
KSMMSRX008	0.08	-0.08	0.00	1.25	0.94	75.81	60.81	0.50		1.86	-0.01	0.00	11.37	42.30	51.69	271.17	74.56	59.56	74.88	59.88		60.65
KSMMSRX009	0.03	-0.03	0.00	11.56	7.81	7.29	-7.71	0.04		0.10	0.01	0.01	0.91	2.27	6.24	164.65	-4.28	-19.28	-0.53	-15.53		0.63
KSMMSRX010	0.03	-0.03	0.00	1.88	1.56	9.17	-5.83	0.10		0.19	0.05	0.05	2.27	4.32	10.24	215.05	7.30	-7.70	7.61	-7.39		4.89
KSMMSRX011	0.11	-0.11	0.00	2.50	1.25	93.98	78.98	0.47		1.60	0.03	0.03	10.69	36.39	41.45	336.74	91.48	76.48	92.73	77.73		37.59
KSMMSRX012	0.02	-0.02	0.00	28.44	28.13	295.11	280.11	2.62		9.50	0.03	0.03	59.59	216.05	207.77	578.99	266.68	251.68	266.99	251.99		10.38
KSMMSRX013	0.01	-0.01	0.00	24.69	13.75	2.26	-12.74	0.07		0.12	0.04	0.04	1.59	2.73	6.24	133.15	-22.43	-37.43	-11.49	-26.49		0.09
KSMMSRX014	0.02	-0.02	0.00	1.25	0.94	147.87	132.87	0.83		3.16	-0.03	0.00	18.88	71.87	64.93	194.72	146.62	131.62	146.93	131.93		118.30
KSMMSRX015	0.00	0.19	0.19	206.56	209.36	0.38	-14.62	0.01		0.06	-0.01	0.00	0.23	1.36	1.25	161.79	-206.19	-221.19	-208.98	-223.98		0.00
KSMMSRX016	0.00	0.00	0.00	40.00	39.06	151.63	136.63	1.14		4.40	-0.06	0.00	25.93	100.07	65.43	430.09	111.63	96.63	112.57	97.57		3.79

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID						NP		Total-C	Inorganic-C	Inorganic CO_2											
Typical Detection Limit	Barite-S	S del	S del Calc	TAP	SAP	1	NP_ADJ	0.01	0.05	0.2	C del	C del Calc	Total-CANP	Inorganic-CANP	Ca-CANP	CaMg-CANP	TNNP	TNNP_Adj	SNNP	SNNP_Adj	TCNNP	
Units	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	TNPR
KSMMSRX017	0.00	0.00	0.00	55.31	55.00	131.58	116.58	0.93		3.49	-0.02	0.00	21.15	79.37	79.66	417.78	76.27	61.27	76.58	61.58		2.38
WP09-42	0.03	-0.04	0.00	0.94	0.63	12.00	12.00	2.14	0.07	0.30	2.07	2.07	178.35	6.82	32.71	124.27	11.06	11.06	11.38	11.38	177.41	12.80
WP09-37	0.04	0.08	0.08	22.19	20.17	38.00	38.00	0.68	0.33	1.20	0.35	0.35	56.67	27.27	52.94	107.67	15.81	15.81	17.83	17.83	34.48	1.71
WP09-53A	0.03	-0.03	0.00	2.19	1.88	13.00	13.00	0.40	0.06	0.20	0.34	0.34	33.34	4.55	35.46	95.35	10.81	10.81	11.13	11.13	31.15	5.94
WP09-53B	0.05	0.04	0.04	26.88	23.95	44.00	44.00	0.73	0.42	1.60	0.31	0.31	60.84	36.36	53.69	103.94	17.13	17.13	20.05	20.05	33.96	1.64
WP09-72	0.02	-0.05	0.00	0.16	0.31	16.00	16.00	0.11	0.05	0.20	0.06	0.06	9.17	4.55	64.43	172.38	15.84	15.84	15.69	15.69	9.01	102.40
WP09-76	0.03	-0.02	0.00	1.25	0.63	76.00	76.00	1.08	0.84	3.10	0.24	0.24	90.01	70.45	110.88	187.56	74.75	74.75	75.38	75.38	88.76	60.80
KC09-09 1-2.4	0.03	0.00	0.00	4.38	2.96	26.00	26.00	0.25	0.26	1.00	-0.01	0.00	20.83	22.73	79.41	149.19	21.63	21.63	23.04	23.04	16.46	5.94
KC09-09 15.53-16.0	0.03	-0.03	0.00	1.25	0.94	42.00	42.00	0.81	0.39	1.40	0.42	0.42	67.50	31.82	108.38	178.39	40.75	40.75	41.06	41.06	66.25	33.60
KC09-09 18.93-19.27	0.03	-0.04	0.00	0.31	0.31	73.00	73.00	0.87	0.80	2.90	0.07	0.07	72.50	65.91	81.91	151.19	72.69	72.69	72.69	72.69	72.19	233.60
KC09-09 28.7-29.8	0.03	-0.03	0.00	5.00	4.69	118.00	118.00	1.32	1.23	4.50	0.09	0.09	110.01	102.27	157.08	263.15	113.00	113.00	113.31	113.31	105.01	23.60
KC09-09 33.2-33.6	0.02	-0.03	0.00	1.25	0.94	68.00	68.00	0.83	0.74	2.70	0.09	0.09	69.17	61.36	91.90	140.02	66.75	66.75	67.06	67.06	67.92	54.40
KC09-09 40.8-41.03	0.04	-0.01	0.00	6.25	5.00	158.00	158.00	1.97	1.87	6.80	0.10	0.10	164.18	154.54	140.85	190.42	151.75	151.75	153.00	153.00	157.93	25.28
KC09-09 50.6-51.0	0.02	0.03	0.03	8.44	7.62	134.00	134.00	1.55	1.46	5.30	0.09	0.09	129.18	120.45	131.36	221.35	125.56	125.56	126.38	126.38	120.74	15.88
KC09-09 54.7-55.2	0.03	-0.03	0.00	2.19	1.56	108.00	108.00	1.21	1.18	4.30	0.03	0.03	100.84	97.73	124.86	196.15	105.81	105.81	106.44	106.44	98.65	49.37
KC09-09 6.23-6.75	0.03	-0.02	0.00	3.44	2.50	48.00	48.00	0.55	0.48	1.80	0.07	0.07	45.84	40.91	100.89	162.36	44.56	44.56	45.50	45.50	42.40	13.96
KC09-09 60.9-61.6	0.02	0.04	0.04	16.56	15.19	106.00	106.00	1.30	1.16	4.20	0.14	0.14	108.34	95.45	127.36	197.87	89.44	89.44	90.81	90.81	91.78	6.40
KC09-09 64.6-66.03	0.02	0.04	0.04	12.19	11.10	126.00	126.00	1.59	1.37	5.00	0.22	0.22	132.51	113.64	141.59	240.82	113.81	113.81	114.90	114.90	120.32	10.34
KC09-09 74.5-75.25	0.00	0.00	0.00	143.44	142.50	22.00	22.00	0.25	0.25	0.90	0.00	0.00	20.83	20.45	30.97	61.28	-121.44	-121.44	-120.50	-120.50	-122.60	0.15
KC09-09 75.6-76.5	0.00	0.04	0.04	107.81	106.75	27.00	27.00	0.28	0.21	0.80	0.07	0.07	23.33	18.18	28.72	59.56	-80.81	-80.81	-79.75	-79.75	-84.48	0.25
KC09-09 80.5-81.47	0.00	0.08	0.08	96.56	96.10	40.00	40.00	0.30	0.28	1.00	0.02	0.02	25.00	22.73	34.96	72.16	-56.56	-56.56	-56.10	-56.10	-71.56	0.41
KC09-09 89.3-90.86	0.05	-0.04	0.00	25.94	24.69	25.00	25.00	0.41	0.45	1.70	-0.04	0.00	34.17	38.64	65.93	97.07	-0.94	-0.94	0.31	0.31	8.23	0.96
KC09-09 9.27-10.25	0.06	-0.06	0.00	4.69	3.75	45.00	45.00	0.55	0.42	1.50	0.13	0.13	45.84	34.09	86.65	143.75	40.31	40.31	41.25	41.25	41.15	9.60
WP09-31	0.03	-0.01	0.00	1.88	0.94	30.00	30.00	0.47	0.22	0.80	0.25	0.25	39.17	18.18	50.44	105.66	28.13	28.13	29.06	29.06	37.29	16.00
WP09-36	0.02	-0.01	0.00	1.56	0.94	54.00	54.00	0.68	0.50	1.80	0.18	0.18	56.67	40.91	105.13	164.36	52.44	52.44	53.06	53.06	55.11	34.56
	0.02	0.06	0.06	39.06	38.19	304.30	304.30	3.47		8.43	1.17	1.17	289.19	191.59	174.56	270.60	265.24	265.24	266.11	266.11	250.12	7.79
Res-001	0.07	-0.08	0.00	1.56	0.63	5.00	5.00	0.06	0.03	0.10	0.04	0.04	1.36	2.27	1.00	26.34	3.44	3.44	4.38	4.38		3.20
Res-002	0.11	-0.08	0.00	2.81	2.50	42.00	42.00	0.47	0.36	1.30	0.11	0.11	10.69	29.57	62.18	133.15	39.19	39.19	39.50	39.50		14.93
Res-003	0.02	-0.01	0.00	3.13	2.81	59.00	59.00	1.49	0.65	2.40	0.84	0.84	33.89	54.58	73.67	113.97	55.88	55.88	56.19	56.19		18.88
Res-004	0.04	-0.01	0.00	4.06	3.91	39.00	39.00	0.35	0.33	1.20	0.02	0.02	7.96	27.29	59.68	121.41	34.94	34.94	35.09	35.09		9.60
Res-005	0.04	-0.02	0.00	2.50	2.34	12.00	12.00	0.55	0.09	0.30	0.46	0.46	12.51	6.82	6.49	47.25	9.50	9.50	9.66	9.66		4.80
WP09-83	0.04	-0.04	0.00	0.94	0.63	54.00	54.00	0.68	0.51	1.90	0.17	0.17	56.67	43.18	96.64	165.51	53.06	53.06	53.38	53.38	55.73	57.60
WP09-84	0.04	-0.03	0.00	1.25	0.94	72.00	72.00	0.90	0.71	2.60	0.19	0.19	75.00	59.09	104.88	178.39	70.75	70.75	71.06	71.06	73.75	57.60
	0.03	0.14	0.14	7.81	6.52	158.60	158.60	0.70		1.97	0.16	0.16	58.34	44.77	58.94	123.70	150.79	150.79	152.08	152.08	50.52	20.30
	0.02	0.17	0.17	7.19	6.05	132.00	132.00	0.29		0.73	0.09	0.09	24.17	16.59	170.81	249.98	124.81	124.81	125.95	125.95	16.98	18.37
Res-016	0.03	0.06	0.06	27.81	29.47	64.00	64.00	1.25	0.78	2.90	0.47	0.47	28.43	65.95	57.94	115.40	36.19	36.19	34.53	34.53		2.30
Res-008	0.02	0.09	0.09	22.81	25.02	8.00	8.00	0.74	0.03	0.10	0.72	0.72	16.83	2.27	4.25	56.98	-14.81	-14.81	-17.02	-17.02		0.35
M -001	0.06	0.01	0.01	29.06	24.48	25.00	25.00	0.13	0.13	0.50	0.00	0.00	2.96	11.37	35.96	53.26	-4.06	-4.06	0.52	0.52		0.86
M -002	0.01	0.00	0.00	2.81	2.67	61.00	61.00	0.68	0.58	2.10	0.10	0.10	15.46	47.76	157.08	270.60	58.19	58.19	58.33	58.33		21.69
M -004	0.01	-0.02	0.00	1.25	0.63	36.00	36.00	0.41	0.39	1.40	0.02	0.02	9.32	31.84	31.72	44.10	34.75	34.75	35.38	35.38		28.80
Res-012	0.02	-0.04	0.00	0.16	0.00	74.00	74.00	0.86	0.79	2.90	0.07	0.07	19.56	65.95	81.16	139.16	73.84	73.84	74.00	74.00		473.60
Res-013	0.16	-0.16	0.00	20.63	15.00	72.00	72.00	1.95	1.47	5.40	0.48	0.48	44.35	122.81	59.93	95.64	51.38	51.38	57.00	57.00		3.49
Res-014	0.05	0.00	0.00	12.50	11.56	25.00	25.00	0.16	0.19	0.70	-0.03	0.00	3.64	15.92	46.20	95.07	12.50	12.50	13.44	13.44		2.00
Res-011	0.01	-0.02	0.00	0.16	0.00	4.00	4.00	0.05	0.05	0.20	0.00	0.00	1.14	4.55	3.75	6.59	3.84	3.84	4.00	4.00		25.60
Res-009	0.02	-0.02	0.00	0.63	0.31	85.00	85.00	1.44	1.14	4.20	0.30	0.30	32.75	95.52	50.94	87.62	84.38	84.38	84.69	84.69		136.00
Res-010	0.03	-0.04	0.00	0.94	0.31	37.00	37.00	0.61	0.39	1.40	0.22	0.22	13.87	31.84	33.21	69.87	36.06	36.06	36.69	36.69		39.47
Res-015	0.06	-0.07	0.00	0.16	0.00	57.00	57.00	0.68	0.57	2.10	0.11	0.11	15.46	47.76	65.18	111.10	56.84	56.84	57.00	57.00		364.80
M -003	0.02	-0.03	0.00	0.31	0.00	95.00	95.00	1.23	1.06	3.90	0.17	0.17	27.97	88.70	104.39	205.60	94.69	94.69	95.00	95.00		304.00
Res-006	0.04	0.09	0.09	27.50	27.92	27.00	27.00	0.11	0.12	0.40	-0.01	0.00	2.50	9.10	29.72	87.91	-0.50	-0.50	-0.92	-0.92		0.98
	0.00	1.78	1.78	166.88	166.49	123.80	123.80	1.58		4.89	0.25	0.25	131.68	111.14	89.90	128.57	-43.08	-43.08	-42.69	-42.69	-35.20	0.74
	0.00	0.76	0.76	93.44	92.67	283.80	283.80	3.70		11.60	0.53	0.53	308.35	263.63	157.33	239.67	190.36	190.36	191.13	191.13	214.92	3.04

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID						NP		Total-C	Inorganic-C	Inorganic CO_2											
Typical Detection Limit	Barite-S	S del	S del Calc	TAP	SAP	1	NP_ADJ	0.01	0.05	0.2	C del	C del Calc	Total-CANP	Inorganic-CANP	Ca-CANP	CaMg-CANP	TNNP	TNNP_Adj	SNNP	SNNP_Adj	TCNNP	
Units	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	TNPR
	0.00	0.78	0.78	99.69	98.67	250.00	250.00	2.84		8.92	0.41	0.41	236.68	202.73	147.59	215.62	150.31	150.31	151.33	151.33	136.99	2.51
	0.00	1.03	1.03	100.31	99.92	217.50	217.50	2.32		7.26	0.34	0.34	193.35	165.00	125.11	192.14	117.19	117.19	117.58	117.58	93.03	2.17
	0.00	0.75	0.75	81.88	81.12	238.80	238.80	2.35		6.94	0.46	0.46	195.85	157.73	144.34	215.33	156.93	156.93	157.68	157.68	113.97	2.92
	0.00	0.72	0.72	77.19	76.17	253.80	253.80	2.44		7.65	0.35	0.35	203.35	173.86	153.83	218.48	176.61	176.61	177.63	177.63	126.16	3.29
	0.02	0.02	0.02	4.06	3.08	231.10	231.10	1.88		4.19	0.74	0.74	156.68	95.23	176.56	275.18	227.04	227.04	228.02	228.02	152.61	56.89
Res-007	0.01	-0.02	0.00	0.63	0.47	177.00	177.00	2.15	1.86	6.80	0.29	0.29	48.90	154.65	154.58	257.14	176.38	176.38	176.53	176.53		283.20
KSMSURX001	0.03	-0.03	0.00	15.94	13.13	7.29	-7.71	0.06		0.05	0.05	0.05	1.36	1.14	11.74	99.36	-8.65	-23.65	-5.84	-20.84		0.46
KSMSURX002	0.00	0.00	0.00	38.44	30.94	-0.38	-15.38	0.05		0.07	0.03	0.03	1.14	1.59	1.00	138.59	-38.81	-53.81	-31.31	-46.31		-0.01
KSMSURX003	0.00	0.00	0.00	29.69	29.06	91.48	76.48	0.31		1.21	-0.02	0.00	7.05	27.52	28.72	176.10	61.79	46.79	62.42	47.42		3.08
KSMSURX004	0.10	-0.11	0.00	0.31	0.00	62.66	47.66	0.30		0.86	0.07	0.07	6.82	19.56	25.97	496.53	62.34	47.34	62.66	47.66		200.50
KSMSURX005	0.07	-0.08	0.00	0.31	0.00	114.66	99.66	0.58		2.21	-0.02	0.00	13.19	50.26	69.67	392.01	114.35	99.35	114.66	99.66		366.92
KSMSURX006	0.04	-0.05	0.00	1.88	1.72	88.35	73.35	0.20		0.66	0.02	0.02	4.55	15.01	34.71	211.61	86.47	71.47	86.63	71.63		47.12
KSMSURX007	0.06	-0.07	0.00	1.25	1.09	65.16	50.16	0.24		0.87	0.00	0.00	5.46	19.79	21.98	334.45	63.91	48.91	64.07	49.07		52.13
KSMSURX008	0.06	-0.06	0.00	5.00	4.84	14.95	-0.05	0.13		0.29	0.05	0.05	2.96	6.60	10.49	312.69	9.95	-5.05	10.11	-4.89		2.99
KSMSURX009	0.00	0.00	0.00	90.00	89.69	134.09	119.09	0.81		3.03	-0.02	0.00	18.42	68.91	74.67	308.97	44.09	29.09	44.40	29.40		1.49
KSMSURX010	0.01	-0.01	0.00	24.06	23.13	72.68	57.68	0.37		1.27	0.02	0.02	8.41	28.88	35.46	226.79	48.62	33.62	49.56	34.56		3.02
KSMSURX011	0.00	0.09	0.09	100.00	100.51	5.03	-9.97	0.01		0.03	0.00	0.00	0.23	0.68	6.49	170.66	-94.97	-109.97	-95.49	-110.49		0.05
KSMSURX012	0.01	0.07	0.07	73.13	73.27	1.88	-13.12	0.04		0.04	0.03	0.03	0.91	0.91	3.50	147.18	-71.24	-86.24	-71.39	-86.39		0.03
KSMSURX013	0.10	-0.12	0.00	0.31	0.00	115.91	100.91	0.44		1.43	0.05	0.05	10.01	32.52	59.43	231.37	115.60	100.60	115.91	100.91		370.93
KSMSURX014	0.04	-0.04	0.00	20.31	19.38	106.52	91.52	0.26		0.88	0.02	0.02	5.91	20.01	138.10	459.01	86.20	71.20	87.14	72.14		5.24
KC09-10 1.35-2.4	0.02	-0.01	0.00	1.56	0.94	11.00	11.00	0.24	0.03	0.20	0.22	0.22	5.46	4.55	37.46	148.61	9.44	9.44	10.06	10.06		7.04
KC09-10 4.56-6.6	0.02	0.07	0.07	9.38	10.55	125.00	110.00	2.11	1.40	5.10	0.71	0.71	47.99	115.99	129.11	249.69	115.63	100.63	114.45	99.45		13.33
KC09-11 1.2-2.4	0.04	0.01	0.01	12.50	12.02	84.00	69.00	1.08	0.89	3.30	0.19	0.19	24.56	75.05	118.37	192.71	71.50	56.50	71.98	56.98		6.72
KC09-11 2.4-4.5	0.03	0.11	0.11	23.44	26.31	102.00	87.00	1.43	1.17	4.30	0.26	0.26	32.52	97.79	135.60	211.04	78.56	63.56	75.69	60.69		4.35
T001	0.02	0.08	0.08	13.44	15.78	6.00	-2.00	0.26	0.03	0.10	0.24	0.24	5.91	2.27	9.24	61.56	-7.44	-15.44	-9.78	-17.78		0.45
T002	0.02	0.03	0.03	7.81	6.81	5.00	-3.00	0.29	0.03	0.10	0.27	0.27	6.60	2.27	12.99	71.59	-2.81	-10.81	-1.81	-9.81		0.64
T003	0.02	0.07	0.07	9.06	10.98	6.00	-2.00	0.36	0.03	0.10	0.34	0.34	8.19	2.27	2.25	65.00	-3.06	-11.06	-4.98	-12.98		0.66
T004	0.03	-0.04	0.00	1.88	0.94	8.00	0.00	0.27	0.13	0.50	0.14	0.14	6.14	11.37	14.98	73.59	6.13	-1.88	7.06	-0.94		4.27
T005	0.03	0.10	0.10	18.44	21.34	2.00	-6.00	0.69	0.18	0.70	0.51	0.51	15.69	15.92	10.24	83.61	-16.44	-24.44	-19.34	-27.34		0.11
T006	0.02	-0.02	0.00	3.13	2.97	28.00	20.00	0.58	0.40	1.50	0.18	0.18	13.19	34.11	16.73	36.94	24.88	16.88	25.03	17.03		8.96
T007	0.02	0.10	0.10	23.13	26.02	8.00	0.00	0.57	0.03	0.10	0.55	0.55	12.96	2.27	11.49	80.46	-15.13	-23.13	-18.02	-26.02		0.35
T008	0.01	0.07	0.07	7.50	9.64	74.00	66.00	1.25	0.98	3.60	0.27	0.27	28.43	81.87	66.43	104.52	66.50	58.50	64.36	56.36		9.87
T009	0.02	-0.01	0.00	1.25	1.09	17.00	9.00	0.14	0.11	0.40	0.03	0.03	3.18	9.10	24.47	85.90	15.75	7.75	15.91	7.91		13.60
T010	0.02	0.01	0.01	1.56	1.71	5.00	-3.00	0.19	0.03	0.10	0.17	0.17	4.32	2.27	2.00	33.50	3.44	-4.56	3.29	-4.71		3.20
T011	0.02	0.00	0.00	3.44	3.24	16.00	8.00	0.53	0.32	1.20	0.21	0.21	12.05	27.29	13.49	55.26	12.56	4.56	12.76	4.76		4.65
T012	0.02	0.01	0.01	3.13	3.28	20.00	12.00	0.30	0.14	0.50	0.16	0.16	6.82	11.37	12.49	64.14	16.88	8.88	16.72	8.72		6.40
T013	0.02	0.06	0.06	10.94	9.09	8.00	0.00	1.59	0.22	0.80	1.37	1.37	36.16	18.19	13.24	66.72	-2.94	-10.94	-1.09	-9.09		0.73
KSM TAR07	0.00	0.00	0.00	6.88	6.72	95.48	95.48	1.06		1.50	0.65	0.65	88.34	34.09	36.21	78.17	88.60	88.60	88.76	88.76	81.46	13.89
KSM TAR08	0.01	-0.01	0.00	1.88	1.56	12.32	12.32	0.51		0.12	0.48	0.48	42.50	2.73	7.24	48.11	10.44	10.44	10.75	10.75	40.63	6.57
KSM TAR09	0.01	-0.01	0.00	1.56	1.25	8.62	8.62	0.77		0.30	0.69	0.69	64.17	6.82	9.74	58.70	7.06	7.06	7.37	7.37	62.61	5.52
KSM TAR01	0.00	0.00	0.00	1.25	1.09	64.07	64.07	0.98		1.84	0.48	0.48	22.29	41.85	28.72	76.17	62.82	62.82	62.98	62.98		51.26
KSM TAR04	0.00	0.00	0.00	10.31	9.69	9.36	9.36	0.43		0.11	0.40	0.40	9.78	2.50	4.25	53.83	-0.95	-0.95	-0.33	-0.33		0.91
KSM TAR05	0.00	0.00	0.00	2.50	2.19	14.29	14.29	0.35		0.73	0.15	0.15	7.96	16.60	8.24	36.08	11.79	11.79	12.10	12.10		5.71
KSM TAR06	0.00	0.00	0.00	8.13	7.50	15.76	15.76	0.19		0.23	0.13	0.13	4.32	5.23	10.24	76.45	7.64	7.64	8.26	8.26		1.94
	0.02	0.19	0.19	7.19	6.06	123.10	123.10	0.68		0.93	0.43	0.43	56.67	21.14	32.46	101.94	115.91	115.91	117.04	117.04	49.48	17.13
	0.01	0.06	0.06	2.50	1.73	30.80	30.80	0.43		0.35	0.33	0.33	35.84	7.95	12.99	67.01	28.30	28.30	29.07	29.07	33.34	12.32
	0.02	0.09	0.09	3.75	2.81	167.10	167.10	1.37		2.63	0.65	0.65	114.17	59.77	82.66	141.46	163.35	163.35	164.29	164.29	110.42	44.56
	0.01	0.05	0.05	2.81	1.50	9.20	9.20	0.38		0.01	0.38	0.38	31.67	0.23	2.75	52.12	6.39	6.39	7.70	7.70	28.86	3.27
KSM TAR02	0.00	0.00	0.00	3.13	2.97	359.30	359.30	4.35		16.43	-0.13	0.00	98.93	373.66	263.71	321.85	356.17	356.17	356.33	356.33		114.97
KSM TAR03	0.01	-0.01	0.00	7.50	5.94	72.86	72.86	0.72		0.48	0.59	0.59	16.37	10.92	11.49	48.97	65.36	65.36	66.93	66.93		9.72
TS014	0.01	0.00	0.00	4.38	3.75	42.00	34.00	0.82	0.54	2.00	0.28	0.28	18.65	45.49	39.71	109.38	37.63	29.63	38.25	30.25		9.60

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID						NP		Total-C	Inorganic-C	Inorganic CO_2											
Typical Detection Limit	Barite-S	S del	S del Calc	TAP	SAP	1	NP_ADJ	0.01	0.05	0.2	C del	C del Calc	Total-CANP	Inorganic-CANP	Ca-CANP	CaMg-CANP	TNNP	TNNP_Adj	SNNP	SNNP_Adj	TCNNP	
Units	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	TNPR
TS015	0.01	0.04	0.04	7.19	7.99	8.00	0.00	0.83	0.19	0.70	0.64	0.64	18.88	15.92	5.74	49.25	0.81	-7.19	0.01	-7.99		1.11
TS016	0.01	0.02	0.02	4.06	4.29	172.00	164.00	2.33	2.00	7.30	0.33	0.33	52.99	166.02	170.31	233.09	167.94	159.94	167.71	159.71		42.34
TS017	0.01	0.02	0.02	5.31	5.19	71.00	63.00	1.16	0.82	3.00	0.34	0.34	26.38	68.23	55.19	110.24	65.69	57.69	65.81	57.81		13.36
TS019	0.01	0.07	0.07	9.38	11.13	40.00	32.00	0.71	0.43	1.60	0.28	0.28	16.15	36.39	47.20	112.25	30.63	22.63	28.87	20.87		4.27
TS020	0.01	-0.01	0.00	5.31	5.00	134.00	126.00	2.21	1.65	6.00	0.56	0.56	50.26	136.46	57.94	127.71	128.69	120.69	129.00	121.00		25.22
TS021	0.02	-0.01	0.00	1.25	1.09	8.00	0.00	0.94	0.20	0.80	0.74	0.74	21.38	18.19	4.99	65.29	6.75	-1.25	6.91	-1.09		6.40
TS022	0.02	0.07	0.07	8.13	9.97	9.00	1.00	0.59	0.03	0.10	0.57	0.57	13.42	2.27	3.50	63.86	0.88	-7.13	-0.97	-8.97		1.11
TS023	0.01	-0.01	0.00	0.63	0.31	17.00	9.00	0.25	0.10	0.40	0.15	0.15	5.69	9.10	8.74	63.28	16.38	8.38	16.69	8.69		27.20
TS024	0.02	-0.04	0.00	1.88	0.31	4.00	-4.00	1.33	0.03	0.10	1.31	1.31	30.25	2.27	5.24	43.81	2.13	-5.88	3.69	-4.31		2.13
TS025	0.02	0.08	0.08	9.06	11.55	9.00	1.00	0.90	0.03	0.10	0.88	0.88	20.47	2.27	3.25	62.71	-0.06	-8.06	-2.55	-10.55		0.99
TS026	0.01	0.02	0.02	4.06	4.24	16.00	8.00	0.30	0.11	0.40	0.19	0.19	6.82	9.10	11.49	62.42	11.94	3.94	11.76	3.76		3.94
TS027	0.02	-0.03	0.00	0.94	0.31	8.00	0.00	1.02	0.03	0.10	1.00	1.00	23.20	2.27	3.50	62.42	7.06	-0.94	7.69	-0.31		8.53
TS028	0.01	0.03	0.03	10.00	10.81	24.00	16.00	0.51	0.20	0.70	0.31	0.31	11.60	15.92	19.98	85.33	14.00	6.00	13.19	5.19		2.40
TS018	0.02	0.01	0.01	1.56	1.66	14.00	6.00	0.42	0.10	0.40	0.32	0.32	9.55	9.10	18.98	71.87	12.44	4.44	12.34	4.34		8.96
G1	0.04	-0.03	0.00	1.56	1.25	10.00	10.00	0.14	0.05	0.20	0.09	0.09	3.18	4.55	52.44	111.39	8.44	8.44	8.75	8.75		6.40
G2	0.04	-0.04	0.00	0.94	0.78	10.00	10.00	0.14	0.06	0.20	0.08	0.08	3.18	4.55	38.21	83.90	9.06	9.06	9.22	9.22		10.67
G3	0.04	-0.03	0.00	0.63	0.47	9.00	9.00	0.22	0.05	0.20	0.17	0.17	5.00	4.55	36.96	94.49	8.38	8.38	8.53	8.53		14.40
G4	0.04	-0.05	0.00	1.56	1.41	9.00	9.00	0.26	0.05	0.20	0.21	0.21	5.91	4.55	30.72	78.46	7.44	7.44	7.59	7.59		5.76
G5	0.04	-0.01	0.00	5.31	5.16	18.00	18.00	0.36	0.11	0.40	0.25	0.25	8.19	9.10	58.44	115.40	12.69	12.69	12.84	12.84		3.39
TG01	0.02	0.02	0.02	3.44	3.78	16.00	16.00	0.58	0.09	0.30	0.49	0.49	13.19	6.82	21.48	73.88	12.56	12.56	12.22	12.22		4.65
TG02	0.02	-0.04	0.00	0.63	0.00	6.00	6.00	0.45	0.03	0.10	0.43	0.43	10.23	2.27	5.99	51.26	5.38	5.38	6.00	6.00		9.60
TG03	0.02	-0.02	0.00	0.63	0.47	6.00	6.00	0.58	0.03	0.10	0.56	0.56	13.19	2.27	5.49	53.83	5.38	5.38	5.53	5.53		9.60
TG04	0.02	-0.04	0.00	0.63	0.00	9.00	9.00	0.62	0.03	0.10	0.60	0.60	14.10	2.27	8.99	56.41	8.38	8.38	9.00	9.00		14.40
TG05	0.02	-0.04	0.00	0.63	0.31	9.00	9.00	0.56	0.03	0.10	0.54	0.54	12.74	2.27	7.49	54.12	8.38	8.38	8.69	8.69		14.40
TG06	0.02	-0.02	0.00	1.25	1.09	19.00	19.00	0.71	0.13	0.50	0.58	0.58	16.15	11.37	19.23	68.15	17.75	17.75	17.91	17.91		15.20
RES-MW-02A 1.1-32.9M	0.02	0.02	0.02	5.31	5.00	11.00	11.00	0.47	0.09	0.30	0.38	0.38	10.69	6.82	10.49	66.43	5.69	-5.31	6.00	-5.00		2.07
RES-MW-01A 4.27-5.49M	0.01	0.03	0.03	6.88	6.56	47.00	47.00	0.80	0.53	2.00	0.27	0.27	18.19	45.49	44.70	107.38	40.13	-6.88	40.44	-6.56		6.84
RES-MW-01A 11.18-11.38M	0.02	0.09	0.09	16.25	18.80	35.00	27.00	0.50	0.32	1.20	0.18	0.18	11.37	27.29	29.72	81.90	18.75	10.75	16.20	8.20		2.15
	0.02	0.03	0.03	11.56	10.69	19.70	19.70	0.42		0.07	0.40	0.40	35.00	1.59	7.99	81.61	8.14	8.14	9.01	9.01	23.44	1.70
	0.02	0.07	0.07	9.06	8.10	19.90	19.90	1.10		0.42	0.99	0.99	91.67	9.55	7.24	75.88	10.84	10.84	11.80	11.80	82.61	2.20
	0.02	0.07	0.07	19.69	18.85	22.50	22.50	1.46		0.81	1.24	1.24	121.67	18.41	6.49	68.72	2.81	2.81	3.65	3.65	101.99	1.14
	0.02	0.15	0.15	20.00	19.32	33.60	33.60	1.11		0.44	0.99	0.99	92.51	10.00	15.98	77.60	13.60	13.60	14.28	14.28	72.51	1.68
	0.01	0.26	0.26	31.88	31.26	136.90	136.90	1.24		1.51	0.83	0.83	103.34	34.32	47.70	117.12	105.03	105.03	105.64	105.64	71.47	4.29
	0.01	0.18	0.18	27.50	27.01	41.50	41.50	1.30		0.25	1.23	1.23	108.34	5.68	23.97	89.05	14.00	14.00	14.49	14.49	80.84	1.51
	0.02	0.06	0.06	13.75	12.75	90.50	90.50	0.95		0.52	0.81	0.81	79.17	11.82	23.22	91.92	76.75	76.75	77.75	77.75	65.42	6.58
	0.01	0.19	0.19	28.75	28.05	138.20	138.20	1.42		1.87	0.91	0.91	118.34	42.50	51.44	115.97	109.45	109.45	110.15	110.15	89.59	4.81
	0.02	0.22	0.22	28.75	27.95	157.00	157.00	1.64		2.69	0.91	0.91	136.68	61.14	58.94	130.29	128.25	128.25	129.05	129.05	107.93	5.46
	0.01	0.02	0.02	3.44	2.88	111.80	111.80	0.93		1.41	0.55	0.55	77.51	32.05	33.21	103.37	108.36	108.36	108.92	108.92	74.07	32.52
	0.01	0.03	0.03	4.69	4.09	25.40	25.40	0.38		0.15	0.34	0.34	31.67	3.41	7.99	58.41	20.71	20.71	21.31	21.31	26.98	5.42
	0.01	0.08	0.08	8.44	7.88	36.10	36.10	0.45		0.54	0.30	0.30	37.50	12.27	15.48	70.44	27.66	27.66	28.22	28.22	29.06	4.28
	0.02	0.03	0.03	6.56	5.36	103.00	103.00	0.81		1.27	0.46	0.46	67.50	28.86	33.21	91.34	96.44	96.44	97.64	97.64	60.94	15.70
	0.01	0.06	0.06	12.81	12.22	261.30	261.30	2.78		8.35	0.50	0.50	231.68	189.77	183.05	244.83	248.49	248.49	249.08	249.08	218.87	20.39
	0.02	0.04	0.04	6.88	5.66	27.10	27.10	0.57		0.26	0.50	0.50	47.50	5.91	13.49	68.15	20.23	20.23	21.44	21.44	40.63	3.94
	0.01	0.01	0.01	2.50	1.89	35.30	35.30	0.42		0.31	0.34	0.34	35.00	7.05	14.23	75.88	32.80	32.80	33.41	33.41	32.50	14.12
	0.02	0.10	0.10	9.69	8.83	15.20	15.20	1.03		0.10	1.00	1.00	85.84	2.27	6.99	74.45	5.51	5.51	6.37	6.37	76.15	1.57
	0.02	0.05	0.05	5.63	4.98	98.00	98.00	0.69		0.85	0.46	0.46	57.50	19.32	24.22	84.47	92.38	92.38	93.02	93.02	51.88	17.42
	0.01	0.17	0.17	25.94	25.46	143.20	143.20	1.26		1.29	0.91	0.91	105.01	29.32	39.46	111.68	117.26	117.26	117.74	117.74	79.07	5.52
	0.02	0.15	0.15	24.06	23.42	139.40	139.40	1.01		1.32	0.65	0.65	84.17	30.00	42.95	112.25	115.34	115.34	115.98	115.98	60.11	5.79
	0.02	0.06	0.06	7.50	6.84	35.10	35.10	0.36		0.25	0.29	0.29	30.00	5.68	12.49	68.44	27.60	27.60	28.26	28.26	22.50	4.68
RES-MW-03A 0.05-0.25M	0.02	-0.03	0.00	0.63	0.31	4.00	-4.00	0.99	0.05	0.20	0.94	0.94	22.52	4.55	2.25	72.45	3.38	-4.63	3.69	-4.31		6.40
RES-MW-03A 1.89-2.04	0.02	0.01	0.01	4.06	4.16	81.00	73.00	1.21	0.95	3.50	0.26	0.26	27.52	79.60	67.18	133.15	76.94	68.94	76.84	68.84		19.94

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID						NP		Total-C	Inorganic-C	Inorganic CO_2											
Typical Detection Limit	Barite-S	S del	S del Calc	TAP	SAP	1	NP_ADJ	0.01	0.05	0.2	C del	C del Calc	Total-CANP	Inorganic-CANP	Ca-CANP	CaMg-CANP	TNNP	TNNP_Adj	SNNP	SNNP_Adj	TCNNP	
Units	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	TNPR
KC09-12 0-4.34	0.04	0.02	0.02	3.44	1.78	12.00	12.00	0.07	0.07	0.30	0.00	0.00	5.83	6.82	58.19	116.26	8.56	8.56	10.22	10.22	2.40	3.49
KC09-12 19.3-20.79	0.04	-0.02	0.00	6.56	5.31	214.00	214.00	2.68	2.44	8.90	0.24	0.24	223.35	202.27	200.28	296.37	207.44	207.44	208.69	208.69	216.79	32.61
KC09-12 20.79-22.16	0.02	0.05	0.05	16.25	15.02	31.00	31.00	0.35	0.27	1.00	0.08	0.08	29.17	22.73	155.08	279.47	14.75	14.75	15.98	15.98	12.92	1.91
KC09-12 25.21-25.7	0.04	0.01	0.01	8.44	6.49	50.00	50.00	0.48	0.43	1.60	0.05	0.05	40.00	36.36	93.90	162.07	41.56	41.56	43.51	43.51	31.57	5.93
KC09-12 6.01-7.16	0.04	0.00	0.00	3.44	1.62	14.00	14.00	0.12	0.08	0.30	0.04	0.04	10.00	6.82	61.93	120.55	10.56	10.56	12.38	12.38	6.56	4.07
KC09-12 9.5-10.53	0.05	-0.02	0.00	1.88	0.31	12.00	12.00	0.14	0.05	0.20	0.09	0.09	11.67	4.55	44.45	103.94	10.13	10.13	11.69	11.69	9.79	6.40
WP09-56	0.04	0.04	0.04	22.19	19.58	9.00	9.00	0.39	0.05	0.20	0.34	0.34	32.50	4.55	23.72	79.60	-13.19	-13.19	-10.58	-10.58	10.31	0.41
WP09-56A	0.04	-0.03	0.00	3.13	2.50	13.00	13.00	0.38	0.05	0.20	0.33	0.33	31.67	4.55	32.46	84.76	9.88	9.88	10.50	10.50	28.54	4.16
	0.00	0.27	0.27	45.94	45.27	242.40	242.40	4.82		10.10	2.06	2.06	401.69	229.54	163.57	226.79	196.46	196.46	197.13	197.13	355.76	5.28
WP09-57	0.03	0.07	0.07	21.56	18.92	118.00	118.00	1.57	1.19	4.40	0.38	0.38	130.84	100.00	111.88	171.24	96.44	96.44	99.08	99.08	109.28	5.47
	0.00	0.14	0.14	52.50	52.13	415.40	415.40	7.46		13.60	3.75	3.75	621.71	309.09	257.22	402.03	362.90	362.90	363.27	363.27	569.21	7.91
	0.01	-0.05	0.00	0.63	1.56	193.20	193.20	1.02		3.34	0.11	0.11	85.01	75.91	147.09	295.51	192.58	192.58	191.64	191.64	84.38	309.12
M -010	0.01	-0.01	0.00	2.19	1.88	15.00	15.00	0.01	0.03	0.10	-0.02	0.00	0.23	2.27	114.37	164.94	12.81	12.81	13.13	13.13		6.86

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID										As	B			Bi				Cr		
Typical Detection Limit				SNPR for Charts	Adj SNPR for Charts			Ag	Al	5	20	Ba	Be	0.01	Ca	Cd	Ce	Co	1	Cs	Cu
Units	TNPR_Adj	SNPR	SNPR_Adj	for charts	for charts	FIZZ	FIZZ_CHECK	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
S 021	210.40	236.63	236.63	236.63	236.63	3	Agree	0.13	2.77	14.1		190	0.37	0.005	6.07	0.29	18.35	3.6	23	0.74	18.9
S 001	-4.00	3.66	-4.57	3.66	0.01	1	Agree	0.19	8.4	12.5		1050	1.49	0.24	0.11	0.4	40.7	13.2	147	5.87	69.1
S 002	0.00	1.61	0.00	1.61	0.01	1	Agree	0.16	7.16	8.7		890	1.15	0.13	0.2	1.08	34.3	10.7	161	3.81	41.5
S 003	-0.24	0.13	-0.26	0.13	0.01	1	Agree	0.27	7.92	13.7		470	0.68	0.19	0.35	0.14	30	6.9	30	3.12	27.7
S 004	411.73	540.18	533.96	540.18	533.96	4	Agree	0.02	1.1	2.5		160	0.32	0.005	15.4	0.56	4.53	1.6	3	0.38	6.9
S 005	-1.28	2.29	-1.83	2.29	0.01	1	Agree	0.2	7.92	10.4		1180	1.39	0.14	0.17	0.42	38.1	9.4	188	5.47	47.3
S 006	-2.67	3.20	-4.00	3.20	0.01	1	Agree	0.33	7.38	13.6		740	1.29	0.15	0.14	1.27	32.9	12.1	117	3.8	64
S 007	-0.72	1.60	-5.60	1.60	0.01	1	Agree	0.45	5.29	21.4		750	0.75	0.13	0.15	0.43	21.5	1.9	87	5.03	96.1
S 008	0.32	4.00	0.40	4.00	0.40	1	Agree	0.09	6.45	5.9		930	0.92	0.05	0.42	0.17	32.6	10.2	139	2.37	23.7
S 010	-3.20	1.02	-3.57	1.02	0.01	1	Agree	0.1	8.22	14.1		1170	1.3	0.21	0.04	0.07	39.7	3.7	82	4.47	39.6
S 009	-4.80	4.80	-9.60	4.80	0.01	1	Agree	0.09	7.66	12.7		980	1.16	0.16	0.07	0.09	41.5	3.9	128	3.78	32.8
S 023	27.20	#DIV/0!	#DIV/0!	200.00	200.00	2	Disagree	0.09	5.92	2.5		220	0.57	0.02	2.95	0.36	21.4	27.9	67	1.34	16.4
S 024	2.56	13.87	4.27	13.87	4.27	1	Agree	0.09	7.6	1.8		740	0.79	0.03	4.89	0.43	35.8	41.8	26	1.12	45.6
S 025	1.60	#DIV/0!	#DIV/0!	200.00	200.00	1	Agree	0.06	6.93	1.2		280	0.57	0.02	4.97	0.35	18.8	39.5	140	0.64	47.3
S 026	19.20	67.20	38.40	67.20	38.40	2	Disagree	0.04	4.99	0.4		290	0.3	0.02	3.45	0.14	13.3	29.3	22	0.35	40.9
S 027	0.30	0.66	0.24	0.66	0.24	1	Agree	0.81	6.51	29.6		530	0.61	0.06	1	0.53	26.9	13.9	72	2.2	26.7
S 028	15.20	25.60	17.37	25.60	17.37	2	Disagree	0.08	7.32	1		560	0.37	0.02	4.72	0.46	24.1	42.2	87	0.53	60.2
S 034	54.40	#DIV/0!	#DIV/0!	200.00	200.00	2	Disagree	0.06	7.52	0.2		300	0.52	0.02	6.29	0.24	19.9	44.3	131	0.76	62.9
S 037	5.79	6.27	5.87	6.27	5.87	3	Agree	0.21	6.36	47.5		1600	0.66	0.03	4.96	0.25	30.8	18.6	14	2.16	28.7
S 038	7.04	11.14	6.13	11.14	6.13	2	Disagree	0.05	7.34	23.5		110	0.41	0.01	5.81	0.1	11.6	50	252	0.26	45.4
S 040	-0.27	0.42	-0.34	0.42	0.01	1	Agree	0.07	6.61	5.5		2690	1.25	0.03	0.19	0.01	33	1.9	1	1.48	4.6
S 046	0.45	0.67	0.44	0.67	0.44	2	Disagree	0.21	7.91	11.2		1040	0.98	0.11	1.2	0.4	14.5	5.5	16	4.4	33.4
S 047	22.55	21.48	20.86	21.48	20.86	3	Agree	0.13	4.73	2.5		650	0.75	0.04	12.35	2	27.8	2.8	8	2.81	23.9
S 011	-3.84	4.80	-9.60	4.80	0.01	1	Agree	0.14	8.81	16.3		1010	1.22	0.21	0.07	0.05	48.1	1.4	100	5.22	33.3
S 012	1.98	2.72	2.26	2.72	2.26	2	Agree	0.99	5.16	13.9		750	0.66	0.05	1.44	6.72	17.9	2.8	23	2.93	28
S 013	3.40	4.42	3.50	4.42	3.50	2	Disagree	0.23	7.35	8.3		2090	1.85	0.17	1.37	1.13	59	11.1	40	3.59	74.4
S 014	-0.33	0.58	-0.29	0.58	0.01	1	Agree	0.7	5.25	11.8		700	0.64	0.07	0.34	0.2	26.8	4.1	28	1.81	27.4
S 015	-1.11	0.13	-1.00	0.13	0.01	1	Agree	0.99	6.8	15.7		1460	1.05	0.11	0.08	0.09	23.3	1.6	38	5.68	33.1
S 016	0.17	0.80	0.15	0.80	0.15	1	Agree	0.58	6.75	15.2		820	1.2	0.15	0.4	1.92	35.6	6.1	68	3.37	24.8
S 017	6.40	14.40	9.60	14.40	9.60	2	Disagree	0.75	7.31	11.9		690	1.32	0.13	1.07	0.71	47.5	13.6	174	3.53	39.1
S 018	-3.84	2.13	-4.27	2.13	0.01	1	Agree	0.23	7.13	17.4		1240	1.02	0.11	0.15	0.25	30.6	4.1	110	6.64	43.4
S 019	2.29	11.20	4.00	11.20	4.00	2	Disagree	0.11	7.98	3.9		1430	1.51	0.07	0.57	0.55	68.7	3	2	1.99	1.8
S 020	0.00	9.60	0.00	9.60	0.01	1	Agree	0.16	8.36	33.4		1910	1.1	0.07	0.44	0.27	30.5	10.3	18	4.03	43.3
S 022	6.40	41.60	12.80	41.60	12.80	1	Agree	0.07	7.4	9.2		300	0.5	0.005	1.07	0.3	16.5	31.1	199	0.71	35.8
S 029	8.53	14.55	9.31	14.55	9.31	1	Agree	0.08	7.15	1.1		800	0.63	0.03	3.95	0.19	21	36	168	1.3	49.6
S 030	-8.00	8.53	-10.67	8.53	0.01	1	Agree	0.34	6.31	30.2		650	0.91	0.12	0.16	0.89	29.7	8.3	85	3.55	40.6
S 031	3.20	11.20	4.00	11.20	4.00	1	Agree	0.19	8.03	6.2		870	1.16	0.06	0.7	0.6	31	10.8	5	1.91	20.5
S 032	-19.20	#DIV/0!	#DIV/0!	200.00	200.00	1	Agree	0.08	6.74	70.1		690	1.48	1.38	0.11	0.1	76.1	0.8	3	1.91	7.6
S 033	-0.13	0.42	-0.12	0.42	0.01	1	Agree	0.68	6.82	18.7		890	1.4	0.14	0.64	1.14	37.3	5.2	26	2.12	29.8
S 035	1.14	2.34	0.84	2.34	0.84	1	Agree	0.05	7.46	1.1		790	0.66	0.02	5.73	0.22	29.8	32.8	36	0.34	33.1
S 036	24.53	40.96	29.44	40.96	29.44	2	Disagree	0.06	7.32	12.3		220	0.76	0.03	4.89	0.15	27.1	39	96	1.31	42.2
S 039	22.89	26.11	23.81	26.11	23.81	3	Agree	0.09	7.28	3.5		1860	0.75	0.01	3.22	0.12	20	23.8	21	1.67	110.5
S 041	21.87	40.00	32.80	40.00	32.80	3	Disagree	0.21	7.66	11.6		1940	2.52	0.15	1.87	0.13	28.4	14.3	30	0.75	89.1
S 042	19.20	22.54	20.03	22.54	20.03	3	Disagree	0.15	7.31	3.6		1400	1.43	0.07	4.58	0.49	32.3	24.8	157	0.55	87.4
S 043	2.50	2.23	2.06	2.23	2.06	3	Agree	1.25	5.5	0.4		600	0.64	0.11	5.37	2.98	24.5	16	93	0.65	134
S 044	15.09	18.46	16.25	18.46	16.25	3	Disagree	0.28	7.44	5.6		1530	1.34	0.07	3.62	0.21	34.5	15.1	32	2	61.4
S 045	7.28	7.85	6.90	7.85	6.90	3	Disagree	0.19	7.38	6.3		1460	1.38	0.05	3.28	0.21	27.4	16.2	34	1.34	66.6
S 048	24.53	51.20	36.80	51.20	36.80	2	Disagree	0.17	6.65	23.1		2600	0.95	0.03	1.37	0.26	58.7	20.6	20	0.47	73.1

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
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CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID										As	B			Bi					Cr		
Typical Detection Limit				SNPR for Charts	Adj SNPR for Charts			Ag	Al	5	20	Ba	Be	0.01	Ca	Cd	Ce	Co	1	Cs	Cu
Units	TNPR_Adj	SNPR	SNPR_Adj	for charts	for charts	FIZZ	FIZZ_CHECK	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
WP09-79	1.43	1.55	1.55	1.55	1.55	2	Disagree	0.51	7.6	122.5		1920	1.13	0.23	2.39	0.27	25	13	22	4.25	163
WP09-80	1.63	1.73	1.73	1.73	1.73	2	Agree	2.49	7.59	358		2020	0.67	0.55	4.07	0.54	14.55	23.4	49	1.97	127.5
WP09-74	4.57	10.67	10.67	10.67	10.67	1	Agree	0.45	7.13	17.9		1770	1.26	0.18	1.65	0.25	34.2	14.9	45	0.95	63.1
WP09-75	5.03	7.04	7.04	7.04	7.04	1	Agree	0.41	7.19	18.2		1820	1.35	0.15	1.48	0.46	35.5	13.3	39	1.28	75.8
M -009	28.80	134.40	86.40	134.40	86.40	2		0.22	8.23	4.1		4080	1.11	0.24	1.63	0.07	29.1	5.5	5	1.99	240
M -007	2.37	2.98	2.34	2.98	2.34	2		0.47	7.8	12.2		1720	0.97	0.29	3.07	0.04	19.6	21	13	4.78	494
M -008	0.70	0.85	0.66	0.85	0.66	2		0.71	7.34	15.9		830	0.75	2.24	1.49	0.46	27.3	7.2	31	1.14	252
M -008a	0.34	0.51	0.32	0.51	0.32	2		0.46	6.34	63.5		530	0.59	0.65	1.2	0.13	11.35	4.9	17	1.92	18.4
	0.34	0.39	0.31	0.39	0.31	2		0.8	7.6	14		30	1	0.6	1.55	0.3	17	12.1	37		106
	-0.07	0.01	-0.06	0.01	0.01	1		0.3	8.3	4		20	0.5	0.5	0.05	4.2	10	11.1	47		68.8
	-0.05	0.04	-0.04	0.04	0.01	1		0.5	10.4	2		26	2	0.2	0.37	0.8	25	11.7	78		148
	0.10	0.12	0.09	0.12	0.09	2		0.7	5.87	0.5		17	1	1.4	2.06	0.05	9	20.5	48		84.1
Res-019	-0.28	0.13	-0.27	0.13	0.01			0.31	7.06	79.8		1160	0.94	0.36	0.13	0.02	12.9	5.7	75	3.6	13.3
Res-020	64.00	176.00	128.00	176.00	128.00			0.04	7.81	8		5450	1.45	0.05	2.57	0.09	21.8	7.6	12	4.53	12.8
Res-021	3.91	4.98	4.06	4.98	4.06			0.11	7.69	28.8		4140	1.71	0.09	3.07	0.06	23.3	10.6	7	7.07	4.5
Res-022	-0.09	0.10	-0.09	0.10	0.01			0.65	8.2	14.8		430	1.59	0.19	0.29	0.45	15.8	14.9	6	5.33	54.7
Res-017	4.64	4.88	4.49	4.88	4.49			0.42	7.3	8.8		1340	0.8	0.14	6.57	0.13	13.65	9.3	4	2.9	253
Res-018	0.18	0.43	0.18	0.43	0.18			1.36	6.93	227		1030	1.11	1.23	1.07	0.17	4.81	9.3	12	3.9	254
M -005	1.12	2.31	1.52	2.31	1.52	2		0.82	7.39	6.1		6420	0.8	0.1	2.22	0.1	17.6	24.9	55	1.74	2550
M -005a	-0.28	0.52	-0.35	0.52	0.01	1		1.18	7.89	29		2330	0.97	2.2	0.49	0.02	11.65	10.7	13	3.18	151.5
M -006	0.60	0.94	0.63	0.94	0.63	2		0.62	7.49	35.8		630	0.83	0.06	1.75	0.11	23.3	17.8	11	5.01	58
WP09-38	0.05	0.05	0.05	0.05	0.05	1	Agree	1.46	7.78	27.7		320	1.16	0.62	0.53	1.44	18.4	25.4	9	4.57	583
WP09-39	10.88	10.88	10.88	10.88	10.88	1	Agree	0.21	9.32	7		420	1.49	0.25	5.39	0.18	52.1	42.7	16	1.06	38.6
WP09-77	0.14	0.17	0.17	0.17	0.17	1	Agree	1.87	7.71	27.6		1220	1.34	0.76	1.06	0.63	23.8	11.2	13	3.75	143
WP09-78	0.74	1.03	1.03	1.03	1.03	1	Agree	2.39	7.42	54.6		2640	2	2.52	0.47	0.51	17.9	14.7	42	5.43	802
KSMMNRX001	383.08	862.16	766.16	200.00	200.00	4		0.121	8.51	14.4		1619	0.5	0.16	5.64	0.25	17.72	37.5	188	0.7	82.2
KSMMNRX002	13.41	15.06	13.77	15.06	13.77	4		0.107	8.07	5.5		1357	2	0.11	3.86	0.25	36.36	21.9	172	0.8	63.22
KSMMNRX003	36.60	39.01	37.26	39.01	37.26	4		0.074	7.17	33.6		732	1	0.05	10.24	0.16	24.16	13.6	107	1.6	31.13
KSMMNRX004	16.68	11.78	11.14	11.78	11.14	4		0.103	8.37	3		1337	0.5	0.04	4.18	0.13	48.29	32.9	66	1.3	57.94
KSMMNRX005	1.05	1.02	0.91	1.02	0.91	4		1.158	7.62	70.6		52	3	0.06	3.57	0.27	22.12	23.2	19	3.6	110.02
KSMMNRX006	27.23	25.01	22.89	25.01	22.89	4		0.12	7.69	3.5		597	1	0.04	7.69	0.16	20.67	35.9	28	0.7	133.95
KSMMNRX007	22.13	24.54	22.89	24.54	22.89	4		0.124	8.12	15.9		1627	1	0.07	4.47	0.17	16.77	28.5	20	2.4	130.77
KSMMNRX008	-0.18	0.05	-0.18	0.05	0.01	1		4.845	4.71	18.7		99	0.5	4.89	0.14	0.41	9.31	8.8	55	2.2	874.16
KSMMNRX009	-0.89	0.12	-1.53	0.12	0.01	1		4.863	7.6	63.9		1110	2	2.32	0.14	0.2	6.59	1.7	21	8	150.59
KSMMNRX010	-0.31	0.12	-0.36	0.12	0.01	1		4.823	6.02	12.4		262	1	4.28	0.16	0.12	5.58	4.5	29	3.4	141.09
KSMMSRX001	-0.55	0.88	-0.72	0.88	0.01	1		0.105	8.15	101.8		1793	0.5	0.08	4.39	0.04	17.35	7.7	25	7.4	5.73
KSMMSRX002	-0.38	0.08	-0.45	0.08	0.01	1		0.283	8.46	96.2		267	0.5	0.3	2.5	0.11	17.16	4.5	27	3.8	52.19
KSMMSRX003	-0.29	0.45	-0.32	0.45	0.01	1		0.308	7.71	80.3		496	1	0.07	0.39	0.36	13.27	6.1	22	14.4	18.28
KSMMSRX004	-2.58	0.16	-4.64	0.16	0.01	1		0.386	6.38	22		2109	0.5	0.64	0.04	0.34	8.65	1	62	5.9	21.58
KSMMSRX005	-0.03	0.62	-0.03	0.62	0.01	2		1.145	6.24	104.6		231	0.5	0.79	0.82	0.11	15.28	9.1	59	3	10.48
KSMMSRX006	2.42	3.47	2.47	3.47	2.47	4		1.615	6.51	18.9		974	0.5	0.09	0.68	0.13	17.3	18.2	52	1.4	1247.96
KSMMSRX007	5.02	9.07	6.98	9.07	6.98	4		0.214	6.02	11.2		784	1	0.29	2.09	0.08	14.73	3.1	50	3.7	114.12
KSMMSRX008	48.65	80.87	64.87	80.87	64.87	4		0.056	7.52	7.1		3316	1	0.1	2.07	0.36	17.22	6.5	35	1.6	113.14
KSMMSRX009	-0.67	0.93	-0.99	0.93	0.01	1		0.493	7.15	118.1		1374	1	0.64	0.25	0.07	11.21	3.7	19	5	121.96
KSMMSRX010	-3.11	5.87	-3.73	5.87	0.01	2		1.05	6.23	6.3		1479	0.5	0.26	0.41	0.06	13.16	9.2	69	1.3	1091.63
KSMMSRX011	31.59	75.19	63.19	75.19	63.19	4		0.201	7.49	4.4		4537	1	0.14	1.66	0.06	22.05	8.4	29	1.1	278.79
KSMMSRX012	9.85	10.49	9.96	10.49	9.96	4		0.492	8.01	19.1		914	0.5	0.4	8.32	0.15	22.69	28.3	13	2.6	467.03
KSMMSRX013	-0.52	0.16	-0.93	0.16	0.01	1		3.398	7.22	95.2		334	0.5	5.95	0.25	0.07	10.25	8.3	59	2.6	318.74
KSMMSRX014	106.30	157.73	141.73	157.73	141.73	4		0.284	4.54	4		730	2	0.15	2.6	0.15	7.11	16.7	56	0.7	1215.47
KSMMSRX015	-0.07	0.00	-0.07	0.00	0.01	1		2.681	4.41	224.7		21	0.5	5.39	0.05	1.66	15.77	13.8	97	1.8	32.47
KSMMSRX016	3.42	3.88	3.50	3.88	3.50	4		0.263	8.4	18.3		181	1	0.19	2.62	0.13	24.34	16.3	35	2.2	48.33

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID											As	B			Bi				Cr		
Typical Detection Limit				SNPR for Charts	Adj SNPR for Charts			Ag	Al		5	20	Ba	Be	0.01	Ca	Cd	Ce	Co	1	Cs	Cu
Units	TNPR_Adj	SNPR	SNPR_Adj	for charts	for charts	FIZZ	FIZZ_CHECK	ppm	%		ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
KSMMSRX017	2.11	2.39	2.12	2.39	2.12	4		1.111	9.04		85.1		107	1	0.18	3.19	0.08	22.91	8.9	23	3.5	188.21
WP09-42	12.80	19.20	19.20	19.20	19.20	1	Agree	0.45	7.16		46.8		1080	1.02	0.17	1.31	0.51	24.8	27.4	317	1.73	108
WP09-37	1.71	1.88	1.88	1.88	1.88	2	Disagree	0.89	7.52		45.8		1910	1.39	0.37	2.12	1.5	38	20.5	78	2.69	301
WP09-53A	5.94	6.93	6.93	6.93	6.93	1	Agree	0.51	7.13		31.7		1450	1.17	0.12	1.42	0.65	28.2	18.7	132	1.5	87
WP09-53B	1.64	1.84	1.84	1.84	1.84	2	Disagree	1.01	7.25		71.6		2290	1.32	0.37	2.15	1.52	34.8	20	73	2.54	262
WP09-72	102.40	51.20	51.20	51.20	51.20	1	Agree	0.26	7.18		22.4		1040	1.04	0.05	2.58	0.32	19.55	26.3	320	0.88	74.1
WP09-76	60.80	121.60	121.60	121.60	121.60	2	Agree	0.34	7.64		18.9		1090	1.3	0.11	4.44	0.47	31.8	20.3	125	1.59	89.7
KC09-09 1-2.4	5.94	8.80	8.80	8.80	8.80	2	Disagree	0.22	7.26		13.5		1090	0.98	0.17	3.18	0.21	26.6	23.1	60	4.88	100.5
KC09-09 15.53-16.0	33.60	44.80	44.80	44.80	44.80	2	Disagree	0.08	8.15		5.3		1120	2.01	0.04	4.34	0.22	49.9	19	39	0.6	74.5
KC09-09 18.93-19.27	233.60	233.60	233.60	233.60	233.60	2	Agree	0.16	7.63		14.8		1240	1.79	0.08	3.28	0.23	43.3	16	7	0.72	118
KC09-09 28.7-29.8	23.60	25.17	25.17	25.17	25.17	3	Agree	0.5	7.17		17.3		1150	1.11	0.09	6.29	0.37	23.2	21.4	235	0.95	93.8
KC09-09 33.2-33.6	54.40	72.53	72.53	72.53	72.53	2	Agree	0.47	7.57		118		650	1.66	0.06	3.68	0.48	35.1	19	63	1.64	81.3
KC09-09 40.8-41.03	25.28	31.60	31.60	31.60	31.60	3	Agree	1.53	7.25		25.9		1670	2.13	0.13	5.64	0.89	43.6	16.1	55	1.23	66.7
KC09-09 50.6-51.0	15.88	17.58	17.58	17.58	17.58	3	Agree	0.28	7.07		5.7		690	1.02	0.01	5.26	0.2	22.1	21.4	169	0.48	47.8
KC09-09 54.7-55.2	49.37	69.12	69.12	69.12	69.12	3	Agree	2.33	7.53		12.8		1300	1.54	0.03	5	0.26	31.2	16	77	0.83	60.3
KC09-09 6.23-6.75	13.96	19.20	19.20	19.20	19.20	2	Disagree	0.22	7.31		31.3		1480	1.36	0.21	4.04	0.29	31.9	21.5	38	5.5	85.6
KC09-09 60.9-61.6	6.40	6.98	6.98	6.98	6.98	3	Agree	0.44	7.46		15.5		1030	1.52	0.07	5.1	0.29	32.9	17.1	84	1.04	79.8
KC09-09 64.6-66.03	10.34	11.35	11.35	11.35	11.35	3	Agree	0.5	7.51		11.9		1060	1.19	0.1	5.67	0.62	21	24.9	158	0.92	131.5
KC09-09 74.5-75.25	0.15	0.15	0.15	0.15	0.15	2	Disagree	1.36	6.99		27.2		150	1.05	0.57	1.24	1.65	26.1	17	11	3.52	313
KC09-09 75.6-76.5	0.25	0.25	0.25	0.25	0.25	2	Disagree	1.33	7.89		28		170	1.21	0.66	1.15	1.58	25.4	17	7	4.97	333
KC09-09 80.5-81.47	0.41	0.42	0.42	0.42	0.42	2	Disagree	2.84	7.54		34		210	1.12	0.82	1.4	4.29	24.5	16	8	4.67	557
KC09-09 89.3-90.86	0.96	1.01	1.01	1.01	1.01	2	Disagree	0.78	7.77		13.1		2030	1.3	0.23	2.64	0.45	32.5	9.4	5	3.72	110.5
KC09-09 9.27-10.25	9.60	12.00	12.00	12.00	12.00	2	Disagree	0.3	7.55		7.7		2450	1.84	0.12	3.47	0.19	42.3	17.8	21	1.95	226
WP09-31	16.00	32.00	32.00	32.00	32.00	2	Disagree	0.49	7.19		15.5		1480	1.19	0.09	2.02	0.49	32	15.4	80	1.08	67.1
WP09-36	34.56	57.60	57.60	57.60	57.60	2	Agree	0.29	7.79		13.4		870	1.51	0.07	4.21	0.34	25.9	14.9	70	0.64	54
	7.79	7.97	7.97	7.97	7.97	4		0.10	7.18		5.0		773	2.00	0.05	6.99	0.20	56.0	21.6	41		124.0
Res-001	3.20	8.00	8.00	8.00	8.00			0.02	1.85		0.9		3000	0.2	0.15	0.04	0.22	13.65	8.3	9	0.24	12.1
Res-002	14.93	16.80	16.80	16.80	16.80			0.39	7.8		15		4750	0.51	0.03	2.49	0.36	15.85	21.6	30	0.29	74.7
Res-003	18.88	20.98	20.98	20.98	20.98			1.29	6.08		0.9		880	0.66	0.12	2.95	1.84	23.6	12.1	87	0.92	103.5
Res-004	9.60	9.98	9.98	9.98	9.98			0.16	8.08		9.2		1820	0.81	0.1	2.39	0.2	22.9	17.8	61	0.36	49.1
Res-005	4.80	5.12	5.12	5.12	5.12			0.23	6.81		5.1		1640	1.14	0.13	0.26	0.17	45.6	15	34	1.35	69.1
WP09-83	57.60	86.40	86.40	86.40	86.40	2	Agree	0.25	7.46		14.4		1710	1.62	0.07	3.87	0.19	30.9	21.6	24	2.27	111.5
WP09-84	57.60	76.80	76.80	76.80	76.80	2	Agree	0.27	7.92		10.3		1660	1.64	0.09	4.2	0.17	36.8	21.2	23	1.67	99.9
	20.30	24.34	24.34	24.34	24.34	4		0.20	8.47		7.0		1350	2.00	0.05	2.36	0.20	43.0	17.0	26		129.0
	18.37	21.82	21.82	21.82	21.82	3		0.10	8.76		2.0		702	2.00	0.05	6.84	0.05	54.0	21.2	37		44.9
Res-016	2.30	2.17	2.17	2.17	2.17			0.25	7.37		11.5		1150	1.04	0.15	2.32	0.16	23.6	14.3	104	2.72	69.5
Res-008	0.35	0.32	0.32	0.32	0.32			0.41	7.34		14.1		830	0.83	0.17	0.17	0.4	36	19.5	119	4.5	69.4
M -001	0.86	1.02	1.02	1.02	1.02	2		1.82	6.82		17.9		2430	1.29	1.04	1.44	0.05	13.5	4.3	6	5	350
M -002	21.69	22.88	22.88	22.88	22.88	2		0.15	7.83		5.9		630	0.63	0.05	6.29	0.13	20.6	26.3	57	0.41	118.5
M -004	28.80	57.60	57.60	57.60	57.60	2		0.48	6.1		4.1		500	1.3	0.4	1.27	0.15	6.65	2.2	14	0.84	225
Res-012	473.60	#DIV/0!	#DIV/0!	200.00	200.00			0.04	7.99		36.2		920	1.27	0.07	3.25	0.1	30	15	1	3.86	18.9
Res-013	3.49	4.80	4.80	4.80	4.80			0.06	7.77		9.1		6840	1.37	0.04	2.4	0.11	32.8	12	1	2.97	32.5
Res-014	2.00	2.16	2.16	2.16	2.16			0.2	8.22		29.2		2320	1.41	0.1	1.85	0.3	38.5	14.5	0.5	1.73	41.9
Res-011	25.60	#DIV/0!	#DIV/0!	200.00	200.00			0.03	6.11		15		260	1.92	0.05	0.15	0.07	74.1	0.9	2	1.15	17.2
Res-009	136.00	272.00	272.00	272.00	272.00			0.07	5.51		11.2		870	0.98	0.07	2.04	0.11	33.9	11.4	150	1.35	16.5
Res-010	39.47	118.40	118.40	118.40	118.40			0.07	6.49		6		1280	1.27	0.08	1.33	0.17	45	14.5	119	2.07	19.2
Res-015	364.80	#DIV/0!	#DIV/0!	200.00	200.00			0.21	7.42		6.9		2430	2.41	0.12	2.61	0.06	38.2	12.3	22	0.64	84.7
M -003	304.00	#DIV/0!	#DIV/0!	200.00	200.00	2		0.21	7.6		10.9		810	0.65	0.04	4.18	0.2	21.5	22.9	229	0.69	46.3
Res-006	0.98	0.97	0.97	0.97	0.97			0.16	7.87		4.4		1570	1.06	0.04	1.19	0.1	69.7	16.4	5	0.45	11.9
	0.74	0.74	0.74	0.74	0.74	3		0.70	6.56		558.0		103	<1	0.10	3.60	0.70	18.0	22.1	30		33.6
	3.04	3.06	3.06	3.06	3.06	4		0.80	6.86		230.0		192	<1	<0.1	6.30	0.40	15.0	17.6	28		116.0

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID																					
Typical Detection Limit				SNPR for Charts	Adj SNPR for Charts			Ag	Al	As 5	B 20	Ba	Be	Bi 0.01	Ca	Cd	Ce	Co	Cr 1	Cs	Cu
Units	TNPR_Adj	SNPR	SNPR_Adj	for charts	for charts	FIZZ	FIZZ_CHECK	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	2.51	2.53	2.53	2.53	2.53	4		0.20	6.67	166.0		108	<1	<0.1	5.91	<0.1	13.0	24.8	20		13.2
	2.17	2.18	2.18	2.18	2.18	4		0.70	6.42	210.0		112	<1	<0.1	5.01	0.30	12.0	20.6	26		55.0
	2.92	2.94	2.94	2.94	2.94	4		0.40	7.25	199.0		172	<1	<0.1	5.78	0.10	15.0	21.4	19		50.3
	3.29	3.33	3.33	3.33	3.33	4		0.70	6.21	204.0		115	<1	<0.1	6.16	0.30	14.0	19.3	21		367.0
	56.89	75.11	75.11	75.11	75.11	4		0.10	7.43	60.0		923	1.00	0.05	7.07	0.40	30.0	21.0	232		73.2
Res-007	283.20	377.60	377.60	377.60	377.60			0.09	7.16	7		600	0.53	0.03	6.19	0.17	17.4	18.5	129	0.72	47.5
KSMSURX001	-0.48	0.56	-0.59	0.56	0.01	1		0.96	8.12	32.9		1382	1	0.15	0.47	0.01	6.43	4.1	31	2.4	36.08
KSMSURX002	-0.40	-0.01	-0.50	0.00	0.01	1		2.184	3.12	132.1		94	0.5	0.5	0.04	0.01	8	2.9	104	2.9	24.45
KSMSURX003	2.58	3.15	2.63	3.15	2.63	4		0.91	7.77	13.4		198	1	0.34	1.15	1.44	9.57	19.6	27	7.2	2663.75
KSMSURX004	152.50	#DIV/0!	#DIV/0!	200.00	200.00	4		0.065	8.94	4.9		4357	0.5	0.02	1.04	0.06	29.77	5.3	40	3.1	75.26
KSMSURX005	318.92	#DIV/0!	#DIV/0!	200.00	200.00	4		0.444	8.62	7.3		2914	1	0.04	2.79	0.11	18.52	18.2	46	1.4	1076.31
KSMSURX006	39.12	51.40	42.67	51.40	42.67	4		0.295	8.18	7.5		1828	2	0.08	1.39	0.16	13.34	20.6	10	4	956.33
KSMSURX007	40.13	59.58	45.86	59.58	45.86	4		0.49	7.13	8.3		2668	1	0.15	0.88	0.14	20.28	8	24	4.4	1162.15
KSMSURX008	-0.01	3.09	-0.01	3.09	0.01	2		0.135	7.08	9.7		2395	1	0.05	0.42	0.31	19.08	3.6	29	3.4	602.8
KSMSURX009	1.32	1.50	1.33	1.50	1.33	4		0.294	6.79	8.6		59	0.5	0.25	2.99	0.06	15.82	25.3	33	2.6	947.35
KSMSURX010	2.40	3.14	2.49	3.14	2.49	4		0.457	6.15	2.8		294	1	0.17	1.42	0.09	13.8	17.9	45	1.9	930.45
KSMSURX011	-0.10	0.05	-0.10	0.05	0.01	1		0.191	7.23	188.4		155	1	0.7	0.26	0.01	13.75	7.2	59	11.2	464.32
KSMSURX012	-0.18	0.03	-0.18	0.03	0.01	1		0.434	7.07	980.6		226	1	0.44	0.14	0.32	10.03	20.2	31	5	3191.71
KSMSURX013	322.93	#DIV/0!	#DIV/0!	200.00	200.00	4		0.382	7.49	24.7		4243	1	0.09	2.38	0.1	13.3	22.7	21	3.5	986.42
KSMSURX014	4.51	5.50	4.72	5.50	4.72	4		0.046	8.33	63.1		1778	1	0.05	5.53	0.07	20.42	21.9	33	2.4	44.97
KC09-10 1.35-2.4	7.04	11.73	11.73	11.73	11.73	1		0.23	7.53	6.1		810	1.07	0.02	1.5	0.23	18.25	28.5	323	0.48	65.5
KC09-10 4.56-6.6	11.73	11.85	10.43	11.85	10.43	3		0.22	6.78	4.7		960	0.97	0.02	5.17	0.34	16.5	28.7	327	1.19	66.3
KC09-11 1.2-2.4	5.52	6.99	5.74	6.99	5.74	3		0.46	7.91	10		1520	0.77	0.03	4.74	0.53	17.45	19.6	33	0.83	104.5
KC09-11 2.4-4.5	3.71	3.88	3.31	3.88	3.31	3		0.45	8.33	4.4		1210	0.61	0.02	5.43	0.73	17.3	20.3	41	0.65	95.5
T001	-0.15	0.38	-0.13	0.38	0.01	1	Agree	0.14	5.42	7.7		650	0.79	0.1	0.37	0.17	22.7	16.5	197	2.58	45.9
T002	-0.38	0.73	-0.44	0.73	0.01	1	Agree	0.17	6.91	11.6		950	0.94	0.13	0.52	0.04	26.8	8.7	148	2.45	35.1
T003	-0.22	0.55	-0.18	0.55	0.01	1	Agree	0.15	6.11	10.1		800	0.82	0.14	0.09	0.06	9.05	10.6	107	2.15	45.8
T004	0.00	8.53	0.00	8.53	0.01	1	Agree	0.14	6.41	11		1100	1.14	0.14	0.6	0.08	27.8	13.8	83	3.24	39.3
T005	-0.33	0.09	-0.28	0.09	0.01	1	Agree	0.38	7.08	18.7		1160	1.11	0.14	0.41	0.14	20.7	13.3	224	3.42	50.8
T006	6.40	9.43	6.74	9.43	6.74	2	Disagree	0.11	6.66	6.3		880	1.01	0.08	0.67	0.25	27.3	16.7	240	2.3	35.9
T007	0.00	0.31	0.00	0.31	0.01	1	Agree	0.31	6.58	12.9		740	0.79	0.14	0.46	0.17	31.4	15	214	3.05	54.1
T008	8.80	7.68	6.85	7.68	6.85	2	Agree	0.15	5.02	6.9		500	0.66	0.08	2.66	0.18	25.4	12.5	162	2.04	32
T009	7.20	15.54	8.23	15.54	8.23	2	Disagree	0.03	7.24	2.1		690	0.64	0.03	0.98	0.1	14.85	16.6	264	1.66	23.9
T010	-1.92	2.93	-1.76	2.93	0.01	1	Agree	0.09	5.91	5		660	0.89	0.08	0.08	0.06	24.1	11.8	125	1.65	33
T011	2.33	4.94	2.47	4.94	2.47	2	Disagree	0.12	6.64	6.4		700	1	0.1	0.54	0.23	30.1	14.3	148	1.82	45.4
T012	3.84	6.11	3.66	6.11	3.66	2	Disagree	0.14	5.07	7.4		650	0.8	0.09	0.5	0.25	24.9	17.2	231	1.83	38.9
T013	0.00	0.88	0.00	0.88	0.01	1	Agree	0.71	7.66	26.1		820	0.95	0.19	0.53	0.02	25.7	3.7	127	3.02	30.1
KSM TAR07	13.89	14.21	14.21	14.21	14.21	Moderate		258	2.05	11.2	10	175.8		0.1	1.45	0.66		17.3	84.1		52.35
KSM TAR08	6.57	7.88	7.88	7.88	7.88	None		210	2.14	8.6	10	232.8		0.13	0.29	0.27		14.7	122.4		51.26
KSM TAR09	5.52	6.90	6.90	6.90	6.90	None		235	2.57	8.3	10	258.7		0.17	0.39	0.32		13.3	111.2		66.02
KSM TAR01	51.26	58.58	58.58	58.58	58.58	Moderate		192	2.07	7.6	52	162.1		0.12	1.15	0.26		10.6	104.3		52.46
KSM TAR04	0.91	0.97	0.97	0.97	0.97	None		270	2.6	10.8	10	95.4		0.16	0.17	0.29		18.9	62.9		75.16
KSM TAR05	5.71	6.53	6.53	6.53	6.53	None		121	1.57	6.3	10	136.2		0.06	0.33	0.22		18.6	135.4		23.82
KSM TAR06	1.94	2.10	2.10	2.10	2.10	None		194	2.83	7	10	61.8		0.06	0.41	0.29		21.5	205.7		42.87
	17.13	20.31	20.31	20.31	20.31	4		0.20	5.51	7.0		686	0.50	0.05	1.30	0.40	19.0	18.8	363		44.0
	12.32	17.84	17.84	17.84	17.84	2		0.20	4.61	7.0		632	1.00	0.05	0.52	0.30	20.0	15.9	350		36.4
	44.56	59.55	59.55	59.55	59.55	4		0.20	5.49	7.0		866	1.00	0.05	3.31	0.30	26.0	17.3	254		46.3
	3.27	6.14	6.14	6.14	6.14	1		0.20	4.63	7.0		518	0.50	0.05	0.11	0.20	16.0	10.5	286		33.7
KSM TAR02	114.97	121.03	121.03	121.03	121.03	Strong		56	1	4.4	10	143.5		0.04	10.56	0.06		9.7	89.5		13.94
KSM TAR03	9.72	12.27	12.27	12.27	12.27	Moderate		311	2.2	10.5	10	223.2		0.11	0.46	0.2		18.4	130.6		34.23
TS014	7.77	11.20	9.07	11.20	9.07	2	Disagree	0.18	7.33	8.7		590	1.01	0.09	1.59	0.15	21	17.8	170	2.56	34.9

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID										As	B			Bi					Cr		
Typical Detection Limit				SNPR for Charts	Adj SNPR for Charts			Ag	Al	5	20	Ba	Be	0.01	Ca	Cd	Ce	Co	1	Cs	Cu
Units	TNPR_Adj	SNPR	SNPR_Adj	for charts	for charts	FIZZ	FIZZ_CHECK	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
TS015	0.00	1.00	0.00	1.00	0.01	1	Agree	0.28	7.96	13.3		610	0.9	0.12	0.23	0.11	27.8	14.9	149	2.44	41.9
TS016	40.37	40.06	38.20	40.06	38.20	3	Agree	0.1	6.05	2.6		540	0.74	0.09	6.82	0.16	24.1	13.1	112	1.96	34
TS017	11.86	13.67	12.13	13.67	12.13	2	Agree	0.14	7.25	7.1		590	0.96	0.08	2.21	0.18	25	14.9	174	2.43	33.9
TS019	3.41	3.59	2.87	3.59	2.87	2	Disagree	0.16	7.09	9.3		590	0.94	0.09	1.89	0.18	24.2	16.7	208	2.3	31.2
TS020	23.72	26.80	25.20	26.80	25.20	3	Agree	0.1	5.92	6.2		590	0.94	0.1	2.32	0.2	24.2	18.3	183	3.05	41
TS021	0.00	7.31	0.00	7.31	0.01	1	Agree	0.21	6.17	10.1		880	1.01	0.15	0.2	0.1	29.2	7.1	234	3.86	32.5
TS022	0.12	0.90	0.10	0.90	0.10	1	Agree	0.22	6.67	9.9		900	1.1	0.13	0.14	0.25	27.8	11.6	216	3.8	49.5
TS023	14.40	54.40	28.80	54.40	28.80	1	Agree	0.13	5.67	8.6		480	0.7	0.05	0.35	0.14	16.6	12.2	168	1.91	28.5
TS024	-2.13	12.80	-12.80	12.80	0.01	1	Agree	0.27	7.37	19.8		890	1.1	0.16	0.21	0.08	34.9	4.2	143	3.76	37.3
TS025	0.11	0.78	0.09	0.78	0.09	1	Agree	0.25	7.44	13.1		870	1.05	0.16	0.13	0.34	27.4	17.3	195	3.36	65.6
TS026	1.97	3.78	1.89	3.78	1.89	2	Disagree	0.12	4.87	5.3		620	0.78	0.09	0.46	0.18	23.2	14.5	284	1.71	34.1
TS027	0.00	25.60	0.00	25.60	0.01	1	Agree	0.21	6.36	8.5		840	1.28	0.15	0.14	0.34	32.4	20.8	175	3.02	42.3
TS028	1.60	2.22	1.48	2.22	1.48	2	Disagree	0.24	5.53	7.9		610	0.86	0.09	0.8	0.32	24.3	19.2	221	2.53	46.7
TS018	3.84	8.42	3.61	8.42	3.61	1	Agree	0.14	5.66	6.4		720	1.07	0.1	0.76	0.25	33.4	16.2	161	2.14	40.6
G1	6.40	8.00	8.00	8.00	8.00	1		0.46	7.26	17.6		1650	1.39	0.21	2.1	0.58	33.7	18.9	48	1.21	94.8
G2	10.67	12.80	12.80	12.80	12.80	1		0.5	7.17	23.8		1730	1.25	0.17	1.53	0.61	33.2	13.1	40	1.1	64.7
G3	14.40	19.20	19.20	19.20	19.20	1		0.3	7.05	18		1510	1.18	0.11	1.48	0.37	30.9	19.2	45	1.26	77.2
G4	5.76	6.40	6.40	6.40	6.40	1		0.31	7.28	24		1720	1.32	0.16	1.23	0.47	37.8	15.6	43	1.26	80.7
G5	3.39	3.49	3.49	3.49	3.49	1		0.25	8.2	5.8		1620	1.28	0.12	2.34	0.46	25.4	15.2	37	1.35	63.9
TG01	4.65	4.23	4.23	4.23	4.23	1		0.24	6.83	9.9		810	1.09	0.09	0.86	0.5	25.6	17.4	152	2.11	40.1
TG02	9.60	#DIV/0!	#DIV/0!	200.00	200.00	1		0.22	6.1	8.7		780	0.98	0.1	0.24	0.29	26.8	14.2	168	2.15	37.6
TG03	9.60	12.80	12.80	12.80	12.80	1		0.15	6.41	8.5		760	0.96	0.09	0.22	0.19	24.1	15.8	167	2.16	27.5
TG04	14.40	#DIV/0!	#DIV/0!	200.00	200.00	1		0.17	5.85	7.1		750	1.27	0.1	0.36	0.24	29.5	16.7	169	2.04	42.9
TG05	14.40	28.80	28.80	28.80	28.80	1		0.17	6.05	6.8		780	1.24	0.1	0.3	0.26	29.5	17.9	197	2.03	43.5
TG06	15.20	17.37	17.37	17.37	17.37	1		0.17	5.59	6.8		750	1.21	0.09	0.77	0.25	28.4	16.8	158	1.96	40.7
RES-MW-02A 1.1-32.9M	0.00	2.20	0.00	2.20	2.20	1		0.42	5.89	7.1		860	0.93	0.09	0.42	0.32	25.4	15.7	251	2.11	40.6
RES-MW-01A 4.27-5.49M	0.00	7.16	0.00	7.16	7.16	2		1.35	6.34	7.6		620	0.84	0.09	1.79	0.28	26.5	16.2	205	2.19	42
RES-MW-01A 11.18-11.38M	1.66	1.86	1.44	1.86	1.44	2		0.15	5.59	5.4		790	0.76	0.08	1.19	0.25	24.6	15.3	226	2.39	35.9
	1.70	1.84	1.84	1.84	1.84	1		0.20	6.14	8.0		772	1.00	0.05	0.32	0.30	26.0	22.6	222		49.6
	2.20	2.46	2.46	2.46	2.46	1		0.20	6.04	7.0		896	2.00	0.20	0.29	0.30	34.0	18.8	160		74.8
	1.14	1.19	1.19	1.19	1.19	1		0.30	6.31	10.0		719	1.00	0.20	0.26	0.30	20.0	15.4	131		63.5
	1.68	1.74	1.74	1.74	1.74	2		0.30	5.52	8.0		719	0.50	0.20	0.64	0.40	19.0	19.5	331		53.9
	4.29	4.38	4.38	4.38	4.38	4		0.40	6.17	11.0		624	1.00	0.20	1.91	0.20	27.0	21.6	269		57.3
	1.51	1.54	1.54	1.54	1.54	2		0.40	6.12	10.0		451	1.00	0.20	0.96	0.40	24.0	17.3	171		67.2
	6.58	7.10	7.10	7.10	7.10	3		0.40	5.88	9.0		945	1.00	0.20	0.93	0.40	23.0	19.7	211		69.9
	4.81	4.93	4.93	4.93	4.93	4		0.40	6.67	12.0		534	1.00	0.20	2.06	0.40	25.0	19.0	164		57.4
	5.46	5.62	5.62	5.62	5.62	4		0.50	6.37	9.0		668	1.00	0.20	2.36	0.30	29.0	17.5	228		64.7
	32.52	38.82	38.82	38.82	38.82	4		0.20	4.94	6.0		550	0.50	0.10	1.33	0.30	22.0	15.9	318		44.4
	5.42	6.21	6.21	6.21	6.21	2		0.20	4.53	6.0		607	0.50	0.05	0.32	0.30	18.0	14.0	341		40.9
	4.28	4.58	4.58	4.58	4.58	2		0.30	4.64	7.0		550	0.50	0.05	0.62	0.30	19.0	16.7	331		39.7
	15.70	19.20	19.20	19.20	19.20	3		0.20	5.15	8.0		785	1.00	0.10	1.33	0.30	19.0	14.8	291		42.6
	20.39	21.39	21.39	21.39	21.39	4		0.30	4.08	5.0		602	1.00	0.05	7.33	0.10	20.0	13.8	239		29.8
	3.94	4.79	4.79	4.79	4.79	2		0.30	5.39	10.0		805	1.00	0.10	0.54	0.40	21.0	16.4	237		50.7
	14.12	18.65	18.65	18.65	18.65	2		0.20	4.86	6.0		619	0.50	0.10	0.57	0.30	18.0	16.9	354		42.4
	1.57	1.72	1.72	1.72	1.72	1		0.10	6.14	8.0		961	1.00	0.20	0.28	0.40	19.0	14.8	198		80.8
	17.42	19.68	19.68	19.68	19.68	4		0.10	4.70	6.0		672	0.50	0.05	0.97	0.40	17.0	15.0	371		42.9
	5.52	5.62	5.62	5.62	5.62	4		0.30	5.95	14.0		443	1.00	0.10	1.58	0.50	26.0	22.8	247		61.7
	5.79	5.95	5.95	5.95	5.95	4		0.50	5.87	10.0		672	0.50	0.10	1.72	0.30	32.0	21.8	285		52.3
	4.68	5.13	5.13	5.13	5.13	2		0.20	5.03	6.0		687	2.00	0.10	0.50	0.40	21.0	19.2	342		42.5
RES-MW-03A 0.05-0.25M	-6.40	12.80	-12.80	12.80	0.01	1		0.12	6.58	6.6		980	1.19	0.15	0.09	0.17	28.9	10.5	148	3.31	46.3
RES-MW-03A 1.89-2.04	17.97	19.49	17.57	19.49	17.57	2		0.15	4.82	2.7		730	0.96	0.08	2.69	0.23	21.1	13	207	2.37	36.7

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID										As	B			Bi					Cr		
Typical Detection Limit				SNPR for Charts	Adj SNPR for Charts			Ag	Al	5	20	Ba	Be	0.01	Ca	Cd	Ce	Co	1	Cs	Cu
Units	TNPR_Adj	SNPR	SNPR_Adj	for charts	for charts	FIZZ	FIZZ_CHECK	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
KC09-12 0-4.34	3.49	6.73	6.73	6.73	6.73	1	Agree	0.15	6.62	2.2		1840	1.17	0.05	2.33	0.25	30.5	14.4	33	0.6	35
KC09-12 19.3-20.79	32.61	40.28	40.28	40.28	40.28	3	Agree	0.48	6.04	14.6		1690	1.19	0.14	8.02	0.75	52.9	22	75	1.54	101
KC09-12 20.79-22.16	1.91	2.06	2.06	2.06	2.06	2	Disagree	0.38	8.23	10.2		830	0.73	0.06	6.21	0.53	19.65	34.7	152	1.14	119.5
KC09-12 25.21-25.7	5.93	7.71	7.71	7.71	7.71	2	Agree	1.09	7.24	14.3		1820	1.4	0.08	3.76	0.24	24.6	19.6	31	2.76	110.5
KC09-12 6.01-7.16	4.07	8.62	8.62	8.62	8.62	1	Agree	0.23	7.49	4.5		1630	1.25	0.05	2.48	0.2	29.4	14.2	37	0.66	57.7
KC09-12 9.5-10.53	6.40	38.40	38.40	38.40	38.40	1	Agree	0.4	6.71	82.3		2060	1.21	0.04	1.78	0.36	32.5	22.3	44	1.73	106.5
WP09-56	0.41	0.46	0.46	0.46	0.46	1	Agree	1.19	7.89	63.5		1860	1.68	0.42	0.95	1.24	41.9	24.1	100	3.74	298
WP09-56A	4.16	5.20	5.20	5.20	5.20	1	Agree	0.79	7.49	33.1		1690	1.49	0.17	1.3	1.1	39.7	21.4	79	2.13	156.5
	5.28	5.35	5.35	5.35	5.35	4		1.80	3.48	5.0		63	0.50	0.20	6.55	24.20	14.0	13.5	172		99.8
WP09-57	5.47	6.24	6.24	6.24	6.24	3	Agree	0.69	7.3	26.9		1480	1.29	0.42	4.48	0.53	33.1	16.1	57	2.23	225
	7.91	7.97	7.97	7.97	7.97	4		3.70	2.63	3.0		72	1.00	0.05	10.30	6.40	22.0	5.8	123		61.3
	309.12	123.65	123.65	123.65	123.65	4		0.10	7.70	35.0		566	2.00	0.05	5.89	0.05	14.0	48.5	122		34.1
M -010	6.86	8.00	8.00	8.00	8.00	1		0.05	7.88	0.9		540	0.77	0.05	4.58	0.07	24.9	11.4	8	0.64	14.3

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
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GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID					Hg														Re	S	
Typical Detection Limit	Fe	Ga	Ge	Hf	0.01	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	0.002	0.01	Sb
Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
S 021	3.33	4.98	0.09	0.9	0.08	0.029	0.45	9.9	32.1	1.8	978	1.3	1	3.2	12.9	360	11.3	19	0.001	0.05	14.85
S 001	4.96	21.3	0.14	2.5	0.14	0.077	1.95	20.2	44.3	1.51	193	3.48	1.09	8.9	114.5	720	14.5	86.7	0.002	0.04	1.91
S 002	4.26	17.85	0.11	1.9	0.16	0.053	1.47	17.6	39.2	1.53	429	2.55	1.76	7.1	106.5	550	9.7	65.2	0.001	0.18	1.83
S 003	5.52	18.45	0.14	2.2	0.17	0.055	0.72	13.4	26.8	0.93	300	22.4	3.87	9.2	22.3	1230	21.9	35.8	0.007	0.84	1.95
S 004	1.63	2.35	0.05	0.4	0.01	0.009	0.19	2.5	3.7	8.56	873	1.36	0.39	0.8	6.7	320	2	10.2	0.003	0.06	0.21
S 005	4.52	21.5	0.13	2.7	0.36	0.068	1.81	18.7	44.9	1.48	208	5.4	1.41	8.1	103	590	12.4	83.2	0.004	0.1	2.12
S 006	3.71	19.55	0.13	2.7	0.26	0.064	1.49	15.8	46.3	1.17	372	15.9	1.47	6.4	88.9	710	11.5	78.1	0.014	0.06	3.32
S 007	13.95	15.9	0.22	2.5	0.42	0.063	1.36	11	9	0.47	35	34.5	0.68	5.3	31.2	350	10.2	65.3	0.03	0.33	7.55
S 008	3.45	16.15	0.1	2.1	0.06	0.037	1.1	18	33.5	1.43	538	1.62	2.03	6.3	67.1	520	6.4	52.5	0.001	0.11	0.8
S 010	4.13	22.9	0.13	2.9	0.26	0.076	2.2	20	27.8	0.95	173	6.36	1.16	8.1	31.9	510	17.3	104	0.005	0.07	2.38
S 009	3.49	21	0.13	2.7	0.12	0.062	1.77	21.7	21.8	0.83	138	6.82	1.6	8.3	50.4	530	14.5	81.8	0.004	0.04	3.06
S 023	6.78	15.45	0.17	2.9	0.01	0.079	0.43	9.7	11.8	2.12	1660	0.61	2.02	5.7	24.9	1030	6.3	18	0.002	0.02	7.84
S 024	8.33	22.5	0.21	4.7	0.01	0.107	0.84	16.2	12.3	2.15	1420	1.37	2.3	11.3	26.3	1830	3.4	31.1	0.004	0.05	0.34
S 025	7.79	18.3	0.16	3.1	0.02	0.094	0.36	7.9	12.8	2.92	1340	0.5	2.9	5.2	43.1	1060	1.5	11.9	0.002	0.02	0.4
S 026	5.14	11.4	0.11	1.7	0.01	0.054	0.28	6	7.2	1.97	1010	0.45	2.1	3.4	22.7	620	1.4	7.1	0.001	0.02	0.11
S 027	3.39	12.4	0.13	1.9	0.04	0.064	0.63	13.8	10.2	0.86	383	6.74	3.08	4.1	36.9	610	11.1	28.4	0.01	0.53	13.2
S 028	7.59	17.95	0.16	3.4	0.01	0.096	0.57	10.6	8.4	2.93	1330	0.32	2.99	7	42.2	1230	1.8	13.7	0.004	0.05	0.28
S 034	7.9	18.75	0.17	3.1	0.05	0.097	0.36	8.3	9.4	3.33	1590	1.19	2.82	5.2	46	1070	1	12.7	0.004	0.01	0.29
S 037	7.35	17.85	0.15	0.8	0.05	0.078	1.6	15.6	20.8	1.65	1420	1.17	0.06	7.3	6.3	1930	10.4	54.1	0.001	0.83	2.17
S 038	7.98	15.85	0.14	2.3	0.01	0.087	0.06	4.4	27.9	4.22	1370	0.29	1.63	3.4	124.5	640	0.7	0.4	0.001	0.04	0.86
S 040	1.97	18.7	0.09	2.3	0.5	0.062	3.22	17.5	4.4	0.26	299	2.24	2.35	12.4	0.8	900	9.2	82.5	0.001	0.49	2.24
S 046	3.95	18.8	0.1	1.5	0.37	0.07	1.79	6.5	18.4	1.03	579	24.6	1.74	4.7	19.1	820	10	58.8	0.029	1.29	2.43
S 047	2.3	11.5	0.09	1.2	0.12	0.068	1.09	13.8	14.5	0.68	1740	7.65	0.61	3.4	15.3	530	3.3	37.4	0.018	0.49	0.81
S 011	3.68	24.6	0.13	3.4	0.31	0.071	1.94	24.1	32.2	1.01	121	9.16	1.95	9.5	21.1	510	17	95.4	0.007	0.05	3.92
S 012	2.48	9.6	0.12	1.9	0.26	0.054	0.79	7.6	13.2	0.42	1060	4.86	2.49	3.1	12.1	360	6	31.4	0.013	0.66	7.13
S 013	4.36	20.1	0.16	2.9	0.11	0.051	3.94	32.8	26.7	1.07	702	2.8	1.16	14.7	21.3	1310	19.4	105	0.002	0.35	2.75
S 014	3.64	12.2	0.13	1.6	0.15	0.056	0.88	16.4	14.5	0.59	864	4	1.75	3.7	15.1	830	10.4	36.6	0.004	0.31	3.51
S 015	2.72	18.25	0.12	2.2	0.06	0.066	2.68	13.5	14.7	0.57	269	4.08	1.1	6.1	7.1	500	10.8	86.7	0.017	0.25	39.2
S 016	3.13	17.65	0.14	2.2	0.09	0.053	1.53	18.6	32.1	0.71	351	6.86	1.92	6.3	39.6	580	14.3	59.4	0.007	0.38	4.85
S 017	4.84	19.25	0.14	1.9	0.08	0.064	1.3	24.7	52.9	1.94	510	3.09	1.64	7.2	85.4	1610	11.5	63.5	0.003	0.11	3.21
S 018	4.54	19.8	0.14	2	0.08	0.07	2.14	17.4	17.3	0.96	139	7.37	0.75	6.7	41.1	1230	9.6	91	0.005	0.06	5.33
S 019	2.79	18.95	0.12	4.4	0.01	0.04	1	40.8	22.2	0.88	1260	5.69	3.93	16.8	4.2	740	13.2	43.7	0.005	0.08	0.75
S 020	5.03	20.8	0.13	1.7	0.01	0.047	2.27	15.5	22.1	0.87	633	0.7	2.64	8.1	7.9	1190	10	74	0.001	0.06	3.38
S 022	5.95	17.15	0.13	1.8	0.005	0.049	0.19	7.4	45.1	4.02	1000	0.79	2.61	6.5	92.9	700	3.3	1.3	0.001	0.01	0.79
S 029	5.45	17.35	0.12	2.4	0.01	0.055	0.38	10.1	20.1	3.93	927	0.75	2.89	6.2	93.8	670	5	2.7	0.001	0.07	1.02
S 030	3.62	16.4	0.13	1.8	0.14	0.063	1.8	15.7	37.3	0.74	250	7.09	1.11	6.2	40.4	390	13.9	64.3	0.005	0.02	9.73
S 031	3.62	17.8	0.12	2	0.01	0.046	1.56	15.4	11.6	0.92	909	1.04	3.31	9.6	6.1	760	5.6	71	0.001	0.05	4.36
S 032	1.45	16.4	0.11	3.7	0.005	0.039	2.93	45.5	3.2	0.2	413	2.9	0.7	24.4	2.2	130	9.2	128	0.001	0.01	7.22
S 033	2.91	17.35	0.11	2.6	0.02	0.075	2.11	16.3	7.2	0.47	658	2.52	1.34	5.5	19.1	430	8.1	78.6	0.007	0.51	3.3
S 035	7.43	17.9	0.16	3	0.01	0.09	0.32	13.9	10.5	2.72	1340	1.06	2.55	7.2	27.8	1220	1.7	10	0.001	0.15	0.5
S 036	7.59	20.7	0.16	3.4	0.05	0.097	0.89	11.6	8.7	2.54	1530	0.9	2.31	8.2	54.4	920	3	33.9	0.002	0.04	3.87
S 039	6.56	16.25	0.13	0.4	0.02	0.057	2.54	10.2	15.6	3.09	1140	0.37	1.65	3.3	11.9	1870	3.6	47.1	0.001	0.13	1.15
S 041	3.9	20.2	0.13	2	0.01	0.044	3.17	14.3	12.5	1.12	870	1.29	2.88	15.1	16.9	1110	23.3	88.2	0.001	0.07	0.83
S 042	4.96	17.9	0.16	1.1	0.05	0.053	2.03	18.3	15.3	2.8	965	1.47	2.23	9	97.3	1550	8.6	54.7	0.002	0.13	0.59
S 043	3.84	14.25	0.18	1	0.06	0.058	1.15	17.2	9.1	1.05	794	12.45	1.38	5.6	67.5	1140	5.8	40.6	0.066	1.46	2.49
S 044	4.77	19.15	0.15	2.1	0.05	0.059	2.49	17.9	13.4	1.33	932	1.88	2.72	8.3	14.7	1580	11.3	69.4	0.004	0.15	1.42
S 045	4.37	17.95	0.12	1.5	0.04	0.052	2.39	14.3	12.9	1.65	928	1.2	3.08	8.7	19.6	1540	10.8	55.2	0.003	0.31	1.33
S 048	4.85	18.15	0.13	1.9	0.03	0.047	1.04	34.8	12.7	1.64	911	0.58	2.43	33.6	11.7	2980	3.7	19.7	0.001	0.03	2.3

Notes:

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Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID					Hg														Re	S	
Typical Detection Limit	Fe	Ga	Ge	Hf	0.01	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	0.002	0.01	Sb
Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
WP09-79	4.26	17.75	0.21	1.3	0.03	0.064	2.78	12.4	22.5	1.17	976	2.52	2.13	7.9	11.4	1240	20.6	89.8	0.01	0.97	5.76
WP09-80	5.25	15.05	0.2	0.8	0.04	0.086	2.92	7.6	31.2	2.34	1740	2.01	1.83	5.2	23.4	1300	22.8	72.8	0.002	1.22	14.9
WP09-74	4.28	17.3	0.18	1.2	0.02	0.058	2.17	17.3	12.6	1.55	797	2	2.16	8.2	20.5	1120	14.5	63.8	0.001	0.08	3.55
WP09-75	4.03	18	0.2	1.4	0.03	0.056	2.32	18.4	13.1	1.42	885	1.85	2.14	8.2	21.1	1150	12.2	72.4	0.001	0.08	3.45
M -009	2.93	24.2	0.26	1	0.005	0.061	4.85	16.7	5.8	0.64	669	0.63	2.82	11	2.9	1020	16.3	115	0.007	0.02	3.89
M -007	4.75	17.55	0.26	0.9	0.04	0.061	4.32	9.9	13.9	1.81	1020	5.5	1.98	10.1	9	1990	2.9	113	0.015	0.74	6.49
M -008	3.25	18	0.22	1	0.02	0.237	2.01	14.3	5.1	0.97	1470	0.51	4.34	4.8	21.5	730	25.3	69.4	0.002	2.42	5.97
M -008a	2.27	12.95	0.2	0.6	0.03	0.012	2.9	5.8	2.9	0.25	445	12.7	2.77	2.3	8.3	340	27.8	98.4	0.003	2.12	3.26
	5.17			0.8			4.02	6	11.1	1.15	471	3.1	0.068	3.4	3.2	0.129	6	143		5.7	25.9
	5.18			0.7			3.51	3.6	2.6	0.26	23	20.2	0.279	1.1	4.7	0.018	74.4	115		5.8	1.3
	5.07			0.6			4.47	10.9	4.2	0.39	48	69.6	0.355	1.1	4.5	0.147	104	148		5.3	0.4
	10.6			0.6			3.62	3	9.4	0.89	587	22.4	0.217	2.5	3.8	0.105	34.7	107		10	6.6
Res-019	2	15.7	0.2	0.8	0.02	0.005	3.99	7.1	8	0.23	80	3.2	2.76	2.4	15.1	540	11.7	139	0.001	1.2	3.53
Res-020	3.33	18.8	0.26	1.5	0.005	0.053	4.2	11.8	14	0.92	1090	0.52	2.8	8.9	4.4	1130	10.8	91.8	0.006	0.01	4.18
Res-021	4.19	19.35	0.26	1.3	0.01	0.055	3.45	13.1	12.9	1.41	1640	0.18	2.21	8.8	2.9	1290	47.2	124	0.005	0.56	7.37
Res-022	3.95	17.85	0.33	1.3	0.01	0.025	2.71	8.1	19.5	0.77	511	4.97	0.22	1.7	2.9	1240	80.9	106	0.029	2.31	0.85
Res-017	3.52	13.95	0.22	0.4	0.01	0.113	2.05	8.4	18.9	1.13	1260	12.7	2.39	6.8	3.8	1300	5.9	70.2	0.012	1.29	3.91
Res-018	3.8	11.7	0.23	0.7	0.02	0.008	3.05	2.7	8.9	0.59	391	4.35	0.05	6.6	9.2	1140	24.9	110	0.005	2	9.06
M -005	5.34	17.65	0.26	1	0.05	0.087	2.95	8.6	12.7	2.32	690	14.75	2.63	7.4	25.4	1910	6.3	84.7	0.026	0.76	4.1
M -005a	6.22	20.6	0.26	1.3	0.05	0.132	4.93	5.2	18.7	2.17	850	9.22	1.27	10.5	6.1	2110	7.3	95.7	0.007	0.75	5.11
M -006	4.84	19.15	0.25	1.4	0.04	0.07	3.58	12.3	9.4	1.61	1480	1.31	2.14	8.1	4.5	1250	10.8	120.5	0.003	1.6	7.36
WP09-38	7.85	18.15	0.28	0.6	0.1	0.083	2.34	8.7	21.4	1.36	878	69.5	0.38	2.6	7.5	1710	67.7	105	0.424	6.8	3.15
WP09-39	8.88	24.1	0.24	4.8	0.03	0.098	1.19	24.6	11.2	3.35	1220	5.94	2.69	25.8	30.8	2040	12.8	24.9	0.001	0.06	1.1
WP09-77	4.95	18.2	0.2	1	0.07	0.059	3.46	13	20	1.05	510	30.6	1.43	5.9	6	1280	43.2	129	0.126	1.95	13.25
WP09-78	4.78	19.35	0.19	1.3	0.05	0.111	5.63	10	42.4	1.25	1140	13.65	1.32	8.4	17.3	1240	61.3	177.5	0.002	0.41	6.77
KSMMNRX001	5.4	15.02		1.34			2.53	7.6	25	4.69	1208	0.65	1.501	4.13	107.5	940	2.75	40.6		0.02	5.02
KSMMNRX002	4.67	19.95		1.79			2.6	17.6	19.9	2.49	1003	0.95	2.824	29.62	76.5	1660	7.75	33.7		0.39	1.28
KSMMNRX003	3.29	13.47		1.45			2.01	12.5	18.4	1.35	1819	0.93	2.765	11.35	35.3	990	6.73	47.1		0.27	2.73
KSMMNRX004	6.67	17.27		1.47			1.87	20.6	31	3.68	1383	0.61	2.557	12.91	57.4	2900	2.47	23.6		0.48	1.23
KSMMNRX005	6.13	16.04		1.56			3.31	10.4	17.5	1.22	1412	0.83	0.067	18.73	18	2380	41.29	95.2		4.15	8.96
KSMMNRX006	7.73	17.58		1.45			1.55	10.3	11.5	3.64	1901	1.06	2.098	7.89	18	2530	8.42	32.4		0.19	1.07
KSMMNRX007	6.39	17.79		0.95			3.28	7.9	30.4	2.45	1467	0.93	1.779	12.84	11.7	2670	7.54	57		0.31	2.69
KSMMNRX008	3.28	12.31		0.68			3.56	6.9	27.2	0.34	88	539.5	0.101	3.8	2.2	1170	32.5	106.3		2.15	19.42
KSMMNRX009	2.73	23.6		1.03			3.68	3	6.5	0.47	208	6.43	0.179	13.51	1.1	1440	397.33	121.5		0.42	6.55
KSMMNRX010	2.77	16.06		0.98			3.8	3.7	17.6	0.31	62	308.1	0.202	6.94	1.5	2100	56.89	133.9		1.1	16.13
KSMMSRX001	4.92	20.17		0.78			2.23	8.9	36.7	2.04	1955	2.99	0.822	9.61	2.8	1730	7.13	33.7		0.43	22.87
KSMMSRX002	4.94	21.14		0.9			2.27	8.3	14.5	1.62	1664	2.19	2.441	9.33	2.7	1560	8.55	39		0.99	21.3
KSMMSRX003	2.85	17.99		1.03			3.27	6.4	5.1	0.62	959	1.9	1.913	10.31	1.9	1110	28.23	114.4		0.69	23.6
KSMMSRX004	1.22	14.92		0.36			2.68	3.4	4.9	0.47	89	33.91	0.202	0.81	1.4	210	25.36	89.4		0.18	10.39
KSMMSRX005	3.25	13.8		0.43			3.36	7.1	7.3	0.74	1009	6.8	2.1	3.93	7.3	900	10.14	96.9		0.9	4.88
KSMMSRX006	2.98	16.49		0.62			2.61	7.6	14.7	1.15	764	4.54	3.373	4.13	17.9	850	6.03	60.3		0.57	3.82
KSMMSRX007	1.42	14.43		0.43			3.41	7.2	5.6	0.48	716	5.55	0.582	5.53	2.5	810	28.55	92.8		0.25	4.59
KSMMSRX008	3.01	19.91		0.73			2.89	7.4	6.1	0.5	807	3.33	3.467	9.95	3.8	1030	3.78	61.1		0.02	1.6
KSMMSRX009	2.95	21.02		1.34			4	5.5	11.9	0.72	494	6.74	1.099	11.16	2	1100	8.82	103.7		0.29	4.51
KSMMSRX010	1.68	14.01		0.9			3.67	7.1	14.1	0.82	376	6.72	2.442	6.72	11.2	660	3.39	76.2		0.05	3.21
KSMMSRX011	3.9	19.45		0.8			2.89	10.1	6.3	0.78	758	3.62	3.414	10.26	3.2	1080	4.95	56.8		0.09	1.02
KSMMSRX012	5.17	15.41		0.73			2.41	11.9	13.9	1.96	2248	1.86	2.667	11.34	10.2	2250	6.8	84.8		1.03	3.25
KSMMSRX013	8.94	19.3		0.84			3.89	4.4	6.2	0.77	368	47.67	0.767	6.55	6	1550	35.24	117.2		0.86	5.59
KSMMSRX014	7.9	24.56		1.71			3.09	4.2	11.3	1.73	1047	4.82	0.111	12.04	18.3	60	13.88	59.3		0.24	2.69
KSMMSRX015	6.3	13.21		0.36			4.51	5.6	4	0.13	55	15.59	0.099	3.5	15.8	550	221.29	113.1		7.42	15.85
KSMMSRX016	5.31	15.74		0.68			3.57	12.4	12	1.48	1739	3.37	3.409	8.89	4.6	1580	16.12	113.1		1.65	4.55

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID					Hg														Re	S	
Typical Detection Limit	Fe	Ga	Ge	Hf	0.01	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	0.002	0.01	Sb
Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
KSMMSRX017	3.66	18.85		1.02			3.03	11.4	9.7	1	2051	1.58	4.236	10.88	3	1250	16.38	112.1		2.05	7.68
WP09-42	5.55	17.25	0.21	1.6	0.05	0.058	1.68	12.2	27.4	3.03	988	3.37	1.81	6.8	124	1140	14.8	60.4	0.001	0.03	5.43
WP09-37	5.19	17.35	0.18	1.6	0.15	0.071	2.13	20.5	24.9	1.64	913	8.75	1.67	8.3	49.1	1520	28.6	72.1	0.019	0.74	6.7
WP09-53A	4.58	17.35	0.2	1.4	0.06	0.052	1.76	14.7	25.1	1.91	867	2.88	2.05	6.9	60.4	1430	10	64.5	0.004	0.09	4.55
WP09-53B	4.81	17.15	0.25	1.4	0.16	0.068	2.4	18.1	24.2	1.48	887	13.6	1.65	8.5	45.4	1490	30.1	78.3	0.038	0.89	6.94
WP09-72	5.35	16.15	0.2	1.3	0.03	0.047	1.77	10.1	24	3.44	1040	1.78	2.23	4.8	117.5	1590	7	42.4	0.001	0.01	2.34
WP09-76	4.97	17.8	0.18	1.7	0.02	0.053	1.9	16.3	18.3	2.11	1070	1.71	2.35	7.9	58.5	1570	10.9	62.9	0.008	0.03	2.54
KC09-09 1-2.4	5.13	16.4	0.14	1.6	0.03	0.064	1.56	13.1	29.5	2.03	1040	3.16	1.76	5.4	32.5	940	10.5	42	0.004	0.12	5.08
KC09-09 15.53-16.0	5.58	20.6	0.16	2.5	0.02	0.06	2.33	24.2	12.3	1.89	1290	0.86	3.15	19.7	18.8	2060	7.7	44.8	0.003	0.03	0.75
KC09-09 18.93-19.27	5.42	19.85	0.15	2	0.02	0.077	1.96	19.1	17.9	2	1270	1.07	3.34	20.3	6.2	2380	7.1	31.7	0.002	0.01	2.08
KC09-09 28.7-29.8	4.86	15.2	0.15	1.7	0.03	0.048	1.99	11.6	18.5	2.9	946	1.95	2.23	6.3	84.3	1490	8.3	51.7	0.008	0.16	2.49
KC09-09 33.2-33.6	4.6	19.8	0.14	1.5	0.02	0.056	1.55	16	14.7	1.21	1040	1.33	3.35	9.6	27.6	1940	10.2	42.4	0.003	0.03	8.61
KC09-09 40.8-41.03	3.98	16.7	0.15	1.6	0.02	0.049	2.67	21.5	10.9	1.01	924	2.76	2.45	14.4	29	1510	27.9	69.1	0.004	0.21	14.9
KC09-09 50.6-51.0	4.16	14.6	0.12	1.7	0.02	0.038	1.24	11.6	19.9	2.47	871	1.78	2.84	9.9	80.1	1340	4.7	29.9	0.004	0.25	1.31
KC09-09 54.7-55.2	4.32	18.05	0.14	1.6	0.01	0.047	1.97	15.5	14.9	1.85	903	0.94	2.55	11.3	33.4	1470	6.9	49.5	0.004	0.06	2.16
KC09-09 6.23-6.75	5.05	17.8	0.14	2.1	0.02	0.056	1.86	15.4	22.4	1.63	1280	2.31	2.14	7.2	21	1240	11.7	47.4	0.004	0.09	7.16
KC09-09 60.9-61.6	4.42	16.75	0.13	1.7	0.02	0.044	1.78	17	14.8	1.81	898	2.87	2.8	8.3	40	1420	9.2	47.7	0.01	0.55	2.12
KC09-09 64.6-66.03	5	16.75	0.11	1.5	0.03	0.056	1.58	10.5	19	2.74	1080	2.5	2.12	4.7	83.8	1070	7.2	49.3	0.013	0.38	1.82
KC09-09 74.5-75.25	6	16.3	0.16	1.1	0.16	0.084	2.45	12.9	17.9	0.9	681	27.5	0.76	5.3	7.1	1390	49.6	88.7	0.125	4.42	6.37
KC09-09 75.6-76.5	5.58	19.2	0.17	1.2	0.23	0.091	2.64	12.1	18.8	0.93	986	43.3	0.77	5.1	5.2	1380	63.9	95	0.198	3.66	9.55
KC09-09 80.5-81.47	5.53	17.6	0.15	1.1	0.24	0.102	2.2	12	21.6	1.12	1500	58.6	0.76	5.1	6	1340	109	79.4	0.313	3.1	13.9
KC09-09 89.3-90.86	4.29	19.25	0.13	1.9	0.07	0.059	2.17	15.9	14.6	0.75	990	8.03	1.99	8.9	2.9	1060	20.7	65.4	0.045	0.85	4.17
KC09-09 9.27-10.25	5.12	20.3	0.18	2.4	0.02	0.073	3.63	18.7	16.2	1.55	1280	2.15	1.96	15.4	11	2030	9.8	72.3	0.006	0.15	1.76
WP09-31	4.14	17.1	0.18	1.5	0.05	0.052	1.49	16.4	22.2	1.67	890	3.03	2.31	6.9	43.1	1410	8	51.8	0.003	0.07	4.41
WP09-36	4.03	19.55	0.2	1.6	0.03	0.045	0.93	12.5	17.5	1.53	992	1.36	3.43	7	36	1220	7.3	22.5	0.003	0.05	1.54
	4.94			0.7			1.6	31.5	10.2	2.46	1320	4.30	2.43	15.6	14.6	0.2	8.3	37.3		1.30	1.00
Res-001	1.99	6.77	0.14	0.2	0.005	0.03	0.15	5.4	21.1	0.88	635	0.25	0.1	3.1	16.9	110	8.1	6.1	0.004	0.05	0.21
Res-002	5.04	20.2	0.27	1.1	0.005	0.057	2.5	7.1	8.5	2.16	1120	1.2	2.8	5.2	22.4	1280	1.8	43.4	0.01	0.08	0.96
Res-003	3.94	15.35	0.27	1.6	0.03	0.065	1.14	16.5	6.6	1.03	822	7.84	1.58	5.6	48.1	1030	6	46.8	0.039	0.1	1.75
Res-004	4.41	20.4	0.26	1.7	0.005	0.049	1.7	10.8	6.3	1.85	893	0.86	4.04	4.5	26.9	1200	9	36.2	0.004	0.14	0.66
Res-005	3.89	18.5	0.23	0.7	0.02	0.07	1.75	19.7	15.4	1.39	790	0.44	0.77	12.2	35.4	310	6.9	57.5	0.005	0.07	1.37
WP09-83	5.02	19.1	0.22	1.8	0.02	0.047	2.01	14.9	15.8	1.91	1120	1.14	2.75	6.3	18.1	1910	9.6	55.2	0.001	0.03	1.72
WP09-84	5.03	19.65	0.25	1.9	0.01	0.05	1.96	18.5	12.3	2.03	1120	1.6	3.01	7.1	17.1	1940	11.6	63.9	0.001	0.04	1.38
	4.31			1.6			1.3	21.5	11.2	1.96	926	2.20	5.30	6.4	8.0	0.2	7.3	30.2		0.20	0.30
	6.94			2.0			0.8	26.6	4.5	1.89	2170	0.60	3.52	8.3	8.3	0.2	6.7	20.2		0.20	1.10
Res-016	4.25	16.2	0.25	1	0.06	0.073	1.69	11.9	40.4	1.71	1020	5.7	2.11	6.5	72.8	1160	7.5	61.1	0.006	0.97	1.97
Res-008	5.04	18.7	0.24	2.4	0.15	0.078	1.52	17.1	54.2	1.82	663	2.73	1.2	6.2	104	470	8.4	66.7	0.008	0.79	1.25
M -001	2.75	22.6	0.21	1.3	0.04	0.175	4.66	9.4	7.9	0.42	299	21.2	0.46	6.4	2.6	750	17.6	123	0.042	0.94	4.02
M -002	6.33	17.85	0.23	1.3	0.02	0.075	1.2	11	8.5	3.16	1500	0.26	1.85	7.2	30.9	2030	6.8	33.6	0.003	0.07	5.42
M -004	1.12	31.2	0.17	0.7	0.01	0.021	4.55	3.7	2.4	0.27	463	0.39	1.19	10	7.2	220	7.5	75.6	0.002	0.04	1.68
Res-012	4.58	20.2	0.26	2.8	0.005	0.062	1.39	14.3	18.6	1.61	1140	0.41	3.5	6.9	2.6	1430	9.9	37	0.001	0.005	6.03
Res-013	4.12	20.1	0.24	2.6	0.08	0.058	0.44	15.8	35	0.94	1560	0.3	3.35	7.5	2.1	1520	5.8	13.2	0.007	0.67	1.88
Res-014	4.97	22.2	0.28	2.8	0.05	0.068	1.88	18.7	23.1	1.47	1080	0.44	3.25	8.1	2.6	1680	18.6	38.4	0.002	0.42	1.59
Res-011	2.9	22.2	0.24	5.6	0.17	0.118	0.51	36.2	68.4	0.08	143	0.94	0.01	17.3	0.5	460	12.8	20.9	0.001	0.005	2.36
Res-009	1.65	12.6	0.17	1.4	0.03	0.025	1.03	18.4	17.9	1.02	240	0.55	1.52	5.7	43.5	430	6.9	33.6	0.001	0.01	1.04
Res-010	2.62	15.6	0.23	1.9	0.02	0.033	1.24	22.5	32.1	1.11	323	0.91	2.47	7.5	54.5	500	10.3	43.7	0.001	0.03	0.92
Res-015	3.82	21	0.28	1.6	0.005	0.039	4.1	17.3	10	1.27	732	0.1	2.58	10.3	14.5	2140	15.7	78.8	0.002	0.005	0.39
M -003	4.59	16.4	0.21	1.4	0.01	0.047	1.6	11.2	14.7	3	760	0.3	2.83	4.1	107.5	1100	6.3	39.1	0.003	0.005	1.97
Res-006	6.53	19.15	0.31	2.4	0.16	0.063	1.88	35	13.5	1.88	887	1.08	3.14	12.6	7	3170	5.4	44.2	0.004	0.91	4.03
	5.37			0.9			3.5	8.5	5.5	0.89	2730	0.50	0.08	3.7	4.3	0.2	32.2	100.0		5.10	14.70
	5.28			0.9			3.5	7.9	43.3	2.07	4110	0.30	0.07	3.4	4.9	0.1	11.5	103.0		2.90	22.00

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID					Hg														Re	S	
Typical Detection Limit	Fe	Ga	Ge	Hf	0.01	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	0.002	0.01	Sb
Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	5.93			0.9			3.5	5.9	31.2	1.62	3460	0.10	0.06	3.7	4.2	0.1	15.0	65.0		3.20	9.90
	5.22			0.9			3.4	5.6	17.3	1.70	3780	0.10	0.06	3.8	3.7	0.1	26.3	67.6		3.00	17.00
	5.31			0.9			3.5	7.1	23.4	1.74	3710	0.20	0.06	3.8	3.9	0.1	16.8	89.0		2.60	14.70
	4.81			1.2			3.5	6.2	21.3	1.47	3640	0.40	0.05	5.3	3.7	0.1	121.0	54.8		2.30	59.10
	4.74			1.3			1.7	15.2	12.7	2.54	1110	0.80	3.42	7.5	80.6	0.1	7.9	38.0		0.20	1.20
Res-007	3.82	14.7	0.23	1.3	0.01	0.035	1.1	8.5	14.2	2.79	703	0.23	2.94	3.9	89.8	950	4.5	30	0.003	0.01	1.51
KSMSURX001	2.28	14.29		1.01			4.03	3	4.2	0.35	207	2.03	4.808	7.67	2.6	1780	13.3	106.6		0.51	6.91
KSMSURX002	3.2	8.14		0.3			2.62	4.8	7.3	0.29	87	10.29	0.19	2.29	2.2	540	23.68	87.7		1.51	15.52
KSMSURX003	5.51	16.89		0.44			3.13	5	13.8	1.02	2058	4.53	2.034	4.97	4.9	1620	105.47	101		1.12	10.59
KSMSURX004	2.87	21.14		0.9			4.11	16.3	7.8	0.62	580	3.64	3.182	12.17	2.6	950	6.19	91.8		0.02	1.69
KSMSURX005	5.48	17.85		0.54			3.97	10.9	11.8	1.61	1541	2.15	2.701	8.07	17.3	1690	6.77	89.2		0.15	1.63
KSMSURX006	5.17	18.03		0.6			2.88	6	32.5	2.47	1504	1.06	2.094	11.71	12.3	2510	3.1	47.7		0.16	2.33
KSMSURX007	2.82	20.23		1.27			2.34	10.8	11.2	0.76	601	6.43	1.908	10.39	4.2	900	6.41	43.2		0.23	2.48
KSMSURX008	3.17	20.8		1.28			2.38	10.5	10.4	1.1	749	5.5	2.219	9.71	5.3	1080	3.57	42.9		0.23	1.73
KSMSURX009	5.32	14.46		0.82			2.06	7.8	12.4	1.23	675	13.98	2.676	4.7	20.6	1160	5.53	46.9		3.34	2.14
KSMSURX010	2.85	13.48		0.83			2.23	6.5	7.9	0.8	444	5	2.587	4.27	9.7	920	4.25	49.8		0.91	2.08
KSMSURX011	4.16	18.91		0.67			2.38	5.7	13.6	0.57	105	2.15	0.06	5.03	16.2	1740	12.97	73.2		3.71	15.95
KSMSURX012	2.79	18.56		0.88			2.34	5	17.1	0.48	55	138.78	0.333	4.58	4.9	1740	18.45	47.3		2.68	876.04
KSMSURX013	4.36	16.54		0.82			2.35	5.7	20.8	1.78	548	5.59	2.278	5.58	12.2	1400	3.86	41.7		0.13	10.01
KSMSURX014	6.16	19.22		0.96			0.97	10.5	36.4	2.53	1917	1.99	2.284	6.79	5.5	1820	14.02	12.6		0.81	11.19
KC09-10 1.35-2.4	5.12	15.35	0.13	1.2	0.03	0.042	1.3	9.3	20.1	3.69	756	0.64	3.1	3.7	140.5	1260	4.3	21.3	0.001	0.04	0.61
KC09-10 4.56-6.6	5.02	14.75	0.13	1.4	0.03	0.046	1.55	8.2	24.2	3.55	800	2.19	2.2	3.3	140.5	1220	4.8	36.8	0.004	0.31	1.16
KC09-11 1.2-2.4	5.18	18.85	0.13	1	0.02	0.054	1.61	8.6	20.8	1.99	1480	2.89	2.15	5.8	25.5	1290	2.8	37	0.007	0.35	1.82
KC09-11 2.4-4.5	5.05	18.4	0.13	0.9	0.02	0.052	0.96	8.9	18.3	1.94	1120	6.13	2.88	4.8	31.1	1060	2.6	26	0.012	0.69	0.78
T001	3.26	12.2	0.1	1.2	0.05	0.037	0.97	10.8	39.6	1.78	525	3.18	1.25	5.5	144.5	390	5.6	37.9	0.006	0.43	0.8
T002	4.21	16.3	0.13	1.4	0.08	0.055	1.26	11.6	47.9	1.98	1120	2.51	1.88	5.7	71	830	7.3	47.7	0.005	0.27	1.1
T003	4.25	15.45	0.11	1.3	0.05	0.055	1.09	3.5	56.6	2.18	1070	3.75	1.44	5.5	79.9	320	5.7	40.3	0.012	0.31	2.14
T004	3.53	16.1	0.13	1.3	0.06	0.06	1.56	12.4	46.7	1.97	1040	1.07	1.17	4.7	63	720	6.9	62.2	0.002	0.07	0.64
T005	4.81	18.8	0.14	1.5	0.16	0.061	1.57	7.9	51.6	2.51	582	3.34	1.53	6.6	122.5	440	12.4	58.8	0.003	0.61	1.96
T006	3.43	15.1	0.15	1.5	0.12	0.038	0.98	12.9	52.2	0.62	837	2	1.96	5.9	115.5	620	4.8	38.9	0.002	0.1	0.53
T007	4.66	15.2	0.16	1.4	0.17	0.054	1.38	14.3	50.5	2.35	722	2.5	1.18	6.5	140.5	730	10.1	55.4	0.003	0.77	1.33
T008	2.54	11.55	0.13	1.4	0.09	0.031	0.67	12.9	37.1	0.99	1460	1.78	1.74	5	92.1	540	6.1	27	0.002	0.25	0.73
T009	2.79	16.7	0.12	1.4	0.01	0.031	0.71	6.4	32.1	2.02	529	0.34	3.48	3.3	142	450	2	19.2	0.001	0.04	0.19
T010	2.89	13.05	0.12	1.1	0.04	0.028	0.98	11.2	51.1	1.09	496	1.77	1.7	5.3	83.2	450	4.6	38.6	0.001	0.05	0.58
T011	4.23	16.7	0.13	1.2	0.04	0.051	1.26	14	56.5	1.39	1280	1.16	1.3	5.1	91.3	850	4.6	48.1	0.001	0.11	0.44
T012	3.13	11.85	0.11	1.3	0.03	0.031	0.92	11.4	36	1.74	419	1.32	1.18	5.3	134.5	440	5.8	38.5	0.001	0.11	0.7
T013	5.14	19.35	0.18	2.1	0.28	0.06	1.7	12	31	1.8	407	1.99	1.62	5.9	32	1700	16.9	64.4	0.005	0.36	1.9
KSM TAR07	3.54	6.1			239		0.2	7.7		1.28	1388	1.21	0.017		92.2	0.083	8.02			0.25	0.18
KSM TAR08	3.41	6.3			70		0.25	4.3		1.39	563	1	0.015		106.9	0.075	7.95			0.06	0.08
KSM TAR09	4.16	7.1			69		0.25	3.7		1.66	356	1.1	0.011		127	0.098	9.13			0.06	0.06
KSM TAR01	3.2	5.6			67		0.19	1.9		1.51	581	1	0.012		92.7	0.045	7.33			0.04	0.08
KSM TAR04	4.45	7.3			56		0.14	16		1.71	1097	1.52	0.019		97.4	0.039	7.22			0.35	0.12
KSM TAR05	2.78	5.1			38		0.2	2.1		0.93	144	0.56	0.017		120.3	0.037	10.64			0.07	0.05
KSM TAR06	4.14	8.4			58		0.11	8.1		2.26	399	1.58	0.022		138.6	0.05	8.83			0.29	0.1
	4.08			1.1			1.1	9.0	46.6	2.26	716	2.00	1.31	5.6	160.0	0.1	5.1	36.3		0.20	1.00
	3.14			1.2			1.0	9.7	42.4	1.82	469	1.30	1.34	5.4	148.0	0.0	4.3	34.5		0.05	0.70
	3.01			1.3			1.3	13.4	34.6	1.63	2140	2.00	1.63	5.9	140.0	0.1	8.8	50.5		0.10	1.00
	3.40			1.3			1.0	7.5	39.1	1.71	357	1.20	1.27	6.3	132.0	0.1	5.4	35.8		0.05	0.70
KSM TAR02	1.72	3.1			22		0.15	7.1		0.68	2434	0.56	0.023		44.4	0.046	5.09			0.1	0.24
KSM TAR03	3.79	6.8			91		0.18	4.7		1.25	429	1.5	0.018		106	0.055	21			0.24	0.41
TS014	3.57	18.3	0.15	1.4	0.06	0.042	1.15	9.6	36.9	2.23	549	1.04	2.09	4.9	129.5	600	6.7	37.6	0.002	0.14	0.74

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID					Hg														Re	S	
Typical Detection Limit	Fe	Ga	Ge	Hf	0.01	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	0.002	0.01	Sb
Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
TS015	4.23	20.2	0.15	1.5	0.16	0.052	1.23	12.4	50.6	1.49	488	1.75	2.14	5.6	112	1070	9.5	42.7	0.003	0.23	0.93
TS016	3.2	14.35	0.14	1.5	0.05	0.037	0.93	11.4	31.1	1.32	763	3.36	1.26	4.3	60.9	560	8	30.3	0.001	0.15	0.5
TS017	3.56	17.65	0.14	1.4	0.09	0.04	1.17	12.1	47.1	1.64	571	1.29	1.58	5.1	111	760	6.4	39.9	0.001	0.18	0.6
TS019	3.76	17.1	0.16	1.3	0.09	0.045	1.07	10.9	43.8	2.03	849	1.27	1.85	5.5	110	1000	7.6	39.5	0.001	0.32	0.72
TS020	3.94	13.75	0.15	1.5	0.06	0.038	1.17	12.2	98.3	2.14	690	1.32	1.15	5.6	146	500	5	45.9	0.001	0.19	0.53
TS021	3.65	16.4	0.16	1.8	0.13	0.053	1.46	14.3	38.9	2.08	281	2.74	1.18	7.4	146	510	8	58.8	0.003	0.04	1.09
TS022	3.98	17.1	0.11	1.7	0.13	0.06	1.63	13.2	38.7	2.09	305	1.91	1.42	6.5	116.5	620	7.3	66.1	0.002	0.27	1.14
TS023	4.01	12.95	0.1	0.9	0.06	0.034	0.84	7.9	52.2	1.86	1210	0.89	1.36	4.3	108	480	6.5	34.6	0.001	0.01	0.78
TS024	3.5	19	0.1	1.6	0.13	0.082	1.64	16.7	45.8	1.32	152	3.14	1.52	6.4	86.5	1250	7.8	65.7	0.008	0.05	1.13
TS025	4.43	18.9	0.13	1.4	0.07	0.08	1.48	12.5	54.5	2.06	406	2.37	1.61	6.5	150	550	7	59.4	0.003	0.29	0.85
TS026	3.18	11.95	0.09	1.2	0.04	0.041	0.9	11.5	36.2	1.72	436	0.89	1.17	5	133	510	4	37	0.001	0.13	0.53
TS027	3.56	16.95	0.11	1.7	0.05	0.065	1.39	15.2	42.8	2.04	620	2.2	1.49	6.7	130.5	620	6.7	57.6	0.003	0.03	0.87
TS028	3.94	13.5	0.1	1.4	0.07	0.045	0.99	11.8	43.7	2.18	536	2.23	1.3	5.1	157	650	8.2	41.2	0.002	0.34	1.01
TS018	3.96	14.6	0.16	2.1	0.06	0.044	1.12	16.4	34.9	1.75	542	1.08	1.12	9.6	124	860	5.9	45.1	0.002	0.05	0.62
G1	5	18.65	0.14	1.4	0.04	0.067	2.11	18.2	12.4	1.79	1200	2.73	2.25	8.3	24.4	1270	14.6	66.3	0.001	0.06	3.46
G2	4.08	17.7	0.11	1.5	0.08	0.063	2.29	17.7	12.3	1.4	918	2.05	2.14	8.2	22.2	1050	28	66.6	0.002	0.03	3.74
G3	4.87	18	0.13	1.2	0.04	0.066	1.89	16.1	14.7	1.82	1020	1.93	2.1	7.2	24.4	1160	12.7	55.6	0.001	0.01	3.83
G4	4.71	19.1	0.14	1.5	0.05	0.061	2.1	19.6	14.2	1.51	952	2.07	2.2	9.2	23.6	1140	14.3	62.5	0.001	0.06	5.19
G5	4.44	18.75	0.13	0.6	0.01	0.069	2.12	13.7	10.3	1.69	780	1.15	2.8	9	18.3	1400	9.7	54.4	0.004	0.19	1.32
TG01	3.85	16.75	0.16	1.8	0.11	0.062	1.28	13	43.5	1.72	1580	1.5	1.86	5	112	750	8.3	50.1	0.002	0.13	1.75
TG02	3.81	14.1	0.1	1.5	0.08	0.054	1.2	12.5	43.5	1.55	925	1.56	1.43	5.3	110	690	11.5	48.4	0.002	0.02	2.7
TG03	4	15.75	0.1	1.5	0.06	0.057	1.18	11.5	46	1.66	1150	1.43	1.48	5.4	105	600	9.2	49	0.001	0.02	1.72
TG04	4	14.45	0.16	2	0.06	0.049	1.15	15	39.1	1.61	592	0.8	1.1	7.2	121	810	5.9	51.2	0.001	0.03	0.72
TG05	3.94	15.4	0.18	2	0.06	0.05	1.15	15.2	42.2	1.59	599	0.94	1.23	7.4	130.5	770	6.2	52.8	0.001	0.03	0.73
TG06	3.77	13.55	0.16	1.9	0.07	0.045	1.11	14.2	36.7	1.61	543	1.12	1.13	7.2	115.5	790	5.9	48.5	0.001	0.05	0.79
RES-MW-02A 1.1-32.9M	3.56	14.05	0.13	1.7	0.05	0.045	1.13	12.7	41.1	1.9	408	1.59	1.42	6	131.5	530	7.3	46.7	0.002	0.18	0.95
RES-MW-01A 4.27-5.49M	3.62	14.7	0.13	1.5	0.05	0.044	1.11	13	39.7	1.96	789	1.18	1.62	5.7	132	840	6.2	43.7	0.002	0.24	0.76
RES-MW-01A 11.18-11.38M	3.47	13.2	0.13	1.5	0.1	0.039	1.12	12.5	38.7	1.67	940	1.66	1.54	5.8	117	950	5.1	47.3	0.002	0.54	0.93
	4.35			1.4			1.4	11.8	52.2	2.53	240	2.80	1.60	6.1	168.0	0.1	6.7	47.5		0.40	0.80
	4.17			1.4			1.7	15.4	44.1	2.36	341	2.70	1.32	6.7	130.0	0.1	5.7	64.3		0.30	0.70
	3.68			1.5			2.0	9.5	53.6	2.14	259	1.70	1.39	6.8	121.0	0.1	7.7	73.4		0.70	1.20
	3.85			1.2			1.3	9.4	47.0	2.07	361	2.30	1.44	5.8	147.0	0.1	9.9	46.7		0.60	1.20
	4.49			1.2			1.4	13.2	48.4	2.18	1040	3.00	1.58	6.1	136.0	0.1	10.4	50.3		1.00	1.60
	4.42			1.4			1.5	11.6	53.0	2.15	658	2.00	1.39	6.3	115.0	0.3	10.2	54.5		0.90	1.20
	4.10			1.4			1.6	10.9	59.6	2.28	596	2.90	1.33	6.6	122.0	0.2	9.0	46.2		0.40	1.20
	5.05			1.2			1.6	11.3	58.8	1.99	900	2.20	1.24	5.8	109.0	0.2	10.0	51.7		0.90	1.00
	3.81			1.5			1.6	15.1	43.9	2.19	868	2.10	1.19	6.3	147.0	0.1	10.3	63.9		0.90	1.30
	3.26			1.1			1.0	11.5	50.2	2.28	520	1.90	1.19	5.0	157.0	0.1	3.7	38.9		0.10	0.40
	2.98			1.0			1.0	9.1	40.6	1.72	163	1.60	1.27	5.2	126.0	0.0	4.7	37.4		0.20	0.80
	3.18			1.0			1.0	8.9	37.9	1.84	286	1.50	1.32	4.7	126.0	0.1	9.3	32.6		0.30	1.20
	3.38			1.3			1.3	9.3	41.9	1.86	986	1.20	1.35	5.6	142.0	0.1	6.3	42.9		0.20	0.90
	2.39			1.1			0.9	9.4	28.6	1.22	2390	1.30	1.28	4.2	113.0	0.1	7.9	36.8		0.40	0.90
	3.70			1.3			1.4	9.9	45.8	1.84	602	1.50	1.46	5.9	126.0	0.1	8.0	44.8		0.30	1.00
	3.32			1.1			1.0	8.7	49.7	2.08	342	1.70	1.40	5.5	149.0	0.1	7.0	32.2		0.05	0.80
	4.02			1.7			1.8	8.1	47.7	2.32	325	2.50	1.41	7.3	140.0	0.1	4.8	51.4		0.30	0.70
	2.96			1.0			1.1	8.3	46.9	1.98	480	1.40	1.18	5.0	152.0	0.0	3.5	36.1		0.20	0.60
	4.71			1.3			1.4	12.7	54.8	2.32	668	3.40	1.22	6.3	157.0	0.1	11.5	55.3		0.80	1.30
	4.22			1.2			1.4	16.3	48.9	2.20	1130	2.40	1.33	6.2	168.0	0.2	11.5	56.3		0.80	1.10
	3.25			1.0			1.1	10.4	45.2	1.89	229	1.40	1.38	5.8	138.0	0.1	8.4	39.1		0.30	1.00
RES-MW-03A 0.05-0.25M	3.68	16.7	0.12	2	0.05	0.063	1.47	13.6	40.9	2.44	258	1.8	1.38	7.2	149.5	470	4.9	53	0.003	0.02	0.55
RES-MW-03A 1.89-2.04	2.72	11.55	0.11	1.5	0.03	0.04	1.18	10.7	30.5	1.96	951	1.64	0.97	5.3	116.5	430	5.3	47.2	0.002	0.14	0.49

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID					Hg														Re	S	
Typical Detection Limit	Fe	Ga	Ge	Hf	0.01	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	0.002	0.01	Sb
Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
KC09-12 0-4.34	4.11	16.3	0.11	1.3	0.03	0.057	1.16	15.8	14.1	1.73	860	1.43	2.12	5.7	25.9	970	5.4	29.2	0.004	0.09	0.8
KC09-12 19.3-20.79	5.38	15.55	0.16	1.2	0.09	0.065	1.21	28.4	50.6	2.33	959	5.67	0.98	25.7	40.6	1810	8.9	35.7	0.015	0.22	2.89
KC09-12 20.79-22.16	5.05	15.5	0.12	1.4	0.07	0.054	1.01	9.6	25.9	3.55	995	3.43	1.75	4.2	98.4	1080	7.7	25.9	0.01	0.5	2.21
KC09-12 25.21-25.7	4.53	18.2	0.12	2	0.02	0.049	2.33	11.8	18.5	1.9	955	2.31	2.32	5.5	20.8	1590	11.9	57.7	0.006	0.27	1.61
KC09-12 6.01-7.16	4.18	19.8	0.12	2.1	0.01	0.051	1.56	14	17.2	1.73	762	2.04	2.57	9.2	22.2	1450	5.4	37.6	0.005	0.1	2.11
KC09-12 9.5-10.53	5.06	16.2	0.14	1.4	0.12	0.059	1.56	15.5	20.1	1.85	785	7.37	1.96	6.9	28.3	1420	6.9	40.7	0.005	0.04	2.23
WP09-56	5.58	20.8	0.27	1.8	0.2	0.079	2.23	22.4	32.2	1.83	743	17.4	1.51	9.3	63.5	1560	35	83.8	0.047	0.73	9.03
WP09-56A	4.85	18.1	0.25	1.9	0.14	0.064	1.98	21.4	26.3	1.66	1310	7.55	1.99	9.3	50.7	1620	17.8	67.6	0.03	0.11	5.99
	2.67			0.7			0.8	7.4	24.5	1.37	583	63.80	0.20	3.3	108.0	0.1	5.9	31.9		1.60	51.50
WP09-57	4.23	17.25	0.24	1.2	0.08	0.057	2.2	17.8	21.1	1.5	954	9.34	1.92	8.3	33.4	1360	26	69	0.043	0.72	5.92
	1.89			0.7			0.7	15.1	10.6	3.74	922	8.50	0.28	3.0	61.9	0.1	6.6	26.9		1.70	8.60
	7.65			0.7			0.2	6.1	21.2	4.43	1820	0.60	1.52	3.2	80.3	0.1	2.7	4.5		0.05	8.50
M -010	3.93	21.9	0.25	0.3	0.005	0.047	0.77	10.4	9.4	1.18	1040	0.2	2.86	4.2	5	1190	5.6	17.5	0.002	0.07	0.07

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
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SP = poorly-graded sand
SM = silty sand
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ML = silt
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OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID						Te		Ti		U		W				Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO
Typical Detection Limit	Sc	Se	Sn	Sr	Ta	0.05	Th	0.001	Tl	0.1	V	0.1	Y	Zn	Zr	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%
S 021	5.5	2	0.3	611	0.21	0.025	1.6	0.108	0.11	0.7	35	0.9	11.9	62	35.7	5.2	0.02	8.69	0.005	4.8	0.57	3.29
S 001	20.5	3	1.5	102	0.55	0.08	6	0.434	0.96	2.3	188	1.4	18.8	148	92	16.52	0.11	0.14	0.02	7.01	2.44	2.68
S 002	15.4	3	1.2	156.5	0.47	0.07	5	0.344	0.57	1.8	133	1.1	12.6	156	71.2	14.57	0.09	0.25	0.03	6.04	1.85	2.76
S 003	16.2	7	1.5	351	0.64	0.11	6.5	0.436	0.46	2.2	135	0.7	10.6	53	87.4	16.28	0.05	0.46	0.005	7.8	0.93	1.73
S 004	2.6	3	0.2	762	0.05	0.025	0.4	0.05	0.12	0.5	27	0.1	4.8	60	17	1.99	0.02	25.04	0.005	2.46	0.24	14.99
S 005	19.8	3	1.5	127	0.56	0.08	6.1	0.419	0.98	2.9	165	1.3	15.4	123	99.2	16.57	0.13	0.17	0.03	6.57	2.34	2.71
S 006	17.1	6	1.4	104	0.45	0.1	5.9	0.354	1.81	4.2	226	1	14.9	156	98	15.01	0.07	0.18	0.02	5.22	1.92	2.17
S 007	14.6	10	1.2	53.7	0.37	0.11	4.2	0.301	2.66	6.1	321	0.9	14.3	264	94.4	10.44	0.08	0.19	0.01	21.02	1.79	0.92
S 008	11.7	2	1.1	246	0.48	0.025	4.5	0.316	0.31	1.9	103	0.8	11.6	69	77	12.54	0.09	0.56	0.02	4.82	1.39	2.59
S 010	18	3	1.6	108.5	0.55	0.08	7.7	0.393	1.37	3.5	157	1.6	14.2	117	104.5	17.29	0.12	0.03	0.01	5.95	2.85	1.78
S 009	17	4	1.4	164.5	0.55	0.08	7.3	0.399	1.03	3.3	177	1.4	12.1	97	99.5	16.04	0.11	0.08	0.02	5.14	2.34	1.59
S 023	30.3	2	0.9	119	0.34	0.025	1.5	0.82	0.11	0.9	260	0.2	35.4	110	92.4	11.6	0.02	4.24	0.01	9.95	0.55	3.86
S 024	43	3	1.6	109.5	0.71	0.025	3	1.16	0.26	2	310	0.3	53.9	119	141	15.7	0.09	7.4	0.005	13.15	1.07	4.09
S 025	44.1	3	1	163.5	0.34	0.025	1.1	1.01	0.08	0.6	331	0.1	41.1	105	86.6	14	0.03	7.46	0.03	11.86	0.45	5.4
S 026	29.3	2	0.7	175.5	0.22	0.025	1.3	0.522	0.06	0.6	203	0.1	24.8	61	49.1	10	0.03	5.15	0.005	7.82	0.37	3.68
S 027	25	8	1	391	0.26	0.07	1.2	0.572	0.27	1.5	210	1.4	19.5	96	61.5	13.66	0.06	1.45	0.01	5.22	0.84	1.69
S 028	46.4	3	1.2	195.5	0.44	0.025	1.5	1.075	0.11	0.7	325	0.2	46.4	118	97.9	14.72	0.06	7.08	0.02	11.62	0.71	5.4
S 034	47.5	3	1.1	220	0.33	0.025	1.1	0.978	0.07	0.6	331	0.2	46.2	109	92.1	14.96	0.03	9.22	0.03	11.8	0.46	5.99
S 037	20.2	2	1	166	0.46	0.025	1.7	0.532	0.36	0.8	129	1.2	18.6	119	25.5	12.63	0.2	7.24	0.005	11.03	2.02	3.04
S 038	43.7	2	0.9	164	0.23	0.025	0.6	0.834	0.02	0.3	305	0.1	35.4	99	66.6	16.85	0.01	8.88	0.06	12.74	0.12	8.02
S 040	12.7	2	1.6	105.5	0.78	0.025	3.5	0.518	0.97	1.5	31	1.3	14.4	12	70.9	14.36	0.34	0.25	0.01	3.28	4.69	0.54
S 046	22.2	5	1.4	187.5	0.31	0.05	2.3	0.451	3.34	2.6	158	0.8	17	85	45.8	16.58	0.12	1.67	0.005	5.91	2.31	1.93
S 047	10.2	3	1	160	0.23	0.025	2.2	0.207	2.19	2.3	74	0.6	18.6	153	40.3	8.76	0.07	17.66	0.005	3.3	1.25	1.27
S 011	18.6	4	1.7	173	0.63	0.08	9.3	0.426	1.32	5.3	161	1.6	14.1	48	118	18.65	0.11	0.08	0.02	5.36	2.53	1.88
S 012	9.6	8	0.9	282	0.22	0.025	1.7	0.166	0.48	1.4	116	0.6	16.1	371	71.8	10.28	0.48	2.05	0.005	3.74	1.03	0.82
S 013	17.1	3	1.4	500	0.9	0.05	9.8	0.362	0.9	3.9	225	1.3	17	99	102.5	14.72	0.23	1.91	0.005	6.21	4.92	1.98
S 014	11.7	5	1	150.5	0.25	0.08	1.8	0.234	0.36	1.1	113	0.7	19.3	73	60.8	10.63	0.07	0.47	0.005	5.39	1.17	1.15
S 015	13.9	7	1.4	106	0.42	0.1	3.4	0.313	0.98	1.8	159	1.3	12.7	43	81.3	14.38	0.16	0.1	0.005	3.96	3.56	1.12
S 016	14.2	5	1.2	184.5	0.38	0.06	4.8	0.294	0.92	2.4	140	1	14	154	77.1	14.4	0.09	0.57	0.01	4.61	2.06	1.38
S 017	18	4	1.3	218	0.46	0.07	4.2	0.415	0.77	2	169	0.9	16.6	128	76.4	15.8	0.08	1.67	0.03	7.27	1.74	3.68
S 018	19.4	6	1.4	68.8	0.5	0.07	4.3	0.432	1.5	1.8	212	0.9	13.5	135	74.7	14.93	0.14	0.2	0.02	6.72	2.88	1.84
S 019	7.2	2	1.5	593	1.19	0.025	9.9	0.377	0.37	5	40	1.1	22	74	177	17.1	0.16	0.83	0.005	4.11	1.32	1.67
S 020	14.9	2	1.2	299	0.51	0.09	3.8	0.408	0.59	1.9	163	1.3	14.1	87	64.1	16.97	0.21	0.6	0.005	7.27	2.88	1.6
S 022	23.9	2	0.9	333	0.41	0.025	1.4	0.55	0.09	0.6	190	0.5	15.9	80	53.3	17.05	0.03	1.56	0.03	8.97	0.35	7.43
S 029	26.6	2	0.8	363	0.39	0.025	1.8	0.497	0.07	0.8	168	0.2	19.7	64	79	16.33	0.09	5.93	0.03	8.35	0.53	7.34
S 030	18.9	8	1.2	91.3	0.43	0.06	3.6	0.367	1.28	2	189	1	14.1	281	63.4	13.39	0.07	0.21	0.02	5.41	2.36	1.42
S 031	7.9	2	1	238	0.64	0.025	4.1	0.271	0.48	2	72	0.8	17.7	86	65.3	18.21	0.1	1.05	0.005	5.5	2.09	1.84
S 032	2.5	2	1.6	82.7	1.86	0.025	19.6	0.13	0.88	5.9	7	0.8	13.9	25	114.5	14.16	0.08	0.13	0.005	2.06	3.8	0.43
S 033	12	5	1.5	210	0.39	0.07	3.3	0.238	0.56	1.5	110	0.8	28.3	116	75	13.73	0.1	0.86	0.01	4.24	2.68	0.89
S 035	41.6	3	1	84.7	0.44	0.025	1.8	0.908	0.05	0.9	328	0.2	38.9	80	94.4	14.94	0.09	8.47	0.01	11.18	0.4	4.96
S 036	39.8	3	1.6	185	0.58	0.025	3	0.976	0.25	1.4	295	0.4	45.8	99	90.9	15.35	0.02	7.45	0.02	11.74	1.13	4.8
S 039	36.5	1	0.6	266	0.22	0.025	1.3	0.397	0.26	0.6	299	0.7	10.5	91	12.9	14.91	0.23	4.8	0.005	9.95	3.26	5.66
S 041	10.6	2	1	784	0.86	0.09	4.7	0.331	0.43	2.5	153	1.3	16.9	91	65.7	17.43	0.23	2.74	0.04	5.84	4.19	2.23
S 042	18.1	2	1	851	0.55	0.05	3.1	0.419	0.29	1.3	173	0.8	19.8	114	31.1	14.71	0.17	6.72	0.03	7.35	2.55	5.09
S 043	13.8	20	1	293	0.4	0.18	2.2	0.366	0.4	3.8	272	0.3	29.5	244	33.7	10.61	0.11	7.68	0.02	5.6	1.41	1.96
S 044	17	3	1.1	580	0.53	0.025	3.8	0.46	0.35	2.1	152	0.9	24.3	85	67.4	15.13	0.18	5.02	0.005	6.8	3	2.44
S 045	18.7	3	0.9	780	0.59	0.05	3	0.373	0.22	1.6	178	0.8	17.6	80	43.6	15.84	0.18	4.7	0.01	6.38	3	3.08
S 048	18.7	2	1.2	197.5	1.72	0.025	5.6	0.649	0.09	1.8	236	0.5	15	74	66.6	13.1	0.31	1.89	0.005	7.09	1.31	2.94

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID						Te		Ti		U		W				Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO
Typical Detection Limit	Sc	Se	Sn	Sr	Ta	0.05	Th	0.001	Tl	0.1	V	0.1	Y	Zn	Zr	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%
WP09-79	14.9	3	1.4	400	0.47	0.23	3.3	0.33	1.01	2.2	149	2.5	13.6	84	40.1	16.52	0.22	3.47	0.005	6.24	3.56	2.29
WP09-80	28	2	0.7	375	0.3	0.67	1.2	0.34	1.06	0.7	217	2.4	14.4	124	22.7	15.14	0.24	5.84	0.01	7.54	3.59	4.28
WP09-74	18	2	1.5	364	0.49	0.12	3.2	0.358	0.44	1.6	161	1.6	19.5	108	38.6	14.23	0.2	2.36	0.01	6.04	2.71	2.85
WP09-75	16.4	2	2	346	0.51	0.31	3.5	0.334	0.49	1.8	151	1.7	20.6	119	48.5	14.37	0.21	2.09	0.005	5.71	2.93	2.57
M -009	11.7	2	1.3	460	0.67	0.025	6.1	0.199	0.93	2.1	153	5.2	14.6	36	21.7	17.7	0.5	2.46	0.005	4.36	6.62	1.19
M -007	25	4	1.3	321	0.62	0.23	1.8	0.42	0.94	0.9	315	37.1	16.2	36	24.9	16.77	0.21	4.59	0.01	7.24	5.46	3.28
M -008	11.9	5	1	218	0.34	0.5	3.1	0.302	0.78	1.7	106	11.4	7.4	98	29.2	16.01	0.1	2.26	0.02	4.74	2.59	1.7
M -008a	5.7	4	0.6	188	0.17	0.42	1.8	0.131	1.16	1.4	48	9.5	5.1	33	16.5	14.61	0.19	1.98	0.01	3.71	4.21	0.53
	16		2	74	0.2		2.5	0.163		2.1	158	4	15	19	28.2							
	24		5.2	48	0.05		1.4	0.067		1.1	216	0.7	11.9	528	23							
	23		2.4	87	0.05		2.3	0.061		0.9	227	0.5	11.5	124	20.4							
	12		1.7	71	0.2		1.1	0.127		1.3	125	2.5	10.5	16	19.9							
Res-019	9.2	6	0.7	200	0.18	0.35	2.3	0.168	1.97	1.2	87	5	3.5	13	20.1	14.46	0.13	0.16	0.01	2.79	4.98	0.42
Res-020	21.1	1	0.8	420	0.57	0.025	4.4	0.255	1.46	2.3	156	2.2	13.8	56	43.5	17.33	0.65	3.75	0.005	4.81	5.25	1.73
Res-021	23.6	1	0.9	237	0.52	0.05	4.3	0.242	1.76	2.2	193	7.5	11.8	101	33.2	17.16	0.52	4.67	0.005	6.3	4.47	2.71
Res-022	26.3	28	3.8	69.7	0.12	0.05	4.7	0.091	3.87	1.9	209	1.9	6.6	349	39.9	16.92	0.36	0.41	0.01	5.67	3.47	1.4
Res-017	19.9	2	1	944	0.39	0.11	1.9	0.16	0.62	0.7	141	2	13.6	61	9.7	14.34	0.17	9.81	0.005	5.19	2.61	2.01
Res-018	19.5	12	1.8	36.5	0.4	1.18	1.8	0.182	1.12	0.7	156	4.6	6.7	44	22	13.3	0.16	1.5	0.005	5.26	3.86	1.11
M -005	23.8	7	2.3	985	0.48	0.07	1.6	0.308	0.62	1.6	231	2.8	15.9	32	28	16.26	1.41	3.35	0.01	8.18	3.81	4.13
M -005a	31.8	6	3.1	189.5	0.66	0.58	1.4	0.52	1.51	1.8	346	30.9	9.8	52	36.8	18.1	0.29	0.77	0.005	9.46	7.43	3.92
M -006	25	3	0.9	209	0.5	0.57	3.6	0.399	2.35	1.9	217	12.7	17.4	98	42.3	16.53	1	2.65	0.005	7.39	4.66	2.97
WP09-38	24.7	29	2.5	121.5	0.16	0.44	2.7	0.144	3.21	1.3	223	1	8.9	325	20.2	16.33	0.41	0.75	0.005	10.9	2.99	2.51
WP09-39	19.7	2	2.1	718	1.55	0.08	2.4	1.56	0.16	1.1	214	1.1	25.7	128	201	17.12	0.04	7.47	0.005	12.56	1.38	5.71
WP09-77	15.7	9	1.6	254	0.32	0.61	2.8	0.253	1.49	1.8	210	4.2	10.1	112	31.5	15.89	0.39	1.42	0.005	7	4.48	2
WP09-78	16.7	5	1.7	191.5	0.4	1.24	4.6	0.293	1.16	4	362	10.3	11.5	117	41.7	15.31	0.29	0.65	0.01	6.57	7.15	2.32
KSMMNRX001	30.8	0.25	0.7	550	0.2		0.5	0.536		0.3	209	0.2	17.2	65.8	36.7	16.38	0.17	8.35	0.039	8.1	3.23	7.88
KSMMNRX002	15.5	0.9	1.2	1135	1.4		1.9	0.5		0.9	216	0.8	16.3	101.3	66.5	16.32	0.15	5.74	0.038	6.96	3.23	4.49
KSMMNRX003	13.2	0.25	0.6	1009	0.5		2	0.331		1.1	131	1.1	12.1	51.2	50.4	12.68	0.08	14.79	0.027	4.75	2.36	2.36
KSMMNRX004	22.1	0.6	0.9	1149	0.4		0.9	0.812		0.3	240	1.3	17.3	91.2	53.4	16.38	0.14	6.05	0.018	10.05	2.31	6.13
KSMMNRX005	25.7	0.7	1.1	374	0.8		2.7	0.424		1.6	333	9.3	12.4	90.7	56.2	14.84	0.18	5.11	0.005	8.99	7.3	2.19
KSMMNRX006	42.5	0.6	1	546	0.4		1.4	0.516		0.8	420	0.7	19.4	93.7	47.3	13.82	0.06	11.36	0.006	11.89	1.82	6.04
KSMMNRX007	25.9	0.6	0.9	649	0.6		1.2	0.526		0.8	348	1.2	11.2	85.9	32.3	15.76	0.19	6.63	0.006	9.72	4.26	4.32
KSMMNRX008	6.5	18.3	0.7	150	0.2		1.6	0.138		3.1	180	8	2.6	21.5	25.9	11.11	0.3	0.24	0.012	4.73	8.44	0.63
KSMMNRX009	10.1	2.5	2	210	0.5		2.6	0.288		1.7	191	4.7	2	53.5	27.7	18.3	0.68	0.2	0.007	3.96	10.75	0.84
KSMMNRX010	8.7	22.4	0.4	334	0.3		1.5	0.223		2.4	75	4	2.6	28.5	34.7	15.38	0.71	0.31	0.007	4.08	12.22	0.56
KSMMSRX001	20.3	1.2	0.8	414	0.4		3	0.326		1.8	261	1.8	8.6	41	20.2	17.12	0.2	6.4	0.008	7.26	2.78	3.78
KSMMSRX002	22.4	2.6	0.9	463	0.4		2.6	0.348		1.2	263	1.4	7.7	87.2	23.9	18.49	0.37	3.79	0.003	7.42	2.86	2.95
KSMMSRX003	10.3	0.25	0.6	125	0.5		3.4	0.211		2.1	140	8.4	6.3	130.3	36.5	17.09	0.39	0.64	0.006	4	4.7	1.09
KSMMSRX004	4.3	5.2	1.6	94	0.05		0.6	0.063		0.5	46	1.6	0.9	40.7	11.7	13.84	0.24	0.06	0.013	1.71	4.47	0.84
KSMMSRX005	10.5	0.9	0.5	181	0.2		1.7	0.204		0.8	125	3.3	4.9	59.6	13.4	14.12	0.23	1.35	0.011	4.62	4.82	1.28
KSMMSRX006	6.7	2.9	0.9	192	0.2		2.5	0.249		1.3	84	2.9	6	101.1	19.8	15.33	0.11	1.2	0.009	4.53	3.87	2.06
KSMMSRX007	6.1	0.6	0.7	232	0.2		3	0.121		0.9	105	2.1	8	35.5	10.1	12.12	0.56	2.85	0.012	1.98	6.4	0.83
KSMMSRX008	8.4	0.25	0.9	423	0.4		3.2	0.228		0.9	161	1.7	10	34.2	19	16.41	0.34	3.06	0.008	4.34	6.39	0.88
KSMMSRX009	7.3	0.7	1.3	241	0.5		3.3	0.214		2.4	143	13	4.9	19.9	48.3	17.1	0.65	0.39	0.001	4.28	9.06	1.32
KSMMSRX010	7.6	0.8	1.2	141	0.3		2.2	0.389		1.8	84	8	7.2	21	30.8	15.28	0.17	0.74	0.016	2.52	7.06	1.47
KSMMSRX011	7.5	0.25	1.4	538	0.4		2.9	0.221		1.9	157	7.5	10.6	22.7	23	16.57	0.48	2.6	0.006	5.85	5.67	1.42
KSMMSRX012	23.1	1.7	1.2	399	0.5		1.5	0.405		0.8	271	20.7	16.3	55.2	27.6	14.12	0.1	12.27	0.002	7.69	3	3.43
KSMMSRX013	15.2	9.7	2.6	210	0.3		1.1	0.377		1.2	276	19.7	5	56.6	33.7	14.84	0.35	0.43	0.009	13.27	9.72	1.33
KSMMSRX014	29	2	5	199	0.4		1	0.18		2.7	1676	1.8	3.9	92.1	50	8.87	0.09	3.83	0.01	12.17	5.12	3.07
KSMMSRX015	6.5	32.9	1	44	0.2		0.6	0.167		0.9	481	28.4	7.5	284.9	11	10.31	0.18	0.09	0.021	9.44	8.53	0.23
KSMMSRX016	27.1	2.1	1	306	0.4		3.3	0.271		1.4	246	16	9.4	65.9	18.2	15.4	0.37	3.79	0.005	7.64	4.39	2.53

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID						Te		Ti		U		W				Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO
Typical Detection Limit	**Sc**	**Se**	**Sn**	**Sr**	**Ta**	**0.05**	**Th**	**0.001**	**Tl**	**0.1**	**V**	**0.1**	**Y**	**Zn**	**Zr**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**
Units	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**%**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
KSMMSRX017	18.1	1.9	0.9	206	0.5		3.7	0.236		2.6	198	16.8	10	87.2	30	16.72	0.31	4.67	0.004	5.23	3.63	1.74
WP09-42	24.1	2	1.1	321	0.4	0.42	1.8	0.422	0.4	1.5	216	1.9	16.1	106	55.1	13.99	0.11	1.85	0.05	7.79	2.11	5.36
WP09-37	18.9	6	1.2	369	0.48	0.27	2.8	0.434	0.75	2.1	213	2.4	19.7	202	54.8	14.85	0.23	3.02	0.01	7.43	2.68	3.03
WP09-53A	19.1	3	0.9	429	0.39	0.12	2.1	0.406	0.45	1.6	193	1.5	18.3	108	47.9	14.13	0.16	2.05	0.02	6.36	2.2	3.47
WP09-53B	17.7	7	1.3	375	0.49	0.55	2.7	0.414	1.01	2.1	207	3.3	18.4	185	47.7	14.47	0.27	3.11	0.01	6.89	3.06	2.79
WP09-72	25.7	2	0.8	484	0.28	0.26	1.4	0.416	0.23	1.4	216	0.7	16	93	41.1	14.43	0.11	3.77	0.06	7.78	2.27	6.24
WP09-76	18.1	2	1	534	0.44	0.12	2.6	0.445	0.34	1.6	183	1.6	19.5	106	57.1	14.83	0.11	6.19	0.02	6.83	2.32	3.76
KC09-09 1-2.4	22.4	1	1	356	0.34	0.08	4	0.404	0.51	2.7	187	2.2	17.1	76	48.3	58.64	15.71	7.67	4.61	3.82	2.46	2
KC09-09 15.53-16.0	17.1	1	1.3	954	1.11	0.05	3.4	0.591	0.2	1.6	215	0.7	19	98	79.7	51.04	17.05	8.4	6.38	3.53	4.38	2.96
KC09-09 18.93-19.27	16.9	1	2.3	640	1.17	0.07	2.8	0.676	0.21	1.4	233	12.3	15.6	97	62.1	49.46	17.12	8.27	4.88	3.87	4.68	2.55
KC09-09 28.7-29.8	22.2	1	0.8	595	0.37	0.07	2.1	0.412	0.29	1.4	198	2.4	16.2	78	50.1	51.51	13.81	7.07	9.02	5.17	2.99	2.41
KC09-09 33.2-33.6	16.5	2	1	488	0.57	0.05	2.4	0.524	0.29	1.2	190	6.3	16.5	101	48.6	55.25	16.43	6.77	5.28	2.28	4.55	1.9
KC09-09 40.8-41.03	14.6	2	1	645	0.76	0.08	3.3	0.382	0.39	1.7	183	8.1	16.9	104	57.2	52.45	14.86	5.85	8.06	1.9	3.35	3.23
KC09-09 50.6-51.0	19.4	1	0.7	655	0.63	0.05	1.9	0.349	0.13	1.3	169	1.3	15.9	58	54.5	52.17	14.35	6.36	7.89	4.61	4.01	1.53
KC09-09 54.7-55.2	15.9	1	0.9	706	0.69	0.05	2.4	0.453	0.24	1.3	170	14.9	15.5	71	50.4	53.19	15.45	6.57	7.38	3.47	3.57	2.51
KC09-09 6.23-6.75	19.8	1	1	571	0.41	0.07	4	0.441	0.51	1.6	174	2.6	17.6	80	63	55.6	16.29	7.57	5.95	3.08	2.97	2.36
KC09-09 60.9-61.6	15.9	3	0.9	646	0.49	0.06	2.5	0.381	0.25	1.6	159	2.7	16.8	83	52.8	53.19	14.96	6.64	7.44	3.34	3.83	2.21
KC09-09 64.6-66.03	24.1	4	0.8	509	0.28	0.06	1.7	0.404	0.3	1.1	198	2.6	17.2	105	46	50.18	14.7	7.37	8.16	4.9	2.91	1.87
KC09-09 74.5-75.25	19.4	13	2.1	260	0.31	0.31	3.2	0.275	2.23	1.6	163	4.6	12.4	196	34.7	60.03	15.6	8.9	1.82	1.72	1.12	3.16
KC09-09 75.6-76.5	19.7	13	2.3	288	0.3	0.28	3.7	0.245	2.53	1.6	166	2	11.7	189	36.4	58.75	17.41	8.23	1.73	1.76	1.13	3.35
KC09-09 80.5-81.47	17.2	9	2	268	0.33	0.43	3.4	0.244	1.84	1.6	155	1.8	12.2	520	33.2	61.21	15.16	7.73	1.88	1.97	1.07	2.67
KC09-09 89.3-90.86	12.5	3	1.1	386	0.54	0.09	3.7	0.324	0.73	1.9	126	5.1	19.5	114	59	61.05	16.66	6.41	3.84	1.46	2.84	2.77
KC09-09 9.27-10.25	16.2	1	1.3	898	0.94	0.07	3.7	0.619	0.52	1.9	205	2.1	18.8	84	76.3	52.01	17.6	7.99	5.25	3.14	2.87	4.75
WP09-31	15.6	2	1.2	593	0.42	0.06	2.1	0.4	0.36	1.5	203	1.2	17.3	106	50.2	14.29	0.17	2.92	0.01	5.97	1.87	3.11
WP09-36	12.3	2	1	935	0.4	0.36	1.7	0.36	0.18	1.2	151	0.9	14	92	55.6	16.81	0.09	6.1	0.01	5.88	1.2	2.95
	19.0		0.9	1070	0.80	0.00	3.8	0.466		1.3	228	0.4	11.1	47	31.6							
Res-001	5.5	1	0.6	26.4	0.23	0.1	1.3	0.137	0.03	0.1	21	0.4	2.8	50	9	3.62	0.36	0.02	0.005	2.85	0.18	1.55
Res-002	20.8	3	0.7	972	0.33	0.025	0.9	0.55	0.54	0.9	204	0.6	19	86	32.8	19.52	0.62	4.01	0.01	8.17	3.36	4.14
Res-003	15.2	13	1	229	0.39	0.19	2.2	0.393	0.45	3.6	269	0.4	29.8	194	64	11.53	0.09	4.37	0.01	5.67	1.41	1.8
Res-004	17.6	2	0.9	591	0.3	0.025	2.4	0.406	0.26	1.3	158	1.3	16.9	76	52.4	17.76	0.22	3.62	0.01	6.48	2.16	3.21
Res-005	15.8	2	2.3	54.4	0.64	0.09	2.9	0.332	0.32	0.5	103	1	9.3	113	27.6	14.35	0.2	0.37	0.01	5.85	2.35	2.52
WP09-83	17.2	2	1.1	600	0.35	0.4	2.3	0.449	0.28	1.6	218	1.2	17.6	89	61.2	15.97	0.21	5.7	0.005	7.39	2.58	3.69
WP09-84	17.3	2	1	654	0.39	0.2	2.8	0.451	0.27	1.6	215	1.2	18.6	85	63.3	16.02	0.21	6.15	0.005	7.42	2.48	3.81
	9.0		0.8	638	0.40	0.00	3.5	0.408		1.7	174	1.1	15.4	80	54.7							
	14.0		1.2	799	0.50	0.00	3.0	0.621		1.4	239	0.5	23.7	146	68.3							
Res-016	21.5	3	1.1	342	0.4	0.1	2.6	0.322	0.49	1	156	1.4	14.4	81	33.4	14.91	0.14	3.45	0.02	6.28	2.17	3.02
Res-008	21.9	4	1.3	102	0.45	0.14	3.8	0.405	0.83	1.8	189	0.9	19.7	138	84.9	15.1	0.09	0.22	0.02	7.51	1.97	3.11
M -001	9.7	12	2.4	142.5	0.27	0.51	6.1	0.153	1.63	4.9	230	5.3	8.2	25	38.7	14.48	0.3	2.15	0.005	3.98	8.42	0.85
M -002	38.1	2	0.8	1720	0.46	0.07	1.6	0.399	0.18	0.9	323	1	19.2	73	35.7	15.37	0.08	9.5	0.01	9.7	1.5	5.44
M -004	2.5	1	1.5	99.6	0.39	0.07	10.6	0.07	0.72	2.9	400	4.4	3.2	32	24.1	12.37	0.05	1.8	0.005	1.55	7.58	0.55
Res-012	17.9	2	1.2	412	0.43	0.025	2.9	0.451	0.31	2	165	0.5	22.7	85	89.5	17.47	0.12	4.96	0.005	7.06	1.89	2.96
Res-013	15.9	2	1	647	0.46	0.08	3	0.439	0.07	1.7	170	0.6	21.2	87	78.8	17.06	0.92	3.75	0.01	6.32	0.58	1.71
Res-014	22.2	2	1.3	280	0.49	0.025	2.8	0.514	0.26	1.7	174	0.5	26.4	103	83	18.27	0.29	2.9	0.005	7.82	2.54	2.71
Res-011	10.3	2	4.6	155	1.15	0.025	5.6	0.231	0.09	1.3	6	1.6	38.3	153	201	12.4	0.02	0.19	0.01	4.23	0.66	0.23
Res-009	10.3	1	0.8	253	0.37	0.025	4.1	0.222	0.21	1.3	67	0.7	8.6	47	43	10.69	0.1	3.05	0.03	2.4	1.3	1.8
Res-010	13.7	1	1	468	0.48	0.025	5.9	0.253	0.25	2	79	0.9	12.2	60	57.8	12.95	0.15	1.92	0.02	3.77	1.59	1.91
Res-015	10.6	2	1	633	0.61	0.08	3.5	0.33	0.47	1.5	131	1	19.1	82	52	17.87	0.3	3.92	0.005	5.7	5.39	2.46
M -003	21.3	1	0.7	570	0.27	0.025	1.9	0.391	0.27	1	168	4.5	14.4	68	42.5	14.9	0.09	6.12	0.03	6.78	1.99	5.02
Res-006	18.8	3	1.4	435	0.76	0.025	4	0.674	0.72	1.3	191	1.9	28.5	90	91.4	16.1	0.19	1.76	0.005	9.51	2.43	3.29
	24.0		0.7	79	0.20	0.00	1.9	0.206		1.7	180	4.9	9.3	216	29.6							
	24.0		0.7	131	0.20	0.00	1.8	0.210		1.0	212	3.6	11.0	233	26.2							

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID						Te		Ti		U		W				Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO
Typical Detection Limit	Sc	Se	Sn	Sr	Ta	0.05	Th	0.001	Tl	0.1	V	0.1	Y	Zn	Zr	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%
	22.0		0.6	161	0.20	0.00	1.4	0.222		1.0	261	2.4	8.7	212	27.6							
	21.0		0.7	125	0.20	0.00	1.4	0.240		0.9	222	2.4	8.2	253	28.3							
	25.0		0.7	143	0.20	0.00	1.8	0.254		1.1	230	2.0	9.5	246	28.8							
	17.0		0.7	177	0.30	0.00	1.8	0.234		1.6	234	2.1	8.2	257	33.0							
	20.0		0.9	677	0.40	0.00	2.0	0.442		1.5	197	1.0	15.1	75	46.4							
Res-007	14.4	2	0.6	568	0.26	0.025	1.8	0.294	0.18	1	122	0.4	12.2	57	42	13.81	0.08	9.58	0.02	5.75	1.35	4.88
KSMSURX001	16.6	0.25	0.8	279	0.4		1.4	0.371		0.4	143	32.2	3.4	19.6	29.2	18.72	0.37	0.74	0.006	3.39	5.69	0.63
KSMSURX002	12.8	5.4	0.8	41	0.1		0.6	0.112		0.5	122	6.1	1.5	8.7	9.4	6.89	0.12	0.06	0.017	4.37	3.04	0.5
KSMSURX003	18.1	6.7	1.5	97	0.2		1.1	0.216		1.9	189	6.4	6.9	338.5	12.9	16.76	0.28	1.83	0.005	8.3	5.13	1.87
KSMSURX004	8.7	0.25	1.1	372	0.5		5.2	0.191		1.6	149	1.8	11.8	32.8	23.7	17.09	0.34	1.58	0.005	4.01	6.96	1.05
KSMSURX005	28.9	1.1	0.8	440	0.4		1.6	0.402		1	351	4	14.7	70.3	13.9	15.66	0.26	4.02	0.01	7.71	6.33	2.7
KSMSURX006	19.3	1.4	1.4	190	0.6		1.3	0.414		0.8	275	9.1	11.1	80.4	15.8	18.14	0.21	2.14	0.005	7.81	7	4.58
KSMSURX007	7.9	2	2.1	222	0.5		4.4	0.23		2.7	123	4.4	9.4	39.1	31.9	16.19	0.29	1.46	0.005	4.15	7.6	1.41
KSMSURX008	7.5	0.25	1.4	160	0.4		3.9	0.225		2.5	131	3.8	7.4	49.6	31.2	16.57	0.26	0.69	0.002	4.65	6.61	2.01
KSMSURX009	12.8	9	1.8	194	0.2		1.2	0.309		1.9	136	15.1	9.6	31.1	23.7	15.24	0.24	4.49	0.008	8.05	4.64	2.38
KSMSURX010	9.8	3.8	2	193	0.2		1.5	0.249		1.9	123	3.8	11.2	28	20.4	13.61	0.33	2.14	0.009	4.15	4.91	1.45
KSMSURX011	30.7	0.5	2.1	23	0.2		1	0.391		1.1	303	54.5	4.7	18.4	18.3	17.67	0.12	0.46	0.011	6.26	7.96	1.08
KSMSURX012	23.1	7.5	9.5	79	0.2		1.1	0.31		2.8	289	49.6	4.6	136.9	28.1	17.83	0.33	0.22	0.008	4.09	10.18	0.87
KSMSURX013	17.4	1.9	1	395	0.3		1.1	0.411		0.8	212	5.5	13.4	32.1	22.3	16.6	0.43	3.57	0.004	6.56	5.7	3.31
KSMSURX014	30.4	0.25	0.8	787	0.3		2.1	0.36		1.1	322	0.8	11.6	92.5	23.5	16.51	0.25	8.17	0.006	9.22	1.16	4.47
KC09-10 1.35-2.4	20.6	1	0.7	333	0.24	0.025	1.3	0.396	0.2	0.9	198	0.6	17.1	89	36.5	15.69	0.1	2.24	0.06	7.87	1.67	6.75
KC09-10 4.56-6.6	24.5	2	0.7	450	0.21	0.05	1.3	0.379	0.22	1.2	202	0.5	16.4	83	44.7	13.27	0.11	7.52	0.06	7.44	1.84	6.29
KC09-11 1.2-2.4	17.4	4	0.7	501	0.35	0.05	1.1	0.493	0.42	0.9	222	0.5	18.2	100	22.5	16.73	0.18	6.89	0.01	7.8	2.03	3.75
KC09-11 2.4-4.5	17.3	6	0.7	490	0.31	0.09	1	0.524	0.25	1.1	228	0.4	18.7	108	20.9	16.23	0.14	7.73	0.01	7.38	1.14	3.5
T001	13.1	2	0.9	78.5	0.37	0.07	2.5	0.274	0.27	1	103	0.6	13.4	77	36.7	10.48	0.07	0.53	0.03	4.84	1.26	3.25
T002	19.1	2	1	143.5	0.37	0.09	2.3	0.408	0.33	0.9	139	0.8	18.4	58	39.9	13.44	0.1	0.74	0.02	6.02	1.58	3.54
T003	15.3	1	0.9	96.4	0.38	0.09	2.2	0.321	0.32	0.9	136	0.7	6.6	66	39.2	12.55	0.09	0.13	0.02	6.23	1.43	3.94
T004	17.1	2	1.1	100	0.33	0.09	2.2	0.355	0.42	0.7	128	0.8	18.5	74	34.5	12.59	0.12	0.85	0.01	5.18	2.03	3.56
T005	19.4	3	1.1	102.5	0.44	0.11	2.7	0.406	0.41	1.1	164	0.5	11.3	71	47	14.2	0.13	0.61	0.03	6.96	2.05	4.42
T006	14.3	1	1	208	0.41	0.025	2.5	0.339	0.25	1	117	0.7	14.4	93	43.7	13.23	0.09	0.96	0.04	4.97	1.25	1.17
T007	16.4	3	1	101.5	0.42	0.11	2.9	0.369	0.36	1	137	0.6	18.5	85	42.3	13.01	0.08	0.66	0.03	6.87	1.78	4.22
T008	11.7	2	0.8	247	0.34	0.025	2.9	0.233	0.18	1.2	89	0.6	12.9	75	48.9	9.36	0.05	3.82	0.03	3.71	0.83	1.81
T009	13	1	0.6	432	0.21	0.025	1.1	0.357	0.11	0.5	103	0.3	10.5	64	39.7	14.82	0.08	1.52	0.05	4.12	0.91	3.58
T010	11.7	2	0.9	71.5	0.36	0.05	2.4	0.282	0.24	0.8	86	0.6	9.8	71	37.3	11.47	0.07	0.11	0.02	4.13	1.28	1.96
T011	16.6	2	1	71.7	0.36	0.025	2.6	0.333	0.28	0.9	145	0.7	13.4	123	40.7	13.12	0.07	0.78	0.02	6.18	1.62	2.54
T012	11.6	2	0.8	95.9	0.36	0.06	2.9	0.265	0.23	1.1	95	0.7	11.1	92	43.4	9.6	0.07	0.71	0.04	4.53	1.18	3.14
T013	19.3	5	1	95.6	0.4	0.11	3.2	0.412	0.4	1.4	209	0.7	17.5	53	64.9	15.16	0.09	0.79	0.02	7.47	2.17	3.21
KSM TAR07	5.8	0.9		70.8		0.04	1.1	0.04	0.12	0.2	60	0.05		132.5		12.57	0.08	2.28	0.029	5.5	1.67	2.58
KSM TAR08	6.2	0.6		34.1		0.04	1.3	0.002	0.05	0.2	57	0.05		112.6		11.77	0.08	0.47	0.047	5.44	1.83	2.88
KSM TAR09	8.1	0.6		42.1		0.04	1.8	0.002	0.04	0.2	59	0.05		129.6		13.78	0.1	0.61	0.031	6.46	2.14	3.39
KSM TAR01	4.1	0.3		100.6		0.04	1.3	0.0005	0.08	0.2	39	0.05		78.9		13.6	0.09	1.7	0.034	5.02	2.05	3.09
KSM TAR04	3.7	0.9		16.9		0.05	1.6	0.002	0.14	0.05	64	0.05		162.6		14.48	0.09	0.26	0.02	6.72	1.88	3.2
KSM TAR05	4.1	0.2		42.5		0.01	1.2	0.001	0.04	0.2	32	0.05		78.5		14.21	0.08	0.54	0.059	4.22	2.05	1.98
KSM TAR06	5.6	0.6		24.3		0.01	0.9	0.097	0.04	0.2	67	0.05		115.1		13.65	0.04	0.89	0.059	6.2	1.02	3.93
	12.0		0.8	190	0.40	0.00	2.6	0.326		1.0	122	0.7	10.4	137	38.4							
	10.0		1.0	105	0.30	0.00	2.6	0.294		1.0	106	0.7	8.6	97	40.8							
	11.0		1.0	287	0.40	0.00	3.2	0.321		1.3	119	0.7	17.7	110	51.9							
	11.0		1.1	55	0.40	0.00	2.4	0.318		1.1	118	0.8	6.3	60	45.5							
KSM TAR02	4.2	0.1		719.9		0.01	1.3	0.002	0.02	0.2	32	0.05		36.4		8.71	0.08	19.43	0.037	2.64	1.24	1.41
KSM TAR03	4.1	0.6		59.6		0.03	1.7	0.003	0.05	0.2	43	0.05		88.8		15.25	0.1	0.72	0.045	5.71	1.97	2.43
TS014	14.8	2	0.8	302	0.32	0.05	2	0.33	0.25	0.7	129	0.4	12.9	84	37	15.49	0.06	2.47	0.03	5.42	1.49	4.08

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID						Te		Ti		U		W				Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO
Typical Detection Limit	Sc	Se	Sn	Sr	Ta	0.05	Th	0.001	Tl	0.1	V	0.1	Y	Zn	Zr	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%
TS015	18.2	2	0.9	215	0.37	0.06	2.7	0.379	0.27	1	174	0.5	13.6	95	45.6	16.23	0.07	0.33	0.02	6.23	1.59	2.69
TS016	13.1	2	0.7	327	0.25	0.05	1.9	0.289	0.22	0.8	99	0.4	17.3	64	46.8	11.16	0.06	10.01	0.02	4.72	1.14	2.41
TS017	15.2	2	0.9	249	0.31	0.025	2.4	0.343	0.27	1	121	0.5	14.5	90	45.3	14.66	0.06	3.25	0.03	5.27	1.48	2.95
TS019	16.6	2	0.9	272	0.36	0.05	2.5	0.352	0.28	1	119	0.7	13.1	83	36.8	14.02	0.06	2.78	0.04	5.59	1.36	3.67
TS020	13.7	1	0.8	294	0.37	0.07	2.9	0.283	0.29	1.2	114	0.7	12.3	103	47.7	10.96	0.07	3.35	0.03	5.74	1.43	3.79
TS021	18	3	1.2	82.1	0.48	0.07	3.8	0.373	0.37	1.8	168	0.8	12.5	58	65.2	12.18	0.1	0.29	0.04	5.38	1.9	3.7
TS022	16.2	2	1.3	58.8	0.42	0.06	3.3	0.373	0.46	1.5	146	0.8	10.9	77	53.4	13.07	0.09	0.17	0.03	5.6	2.04	3.55
TS023	10.7	2	0.8	100.5	0.27	0.05	1.7	0.264	0.23	0.8	95	0.5	6.7	93	29.9	11.43	0.05	0.48	0.03	5.81	1.09	3.31
TS024	20.5	3	1.4	78	0.4	0.12	3	0.424	0.42	1.5	216	0.7	12.3	66	54.9	14.76	0.1	0.28	0.02	4.97	2.18	2.38
TS025	18.7	2	1.3	74.1	0.42	0.11	3.1	0.417	0.44	1.3	180	0.8	11.6	120	47.9	15.16	0.09	0.16	0.03	6.41	1.92	3.64
TS026	12.3	1	1	79.4	0.32	0.025	2.5	0.278	0.24	1.1	100	0.7	10.2	76	38.2	9.6	0.06	0.63	0.05	4.55	1.16	3.04
TS027	16.5	2	1.4	57.9	0.43	0.08	3.4	0.352	0.37	1.6	151	0.7	13	103	56.2	12.9	0.09	0.18	0.03	5.12	1.79	3.61
TS028	13.2	2	1	126.5	0.34	0.06	2.7	0.275	0.27	1.2	107	0.6	13.2	112	44.4	10.61	0.06	1.11	0.03	5.61	1.24	3.83
TS018	14.5	2	1.1	159.5	0.6	0.06	3.6	0.369	0.27	1.5	115	0.7	16.2	92	77	10.9	0.08	1.09	0.03	5.75	1.41	3.11
G1	22.1	2	1.4	331	0.51	0.07	3.3	0.394	0.46	1.6	175	1.2	21.3	117	43.2	14.56	0.19	3	0.01	7.22	2.64	3.19
G2	16.2	2	1.5	330	0.51	0.05	3.5	0.319	0.5	1.7	146	1.5	19.5	115	47.3	14.4	0.2	2.17	0.01	5.89	2.87	2.53
G3	21.1	2	1.2	307	0.43	0.05	2.8	0.376	0.42	1.3	179	1.2	18.4	101	34.6	15.09	0.19	2.25	0.02	7.43	2.51	3.46
G4	18.3	2	1.5	314	0.55	0.07	3.5	0.366	0.51	1.6	153	1.5	21.9	111	44.7	14.8	0.2	1.71	0.01	6.85	2.66	2.76
G5	20.9	2	1	574	0.52	0.06	3	0.36	0.42	1.3	184	0.8	17	106	15.2	17.12	0.2	3.44	0.01	6.57	2.67	3.1
TG01	17.1	2	0.9	191	0.35	0.06	2.6	0.353	0.48	1	130	0.7	16.5	155	58	13.96	0.09	1.22	0.03	5.64	1.63	3.13
TG02	15.8	2	1	106.5	0.38	0.025	2.8	0.332	0.33	1	126	0.7	13.4	109	46.6	12.69	0.09	0.31	0.03	5.69	1.58	2.95
TG03	16.6	2	1.1	119.5	0.37	0.05	2.7	0.34	0.33	1.1	129	0.7	11.9	90	48.9	13.05	0.08	0.32	0.03	5.88	1.54	3.12
TG04	15.7	2	1	110	0.47	0.06	3.3	0.351	0.3	1.3	120	0.7	15.6	95	71.5	11.5	0.07	0.49	0.03	5.61	1.44	2.91
TG05	16.8	2	1	119.5	0.49	0.06	3.5	0.356	0.31	1.4	122	0.7	15.8	97	73.4	11.68	0.08	0.4	0.03	5.5	1.43	2.84
TG06	15.2	2	0.9	139	0.48	0.025	3.2	0.341	0.3	1.3	115	0.6	15.2	90	70.5	10.79	0.07	1.06	0.03	5.23	1.37	2.86
RES-MW-02A 1.1-32.9M	13.6	2	1.1	156	0.4	0.05	3.2	0.314	0.31	1.4	121	1.5	12.6	91	58.6	70.99	11.57	5.17	0.57	3.44	2.1	1.46
RES-MW-01A 4.27-5.49M	12.9	2	1	248	0.38	0.05	2.8	0.309	0.29	1.1	114	4.8	13.9	97	51.9	67.15	12.01	5.16	2.51	3.46	2.28	1.37
RES-MW-01A 11.18-11.38M	12.3	3	1	186	0.39	0.05	3	0.287	0.31	1.2	103	0.8	13.9	94	51.5	70.28	11.33	5.14	1.66	3.09	2.26	1.45
	15.0		1.1	106	0.40	0.00	2.4	0.389		1.1	135	0.7	10.4	113	51.4							
	17.0		1.3	92	0.40	0.00	3.3	0.396		1.4	187	0.7	9.9	151	53.4							
	15.0		1.4	78	0.40	0.00	2.9	0.414		1.3	193	0.8	8.2	148	52.8							
	13.0		1.0	120	0.40	0.00	2.3	0.342		1.0	142	0.4	8.4	113	40.2							
	14.0		1.0	282	0.40	0.00	2.8	0.375		1.0	148	0.7	13.0	129	41.7							
	15.0		1.3	174	0.40	0.00	2.9	0.390		1.2	185	0.9	18.4	128	49.5							
	14.0		1.1	180	0.40	0.00	2.6	0.370		1.1	161	0.8	12.8	146	44.9							
	14.0		1.2	276	0.30	0.00	2.7	0.386		1.0	165	0.7	14.8	139	44.8							
	15.0		1.1	290	0.40	0.00	3.5	0.370		1.4	170	0.7	15.3	123	52.0							
	11.0		1.1	202	0.30	0.00	2.8	0.270		1.1	111	0.7	10.6	98	39.0							
	11.0		1.0	81	0.30	0.00	2.3	0.290		0.9	112	0.7	6.7	87	34.8							
	10.0		1.0	117	0.30	0.00	2.4	0.269		0.9	104	0.9	8.6	87	37.2							
	11.0		1.0	173	0.40	0.00	2.8	0.301		1.1	119	0.7	11.9	89	47.6							
	8.0		0.8	664	0.30	0.00	2.5	0.235		1.0	84	0.5	13.0	71	40.5							
	11.0		1.1	121	0.40	0.00	2.6	0.362		1.1	139	0.8	10.5	112	46.7							
	11.0		1.1	119	0.30	0.00	2.4	0.308		0.9	120	0.7	8.4	93	38.5							
	15.0		1.3	71	0.50	0.00	2.6	0.429		1.3	196	0.8	7.8	144	61.2							
	11.0		1.0	193	0.30	0.00	2.2	0.279		0.8	111	0.8	7.1	93	33.8							
	14.0		1.2	248	0.40	0.00	3.1	0.358		1.3	157	0.7	13.8	128	47.1							
	15.0		1.1	254	0.40	0.00	3.0	0.363		1.2	139	0.7	20.1	113	42.9							
	12.0		1.1	118	0.40	0.00	2.6	0.347		1.0	119	0.8	8.4	92	37.6							
RES-MW-03A 0.05-0.25M	16.6	2	1.3	50.1	0.48	0.05	3.7	0.368	0.4	1.6	166	0.8	10.6	71	71	67.57	13.05	5.23	0.11	4.3	1.99	1.9
RES-MW-03A 1.89-2.04	11.1	2	0.9	374	0.37	0.05	2.9	0.257	0.3	1.2	96	0.6	10.4	79	50.6	69.5	9.2	3.97	3.85	3.58	1.35	1.46

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID						Te		Ti		U		W				Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO
Typical Detection Limit	Sc	Se	Sn	Sr	Ta	0.05	Th	0.001	Tl	0.1	V	0.1	Y	Zn	Zr	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%
KC09-12 0-4.34	13.1	1	1	746	0.35	0.05	1.7	0.39	0.15	0.8	126	0.5	16.1	83	37.8	66.25	13.38	5.98	3.27	3.11	2.9	1.42
KC09-12 19.3-20.79	13.1	3	1.3	308	1.69	0.08	2.7	0.733	0.3	1.5	193	4	16.6	118	43	47.82	11.46	7.93	11.62	4.22	1.31	1.43
KC09-12 20.79-22.16	26	3	0.7	372	0.26	0.06	1.1	0.438	0.33	1	191	1.5	20.5	88	41.2	52.67	15.98	7.33	8.79	6.18	2.31	1.19
KC09-12 25.21-25.7	14.7	2	0.9	446	0.32	0.06	2.5	0.402	0.32	1.5	196	5.2	14.6	79	56.5	57.75	15.33	6.71	5.44	3.56	3.24	2.9
KC09-12 6.01-7.16	14.2	1	1.1	658	0.54	0.05	2.6	0.447	0.25	1.6	167	10.7	15.4	68	64.6	60.93	16.24	6.14	3.58	3.17	3.55	1.97
KC09-12 9.5-10.53	19.3	2	1.5	426	0.42	0.05	1.9	0.446	0.29	1.4	174	87.4	18.7	128	42.8	63.3	13.79	7.52	2.59	3.37	2.8	1.96
WP09-56	22.1	8	1.4	312	0.52	0.42	3.2	0.439	0.92	2.4	248	2.9	21.3	205	62.6	16.11	0.22	1.35	0.02	8.08	2.91	3.5
WP09-56A	21.5	4	1.2	402	0.53	0.12	2.8	0.455	0.6	2.1	218	1.9	22	153	68	14.99	0.2	1.89	0.01	6.97	2.52	3.09
	12.0		0.8	307	0.20	0.00	1.5	0.308		7.1	1250	1.2	11.6	1310	32.2							
WP09-57	15.1	5	1	558	0.44	0.23	2.7	0.361	0.62	2	186	2.7	13.8	105	40	14.58	0.18	6.53	0.01	6.3	2.76	2.84
	6.0		0.8	383	0.20	0.00	2.6	0.123		2.9	214	0.4	12.2	242	33.1							
	35.0		0.7	441	0.20	0.00	0.8	0.589		0.3	299	0.6	23.2	97	17.4							
M -010	11.4	2	0.9	862	0.2	0.025	1.7	0.316	0.17	0.6	96	0.2	17.5	78	3.4	19.2	0.06	7.05	0.005	6.03	1.04	2.29

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
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OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2		
Typical Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	LOI	Total
Units	%	%	%	%	%	%	%	%
S 021	0.13	1.41	0.089	62.5	0.07	0.18	12.75	99.699
S 001	0.03	1.58	0.165	62.43	0.02	0.78	6.03	99.955
S 002	0.06	2.56	0.125	66.5	0.02	0.65	4.37	99.875
S 003	0.04	5.51	0.277	58.7	0.04	0.83	7.08	99.727
S 004	0.12	0.51	0.08	16.5	0.08	0.1	37.3	99.43
S 005	0.03	2.11	0.141	62.54	0.01	0.8	5.85	100.001
S 006	0.05	2.2	0.167	65.7	0.02	0.67	6.5	99.897
S 007	0.005	1.05	0.089	51.53	0.005	0.56	12	99.679
S 008	0.07	2.97	0.122	69.9	0.03	0.57	3.39	99.062
S 010	0.02	1.77	0.119	62.5	0.02	0.73	6.49	99.679
S 009	0.02	2.46	0.126	65.5	0.02	0.75	5.81	100.006
S 023	0.23	2.83	0.228	61.21	0.02	1.5	3.66	99.908
S 024	0.2	3.22	0.423	47.85	0.01	2.2	3.65	99.053
S 025	0.19	3.99	0.246	50.1	0.02	1.89	3.7	99.366
S 026	0.14	3.04	0.147	66.2	0.02	0.99	1.99	99.577
S 027	0.05	4.59	0.146	66.01	0.04	1.07	5.06	99.896
S 028	0.19	4.15	0.281	50.25	0.03	1.99	3.2	99.701
S 034	0.22	3.82	0.244	48.25	0.03	1.8	2.96	99.814
S 037	0.2	0.16	0.426	53.21	0.02	1.05	7.66	98.886
S 038	0.2	2.29	0.156	44.87	0.02	1.6	4.08	99.896
S 040	0.05	3.6	0.212	69.35	0.01	0.99	2.12	99.802
S 046	0.08	2.54	0.186	60.56	0.02	0.84	7.13	99.876
S 047	0.24	0.83	0.122	48.28	0.02	0.37	16.95	99.122
S 011	0.02	2.9	0.123	61.2	0.02	0.78	6.18	99.853
S 012	0.14	3.69	0.088	72.76	0.04	0.33	4.43	99.878
S 013	0.09	1.65	0.289	62.35	0.06	0.64	4.81	99.859
S 014	0.11	2.69	0.196	74.02	0.02	0.44	3.48	99.836
S 015	0.04	1.74	0.119	67.82	0.01	0.61	5.5	99.119
S 016	0.05	2.95	0.14	68.14	0.03	0.57	4.94	99.94
S 017	0.07	2.48	0.373	60.15	0.03	0.82	5.74	99.933
S 018	0.02	1.18	0.284	63.33	0.01	0.82	7.25	99.624
S 019	0.17	5.71	0.168	64.85	0.08	0.71	3.03	99.908
S 020	0.08	3.72	0.265	62.53	0.03	0.75	3.03	99.935
S 022	0.13	3.76	0.165	54.25	0.04	1.04	4.78	99.585
S 029	0.13	3.99	0.161	51.05	0.04	0.92	4.8	99.691
S 030	0.04	1.7	0.097	69	0.02	0.67	5.56	99.967
S 031	0.13	4.89	0.175	62.06	0.03	0.51	3.12	99.705
S 032	0.05	1.09	0.038	74.79	0.02	0.23	2.6	99.478
S 033	0.09	1.95	0.101	70.87	0.03	0.41	3.71	99.671
S 035	0.19	3.45	0.276	49.63	0.01	1.66	4.08	99.346
S 036	0.22	3.27	0.214	49.46	0.02	1.87	4.23	99.794
S 039	0.16	2.4	0.423	50.2	0.03	0.85	6.73	99.603
S 041	0.12	4.08	0.251	57.53	0.1	0.59	4.01	99.381
S 042	0.14	3.1	0.341	54.02	0.09	0.76	4.8	99.871
S 043	0.11	1.94	0.25	59.66	0.04	0.67	9.26	99.32
S 044	0.12	3.61	0.332	57.85	0.06	0.83	4.54	99.912
S 045	0.13	4.27	0.336	56.3	0.09	0.7	4.37	99.386
S 048	0.12	3.43	0.635	64	0.03	1.45	3.69	99.995

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
GM = silty gravel
GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2		
Typical Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	LOI	Total
Units	%	%	%	%	%	%	%	%
WP09-79	0.13	3.12	0.275	59.45	0.04	0.67		
WP09-80	0.23	2.53	0.282	53.42	0.04	0.68		
WP09-74	0.11	3.06	0.244	64.24	0.04	0.72		
WP09-75	0.12	3.1	0.246	65.56	0.04	0.62		
M -009	0.09	4.18	0.229	59.54	0.05	0.36	2.68	99.96
M -007	0.14	2.83	0.447	52.91	0.04	0.77	5.26	99.96
M -008	0.2	6.27	0.164	60.46	0.04	0.57	5.13	100.25
M -008a	0.07	4.66	0.092	65.7	0.04	0.32	3.8	99.92
Res-019	0.01	4.01	0.116	70.72	0.04	0.44	1.8	100.1
Res-020	0.15	3.95	0.253	58	0.05	0.44	3.66	100
Res-021	0.23	3.18	0.291	54.1	0.04	0.43	5.75	99.85
Res-022	0.07	0.36	0.279	66.18	0.03	0.51	4.52	100.2
Res-017	0.18	3.4	0.291	52.56	0.1	0.31	8.55	99.52
Res-018	0.05	0.09	0.25	70	0.02	0.36	3.94	99.9
M -005	0.1	3.67	0.427	52.72	0.1	0.57	4.92	99.66
M -005a	0.12	1.82	0.469	51.29	0.03	0.96	5.18	99.84
M -006	0.21	3.18	0.284	56	0.04	0.76	4.36	100.05
WP09-38	0.11	0.59	0.367	54.07	0.01	0.75		
WP09-39	0.16	3.5	0.414	48	0.07	2.76		
WP09-77	0.07	2.14	0.275	60.81	0.03	0.64		
WP09-78	0.14	1.96	0.266	60.85	0.02	0.62		
KSMMNRX001	0.15	1.95	0.2	48		0.88	4.61	99.92
KSMMNRX002	0.13	3.85	0.34	51.1		0.9	6.19	99.35
KSMMNRX003	0.22	3.65	0.2	41.9		0.56	14.68	98.24
KSMMNRX004	0.17	3.49	0.59	45.3		1.3	7.06	98.99
KSMMNRX005	0.19	0.1	0.5	50.9		0.69	4.88	95.92
KSMMNRX006	0.24	2.79	0.54	46.6		0.91	3.63	99.75
KSMMNRX007	0.19	2.38	0.52	46.3		0.85	8.02	99.13
KSMMNRX008	0.01	0.14	0.25	70		0.37	3.01	99.26
KSMMNRX009	0.03	0.21	0.28	60.8		0.51	3.27	99.9
KSMMNRX010	0.01	0.27	0.43	62.1		0.41	2.79	99.31
KSMMSRX001	0.24	1.04	0.38	55.2		0.58	4.22	99.23
KSMMSRX002	0.22	3.33	0.33	54.2		0.62	4.91	99.51
KSMMSRX003	0.13	2.53	0.23	63.8		0.38	3.3	98.34
KSMMSRX004	0.01	0.26	0.04	75.7		0.36	2.73	100.3
KSMMSRX005	0.14	2.85	0.17	66.5		0.41	2.74	99.27
KSMMSRX006	0.11	4.64	0.18	63.6		0.52	2.45	98.65
KSMMSRX007	0.09	0.75	0.16	69.2		0.34	3.42	98.81
KSMMSRX008	0.11	4.5	0.21	59.6		0.39	2.7	98.92
KSMMSRX009	0.07	1.57	0.22	61.5		0.42	2.87	99.54
KSMMSRX010	0.05	3.34	0.13	67.1		0.66	1.47	100.06
KSMMSRX011	0.1	4.77	0.23	58.8		0.4	2.82	99.72
KSMMSRX012	0.28	3.59	0.46	41.6		0.66	10.23	97.43
KSMMSRX013	0.05	1.05	0.32	51.7		0.68	5.81	99.54
KSMMSRX014	0.14	0.15	0.01	60.5		0.32	4.38	98.69
KSMMSRX015	0.01	0.12	0.11	64.9		0.34	5.27	99.55
KSMMSRX016	0.23	4.45	0.35	53.2		0.52	5.03	97.91

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
GP =poorly graded gravel
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SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2		
Typical Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	LOI	Total
Units	%	%	%	%	%	%	%	%
KSMMSRX017	0.26	5.49	0.27	54.5		0.47	5.55	98.91
WP09-42	0.13	2.56	0.244	55.84	0.03	0.82		
WP09-37	0.12	2.42	0.331	59.13	0.04	0.84		
WP09-53A	0.11	2.88	0.303	63.34	0.05	0.81		
WP09-53B	0.12	2.33	0.322	59.42	0.04	0.87		
WP09-72	0.14	3.23	0.349	57.19	0.06	0.81		
WP09-76	0.14	3.21	0.329	54.21	0.05	0.91		
KC09-09 1-2.4	0.01	0.75	0.14	0.217	0.05	0.13	3.58	99.787
KC09-09 15.53-16.0	0.01	1.08	0.19	0.465	0.11	0.14	4.1	99.835
KC09-09 18.93-19.27	0.01	1.26	0.18	0.544	0.07	0.15	5.68	98.724
KC09-09 28.7-29.8	0.05	0.72	0.13	0.328	0.06	0.14	6.56	99.968
KC09-09 33.2-33.6	0.01	0.94	0.14	0.424	0.06	0.08	5.5	99.614
KC09-09 40.8-41.03	0.01	0.67	0.13	0.332	0.07	0.2	8.33	99.442
KC09-09 50.6-51.0	0.04	0.64	0.13	0.308	0.07	0.08	6.99	99.178
KC09-09 54.7-55.2	0.01	0.83	0.13	0.331	0.08	0.16	6.03	99.711
KC09-09 6.23-6.75	0.01	0.81	0.18	0.282	0.07	0.18	4.24	99.592
KC09-09 60.9-61.6	0.02	0.69	0.13	0.318	0.07	0.12	5.5	98.458
KC09-09 64.6-66.03	0.03	0.72	0.15	0.241	0.06	0.12	7.47	98.881
KC09-09 74.5-75.25	0.01	0.68	0.1	0.318	0.03	0.37	6.04	99.898
KC09-09 75.6-76.5	0.01	0.63	0.14	0.31	0.04	0.43	5.86	99.78
KC09-09 80.5-81.47	0.01	0.57	0.2	0.29	0.04	0.28	5.43	98.51
KC09-09 89.3-90.86	0.01	0.62	0.14	0.241	0.05	0.25	3.41	99.751
KC09-09 9.27-10.25	0.01	1.16	0.19	0.475	0.1	0.31	4.14	99.995
WP09-31	0.12	3.29	0.301	63.21	0.06	0.76		
WP09-36	0.13	4.79	0.267	56.19	0.1	0.7		
Res-001	0.08	0.11	0.032	89.55	0.03	0.25	1.49	100.1
Res-002	0.16	4.11	0.304	50	0.11	1.05	4.37	99.93
Res-003	0.11	2.32	0.234	65.02	0.04	0.73	5.48	98.81
Res-004	0.12	5.77	0.264	56.14	0.07	0.72	3.32	99.86
Res-005	0.11	1.13	0.077	68.48	0.02	0.65	3.65	99.77
WP09-83	0.15	3.91	0.423	53.68	0.06	0.88		
WP09-84	0.15	4.28	0.422	52.5	0.07	0.85		
Res-016	0.14	3.08	0.265	60	0.05	0.59	6.06	100.2
Res-008	0.09	1.76	0.108	63.58	0.03	0.74	5.93	100.25
M -001	0.04	0.68	0.176	65.1	0.03	0.36	3.21	99.78
M -002	0.21	2.62	0.446	49.1	0.16	0.75	4.96	99.85
M -004	0.06	1.78	0.053	72.18	0.03	0.14	2	100.15
Res-012	0.16	5.19	0.327	53.4	0.05	0.86	5.54	99.99
Res-013	0.22	4.87	0.346	53	0.07	0.83	10.05	99.74
Res-014	0.16	4.87	0.384	55	0.04	0.94	3.85	99.77
Res-011	0.02	0.04	0.112	76	0.04	0.4	5.32	99.67
Res-009	0.03	2.27	0.099	71.62	0.04	0.41	6.39	100.25
Res-010	0.04	3.63	0.113	70.03	0.06	0.46	3.59	100.25
Res-015	0.1	3.73	0.484	55.28	0.07	0.59	4.1	99.99
M -003	0.1	3.97	0.238	52.71	0.06	0.72	7.3	100.05
Res-006	0.12	4.53	0.69	53.4	0.05	1.39	5.97	99.43

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
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GC = clayey gravel
SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2		
Typical Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	LOI	Total
Units	%	%	%	%	%	%	%	%
Res-007	0.1	4.21	0.216	50	0.06	0.55	9.57	100.2
KSMSURX001	0.04	6.38	0.39	60.5		0.76	2.27	99.9
KSMSURX002	0.02	0.25	0.12	80.1		0.31	3.12	98.86
KSMSURX003	0.27	2.77	0.33	56.5		0.41	3.92	98.45
KSMSURX004	0.08	4.15	0.21	60.6		0.41	2.14	98.69
KSMSURX005	0.19	3.49	0.36	53.8		0.79	3.56	98.95
KSMSURX006	0.2	2.83	0.51	51.4		0.74	3.64	99.23
KSMSURX007	0.08	2.61	0.2	62		0.4	2.58	99.02
KSMSURX008	0.11	2.98	0.21	61.5		0.43	2.6	98.6
KSMSURX009	0.09	3.69	0.24	53		0.54	4.11	96.72
KSMSURX010	0.06	3.42	0.19	65.6		0.4	2.36	98.7
KSMSURX011	0.02	0.1	0.38	59.3		0.84	5.01	99.25
KSMSURX012	0.01	0.4	0.37	59		0.76	3.82	97.9
KSMSURX013	0.08	3.1	0.3	55.3		0.73	3.74	99.52
KSMSURX014	0.24	3.02	0.38	51.2		0.59	4.05	99.33
KC09-10 1.35-2.4	0.11	4.47	0.293	56.25	0.04	0.74	3.46	99.74
KC09-10 4.56-6.6	0.12	2.95	0.272	50.8	0.05	0.67	8.06	99.45
KC09-11 1.2-2.4	0.21	2.97	0.29	52.12	0.05	0.89	5.57	99.49
KC09-11 2.4-4.5	0.15	3.84	0.237	51.82	0.05	0.92	5.7	98.85
T001	0.07	1.9	0.088	73.75	0.02	0.49	3.01	99.788
T002	0.14	2.73	0.181	66.18	0.02	0.74	3.69	99.121
T003	0.14	2.18	0.079	68.7	0.01	0.64	3.68	99.819
T004	0.13	1.77	0.16	69.15	0.01	0.65	3.51	99.72
T005	0.08	2.24	0.1	63.05	0.02	0.74	5.13	99.76
T006	0.11	2.94	0.143	69.42	0.03	0.61	4.95	99.913
T007	0.1	1.69	0.162	66.01	0.01	0.66	4.56	99.842
T008	0.19	2.48	0.118	71.76	0.03	0.4	5.36	99.948
T009	0.07	4.94	0.099	66.08	0.05	0.64	3.02	99.979
T010	0.06	2.49	0.102	74.53	0.01	0.51	2.96	99.702
T011	0.17	1.95	0.185	68.01	0.01	0.61	4.7	99.965
T012	0.06	1.8	0.101	75	0.01	0.47	3.24	99.951
T013	0.05	2.35	0.358	59.32	0.01	0.74	7.44	99.178
KSM TAR07	0.18	2.54	0.2	66		0.61	5.45	99.66
KSM TAR08	0.08	1.79	0.18	70.9		0.61	4.42	100.45
KSM TAR09	0.05	1.83	0.23	65.6		0.76	5.14	100.12
KSM TAR01	0.08	2.2	0.11	65.5		0.64	5.73	99.87
KSM TAR04	0.15	2.4	0.09	67		0.67	3.76	100.75
KSM TAR05	0.02	2.79	0.09	70		0.54	3.72	100.22
KSM TAR06	0.06	3.25	0.12	66.6		0.68	3.54	99.95
KSM TAR02	0.32	2.64	0.11	47.4		0.35	16.42	100.78
KSM TAR03	0.06	3.12	0.13	66.1		0.61	4.38	100.58
TS014	0.07	3.11	0.134	61.11	0.04	0.64	5.74	99.884

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel
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SW = well graded sand, fine to coarse sand
SP = poorly-graded sand
SM = silty sand
SC = clayey sand
ML = silt
CL = clay
OL = organic silt
#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2		
Typical Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	LOI	Total
Units	%	%	%	%	%	%	%	%
TS015	0.07	3.16	0.233	62.75	0.02	0.7	5.67	99.763
TS016	0.1	1.75	0.128	57.33	0.03	0.5	10.3	99.658
TS017	0.08	2.28	0.17	62.01	0.03	0.62	7.03	99.92
TS019	0.11	2.68	0.218	64.03	0.03	0.64	4.73	99.958
TS020	0.09	1.63	0.111	61.9	0.03	0.53	9.43	99.091
TS021	0.04	1.72	0.116	68.25	0.02	0.67	5.44	99.846
TS022	0.04	1.97	0.136	68.02	0.01	0.68	4.37	99.776
TS023	0.17	1.97	0.113	71.02	0.02	0.49	3.68	99.663
TS024	0.02	2.17	0.274	65.47	0.01	0.79	5.84	99.264
TS025	0.05	2.29	0.129	64.47	0.01	0.79	4.78	99.929
TS026	0.06	1.69	0.117	75.25	0.02	0.52	3.04	99.787
TS027	0.08	2.17	0.14	68.36	0.02	0.68	4.56	99.73
TS028	0.07	1.79	0.142	70.65	0.02	0.51	4.13	99.802
TS018	0.07	1.64	0.187	70.54	0.02	0.65	4.28	99.757
G1	0.16	3.09	0.27	62.33	0.04	0.71	2.56	99.97
G2	0.12	3.02	0.232	65.5	0.03	0.59	2.31	99.87
G3	0.14	3.04	0.267	61.45	0.04	0.73	3.29	99.9
G4	0.13	3.1	0.249	63.4	0.03	0.69	3.27	99.86
G5	0.11	3.9	0.305	59.45	0.06	0.64	2.24	99.81
TG01	0.21	2.73	0.168	66.07	0.02	0.62	4.28	99.81
TG02	0.13	2.19	0.158	69.5	0.02	0.61	4.08	100.05
TG03	0.15	2.21	0.138	68.04	0.01	0.64	4.76	99.97
TG04	0.07	1.64	0.178	70.51	0.02	0.65	5	100.1
TG05	0.08	1.79	0.168	70.69	0.02	0.63	4.78	100.1
TG06	0.07	1.61	0.171	71.02	0.02	0.66	4.96	99.92
RES-MW-02A 1.1-32.9M	0.05	0.58	0.05	0.124	0.02	0.1	3.66	99.884
RES-MW-01A 4.27-5.49M	0.04	0.54	0.1	0.184	0.03	0.06	4.91	99.804
RES-MW-01A 11.18-11.38M	0.04	0.52	0.13	0.214	0.03	0.09	3.68	99.914
RES-MW-03A 0.05-0.25M	0.03	0.67	0.04	0.109	0.01	0.1	4.72	99.829
RES-MW-03A 1.89-2.04	0.04	0.46	0.13	0.099	0.05	0.08	5.95	99.719

Notes:

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Appendix 7-1. Static Test Results for Non-deposit Samples - Data

Sample ID	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2		
Typical Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	LOI	Total
Units	%	%	%	%	%	%	%	%
KC09-12 0-4.34	0.01	0.69	0.12	0.219	0.09	0.22	2.18	99.839
KC09-12 19.3-20.79	0.01	1.44	0.13	0.405	0.03	0.21	11.75	99.765
KC09-12 20.79-22.16	0.03	0.78	0.14	0.233	0.04	0.09	3.18	98.943
KC09-12 25.21-25.7	0.01	0.72	0.13	0.359	0.05	0.22	3.38	99.799
KC09-12 6.01-7.16	0.01	0.79	0.11	0.319	0.08	0.19	2.79	99.869
KC09-12 9.5-10.53	0.01	0.81	0.11	0.322	0.05	0.25	2.98	99.862
WP09-56	0.1	2.24	0.343	58.14	0.03	0.93		
WP09-56A	0.17	2.88	0.35	62.02	0.04	0.9		
WP09-57	0.13	2.73	0.298	55.07	0.06	0.69		
M -010	0.14	4.16	0.275	58.4	0.1	0.58	0.59	99.91

Notes:

When a result was below method detection one half the detection limit was used

GW = well graded gravel, fine to coarse gravel

GP =poorly graded gravel

GM = silty gravel

GC = clayey gravel

SW = well graded sand, fine to coarse sand

SP = poorly-graded sand

SM = silty sand

SC = clayey sand

ML = silt

CL = clay

OL = organic silt

#N/A = Sample location was not provided

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID			Total-S	Sulphide-S			Sulphate-S $NaCO_3$	Sulphate-S HCl						NP		Total-C
Typical Detection Limit			0.01	0.01	Sulphide-S Calc	Sulphide-S + S del	0.01	0.01	Barite-S	S del	S del Calc	TAP	SAP	1	NP_ADJ	0.01
Units	Purpose	Paste pH	%	%	%	%	%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	%
By Location																
CCAR-OVB																
Count		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Minimum		8.8	0.04	0.03	0.035	0.035565698	0.02	0.005	0.004434302	0.000565698	0.000565698	1.25	1.111428077	263	263	3.59
10 Percentile		8.8	0.04	0.03	0.035	0.035565698	0.02	0.005	0.004434302	0.000565698	0.000565698	1.25	1.111428077	263	263	3.59
25 Percentile		8.8	0.04	0.03	0.035	0.035565698	0.02	0.005	0.004434302	0.000565698	0.000565698	1.25	1.111428077	263	263	3.59
Median-25Percentile		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean		8.8	0.04	0.03	0.035	0.035565698	0.02	0.005	0.004434302	0.000565698	0.000565698	1.25	1.111428077	263	263	3.59
Standard Deviation		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Median		8.8	0.04	0.03	0.035	0.035565698	0.02	0.005	0.004434302	0.000565698	0.000565698	1.25	1.111428077	263	263	3.59
75Percentile-Median		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75 Percentile		8.8	0.04	0.03	0.035	0.035565698	0.02	0.005	0.004434302	0.000565698	0.000565698	1.25	1.111428077	263	263	3.59
90 Percentile		8.8	0.04	0.03	0.035	0.035565698	0.02	0.005	0.004434302	0.000565698	0.000565698	1.25	1.111428077	263	263	3.59
Maximum		8.8	0.04	0.03	0.035	0.035565698	0.02	0.005	0.004434302	0.000565698	0.000565698	1.25	1.111428077	263	263	3.59
Interquartile Range (IQR) 1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Variance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coefficient of Variation (CoV) 2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPR < 1.0 or NPR = 1.0																
1.0 < NPR < 2.0																
NPR > 2.0 or NPR =2.0																
Sum Check																
% NPR < 1.0 or NPR = 1.0 of Total																
% 1.0 < NPR < 2.0 of Total																
% NPR > 2.0 or NPR =2.0 of Total																
Sum Check																
CCAR-RX																
Count		47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
Minimum		5	0.01	0.01	-0.01	0	0.005	0.005	0.002567227	-0.070679916	0	0.3125	0	1	-8	0.09
10 Percentile		6.26	0.02	0.02	0.01	0.01	0.005	0.005	0.006674791	-0.039772731	0	0.625	0.3125	3	-6	0.16
25 Percentile		6.8	0.04	0.03	0.03	0.03	0.005	0.005	0.014586518	-0.026319138	0	1.25	0.9375	5	-4	0.275
Median-25Percentile		0.9	0.03	0.03	0.025	0.027432773	0.005	0.005	0.004550994	0.012379486	0	0.9375	0.85727415	9	9	0.595
Mean		7.557446809	0.224468085	0.162765957	0.195	0.220786071	0.036276596	0.029468085	0.022856764	0.009377279	0.025573305	7.01462766	6.899564714	48.4893617	39.4893617	1.242340426
Standard Deviation		1.041427964	0.304985584	0.232183916	0.282853996	0.337390731	0.06139745	0.053487263	0.014073344	0.081805187	0.074551428	9.530799499	10.54346035	119.8081574	119.8081574	1.733129273
Median		7.7	0.07	0.06	0.055	0.057432773	0.01	0.01	0.019137512	-0.013939652	0	2.1875	1.79477415	14	5	0.87
75Percentile-Median		0.75	0.23	0.16	0.2275	0.251141516	0.02	0.01	0.011669215	0.040512412	0.02657276	7.1875	7.848172363	18	18	0.615
75 Percentile		8.45	0.3	0.22	0.2825	0.308574288	0.03	0.02	0.030806726	0.02657276	0.02657276	9.375	9.642946513	32	23	1.485
90 Percentile		8.74	0.608	0.44	0.565	0.64454996	0.076	0.058	0.043876247	0.052162335	0.052162335	19	20.14218625	89.4	80.4	2.084
Maximum		9	1.38	1.15	1.21	1.675996943	0.29	0.27	0.062780374	0.485996943	0.485996943	43.125	52.37490446	781	772	10.8
Interquartile Range (IQR) 1		1.65	0.26	0.19	0.2525	0.278574288	0.025	0.015	0.016220208	0.052891898	0.02657276	8.125	8.705446513	27	27	1.21
Variance		1.084572205	0.093016206	0.053909371	0.080006383	0.113832505	0.003769647	0.002860887	0.000198059	0.006692089	0.005557915	90.83613909	111.1645561	14353.99457	14353.99457	3.003737076
Skewness		-0.67198993	2.225767468	2.404722271	2.213793753	2.547747208	2.962338718	3.193383547	0.991757253	4.445156538	5.30144497	2.225767468	2.547747208	5.249812252	5.249812252	4.089175939
Coefficient of Variation (CoV) 2		0.137801561	1.358703549	1.426489417	1.450533312	1.528134134	1.692481034	1.815091228	0.615718998	8.723765957	2.915205064	1.358703549	1.528134134	2.470813249	3.033935019	1.395051821
NPR < 1.0 or NPR = 1.0																
1.0 < NPR < 2.0																
NPR > 2.0 or NPR =2.0																
Sum Check																
% NPR < 1.0 or NPR = 1.0 of Total																
% 1.0 < NPR < 2.0 of Total																
% NPR > 2.0 or NPR =2.0 of Total																
Sum Check																

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID			Total-S	Sulphide-S	Sulphide-S Calc	Sulphide-S + S del	Sulphate-S $NaCO_3$	Sulphate-S HCl						NP		Total-C
Typical Detection Limit			0.01	0.01			0.01	0.01	Barite-S	S del	S del Calc	TAP	SAP	1	NP_ADJ	0.01
Units	Purpose	Paste pH	%	%	%	%	%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	%
Kerr Haul Rd-OVB																
Count		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Minimum		8.2	0.07	0.03	0.04	0.03	0.07	0.02	0.041309019	-0.042475941	0	2.1875	0.9375	10	10	0.09
10 Percentile		8.23	0.07	0.036	0.043	0.036	0.07	0.02	0.041659096	-0.039125864	0	2.1875	1.125	10.3	10.3	0.111
25 Percentile		8.275	0.07	0.045	0.0475	0.045	0.07	0.02	0.042184211	-0.03410075	0	2.1875	1.40625	10.75	10.75	0.1425
Median-25Percentile		0.275	0.445	0.405	0.4425	0.422595108	0.445	0.005	0.001458652	0.036041348	0.017595108	13.90625	13.20609713	16.25	16.25	0.1925
Mean		8.525	0.57	0.4975	0.545	0.519511647	0.57	0.025	0.043934593	0.003565407	0.022011647	17.8125	16.23473898	31	31	0.37
Standard Deviation		0.277263413	0.506013834	0.463539373	0.506581681	0.486271945	0.506013834	0.005	0.002240823	0.041127118	0.022880652	15.81293231	15.19599829	21.36586062	21.36586062	0.257196423
Median		8.55	0.515	0.45	0.49	0.467595108	0.515	0.025	0.043642862	0.001940598	0.017595108	16.09375	14.61234713	27	27	0.335
75Percentile-Median		0.25	0.5	0.4525	0.4975	0.474511647	0.5	0.005	0.001750382	0.037666157	0.022011647	15.625	14.82848898	20.25	20.25	0.2275
75 Percentile		8.8	1.015	0.9025	0.9875	0.942106755	1.015	0.03	0.045393245	0.039606755	0.039606755	31.71875	29.44083611	47.25	47.25	0.5625
90 Percentile		8.8	1.114	0.997	1.091	1.044556526	1.114	0.03	0.046443474	0.047556526	0.047556526	34.8125	32.64239144	54.9	54.9	0.657
Maximum		8.8	1.18	1.06	1.16	1.112856373	1.18	0.03	0.047143627	0.052856373	0.052856373	36.875	34.77676167	60	60	0.72
Interquartile Range (IQR) 1		0.525	0.945	0.8575	0.94	0.897106755	0.945	0.01	0.003209034	0.073707505	0.039606755	29.53125	28.03458611	36.5	36.5	0.42
Variance		0.076875	0.25605	0.21486875	0.256625	0.236460405	0.25605	0.000025	5.02129E-06	0.00169144	0.000523524	250.0488281	230.9183641	456.5	456.5	0.06615
Skewness		-0.08380056	0.121316561	0.130378069	0.131900784	0.139311127	0.121316561	-1.92439E-15	0.481563048	0.070788641	0.372497534	0.121316561	0.139311127	0.393167011	0.393167011	0.366647961
Coefficient of Variation (CoV) 2		0.032523567	0.887743568	0.931737432	0.929507672	0.936017408	0.887743568	0.2	0.051003624	11.53504055	1.039479331	0.887743568	0.936017408	0.68922131	0.68922131	0.695125468
NPR < 1.0 or NPR = 1.0																
1.0 < NPR < 2.0																
NPR > 2.0 or NPR =2.0																
Sum Check																
% NPR < 1.0 or NPR = 1.0 of Total																
% 1.0 < NPR < 2.0 of Total																
% NPR > 2.0 or NPR =2.0 of Total																
Sum Check																
MDT-RX																
Count		13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Minimum		5.6	0.02	0.02	0.01	0.01	0.005	0.005	0.010035524	-0.137194438	0	0.625	0.3125	5	-10	0.005
10 Percentile		6.78	0.132	0.112	0.112	0.112	0.01	0.005	0.012836136	-0.096143175	0	4.125	3.5	8.2	-6.8	0.03
25 Percentile		8.5	0.68	0.52	0.55	0.55	0.01	0.01	0.019370896	-0.056621096	0	21.25	17.1875	26	11	0.24
Median-25Percentile		0.5	0.46	0.48	0.56	0.642927422	0.01	0.01	0.011902599	0.086478998	0.029857902	14.375	20.09148195	18	18	0.23
Mean		8.415384615	1.224615385	1.101538462	1.177307692	1.228538019	0.058076923	0.047307692	0.054019487	0.021749744	0.051230327	38.26923077	38.3918131	52.46153846	37.46153846	0.568846154
Standard Deviation		1.131946012	0.823460011	0.788248752	0.83746783	0.890162584	0.077497853	0.06407974	0.045402381	0.095145497	0.063513338	25.73312536	27.81758074	45.67546957	45.67546957	0.534653568
Median		9	1.14	1	1.11	1.192927422	0.02	0.02	0.031273495	0.029857902	0.029857902	35.625	37.27898195	44	29	0.47
75Percentile-Median		0.2	0.78	0.89	0.805	0.723033996	0.03	0.01	0.063947296	0.05306952	0.05306952	24.375	22.59481237	23	23	0.3
75 Percentile		9.2	1.92	1.89	1.915	1.915961418	0.05	0.03	0.095220791	0.082927422	0.082927422	60	59.87379431	67	52	0.77
90 Percentile		9.2	2.386	2.214	2.368	2.510496178	0.128	0.128	0.12107977	0.148496178	0.148496178	74.5625	78.45300557	78.6	63.6	0.948
Maximum		9.3	2.42	2.22	2.415	2.597630633	0.29	0.22	0.149832715	0.182630633	0.182630633	75.625	81.17595727	189	174	2.11
Interquartile Range (IQR) 1		0.7	1.24	1.37	1.365	1.365961418	0.04	0.02	0.075849894	0.139548519	0.082927422	38.75	42.68629431	41	41	0.53
Variance		1.281301775	0.678086391	0.621336095	0.701352367	0.792389425	0.006005917	0.004106213	0.002061376	0.009052666	0.004033944	662.1937408	773.8177982	2086.248521	2086.248521	0.285854438
Skewness		-1.60530514	0.170249297	0.244178272	0.252097712	0.309661074	2.328250375	1.886112756	1.024683085	0.101956864	1.079918003	0.170249297	0.309661074	2.087410149	2.087410149	1.838810198
Coefficient of Variation (CoV) 2		0.134509124	0.672423376	0.715588951	0.711341509	0.724570644	1.334400111	1.354531079	0.840481521	4.374557129	1.23976054	0.672423376	0.724570644	0.870646781	1.219263048	0.93989133
NPR < 1.0 or NPR = 1.0																
1.0 < NPR < 2.0																
NPR > 2.0 or NPR =2.0																
Sum Check																
% NPR < 1.0 or NPR = 1.0 of Total																
% 1.0 < NPR < 2.0 of Total																
% NPR > 2.0 or NPR =2.0 of Total																
Sum Check																

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID			Total-S	Sulphide-S	Sulphide-S Calc	Sulphide-S + S del	Sulphate-S $NaCO_3$	Sulphate-S HCl						NP		Total-C
Typical Detection Limit			0.01	0.01			0.01	0.01	Barite-S	S del	S del Calc	TAP	SAP	1	NP_ADJ	0.01
Units	Purpose	Paste pH	%	%	%	%	%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	%
MP-OVB																
Count		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Minimum		5.9	0.05	0.05	0.04	0.05	0.01	0.01	0.007468297	-0.01980214	0	1.5625	1.5625	9	9	0.08
10 Percentile		6.02	0.152	0.119	0.13	0.119	0.028	0.022	0.00816845	-0.014345534	0	4.75	3.71875	9	9	0.089
25 Percentile		6.2	0.305	0.2225	0.265	0.2225	0.055	0.04	0.009218679	-0.006160625	0	9.53125	6.953125	9	9	0.1025
Median-25Percentile		1	0.91	0.6825	0.77	0.768263558	0.175	0.025	0.009918832	0.091117457	0.085763558	28.4375	24.0082362	1	1	0.0775
Mean		7.125	2.315	1.99	2.2025	2.181014705	0.6275	0.1125	0.026839193	0.185660807	0.191014705	72.34375	68.15670953	11.5	11.5	0.21
Standard Deviation		1.035313962	2.685502746	2.438821437	2.673764902	2.680427883	0.828202119	0.1166994	0.02166455	0.246490546	0.242161568	83.92196082	83.76337135	3.278719262	3.278719262	0.12708265
Median		7.2	1.215	0.905	1.035	0.990763558	0.23	0.065	0.019137512	0.084956832	0.085763558	37.96875	30.9613612	10	10	0.18
75Percentile-Median		0.925	2.01	1.7675	1.9375	1.958514705	0.5725	0.0725	0.017620514	0.191821431	0.191014705	62.8125	61.20358453	2.5	2.5	0.1075
75 Percentile		8.125	3.225	2.6725	2.9725	2.949278263	0.8025	0.1375	0.036758026	0.276778263	0.276778263	100.78125	92.16494572	12.5	12.5	0.2875
90 Percentile		8.17	5.358	4.729	5.209	5.195230327	1.545	0.241	0.051671282	0.466230327	0.466230327	167.4375	162.3509477	15.2	15.2	0.355
Maximum		8.2	6.78	6.1	6.7	6.692531703	2.04	0.31	0.061613453	0.592531703	0.592531703	211.875	209.1416157	17	17	0.4
Interquartile Range (IQR) 1		1.925	2.92	2.45	2.7075	2.726778263	0.7475	0.0975	0.027539346	0.282938888	0.276778263	91.25	85.21182072	3.5	3.5	0.185
Variance		1.071875	7.211925	5.94785	7.14901875	7.184693637	0.68591875	0.01361875	0.000469353	0.06075759	0.058642225	7042.895508	7016.30238	10.75	10.75	0.01615
Skewness		-0.08998929	1.570418883	1.70233771	1.683005851	1.690152468	1.826349915	1.72964644	1.270778556	1.506695274	1.548519536	1.570418883	1.690152468	1.6585238	1.6585238	0.78611249
Coefficient of Variation (CoV) 2		0.145307223	1.160044383	1.22553841	1.213968173	1.228982032	1.319844014	1.037328002	0.80719824	1.327639102	1.267764011	1.160044383	1.228982032	0.285106023	0.285106023	0.605155477
NPR < 1.0 or NPR = 1.0																
1.0 < NPR < 2.0																
NPR > 2.0 or NPR =2.0																
Sum Check																
% NPR < 1.0 or NPR = 1.0 of Total																
% 1.0 < NPR < 2.0 of Total																
% NPR > 2.0 or NPR =2.0 of Total																
Sum Check																
MP-RX																
Count		27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Minimum		4.4	0.01	0.01	0.005	0.005	0.005	0.005	0.000490107	-0.105886453	0	0.3125	0.15625	0.376884422	-14.62311558	0.01
10 Percentile		5.028	0.052	0.036	0.036	0.036	0.005	0.01	0.002422529	-0.045359249	0	1.625	1.125	1.809045226	-13.19095477	0.022
25 Percentile		5.91	0.235	0.14	0.195	0.228033479	0.005	0.01	0.006173014	-0.031868625	0	7.34375	7.126046216	5.527638191	-9.472361809	0.04
Median-25Percentile		2.45	0.255	0.16	0.175	0.141966521	0	0.02	0.012124314	0.020292764	0	7.96875	4.436453784	59.63526908	59.63526908	0.36
Mean		7.562592593	0.925925926	0.796296296	0.852962963	0.905300447	0.005	0.072962963	0.024582281	0.032084386	0.052337484	28.93518519	28.29063896	93.80968007	78.80968007	0.632592593
Standard Deviation		1.643694106	1.364939991	1.284953229	1.356954828	1.437236031	8.67362E-19	0.085138876	0.023734786	0.135194984	0.124513823	42.65437473	44.91362598	100.1141381	100.1141381	0.850597144
Median		8.36	0.49	0.3	0.37	0.37	0.005	0.03	0.018297328	-0.011575861	0	15.3125	11.5625	65.16290727	50.16290727	0.4
75Percentile-Median		0.565	0.495	0.56	0.52	0.53188432	0	0.065	0.014994941	0.025764592	0.014188731	15.46875	16.62138499	84.58646617	84.58646617	0.54
75 Percentile		8.925	0.985	0.86	0.89	0.90188432	0.005	0.095	0.033292269	0.014188731	0.014188731	30.78125	28.18388499	149.7493734	134.7493734	0.94
90 Percentile		9.138	1.87	1.664	1.788	1.879075798	0.005	0.198	0.044795781	0.204781734	0.204781734	58.4375	58.72111869	243.7343358	228.7343358	1.304
Maximum		9.24	6.61	6.32	6.51	6.699509893	0.005	0.35	0.105886453	0.568786402	0.568786402	206.5625	209.3596842	335.2130326	320.2130326	3.71
Interquartile Range (IQR) 1		3.015	0.75	0.72	0.695	0.673850841	0	0.085	0.027119255	0.046057356	0.014188731	23.4375	21.05783877	144.2217352	144.2217352	0.9
Variance		2.701730316	1.86306118	1.651104801	1.841326406	2.06564741	7.52316E-37	0.007248628	0.00056334	0.018277684	0.015503692	1819.395683	2017.233799	10022.84065	10022.84065	0.723515501
Skewness		-0.70921409	3.139583545	3.327834308	3.186509056	3.060596823	-1.059811304	1.663446409	1.836972334	2.734422664	3.111230556	3.139583545	3.060596823	0.919340245	0.919340245	2.274653554
Coefficient of Variation (CoV) 2		0.21734532	1.474135191	1.613662195	1.590871922	1.587579059	1.73472E-16	1.166878	0.965524143	4.213731407	2.379056339	1.474135191	1.587579059	1.067204771	1.270327935	1.344620777
NPR < 1.0 or NPR = 1.0																
1.0 < NPR < 2.0																
NPR > 2.0 or NPR =2.0																
Sum Check																
% NPR < 1.0 or NPR = 1.0 of Total																
% 1.0 < NPR < 2.0 of Total																
% NPR > 2.0 or NPR =2.0 of Total																
Sum Check																

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID			Total-S	Sulphide-S	Sulphide-S Calc	Sulphide-S + S del	Sulphate-S $NaCO_3$	Sulphate-S HCl						NP		Total-C
Typical Detection Limit			0.01	0.01			0.01	0.01	Barite-S	S del	S del Calc	TAP	SAP	1	NP_ADJ	0.01
Units	Purpose	Paste pH	%	%	%	%	%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	%
MRSF-OVB																
Count		24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Minimum		6.4	0.005	0.01	-0.015	0.01	0.005	0.01	0.003500764	-0.057179151	0	0.15625	0.3125	12	12	0.11
10 Percentile		7.86	0.033	0.02	0.013	0.02	0.005	0.01	0.007981743	-0.03847086	0	1.03125	0.625	17.8	17.8	0.259
25 Percentile		8.075	0.0475	0.03	0.0375	0.03	0.01	0.01	0.023105045	-0.031215149	0	1.484375	0.9375	26.75	26.75	0.4075
Median-25Percentile		0.425	0.0975	0.075	0.0825	0.077280556	0.01	0.01	0.002683919	0.016225268	0	3.046875	2.41501738	17.75	17.75	0.2975
Mean		8.375	0.662291667	0.620833333	0.644375	0.634699595	0.024583333	0.017916667	0.027908871	-0.004367205	0.013866261	20.69661458	19.83436234	60.375	60.375	0.847083333
Standard Deviation		0.546389666	1.200201354	1.188244211	1.196870322	1.197036967	0.018814703	0.008650225	0.013750857	0.036751194	0.023322891	37.50629231	37.40740521	41.75205833	41.75205833	0.549692938
Median		8.5	0.145	0.105	0.12	0.107280556	0.02	0.02	0.025788964	-0.014989881	0	4.53125	3.35251738	44.5	44.5	0.705
75Percentile-Median		0.1	0.43	0.375	0.435	0.418546408	0.01	0	0.008751911	0.049227561	0.034237679	13.4375	13.07957523	39	39	0.5275
75 Percentile		8.6	0.575	0.48	0.555	0.525826964	0.03	0.02	0.034540875	0.034237679	0.034237679	17.96875	16.43209261	83.5	83.5	1.2325
90 Percentile		8.9	2.421	2.337	2.402	2.389569251	0.047	0.03	0.046536828	0.036398238	0.036398238	75.65625	74.67403909	123.6	123.6	1.578
Maximum		9.1	4.59	4.56	4.56	4.56	0.08	0.04	0.057179151	0.0754236	0.0754236	143.4375	142.5	158	158	2.14
Interquartile Range (IQR) 1		0.525	0.5275	0.45	0.5175	0.495826964	0.02	0.01	0.01143583	0.065452828	0.034237679	16.484375	15.49459261	56.75	56.75	0.825
Variance		0.298541667	1.44048329	1.411924306	1.432498568	1.432897499	0.000353993	7.48264E-05	0.000189086	0.00135065	0.000543957	1406.721963	1399.313964	1743.234375	1743.234375	0.302162326
Skewness		-1.99743539	2.404507255	2.461008903	2.407657435	2.426674327	1.271878125	0.855278897	0.190144075	0.806482368	1.650495303	2.404507255	2.426674327	0.894556011	0.894556011	0.838927029
Coefficient of Variation (CoV) 2		0.065240557	1.812194558	1.913950407	1.857412721	1.885989808	0.765343858	0.482803244	0.492705597	-8.415267087	1.681988426	1.812194558	1.885989808	0.69154548	0.69154548	0.648924275
NPR < 1.0 or NPR = 1.0																
1.0 < NPR < 2.0																
NPR > 2.0 or NPR =2.0																
Sum Check																
% NPR < 1.0 or NPR = 1.0 of Total																
% 1.0 < NPR < 2.0 of Total																
% NPR > 2.0 or NPR =2.0 of Total																
Sum Check																
MTDT-RX																
Count		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Minimum		7.7	0.05	0.03	0.02	0.02	0.005	0.005	0.020537818	-0.080857538	0	1.5625	0.625	5	5	0.06
10 Percentile		7.94	0.062	0.038	0.042	0.042	0.007	0.005	0.0276327	-0.080520638	0	1.9375	1.3125	7.8	7.8	0.176
25 Percentile		8.3	0.08	0.05	0.075	0.075	0.01	0.005	0.038275024	-0.080015287	0	2.5	2.34375	12	12	0.35
Median-25Percentile		0.1	0.01	0.01	0.005	0.005	0	0.005	0.004200917	0.056740264	0	0.3125	0.15625	27	27	0.12
Mean		8.42	0.09	0.062	0.078	0.078	0.015	0.012	0.056432321	-0.040432321	0	2.8125	2.4375	31.4	31.4	0.584
Standard Deviation		0.426145515	0.02607681	0.021354157	0.033852622	0.033852622	0.008944272	0.009273618	0.031494395	0.033091348	0	0.814900301	1.05789443	20.02598312	20.02598312	0.482559841
Median		8.4	0.09	0.06	0.08	0.08	0.01	0.01	0.042475941	-0.023275024	0	2.8125	2.5	39	39	0.47
75Percentile-Median		0.4	0.01	0.02	0.01	0.01	0.01	0	0.027539346	0.012737206	0	0.3125	0.3125	3	3	0.08
75 Percentile		8.8	0.1	0.08	0.09	0.09	0.02	0.01	0.070015287	-0.010537818	0	3.125	2.8125	42	42	0.55
90 Percentile		8.86	0.118	0.086	0.111	0.111	0.026	0.022	0.094520638	-0.008700692	0	3.6875	3.46875	52.2	52.2	1.114
Interquartile Range (IQR) 1		0.5	0.02	0.03	0.015	0.015	0.01	0.005	0.031740264	0.06947747	0	0.625	0.46875	30	30	0.2
Variance		0.1816	0.00068	0.000456	0.001146	0.001146	0.00008	0.000086	0.000991897	0.001095037	0	0.6640625	1.119140625	401.04	401.04	0.232864
Skewness		-0.80718941	1.0842E-15	-0.205752797	-0.688426961	-0.688426961	0.9375	1.917756339	1.038061298	-0.497945552	#DIV/0!	-5.78241E-17	-0.688426961	-0.113097222	-0.113097222	1.553358755
Coefficient of Variation (CoV) 2		0.050611106	0.289742329	0.344421879	0.434007971	0.434007971	0.596284794	0.772801541	0.558091431	-0.818437992	#DIV/0!	0.289742329	0.434007971	0.637770163	0.637770163	0.826301097
NPR < 1.0 or NPR = 1.0																
1.0 < NPR < 2.0																
NPR > 2.0 or NPR =2.0																
Sum Check																
% NPR < 1.0 or NPR = 1.0 of Total																
% 1.0 < NPR < 2.0 of Total																
% NPR > 2.0 or NPR =2.0 of Total																
Sum Check																

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID			Total-S	Sulphide-S	Sulphide-S Calc	Sulphide-S + S del	Sulphate-S $NaCO_3$	Sulphate-S HCl						NP		Total-C
Typical Detection Limit			0.01	0.01			0.01	0.01	Barite-S	S del	S del Calc	TAP	SAP	1	NP_ADJ	0.01
Units	Purpose	Paste pH	%	%	%	%	%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	%
MTRSF-OVB																
Count		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Minimum		9	0.03	0.02	0.02	0.02	0.03	0.005	0.038741792	-0.039908714	0	0.9375	0.625	54	54	0.68
10 Percentile		9	0.031	0.021	0.0215	0.021	0.031	0.0055	0.038858484	-0.039292022	0	0.96875	0.65625	55.8	55.8	0.702
25 Percentile		9	0.0325	0.0225	0.02375	0.0225	0.0325	0.00625	0.039033523	-0.038366983	0	1.015625	0.703125	58.5	58.5	0.735
Median-25Percentile		0	0.0025	0.0025	0.00375	0.0025	0.0025	0.00125	0.00029173	0.00154173	0	0.078125	0.078125	4.5	4.5	0.055
Mean	SRSF-RX	9	0.035	0.025	0.0275	0.025	0.035	0.0075	0.039325253	-0.036825253	0	1.09375	0.78125	63	63	0.79
Standard Deviation	TAR-RX	0	0.005	0.005	0.0075	0.005	0.005	0.0025	0.000583461	0.003083461	0	0.15625	0.15625	9	9	0.11
Median	TCAR-OVB	9	0.035	0.025	0.0275	0.025	0.035	0.0075	0.039325253	-0.036825253	0	1.09375	0.78125	63	63	0.79
75Percentile-Median	TCAR-RX	0	0.0025	0.0025	0.00375	0.0025	0.0025	0.00125	0.00029173	0.00154173	0	0.078125	0.078125	4.5	4.5	0.055
75 Percentile	TDPR-RX	9	0.0375	0.0275	0.03125	0.0275	0.0375	0.00875	0.039616983	-0.035283523	0	1.171875	0.859375	67.5	67.5	0.845
90 Percentile	Ted Morris-OVE	9	0.039	0.029	0.0335	0.029	0.039	0.0095	0.039792022	-0.034358484	0	1.21875	0.90625	70.2	70.2	0.878
Maximum	Teigen-OVB	9	0.04	0.03	0.035	0.03	0.04	0.01	0.039908714	-0.033741792	0	1.25	0.9375	72	72	0.9
	TMF-OVB															
Interquartile Range (IQR) 1	TMF-RX	0	0.005	0.005	0.0075	0.005	0.005	0.0025	0.000583461	0.003083461	0	0.15625	0.15625	9	9	0.11
Variance	WSF-OVB	0	0.000025	0.000025	5.625E-05	0.000025	0.000025	0.00000625	3.40426E-07	9.50773E-06	0	0.024414063	0.024414063	81	81	0.0121
Coefficient of Variation (CoV) 2		0	0.142857143	0.2	0.272727273	0.2	0.142857143	0.333333333	0.014836795	-0.083732235	-	0.142857143	0.2	0.142857143	0.142857143	0.139240506
NPR < 1.0 or NPR = 1.0																
1.0 < NPR < 2.0																
NPR > 2.0 or NPR =2.0																
Sum Check																
% NPR < 1.0 or NPR = 1.0 of Total																
% 1.0 < NPR < 2.0 of Total																
% NPR > 2.0 or NPR =2.0 of Total																
Sum Check																
MTT-RX																
Count		15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Minimum		6.7	0.005	0.01	-0.005	0	0.005	0.005	0.006067992	-0.159634855	0	0.15625	0	4	4	0.05
10 Percentile		6.92	0.005	0.01	-0.003	0	0.005	0.005	0.012602752	-0.055976705	0	0.15625	0	14.8	14.8	0.118
25 Percentile		7.65	0.015	0.01	0.005	0.005	0.01	0.01	0.016803669	-0.032687741	0	0.46875	0.15625	26	26	0.285
Median-25Percentile		0.75	0.025	0.02	0.015	0.015	0	0	0.004667686	0.012383308	0	0.78125	0.46875	31	31	0.395
Mean		8.2	0.314333333	0.25	0.276	0.294048866	0.041666667	0.038333333	0.036470185	-0.010470185	0.017382199	9.822916667	9.18902705	56.46666667	56.46666667	0.83
Standard Deviation		0.834266145	0.373219626	0.2972541	0.340994624	0.367025701	0.055697596	0.054792538	0.036554017	0.060467254	0.033229805	11.6631133	11.46955316	41.79452383	41.79452383	0.635074799
Median		8.4	0.04	0.03	0.02	0.02	0.01	0.01	0.021471355	-0.020304433	0	1.25	0.625	57	57	0.68
75Percentile-Median		0.4	0.655	0.51	0.575	0.611643809	0.035	0.015	0.02392189	0.027096637	0.006792204	20.46875	19.11386902	16	16	0.56
75 Percentile		8.8	0.695	0.54	0.595	0.631643809	0.045	0.025	0.045393245	0.006792204	0.006792204	21.71875	19.73886902	73	73	1.24
90 Percentile		9.14	0.886	0.688	0.788	0.856266841	0.124	0.128	0.056712383	0.079641785	0.079641785	27.6875	26.75833879	91	91	1.746
Maximum		9.4	0.93	0.79	0.88	0.943160807	0.19	0.18	0.159634855	0.093358666	0.093358666	29.0625	29.47377521	177	177	2.15
Interquartile Range (IQR) 1		1.15	0.68	0.53	0.59	0.626643809	0.035	0.015	0.028589576	0.039479945	0.006792204	21.25	19.58261902	47	47	0.955
Variance		0.696	0.139292889	0.08836	0.116277333	0.134707865	0.003102222	0.003002222	0.001336196	0.003656289	0.00110422	136.0282118	131.5506497	1746.782222	1746.782222	0.40332
Skewness		-0.49684018	0.70900325	0.758636343	0.768929391	0.817355602	1.989470047	2.020560792	2.748198959	-0.330588331	1.761835147	0.70900325	0.817355602	1.505638143	1.505638143	0.721338157
Coefficient of Variation (CoV) 2		0.101739774	1.187337091	1.1890164	1.235487767	1.248179279	1.336742309	1.429370557	1.002298637	-5.775184773	1.911714671	1.187337091	1.248179279	0.74016276	0.74016276	0.76515036
NPR < 1.0 or NPR = 1.0																
1.0 < NPR < 2.0																
NPR > 2.0 or NPR =2.0																
Sum Check																
% NPR < 1.0 or NPR = 1.0 of Total																
% 1.0 < NPR < 2.0 of Total																
% NPR > 2.0 or NPR =2.0 of Total																
Sum Check																

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID			Total-S	Sulphide-S	Sulphide-S Calc	Sulphide-S + S del	Sulphate-S $NaCO_3$	Sulphate-S HCl						NP		Total-C
Typical Detection Limit			0.01	0.01			0.01	0.01	Barite-S	S del	S del Calc	TAP	SAP	1	NP_ADJ	0.01
Units	Purpose	Paste pH	%	%	%	%	%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	%
SP-RX																
Count		14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Minimum		4.99	0.01	0.01	-0.01	0	0.005	0.005	0.001376967	-0.119024955	0	0.3125	0	-0.376884422	-15.37688442	0.01
10 Percentile		5.465	0.01	0.01	0	0	0.005	0.005	0.002620906	-0.101582329	0	0.3125	0	2.826633166	-12.17336683	0.043
25 Percentile		6.295	0.045	0.045	0.04	0.04	0.005	0.01	0.004784378	-0.065674081	0	1.40625	1.25	9.202261307	-5.797738693	0.0775
Median-25Percentile		2.39	0.535	0.475	0.48	0.48	0	0.01	0.03209034	0.028799363	0	16.71875	15	59.72004446	59.72004446	0.1725
Mean		7.888571429	0.915714286	0.863571429	0.871785714	0.884007718	0.005	0.043928571	0.037659889	-0.029445604	0.011507718	28.61607143	27.6252412	62.87661454	47.87661454	0.271428571
Standard Deviation		1.608472466	1.068795813	1.028817679	1.053169718	1.073074833	8.67362E-19	0.060627038	0.03444985	0.057925621	0.028273991	33.39986915	33.53358853	46.66989033	46.66989033	0.218365916
Median		8.685	0.58	0.52	0.52	0.52	0.005	0.02	0.036874718	-0.036874718	0	18.125	16.25	68.92230576	53.92230576	0.25
75Percentile-Median		0.3675	0.58	0.455	0.455	0.455	0	0.04	0.023799363	0.034074106	0	18.125	14.21875	33.83458647	33.83458647	0.105
75 Percentile		9.0525	1.16	0.975	0.975	0.975	0.005	0.06	0.060674081	-0.002800611	0	36.25	30.46875	102.7568922	87.75689223	0.355
90 Percentile		9.159	2.718	2.666	2.69	2.712417655	0.005	0.084	0.089719923	0.05189477	0.052307861	84.9375	84.7630517	115.5388471	100.5388471	0.538
Maximum		9.49	3.2	3.04	3.13	3.216382543	0.005	0.24	0.101685535	0.086382543	0.086382543	100	100.5119545	134.085213	119.085213	0.81
Interquartile Range (IQR) 1		2.7575	1.115	0.93	0.935	0.935	0	0.05	0.055889703	0.062873469	0	34.84375	29.21875	93.55463092	93.55463092	0.2775
Variance		2.587183673	1.14232449	1.058465816	1.109166454	1.151489597	7.52316E-37	0.003675638	0.001186792	0.003355378	0.000799419	1115.55126	1124.50156	2178.078664	2178.078664	0.047683673
Skewness		-0.95279039	1.208328024	1.277772666	1.279278157	1.291726568	1.12422813	2.646444192	0.611637537	0.525106721	2.323956116	1.208328024	1.291726568	-0.14404172	-0.14404172	1.061421613
Coefficient of Variation (CoV) 2		0.203899081	1.167171715	1.191352151	1.208060307	1.213874959	1.73472E-16	1.380127698	0.91476237	-1.967207787	2.456958906	1.167171715	1.213874959	0.742245598	0.974795122	0.804506008
NPR < 1.0 or NPR = 1.0																
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Sum Check																
SRSF-OVB																
Count		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Minimum		8.1	0.05	0.02	0.03	0.03	0.005	0.02	0.018904128	-0.008904128	0	1.5625	0.9375	11	11	0.24
10 Percentile		8.1	0.05	0.02	0.03	0.03	0.005	0.02	0.018904128	-0.008904128	0	1.5625	0.9375	11	11	0.24
25 Percentile		8.1	0.05	0.02	0.03	0.03	0.005	0.02	0.018904128	-0.008904128	0	1.5625	0.9375	11	11	0.24
Median-25Percentile		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean		8.1	0.05	0.02	0.03	0.03	0.005	0.02	0.018904128	-0.008904128	0	1.5625	0.9375	11	11	0.24
Standard Deviation		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Median		8.1	0.05	0.02	0.03	0.03	0.005	0.02	0.018904128	-0.008904128	0	1.5625	0.9375	11	11	0.24
75Percentile-Median		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75 Percentile		8.1	0.05	0.02	0.03	0.03	0.005	0.02	0.018904128	-0.008904128	0	1.5625	0.9375	11	11	0.24
90 Percentile		8.1	0.05	0.02	0.03	0.03	0.005	0.02	0.018904128	-0.008904128	0	1.5625	0.9375	11	11	0.24
Maximum		8.1	0.05	0.02	0.03	0.03	0.005	0.02	0.018904128	-0.008904128	0	1.5625	0.9375	11	11	0.24
Interquartile Range (IQR) 1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Variance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coefficient of Variation (CoV) 2		0	0	0	0	0	0	0	0	0	-	0	0	0	0	0
NPR < 1.0 or NPR = 1.0																
1.0 < NPR < 2.0																
NPR > 2.0 or NPR =2.0																
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% NPR < 1.0 or NPR = 1.0 of Total																
% 1.0 < NPR < 2.0 of Total																
% NPR > 2.0 or NPR =2.0 of Total																
Sum Check																

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID			Total-S	Sulphide-S	Sulphide-S Calc	Sulphide-S + S del	Sulphate-S $NaCO_3$	Sulphate-S HCl						NP		Total-C
Typical Detection Limit			0.01	0.01			0.01	0.01	Barite-S	S del	S del Calc	TAP	SAP	1	NP_ADJ	0.01
Units	Purpose	Paste pH	%	%	%	%	%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	%
SRSF-RX																
Count		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Minimum		7.8	0.3	0.18	0.27	0.337595108	0.02	0.02	0.022404892	0.014525588	0.014525588	9.375	10.54984713	84	69	1.08
10 Percentile		7.88	0.32	0.208	0.29	0.346981204	0.02	0.022	0.023571813	0.025139492	0.025139492	10	10.84316263	87.6	72.6	1.15
25 Percentile		8	0.35	0.25	0.32	0.361060348	0.02	0.025	0.025322196	0.041060348	0.041060348	10.9375	11.28313587	93	78	1.255
Median-25Percentile	TCAR-RX	0.2	0.05	0.07	0.05	0.02346524	0	0.005	0.002917304	0.02653476	0.02653476	1.5625	0.733288746	9	9	0.175
Mean	TDPR-RX	8.166666667	0.483333333	0.363333333	0.456666667	0.521293732	0.023333333	0.026666667	0.028706268	0.064627066	0.064627066	15.10416667	16.29042913	103.6666667	88.66666667	1.54
Standard Deviation	Ted Morris-OVE	0.286744176	0.192930615	0.17016332	0.197540432	0.227412738	0.004714045	0.004714045	0.005345808	0.039751428	0.039751428	6.02908172	7.106648049	16.77961726	16.77961726	0.427629123
Median	Teigen-OVB	8.2	0.4	0.32	0.37	0.384525588	0.02	0.03	0.028239499	0.067595108	0.067595108	12.5	12.01642462	102	87	1.43
75Percentile-Median	TMF-OVB	0.15	0.175	0.135	0.18	0.228617457	0.005	0	0.003617457	0.022082696	0.022082696	5.46875	7.144295516	11.5	11.5	0.34
75 Percentile	TMF-RX	8.35	0.575	0.455	0.55	0.613143044	0.025	0.03	0.031856956	0.089677804	0.089677804	17.96875	19.16072014	113.5	98.5	1.77
90 Percentile	WSF-OVB	8.44	0.68	0.536	0.658	0.750313518	0.028	0.03	0.03402743	0.102927422	0.102927422	21.25	23.44729744	120.4	105.4	1.974
Maximum		8.5	0.75	0.59	0.73	0.841760501	0.03	0.03	0.035474412	0.111760501	0.111760501	23.4375	26.30501565	125	110	2.11
Interquartile Range (IQR) 1		0.35	0.225	0.205	0.23	0.252082696	0.005	0.005	0.00653476	0.048617457	0.048617457	7.03125	7.877584261	20.5	20.5	0.515
Variance		0.082222222	0.037222222	0.028955556	0.039022222	0.051716553	2.22222E-05	2.22222E-05	2.85777E-05	0.001580176	0.001580176	36.34982639	50.50444649	281.5555556	281.5555556	0.182866667
Skewness		-0.42327316	1.389636139	0.895218323	1.405138365	1.676892129	1.732050808	-1.732050808	0.319184779	-0.273317331	-0.273317331	1.389636139	1.676892129	0.362549825	0.362549825	0.903439708
Coefficient of Variation (CoV) 2		0.035111532	0.39916679	0.468339414	0.432570289	0.436246829	0.202030509	0.176776695	0.186224418	0.615089476	0.615089476	0.39916679	0.436246829	0.16186126	0.189243804	0.277681249
NPR < 1.0 or NPR = 1.0																
1.0 < NPR < 2.0																
NPR > 2.0 or NPR =2.0																
Sum Check																
% NPR < 1.0 or NPR = 1.0 of Total																
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% NPR > 2.0 or NPR =2.0 of Total																
Sum Check																
TAR-RX																
Count		13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Minimum		4.5	0.04	0.02	0.03	0.03	0.01	0.005	0.011669215	-0.035672272	0	1.25	0.9375	2	-6	0.14
10 Percentile		5.86	0.052	0.032	0.037	0.038919327	0.02	0.005	0.015169979	-0.014650957	0	1.625	1.21622898	5	-3	0.204
25 Percentile		6.7	0.1	0.07	0.095	0.095	0.02	0.005	0.015403363	0.0036631	0.0036631	3.125	2.96875	6	-2	0.27
Median-25Percentile		0.6	0.14	0.07	0.095	0.122828492	0.01	0	0.001867074	0.024165393	0.024165393	4.375	3.838390387	2	2	0.09
Mean		7.230769231	0.257692308	0.181538462	0.236538462	0.277840599	0.044615385	0.021153846	0.018491217	0.036508783	0.041302137	8.052884615	8.682518717	15.61538462	7.615384615	0.54
Standard Deviation		1.192530996	0.211919936	0.173287052	0.212081122	0.247690577	0.035216994	0.032293953	0.004236823	0.044698708	0.038717682	6.622497992	7.740330518	18.29896366	18.29896366	0.413056152
Median		7.3	0.24	0.14	0.19	0.217828492	0.03	0.005	0.017270438	0.027828492	0.027828492	7.5	6.807140387	8	0	0.36
75Percentile-Median		0.8	0.11	0.05	0.09	0.133500764	0.03	0.005	0.00326738	0.045502293	0.045502293	3.4375	4.171898886	9	9	0.22
75 Percentile		8.1	0.35	0.19	0.28	0.351329257	0.06	0.01	0.020537818	0.073330785	0.073330785	10.9375	10.97903927	17	9	0.58
90 Percentile		8.64	0.558	0.426	0.549	0.647307942	0.084	0.054	0.024972119	0.094149654	0.094149654	17.4375	20.22837319	26.4	18.4	1.138
Maximum		8.8	0.74	0.62	0.735	0.832729562	0.14	0.12	0.027072578	0.102927422	0.102927422	23.125	26.02279883	74	66	1.59
Interquartile Range (IQR) 1		1.4	0.25	0.12	0.185	0.256329257	0.04	0.005	0.005134454	0.069667686	0.069667686	7.8125	8.010289273	11	11	0.31
Variance		1.422130178	0.044910059	0.030028402	0.044978402	0.061350622	0.001240237	0.001042899	1.79507E-05	0.001997974	0.001499059	43.85747966	59.91271653	334.852071	334.852071	0.170615385
Skewness		-0.75392251	1.071486124	1.561838501	1.270906487	1.103483316	1.698721551	2.571119734	0.706627647	0.010548885	0.313198079	1.071486124	1.103483316	2.750893355	2.750893355	1.654811589
Coefficient of Variation (CoV) 2		0.1649245	0.82237587	0.95454732	0.896603118	0.891484461	0.789346424	1.526623239	0.229126214	1.224327512	0.937425638	0.82237587	0.891484461	1.171854816	2.402894218	0.7649188
NPR < 1.0 or NPR = 1.0																
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NPR > 2.0 or NPR =2.0																
Sum Check																
% NPR < 1.0 or NPR = 1.0 of Total																
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% NPR > 2.0 or NPR =2.0 of Total																
Sum Check																

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID			Total-S	Sulphide-S	Sulphide-S Calc	Sulphide-S + S del	Sulphate-S $NaCO_3$	Sulphate-S HCl						NP		Total-C
Typical Detection Limit			0.01	0.01			0.01	0.01	Barite-S	S del	S del Calc	TAP	SAP	1	NP_ADJ	0.01
Units	Purpose	Paste pH	%	%	%	%	%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	%
TCAR-OVB																
Count		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Minimum		7.76	0.05	0	0.04	0.04	0	0.005	0.004102896	-0.006037652	0	1.5625	1.25	8.620689655	8.620689655	0.51
10 Percentile		7.78	0.052	0	0.042	0.042	0	0.006	0.004368954	-0.005916759	0	1.625	1.3125	9.359605911	9.359605911	0.562
25 Percentile		7.81	0.055	0	0.045	0.045	0	0.0075	0.004768041	-0.005735419	0	1.71875	1.40625	10.4679803	10.4679803	0.64
Median-25Percentile		0.05	0.005	0	0.005	0.005	0	0.0025	0.000665145	0.000302233	0	0.15625	0.15625	1.84729064	1.84729064	0.13
Mean		7.88	0.11	0	0.101666667	0.101666667	0	0.008333333	0.005191245	-0.005191245	0	3.4375	3.177083333	38.80444918	38.80444918	0.78
Standard Deviation		0.107082523	0.07788881	0	0.080242687	0.080242687	0	0.002357023	0.000808176	0.000808176	0	2.434025301	2.507583983	40.10219353	40.10219353	0.224647873
Median		7.86	0.06	0	0.05	0.05	0	0.01	0.005433186	-0.005433186	0	1.875	1.5625	12.31527094	12.31527094	0.77
75Percentile-Median		0.08	0.08	0	0.0825	0.0825	0	0	0.000302233	0.000665145	0	2.5	2.578125	41.581058	41.581058	0.145
75 Percentile		7.94	0.14	0	0.1325	0.1325	0	0.01	0.005735419	-0.004768041	0	4.375	4.140625	53.89632894	53.89632894	0.915
90 Percentile		7.988	0.188	0	0.182	0.182	0	0.01	0.005916759	-0.004368954	0	5.875	5.6875	78.84496373	78.84496373	1.002
Maximum		8.02	0.22	0	0.215	0.215	0	0.01	0.006037652	-0.004102896	0	6.875	6.71875	95.47738693	95.47738693	1.06
Interquartile Range (IQR) 1		0.13	0.085	0	0.0875	0.0875	0	0.0025	0.000967378	0.000967378	0	2.65625	2.734375	43.42834864	43.42834864	0.275
Variance		0.011466667	0.006066667	0	0.006438889	0.006438889	0	5.55556E-06	6.53148E-07	6.53148E-07	0	5.924479167	6.287977431	1608.185926	1608.185926	0.050466667
Skewness		0.670284414	1.710662618	-	1.7118977	1.7118977	-	-1.732050808	-1.034228352	1.034228352	-	1.710662618	1.7118977	1.721031357	1.721031357	0.163339225
Coefficient of Variation (CoV) 2		0.013589153	0.708080088	-	0.789272336	0.789272336	-	0.282842712	0.155680519	-0.155680519	-	0.708080088	0.789272336	1.033443184	1.033443184	0.288010093
NPR < 1.0 or NPR = 1.0																
1.0 < NPR < 2.0																
NPR > 2.0 or NPR =2.0																
Sum Check																
% NPR < 1.0 or NPR = 1.0 of Total																
% 1.0 < NPR < 2.0 of Total																
% NPR > 2.0 or NPR =2.0 of Total																
Sum Check																
TCAR-RX																
Count		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Minimum		7.34	0.04	0	0.035	0.035	0	0.005	0.001442315	-0.005209137	0	1.25	1.09375	9.359605911	9.359605911	0.19
10 Percentile		7.57	0.06	0	0.0525	0.0525	0	0.005	0.001834401	-0.004496148	0	1.875	1.640625	11.8226601	11.8226601	0.27
25 Percentile		7.8175	0.085	0	0.07625	0.07625	0	0.00625	0.002464538	-0.003674636	0	2.65625	2.3828125	14.65517241	14.65517241	0.37
Median-25Percentile		0.4275	0.085	0	0.06625	0.06625	0	0.00875	0.000799341	0.000410756	0	2.65625	2.0703125	25.26177686	25.26177686	0.205
Mean		8.278333333	0.175	0	0.156666667	0.156666667	0	0.018333333	0.003198143	-0.003198143	0	5.46875	4.895833333	89.27333713	89.27333713	1.17
Standard Deviation		0.667443298	0.106731751	0	0.098050441	0.098050441	0	0.015456031	0.001185787	0.001185787	0	3.335367218	3.064076267	123.3085443	123.3085443	1.445187416
Median		8.245	0.17	0	0.1425	0.1425	0	0.015	0.003263879	-0.003263879	0	5.3125	4.453125	39.91694928	39.91694928	0.575
75Percentile-Median		0.45	0.085	0	0.085	0.085	0	0.005	0.000410756	0.000799341	0	2.65625	2.65625	30.74887987	30.74887987	0.34
75 Percentile		8.695	0.255	0	0.2275	0.2275	0	0.02	0.003674636	-0.002464538	0	7.96875	7.109375	70.66582915	70.66582915	0.915
90 Percentile		9.02	0.295	0	0.275	0.275	0	0.035	0.004496148	-0.001834401	0	9.21875	8.59375	216.080402	216.080402	2.665
Maximum		9.32	0.33	0	0.31	0.31	0	0.05	0.005209137	-0.001442315	0	10.3125	9.6875	359.2964824	359.2964824	4.35
Interquartile Range (IQR) 1		0.8775	0.17	0	0.15125	0.15125	0	0.01375	0.001210098	0.001210098	0	5.3125	4.7265625	56.01065673	56.01065673	0.545
Variance		0.445480556	0.011391667	0	0.009613889	0.009613889	0	0.000238889	1.40609E-06	1.40609E-06	0	11.12467448	9.388563368	15204.99709	15204.99709	2.088566667
Skewness		0.193897867	0.163863689	-	0.371460463	0.371460463	-	1.634518753	0.274554924	-0.274554924	-	0.163863689	0.371460463	2.232190773	2.232190773	2.280510991
Coefficient of Variation (CoV) 2		0.080625323	0.60989572	-	0.625853876	0.625853876	-	0.843056227	0.370773689	-0.370773689	-	0.60989572	0.625853876	1.38124717	1.38124717	1.235202919
NPR < 1.0 or NPR = 1.0																
1.0 < NPR < 2.0																
NPR > 2.0 or NPR =2.0																
Sum Check																
% NPR < 1.0 or NPR = 1.0 of Total																
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% NPR > 2.0 or NPR =2.0 of Total																
Sum Check																

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID			Total-S	Sulphide-S	Sulphide-S Calc	Sulphide-S + S del	Sulphate-S $NaCO_3$	Sulphate-S HCl						NP		Total-C
Typical Detection Limit			0.01	0.01			0.01	0.01	Barite-S	S del	S del Calc	TAP	SAP	1	NP_ADJ	0.01
Units	Purpose	Paste pH	%	%	%	%	%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	%
TDPR-RX																
Count		15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Minimum		6.2	0.02	0.01	0.01	0.01	0.01	0.005	0.011202446	-0.040771202	0	0.625	0.3125	4	-4	0.25
10 Percentile		6.6	0.034	0.02	0.01	0.01	0.02	0.005	0.01306952	-0.023270438	0	1.0625	0.3125	8	0	0.348
25 Percentile		7.35	0.055	0.025	0.04	0.044098166	0.02	0.0075	0.013769673	-0.008370132	0	1.71875	1.378067673	8.5	0.5	0.55
Median-25Percentile		0.65	0.085	0.085	0.08	0.093299083	0.02	0.0025	0.000466769	0.023900306	0.015530174	2.65625	2.915596337	7.5	7.5	0.28
Mean		7.7	0.156	0.110666667	0.142666667	0.165586834	0.034	0.013333333	0.016056839	0.015943161	0.022920167	4.875	5.17458855	38.4	30.4	0.954666667
Standard Deviation		0.71367593	0.100717426	0.077757458	0.104878766	0.128646591	0.01496663	0.011055416	0.003301872	0.035124502	0.0277369	3.147419578	4.020205955	48.65771607	48.65771607	0.59403554
Median		8	0.14	0.11	0.12	0.137397248	0.04	0.01	0.014236442	0.015530174	0.015530174	4.375	4.29366401	16	8	0.83
75Percentile-Median		0.15	0.105	0.055	0.115	0.149982238	0	0.005	0.005717915	0.017733384	0.017733384	3.28125	4.68694493	25	25	0.26
75 Percentile		8.15	0.245	0.165	0.235	0.287379486	0.04	0.015	0.019954357	0.033263558	0.033263558	7.65625	8.980608939	41	33	1.09
90 Percentile		8.38	0.296	0.198	0.288	0.352043619	0.056	0.02	0.020677848	0.067889379	0.067889379	9.25	11.00136311	108.8	100.8	1.858
Maximum		8.7	0.32	0.27	0.315	0.369695567	0.06	0.05	0.021004586	0.084695567	0.084695567	10	11.55298646	172	164	2.33
Interquartile Range (IQR) 1		0.8	0.19	0.14	0.195	0.243281321	0.02	0.0075	0.006184684	0.04163369	0.033263558	5.9375	7.602541266	32.5	32.5	0.54
Variance		0.509333333	0.010144	0.006046222	0.010999556	0.016549945	0.000224	0.000122222	1.09024E-05	0.001233731	0.000769336	9.90625	16.16205592	2367.573333	2367.573333	0.352878222
Skewness		-0.84761998	0.228897662	0.317658456	0.237368226	0.367717749	0.2819617	2.618533228	0.450130089	0.465305159	1.187890393	0.228897662	0.367717749	1.986019004	1.986019004	1.312637087
Coefficient of Variation (CoV) 2		0.092685186	0.645624529	0.702627629	0.735131537	0.776913162	0.440194987	0.829156198	0.205636502	2.203107833	1.210152604	0.645624529	0.776913162	1.267128023	1.600582766	0.622243931
NPR < 1.0 or NPR = 1.0																
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Count		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Minimum		7.2	0.02	0.01	0.015	0.015	0.005	0.005	0.035241028	-0.045142098	0	0.625	0.46875	9	9	0.14
10 Percentile		7.28	0.024	0.014	0.019	0.019	0.005	0.005	0.036267919	-0.041235452	0	0.75	0.59375	9	9	0.14
25 Percentile		7.4	0.03	0.02	0.025	0.025	0.005	0.005	0.037808255	-0.035375482	0	0.9375	0.78125	9	9	0.14
Median-25Percentile		0	0.02	0.01	0.015	0.015	0	0	0.000700153	0.005134454	0	0.625	0.46875	1	1	0.08
Mean		7.72	0.064	0.05	0.058	0.058	0.007	0.006	0.038415054	-0.030415054	0	2	1.8125	11.2	11.2	0.224
Standard Deviation		0.479165942	0.05425864	0.046904158	0.054552727	0.054552727	0.00244949	0.002	0.001858888	0.01053714	0	1.695582496	1.704772712	3.42928564	3.42928564	0.082365041
Median		7.4	0.05	0.03	0.04	0.04	0.005	0.005	0.038508408	-0.030241028	0	1.5625	1.25	10	10	0.22
75Percentile-Median		0.9	0	0.02	0.005	0.005	0.005	0	0.00163369	0.00173262	0	0	0.15625	0	0	0.04
75 Percentile		8.3	0.05	0.05	0.045	0.045	0.01	0.005	0.040142098	-0.028508408	0	1.5625	1.40625	10	10	0.26
90 Percentile		8.3	0.122	0.104	0.117	0.117	0.01	0.008	0.040282129	-0.019088316	0	3.8125	3.65625	14.8	14.8	0.32
Maximum		8.3	0.17	0.14	0.165	0.165	0.01	0.01	0.040375482	-0.012808255	0	5.3125	5.15625	18	18	0.36
Interquartile Range (IQR) 1		0.9	0.02	0.03	0.02	0.02	0.005	0	0.002333843	0.006867074	0	0.625	0.625	1	1	0.12
Variance		0.2296	0.002944	0.0022	0.002976	0.002976	0.000006	0.000004	3.45546E-06	0.000111031	0	2.875	2.90625	11.76	11.76	0.006784
Skewness		0.49885292	1.980381164	1.820246761	2.022956054	2.022956054	0.608580619	2.236067977	-0.905729836	0.547608023	-	1.980381164	2.022956054	2.141565037	2.141565037	0.734539854
Coefficient of Variation (CoV) 2		0.062068127	0.847791248	0.938083152	0.940564255	0.940564255	0.349927106	0.333333333	0.048389569	-0.346444895	-	0.847791248	0.940564255	0.306186218	0.306186218	0.367701076
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Teigen-OVB																
Count		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Minimum		7.1	0.02	0.02	0	0	0.005	0.005	0.017503822	-0.038203975	0	0.625	0	6	6	0.45

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID			Total-S	Sulphide-S	Sulphide-S Calc	Sulphide-S + S del	Sulphate-S $NaCO_3$	Sulphate-S HCl						NP		Total-C
Typical Detection Limit			0.01	0.01			0.01	0.01	Barite-S	S del	S del Calc	TAP	SAP	1	NP_ADJ	0.01
Units	Purpose	Paste pH	%	%	%	%	%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	%
10 Percentile		7.15	0.02	0.02	0	0	0.005	0.005	0.017503822	-0.038203975	0	0.625	0	6	6	0.505
25 Percentile		7.25	0.02	0.02	0.0025	0.0025	0.005	0.005	0.017562168	-0.038028936	0	0.625	0.078125	6.75	6.75	0.565
Median-25Percentile		0.15	0	0.005	0.01	0.01	0	0.0025	0.000408423	0.007908423	0	0	0.3125	2.25	2.25	0.015
Mean		7.566666667	0.038333333	0.033333333	0.0275	0.030182645	0.011666667	0.010833333	0.018009488	-0.023842821	0.002682645	1.197916667	0.943207669	10.83333333	10.83333333	0.583333333
Standard Deviation		0.426874949	0.032871805	0.017950549	0.036600319	0.042324654	0.009860133	0.006718548	0.000493552	0.019136453	0.005998577	1.027243902	1.322645426	4.946940693	4.946940693	0.077172246
Median		7.4	0.02	0.025	0.0125	0.0125	0.005	0.0075	0.01797059	-0.030120514	0	0.625	0.390625	9	9	0.58
75Percentile-Median		0.525	0.015	0.0125	0.0175	0.0175	0.01125	0.01	0.000233384	0.007558346	0	0.46875	0.546875	5.25	5.25	0.03
75 Percentile		7.925	0.035	0.0375	0.03	0.03	0.01625	0.0175	0.018203975	-0.022562168	0	1.09375	0.9375	14.25	14.25	0.61
90 Percentile		8.15	0.075	0.055	0.07	0.078047936	0.025	0.02	0.018554051	-0.003203975	0.008047936	2.34375	2.438998007	17.5	17.5	0.665
Maximum		8.2	0.11	0.07	0.105	0.121095872	0.03	0.02	0.018904128	0.016095872	0.016095872	3.4375	3.784246014	19	19	0.71
Interquartile Range (IQR) 1		0.675	0.015	0.0175	0.0275	0.0275	0.01125	0.0125	0.000641807	0.015466769	0	0.46875	0.859375	7.5	7.5	0.045
Variance		0.182222222	0.001080556	0.000322222	0.001339583	0.001791376	9.72222E-05	4.51389E-05	2.43594E-07	0.000366204	3.59829E-05	1.055230035	1.749390922	24.47222222	24.47222222	0.005955556
Skewness		0.720438879	2.206659023	1.674699946	1.941023696	2.061308368	1.322600143	0.710721585	0.857969386	1.798841363	2.449489743	2.206659023	2.061308368	0.837831638	0.837831638	-0.14973844
Coefficient of Variation (CoV) 2		0.056415192	0.857525344	0.538516481	1.330920682	1.402284427	0.845154255	0.620173673	0.027405135	-0.80260858	2.236067977	0.857525344	1.402284427	0.456640679	0.456640679	0.132295279
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Sum Check																
TMF-OVB																
Count		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Minimum		8.1	0.17	0.12	0.16	0.139928951	0.01	0.01	0.014469826	0.019928951	0.019928951	5.3125	5	11	11	0.47
10 Percentile		8.12	0.175	0.125	0.165	0.145489073	0.01	0.01	0.015029948	0.020489073	0.020489073	5.46875	5.15625	14.6	14.6	0.503
25 Percentile		8.15	0.1825	0.1325	0.1725	0.153829257	0.01	0.01	0.015870132	0.021329257	0.021329257	5.703125	5.390625	20	20	0.5525
Median-25Percentile		0.05	0.0125	0.0125	0.0125	0.013900306	0	0	0.001400306	0.001400306	0.001400306	0.390625	0.390625	9	9	0.0825
Mean		8.2	0.195	0.145	0.185	0.167729562	0.01	0.01	0.017270438	0.022729562	0.022729562	6.09375	5.78125	29	29	0.635
Standard Deviation		0.1	0.025	0.025	0.025	0.027800611	0	0	0.002800611	0.002800611	0.002800611	0.78125	0.78125	18	18	0.165
Median		8.2	0.195	0.145	0.185	0.167729562	0.01	0.01	0.017270438	0.022729562	0.022729562	6.09375	5.78125	29	29	0.635
75Percentile-Median		0.05	0.0125	0.0125	0.0125	0.013900306	0	0	0.001400306	0.001400306	0.001400306	0.390625	0.390625	9	9	0.0825
75 Percentile		8.25	0.2075	0.1575	0.1975	0.181629868	0.01	0.01	0.018670743	0.024129868	0.024129868	6.484375	6.171875	38	38	0.7175
90 Percentile		8.28	0.215	0.165	0.205	0.189970052	0.01	0.01	0.019510927	0.024970052	0.024970052	6.71875	6.40625	43.4	43.4	0.767
Maximum		8.3	0.22	0.17	0.21	0.195530174	0.01	0.01	0.020071049	0.025530174	0.025530174	6.875	6.5625	47	47	0.8
Interquartile Range (IQR) 1		0.1	0.025	0.025	0.025	0.027800611	0	0	0.002800611	0.002800611	0.002800611	0.78125	0.78125	18	18	0.165
Variance		0.01	0.000625	0.000625	0.000625	0.000772874	0	0	7.84342E-06	7.84342E-06	7.84342E-06	0.610351563	0.610351563	324	324	0.027225
Skewness		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coefficient of Variation (CoV) 2		0.012195122	0.128205128	0.172413793	0.135135135	0.16574664	0	0	0.162162162	0.123214492	0.123214492	0.128205128	0.135135135	0.620689655	0.620689655	0.25984252
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Sum Check																
TMF-RX																
Count		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Minimum		6.9	0.02	0.02	0.01	0.01	0.01	0.01	0.017037053	-0.03287166	0	0.625	0.3125	4	-4	0.5
10 Percentile		7.28	0.042	0.034	0.032	0.034592589	0.01	0.01	0.017317114	-0.023704739	0.002592589	1.3125	1.081018417	10.2	2.2	0.598
25 Percentile		7.85	0.075	0.055	0.065	0.071481473	0.01	0.01	0.017737206	-0.009954357	0.006481473	2.34375	2.233796044	19.5	11.5	0.745

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID			Total-S	Sulphide-S	Sulphide-S Calc	Sulphide-S + S del	Sulphate-S $NaCO_3$	Sulphate-S HCl						NP		Total-C
Typical Detection Limit			0.01	0.01			0.01	0.01	Barite-S	S del	S del Calc	TAP	SAP	1	NP_ADJ	0.01
Units	Purpose	Paste pH	%	%	%	%	%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	%
Median-25Percentile		0.95	0.055	0.035	0.055	0.061481473	0	0	0.000700153	0.022917304	0.006481473	1.71875	1.921296044	15.5	15.5	0.245
Mean		8.166666667	0.223333333	0.17	0.213333333	0.248175196	0.01	0.01	0.019448691	0.023884642	0.034841863	6.979166667	7.755474873	40	32	0.9
Standard Deviation		0.89566859	0.214527905	0.165126214	0.214527905	0.254875115	0	0	0.002487	0.051383762	0.04045528	6.703997046	7.964847342	31.63331577	31.63331577	0.296760285
Median		8.8	0.13	0.09	0.12	0.132962947	0.01	0.01	0.018437359	0.012962947	0.012962947	4.0625	4.155092087	35	27	0.99
75Percentile-Median		0	0.195	0.155	0.195	0.234299847	0	0	0.002217151	0.039299847	0.039299847	6.09375	7.321870223	23	23	0.11
75 Percentile		8.8	0.325	0.245	0.315	0.367262794	0.01	0.01	0.02065451	0.052262794	0.052262794	10.15625	11.47696231	58	50	1.1
90 Percentile		8.8	0.442	0.338	0.432	0.507842702	0.01	0.01	0.0219848	0.075842702	0.075842702	13.8125	15.87008444	71.8	63.8	1.166
Maximum		8.8	0.52	0.4	0.51	0.601562641	0.01	0.01	0.02287166	0.091562641	0.091562641	16.25	18.79883253	81	73	1.21
Interquartile Range (IQR) 1		0.95	0.25	0.19	0.25	0.295781321	0	0	0.002917304	0.062217151	0.045781321	7.8125	9.243166266	38.5	38.5	0.355
Variance		0.802222222	0.046022222	0.027266667	0.046022222	0.064961324	0	0	6.18517E-06	0.002640291	0.00163663	44.94357639	63.43879319	1000.666667	1000.666667	0.088066667
Skewness		-1.73205081	1.396813283	1.501539059	1.396813283	1.434629059	-	-	1.32940407	0.757442414	1.599629236	1.396813283	1.434629059	0.571081166	0.571081166	-1.04597784
Coefficient of Variation (CoV) 2		0.109673705	0.960572711	0.971330673	1.005599557	1.026996731	0	0	0.127874939	2.151330574	1.161111291	0.960572711	1.026996731	0.790832894	0.988541118	0.32973365
NPR < 1.0 or NPR = 1.0																
1.0 < NPR < 2.0																
NPR > 2.0 or NPR =2.0																
Sum Check																
% NPR < 1.0 or NPR = 1.0 of Total																
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% NPR > 2.0 or NPR =2.0 of Total																
Sum Check																
WSF-OVB																
Count		9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Minimum		7.4	0.06	0.01	0.04	0.01	0.005	0.01	0.019370896	-0.029441945	0	1.875	0.3125	9	9	0.07
10 Percentile		7.8	0.092	0.034	0.08	0.043566689	0.017	0.01	0.031506879	-0.021441945	0	2.875	1.361459016	11.4	11.4	0.11
25 Percentile		8	0.11	0.05	0.09	0.057057291	0.02	0.02	0.038041639	-0.018077164	0	3.4375	1.783040329	12	12	0.14
Median-25Percentile		0.1	0.1	0.12	0.1	0.112942709	0.01	0	0.001400306	0.025601223	0.007524059	3.125	3.529459671	2	2	0.24
Mean		8.088888889	0.308888889	0.234444444	0.285555556	0.254357607	0.030555556	0.023333333	0.038638066	0.012473045	0.019913162	9.652777778	7.948675212	52.55555556	52.55555556	0.686666667
Standard Deviation		0.292287699	0.246461376	0.213287032	0.235943077	0.233890307	0.016063147	0.012472191	0.007708445	0.031108907	0.023498608	7.701918001	7.309072093	65.87549049	65.87549049	0.822732574
Median		8.1	0.21	0.17	0.19	0.17	0.03	0.02	0.039441945	0.007524059	0.007524059	6.5625	5.3125	14	14	0.38
75Percentile-Median		0.2	0.31	0.26	0.31	0.310629104	0.01	0	0.003500764	0.029066463	0.029066463	9.6875	9.707159496	36	36	0.1
75 Percentile		8.3	0.52	0.43	0.5	0.480629104	0.04	0.02	0.042942709	0.036590522	0.036590522	16.25	15.0196595	50	50	0.48
90 Percentile		8.4	0.694	0.55	0.646	0.609685404	0.052	0.042	0.044343015	0.053595108	0.053595108	21.6875	19.05266889	137.2	137.2	1.792
Maximum		8.4	0.71	0.59	0.67	0.626590522	0.06	0.05	0.048077164	0.065459125	0.065459125	22.1875	19.58095381	214	214	2.68
Interquartile Range (IQR) 1		0.3	0.41	0.38	0.41	0.423571813	0.02	0	0.00490107	0.054667686	0.036590522	12.8125	13.23661917	38	38	0.34
Variance		0.085432099	0.06074321	0.045491358	0.055669136	0.054704676	0.000258025	0.000155556	5.94201E-05	0.000967764	0.000552185	59.3195409	53.42253486	4339.580247	4339.580247	0.676888889
Skewness		-1.42049805	0.7917498	0.722251135	0.760261372	0.735551869	0.438800229	1.295878193	-1.803858712	0.369046681	1.003733939	0.7917498	0.735551869	1.951933588	1.951933588	1.917339339
Coefficient of Variation (CoV) 2		0.036134468	0.797896541	0.909755113	0.826259804	0.919533369	0.525702993	0.534522484	0.199503912	2.494090766	1.180054032	0.797896541	0.919533369	1.253444851	1.253444851	1.198154234
NPR < 1.0 or NPR = 1.0																
1.0 < NPR < 2.0																
NPR > 2.0 or NPR =2.0																
Sum Check																
% NPR < 1.0 or NPR = 1.0 of Total																
% 1.0 < NPR < 2.0 of Total																
% NPR > 2.0 or NPR =2.0 of Total																
Sum Check																

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	Inorganic-C	Inorganic CO_2				Inorganic-CANP														
Typical Detection Limit	0.05	0.2	C del	C del Calc	Total-CANP		Ca-CANP	CaMg-CANP	TNNP	TNNP_Adj	SNNP	SNNP_Adj	TCNNP	TNPR	TNPR_Adj	SNPR	SNPR_Adj	SNPR for Charts	Adj SNPR for Charts	FIZZ
Units	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t							
By Location																				
CCAR-OVB																				
Count	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Minimum	2.29	8.4	1.3	1.3	81.64578505	191.0374915	151.5834082	225.3548462	261.75	261.75	261.8885719	261.8885719	0	210.4	210.4	236.6325	236.632496	236.6324959	236.6324959	3
10 Percentile	2.29	8.4	1.3	1.3	81.64578505	191.0374915	151.5834082	225.3548462	261.75	261.75	261.8885719	261.8885719	0	210.4	210.4	236.6325	236.632496	236.6324959	236.6324959	3
25 Percentile	2.29	8.4	1.3	1.3	81.64578505	191.0374915	151.5834082	225.3548462	261.75	261.75	261.8885719	261.8885719	0	210.4	210.4	236.6325	236.632496	236.6324959	236.6324959	3
Median-25Percentile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean	2.29	8.4	1.3	1.3	81.64578505	191.0374915	151.5834082	225.3548462	261.75	261.75	261.8885719	261.8885719	0	210.4	210.4	236.6325	236.632496	236.6324959	236.6324959	3
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Median	2.29	8.4	1.3	1.3	81.64578505	191.0374915	151.5834082	225.3548462	261.75	261.75	261.8885719	261.8885719	0	210.4	210.4	236.6325	236.632496	236.6324959	236.6324959	3
75Percentile-Median	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75 Percentile	2.29	8.4	1.3	1.3	81.64578505	191.0374915	151.5834082	225.3548462	261.75	261.75	261.8885719	261.8885719	0	210.4	210.4	236.6325	236.632496	236.6324959	236.6324959	3
90 Percentile	2.29	8.4	1.3	1.3	81.64578505	191.0374915	151.5834082	225.3548462	261.75	261.75	261.8885719	261.8885719	0	210.4	210.4	236.6325	236.632496	236.6324959	236.6324959	3
Maximum	2.29	8.4	1.3	1.3	81.64578505	191.0374915	151.5834082	225.3548462	261.75	261.75	261.8885719	261.8885719	0	210.4	210.4	236.6325	236.632496	236.6324959	236.6324959	3
Interquartile Range (IQR) 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coefficient of Variation (CoV) 2	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
CCAR-RX																				
Count	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	43	43	47	47	47
Minimum	0.025	0.1	0.03	0.03	2.046830266	2.274255851	0.998902196	8.876747437	-21.6875	-30.6875	-20.09471682	-29.09471682	0	0.121519	-19.2	-	-	0.125036195	0.01	1
10 Percentile	0.025	0.1	0.082	0.082	3.638809362	2.274255851	2.746981038	25.77120224	-6.7875	-15.7875	-6.871941654	-15.87194165	0	0.576441	-3.84	-	-	0.626848573	0.01	1
25 Percentile	0.025	0.1	0.1375	0.1375	6.25420359	2.274255851	4.869648204	34.21842964	1.59375	-7.40625	2.375	-6.625	0	1.807059	-0.3016875	-	-	2.183613812	0.01	1
Median-25Percentile	0.055	0.2	0.3875	0.3875	13.53182231	4.548511702	21.85098553	29.63688257	9.84375	9.84375	9.6875	9.6875	0	4.592941	2.28478605	-	-	5.661423338	3.485889145	0
Mean	0.474468085	1.742553191	0.7678723	0.76787234	28.25399982	39.63011791	61.8044167	119.7416569	41.47473404	32.47473404	41.58979699	32.58979699	0	20.19457	14.5979969	-	-	39.33093962	34.9494707	1.659574
Standard Deviation	1.391361355	5.099426112	0.7092337	0.70923374	39.41579389	115.9739967	78.45575705	122.420656	119.5425426	119.5425426	119.4360343	119.4360343	0	60.36781	59.783147	-	-	91.70698138	91.67209973	0.832239
Median	0.08	0.3	0.525	0.525	19.7860259	6.822767553	26.72063373	63.85531221	11.4375	2.4375	12.0625	3.0625	0	6.4	1.98309859	-	-	7.845037149	3.495889145	1
75Percentile-Median	0.2	0.75	0.8075	0.8075	13.98667348	17.05691888	79.78731287	122.6995573	19.5	19.5	19.234375	19.234375	0	12.57143	9.82642522	-	-	16.22452807	15.20721645	1
75 Percentile	0.28	1.05	1.3325	1.3325	33.77269939	23.87968643	106.5079466	186.5548695	30.9375	21.9375	31.296875	22.296875	0	18.97143	11.8095238	-	-	24.06956522	18.70310559	2
90 Percentile	0.76	2.76	1.806	1.806	47.39549193	62.76946149	137.6986677	232.3417055	75.225	66.225	73.525	64.525	0	33.81333	23.5487179	-	-	120.32	103.04	3
Maximum	9	33	2.635	2.635	245.6196319	750.5044308	384.5773453	686.0866729	779.125	770.125	779.5541921	770.5541921	0	416.5333	411.733333	-	-	540.1824298	533.9575363	4
Interquartile Range (IQR) 1	0.255	0.95	1.195	1.195	27.5184958	21.60543058	101.6382984	152.3364399	29.34375	29.34375	28.921875	28.921875	0	17.16437	12.1112113	-	-	21.88595141	18.69310559	1
Variance	1.935886419	26.00414667	0.5030125	0.50301249	1553.604808	13449.96791	6155.305815	14986.81701	14290.41949	14290.41949	14264.96628	14264.96628	0	3644.272	3574.02467	-	-	8410.170434	8403.773869	0.692621
Skewness	5.332032818	5.336509206	0.8279329	0.82793288	4.089175939	5.336509206	2.206659149	2.384518179	5.367297958	5.367297958	5.385402436	5.385402436	-	6.23234	6.43651215	-	-	4.014670657	4.024552353	0.957301
Coefficient of Variation (CoV) 2	2.932465635	2.926410589	0.923635	0.92363496	1.395051821	2.926410589	1.26941991	1.022373158	2.882297991	3.681093814	2.871762858	3.664829035	-	2.989309	4.09529798	-	-	2.331675324	2.622989645	0.501477
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	Inorganic-C	Inorganic CO_2				Inorganic-CANP														
Typical Detection Limit	0.05	0.2	C del	C del Calc	Total-CANP		Ca-CANP	CaMg-CANP	TNNP	TNNP_Adj	SNNP	SNNP_Adj	TCNNP	TNPR	TNPR_Adj	SNPR	SNPR_Adj	SNPR for Charts	Adj SNPR for Charts	FIZZ
Units	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t							
Kerr Haul Rd-OVB																				
Count	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Minimum	0.05	0.2	0.03	0.03	7.500499584	4.545413261	36.95938124	83.04054054	7.8125	7.8125	9.0625	9.0625	5.312999584	1.433333	1.43333333	1.5544682	1.55446815	1.554468153	1.554468153	1
10 Percentile	0.05	0.2	0.033	0.033	9.250616153	4.545413261	38.23298154	85.61766076	8.1125	8.1125	9.175	9.175	7.063116153	1.491469	1.49146893	1.6057147	1.60571471	1.605714714	1.605714714	1
25 Percentile	0.05	0.2	0.0375	0.0375	11.87579101	4.545413261	40.14338199	89.4833411	8.5625	8.5625	9.34375	9.34375	9.688291007	1.578672	1.57867232	1.6825846	1.68258456	1.682584557	1.682584557	1
Median-25Percentile	0.215	0.8	0.0125	0.0125	16.04273522	18.18165304	10.30117889	7.301840634	2.34375	2.34375	3.043902872	3.043902872	2.136485221	1.520601	1.52060129	2.7000605	2.70006046	2.700060456	2.700060456	0.5
Mean	0.31	1.15	0.06	0.06	30.83538718	26.13612625	59.87170035	115.0397833	13.1875	13.1875	14.76526102	14.76526102	13.02288718	3.165113	3.16511299	5.2466062	5.24660621	5.246606211	5.246606211	1.5
Standard Deviation	0.267675176	0.973396117	0.0308221	0.03082207	21.43446293	22.12243808	25.58277976	40.11530896	6.0584716	6.0584716	6.530765991	6.530765991	6.429740896	1.644285	1.64428467	3.8283439	3.82834389	3.82834389	3.82834389	0.5
Median	0.265	1	0.05	0.05	27.91852623	22.7270663	50.44456088	96.78518173	10.90625	10.90625	12.38765287	12.38765287	11.82477623	3.099274	3.09927361	4.382645	4.38264501	4.382645012	4.382645012	1.5
75Percentile-Median	0.26	0.95	0.0225	0.0225	18.95959617	21.59071299	19.72831836	25.55644222	4.625	4.625	5.42151102	5.42151102	3.33459617	1.586441	1.58644068	3.5640217	3.56402165	3.564021654	3.564021654	0.5
75 Percentile	0.525	1.95	0.0725	0.0725	46.8781224	44.31777929	70.17287924	122.341624	15.53125	15.53125	17.80916389	17.80916389	15.1593724	4.685714	4.68571429	7.9466667	7.94666667	7.946666667	7.946666667	2
90 Percentile	0.606	2.22	0.095	0.095	54.75364696	50.45408719	89.05213074	159.0655871	20.0875	20.0875	22.25760856	22.25760856	19.94114696	4.891429	4.89142857	9.5786667	9.57866667	9.578666667	9.578666667	2
Maximum	0.66	2.4	0.11	0.11	60.00399667	54.54495913	101.6382984	183.5482293	23.125	23.125	25.22323833	25.22323833	23.12899667	5.028571	5.02857143	10.666667	10.6666667	10.66666667	10.66666667	2
Interquartile Range (IQR) 1	0.475	1.75	0.035	0.035	35.00233139	39.77236603	30.02949726	32.85828285	6.96875	6.96875	8.465413891	8.465413891	5.471081391	3.107042	3.10704197	6.2640821	6.26408211	6.26408211	6.26408211	1
Variance	0.07165	0.9475	0.00095	0.00095	459.436201	489.4022668	654.47862	1609.238013	36.70507813	36.70507813	42.65090443	42.65090443	41.34156799	2.703672	2.70367206	14.656217	14.6562169	14.65621694	14.65621694	0.25
Skewness	0.285289614	0.240851399	1.3309377	1.33093773	0.366647961	0.240851399	1.404981308	1.835860542	1.445473648	1.445473648	1.254964792	1.254964792	0.923857982	0.040948	0.04094751	0.5479274	0.54792745	0.547927446	0.547927446	0
Coefficient of Variation (CoV) 2	0.863468311	0.846431406	0.5137012	0.51370117	0.695125468	0.846431406	0.427293356	0.348708141	0.459410169	0.459410169	0.442306166	0.442306166	0.493726223	0.519503	0.51950267	0.7296801	0.72968005	0.729680051	0.729680051	0.333333
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
MDT-RX																				
Count	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Minimum	0.025	0.1	-0.02	0	0.113712793	2.274255851	3.246432136	10.30848089	-66.6875	-81.6875	-70.43638986	-85.43638986	0	0.107113	-0.2823529	0.1019935	-0.3490909	0.101993475	0.01	0
10 Percentile	0.025	0.12	0.001	0.001	0.682276755	2.729107021	8.240943114	32.58625349	-34.5	-49.5	-38.91552468	-53.91552468	0	0.196987	-0.2433062	0.1941484	-0.232447	0.194148416	0.01	0
25 Percentile	0.24	0.9	0.005	0.005	5.458214042	20.46830266	26.72063373	47.53355079	-30.625	-45.625	-32.27898195	-47.27898195	0	0.433333	0.18333333	0.5050757	0.18371977	0.505075658	0.183719775	0
Median-25Percentile	0.19	0.7	0.025	0.025	5.230788457	15.91979096	13.98463074	28.63466915	25.0625	25.0625	29.36345727	29.36345727	0	0.471308	0.51877637	0.4353211	0.47906231	0.435321084	0.479062313	1
Mean	0.534230769	1.969230769	0.0346154	0.03615385	12.93701694	44.78534599	49.08067519	88.92166105	14.19230769	-0.807692308	14.06972536	-0.930274637	0	11.60033	8.15461423	25.311773	17.531333	25.31177267	17.58799322	1
Standard Deviation	0.504848973	1.849068212	0.0333664	0.03120366	12.15939005	42.05254201	40.5033706	54.02960863	55.1354836	55.1354836	55.90725539	55.90725539	0	24.90665	17.7716774	56.005304	39.1241512	56.00530381	39.09851452	0.960769
Median	0.43	1.6	0.03	0.03	10.6890025	36.38809362	40.70526447	76.16821994	-5.5625	-20.5625	-2.915524678	-17.91552468	0	0.904641	0.7021097	0.9403967	0.66278209	0.940396741	0.662782088	1
75Percentile-Median	0.27	1	0.02	0.02	6.822767553	22.74255851	23.4742016	52.11509786	51.75	51.75	48.79496524	48.79496524	0	3.895359	3.20900141	3.9420369	3.39875637	3.942036932	3.398756373	1
75 Percentile	0.7	2.6	0.05	0.05	17.51177005	59.13065212	64.17946607	128.2833178	46.1875	31.1875	45.87944056	30.87944056	0	4.8	3.91111111	4.8824337	4.06153846	4.882433673	4.061538462	2
90 Percentile	0.874	3.2	0.078	0.078	21.55994547	72.77618723	76.66574351	137.790028	62.175	47.175	62.7375	47.7375	0	36.848	23.968	108.51692	70.0189878	108.5169231	70.01898779	2
Maximum	2.01	7.4	0.1	0.1	47.98679845	168.294933	164.0696856	220.4869525	151.5	136.5	150.2897967	135.2897967	0	88	64	176	128	176	128	2
Interquartile Range (IQR) 1	0.46	1.7	0.045	0.045	12.05355601	38.66234947	37.45883234	80.74976701	76.8125	76.8125	78.15842251	78.15842251	0	4.366667	3.72777778	4.377358	3.87781869	4.377358015	3.877818687	2
Variance	0.254872485	3.419053254	0.0011133	0.00097367	147.8507665	1768.41629	1640.52303	2919.198608	3039.921551	3039.921551	3125.621205	3125.621205	0	620.3412	315.832519	3136.5941	1530.69921	3136.594055	1528.693838	0.923077
Skewness	1.935822994	1.976604651	0.3810809	0.64694758	1.838810198	1.976604651	1.742996082	0.916132298	1.014683265	1.014683265	0.88668342	0.88668342	-	2.66097	2.78097844	2.2735545	2.37097213	2.273554478	2.37171075	0
Coefficient of Variation (CoV) 2	0.945001677	0.938979952	0.9639169	0.86308006	0.93989133	0.938979952	0.825240697	0.60760908	3.884885023	-68.26297969	3.973585408	-60.09758103	-	2.147064	2.17934006	2.2126188	2.23167007	2.21261879	2.223023061	0.960769
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	Inorganic-C	Inorganic CO_2				Inorganic-CANP														
Typical Detection Limit	0.05	0.2	C del	C del Calc	Total-CANP		Ca-CANP	CaMg-CANP	TNNP	TNNP_Adj	SNNP	SNNP_Adj	TCNNP	TNPR	TNPR_Adj	SNPR	SNPR_Adj	SNPR for Charts	Adj SNPR for Charts	FIZZ
Units	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t							
MP-OVB																				
Count	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Minimum	0.05	0.2	0.01	0.01	6.667110741	4.545413261	11.7371008	49.25163094	-200.875	-200.875	-198.1416157	-198.1416157	-178.5394463	0.051917	0.0519174	0.0525959	0.05259594	0.052595941	0.052595941	1
10 Percentile	0.056	0.23	0.01	0.01	7.417160699	5.22722525	12.18660679	50.71199907	-157.0375	-157.0375	-151.9509477	-151.9509477	-141.3524292	0.078695	0.07869512	0.0875951	0.08759507	0.087595074	0.087595074	1
25 Percentile	0.065	0.275	0.01	0.01	8.542235637	6.249943233	12.86086577	52.90255126	-91.28125	-91.28125	-82.66494572	-82.66494572	-85.57190362	0.118862	0.1188617	0.1400938	0.14009377	0.140093774	0.140093774	1
Median-25Percentile	0.01	0.025	0.095	0.095	6.45876353	0.568176658	6.992315369	4.366787046	62.3125	62.3125	60.70358453	60.70358453	55.52034763	0.320957	0.3209573	0.4588218	0.4588218	0.4588218	0.4588218	0
Mean	0.075	0.3	0.135	0.135	17.5011657	6.818119891	46.51138348	103.514329	-60.84375	-60.84375	-56.65670953	-56.65670953	-54.8425843	2.952889	2.95288885	3.0326068	3.03260677	3.032606772	3.032606772	1
Standard Deviation	0.018027756	0.070710678	0.1320038	0.13200379	10.59092628	1.60704627	51.18136396	84.82014839	84.83654435	84.83654435	84.57212491	84.57212491	76.20148373	4.584325	4.58432496	4.5463436	4.54634356	4.546343559	4.546343559	0
Median	0.075	0.3	0.105	0.105	15.00099917	6.818119891	19.85318114	57.2693383	-28.96875	-28.96875	-21.9613612	-21.9613612	-30.051556	0.439819	0.439819	0.5989156	0.59891557	0.598915573	0.598915573	1
75Percentile-Median	0.01	0.025	0.125	0.125	8.958930058	0.568176658	33.65051771	50.61177773	30.4375	30.4375	26.0082362	26.0082362	30.72931932	2.834027	2.83402715	2.892513	2.892513	2.892512998	2.892512998	0
75 Percentile	0.085	0.325	0.23	0.23	23.95992923	7.386296549	53.50369885	107.881116	1.46875	1.46875	4.046875	4.046875	0.677763322	3.273846	3.27384615	3.4914286	3.49142857	3.491428571	3.491428571	1
90 Percentile	0.094	0.37	0.284	0.284	29.58530391	8.409014532	102.1627221	193.3126514	9.85	9.85	10.88125	10.88125	11.83443797	7.837538	7.83753846	7.9245714	7.92457143	7.924571429	7.924571429	1
Maximum	0.1	0.4	0.32	0.32	33.33555371	9.090826521	134.6020709	250.2670084	15.4375	15.4375	15.4375	15.4375	19.27222107	10.88	10.88	10.88	10.88	10.88	10.88	1
Interquartile Range (IQR) 1	0.02	0.05	0.22	0.22	15.41769359	1.136353315	40.64283308	54.97856477	92.75	92.75	86.71182072	86.71182072	86.24966694	3.154984	3.15498445	3.3513348	3.3513348	3.351334798	3.351334798	0
Variance	0.000325	0.005	0.017425	0.017425	112.1677195	2.582597714	2619.532016	7194.457572	7197.239258	7197.239258	7152.444312	7152.444312	5806.666123	21.01604	21.0160353	20.66924	20.6692398	20.66923976	20.66923976	0
Skewness	-2.12677E-15	2.07242E-15	0.5082826	0.50828257	0.78611249	3.25665E-15	1.926966498	1.986970072	-1.496410633	-1.496410633	-1.625895527	-1.625895527	-1.336369448	1.980386	1.98038644	1.9596348	1.95963482	1.959634815	1.959634815	-
Coefficient of Variation (CoV) 2	0.240370085	0.23570226	0.9778058	0.97780584	0.605155477	0.23570226	1.100405108	0.8194049	-1.394334576	-1.394334576	-1.492711554	-1.492711554	-1.389458296	1.552488	1.55248815	1.4991537	1.49915367	1.499153666	1.499153666	0
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
MP-RX																				
Count	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Minimum	0	0.03	-0.0832061	0	0.227425585	0.682276755	0.998902196	89.91286114	-206.1856156	-221.1856156	-208.9827997	-223.9827997	0	0.001825	-3.1088777	0.0018002	-4.639196	0.001800177	0.01	1
10 Percentile	0	0.046	-0.0306049	0	0.500336287	1.046157691	3.496157685	124.1026561	-31.31030151	-46.31030151	-26.55453014	-41.55453014	0	0.07224	-0.7553269	0.1058877	-1.2045663	0.105887705	0.01	1
25 Percentile	0	0.1	-0.0154726	0	0.90970234	2.274255851	7.991217565	194.5725769	-11.72346106	-26.72346106	-8.439632204	-23.4396322	0	0.259353	-0.3466455	0.3091705	-0.4023002	0.309170486	0.01	1
Median-25Percentile	0	1.23	0.0281834	0.01271075	8.187321063	27.97334697	44.20142216	76.59773998	48.41597359	48.41597359	45.44464474	45.44464474	0	3.136893	2.45428744	3.1578303	2.52191747	3.15783035	2.109617225	3
Mean	0	2.281111111	0.0100944	0.02113728	14.38677405	51.87830291	66.98194167	320.0931794	64.87449489	49.87449489	65.51904111	50.51904111	0	29.8899	25.9237885	49.30135	42.8106575	24.7770761	22.36246017	2.740741
Standard Deviation	0	3.162538049	0.0439291	0.03252608	19.34475531	71.92420663	67.66988406	171.8572472	115.2023372	115.2023372	114.3254919	114.3254919	0	82.65118	73.6506985	163.0876	145.138391	48.63841531	46.23074507	1.429649
Median	0	1.33	0.0127107	0.01271075	9.097023404	30.24760282	52.19263972	271.1703169	36.69251253	21.69251253	37.00501253	22.00501253	0	3.396246	2.10764199	3.4670008	2.11961722	3.467000835	2.119617225	4
75Percentile-Median	0	2.055	0.0155919	0.01559191	12.2809816	46.73595774	48.19703094	137.7327586	103.8169643	103.8169643	103.7388393	103.7388393	0	17.2888	17.297404	16.337403	16.2078901	16.337403	16.20789008	0
75 Percentile	0	3.385	0.0283027	0.02830266	21.378005	76.98356055	100.3896707	408.9030755	140.5094768	125.5094768	140.7438518	125.7438518	0	20.68505	19.4050459	19.804404	18.3275073	19.80440383	18.3275073	4
90 Percentile	0	4.796	0.0416119	0.04161191	29.6562963	109.0733106	161.3227046	593.1958062	231.8593358	216.8593358	228.9368793	213.9368793	0	47.24669	41.4181167	77.460317	63.8603175	77.46031746	63.86031746	4
Maximum	0	13.9	0.1549125	0.15491252	84.37489207	316.1215633	255.7189621	709.5671016	326.4630326	311.4630326	326.6192826	311.6192826	0	431.0777	383.077694	862.15539	766.155388	200	200	4
Interquartile Range (IQR) 1	0	3.285	0.0437753	0.02830266	20.46830266	74.7093047	92.39845309	214.3304986	152.2329379	152.2329379	149.183484	149.183484	0	20.42569	19.7516914	19.495233	18.7298076	19.49523335	18.3175073	3
Variance	0	10.00164691	0.0019298	0.00105795	374.2195579	5173.091499	4579.213209	29534.91341	13271.57849	13271.57849	13070.3181	13070.3181	0	6831.217	5424.42539	26597.565	21065.1525	2365.695444	2137.28179	2.043896
Skewness	-	2.320015911	0.9580644	2.85527933	2.274653554	2.320015911	1.232433775	0.726342125	0.33179575	0.33179575	0.300037995	0.300037995	-	4.510833	4.49900556	4.8536712	4.85320379	2.666454906	2.89198629	-0.31712
Coefficient of Variation (CoV) 2	-	1.386402457	4.3518237	1.53880118	1.344620777	1.386402457	1.010270565	0.536897561	1.775772395	2.30984469	1.744920102	2.263017852	-	2.765188	2.84104688	3.3079743	3.3902397	1.963040963	2.067337167	0.521629
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	Inorganic-C	Inorganic CO_2				Inorganic-CANP														
Typical Detection Limit	0.05	0.2	C del	C del Calc	Total-CANP		Ca-CANP	CaMg-CANP	TNNP	TNNP_Adj	SNNP	SNNP_Adj	TCNNP	TNPR	TNPR_Adj	SNPR	SNPR_Adj	SNPR for Charts	Adj SNPR for Charts	FIZZ
Units	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t							
MRSF-OVB																				
Count	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Minimum	0.05	0.2	-0.04	0	9.167277269	4.545413261	28.71843812	59.56011184	-121.4375	-121.4375	-120.5	-120.5	-122.6027789	0.153377	0.15337691	0.154386	0.15438596	0.154385965	0.154385965	1
10 Percentile	0.112	0.45	0.006	0.006	21.58477102	10.22717984	33.38830589	79.11759087	-39.875	-39.875	-39.17403909	-39.17403909	-47.62315154	0.579124	0.57912426	0.5951702	0.59517021	0.595170208	0.595170208	1.3
25 Percentile	0.2575	0.975	0.0675	0.0675	33.96059534	22.15888965	52.3175025	105.2324091	14.625	14.625	14.609375	14.609375	27.47597055	4.885312	4.88531187	5.6710085	5.6710085	5.671008497	5.671008497	2
Median-25Percentile	0.1775	0.675	0.0275	0.0275	24.79331807	15.34076975	31.96487026	44.95643057	25.90625	25.90625	26.546875	26.546875	21.27744328	8.496506	8.49650631	12.719606	12.7196061	12.71960613	12.71960613	0
Mean	0.626666667	2.291666667	0.2204167	0.2225	70.59497988	52.08286028	84.93790232	149.4133174	39.67838542	39.67838542	40.54063766	40.54063766	49.89836529	29.98385	29.9838548	35.284424	35.2844243	35.2844243	35.2844243	2.125
Standard Deviation	0.492998197	1.789067883	0.4042738	0.40304311	45.81079616	40.66026439	39.14836704	53.94595986	63.26024824	63.26024824	63.21613424	63.21613424	69.50048663	48.85155	48.851551	50.66989	50.6698896	50.66988958	50.66988958	0.599479
Median	0.435	1.65	0.095	0.095	58.75391341	37.4996594	84.28237275	150.1888397	40.53125	40.53125	41.15625	41.15625	48.75341382	13.38182	13.3818182	18.390615	18.3906146	18.39061463	18.39061463	2
75Percentile-Median	0.485	1.725	0.1475	0.1475	43.96126145	39.20418937	30.09192864	38.08410997	37.890625	37.890625	38.07842642	38.07842642	44.74326082	20.45818	20.4581818	28.009385	28.0093854	28.00938537	28.00938537	0.25
75 Percentile	0.92	3.375	0.2425	0.2425	102.7151749	76.70384877	114.3743014	188.2729497	78.421875	78.421875	79.23467642	79.23467642	93.49667465	33.84	33.84	46.4	46.4	46.4	46.4	2.25
90 Percentile	1.328	4.85	0.347	0.347	131.5087594	110.2262716	137.9983383	214.3018639	113.56875	113.56875	114.4224098	114.4224098	120.6128372	58.88	58.88	71.509333	71.5093333	71.50933333	71.50933333	3
Maximum	1.87	6.8	2.07	2.07	178.3452123	154.5440509	157.0773703	263.1526095	151.75	151.75	153	153	177.4077123	233.6	233.6	233.6	233.6	233.6	233.6	3
Interquartile Range (IQR) 1	0.6625	2.4	0.175	0.175	68.75457952	54.54495913	62.0567989	83.04054054	63.796875	63.796875	64.62530142	64.62530142	66.0207041	28.95469	28.9546881	40.728992	40.7289915	40.7289915	40.7289915	0.25
Variance	0.243047222	3.200763889	0.1634373	0.16244375	2098.629045	1653.2571	1532.594642	2910.166586	4001.859007	4001.859007	3996.279628	3996.279628	4830.317641	2386.474	2386.47404	2567.4377	2567.43771	2567.43771	2567.43771	0.359375
Skewness	0.954644331	0.949852053	4.2160426	4.24398277	0.838927029	0.949852053	0.127361974	0.155775701	-0.637550858	-0.637550858	-0.63704745	-0.63704745	-0.67219159	3.302415	3.30241527	2.8047964	2.80479641	2.804796411	2.804796411	-0.05809
Coefficient of Variation (CoV) 2	0.78669925	0.780684167	1.8341346	1.81142972	0.648924275	0.780684167	0.460905744	0.361051885	1.594325162	1.594325162	1.559327575	1.559327575	1.392840952	1.629262	1.62926186	1.4360413	1.43604127	1.436041273	1.436041273	0.282108
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
MTDT-RX																				
Count	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Minimum	0.025	0.1	0.02	0.02	1.364553511	2.274255851	0.998902196	26.34389562	3.4375	3.4375	4.375	4.375	0	3.2	3.2	5.12	5.12	5.12	5.12	0
10 Percentile	0.051	0.18	0.026	0.026	4.002690298	4.093660532	3.196487026	34.70521901	5.8625	5.8625	6.4875	6.4875	0	3.84	3.84	6.272	6.272	6.272	6.272	0
25 Percentile	0.09	0.3	0.035	0.035	7.959895478	6.822767553	6.492864271	47.2472041	9.5	9.5	9.65625	9.65625	0	4.8	4.8	8	8	8	8	0
Median-25Percentile	0.24	0.9	0.075	0.075	2.729107021	20.46830266	53.19154192	66.71877912	25.4375	25.4375	25.4375	25.4375	0	4.8	4.8	1.984	1.984	1.984	1.984	0
Mean	0.291	1.06	0.293	0.293	13.28165417	24.10711202	40.60537425	88.42385834	28.5875	28.5875	28.9625	28.9625	0	10.28267	10.2826667	12.176356	12.1763556	12.17635556	12.17635556	0
Standard Deviation	0.22195495	0.821218607	0.3167586	0.31675858	10.97464541	18.67661221	30.51257903	43.10574492	19.4635316	19.4635316	19.32412069	19.32412069	0	5.936879	5.93687924	5.8460866	5.84608661	5.846086613	5.846086613	0
Median	0.33	1.2	0.11	0.11	10.6890025	27.29107021	59.68440619	113.9659832	34.9375	34.9375	35.09375	35.09375	0	9.6	9.6	9.984	9.984	9.984	9.984	0
75Percentile-Median	0.03	0.1	0.35	0.35	1.819404681	2.274255851	2.497255489	7.445013979	4.25	4.25	4.40625	4.40625	0	5.333333	5.33333333	6.816	6.816	6.816	6.816	0
75 Percentile	0.36	1.3	0.46	0.46	12.50840718	29.56532606	62.18166168	121.4109972	39.1875	39.1875	39.5	39.5	0	14.93333	14.9333333	16.8	16.8	16.8	16.8	0
90 Percentile	0.534	1.96	0.688	0.688	25.33521018	44.57541468	69.07408683	128.4551258	49.2	49.2	49.5125	49.5125	0	17.30133	17.3013333	19.306667	19.3066667	19.30666667	19.30666667	0
Interquartile Range (IQR) 1	0.27	1	0.425	0.425	4.548511702	22.74255851	55.68879741	74.1637931	29.6875	29.6875	29.84375	29.84375	0	10.13333	10.1333333	8.8	8.8	8.8	8.8	0
Variance	0.049264	0.6744	0.100336	0.100336	120.442842	348.8158437	931.0174788	1858.105245	378.8290625	378.8290625	373.4216406	373.4216406	0	35.24654	35.2465351	34.176729	34.1767287	34.17672868	34.17672868	0
Skewness	0.537542759	0.591601521	1.1695606	1.16956056	1.553358755	0.591601521	-0.511008869	-0.621744386	-0.044340964	-0.044340964	-0.019854716	-0.019854716	-	0.307228	0.30722794	0.5161753	0.51617528	0.516175283	0.516175283	-
Coefficient of Variation (CoV) 2	0.762731788	0.774734535	1.0810873	1.08108731	0.826301097	0.774734535	0.751441886	0.48748998	0.680840633	0.680840633	0.667211763	0.667211763	-	0.577368	0.57736766	0.4801179	0.48011793	0.480117929	0.480117929	-
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	Inorganic-C	Inorganic CO_2				Inorganic-CANP														
Typical Detection Limit	0.05	0.2	C del	C del Calc	Total-CANP	kg $CaCO_3$/t	Ca-CANP	CaMg-CANP	TNNP	TNNP_Adj	SNNP	SNNP_Adj	TCNNP	TNPR	TNPR_Adj	SNPR	SNPR_Adj	SNPR for Charts	Adj SNPR for Charts	FIZZ
Units	%	%	%	%	kg $CaCO_3$/t		kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t							
MTRSF-OVB																				
Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Minimum	0.51	1.9	0.17	0.17	56.6704413	43.18142598	96.64378743	165.5083877	53.0625	53.0625	53.375	53.375	55.7329413	57.6	57.6	76.8	76.8	76.8	76.8	2
10 Percentile	0.53	1.97	0.172	0.172	58.50389675	44.77232062	97.46788174	166.7969478	54.83125	54.83125	55.14375	55.14375	57.53514675	57.6	57.6	77.76	77.76	77.76	77.76	2
25 Percentile	0.56	2.075	0.175	0.175	61.25407993	47.15866258	98.7040232	168.729788	57.484375	57.484375	57.796875	57.796875	60.23845493	57.6	57.6	79.2	79.2	79.2	79.2	2
Median-25Percentile	0.05	0.175	0.005	0.005	4.583638634	3.977236603	2.060235778	3.22140028	4.421875	4.421875	4.421875	4.421875	4.505513634	0	0	2.4	2.4	2.4	2.4	0
Mean	0.61	2.25	0.18	0.18	65.83771857	51.13589918	100.764259	171.9511883	61.90625	61.90625	62.21875	62.21875	64.74396857	57.6	57.6	81.6	81.6	81.6	81.6	2
Standard Deviation	0.1	0.35	0.01	0.01	9.167277269	7.954473206	4.120471557	6.442800559	8.84375	8.84375	8.84375	8.84375	9.011027269	0	0	4.8	4.8	4.8	4.8	0
Median	0.61	2.25	0.18	0.18	65.83771857	51.13589918	100.764259	171.9511883	61.90625	61.90625	62.21875	62.21875	64.74396857	57.6	57.6	81.6	81.6	81.6	81.6	2
75Percentile-Median	0.05	0.175	0.005	0.005	4.583638634	3.977236603	2.060235778	3.22140028	4.421875	4.421875	4.421875	4.421875	4.505513634	0	0	2.4	2.4	2.4	2.4	0
75 Percentile	0.66	2.425	0.185	0.185	70.4213572	55.11313579	102.8244948	175.1725885	66.328125	66.328125	66.640625	66.640625	69.2494822	57.6	57.6	84	84	84	84	2
90 Percentile	0.69	2.53	0.188	0.188	73.17154038	57.49947775	104.0606362	177.1054287	68.98125	68.98125	69.29375	69.29375	71.95279038	57.6	57.6	85.44	85.44	85.44	85.44	2
Maximum	0.71	2.6	0.19	0.19	75.00499584	59.09037239	104.8847305	178.3939888	70.75	70.75	71.0625	71.0625	73.75499584	57.6	57.6	86.4	86.4	86.4	86.4	2
Interquartile Range (IQR) 1	0.1	0.35	0.01	0.01	9.167277269	7.954473206	4.120471557	6.442800559	8.84375	8.84375	8.84375	8.84375	9.011027269	0	0	4.8	4.8	4.8	4.8	0
Variance	0.01	0.1225	0.0001	0.0001	84.03897253	63.27364399	16.97828585	41.50967905	78.21191406	78.21191406	78.21191406	78.21191406	81.19861244	0	0	23.04	23.04	23.04	23.04	0
Coefficient of Variation (CoV) 2	0.163934426	0.155555556	0.0555556	0.05555556	0.139240506	0.155555556	0.040892193	0.037468776	0.142857143	0.142857143	0.142139628	0.142139628	0.139179409	0	0	0.0588235	0.05882353	0.058823529	0.058823529	0
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
MTT-RX																				
Count	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	11	11	15	15	15
Minimum	0.025	0.1	-0.03	0	1.137127925	2.274255851	3.745883234	6.585973905	-14.8125	-14.8125	-17.0196595	-17.0196595	0	0.350685	0.35068493	-	-	0.319748556	0.319748556	0
10 Percentile	0.078	0.28	-0.006	0	2.683621904	6.367916383	14.43413673	47.76262815	-2.6375	-2.6375	-0.341570212	-0.341570212	0	0.908856	0.9088563	-	-	0.988816533	0.988816533	0
25 Percentile	0.16	0.6	0.01	0.01	6.481629175	13.64553511	32.46432136	63.42579217	8.171875	8.171875	8.71875	8.71875	0	2.150562	2.1505618	-	-	2.166792015	2.166792015	0
Median-25Percentile	0.41	1.5	0.1	0.1	8.983310611	34.11383776	18.47969062	31.64130941	28.015625	28.015625	27.96875	27.96875	0	23.44944	23.4494382	-	-	55.43320799	55.43320799	0
Mean	0.636333333	2.333333333	0.1936667	0.19633333	18.87632356	53.06596986	61.06622089	113.0687636	46.64375	46.64375	47.27763962	47.27763962	0	112.476	112.47602	-	-	110.6617737	110.6617737	0.533333
Standard Deviation	0.531565194	1.950954183	0.2128729	0.21025751	14.44322577	44.36968964	44.98839937	73.67330822	47.25285871	47.25285871	47.24849977	47.24849977	0	155.4056	155.405608	-	-	118.538287	118.538287	0.884433
Median	0.57	2.1	0.11	0.11	15.46493979	47.75937287	50.94401198	95.06710158	36.1875	36.1875	36.6875	36.6875	0	25.6	25.6	-	-	57.6	57.6	0
75Percentile-Median	0.355	1.3	0.185	0.185	12.73583277	29.56532606	22.22557385	32.2140028	29.828125	29.828125	29.47973766	29.47973766	0	184	184	-	-	142.4	142.4	1
75 Percentile	0.925	3.4	0.295	0.295	28.20077255	77.32469893	73.16958583	127.2811044	66.015625	66.015625	66.16723766	66.16723766	0	209.6	209.6	-	-	200	200	1
90 Percentile	1.338	4.92	0.476	0.476	39.70850716	111.8933879	134.5021806	236.5223672	90.5625	90.5625	90.875	90.875	0	340.48	340.48	-	-	243.2	243.2	2
Maximum	1.86	6.8	0.715	0.715	48.8965008	154.6493979	157.0773703	270.5976235	176.375	176.375	176.53125	176.53125	0	473.6	473.6	-	-	377.6	377.6	2
Interquartile Range (IQR) 1	0.765	2.8	0.285	0.285	21.71914338	63.67916383	40.70526447	63.85531221	57.84375	57.84375	57.44848766	57.44848766	0	207.4494	207.449438	-	-	197.833208	197.833208	1
Variance	0.282561556	3.806222222	0.0453149	0.04420822	208.6067706	1968.669359	2023.956078	5427.756344	2232.832656	2232.832656	2232.420731	2232.420731	0	24150.9	24150.9031	-	-	14051.32549	14051.32549	0.782222
Skewness	0.893205124	0.884911046	1.1222228	1.16306174	0.721338157	0.884911046	1.079462061	1.051770696	1.25470851	1.25470851	1.224476328	1.224476328	-	1.279668	1.27966759	-	-	0.781934018	0.781934018	1.176354
Coefficient of Variation (CoV) 2	0.835356512	0.836123221	1.0991718	1.07092112	0.76515036	0.836123221	0.736714975	0.651579675	1.013058742	1.013058742	0.999383644	0.999383644	-	1.381678	1.38167769	-	-	1.07117646	1.07117646	1.658312
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
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% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	Inorganic-C	Inorganic CO_2				Inorganic-CANP														
Typical Detection Limit	0.05	0.2	C del	C del Calc	Total-CANP		Ca-CANP	CaMg-CANP	TNNP	TNNP_Adj	SNNP	SNNP_Adj	TCNNP	TNPR	TNPR_Adj	SNPR	SNPR_Adj	SNPR for Charts	Adj SNPR for Charts	FIZZ
Units	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t							
SP-RX																				
Count	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	11	11	14	14	14
Minimum	0	0.03	-0.0230925	0	0.227425585	0.682276755	0.998902196	99.36230196	-94.97487437	-109.9748744	-95.48682886	-110.4868289	0	-0.009805	-0.4839886	-	-	0.001	0.01	1
10 Percentile	0	0.043	-0.0191993	0	0.977930016	0.977930016	4.395169661	141.1689189	-61.51271985	-76.51271985	-59.36609049	-74.36609049	0	0.033114	-0.3338418	-	-	0.033001148	0.01	1
25 Percentile	0	0.125	0.0020058	0.00200579	1.762548284	2.842819814	10.80062999	172.0227749	-4.000863693	-19.00086369	-1.852426193	-16.85242619	0	0.71535	-0.0773241	-	-	0.790124243	0.01	1.25
Median-25Percentile	0	0.74	0.0196529	0.01965292	3.923091343	16.8294933	16.54431761	57.05457829	59.20606419	59.20606419	57.83887669	57.83887669	0	2.335613	2.56396725	-	-	2.355199106	2.552934509	2.75
Mean	0	0.921428571	0.0199776	0.02427452	6.172980167	20.9556432	37.28045694	264.6661563	34.26054312	19.26054312	35.25137334	20.25137334	0	75.28164	63.0873331	-	-	51.99859313	49.98316121	3
Standard Deviation	0	0.84941036	0.0270782	0.02134321	4.966199631	19.3177648	36.1775199	118.3053223	63.68892745	63.68892745	63.22776765	63.22776765	0	130.4029	112.345855	-	-	79.46234392	79.72510525	1.36277
Median	0	0.865	0.0216587	0.02165871	5.685639627	19.67231311	27.3449476	229.0773532	55.2052005	40.2052005	55.9864505	40.9864505	0	3.050963	2.48664313	-	-	3.145323349	2.562934509	4
75Percentile-Median	0	0.39	0.0208322	0.0208322	2.387968643	8.869597819	26.09631986	99.93499534	25.42586936	25.42586936	25.00117481	25.00117481	0	47.82623	37.3905499	-	-	54.38812065	42.50297702	0
75 Percentile	0	1.255	0.0424909	0.04249091	8.073608271	28.54191093	53.44126747	329.0123486	80.63106986	65.63106986	80.98762531	65.98762531	0	50.87719	39.877193	-	-	57.533444	45.06591153	4
90 Percentile	0	1.976	0.0505319	0.05053192	12.23549648	44.93929561	73.16958583	438.9122088	105.9856673	90.98566729	106.4055451	91.40554511	0	316.9925	268.992481	-	-	200	200	4
Maximum	0	3.03	0.0653124	0.06531243	18.42147239	68.90995228	138.0982285	496.5251631	115.602287	100.602287	115.914787	100.914787	0	370.9273	322.927318	-	-	200	200	4
Interquartile Range (IQR) 1	0	1.13	0.0404851	0.04048512	6.311059986	25.69909112	42.64063748	156.9895736	84.63193356	84.63193356	82.84005151	82.84005151	0	50.16184	39.9545171	-	-	56.74331976	45.05591153	2.75
Variance	0	0.721497959	0.0007332	0.00045553	24.66313878	373.176037	1308.812946	13996.14929	4056.27948	4056.27948	3997.750602	3997.750602	0	17004.91	12621.5912	-	-	6314.264101	6356.092407	1.857143
Skewness	-	1.14916047	-0.1476485	0.42133426	1.061421613	1.14916047	1.636201899	0.606176242	-0.748803056	-0.748803056	-0.781006439	-0.781006439	-	1.774418	1.85891996	-	-	1.374659923	1.439330423	-0.7615
Coefficient of Variation (CoV) 2	-	0.9218407	1.3554296	0.87924358	0.804506008	0.9218407	0.970415142	0.446998301	1.858958489	3.306704648	1.793625657	3.122147154	-	1.7322	1.78079893	-	-	1.528163343	1.595039276	0.454257
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
SRSF-OVB																				
Count	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Minimum	0.025	0.2	0.215	0.215	5.458214042	4.548511702	37.45883234	148.6139329	9.4375	9.4375	10.0625	10.0625	0	7.04	7.04	11.733333	11.7333333	11.73333333	11.73333333	1
10 Percentile	0.025	0.2	0.215	0.215	5.458214042	4.548511702	37.45883234	148.6139329	9.4375	9.4375	10.0625	10.0625	0	7.04	7.04	11.733333	11.7333333	11.73333333	11.73333333	1
25 Percentile	0.025	0.2	0.215	0.215	5.458214042	4.548511702	37.45883234	148.6139329	9.4375	9.4375	10.0625	10.0625	0	7.04	7.04	11.733333	11.7333333	11.73333333	11.73333333	1
Median-25Percentile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean	0.025	0.2	0.215	0.215	5.458214042	4.548511702	37.45883234	148.6139329	9.4375	9.4375	10.0625	10.0625	0	7.04	7.04	11.733333	11.7333333	11.73333333	11.73333333	1
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Median	0.025	0.2	0.215	0.215	5.458214042	4.548511702	37.45883234	148.6139329	9.4375	9.4375	10.0625	10.0625	0	7.04	7.04	11.733333	11.7333333	11.73333333	11.73333333	1
75Percentile-Median	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75 Percentile	0.025	0.2	0.215	0.215	5.458214042	4.548511702	37.45883234	148.6139329	9.4375	9.4375	10.0625	10.0625	0	7.04	7.04	11.733333	11.7333333	11.73333333	11.73333333	1
90 Percentile	0.025	0.2	0.215	0.215	5.458214042	4.548511702	37.45883234	148.6139329	9.4375	9.4375	10.0625	10.0625	0	7.04	7.04	11.733333	11.7333333	11.73333333	11.73333333	1
Maximum	0.025	0.2	0.215	0.215	5.458214042	4.548511702	37.45883234	148.6139329	9.4375	9.4375	10.0625	10.0625	0	7.04	7.04	11.733333	11.7333333	11.73333333	11.73333333	1
Interquartile Range (IQR) 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coefficient of Variation (CoV) 2	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	Inorganic-C	Inorganic CO_2				Inorganic-CANP														
Typical Detection Limit	0.05	0.2	C del	C del Calc	Total-CANP		Ca-CANP	CaMg-CANP	TNNP	TNNP_Adj	SNNP	SNNP_Adj	TCNNP	TNPR	TNPR_Adj	SNPR	SNPR_Adj	SNPR for Charts	Adj SNPR for Charts	FIZZ
Units	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t							
SRSF-RX																				
Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Minimum	0.89	3.3	0.19	0.19	24.56196319	75.05044308	118.3699102	192.7113234	71.5	56.5	71.98357538	56.98357538	0	4.352	3.712	3.8775875	3.30735405	3.877587505	3.307354048	3
10 Percentile	0.946	3.5	0.204	0.204	26.15394229	79.59895478	120.5175499	196.376561	72.9125	57.9125	72.72585717	57.72585717	0	4.8256	4.0736	4.5001564	3.79431136	4.500156417	3.794311364	3
25 Percentile	1.03	3.8	0.225	0.225	28.54191093	86.42172234	123.7390095	201.8744175	75.03125	60.03125	73.83927986	58.83927986	0	5.536	4.616	5.4340098	4.52474734	5.434009786	4.524747338	3
Median-25Percentile	0.14	0.5	0.035	0.035	3.979947739	11.37127925	5.369099301	9.163094129	3.53125	3.53125	1.855704484	1.855704484	0	1.184	0.904	1.5564223	1.21739329	1.556422281	1.217393289	0
Mean	1.153333333	4.233333333	0.3866667	0.38666667	35.0235401	96.27683102	127.6929973	217.8143833	88.5625	73.5625	87.37623753	72.37623753	0	8.135111	6.98844444	7.5721775	6.49206201	7.572177497	6.492062015	3
Standard Deviation	0.208539898	0.736357401	0.2304103	0.23041026	9.725380346	16.74665128	7.105363572	23.75162908	19.35206976	19.35206976	19.20401534	19.20401534	0	3.800701	3.43537421	3.2800136	2.95443481	3.280013598	2.954434807	0
Median	1.17	4.3	0.26	0.26	32.52185867	97.79300159	129.1081088	211.0375116	78.5625	63.5625	75.69498435	60.69498435	0	6.72	5.52	6.9904321	5.74214063	6.990432068	5.742140627	3
75Percentile-Median	0.115	0.4	0.225	0.225	7.732469893	9.097023404	3.246432136	19.32840168	18.53125	18.53125	19.37758426	19.37758426	0	3.306667	3.10666667	2.4290404	2.34227537	2.429040426	2.342275371	0
75 Percentile	1.285	4.7	0.485	0.485	40.25432856	106.890025	132.3545409	230.3659133	97.09375	82.09375	95.07256861	80.07256861	0	10.02667	8.62666667	9.4194725	8.084416	9.419472494	8.084415998	3
90 Percentile	1.354	4.94	0.62	0.62	44.8938105	112.348239	134.3024002	241.9629543	108.2125	93.2125	106.6991192	91.69911917	0	12.01067	10.4906667	10.876897	9.48978122	10.87689675	9.489781221	3
Maximum	1.4	5.1	0.71	0.71	47.98679845	115.9870484	135.6009731	249.694315	115.625	100.625	114.4501529	99.45015287	0	13.33333	11.7333333	11.848513	10.4266914	11.84851292	10.42669137	3
Interquartile Range (IQR) 1	0.255	0.9	0.26	0.26	11.71241763	20.46830266	8.615531437	28.49149581	22.0625	22.0625	21.23328875	21.23328875	0	4.490667	4.01066667	3.9854627	3.55966866	3.985462708	3.559668661	0
Variance	0.043488889	0.542222222	0.0530889	0.05308889	94.58302287	280.4503291	50.4861915	564.1398839	374.5026042	374.5026042	368.7942053	368.7942053	0	14.44533	11.801796	10.758489	8.72868503	10.7584892	8.728685026	0
Skewness	-0.292397199	-0.330831815	1.6129234	1.61292343	0.903439708	-0.330831815	-0.712413965	0.991445228	1.560644335	1.560644335	1.683657438	1.683657438	-	1.241592	1.37924002	0.6379985	0.89256854	0.63799854	0.892568536	-
Coefficient of Variation (CoV) 2	0.18081494	0.173942693	0.5958886	0.59588861	0.277681249	0.173942693	0.055644113	0.109045274	0.218513138	0.263069767	0.219785332	0.265335917	-	0.467197	0.49157924	0.4331665	0.45508419	0.433166497	0.455084194	0
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
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% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
TAR-RX																				
Count	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Minimum	0.025	0.1	0.03	0.03	3.183958191	2.274255851	1.997804391	33.50256291	-16.4375	-24.4375	-19.34148195	-27.34148195	0	0.108475	-1.92	0.0937142	-1.7583501	0.093714204	0.01	1
10 Percentile	0.025	0.1	0.144	0.144	4.639481936	2.274255851	3.645993014	40.60396086	-13.5875	-21.5875	-16.37342669	-24.37342669	0	0.366059	-0.3722847	0.3220034	-0.4087995	0.322003395	0.01	1
25 Percentile	0.025	0.1	0.165	0.165	6.140490798	2.274255851	10.2387475	61.56453868	-3.0625	-11.0625	-4.979039273	-12.97903927	0	0.64	-0.2206897	0.5464959	-0.1821653	0.546495905	0.01	1
Median-25Percentile	0.105	0.4	0.07	0.07	2.046830266	9.097023404	2.746981038	5.154240447	6.5	6.5	8.272894373	8.272894373	0	2.56	0.22068966	2.3840875	0.1821653	2.38408754	0	0
Mean	0.200384615	0.746153846	0.3396154	0.33961538	12.2809816	16.9694475	16.15532205	67.90821923	7.5625	-0.4375	6.932865898	-1.067134102	0	4.144793	1.96679401	4.4696336	1.93528185	4.469633622	2.155985463	1.384615
Standard Deviation	0.253183284	0.930355916	0.3275812	0.32758124	9.393953702	21.15867385	15.53105273	18.56616906	20.7877466	20.7877466	20.98446732	20.98446732	0	4.224878	3.32964295	4.597183	3.21362411	4.597183036	3.0268538	0.486504
Median	0.13	0.5	0.235	0.235	8.187321063	11.37127925	12.98572854	66.71877912	3.4375	-4.5625	3.293855099	-4.706144901	0	3.2	0	2.9305834	0	2.930583445	0.01	1
75Percentile-Median	0.09	0.3	0.1	0.1	5.003362872	6.822767553	1.997804391	13.74464119	12.3125	12.3125	12.6123949	12.6123949	0	3.2	3.84	4.74948	3.66307281	4.749480018	3.65307281	1
75 Percentile	0.22	0.8	0.335	0.335	13.19068394	18.19404681	14.98353293	80.46342032	15.75	7.75	15.90625	7.90625	0	6.4	3.84	7.6800635	3.66307281	7.680063463	3.66307281	2
90 Percentile	0.384	1.44	0.538	0.538	25.88103158	32.74928425	22.92480539	85.44585275	23.275	15.275	23.36981237	15.36981237	0	9.685333	7.04	9.2519298	6.82719749	9.251929825	6.827197487	2
Maximum	0.98	3.6	1.37	1.37	36.16066803	81.87321063	66.42699601	104.5165424	66.5	58.5	64.36466295	56.36466295	0	13.6	8.8	15.542857	8.22857143	15.54285714	8.228571429	2
Interquartile Range (IQR) 1	0.195	0.7	0.17	0.17	7.050193138	15.91979096	4.744785429	18.89888164	18.8125	18.8125	20.88528927	20.88528927	0	5.76	4.06068966	7.1335676	3.84523811	7.133567558	3.65307281	1
Variance	0.064101775	0.86556213	0.1073095	0.10730947	88.24636616	447.6894791	241.2135988	344.7026335	432.1304087	432.1304087	440.3478687	440.3478687	0	17.84959	11.0865222	21.134092	10.3273799	21.13409187	9.161843925	0.236686
Skewness	2.4499402	2.423559101	2.6105631	2.61056312	1.654811589	2.423559101	2.82873591	-0.161200973	1.740175444	1.740175444	1.474102134	1.474102134	-	0.994683	1.01650617	1.0769197	0.97178129	1.076919717	1.095625245	0.538593
Coefficient of Variation (CoV) 2	1.263486637	1.246868753	0.9645654	0.96456537	0.7649188	1.246868753	0.961358287	0.273400912	2.748792939	-47.51484937	3.026809926	-19.66432081	-	1.019322	1.69292917	1.0285369	1.66054579	1.028536884	1.403930523	0.351364
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	Inorganic-C	Inorganic CO_2				Inorganic-CANP														
Typical Detection Limit	0.05	0.2	C del	C del Calc	Total-CANP		Ca-CANP	CaMg-CANP	TNNP	TNNP_Adj	SNNP	SNNP_Adj	TCNNP	TNPR	TNPR_Adj	SNPR	SNPR_Adj	SNPR for Charts	Adj SNPR for Charts	FIZZ
Units	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t							
TCAR-OVB																				
Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0
Minimum	0	0.12	0.4772529	0.4772529	42.50283097	2.727247956	7.242040918	48.10624418	7.058189655	7.058189655	7.370689655	7.370689655	40.62783097	5.517241	5.51724138	6.8965517	6.89655172	6.896551724	6.896551724	0
10 Percentile	0	0.156	0.5119346	0.51193456	46.83645296	3.545422343	7.741492016	50.22520969	7.734605911	7.734605911	8.047105911	8.047105911	45.02395296	5.727422	5.727422	7.0935961	7.09359606	7.093596059	7.093596059	-
25 Percentile	0	0.21	0.5639571	0.56395706	53.33688593	4.772683924	8.490668663	53.40365797	8.749230296	8.749230296	9.061730296	9.061730296	51.61813593	6.042693	6.04269294	7.3891626	7.38916256	7.389162562	7.389162562	-
Median-25Percentile	0	0.09	0.0867042	0.08670416	10.83405495	2.045435967	1.248627745	5.297413793	1.69104064	1.69104064	1.69104064	1.69104064	10.99030495	0.525452	0.52545156	0.4926108	0.49261084	0.492610837	0.492610837	-
Mean	0	0.64	0.6053488	0.60534878	65.00432973	14.54532243	17.73051397	61.65998757	35.36694918	35.36694918	35.62736584	35.62736584	61.56682973	8.657669	8.6576686	9.662971	9.66297098	9.662970982	9.662970982	-
Standard Deviation	0	0.612535713	0.0918602	0.09186017	18.72190306	13.92113977	13.10682507	12.45160039	37.6684527	37.6684527	37.59484534	37.59484534	16.68764668	3.722937	3.72293723	3.2407077	3.2407077	3.240707704	3.240707704	-
Median	0	0.3	0.6506612	0.65066121	64.17094088	6.818119891	9.739296407	58.70107176	10.44027094	10.44027094	10.75277094	10.75277094	62.60844088	6.568144	6.5681445	7.8817734	7.8817734	7.881773399	7.881773399	-
75Percentile-Median	0	0.6	0.0187355	0.01873551	12.08413822	13.63623978	13.23545409	9.735787512	39.081058	39.081058	39.002933	39.002933	9.427888218	3.659738	3.65973771	3.1644072	3.16440721	3.164407212	3.164407212	-
75 Percentile	0	0.9	0.6693967	0.66939673	76.2550791	20.45435967	22.9747505	68.43685927	49.52132894	49.52132894	49.75570394	49.75570394	72.0363291	10.22788	10.2278822	11.046181	11.0461806	11.04618061	11.04618061	-
90 Percentile	0	1.26	0.680638	0.68063804	83.50556203	28.63610354	30.91602295	74.27833178	72.96996373	72.96996373	73.15746373	73.15746373	77.69306203	12.42372	12.4237248	12.944825	12.9448249	12.94482494	12.94482494	-
Maximum	0	1.5	0.6881322	0.68813224	88.33921732	34.09059946	36.21020459	78.17264678	88.60238693	88.60238693	88.75863693	88.75863693	81.46421732	13.88762	13.8876199	14.210588	14.2105878	14.21058782	14.21058782	0
Interquartile Range (IQR) 1	0	0.69	0.1054397	0.10543967	22.91819317	15.68167575	14.48408184	15.0332013	40.77209864	40.77209864	40.69397364	40.69397364	20.41819317	4.185189	4.18518927	3.657018	3.65701805	3.657018049	3.657018049	-
Variance	0	0.3752	0.0084383	0.00843829	350.509654	193.7981324	171.7888635	155.0423524	1418.912329	1418.912329	1413.372396	1413.372396	278.4775519	13.86026	13.8602616	10.502186	10.5021864	10.50218642	10.50218642	-
Skewness	-	1.620548722	-1.5184132	-1.5184132	0.163339225	1.620548722	1.685012135	0.840250902	1.721584557	1.721584557	1.721543556	1.721543556	-0.228743062	1.629117	1.62911689	1.612761	1.61276096	1.612760963	1.612760963	-
Coefficient of Variation (CoV) 2	-	0.957087052	0.1517475	0.15174751	0.288010093	0.957087052	0.739224204	0.201939716	1.06507498	1.06507498	1.055223827	1.055223827	0.271049309	0.430016	0.43001614	0.3353738	0.33537384	0.335373842	0.335373842	-
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
TCAR-RX																				
Count	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	0
Minimum	0	0.11	-0.1336242	0	4.321086117	2.501681436	4.245334331	36.07968313	-0.952894089	-0.952894089	-0.327894089	-0.327894089	0	0.907598	0.90759815	0.9661529	0.96615287	0.966152868	0.966152868	0
10 Percentile	0	0.17	-0.0031947	0.06361736	6.140490798	3.866234947	6.243138723	42.52248369	3.342826355	3.342826355	3.967826355	3.967826355	0	1.423863	1.42386349	1.5339796	1.53397955	1.533979554	1.533979554	-
25 Percentile	0	0.2925	0.1331232	0.13312315	8.414746648	6.652198364	8.740394212	50.18225769	8.67533867	8.67533867	9.22221367	9.22221367	0	2.883668	2.88366806	3.2090077	3.20900774	3.209007741	3.209007741	-
Median-25Percentile	0	0.3125	0.142262	0.14226199	4.662224494	7.107049534	2.122667166	14.81844129	28.62769435	28.62769435	28.31519435	28.31519435	0	4.831096	4.83109624	6.1922413	6.19224125	6.192241254	6.192241254	-
Mean	0	3.303333333	0.268545	0.29081572	26.60879346	75.12625161	54.44016966	102.2257689	83.80458713	83.80458713	84.3775038	84.3775038	0	30.7514	30.7514019	33.579208	33.579208	33.57920799	33.57920799	-
Standard Deviation	0	5.897552223	0.2447345	0.2108595	32.86725936	134.1254265	93.90433327	99.27520449	124.5899418	124.5899418	124.4401371	124.4401371	0	41.44105	41.4410478	43.802607	43.8026068	43.80260685	43.80260685	-
Median	0	0.605	0.2753851	0.27538514	13.07697114	13.7592479	10.86306138	65.00069897	37.30303302	37.30303302	37.53740802	37.53740802	0	7.714764	7.7147643	9.401249	9.40124899	9.401248995	9.401248995	-
75Percentile-Median	0	0.9575	0.1830186	0.18301863	7.732469893	21.77599977	13.54761103	11.38228099	27.42529612	27.42529612	28.40185862	28.40185862	0	33.15626	33.1562575	37.600678	37.6006779	37.60067793	37.60067793	-
75 Percentile	0	1.5625	0.4584038	0.45840377	20.80944104	35.53524767	24.41067241	76.38297996	64.72832915	64.72832915	65.93926665	65.93926665	0	40.87102	40.8710218	47.001927	47.0019269	47.00192693	47.00192693	-
90 Percentile	0	9.135	0.5334447	0.53344467	60.60891843	207.753272	146.2143089	199.154124	210.767902	210.767902	211.627277	211.627277	0	83.11558	83.1155779	89.802395	89.8023954	89.80239544	89.80239544	-
Maximum	0	16.43	0.5890116	0.58901159	98.93012952	373.6602363	263.7101796	321.8536813	356.1714824	356.1714824	356.3277324	356.3277324	0	114.9749	114.974874	121.02618	121.026184	121.0261835	121.0261835	0
Interquartile Range (IQR) 1	0	1.27	0.3252806	0.32528062	12.39469439	28.88304931	15.67027819	26.20072227	56.05299048	56.05299048	56.71705298	56.71705298	0	37.98735	37.9873537	43.792919	43.7929192	43.79291919	43.79291919	-
Variance	0	34.78112222	0.059895	0.04446173	1080.256738	17989.63003	8818.023808	9855.566226	15522.65359	15522.65359	15485.34772	15485.34772	0	1717.36	1717.36044	1918.6684	1918.66837	1918.668367	1918.668367	-
Skewness	-	2.400490813	-0.391506	0.06436872	2.280510991	2.400490813	2.413520085	2.333796562	2.214410694	2.214410694	2.211257565	2.211257565	-	1.701369	1.70136903	1.5993993	1.59939929	1.599399291	1.599399291	-
Coefficient of Variation (CoV) 2	-	1.78533367	0.9113351	0.72506225	1.235202919	1.78533367	1.724908902	0.971136785	1.486672103	1.486672103	1.474802305	1.474802305	-	1.347615	1.34761491	1.3044562	1.30445622	1.304456223	1.304456223	-
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	Inorganic-C	Inorganic CO_2				Inorganic-CANP														
Typical Detection Limit	0.05	0.2	C del	C del Calc	Total-CANP		Ca-CANP	CaMg-CANP	TNNP	TNNP_Adj	SNNP	SNNP_Adj	TCNNP	TNPR	TNPR_Adj	SNPR	SNPR_Adj	SNPR for Charts	Adj SNPR for Charts	FIZZ
Units	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t							
TDPR-RX																				
Count	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Minimum	0.025	0.1	0.15	0.15	5.685639627	2.274255851	3.246432136	43.8110438	-0.0625	-8.0625	-2.55298646	-10.55298646	0	0.993103	-2.1333333	0.7790193	-12.8	0.77901935	0.01	1
10 Percentile	0.025	0.1	0.226	0.226	7.914410361	2.274255851	3.496157685	54.52041007	0.8375	-7.1625	-0.578208488	-8.578208488	0	1.109833	0	0.9420704	0	0.94207036	0.01	1
25 Percentile	0.0625	0.25	0.295	0.295	12.50840718	5.685639627	5.119373752	62.5667521	4.4375	-3.5625	5.296875	-2.703125	0	2.266667	0.05517241	2.907176	0.04327885	2.907175958	0.048278853	1
Median-25Percentile	0.1275	0.45	0.045	0.045	6.367916383	10.23415133	6.368001497	2.720293569	8	8	7.040739654	7.040739654	0	4.133333	1.91405836	5.5144575	1.84559941	5.51445747	1.840599413	0
Mean	0.429333333	1.58	0.5253333	0.52533333	21.71156252	35.93324244	30.38327512	88.19478099	33.525	25.525	33.22541145	25.22541145	0	10.50482	7.1359855	14.169174	7.37537208	14.16917433	8.231372082	1.6
Standard Deviation	0.592013138	2.15319917	0.3211929	0.32119292	13.50988801	48.96925811	41.99536052	45.85876013	48.60431651	48.60431651	48.78886197	48.78886197	0	11.62083	11.1778554	15.408339	12.9811489	15.40833947	12.00950518	0.711805
Median	0.19	0.7	0.34	0.34	18.87632356	15.91979096	11.48737525	65.28704567	12.4375	4.4375	12.33761465	4.337614654	0	6.4	1.96923077	8.4216334	1.88887827	8.421633427	1.888878266	1
75Percentile-Median	0.295	1.1	0.35	0.35	5.913065212	25.01681436	31.96487026	44.52691053	21.6875	21.6875	21.22128649	21.22128649	0	5.082353	7.84589528	11.212258	8.70833053	11.21225797	8.708330529	1
75 Percentile	0.485	1.8	0.69	0.69	24.78938878	40.93660532	43.45224551	109.8139562	34.125	26.125	33.55890114	25.55890114	0	11.48235	9.81512605	19.633891	10.5972088	19.63389139	10.5972088	2
90 Percentile	1.318	4.8	0.947	0.947	42.25567371	109.1642808	56.83753493	121.5255359	103.4875	95.4875	103.7221209	95.72212091	0	26.40941	19.9905882	34.755416	27.36	34.75541585	27.36	2.6
Maximum	2	7.3	1.305	1.305	52.99016133	166.0206771	170.3128244	233.0862069	167.9375	159.9375	167.706336	159.706336	0	42.33846	40.3692308	54.4	38.1958159	54.4	38.19581589	3
Interquartile Range (IQR) 1	0.4225	1.55	0.395	0.395	12.2809816	35.25096569	38.33287176	47.2472041	29.6875	29.6875	28.26202614	28.26202614	0	9.215686	9.75995364	16.726715	10.5539299	16.72671544	10.54892994	1
Variance	0.350479556	4.636266667	0.1031649	0.10316489	182.5170742	2397.98824	1763.610305	2103.025881	2362.379583	2362.379583	2380.353052	2380.353052	0	135.0438	124.944452	237.41693	168.510228	237.4169252	144.2282146	0.506667
Skewness	1.915594825	1.910973456	1.0747764	1.07477641	1.312637087	1.910973456	2.66505401	2.230075492	2.016198466	2.016198466	2.003273778	2.003273778	-	1.699091	2.0634724	1.5115273	1.16131085	1.511527255	1.563246526	0.840721
Coefficient of Variation (CoV) 2	1.378912588	1.362784285	0.6114078	0.61140783	0.622243931	1.362784285	1.382186758	0.519971359	1.449793184	1.90418478	1.468420099	1.934115607	-	1.106238	1.56640669	1.087455	1.76006699	1.087455	1.458991898	0.444878
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
Ted Morris-OVB																				
Count	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Minimum	0.05	0.2	0.08	0.08	3.183958191	4.548511702	30.71624251	78.45899348	7.4375	7.4375	7.59375	7.59375	0	3.388235	3.38823529	3.4909091	3.49090909	3.490909091	3.490909091	1
10 Percentile	0.05	0.2	0.084	0.084	3.183958191	4.548511702	33.213498	80.63522833	7.8125	7.8125	7.96875	7.96875	0	4.336941	4.33694118	4.6545455	4.65454545	4.654545455	4.654545455	1
25 Percentile	0.05	0.2	0.09	0.09	3.183958191	4.548511702	36.95938124	83.89958062	8.375	8.375	8.53125	8.53125	0	5.76	5.76	6.4	6.4	6.4	6.4	1
Median-25Percentile	0	0	0.08	0.08	1.819404681	0	1.248627745	10.59482759	0.0625	0.0625	0.21875	0.21875	0	0.64	0.64	1.6	1.6	1.6	1.6	0
Mean	0.064	0.24	0.16	0.16	5.094333106	5.458214042	43.35235529	96.7279124	9.2	9.2	9.3875	9.3875	0	8.12298	8.12298039	9.9781818	9.97818182	9.978181818	9.978181818	1
Standard Deviation	0.023323808	0.08	0.0663325	0.0663325	1.873191767	1.819404681	10.36478362	14.6069374	1.81934054	1.81934054	1.807276957	1.807276957	0	3.920241	3.92024142	5.5100977	5.51009772	5.510097718	5.510097718	0
Median	0.05	0.2	0.17	0.17	5.003362872	4.548511702	38.20800898	94.4944082	8.4375	8.4375	8.75	8.75	0	6.4	6.4	8	8	8	8	1
75Percentile-Median	0.01	0	0.04	0.04	0.90970234	0	14.23435629	16.8944548	0.625	0.625	0.46875	0.46875	0	4.266667	4.26666667	4.8	4.8	4.8	4.8	0
75 Percentile	0.06	0.2	0.21	0.21	5.913065212	4.548511702	52.44236527	111.388863	9.0625	9.0625	9.21875	9.21875	0	10.66667	10.6666667	12.8	12.8	12.8	12.8	1
90 Percentile	0.09	0.32	0.234	0.234	7.277618723	7.277618723	56.03841317	113.7941752	11.2375	11.2375	11.39375	11.39375	0	12.90667	12.9066667	16.64	16.64	16.64	16.64	1
Maximum	0.11	0.4	0.25	0.25	8.187321063	9.097023404	58.43577844	115.3977167	12.6875	12.6875	12.84375	12.84375	0	14.4	14.4	19.2	19.2	19.2	19.2	1
Interquartile Range (IQR) 1	0.01	0	0.12	0.12	2.729107021	0	15.48298403	27.48928239	0.6875	0.6875	0.6875	0.6875	0	4.906667	4.90666667	6.4	6.4	6.4	6.4	0
Variance	0.000544	0.0064	0.0044	0.0044	3.508847396	3.310233392	107.4287395	213.3626201	3.31	3.31	3.26625	3.26625	0	15.36829	15.3682928	30.361177	30.3611769	30.36117686	30.36117686	0
Skewness	2.092235374	2.236067977	3.701E-16	3.7007E-16	0.734539854	2.236067977	0.473307871	0.137687333	1.779085421	1.779085421	1.748750461	1.748750461	-	0.689481	0.68948087	0.8556874	0.85568738	0.855687383	0.855687383	-
Coefficient of Variation (CoV) 2	0.364434493	0.333333333	0.4145781	0.4145781	0.367701076	0.333333333	0.239082365	0.151010572	0.197754407	0.197754407	0.192519516	0.192519516	-	0.482611	0.48261121	0.5522146	0.5522146	0.552214604	0.552214604	0
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
Teigen-OVB																				
Count	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	4	4	6	6	6
Minimum	0.025	0.1	0.425	0.425	10.23415133	2.274255851	5.493962076	51.25605778	5.375	5.375	5.53125	5.53125	0	4.654545	4.65454545	#DIV/0!	#DIV/0!	4.228054925	4.228054925	1

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	Inorganic-C	Inorganic CO_2				Inorganic-CANP												SNPR for Charts	Adj SNPR for Charts	FIZZ
Typical Detection Limit	0.05	0.2	C del	C del Calc	Total-CANP		Ca-CANP	CaMg-CANP	TNNP	TNNP_Adj	SNNP	SNNP_Adj	TCNNP	TNPR	TNPR_Adj	SNPR	SNPR_Adj			
Units	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t							
10 Percentile	0.025	0.1	0.4575	0.4575	11.48499205	2.274255851	5.743687625	52.54461789	5.375	5.375	5.765625	5.765625	0	7.127273	7.12727273	#DIV/0!	#DIV/0!	8.514027463	8.514027463	1
25 Percentile	0.025	0.1	0.50125	0.50125	12.84954556	2.274255851	6.368001497	53.90476468	6.125	6.125	6.671875	6.671875	0	9.6	9.6	#DIV/0!	#DIV/0!	13.94285714	13.94285714	1
Median-25Percentile	0	0	0.04375	0.04375	0.341138378	0	1.872941617	1.360146785	2.25	2.25	2.171875	2.171875	0	2.4	2.4	#DIV/0!	#DIV/0!	9.142857143	9.142857143	0
Mean	0.053333333	0.2	0.53	0.53	13.26649246	4.548511702	11.44575432	59.60783628	9.635416667	9.635416667	9.890125664	9.890125664	0	11.30909	11.3090909	#DIV/0!	#DIV/0!	77.19991392	77.19991392	1
Standard Deviation	0.041699987	0.152752523	0.057735	0.05773503	1.75509432	3.473983196	6.42918683	8.367036389	4.356869675	4.356869675	4.20393275	4.20393275	0	3.749924	3.74992378	#DIV/0!	#DIV/0!	87.13396078	87.13396078	0
Median	0.025	0.1	0.545	0.545	13.19068394	2.274255851	8.240943114	55.26491146	8.375	8.375	8.84375	8.84375	0	12	12	#DIV/0!	#DIV/0!	23.08571429	23.08571429	1
75Percentile-Median	0.04875	0.15	0.02875	0.02875	0.682276755	3.411383776	8.428237275	9.95054753	3.140625	3.140625	2.568065489	2.568065489	0	2.4	2.4	#DIV/0!	#DIV/0!	134.1142857	134.1142857	0
75 Percentile	0.07375	0.25	0.57375	0.57375	13.87296069	5.685639627	16.66918039	65.21545899	11.515625	11.515625	11.41181549	11.41181549	0	14.4	14.4	#DIV/0!	#DIV/0!	157.2	157.2	1
90 Percentile	0.11	0.4	0.5875	0.5875	15.12380141	9.097023404	20.35263224	71.0139795	15.15625	15.15625	15.06100199	15.06100199	0	14.8	14.8	#DIV/0!	#DIV/0!	200	200	1
Maximum	0.13	0.5	0.595	0.595	16.14721654	11.37127925	21.47639721	73.87744641	17.75	17.75	17.90625	17.90625	0	15.2	15.2	#DIV/0!	#DIV/0!	200	200	1
Interquartile Range (IQR) 1	0.04875	0.15	0.0725	0.0725	1.023415133	3.411383776	10.30117889	11.31069432	5.390625	5.390625	4.739940489	4.739940489	0	4.8	4.8	#DIV/0!	#DIV/0!	143.2571429	143.2571429	0
Variance	0.001738889	0.023333333	0.0033333	0.00333333	3.080356073	12.06855924	41.33444329	70.00729793	18.98231337	18.98231337	17.67305056	17.67305056	0	14.06193	14.0619284	#DIV/0!	#DIV/0!	7592.327121	7592.327121	0
Skewness	1.287081208	1.536722498	-0.9560949	-0.9560949	-0.14973844	1.536722498	0.885529917	0.995812281	1.105795998	1.105795998	1.178154669	1.178154669	-	-0.808041	-0.8080411	#DIV/0!	#DIV/0!	0.938478364	0.938478364	-
Coefficient of Variation (CoV) 2	0.78187475	0.763762616	0.108934	0.10893401	0.132295279	0.763762616	0.561709316	0.140368061	0.45217242	0.45217242	0.425063633	0.425063633	-	0.331585	0.3315849	#DIV/0!	#DIV/0!	1.128679507	1.128679507	0
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
TMF-OVB																				
Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	2	0	2	2	1
Minimum	0.09	0.3	0.27	0.27	10.6890025	6.822767553	10.48847305	66.43243243	5.6875	-6.875	6	-6.5625	0	2.070588	0	2.2	0	2.2	2.2	1
10 Percentile	0.134	0.47	0.281	0.281	11.43950693	10.6890025	13.90971307	70.52719012	9.13125	-6.71875	9.44375	-6.40625	0	2.547166	0	2.6961905	0	2.696190476	2.696190476	1.1
25 Percentile	0.2	0.725	0.2975	0.2975	12.56526358	16.48835492	19.0415731	76.66932665	14.296875	-6.484375	14.609375	-6.171875	0	3.262032	0	3.4404762	0	3.44047619	3.44047619	1.25
Median-25Percentile	0.11	0.425	0.0275	0.0275	1.876261077	9.665587367	8.55310005	10.23689422	8.609375	0.390625	8.609375	0.390625	0	1.191444	0	1.2404762	0	1.24047619	1.24047619	0.25
Mean	0.31	1.15	0.325	0.325	14.44152465	26.15394229	27.59467315	86.90622088	22.90625	-6.09375	23.21875	-5.78125	0	4.453476	0	4.6809524	0	4.680952381	4.680952381	1.5
Standard Deviation	0.22	0.85	0.055	0.055	3.752522154	19.33117473	17.1062001	20.47378844	17.21875	0.78125	17.21875	0.78125	0	2.382888	0	2.4809524	0	2.480952381	2.480952381	0.5
Median	0.31	1.15	0.325	0.325	14.44152465	26.15394229	27.59467315	86.90622088	22.90625	-6.09375	23.21875	-5.78125	0	4.453476	0	4.6809524	0	4.680952381	4.680952381	1.5
75Percentile-Median	0.11	0.425	0.0275	0.0275	1.876261077	9.665587367	8.55310005	10.23689422	8.609375	0.390625	8.609375	0.390625	0	1.191444	0	1.2404762	0	1.24047619	1.24047619	0.25
75 Percentile	0.42	1.575	0.3525	0.3525	16.31778573	35.81952965	36.1477732	97.1431151	31.515625	-5.703125	31.828125	-5.390625	0	5.64492	0	5.9214286	0	5.921428571	5.921428571	1.75
90 Percentile	0.486	1.83	0.369	0.369	17.44354238	41.61888207	41.27963323	103.2852516	36.68125	-5.46875	36.99375	-5.15625	0	6.359786	0	6.6657143	0	6.665714286	6.665714286	1.9
Maximum	0.53	2	0.38	0.38	18.19404681	45.48511702	44.70087325	107.3800093	40.125	-5.3125	40.4375	-5	0	6.836364	0	7.1619048	0	7.161904762	7.161904762	2
Interquartile Range (IQR) 1	0.22	0.85	0.055	0.055	3.752522154	19.33117473	17.1062001	20.47378844	17.21875	0.78125	17.21875	0.78125	0	2.382888	0	2.4809524	0	2.480952381	2.480952381	0.5
Variance	0.0484	0.7225	0.003025	0.003025	14.08142252	373.6943166	292.6220819	419.1760132	296.4853516	0.610351563	296.4853516	0.610351563	0	5.678154	0	6.1551247	0	6.155124717	6.155124717	0.25
Skewness	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coefficient of Variation (CoV) 2	0.709677419	0.739130435	0.1692308	0.16923077	0.25984252	0.739130435	0.619909502	0.235584843	0.751705321	-0.128205128	0.741588156	-0.135135135	-	0.535062	-	0.5300102	-	0.530010173	0.530010173	0.333333
NPR < 1.0 or NPR = 1.0																				
1.0 < NPR < 2.0																				
NPR > 2.0 or NPR =2.0																				
Sum Check																				
% NPR < 1.0 or NPR = 1.0 of Total																				
% 1.0 < NPR < 2.0 of Total																				
% NPR > 2.0 or NPR =2.0 of Total																				
Sum Check																				
TMF-RX																				
Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Minimum	0.05	0.2	0.18	0.18	11.37127925	4.548511702	2.24752994	72.44571295	3.375	-4.625	3.6875	-4.3125	0	2.153846	-6.4	1.8618177	-12.8	1.861817745	0.01	1
10 Percentile	0.104	0.4	0.196	0.196	13.60004999	9.097023404	7.741492016	74.33560112	6.45	-1.55	6.190233493	-1.809766507	0	3.003077	-4.7876923	4.0494542	-9.9527481	4.049454196	0.295251881	1.2
25 Percentile	0.185	0.7	0.22	0.22	16.94320609	15.91979096	15.98243513	77.17043336	11.0625	3.0625	9.944333734	1.944333734	0	4.276923	-2.3692308	7.3309089	-5.6818703	7.330908873	0.723129702	1.5

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	Inorganic-C	Inorganic CO_2				Inorganic-CANP														
Typical Detection Limit	0.05	0.2	C del	C del Calc	Total-CANP		Ca-CANP	CaMg-CANP	TNNP	TNNP_Adj	SNNP	SNNP_Adj	TCNNP	TNPR	TNPR_Adj	SNPR	SNPR_Adj	SNPR for Charts	Adj SNPR for Charts	FIZZ
Units	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t							
Median-25Percentile	0.135	0.5	0.04	0.04	5.571926835	11.37127925	13.73490519	4.72472041	7.6875	7.6875	6.256833734	6.256833734	0	2.123077	4.03076923	5.4690911	7.1181297	5.469091127	0.713129702	0.5
Mean	0.44	1.633333333	0.46	0.46	20.46830266	37.1461789	33.0470143	95.83069276	33.02083333	25.02083333	32.24452513	24.24452513	0	9.497436	4.41025641	11.385324	2.06835459	11.38532351	6.33835459	1.666667
Standard Deviation	0.377094153	1.381625452	0.340979	0.34097898	6.749088142	31.42169767	26.61136609	26.67006843	31.68178093	31.68178093	31.94832888	31.94832888	0	7.583698	10.1367792	7.2675439	12.4060665	7.26754392	7.96244542	0.471405
Median	0.32	1.2	0.26	0.26	22.51513292	27.29107021	29.71734032	81.89515377	18.75	10.75	16.20116747	8.201167467	0	6.4	1.66153846	12.8	1.4362594	12.8	1.436259404	2
75Percentile-Median	0.315	1.15	0.34	0.34	2.501681436	26.15394229	18.72941617	25.62802889	29.09375	29.09375	30.32187022	30.32187022	0	6.769231	8.15384615	3.3470764	8.06627248	3.347076395	8.066272481	0
75 Percentile	0.635	2.35	0.6	0.6	25.01681436	53.4450125	48.44675649	107.5231827	47.84375	39.84375	46.52303769	38.52303769	0	13.16923	9.81538462	16.147076	9.50253188	16.14707639	9.502531885	2
90 Percentile	0.824	3.04	0.804	0.804	26.51782322	69.13737787	59.68440619	122.9	65.3	57.3	64.71615982	56.71615982	0	17.23077	14.7076923	18.155322	14.3422954	18.15532223	14.34229537	2
Maximum	0.95	3.5	0.94	0.94	27.5184958	79.59895478	67.17617265	133.1512116	76.9375	68.9375	76.84490791	68.84490791	0	19.93846	17.9692308	19.494153	17.5688044	19.49415279	17.56880437	2
Interquartile Range (IQR) 1	0.45	1.65	0.38	0.38	8.073608271	37.52522154	32.46432136	30.3527493	36.78125	36.78125	36.57870396	36.57870396	0	8.892308	12.1846154	8.8161675	15.1844022	8.816167522	8.779402183	0.5
Variance	0.1422	1.908888889	0.1162667	0.11626667	45.55019074	987.3230847	708.1648052	711.2925502	1003.735243	1003.735243	1020.695718	1020.695718	0	57.51248	102.754293	52.817195	153.910485	52.81719464	63.40053707	0.222222
Skewness	1.09029058	1.076814068	1.6608181	1.66081805	-1.04597784	1.076814068	0.45493029	1.570405029	1.431163433	1.431163433	1.534892632	1.534892632	-	1.333787	0.94747699	-0.6971477	0.18688008	-0.69714766	1.690463957	-1.73205
Coefficient of Variation (CoV) 2	0.857032165	0.845893134	0.7412587	0.74125866	0.32973365	0.845893134	0.805257802	0.278304035	0.959448255	1.266216057	0.990814061	1.317754368	-	0.7985	2.29845576	0.6383256	5.99803657	0.63832564	1.256232246	0.282843
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Sum Check																				
WSF-OVB																				
Count	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Minimum	0.05	0.2	0	0	5.833721898	4.545413261	23.72392715	79.60438024	-13.1875	-13.1875	-10.58095381	-10.58095381	2.396221898	0.405634	0.4056338	0.4596303	0.45963032	0.459630317	0.459630317	1
10 Percentile	0.05	0.2	0.032	0.032	9.167277269	4.545413261	30.71624251	83.7277726	4.2125	4.2125	6.057376975	6.057376975	5.729777269	1.607281	1.60728061	1.7430953	1.74309532	1.74309532	1.74309532	1
25 Percentile	0.05	0.2	0.05	0.05	11.6674438	4.545413261	44.4511477	103.943849	9.875	9.875	10.5	10.5	9.792443797	3.490909	3.49090909	5.2	5.2	5.2	5.2	1
Median-25Percentile	0.03	0.1	0.04	0.04	20.00133222	2.27270663	17.48078842	16.60810811	0.6875	0.6875	1.87630123	1.87630123	3.126165695	0.669091	0.66909091	1.5300777	1.53007772	1.530077724	1.530077724	0
Mean	0.514444444	1.9	0.1722222	0.17222222	57.22603386	43.18142598	86.87674373	157.140701	42.90277778	42.90277778	44.60688034	44.60688034	47.57325608	7.160542	7.16054178	12.856094	12.8560945	12.85609449	12.85609449	1.666667
Standard Deviation	0.764810959	2.78767127	0.1406949	0.14069492	68.56561479	63.35558979	56.15505843	75.76583847	65.20778828	65.20778828	65.17030294	65.17030294	67.32857238	9.176227	9.17622687	14.372825	14.3728248	14.37282485	14.37282485	0.816497
Median	0.08	0.3	0.09	0.09	31.66877602	6.818119891	61.93193613	120.5519571	10.5625	10.5625	12.37630123	12.37630123	12.91860949	4.16	4.16	6.7300777	6.73007772	6.730077724	6.730077724	1
75Percentile-Median	0.35	1.3	0.24	0.24	8.333888426	29.54518619	49.94510978	50.6833644	31	31	31.13857192	31.13857192	18.64655495	1.765926	1.76592593	1.8922113	1.89221125	1.89221125	1.89221125	1
75 Percentile	0.43	1.6	0.33	0.33	40.00266445	36.36330609	111.8770459	171.2353215	41.5625	41.5625	43.51487315	43.51487315	31.56516445	5.925926	5.92592593	8.622289	8.62228897	8.622288974	8.622288974	2
90 Percentile	1.44	5.3	0.348	0.348	149.3432806	120.4534514	164.1196307	282.8532619	118.6375	118.6375	121.0010219	121.0010219	130.7807806	11.6419	11.6419048	38.776471	38.7764706	38.77647059	38.77647059	3
Maximum	2.44	8.9	0.38	0.38	223.3482098	202.2708901	200.2798902	296.3688257	207.4375	207.4375	208.6875	208.6875	216.7857098	32.60952	32.6095238	40.282353	40.2823529	40.28235294	40.28235294	3
Interquartile Range (IQR) 1	0.38	1.4	0.28	0.28	28.33522065	31.81789282	67.4258982	67.29147251	31.6875	31.6875	33.01487315	33.01487315	21.77272065	2.435017	2.43501684	3.422289	3.42228897	3.422288974	3.422288974	1
Variance	0.584935802	7.771111111	0.0197951	0.01979506	4701.243532	4013.930758	3153.390587	5740.462279	4252.055652	4252.055652	4247.168385	4247.168385	4533.136659	84.20314	84.2031396	206.57809	206.578094	206.5780942	206.5780942	0.666667
Skewness	2.096108152	2.082406179	0.3552655	0.35526548	1.917339339	2.082406179	0.960756907	1.058884866	2.07097318	2.07097318	2.062249683	2.062249683	2.100801302	2.774369	2.7743688	1.4948994	1.49489944	1.494899445	1.494899445	0.824786
Coefficient of Variation (CoV) 2	1.48667357	1.467195405	0.8169383	0.81693827	1.198154234	1.467195405	0.646376188	0.48215286	1.519896651	1.519896651	1.460992171	1.460992171	1.415260967	1.281499	1.28149896	1.1179775	1.11797754	1.117977537	1.117977537	0.489898
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Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID				As	B			Bi					Cr							Hg				
Typical Detection Limit		Ag	Al	5	20	Ba	Be	0.01	Ca	Cd	Ce	Co	1	Cs	Cu	Fe	Ga	Ge	Hf	0.01	In	K	La	Li
Units	FIZZ_CHECK	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
By Location																								
CCAR-OVB																								
Count	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Minimum	0	0.13	2.77	14.1	0	190	0.37	0.005	6.07	0.29	18.35	3.6	23	0.74	18.9	3.33	4.98	0.09	0.9	0.08	0.029	0.45	9.9	32.1
10 Percentile	-	0.13	2.77	14.1	0	190	0.37	0.005	6.07	0.29	18.35	3.6	23	0.74	18.9	3.33	4.98	0.09	0.9	0.08	0.029	0.45	9.9	32.1
25 Percentile	-	0.13	2.77	14.1	0	190	0.37	0.005	6.07	0.29	18.35	3.6	23	0.74	18.9	3.33	4.98	0.09	0.9	0.08	0.029	0.45	9.9	32.1
Median-25Percentile	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean	-	0.13	2.77	14.1	0	190	0.37	0.005	6.07	0.29	18.35	3.6	23	0.74	18.9	3.33	4.98	0.09	0.9	0.08	0.029	0.45	9.9	32.1
Standard Deviation	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Median	-	0.13	2.77	14.1	0	190	0.37	0.005	6.07	0.29	18.35	3.6	23	0.74	18.9	3.33	4.98	0.09	0.9	0.08	0.029	0.45	9.9	32.1
75Percentile-Median	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75 Percentile	-	0.13	2.77	14.1	0	190	0.37	0.005	6.07	0.29	18.35	3.6	23	0.74	18.9	3.33	4.98	0.09	0.9	0.08	0.029	0.45	9.9	32.1
90 Percentile	-	0.13	2.77	14.1	0	190	0.37	0.005	6.07	0.29	18.35	3.6	23	0.74	18.9	3.33	4.98	0.09	0.9	0.08	0.029	0.45	9.9	32.1
Maximum	0	0.13	2.77	14.1	0	190	0.37	0.005	6.07	0.29	18.35	3.6	23	0.74	18.9	3.33	4.98	0.09	0.9	0.08	0.029	0.45	9.9	32.1
Interquartile Range (IQR) 1	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Variance	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coefficient of Variation (CoV) 2	-	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPR < 1.0 or NPR = 1.0																								
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Count	0	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
Minimum	0	0.02	1.1	0.2	0	110	0.3	0.005	0.04	0.01	4.53	0.8	1	0.26	1.8	1.45	2.35	0.05	0.4	0.005	0.009	0.06	2.5	3.2
10 Percentile	-	0.06	5.274	1.1	0	286	0.512	0.02	0.11	0.096	17.34	1.9	6.8	0.506	18.86	2.624	12.32	0.106	1.16	0.01	0.0452	0.344	7.52	7.92
25 Percentile	-	0.085	6.56	3.55	0	625	0.65	0.03	0.195	0.16	22.4	4.1	22.5	0.94	27.85	3.555	16.325	0.12	1.8	0.01	0.053	0.755	10.8	11.05
Median-25Percentile	-	0.075	0.75	7.65	0	195	0.3	0.04	0.875	0.14	7.6	7	44.5	1.06	12.75	0.815	1.625	0.01	0.4	0.04	0.009	0.715	4.8	3.65
Mean	-	0.26744681	6.90617021	12.6212766	0	979.361702	0.98531915	0.1112766	2.47489362	0.63361702	31.4048936	15.8340426	74.9787234	2.45787234	44.9914894	4.86319149	17.5	0.13468085	2.26382979	0.10276596	0.06331915	1.46276596	16.2446809	19.9680851
Standard Deviation	-	0.28737601	1.25933544	12.9487358	0	603.011606	0.43456925	0.19720782	3.14167923	1.06317955	13.8118865	13.7078992	63.1790732	1.71852725	26.9741628	2.23421566	3.72851291	0.02901585	0.88951948	0.1223259	0.01836406	0.91221429	8.44627095	12.6707589
Median	-	0.16	7.31	11.2	0	820	0.95	0.07	1.07	0.3	30	11.1	67	2	40.6	4.37	17.95	0.13	2.2	0.05	0.062	1.47	15.6	14.7
75Percentile-Median	-	0.115	0.25	4.25	0	500	0.345	0.065	3.195	0.255	5.7	13.2	55.5	1.685	20.2	1.365	1.45	0.02	0.6	0.09	0.011	0.6	2.55	12.6
75 Percentile	-	0.275	7.56	15.45	0	1320	1.295	0.135	4.265	0.555	35.7	24.3	122.5	3.685	60.8	5.735	19.4	0.15	2.8	0.14	0.073	2.07	18.15	27.3
90 Percentile	-	0.72	8	25.94	0	1880	1.45	0.178	5.514	1.192	47.74	39.2	163.8	5.106	79.6	7.67	21.12	0.164	3.4	0.28	0.0916	2.596	24.34	41.24
Maximum	0	1.25	8.81	70.1	0	2690	2.52	1.38	15.4	6.72	76.1	50	252	6.64	134	13.95	24.6	0.22	4.7	0.5	0.107	3.94	45.5	52.9
Interquartile Range (IQR) 1	-	0.19	1	11.9	0	695	0.645	0.105	4.07	0.395	13.3	20.2	100	2.745	32.95	2.18	3.075	0.03	1	0.13	0.02	1.315	7.35	16.25
Variance	-	0.08258497	1.58592576	167.66976	0	363622.997	0.18885043	0.03889092	9.87014839	1.13035075	190.768208	187.906501	3991.59529	2.9533359	727.605459	4.9917196	13.9018085	0.00084192	0.79124491	0.01496363	0.00033724	0.8321349	71.339493	160.54813
Skewness	-	1.85774034	-2.2846019	2.38197308	-	0.99175725	0.90363044	5.82859543	2.20665915	4.40704962	1.17614965	0.94208014	0.78605815	0.62970759	1.1378188	1.53991277	-1.6131499	0.34693698	0.35273129	1.6449676	0.1080498	0.51366843	1.54158318	0.97173798
Coefficient of Variation (CoV) 2	-	1.0745165	0.18234932	1.02594502	-	0.615719	0.44104415	1.77223087	1.26941991	1.67795294	0.43980045	0.86572328	0.84262669	0.69919305	0.59953923	0.45941347	0.21305788	0.21544152	0.39292684	1.19033486	0.29002374	0.62362286	0.51994071	0.63455052
NPR < 1.0 or NPR = 1.0																								
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Sum Check																								

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID				As	B			Bi					Cr							Hg				
Typical Detection Limit		Ag	Al	5	20	Ba	Be	0.01	Ca	Cd	Ce	Co	1	Cs	Cu	Fe	Ga	Ge	Hf	0.01	In	K	La	Li
Units	FIZZ_CHECK	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
Kerr Haul Rd-OVB																								
Count	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Minimum	0	0.41	7.13	17.9	0	1770	0.67	0.15	1.48	0.25	14.55	13	22	0.95	63.1	4.03	15.05	0.18	0.8	0.02	0.056	2.17	7.6	12.6
10 Percentile	-	0.422	7.148	17.99	0	1785	0.808	0.159	1.531	0.256	17.685	13.09	27.1	1.049	66.91	4.099	15.725	0.186	0.92	0.023	0.0566	2.215	9.04	12.75
25 Percentile	-	0.44	7.175	18.125	0	1807.5	1.015	0.1725	1.6075	0.265	22.3875	13.225	34.75	1.1975	72.625	4.2025	16.7375	0.195	1.1	0.0275	0.0575	2.2825	11.2	12.975
Median-25Percentile	-	0.04	0.215	52.225	0	62.5	0.18	0.0325	0.4125	0.1	7.2125	0.875	7.25	0.4275	29.025	0.0675	0.7875	0.005	0.15	0.0025	0.0035	0.2675	3.65	4.825
Mean	-	0.965	7.3775	129.15	0	1882.5	1.1025	0.2775	2.3975	0.38	27.3125	16.15	38.75	2.1125	107.35	4.455	17.025	0.1975	1.175	0.03	0.066	2.5475	13.925	19.85
Standard Deviation	-	0.88117819	0.21856063	138.837144	0	96.0143218	0.26166534	0.15990231	1.02443582	0.12349089	8.40687033	4.24764641	10.3047319	1.28779608	40.1758945	0.4693879	1.16752944	0.01089725	0.22776084	0.00707107	0.01191638	0.31107676	4.29381823	7.64803896
Median	-	0.48	7.39	70.35	0	1870	1.195	0.205	2.02	0.365	29.6	14.1	42	1.625	101.65	4.27	17.525	0.2	1.25	0.03	0.061	2.55	14.85	17.8
75Percentile-Median	-	0.525	0.2025	111.025	0	75	0.0875	0.105	0.79	0.115	4.925	2.925	4	0.915	34.725	0.2525	0.2875	0.0025	0.075	0.0025	0.0085	0.265	2.725	6.875
75 Percentile	-	1.005	7.5925	181.375	0	1945	1.2825	0.31	2.81	0.48	34.525	17.025	46	2.54	136.375	4.5225	17.8125	0.2025	1.325	0.0325	0.0695	2.815	17.575	24.675
90 Percentile	-	1.896	7.597	287.35	0	1990	1.323	0.454	3.566	0.516	35.11	20.85	47.8	3.566	152.35	4.959	17.925	0.207	1.37	0.037	0.0794	2.878	18.07	28.59
Maximum	0	2.49	7.6	358	0	2020	1.35	0.55	4.07	0.54	35.5	23.4	49	4.25	163	5.25	18	0.21	1.4	0.04	0.086	2.92	18.4	31.2
Interquartile Range (IQR) 1	-	0.565	0.4175	163.25	0	137.5	0.2675	0.1375	1.2025	0.215	12.1375	3.8	11.25	1.3425	63.75	0.32	1.075	0.0075	0.225	0.005	0.012	0.5325	6.375	11.7
Variance	-	0.776475	0.04776875	19275.7525	0	9218.75	0.06846875	0.02556875	1.04946875	0.01525	70.6754688	18.0425	106.1875	1.65841875	1614.1025	0.220325	1.363125	0.00011875	0.051875	5E-05	0.000142	0.09676875	18.436875	58.4925
Skewness	-	1.99024967	-0.0473591	1.49544367	-	0.48156305	-1.493973	1.81403731	1.40498131	0.24832453	-0.8858805	1.83469807	-1.3368984	1.54396915	0.41717313	1.72890403	-1.734512	-1.1293381	-1.4430588	-1.332E-15	1.65822373	-0.0189283	-0.7029984	0.76672803
Coefficient of Variation (CoV) 2	-	0.91313802	0.0296253	1.07500692	-	0.05100362	0.23733818	0.57622455	0.42729336	0.32497603	0.30780303	0.26301216	0.26592857	0.60960761	0.37425146	0.10536204	0.06857735	0.05517594	0.19383901	0.23570226	0.18055114	0.1221106	0.30835319	0.38529164
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Count	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Minimum	0	0.04	6.34	4.1	0	430	0.59	0.05	0.13	0.02	4.81	4.9	4	1.14	4.5	2	11.7	0.2	0.4	0.005	0.005	2.01	2.7	2.9
10 Percentile	0	0.132	6.956	6.48	0	550	0.76	0.066	0.33	0.024	11.41	5.54	5.2	1.776	12.9	2.402	13.15	0.204	0.62	0.006	0.0088	2.182	5.32	5.24
25 Percentile	0	0.31	7.3	8.8	0	830	0.8	0.1	1.07	0.06	12.9	7.2	7	1.99	18.4	3.25	15.7	0.22	0.8	0.01	0.025	2.9	7.1	8
Median-25Percentile	0	0.16	0.19	7.1	0	510	0.17	0.14	0.56	0.04	4.7	2.1	5	1.61	133.1	0.55	2.15	0.04	0.2	0.01	0.036	0.55	1.5	4.7
Mean	0	0.56692308	7.49769231	41.0615385	0	2314.61538	1.04769231	0.60307692	1.96538462	0.14230769	17.8584615	11.4923077	20.0769231	3.62230769	335.092308	3.87615385	17.4961538	0.24692308	1.01538462	0.02384615	0.07069231	3.46076923	9.53846154	11.5923077
Standard Deviation	0	0.37357698	0.50680225	58.0310731	0	1945.39146	0.3274882	0.75529296	1.62191537	0.1399535	6.74293459	6.07066864	20.6303046	1.63976618	654.360743	1.15195178	3.19756287	0.03290654	0.32068713	0.01583009	0.06076358	0.92280894	3.81566376	5.23838812
Median	0	0.47	7.49	15.9	0	1340	0.97	0.24	1.63	0.1	17.6	9.3	12	3.6	151.5	3.8	17.85	0.26	1	0.02	0.061	3.45	8.6	12.7
75Percentile-Median	0	0.24	0.32	19.9	0	2740	0.14	0.41	0.94	0.03	5.7	5.6	5	1.18	101.5	0.95	1.3	0	0.3	0.02	0.026	0.75	3.7	1.3
75 Percentile	0	0.71	7.81	35.8	0	4080	1.11	0.65	2.57	0.13	23.3	14.9	17	4.78	253	4.75	19.15	0.26	1.3	0.04	0.087	4.2	12.3	14
90 Percentile	0	1.108	8.138	76.54	0	5188	1.562	2.006	3.07	0.394	26.5	20.36	50.2	5.266	446	5.24	20.35	0.26	1.38	0.048	0.1282	4.744	14.06	18.86
Maximum	0	1.36	8.23	227	0	6420	1.71	2.24	6.57	0.46	29.1	24.9	75	7.07	2550	6.22	24.2	0.33	1.5	0.05	0.237	4.93	16.7	19.5
Interquartile Range (IQR) 1	0	0.4	0.51	27	0	3250	0.31	0.55	1.5	0.07	10.4	7.7	10	2.79	234.6	1.5	3.45	0.04	0.5	0.03	0.062	1.3	5.2	6
Variance	0	0.13955976	0.25684852	3367.60544	0	3784547.93	0.10724852	0.57046746	2.63060947	0.01958698	45.4671669	36.8530178	425.609467	2.68883314	428187.982	1.3269929	10.2244083	0.00108284	0.10284024	0.00025059	0.00369221	0.85157633	14.5592899	27.4407101
Skewness	-	0.74282257	-0.6485699	2.80368191	-	1.02468309	0.87150967	1.59142105	1.74299608	1.76178565	-0.0828528	1.05562508	1.93403377	0.38122069	3.3302499	0.3176029	0.01442799	0.8243882	-0.2853678	0.5046858	1.58510929	0.04196508	0.12517986	0.04404723
Coefficient of Variation (CoV) 2	-	0.65895533	0.06759443	1.41327079	-	0.84048152	0.31258051	1.25239904	0.8252407	0.98345703	0.37757645	0.52823757	1.02756306	0.4526855	1.95277757	0.29718939	0.18275804	0.13326635	0.31582824	0.66384244	0.85955014	0.2666485	0.40002927	0.45188484
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Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID				As	B			Bi					Cr							Hg				
Typical Detection Limit		Ag	Al	5	20	Ba	Be	0.01	Ca	Cd	Ce	Co	1	Cs	Cu	Fe	Ga	Ge	Hf	0.01	In	K	La	Li
Units	FIZZ_CHECK	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
MP-OVB																								
Count	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Minimum	0	0.21	7.42	7	0	320	1.16	0.25	0.47	0.18	17.9	11.2	9	1.06	38.6	4.78	18.15	0.19	0.6	0.03	0.059	1.19	8.7	11.2
10 Percentile	-	0.585	7.507	13.18	0	350	1.214	0.361	0.488	0.279	18.05	12.25	10.2	1.867	69.92	4.831	18.165	0.193	0.72	0.036	0.0662	1.535	9.09	13.84
25 Percentile	-	1.1475	7.6375	22.45	0	395	1.295	0.5275	0.515	0.4275	18.275	13.825	12	3.0775	116.9	4.9075	18.1875	0.1975	0.9	0.045	0.077	2.0525	9.675	17.8
Median-25Percentile	-	0.5175	0.1075	5.2	0	425	0.12	0.1625	0.28	0.1425	2.825	6.225	2.5	1.0825	246.1	1.4925	0.5875	0.0225	0.25	0.015	0.0135	0.8475	1.825	2.9
Mean	-	1.4825	8.0575	29.225	0	1150	1.4975	1.0375	1.8625	0.69	28.05	23.5	20	3.7025	391.65	6.615	19.95	0.2275	1.925	0.0625	0.08775	3.155	14.075	23.75
Standard Deviation	-	0.80521348	0.74129532	16.902718	0	928.277976	0.31275989	0.87596732	2.04950451	0.46330336	14.0766651	12.2574467	12.9421791	1.63721372	312.839044	1.78849797	2.44361413	0.03561952	1.67835485	0.0258602	0.019331	1.6389097	6.2735058	11.4554572
Median	-	1.665	7.745	27.65	0	820	1.415	0.69	0.795	0.57	21.1	20.05	14.5	4.16	363	6.4	18.775	0.22	1.15	0.06	0.0905	2.9	11.5	20.7
75Percentile-Median	-	0.335	0.42	6.775	0	755	0.2025	0.51	1.3475	0.2625	9.775	9.675	8	0.625	274.75	1.7075	1.7625	0.03	1.025	0.0175	0.01075	1.1025	4.4	5.95
75 Percentile	-	2	8.165	34.425	0	1575	1.6175	1.2	2.1425	0.8325	30.875	29.725	22.5	4.785	637.75	8.1075	20.5375	0.25	2.175	0.0775	0.10125	4.0025	15.9	26.65
90 Percentile	-	2.234	8.858	46.53	0	2214	1.847	1.992	4.091	1.197	43.61	37.51	34.2	5.172	736.3	8.571	22.675	0.268	3.75	0.091	0.1071	4.979	21.12	36.1
Maximum	0	2.39	9.32	54.6	0	2640	2	2.52	5.39	1.44	52.1	42.7	42	5.43	802	8.88	24.1	0.28	4.8	0.1	0.111	5.63	24.6	42.4
Interquartile Range (IQR) 1	-	0.8525	0.5275	11.975	0	1180	0.3225	0.6725	1.6275	0.405	12.6	15.9	10.5	1.7075	520.85	3.2	2.35	0.0525	1.275	0.0325	0.02425	1.95	6.225	8.85
Variance	-	0.64836875	0.54951875	285.701875	0	861700	0.09781875	0.76731875	4.20046875	0.21465	198.1525	150.245	167.5	2.68046875	97868.2675	3.198725	5.97125	0.00126875	2.816875	0.00066875	0.00037369	2.686025	39.356875	131.2275
Skewness	-	-1.0408657	1.79632726	0.47997079	-	1.27077856	1.19645664	1.72377125	1.9269665	1.23299337	1.84571669	1.06803807	1.7797382	-1.2475633	0.23653951	0.20504269	1.78250791	0.70065211	1.86861295	0.42252141	-0.6129686	0.69451219	1.65154242	1.28023093
Coefficient of Variation (CoV) 2	-	0.54314569	0.09200066	0.57836503	-	0.80719824	0.20885469	0.84430585	1.10040511	0.67145414	0.50184189	0.52159348	0.64710896	0.44219142	0.79877198	0.27037006	0.12248692	0.15656931	0.87187265	0.41376322	0.22029628	0.51946425	0.44571977	0.48233504
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Count	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Minimum	0	0.056	4.41	3	0	21	0.5	0.04	0.04	0.04	5.58	1	13	0.7	5.73	1.22	12.31	0	0.36	0	0	1.55	3	4
10 Percentile	0	0.1042	5.496	4.24	0	103.8	0.5	0.056	0.14	0.066	8.034	3.46	19.6	0.76	20.26	2.31	13.668	0	0.43	0	0	2.142	4	5.4
25 Percentile	0	0.1225	6.31	9.15	0	264.5	0.5	0.085	0.32	0.095	12.185	6.3	24	1.35	50.26	2.965	14.97	0	0.705	0	0	2.565	6	6.4
Median-25Percentile	0	0.1855	1.21	9.75	0	519.5	0.5	0.095	1.77	0.055	4.975	2.8	11	1.05	63.86	0.935	2.3	0	0.195	0	0	0.525	1.6	5.6
Mean	0	1.12677778	7.16148148	46.6222222	0	1053.2963	0.96296296	1.02518519	2.68222222	0.22518519	17.7044444	14.0111111	53.2222222	3.21111111	263.747407	4.42444444	17.3885185	0	0.9762963	0	0	3.03592593	8.4962963	14.4185185
Standard Deviation	0	1.53437837	1.22478329	51.6631134	0	1016.983	0.60745257	1.7818766	2.70977016	0.29895336	8.94797446	10.592217	42.8644144	2.90214905	370.075843	1.99632316	3.12054091	0	0.40308209	0	0	0.70116971	4.02671463	8.82043238
Median	0	0.308	7.52	18.9	0	784	1	0.18	2.09	0.15	17.16	9.1	35	2.4	114.12	3.9	17.27	0	0.9	0	0	3.09	7.6	12
75Percentile-Median	0	0.8435	0.575	63.8	0	642.5	0	0.46	1.93	0.1	4.925	10.95	25.5	1.25	119.38	1.865	2.41	0	0.44	0	0	0.475	2.75	6
75 Percentile	0	1.1515	8.095	82.7	0	1426.5	1	0.64	4.02	0.25	22.085	20.05	60.5	3.65	233.5	5.765	19.68	0	1.34	0	0	3.565	10.35	18
90 Percentile	0	3.968	8.424	102.92	0	1919.4	2	4.524	6.46	0.36	24.232	30.26	101	6.5	961.148	7.094	21.068	0	1.506	0	0	3.836	12.44	28.48
Maximum	0	4.863	9.04	224.7	0	4537	3	5.95	10.24	1.66	48.29	37.5	188	14.4	1247.96	8.94	24.56	0	1.79	0	0	4.51	20.6	36.7
Interquartile Range (IQR) 1	0	1.029	1.785	73.55	0	1162	0.5	0.555	3.7	0.155	9.9	13.75	36.5	2.3	183.24	2.8	4.71	0	0.635	0	0	1	4.35	11.6
Variance	0	2.35431699	1.5000941	2669.07728	0	1034254.43	0.36899863	3.17508422	7.34285432	0.08937311	80.0662469	112.195062	1837.35802	8.42246914	136956.13	3.98530617	9.73777558	0	0.16247517	0	0	0.49163896	16.2144307	77.8000274
Skewness	-	1.6966083	-0.8584038	1.69722501	-	1.83697233	1.85770272	1.96679358	1.23243378	4.30351745	1.61783545	0.9015252	1.99358256	2.41614111	1.91114363	0.46747105	0.46738998	-	0.37417501	-	-	-0.1575409	1.26272242	0.97600592
Coefficient of Variation (CoV) 2	-	1.36174	0.17102373	1.10812207	-	0.96552414	0.63081613	1.73810218	1.01027057	1.32758895	0.50540837	0.75598694	0.80538566	0.90378344	1.40314495	0.45120313	0.17945985	-	0.41286861	-	-	0.23095745	0.47393764	0.61174332
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Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID				As	B			Bi					Cr							Hg				
Typical Detection Limit		Ag	Al	5	20	Ba	Be	0.01	Ca	Cd	Ce	Co	1	Cs	Cu	Fe	Ga	Ge	Hf	0.01	In	K	La	Li
Units	FIZZ_CHECK	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
MRSF-OVB																								
Count	0	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Minimum	0	0.08	6.99	5.3	0	150	0.98	0.01	1.15	0.19	19.55	9.4	5	0.48	47.8	3.98	14.6	0.11	1.1	0.01	0.038	0.93	10.1	10.9
10 Percentile	-	0.22	7.139	8.96	0	342	1.026	0.043	1.337	0.213	22.43	15.58	7.3	0.664	62.22	4.146	16.195	0.13	1.23	0.02	0.0456	1.508	11.6	14.63
25 Percentile	-	0.2875	7.1875	13.325	0	990	1.1175	0.07	2.095	0.2825	25.25	16.075	33.75	0.91	74.4	4.395	16.7375	0.14	1.475	0.02	0.04875	1.655	12.175	15.875
Median-25Percentile	-	0.1925	0.2975	4.775	0	115	0.1825	0.045	1.28	0.1775	6.25	2.775	37.75	0.635	17.35	0.59	0.6125	0.015	0.125	0.01	0.00725	0.275	3.275	2.775
Mean	-	0.7325	7.43791667	27.0041667	0	1195.83333	1.36541667	0.1975	3.40125	0.75083333	31.1104167	19.0083333	93	2.09458333	146.758333	4.9025	17.7020833	0.16333333	1.6375	0.06291667	0.06041667	1.985	15.3291667	19.4791667
Standard Deviation	-	0.68248474	0.28219348	24.14264	0	589.193776	0.31759486	0.20759034	1.56765566	0.87126783	7.75585772	3.91928104	88.2982635	1.55390095	120.977694	0.55973394	1.55800882	0.03210227	0.34255474	0.06797543	0.01548364	0.53680381	3.60271647	4.67626802
Median	-	0.48	7.485	18.1	0	1105	1.3	0.115	3.375	0.46	31.5	18.85	71.5	1.545	91.75	4.985	17.35	0.155	1.6	0.03	0.056	1.93	15.45	18.65
75Percentile-Median	-	0.44	0.1	13.3	0	375	0.225	0.1	1.205	0.25	3.375	2.55	55.25	1.3525	63.375	0.3825	1.8625	0.025	0.1	0.0325	0.01275	0.3025	1.825	4.15
75 Percentile	-	0.92	7.585	31.4	0	1480	1.525	0.215	4.58	0.71	34.875	21.4	126.75	2.8975	155.125	5.3675	19.2125	0.18	1.7	0.0625	0.06875	2.2325	17.275	22.8
90 Percentile	-	1.479	7.784	46.5	0	1994	1.825	0.51	5.526	1.562	43	24.36	215.2	4.817	309.4	5.571	19.835	0.2	2.07	0.16	0.0819	2.583	20.08	25.04
Maximum	0	2.84	8.15	118	0	2450	2.13	0.82	6.29	4.29	49.9	27.4	320	5.5	557	6	20.6	0.25	2.5	0.24	0.102	3.63	24.2	29.5
Interquartile Range (IQR) 1	-	0.6325	0.3975	18.075	0	490	0.4075	0.145	2.485	0.4275	9.625	5.325	93	1.9875	80.725	0.9725	2.475	0.04	0.225	0.0425	0.02	0.5775	5.1	6.925
Variance	-	0.46578542	0.07963316	582.867066	0	347149.306	0.10086649	0.04309375	2.45754427	0.75910764	60.153329	15.3607639	7796.58333	2.41460816	14635.6024	0.31330208	2.42739149	0.00103056	0.11734375	0.00462066	0.00023974	0.28815833	12.979566	21.8674826
Skewness	-	1.84118907	0.57942734	2.56009543	-	0.19014408	0.93927163	1.84045167	0.12736197	3.0336486	0.69909677	0.12294085	1.46343588	1.0192619	2.01084082	-0.0413194	0.19907661	0.74215174	0.86667333	1.65273819	1.10744609	0.94665424	0.64987719	0.26684888
Coefficient of Variation (CoV) 2	-	0.93171978	0.03793985	0.89403388	-	0.4927056	0.23259922	1.05109034	0.46090574	1.16040111	0.24930099	0.20618752	0.94944369	0.74186638	0.82433271	0.11417316	0.08801274	0.19654449	0.20919373	1.08040426	0.25628091	0.27043013	0.23502363	0.2400651
NPR < 1.0 or NPR = 1.0																								
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MTDT-RX																								
Count	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Minimum	0	0.02	1.85	0.9	0	880	0.2	0.03	0.04	0.17	13.65	8.3	9	0.24	12.1	1.99	6.77	0.14	0.2	0.005	0.03	0.15	5.4	6.3
10 Percentile	0	0.076	3.542	0.9	0	1184	0.324	0.058	0.128	0.182	14.53	9.82	17.4	0.26	26.9	2.75	10.202	0.176	0.4	0.005	0.0376	0.546	6.08	6.42
25 Percentile	0	0.16	6.08	0.9	0	1640	0.51	0.1	0.26	0.2	15.85	12.1	30	0.29	49.1	3.89	15.35	0.23	0.7	0.005	0.049	1.14	7.1	6.6
Median-25Percentile	0	0.07	0.73	4.2	0	180	0.15	0.02	2.13	0.02	7.05	2.9	4	0.07	20	0.05	3.15	0.03	0.4	0	0.008	0.56	3.7	1.9
Mean	0	0.418	6.124	6.22	0	2418	0.664	0.106	1.626	0.558	24.32	14.96	44.2	0.632	61.7	3.854	16.244	0.234	1.06	0.013	0.0542	1.448	11.9	11.58
Standard Deviation	0	0.45199115	2.25275476	5.36335716	0	1349.46508	0.3120641	0.04127953	1.22184451	0.64431048	11.3222171	4.57584965	27.0510628	0.43429944	30.2982508	1.01969799	5.07085239	0.04923413	0.56071383	0.01029563	0.01404849	0.77988204	5.44977064	5.78598306
Median	0	0.23	6.81	5.1	0	1820	0.66	0.12	2.39	0.22	22.9	15	34	0.36	69.1	3.94	18.5	0.26	1.1	0.005	0.057	1.7	10.8	8.5
75Percentile-Median	0	0.16	0.99	4.1	0	1180	0.15	0.01	0.1	0.14	0.7	2.8	27	0.56	5.6	0.47	1.7	0.01	0.5	0.015	0.008	0.05	5.7	6.9
75 Percentile	0	0.39	7.8	9.2	0	3000	0.81	0.13	2.49	0.36	23.6	17.8	61	0.92	74.7	4.41	20.2	0.27	1.6	0.02	0.065	1.75	16.5	15.4
90 Percentile	0	0.93	7.968	12.68	0	4050	1.008	0.142	2.766	1.248	36.8	20.08	76.6	1.178	91.98	4.788	20.32	0.27	1.66	0.026	0.068	2.2	18.42	18.82
Interquartile Range (IQR) 1	0	0.23	1.72	8.3	0	1360	0.3	0.03	2.23	0.16	7.75	5.7	31	0.63	25.6	0.52	4.85	0.04	0.9	0.015	0.016	0.61	9.4	8.8
Variance	0	0.204296	5.074904	28.7656	0	1821056	0.097384	0.001704	1.492904	0.415136	128.1926	20.9384	731.76	0.188616	917.984	1.039784	25.713544	0.002424	0.3144	0.000106	0.00019736	0.608216	29.7	33.4776
Skewness	-	1.86030659	-1.7096875	0.77445289	-	1.0380613	0.0727219	-1.430263	-0.5110089	2.18061814	1.60443498	-0.009773	0.53627805	0.9960636	-0.5186852	-1.3035331	-1.6140585	-1.7980945	-0.4448583	1.01626713	-0.9771501	-0.6337593	0.34139584	0.95217736
Coefficient of Variation (CoV) 2	-	1.08131854	0.36785675	0.86227607	-	0.55809143	0.46997605	0.38942957	0.75144189	1.15467829	0.46555169	0.3058723	0.612015	0.68718265	0.49105755	0.26458173	0.31216772	0.21040228	0.52897531	0.79197155	0.25919719	0.53859257	0.45796392	0.49965311
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Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID				As	B			Bi					Cr							Hg				
Typical Detection Limit		Ag	Al	5	20	Ba	Be	0.01	Ca	Cd	Ce	Co	1	Cs	Cu	Fe	Ga	Ge	Hf	0.01	In	K	La	Li
Units	FIZZ_CHECK	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
MTRSF-OVB																								
Count	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Minimum	0	0.25	7.46	10.3	0	1660	1.62	0.07	3.87	0.17	30.9	21.2	23	1.67	99.9	5.02	19.1	0.22	1.8	0.01	0.047	1.96	14.9	12.3
10 Percentile	-	0.252	7.506	10.71	0	1665	1.622	0.072	3.903	0.172	31.49	21.24	23.1	1.73	101.06	5.021	19.155	0.223	1.81	0.011	0.0473	1.965	15.26	12.65
25 Percentile	-	0.255	7.575	11.325	0	1672.5	1.625	0.075	3.9525	0.175	32.375	21.3	23.25	1.82	102.8	5.0225	19.2375	0.2275	1.825	0.0125	0.04775	1.9725	15.8	13.175
Median-25Percentile	-	0.005	0.115	1.025	0	12.5	0.005	0.005	0.0825	0.005	1.475	0.1	0.25	0.15	2.9	0.0025	0.1375	0.0075	0.025	0.0025	0.00075	0.0125	0.9	0.875
Mean	-	0.26	7.69	12.35	0	1685	1.63	0.08	4.035	0.18	33.85	21.4	23.5	1.97	105.7	5.025	19.375	0.235	1.85	0.015	0.0485	1.985	16.7	14.05
Standard Deviation	-	0.01	0.23	2.05	0	25	0.01	0.01	0.165	0.01	2.95	0.2	0.5	0.3	5.8	0.005	0.275	0.015	0.05	0.005	0.0015	0.025	1.8	1.75
Median	-	0.26	7.69	12.35	0	1685	1.63	0.08	4.035	0.18	33.85	21.4	23.5	1.97	105.7	5.025	19.375	0.235	1.85	0.015	0.0485	1.985	16.7	14.05
75Percentile-Median	-	0.005	0.115	1.025	0	12.5	0.005	0.005	0.0825	0.005	1.475	0.1	0.25	0.15	2.9	0.0025	0.1375	0.0075	0.025	0.0025	0.00075	0.0125	0.9	0.875
75 Percentile	-	0.265	7.805	13.375	0	1697.5	1.635	0.085	4.1175	0.185	35.325	21.5	23.75	2.12	108.6	5.0275	19.5125	0.2425	1.875	0.0175	0.04925	1.9975	17.6	14.925
90 Percentile	-	0.268	7.874	13.99	0	1705	1.638	0.088	4.167	0.188	36.21	21.56	23.9	2.21	110.34	5.029	19.595	0.247	1.89	0.019	0.0497	2.005	18.14	15.45
Maximum	0	0.27	7.92	14.4	0	1710	1.64	0.09	4.2	0.19	36.8	21.6	24	2.27	111.5	5.03	19.65	0.25	1.9	0.02	0.05	2.01	18.5	15.8
Interquartile Range (IQR) 1	-	0.01	0.23	2.05	0	25	0.01	0.01	0.165	0.01	2.95	0.2	0.5	0.3	5.8	0.005	0.275	0.015	0.05	0.005	0.0015	0.025	1.8	1.75
Variance	-	0.0001	0.0529	4.2025	0	625	1E-04	0.0001	0.027225	1E-04	8.7025	0.04	0.25	0.09	33.64	2.5E-05	0.075625	0.000225	0.0025	0.000025	0.00000225	0.000625	3.24	3.0625
Coefficient of Variation (CoV) 2	-	0.03846154	0.02990897	0.1659919	-	0.0148368	0.00613497	0.125	0.04089219	0.05555556	0.08714919	0.00934579	0.0212766	0.15228426	0.05487228	0.00099502	0.01419355	0.06382979	0.02702703	0.33333333	0.03092784	0.01259446	0.10778443	0.12455516
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MTT-RX																								
Count	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Minimum	0	0.03	5.51	4.1	0	260	0.53	0.03	0.15	0.05	6.65	0.9	0.5	0.41	11.9	1.12	12.6	0.17	0.7	0.005	0.021	0.44	3.7	2.4
10 Percentile	0	0.048	6.104	5	0	540	0.638	0.04	0.578	0.064	15.06	3.04	1	0.526	16.78	2.038	15.06	0.186	1.12	0.007	0.0282	0.718	8.86	8.14
25 Percentile	0	0.07	6.655	6.45	0	720	0.905	0.045	1.3	0.1	21.05	11.7	3.5	0.705	19.05	2.825	16.3	0.22	1.3	0.01	0.037	1.15	11.1	11.75
Median-25Percentile	0	0.09	0.715	4.45	0	200	0.365	0.025	0.74	0.03	11.75	2.8	18.5	0.645	27.25	1.295	2.85	0.02	0.3	0.02	0.025	0.37	4.7	6.15
Mean	0	0.28333333	7.17333333	12.6266667	0	1562.66667	1.19733333	0.16333333	2.44533333	0.152	33.43	13.6666667	63.9	1.94	77.9333333	3.93933333	19.38	0.23666667	2.03333333	0.05466667	0.06466667	1.91933333	16.7333333	24.06
Standard Deviation	0	0.4296924	0.77398249	8.86457118	0	1566.25867	0.47540112	0.25088289	1.80151368	0.08997778	18.1581368	6.85698346	69.9848079	1.4791439	90.0115672	1.48586884	4.27246221	0.03681787	1.1533526	0.05675875	0.03809754	1.32665226	8.71035144	18.0016592
Median	0	0.16	7.37	10.9	0	920	1.27	0.07	2.04	0.13	32.8	14.5	22	1.35	46.3	4.12	19.15	0.24	1.6	0.03	0.062	1.52	15.8	17.9
75Percentile-Median	0	0.07	0.43	3.65	0	1025	0.065	0.065	0.89	0.04	5.55	2.95	97	1.495	30.8	0.66	2.45	0.015	0.9	0.04	0.012	0.36	2.75	15.65
75 Percentile	0	0.23	7.8	14.55	0	1945	1.335	0.135	2.93	0.17	38.35	17.45	119	2.845	77.1	4.78	21.6	0.255	2.5	0.07	0.074	1.88	18.55	33.55
90 Percentile	0	0.452	7.942	24.68	0	2430	1.716	0.308	5.386	0.26	59.82	21.54	141.6	4.244	182.4	5.814	22.44	0.28	2.8	0.156	0.102	4.37	30	48.68
Maximum	0	1.82	8.22	36.2	0	6840	2.41	1.04	6.29	0.4	74.1	26.3	229	5	350	6.53	31.2	0.31	5.6	0.17	0.175	4.66	36.2	68.4
Interquartile Range (IQR) 1	0	0.16	1.145	8.1	0	1225	0.43	0.09	1.63	0.07	17.3	5.75	115.5	2.14	58.05	1.955	5.3	0.035	1.2	0.06	0.037	0.73	7.45	21.8
Variance	0	0.18463556	0.59904889	78.5806222	0	2453166.22	0.22600622	0.06294222	3.24545156	0.008096	329.717933	47.0182222	4897.87333	2.18786667	8102.08222	2.20780622	18.2539333	0.00135556	1.33022222	0.00322156	0.00145142	1.76000622	75.8702222	324.059733
Skewness	-	3.33853884	-0.7651787	1.66683068	-	2.74819896	1.01539358	3.16985161	1.07946206	1.61045275	1.00227771	-0.2973527	0.91646731	0.89979099	2.24515201	-0.1236866	1.14737432	-0.0880173	2.00074865	1.20776211	1.7103788	1.30265014	1.12719433	1.22885079
Coefficient of Variation (CoV) 2	-	1.5165614	0.10789719	0.70205157	-	1.00229864	0.39704993	1.53601767	0.73671497	0.59195905	0.54316892	0.5017305	1.09522391	0.76244531	1.15498161	0.37718789	0.22045729	0.15556847	0.56722259	1.03826979	0.58913715	0.69120472	0.52053893	0.74819864
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Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID				As	B			Bi					Cr							Hg				
Typical Detection Limit		Ag	Al	5	20	Ba	Be	0.01	Ca	Cd	Ce	Co	1	Cs	Cu	Fe	Ga	Ge	Hf	0.01	In	K	La	Li
Units	FIZZ_CHECK	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
SP-RX																								
Count	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Minimum	0	0.046	3.12	2.8	0	59	0.5	0.02	0.04	0.01	6.43	2.9	10	1.4	24.45	2.28	8.14	0	0.3	0	0	0.97	3	4.2
10 Percentile	0	0.086	6.342	5.62	0	112.3	0.5	0.043	0.176	0.01	8.471	3.75	21.9	2.05	38.747	2.799	13.723	0	0.47	0	0	2.111	4.86	7.45
25 Percentile	0	0.21675	7.0725	7.7	0	205	1	0.0575	0.4325	0.06	10.8475	5.775	27.5	2.45	172.525	2.855	14.98	0	0.6175	0	0	2.34	5.175	8.525
Median-25Percentile	0	0.19125	0.2875	3.85	0	1375	0	0.0925	0.6625	0.035	2.9275	12.275	4.5	0.8	766.375	0.825	2.96	0	0.2075	0	0	0.04	1.075	3.575
Mean	0	0.5205	7.28714286	106.021429	0	1613.64286	0.96428571	0.21642857	1.49285714	0.20642857	15.1507143	14.1071429	38.0714286	3.95714286	940.167857	4.01	17.0385714	0	0.80857143	0	0	2.69928571	7.75	14.8
Standard Deviation	0	0.53060245	1.37280957	248.335275	0	1476.09976	0.35174492	0.1984442	1.44869118	0.35489651	5.91654878	8.01404698	21.6017998	2.45086407	912.459071	1.25767359	3.3773888	0	0.27283844	0	0	0.83680911	3.45248358	9.00745723
Median	0	0.408	7.36	11.55	0	1580	1	0.15	1.095	0.095	13.775	18.05	32	3.25	938.9	3.68	17.94	0	0.825	0	0	2.38	6.25	12.1
75Percentile-Median	0	0.07375	0.805	44	0	1019.75	0	0.1675	1.045	0.06	5.165	2.45	11.75	1.05	114.9375	1.6025	1.2025	0	0.12	0	0	0.6875	4.25	4.175
75 Percentile	0	0.48175	8.165	55.55	0	2599.75	1	0.3175	2.14	0.155	18.94	20.5	43.75	4.3	1053.8375	5.2825	19.1425	0	0.945	0	0	3.0675	10.5	16.275
90 Percentile	0	0.945	8.533	171.51	0	3844.3	1	0.482	2.93	0.317	20.378	22.46	55.1	6.54	2213.27	5.501	20.629	0	1.192	0	0	4.012	10.87	28.99
Maximum	0	2.184	8.94	980.6	0	4357	2	0.7	5.53	1.44	29.77	25.3	104	11.2	3191.71	6.16	21.14	0	1.28	0	0	4.11	16.3	36.4
Interquartile Range (IQR) 1	0	0.265	1.0925	47.85	0	2394.75	0	0.26	1.7075	0.095	8.0925	14.725	16.25	1.85	881.3125	2.4275	4.1625	0	0.3275	0	0	0.7275	5.325	7.75
Variance	0	0.28153896	1.88460612	61670.4088	0	2178870.52	0.12372449	0.0393801	2.09870612	0.12595153	35.0055495	64.224949	466.637755	6.00673469	832581.556	1.58174286	11.4067551	0	0.07444082	0	0	0.70024949	11.9196429	81.1342857
Skewness	-	2.37906017	-2.0035531	3.46547989	-	0.61163754	1.49686956	1.24792807	1.6362019	3.31282677	0.8338084	-0.2358148	2.10003655	2.06033493	1.43021548	0.30274277	-1.2736754	-	0.01221904	-	-	0.2144221	1.02887582	1.47144033
Coefficient of Variation (CoV) 2	-	1.01940913	0.1883879	2.3423121	-	0.91476237	0.36477251	0.91690391	0.97041514	1.71922183	0.39051286	0.56808434	0.56740187	0.61935193	0.97052783	0.31363431	0.19822019	-	0.3374327	-	-	0.31001131	0.44548175	0.60861197
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SRSF-OVB																								
Count	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Minimum	0	0.23	7.53	6.1	0	810	1.07	0.02	1.5	0.23	18.25	28.5	323	0.48	65.5	5.12	15.35	0.13	1.2	0.03	0.042	1.3	9.3	20.1
10 Percentile	0	0.23	7.53	6.1	0	810	1.07	0.02	1.5	0.23	18.25	28.5	323	0.48	65.5	5.12	15.35	0.13	1.2	0.03	0.042	1.3	9.3	20.1
25 Percentile	0	0.23	7.53	6.1	0	810	1.07	0.02	1.5	0.23	18.25	28.5	323	0.48	65.5	5.12	15.35	0.13	1.2	0.03	0.042	1.3	9.3	20.1
Median-25Percentile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean	0	0.23	7.53	6.1	0	810	1.07	0.02	1.5	0.23	18.25	28.5	323	0.48	65.5	5.12	15.35	0.13	1.2	0.03	0.042	1.3	9.3	20.1
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Median	0	0.23	7.53	6.1	0	810	1.07	0.02	1.5	0.23	18.25	28.5	323	0.48	65.5	5.12	15.35	0.13	1.2	0.03	0.042	1.3	9.3	20.1
75Percentile-Median	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75 Percentile	0	0.23	7.53	6.1	0	810	1.07	0.02	1.5	0.23	18.25	28.5	323	0.48	65.5	5.12	15.35	0.13	1.2	0.03	0.042	1.3	9.3	20.1
90 Percentile	0	0.23	7.53	6.1	0	810	1.07	0.02	1.5	0.23	18.25	28.5	323	0.48	65.5	5.12	15.35	0.13	1.2	0.03	0.042	1.3	9.3	20.1
Maximum	0	0.23	7.53	6.1	0	810	1.07	0.02	1.5	0.23	18.25	28.5	323	0.48	65.5	5.12	15.35	0.13	1.2	0.03	0.042	1.3	9.3	20.1
Interquartile Range (IQR) 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coefficient of Variation (CoV) 2	-	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID				As	B			Bi					Cr							Hg				
Typical Detection Limit		Ag	Al	5	20	Ba	Be	0.01	Ca	Cd	Ce	Co	1	Cs	Cu	Fe	Ga	Ge	Hf	0.01	In	K	La	Li
Units	FIZZ_CHECK	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
SRSF-RX																								
Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Minimum	0	0.22	6.78	4.4	0	960	0.61	0.02	4.74	0.34	16.5	19.6	33	0.65	66.3	5.02	14.75	0.13	0.9	0.02	0.046	0.96	8.2	18.3
10 Percentile	0	0.266	7.006	4.46	0	1010	0.642	0.02	4.826	0.378	16.66	19.74	34.6	0.686	72.14	5.026	15.48	0.13	0.92	0.02	0.0472	1.078	8.28	18.8
25 Percentile	0	0.335	7.345	4.55	0	1085	0.69	0.02	4.955	0.435	16.9	19.95	37	0.74	80.9	5.035	16.575	0.13	0.95	0.02	0.049	1.255	8.4	19.55
Median-25Percentile	0	0.115	0.565	0.15	0	125	0.08	0	0.215	0.095	0.4	0.35	4	0.09	14.6	0.015	1.825	0	0.05	0	0.003	0.295	0.2	1.25
Mean	0	0.37666667	7.67333333	6.36666667	0	1230	0.78333333	0.02333333	5.11333333	0.53333333	17.0833333	22.8666667	133.666667	0.89	88.7666667	5.08333333	17.3333333	0.13	1.1	0.02333333	0.05066667	1.37333333	8.56666667	21.1
Standard Deviation	0	0.11085526	0.6545397	2.57207223	0	229.056034	0.14727148	0.00471405	0.2845269	0.15923428	0.41699987	4.1346772	136.746318	0.22449944	16.3056909	0.06944222	1.83590728	0	0.21602469	0.00471405	0.00339935	0.29329545	0.28674418	2.41798814
Median	0	0.45	7.91	4.7	0	1210	0.77	0.02	5.17	0.53	17.3	20.3	41	0.83	95.5	5.05	18.4	0.13	1	0.02	0.052	1.55	8.6	20.8
75Percentile-Median	0	0.005	0.21	2.65	0	155	0.1	0.005	0.13	0.1	0.075	4.2	143	0.18	4.5	0.065	0.225	0	0.2	0.005	0.001	0.03	0.15	1.7
75 Percentile	0	0.455	8.12	7.35	0	1365	0.87	0.025	5.3	0.63	17.375	24.5	184	1.01	100	5.115	18.625	0.13	1.2	0.025	0.053	1.58	8.75	22.5
90 Percentile	0	0.458	8.246	8.94	0	1458	0.93	0.028	5.378	0.69	17.42	27.02	269.8	1.118	102.7	5.154	18.76	0.13	1.32	0.028	0.0536	1.598	8.84	23.52
Maximum	0	0.46	8.33	10	0	1520	0.97	0.03	5.43	0.73	17.45	28.7	327	1.19	104.5	5.18	18.85	0.13	1.4	0.03	0.054	1.61	8.9	24.2
Interquartile Range (IQR) 1	0	0.12	0.775	2.8	0	280	0.18	0.005	0.345	0.195	0.475	4.55	147	0.27	19.1	0.08	2.05	0	0.25	0.005	0.004	0.325	0.35	2.95
Variance	0	0.01228889	0.42842222	6.61555556	0	52466.6667	0.02168889	2.2222E-05	0.08095556	0.02535556	0.17388889	17.0955556	18699.5556	0.0504	265.875556	0.00482222	3.37055556	0	0.04666667	2.2222E-05	1.1556E-05	0.08602222	0.08222222	5.84666667
Skewness	-	-1.7214859	-1.2127276	1.71439501	-	0.31918478	0.33083181	1.73205081	-0.712414	0.07689218	-1.5654824	1.69489143	1.72760585	0.93521953	-1.3447684	1.49276908	-1.6543321	-	1.45786297	1.73205081	-1.2933428	-1.6778448	-0.4232732	0.45118443
Coefficient of Variation (CoV) 2	-	0.294306	0.08530057	0.4039904	-	0.18622442	0.18800614	0.20203051	0.05564411	0.29856427	0.02440975	0.18081679	1.02303979	0.25224657	0.1836916	0.01366077	0.10591773	0	0.19638608	0.20203051	0.06709236	0.21356465	0.03347208	0.11459659
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TAR-RX																								
Count	0	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Minimum	0	0.03	5.02	2.1	0	500	0.64	0.03	0.08	0.02	9.05	3.7	83	1.65	23.9	2.54	11.55	0.1	1.1	0.01	0.028	0.67	3.5	31
10 Percentile	-	0.094	5.14	5.26	0	650	0.686	0.08	0.146	0.044	16.02	9.08	110.6	1.692	30.48	2.81	11.92	0.11	1.2	0.032	0.031	0.752	6.7	32.88
25 Percentile	-	0.12	5.91	6.4	0	660	0.79	0.08	0.41	0.06	22.7	11.8	127	1.83	33	3.13	13.05	0.12	1.3	0.04	0.031	0.97	10.8	37.1
Median-25Percentile	-	0.02	0.67	1.3	0	80	0.1	0.02	0.11	0.08	2.7	2	35	0.47	5.9	0.4	2.4	0.01	0.1	0.02	0.02	0.12	0.8	10.8
Mean	-	0.20307692	6.36230769	10.1692308	0	792.307692	0.88769231	0.11076923	0.64692308	0.13461538	23.9076923	13.1307692	174.615385	2.40076923	39.2461538	3.75923077	15.2576923	0.13153846	1.39230769	0.09076923	0.04553846	1.15769231	10.8692308	45.3
Standard Deviation	-	0.17022088	0.78997715	6.09052033	0	181.538462	0.1498283	0.03931364	0.62192486	0.07732204	5.88677939	3.6707544	54.9160737	0.59234166	8.40518296	0.80743146	2.40030817	0.02106625	0.23357271	0.07205356	0.01243206	0.31550092	3.00599008	8.65927693
Median	-	0.14	6.58	7.7	0	740	0.89	0.1	0.52	0.14	25.4	13.8	162	2.3	38.9	3.53	15.45	0.13	1.4	0.06	0.051	1.09	11.6	47.9
75Percentile-Median	-	0.03	0.33	3.9	0	140	0.11	0.04	0.08	0.04	1.9	2.7	62	0.72	6.9	0.72	1.25	0.01	0	0.06	0.004	0.29	1.3	3.7
75 Percentile	-	0.17	6.91	11.6	0	880	1	0.14	0.6	0.18	27.3	16.5	224	3.02	45.8	4.25	16.7	0.14	1.4	0.12	0.055	1.38	12.9	51.6
90 Percentile	-	0.366	7.208	17.54	0	1070	1.09	0.14	0.918	0.246	29.64	16.68	238.2	3.202	49.82	4.78	18.38	0.158	1.5	0.168	0.06	1.568	13.78	55.64
Maximum	0	0.71	7.66	26.1	0	1160	1.14	0.19	2.66	0.25	31.4	17.2	264	3.42	54.1	5.14	19.35	0.18	2.1	0.28	0.061	1.7	14.3	56.6
Interquartile Range (IQR) 1	-	0.05	1	5.2	0	220	0.21	0.06	0.19	0.12	4.6	4.7	97	1.19	12.8	1.12	3.65	0.02	0.1	0.08	0.024	0.41	2.1	14.5
Variance	-	0.02897515	0.62406391	37.0944379	0	32956.213	0.02244852	0.00154556	0.38679053	0.0059787	34.6541716	13.4744379	3015.77515	0.35086864	70.6471006	0.65194556	5.76147929	0.00044379	0.05455621	0.00519172	0.00015456	0.09954083	9.03597633	74.9830769
Skewness	-	2.26541952	-0.366465	1.48512873	-	0.70662765	0.02154145	-0.0307226	2.82873591	0.13878462	-1.3989444	-1.3125435	0.00938132	0.37470097	0.0759955	0.17200968	-0.0579325	0.83452549	2.16164387	1.50627146	-0.1571301	0.19614847	-1.357665	-0.401224
Coefficient of Variation (CoV) 2	-	0.83820888	0.12416519	0.59891652	-	0.22912621	0.16878405	0.35491479	0.96135829	0.57439231	0.24622951	0.27955365	0.31449734	0.24672994	0.21416578	0.21478635	0.1573179	0.16015279	0.16775941	0.79381044	0.2730014	0.27252571	0.2765596	0.19115402
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Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID				As	B			Bi					Cr							Hg				
Typical Detection Limit		Ag	Al	5	20	Ba	Be	0.01	Ca	Cd	Ce	Co	1	Cs	Cu	Fe	Ga	Ge	Hf	0.01	In	K	La	Li
Units	FIZZ_CHECK	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
TCAR-OVB																								
Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Minimum	0	210	2.05	8.3	10	175.8	0	0.1	0.29	0.27	0	13.3	84.1	0	51.26	3.41	6.1	0	0	69	0	0.2	3.7	0
10 Percentile	0	215	2.068	8.36	10	187.2	0	0.106	0.31	0.28	0	13.58	89.52	0	51.478	3.436	6.14	0	0	69.2	0	0.21	3.82	0
25 Percentile	0	222.5	2.095	8.45	10	204.3	0	0.115	0.34	0.295	0	14	97.65	0	51.805	3.475	6.2	0	0	69.5	0	0.225	4	0
Median-25Percentile	0	12.5	0.045	0.15	0	28.5	0	0.015	0.05	0.025	0	0.7	13.55	0	0.545	0.065	0.1	0	0	0.5	0	0.025	0.3	0
Mean	0	234.333333	2.25333333	9.36666667	10	222.433333	0	0.13333333	0.71	0.41666667	0	15.1	105.9	0	56.5433333	3.70333333	6.5	0	0	126	0	0.23333333	5.23333333	0
Standard Deviation	0	19.6015872	0.22691163	1.302135	0	34.6285367	0	0.02867442	0.52484918	0.17326922	0	1.65730705	16.0787645	0	6.71577413	0.32724439	0.43204938	0	0	79.9041092	0	0.02357023	1.76131264	0
Median	0	235	2.14	8.6	10	232.8	0	0.13	0.39	0.32	0	14.7	111.2	0	52.35	3.54	6.3	0	0	70	0	0.25	4.3	0
75Percentile-Median	0	11.5	0.215	1.3	0	12.95	0	0.02	0.53	0.17	0	1.3	5.6	0	6.835	0.31	0.4	0	0	84.5	0	0	1.7	0
75 Percentile	0	246.5	2.355	9.9	10	245.75	0	0.15	0.92	0.49	0	16	116.8	0	59.185	3.85	6.7	0	0	154.5	0	0.25	6	0
90 Percentile	0	253.4	2.484	10.68	10	253.52	0	0.162	1.238	0.592	0	16.78	120.16	0	63.286	4.036	6.94	0	0	205.2	0	0.25	7.02	0
Maximum	0	258	2.57	11.2	10	258.7	0	0.17	1.45	0.66	0	17.3	122.4	0	66.02	4.16	7.1	0	0	239	0	0.25	7.7	0
Interquartile Range (IQR) 1	0	24	0.26	1.45	0	41.45	0	0.035	0.58	0.195	0	2	19.15	0	7.38	0.375	0.5	0	0	85	0	0.025	2	0
Variance	0	384.222222	0.05148889	1.69555556	0	1199.13556	0	0.00082222	0.27546667	0.03002222	0	2.74666667	258.526667	0	45.1016222	0.10708889	0.18666667	0	0	6384.66667	0	0.00055556	3.10222222	0
Skewness	-	-0.1248675	1.52993838	1.66335263	-	-1.0342284	#DIV/0!	0.42327316	1.68501214	1.62450534	-	0.85235766	-1.1233987	-	1.69789326	1.5293066	1.45786297	-	-	1.73184735	-	-1.7320508	1.58252321	-
Coefficient of Variation (CoV) 2	-	0.08364831	0.10070043	0.13901797	0	0.15568052	#DIV/0!	0.21505813	0.7392242	0.41584613	-	0.10975543	0.15182969	-	0.11877217	0.08836482	0.06646914	-	-	0.6341596	-	0.10101525	0.33655656	-
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TCAR-RX																								
Count	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Minimum	0	56	1	4.4	10	61.8	0	0.04	0.17	0.06	0	9.7	62.9	0	13.94	1.72	3.1	0	0	22	0	0.11	1.9	0
10 Percentile	0	88.5	1.285	5.35	10	78.6	0	0.05	0.25	0.13	0	10.15	76.2	0	18.88	2.25	4.1	0	0	30	0	0.125	2	0
25 Percentile	0	138.75	1.695	6.475	10	105.6	0	0.06	0.35	0.205	0	12.55	93.2	0	26.4225	2.885	5.225	0	0	42.5	0	0.1425	2.75	0
Median-25Percentile	0	54.25	0.44	0.825	0	34.25	0	0.025	0.085	0.035	0	5.95	24.25	0	12.1275	0.61	0.975	0	0	14.5	0	0.0225	3.15	0
Mean	0	190.666667	2.045	7.76666667	17	137.033333	0	0.09166667	2.18	0.22	0	16.2833333	121.4	0	40.4133333	3.34666667	6.05	0	0	55.3333333	0	0.16166667	6.65	0
Standard Deviation	0	85.4159756	0.61462048	2.26470503	15.6524758	50.8083545	0	0.04179979	3.76030141	0.07895146	0	4.46371171	44.9432976	0	19.8867541	0.91578139	1.70562794	0	0	21.7076535	0	0.03131382	4.77484729	0
Median	0	193	2.135	7.3	10	139.85	0	0.085	0.435	0.24	0	18.5	117.45	0	38.55	3.495	6.2	0	0	57	0	0.165	5.9	0
75Percentile-Median	0	58	0.365	2.475	0	17.6	0	0.0325	0.5425	0.0425	0	0.325	16.75	0	11.5125	0.5575	0.975	0	0	7.75	0	0.0225	1.95	0
75 Percentile	0	251	2.5	9.775	10	157.45	0	0.1175	0.9775	0.2825	0	18.825	134.2	0	50.0625	4.0525	7.175	0	0	64.75	0	0.1875	7.85	0
90 Percentile	0	290.5	2.715	10.65	31	192.65	0	0.14	5.855	0.29	0	20.2	170.55	0	63.81	4.295	7.85	0	0	79	0	0.195	12.05	0
Maximum	0	311	2.83	10.8	52	223.2	0	0.16	10.56	0.29	0	21.5	205.7	0	75.16	4.45	8.4	0	0	91	0	0.2	16	0
Interquartile Range (IQR) 1	0	112.25	0.805	3.3	0	51.85	0	0.0575	0.6275	0.0775	0	6.275	41	0	23.64	1.1675	1.95	0	0	22.25	0	0.045	5.1	0
Variance	0	7295.88889	0.37775833	5.12888889	245	2581.48889	0	0.00174722	14.1398667	0.00623333	0	19.9247222	2019.9	0	395.482989	0.83865556	2.90916667	0	0	471.222222	0	0.00098056	22.7991667	0
Skewness	-	-0.1972168	-0.5798459	0.12892029	2.44948974	0.27455492	-	0.45796201	2.41352009	-1.5553635	-	-0.7367048	0.91742702	-	0.5906506	-0.7606332	-0.5182548	-	-	0.10562817	-	-0.4789901	1.28247785	-
Coefficient of Variation (CoV) 2	-	0.44798589	0.30054791	0.29159292	0.92073387	0.37077369	-	0.45599768	1.7249089	0.35887028	-	0.27412764	0.37020838	-	0.49208398	0.27363986	0.28192197	-	-	0.39230699	-	0.19369375	0.71802215	-
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Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID				As	B			Bi					Cr							Hg				
Typical Detection Limit		Ag	Al	5	20	Ba	Be	0.01	Ca	Cd	Ce	Co	1	Cs	Cu	Fe	Ga	Ge	Hf	0.01	In	K	La	Li
Units	FIZZ_CHECK	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
TDPR-RX																								
Count	0	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Minimum	0	0.1	4.87	2.6	0	480	0.7	0.05	0.13	0.08	16.6	4.2	112	1.71	28.5	3.18	11.95	0.09	0.9	0.04	0.034	0.84	7.9	31.1
10 Percentile	-	0.108	5.582	5.66	0	560	0.756	0.084	0.14	0.104	21.88	8.9	145.4	1.93	31.72	3.32	13.17	0.1	1.24	0.05	0.0374	0.912	10.12	35.42
25 Percentile	-	0.135	5.795	6.75	0	590	0.88	0.09	0.205	0.145	24.15	12.65	164.5	2.22	33.95	3.56	14.05	0.105	1.4	0.06	0.0405	1.03	11.45	37.8
Median-25Percentile	-	0.045	0.565	1.85	0	20	0.08	0.01	0.255	0.035	0.85	2.25	10.5	0.31	3.35	0.2	2.9	0.035	0.1	0.01	0.0045	0.14	0.75	5.9
Mean	-	0.18333333	6.48933333	9.12	0	688	0.96266667	0.11	1.21666667	0.19866667	26.3666667	14.5866667	186.2	2.722	39.6	3.76466667	16.18	0.13	1.49333333	0.08333333	0.05053333	1.21133333	12.54	46.3666667
Standard Deviation	-	0.05906682	0.85862267	3.90217034	0	141.477913	0.14821006	0.03204164	1.68166055	0.08163877	4.66742851	4.31584162	40.636929	0.69025792	8.96519195	0.33970314	2.41880136	0.02476557	0.26699979	0.03571492	0.01450915	0.24816303	2.29399215	15.3068902
Median	-	0.18	6.36	8.6	0	610	0.96	0.1	0.46	0.18	25	14.9	175	2.53	37.3	3.76	16.95	0.14	1.5	0.07	0.045	1.17	12.2	43.7
75Percentile-Median	-	0.05	0.93	1.4	0	245	0.1	0.04	1.28	0.07	3.5	2.65	37	0.675	4.8	0.21	1.025	0.01	0.15	0.04	0.0115	0.255	1.55	5.15
75 Percentile	-	0.23	7.29	10	0	855	1.06	0.14	1.74	0.25	28.5	17.55	212	3.205	42.1	3.97	17.975	0.15	1.65	0.11	0.0565	1.425	13.75	48.85
90 Percentile	-	0.262	7.412	13.22	0	886	1.1	0.156	2.276	0.332	33	18.84	228.8	3.784	48.38	4.142	18.96	0.16	1.76	0.13	0.074	1.57	15.92	53.58
Maximum	0	0.28	7.96	19.8	0	900	1.28	0.16	6.82	0.34	34.9	20.8	284	3.86	65.6	4.43	20.2	0.16	2.1	0.16	0.082	1.64	16.7	98.3
Interquartile Range (IQR) 1	-	0.095	1.495	3.25	0	265	0.18	0.05	1.535	0.105	4.35	4.9	47.5	0.985	8.15	0.41	3.925	0.045	0.25	0.05	0.016	0.395	2.3	11.05
Variance	-	0.00348889	0.73723289	15.2269333	0	20016	0.02196622	0.00102667	2.82798222	0.00666489	21.7848889	18.6264889	1651.36	0.476456	80.3746667	0.11539822	5.8506	0.00061333	0.07128889	0.00127556	0.00021052	0.06158489	5.2624	234.300889
Skewness	-	0.13743455	-0.0673596	1.20974183	-	0.45013009	0.06030271	0.23042575	2.66505401	0.54357688	0.04191623	-1.0423834	0.61367755	0.41150586	1.64789339	0.02614941	-0.1618077	-0.2641946	0.1030386	0.88922365	1.17747689	0.36073713	0.13053645	2.75523549
Coefficient of Variation (CoV) 2	-	0.32218264	0.13231292	0.42786955	-	0.2056365	0.15395782	0.29128763	1.38218676	0.41093341	0.17702004	0.2958758	0.21824344	0.25358484	0.22639374	0.09023459	0.14949329	0.19050437	0.1787945	0.42857905	0.28712047	0.20486766	0.18293398	0.33012704
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Count	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Minimum	0	0.25	7.05	5.8	0	1510	1.18	0.11	1.23	0.37	25.4	13.1	37	1.1	63.9	4.08	17.7	0.11	0.6	0.01	0.061	1.89	13.7	10.3
10 Percentile	0	0.27	7.098	10.52	0	1554	1.208	0.114	1.33	0.406	27.6	13.94	38.2	1.144	64.22	4.224	17.82	0.118	0.84	0.022	0.0618	1.974	14.66	11.1
25 Percentile	0	0.3	7.17	17.6	0	1620	1.25	0.12	1.48	0.46	30.9	15.2	40	1.21	64.7	4.44	18	0.13	1.2	0.04	0.063	2.1	16.1	12.3
Median-25Percentile	0	0.01	0.09	0.4	0	30	0.03	0.04	0.05	0.01	2.3	0.4	3	0.05	12.5	0.27	0.65	0	0.2	0	0.003	0.01	1.6	0.1
Mean	0	0.364	7.392	17.84	0	1646	1.284	0.154	1.736	0.498	32.2	16.4	42.6	1.236	76.26	4.62	18.44	0.13	1.24	0.044	0.0652	2.102	17.06	12.78
Standard Deviation	0	0.0976934	0.41208737	6.61077908	0	79.649231	0.07002857	0.03611094	0.41504699	0.08704022	4.06300381	2.32637056	3.82622529	0.08163333	11.4081725	0.3283291	0.5132251	0.01095445	0.33823069	0.02244994	0.00285657	0.12702756	2.01851431	1.56384142
Median	0	0.31	7.26	18	0	1650	1.28	0.16	1.53	0.47	33.2	15.6	43	1.26	77.2	4.71	18.65	0.13	1.4	0.04	0.066	2.11	17.7	12.4
75Percentile-Median	0	0.15	0.02	5.8	0	70	0.04	0.01	0.57	0.11	0.5	3.3	2	0	3.5	0.16	0.1	0.01	0.1	0.01	0.001	0.01	0.5	1.8
75 Percentile	0	0.46	7.28	23.8	0	1720	1.32	0.17	2.1	0.58	33.7	18.9	45	1.26	80.7	4.87	18.75	0.14	1.5	0.05	0.067	2.12	18.2	14.2
90 Percentile	0	0.484	7.832	23.92	0	1726	1.362	0.194	2.244	0.598	36.16	19.08	46.8	1.314	89.16	4.948	18.96	0.14	1.5	0.068	0.0682	2.222	19.04	14.5
Maximum	0	0.5	8.2	24	0	1730	1.39	0.21	2.34	0.61	37.8	19.2	48	1.35	94.8	5	19.1	0.14	1.5	0.08	0.069	2.29	19.6	14.7
Interquartile Range (IQR) 1	0	0.16	0.11	6.2	0	100	0.07	0.05	0.62	0.12	2.8	3.7	5	0.05	16	0.43	0.75	0.01	0.3	0.01	0.004	0.02	2.1	1.9
Variance	0	0.009544	0.169816	43.7024	0	6344	0.004904	0.001304	0.172264	0.007576	16.508	5.412	14.64	0.006664	130.1464	0.1078	0.2634	0.00012	0.1144	0.000504	8.16E-06	0.016136	4.0744	2.4456
Skewness	-	0.4793374	2.01462564	-1.3414475	-	-0.9057298	0.06375742	0.35101896	0.47330787	-0.0984198	-0.6073703	-0.0142082	-0.1162425	-0.5611169	0.60806023	-0.775557	-0.3613874	-1.3608276	-1.7179545	0.19604279	-0.3008332	-0.4184927	-0.7499401	-0.426983
Coefficient of Variation (CoV) 2	-	0.26838846	0.05574775	0.37055937	-	0.04838957	0.05453938	0.23448662	0.23908236	0.17477956	0.12618024	0.14185186	0.0898175	0.06604638	0.14959576	0.07106691	0.02783216	0.08426501	0.27276669	0.51022601	0.04381244	0.06043176	0.11831854	0.12236631
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Count	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Minimum	0	0.15	5.59	6.8	0	750	0.96	0.09	0.22	0.19	24.1	14.2	152	1.96	27.5	3.77	13.55	0.1	1.5	0.06	0.045	1.11	11.5	36.7

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID				As	B			Bi					Cr							Hg				
Typical Detection Limit		Ag	Al	5	20	Ba	Be	0.01	Ca	Cd	Ce	Co	1	Cs	Cu	Fe	Ga	Ge	Hf	0.01	In	K	La	Li
Units	FIZZ_CHECK	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
10 Percentile	0	0.16	5.72	6.8	0	750	0.97	0.09	0.23	0.215	24.85	15	155	1.995	32.55	3.79	13.825	0.1	1.5	0.06	0.047	1.13	12	37.9
25 Percentile	0	0.17	5.9	6.875	0	752.5	1.0075	0.09	0.255	0.2425	25.9	16.025	160.25	2.0325	38.225	3.82	14.1875	0.115	1.575	0.06	0.04925	1.15	12.625	39.875
Median-25Percentile	0	0	0.175	0.925	0	17.5	0.1425	0.005	0.075	0.0125	1.7	0.725	7.25	0.0425	2.175	0.075	0.7375	0.045	0.275	0.005	0.00275	0.015	0.975	2.975
Mean	0	0.18666667	6.13833333	7.96666667	0	771.666667	1.125	0.095	0.45833333	0.28833333	27.3166667	16.4666667	168.5	2.075	38.7166667	3.895	15	0.14333333	1.78333333	0.07333333	0.05283333	1.17833333	13.5666667	41.8333333
Standard Deviation	0	0.03197221	0.39692219	1.15710366	0	21.1476292	0.12311918	0.005	0.2574501	0.09923317	2.01114948	1.20231259	14.1273966	0.07135592	5.37414076	0.09032349	1.08012345	0.0314466	0.21147629	0.01795055	0.00558022	0.05335937	1.3449494	3.07878042
Median	0	0.17	6.075	7.8	0	770	1.15	0.095	0.33	0.255	27.6	16.75	167.5	2.075	40.4	3.895	14.925	0.16	1.85	0.065	0.052	1.165	13.6	42.85
75Percentile-Median	0	0.0375	0.2575	0.85	0	10	0.0825	0.005	0.3375	0.0275	1.625	0.5	1.25	0.065	1.95	0.09	0.7375	0	0.125	0.0125	0.00425	0.03	1.2	0.65
75 Percentile	0	0.2075	6.3325	8.65	0	780	1.2325	0.1	0.6675	0.2825	29.225	17.25	168.75	2.14	42.35	3.985	15.6625	0.16	1.975	0.0775	0.05625	1.195	14.8	43.5
90 Percentile	0	0.23	6.62	9.3	0	795	1.255	0.1	0.815	0.395	29.5	17.65	183	2.155	43.2	4	16.25	0.17	2	0.095	0.0595	1.24	15.1	44.75
Maximum	0	0.24	6.83	9.9	0	810	1.27	0.1	0.86	0.5	29.5	17.9	197	2.16	43.5	4	16.75	0.18	2	0.11	0.062	1.28	15.2	46
Interquartile Range (IQR) 1	0	0.0375	0.4325	1.775	0	27.5	0.225	0.01	0.4125	0.04	3.325	1.225	8.5	0.1075	4.125	0.165	1.475	0.045	0.4	0.0175	0.007	0.045	2.175	3.625
Variance	0	0.00102222	0.15754722	1.33888889	0	447.222222	0.01515833	0.000025	0.06628056	0.00984722	4.04472222	1.44555556	199.583333	0.00509167	28.8813889	0.00815833	1.16666667	0.00098889	0.04472222	0.00032222	3.1139E-05	0.00284722	1.80888889	9.47888889
Skewness	-	0.87673298	0.58888845	0.58122026	-	0.85796939	-0.2934833	1.1491E-14	0.88552992	1.94790589	-0.4598964	-1.0681324	1.41612552	-0.3618111	-1.7930974	-0.0780455	0.3443249	-0.7306235	-0.5684047	1.67469995	0.37358736	1.04617375	-0.250129	-0.5790292
Coefficient of Variation (CoV) 2	-	0.1712797	0.06466286	0.14524314	-	0.02740514	0.10943927	0.05263158	0.56170932	0.34416129	0.07362353	0.07301493	0.08384212	0.03438839	0.13880691	0.0231896	0.07200823	0.21939491	0.11858484	0.24478022	0.10561936	0.04528376	0.09913632	0.07359634
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Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Minimum	0	0.42	5.89	7.1	0	620	0.84	0.09	0.42	0.28	25.4	15.7	205	2.11	40.6	3.56	14.05	0.13	1.5	0.05	0.044	1.11	12.7	39.7
10 Percentile	0	0.513	5.935	7.15	0	644	0.849	0.09	0.557	0.284	25.51	15.75	209.6	2.118	40.74	3.566	14.115	0.13	1.52	0.05	0.0441	1.112	12.73	39.84
25 Percentile	0	0.6525	6.0025	7.225	0	680	0.8625	0.09	0.7625	0.29	25.675	15.825	216.5	2.13	40.95	3.575	14.2125	0.13	1.55	0.05	0.04425	1.115	12.775	40.05
Median-25Percentile	0	0.2325	0.1125	0.125	0	60	0.0225	0	0.3425	0.01	0.275	0.125	11.5	0.02	0.35	0.015	0.1625	0	0.05	0	0.00025	0.005	0.075	0.35
Mean	0	0.885	6.115	7.35	0	740	0.885	0.09	1.105	0.3	25.95	15.95	228	2.15	41.3	3.59	14.375	0.13	1.6	0.05	0.0445	1.12	12.85	40.4
Standard Deviation	0	0.465	0.225	0.25	0	120	0.045	0	0.685	0.02	0.55	0.25	23	0.04	0.7	0.03	0.325	0	0.1	0	0.0005	0.01	0.15	0.7
Median	0	0.885	6.115	7.35	0	740	0.885	0.09	1.105	0.3	25.95	15.95	228	2.15	41.3	3.59	14.375	0.13	1.6	0.05	0.0445	1.12	12.85	40.4
75Percentile-Median	0	0.2325	0.1125	0.125	0	60	0.0225	0	0.3425	0.01	0.275	0.125	11.5	0.02	0.35	0.015	0.1625	0	0.05	0	0.00025	0.005	0.075	0.35
75 Percentile	0	1.1175	6.2275	7.475	0	800	0.9075	0.09	1.4475	0.31	26.225	16.075	239.5	2.17	41.65	3.605	14.5375	0.13	1.65	0.05	0.04475	1.125	12.925	40.75
90 Percentile	0	1.257	6.295	7.55	0	836	0.921	0.09	1.653	0.316	26.39	16.15	246.4	2.182	41.86	3.614	14.635	0.13	1.68	0.05	0.0449	1.128	12.97	40.96
Maximum	0	1.35	6.34	7.6	0	860	0.93	0.09	1.79	0.32	26.5	16.2	251	2.19	42	3.62	14.7	0.13	1.7	0.05	0.045	1.13	13	41.1
Interquartile Range (IQR) 1	0	0.465	0.225	0.25	0	120	0.045	0	0.685	0.02	0.55	0.25	23	0.04	0.7	0.03	0.325	0	0.1	0	0.0005	0.01	0.15	0.7
Variance	0	0.216225	0.050625	0.0625	0	14400	0.002025	0	0.469225	0.0004	0.3025	0.0625	529	0.0016	0.49	0.0009	0.105625	0	0.01	0	0.00000025	1E-04	0.0225	0.49
Skewness	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coefficient of Variation (CoV) 2	-	0.52542373	0.03679477	0.03401361	-	0.16216216	0.05084746	0	0.6199095	0.06666667	0.02119461	0.01567398	0.10087719	0.01860465	0.01694915	0.00835655	0.0226087	0	0.0625	0	0.01123596	0.00892857	0.01167315	0.01732673
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Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Minimum	0	0.12	4.82	2.7	0	730	0.76	0.08	0.09	0.17	21.1	10.5	148	2.37	35.9	2.72	11.55	0.11	1.5	0.03	0.039	1.12	10.7	30.5
10 Percentile	0	0.126	4.974	3.24	0	742	0.8	0.08	0.31	0.182	21.8	11	159.8	2.374	36.06	2.87	11.88	0.112	1.5	0.034	0.0392	1.132	11.06	32.14
25 Percentile	0	0.135	5.205	4.05	0	760	0.86	0.08	0.64	0.2	22.85	11.75	177.5	2.38	36.3	3.095	12.375	0.115	1.5	0.04	0.0395	1.15	11.6	34.6

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID				As	B			Bi					Cr							Hg				
Typical Detection Limit		Ag	Al	5	20	Ba	Be	0.01	Ca	Cd	Ce	Co	1	Cs	Cu	Fe	Ga	Ge	Hf	0.01	In	K	La	Li
Units	FIZZ_CHECK	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
Median-25Percentile	0	0.015	0.385	1.35	0	30	0.1	0	0.55	0.03	1.75	1.25	29.5	0.01	0.4	0.375	0.825	0.005	0	0.01	0.0005	0.03	0.9	4.1
Mean	0	0.14	5.66333333	4.9	0	833.333333	0.97	0.10333333	1.32333333	0.21666667	24.8666667	12.9333333	193.666667	2.69	39.6333333	3.29	13.8166667	0.12	1.66666667	0.06	0.04733333	1.25666667	12.2666667	36.7
Standard Deviation	0	0.01414214	0.7203857	1.63095064	0	106.562449	0.17568912	0.03299832	1.06562449	0.03399346	3.18991466	1.96015872	33.209771	0.43848223	4.72534537	0.41206796	2.14722043	0.00816497	0.23570226	0.0294392	0.01108553	0.15282525	1.19536141	4.47511639
Median	0	0.15	5.59	5.4	0	790	0.96	0.08	1.19	0.23	24.6	13	207	2.39	36.7	3.47	13.2	0.12	1.5	0.05	0.04	1.18	12.5	38.7
75Percentile-Median	0	0	0.495	0.6	0	95	0.115	0.035	0.75	0.01	2.15	1.15	9.5	0.46	4.8	0.105	1.75	0.005	0.25	0.025	0.0115	0.145	0.55	1.1
75 Percentile	0	0.15	6.085	6	0	885	1.075	0.115	1.94	0.24	26.75	14.15	216.5	2.85	41.5	3.575	14.95	0.125	1.75	0.075	0.0515	1.325	13.05	39.8
90 Percentile	0	0.15	6.382	6.36	0	942	1.144	0.136	2.39	0.246	28.04	14.84	222.2	3.126	44.38	3.638	16	0.128	1.9	0.09	0.0584	1.412	13.38	40.46
Maximum	0	0.15	6.58	6.6	0	980	1.19	0.15	2.69	0.25	28.9	15.3	226	3.31	46.3	3.68	16.7	0.13	2	0.1	0.063	1.47	13.6	40.9
Interquartile Range (IQR) 1	0	0.015	0.88	1.95	0	125	0.215	0.035	1.3	0.04	3.9	2.4	39	0.47	5.2	0.48	2.575	0.01	0.25	0.035	0.012	0.175	1.45	5.2
Variance	0	0.0002	0.51895556	2.66	0	11355.5556	0.03086667	0.00108889	1.13555556	0.00115556	10.1755556	3.84222222	1102.88889	0.19226667	22.3288889	0.1698	4.61055556	6.6667E-05	0.05555556	0.00086667	0.00012289	0.02335556	1.42888889	20.0266667
Skewness	-	-1.7320508	0.37144328	-1.0558319	-	1.32940407	0.20868104	1.73205081	0.45493029	-1.2933428	0.30572325	-0.1248675	-1.3166384	1.72934862	1.69489143	-1.4008159	0.99719185	5.9952E-15	1.73205081	1.15206964	1.72148595	1.5339748	-0.6989885	-1.4234217
Coefficient of Variation (CoV) 2	-	0.10101525	0.12720171	0.33284707	-	0.12787494	0.1811228	0.31933855	0.8052578	0.15689291	0.12828075	0.15155866	0.17147902	0.16300455	0.11922654	0.12524862	0.15540799	0.06804138	0.14142136	0.49065338	0.23420126	0.1216116	0.09744794	0.12193778
NPR < 1.0 or NPR = 1.0																								
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WSF-OVB																								
Count	0	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Minimum	0	0.15	6.04	2.2	0	830	0.73	0.04	0.95	0.2	19.65	14.2	31	0.6	35	4.11	15.5	0.11	1.2	0.01	0.049	1.01	9.6	14.1
10 Percentile	-	0.214	6.504	4.04	0	1350	1.082	0.048	1.23	0.232	23.61	14.36	32.6	0.648	53.16	4.166	15.54	0.118	1.2	0.018	0.0506	1.13	11.36	16.58
25 Percentile	-	0.38	6.71	10.2	0	1630	1.19	0.05	1.78	0.25	29.4	16.1	37	1.14	101	4.23	16.2	0.12	1.3	0.03	0.054	1.21	14	18.5
Median-25Percentile	-	0.1	0.59	4.4	0	60	0.06	0.03	0.7	0.28	3.1	5.3	20	0.59	9.5	0.62	1.05	0.02	0.1	0.05	0.003	0.35	1.8	2.6
Mean	-	0.6	7.22333333	27.9555556	0	1655.55556	1.26777778	0.15888889	3.47888889	0.57777778	33.8055556	20.9777778	67.5555556	1.83666667	134.411111	4.77444444	17.5222222	0.17	1.58888889	0.08444444	0.05944444	1.69333333	17.4111111	25.1111111
Standard Deviation	-	0.34554305	0.63543511	26.1149643	0	330.289809	0.2462509	0.1455598	2.24867094	0.35857055	9.32453289	5.92467116	37.2681309	0.95537078	77.3966471	0.50879184	1.76448153	0.06091889	0.33811387	0.05833069	0.00853894	0.47758653	5.49837237	10.3854005
Median	-	0.48	7.3	14.6	0	1690	1.25	0.08	2.48	0.53	32.5	21.4	57	1.73	110.5	4.85	17.25	0.14	1.4	0.08	0.057	1.56	15.8	21.1
75Percentile-Median	-	0.31	0.19	18.5	0	150	0.15	0.09	2	0.22	7.2	0.9	22	0.5	46	0.21	0.95	0.1	0.5	0.04	0.007	0.64	5.6	5.2
75 Percentile	-	0.79	7.49	33.1	0	1840	1.4	0.17	4.48	0.75	39.7	22.3	79	2.23	156.5	5.06	18.2	0.24	1.9	0.12	0.064	2.2	21.4	26.3
90 Percentile	-	1.11	7.958	67.26	0	1900	1.528	0.42	6.572	1.128	44.1	26.22	110.4	2.956	239.6	5.42	20	0.254	2.02	0.152	0.0678	2.25	23.6	35.88
Maximum	0	1.19	8.23	82.3	0	2060	1.68	0.42	8.02	1.24	52.9	34.7	152	3.74	298	5.58	20.8	0.27	2.1	0.2	0.079	2.33	28.4	50.6
Interquartile Range (IQR) 1	-	0.41	0.78	22.9	0	210	0.21	0.12	2.7	0.5	10.3	6.2	42	1.09	55.5	0.83	2	0.12	0.6	0.09	0.01	0.99	7.4	7.8
Variance	-	0.1194	0.40377778	681.991358	0	109091.358	0.06063951	0.02118765	5.05652099	0.12857284	86.9469136	35.1017284	1388.91358	0.91273333	5990.24099	0.25886914	3.11339506	0.00371111	0.11432099	0.00340247	7.2914E-05	0.22808889	30.2320988	107.856543
Skewness	-	0.54994741	-0.344926	1.24796343	-	-1.8038587	-0.6655416	1.30485494	0.96075691	0.8756252	0.65722998	1.23255088	1.3149109	0.59969094	1.05226898	0.11253384	0.67274177	0.73635668	0.30422436	0.62088974	1.2573527	-0.0274182	0.65676857	1.75657041
Coefficient of Variation (CoV) 2	-	0.57590508	0.08796979	0.93416009	-	0.19950391	0.19423822	0.91611061	0.64637619	0.62060288	0.27582842	0.28242606	0.55166641	0.52016558	0.57582031	0.10656566	0.10069964	0.35834641	0.21279894	0.69075814	0.1436458	0.28203929	0.31579675	0.4135779
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Sum Check																								

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID										Re	S							Te		Ti	
Typical Detection Limit	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	0.002	0.01	Sb	Sc	Se	Sn	Sr	Ta	0.05	Th	0.001	Tl
Units	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
By Location																					
CCAR-OVB																					
Count	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Minimum	1.8	978	1.3	1	3.2	12.9	360	11.3	19	0.001	0.05	14.85	5.5	2	0.3	611	0.21	0.025	1.6	0.108	0.11
10 Percentile	1.8	978	1.3	1	3.2	12.9	360	11.3	19	0.001	0.05	14.85	5.5	2	0.3	611	0.21	0.025	1.6	0.108	0.11
25 Percentile	1.8	978	1.3	1	3.2	12.9	360	11.3	19	0.001	0.05	14.85	5.5	2	0.3	611	0.21	0.025	1.6	0.108	0.11
Median-25Percentile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean	1.8	978	1.3	1	3.2	12.9	360	11.3	19	0.001	0.05	14.85	5.5	2	0.3	611	0.21	0.025	1.6	0.108	0.11
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Median	1.8	978	1.3	1	3.2	12.9	360	11.3	19	0.001	0.05	14.85	5.5	2	0.3	611	0.21	0.025	1.6	0.108	0.11
75Percentile-Median	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75 Percentile	1.8	978	1.3	1	3.2	12.9	360	11.3	19	0.001	0.05	14.85	5.5	2	0.3	611	0.21	0.025	1.6	0.108	0.11
90 Percentile	1.8	978	1.3	1	3.2	12.9	360	11.3	19	0.001	0.05	14.85	5.5	2	0.3	611	0.21	0.025	1.6	0.108	0.11
Maximum	1.8	978	1.3	1	3.2	12.9	360	11.3	19	0.001	0.05	14.85	5.5	2	0.3	611	0.21	0.025	1.6	0.108	0.11
Interquartile Range (IQR) 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coefficient of Variation (CoV) 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
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Sum Check																					
CCAR-RX																					
Count	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
Minimum	0.2	35	0.29	0.06	0.8	0.8	130	0.7	0.4	0.001	0.01	0.11	2.5	1	0.2	53.7	0.05	0.025	0.4	0.05	0.02
10 Percentile	0.53	185	0.548	0.73	3.4	6.54	414	1.76	10.12	0.001	0.02	0.376	9.96	2	0.9	97.72	0.23	0.025	1.26	0.2364	0.076
25 Percentile	0.865	361.5	1.05	1.36	5.4	14.9	540	3.65	29.75	0.001	0.045	0.82	13.85	2	1	123	0.355	0.025	1.75	0.3375	0.235
Median-25Percentile	0.305	502.5	1.47	0.59	1.6	11.4	220	5.95	24.95	0.002	0.035	1.42	4.15	1	0.2	62	0.105	0.025	1.65	0.0775	0.195
Mean	1.70680851	784.595745	4.94510638	1.96978723	8.1106383	39.612766	939.361702	8.92765957	52.5595745	0.00657447	0.23659574	3.63893617	20.8234043	4	1.1787234	260.557447	0.52744681	0.05329787	4.04042553	0.47838298	0.68085106
Standard Deviation	1.43724338	473.684816	6.81018601	0.88697307	5.47288224	33.9631441	534.540583	5.54078503	31.681397	0.01093257	0.32112354	5.90351869	11.5090198	3.1079856	0.30522832	202.460114	0.33246	0.03382176	3.29549399	0.25242901	0.69940653
Median	1.17	864	2.52	1.95	7	26.3	760	9.6	54.7	0.003	0.08	2.24	18	3	1.2	185	0.46	0.05	3.4	0.415	0.43
75Percentile-Median	0.965	236	4.03	0.675	1.8	26.1	465	1.9	23.65	0.003	0.24	1.45	6.45	2	0.2	111	0.11	0.03	1.5	0.112	0.535
75 Percentile	2.135	1100	6.55	2.625	8.8	52.4	1225	11.5	78.35	0.006	0.32	3.69	24.45	5	1.4	296	0.57	0.08	4.9	0.527	0.965
90 Percentile	3.186	1420	10.476	3.026	13.32	95.2	1592	15.5	89.32	0.0152	0.582	7.352	42.16	7.4	1.6	585.2	0.812	0.094	7.46	0.9352	1.422
Maximum	8.56	1740	34.5	3.93	33.6	124.5	2980	23.3	128	0.066	1.46	39.2	47.5	20	1.7	851	1.86	0.18	19.6	1.16	3.34
Interquartile Range (IQR) 1	1.27	738.5	5.5	1.265	3.4	37.5	685	7.85	48.6	0.005	0.275	2.87	10.6	3	0.4	173	0.215	0.055	3.15	0.1895	0.73
Variance	2.06566854	224377.305	46.3786335	0.78672123	29.95244	1153.49516	285733.635	30.7002988	1003.71092	0.00011952	0.10312033	34.8515329	132.457537	9.65957447	0.09316433	40990.0978	0.11052965	0.00114391	10.8602807	0.06372041	0.48916949
Skewness	2.59673424	0.23823039	2.71987951	0.05384705	2.81443526	1.03424144	1.43025464	0.52474034	0.10028452	3.93504147	2.25580805	4.89209951	0.97063725	3.23377311	-0.5520447	1.678095	2.46905964	1.31718335	2.51486449	1.16331489	1.91741862
Coefficient of Variation (CoV) 2	0.84206481	0.60373105	1.37715662	0.45028877	0.67477824	0.85737876	0.5690466	0.62063131	0.60277119	1.66288256	1.35726675	1.62231993	0.55269636	0.7769964	0.25894821	0.77702678	0.63031948	0.63457988	0.81563043	0.52767139	1.02725333
NPR < 1.0 or NPR = 1.0																					
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Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
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% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID										Re	S							Te		Ti	
Typical Detection Limit	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	0.002	0.01	Sb	Sc	Se	Sn	Sr	Ta	0.05	Th	0.001	Tl
Units	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
Kerr Haul Rd-OVB																					
Count	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Minimum	1.17	797	1.85	1.83	5.2	11.4	1120	12.2	63.8	0.001	0.08	3.45	14.9	2	0.7	346	0.3	0.12	1.2	0.33	0.44
10 Percentile	1.245	823.4	1.895	1.92	6.01	14.13	1129	12.89	66.38	0.001	0.08	3.48	15.35	2	0.91	351.4	0.351	0.153	1.8	0.3312	0.455
25 Percentile	1.3575	863	1.9625	2.055	7.225	18.225	1142.5	13.925	70.25	0.001	0.08	3.525	16.025	2	1.225	359.5	0.4275	0.2025	2.7	0.333	0.4775
Median-25Percentile	0.1275	67.5	0.0425	0.08	0.825	2.575	52.5	3.625	2.35	0.0005	0.445	1.13	1.175	0	0.225	10	0.0525	0.0675	0.55	0.004	0.2725
Mean	1.62	1099.5	2.095	2.065	7.375	19.1	1202.5	17.525	74.7	0.0035	0.5875	6.915	19.325	2.25	1.4	371.25	0.4425	0.3325	2.8	0.3405	0.75
Standard Deviation	0.43755	375.169628	0.25342652	0.13610658	1.26169529	4.57547812	71.5454401	4.32398832	9.43027041	0.00377492	0.51513954	4.70169384	5.12707275	0.4330127	0.46368092	19.5624002	0.08347904	0.20620075	0.93005376	0.01071214	0.28609439
Median	1.485	930.5	2.005	2.135	8.05	20.8	1195	17.55	72.6	0.0015	0.525	4.655	17.2	2	1.45	369.5	0.48	0.27	3.25	0.337	0.75
75Percentile-Median	0.2625	236.5	0.1325	0.01	0.15	0.875	60	3.6	4.45	0.0025	0.5075	3.39	3.3	0.25	0.175	11.75	0.015	0.13	0.1	0.0075	0.2725
75 Percentile	1.7475	1167	2.1375	2.145	8.2	21.675	1255	21.15	77.05	0.004	1.0325	8.045	20.5	2.25	1.625	381.25	0.495	0.4	3.35	0.3445	1.0225
90 Percentile	2.103	1510.8	2.367	2.154	8.2	22.71	1282	22.14	84.7	0.0076	1.145	12.158	25	2.7	1.85	392.5	0.504	0.562	3.44	0.3526	1.045
Maximum	2.34	1740	2.52	2.16	8.2	23.4	1300	22.8	89.8	0.01	1.22	14.9	28	3	2	400	0.51	0.67	3.5	0.358	1.06
Interquartile Range (IQR) 1	0.39	304	0.175	0.09	0.975	3.45	112.5	7.225	6.8	0.003	0.9525	4.52	4.475	0.25	0.4	21.75	0.0675	0.1975	0.65	0.0115	0.545
Variance	0.19145	140752.25	0.064225	0.018525	1.591875	20.935	5118.75	18.696875	88.93	0.00001425	0.26536875	22.105925	26.286875	0.1875	0.215	382.6875	0.00696875	0.04251875	0.865	0.00011475	0.08185
Skewness	1.41520482	1.83128406	1.61187398	-1.961921	-1.9449567	-1.6557958	0.32323141	-0.0150941	1.09921499	1.93192197	0.15070695	1.78262489	1.73124114	2	-0.5472849	0.42437065	-1.8296679	1.37100673	-1.9182896	1.38335134	2.2204E-16
Coefficient of Variation (CoV) 2	0.27009259	0.3412184	0.12096731	0.06591117	0.17107733	0.23955383	0.05949725	0.24673257	0.12624191	1.07854778	0.87683327	0.6799268	0.26530777	0.19245009	0.33120066	0.05269333	0.1886532	0.62015264	0.33216206	0.03146004	0.38145919
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Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
MDT-RX																					
Count	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Minimum	0.23	80	0.18	0.05	1.7	2.9	340	2.9	69.4	0.001	0.01	0.85	5.7	1	0.6	36.5	0.12	0.025	1.4	0.091	0.62
10 Percentile	0.318	401.8	0.512	0.43	2.32	2.9	578	5.98	73.1	0.0022	0.128	3.314	9.7	1.2	0.72	93.36	0.172	0.03	1.64	0.1368	0.652
25 Percentile	0.64	511	0.63	1.98	4.8	3.8	1020	7.3	91.8	0.003	0.74	3.89	11.9	2	0.9	189.5	0.34	0.05	1.8	0.168	0.93
Median-25Percentile	0.33	339	3.72	0.41	2.6	2.3	220	4.4	14.2	0.003	0.46	0.29	9.2	2	0.1	28.5	0.14	0.18	0.5	0.074	0.23
Mean	1.14	892	5.42615385	2.18307692	6.87692308	8.92307692	1230	21.3923077	102.9	0.00930769	1.21384615	5.00615385	19.5769231	6.23076923	1.5	344.438462	0.43230769	0.32	2.98461538	0.25976923	1.46846154
Standard Deviation	0.65533315	462.264992	5.03204583	1.0968373	3.06673313	7.07847809	511.694019	20.807634	19.7770263	0.00862362	0.79412786	2.09681641	7.39596084	6.90767518	0.95353593	287.553138	0.17940731	0.32195915	1.44267175	0.12102394	0.85854838
Median	0.97	850	4.35	2.39	7.4	6.1	1240	11.7	106	0.006	1.2	4.18	21.1	4	1	218	0.48	0.23	2.3	0.242	1.16
75Percentile-Median	0.64	410	4.87	0.38	1.5	3.1	60	13.6	9	0.006	0.8	2.31	3.9	2	0.8	202	0.09	0.27	2	0.066	0.6
75 Percentile	1.61	1260	9.22	2.77	8.9	9.2	1300	25.3	115	0.012	2	6.49	25	6	1.8	420	0.57	0.5	4.3	0.308	1.76
90 Percentile	2.098	1478	12.7	2.816	10.42	20.22	1974	43.32	123.3	0.0238	2.272	7.368	26.04	11	2.94	847.2	0.652	0.578	4.64	0.4158	2.274
Maximum	2.32	1640	14.75	4.34	11	25.4	2110	80.9	139	0.029	2.42	9.06	31.8	28	3.8	985	0.67	1.18	6.1	0.52	3.87
Interquartile Range (IQR) 1	0.97	749	8.59	0.79	4.1	5.4	280	18	23.2	0.009	1.26	2.6	13.1	4	0.9	230.5	0.23	0.45	2.5	0.14	0.83
Variance	0.42946154	213688.923	25.3214852	1.20305207	9.40485207	50.1048521	261830.769	432.957633	391.130769	7.4367E-05	0.63063905	4.39663905	54.7002367	47.7159763	0.90923077	82686.807	0.03218698	0.10365769	2.08130178	0.01464679	0.73710533
Skewness	0.41706731	0.04371224	0.72738279	-0.4646657	-0.4991736	1.40535693	0.17339805	2.02226603	-0.1732148	1.47160289	0.05830941	0.12018595	-0.4615395	2.65345637	1.46278902	1.52108645	-0.4525205	1.46503934	0.79740238	0.74966726	1.7615614
Coefficient of Variation (CoV) 2	0.57485364	0.5182343	0.92736881	0.50242724	0.44594553	0.79327772	0.4160114	0.97266898	0.19219656	0.92650489	0.65422447	0.41884778	0.37778975	1.10863923	0.63569062	0.83484619	0.41499911	1.00612233	0.4833694	0.46589019	0.58465841
NPR < 1.0 or NPR = 1.0																					
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Sum Check																					

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID										Re	S							Te		Ti	
Typical Detection Limit	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	0.002	0.01	Sb	Sc	Se	Sn	Sr	Ta	0.05	Th	0.001	Tl
Units	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
MP-OVB																					
Count	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Minimum	1.05	510	5.94	0.38	2.6	6	1240	12.8	24.9	0.001	0.06	1.1	15.7	2	1.6	121.5	0.16	0.08	2.4	0.144	0.16
10 Percentile	1.11	620.4	8.253	0.662	3.59	6.45	1252	21.92	48.93	0.0013	0.165	1.715	16	2.9	1.63	142.5	0.208	0.188	2.49	0.1767	0.46
25 Percentile	1.2	786	11.7225	1.085	5.075	7.125	1270	35.6	84.975	0.00175	0.3225	2.6375	16.45	4.25	1.675	174	0.28	0.35	2.625	0.22575	0.91
Median-25Percentile	0.105	223	10.4025	0.29	2.075	5.275	225	16.65	32.025	0.06225	0.8575	2.3225	1.75	2.75	0.225	48.75	0.08	0.175	0.125	0.04725	0.415
Mean	1.7525	937	29.9225	1.455	10.675	15.4	1567.5	46.25	109.1	0.13825	2.305	6.0675	19.2	11.25	1.975	321.25	0.6075	0.5925	3.125	0.5625	1.505
Standard Deviation	0.92898802	277.086629	24.5295336	0.82153819	8.97144776	9.89368485	329.194092	21.3002934	55.1838292	0.1726302	2.69082237	4.61707903	3.5	10.5445484	0.35619517	233.809885	0.55097073	0.4199628	0.8642193	0.57848271	1.09946578
Median	1.305	1009	22.125	1.375	7.15	12.4	1495	52.25	117	0.064	1.18	4.96	18.2	7	1.9	222.75	0.36	0.525	2.75	0.273	1.325
75Percentile-Median	0.5525	151	18.2	0.37	5.6	8.275	297.5	10.65	24.125	0.1365	1.9825	3.43	2.75	7	0.3	147.25	0.3275	0.2425	0.5	0.33675	0.595
75 Percentile	1.8575	1160	40.325	1.745	12.75	20.675	1792.5	62.9	141.125	0.2005	3.1625	8.39	20.95	14	2.2	370	0.6875	0.7675	3.25	0.60975	1.92
90 Percentile	2.753	1196	57.83	2.312	20.58	26.75	1941	65.78	162.95	0.3346	5.345	11.306	23.2	23	2.38	578.8	1.205	1.051	4.06	1.1799	2.694
Maximum	3.35	1220	69.5	2.69	25.8	30.8	2040	67.7	177.5	0.424	6.8	13.25	24.7	29	2.5	718	1.55	1.24	4.6	1.56	3.21
Interquartile Range (IQR) 1	0.6575	374	28.6025	0.66	7.675	13.55	522.5	27.3	56.15	0.19875	2.84	5.7525	4.5	9.75	0.525	196	0.4075	0.4175	0.625	0.384	1.01
Variance	0.86301875	76777	601.698019	0.674925	80.486875	97.885	108368.75	453.7025	3045.255	0.02980119	7.240525	21.3174188	12.25	111.1875	0.126875	54667.0625	0.30356875	0.17636875	0.746875	0.33464225	1.208825
Skewness	1.91344395	-0.9572425	1.28768114	0.4989266	1.6868128	1.04425434	0.60073183	-1.0833208	-0.69345	1.53319189	1.61481588	0.98313788	1.09073753	1.67875147	0.70065211	1.76143325	1.85084536	0.77938142	1.82262956	1.94602813	0.80873242
Coefficient of Variation (CoV) 2	0.53009302	0.29571679	0.81976886	0.56463106	0.84041665	0.64244707	0.21001218	0.46054688	0.50580962	1.24868141	1.16738497	0.76095246	0.18229167	0.93729319	0.18035199	0.72781287	0.90694771	0.70879797	0.27655018	1.02841371	0.73054205
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
MP-RX																					
Count	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Minimum	0.13	55	0.61	0.067	0.81	1.1	60	2.47	23.6	0	0.02	1.02	4.3	0.25	0.4	44	0.05	0	0.5	0.063	0
10 Percentile	0.418	88.6	0.89	0.107	3.878	1.74	616	3.624	33.7	0	0.074	1.26	6.5	0.25	0.6	134.6	0.2	0	0.78	0.1554	0
25 Percentile	0.56	435	1.32	0.392	6.04	2.6	920	6.765	51.95	0	0.245	2.71	7.55	0.6	0.75	195.5	0.25	0	1.3	0.2125	0
Median-25Percentile	0.44	568	2.05	1.521	3.57	3.4	250	2.055	32.85	0	0.185	1.88	5.65	0.3	0.15	110.5	0.15	0	0.7	0.0585	0
Mean	1.39444444	1024.07407	37.5248148	1.74877778	9.50592593	16.437037	1372.59259	37.3448148	78.3407407	0	1.00703704	7.64740741	15.9777778	4.18703704	1.18518519	389.407407	0.41296296	0	2.07037037	0.31496296	0
Standard Deviation	1.12889764	665.238076	114.171592	1.27785568	5.51993509	24.9126496	714.970046	81.668904	32.5988895	0	1.53047515	7.04735022	9.61246619	7.72108216	0.87504654	293.9543	0.24705397	0	0.95832215	0.15984147	0
Median	1	1003	3.37	1.913	9.61	6	1170	8.82	84.8	0	0.43	4.59	13.2	0.9	0.9	306	0.4	0	2	0.271	0
75Percentile-Median	0.845	562.5	3.36	0.803	1.735	11.95	525	19.57	24.4	0	0.58	5.085	9.55	1.65	0.3	194.5	0.1	0	0.95	0.126	0
75 Percentile	1.845	1565.5	6.73	2.716	11.345	17.95	1695	28.39	109.2	0	1.01	9.675	22.75	2.55	1.2	500.5	0.5	0	2.95	0.397	0
90 Percentile	2.95	1922.6	39.414	3.411	13.15	44.14	2440	47.53	115.52	0	2.09	20.172	27.86	13.14	1.76	793	0.54	0	3.3	0.52	0
Maximum	4.69	2248	539.5	4.236	29.62	107.5	2900	397.33	133.9	0	7.42	23.6	42.5	32.9	5	1149	1.4	0	3.7	0.812	0
Interquartile Range (IQR) 1	1.285	1130.5	5.41	2.324	5.305	15.35	775	21.625	57.25	0	0.765	6.965	15.2	1.95	0.45	305	0.25	0	1.65	0.1845	0
Variance	1.27440988	442541.698	13035.1525	1.63291514	30.4696834	620.64011	511182.167	6669.80988	1062.6876	0	2.34235418	49.6651451	92.3995062	59.6151097	0.76570645	86409.1303	0.06103567	0	0.91838134	0.02554929	0
Skewness	1.43832633	0.12846478	3.83436286	0.09939452	1.7326851	2.56233044	0.43420252	3.77541744	-0.099424	-	3.17650711	1.22238393	0.8855207	2.72237724	3.35135174	1.47735773	2.39478787	-	-0.0366243	1.1434105	-
Coefficient of Variation (CoV) 2	0.80956803	0.64959957	3.04256245	0.73071358	0.58068358	1.51564114	0.52089021	2.18688737	0.41611669	-	1.5197804	0.92153456	0.60161471	1.84404439	0.73832052	0.75487598	0.59824729	-	0.46287474	0.5074929	-
NPR < 1.0 or NPR = 1.0																					
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NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
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% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID										Re	S							Te		Ti	
Typical Detection Limit	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	0.002	0.01	Sb	Sc	Se	Sn	Sr	Ta	0.05	Th	0.001	Tl
Units	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
MRSF-OVB																					
Count	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Minimum	0.75	681	0.86	0.76	4.7	2.9	940	4.7	22.5	0.001	0.01	0.75	12.3	1	0.7	260	0.28	0.05	1.4	0.244	0.13
10 Percentile	0.954	875.8	1.148	1.034	5.1	6.06	1091	7.03	34.79	0.0023	0.03	1.606	14.9	1	0.8	297.9	0.303	0.05	1.73	0.2897	0.203
25 Percentile	1.4125	901.75	1.7625	1.7975	6.075	16.85	1315	7.6	44.2	0.003	0.045	2.11	16.125	1	0.9	373.5	0.3625	0.06	2.1	0.37575	0.2475
Median-25Percentile	0.3275	87.25	0.8675	0.3875	1.475	17.85	110	2.5	7.55	0.001	0.09	2.18	1.775	1	0.1	148	0.0675	0.02	0.55	0.03325	0.1275
Mean	1.81666667	1026.08333	8.23291667	2.18625	8.91666667	42.6208333	1476.25	20.0458333	56.7166667	0.03429167	0.66583333	4.945	18.3875	3.45833333	1.20833333	537.708333	0.5225	0.16791667	2.725	0.41754167	0.62041667
Standard Deviation	0.68809318	178.081189	14.2224768	0.74384593	4.29356754	33.7124109	330.930664	23.4052341	18.141037	0.07330784	1.20088827	3.73096726	3.39304589	3.5116374	0.46360603	197.097793	0.24363993	0.14744997	0.77526877	0.10248495	0.6374394
Median	1.74	989	2.63	2.185	7.55	34.7	1425	10.1	51.75	0.004	0.135	4.29	17.9	2	1	521.5	0.43	0.08	2.65	0.409	0.375
75Percentile-Median	0.31	83.5	1.905	0.4275	2.125	24.275	107.5	12.4	18.1	0.0105	0.4625	2.47	1.825	1.25	0.3	123.75	0.155	0.1925	0.75	0.033	0.1975
75 Percentile	2.05	1072.5	4.535	2.6125	9.675	58.975	1532.5	22.5	69.85	0.0145	0.5975	6.76	19.725	3.25	1.3	645.25	0.585	0.2725	3.4	0.442	0.5725
90 Percentile	2.852	1280	23.33	3.283	15.1	84.15	2003	43.75	79.07	0.101	2.437	9.268	23.59	8.4	2.07	840.4	0.886	0.402	3.7	0.5709	1.591
Maximum	3.44	1500	58.6	3.43	20.3	124	2380	109	95	0.313	4.42	14.9	25.7	13	2.3	954	1.17	0.55	4	0.676	2.53
Interquartile Range (IQR) 1	0.6375	170.75	2.7725	0.815	3.6	42.125	217.5	14.9	25.65	0.0115	0.5525	4.65	3.6	2.25	0.4	271.75	0.2225	0.2125	1.3	0.06625	0.325
Variance	0.47347222	31712.9097	202.278846	0.55330677	18.4347222	1136.52665	109515.104	547.804983	329.097222	0.00537404	1.44213264	13.9201167	11.5127604	12.3315972	0.21493056	38847.5399	0.05936042	0.02174149	0.60104167	0.01050316	0.40632899
Skewness	0.6256505	0.87514517	2.68896951	-0.2782038	1.56114367	0.97899841	1.03191857	2.7409085	0.2457133	2.97072114	2.33636956	1.31936163	0.37640193	1.87811675	1.48663993	0.61020717	1.51181798	1.20582308	0.11380567	0.71323648	2.11679766
Coefficient of Variation (CoV) 2	0.37876689	0.17355431	1.72751375	0.34023828	0.48152159	0.79098432	0.2241698	1.16758599	0.31985372	2.1377743	1.80358689	0.75449287	0.18453003	1.01541322	0.38367396	0.36655149	0.46629652	0.87811395	0.2845023	0.24544844	1.02743759
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
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% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
MTDT-RX																					
Count	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Minimum	0.88	635	0.25	0.1	3.1	16.9	110	1.8	6.1	0.004	0.05	0.21	5.5	1	0.6	26.4	0.23	0.025	0.9	0.137	0.03
10 Percentile	0.94	697	0.326	0.368	3.66	19.1	190	3.48	18.14	0.004	0.058	0.39	9.38	1.4	0.64	37.6	0.258	0.025	1.06	0.215	0.122
25 Percentile	1.03	790	0.44	0.77	4.5	22.4	310	6	36.2	0.004	0.07	0.66	15.2	2	0.7	54.4	0.3	0.025	1.3	0.332	0.26
Median-25Percentile	0.36	32	0.42	0.81	0.7	4.5	720	0.9	7.2	0.001	0.01	0.3	0.6	0	0.2	174.6	0.03	0.065	0.9	0.061	0.06
Mean	1.462	852	2.118	1.858	6.12	29.94	786	6.36	38	0.0124	0.088	0.99	14.98	4.2	1.1	374.56	0.378	0.086	1.94	0.3636	0.32
Standard Deviation	0.48337977	158.327509	2.87998889	1.41421922	3.15683386	10.9154203	481.356417	2.49847954	17.3649071	0.01348481	0.03059412	0.53669358	5.12499756	4.44522215	0.6164414	360.190603	0.14076931	0.06077829	0.73375745	0.13398	0.17492856
Median	1.39	822	0.86	1.58	5.2	26.9	1030	6.9	43.4	0.005	0.08	0.96	15.8	2	0.9	229	0.33	0.09	2.2	0.393	0.32
75Percentile-Median	0.46	71	0.34	1.22	0.4	8.5	170	1.2	3.4	0.005	0.02	0.41	1.8	1	0.1	362	0.06	0.01	0.2	0.013	0.13
75 Percentile	1.85	893	1.2	2.8	5.6	35.4	1200	8.1	46.8	0.01	0.1	1.37	17.6	3	1	591	0.39	0.1	2.4	0.406	0.45
90 Percentile	2.036	1029.2	5.184	3.544	9.56	43.02	1248	8.64	53.22	0.0274	0.124	1.598	19.52	9	1.78	819.6	0.54	0.154	2.7	0.4924	0.504
Interquartile Range (IQR) 1	0.82	103	0.76	2.03	1.1	13	890	2.1	10.6	0.006	0.03	0.71	2.4	1	0.3	536.6	0.09	0.075	1.1	0.074	0.19
Variance	0.233656	25067.6	8.294336	2.000016	9.9656	119.1464	231704	6.2424	301.54	0.00018184	0.000936	0.28804	26.2656	19.76	0.38	129737.27	0.019816	0.003694	0.5384	0.01795064	0.0306
Skewness	0.31768347	0.663617	2.16344337	0.47244489	1.81996549	0.79722234	-0.5633062	-1.3580031	-1.3786973	2.09333147	0.84457439	-0.0321461	-1.4092758	2.1237119	1.94733099	0.92691677	1.51338101	0.89464635	-0.2923351	-0.6308417	-0.6550115
Coefficient of Variation (CoV) 2	0.33062912	0.18583041	1.35976813	0.76115136	0.51582253	0.3645765	0.61241274	0.39284269	0.45697124	1.08748438	0.34766042	0.54211473	0.34212267	1.05838623	0.56040127	0.96163659	0.37240559	0.70672425	0.37822549	0.36848184	0.54665174
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID										Re	S							Te		Ti	
Typical Detection Limit	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	0.002	0.01	Sb	Sc	Se	Sn	Sr	Ta	0.05	Th	0.001	Tl
Units	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
MTRSF-OVB																					
Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Minimum	1.91	1120	1.14	2.75	6.3	17.1	1910	9.6	55.2	0.001	0.03	1.38	17.2	2	1	600	0.35	0.2	2.3	0.449	0.27
10 Percentile	1.922	1120	1.186	2.776	6.38	17.2	1913	9.8	56.07	0.001	0.031	1.414	17.21	2	1.01	605.4	0.354	0.22	2.35	0.4492	0.271
25 Percentile	1.94	1120	1.255	2.815	6.5	17.35	1917.5	10.1	57.375	0.001	0.0325	1.465	17.225	2	1.025	613.5	0.36	0.25	2.425	0.4495	0.2725
Median-25Percentile	0.03	0	0.115	0.065	0.2	0.25	7.5	0.5	2.175	0	0.0025	0.085	0.025	0	0.025	13.5	0.01	0.05	0.125	0.0005	0.0025
Mean	1.97	1120	1.37	2.88	6.7	17.6	1925	10.6	59.55	0.001	0.035	1.55	17.25	2	1.05	627	0.37	0.3	2.55	0.45	0.275
Standard Deviation	0.06	0	0.23	0.13	0.4	0.5	15	1	4.35	0	0.005	0.17	0.05	0	0.05	27	0.02	0.1	0.25	0.001	0.005
Median	1.97	1120	1.37	2.88	6.7	17.6	1925	10.6	59.55	0.001	0.035	1.55	17.25	2	1.05	627	0.37	0.3	2.55	0.45	0.275
75Percentile-Median	0.03	0	0.115	0.065	0.2	0.25	7.5	0.5	2.175	0	0.0025	0.085	0.025	0	0.025	13.5	0.01	0.05	0.125	0.0005	0.0025
75 Percentile	2	1120	1.485	2.945	6.9	17.85	1932.5	11.1	61.725	0.001	0.0375	1.635	17.275	2	1.075	640.5	0.38	0.35	2.675	0.4505	0.2775
90 Percentile	2.018	1120	1.554	2.984	7.02	18	1937	11.4	63.03	0.001	0.039	1.686	17.29	2	1.09	648.6	0.386	0.38	2.75	0.4508	0.279
Maximum	2.03	1120	1.6	3.01	7.1	18.1	1940	11.6	63.9	0.001	0.04	1.72	17.3	2	1.1	654	0.39	0.4	2.8	0.451	0.28
Interquartile Range (IQR) 1	0.06	0	0.23	0.13	0.4	0.5	15	1	4.35	0	0.005	0.17	0.05	0	0.05	27	0.02	0.1	0.25	0.001	0.005
Variance	0.0036	0	0.0529	0.0169	0.16	0.25	225	1	18.9225	0	0.000025	0.0289	0.0025	0	0.0025	729	0.0004	0.01	0.0625	0.000001	0.000025
Coefficient of Variation (CoV) 2	0.03045685	0	0.16788321	0.04513889	0.05970149	0.02840909	0.00779221	0.09433962	0.07304786	0	0.14285714	0.10967742	0.00289855	0	0.04761905	0.0430622	0.05405405	0.33333333	0.09803922	0.00222222	0.01818182
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
MTT-RX																					
Count	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Minimum	0.08	143	0.1	0.01	3.9	0.5	220	4.5	13.2	0.001	0.005	0.39	2.5	1	0.6	99.6	0.26	0.025	1.6	0.07	0.07
10 Percentile	0.33	263.6	0.242	0.752	4.74	2.3	442	5.56	24.54	0.001	0.005	0.968	9.94	1	0.74	118.2	0.27	0.025	1.84	0.1806	0.126
25 Percentile	0.98	393	0.3	1.36	6.3	2.6	485	6.55	33.6	0.0015	0.0075	1.38	10.45	1.5	0.9	204	0.38	0.025	2.7	0.242	0.195
Median-25Percentile	0.49	339	0.14	1.11	0.9	11.9	615	0.95	5.5	0.0015	0.0325	0.5	5.45	0.5	0.2	208	0.07	0	0.8	0.088	0.075
Mean	1.50333333	767.533333	2.36933333	2.16	8.01333333	36.14	1200.66667	9.6	49.26	0.00573333	0.32533333	2.404	16.6066667	2.66666667	1.38	455.14	0.48333333	0.08333333	4.01333333	0.3432	0.44533333
Standard Deviation	0.90987667	422.177509	5.22290911	1.05113272	3.31317907	38.5555668	784.835156	4.37721373	26.8853814	0.00992953	0.39345252	1.62458938	7.95767694	2.62466929	0.95652148	384.703965	0.21779705	0.11920104	2.23692249	0.1455771	0.39070648
Median	1.47	732	0.44	2.47	7.2	14.5	1100	7.5	39.1	0.003	0.04	1.88	15.9	2	1.1	412	0.45	0.025	3.5	0.33	0.27
75Percentile-Median	0.38	318	0.57	0.57	1.85	49.15	500	4.05	24.8	0.002	0.69	1.31	5.5	0.5	0.25	157	0.035	0.055	1.35	0.092	0.335
75 Percentile	1.85	1050	1.01	3.04	9.05	63.65	1600	11.55	63.9	0.005	0.73	3.19	21.4	2.5	1.35	569	0.485	0.08	4.85	0.422	0.605
90 Percentile	2.916	1356	4.512	3.31	11.68	98.32	2096	16.84	77.52	0.0076	0.928	4.864	22.08	3.6	2.04	641.4	0.7	0.124	6.02	0.4888	0.786
Maximum	3.16	1560	21.2	3.5	17.3	107.5	3170	18.6	123	0.042	0.97	6.03	38.1	12	4.6	1720	1.15	0.51	10.6	0.674	1.63
Interquartile Range (IQR) 1	0.87	657	0.71	1.68	2.75	61.05	1115	5	30.3	0.0035	0.7225	1.81	10.95	1	0.45	365	0.105	0.055	2.15	0.18	0.41
Variance	0.82787556	178233.849	27.2787796	1.10488	10.9771556	1486.53173	615966.222	19.16	722.823733	9.8596E-05	0.15480489	2.63929067	63.3246222	6.88888889	0.91493333	147997.141	0.04743556	0.01420889	5.00382222	0.02119269	0.15265156
Skewness	0.36783702	0.37512173	3.4576868	-0.6228753	1.55185767	0.81567835	1.00565965	1.01164573	1.3880824	3.57280673	0.71047221	1.14693135	0.9725901	3.26706438	2.80873778	2.450626	2.05642855	3.34631223	1.75305161	0.30117218	1.98271768
Coefficient of Variation (CoV) 2	0.60523947	0.55004453	2.2043792	0.48663552	0.41345829	1.06683915	0.65366615	0.45595976	0.54578525	1.73189468	1.20938276	0.67578593	0.47918568	0.98425098	0.6931315	0.84524315	0.45061459	1.43041253	0.55737271	0.42417571	0.87733492
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID										Re	S							Te		Ti	
Typical Detection Limit	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	0.002	0.01	Sb	Sc	Se	Sn	Sr	Ta	0.05	Th	0.001	Tl
Units	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
SP-RX																					
Count	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Minimum	0.29	55	1.06	0.06	2.29	2.2	540	3.1	12.6	0	0.02	1.63	7.5	0.25	0.8	23	0.1	0	0.6	0.112	0
10 Percentile	0.389	92.4	2.002	0.2329	4.363	2.6	906	3.657	42.06	0	0.136	1.702	8.14	0.25	0.8	52.4	0.2	0	1.03	0.1985	0
25 Percentile	0.5825	266.25	2.15	1.9395	4.7675	4.375	982.5	4.57	44.125	0	0.1775	2.095	10.55	0.3125	0.85	112.75	0.2	0	1.1	0.22625	0
Median-25Percentile	0.3275	324.25	2.615	0.309	1.4175	1.025	527.5	2.02	4.625	0	0.4825	2.6	6.45	1.3375	0.55	80.75	0.1	0	0.25	0.08325	0
Mean	1.115	790.785714	14.5085714	2.09671429	6.995	8.60714286	1417.85714	16.255	62.9714286	0	1.10785714	68.5921429	17.4285714	2.87857143	1.93571429	248	0.32142857	0	1.96428571	0.29935714	0
Standard Deviation	0.70631589	658.369	34.6351339	1.20969089	2.92999695	5.88890777	499.61669	25.4652729	27.0962419	0	1.20621118	224.003716	7.9254949	2.94003853	2.15128106	194.1818	0.14232042	0	1.38595359	0.09266885	0
Median	0.91	590.5	4.765	2.2485	6.185	5.4	1510	6.59	48.75	0	0.66	4.695	17	1.65	1.4	193.5	0.3	0	1.35	0.3095	0
75Percentile-Median	0.605	724.75	1.455	0.40525	3.115	6.875	230	7.25	40.075	0	0.7525	6.345	5.15	3.35	0.55	155.25	0.1	0	0.625	0.0765	0
75 Percentile	1.515	1315.25	6.22	2.65375	9.3	12.275	1740	13.84	88.825	0	1.4125	11.04	22.15	5	1.95	348.75	0.4	0	1.975	0.386	0
90 Percentile	2.263	1804.2	12.873	3.0377	11.314	16.97	1808	22.111	98.24	0	3.142	15.821	29.95	7.26	2.1	426.5	0.5	0	4.25	0.4083	0
Maximum	2.53	2058	138.78	4.808	12.17	20.6	2510	105.47	106.6	0	3.71	876.04	30.7	9	9.5	787	0.6	0	5.2	0.414	0
Interquartile Range (IQR) 1	0.9325	1049	4.07	0.71425	4.5325	7.9	757.5	9.27	44.7	0	1.235	8.945	11.6	4.6875	1.1	236	0.2	0	0.875	0.15975	0
Variance	0.49888214	433449.74	1199.5925	1.46335206	8.58488214	34.6792347	249616.837	648.480125	734.206327	0	1.45494541	50177.6649	62.8134694	8.64382653	4.6280102	37706.5714	0.0202551	0	1.92086735	0.00858752	0
Skewness	0.9372222	0.81777869	3.67972382	0.04002847	0.43037026	0.77357869	0.26630156	3.39626173	0.1176324	-	1.24175606	3.7382774	0.49475298	0.96098843	3.42924029	1.52482624	0.40761282	#DIV/0!	1.48231832	-0.3994409	-
Coefficient of Variation (CoV) 2	0.63346717	0.83255045	2.38721876	0.57694599	0.41887019	0.68418845	0.35237449	1.56661168	0.43029422	-	1.08877863	3.26573434	0.45474151	1.02135333	1.11136291	0.78299113	0.44277464	#DIV/0!	0.70557637	0.3095595	-
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
SRSF-OVB																					
Count	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Minimum	3.69	756	0.64	3.1	3.7	140.5	1260	4.3	21.3	0.001	0.04	0.61	20.6	1	0.7	333	0.24	0.025	1.3	0.396	0.2
10 Percentile	3.69	756	0.64	3.1	3.7	140.5	1260	4.3	21.3	0.001	0.04	0.61	20.6	1	0.7	333	0.24	0.025	1.3	0.396	0.2
25 Percentile	3.69	756	0.64	3.1	3.7	140.5	1260	4.3	21.3	0.001	0.04	0.61	20.6	1	0.7	333	0.24	0.025	1.3	0.396	0.2
Median-25Percentile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean	3.69	756	0.64	3.1	3.7	140.5	1260	4.3	21.3	0.001	0.04	0.61	20.6	1	0.7	333	0.24	0.025	1.3	0.396	0.2
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Median	3.69	756	0.64	3.1	3.7	140.5	1260	4.3	21.3	0.001	0.04	0.61	20.6	1	0.7	333	0.24	0.025	1.3	0.396	0.2
75Percentile-Median	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75 Percentile	3.69	756	0.64	3.1	3.7	140.5	1260	4.3	21.3	0.001	0.04	0.61	20.6	1	0.7	333	0.24	0.025	1.3	0.396	0.2
90 Percentile	3.69	756	0.64	3.1	3.7	140.5	1260	4.3	21.3	0.001	0.04	0.61	20.6	1	0.7	333	0.24	0.025	1.3	0.396	0.2
Maximum	3.69	756	0.64	3.1	3.7	140.5	1260	4.3	21.3	0.001	0.04	0.61	20.6	1	0.7	333	0.24	0.025	1.3	0.396	0.2
Interquartile Range (IQR) 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coefficient of Variation (CoV) 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID										Re	S							Te		Ti	
Typical Detection Limit	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	0.002	0.01	Sb	Sc	Se	Sn	Sr	Ta	0.05	Th	0.001	Tl
Units	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
SRSF-RX																					
Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Minimum	1.94	800	2.19	2.15	3.3	25.5	1060	2.6	26	0.004	0.31	0.78	17.3	2	0.7	450	0.21	0.05	1	0.379	0.22
10 Percentile	1.95	864	2.33	2.16	3.6	26.62	1092	2.64	28.16	0.0046	0.318	0.856	17.32	2.4	0.7	458	0.23	0.05	1.02	0.4018	0.226
25 Percentile	1.965	960	2.54	2.175	4.05	28.3	1140	2.7	31.4	0.0055	0.33	0.97	17.35	3	0.7	470	0.26	0.05	1.05	0.436	0.235
Median-25Percentile	0.025	160	0.35	0.025	0.75	2.8	80	0.1	5.4	0.0015	0.02	0.19	0.05	1	0	20	0.05	0	0.05	0.057	0.015
Mean	2.49333333	1133.33333	3.73666667	2.41	4.63333333	65.7	1190	3.4	33.2666667	0.00766667	0.45	1.25333333	19.7333333	4	0.7	480.333333	0.29	0.06333333	1.13333333	0.46533333	0.29666667
Standard Deviation	0.74745494	277.768889	1.71630093	0.33296646	1.02740233	52.9409734	96.2635272	0.99331096	5.13895796	0.00329983	0.17048949	0.42967688	3.37078955	1.63299316	1.1102E-16	21.9139732	0.05887841	0.01885618	0.12472191	0.06234492	0.08806563
Median	1.99	1120	2.89	2.2	4.8	31.1	1220	2.8	36.8	0.007	0.35	1.16	17.4	4	0.7	490	0.31	0.05	1.1	0.493	0.25
75Percentile-Median	0.78	180	1.62	0.34	0.5	54.7	35	1	0.1	0.0025	0.17	0.33	3.55	1	0	5.5	0.02	0.02	0.1	0.0155	0.085
75 Percentile	2.77	1300	4.51	2.54	5.3	85.8	1255	3.8	36.9	0.0095	0.52	1.49	20.95	5	0.7	495.5	0.33	0.07	1.2	0.5085	0.335
90 Percentile	3.238	1408	5.482	2.744	5.6	118.62	1276	4.4	36.96	0.011	0.622	1.688	23.08	5.6	0.7	498.8	0.342	0.082	1.26	0.5178	0.386
Maximum	3.55	1480	6.13	2.88	5.8	140.5	1290	4.8	37	0.012	0.69	1.82	24.5	6	0.7	501	0.35	0.09	1.3	0.524	0.42
Interquartile Range (IQR) 1	0.805	340	1.97	0.365	1.25	57.5	115	1.1	5.5	0.004	0.19	0.52	3.6	2	0	25.5	0.07	0.02	0.15	0.0725	0.1
Variance	0.55868889	77155.5556	2.94568889	0.11086667	1.05555556	2802.74667	9266.66667	0.98666667	26.4088889	1.0889E-05	0.02906667	0.18462222	11.3622222	2.66666667	1.2326E-32	480.222222	0.00346667	0.00035556	0.01555556	0.00388689	0.00775556
Skewness	1.72623973	0.17609799	1.51847514	1.70280392	-0.5855827	1.71752714	-1.0709148	1.6795356	-1.7300834	0.72210865	1.66081805	0.77300303	1.73090758	0	2.44948974	-1.410521	-1.1520696	1.73205081	0.93521953	-1.4164433	1.58252321
Coefficient of Variation (CoV) 2	0.29978139	0.2450902	0.45931336	0.13816036	0.22174151	0.80579868	0.08089372	0.29215028	0.15447769	0.43041282	0.37886554	0.3428273	0.17081704	0.40824829	1.586E-16	0.04562243	0.20302899	0.29772917	0.11004875	0.13397905	0.29685045
NPR < 1.0 or NPR = 1.0																					
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TAR-RX																					
Count	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Minimum	0.62	407	0.34	1.17	3.3	32	320	2	19.2	0.001	0.04	0.19	11.6	1	0.6	71.5	0.21	0.025	1.1	0.233	0.11
10 Percentile	1.01	434.4	1.088	1.18	4.76	64.6	400	4.6	29.18	0.001	0.054	0.458	11.7	1	0.8	73.06	0.332	0.025	2.2	0.2668	0.19
25 Percentile	1.39	525	1.32	1.25	5.1	79.9	440	4.8	38.5	0.001	0.1	0.58	13	2	0.9	95.6	0.36	0.025	2.3	0.282	0.24
Median-25Percentile	0.41	197	0.67	0.28	0.4	12.2	100	1	1.8	0.001	0.15	0.15	2.3	0	0.1	4.4	0.01	0.045	0.2	0.057	0.04
Mean	1.72461538	806.692308	2.05461538	1.64846154	5.40769231	100.923077	652.307692	7.13846154	44.3846154	0.00338462	0.26769231	1.00307692	15.2769231	2.15384615	0.93076923	141.853846	0.36538462	0.06769231	2.49230769	0.33492308	0.29230769
Standard Deviation	0.53432366	339.046941	0.9450976	0.58982196	0.80523436	33.9326517	344.610233	3.76104291	12.9059823	0.00297524	0.21884852	0.61076729	2.83010026	1.02628185	0.13234347	97.9598004	0.05415297	0.03343279	0.49685401	0.05573904	0.08919761
Median	1.8	722	1.99	1.53	5.5	92.1	540	5.8	40.3	0.002	0.25	0.73	15.3	2	1	100	0.37	0.07	2.5	0.339	0.28
75Percentile-Median	0.22	348	0.52	0.21	0.4	42.4	190	1.5	15.1	0.003	0.11	0.6	1.8	0	0	43.5	0.03	0.02	0.4	0.03	0.08
75 Percentile	2.02	1070	2.51	1.74	5.9	134.5	730	7.3	55.4	0.005	0.36	1.33	17.1	2	1	143.5	0.4	0.09	2.9	0.369	0.36
90 Percentile	2.316	1248	3.308	1.944	6.38	141.7	846	11.94	61.52	0.0058	0.574	1.948	19.26	3	1.08	239.2	0.418	0.11	2.9	0.4076	0.408
Maximum	2.51	1460	3.75	3.48	6.6	144.5	1700	16.9	64.4	0.012	0.77	2.14	19.4	5	1.1	432	0.44	0.11	3.2	0.412	0.42
Interquartile Range (IQR) 1	0.63	545	1.19	0.49	0.8	54.6	290	2.5	16.9	0.004	0.26	0.75	4.1	0	0.1	47.9	0.04	0.065	0.6	0.087	0.12
Variance	0.28550178	114952.828	0.89320947	0.34788994	0.64840237	1151.42485	118756.213	14.1454438	166.564379	8.8521E-06	0.04789467	0.37303669	8.00946746	1.05325444	0.01751479	9596.12249	0.00293254	0.00111775	0.24686391	0.00310684	0.00795621
Skewness	-0.6618865	0.53509777	0.15032559	2.45012092	-1.0963127	-0.3579734	2.2883899	1.49473834	-0.1640736	2.00134195	1.07973933	0.80548047	0.14095629	1.58641202	-1.1076783	2.27083554	-1.7054621	-0.1326226	-1.5587365	-0.258247	-0.3203888
Coefficient of Variation (CoV) 2	0.30982193	0.42029277	0.4599876	0.35780147	0.14890536	0.33622292	0.52829399	0.52687024	0.29077603	0.87904907	0.81753757	0.60889377	0.18525329	0.476488	0.14218719	0.69056852	0.14820813	0.4938935	0.199355	0.1664234	0.30514971
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Sum Check																					

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID										Re	S						Te		Ti	
Typical Detection Limit	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	0.002	0.01	Sb	Sc	Se	Sn	Sr	Ta	0.05	Th	0.001	Tl
Units	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
TCAR-OVB																					
Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Minimum	1.28	356	1	0.011	0	92.2	0.075	7.95	0	0	0.06	0.06	5.8	0.6	0	34.1	0	0.04	1.1	0.002	0.04
10 Percentile	1.302	397.4	1.02	0.0118	0	95.14	0.0766	7.964	0	0	0.06	0.064	5.88	0.6	0	35.7	0	0.04	1.14	0.002	0.042
25 Percentile	1.335	459.5	1.05	0.013	0	99.55	0.079	7.985	0	0	0.06	0.07	6	0.6	0	38.1	0	0.04	1.2	0.002	0.045
Median-25Percentile	0.055	103.5	0.05	0.002	0	7.35	0.004	0.035	0	0	0	0.01	0.2	0	0	4	0	0	0.1	0	0.005
Mean	1.44333333	769	1.10333333	0.01433333	0	108.7	0.08533333	8.36666667	0	0	0.12333333	0.10666667	6.7	0.7	0	49	0	0.04	1.4	0.01466667	0.07
Standard Deviation	0.1596524	445.782458	0.08576454	0.00249444	0	14.2639405	0.00953357	0.54051416	0	0	0.08956686	0.05249339	1.0033278	0.14142136	0	15.7571148	0	0	0.29439203	0.01791337	0.03559026
Median	1.39	563	1.1	0.015	0	106.9	0.083	8.02	0	0	0.06	0.08	6.2	0.6	0	42.1	0	0.04	1.3	0.002	0.05
75Percentile-Median	0.135	412.5	0.055	0.001	0	10.05	0.0075	0.555	0	0	0.095	0.05	0.95	0.15	0	14.35	0	0	0.25	0.019	0.035
75 Percentile	1.525	975.5	1.155	0.016	0	116.95	0.0905	8.575	0	0	0.155	0.13	7.15	0.75	0	56.45	0	0.04	1.55	0.021	0.085
90 Percentile	1.606	1223	1.188	0.0166	0	122.98	0.095	8.908	0	0	0.212	0.16	7.72	0.84	0	65.06	0	0.04	1.7	0.0324	0.106
Maximum	1.66	1388	1.21	0.017	0	127	0.098	9.13	0	0	0.25	0.18	8.1	0.9	0	70.8	0	0.04	1.8	0.04	0.12
Interquartile Range (IQR) 1	0.19	516	0.105	0.003	0	17.4	0.0115	0.59	0	0	0.095	0.06	1.15	0.15	0	18.35	0	0	0.35	0.019	0.04
Variance	0.02548889	198722	0.00735556	6.2222E-06	0	203.46	9.0889E-05	0.29215556	0	0	0.00802222	0.00275556	1.00666667	0.02	0	248.286667	0	0	0.08666667	0.00032089	0.00126667
Skewness	1.13609572	1.45617853	0.14265937	-0.9352195	-	0.45873788	0.86335419	1.71028888	-	-	1.73205081	1.54539253	1.52787436	1.73205081	-	1.40325753	-	-	1.15206964	1.73205081	1.63005916
Coefficient of Variation (CoV) 2	0.11061367	0.5796911	0.07773221	0.17403058	-	0.131223	0.11172148	0.06460329	-	-	0.72621778	0.49212549	0.14975042	0.20203051	-	0.32157377	-	0	0.21028002	1.22136626	0.5084323
NPR < 1.0 or NPR = 1.0																					
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Sum Check																					
TCAR-RX																					
Count	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Minimum	0.68	144	0.56	0.012	0	44.4	0.037	5.09	0	0	0.04	0.05	3.7	0.1	0	16.9	0	0.01	0.9	0.0005	0.02
10 Percentile	0.805	271.5	0.56	0.0145	0	68.55	0.038	6.155	0	0	0.055	0.065	3.9	0.15	0	20.6	0	0.01	1.05	0.00075	0.03
25 Percentile	1.01	406.5	0.67	0.01725	0	93.875	0.0405	7.2475	0	0	0.0775	0.085	4.1	0.225	0	28.85	0	0.01	1.225	0.00125	0.04
Median-25Percentile	0.37	98.5	0.58	0.00125	0	7.825	0.005	0.8325	0	0	0.0925	0.025	0	0.225	0	22.2	0	0.01	0.075	0.00075	0.005
Mean	1.39	847.333333	1.12	0.0185	0	99.9	0.04533333	10.0183333	0	0	0.18166667	0.16666667	4.3	0.45	0	160.633333	0	0.025	1.33333333	0.01758333	0.06166667
Standard Deviation	0.51784811	766.100661	0.43924177	0.00359398	0	29.1244456	0.00612826	5.19201122	0	0	0.11739061	0.12405196	0.60277138	0.27537853	0	251.59242	0	0.01607275	0.26246693	0.03552513	0.03933475
Median	1.38	505	1.25	0.0185	0	101.7	0.0455	8.08	0	0	0.17	0.11	4.1	0.45	0	51.05	0	0.02	1.3	0.002	0.045
75Percentile-Median	0.28	463	0.265	0.00275	0	15.025	0.0035	2.1075	0	0	0.1075	0.1	0.075	0.15	0	39.3	0	0.0175	0.225	0.00075	0.0275
75 Percentile	1.66	968	1.515	0.02125	0	116.725	0.049	10.1875	0	0	0.2775	0.21	4.175	0.6	0	90.35	0	0.0375	1.525	0.00275	0.0725
90 Percentile	1.985	1765.5	1.55	0.0225	0	129.45	0.0525	15.82	0	0	0.32	0.325	4.9	0.75	0	410.25	0	0.045	1.65	0.05	0.11
Maximum	2.26	2434	1.58	0.023	0	138.6	0.055	21	0	0	0.35	0.41	5.6	0.9	0	719.9	0	0.05	1.7	0.097	0.14
Interquartile Range (IQR) 1	0.65	561.5	0.845	0.004	0	22.85	0.0085	2.94	0	0	0.2	0.125	0.075	0.375	0	61.5	0	0.0275	0.3	0.0015	0.0325
Variance	0.26816667	586910.222	0.19293333	1.2917E-05	0	848.233333	3.7556E-05	26.9569806	0	0	0.01378056	0.01538889	0.36333333	0.07583333	0	63298.7456	0	0.00025833	0.06888889	0.00126203	0.00154722
Skewness	0.38621118	1.76626233	-0.3682749	-0.7079233	-	-0.9668964	0.17099653	1.89453159	-	-	0.20590644	1.45435503	2.03826371	0.39342474	-	2.3863937	-	0.49467644	-0.1963411	2.44672533	1.47204631
Coefficient of Variation (CoV) 2	0.3725526	0.90413139	0.39218015	0.194269	-	0.29153599	0.13518218	0.518251	-	-	0.64618685	0.74431176	0.14017939	0.61195228	-	1.56625287	-	0.64291005	0.1968502	2.02038643	0.63786074
NPR < 1.0 or NPR = 1.0																					
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Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID										Re	S							Te		Ti	
Typical Detection Limit	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	0.002	0.01	Sb	Sc	Se	Sn	Sr	Ta	0.05	Th	0.001	Tl
Units	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
TDPR-RX																					
Count	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Minimum	1.32	152	0.89	1.12	4.3	60.9	480	4	30.3	0.001	0.01	0.5	10.7	1	0.7	57.9	0.25	0.025	1.7	0.264	0.22
10 Percentile	1.388	290.6	0.95	1.158	4.54	95.1	504	5.36	35.56	0.001	0.034	0.53	12.62	1.4	0.8	64.92	0.286	0.035	1.94	0.2762	0.234
25 Percentile	1.68	421	1.175	1.22	5.05	110.5	530	6.45	38.55	0.001	0.05	0.61	13.45	2	0.85	78.7	0.32	0.05	2.45	0.286	0.26
Median-25Percentile	0.35	121	0.575	0.2	0.55	13.5	90	0.55	4.15	0.001	0.1	0.17	1.75	0	0.15	47.8	0.05	0.01	0.25	0.066	0.01
Mean	1.86333333	559.866667	1.832	1.48266667	5.9	121.393333	702.666667	6.97333333	46.76	0.00226667	0.16133333	0.80266667	15.48	2	1.03333333	165.053333	0.37733333	0.06266667	2.76666667	0.34006667	0.31
Standard Deviation	0.29668539	247.988942	0.78763105	0.31585791	1.3190906	24.4863082	228.982289	1.31070804	11.2653333	0.00173077	0.10726085	0.21532817	2.59003217	0.51639778	0.22705848	96.9921431	0.08473226	0.02509095	0.59962952	0.05007789	0.07720104
Median	2.03	542	1.75	1.42	5.6	124	620	7	42.7	0.002	0.15	0.78	15.2	2	1	126.5	0.37	0.06	2.7	0.352	0.27
75Percentile-Median	0.055	113	0.55	0.175	0.9	15.5	190	0.9	15.5	0.001	0.1	0.19	2.1	0	0.25	134	0.05	0.01	0.5	0.021	0.1
75 Percentile	2.085	655	2.3	1.595	6.5	139.5	810	7.9	58.2	0.003	0.25	0.97	17.3	2	1.25	260.5	0.42	0.07	3.2	0.373	0.37
90 Percentile	2.164	814.6	2.98	1.994	7.12	148.4	1042	8.12	63.18	0.003	0.308	1.114	18.5	2.6	1.36	298.8	0.46	0.098	3.52	0.4018	0.432
Maximum	2.23	1210	3.36	2.14	9.6	157	1250	9.5	66.1	0.008	0.34	1.14	20.5	3	1.4	327	0.6	0.12	3.8	0.424	0.46
Interquartile Range (IQR) 1	0.405	234	1.125	0.375	1.45	29	280	1.45	19.65	0.002	0.2	0.36	3.85	0	0.4	181.8	0.1	0.02	0.75	0.087	0.11
Variance	0.08802222	61498.5156	0.62036267	0.09976622	1.74	599.579289	52432.8889	1.71795556	126.907733	2.9956E-06	0.01150489	0.04636622	6.70826667	0.26666667	0.05155556	9407.47582	0.00717956	0.00062956	0.35955556	0.0025078	0.00596
Skewness	-0.701674	0.96355547	0.57151791	0.94004764	1.42573661	-0.8533464	1.2466901	-0.4804014	0.52819196	2.54808978	0.18943696	0.18651547	0.10793326	0	0.37525886	0.45050434	1.02538963	0.8723242	-0.0906912	-0.041419	0.84697059
Coefficient of Variation (CoV) 2	0.15922293	0.44294286	0.42992961	0.21303367	0.22357468	0.20171049	0.32587612	0.18796004	0.24091816	0.76357382	0.66483995	0.268266	0.16731474	0.25819889	0.21973402	0.58764123	0.22455545	0.40038743	0.21673356	0.14725905	0.2490356
NPR < 1.0 or NPR = 1.0																					
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Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
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Sum Check																					
Ted Morris-OVB																					
Count	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Minimum	1.4	780	1.15	2.1	7.2	18.3	1050	9.7	54.4	0.001	0.01	1.32	16.2	2	1	307	0.43	0.05	2.8	0.319	0.42
10 Percentile	1.444	835.2	1.462	2.116	7.6	19.86	1086	10.9	54.88	0.001	0.018	2.176	17.04	2	1.08	309.8	0.462	0.05	2.88	0.3354	0.42
25 Percentile	1.51	918	1.93	2.14	8.2	22.2	1140	12.7	55.6	0.001	0.03	3.46	18.3	2	1.2	314	0.51	0.05	3	0.36	0.42
Median-25Percentile	0.18	34	0.12	0.06	0.1	1.4	20	1.6	6.9	0	0.03	0.28	2.6	0	0.2	16	0	0.01	0.3	0.006	0.04
Mean	1.642	974	1.986	2.298	8.38	22.58	1204	15.86	61.08	0.0018	0.07	3.508	19.72	2	1.32	371.2	0.504	0.06	3.22	0.363	0.462
Standard Deviation	0.1624069	137.439441	0.50333289	0.2561562	0.70540768	2.28595713	120.432554	6.31398448	5.1843611	0.00116619	0.06292853	1.24709903	2.16185106	0	0.19390719	101.818269	0.0397995	0.00894427	0.27856777	0.02483546	0.03815757
Median	1.69	952	2.05	2.2	8.3	23.6	1160	14.3	62.5	0.001	0.06	3.74	20.9	2	1.4	330	0.51	0.06	3.3	0.366	0.46
75Percentile-Median	0.1	68	0.02	0.05	0.7	0.8	110	0.3	3.8	0.001	0	0.09	0.2	0	0.1	1	0.01	0.01	0.2	0.01	0.04
75 Percentile	1.79	1020	2.07	2.25	9	24.4	1270	14.6	66.3	0.002	0.06	3.83	21.1	2	1.5	331	0.52	0.07	3.5	0.376	0.5
90 Percentile	1.808	1128	2.466	2.58	9.12	24.4	1348	22.64	66.48	0.0032	0.138	4.646	21.7	2	1.5	476.8	0.538	0.07	3.5	0.3868	0.506
Maximum	1.82	1200	2.73	2.8	9.2	24.4	1400	28	66.6	0.004	0.19	5.19	22.1	2	1.5	574	0.55	0.07	3.5	0.394	0.51
Interquartile Range (IQR) 1	0.28	102	0.14	0.11	0.8	2.2	130	1.9	10.7	0.001	0.03	0.37	2.8	0	0.3	17	0.01	0.02	0.5	0.016	0.08
Variance	0.026376	18889.6	0.253344	0.065616	0.4976	5.2256	14504	39.8664	26.8776	0.00000136	0.00396	1.555256	4.6736	0	0.0376	10366.96	0.001584	8E-05	0.0776	0.0006168	0.001456
Skewness	-0.5206316	0.47691096	-0.4016036	2.01767423	-0.7301969	-1.6307742	0.65157479	1.79808967	-0.3195483	1.71439233	1.73001255	-0.8716286	-0.8476338	-	-0.912717	2.19016187	-1.434661	-3.331E-15	-0.5560984	-1.0353476	0.0927311
Coefficient of Variation (CoV) 2	0.09890798	0.14110826	0.25344053	0.11146919	0.08417753	0.10123814	0.10002704	0.39810747	0.08487821	0.64788354	0.89897901	0.35550143	0.10962734	0	0.14689939	0.27429491	0.07896726	0.1490712	0.08651173	0.06841724	0.08259214
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
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Sum Check																					
Teigen-OVB																					
Count	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Minimum	1.55	543	0.8	1.1	5	105	600	5.9	48.4	0.001	0.02	0.72	15.2	2	0.9	106.5	0.35	0.025	2.6	0.332	0.3

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID										Re	S							Te		Ti	
Typical Detection Limit	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	0.002	0.01	Sb	Sc	Se	Sn	Sr	Ta	0.05	Th	0.001	Tl
Units	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
10 Percentile	1.57	567.5	0.87	1.115	5.15	107.5	645	5.9	48.45	0.001	0.02	0.725	15.45	2	0.9	108.25	0.36	0.025	2.65	0.336	0.3
25 Percentile	1.595	593.75	0.985	1.155	5.325	110.5	705	5.975	48.625	0.001	0.0225	0.745	15.725	2	0.925	112.375	0.3725	0.03125	2.725	0.34025	0.3025
Median-25Percentile	0.015	168.25	0.29	0.175	0.975	3.25	55	1.275	0.925	0	0.0075	0.51	0.475	0	0.075	7.125	0.0525	0.02375	0.275	0.00575	0.0175
Mean	1.62333333	898.166667	1.225	1.37166667	6.25	115.666667	735	7.83333333	50	0.00133333	0.04666667	1.40166667	16.2	2	0.98333333	130.916667	0.42333333	0.04666667	3.01666667	0.3455	0.34166667
Standard Deviation	0.05405758	373.813419	0.2894679	0.2600908	1.02591423	8.2445268	71.121961	2.06854753	1.58640054	0.0004714	0.03858612	0.73010083	0.67577116	0	0.06871843	28.7799361	0.05763872	0.0157233	0.33374974	0.00846069	0.06309164
Median	1.61	762	1.275	1.33	6.3	113.75	760	7.25	49.55	0.001	0.03	1.255	16.2	2	1	119.5	0.425	0.055	3	0.346	0.32
75Percentile-Median	0.0375	331.75	0.2075	0.1375	0.9	5.875	25	1.725	1.375	0.00075	0.015	0.4875	0.55	0	0	14.625	0.0525	0.005	0.275	0.0065	0.01
75 Percentile	1.6475	1093.75	1.4825	1.4675	7.2	119.625	785	8.975	50.925	0.00175	0.045	1.7425	16.75	2	1	134.125	0.4775	0.06	3.275	0.3525	0.33
90 Percentile	1.69	1365	1.53	1.67	7.3	125.75	800	10.35	52	0.002	0.09	2.225	16.95	2	1.05	165	0.485	0.06	3.4	0.3545	0.405
Maximum	1.72	1580	1.56	1.86	7.4	130.5	810	11.5	52.8	0.002	0.13	2.7	17.1	2	1.1	191	0.49	0.06	3.5	0.356	0.48
Interquartile Range (IQR) 1	0.0525	500	0.4975	0.3125	1.875	9.125	80	3	2.3	0.00075	0.0225	0.9975	1.025	0	0.075	21.75	0.105	0.02875	0.55	0.01225	0.0275
Variance	0.00292222	139736.472	0.08379167	0.06764722	1.0525	67.9722222	5058.33333	4.27888889	2.51666667	2.2222E-07	0.00148889	0.53304722	0.45666667	0	0.00472222	828.284722	0.00332222	0.00024722	0.11138889	7.1583E-05	0.00398056
Skewness	0.74611047	1.01665361	-0.320521	1.04955803	-0.0399464	0.80249229	-1.2160749	0.85449829	0.86944088	0.96824584	2.11156577	0.82946164	-0.1331138	-	0.31256996	1.82614112	-0.0566771	-0.7746566	0.16915925	-0.366267	2.24233652
Coefficient of Variation (CoV) 2	0.03330036	0.41619605	0.23630033	0.18961662	0.16414628	0.07127833	0.09676457	0.2640699	0.03172801	0.35355339	0.82684549	0.5208805	0.04171427	0	0.06988315	0.21983401	0.13615446	0.3369279	0.11063527	0.02448826	0.18465847
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
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Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
TMF-OVB																					
Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Minimum	1.9	408	1.18	1.42	5.7	131.5	530	6.2	43.7	0.002	0.18	0.76	12.9	2	1	156	0.38	0.05	2.8	0.309	0.29
10 Percentile	1.906	446.1	1.221	1.44	5.73	131.55	561	6.31	44	0.002	0.186	0.779	12.97	2	1.01	165.2	0.382	0.05	2.84	0.3095	0.292
25 Percentile	1.915	503.25	1.2825	1.47	5.775	131.625	607.5	6.475	44.45	0.002	0.195	0.8075	13.075	2	1.025	179	0.385	0.05	2.9	0.31025	0.295
Median-25Percentile	0.015	95.25	0.1025	0.05	0.075	0.125	77.5	0.275	0.75	0	0.015	0.0475	0.175	0	0.025	23	0.005	0	0.1	0.00125	0.005
Mean	1.93	598.5	1.385	1.52	5.85	131.75	685	6.75	45.2	0.002	0.21	0.855	13.25	2	1.05	202	0.39	0.05	3	0.3115	0.3
Standard Deviation	0.03	190.5	0.205	0.1	0.15	0.25	155	0.55	1.5	0	0.03	0.095	0.35	0	0.05	46	0.01	0	0.2	0.0025	0.01
Median	1.93	598.5	1.385	1.52	5.85	131.75	685	6.75	45.2	0.002	0.21	0.855	13.25	2	1.05	202	0.39	0.05	3	0.3115	0.3
75Percentile-Median	0.015	95.25	0.1025	0.05	0.075	0.125	77.5	0.275	0.75	0	0.015	0.0475	0.175	0	0.025	23	0.005	0	0.1	0.00125	0.005
75 Percentile	1.945	693.75	1.4875	1.57	5.925	131.875	762.5	7.025	45.95	0.002	0.225	0.9025	13.425	2	1.075	225	0.395	0.05	3.1	0.31275	0.305
90 Percentile	1.954	750.9	1.549	1.6	5.97	131.95	809	7.19	46.4	0.002	0.234	0.931	13.53	2	1.09	238.8	0.398	0.05	3.16	0.3135	0.308
Maximum	1.96	789	1.59	1.62	6	132	840	7.3	46.7	0.002	0.24	0.95	13.6	2	1.1	248	0.4	0.05	3.2	0.314	0.31
Interquartile Range (IQR) 1	0.03	190.5	0.205	0.1	0.15	0.25	155	0.55	1.5	0	0.03	0.095	0.35	0	0.05	46	0.01	0	0.2	0.0025	0.01
Variance	0.0009	36290.25	0.042025	0.01	0.0225	0.0625	24025	0.3025	2.25	0	0.0009	0.009025	0.1225	0	0.0025	2116	0.0001	0	0.04	6.25E-06	0.0001
Skewness	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coefficient of Variation (CoV) 2	0.01554404	0.31829574	0.14801444	0.06578947	0.02564103	0.00189753	0.22627737	0.08148148	0.03318584	0	0.14285714	0.11111111	0.02641509	0	0.04761905	0.22772277	0.02564103	0	0.06666667	0.00802568	0.03333333
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
TMF-RX																					
Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Minimum	1.67	258	1.64	0.97	5.3	116.5	430	4.9	47.2	0.002	0.02	0.49	11.1	2	0.9	50.1	0.37	0.05	2.9	0.257	0.3
10 Percentile	1.728	394.4	1.644	1.052	5.4	116.6	438	4.94	47.22	0.002	0.044	0.502	11.34	2	0.92	77.28	0.374	0.05	2.92	0.263	0.302
25 Percentile	1.815	599	1.65	1.175	5.55	116.75	450	5	47.25	0.002	0.08	0.52	11.7	2	0.95	118.05	0.38	0.05	2.95	0.272	0.305

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID										Re	S							Te		Ti	
Typical Detection Limit	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	0.002	0.01	Sb	Sc	Se	Sn	Sr	Ta	0.05	Th	0.001	Tl
Units	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
Median-25Percentile	0.145	341	0.01	0.205	0.25	0.25	20	0.1	0.05	0	0.06	0.03	0.6	0	0.05	67.95	0.01	0	0.05	0.015	0.005
Mean	2.02333333	716.333333	1.7	1.29666667	6.1	127.666667	616.666667	5.1	49.1666667	0.00233333	0.23333333	0.65666667	13.3333333	2.33333333	1.06666667	203.366667	0.41333333	0.05	3.2	0.304	0.33666667
Standard Deviation	0.31752515	324.121719	0.07118052	0.24004629	0.80415587	15.4398474	236.267269	0.16329932	2.71088341	0.0004714	0.22231109	0.19482186	2.36126143	0.47140452	0.16996732	132.800611	0.04784233	6.9389E-18	0.35590261	0.04688283	0.04496913
Median	1.96	940	1.66	1.38	5.8	117	470	5.1	47.3	0.002	0.14	0.55	12.3	2	1	186	0.39	0.05	3	0.287	0.31
75Percentile-Median	0.24	5.5	0.07	0.08	0.7	16.25	240	0.1	2.85	0.0005	0.2	0.19	2.15	0.5	0.15	94	0.045	0	0.35	0.0405	0.045
75 Percentile	2.2	945.5	1.73	1.46	6.5	133.25	710	5.2	50.15	0.0025	0.34	0.74	14.45	2.5	1.15	280	0.435	0.05	3.35	0.3275	0.355
90 Percentile	2.344	948.8	1.772	1.508	6.92	143	854	5.26	51.86	0.0028	0.46	0.854	15.74	2.8	1.24	336.4	0.462	0.05	3.56	0.3518	0.382
Maximum	2.44	951	1.8	1.54	7.2	149.5	950	5.3	53	0.003	0.54	0.93	16.6	3	1.3	374	0.48	0.05	3.7	0.368	0.4
Interquartile Range (IQR) 1	0.385	346.5	0.08	0.285	0.95	16.5	260	0.2	2.9	0.0005	0.26	0.22	2.75	0.5	0.2	161.95	0.055	0	0.4	0.0555	0.05
Variance	0.10082222	105054.889	0.00506667	0.05762222	0.64666667	238.388889	55822.2222	0.02666667	7.34888889	2.2222E-07	0.04942222	0.03795556	5.57555556	0.22222222	0.02888889	17636.0022	0.00228889	4.8148E-35	0.12666667	0.002198	0.00202222
Skewness	0.71342273	-1.7305547	1.63005916	-1.173048	1.24353737	1.7306886	1.69489143	-1.998E-14	1.73028331	1.73205081	1.3613014	1.6096545	1.40262706	1.73205081	1.29334278	0.47501078	1.50780848	-2.4494897	1.63005916	1.21551647	1.66803368
Coefficient of Variation (CoV) 2	0.15693171	0.45247332	0.0418709	0.18512567	0.13182883	0.12093875	0.38313611	0.03201947	0.05513661	0.20203051	0.95276183	0.29668303	0.17709461	0.20203051	0.15934436	0.65301071	0.11574758	1.3878E-16	0.11121957	0.15421984	0.13357166
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
WSF-OVB																					
Count	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Minimum	1.5	743	1.43	0.98	4.2	20.8	970	5.4	25.9	0.004	0.04	0.8	13.1	1	0.7	308	0.26	0.05	1.1	0.361	0.15
10 Percentile	1.628	758.2	1.918	1.404	5.24	21.92	1058	5.4	28.54	0.0048	0.08	1.448	13.1	1	0.86	311.2	0.308	0.05	1.58	0.3842	0.23
25 Percentile	1.73	785	2.31	1.75	5.7	25.9	1360	6.9	35.7	0.005	0.1	2.11	14.2	2	1	372	0.35	0.05	1.9	0.402	0.29
Median-25Percentile	0.1	169	3.36	0.21	2.6	7.5	90	2	5	0.005	0.12	0.12	0.9	1	0.1	54	0.09	0.01	0.7	0.037	0.03
Mean	2.00888889	924.777778	6.28222222	1.90222222	9.34444444	42.6444444	1428.88889	13.8888889	49.6888889	0.01833333	0.30888889	3.64333333	17.6777778	3.22222222	1.12222222	469.777778	0.56333333	0.12444444	2.35555556	0.45677778	0.42
Standard Deviation	0.58532886	163.142595	4.73256514	0.43547618	6.047242	23.756782	249.997531	9.81930575	19.2348321	0.01619328	0.25726961	2.55811997	4.41683088	2.09644025	0.23934066	144.226502	0.40898248	0.11805	0.61844089	0.10209775	0.22939534
Median	1.83	954	5.67	1.96	8.3	33.4	1450	8.9	40.7	0.01	0.22	2.23	15.1	3	1.1	426	0.44	0.06	2.6	0.439	0.32
75Percentile-Median	0.07	5	1.88	0.16	1	17.3	140	8.9	26.9	0.02	0.28	3.69	6.4	1	0.2	132	0.09	0.06	0.1	0.008	0.28
75 Percentile	1.9	959	7.55	2.12	9.3	50.7	1590	17.8	67.6	0.03	0.5	5.92	21.5	4	1.3	558	0.53	0.12	2.7	0.447	0.6
90 Percentile	2.574	1058	10.952	2.37	12.58	70.48	1658	27.8	71.96	0.0438	0.722	6.598	22.88	5.6	1.42	675.6	0.77	0.268	2.88	0.5106	0.68
Maximum	3.55	1310	17.4	2.57	25.7	98.4	1810	35	83.8	0.047	0.73	9.03	26	8	1.5	746	1.69	0.42	3.2	0.733	0.92
Interquartile Range (IQR) 1	0.17	174	5.24	0.37	3.6	24.8	230	10.9	31.9	0.025	0.4	3.81	7.3	2	0.3	186	0.18	0.07	0.8	0.045	0.31
Variance	0.34260988	26615.5062	22.3971728	0.18963951	36.5691358	564.384691	62498.7654	96.4187654	369.978765	0.00026222	0.06618765	6.54397778	19.5083951	4.39506173	0.05728395	20801.284	0.16726667	0.0139358	0.38246914	0.01042395	0.05262222
Skewness	2.32692108	1.37357232	1.43514706	-0.7605115	2.50810623	1.56210791	-0.6090018	1.32460709	0.48939517	0.95083421	0.8184063	1.12502379	0.69640471	1.30873286	-0.0831985	0.84962573	2.70359213	2.05764554	-0.891849	2.49567969	1.21151769
Coefficient of Variation (CoV) 2	0.29136946	0.17641275	0.75332661	0.22893024	0.64714837	0.55708973	0.17495939	0.70699001	0.3871053	0.88326966	0.83288724	0.70213723	0.24985216	0.65061939	0.21327385	0.30701006	0.7260044	0.94861607	0.26254566	0.22351733	0.54617938
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	U	V	W	Y	Zn	Zr	Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2	LOI	Total
Typical Detection Limit	**0.1**	**1**	**0.1**	**0.1**	**1**	**1**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**		
Units	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
By Location																					
CCAR-OVB																					
Count	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Minimum	0.7	35	0.9	11.9	62	35.7	5.2	0.02	8.69	0.005	4.8	0.57	3.29	0.13	1.41	0.089	62.5	0.07	0.18	12.75	99.699
10 Percentile	0.7	35	0.9	11.9	62	35.7	5.2	0.02	8.69	0.005	4.8	0.57	3.29	0.13	1.41	0.089	62.5	0.07	0.18	12.75	99.699
25 Percentile	0.7	35	0.9	11.9	62	35.7	5.2	0.02	8.69	0.005	4.8	0.57	3.29	0.13	1.41	0.089	62.5	0.07	0.18	12.75	99.699
Median-25Percentile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean	0.7	35	0.9	11.9	62	35.7	5.2	0.02	8.69	0.005	4.8	0.57	3.29	0.13	1.41	0.089	62.5	0.07	0.18	12.75	99.699
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Median	0.7	35	0.9	11.9	62	35.7	5.2	0.02	8.69	0.005	4.8	0.57	3.29	0.13	1.41	0.089	62.5	0.07	0.18	12.75	99.699
75Percentile-Median	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75 Percentile	0.7	35	0.9	11.9	62	35.7	5.2	0.02	8.69	0.005	4.8	0.57	3.29	0.13	1.41	0.089	62.5	0.07	0.18	12.75	99.699
90 Percentile	0.7	35	0.9	11.9	62	35.7	5.2	0.02	8.69	0.005	4.8	0.57	3.29	0.13	1.41	0.089	62.5	0.07	0.18	12.75	99.699
Maximum	0.7	35	0.9	11.9	62	35.7	5.2	0.02	8.69	0.005	4.8	0.57	3.29	0.13	1.41	0.089	62.5	0.07	0.18	12.75	99.699
Interquartile Range (IQR) 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coefficient of Variation (CoV) 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
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Sum Check																					
CCAR-RX																					
Count	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
Minimum	0.3	7	0.1	4.8	12	12.9	1.99	0.01	0.03	0.005	2.06	0.12	0.43	0.005	0.16	0.038	16.5	0.005	0.1	1.99	98.886
10 Percentile	0.6	73.2	0.2	12.4	57.2	37.66	10.542	0.03	0.136	0.005	3.872	0.43	1.04	0.026	1.144	0.0994	48.988	0.01	0.428	3.03	99.2408
25 Percentile	1	134	0.45	14.1	77	62.45	13.525	0.07	0.25	0.005	5.22	0.98	1.635	0.05	1.945	0.1255	52.37	0.02	0.625	3.675	99.5275
Median-25Percentile	0.8	35	0.35	2.9	22	12.55	1.385	0.02	1.42	0.005	1.16	0.87	0.595	0.06	0.955	0.0495	8.84	0	0.155	1.105	0.2665
Mean	2.09574468	183.382979	0.79787234	21.0191489	111.723404	75.9659574	14.3365957	0.12021277	3.67	0.01531915	7.2512766	1.89531915	3.1587234	0.10861702	2.8387234	0.21421277	59.2714894	0.03202128	0.9012766	5.86489362	99.6765532
Standard Deviation	1.41390623	85.3878643	0.43928828	11.0699255	64.8076375	30.1702705	2.89726083	0.09065927	4.83209527	0.01195756	3.45111121	1.19093536	2.56448296	0.06635416	1.23835618	0.11426377	9.97688306	0.02261283	0.47857776	5.28277122	0.2890821
Median	1.8	169	0.8	17	99	75	14.91	0.09	1.67	0.01	6.38	1.85	2.23	0.11	2.9	0.175	61.21	0.02	0.78	4.78	99.794
75Percentile-Median	0.65	62	0.35	6.15	22	18.4	1.395	0.07	4.655	0.01	2.28	0.765	1.745	0.04	0.805	0.1015	4.645	0.02	0.235	1.325	0.1025
75 Percentile	2.45	231	1.15	23.15	121	93.4	16.305	0.16	6.325	0.02	8.66	2.615	3.975	0.15	3.705	0.2765	65.855	0.04	1.015	6.105	99.8965
90 Percentile	4.02	314.4	1.34	39.78	156	103.3	17.07	0.23	7.996	0.03	11.764	3.38	5.792	0.2	4.198	0.3538	69.57	0.068	1.716	7.414	99.946
Maximum	6.1	331	1.6	53.9	371	177	18.65	0.48	25.04	0.06	21.02	4.92	14.99	0.24	5.71	0.635	74.79	0.1	2.2	37.3	100.006
Interquartile Range (IQR) 1	1.45	97	0.7	9.05	44	30.95	2.78	0.09	6.075	0.015	3.44	1.635	2.34	0.1	1.76	0.151	13.485	0.02	0.39	2.43	0.369
Variance	1.99913083	7291.08737	0.1929742	122.54325	4200.02988	910.245224	8.39412033	0.0082191	23.3491447	0.00014298	11.9101686	1.41832703	6.57657284	0.00440287	1.53352603	0.01305621	99.5381957	0.00051134	0.22903667	27.9076718	0.08356846
Skewness	1.25965409	0.0874574	-0.0552671	1.46382473	2.04054524	0.52443971	-1.8678826	1.7982219	2.42458419	1.40722239	1.54895692	0.57665885	2.42389155	0.30830837	0.06541783	1.33868471	-1.6278188	1.63180849	1.11267738	4.82137325	-1.0699078
Coefficient of Variation (CoV) 2	0.67465576	0.4656259	0.55057465	0.52665907	0.58007217	0.39715514	0.20208848	0.75415678	1.31664721	0.78056297	0.47593154	0.6283561	0.81187323	0.6109002	0.436237	0.53341253	0.16832516	0.70618133	0.53099987	0.90074459	0.0029002
NPR < 1.0 or NPR = 1.0																					
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Sum Check																					

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	U	V	W	Y	Zn	Zr	Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2	LOI	Total
Typical Detection Limit	**0.1**		**0.1**				**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**		
Units	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Kerr Haul Rd-OVB																					
Count	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Minimum	0.7	149	1.6	13.6	84	22.7	14.23	0.2	2.09	0.005	5.71	2.71	2.29	0.11	2.53	0.244	53.42	0.04	0.62	0	0
10 Percentile	0.97	149.6	1.63	13.84	91.2	27.47	14.272	0.203	2.171	0.005	5.809	2.776	2.374	0.113	2.689	0.2446	55.229	0.04	0.635	0	0
25 Percentile	1.375	150.5	1.675	14.2	102	34.625	14.335	0.2075	2.2925	0.005	5.9575	2.875	2.5	0.1175	2.9275	0.2455	57.9425	0.04	0.6575	0	0
Median-25Percentile	0.325	5.5	0.375	2.75	11.5	4.725	0.42	0.0075	0.6225	0.0025	0.1825	0.37	0.21	0.0075	0.1525	0.015	3.9025	0	0.0175	0	0
Mean	1.575	169.5	2.05	17.025	108.75	37.475	15.065	0.2175	3.44	0.0075	6.3825	3.1975	2.9975	0.1475	2.9525	0.26175	60.6675	0.04	0.6725	0	0
Standard Deviation	0.54943152	27.7983812	0.40311289	3.06298466	15.4171171	9.32747956	0.90869412	0.0147902	1.47900304	0.0025	0.69456371	0.38557587	0.7664651	0.0481534	0.24488518	0.01694661	4.7620341	0	0.03561952	0	0
Median	1.7	156	2.05	16.95	113.5	39.35	14.755	0.215	2.915	0.0075	6.14	3.245	2.71	0.125	3.08	0.2605	61.845	0.04	0.675	0	0
75Percentile-Median	0.2	19	0.375	2.825	6.75	2.85	0.73	0.01	1.1475	0.0025	0.425	0.3225	0.4975	0.03	0.025	0.01625	2.725	0	0.015	0	0
75 Percentile	1.9	175	2.425	19.775	120.25	42.2	15.485	0.225	4.0625	0.01	6.565	3.5675	3.2075	0.155	3.105	0.27675	64.57	0.04	0.69	0	0
90 Percentile	2.08	200.2	2.47	20.27	122.5	45.98	16.106	0.234	5.129	0.01	7.15	3.581	3.851	0.2	3.114	0.2799	65.164	0.04	0.708	0	0
Maximum	2.2	217	2.5	20.6	124	48.5	16.52	0.24	5.84	0.01	7.54	3.59	4.28	0.23	3.12	0.282	65.56	0.04	0.72	0	0
Interquartile Range (IQR) 1	0.525	24.5	0.75	5.575	18.25	7.575	1.15	0.0175	1.77	0.005	0.6075	0.6925	0.7075	0.0375	0.1775	0.03125	6.6275	0	0.0325	0	0
Variance	0.301875	772.75	0.1625	9.381875	237.6875	87.001875	0.825725	0.00021875	2.18745	0.00000625	0.48241875	0.14866875	0.58746875	0.00231875	0.05996875	0.00028719	22.6769688	0	0.00126875	0	0
Skewness	-1.0818161	1.84667189	2.2204E-15	0.03897245	-1.2452145	-0.995564	1.24814618	0.7528372	1.3523347	-1.184E-15	1.55543194	-0.2031762	1.60980976	1.87167121	-1.9539697	0.10059373	-0.8812915	-	-0.3557157	-	-
Coefficient of Variation (CoV) 2	0.34884541	0.16400225	0.19664043	0.17991099	0.14176659	0.24889872	0.06031823	0.06800092	0.42994274	0.33333333	0.10882314	0.12058667	0.25570145	0.32646373	0.08294163	0.06474349	0.07849399	0	0.05296582	-	-
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
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Sum Check																					
MDT-RX																					
Count	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Minimum	0.7	48	1.9	3.5	13	9.7	13.3	0.1	0.16	0.005	2.79	2.59	0.42	0.01	0.09	0.092	51.29	0.02	0.31	1.8	99.52
10 Percentile	0.74	90.8	2.04	5.4	32.2	17.22	14.364	0.136	0.482	0.005	3.84	2.782	0.646	0.054	0.652	0.1256	52.592	0.03	0.328	2.876	99.696
25 Percentile	1.2	141	2.8	6.7	36	21.7	14.61	0.17	1.5	0.005	4.74	3.81	1.19	0.07	2.83	0.229	52.91	0.04	0.36	3.8	99.85
Median-25Percentile	0.5	15	2.4	5.1	16	6.3	1.92	0.12	0.96	0	0.52	0.66	0.54	0.05	0.57	0.05	5.09	0	0.08	0.72	0.11
Mean	1.56923077	181.384615	10.2153846	10.9538462	77.6153846	28.2923077	16.1146154	0.43769231	2.95076923	0.00807692	5.77692308	4.57076923	2.08461538	0.12461538	3.2	0.27630769	59.2446154	0.04769231	0.52307692	4.58076923	99.9392308
Standard Deviation	0.52825491	81.1869054	10.7626738	4.50207053	82.865543	10.0230858	1.42453563	0.37373693	2.42336848	0.00417799	1.80151383	1.35890488	1.17152508	0.06476174	1.61188375	0.11273753	6.6094357	0.02358417	0.1911256	1.55971132	0.19229231
Median	1.7	156	5.2	11.8	52	28	16.53	0.29	2.46	0.005	5.26	4.47	1.73	0.12	3.4	0.279	58	0.04	0.44	4.52	99.96
75Percentile-Median	0.2	61	6.2	2.8	46	8.8	0.63	0.23	1.29	0.005	1.98	0.78	1.24	0.06	0.61	0.012	7.7	0.01	0.13	0.66	0.09
75 Percentile	1.9	217	11.4	14.6	98	36.8	17.16	0.52	3.75	0.01	7.24	5.25	2.97	0.18	4.01	0.291	65.7	0.05	0.57	5.18	100.05
90 Percentile	2.18	298.2	27.26	16.14	100.4	41.82	17.626	0.93	4.654	0.01	8.022	6.388	3.792	0.208	4.564	0.443	69.236	0.09	0.768	5.652	100.18
Maximum	2.3	346	37.1	17.4	349	43.5	18.1	1.41	9.81	0.02	9.46	7.43	4.13	0.23	6.27	0.469	70.72	0.1	0.96	8.55	100.25
Interquartile Range (IQR) 1	0.7	76	8.6	7.9	62	15.1	2.55	0.35	2.25	0.005	2.5	1.44	1.78	0.11	1.18	0.062	12.79	0.01	0.21	1.38	0.2
Variance	0.27905325	6591.31361	115.835148	20.2686391	6866.69822	100.462249	2.02930178	0.13967929	5.87271479	1.7456E-05	3.24545207	1.84662249	1.37247101	0.00419408	2.59816923	0.01270975	43.6846402	0.00055621	0.03652899	2.43269941	0.03697633
Skewness	-0.4685316	0.53411432	1.80620377	-0.1883206	2.97019358	-0.0543676	-0.6102151	1.62032109	1.71735514	1.8283372	0.45752417	0.54210834	0.37765718	0.03466068	-0.4507414	0.22084528	0.56068916	1.67269558	1.04201441	0.80487983	-0.5368818
Coefficient of Variation (CoV) 2	0.33663303	0.44759532	1.053575	0.41100363	1.06764327	0.35426894	0.08840023	0.8538805	0.82126669	0.51727526	0.3118466	0.29730332	0.5619862	0.51969297	0.50371367	0.40801446	0.1115618	0.49450677	0.36538717	0.34049114	0.00192409
NPR < 1.0 or NPR = 1.0																					
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% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	U		W				Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2		
Typical Detection Limit	0.1	V	0.1	Y	Zn	Zr	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	LOI	Total
Units	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
MP-OVB																					
Count	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Minimum	1.1	210	1	8.9	112	20.2	15.31	0.04	0.65	0.005	6.57	1.38	2	0.07	0.59	0.266	48	0.01	0.62	0	0
10 Percentile	1.16	211.2	1.03	9.26	113.5	23.59	15.484	0.115	0.68	0.005	6.699	1.863	2.096	0.082	1.001	0.2687	49.821	0.013	0.626	0	0
25 Percentile	1.25	213	1.075	9.8	115.75	28.675	15.745	0.2275	0.725	0.005	6.8925	2.5875	2.24	0.1	1.6175	0.27275	52.5525	0.0175	0.635	0	0
Median-25Percentile	0.3	5.5	1.575	1	6.75	7.925	0.365	0.1125	0.36	0	2.0575	1.1475	0.175	0.025	0.4325	0.04825	4.8875	0.0075	0.06	0	0
Mean	2.05	252.25	4.15	14.05	170.5	73.6	16.1625	0.2825	2.5725	0.00625	9.2575	4	3.135	0.12	2.0475	0.3305	55.9325	0.0325	1.1925	0	0
Standard Deviation	1.15433964	63.5388661	3.77657252	6.7887775	89.3881983	73.9465009	0.66065782	0.14720309	2.84302985	0.00216506	2.54574522	2.12352302	1.49780673	0.03391165	1.03080975	0.06233979	5.34708507	0.02277608	0.90634913	0	0
Median	1.55	218.5	2.65	10.8	122.5	36.6	16.11	0.34	1.085	0.005	8.95	3.735	2.415	0.125	2.05	0.321	57.44	0.025	0.695	0	0
75Percentile-Median	0.8	39.25	3.075	4.25	54.75	44.925	0.4175	0.055	1.8475	0.00125	2.365	1.4125	0.895	0.02	0.43	0.05775	3.38	0.015	0.5575	0	0
75 Percentile	2.35	257.75	5.725	15.05	177.25	81.525	16.5275	0.395	2.9325	0.00625	11.315	5.1475	3.31	0.145	2.48	0.37875	60.82	0.04	1.2525	0	0
90 Percentile	3.34	320.3	8.47	21.44	265.9	153.21	16.883	0.404	5.655	0.0085	12.062	6.349	4.75	0.154	3.092	0.3999	60.838	0.058	2.157	0	0
Maximum	4	362	10.3	25.7	325	201	17.12	0.41	7.47	0.01	12.56	7.15	5.71	0.16	3.5	0.414	60.85	0.07	2.76	0	0
Interquartile Range (IQR) 1	1.1	44.75	4.65	5.25	61.5	52.85	0.7825	0.1675	2.2075	0.00125	4.4225	2.56	1.07	0.045	0.8625	0.106	8.2675	0.0225	0.6175	0	0
Variance	1.3325	4037.1875	14.2625	46.0875	7990.25	5468.085	0.43646875	0.02166875	8.08281875	4.6875E-06	6.48081875	4.50935	2.243425	0.00115	1.06256875	0.00388625	28.5913188	0.00051875	0.82146875	0	0
Skewness	1.72286493	1.96747492	1.39060262	1.89100483	1.9751131	1.93665886	0.36452268	-1.485835	1.93669639	2	0.25022735	0.55853095	1.91057605	-0.5995807	-0.012506	0.34230927	-0.7666084	1.44305884	1.98233462	-	-
Coefficient of Variation (CoV) 2	0.56309251	0.25188847	0.91001747	0.48318701	0.52427096	1.00470789	0.04087597	0.52107289	1.10516224	0.34641016	0.27499273	0.53088075	0.47776929	0.28259708	0.50344799	0.18862268	0.09559889	0.70080258	0.7600412	-	-
NPR < 1.0 or NPR = 1.0																					
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Sum Check																					
MP-RX																					
Count	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Minimum	0.3	46	0.2	0.9	19.9	10.1	8.87	0.06	0.06	0.001	1.71	1.82	0.23	0.01	0.1	0.01	41.6	0	0.32	1.47	95.92
10 Percentile	0.68	84	0.98	2.6	22.22	12.72	11.716	0.096	0.224	0.0036	3.384	2.612	0.75	0.01	0.146	0.122	45.9	0	0.352	2.718	98.108
25 Percentile	0.85	135.5	1.5	4.95	38.1	20	13.98	0.16	0.535	0.006	4.31	3.23	0.985	0.06	0.51	0.19	51	0	0.395	2.845	98.75
Median-25Percentile	0.35	62.5	1.8	3.05	21.5	10	1.4	0.07	2.525	0.002	1.54	1.47	0.755	0.07	2.02	0.06	7.8	0	0.125	1.375	0.51
Mean	1.41481481	261.481481	6.9037037	8.9	71.0518519	31.7888889	14.9888889	0.28888889	3.96074074	0.01144444	6.56222222	5.49592593	2.43296296	0.13259259	2.34296296	0.28333333	57.2074074	0	0.57222222	4.74222222	99.0425926
Standard Deviation	0.74669827	295.79765	7.36867652	5.01154223	51.3047277	14.9082213	2.30210103	0.18471867	3.9407688	0.00956201	3.07118186	2.74917262	1.90054147	0.08307037	1.71003534	0.14814907	8.88481542	0	0.22927152	2.71582923	0.89232361
Median	1.2	198	3.3	8	59.6	30	15.38	0.23	3.06	0.008	5.85	4.7	1.74	0.13	2.53	0.25	58.8	0	0.52	4.22	99.26
75Percentile-Median	0.65	69	5.55	3.65	31.35	12	1.11	0.14	2.835	0.0045	2.695	2.48	1.51	0.075	1.09	0.115	4.9	0	0.15	1.19	0.285
75 Percentile	1.85	267	8.85	11.65	90.95	42	16.49	0.37	5.895	0.0125	8.545	7.18	3.25	0.205	3.62	0.365	63.7	0	0.67	5.41	99.545
90 Percentile	2.48	376.8	17.96	16.66	101.18	51.6	17.108	0.596	9.554	0.0234	10.786	9.324	5.11	0.24	4.556	0.508	67.94	0	0.888	7.444	99.908
Maximum	3.1	1676	28.4	19.4	284.9	66.5	18.49	0.71	14.79	0.039	13.27	12.22	7.88	0.28	5.49	0.59	75.7	0	1.3	14.68	100.3
Interquartile Range (IQR) 1	1	131.5	7.35	6.7	52.85	22	2.51	0.21	5.36	0.0065	4.235	3.95	2.265	0.145	3.11	0.175	12.7	0	0.275	2.565	0.795
Variance	0.5575583	87496.2497	54.2973937	25.1155556	2632.17509	222.255062	5.29966914	0.03412099	15.5296587	9.1432E-05	9.43215802	7.55795007	3.61205789	0.00690069	2.92422085	0.02194815	78.9399451	0	0.05256543	7.3757284	0.79624143
Skewness	0.56577215	4.2504546	1.40476236	0.4749672	2.71701908	0.52740444	-0.972445	0.96918963	1.22490177	1.80486035	0.50022081	0.80912948	1.31656582	0.03351023	0.06408625	0.35191381	0.00548125	-	1.37875544	2.13825788	-1.7408064
Coefficient of Variation (CoV) 2	0.52777103	1.13123747	1.06735121	0.56309463	0.72207446	0.46897585	0.15358717	0.63941079	0.99495752	0.83551573	0.46800943	0.5002201	0.78116334	0.62650835	0.72986017	0.52287908	0.15530883	-	0.40066868	0.57269126	0.00900949
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Sum Check																					

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	U	V	W	Y	Zn	Zr	Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2	LOI	Total
Typical Detection Limit	0.1		0.1				0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
Units	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
MRSF-OVB																					
Count	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Minimum	1.1	126	0.7	11.7	58	33.2	13.99	0.09	1.85	0.01	1.46	1.07	1.53	0.01	0.57	0.1	0.217	0.03	0.08	0	0
10 Percentile	1.23	156.2	0.99	12.88	76.6	37.81	14.332	0.11	2.95	0.01	1.802	1.151	1.93	0.01	0.633	0.13	0.2533	0.04	0.12	0	0
25 Percentile	1.4	168.25	1.575	15.825	83.75	47.85	14.845	0.215	5.33	0.0425	2.88	2.1775	2.3975	0.01	0.6875	0.1375	0.3095	0.0475	0.14	0	0
Median-25Percentile	0.2	20.25	0.725	1.025	18.75	3.75	36.915	14.695	1.275	4.1825	0.965	0.6775	0.4725	0.005	0.1975	0.0425	0.0685	0.0125	0.125	4.19	99.0295
Mean	1.60416667	186.375	3.55	16.5916667	127.166667	52.575	41.3970833	10.6004167	6.11708333	3.74	4.37291667	2.76833333	3.03916667	0.05291667	1.56166667	0.20191667	19.7480833	0.06083333	0.4025	3.7025	66.2968333
Standard Deviation	0.34092908	25.1426141	3.51401954	2.20452502	90.9668743	10.8648228	19.1281443	7.44128208	2.09568899	3.23061011	2.03824164	1.04377786	1.07601857	0.05310988	1.1715007	0.07917118	27.5088447	0.02079997	0.3049351	2.8422442	46.8807779
Median	1.6	188.5	2.3	16.85	102.5	51.6	51.76	14.91	6.605	4.225	3.845	2.855	2.87	0.015	0.885	0.18	0.378	0.06	0.265	4.19	99.0295
75Percentile-Median	0.025	17	1.325	1.475	7	5.525	3.5775	1.415	1.08	2.405	2.2225	0.55	0.39	0.105	1.57	0.0955	55.5495	0.01	0.5075	1.7125	0.72875
75 Percentile	1.625	205.5	3.625	18.325	109.5	57.125	55.3375	16.325	7.685	6.63	6.0675	3.405	3.26	0.12	2.455	0.2755	55.9275	0.07	0.7725	5.9025	99.75825
90 Percentile	2.04	215.7	7.56	19.35	193.9	62.73	59.646	17.099	8.258	8.009	7.268	4.269	4.453	0.13	3.224	0.3269	59.333	0.094	0.834	6.861	99.8791
Maximum	2.7	233	14.9	19.7	520	79.7	61.21	17.6	8.9	9.02	7.79	4.68	6.24	0.14	4.79	0.349	63.34	0.11	0.91	8.33	99.995
Interquartile Range (IQR) 1	0.225	37.25	2.05	2.5	25.75	9.275	40.4925	16.11	2.355	6.5875	3.1875	1.2275	0.8625	0.11	1.7675	0.138	55.618	0.0225	0.6325	5.9025	99.75825
Variance	0.11623264	632.151042	12.3483333	4.85993056	8274.97222	118.044375	365.885904	55.372679	4.39191233	10.4368417	4.15442899	1.08947222	1.15781597	0.00282066	1.37241389	0.00626808	756.736535	0.00043264	0.09298542	8.07835208	2197.80733
Skewness	1.42398929	-0.3627913	2.17620699	-0.744084	3.57927054	0.56963499	-0.6632305	-0.7045448	-0.8396086	0.11970425	0.25565647	0.06375163	1.48852331	0.69211425	1.2137967	0.6671597	0.770127	0.74185489	0.58426385	-0.2604912	-0.754882
Coefficient of Variation (CoV) 2	0.21252722	0.13490336	0.98986466	0.13286941	0.71533584	0.20665379	0.46206502	0.70198015	0.34259612	0.86379949	0.46610576	0.37704197	0.35405053	1.00365134	0.75016053	0.39209831	1.39298808	0.34191737	0.75760274	0.76765542	0.7071345
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
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% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
MTDT-RX																					
Count	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Minimum	0.1	21	0.4	2.8	50	9	3.62	0.09	0.02	0.005	2.85	0.18	1.55	0.08	0.11	0.032	50	0.02	0.25	1.49	98.81
10 Percentile	0.26	53.8	0.4	5.4	60.4	16.44	6.784	0.134	0.16	0.007	3.978	0.672	1.65	0.092	0.518	0.05	52.456	0.024	0.41	2.222	99.194
25 Percentile	0.5	103	0.4	9.3	76	27.6	11.53	0.2	0.37	0.01	5.67	1.41	1.8	0.11	1.13	0.077	56.14	0.03	0.65	3.32	99.77
Median-25Percentile	0.4	55	0.2	7.6	10	5.2	2.82	0.02	3.25	0	0.18	0.75	0.72	0	1.19	0.157	8.88	0.01	0.07	0.33	0.09
Mean	1.28	151	0.74	15.56	103.8	37.16	13.356	0.298	2.478	0.009	5.804	1.892	2.644	0.116	2.688	0.1822	65.838	0.054	0.68	3.662	99.694
Standard Deviation	1.22702893	84.836313	0.35552778	9.14780848	49.4060725	19.2667174	5.59467819	0.18247192	1.88235385	0.002	1.72053015	1.05828919	0.9468812	0.0257682	2.03615716	0.10755166	13.5262832	0.03261901	0.25565602	1.31461629	0.45504286
Median	0.9	158	0.6	16.9	86	32.8	14.35	0.22	3.62	0.01	5.85	2.16	2.52	0.11	2.32	0.234	65.02	0.04	0.72	3.65	99.86
75Percentile-Median	0.4	46	0.4	2.1	27	19.6	3.41	0.14	0.39	0	0.63	0.19	0.69	0.01	1.79	0.03	3.46	0.03	0.01	0.72	0.07
75 Percentile	1.3	204	1	19	113	52.4	17.76	0.36	4.01	0.01	6.48	2.35	3.21	0.12	4.11	0.264	68.48	0.07	0.73	4.37	99.93
90 Percentile	2.68	243	1.18	25.48	161.6	59.36	18.816	0.516	4.226	0.01	7.494	2.956	3.768	0.144	5.106	0.288	81.122	0.094	0.922	5.036	100.032
Interquartile Range (IQR) 1	0.8	101	0.6	9.7	37	24.8	6.23	0.16	3.64	0	0.81	0.94	1.41	0.01	2.98	0.187	12.34	0.04	0.08	1.05	0.16
Variance	1.5056	7197.2	0.1264	83.6824	2440.96	371.2064	31.300424	0.033296	3.543256	0.000004	2.960224	1.119976	0.896584	0.000664	4.145936	0.01156736	182.960336	0.001064	0.06536	1.728216	0.207064
Skewness	1.66462638	-0.2516357	0.74199382	0.23671898	1.36416696	-0.0171885	-1.0357627	1.13896214	-0.5525158	-2.236068	-0.7156591	-0.4655693	0.5678456	0.66493621	0.3950331	-0.4935542	1.01982838	1.06383002	-0.511937	-0.5148058	-1.9166516
Coefficient of Variation (CoV) 2	0.95861635	0.56182989	0.48044294	0.58790543	0.47597372	0.51848002	0.41888875	0.61232186	0.75962625	0.22222222	0.29643869	0.55934946	0.35812451	0.22213963	0.75749895	0.59029452	0.20544797	0.60405579	0.37596473	0.35898861	0.0045644
NPR < 1.0 or NPR = 1.0																					
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Sum Check																					
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Sum Check																					

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	U	V	W	Y	Zn	Zr	Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2	LOI	Total
Typical Detection Limit	0.1		0.1				0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
Units	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
MTRSF-OVB																					
Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Minimum	1.6	215	1.2	17.6	85	61.2	15.97	0.21	5.7	0.005	7.39	2.48	3.69	0.15	3.91	0.422	52.5	0.06	0.85	0	0
10 Percentile	1.6	215.3	1.2	17.7	85.4	61.41	15.975	0.21	5.745	0.005	7.393	2.49	3.702	0.15	3.947	0.4221	52.618	0.061	0.853	0	0
25 Percentile	1.6	215.75	1.2	17.85	86	61.725	15.9825	0.21	5.8125	0.005	7.3975	2.505	3.72	0.15	4.0025	0.42225	52.795	0.0625	0.8575	0	0
Median-25Percentile	0	0.75	0	0.25	1	0.525	0.0125	0	0.1125	0	0.0075	0.025	0.03	0	0.0925	0.00025	0.295	0.0025	0.0075	0	0
Mean	1.6	216.5	1.2	18.1	87	62.25	15.995	0.21	5.925	0.005	7.405	2.53	3.75	0.15	4.095	0.4225	53.09	0.065	0.865	0	0
Standard Deviation	0	1.5	0	0.5	2	1.05	0.025	0	0.225	0	0.015	0.05	0.06	0	0.185	0.0005	0.59	0.005	0.015	0	0
Median	1.6	216.5	1.2	18.1	87	62.25	15.995	0.21	5.925	0.005	7.405	2.53	3.75	0.15	4.095	0.4225	53.09	0.065	0.865	0	0
75Percentile-Median	0	0.75	0	0.25	1	0.525	0.0125	0	0.1125	0	0.0075	0.025	0.03	0	0.0925	0.00025	0.295	0.0025	0.0075	0	0
75 Percentile	1.6	217.25	1.2	18.35	88	62.775	16.0075	0.21	6.0375	0.005	7.4125	2.555	3.78	0.15	4.1875	0.42275	53.385	0.0675	0.8725	0	0
90 Percentile	1.6	217.7	1.2	18.5	88.6	63.09	16.015	0.21	6.105	0.005	7.417	2.57	3.798	0.15	4.243	0.4229	53.562	0.069	0.877	0	0
Maximum	1.6	218	1.2	18.6	89	63.3	16.02	0.21	6.15	0.005	7.42	2.58	3.81	0.15	4.28	0.423	53.68	0.07	0.88	0	0
Interquartile Range (IQR) 1	0	1.5	0	0.5	2	1.05	0.025	0	0.225	0	0.015	0.05	0.06	0	0.185	0.0005	0.59	0.005	0.015	0	0
Variance	0	2.25	0	0.25	4	1.1025	0.000625	0	0.050625	0	0.000225	0.0025	0.0036	0	0.034225	0.00000025	0.3481	0.000025	0.000225	0	0
Coefficient of Variation (CoV) 2	0	0.00692841	0	0.02762431	0.02298851	0.01686747	0.00156299	0	0.03797468	0	0.00202566	0.01976285	0.016	0	0.04517705	0.00118343	0.0111132	0.07692308	0.01734104	-	-
NPR < 1.0 or NPR = 1.0																					
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Sum Check																					
MTT-RX																					
Count	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Minimum	0.9	6	0.4	3.2	25	24.1	10.69	0.02	0.19	0.005	1.55	0.58	0.23	0.02	0.04	0.053	49.1	0.03	0.14	2	99.43
10 Percentile	1	71.8	0.5	8.36	38	34.32	12.382	0.062	0.836	0.005	2.948	0.916	0.67	0.034	1.112	0.1026	51.084	0.03	0.376	3.362	99.698
25 Percentile	1.15	126.5	0.65	12.2	58.5	40.35	13.38	0.085	1.86	0.005	4.105	1.425	1.755	0.05	2.025	0.1125	53.2	0.04	0.435	3.975	99.775
Median-25Percentile	0.35	41.5	0.35	6.9	22.5	11.65	1.53	0.035	1.19	0.005	2.175	0.545	0.955	0.05	1.605	0.1255	2.08	0.01	0.155	1.565	0.215
Mean	1.75333333	171.4	1.70666667	17.8866667	78.7333333	66.52	14.9166667	0.19466667	3.68466667	0.01333333	5.89066667	2.75733333	2.66266667	0.106	3.14866667	0.27046667	60.0266667	0.056	0.64866667	5.58933333	99.9713333
Standard Deviation	0.98174448	93.2857974	1.57626845	8.66878436	33.5826675	42.1352141	2.13989304	0.21237912	2.75929669	0.00888194	2.28673411	2.32239378	1.5258985	0.06075086	1.5272584	0.17130436	8.69538549	0.03072458	0.28853346	2.1299373	0.24570624
Median	1.5	168	1	19.1	81	52	14.91	0.12	3.05	0.01	6.28	1.97	2.71	0.1	3.63	0.238	55.28	0.05	0.59	5.54	99.99
75Percentile-Median	0.4	22	0.75	2.85	7.5	31.95	1.67	0.12	1.39	0.01	1.005	0.515	0.49	0.05	0.74	0.127	12.285	0.01	0.2	0.685	0.21
75 Percentile	1.9	190	1.75	21.95	88.5	83.95	16.58	0.24	4.44	0.02	7.285	2.485	3.2	0.15	4.37	0.365	67.565	0.06	0.79	6.225	100.2
90 Percentile	2.54	285.8	4.46	27.66	124	90.64	17.71	0.3	8.148	0.026	8.834	6.704	4.964	0.19	4.87	0.4688	71.956	0.07	0.908	8.662	100.25
Maximum	4.9	400	5.3	38.3	153	201	18.27	0.92	9.58	0.03	9.7	8.42	5.44	0.22	5.19	0.69	76	0.16	1.39	10.05	100.25
Interquartile Range (IQR) 1	0.75	63.5	1.1	9.75	30	43.6	3.2	0.155	2.58	0.015	3.18	1.06	1.445	0.1	2.345	0.2525	14.365	0.02	0.355	2.25	0.425
Variance	0.96382222	8702.24	2.48462222	75.1478222	1127.79556	1775.37627	4.57914222	0.04510489	7.61371822	7.8889E-05	5.22915289	5.39351289	2.32836622	0.00369067	2.33251822	0.02934518	75.6097289	0.000944	0.08325156	4.53663289	0.06037156
Skewness	2.39497993	0.82411744	1.47686397	0.58709939	0.64151272	2.24846174	-0.191824	2.86748711	1.0970522	0.72768887	-0.1793692	1.66798732	0.29513631	0.40147855	-0.5789886	0.92431339	0.53557122	2.72846078	0.79507484	0.62305347	-0.602639
Coefficient of Variation (CoV) 2	0.55993031	0.54425786	0.92359479	0.48465063	0.42653684	0.63342174	0.14345652	1.09098861	0.74885924	0.66614563	0.38819615	0.8422608	0.57307154	0.5731213	0.48504925	0.63336587	0.14485871	0.54865327	0.44481006	0.3810718	0.00245777
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
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% NPR < 1.0 or NPR = 1.0 of Total																					
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% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	U		W				Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2		
Typical Detection Limit	0.1	V	0.1	Y	Zn	Zr	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	LOI	Total
Units	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
SP-RX																					
Count	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Minimum	0.4	122	0.8	1.5	8.7	9.4	6.89	0.12	0.06	0.002	3.39	1.16	0.5	0.01	0.1	0.12	51.2	0	0.31	2.14	96.72
10 Percentile	0.59	123	2.4	3.76	18.76	13.2	14.099	0.147	0.292	0.0043	4.034	3.52	0.702	0.02	0.295	0.193	51.88	0	0.4	2.297	98.065
25 Percentile	0.85	132.25	3.85	5.25	28.775	16.425	15.7925	0.2425	0.7025	0.005	4.15	4.965	1.0575	0.045	2.65	0.21	54.175	0	0.41	2.585	98.6225
Median-25Percentile	0.5	36.75	1.95	4.25	7.175	6.475	0.7925	0.0275	1.0025	0.001	1.305	1.05	0.6025	0.035	0.35	0.105	4.975	0	0.155	1.015	0.2825
Mean	1.5	204.857143	14.0785714	8.66428571	69.8571429	21.7357143	15.9628571	0.27357143	2.255	0.00721429	5.90857143	5.92214286	2.02214286	0.10642857	2.79928571	0.29928571	59.2714286	0	0.57928571	3.35142857	98.7942857
Standard Deviation	0.77367398	82.1252155	17.2786482	3.84588967	81.7709843	6.76499468	2.8061245	0.08371782	2.12211737	0.00360909	1.92854444	2.11051171	1.27954333	0.08173189	1.60474059	0.10305784	7.11873068	0	0.17814377	0.82237337	0.74602484
Median	1.35	169	5.8	9.5	35.95	22.9	16.585	0.27	1.705	0.006	5.455	6.015	1.66	0.08	3	0.315	59.15	0	0.565	3.6	98.905
75Percentile-Median	0.55	116.5	7.8	2	41.925	4.1	0.94	0.06	1.5075	0.00275	2.33	0.975	0.96	0.09	0.4725	0.0625	2.125	0	0.19	0.295	0.34
75 Percentile	1.9	285.5	13.6	11.5	77.875	27	17.525	0.33	3.2125	0.00875	7.785	6.99	2.62	0.17	3.4725	0.3775	61.275	0	0.755	3.895	99.245
90 Percentile	2.64	316.3	44.38	12.92	123.58	30.6	18.047	0.361	4.349	0.0107	8.225	7.852	4.122	0.228	4.012	0.387	64.52	0	0.781	4.092	99.463
Maximum	2.8	351	54.5	14.7	338.5	31.9	18.72	0.43	8.17	0.017	9.22	10.18	4.58	0.27	6.38	0.51	80.1	0	0.84	5.01	99.9
Interquartile Range (IQR) 1	1.05	153.25	9.75	6.25	49.1	10.575	1.7325	0.0875	2.51	0.00375	3.635	2.025	1.5625	0.125	0.8225	0.1675	7.1	0	0.345	1.31	0.6225
Variance	0.59857143	6744.55102	298.551684	14.7908673	6686.49388	45.7651531	7.87433469	0.00700867	4.50338214	1.3026E-05	3.71928367	4.45425969	1.63723112	0.0066801	2.57519235	0.01062092	50.6763265	0	0.0317352	0.67629796	0.55655306
Skewness	0.32044567	0.55165771	1.66262001	-0.3336702	2.7811317	-0.183576	-2.598139	-0.2976595	1.62087385	1.36250223	0.3078926	-0.3626977	0.91868982	0.81212127	-0.0069878	0.152717	1.74007089	-	0.03285501	0.11630601	-1.4717205
Coefficient of Variation (CoV) 2	0.51578265	0.40089017	1.22730124	0.44387844	1.17054579	0.31123866	0.17579087	0.30601814	0.94107201	0.50026951	0.32639775	0.35637636	0.63276604	0.76795066	0.57326788	0.344346	0.12010392	-	0.30752316	0.24537995	0.0075513
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
SRSF-OVB																					
Count	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Minimum	0.9	198	0.6	17.1	89	36.5	15.69	0.1	2.24	0.06	7.87	1.67	6.75	0.11	4.47	0.293	56.25	0.04	0.74	3.46	99.74
10 Percentile	0.9	198	0.6	17.1	89	36.5	15.69	0.1	2.24	0.06	7.87	1.67	6.75	0.11	4.47	0.293	56.25	0.04	0.74	3.46	99.74
25 Percentile	0.9	198	0.6	17.1	89	36.5	15.69	0.1	2.24	0.06	7.87	1.67	6.75	0.11	4.47	0.293	56.25	0.04	0.74	3.46	99.74
Median-25Percentile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean	0.9	198	0.6	17.1	89	36.5	15.69	0.1	2.24	0.06	7.87	1.67	6.75	0.11	4.47	0.293	56.25	0.04	0.74	3.46	99.74
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Median	0.9	198	0.6	17.1	89	36.5	15.69	0.1	2.24	0.06	7.87	1.67	6.75	0.11	4.47	0.293	56.25	0.04	0.74	3.46	99.74
75Percentile-Median	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75 Percentile	0.9	198	0.6	17.1	89	36.5	15.69	0.1	2.24	0.06	7.87	1.67	6.75	0.11	4.47	0.293	56.25	0.04	0.74	3.46	99.74
90 Percentile	0.9	198	0.6	17.1	89	36.5	15.69	0.1	2.24	0.06	7.87	1.67	6.75	0.11	4.47	0.293	56.25	0.04	0.74	3.46	99.74
Maximum	0.9	198	0.6	17.1	89	36.5	15.69	0.1	2.24	0.06	7.87	1.67	6.75	0.11	4.47	0.293	56.25	0.04	0.74	3.46	99.74
Interquartile Range (IQR) 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coefficient of Variation (CoV) 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
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Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	U	V	W	Y	Zn	Zr	Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2	LOI	Total
Typical Detection Limit	0.1		0.1				0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
Units	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
SRSF-RX																					
Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Minimum	0.9	202	0.4	16.4	83	20.9	13.27	0.11	6.89	0.01	7.38	1.14	3.5	0.12	2.95	0.237	50.8	0.05	0.67	5.57	98.85
10 Percentile	0.94	206	0.42	16.76	86.4	21.22	13.862	0.116	7.016	0.01	7.392	1.28	3.55	0.126	2.954	0.244	51.004	0.05	0.714	5.596	98.97
25 Percentile	1	212	0.45	17.3	91.5	21.7	14.75	0.125	7.205	0.01	7.41	1.49	3.625	0.135	2.96	0.2545	51.31	0.05	0.78	5.635	99.15
Median-25Percentile	0.1	10	0.05	0.9	8.5	0.8	1.48	0.015	0.315	0	0.03	0.35	0.125	0.015	0.01	0.0175	0.51	0	0.11	0.065	0.3
Mean	1.06666667	217.333333	0.46666667	17.7666667	97	29.3666667	15.41	0.14333333	7.38	0.02666667	7.54	1.67	4.51333333	0.16	3.25333333	0.26633333	51.58	0.05	0.82666667	6.44333333	99.2633333
Standard Deviation	0.12472191	11.1155547	0.04714045	0.98770216	10.4243305	10.8619622	1.5269141	0.02867442	0.35693137	0.02357023	0.18547237	0.38270964	1.26043202	0.03741657	0.41491632	0.02200505	0.56497788	6.9389E-18	0.11145502	1.14438727	0.29272665
Median	1.1	222	0.5	18.2	100	22.5	16.23	0.14	7.52	0.01	7.44	1.84	3.75	0.15	2.97	0.272	51.82	0.05	0.89	5.7	99.45
75Percentile-Median	0.05	3	0	0.25	4	11.1	0.25	0.02	0.105	0.025	0.18	0.095	1.27	0.03	0.435	0.009	0.15	0	0.015	1.18	0.02
75 Percentile	1.15	225	0.5	18.45	104	33.6	16.48	0.16	7.625	0.035	7.62	1.935	5.02	0.18	3.405	0.281	51.97	0.05	0.905	6.88	99.47
90 Percentile	1.18	226.8	0.5	18.6	106.4	40.26	16.63	0.172	7.688	0.05	7.728	1.992	5.782	0.198	3.666	0.2864	52.06	0.05	0.914	7.588	99.482
Maximum	1.2	228	0.5	18.7	108	44.7	16.73	0.18	7.73	0.06	7.8	2.03	6.29	0.21	3.84	0.29	52.12	0.05	0.92	8.06	99.49
Interquartile Range (IQR) 1	0.15	13	0.05	1.15	12.5	11.9	1.73	0.035	0.42	0.025	0.21	0.445	1.395	0.045	0.445	0.0265	0.66	0	0.125	1.245	0.32
Variance	0.01555556	123.555556	0.00222222	0.97555556	108.666667	117.982222	2.33146667	0.00082222	0.1274	0.00055556	0.0344	0.14646667	1.58868889	0.0014	0.17215556	0.00048422	0.3192	4.8148E-35	0.01242222	1.30962222	0.08568889
Skewness	-0.9352195	-1.3613014	-1.7320508	-1.4051384	-0.9990175	1.70390655	-1.5937983	0.42327316	-1.2933428	1.73205081	1.59709699	-1.4174075	1.68108568	0.93521953	1.72903301	-0.9043462	-1.3730328	-2.4494897	-1.6384093	1.71530242	-1.7078264
Coefficient of Variation (CoV) 2	0.11692679	0.05114519	0.10101525	0.05559299	0.10746732	0.36987385	0.09908592	0.20005408	0.04836468	0.88388348	0.02459846	0.22916745	0.27926854	0.23385359	0.12753576	0.08262221	0.01095343	1.3878E-16	0.13482462	0.17760796	0.00294899
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
TAR-RX																					
Count	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Minimum	0.5	86	0.3	6.6	53	34.5	9.36	0.05	0.11	0.01	3.71	0.83	1.17	0.05	1.69	0.079	59.32	0.01	0.4	2.96	99.121
10 Percentile	0.72	90.2	0.52	9.94	59.2	36.82	9.776	0.07	0.21	0.02	4.122	0.964	1.84	0.06	1.776	0.0902	63.642	0.01	0.474	3.012	99.2828
25 Percentile	0.9	103	0.6	11.1	66	39.2	11.47	0.07	0.61	0.02	4.53	1.25	2.54	0.07	1.9	0.1	66.08	0.01	0.51	3.24	99.72
Median-25Percentile	0.1	25	0.1	2.3	8	1.5	1.54	0.01	0.13	0.01	0.65	0.18	0.71	0.03	0.34	0.018	2.62	0	0.13	0.45	0.099
Mean	0.96153846	127	0.63846154	13.5615385	77.0769231	42.9384615	12.5407692	0.08538462	0.93923077	0.02769231	5.47769231	1.49	3.10307692	0.10538462	2.42	0.14430769	68.5353846	0.01846154	0.60769231	4.25	99.7450769
Standard Deviation	0.21675389	32.984845	0.12733035	3.63794922	17.4816895	7.42226779	1.7717634	0.02098182	0.89789036	0.01049091	1.17322143	0.41165706	0.93546685	0.04360935	0.81577712	0.07073068	4.38307517	0.01166596	0.10547722	1.23699387	0.26966117
Median	1	128	0.7	13.4	74	40.7	13.01	0.08	0.74	0.03	5.18	1.43	3.25	0.1	2.24	0.118	68.7	0.01	0.64	3.69	99.819
75Percentile-Median	0.1	11	0	4.1	11	3	0.43	0.01	0.11	0	1.05	0.35	0.33	0.04	0.25	0.044	3.06	0.01	0.02	1.26	0.129
75 Percentile	1.1	139	0.7	17.5	85	43.7	13.44	0.09	0.85	0.03	6.23	1.78	3.58	0.14	2.49	0.162	71.76	0.02	0.66	4.95	99.948
90 Percentile	1.18	160.2	0.78	18.48	92.8	48.52	14.696	0.116	1.408	0.04	6.942	2.046	4.164	0.164	2.898	0.1842	74.374	0.03	0.74	5.314	99.9622
Maximum	1.4	209	0.8	18.5	123	64.9	15.16	0.13	3.82	0.05	7.47	2.17	4.42	0.19	4.94	0.358	75	0.05	0.74	7.44	99.979
Interquartile Range (IQR) 1	0.2	36	0.1	6.4	19	4.5	1.97	0.02	0.24	0.01	1.7	0.53	1.04	0.07	0.59	0.062	5.68	0.01	0.15	1.71	0.228
Variance	0.04698225	1088	0.01621302	13.2346746	305.609467	55.0900592	3.13914556	0.00044024	0.8062071	0.00011006	1.37644852	0.16946154	0.87509822	0.00190178	0.66549231	0.00500283	19.2113479	0.00013609	0.01112544	1.53015385	0.07271715
Skewness	-0.1525555	1.03704235	-1.3563844	-0.0548582	1.30336495	2.07690296	-0.5003705	0.70465072	2.75688862	0.53444685	0.16517895	0.15895949	-0.6937726	0.53878567	2.41447084	2.2392892	-0.3422303	1.66210582	-0.5133873	1.25810646	-1.6875126
Coefficient of Variation (CoV) 2	0.22542404	0.25972319	0.19943308	0.26825491	0.22680835	0.17285826	0.14128028	0.245733	0.95598482	0.37883838	0.2141817	0.27627991	0.30146428	0.41381132	0.33709798	0.49013794	0.06395346	0.63190629	0.17357011	0.29105738	0.0027035
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	U	V	W	Y	Zn	Zr	Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2	LOI	Total
Typical Detection Limit	0.1		0.1				0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
Units	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
TCAR-OVB																					
Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Minimum	0.2	57	0.05	0	112.6	0	11.77	0.08	0.47	0.029	5.44	1.67	2.58	0.05	1.79	0.18	65.6	0	0.61	4.42	99.66
10 Percentile	0.2	57.4	0.05	0	116	0	11.93	0.08	0.498	0.0294	5.452	1.702	2.64	0.056	1.798	0.184	65.68	0	0.61	4.564	99.752
25 Percentile	0.2	58	0.05	0	121.1	0	12.17	0.08	0.54	0.03	5.47	1.75	2.73	0.065	1.81	0.19	65.8	0	0.61	4.78	99.89
Median-25Percentile	0	1	0	0	8.5	0	0.4	0	0.07	0.001	0.03	0.08	0.15	0.015	0.02	0.01	0.2	0	0	0.36	0.23
Mean	0.2	58.6666667	0.05	0	124.9	0	12.7066667	0.08666667	1.12	0.03566667	5.8	1.88	2.95	0.10333333	2.05333333	0.20333333	67.5	0	0.66	5.00333333	100.076667
Standard Deviation	2.7756E-17	1.24721913	6.9389E-18	0	8.77762306	0	0.82624989	0.00942809	0.82223273	0.00805536	0.46733286	0.19510681	0.33436507	0.05557777	0.34451254	0.02054805	2.40970261	0	0.07071068	0.43145748	0.32396845
Median	0.2	59	0.05	0	129.6	0	12.57	0.08	0.61	0.031	5.5	1.83	2.88	0.08	1.83	0.2	66	0	0.61	5.14	100.12
75Percentile-Median	0	0.5	0	0	1.45	0	0.605	0.01	0.835	0.008	0.48	0.155	0.255	0.05	0.355	0.015	2.45	0	0.075	0.155	0.165
75 Percentile	0.2	59.5	0.05	0	131.05	0	13.175	0.09	1.445	0.039	5.98	1.985	3.135	0.13	2.185	0.215	68.45	0	0.685	5.295	100.285
90 Percentile	0.2	59.8	0.05	0	131.92	0	13.538	0.096	1.946	0.0438	6.268	2.078	3.288	0.16	2.398	0.224	69.92	0	0.73	5.388	100.384
Maximum	0.2	60	0.05	0	132.5	0	13.78	0.1	2.28	0.047	6.46	2.14	3.39	0.18	2.54	0.23	70.9	0	0.76	5.45	100.45
Interquartile Range (IQR) 1	0	1.5	0	0	9.95	0	1.005	0.01	0.905	0.009	0.51	0.235	0.405	0.065	0.375	0.025	2.65	0	0.075	0.515	0.395
Variance	7.7037E-34	1.55555556	4.8148E-35	0	77.0466667	0	0.68268889	8.8889E-05	0.67606667	6.4889E-05	0.2184	0.03806667	0.1118	0.00308889	0.11868889	0.00042222	5.80666667	0	0.005	0.18615556	0.10495556
Skewness	-2.4494897	-0.9352195	-2.4494897	-	-1.5913342	-	0.59665551	1.73205081	1.69446601	1.65231674	1.71066262	0.90036996	0.74673303	1.3613014	1.71455537	0.58558273	1.69632498	-	1.73205081	-1.0859868	-0.485596
Coefficient of Variation (CoV) 2	1.3878E-16	0.02125942	1.3878E-16	-	0.07027721	-	0.06502491	0.10878566	0.73413637	0.22585133	0.08057463	0.10378022	0.11334409	0.53784942	0.16778208	0.10105597	0.0356993	-	0.10713739	0.08623401	0.0032372
NPR < 1.0 or NPR = 1.0																					
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Sum Check																					
TCAR-RX																					
Count	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Minimum	0.05	32	0.05	0	36.4	0	8.71	0.04	0.26	0.02	2.64	1.02	1.41	0.02	2.2	0.09	47.4	0	0.35	3.54	99.87
10 Percentile	0.125	32	0.05	0	57.45	0	11.155	0.06	0.4	0.027	3.43	1.13	1.695	0.04	2.3	0.09	56.45	0	0.445	3.63	99.91
25 Percentile	0.2	33.75	0.05	0	78.6	0	13.6125	0.08	0.585	0.03475	4.42	1.4	2.0925	0.06	2.46	0.095	65.65	0	0.5575	3.73	100.0175
Median-25Percentile	0	7.25	0	0	5.25	0	0.3175	0.005	0.22	0.00625	0.945	0.525	0.6675	0.01	0.255	0.015	0.7	0	0.0675	0.34	0.3825
Mean	0.175	46.1666667	0.05	0	93.3833333	0	13.3166667	0.08	3.92333333	0.04233333	5.085	1.70166667	2.67333333	0.115	2.73333333	0.10833333	63.7666667	0	0.58166667	6.25833333	100.358333
Standard Deviation	0.0559017	14.2292734	6.9389E-18	0	38.6478726	0	2.13314843	0.01914854	6.94897275	0.01390044	1.35631547	0.41317537	0.83328	0.09962429	0.37057013	0.01462494	7.45713678	0	0.11334559	4.60327571	0.36621563
Median	0.2	41	0.05	0	83.85	0	13.93	0.085	0.805	0.041	5.365	1.925	2.76	0.07	2.715	0.11	66.35	0	0.625	4.07	100.4
75Percentile-Median	0	17.75	0	0	24.675	0	0.4825	0.005	0.6925	0.0145	0.7125	0.105	0.4125	0.0625	0.3225	0.0075	0.55	0	0.0375	1.3225	0.3075
75 Percentile	0.2	58.75	0.05	0	108.525	0	14.4125	0.09	1.4975	0.0555	6.0775	2.03	3.1725	0.1325	3.0375	0.1175	66.9	0	0.6625	5.3925	100.7075
90 Percentile	0.2	65.5	0.05	0	138.85	0	14.865	0.095	10.565	0.059	6.46	2.05	3.565	0.235	3.185	0.125	68.5	0	0.675	11.075	100.765
Maximum	0.2	67	0.05	0	162.6	0	15.25	0.1	19.43	0.059	6.72	2.05	3.93	0.32	3.25	0.13	70	0	0.68	16.42	100.78
Interquartile Range (IQR) 1	0	25	0	0	29.925	0	0.8	0.01	0.9125	0.02075	1.6575	0.63	1.08	0.0725	0.5775	0.0225	1.25	0	0.105	1.6625	0.69
Variance	0.003125	202.472222	4.8148E-35	0	1493.65806	0	4.55032222	0.00036667	48.2882222	0.00019322	1.83959167	0.17071389	0.69435556	0.009925	0.13732222	0.00021389	55.6088889	0	0.01284722	21.1901472	0.13411389
Skewness	-2.4494897	0.68342203	1.36930639	-	0.59456775	-	-2.0734212	-1.7552379	2.42737336	-0.2202035	-0.8472369	-0.9888586	-0.0635158	1.71376027	0.028525	-0.0405317	-2.2384909	-	-1.66824	2.31735994	-0.1916067
Coefficient of Variation (CoV) 2	0.31943828	0.30821531	1.3878E-16	-	0.41386264	-	0.16018637	0.23935678	1.77119101	0.32835684	0.26672871	0.24280629	0.31170075	0.86629821	0.13557444	0.13499945	0.11694412	-	0.19486347	0.73554339	0.00364908
NPR < 1.0 or NPR = 1.0																					
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Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	U	V	W	Y	Zn	Zr	Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2	LOI	Total
Typical Detection Limit	**0.1**		**0.1**				**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**		
Units	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
TDPR-RX																					
Count	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Minimum	0.7	95	0.4	6.7	58	29.9	9.6	0.05	0.16	0.02	4.55	1.09	2.38	0.02	1.63	0.111	57.33	0.01	0.49	3.04	99.091
10 Percentile	0.8	99.4	0.44	10.48	64.8	36.88	10.726	0.06	0.174	0.02	4.82	1.148	2.522	0.04	1.66	0.1142	61.426	0.01	0.504	3.86	99.4216
25 Percentile	1	110.5	0.5	11.95	76.5	41.3	11.06	0.06	0.285	0.03	5.195	1.3	2.995	0.055	1.735	0.1225	62.38	0.02	0.525	4.325	99.6965
Median-25Percentile	0.2	10.5	0.2	0.95	13.5	5.5	1.84	0.01	0.345	0	0.395	0.18	0.555	0.015	0.235	0.0135	3.09	0	0.115	0.455	0.0795
Mean	1.2	135.6	0.63333333	12.6866667	87.7333333	48.42	12.8753333	0.07333333	1.772	0.03066667	5.478	1.548	3.31733333	0.07466667	2.13466667	0.15653333	66.0773333	0.022	0.62733333	5.53466667	99.7218667
Standard Deviation	0.31622777	34.4495767	0.13498971	2.38127883	17.1443544	11.4770612	2.00566819	0.01619328	2.47817729	0.00771722	0.49058061	0.33287035	0.51204774	0.03422799	0.4856455	0.04809278	4.59344528	0.00832666	0.09532168	1.94960805	0.23257712
Median	1.2	121	0.7	12.9	90	46.8	12.9	0.07	0.63	0.03	5.59	1.48	3.55	0.07	1.97	0.136	65.47	0.02	0.64	4.78	99.776
75Percentile-Median	0.3	38.5	0	0.5	9	7.35	1.81	0.02	1.995	0	0.155	0.365	0.135	0.015	0.315	0.0425	3.98	0.01	0.04	1.01	0.089
75 Percentile	1.5	159.5	0.7	13.4	99	54.15	14.71	0.09	2.625	0.03	5.745	1.845	3.685	0.085	2.285	0.1785	69.45	0.03	0.68	5.79	99.865
90 Percentile	1.56	177.6	0.8	15.52	108.4	61.6	15.358	0.096	3.31	0.04	6.062	1.992	3.814	0.106	2.938	0.227	70.872	0.03	0.754	8.47	99.9254
Maximum	1.8	216	0.8	17.3	120	77	16.23	0.1	10.01	0.05	6.41	2.18	4.08	0.17	3.16	0.274	75.25	0.04	0.79	10.3	99.958
Interquartile Range (IQR) 1	0.5	49	0.2	1.45	22.5	12.85	3.65	0.03	2.34	0	0.55	0.545	0.69	0.03	0.55	0.056	7.07	0.01	0.155	1.465	0.1685
Variance	0.1	1186.77333	0.01822222	5.67048889	293.928889	131.722933	4.02270489	0.00026222	6.14136267	5.9556E-05	0.24066933	0.11080267	0.26219289	0.00117156	0.23585156	0.00231292	21.0997396	6.9333E-05	0.00908622	3.80097156	0.05409212
Skewness	0.19740326	0.8932254	-0.5102395	-0.487207	0.03966177	0.90130499	0.10629204	0.43947758	2.64373962	0.84224164	-0.0672054	0.43889653	-0.5768284	1.23323377	1.0765304	1.30534334	0.09556358	0.33983323	0.08139493	1.40993511	-1.8339381
Coefficient of Variation (CoV) 2	0.26352314	0.25405293	0.21314165	0.18769933	0.19541437	0.23703142	0.15577602	0.22081741	1.39851991	0.25164863	0.08955469	0.21503252	0.15435523	0.45841063	0.22750414	0.30723667	0.0695162	0.37848473	0.15194741	0.35225392	0.00233226
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
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% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
Ted Morris-OVB																					
Count	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Minimum	1.3	146	0.8	17	101	15.2	14.4	0.19	1.71	0.01	5.89	2.51	2.53	0.11	3.02	0.232	59.45	0.03	0.59	2.24	99.81
10 Percentile	1.3	148.8	0.96	17.56	103	22.96	14.464	0.19	1.894	0.01	6.162	2.562	2.622	0.114	3.028	0.2388	60.25	0.03	0.61	2.268	99.83
25 Percentile	1.3	153	1.2	18.4	106	34.6	14.56	0.19	2.17	0.01	6.57	2.64	2.76	0.12	3.04	0.249	61.45	0.03	0.64	2.31	99.86
Median-25Percentile	0.3	22	0	1.1	5	8.6	0.24	0.01	0.08	0	0.28	0.02	0.34	0.01	0.05	0.018	0.88	0.01	0.05	0.25	0.01
Mean	1.5	167.4	1.24	19.62	110	37	15.194	0.196	2.514	0.012	6.792	2.67	3.008	0.132	3.23	0.2646	62.426	0.04	0.672	2.734	99.882
Standard Deviation	0.16733201	15.0545674	0.25768197	1.81041432	5.86515132	11.703162	0.99074921	0.00489898	0.62098631	0.004	0.53971845	0.1154123	0.32737746	0.01720465	0.33633317	0.02438524	2.01079686	0.01095445	0.05075431	0.45837103	0.05268776
Median	1.6	175	1.2	19.5	111	43.2	14.8	0.2	2.25	0.01	6.85	2.66	3.1	0.13	3.09	0.267	62.33	0.04	0.69	2.56	99.87
75Percentile-Median	0	4	0.3	1.8	4	1.5	0.29	0	0.75	0	0.37	0.01	0.09	0.01	0.01	0.003	1.07	0	0.02	0.71	0.03
75 Percentile	1.6	179	1.5	21.3	115	44.7	15.09	0.2	3	0.01	7.22	2.67	3.19	0.14	3.1	0.27	63.4	0.04	0.71	3.27	99.9
90 Percentile	1.66	182	1.5	21.66	116.2	46.26	16.308	0.2	3.264	0.016	7.346	2.79	3.352	0.152	3.58	0.291	64.66	0.052	0.722	3.282	99.942
Maximum	1.7	184	1.5	21.9	117	47.3	17.12	0.2	3.44	0.02	7.43	2.87	3.46	0.16	3.9	0.305	65.5	0.06	0.73	3.29	99.97
Interquartile Range (IQR) 1	0.3	26	0.3	2.9	9	10.1	0.53	0.01	0.83	0	0.65	0.03	0.43	0.02	0.06	0.021	1.95	0.01	0.07	0.96	0.04
Variance	0.028	226.64	0.0664	3.2776	34.4	136.964	0.981584	0.000024	0.385624	0.000016	0.291296	0.01332	0.107176	0.000296	0.11312	0.00059464	4.043304	0.00012	0.002576	0.210104	0.002776
Skewness	-0.3818018	-0.5428271	-0.8740357	-0.1612009	-0.4787746	-1.5970873	1.93960664	-0.6085806	0.41084321	2.23606798	-0.7709102	0.75171146	-0.2151132	0.59012866	2.1918469	0.56888284	0.0984216	1.36082763	-0.7486904	0.38333204	0.61495178
Coefficient of Variation (CoV) 2	0.11155467	0.0899317	0.20780804	0.09227392	0.05331956	0.31630167	0.06520661	0.02499479	0.24701126	0.33333333	0.07946385	0.04322558	0.10883559	0.13033826	0.10412792	0.09215889	0.03221089	0.27386128	0.07552725	0.16765583	0.0005275
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
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Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
Teigen-OVB																					
Count	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Minimum	1	115	0.6	11.9	90	46.6	10.79	0.07	0.31	0.03	5.23	1.37	2.84	0.07	1.61	0.138	66.07	0.01	0.61	4.08	99.81

Appendix 7-1. Static Test Results for Non-deposit Samples - Data

SampleID	U		W				Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2		
Typical Detection Limit	0.1	V	0.1	Y	Zn	Zr	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	LOI	Total
Units	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
10 Percentile	1	117.5	0.65	12.65	90	47.75	11.145	0.07	0.315	0.03	5.365	1.4	2.85	0.07	1.625	0.148	67.055	0.015	0.615	4.18	99.865
25 Percentile	1.025	120.5	0.7	13.85	91.25	51.175	11.545	0.0725	0.34	0.03	5.5275	1.4325	2.8725	0.0725	1.6775	0.1605	68.405	0.02	0.6225	4.4	99.9325
Median-25Percentile	0.175	3.5	0	1.55	4.75	13.075	0.64	0.0075	0.105	0	0.0975	0.0575	0.0575	0.0325	0.3125	0.0075	1.6	0	0.0125	0.37	0.0775
Mean	1.18333333	123.666667	0.68333333	14.7333333	106	61.4833333	12.2783333	0.08	0.63333333	0.03	5.59166667	1.49833333	2.96833333	0.11833333	2.02833333	0.1635	69.305	0.01833333	0.635	4.64333333	99.9916667
Standard Deviation	0.15723302	5.24933858	0.0372678	1.58289468	22.8181215	10.9211441	1.0623781	0.00816497	0.36604493	0	0.19777232	0.09154537	0.11624925	0.05112621	0.39456375	0.012829	1.75190135	0.00372678	0.01707825	0.34378611	0.10446956
Median	1.2	124	0.7	15.4	96	64.25	12.185	0.08	0.445	0.03	5.625	1.49	2.93	0.105	1.99	0.168	70.005	0.02	0.635	4.77	100.01
75Percentile-Median	0.1	4.25	0	0.35	10	7	0.775	0.0075	0.4725	0	0.0525	0.08	0.1475	0.04	0.215	0.00225	0.64	0	0.0125	0.145	0.0775
75 Percentile	1.3	128.25	0.7	15.75	106	71.25	12.96	0.0875	0.9175	0.03	5.6775	1.57	3.0775	0.145	2.205	0.17025	70.645	0.02	0.6475	4.915	100.0875
90 Percentile	1.35	129.5	0.7	16.15	132	72.45	13.505	0.09	1.14	0.03	5.785	1.605	3.125	0.18	2.47	0.1745	70.855	0.02	0.655	4.98	100.1
Maximum	1.4	130	0.7	16.5	155	73.4	13.96	0.09	1.22	0.03	5.88	1.63	3.13	0.21	2.73	0.178	71.02	0.02	0.66	5	100.1
Interquartile Range (IQR) 1	0.275	7.75	0	1.9	14.75	20.075	1.415	0.015	0.5775	0	0.15	0.1375	0.205	0.0725	0.5275	0.00975	2.24	0	0.025	0.515	0.155
Variance	0.02472222	27.5555556	0.00138889	2.50555556	520.666667	119.271389	1.12864722	6.6667E-05	0.13398889	0	0.03911389	0.00838056	0.01351389	0.00261389	0.15568056	0.00016458	3.06915833	1.3889E-05	0.00029167	0.11818889	0.01091389
Skewness	0.0260937	-0.4519351	-2.4494897	-1.0148047	2.06353122	-0.333109	0.247897	0	0.9277267	-	-0.6796234	0.07985362	0.59916209	0.89048528	0.78158526	-1.4153899	-1.1214338	-2.4494897	-1.332E-16	-0.8170536	-0.7270748
Coefficient of Variation (CoV) 2	0.13287297	0.04244748	0.05453824	0.10743629	0.2152653	0.17762772	0.08652462	0.10206207	0.57796567	0	0.03536912	0.06109814	0.03916314	0.43205244	0.19452609	0.07846485	0.02527814	0.20327891	0.02689488	0.07403865	0.00104478
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
TMF-OVB																					
Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Minimum	1.1	114	1.5	12.6	91	51.9	67.15	11.57	5.16	0.57	3.44	2.1	1.37	0.04	0.54	0.05	0.124	0.02	0.06	3.66	99.804
10 Percentile	1.13	114.7	1.83	12.73	91.6	52.57	67.534	11.614	5.161	0.764	3.442	2.118	1.379	0.041	0.544	0.055	0.13	0.021	0.064	3.785	99.812
25 Percentile	1.175	115.75	2.325	12.925	92.5	53.575	68.11	11.68	5.1625	1.055	3.445	2.145	1.3925	0.0425	0.55	0.0625	0.139	0.0225	0.07	3.9725	99.824
Median-25Percentile	0.075	1.75	0.825	0.325	1.5	1.675	0.96	0.11	0.0025	0.485	0.005	0.045	0.0225	0.0025	0.01	0.0125	0.015	0.0025	0.01	0.3125	0.02
Mean	1.25	117.5	3.15	13.25	94	55.25	69.07	11.79	5.165	1.54	3.45	2.19	1.415	0.045	0.56	0.075	0.154	0.025	0.08	4.285	99.844
Standard Deviation	0.15	3.5	1.65	0.65	3	3.35	1.92	0.22	0.005	0.97	0.01	0.09	0.045	0.005	0.02	0.025	0.03	0.005	0.02	0.625	0.04
Median	1.25	117.5	3.15	13.25	94	55.25	69.07	11.79	5.165	1.54	3.45	2.19	1.415	0.045	0.56	0.075	0.154	0.025	0.08	4.285	99.844
75Percentile-Median	0.075	1.75	0.825	0.325	1.5	1.675	0.96	0.11	0.0025	0.485	0.005	0.045	0.0225	0.0025	0.01	0.0125	0.015	0.0025	0.01	0.3125	0.02
75 Percentile	1.325	119.25	3.975	13.575	95.5	56.925	70.03	11.9	5.1675	2.025	3.455	2.235	1.4375	0.0475	0.57	0.0875	0.169	0.0275	0.09	4.5975	99.864
90 Percentile	1.37	120.3	4.47	13.77	96.4	57.93	70.606	11.966	5.169	2.316	3.458	2.262	1.451	0.049	0.576	0.095	0.178	0.029	0.096	4.785	99.876
Maximum	1.4	121	4.8	13.9	97	58.6	70.99	12.01	5.17	2.51	3.46	2.28	1.46	0.05	0.58	0.1	0.184	0.03	0.1	4.91	99.884
Interquartile Range (IQR) 1	0.15	3.5	1.65	0.65	3	3.35	1.92	0.22	0.005	0.97	0.01	0.09	0.045	0.005	0.02	0.025	0.03	0.005	0.02	0.625	0.04
Variance	0.0225	12.25	2.7225	0.4225	9	11.2225	3.6864	0.0484	2.5E-05	0.9409	0.0001	0.0081	0.002025	0.000025	0.0004	0.000625	0.0009	0.000025	0.0004	0.390625	0.0016
Skewness	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coefficient of Variation (CoV) 2	0.12	0.02978723	0.52380952	0.0490566	0.03191489	0.06063348	0.02779789	0.01865988	0.00096805	0.62987013	0.00289855	0.04109589	0.03180212	0.11111111	0.03571429	0.33333333	0.19480519	0.2	0.25	0.14585764	0.00040062
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
NPR > 2.0 or NPR =2.0																					
Sum Check																					
% NPR < 1.0 or NPR = 1.0 of Total																					
% 1.0 < NPR < 2.0 of Total																					
% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
TMF-RX																					
Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Minimum	1.2	96	0.6	10.4	71	50.6	67.57	9.2	3.97	0.11	3.09	1.35	1.45	0.03	0.46	0.04	0.099	0.01	0.08	3.68	99.719
10 Percentile	1.2	97.4	0.64	10.44	72.6	50.78	67.956	9.626	4.204	0.42	3.188	1.478	1.452	0.032	0.472	0.058	0.101	0.014	0.082	3.888	99.741
25 Percentile	1.2	99.5	0.7	10.5	75	51.05	68.535	10.265	4.555	0.885	3.335	1.67	1.455	0.035	0.49	0.085	0.104	0.02	0.085	4.2	99.774

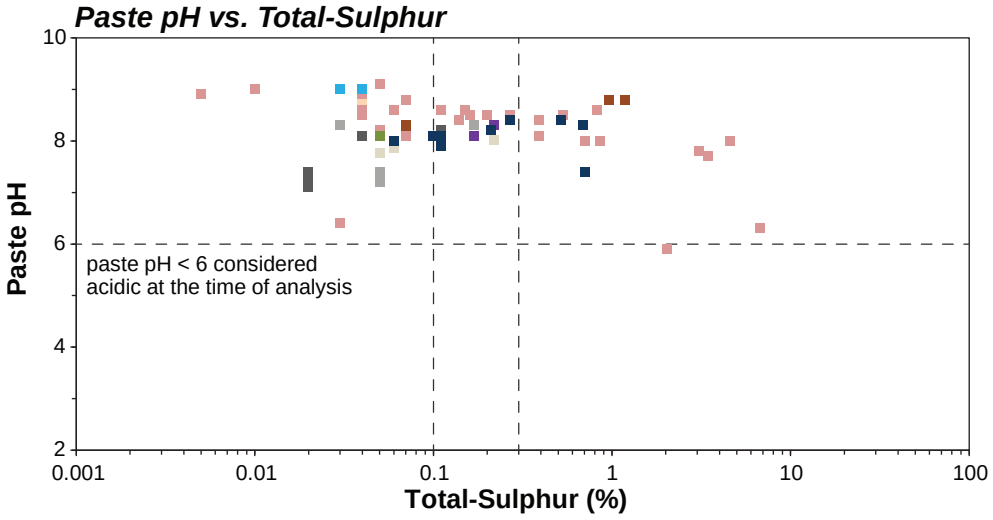
Appendix 7-1. Static Test Results for Non-deposit Samples - Data

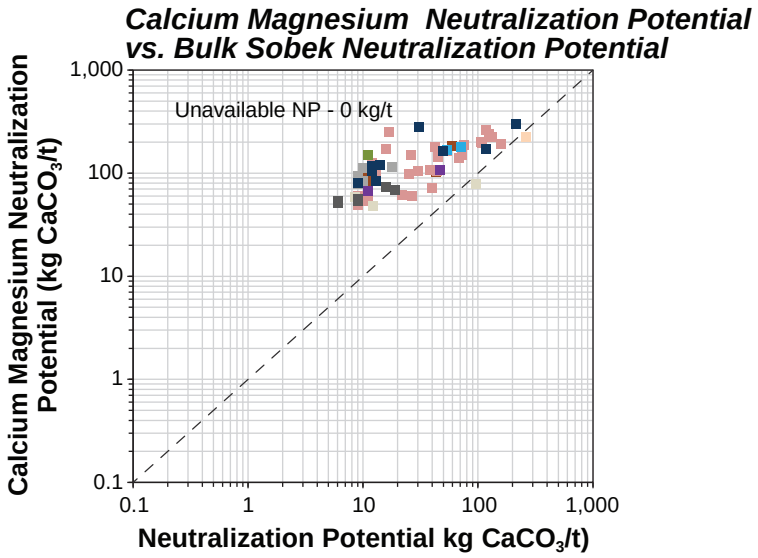
SampleID	U	V	W	Y	Zn	Zr	Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2	LOI	Total
Typical Detection Limit	0.1	ppm	0.1	ppm	ppm	ppm	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	%	%
Units	ppm		ppm				%	%	%	%	%	%	%	%	%	%	%	%	%		
Median-25Percentile	0	3.5	0.1	0.1	4	0.45	0.965	1.065	0.585	0.775	0.245	0.32	0.005	0.005	0.03	0.045	0.005	0.01	0.005	0.52	0.055
Mean	1.33333333	121.666667	0.73333333	11.6333333	81.3333333	57.7	69.1166667	11.1933333	4.78	1.87333333	3.65666667	1.86666667	1.60333333	0.03666667	0.55	0.1	0.14066667	0.03	0.09	4.78333333	99.8206667
Standard Deviation	0.18856181	31.4783876	0.0942809	1.60485375	9.53356643	9.41169485	1.1390737	1.57472396	0.57393379	1.53428232	0.49694623	0.3816048	0.20981473	0.00471405	0.08831761	0.04242641	0.05201496	0.01632993	0.00816497	0.92780506	0.0798262
Median	1.2	103	0.8	10.6	79	51.5	69.5	11.33	5.14	1.66	3.58	1.99	1.46	0.04	0.52	0.13	0.109	0.03	0.09	4.72	99.829
75Percentile-Median	0.2	31.5	0	1.65	7.5	9.75	0.39	0.86	0.045	1.095	0.36	0.135	0.22	0	0.075	0	0.0525	0.01	0.005	0.615	0.0425
75 Percentile	1.4	134.5	0.8	12.25	86.5	61.25	69.89	12.19	5.185	2.755	3.94	2.125	1.68	0.04	0.595	0.13	0.1615	0.04	0.095	5.335	99.8715
90 Percentile	1.52	153.4	0.8	13.24	91	67.1	70.124	12.706	5.212	3.412	4.156	2.206	1.812	0.04	0.64	0.13	0.193	0.046	0.098	5.704	99.897
Maximum	1.6	166	0.8	13.9	94	71	70.28	13.05	5.23	3.85	4.3	2.26	1.9	0.04	0.67	0.13	0.214	0.05	0.1	5.95	99.914
Interquartile Range (IQR) 1	0.2	35	0.1	1.75	11.5	10.2	1.355	1.925	0.63	1.87	0.605	0.455	0.225	0.005	0.105	0.045	0.0575	0.02	0.01	1.135	0.0975
Variance	0.03555556	990.888889	0.00888889	2.57555556	90.8888889	88.58	1.29748889	2.47975556	0.3294	2.35402222	0.24695556	0.14562222	0.04402222	2.2222E-05	0.0078	0.0018	0.00270556	0.00026667	6.6667E-05	0.86082222	0.00637222
Skewness	1.73205081	1.66803368	-1.7320508	1.7118977	0.86335419	1.72017959	-1.1431353	-0.3172771	-1.7001618	0.50429697	0.55785037	-1.1048055	1.7291004	-1.7320508	1.15206964	-1.7320508	1.6841605	1.9984E-15	-5.995E-15	0.25002952	-0.3807793
Coefficient of Variation (CoV) 2	0.14142136	0.25872647	0.12856487	0.13795304	0.11721598	0.1631143	0.01648045	0.14068409	0.12006983	0.81901191	0.13590143	0.20443114	0.13086158	0.12856487	0.16057747	0.42426407	0.36977456	0.54433105	0.09072184	0.19396621	0.0007997
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
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% NPR > 2.0 or NPR =2.0 of Total																					
Sum Check																					
WSF-OVB																					
Count	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Minimum	0.8	126	0.5	13.8	68	37.8	14.58	0.18	1.35	0.01	3.11	1.31	1.19	0.01	0.69	0.11	0.219	0.03	0.09	0	0
10 Percentile	0.96	158.8	1.3	14.44	76.8	39.56	14.908	0.196	1.782	0.01	3.158	2.11	1.374	0.01	0.714	0.11	0.2302	0.03	0.17	0	0
25 Percentile	1.4	174	1.9	15.4	83	41.2	16.11	0.22	5.98	0.02	3.37	2.52	1.43	0.01	0.78	0.12	0.319	0.04	0.21	0	0
Median-25Percentile	0.1	17	1	1.2	22	1.8	36.56	13.16	0.55	3.25	0.85	0.28	0.54	0	0.03	0.01	0.04	0.01	0.01	2.79	99.765
Mean	1.58888889	188.777778	12.9777778	17.6666667	114.111111	50.7222222	43.8222222	9.64222222	5.70888889	3.92555556	4.99555556	2.7	2.25555556	0.05333333	1.45333333	0.19233333	19.6763333	0.05222222	0.41111111	2.91777778	66.453
Standard Deviation	0.48406713	31.7587356	26.4623329	2.87054002	40.9238981	11.3558382	20.8638053	6.8149815	2.26963259	3.85011143	1.78603914	0.59892496	0.79483207	0.05925463	0.86358426	0.09889613	27.4380568	0.01987616	0.31224792	3.40580151	46.9901457
Median	1.5	191	2.9	16.6	105	43	52.67	13.38	6.53	3.27	4.22	2.8	1.97	0.01	0.81	0.13	0.359	0.05	0.22	2.79	99.765
75Percentile-Median	0.5	5	2.3	3.9	23	19.6	8.26	1.95	0.8	2.17	2.08	0.11	0.93	0.09	1.43	0.168	54.711	0.01	0.47	0.39	0.074
75 Percentile	2	196	5.2	20.5	128	62.6	60.93	15.33	7.33	5.44	6.3	2.91	2.9	0.1	2.24	0.298	55.07	0.06	0.69	3.18	99.839
90 Percentile	2.16	224	26.04	21.44	163.4	65.28	63.89	16.032	7.602	9.356	7.192	3.302	3.172	0.138	2.76	0.3444	58.916	0.082	0.906	5.054	99.8634
Maximum	2.4	248	87.4	22	205	68	66.25	16.24	7.93	11.62	8.08	3.55	3.5	0.17	2.88	0.35	62.02	0.09	0.93	11.75	99.869
Interquartile Range (IQR) 1	0.6	22	3.3	5.1	45	21.4	44.82	15.11	1.35	5.42	2.93	0.39	1.47	0.09	1.46	0.178	54.751	0.02	0.48	3.18	99.839
Variance	0.23432099	1008.61728	700.255062	8.24	1674.76543	128.955062	435.298373	46.4439728	5.1512321	14.823358	3.1899358	0.35871111	0.63175802	0.00351111	0.74577778	0.00978044	752.846962	0.00039506	0.09749877	11.599484	2208.07379
Skewness	0.03955176	-0.1171525	2.93696332	0.28372822	1.22304112	0.41274125	-0.6394652	-0.7106949	-1.3328543	0.92459727	0.48262291	-1.2291942	0.15303742	1.11392406	0.78817731	0.89076802	0.87097371	0.8610148	0.92045624	2.09392832	-0.8570155
Coefficient of Variation (CoV) 2	0.30465764	0.16823344	2.03904962	0.1624834	0.35863202	0.2238829	0.47610103	0.70678536	0.39756118	0.98078129	0.35752563	0.22182406	0.3523886	1.1110243	0.59420935	0.51419131	1.39447001	0.38060732	0.75952197	1.16725871	0.7071185
NPR < 1.0 or NPR = 1.0																					
1.0 < NPR < 2.0																					
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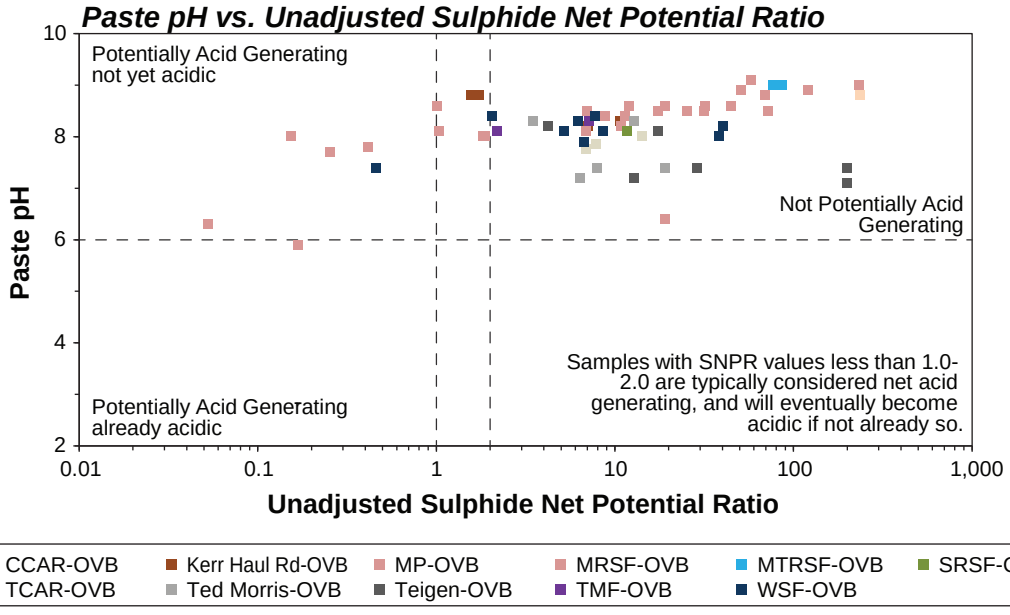
Appendix 7-2

Static Test Results for Non-Deposit Samples – Graphs

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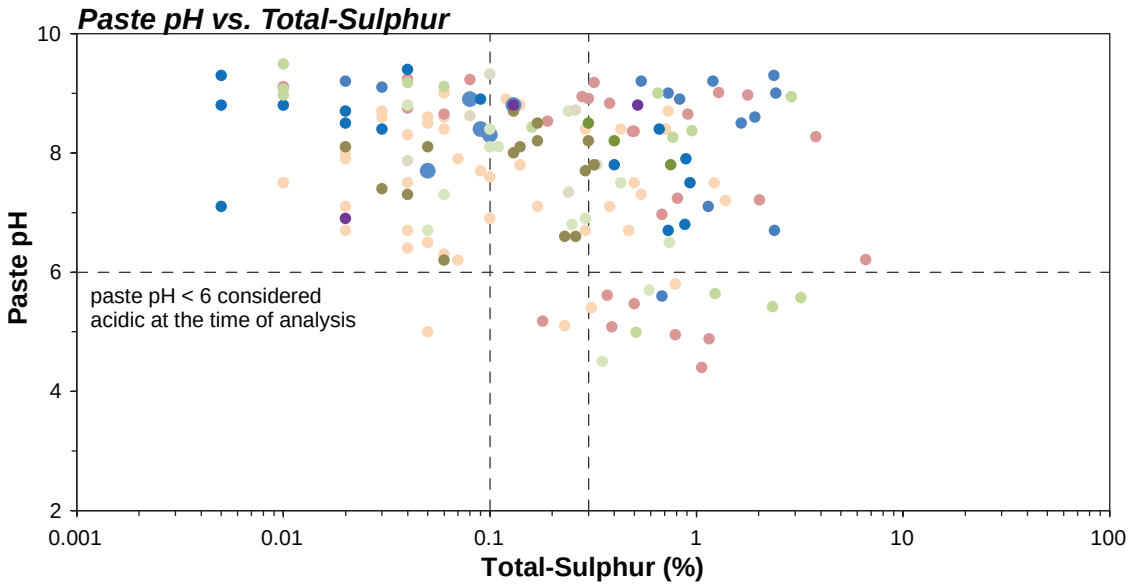
CCAR-OVB, Kerr Haul Rd-OVB, MP-OVB, MRSF-OVB, MTRSF-OVB, SRSF-OVB, TCAR-OVB, Ted Morris-OVB, Teigen-OVB, TMF-OVB, WSF-OVB

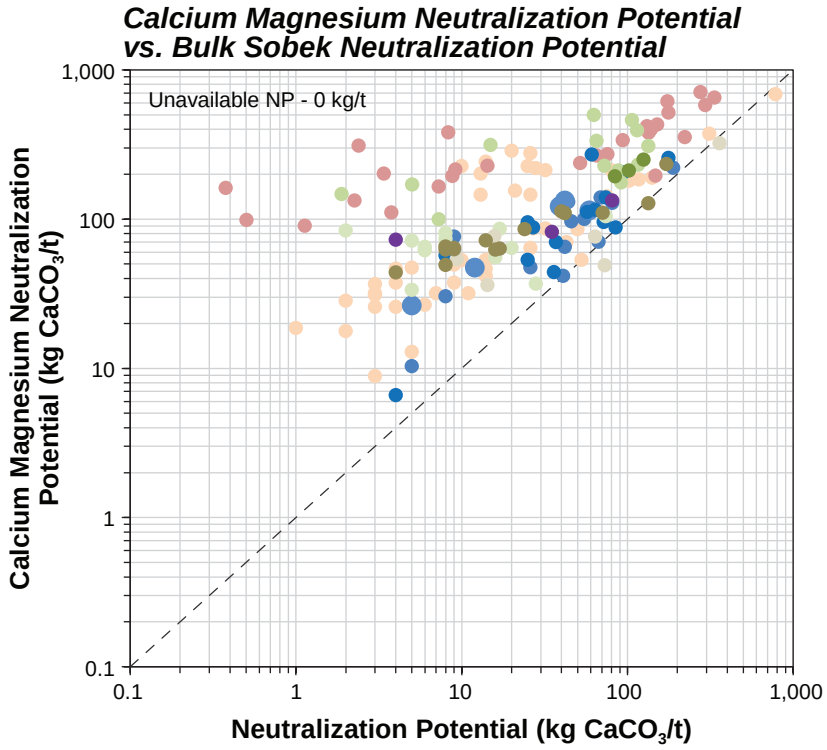
Figure 1

SEABRIDGE GOLD
KSM PROJECT

Overburden

Rescan™ Engineers & Scientists





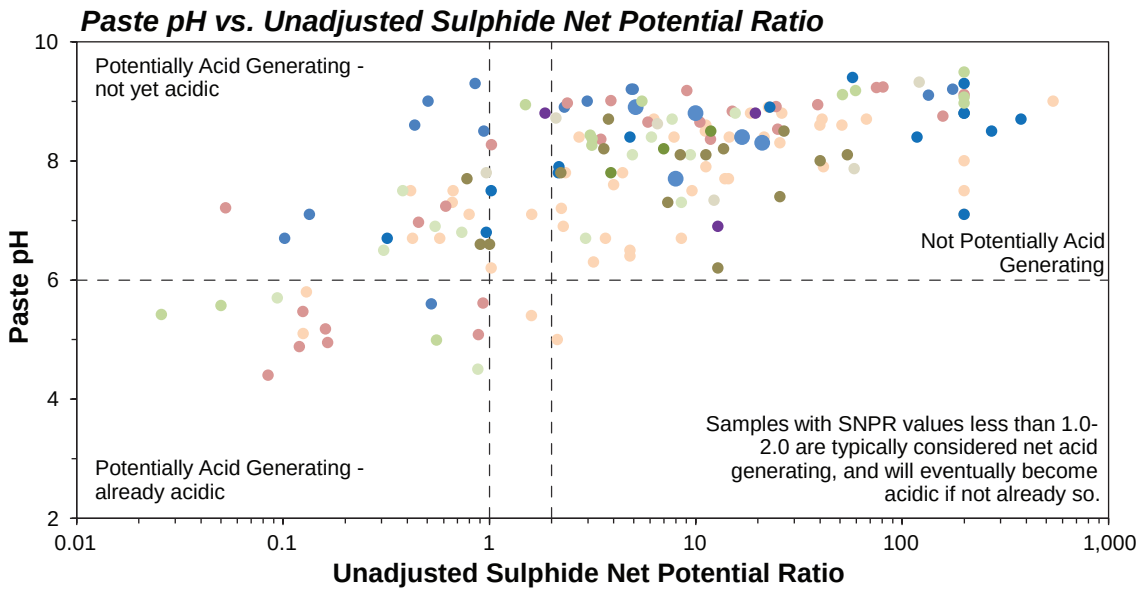
CCAR-RX MDT-RX MP-RX MTDT-RX MTT-RX SP-RX SRSF-RX TAR-RX TCAR-RX TDPR-RX TMF-RX

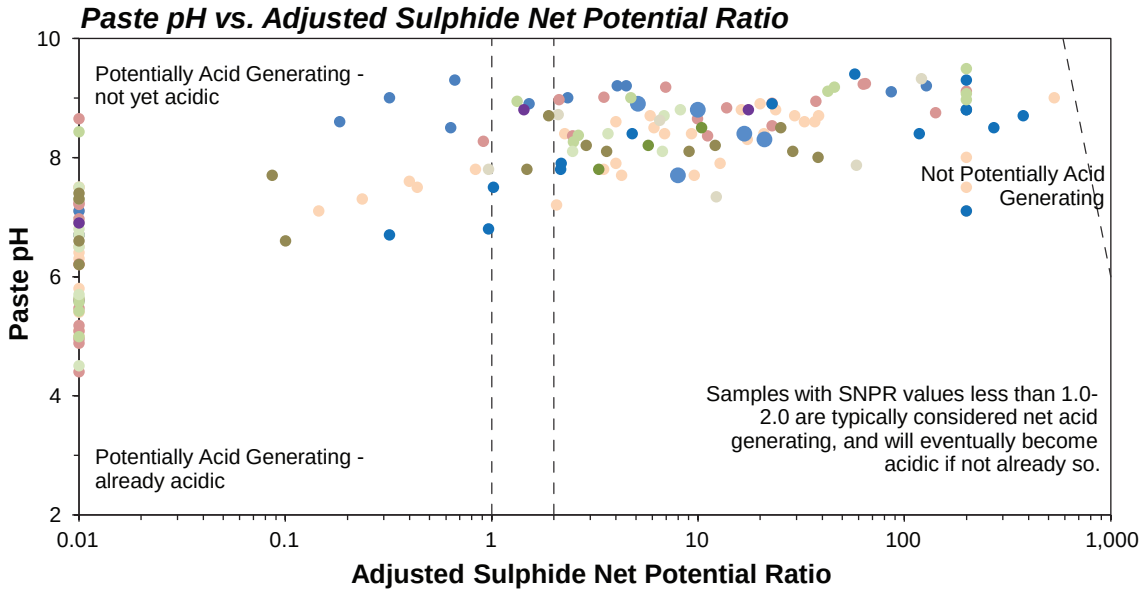
Figure 2

SEABRIDGE GOLD
KSM PROJECT

Rocks

Rescan™
Engineers & Scientists





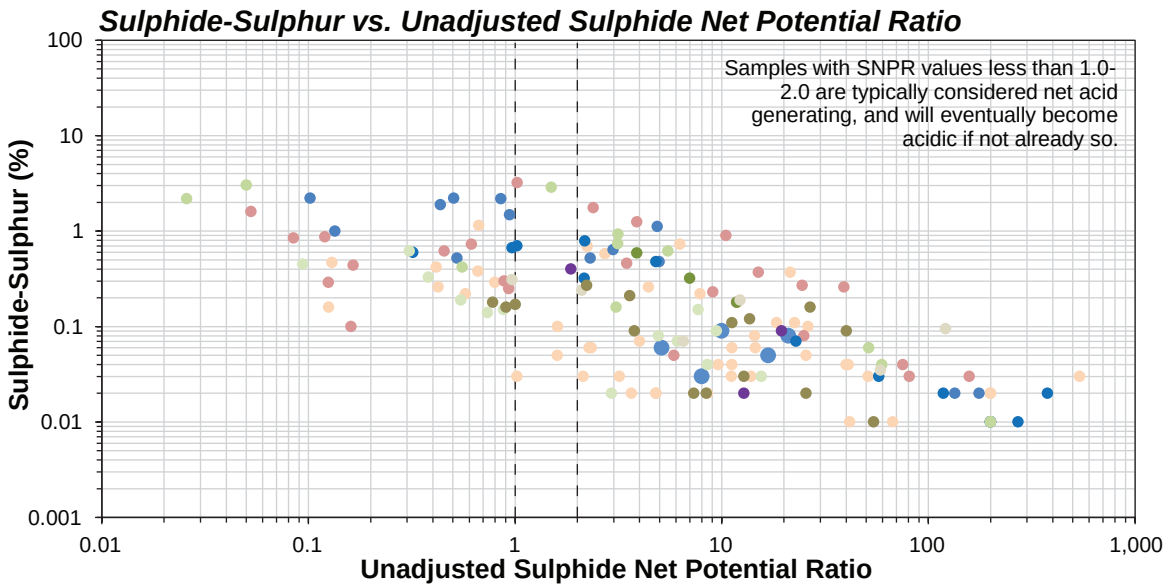
CCAR-RX MDT-RX MP-RX MTDT-RX MTT-RX SP-RX SRSF-RX TAR-RX TCAR-RX TDPR-RX TMF-RX

Figure 3

SEABRIDGE GOLD KSM PROJECT

Rocks

Rescan™ Engineers & Scientists



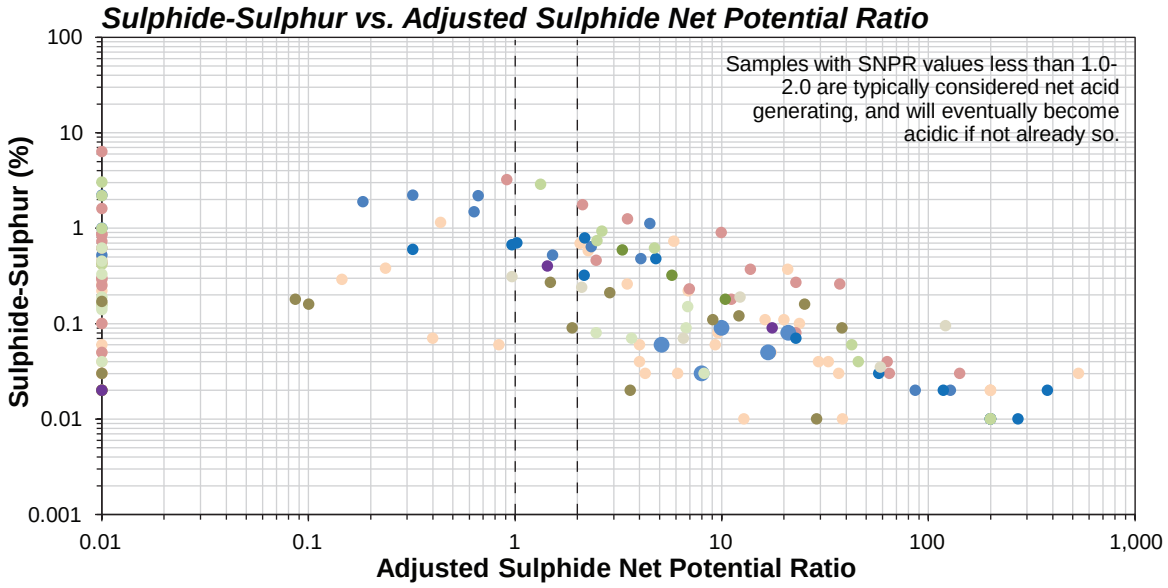


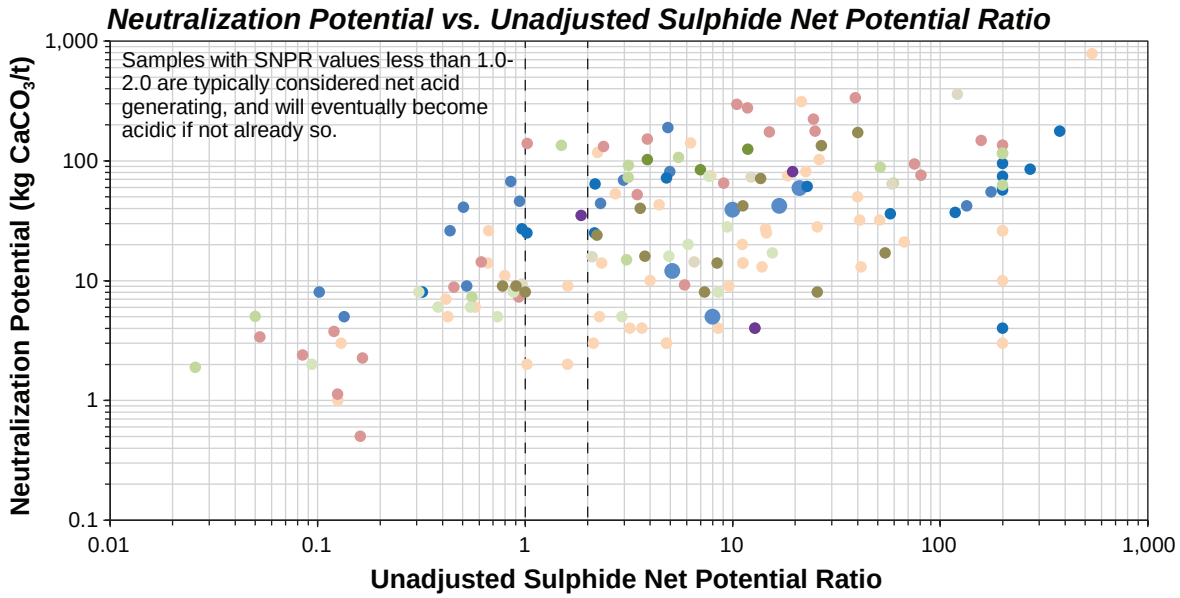


Figure 4

SEABRIDGE GOLD
KSM PROJECT

Rocks

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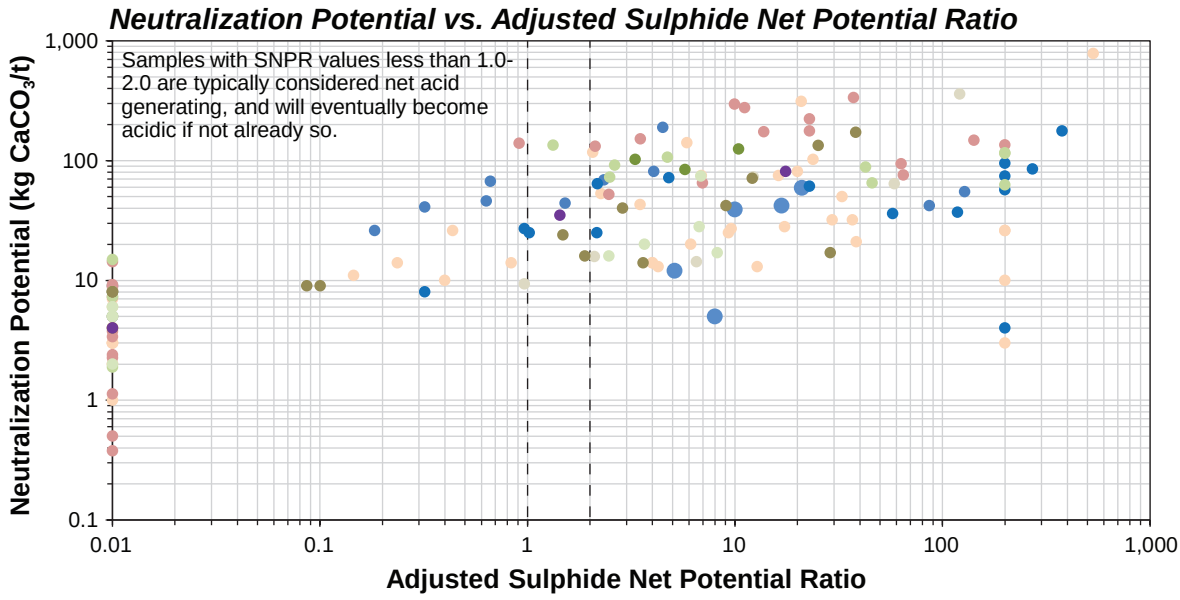




Figure 5

SEABRIDGE GOLD
KSM PROJECT

Rocks

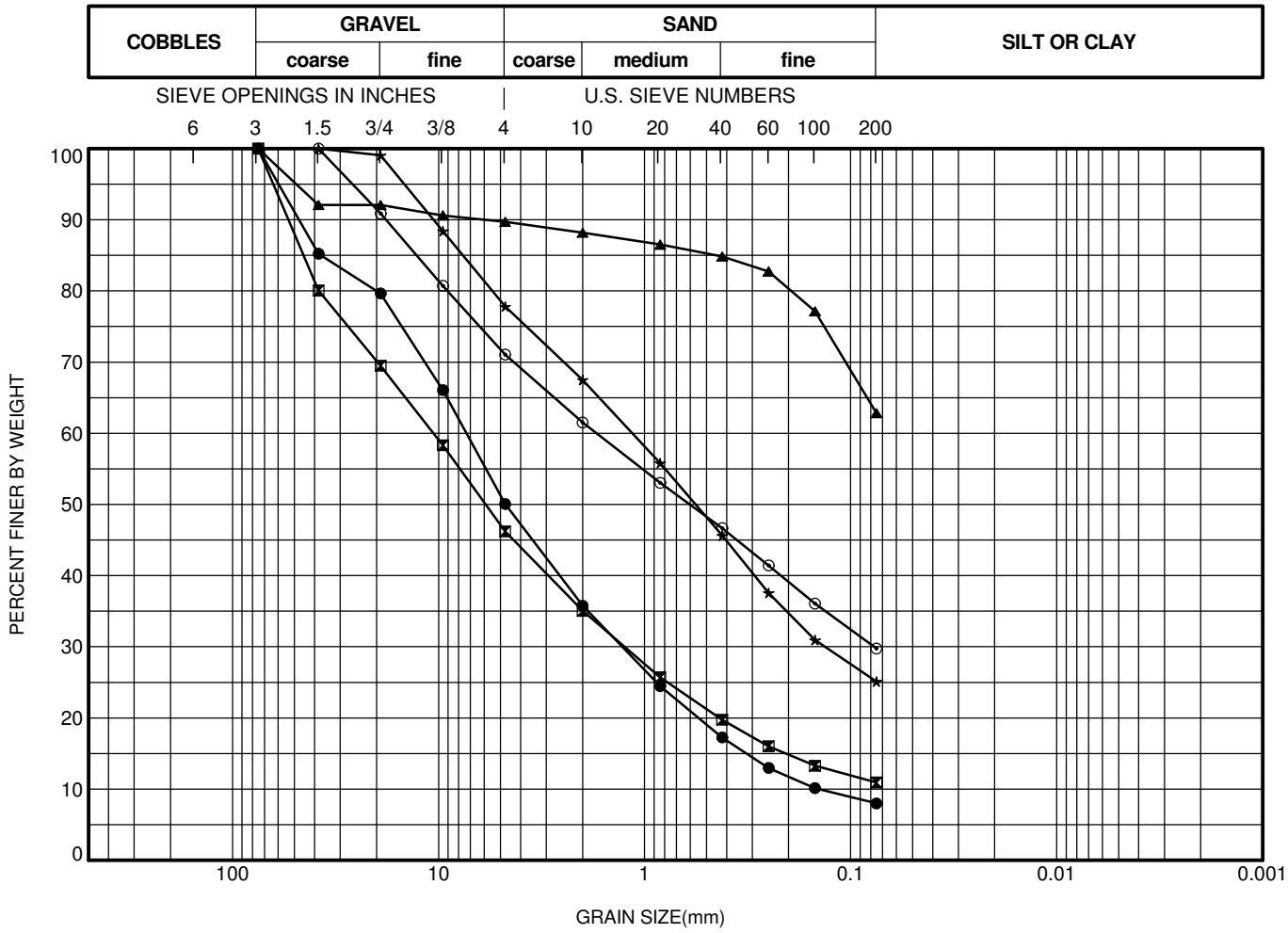
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Appendix 7.1-1

Particle Size Analysis Results of KSM Non Deposit Material

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GRAIN SIZE DISTRIBUTION



	HOLE	DEPTH (m)	D85	D60	D50	D15	D10	CU	%GRAVEL	%SAND	%FINES
●	31	0.00	37.143	7.316	4.735	0.320	0.143	51.223	49.9	42.1	8.0
⊠	36	0.00	45.157	10.572	5.906	0.206		184.558	53.8	35.3	10.9
▲	37	0.00	0.449						10.3	26.9	62.8
★	38	0.00	7.612	1.147	0.566				22.2	52.7	25.1
⊙	42	0.00	12.772	1.713	0.604				28.9	41.3	29.8

	HOLE	SAMPLE	DEPTH (m)	W%	W_L	W_P	PI	REMARKS / SAMPLE DESCRIPTION
●	31		0.00					
⊠	36		0.00					
▲	37		0.00					
★	38		0.00					
⊙	42		0.00					removed 0.7g organic

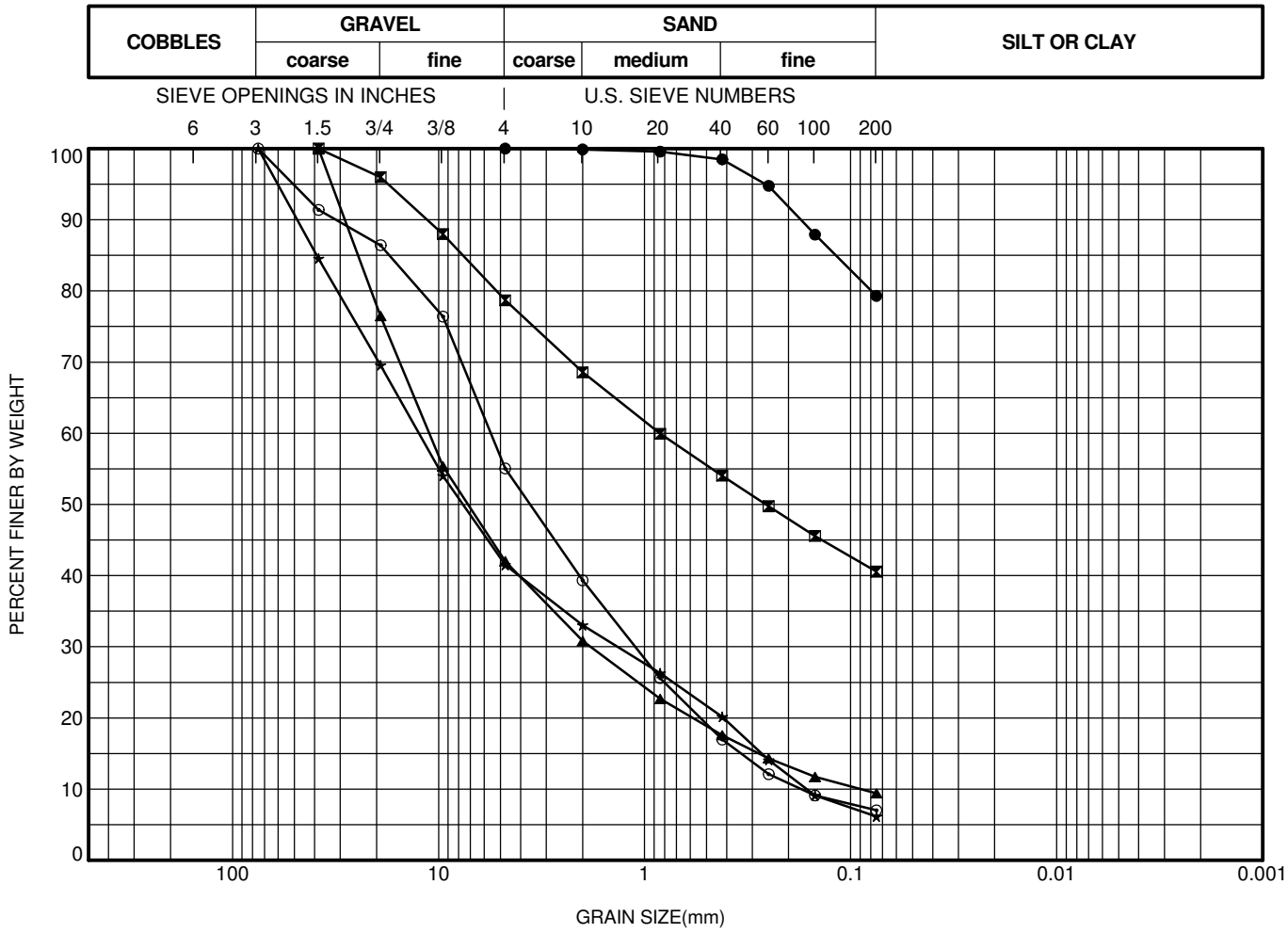
CU = COEFFICIENT OF UNIFORMITY = D60/D10 **PARTICLE SIZES, e.g. D85, in mm** **Tested by Wet Sieving Method (ASTM D1140 & D422)**

Klohn Crippen Berger

PROJECT NO.: M09480A01
PROJECT: Seabridge Kerr Sulphurets
LOCATION: Northwest BC
FIGURE:
DRAWN BY: AC **CHECKED BY:** BY

KCB_GRAIN_SIZE-SI M09480A01_KSM SOIL T0925.GPJ SIEVE.GDT 9/28/09

GRAIN SIZE DISTRIBUTION



	HOLE	DEPTH (m)	D85	D60	D50	D15	D10	CU	%GRAVEL	%SAND	%FINES
●	56	0.00	0.118						0.0	20.7	79.3
⊠	57	0.00	7.612	0.846	0.258				21.3	38.1	40.6
▲	72	0.00	24.554	11.092	7.199	0.279	0.089	124.074	58.0	32.6	9.4
★	74	0.00	38.951	12.437	7.610	0.270	0.163	76.081	58.5	35.3	6.1
⊙	75	0.00	17.296	5.581	3.598	0.341	0.174	32.092	45.0	48.0	7.0

	HOLE	SAMPLE	DEPTH (m)	W%	W_L	W_P	PI	REMARKS / SAMPLE DESCRIPTION
●	56		0.00					
⊠	57		0.00					
▲	72		0.00					
★	74		0.00					
⊙	75		0.00					

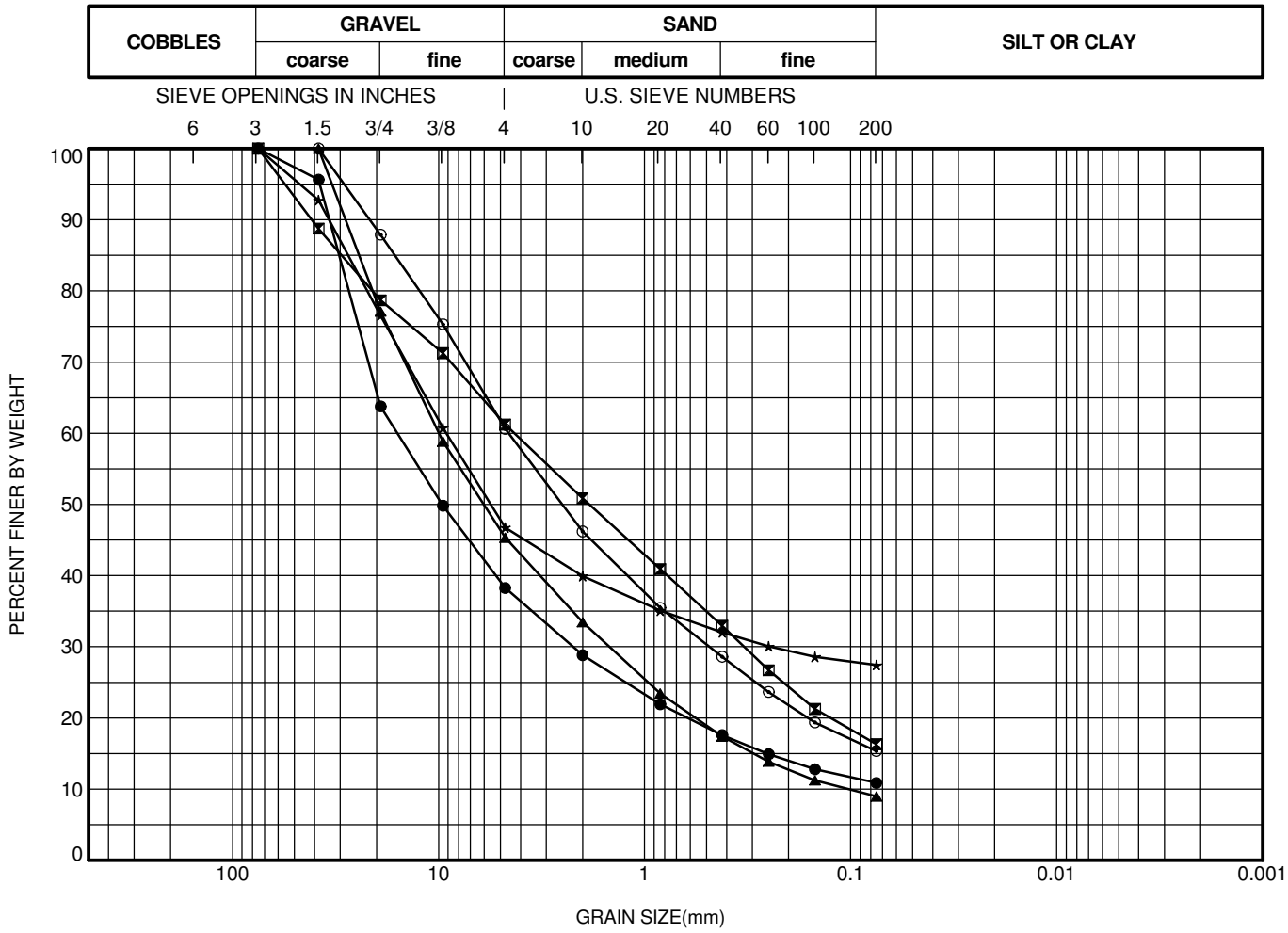
CU = COEFFICIENT OF UNIFORMITY = D60/D10 **PARTICLE SIZES, e.g. D85, in mm** **Tested by Wet Sieving Method (ASTM D1140 & D422)**

Klohn Crippen Berger

PROJECT NO.: M09480A01
PROJECT: Seabridge Kerr Sulphurets
LOCATION: Northwest BC
FIGURE:
DRAWN BY: AC **CHECKED BY:** BY

KCB_GRAIN_SIZE-SI M09480A01_KSM SOIL T0925.GPJ SIEVE.GDT 9/28/09

GRAIN SIZE DISTRIBUTION



	HOLE	DEPTH (m)	D85	D60	D50	D15	D10	CU	%GRAVEL	%SAND	%FINES
●	76	0.00	30.311	15.821	9.601	0.255		289.040	61.7	27.4	10.9
⊠	77	0.00	29.496	4.289	1.856				38.8	44.9	16.3
▲	78	0.00	24.263	9.955	6.042	0.295	0.103	96.901	54.7	36.4	9.0
★	79	0.00	27.430	9.173	5.585				53.3	19.3	27.4
⊙	80	0.00	16.267	4.578	2.513				39.4	45.3	15.3

	HOLE	SAMPLE	DEPTH (m)	W%	W_L	W_P	PI	REMARKS / SAMPLE DESCRIPTION
●	76		0.00					
⊠	77		0.00					
▲	78		0.00					
★	79		0.00					
⊙	80		0.00					

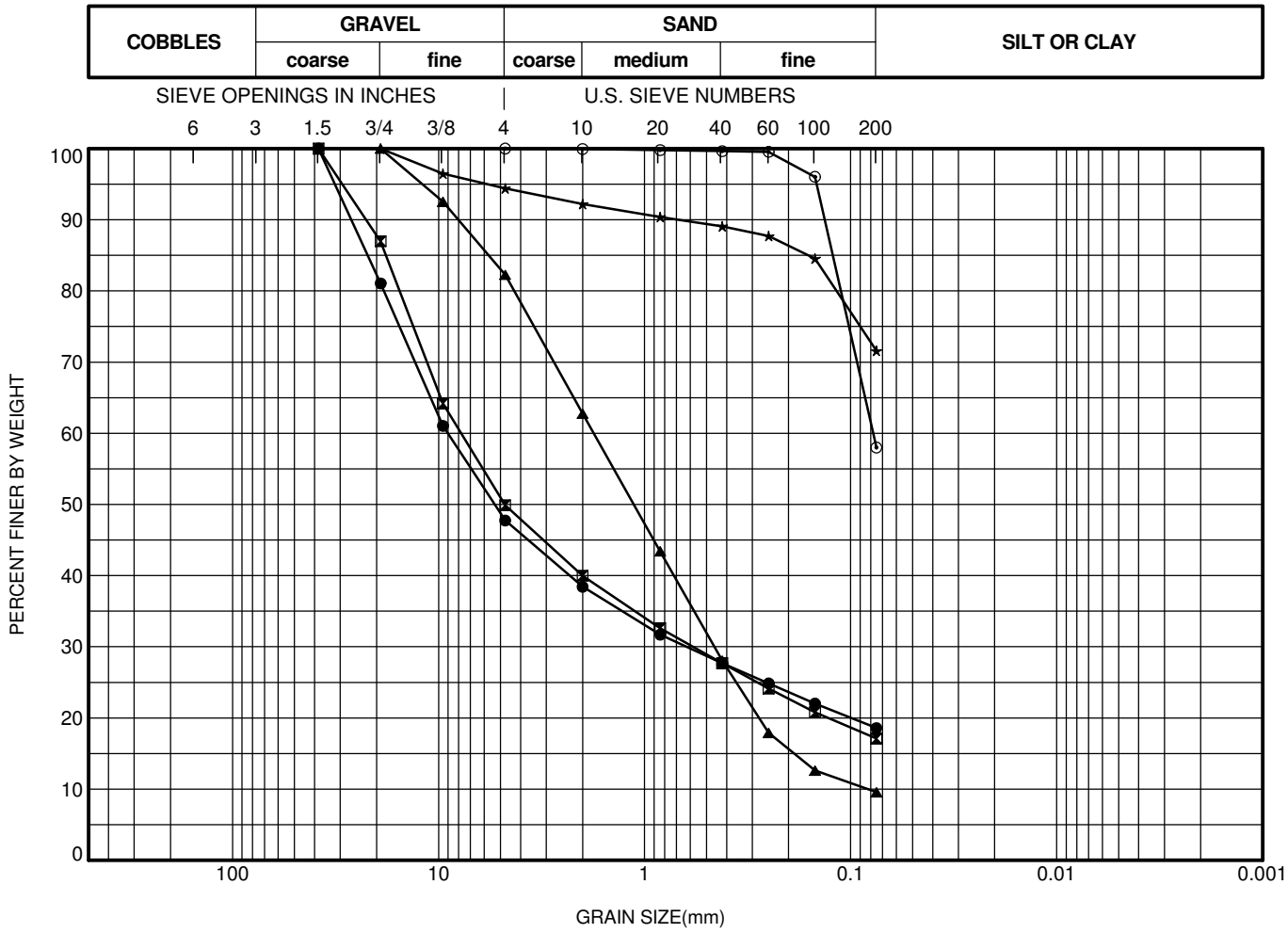
CU = COEFFICIENT OF UNIFORMITY = D60/D10 **PARTICLE SIZES, e.g. D85, in mm** **Tested by Wet Sieving Method (ASTM D1140 & D422)**

Klohn Crippen Berger

PROJECT NO.: M09480A01
PROJECT: Seabridge Kerr Sulphurets
LOCATION: Northwest BC
FIGURE:
DRAWN BY: AC **CHECKED BY:** BY

KCB_GRAIN_SIZE-SI M09480A01_KSM SOIL T0925.GPJ SIEVE.GDT 9/28/09

GRAIN SIZE DISTRIBUTION



	HOLE	DEPTH (m)	D85	D60	D50	D15	D10	CU	%GRAVEL	%SAND	%FINES
●	83	0.00	22.060	9.016	5.346				52.3	29.2	18.6
⊠	84	0.00	17.982	7.769	4.776				50.1	32.8	17.1
▲	53 A	0.00	5.718	1.768	1.129	0.188	0.083	21.336	17.7	72.7	9.6
★	53 B	0.00	0.161						5.6	22.8	71.6
⊙	56 A	0.00	0.122	0.078					0.0	42.0	58.0

	HOLE	SAMPLE	DEPTH (m)	W%	W_L	W_P	PI	REMARKS / SAMPLE DESCRIPTION
●	83		0.00					
⊠	84		0.00					
▲	53 A		0.00					
★	53 B		0.00					
⊙	56 A		0.00					

CU = COEFFICIENT OF UNIFORMITY = D60/D10 **PARTICLE SIZES, e.g. D85, in mm** **Tested by Wet Sieving Method (ASTM D1140 & D422)**

Klohn Crippen Berger

PROJECT NO.: M09480A01
PROJECT: Seabridge Kerr Sulphurets
LOCATION: Northwest BC
FIGURE:
DRAWN BY: AC **CHECKED BY:** BY

KCB_GRAIN_SIZE-SI M09480A01_KSM SOIL T0925.GPJ SIEVE.GDT 9/28/09

Appendix 7.3-1

Shake Flask Extractions on Non-Deposit Overburden Samples - Data

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Appendix 7.3-1. Shake Flask Extractions on Non-deposit Overburden Samples - Data

Sample ID	WP09-38		WP09-42		WP09-77		WP09-78		BC MOE [1] Maximum	BC MOE [1] 30-day Mean	CCME [2] Maximum
	-2 mm	Whole	-2 mm	Whole	-2 mm	Whole	-2 mm	Whole			
Leachable Anions & Nutrients											
Acidity (as CaCO3)	4.3	5.2	8.7	5.6	17.4	12.2	2.2	2.3			
Alkalinity, Total (as CaCO3)	46.2	7.8	210	9.7	176	16.1	87.9	26.3			
Bromide (Br)	<0.5	<0.05	<0.50	0.07	<1.0	<0.5	<0.05	<0.50			
Chloride (Cl)	<5.0	<0.5	<5.0	0.63	<10	<5.0	3.41	<5.0	equation		
Conductivity	1100	709	539	197	2720	1750	396	137			
Fluoride (F)	0.23	0.05	<0.20	<0.02	0.50	0.38	4.60	0.67	equation		
Nitrate (as N)	0.067	0.0138	15.0	16.7	<0.10	<0.050	0.0926	0.092	0.06	0.02	0.06
Nitrite (as N)	<0.01	<0.001	0.03	0.0175	<0.02	<0.01	0.0328	<0.01	0.6	0.2	
pH	6.74	5.85	7.11	5.60	6.93	5.22	8.33	6.73	6.5 to 9.0		6.5 to 9.0
Sulfate (SO4)	567	355	7.6	3.42	1710	1090	71.8	30.6	100		
Calculated Hardness	557	341	243	69	1663	1118	68	43			
Leachable Metals											
Aluminum (Al)-Leachable	<0.01	<0.025	0.311	0.578	<0.05	0.346	0.433	0.0167	equation	equation	0.1
Antimony (Sb)-Leachable	0.00075	<0.00050	0.00313	0.00127	0.0098	0.00063	0.00444	0.00079	0.005		
Arsenic (As)-Leachable	<0.002	<0.005	0.0067	0.0054	<0.01	<0.005	0.0027	<0.001	5		0.005
Barium (Ba)-Leachable	0.026	0.0237	0.0809	0.114	0.036	0.0256	0.0937	0.131			
Beryllium (Be)-Leachable	<0.001	<0.0025	<0.0005	<0.0005	<0.005	<0.0025	<0.0005	<0.0005	0.0053		
Bismuth (Bi)-Leachable	<0.001	<0.0025	<0.0005	<0.0005	<0.005	<0.0025	<0.0005	<0.0005			
Boron (B)-Leachable	<0.02	<0.05	0.025	0.011	<0.1	<0.05	0.020	<0.01			
Cadmium (Cd)-Leachable	0.00336	0.0175	0.000280	0.000637	<0.0005	0.0129	0.000064	0.000106	equation		0.001000
Calcium (Ca)-Leachable	106	39.3	54.9	19.6	534	397	17.0	14.4			
Chromium (Cr)-Leachable	<0.001	<0.0025	0.00551	0.00778	<0.005	<0.0025	<0.0005	<0.0005	0.0089		0.0089
Cobalt (Co)-Leachable	0.00453	0.052	0.00266	0.0163	0.0015	0.140	0.00011	0.00022	(0.094(hardness)+2)/1000	0.00004 to 0.002 (hardness	
Copper (Cu)-Leachable	<0.011	0.229	0.0798	0.0395	<0.010	0.0664	0.0343	<0.007	equation	equation	equation
Iron (Fe)-Leachable	<0.03	<0.03	0.364	0.941	<0.03	0.224	0.199	<0.03	e^(1.273 ln (hardness) -		e^(1.273lnhardness-4.705)/1000
Lead (Pb)-Leachable	0.00038	0.00068	0.00221	0.00247	<0.001	0.00306	0.00046	<0.0001	equation	equation	equation
Lithium (Li)-Leachable	<0.01	<0.025	<0.005	<0.005	<0.05	0.036	<0.005	<0.005	0.01102(hardness)+0.54	0.0044(hardness)+0.605	
Magnesium (Mg)-Leachable	71.2	59.1	25.7	4.93	79.9	30.7	6.23	1.79			
Manganese (Mn)-Leachable	11.6	16.7	0.760	2.41	3.85	12.7	0.0543	0.152	equation	equation	
Mercury (Hg)-Leachable	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010			0.073
Molybdenum (Mo)-Leachable	0.00178	<0.0005	0.00854	0.0003	0.004	<0.0005	0.193	0.00987	hardness-dependent		(0.76lnhardness+1.06)/1000
Nickel (Ni)-Leachable	0.0016	0.0106	0.0140	0.0180	<0.0050	0.0723	<0.00050	0.00086	equation		equation
Phosphorus (P)-Leachable	<0.30	<0.30	0.42	<0.30	<0.30	<0.30	<0.30	<0.30			
Potassium (K)-Leachable	27.7	8.06	15.8	3.71	88.0	13.4	60.9	8.84			
Selenium (Se)-Leachable	0.170	0.128	0.00319	0.00132	0.0272	0.0043	0.00991	0.00309	0.0001 to 0.003		0.0001
Silicon (Si)-Leachable	6.30	4.97	7.16	8.80	8.62	8.81	3.69	3.94			
Silver (Ag)-Leachable	<0.0001	<0.00025	0.000308	<0.00005	<0.0005	<0.00025	0.000063	<0.00005	equation	equation	equation
Sodium (Na)-Leachable	9.37	1.90	20.8	3.39	25.5	4.09	14.7	2.51			
Strontium (Sr)-Leachable	0.212	0.124	0.165	0.0748	1.66	1.77	0.0907	0.0870			
Thallium (Tl)-Leachable	0.0004	<0.0005	<0.0001	<0.0001	<0.001	<0.0005	0.00013	<0.0001	2		
Tin (Sn)-Leachable	<0.001	<0.0025	<0.0005	<0.0005	<0.005	<0.0025	<0.0005	--			
Titanium (Ti)-Leachable	<0.01	<0.01	0.024	0.058	<0.01	<0.01	<0.01	<0.01	0.3		
Uranium (U)-Leachable	0.000047	<0.00005	0.000455	0.000093	0.00143	0.000095	0.00155	0.000018			
Vanadium (V)-Leachable	<0.0020	<0.0050	0.0028	0.0027	<0.010	<0.0050	0.0049	<0.0010			
Zinc (Zn)-Leachable	0.027	0.838	<0.01	<0.01	<0.1	0.579	<0.01	<0.01	equation	equation	

Notes:

[1] British Columbia, Ministry of Environment, Environmental Protection Division, Water Quality Guidelines (Criteria) Reports

at http://wlapwww.gov.bc.ca/wat/wq/wq_guidelines.html#summary or http://wlapwww.gov.bc.ca/wat/wq/BCguidelines/working.html#table1

[2] Canadian Council of Ministers of the Environment, Canadian Environmental Quality Guidelines, water quality guidelines for the protection of freshwater aquatic life

at http://ceqg-rcqe.ccme.ca/

[3] selenium guideline is a 5-day average

Appendix 7.3-2

Meteoric Water Mobility Protocol Extractions on Non-Deposit Rock Samples - Data

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Appendix 7.3-2. Meteoric Water Mobility Protocol Extractions on Non-deposit Rock Samples - Data

Sample ID				Wt. of Dry Sample Used	Input Vol. (DI Water or Previous Cycle Output)	Output Vol. (Extract)	pH	EC	SO4	Dissolved Fluoride	Hardness ($CaCO_3$)	Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Boron	Cadmium
Unit:		Cycle Start	Cycle Completed Date + Date	Kg	L	L	pH Units	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Reportable Detection Limit	Cycle No.	Date	Sampled	0.01	5	5	0.01	1	1	0.01	0.5	0.0002	0.00002	0.00002	0.00002	0.00001	0.000005	0.05	0.000005
Composite 1	1	1/10/2011	1/11/2011	1.8	2.07	1.8	8.02	355	114	0.67	148	0.0025	0.00072	0.00001	0.07841	0.000005	0.0000025	0.025	0.000025
	2	1/11/2011	1/12/2011	1.1	1.3	1.1	7.96	564	223	0.8	261	0.0059	0.00092	0.00034	0.0573	0.00002	0.0000025	0.47	0.000066
	3	1/12/2011	1/13/2011	0.65	0.87	0.65	7.94	632	309	0.88	300	0.0024	0.00085	0.00001	0.0268	0.000005	0.0000025	0.27	0.000014
	4	1/13/2011	1/14/2011	0.4	0.47	0.4	7.83	742	356	0.68	355	0.018	0.001	0.0007	0.0421	0.000005	0.0000025	1.2	0.00009
	5	1/17/2011	1/18/2011	0.24	0.315	0.24	7.55	998	508	0.35	442	0.019	0.0009	0.0006	0.0421	0.000005	0.0000025	1.1	0.00007
Composite 2	1	1/10/2011	1/11/2011	0.983	1.22	0.985	8.35	137	4	0.95	31.4	0.0433	0.00111	0.00315	0.01301	0.00003	0.0000025	0.27	0.000021
	2	1/11/2011	1/12/2011	0.614	0.76	0.615	8.47	195	8	1.55	50.2	0.0104	0.00202	0.00622	0.0332	0.000005	0.0000025	1.41	0.000034
	3	1/12/2011	1/13/2011	0.384	0.5	0.38	8.38	230	12	2.18	52.1	0.0001	0.00235	0.00744	0.0144	0.00004	0.0000025	1.67	0.000024
	4	1/13/2011	1/14/2011	0.24	0.3	0.24	8.15	246	17	2.14	56.5	0.016	0.0032	0.0115	0.0362	0.000005	0.0000025	2.5	0.0001
	5	1/17/2011	1/18/2011	0.15	0.17	0.11	8.23	292	19	1.8	65.4	0.087	0.0037	0.0126	0.0389	0.00006	0.0000025	2.5	0.00012
Composite 3	1	1/10/2011	1/11/2011	0.983	1.19	0.985	7.99	215	44	1.28	71.9	0.0025	0.00077	0.00008	0.06521	0.00003	0.0000025	0.34	0.000012
	2	1/11/2011	1/12/2011	0.614	0.78	0.61	8.08	361	57	2.21	132	0.0034	0.00122	0.00042	0.0728	0.000005	0.0000025	1.21	0.000024
	3	1/12/2011	1/13/2011	0.384	0.5	0.38	8.18	417	136	2.62	143	0.0001	0.00135	0.00014	0.0569	0.000005	0.0000025	1.27	0.000024
	4	1/13/2011	1/14/2011	0.24	0.305	0.24	7.93	527	193	2.48	177	0.013	0.002	0.001	0.0778	0.000005	0.0000025	2.1	0.00019
	5	1/17/2011	1/18/2011	0.15	0.17	0.115	7.9	729	257	2.4	245	0.017	0.0025	0.0008	0.061	0.000005	0.0000025	1.9	0.00006

Sample ID				Wt. of Dry Sample Used	Input Vol. (DI Water or Previous Cycle Output)	Output Vol. (Extract)	Calcium	Cesium	Chromium	Cobalt	Copper	Iron	Lanthanum	Lead	Lithium	Magnesium	Manganese	Molybdenum	Nickel
Unit:		Cycle Start	Cycle Completed Date + Date	Kg	L	L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Reportable Detection Limit	Cycle No.	Date	Sampled	0.01	5	5	0.05	0.00005	0.0001	0.000005	0.00005	0.001	0.00005	0.000005	0.0005	0.05	0.00005	0.00005	0.00002
Composite 1	1	1/10/2011	1/11/2011	1.8	2.07	1.8	52.13	0.0003	0.00005	0.000788	0.01421	0.0005	0.000025	0.000006	0.0028	3.35	0.26627	0.01055	0.0004
	2	1/11/2011	1/12/2011	1.1	1.3	1.1	92.44	0.00033	0.0001	0.001241	0.02244	0.004	0.00007	0.0000025	0.0032	6.6	0.41472	0.01185	0.00075
	3	1/12/2011	1/13/2011	0.65	0.87	0.65	102.78	0.00015	0.00005	0.00048	0.01618	0.007	0.000025	0.000068	0.0015	7.52	0.31357	0.01362	0.0005
	4	1/13/2011	1/14/2011	0.4	0.47	0.4	126	0.0004	0.00005	0.00092	0.0664	0.007	0.000025	0.00008	0.0015	10.1	0.389	0.0142	0.0014
	5	1/17/2011	1/18/2011	0.24	0.315	0.24	158	0.0005	0.00005	0.00082	0.0367	0.0005	0.000025	0.00007	0.0015	11.8	0.489	0.0133	0.0007
Composite 2	1	1/10/2011	1/11/2011	0.983	1.22	0.985	9.83	0.00011	0.00005	0.000005	0.00242	0.004	0.000025	0.000018	0.0015	0.75	0.00014	0.00182	0.00011
	2	1/11/2011	1/12/2011	0.614	0.76	0.615	15.94	0.00015	0.0005	0.000031	0.00474	0.006	0.000025	0.0000025	0.0015	1.74	0.00252	0.00345	0.00024
	3	1/12/2011	1/13/2011	0.384	0.5	0.38	13.08	0.00015	0.0003	0.00002	0.00408	0.0005	0.000025	0.0000025	0.0015	1.82	0.00307	0.00452	0.0024
	4	1/13/2011	1/14/2011	0.24	0.3	0.24	19.8	0.00015	0.0009	0.00029	0.0338	0.0005	0.000025	0.00016	0.0015	1.7	0.0057	0.0059	0.0047
	5	1/17/2011	1/18/2011	0.15	0.17	0.11	23.5	0.00015	0.0013	0.00017	0.0246	0.0005	0.000025	0.0001	0.0015	1.6	0.007	0.0069	0.0039
Composite 3	1	1/10/2011	1/11/2011	0.983	1.19	0.985	24.23	0.00011	1E-04	0.000064	0.0026	0.002	0.000025	0.000007	0.0013	1.83	0.10927	0.00686	0.00018
	2	1/11/2011	1/12/2011	0.614	0.78	0.61	44.34	0.00015	0.00005	0.000091	0.00784	0.0005	0.000025	0.0000025	0.0015	4.54	0.19072	0.01095	0.00044
	3	1/12/2011	1/13/2011	0.384	0.5	0.38	43.58	0.00015	0.00005	0.00005	0.00698	0.0005	0.000025	0.000058	0.0015	5.42	0.16857	0.01312	0.002
	4	1/13/2011	1/14/2011	0.24	0.305	0.24	56.5	0.0003	0.00005	0.00031	0.0915	0.0005	0.000025	0.00019	0.0015	8.7	0.334	0.0169	0.0042
	5	1/17/2011	1/18/2011	0.15	0.17	0.115	79.8	0.0004	0.00005	0.00025	0.0341	0.006	0.000025	0.00005	0.0015	11	0.402	0.0194	0.0026

Sample ID				Wt. of Dry Sample Used	Input Vol. (DI Water or Previous Cycle Output)	Output Vol. (Extract)	Phosphorus	Potassium	Rubidium	Selenium	Silicon	Silver	Sodium	Strontium	Sulphur	Tellurium	Thallium	Thorium	Tin
Unit:		Cycle Start	Cycle Completed Date + Date	Kg	L	L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Reportable Detection Limit	Cycle No.	Date	Sampled	0.01	5	5	0.002	0.05	0.00005	0.00004	0.1	0.000005	0.05	0.00005	10	0.00002	0.000002	0.000005	0.00001
Composite 1	1	1/10/2011	1/11/2011	1.8	2.07	1.8	0.004	4.05	0.00566	0.00415	0.9	0.000005	1.61	0.33797	47	0.00001	0.000027	0.0000025	0.00005
	2	1/11/2011	1/12/2011	1.1	1.3	1.1	0.007	6.36	0.00819	0.00899	4.2	0.00001	11.31	0.46791	86	0.00001	0.000041	0.000003	0.00016
	3	1/12/2011	1/13/2011	0.65	0.87	0.65	0.001	7.17	0.00861	0.01124	8	0.000005	10.5	0.48782	96	0.00005	0.000028	0.0000025	0.000025
	4	1/13/2011	1/14/2011	0.4	0.47	0.4	0.005	8.7	0.0107	0.0138	6.7	0.000005	23.3	0.571	122	0.00005	0.00005	0.000015	0.000025
	5	1/17/2011	1/18/2011	0.24	0.315	0.24	0.005	10.7	0.0134	0.0176	4.3	0.000005	23.7	0.685	150	0.00005	0.00006	0.000015	0.000025
Composite 2	1	1/10/2011	1/11/2011	0.983	1.22	0.985	0.031	1.62	0.00222	0.00062	5.4	0.000005	5.17	0.07407	25	0.00001	0.00001	0.000018	0.000025
	2	1/11/2011	1/12/2011	0.614	0.76	0.615	0.032	2.91	0.0039	0.00094	14.7	0.000005	17.11	0.13691	25	0.00005	0.000022	0.0000025	0.00002
	3	1/12/2011	1/13/2011	0.384	0.5	0.38	0.007	3.47	0.00411	0.00114	11.9	0.000005	21.1	0.13582	25	0.00005	0.000018	0.00003	0.000025
	4	1/13/2011	1/14/2011	0.24	0.3	0.24	0.005	3.9	0.0043	0.0012	14.6	0.000005	29.4	0.176	25	0.00005	0.00005	0.000015	0.000025
	5	1/17/2011	1/18/2011	0.15	0.17	0.11	0.005	3.7	0.0049	0.0013	15.4	0.000005	29.4	0.19	25	0.00005	0.00004	0.000015	0.000025
Composite 3	1	1/10/2011	1/11/2011	0.983	1.19	0.985	0.007	2.63	0.00359	0.00563	4.9	0.000005	4.25	0.10397	23	0.00001	0.00001	0.0000025	0.00017
	2	1/11/2011	1/12/2011	0.614	0.78	0.61	0.002	6.91	0.0083	0.01154	10.4	0.000005	19.01	0.18591	25	0.00005	0.000022	0.000016	0.0001
	3	1/12/2011	1/13/2011	0.384	0.5	0.38	0.007	8.17	0.01001	0.01314	7.7	0.000005	21.2	0.19982	25	0.00005	0.000018	0.000002	0.000025
	4	1/13/2011	1/14/2011	0.24	0.305	0.24	0.02	12.8	0.0159	0.019	11.3	0.00008	34.9	0.273	63	0.00005	0.00004	0.00003	0.000025
	5	1/17/2011	1/18/2011	0.15	0.17	0.115	0.005	14.2	0.0174	0.0258	11	0.000005	35.4	0.321	86	0.00005	0.00004	0.000015	0.000025

All concentrations are from dissolved metals

If result was below detection limit, half detection limit was used

Appendix 7.3-2. Meteoric Water Mobility Protocol Extractions on Non-deposit Rock Samples - Data

Sample ID			Cycle Completed	Wt. of Dry Sample Used	Input Vol. (DI Water or Previous Cycle Output)	Output Vol. (Extract)	Titanium	Uranium	Vanadium	Tungsten	Zinc	Zirconium			
Unit:		Cycle Start	Date + Date	Kg	L	L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L			
Reportable Detection Limit	Cycle No.	Date	Sampled	0.01	5	5	0.0005	0.000002	0.0002	0.00001	0.0001	0.0001	Anions	Cations	Balance (%)
Composite 1	1	1/10/2011	1/11/2011	1.8	2.07	1.8	0.0007	0.000288	0.00025	0.00165	0.0024	0.00025	2.410263158	3.061097046	-11.89528497
	2	1/11/2011	1/12/2011	1.1	1.3	1.1	0.0007	0.000487	0.00015	0.00136	0.0014	0.00025	4.687938596	5.827040011	-10.83313107
	3	1/12/2011	1/13/2011	0.65	0.87	0.65	0.0015	0.000569	0.0002	0.0015	0.00005	0.00025	6.483815789	6.400020738	0.650388965
	4	1/13/2011	1/14/2011	0.4	0.47	0.4	0.0015	0.00066	0.002	0.00149	0.00005	0.00025	7.45245614	8.372764197	-5.815451773
	5	1/17/2011	1/18/2011	0.24	0.315	0.24	0.0015	0.00062	0.002	0.00132	0.00005	0.00025	10.60175439	10.18059825	2.026508475
Composite 2	1	1/10/2011	1/11/2011	0.983	1.22	0.985	0.00025	0.000055	0.0054	0.00998	0.0022	0.00025	0.133333333	0.82356527	-72.13219189
	2	1/11/2011	1/12/2011	0.614	0.76	0.615	0.0015	0.000126	0.0089	0.01469	0.001	0.00025	0.248245614	1.758598939	-75.26010536
	3	1/12/2011	1/13/2011	0.384	0.5	0.38	0.0015	0.000179	0.0112	0.01816	0.00005	0.00025	0.364736842	1.808867301	-66.43944176
	4	1/13/2011	1/14/2011	0.24	0.3	0.24	0.0015	0.00024	0.013	0.0207	0.00005	0.00025	0.466798246	2.508996758	-68.62698908
	5	1/17/2011	1/18/2011	0.15	0.17	0.11	0.0015	0.00032	0.013	0.0203	0.00005	0.00025	0.490570175	2.687928438	-69.13195599
Composite 3	1	1/10/2011	1/11/2011	0.983	1.19	0.985	0.0007	0.000363	0.00025	0.0015	0.00005	0.00025	0.984035088	1.6161572	-24.31059101
	2	1/11/2011	1/12/2011	0.614	0.78	0.61	0.0015	0.000836	0.0009	0.00192	0.00005	0.00025	1.303815789	3.597058096	-46.79251823
	3	1/12/2011	1/13/2011	0.384	0.5	0.38	0.0015	0.001229	0.0022	0.00249	0.00005	0.00025	2.97122807	3.757792597	-11.68913822
	4	1/13/2011	1/14/2011	0.24	0.305	0.24	0.0015	0.00219	0.002	0.00299	0.00005	0.00025	4.151359649	5.396661605	-13.04251345
	5	1/17/2011	1/18/2011	0.15	0.17	0.115	0.0015	0.00251	0.002	0.00284	0.00005	0.00025	5.480482456	6.80751028	-10.79938646

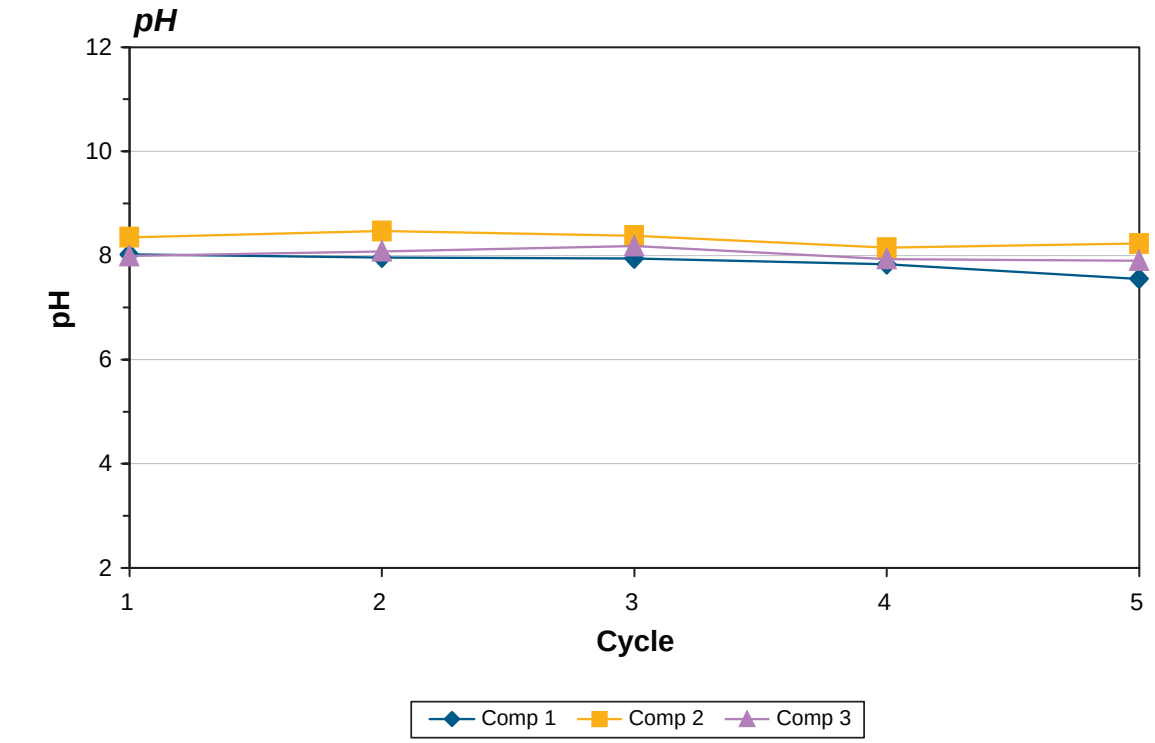
All concentrations are from dissolved metals

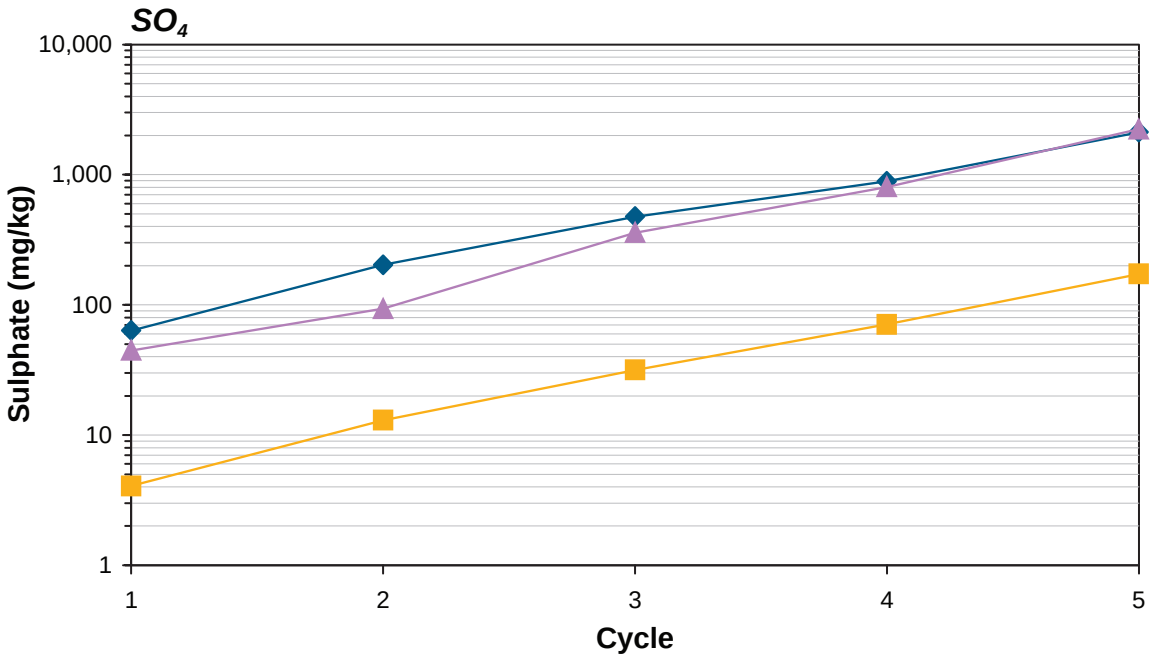
If result was below detection limit, half detection limit was used

Appendix 7.3-3

Meteoric Water Mobility Protocol Extractions on Non-Deposit Rock Samples – Graphs

Rescan™
Engineers and Scientists



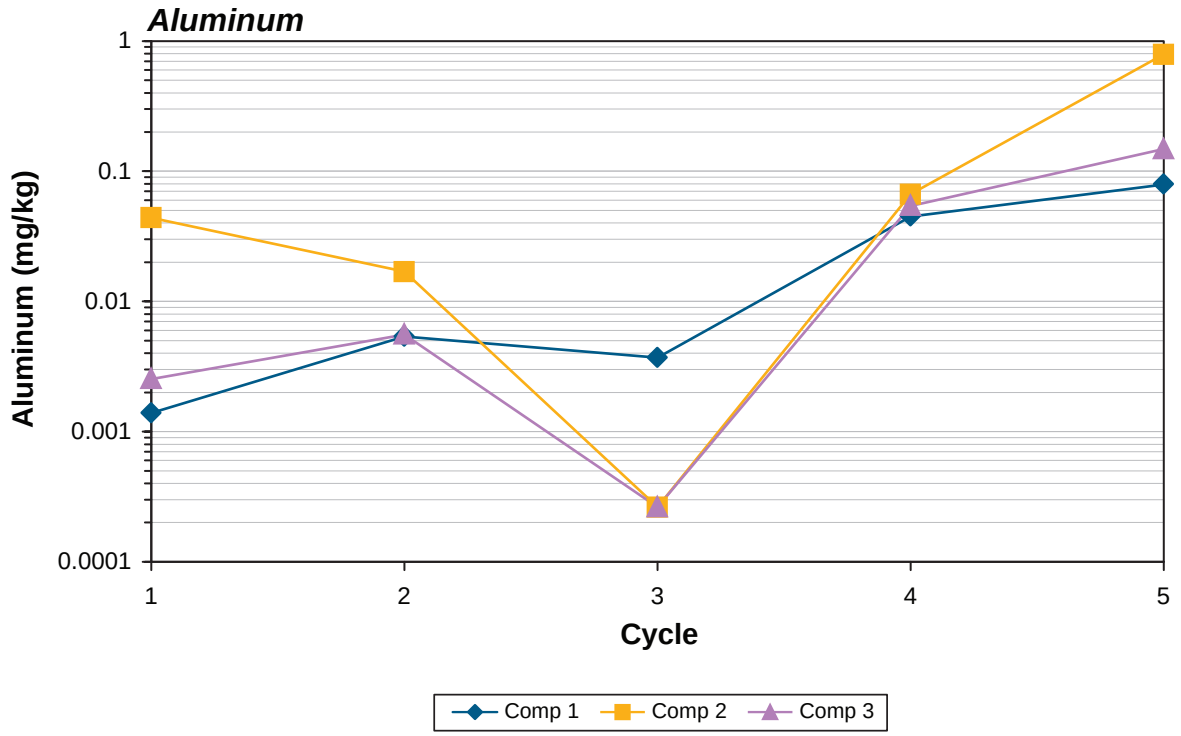


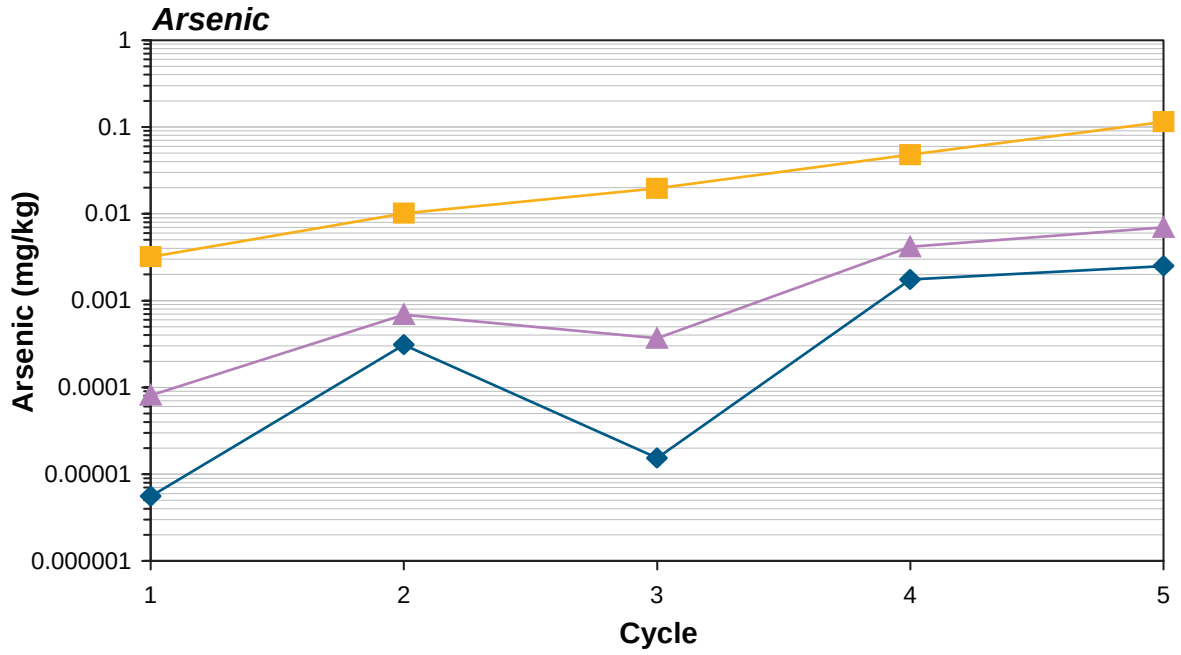
SEABRIDGE GOLD
KSM PROJECT

Non-Deposit Rock MWMP Results for pH and Sulphate

Figure 1

Rescan™ Engineers & Scientists



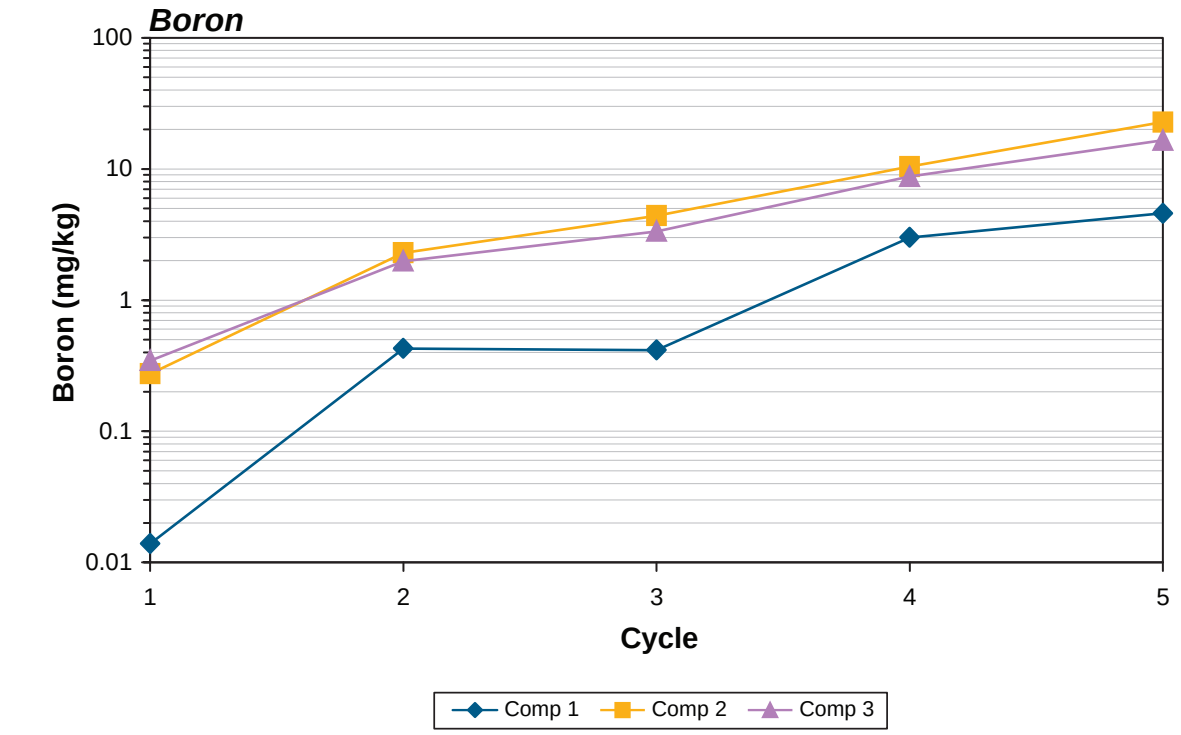


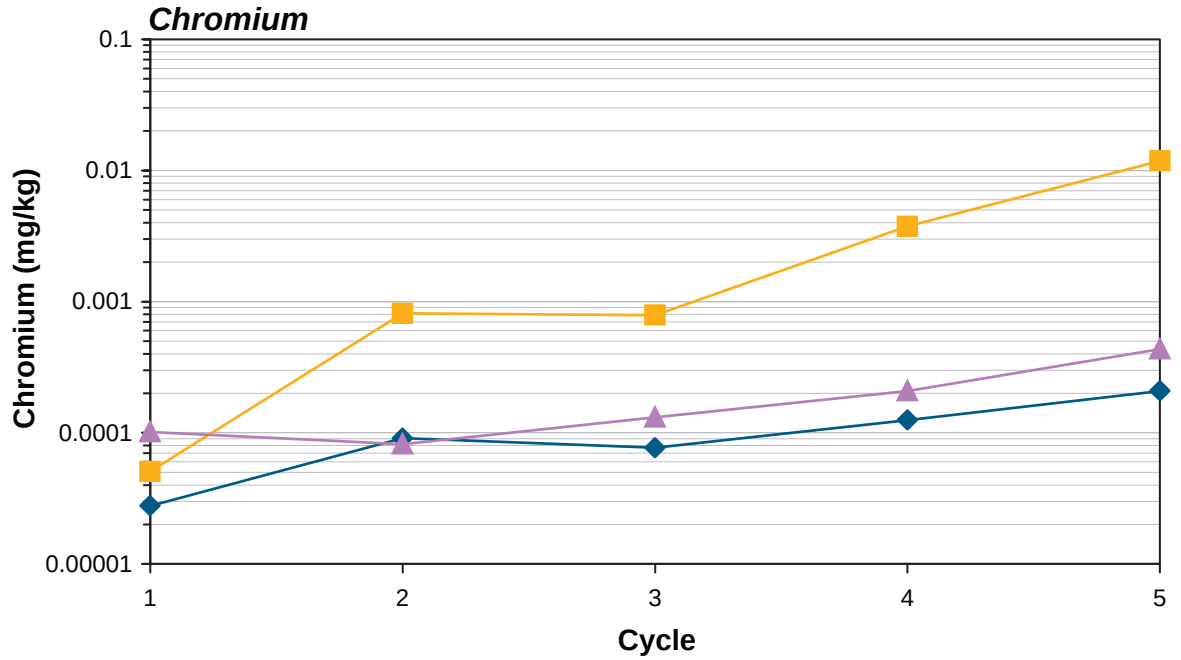
SEABRIDGE GOLD
KSM PROJECT

Non-Deposit Rock MWMP Results for Aluminum and Arsenic

Figure 2

Rescan™ Engineers & Scientists



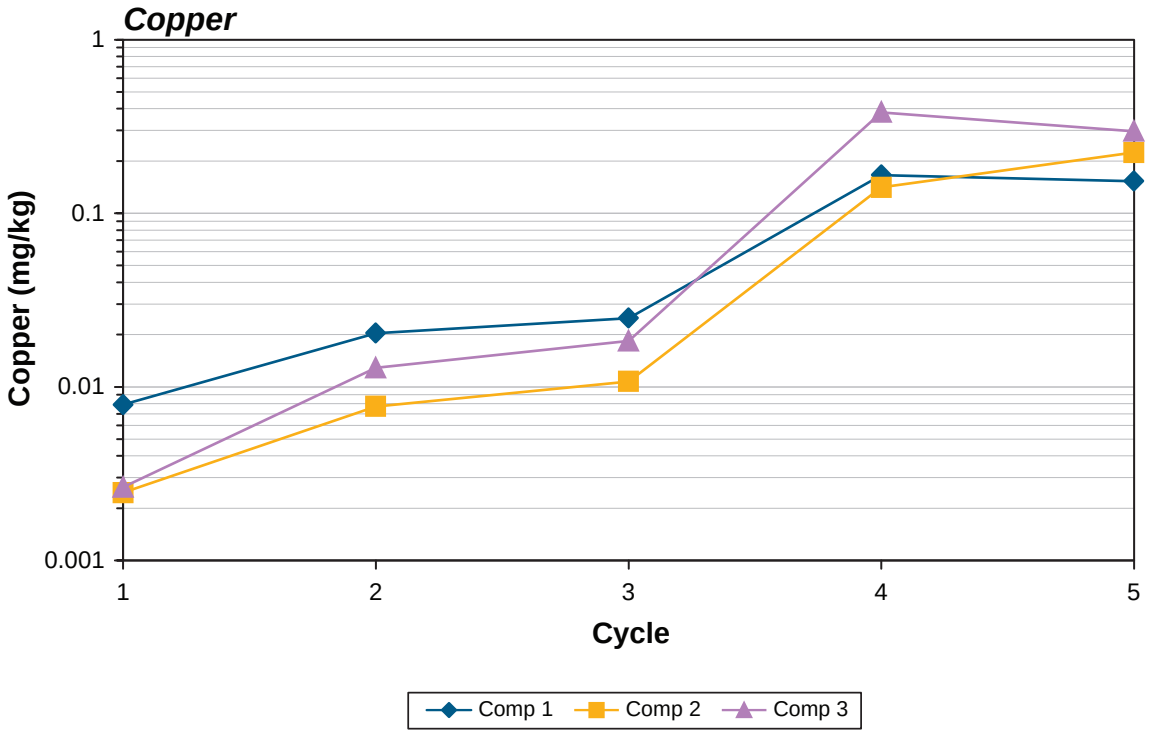


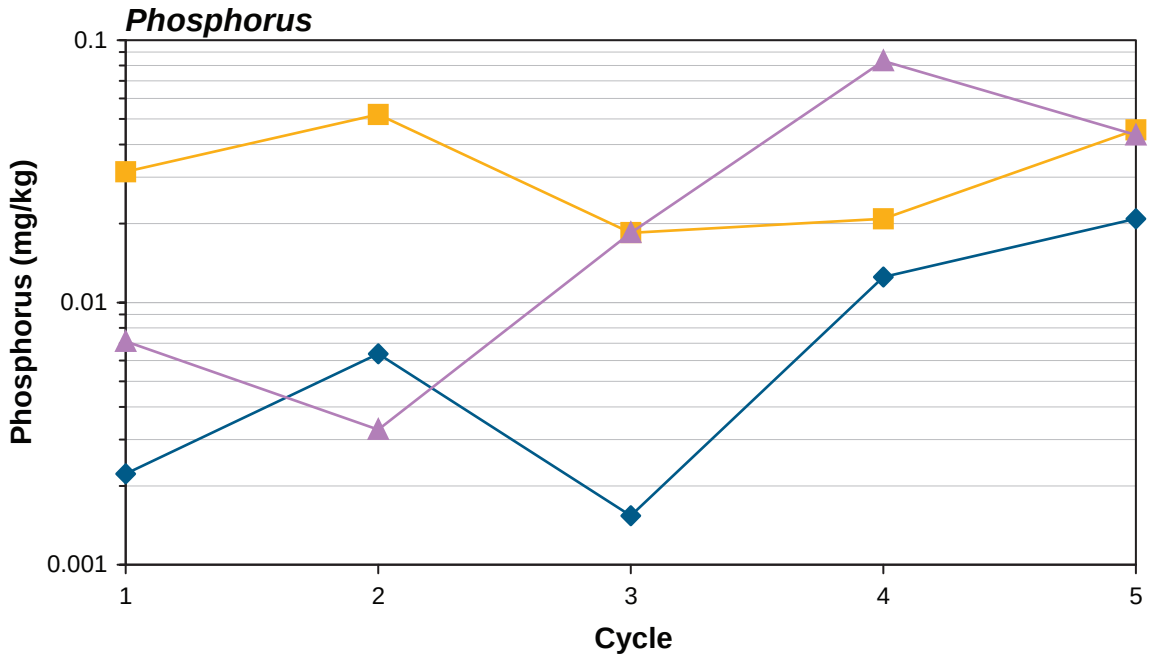
SEABRIDGE GOLD
KSM PROJECT

Non-Deposit Rock MWMP Results for Boron and Chromium

Figure 3

Rescan™ Engineers & Scientists



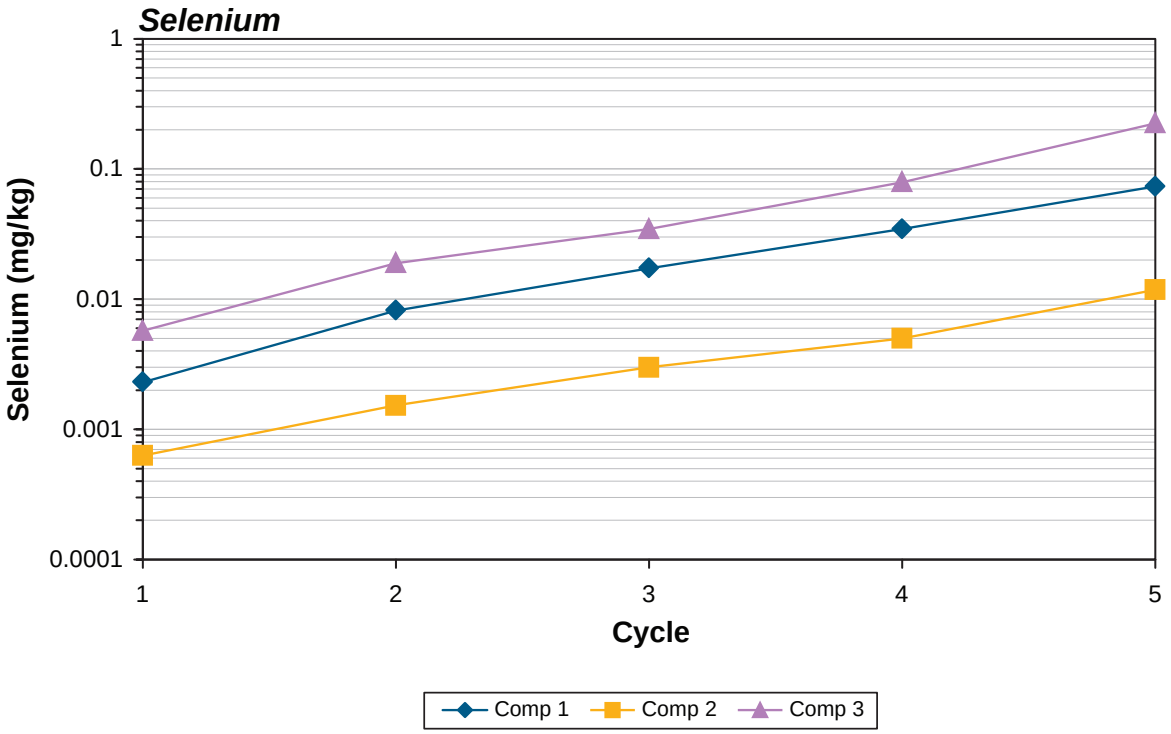


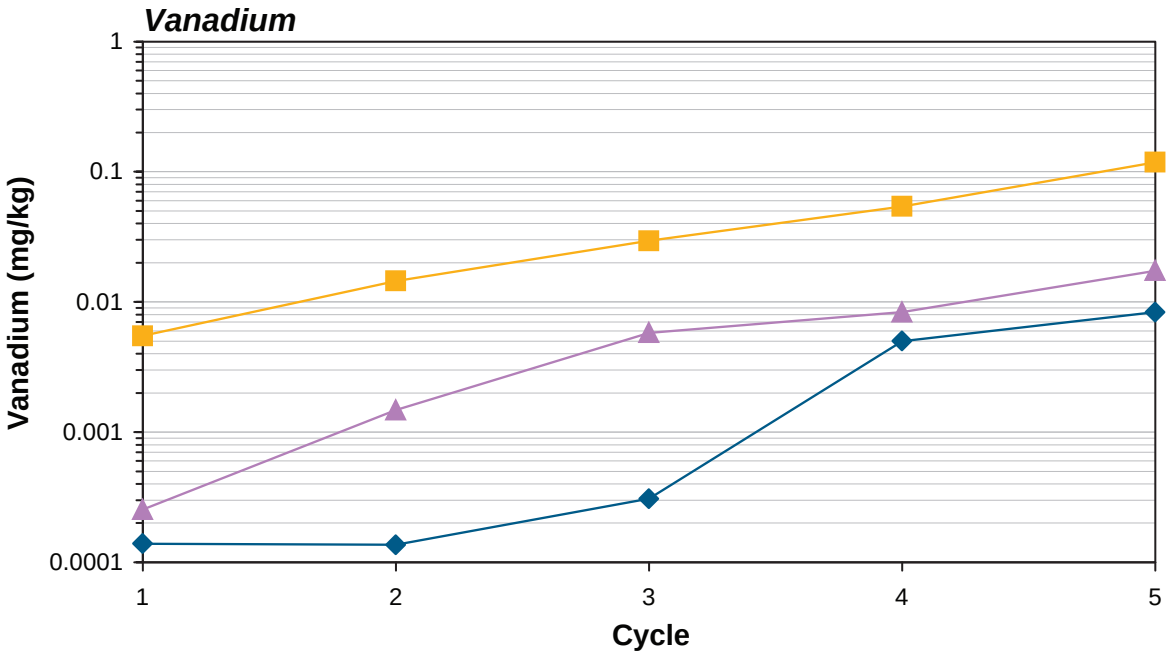
SEABRIDGE GOLD
KSM PROJECT

Non-Deposit Rock MWMP Results for Copper and Phosphorus

Figure 4

Rescan™ Engineers & Scientists



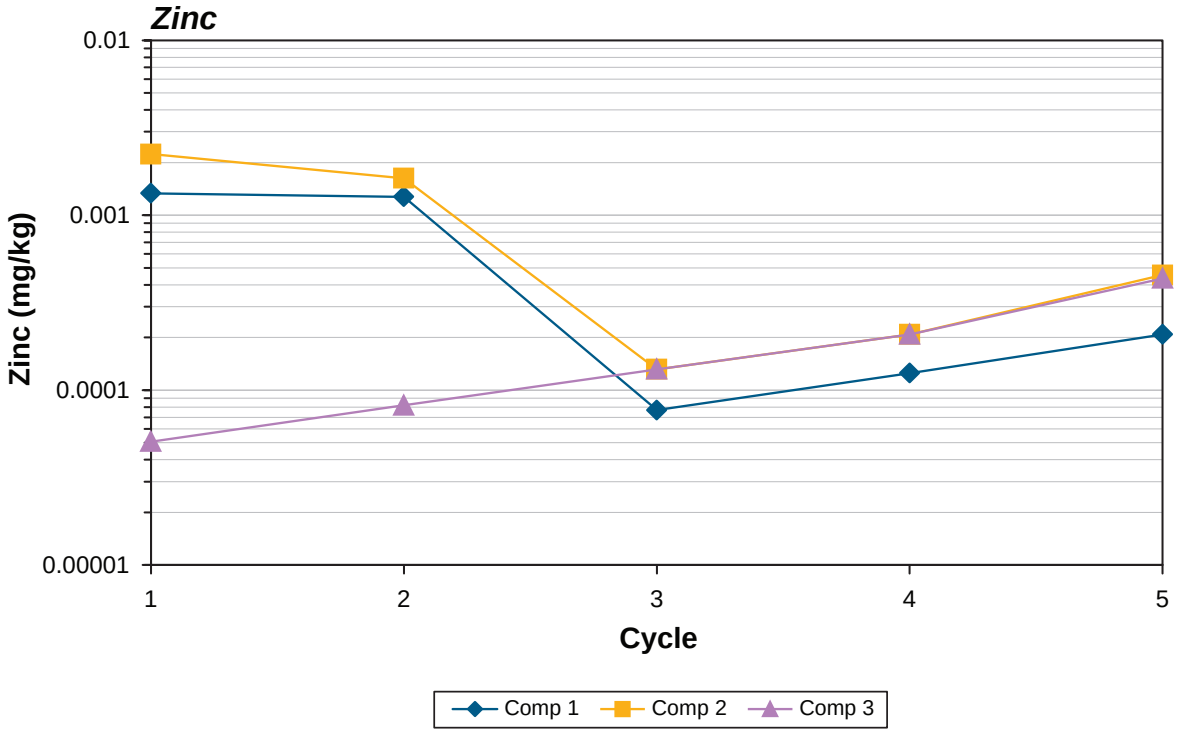


SEABRIDGE GOLD
KSM PROJECT

Non-Deposit Rock MWMP Results for Selenium and Vanadium

Figure 5

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SEABRIDGE GOLD
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Non-Deposit Rock MWMP Results for Zinc

Figure 6

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Appendix 8.1-1
Deposit Seep Water Quality Data

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Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Month Sampled	Date Sampled	ALS Sample ID	Matrix	Field Measurements						Physical Tests									
						pH	Temperature (°C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	TDS (g/L)	Conductivity (uS/cm)	Hardness (as $CaCO_3$) (mg/L)	pH	Suspended Solids (mg/L)	Dissolved Solids (mg/L)	Turbidity (NTU)	Acidity (as $CaCO_3$) (mg/L)	Alkalinity, Total (as $CaCO_3$) (mg/L)	Ammonia as N (mg/L)	Bromide (mg/L)
Kerr																					
K-1	Oct-09	Oct	20-Oct-09	L833787-1	Water	3.72	2.18	1249	1.96	--	0.812	--	590	3.14	27.3	1160	48.5	199	<2.0	<0.020	<2.5
K-2	Oct-09	Oct	20-Oct-09	L833787-2	Water	5.82	3.22	1600	1.62	--	1.040	--	954	6.42	18.0	1500	83.8	41.9	58.9	0.0175	<2.5
K-3	Oct-09	Oct	20-Oct-09	L833787-3	Water	6.46	2.35	825	7.97	--	0.536	--	454	7.12	42.0	245	41.7	5.5	4.5	<0.0050	<0.050
K-3	Jul-12	Jul	5-Jul-12	L1175734-10	Water	7.29	10.69	372	11.55		--	414	196	8.02	14	316	18.4	4.3	10.8	<0.0050	<0.050
K-3	Aug-12	Aug	17-Aug-12	L1196665-23	Water	6.68	--	730	--	--	--	543	266	7.74	6.0	446	3.40	5.5	11.0	<0.0050	<0.050
K-3	Sep-12	Sep	1-Sep-12	L1204850-11	Water	6.50	11.24	535	9.66	184	--	786	404	6.35	12.3	650	16.1	11.6	18.9	<0.0050	<0.050
K-3	Oct-12	Oct	2-Oct-12	L1220179-8	Water	--	--	--	--	--	--	200	80.4	6.23	<3.0	135	0.76	6.1	4.4	<0.0050	<0.050
K-4	Jun-10	Jun	7-Jun-10	L897476-14	Water	3.20	2.89	190		314	0.214	--	20.0	3.21	5.8	71	22.9	47.5	<2.0	<0.0050	<0.25
K-4	Jul-10	Jul	6-Jul-10	L907299-16	Water	2.55	2.12	715	7.93	510	0.825	1140	390	3.11	<3.0	797	0.13	140	<2.0	0.0318	<0.50
K-4	Aug-10	Aug	9-Aug-10	L918999-25	Water	2.42	3.71	956	5.93	624	1.047	--	391	3.23	<3.0	787	3.09	134	<2.0	0.0284	<0.50
K-4	Jul-12	Jul	5-Jul-12	L1175734-20	Water	3.70	1.90	917	7.80	--	--	780	182	3.18	<3.0	477	<0.10	113	<2.0	0.0131	<0.50
K-4	Aug-12	Aug	17-Aug-12	L1196665-21	Water	5.83	6.30	1120	7.86	--	--	964	307	3.19	<3.0	699	<0.10	133	<2.0	0.0122	<0.50
K-4	Sep-12	Sep	1-Sep-12	L1204850-9,10	Water	2.90	4.29	724	11.32	512	--	1115	403	3.22	<3.0	892	0.29	171.5	<2.0	0.0184	<0.50
K-4	Oct-12	Oct	2-Oct-12	L1220179-6	Water	2.81	2.84	399	11.32	475	0.450	969	311	3.20	<3.0	688	0.14	122	<2.0	0.0074	<0.50
K-5	Jun-10	Jun	7-Jun-10	L897476-15	Water	3.08	2.09	660	--	328	0.763	--	292	3.08	8.3	648	23.7	141	<2.0	0.0221	<0.50
K-5	Aug-10	Aug	9-Aug-10	L918999-26	Water	2.80	3.05	1177	3.60	503	1.317	--	576	3.41	12.3	1230	29.5	243	<1.0	0.0552	<2.5
K-5	Jul-12	Jul	5-Jul-12	L1175734-8	Water	1.25	4.64	1069	172	--	--	1060	360	3.25	4.0	950	8.32	164	<2.0	0.287	<0.50
K-5	Aug-12	Aug	17-Aug-12	L1196665-22	Water	6.20	4.20	1320	1.24	--	--	1240	481	3.44	29.5	1190	53.6	220	<2.0	0.0377	<0.50
K-5	Sep-12	Sep	1-Sep-12	L1204850-8	Water	2.61	3.33	806	2.82	355	--	1350	552	3.37	23	1210	54.5	234	<2.0	0.0444	<0.50
K-5	Oct-12	Oct	2-Oct-12	L1220179-7	Water	3.21	2.80		1.76	345	0.786	1310	494	3.18	14.5	1070	8.68	203	<2.0	0.0379	<0.50
Sulphurets																					
S-1	Oct-09	Oct	21-Oct-09	L833787-4	Water	6.46	4.50	219	12.00	--	0.142	--	91.0	7.78	<3.0	127	0.77	2.7	24.2	0.0107	<0.050
S-1	Oct-12	Oct	3-Oct-12	L1220179-34	Water							226	102	8.20	<3.0	154	0.61	3.7	37.8	<0.0050	<0.050
Mitchell																					
MN-A	Jul-09	Jul	13-Jul-09	L792603-1	Water	6.12	12.44	237	8.65	419	0.203	329	136	6.77	3.3	227	0.86	5.3	20.9	<0.0050	<0.050
MN-A	Aug-09	Aug	27-Aug-09	not sampled	Water	5.42	9.61	387	8.28	207	--	--	--	--	--	--	--				
MN-A	Sep-09	Sep	20-Sep-09	L830787-8	Water	6.24	7.36	453	8.77	291	0.294	--	260	6.45	3.3	323	1.91	8.0	24.1	<0.0050	<0.050
MN-A	Oct-09	Oct	21-Oct-09	L833847-5	Water	5.49	5.88	393	9.62	413	0.256	--	200	5.93	4.0	350	1.63	13.1	7.0	<0.0050	<0.050
MN-A	Jun-10	Jun	8-Jun-10	L897476-25	Water	6.01	9.47	553		152	0.360	--	169	6.50	5.3	314	1.84	9.9	9.7	<0.0050	<0.050
MN-A	Jul-10	Jul	7-Jul-10	L907299-23	Water	5.60	14.55	442	7.80	228	0.363	393	174	5.21	<3.0	316	0.13	25.1	3.0	<0.0050	<0.050
MN-A	Aug-10	Aug	1-Aug-10	L918999-17,18	Water	5.74	9.64	425	7.78	273	0.391	--	191	7.26	10.3	317	4.14	7.9	22.4	<0.0050	<0.050
MN-A	Jul-12	Jul	7-Jul-12	L1175734-15	Water	5.82	12.07	3.19	9.83	--	--	303	138	7.61	4.0	218	1.24	5.1	14.8	<0.0050	<0.050
MN-A	Aug-12	Aug	17-Aug-12	L1196665-11	Water	6.88	14.50	360	8.39	--	--	336	141	6.54	3.3	243	0.50	8.9	22.7	<0.0050	<0.050
MN-A	Sep-12	Sep	2-Sep-12	L1204850-18	Water	7.12	10.95	275	10.38	330		362	161	8.04	<3.0	261	0.37	5.55	27.6	<0.0050	<0.050
MN-A	Oct-12	Oct	3-Oct-12	L1220179-13	Water	7.52	5.13	139	12.15	152	0.120	389	180	6.68	3.4	297	1.01	5.2	14.8	<0.0050	<0.050
MN-B	Jul-09	Jul	12-Jul-09	L792602-1	Water	--	--	--	--	--	--	248	98.2	5.60	<3.0	180	0.78	14.6	2.4	<0.005	<0.005
MN-B	Aug-10	Aug	1-Aug-10	L918999-19, 20	Water	4.71	9.22	240	9.62	296	0.223	--	88.6	6.23	<3.0	169	<0.10	17.1	<2.0	<0.0050	<0.050
MN-B	Aug-12	Aug	17-Aug-12	L1196665-13	Water	6.52	13.60	210	7.19	--	--	190	69.6	6.81	<3.0	136	0.28	6.2	2.8	<0.0050	<0.050
MN-B	Sep-12	Sep	3-Sep-12	L1204850-15	Water	6.40	6.05	122	11.47	188	--	198	81.1	8.17	<3.0	137	0.15	3.3	8.3	<0.0050	<0.050
MN-B	Oct-12	Oct	3-Oct-12	L1220179-14	Water							163	67.4	7.51	<3.0	114	0.90	4.5	6.6	<0.0050	<0.050
MN-C	Aug-10	Aug	1-Aug-10	L918999-21, 22	Water	6.38	11.39	525	8.76	200	0.459	--	253	5.19	3.6	487	3.45	56.00	<2.0	<0.0050	<0.050
MN-C	Aug-12	Aug	17-Aug-12	L1196665-14	Water	6.91	17.00	510	6.72	--	--	466	211	7.76	<3.0	371	0.28	4.1	20.7	<0.0050	<0.050
MN-C	Sep-12	Sep	3-Sep-12	L1204850-14	Water	7.22	7.58	255	11.58	153	--	403	192	7.93	<3.0	304	0.16	6.7	27.0	<0.0050	<0.050
MN-C	Oct-12	Oct	3-Oct-12	L1220179-15	Water							430	209	7.72	<3.0	321	0.32	4.6	18.3	<0.0050	<0.050
MN-D	Aug-10	Aug	8-Aug-10	L918999-23	Water	2.79	8.65	371	9.36	565	0.351	--	85.7	3.16	44.3	222	66.0	85.0	<1.0	<0.0050	<0.50

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Month Sampled	Date Sampled	ALS Sample ID	Matrix	Field Measurements						Physical Tests										
						pH	Temperature (°C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	TDS (g/L)	Conductivity (uS/cm)	Hardness (as $CaCO_3$) (mg/L)	pH	Suspended Solids (mg/L)	Dissolved Solids (mg/L)	Turbidity (NTU)	Acidity (as $CaCO_3$) (mg/L)	Alkalinity, Total (as $CaCO_3$) (mg/L)	Ammonia as N (mg/L)	Bromide (mg/L)
Mitchell *(cont'd)*																						
MN-D	Aug-12	Aug	17-Aug-12	L1196665-15	Water	6.77	--	200	--	--	--	186	79.8	8.12	<3.0	121	0.19	2.2	48.7	<0.0050	<0.050
MN-D	Sep-12	Sep	3-Sep-12	L1204850-16	Water							401	191	6.87	<3.0	302	<0.10	10	27.7	<0.0050	<0.050
MN-D	Oct-12	Oct	3-Oct-12	L1220179-16	Water							133	62.8	8.10	<3.0	85	0.20	2.5	42.1	<0.0050	<0.050
MS-A	Aug-09	Aug	27-Aug-09	L812958-1	Water	2.33	4.74	1272	17.7%	405	--	1260	175	3.21	<3.0	737	2.17	-	<2.0	0.0106	<0.50
MS-A	Sep-09	Sep	20-Sep-09	L830787-1	Water	3.18	4.35	1495	3.74	412	0.972	--	224	2.91	<3.0	830	0.13	331	<2.0	<0.020	<10
MS-A	Oct-09	Oct	21-Oct-09	L833847-11	Water	2.77	4.13	1366	4.10	415	0.887	--	211	2.93	<3.0	789	0.53	340	<2.0	<0.0050	<1.0
MS-A	Jun-10	Jun	8-Jun-10	L897476-16	Water	2.24	5.47	3412	23.0%	249	3.535	--	350	2.38	11.0	3160	1.89	1740	<2.0	0.121	<10
MS-A	Jul-10	Jul	7-Jul-10	L907299-17	Water	2.23	4.44	2104	4.10	451	2.252	1950	328	2.67	<3.0	1460	0.19	659	<2.0	0.0463	<2.5
MS-A	Jul-12	Jul	6-Jul-12	L1175734-21	Water	4.19	5.47	2000	5.00	--	--	1820	307	2.76	<3.0	1990	<0.10	782	<2.0	<0.0050	<1.0
MS-A	Aug-12	Aug	16-Aug-12	L1196665-2	Water	5.14	6.10	1940	9.77	--	--	1710	288	6.21	<3.0	1860	<0.10	804	<2.0	<0.0050	<1.0
MS-A	Sep-12	Sep	2-Sep-12	L1204850-5	Water	2.71	4.83	1175	5.20	468		1730	308	2.97	<3.0	2060	0.15	851	<2.0	<0.0050	<1.0
MS-A	Oct-12	Oct	3-Oct-12	L1220179-18	Water	2.53	4.94	1594	10.94	419	1.683	2390	397	2.76	<3.0	2810	0.16	1520	<2.0	<0.0050	<1.0
MS-B	Jul-09	Jul	13-Jul-09	L792603-3	Water	2.69	4.66	837	12.25	519	0.889	1340	167	2.72	<3.0	796	0.16	371	<2.0	0.0065	<0.50
MS-B	Aug-09	Aug	27-Aug-09	L812958-2	Water	2.41	4.44	1054	85.6%	487	--	1180	183	2.87	<3.0	607	0.12	285	<2.0	<0.0050	<0.50
MS-B	Sep-09	Sep	20-Sep-09	L830787-2	Water	3.20	4.85	1390	10.33	423	0.904	--	216	2.79	<3.0	751	0.14	356	<2.0	<0.0050	<10
MS-B	Oct-09	Oct	21-Oct-09	L833847-10	Water	2.57	2.57	1303	9.76	497	0.652	--	182	2.81	4.7	832	1.82	380	<2.0	<0.0050	<0.50
MS-B	Jun-10	Jun	8-Jun-10	L897476-17	Water	2.49	4.70	1960	85.4%	316	2.085	--	267	2.56	<5.0	2040	<0.10	1000	<2.0	0.0179	<2.5
MS-B	Jul-10	Jul	7-Jul-10	L907299-18	Water	2.30	5.80	1573	11.03	574	1.615	1420	222	2.76	<3.0	979	0.11	439	<2.0	<0.0050	<2.5
MS-B	Jul-12	Jul	6-Jul-12	L1175734-23	Water	9.54	3.73	1550	8.80	--	--	1620	232	2.72	<3.0	1390	<0.10	588	<2.0	0.0071	<0.50
MS-B	Aug-12	Aug	16-Aug-12	L1196665-3	Water	5.68	4.70	1410	9.42	--	--	1190	191	2.85	<3.0	771	<0.10	297	<2.0	<0.0050	<0.50
MS-B	Sep-12	Sep	2-Sep-12	L1204850-6	Water	2.46	4.47	840	11.76	522	--	1220	186	2.87	<3.0	882	0.14	327	<2.0	<0.0050	<0.50
MS-B	Oct-12	Oct	3-Oct-12	L1220179-19	Water	2.44	4.33	1016	11.74	552	1.091	1570	200	2.72	<3.0	1270	0.11	611	<2.0	<0.0050	<1.0
MS-C1	Jul-09	Jul	13-Jul-09	L792603-7	Water	5.04	9.79	557	8.23	299	0.514	936	185	2.99	<3.0	555	0.51	187	<2.0	<0.0050	<0.050
MS-C1	Jun-10	Jun	8-Jun-10	L897476-22	Water	2.90	3.19	1270	16.3%	277	1.401	--	430	3.00	<5.0	1400	5.57	448	<2.0	<0.0050	<1.0
MS-C1	Jul-10	Jul	7-Jul-10	L907299-22	Water	2.85	3.78	864	3.08	453	0.944	851	215	3.29	<3.0	599	1.54	164	<2.0	<0.0050	<0.50
MS-C1	Aug-10	Aug	8-Aug-10	L918999-16	Water	2.55	4.13	621	4.56	530	0.670	--	175	6.36	5.8	265	1.56	14.5	29.7	<0.0050	<0.050
MS-C1-2	Jul-12	Jul	6-Jul-12	L1175734-13	Water	5.55	14.40	8.63	8.42	--	--	881	239	3.32	26	710	82.1	172	<2.0	0.0083	<0.50
MS-C1-2	Aug-12	Aug	16-Aug-12	L1196665-6	Water	5.53	13.00	930	8.72	--	--	814	226	3.48	19	655	49.5	164	<2.0	<0.0050	<0.50
MS-C1-2	Sep-12	Sep	2-Sep-12	L1204850-24	Water	2.98	8.32	667	10.71	407	--	870	200	3.26	<3.0	776	11.0	221	<2.0	<0.0050	<0.50
MS-C1-2	Oct-12	Oct	3-Oct-12	L1220179-27	Water	3.14	5.59	557	11.84	401	0.576	895	246	3.37	27.2	635	17.8	170	<2.0	0.0065	<0.50
MS-C2	Jul-09	Jul	13-Jul-09	L792603-6	Water	3.00	7.04	564	9.45	484	0.557	808	196	3.14	1.5	531	0.22	149	2.0	0.0050	0.05
MS-C2	Jun-10	Jun	8-Jun-10	L897476-23	Water	2.88	6.14	1209	34.3%	215	1.227	--	350	2.88	25.5	1110	25.1	394	<2.0	<0.0050	<1.0
MS-C2	Jul-12	Jul	7-Jul-12	L1175734-18	Water	7.05	12.12	812	8.50	--	--	894	219	3.14	<3.0	713	<0.10	176	<2.0	<0.0050	<0.50
MS-C2	Aug-12	Aug	16-Aug-12	L1196665-1	Water	5.97	5.30	750	1.18	--	--	628	188	8.16	<3.0	453	0.25	352	<2.0	<0.0050	<0.25
MS-C2	Sep-12	Sep	2-Sep-12	L1204850-23	Water							595	167	3.54	3	448	8.58	90.3	<2.0	<0.0050	<0.050
MS-C2	Oct-12	Oct	3-Oct-12	L1220179-17	Water							777	213	3.28	<3.0	509	0.10	136	<2.0	<0.0050	<0.50
MS-C2-2	Jul-12	Jul	6-Jul-12	L1175734-12	Water	2.74	4.77	1060	4.78	--	--	734	363	6.75	34	616	129	15.5	12.2	0.0094	<0.25
MS-C2-2	Aug-12	Aug	16-Aug-12	L1196665-8	Water	6.97	--	800	--	--	--	722	339	6.08	39	614	160	32.5	10.7	0.0078	<0.25
MS-C2-2	Sep-12	Sep	2-Sep-12	L1204850-25	Water	5.90	8.41	494	10.39	169	--	717	341	5.89	32.3	651	131	29.6	6.9	0.0077	<0.050
MS-C2-2	Oct-12	Oct	3-Oct-12	L1220179-28	Water	--	--	--	--	--	--	672	296	6.21	36.6	556	159	26.4	8.2	0.0072	<0.050
MS-C3	Aug-09	Aug	27-Aug-09	L812958-4	Water	3.08	6.65	566	8.27	406	--	614	162	3.27	<3.0	383	0.15	-	<2.0	<0.0050	<0.050
MS-C3	Sep-09	Sep	20-Sep-09	L830787-3,4	Water	3.86	4.19	659	3.04	377	0.430	--	228	3.33	<3.0	398	3.12	77.4	<2.0	<0.0050	<0.050
MS-C3	Oct-09	Oct	21-Oct-09	L833847-9	Water	3.21	3.88	614	3.03	410	0.399	--	197	3.45	<3.0	416	0.16	78.5	<2.0	<0.0050	<0.050
MS-C3	Jun-10	Jun	8-Jun-10	L897476-21	Water	5.63	3.73	561	3.9%	131	0.614	--	302	3.52	33.3	604	87.8	63.7	<2.0	<0.010	<0.50
MS-C3	Jul-10	Jul	7-Jul-10	L907299-21	Water	5.36	3.80	5.21	0.26	218	0.570	546	213	5.68	11.0	441	35.6	32.5	6.4	0.0056	<0.050

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Month Sampled	Date Sampled	ALS Sample ID	Matrix	Field Measurements						Physical Tests										
						pH	Temperature (°C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	TDS (g/L)	Conductivity (uS/cm)	Hardness (as $CaCO_3$) (mg/L)	pH	Suspended Solids (mg/L)	Dissolved Solids (mg/L)	Turbidity (NTU)	Acidity (as $CaCO_3$) (mg/L)	Alkalinity, Total (as $CaCO_3$) (mg/L)	Ammonia as N (mg/L)	Bromide (mg/L)
Mitchell *(cont'd)*																						
MS-C4	Jul-09	Jul	13-Jul-09	L792603-5,4	Water	3.49	6.57	321	6.62	453	0.328	380	113	3.85	16.6	242	42.6	36.4	<2.0	<0.0050	<0.050
MS-C4	Aug-09	Aug	27-Aug-09	L812958-5,6,7	Water	3.38	4.49	427	3.83	352	--	417	164	5.95	8.2	304	13.8	-	12.2	<0.0050	<0.050
MS-C4	Sep-09	Sep	20-Sep-09	L830787-5,6	Water	5.59	3.91	476	4.60	325	0.310	--	255	6.01	10.6	335	33.0	17.3	8.9	<0.0050	<0.050
MS-C4	Oct-09	Oct	21-Oct-09	L833847-8	Water	5.00	3.84	491	2.89	286	0.292	--	190	3.62	27.5	398	59.8	48.2	<2.0	<0.0050	<0.050
MS-D	Jul-12	Jul	7-Jul-12	L1175734-17	Water	6.99	4.08	720	3.22	--	--	716	229	3.37	<3.0	523	2.71	96.7	<2.0	<0.0050	<0.25
MS-D	Aug-12	Aug	16-Aug-12	L1196665-4	Water	6.47	4.20	490	0.37	--	--	440	190	6.06	8.5	341	11.5	22.6	16.6	<0.0050	<0.050
MS-D	Sep-12	Sep	2-Sep-12	L1204850-26	Water	5.44	4.24	282	11.48	346	--	434	191	7.18	9.7	339	18.6	11.3	13.6	<0.0050	<0.050
MS-D	Oct-12	Oct	3-Oct-12	L1220179-20	Water	3.80	4.21	329	12.01	389	0.353	592	209	3.62	16.4	421	17.6	50.4	<2.0	<0.0050	<0.050
MS-D-2	Jul-12	Jul	6-Jul-12	L1175734-11	Water	4.17	4.26	644	10.31	--	--	748	242	3.56	12	619	31.2	107	<2.0	0.0139	<0.25
MS-D-2	Aug-12	Aug	16-Aug-12	L1196665-9	Water	6.56	4.30	670	1.75	--	--	620	205	4.51	5.4	533	5.47	111	<2.0	0.0105	<0.050
MS-D-2	Sep-12	Sep	2-Sep-12	L1204850-28	Water	3.29	3.71	381	5.41	392	--	652	220	3.85	5.7	611	14.2	110	<2.0	0.0116	<0.050
MS D-2	Oct-12	Oct	3-Oct-12	L1220179-29	Water	4.52	3.71	368	7.00	243	0.404	705	229	3.77	12.2	536	2.27	106	<2.0	0.0105	<0.25
MS-E	Jul-09	Jul	13-Jul-09	L792603-2	Water		--	--	--	--	--	4920	487	2.20	25.8	5700	16.8	4050	<2.0	0.186	<25
MS-E	Aug-09	Aug	27-Aug-09	L812958-3	Water	2.26	8.14	2932	9.21	467	--	3050	587	2.8	24	3960	16.9	-	<2.0	0.104	<10
MS-E	Jun-10	Jun	8-Jun-10	L897476-20	Water	2.19	11.37	7037	81.5%	385	6.184	--	835	2.24	12.3	14200	3.75	7340	<1.0	<0.010	<25
MS-E	Jul-10	Jul	8-Jul-10	L907299-38	Water	2.48	20.46	3564	6.51	433	2.537	2700	610	2.68	14.4	3140	3.75	1470	<1.0	0.0804	15.1
MS-E	Aug-10	Aug	8-Aug-10	L918999-15	Water	2.02	9.47	2765	8.36	577	2.555	--	607	2.65	9.5	3530	0.39	1660	<1.0	0.0948	<5.0
MS-E	Jul-12	Jul	6-Jul-12	L1175734-25	Water	4.40	3.96	3570	8.66	--	--	3090	651	2.87	56.7	4710	94.4	2210	<2.0	0.0179	<2.0
MS-E	Aug-12	Aug	16-Aug-12	L1196665-5	Water	--	--	--	--	--	--	2250	497	2.93	11.5	2780	14.8	1230	<2.0	<0.0050	<1.0
MS-E	Sep-12	Sep	2-Sep-12	L1204850-4	Water	--	--	--	--	--	--	2480	462	2.79	11	3430	7.65	1420	<2.0	<0.0050	<1.0
MS-E	Oct-12	Oct	3-Oct-12	L1220179-21	Water	--	--	--	--	--	--	3950	614	2.49	94.8	5130	120	2680	<2.0	<0.0050	<1.0
MS-G	Sep-09	Sep	20-Sep-09	L830787-7	Water	3.47	4.70	1484	8.74	414	2.638	--	305	2.89	-	-	-	490	<2.0	-	<10
MS-G	Oct-09	Oct		L833847-7,12	Water	2.95	4.51	1360	9.31	421	0.879	--	315	3.06	13.7	1240	63.45	481	<2.0	0.0186	<1.0
MS-G	Jun-10	Jun	1-Jun-10	L897476-18,19	Water	2.61	5.69	3501	0.78	337	3.620	--	748	2.68	<3.0	5870	10.96	2805	<1.0	<0.010	<10
MS-G	Jul-10	Jul	1-Jul-10	L907299-19,20	Water	2.61	5.77	1623	9.62	464	1.667	1580	339	2.98	<5.0	1500	6.27	661	<2.0	0.0312	<2.5
MS-G	Aug-10	Aug	8-Aug-10	L918999-14	Water	2.21	4.96	1053	10.25	594	1.109	--	218	2.97	3.7	1060	8.54	386	<2.0	<0.0050	<2.5
MS-G	Jul-12	Jul	6-Jul-12	L1175734-22	Water	4.65	5.72	2275	4.00	--	--	2015	458	2.95	<3.0	2545	<0.10	956	<2.0	<0.0050	<1.0
MS-G	Aug-12	Aug	16-Aug-12	L1196665-10	Water	5.83	6.30	1160	5.06	--	--	1040	233	3.28	3.4	1010	5.13	310	<2.0	<0.0050	<0.50
MS-G	Sep-12	Sep	2-Sep-12	L1204850-7	Water	2.69	4.71	711	7.32	469	--	1130	274	3.20	<3.0	1130	6.05	352	<2.0	<0.0050	<0.50
MS-G	Oct-12	Oct	3-Oct-12	L1220179-22	Water	2.66	4.77	1278	4.41	429	1.352	2110	408	2.82	5.0	2380	1.55	1160	<2.0	<0.0050	<1.0
MS-H	Jun-10	Jun	1-Jun-10	L897476-26,27	Water	7.06	4.70	303	0.78	84	0.321	--	156	7.78	5.8	282	3.42	5.85	38.9	<0.0050	<0.050
MS-H	Jul-10	Jul	1-Jul-10	L907299-24,25	Water	6.13	3.67	302	6.13	185	0.331	323	138	7.48	<3.0	228	6.54	7.3	34.3	<0.0050	<0.050
MS-H	Jul-12	Jul	7-Jul-12	L1175734-1	Water	7.27	4.50	320	12.53	--	--	317	139	7.11	8.0	240	3.10	7.0	25.2	<0.0050	<0.050
MS-H	Aug-12	Aug	17-Aug-12	L1196665-16	Water	7.02	5.60	320	11.03	--	--	291	126	7.82	<3.0	209	0.28	3.4	33.9	<0.0050	<0.050
MS-H	Sep-12	Sep	3-Sep-12	L1204850-31	Water	6.44	4.26	195	13.21	170	--	321	149	8.14	3.7	234	1.06	4.3	40.1	<0.0050	<0.050
MS-H	Oct-12	Oct	4-Oct-12	L1220179-33	Water	--	--	--	--	--	--	363	167	7.98	<3.0	242	0.56	8.3	43.2	<0.0050	<0.050
MS-I	Jun-10	Jun	10-Jun-10	L897476-38	Water	5.15	9.71	631	57.2%	108	0.581	--	285	5.87	<3.0	512	0.50	17.8	5.1	<0.0050	<0.050
MS-I	Jul-10	Jul	7-Jul-10	L907299-26	Water	5.13	11.40	780	7.29	214	0.685	668	319	5.51	4.0	549	0.70	16.9	6.1	<0.0050	<0.050
MS-I	Jul-12	Jul	7-Jul-12	L1175734-2	Water	8.12	8.04	1412	8.86	--	--	1340	803	7.97	4.0	1220	4.02	5.9	101	<0.0050	<0.50
MS-I	Aug-12	Aug	17-Aug-12	L1196665-17	Water	7.34	10.80	1390	7.83	--	--	1300	796	7.91	<3.0	1200	0.70	5.2	97.8	<0.0050	<0.50
MS-I	Sep-12	Sep	3-Sep-12	L1204850-29	Water	6.76	6.91	854	7.90	131	--	1210	702	7.35	3.0	1090	1.87	12.4	83.5	<0.0050	<0.50
MS-I	Oct-12	Oct	3-Oct-12	L1220179-23	Water	6.71	6.31	773	10.15	108	0.782	1200	705	6.57	<3.0	1060	3.31	23.3	83.9	<0.0050	<0.50
MS-J	Jun-10	Jun	10-Jun-10	L897476-39	Water	6.67	5.57	354	99.6%	67	0.365	--	303	6.81	34.4	557	197	14.6	27.5	0.0096	<0.50
MS-J	Jul-10	Jul	7-Jul-10	L907299-27,28	Water	6.12	5.19	634	3.21	142	0.665	621	247	7.27	24.8	474	187	11.2	29.8	0.0106	<0.050
MS-J	Aug-10	Aug	9-Aug-10	L918999-27	Water	--	6.26	559	10.26	225	0.566	--	241	6.88	25.8	432	133	14.6	32.4	0.0096	0.52

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Month Sampled	Date Sampled	ALS Sample ID	Matrix	Field Measurements						Physical Tests									
						pH	Temperature (°C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	TDS (g/L)	Conductivity (uS/cm)	Hardness (as $CaCO_3$) (mg/L)	pH	Suspended Solids (mg/L)	Dissolved Solids (mg/L)	Turbidity (NTU)	Acidity (as $CaCO_3$) (mg/L)	Alkalinity, Total (as $CaCO_3$) (mg/L)	Ammonia as N (mg/L)	Bromide (mg/L)
Mitchell *(cont'd)*																					
MS-J	Jul-12	Jul	7-Jul-12	L1175734-5	Water	7.26	4.97	690	4.70	--	--	606	246	6.44	44.7	484	110	14.8	17.7	0.0069	<0.050
MS-J	Aug-12	Aug	17-Aug-12	L1196665-18	Water	6.78	7.40	580	7.34	--	--	519	203	7.39	39.9	391	70.3	10.5	29.9	0.0068	<0.050
MS-J	Sep-12	Sep	3-Sep-12	L1204850-32	Water	5.55	5.11	336	9.66	208	--	511	208	7.77	29	376	67.7	10.0	34.3	0.0063	<0.050
MS-J	Oct-12	Oct	3-Oct-12	L1220179-24	Water	--	--	--	--	--	--	522	214	7.71	21.2	375	68.6	12.1	33.4	<0.0050	<0.050
MS-L	Jul-12	Jul	7-Jul-12	L1175734-3	Water	8.70	7.46	780	8.36	--	--	773	370	7.91	6.0	608	37.4	6.7	115	<0.0050	<0.050
MS-L	Aug-12	Aug	17-Aug-12	L1196665-19	Water	7.13	8.60	810	7.86	--	--	753	362	7.89	3.7	597	27.6	5.2	110	<0.0050	<0.50
MS-L	Sep-12	Sep	3-Sep-12	L1204850-30	Water	6.56	6.84	514	10.31	142	--	748	355	7.95	<3.0	584	26.4	7.6	112	0.0065	<0.050
MS-L	Oct-12	Oct	3-Oct-12	L1220179-25	Water	--	--	--	--	--	--	734	347	7.99	3.8	546	23.8	9.1	111	<0.0050	<0.50
MS-M	Jul-12	Jul	7-Jul-12	L1175734-19	Water	7.62	6.30	626	9.54	--	--	752	281	6.57	49.3	609	204	19.4	21.4	0.0127	<0.50
MS-M	Aug-12	Aug	17-Aug-12	L1196665-20	Water	6.89	6.00	720	4.60	--	--	655	241	6.82	31.9	500	167	15.7	30.4	0.0112	<0.050
MS-M	Sep-12	Sep	3-Sep-12	L1204850-33	Water	5.43	4.86	419	6.65	177	--	641	233	7.67	27.7	483	137	11.0	31.6	0.0108	<0.050
MS-M	Oct-12	Oct	3-Oct-12	L1220179-26	Water	6.27	4.86	410	7.15	69	0.432	655	253	7.82	27.2	489	152	11.2	33.4	0.0093	<0.050
MS-S	Jul-12	Jul	7-Jul-12	L1175734-4	Water	--	--	--	--	--	--	606	244	6.38	46	480	108	15.4	18.0	0.0073	<0.050
MS-T	Jul-12	Jul	7-Jul-12	L1175734-16	Water	5.82	12.07	3.19	9.83	--	--	302	137	7.78	<3.0	226	0.80	7.2	14.7	<0.0050	<0.050
MS-U	Jul-12	Jul	7-Jul-12	L1175734-14	Water	3.20	3.74	1367	4.24	--	--	1210	198	2.88	<3.0	1000	0.14	345	<2.0	0.0070	<0.50

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as N (mg/L)	Nitrite as N (mg/L)	Total Nitrogen (mg/L)	Ortho Phosphate as P (mg/L)	Total Phosphate as P (mg/L)	Sulfate (mg/L)	Organic Carbon (mg/L)	Total Metals (mg/L)	Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron
Kerr																								
K-1	Oct-09	<25	0.55	<0.25	<0.050			0.202	751	<0.50		7.57	0.00091	0.0260	0.00879	<0.0025	<0.0025	<0.050	0.00259	192	0.0042	0.0339	4.23	67.4
K-2	Oct-09	<25	0.569	<0.25	<0.050			<0.0020	948	<0.50		0.0053	<0.00050	0.00630	0.00539	<0.0025	<0.0025	<0.050	<0.000050	339	<0.0025	0.0119	0.00392	35.7
K-3	Oct-09	<0.50	0.134	<0.0050	<0.0010			0.039	162	1.50		0.290	<0.00020	0.0273	0.0108	<0.0010	<0.0010	<0.020	0.000059	165	<0.0010	0.00774	0.0344	31.7
K-3	Jul-12	<0.50	0.177	<0.0050	<0.0010	<0.050	<0.0010	0.037	194	0.9		0.0533	<0.00010	0.00079	0.00854	<0.00010	<0.00050	0.011	0.000019	73	<0.00010	0.00151	0.00378	3.41
K-3	Aug-12	<0.50	0.213	<0.0050	<0.0010	<0.050	<0.0010	0.0069	272	0.62		0.0351	<0.00010	<0.00010	0.0170	<0.00010	<0.00050	0.011	0.000029	96.2	<0.00010	0.00013	0.00248	0.046
K-3	Sep-12	<0.50	0.255	<0.0050	<0.0010	<0.050	<0.0010	<0.0020	391	<0.50		0.0101	<0.00010	0.0004	0.0084	<0.00010	<0.00050	0.013	<0.000010	154	0.0001	0.00185	0.00088	1.69
K-3	Oct-12	<0.50	0.105	<0.0050	<0.0010	<0.050	<0.0010	0.0027	85	1.52		0.102	<0.00010	<0.00010	0.0125	<0.00010	<0.00050	<0.010	0.000036	29.2	<0.00010	0.00059	0.00678	0.188
K-4	Jun-10	<2.5	<0.10	<0.025	<0.0050	<0.050		0.0231	60.0	<0.50		0.593	<0.00010	0.00048	0.0252	<0.00050	<0.00050	<0.010	0.000201	6.49	0.00081	0.00536	0.198	7.06
K-4	Jul-10	<5.0	0.47	<0.050	<0.010	<0.050		0.0221	537	0.58		6.14	<0.00020	0.00037	0.0103	<0.0010	<0.0010	<0.020	0.00212	134	0.0011	0.0265	1.77	16.9
K-4	Aug-10	<5.0	0.63	<0.050	<0.010	<0.050		0.0090	575	<0.50		6.08	<0.00020	0.00111	0.0102	<0.0010	<0.0010	<0.020	0.00195	133	0.00137	0.0245	1.87	18.0
K-4	Jul-12	<5.0	0.33	0.085	<0.010	<0.050	0.0093	<0.020	309	<0.50		3.30	<0.00010	0.00017	0.0105	0.00029	<0.00050	<0.010	0.00119	66.4	0.00126	0.0148	1.36	13.5
K-4	Aug-12	<5.0	0.60	<0.050	<0.010	<0.050	0.0103	0.0083	436	<0.50		5.49	<0.00010	0.00025	0.00701	0.00041	<0.00050	<0.010	0.00195	108	0.00155	0.0246	2.23	21.4
K-4	Sep-12	<5.0	0.69	<0.050	<0.010	<0.050	0.0029	0.0032	546	<0.50		6.08	<0.00010	0.00024	0.00672	0.000455	<0.00050	<0.010	0.00234	142	0.001585	0.0281	2.565	29.5
K-4	Oct-12	6.1	0.51	<0.050	<0.010	<0.050	0.0253	0.0259	445	0.64		5.23	<0.00010	0.00075	0.0188	0.00029	<0.00050	<0.010	0.00183	109	0.00105	0.022	1.84	15.2
K-5	Jun-10	<5.0	0.49	<0.050	<0.010	<0.050		0.0440	491	<0.50		5.58	<0.00020	0.00236	0.0169	<0.0010	<0.0010	<0.020	0.00198	119	0.00135	0.0237	1.87	20.7
K-5	Aug-10	<25	1.00	<0.25	<0.050	<0.050		0.0200	911	<0.50		8.52	<0.00050	0.00929	0.00502	<0.0025	<0.0025	<0.050	0.00324	206	0.0016	0.0391	3.34	77.5
K-5	Jul-12	<5.0	0.65	0.074	<0.010	<0.050	0.0893	0.237	548	<0.50		6.12	0.00019	0.00960	0.00909	0.00049	<0.00050	<0.010	0.00235	126	0.0021	0.028	2.57	45.5
K-5	Aug-12	<5.0	0.91	<0.050	<0.010	<0.050	0.0247	0.423	702	<0.50		8.22	0.00021	0.0154	0.00579	0.00059	<0.00050	<0.010	0.00293	164	0.00256	0.0365	3.57	64.8
K-5	Sep-12	<5.0	0.97	<0.050	<0.010	<0.050	0.0012	0.306	738	<0.50		8.65	0.00024	0.0181	0.00484	0.00064	<0.00050	<0.010	0.00304	187	0.00277	0.0383	3.91	72.2
K-5	Oct-12	<5.0	0.93	<0.050	0.012	0.050	0.0482	0.248	709	<0.50		8.79	0.00019	0.0154	0.00663	0.00060	<0.00050	<0.010	0.00283	171	0.00288	0.0369	3.8	65
Sulphurets																								
S-1	Oct-09	<0.50	0.056	<0.0050	<0.0010			<0.0020	69.8	0.66		0.165	0.00052	0.00026	0.0391	<0.00050	<0.00050	<0.010	0.000047	36.8	<0.00050	<0.00010	0.00110	<0.030
S-1	Oct-12	<0.50	0.085	0.005	<0.0010	0.11	<0.0010	0.0032	71.7	3.61		0.0340	0.00087	0.00101	0.0269	<0.00010	<0.00050	<0.010	<0.000010	39.7	0.00014	<0.00010	0.00568	<0.030
Mitchell																								
MN-A	Jul-09	<0.50	0.876	<0.0050	<0.0010	<0.050	<0.0010	<0.0020	136	<0.50		0.818	0.00035	0.00462	0.0161	<0.00050	<0.00050	<0.010	0.00224	48.6	<0.00050	0.00164	0.705	<0.030
MN-A	Aug-09									--		--	--	--	--	--	--	--	--	--	--	--	--	--
MN-A	Sep-09	<0.50	1.03	0.0076	<0.0010		<0.0010	<0.0020	190	<0.50		0.639	0.00018	0.00010	0.0163	<0.00050	<0.00050	<0.010	0.00361	104	<0.00050	0.00177	1.10	<0.030
MN-A	Oct-09	<0.50	1.08	<0.0050	<0.0010			<0.0020	213	<0.50		1.34	0.00011	0.00020	0.0124	<0.00050	<0.00050	<0.010	0.00457	67.9	<0.00050	0.00473	1.29	0.058
MN-A	Jun-10	<0.50	0.917	<0.0050	<0.0010	<0.050		<0.0020	198	<0.50		1.26	0.00011	<0.00010	0.0119	<0.00050	<0.00050	<0.010	0.00395	62.5	<0.00020	0.00303	1.28	<0.030
MN-A	Jul-10	<0.50	0.913	<0.0050	<0.0010	<0.050		<0.0020	191	<0.50		1.68	<0.00010	<0.00010	0.0116	<0.00050	<0.00050	<0.010	0.00378	54.5	<0.00020	0.00573	1.37	<0.030
MN-A	Aug-10	<0.50	1.26	<0.0050	<0.0010	<0.050		<0.0020	208	<0.50		3.91	0.00025	<0.00010	0.0192	<0.00050	<0.00050	<0.010	0.00447	75.65	<0.00050	0.00253	1.56	<0.030
MN-A	Jul-12	<0.50	0.873	<0.0050	<0.0010	<0.050	<0.0010	0.0026	129	<0.50		0.646	0.00023	0.00017	0.0172	0.00018	<0.00050	<0.010	0.00161	51.4	0.00015	0.00164	0.452	<0.030
MN-A	Aug-12	<0.50	0.977	<0.0050	<0.0010	<0.050	<0.0010	<0.0020	141	<0.50		0.447	0.00027	0.00012	0.0175	0.00013	<0.00050	<0.010	0.00143	53.4	<0.00010	0.00131	0.299	<0.030
MN-A	Sep-12	<0.50	1.02	<0.0050	<0.0010	<0.050	<0.0010	<0.0020	144	<0.50		0.349	0.000265	0.000165	0.0178	<0.00010	<0.00050	<0.010	0.00127	60.4	<0.00010	0.000905	0.247	<0.030
MN-A	Oct-12	<0.50	0.988	<0.0050	<0.0010	<0.050	<0.0010	<0.0020	175	<0.50		0.761	0.00018	0.00016	0.0155	0.00019	<0.00050	<0.010	0.00238	66.1	<0.00010	0.00429	0.634	<0.030
MN-B	Jul-09	<0.5	2.05	0.0152	<0.001	<0.05	0.0017	<0.002	107	<0.50		1.42	<0.0001	0.00017	0.0193	<0.0005	<0.0005	<0.01	0.00155	39.6	<0.0005	0.00059	0.613	0.1
MN-B	Aug-10	<0.50	0.486	<0.0050	<0.0010	<0.050		<0.0020	94.7	<0.50		0.988	0.000905	<0.00020	0.0275	<0.00050	<0.00050	<0.010	0.00533	34.4	<0.00050	0.00604	0.99	<0.030
MN-B	Aug-12	<0.50	0.406	<0.0050	<0.0010	<0.050	<0.0010	<0.0020	83.7	<0.50		0.31	0.00142	0.00016	0.0308	<0.00010	<0.00050	<0.010	0.00414	27.8	<0.00010	0.00211	0.348	<0.030
MN-B	Sep-12	<0.50	0.401	<0.0050	<0.0010	<0.050	<0.0010	<0.0020	79.1	<0.50		0.0669	0.00129	<0.00010	0.0276	<0.00010	<0.00050	<0.010	0.00224	34.1	<0.00010	0.00115	0.126	<0.030
MN-B	Oct-12	<0.50	0.393	<0.0050	<0.0010	<0.050	<0.0010	<0.0020	66.2	<0.50		0.423	0.00117	0.00018	0.0222	0.0001	<0.00050	<0.010	0.00255	30.5	0.00014	0.00153	0.245	0.062
MN-C	Aug-10	<0.50	0.836	<0.0050	<0.0010	<0.050		<0.0020	275	<0.50		2.17	0.00050	<0.00020	0.0110	<0.0010	<0.0010	<0.020	0.00727	93.10	<0.00040	0.00895	2.15	<0.030
MN-C	Aug-12	<0.50	0.327	<0.0050	<0.0010	<0.050	<0.0010	<0.0020	216	<0.50		0.424	0.00067	0.00018	0.0218	<0.00010	<0.00050	<0.010	0.000661	72.8	<0.00010	0.00233	0.022	0.044
MN-C	Sep-12	<0.50	0.284	<0.0050	<0.0010	<0.050	<0.0010	<0.0020	167	<0.50		0.147	0.00038	<0.00010	0.0144	<0.00010	<0.00050	<0.010	0.000872	72.8	<0.00010	0.0019	0.0325	<0.030
MN-C	Oct-12	<0.50	0.288	<0.0050	<0.0010	<0.050	<0.0010	<0.0020	195	<0.50		0.381	0.00041	<0.00010	0.0127	<0.00010	<0.00050	<0.010	0.000576	79.9	<0.00010	0.00223	0.0218	<0.030
MN-D	Aug-10	<5.0	0.350	<0.050	<0.010	<0.050		0.125	194	<0.50		1.11	<0.00020	0.00044	0.0206	<0.0010	<0.0010	<0.020	0.000773	32.8	<0.00040	0.0117	0.0492	23.6

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as N (mg/L)	Nitrite as N (mg/L)	Total Nitrogen (mg/L)	Ortho Phosphate as P (mg/L)	Total Phosphate as P (mg/L)	Sulfate (mg/L)	Organic Carbon (mg/L)		Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron
Mitchell *(cont'd)*																								
MN-D	Aug-12	<0.50	0.063	<0.0050	<0.0010	<0.050	<0.0010	0.002	42.7	0.96		0.0033	0.0006	0.00033	0.0782	<0.00010	<0.00050	<0.010	<0.000010	31.2	<0.00010	<0.00010	0.00157	<0.030
MN-D	Sep-12	<0.50	0.286	<0.0050	<0.0010	<0.050	<0.0010	<0.0020	168	<0.50		0.0711	0.00037	<0.00010	0.0145	<0.00010	<0.00050	<0.010	0.000885	70.2	<0.00010	0.00197	0.0295	<0.030
MN-D	Oct-12	<0.50	0.07	<0.0050	<0.0010	<0.050	<0.0010	<0.0020	23.3	1.07		0.0123	0.0003	0.00032	0.0458	<0.00010	<0.00050	<0.010	<0.000010	24.9	<0.00010	<0.00010	0.00077	<0.030
MS-A	Aug-09	<5.0	2.16	<0.050	<0.010	<0.050	0.895	0.761	501	<0.50		14.9	<0.00020	0.0117	0.00908	0.0027	<0.0010	<0.020	0.0257	60	0.001	0.0444	6.12	60.2
MS-A	Sep-09	<100	1.72	<1.0	<0.20		0.547	0.472	460	<0.50		13.7	0.00027	0.00880	0.00840	0.0035	<0.0010	<0.020	0.0303	68.7	<0.0010	0.0390	5.78	70.0
MS-A	Oct-09	<10	1.83	<0.10	<0.020			0.407	542	<0.50		11.2	0.00022	0.00711	0.00652	0.0034	<0.0010	<0.020	0.0249	67.8	0.0012	0.0398	5.07	62.4
MS-A	Jun-10	<100	4.14	<1.0	<0.20	<0.050		16.0	1970	1.17		45.6	0.00070	0.116	0.0132	0.0066	<0.0025	<0.050	0.101	120	0.0065	0.176	16.0	392
MS-A	Jul-10	<25	1.90	<0.25	<0.050	<0.050		1.24	923	<0.50		29.2	<0.00050	0.0128	0.00829	0.0054	<0.0025	<0.050	0.0514	105	0.0020	0.0852	11.8	130
MS-A	Jul-12	<10	4.16	0.11	<0.020	<0.050	1.5	2.1	1050	0.54		39.4	0.00028	0.0472	0.00763	0.00851	<0.0010	<0.020	0.0812	90.7	0.00325	0.118	11.3	142
MS-A	Aug-12	<10	4.01	<0.10	<0.020	<0.050	0.950	1.09	1060	0.58		38.5	0.00023	0.0288	0.00801	0.00887	<0.0010	<0.020	0.109	84.4	0.00301	0.105	11.1	200
MS-A	Sep-12	<10	4.27	<0.10	<0.020	<0.050	0.849	0.904	1070	<0.50		39.8	<0.00020	0.0246	0.00744	0.0101	<0.0010	<0.020	0.121	93.5	0.00282	0.109	11.7	219
MS-A	Oct-12	<10	7.30	<0.10	0.021	<0.050	11.6	12.4	1820	1.28		64.0	<0.00050	0.312	0.00759	0.0155	<0.0025	<0.050	0.169	116	0.00687	0.198	15.1	430
MS-B	Jul-09	<5.0	1.51	<0.050	0.018	<0.050	0.851	0.756	514	<0.50		14.8	<0.00020	0.00219	0.00453	0.0015	<0.0010	<0.020	0.0163	55.5	0.0015	0.0278	6.56	52.4
MS-B	Aug-09	<5.0	1.34	<0.050	<0.010	<0.050	0.553	0.456	445	<0.50		12.1	<0.00020	0.0016	0.00473	0.0015	<0.0010	<0.020	0.0144	65.6	0.0011	0.0229	5.2	40.7
MS-B	Sep-09	<100	1.70	<1.0	<0.20		1.01	0.94	440	<0.50		16.9	<0.00020	0.00317	0.00563	0.0019	<0.0010	<0.020	0.0170	66.5	0.0015	0.0297	7.29	62.7
MS-B	Oct-09	<5.0	1.83	<0.050	<0.010			1.02	546	<0.50		15.4	<0.00020	0.00296	0.0101	0.0017	<0.0010	<0.020	0.0174	64.3	0.0021	0.0342	6.68	60.9
MS-B	Jun-10	<25	3.00	<0.25	<0.050	<0.050		7.5	1190	<0.50		29.7	<0.00050	0.0168	0.00431	0.0031	<0.0025	<0.050	0.0388	83.3	0.0035	0.0914	16.4	194
MS-B	Jul-10	<25	2.70	<0.25	<0.050	<0.050		1.51	626	<0.50		19.1	<0.00020	0.00401	0.00426	0.0022	<0.0010	<0.020	0.0247	81.4	0.0021	0.0409	9.75	71.2
MS-B	Jul-12	<5.0	2.71	0.061	<0.010	<0.050	1.40	1.87	737	0.52		25.8	<0.00020	0.00475	0.00387	0.00242	<0.0010	<0.020	0.0296	78.6	0.0029	0.0565	11.3	87.9
MS-B	Aug-12	<5.0	2.04	<0.050	<0.010	<0.050	0.496	0.491	469	<0.50		12.6	<0.00010	0.00162	0.00406	0.00136	<0.00050	<0.010	0.017	63.4	0.00115	0.0238	5.57	41
MS-B	Sep-12	<5.0	1.82	<0.050	<0.010	<0.050	0.595	0.65	477	<0.50		13.7	<0.00010	0.00186	0.00514	0.00136	<0.00050	<0.010	0.0171	63.6	0.00131	0.0254	6.06	46.6
MS-B	Oct-12	<10	2.57	<0.10	0.023	<0.050	3.05	3.2	757	0.68		24.8	<0.00020	0.00980	0.00421	0.00247	<0.0010	<0.020	0.0261	64.2	0.00271	0.053	11.1	121
MS-C1	Jul-09	<0.50	2.68	<0.0050	<0.0010	<0.050	0.0571	0.0464	352	<0.50		7.74	<0.00050	0.00145	0.00564	<0.0025	<0.0025	<0.050	0.0199	60.4	<0.0025	0.0259	12.1	17.5
MS-C1	Jun-10	<10	5.32	<0.10	0.021	<0.050		0.260	835	<0.50		19.4	<0.0010	0.00530	0.00682	<0.0050	<0.0050	<0.10	0.0650	141	<0.0020	0.0806	28.8	79.0
MS-C1	Jul-10	<5.0	2.44	<0.050	<0.010	<0.050		0.0539	388	<0.50		5.24	0.00046	0.00109	0.00495	0.0011	<0.0010	<0.020	0.0206	79.5	<0.00040	0.0217	7.45	29.9
MS-C1	Aug-10	<0.50	0.30	<0.0050	<0.0010	<0.050		<0.0020	179	<0.50		0.148	0.00038	<0.00010	0.0135	<0.00050	<0.00050	<0.010	0.000808	73.5	<0.00050	0.00157	0.0305	<0.030
MS-C1-2	Jul-12	<5.0	2.41	0.0710	<0.010	<0.050	0.0047	0.395	428	<0.50		13.0	0.00017	0.00388	0.0108	0.00273	<0.00050	<0.010	0.0213	74.8	0.00039	0.0382	2.9	36.9
MS-C1-2	Aug-12	<5.0	2.22	<0.050	<0.010	<0.050	0.0069	0.28	407	<0.50		10.4	0.00014	0.00384	0.0105	0.00252	<0.00050	<0.010	0.0258	71.6	0.00029	0.0336	2.3	39.6
MS-C1-2	Sep-12	<5.0	1.86	<0.050	<0.010	<0.050	0.0667	0.254	412	<0.50		12.4	<0.00010	0.00229	0.00967	0.00265	<0.00050	<0.010	0.0196	65.6	0.00048	0.0354	2.8	40.6
MS-C1-2	Oct-12	5.6	2.05	<0.050	0.019	<0.050	0.0259	0.437	409	<0.50		11.3	0.00016	0.00451	0.00968	0.00249	<0.00050	<0.010	0.0214	78.8	0.00039	0.0374	2.31	40.9
MS-C2	Jul-09	0.50	2.44	0.0050	0.0010	0.05	0.0439	0.03	324	0.50		6.14	0.00025	0.00102	0.00691	0.00250	0.0025	0.025	0.0185	65.9	0.0025	0.0206	9.49	18.20
MS-C2	Jun-10	<10	3.74	<0.10	<0.020	<0.050		0.342	731	1.74		12.3	<0.00050	0.00324	0.00758	<0.0025	<0.0025	<0.050	0.0447	119	<0.0010	0.0482	17.8	77.3
MS-C2	Jul-12	<5.0	2.84	0.0650	<0.010	<0.050	0.0578	0.062	382	<0.50		6.79	0.00031	0.00135	0.00621	0.00154	<0.0010	<0.020	0.0201	74.8	0.00027	0.024	10	23.5
MS-C2	Aug-12	<2.5	2.20	<0.025	<0.0050	<0.050	0.0151	<0.020	279	<0.50		5.7	0.00023	0.00056	0.00701	0.00142	<0.00050	<0.010	0.0173	65.6	0.00015	0.0168	6.94	13.5
MS-C2	Sep-12	<0.50	1.79	<0.0050	<0.0010	<0.050	<0.0010	<0.020	244	<0.50		4.41	0.00034	0.00092	0.00769	0.00099	<0.00050	<0.010	0.0142	62.8	0.00016	0.0135	5.1	12.6
MS-C2	Oct-12	<5.0	2.38	<0.050	0.0120	<0.050	0.0057	<0.020	340	<0.50		7.21	0.00016	0.00057	0.00592	0.00145	<0.00050	<0.010	0.0233	74.5	0.00093	0.0265	8.48	15.4
MS-C2-2	Jul-12	<2.5	1.70	0.0260	<0.0050	<0.050	<0.0010	<0.020	385	<0.50		0.790	<0.00020	0.00046	0.00773	0.00150	<0.0010	<0.020	0.0256	103	<0.00020	0.0498	0.622	16.8
MS-C2-2	Aug-12	<2.5	2.38	<0.025	<0.0050	<0.050	0.0019	<0.20	381	<0.50		1.03	<0.00010	0.00046	0.00734	0.00246	<0.00050	<0.010	0.0291	109	<0.00010	0.0524	1.06	18.3
MS-C2-2	Sep-12	<0.50	2.09	<0.0050	<0.0010	<0.050	<0.0010	<0.20	365	<0.50		1.30	<0.00020	0.00036	0.00755	0.00223	<0.0010	<0.020	0.0278	109	<0.00020	0.0528	1.18	17.7
MS-C2-2	Oct-12	<0.50	2.03	<0.0050	<0.0010	<0.050	<0.0010	<0.20	339	<0.50		0.940	<0.00010	0.00036	0.00631	0.00205	<0.00050	<0.010	0.0243	96.8	<0.00010	0.0442	0.91	16.8
MS-C3	Aug-09	<0.50	1.49	<0.0050	<0.0010	<0.050	0.0286	0.0162	254	<0.50		3.11	0.00028	0.00095	0.0067	0.00063	<0.00050	<0.010	0.0115	64.4	<0.00050	0.0112	3.75	11.2
MS-C3	Sep-09	<0.50	1.57	<0.0050	<0.0010		<0.0010	<0.0020	267	<0.50		4.39	<0.0010	<0.0050	0.00762	<0.0050	<0.0050	<0.10	0.0150	74.30	<0.0050	0.0136	5.16	11.10
MS-C3	Oct-09	<0.50	1.58	<0.0050	<0.0010			0.0107	283	0.80		-	-	-	-	-	-	-	-	-	-	-	-	-
MS-C3	Jun-10	<5.0	2.05	<0.050	<0.010	<0.050		0.039	392	<0.50		3.36	0.00069	0.00163	0.0136	<0.0010	<0.0010	<0.020	0.0178	105	<0.00040	0.0211	4.99	23.5
MS-C3	Jul-10	<0.50	1.61	<0.0050	<0.0010	<0.050		0.0117	272	<0.50		1.37	0.00067	0.00057	0.00815	<0.00050	<0.00050	<0.010	0.00984	77.4	<0.00050	0.0116	1.80	8.86

Total Metals (mg/L)

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as N (mg/L)	Nitrite as N (mg/L)	Total Nitrogen (mg/L)	Ortho Phosphate as P (mg/L)	Total Phosphate as P (mg/L)	Sulfate (mg/L)	Organic Carbon (mg/L)	Total Metals (mg/L)	Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron
Mitchell *(cont'd)*																								
MS-C4	Jul-09	<0.50	1.11	0.0180	<0.0010	<0.050	0.0020	<0.020	152	<0.50		1.63	0.00029	0.00092	0.0243	<0.00050	<0.00050	<0.010	0.01	39.05	<0.00050	0.00718	2.09	6.04
MS-C4	Aug-09	<0.50	1.37	<0.0050	<0.0010	<0.050	<0.0010	<0.0020	190	<0.50		1.16	0.00036	0.00034	0.0109	<0.00050	<0.00050	<0.010	0.01	61.37	<0.00050	0.00575	1.38	2.81
MS-C4	Sep-09	<0.50	1.45	<0.0050	<0.0010		<0.0010	<0.0020	211	<0.50		1.62	0.00060	0.00065	0.00904	<0.00050	<0.00050	<0.010	0.00781	74.55	<0.00050	0.0092	1.87	4.94
MS-C4	Oct-09	<0.50	1.54	<0.0050	<0.0010			0.081	258	<0.50		-	-	-	-	-	-	-	-	-	-	-	-	-
MS-D	Jul-12	<2.5	1.61	0.0330	<0.0050	<0.050	0.0026	<0.020	307	<0.50		2.69	0.00057	0.00035	0.0102	0.00052	<0.00050	<0.010	0.0135	86.8	0.00016	0.0156	3.56	9.88
MS-D	Aug-12	<0.50	1.53	<0.0050	<0.0010	<0.050	<0.0010	<0.020	203	<0.50		1.11	0.00091	0.00043	0.00806	0.00025	<0.00050	<0.010	0.00705	68.4	<0.00010	0.00737	1.39	4.72
MS-D	Sep-12	<0.50	1.36	<0.0050	<0.0010	<0.050	<0.0010	<0.020	198	<0.50		0.911	0.00083	0.00024	0.00823	0.00020	<0.00050	<0.010	0.00648	67.5	<0.00010	0.00734	1.17	3.2
MS-D	Oct-12	<0.50	1.42	<0.0050	<0.0010	<0.050	0.0011	0.059	251	<0.50		2.18	0.00063	0.00044	0.00717	0.00039	<0.00050	<0.010	0.00978	72.9	0.00021	0.0124	2.04	11.6
MS-D-2	Jul-12	<2.5	2.38	0.031	<0.0050	<0.050	0.016	0.174	364	<0.50		9.01	0.00023	0.00355	0.0113	0.00265	<0.00050	<0.010	0.0229	80.6	0.00023	0.0374	2.98	24
MS-D-2	Aug-12	<0.50	1.99	<0.0050	<0.0010	<0.050	<0.0010	0.172	319	<0.50		7.16	0.00021	0.00432	0.0105	0.00248	<0.00050	<0.010	0.0233	68.2	0.00016	0.0295	2.66	23.5
MS-D-2	Sep-12	<0.50	1.94	<0.0050	<0.0010	<0.050	<0.0010	0.152	305	<0.50		7.29	0.00028	0.00509	0.0141	0.00238	<0.00050	<0.010	0.0219	68.4	0.00021	0.0281	2.44	26.5
MS D-2	Oct-12	<2.5	2.06	<0.025	<0.0050	<0.050	0.0074	0.171	329	<0.50		7.11	0.00019	0.00407	0.00939	0.00247	<0.00050	<0.010	0.0202	73.8	0.00026	0.0306	2.28	23.5
MS-E	Jul-09	<250	11.0	<2.5	0.720	<3.0	0.0776	548	3450	1.59		127	<0.0020	0.411	0.0577	<0.010	<0.010	<0.20	0.172	144	0.016	0.302	91	957
MS-E	Aug-09	<100	10.3	<1.0	<0.20	<1.0	2.61	15.6	2510	0.92		89.3	<0.0010	0.112	0.0178	0.0112	<0.0050	<0.10	0.13	175	0.0105	0.226	36.4	543
MS-E	Jun-10	<250	<4.5	<2.5	<0.50	<0.050		178	7380	6.35		195	0.00200	1.19	0.0252	0.0110	<0.010	<0.20	0.203	201	0.0404	0.562	76.0	2430
MS-E	Jul-10	<25	6.10	<0.25	<0.050	<0.050		8.0	1960	1.20		46.5	<0.00050	0.0387	0.00920	0.00890	<0.0025	<0.050	0.0871	166	0.0035	0.161	12.4	415
MS-E	Aug-10	<50	6.53	<0.50	<0.10	<0.050		14.2	2440	1.15		50.2	<0.00050	0.0603	0.00587	0.0078	<0.0025	<0.050	0.0807	172	0.0046	0.182	13.0	444
MS-E	Jul-12	<20	12.3	<0.20	<0.040	<0.050	7.29	13.9	2640	1.21		106	<0.00050	0.0912	0.0135	0.0204	<0.0025	<0.050	0.137	204	0.00928	0.243	39.3	558
MS-E	Aug-12	<10	7.81	<0.10	<0.020	<0.050	4.14	6.29	1620	0.63		67.9	<0.00050	0.0491	0.0112	0.0125	<0.0025	<0.050	0.0791	148	0.00547	0.153	25.2	332
MS-E	Sep-12	<10	6.81	<0.10	<0.020	<0.050	8.92	10.5	1750	1.03		61.4	<0.00050	0.0708	0.0103	0.0116	<0.0025	<0.050	0.0699	135	0.00538	0.155	24.1	402
MS-E	Oct-12	<10	12.7	<0.10	0.023	<0.050	30.9	47.7	3130	1.74		98.0	<0.00050	0.288	0.0166	0.00931	<0.0025	<0.050	0.0704	155	0.0162	0.269	38.3	866
MS-G	Sep-09	<100	3.44	-	-		0.0376	-	650	<0.50		25.5	<0.00020	0.00134	0.00809	0.00800	<0.0010	<0.020	0.0799	82.9	0.00150	0.0718	7.57	96.3
MS-G	Oct-09	<10	4.16	<0.10	<0.020			0.093	774	-		23.5	<0.00020	0.00345	0.00742	0.00950	<0.0010	<0.020	0.0739	91.1	<0.0025	0.0778	6.18	114.0
MS-G	Jun-10	<100	18.1	<1.0	<0.20	<1.0		20.5	3525	1.15		120	<0.0010	0.291	0.00725	0.0283	<0.0050	<0.10	0.234	193	0.0115	0.357	23.60	800
MS-G	Jul-10	<25	3.65	<0.25	<0.050	<0.050		0.681	939	<0.50		32.7	<0.00050	0.01398	0.00656	0.0103	<0.0025	<0.050	0.0755	92.8	<0.0010	0.0982	8.40	152.5
MS-G	Aug-10	<25	2.60	<0.25	<0.050	<0.050		0.842	662	0.53		19.7	<0.00020	0.00944	0.00731	0.00480	<0.0010	<0.020	0.0399	63.2	0.00158	0.0621	5.31	79.3
MS-G	Jul-12	<10	7.41	0.120	<0.020	<0.050	1.20	1.745	1330	<0.50		49.05	<0.00020	0.01265	0.00679	0.0147	<0.0010	<0.020	0.0806	126.5	0.00383	0.145	12.4	199.5
MS-G	Aug-12	<5.0	3.09	<0.050	<0.010	<0.050	0.0701	0.149	550	<0.50		15.2	<0.00010	0.0017	0.00672	0.00518	<0.00050	<0.010	0.0339	63.2	0.00096	0.0543	5.15	75.3
MS-G	Sep-12	<5.0	2.65	<0.050	<0.010	<0.050	0.0211	0.113	567	<0.50		16.5	<0.00010	0.00179	0.00634	0.00523	<0.00050	<0.010	0.0421	75	0.00099	0.0555	5.28	82.6
MS-G	Oct-12	<10	8.36	<0.10	0.023	<0.050	11.5	12.4	1480	1.11		42.6	<0.00050	0.0944	0.00749	0.00919	<0.0025	<0.050	0.0664	87.1	0.00454	0.166	11	353
MS-H	Jun-10	<0.50	0.56	0.0162	<0.0010	<0.050		0.0032	150.5	<0.50		0.706	<0.00010	<0.00030	0.0157	<0.00050	<0.00050	<0.010	0.00166	52.5	<0.00020	0.00239	1.09	0.540
MS-H	Jul-10	<0.50	0.467	0.0133	<0.0010	<0.050		<0.0020	127	<0.50		2.22	<0.00010	<0.00010	0.0379	<0.00050	<0.00050	<0.010	0.00151	47.6	<0.00050	0.00188	1.26	<0.030
MS-H	Jul-12	<0.50	0.551	0.0233	<0.0010	<0.050	<0.0010	0.0086	129	<0.50		0.736	0.00012	0.00053	0.0154	0.00012	<0.00050	<0.010	0.00216	51.4	0.00015	0.00185	1.46	0.324
MS-H	Aug-12	<0.50	0.493	0.0129	<0.0010	<0.050	<0.0010	<0.0020	112	<0.50		0.156	<0.00010	0.00019	0.0126	<0.00010	<0.00050	<0.010	0.00138	43.7	<0.00010	0.00066	0.704	0.091
MS-H	Sep-12	<0.50	0.499	0.0091	<0.0010	<0.050	<0.0010	0.0022	117	<0.50		0.142	<0.00010	0.00031	0.0137	<0.00010	<0.00050	<0.010	0.00103	52.5	<0.00010	0.00036	0.585	0.116
MS-H	Oct-12	<0.50	0.549	0.0090	<0.0010	<0.050	<0.0010	<0.0020	136	<0.50		0.102	<0.00010	<0.00010	0.0118	<0.00010	<0.00050	<0.010	0.00109	57.2	0.0001	0.00084	0.48	<0.030
MS-I	Jun-10	<0.50	0.598	<0.0050	<0.0010	<0.050		<0.0020	318	<0.50		1.32	<0.00020	<0.00020	0.00904	<0.0010	<0.0010	<0.020	0.00316	99.0	<0.00040	0.00689	1.56	<0.030
MS-I	Jul-10	<0.50	0.375	<0.0050	<0.0010	<0.050		<0.0020	351	<0.50		1.04	<0.00020	<0.00020	0.0100	<0.0010	<0.0010	<0.020	0.00295	114	<0.0010	0.0125	1.11	<0.030
MS-I	Jul-12	<5.0	0.910	0.0860	<0.010	<0.050	0.00120	0.0133	746	<0.50		0.214	<0.00020	0.00342	0.0107	<0.00020	<0.0010	<0.020	0.000456	314	<0.00020	0.00122	0.181	0.438
MS-I	Aug-12	<5.0	0.810	<0.050	<0.010	<0.050	<0.0010	<0.0020	720	<0.50		0.169	<0.00020	0.00225	0.00943	<0.00020	<0.0010	<0.020	0.000519	307	<0.00020	0.00178	0.16	0.235
MS-I	Sep-12	<5.0	0.700	<0.050	<0.010	<0.050	<0.0010	<0.0020	672	<0.50		0.308	<0.00020	0.00216	0.00897	<0.00020	<0.0010	<0.020	0.000775	269	0.00026	0.00288	0.257	0.541
MS-I	Oct-12	<5.0	0.830	0.0560	<0.010	<0.050	0.0145	<0.020	669	<0.50		0.688	<0.00020	0.00216	0.00847	<0.00020	<0.0010	<0.020	0.00126	267	<0.00020	0.00712	0.591	0.712
MS-J	Jun-10	<5.0	1.06	<0.050	<0.010	<0.050		<0.020	347	<0.50		0.362	<0.00020	0.00105	0.00983	<0.0010	<0.0010	<0.020	0.0139	99.5	<0.00040	0.0198	0.156	17.1
MS-J	Jul-10	<0.50	1.21	<0.0050	<0.0010	<0.050		<0.020	290	<0.50		0.378	<0.00020	0.00067	0.00901	<0.0010	<0.00050	<0.020	0.0133	87.4	<0.00050	0.0158	0.161	14.1
MS-J	Aug-10	<5.0	1.46	<0.050	<0.010	<0.050		<0.0020	295	<0.50		0.256	0.00016	0.00047	0.00896	0.00061	<0.00050	0.016	0.0112	88.8	<0.00050	0.0137	0.112	10.9

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as N (mg/L)	Nitrite as N (mg/L)	Total Nitrogen (mg/L)	Ortho Phosphate as P (mg/L)	Total Phosphate as P (mg/L)	Sulfate (mg/L)	Organic Carbon (mg/L)	Total Metals (mg/L)	Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron
Mitchell *(cont'd)*																								
MS-J	Jul-12	<0.50	1.29	<0.0050	<0.0010	<0.050	<0.0010	<0.020	290	<0.50		2.97	0.00032	0.00776	0.00948	0.00116	<0.00050	0.018	0.00763	86.2	0.00019	0.0187	2.27	17.6
MS-J	Aug-12	<0.50	1.08	<0.0050	<0.0010	<0.050	<0.0010	<0.020	232	<0.50		1.59	0.00026	0.00731	0.0200	0.00078	<0.00050	0.017	0.00497	71.4	<0.00010	0.0117	1.12	9.5
MS-J	Sep-12	<0.50	1.03	<0.0050	<0.0010	<0.050	<0.0010	<0.020	218	<0.50		1.66	0.00027	0.00842	0.0140	0.00078	<0.00050	0.018	0.00434	75.5	0.00014	0.0103	0.949	9.2
MS-J	Oct-12	<0.50	1.02	<0.0050	<0.0010	<0.050	<0.0010	<0.020	227	<0.50		0.912	0.00023	0.0063	0.00873	0.0006	<0.00050	0.018	0.00430	74.4	0.00011	0.0108	0.695	8.4
MS-L	Jul-12	<0.50	0.838	<0.0050	<0.0010	<0.050	<0.0010	<0.020	314	<0.50		<0.0030	0.00014	0.00891	0.00889	<0.00010	<0.00050	0.016	0.000098	136	<0.00010	0.00319	0.00081	3.34
MS-L	Aug-12	<5.0	0.860	<0.050	<0.010	<0.050	<0.0010	<0.020	311	<0.50		0.0032	0.00012	0.00854	0.00927	<0.00010	<0.00050	0.018	0.000098	136	<0.00010	0.00309	0.00106	2.83
MS-L	Sep-12	<0.50	0.845	<0.0050	<0.0010	<0.050	<0.0010	<0.020	296	<0.50		<0.0030	0.00012	0.00955	0.00916	<0.00010	<0.00050	0.017	0.000092	131	<0.00010	0.00286	0.00088	3.16
MS-L	Oct-12	<5.0	0.87	0.0500	<0.010	<0.050	<0.0010	<0.020	306	<0.50		<0.0030	0.00011	0.0077	0.00852	<0.00010	<0.00050	0.017	0.000088	137	<0.00010	0.00269	0.00111	2.09
MS-M	Jul-12	<5.0	1.96	0.0620	<0.010	<0.050	<0.0010	<0.020	381	<0.50		2.64	0.00071	0.0114	0.00792	0.00209	<0.00050	0.033	0.00906	98.8	0.00014	0.026	1.26	26.1
MS-M	Aug-12	<0.50	1.63	<0.0050	<0.0010	<0.050	<0.0010	<0.020	299	<0.50		0.676	0.00040	0.00267	0.00732	0.00114	<0.00050	0.031	0.00708	83.8	<0.00010	0.0212	0.508	14.1
MS-M	Sep-12	<0.50	1.57	<0.0050	<0.0010	<0.050	<0.0010	<0.020	285	<0.50		0.594	0.00040	0.0026	0.00767	0.00108	<0.00050	0.031	0.00651	83.1	0.00011	0.02	0.422	13.6
MS-M	Oct-12	<0.50	1.60	<0.0050	<0.0010	<0.050	<0.0010	<0.020	296	<0.50		0.566	0.00039	0.00218	0.00696	0.00108	<0.00050	0.032	0.00643	85.9	<0.00010	0.0202	0.394	12.9
MS-S	Jul-12	<0.50	1.28	<0.0050	<0.0010	<0.050	<0.0010	<0.020	291	<0.50		2.81	0.00027	0.00666	0.00944	0.00111	<0.00050	0.018	0.00717	86.0	0.00017	0.0177	2.23	16.1
MS-T	Jul-12	<0.50	0.876	<0.0050	<0.0010	<0.050	<0.0010	<0.0020	129	<0.50		0.624	0.00023	0.00015	0.0162	0.00017	<0.00050	<0.010	0.00159	49.6	0.00012	0.00158	0.447	<0.030
MS-U	Jul-12	<5.0	2.31	<0.050	<0.010	<0.050	0.460	0.466	533	<0.50		18.8	<0.00010	0.00152	0.00363	0.00151	<0.00050	<0.010	0.0222	66.9	0.00158	0.0368	6.86	45.8

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc
Kerr																					
K-1	Oct-09	0.00480	<0.025	19.1	3.80	0.000059	0.0470	0.0258	0.87	1.55	0.00108	11.7	<0.000050	<2.0	1.80	<0.00050	<0.00050	<0.010	0.000201	0.0138	0.469
K-2	Oct-09	<0.00025	<0.025	17.1	3.43	<0.000010	0.00365	0.0057	<0.30	1.56	<0.00050	5.57	<0.000050	4.9	3.54	<0.00050	<0.00050	0.016	<0.000050	<0.0050	0.0605
K-3	Oct-09	0.00031	<0.010	7.36	1.07	0.000031	0.00220	0.0062	<0.30	0.87	0.00033	4.28	<0.000020	6.2	4.14	<0.00020	<0.00020	<0.010	<0.000020	<0.0020	0.0304
K-3	Jul-12	<0.000050	0.00424	3.92	0.235	<0.000010	0.000152	0.00219	<0.30	0.481	0.0002	2.62	<0.000010	2.8	1.88	<0.000010	<0.00010	<0.010	<0.000010	<0.0010	0.01
K-3	Aug-12	<0.000050	0.00545	6.26	0.0297	<0.000010	<0.000050	0.00198	<0.30	0.642	0.00033	3.32	<0.000010	4	2.66	<0.000010	<0.00010	0.013	<0.000010	<0.0010	0.0106
K-3	Sep-12	<0.000050	0.00708	8	0.414	<0.000010	0.000113	0.00283	<0.30	0.722	<0.00010	3.22	<0.000010	6	3.92	<0.000010	<0.00010	<0.010	<0.000010	<0.0010	0.0074
K-3	Oct-12	<0.000050	0.00149	2.19	0.0561	<0.000010	<0.000050	0.00184	<0.30	0.363	0.00039	2.37	<0.000010	<2.0	0.847	<0.000010	<0.00010	<0.010	<0.000010	<0.0010	0.0157
K-4	Jun-10	0.000146	<0.0050	0.956	0.303	<0.000010	0.000332	0.0138	<0.30	0.107	0.00032	0.771	0.000012	<2.0	0.0312	<0.00010	<0.00010	<0.010	0.000097	<0.0010	0.0398
K-4	Jul-10	0.00060	0.014	14.3	2.71	<0.000010	0.00043	0.0142	<0.30	0.97	0.00065	6.87	0.000033	<2.0	1.31	<0.00020	<0.00020	<0.010	0.000171	<0.0020	0.356
K-4	Aug-10	0.00065	0.0120	13.5	2.54	<0.000010	0.00117	0.0147	<0.30	0.93	0.00084	7.24	0.000033	<2.0	1.29	<0.00020	<0.00020	<0.010	0.000187	<0.0020	0.278
K-4	Jul-12	0.000512	0.00737	7.22	1.29	<0.000010	0.000236	0.0133	<0.30	0.744	0.0002	4.73	0.000015	<2.0	0.729	0.000049	<0.00010	<0.010	0.000173	<0.0010	0.19
K-4	Aug-12	0.00061	0.0126	12.8	2.47	<0.000010	0.00052	0.0176	<0.30	0.963	0.00023	7.03	0.000017	<2.0	1.12	0.000058	<0.00010	0.014	0.000208	<0.0010	0.341
K-4	Sep-12	0.000702	0.01515	14.9	2.98	<0.000010	0.0006045	0.0181	<0.30	1.06	0.00026	8.165	0.000017	<2.0	1.455	0.000067	<0.00010	<0.010	0.00022	0.00135	0.398
K-4	Oct-12	0.000713	0.0129	11.6	2.18	<0.000010	0.000714	0.0138	<0.30	0.934	0.00048	6.33	0.000031	<2.0	1.13	0.000063	<0.00010	<0.010	0.000139	<0.0010	0.282
K-5	Jun-10	0.00099	0.013	12.2	2.38	<0.000010	0.00278	0.0123	<0.30	1.00	0.00076	6.09	<0.000020	<2.0	1.22	<0.00020	<0.00020	<0.010	0.000186	<0.0020	0.329
K-5	Aug-10	0.00125	<0.025	20.8	4.03	<0.000010	0.00861	0.0197	<0.30	1.55	<0.0010	10.9	<0.000050	2.2	2.02	<0.00050	<0.00050	<0.010	0.000275	0.0078	0.475
K-5	Jul-12	0.00155	0.0152	13.3	2.65	<0.000010	0.0112	0.0183	0.33	1.26	0.00034	7.43	<0.000010	<2.0	1.29	0.000076	<0.00010	<0.010	0.000295	0.0061	0.37
K-5	Aug-12	0.00178	0.0199	19.3	3.58	<0.000010	0.0156	0.0204	0.48	1.53	0.00039	10.4	<0.000010	<2.0	1.71	0.000091	<0.00010	0.017	0.000282	0.0104	0.486
K-5	Sep-12	0.00179	0.0216	21.5	4.13	<0.000010	0.0178	0.0217	0.55	1.66	0.00039	11.3	<0.000010	<2.0	1.96	0.00009	<0.00010	<0.010	0.000283	0.0123	0.522
K-5	Oct-12	0.00159	0.0209	19.3	3.5	<0.000010	0.0143	0.0228	0.48	1.57	0.00041	11	<0.000010	<2.0	1.81	0.000083	<0.00010	<0.010	0.000288	0.0107	0.451
Sulphurets																					
S-1	Oct-09	<0.000050	<0.0050	2.08	0.00206	<0.000010	0.00101	0.00062	<0.30	0.339	0.00078	1.20	<0.000010	<2.0	0.153	<0.00010	<0.00010	<0.010	0.000013	<0.0010	<0.0020
S-1	Oct-12	<0.000050	0.0014	2.05	0.00118	<0.000010	0.00227	<0.00050	<0.30	0.238	0.00034	2.39	<0.000010	<2.0	0.171	<0.000010	<0.00010	<0.010	0.000118	<0.0010	<0.0030
Mitchell																					
MN-A	Jul-09	0.00117	<0.0050	2.60	0.207	<0.000010	0.00142	0.0111	<0.30	1.22	0.00402	5.80	0.000025	<2.0	0.243	<0.00010	<0.00010	<0.010	0.00129	<0.0010	0.147
MN-A	Aug-09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MN-A	Sep-09	0.000197	0.0062	5.60	0.312	<0.000010	0.00117	0.0189	<0.30	2.08	0.00429	6.81	0.000014	<2.0	0.381	<0.00010	<0.00010	<0.010	0.00111	<0.0010	0.251
MN-A	Oct-09	0.00192	0.0064	5.13	0.674	<0.000010	0.000336	0.0274	<0.30	1.67	0.00395	7.94	0.000030	<2.0	0.288	<0.00010	<0.00010	<0.010	0.00159	<0.0010	0.297
MN-A	Jun-10	0.00166	0.0059	3.68	0.465	<0.000010	0.000327	0.0234	<0.30	1.51	0.00268	6.90	0.000029	<2.0	0.263	<0.00010	<0.00010	<0.010	0.00161	<0.0010	0.225
MN-A	Jul-10	0.00423	0.0075	4.40	0.592	<0.000010	0.000060	0.0226	<0.30	1.78	0.00296	9.56	0.000111	<2.0	0.232	<0.00010	<0.00010	<0.010	0.00210	<0.0010	0.237
MN-A	Aug-10	0.00377	0.00655	4.52	0.407	<0.000010	0.000681	0.0227	<0.30	1.82	0.00362	8.26	0.000075	<2.0	0.317	<0.00010	<0.00010	<0.010	0.00340	<0.0010	0.243
MN-A	Jul-12	0.00111	0.00458	2.71	0.171	<0.000010	0.00118	0.00898	<0.30	1.36	0.0039	5.76	0.000020	<2.0	0.24	0.000026	<0.00010	<0.010	0.0013	<0.0010	0.0921
MN-A	Aug-12	0.000913	0.00395	2.97	0.127	<0.000010	0.00168	0.00753	<0.30	1.36	0.00468	5.65	0.000019	<2.0	0.294	0.000026	<0.00010	<0.010	0.00139	<0.0010	0.0672
MN-A	Sep-12	0.0006535	0.00338	3.1	0.0876	<0.000010	0.00198	0.00663	<0.30	1.34	0.004945	5.37	<0.000010	<2.0	0.305	0.0000185	<0.00010	<0.010	0.001675	<0.0010	0.069
MN-A	Oct-12	0.00127	0.00458	4.47	0.448	<0.000010	0.00133	0.0157	<0.30	1.52	0.0045	6.46	0.000027	<2.0	0.309	0.000029	<0.00010	<0.010	0.00158	<0.0010	0.136
MN-B	Jul-09	0.00106	<0.005	2.29	0.0396	0.00001	0.00022	0.0104	<0.3	2.19	0.00345	7.47	0.000078	<2.0	0.201	<0.0001	<0.0001	<0.01	0.000288	<0.0001	0.104
MN-B	Aug-10	0.00338	<0.0050	1.89	0.274	<0.000010	<0.000050	0.00586	<0.30	1.22	0.00076	5.62	<0.000020	<2.0	0.348	<0.00020	<0.00010	<0.010	0.000582	<0.0010	0.345
MN-B	Aug-12	0.000588	0.00131	1.1	0.114	<0.000010	0.000197	0.00324	<0.30	1.1	0.00071	4.23	0.000012	<2.0	0.271	0.000086	<0.00010	<0.010	0.000289	<0.0010	0.256
MN-B	Sep-12	0.000192	0.00055	1.15	0.0416	<0.000010	0.000234	0.00176	<0.30	0.755	0.00067	3.12	<0.000010	<2.0	0.312	0.000034	<0.00010	<0.010	0.000076	<0.0010	0.15
MN-B	Oct-12	0.000708	0.00069	0.978	0.0589	<0.000010	0.000272	0.0021	<0.30	0.684	0.00059	3	0.000023	<2.0	0.283	0.000039	<0.00010	<0.010	0.000251	<0.0010	0.189
MN-C	Aug-10	0.00688	<0.010	6.38	0.69	<0.000010	0.00	0.01	<0.30	0.70	0.00	8.24	<0.000020	2.7	0.43	<0.00020	<0.00020	<0.010	0.00158	<0.0020	0.474
MN-C	Aug-12	0.00217	0.00264	4.27	0.17	<0.000010	0.000249	0.00211	<0.30	0.639	0.00124	5.74	0.000014	<2.0	0.317	0.000012	<0.00010	0.011	0.000127	<0.0010	0.0386
MN-C	Sep-12	0.000176	0.00228	4.67	0.217	<0.000010	0.000524	0.00388	<0.30	0.531	0.00188	5.66	<0.000010	<2.0	0.316	<0.000010	<0.00010	<0.010	0.00008	<0.0010	0.0665
MN-C	Oct-12	0.00128	0.0024	3.77	0.161	<0.000010	0.000175	0.00187	<0.30	0.431	0.00079	5.26	<0.000010	<2.0	0.272	<0.000010	<0.00010	<0.010	0.000096	<0.0010	0.0448
MN-D	Aug-10	0.00016	<0.010	1.74	0.889	<0.000010	<0.00010	0.0038	<0.30	0.29	0.00049	4.01	0.000026	<2.0	0.237	<0.00020	<0.00020	<0.010	0.000456	<0.0020	0.0468

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc
Mitchell *(cont'd)*																					
MN-D	Aug-12	<0.000050	<0.00050	0.525	0.000765	<0.000010	0.000062	<0.00050	<0.30	0.416	<0.00010	2.97	<0.000010	<2.0	0.184	<0.000010	<0.00010	<0.010	0.000013	<0.0010	<0.0030
MN-D	Sep-12	0.000106	0.00236	4.67	0.213	<0.000010	0.000499	0.00379	<0.30	0.553	0.00175	5.48	<0.000010	<2.0	0.305	<0.000010	<0.00010	<0.010	0.00007	<0.0010	0.0645
MN-D	Oct-12	<0.000050	<0.00050	0.376	0.000707	<0.000010	0.000086	<0.00050	<0.30	0.332	<0.00010	2.5	<0.000010	<2.0	0.119	<0.000010	<0.00010	<0.010	<0.000010	<0.0010	<0.0030
MS-A	Aug-09	0.077	0.019	9.47	3.28	<0.000010	0.00606	0.0189	1.01	1.18	0.00721	11.6	0.000142	2.7	0.353	<0.00020	<0.00020	<0.010	0.00211	0.0093	1.55
MS-A	Sep-09	0.0609	0.021	11.8	4.35	<0.000010	0.00768	0.0184	0.58	1.63	0.00664	12.9	0.000198	6.2	0.700	0.00022	<0.00020	0.010	0.00157	0.0104	1.59
MS-A	Oct-09	0.0506	0.022	10.1	3.46	<0.000010	0.00717	0.0176	0.46	1.67	0.00510	12.6	0.000216	5.7	0.618	0.00022	<0.00020	<0.010	0.00139	0.0097	1.34
MS-A	Jun-10	0.271	0.026	16.5	6.44	<0.000010	0.0759	0.0479	16.1	2.11	0.0381	16.8	0.000862	13.6	0.967	<0.00050	<0.00050	<0.010	0.0113	0.0502	5.16
MS-A	Jul-10	0.130	0.027	16.2	5.09	<0.000010	0.0161	0.0336	1.32	2.10	0.0088	15.9	0.000342	7.1	0.848	<0.00050	<0.00050	<0.010	0.00493	0.0258	3.19
MS-A	Jul-12	0.147	0.0472	23.3	11.1	<0.000010	0.0118	0.0407	2.04	1.54	0.0115	17.3	0.000274	4.3	0.683	0.000393	<0.00020	<0.010	0.00991	0.023	4.19
MS-A	Aug-12	0.11	0.0382	19.6	9.34	<0.000010	0.00756	0.0331	1.16	1.59	0.00703	17.2	0.000176	3.7	0.66	0.000376	<0.00020	0.012	0.00717	0.0558	7.84
MS-A	Sep-12	0.115	0.0387	23.4	10.8	<0.000010	0.00714	0.0326	0.99	1.9	0.00577	18.6	0.00013	4.8	0.814	0.000366	<0.00020	<0.010	0.00624	0.0563	8.89
MS-A	Oct-12	0.194	0.0557	30.1	14.2	<0.000010	0.0361	0.0548	12.4	2.28	0.0295	21.9	0.000264	5.7	0.925	0.000463	<0.00050	<0.010	0.0117	0.096	12.4
MS-B	Jul-09	0.00452	0.017	7.40	1.50	<0.000010	0.00884	0.0274	0.90	0.92	0.00488	19.1	0.000659	3.8	0.522	<0.00020	<0.00020	<0.010	0.00665	0.0025	1.31
MS-B	Aug-09	0.00449	0.018	7.71	1.32	<0.000010	0.00789	0.0254	0.59	1.16	0.00464	16.9	0.000546	3.8	0.551	<0.00020	<0.00020	<0.010	0.00398	<0.0020	1.14
MS-B	Sep-09	0.00481	0.020	9.52	1.62	<0.000010	0.0112	0.0250	1.17	1.18	0.00592	17.1	0.000643	3.5	0.620	<0.00020	<0.00020	<0.010	0.00445	0.0023	1.30
MS-B	Oct-09	0.00584	0.019	8.38	1.42	<0.000010	0.0117	0.0240	1.13	1.13	0.00561	17.0	0.000652	3.4	0.568	<0.00020	<0.00020	<0.010	0.00506	0.0024	1.26
MS-B	Jun-10	0.00981	<0.025	13.4	2.58	<0.000010	0.0366	0.0436	8.16	0.64	0.0101	23.0	0.00112	2.8	0.631	<0.00050	<0.00050	<0.010	0.0153	0.0076	2.92
MS-B	Jul-10	0.00509	0.020	9.68	2.00	<0.000010	0.0135	0.0311	1.73	0.99	0.00555	19.6	0.000800	4.1	0.719	<0.00020	<0.00020	<0.010	0.00808	0.0030	1.70
MS-B	Jul-12	0.00443	0.0261	10.9	2.88	<0.000010	0.0152	0.0487	1.87	0.79	0.00562	22.3	0.000871	3.7	0.656	0.000116	<0.00020	<0.010	0.0114	0.0042	2.2
MS-B	Aug-12	0.0032	0.0234	8.43	1.82	<0.000010	0.00798	0.0356	0.61	1.01	0.00332	20.2	0.000607	3.9	0.594	0.000118	0.00031	<0.010	0.00465	0.0023	1.24
MS-B	Sep-12	0.00367	0.0212	8.58	1.83	<0.000010	0.00888	0.0334	0.69	1.04	0.00387	19.7	0.000652	4	0.59	0.000114	<0.00010	<0.010	0.00471	0.0022	1.33
MS-B	Oct-12	0.00518	0.0257	11.4	2.39	<0.000010	0.0271	0.0357	3.5	1.02	0.00789	20	0.000902	3.4	0.574	0.00012	<0.00020	<0.010	0.00841	0.0059	1.82
MS-C1	Jul-09	0.00422	<0.025	6.49	1.33	<0.000010	0.00296	0.0125	<0.30	0.62	0.00264	10.4	0.000141	<2.0	0.366	<0.00050	<0.00050	<0.010	0.0147	<0.0050	1.39
MS-C1	Jun-10	0.0404	<0.050	18.1	3.87	<0.000010	0.00603	0.0292	0.43	0.88	<0.0020	17.5	0.00023	3.0	0.933	<0.0010	<0.0010	<0.010	0.0197	<0.010	4.60
MS-C1	Jul-10	0.0116	0.012	8.38	1.49	<0.000010	0.00240	0.0120	<0.30	0.76	0.00080	11.0	0.000200	2.9	0.549	<0.00020	<0.00020	<0.010	0.00550	<0.0020	1.42
MS-C1	Aug-10	0.000207	<0.0050	4.43	0.187	<0.000010	0.000509	0.00348	<0.30	0.599	0.00144	5.51	<0.000010	<2.0	0.289	<0.00010	<0.00010	<0.010	0.000078	<0.0010	0.0449
MS-C1-2	Jul-12	0.0306	0.0167	12.4	3.9	<0.000010	0.000711	0.0212	0.45	1.3	0.00028	10.4	0.000023	7	0.687	0.000184	<0.00010	<0.010	0.00136	0.004	1.06
MS-C1-2	Aug-12	0.0306	0.0152	12.2	3.58	<0.000010	0.000715	0.0172	0.43	1.26	0.00028	10.3	0.000016	8.6	0.751	0.000188	<0.00010	0.01	0.00123	0.0036	1.09
MS-C1-2	Sep-12	0.0268	0.0152	11.1	3.74	<0.000010	0.000866	0.0174	<0.30	0.978	0.00073	11.3	0.000055	6	0.599	0.000163	<0.00010	<0.010	0.00192	0.0024	0.935
MS-C1-2	Oct-12	0.0301	0.0175	12.5	3.97	<0.000010	0.000922	0.0199	0.51	1.29	0.0003	11.7	0.000021	8.1	0.772	0.000174	<0.00010	<0.010	0.00125	0.0042	1.07
MS-C2	Jul-09	0.0104	0.0125	6.67	1.26	0.00001	0.00196	0.0116	0.30	0.73	0.00223	9.78	0.0000940	2.0	0.42	0.00050	0.00050	0.010	0.00913	0.0050	1.38
MS-C2	Jun-10	0.0351	<0.025	13.5	2.55	<0.000010	0.00353	0.0223	<0.30	1.04	0.0013	14.6	0.000199	3.1	0.810	<0.00050	<0.00050	<0.010	0.0149	<0.0050	3.53
MS-C2	Jul-12	0.00568	0.0109	7.59	1.62	<0.000010	0.00286	0.0156	<0.30	0.77	0.00084	11	0.000112	2.1	0.485	0.000061	<0.00020	<0.010	0.01	<0.0020	1.4
MS-C2	Aug-12	0.023	0.0104	6.72	1.11	<0.000010	0.000801	0.0106	<0.30	0.811	0.0005	9.38	0.000064	2.4	0.434	0.000056	<0.00010	0.01	0.00642	<0.0010	0.946
MS-C2	Sep-12	0.0204	0.00773	6.72	0.979	<0.000010	0.00121	0.00944	<0.30	0.789	0.00043	9.04	0.000057	2.8	0.446	0.000051	<0.00010	<0.010	0.0042	<0.0010	0.844
MS-C2	Oct-12	0.018	0.016	9.69	1.52	<0.000010	0.000898	0.0126	<0.30	0.789	0.0005	11.1	0.000092	2.4	0.49	0.000058	<0.00010	<0.010	0.00599	<0.0010	1.42
MS-C2-2	Jul-12	0.058	0.0149	19	9.57	<0.000010	0.00025	0.0163	<0.30	1.55	<0.00020	9.49	<0.000020	3.1	0.536	0.000091	<0.00020	<0.010	0.000666	<0.0020	1.2
MS-C2-2	Aug-12	0.0567	0.0195	18.2	9.4	<0.000010	0.000265	0.0168	<0.30	1.59	0.00011	9.83	0.000012	3	0.644	0.000104	<0.00010	0.014	0.000681	<0.0010	1.47
MS-C2-2	Sep-12	0.0712	0.0178	19.1	10.4	<0.000010	0.00025	0.0162	<0.30	1.57	<0.00020	9.98	0.000026	3	0.591	0.000091	<0.00020	<0.010	0.000735	<0.0020	1.5
MS-C2-2	Oct-12	0.044	0.0171	16.1	8.73	<0.000010	0.000249	0.0145	<0.30	1.5	<0.00010	9.03	0.000018	2.8	0.523	0.000087	<0.00010	<0.010	0.000532	<0.0010	1.29
MS-C3	Aug-09	0.0111	0.0083	6.18	0.846	<0.000010	0.000971	0.00784	<0.30	0.724	0.00069	7.82	0.000045	2.9	0.407	<0.00010	<0.00010	<0.010	0.00289	<0.0010	0.873
MS-C3	Sep-09	0.01	<0.050	8.43	1.19	<0.000010	0.00119	0.0101	<0.30	0.96	<0.010	8.30	0.00	3.15	0.51	<0.0010	<0.0010	<0.010	0.00	<0.010	1.02
MS-C3	Oct-09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MS-C3	Jun-10	0.00984	<0.010	10.0	1.83	<0.000010	0.00369	0.0143	<0.30	0.85	<0.00040	10.7	0.000064	5.8	0.819	<0.00020	<0.00020	<0.010	0.00455	<0.0020	1.46
MS-C3	Jul-10	0.00782	0.0093	7.65	1.19	<0.000010	0.00239	0.0100	<0.30	0.851	0.00037	9.90	0.000025	7.8	0.651	<0.00010	<0.00010	<0.010	0.00205	<0.0010	0.896

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc
Mitchell *(cont'd)*																					
MS-C4	Jul-09	0.01	<0.0050	3.43	0.63	<0.000010	0.000783	0.00603	<0.30	0.54	0.00085	5.59	0.0000435	<2.0	0.29	<0.00010	<0.00010	<0.010	0.00209	<0.0010	0.59
MS-C4	Aug-09	0.01	0.01	4.92	0.62	<0.000010	0.00115	0.01	<0.30	1.07	0.00133	7.26	<0.000010	<2.0	0.41	<0.00010	<0.00010	<0.010	0.00	<0.0010	0.50
MS-C4	Sep-09	0.01	0.01	8.64	1.22	<0.000010	0.00190	0.0077	<0.30	0.99	0.000205	7.53	<0.000010	8.20	0.61	<0.00010	<0.00010	<0.010	0.00	<0.0010	0.78
MS-C4	Oct-09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MS-D	Jul-12	0.0132	0.0112	7.99	1.37	<0.000010	0.00189	0.0133	<0.30	0.968	0.00034	10.4	0.000034	4	0.68	0.000052	<0.00010	<0.010	0.00266	<0.0010	1.21
MS-D	Aug-12	0.00978	0.00904	6.59	0.845	<0.000010	0.00279	0.00809	<0.30	0.871	0.0002	8.48	<0.000010	5.2	0.565	0.000043	<0.00010	<0.010	0.0012	<0.0010	0.6
MS-D	Sep-12	0.00458	0.00704	6.77	0.953	<0.000010	0.00194	0.00991	<0.30	0.871	0.00012	8.48	<0.000010	5.8	0.555	0.000039	<0.00010	<0.010	0.000792	<0.0010	0.577
MS-D	Oct-12	0.0133	0.00913	7.9	1.08	<0.000010	0.00277	0.00982	<0.30	0.797	0.0004	8.74	0.000044	4.9	0.588	0.000053	<0.00010	<0.010	0.00175	<0.0010	0.807
MS-D-2	Jul-12	0.0962	0.0163	12.1	3.85	<0.000010	0.00088	0.0191	<0.30	1.3	0.00017	10.5	0.000013	6.4	0.72	0.000156	<0.00010	<0.010	0.00186	0.0034	1.12
MS-D-2	Aug-12	0.10	0.0145	10.5	3.23	<0.000010	0.00094	0.0147	<0.30	1.22	0.00013	9.95	<0.000010	7	0.696	0.000141	<0.00010	0.011	0.00164	0.0036	0.999
MS-D-2	Sep-12	0.0986	0.0145	9.98	3.24	<0.000010	0.00117	0.0145	0.32	1.18	0.00018	10.5	<0.000010	6.9	0.675	0.000133	<0.00010	<0.010	0.00168	0.0041	0.951
MS D-2	Oct-12	0.0943	0.0157	10.4	3.24	<0.000010	0.000948	0.0155	<0.30	1.19	0.00012	10.7	0.00001	6.3	0.706	0.000141	<0.00010	<0.010	0.00165	0.0035	0.957
MS-E	Jul-09	0.241	<0.10	39	9.45	<0.000010	0.527	0.0800	59.9	2.80	0.112	30.2	0.00269	4.9	0.925	<0.0020	<0.0020	0.023	0.0684	0.118	14.8
MS-E	Aug-09	0.0554	0.068	46.4	10.8	<0.000010	0.185	0.0639	17.3	2.86	0.0667	27.9	0.00171	10.7	1.05	<0.0010	<0.0010	0.019	0.032	0.081	7.96
MS-E	Jun-10	0.579	<0.10	81.2	17.2	0.000015	1.06	0.127	231	3.1	0.238	44.1	0.00240	14.5	1.27	<0.0020	<0.0020	0.080	0.111	0.289	15.0
MS-E	Jul-10	0.0194	0.051	48.5	12.6	<0.000010	0.0492	0.0498	9.80	0.64	0.0257	23.8	0.000897	26.2	1.26	<0.00050	<0.00050	0.025	0.00857	0.0200	4.69
MS-E	Aug-10	0.0317	0.049	47.9	13.3	<0.000010	0.0577	0.0547	14.1	0.77	0.0322	21.2	0.000871	21.3	1.29	<0.00050	<0.00050	0.033	0.0107	0.0171	4.20
MS-E	Jul-12	0.170	0.0726	42.3	11.7	<0.000010	0.124	0.0719	13.3	4.47	0.0291	27.5	0.000481	17	1.76	0.000414	<0.00050	<0.010	0.0217	0.12	9.52
MS-E	Aug-12	0.115	0.0546	34.2	9.65	<0.000010	0.0761	0.0531	6.94	3.85	0.0232	24.6	0.000404	14.5	1.31	0.00039	<0.00050	0.015	0.0121	0.0735	5.63
MS-E	Sep-12	0.0968	0.0633	36	9.3	<0.000010	0.145	0.0495	11.2	3.29	0.047	25.6	0.000661	14.2	1.22	0.000342	<0.00050	<0.010	0.0121	0.0756	4.84
MS-E	Oct-12	0.236	0.118	58.9	8.52	<0.000010	0.44	0.0726	47.6	3.47	0.0916	30.2	0.000831	12.5	1.07	0.000378	<0.00050	<0.010	0.0252	0.152	5.28
MS-G	Sep-09	0.131	0.027	19.0	10.40	<0.000010	0.00047	0.0248	<0.30	1.84	0.00252	14.8	0.000091	4.3	0.983	0.00040	<0.00020	<0.010	0.00509	0.0024	5.61
MS-G	Oct-09	0.099	0.035	21.5	10.43	<0.000010	0.00089	0.0235	<0.30	1.89	0.00268	16.5	0.000072	5.6	0.937	<0.00050	<0.00020	<0.010	0.00339	0.0112	4.86
MS-G	Jun-10	0.316	<0.050	61.8	32.9	<0.000010	0.03825	0.0965	27.8	2.37	0.0348	26.4	0.000900	10.3	1.59	<0.0010	<0.0010	<0.020	0.0410	0.159	14.2
MS-G	Jul-10	0.154	0.034	27.4	11.30	<0.000010	0.00394	0.0323	0.95	1.79	0.00565	16.2	0.000195	5.5	0.764	<0.00050	<0.00050	<0.010	0.00798	0.0249	4.66
MS-G	Aug-10	0.120	0.023	15.5	7.09	<0.000010	0.00354	0.0239	0.98	1.16	0.00512	12.2	0.000119	4.0	0.551	0.00025	<0.00020	<0.010	0.00469	0.0095	1.96
MS-G	Jul-12	0.1855	0.04545	37.85	15.85	<0.000010	0.00843	0.049	1.64	2.40	0.00748	17.6	0.000255	5.4	1.00	0.000407	<0.00020	<0.010	0.0151	0.0355	4.50
MS-G	Aug-12	0.104	0.0225	20.4	7.77	<0.000010	0.00152	0.0222	<0.30	1.43	0.00214	12.3	0.000113	3.6	0.619	0.000221	<0.00010	<0.010	0.00315	0.0042	1.94
MS-G	Sep-12	0.0777	0.0249	21.6	8.39	<0.000010	0.00131	0.0216	<0.30	1.34	0.00203	12.4	0.00009	4.1	0.681	0.000217	<0.00010	<0.010	0.00269	0.0054	2.73
MS-G	Oct-12	0.162	0.0348	53.9	21.6	<0.000010	0.0320	0.0490	14.8	1.56	0.0339	14.9	0.000397	5	0.744	0.000242	<0.00050	<0.010	0.0105	0.0296	4.18
MS-H	Jun-10	0.000977	<0.0050	6.35	0.126	<0.000010	0.00597	0.0046	<0.30	0.722	0.00261	4.47	0.0000405	4.1	0.402	<0.00010	<0.00010	<0.010	0.000766	<0.0010	0.0702
MS-H	Jul-10	0.00528	<0.0050	6.04	0.122	<0.000010	0.00650	0.00395	<0.30	0.818	0.00373	5.34	0.000138	3.6	0.366	<0.00010	<0.00010	<0.010	0.00186	<0.0010	0.0662
MS-H	Jul-12	0.000749	0.00503	6.16	0.113	<0.000010	0.00511	0.00536	<0.30	0.791	0.00372	4.88	0.000059	2.6	0.415	0.000026	<0.00010	<0.010	0.000591	<0.0010	0.0983
MS-H	Aug-12	0.000248	0.00373	6.02	0.0272	<0.000010	0.00577	0.00336	<0.30	0.733	0.00424	4.08	0.000028	3.1	0.396	0.000014	<0.00010	<0.010	0.000188	<0.0010	0.0558
MS-H	Sep-12	0.000262	0.00296	6.51	0.0132	<0.000010	0.00718	0.00254	<0.30	0.724	0.00452	3.87	0.000021	3.5	0.446	0.000011	<0.00010	<0.010	0.000203	<0.0010	0.0425
MS-H	Oct-12	0.000112	0.00325	7.07	0.0459	<0.000010	0.00741	0.00311	<0.30	0.734	0.0043	3.84	0.000017	3.5	0.466	0.000012	<0.00010	<0.010	0.000216	<0.0010	0.0456
MS-I	Jun-10	0.00070	<0.010	7.99	0.976	<0.000010	0.00015	0.0109	<0.30	0.76	0.00075	5.88	0.000036	2.0	0.797	<0.00020	<0.00020	<0.010	0.00312	<0.0020	0.132
MS-I	Jul-10	0.00085	<0.010	9.25	1.57	<0.000010	0.00013	0.0139	<0.30	0.79	0.00161	6.48	0.000071	2.2	0.889	<0.00020	<0.00020	<0.010	0.00249	<0.0020	0.124
MS-I	Jul-12	0.00186	0.0059	10.6	0.358	<0.000010	0.0143	0.0019	<0.30	0.72	0.00021	6.25	<0.000020	4.8	3.43	<0.000020	<0.00020	0.011	0.00163	<0.0020	0.0202
MS-I	Aug-12	0.00029	0.0053	10.9	0.446	<0.000010	0.0135	0.0020	<0.30	0.75	0.00024	6.33	<0.000020	4.9	3.24	<0.000020	<0.00020	0.02	0.00141	<0.0020	0.0206
MS-I	Sep-12	0.00054	0.0047	10.9	0.583	<0.000010	0.0112	0.0032	<0.30	0.70	0.00035	6.12	<0.000020	4.5	2.91	<0.000020	<0.00020	0.012	0.00137	<0.0020	0.0285
MS-I	Oct-12	0.0005	0.0062	10.6	0.87	<0.000010	0.0114	0.0062	<0.30	0.84	0.00032	7.76	0.000021	4.7	2.9	<0.000020	<0.00020	<0.010	0.00188	<0.0020	0.0625
MS-J	Jun-10	0.0115	0.0140	10.5	2.47	<0.000010	0.00254	0.0076	<0.30	1.39	<0.00040	6.99	<0.000020	20.4	0.995	<0.00020	<0.00020	<0.010	0.000758	<0.0020	0.544
MS-J	Jul-10	0.00672	0.0129	8.96	2.09	<0.000010	0.00228	0.0061	<0.30	1.31	<0.00020	7.22	<0.000010	17.6	0.862	<0.00010	<0.00010	<0.010	0.000564	<0.0010	0.468
MS-J	Aug-10	0.00399	0.0119	8.04	2.06	<0.000010	0.00215	0.0051	<0.30	1.31	<0.00020	6.59	0.000011	15.9	0.801	<0.00010	<0.00010	<0.010	0.000456	<0.0010	0.302

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc
Mitchell *(cont'd)*																					
MS-J	Jul-12	0.047	0.0215	9.85	2.33	<0.000010	0.00207	0.0150	<0.30	1.50	<0.00010	8.62	<0.000010	19.3	0.88	0.000036	<0.00010	<0.010	0.00251	<0.0010	0.444
MS-J	Aug-12	0.026	0.0199	7.73	1.95	<0.000010	0.00179	0.0051	<0.30	1.37	0.0001	7.32	0.000015	18.4	0.754	0.000031	<0.00010	0.013	0.00119	<0.0010	0.279
MS-J	Sep-12	0.0308	0.0195	7.45	1.94	<0.000010	0.00185	0.00451	<0.30	1.36	<0.00010	7.21	0.000012	19.3	0.764	0.000029	<0.00010	<0.010	0.00137	<0.0010	0.248
MS-J	Oct-12	0.0178	0.0186	7.21	1.82	<0.000010	0.00159	0.00459	<0.30	1.27	<0.00010	6.72	<0.000010	17.9	0.758	0.000029	<0.00010	<0.010	0.000881	<0.0010	0.239
MS-L	Jul-12	<0.000050	0.0138	8.97	1.75	<0.000010	0.00912	0.00102	<0.30	1.38	<0.00010	5.73	<0.000010	16.7	1.65	<0.000010	<0.00010	<0.010	0.000667	<0.0010	0.0394
MS-L	Aug-12	<0.000050	0.0148	9.30	1.80	<0.000010	0.00971	0.00097	<0.30	1.40	<0.00010	5.71	<0.000010	16.2	1.76	<0.000010	<0.00010	0.016	0.000651	<0.0010	0.0362
MS-L	Sep-12	<0.000050	0.0126	9.05	1.83	<0.000010	0.00933	0.00091	<0.30	1.33	<0.00010	5.58	<0.000010	15.7	1.66	<0.000010	<0.00010	<0.010	0.00065	<0.0010	0.0358
MS-L	Oct-12	<0.000050	0.0134	8.31	1.71	<0.000010	0.00941	0.00089	<0.30	1.32	<0.00010	4.98	<0.000010	13.5	1.71	<0.000010	<0.00010	<0.010	0.000639	<0.0010	0.0331
MS-M	Jul-12	0.15	0.039	10.7	3.33	<0.000010	0.00198	0.00887	<0.30	2.08	<0.00010	8.98	<0.000010	40.3	1.06	0.000049	<0.00010	<0.010	0.00423	<0.0010	0.601
MS-M	Aug-12	0.0245	0.0349	9.58	2.81	<0.000010	0.00129	0.00735	<0.30	1.96	<0.00010	8.07	<0.000010	35.9	0.924	0.000052	<0.00010	0.012	0.00114	<0.0010	0.485
MS-M	Sep-12	0.025	0.0339	9.76	2.96	<0.000010	0.00126	0.00706	<0.30	1.96	<0.00010	7.97	<0.000010	40.1	0.900	0.000043	<0.00010	<0.010	0.00111	<0.0010	0.459
MS-M	Oct-12	0.022	0.0360	9.37	2.76	<0.000010	0.00125	0.00718	<0.30	1.88	<0.00010	7.75	<0.000010	34.8	0.941	0.000041	<0.00010	<0.010	0.00114	<0.0010	0.456
MS-S	Jul-12	0.0395	0.0214	8.90	2.33	<0.000010	0.00179	0.00683	<0.30	1.49	<0.00010	8.48	<0.000010	19.4	0.857	0.000034	<0.00010	<0.010	0.00229	<0.0010	0.404
MS-T	Jul-12	0.00102	0.00454	2.68	0.167	<0.000010	0.00114	0.00872	<0.30	1.33	0.00381	5.68	0.000022	<2.0	0.231	0.000025	<0.00010	<0.010	0.00125	<0.0010	0.0905
MS-U	Jul-12	0.000635	0.0245	9.78	2.32	<0.000010	0.00755	0.0432	0.50	0.716	0.00256	22.9	0.000396	3.7	0.555	0.000084	<0.00010	<0.010	0.0103	0.0016	1.58

Appendix 8.1-1. Deposit Seep Water Quality Data

Dissolved Metals (mg/L)

Location ID	Date Sampled	Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus
Kerr																						
K-1	Oct-09	7.68	<0.00050	<0.00050	0.00405	<0.0025	<0.0025	<0.050	0.00263	205	<0.0025	0.0365	4.53	26.8	0.00248	<0.025	19.2	4.20	<0.000010	<0.00025	0.0266	<0.30
K-2	Oct-09	<0.0050	<0.00050	<0.00050	0.00508	<0.0025	<0.0025	<0.050	<0.000050	353	<0.0025	0.0123	0.00079	15.7	<0.00025	<0.025	17.6	3.54	<0.000010	0.00055	0.0064	<0.30
K-3	Oct-09	0.0053	<0.00020	0.00045	0.00708	<0.0010	<0.0010	<0.020	0.000024	169	<0.0010	0.00305	0.00068	<0.030	<0.00010	<0.010	7.45	0.541	<0.000010	<0.00010	0.0037	<0.30
K-3	Jul-12	<0.0030	<0.00010	<0.00010	0.00811	<0.00010	<0.00050	0.011	0.000014	72.1	0.00012	0.00104	<0.00050	<0.030	<0.000050	0.00485	3.96	0.18	<0.000010	0.000056	0.00193	<0.30
K-3	Aug-12	0.0307	<0.00010	<0.00010	0.0167	<0.00010	<0.00050	0.011	0.000032	96.4	<0.00010	0.00014	0.00181	<0.030	<0.000050	0.00525	6.2	0.028	<0.000010	<0.000050	0.00189	<0.30
K-3	Sep-12	<0.0030	<0.00010	<0.00010	0.00775	<0.00010	<0.00050	0.013	<0.000010	149	<0.00010	0.00156	<0.00050	<0.030	<0.000050	0.00671	7.85	0.353	<0.000010	0.000071	0.00271	<0.30
K-3	Oct-12	0.083	<0.00010	<0.00010	0.0122	<0.00010	<0.00050	<0.010	0.000037	28.6	<0.00010	0.00059	0.00579	<0.030	<0.000050	0.00147	2.15	0.053	<0.000010	<0.000050	0.00175	<0.30
K-4	Jun-10	0.576	<0.00010	0.00035	0.0237	<0.00050	<0.00050	<0.010	0.000199	6.46	0.00058	0.00528	0.197	7.32	0.000071	<0.0050	0.949	0.302	<0.000010	0.000078	0.0136	<0.30
K-4	Jul-10	6.09	<0.00020	0.00029	0.0101	<0.0010	<0.0010	<0.020	0.00220	133	<0.0010	0.0262	1.77	18.2	0.00061	0.013	14.2	2.67	<0.000010	0.00042	0.0140	<0.30
K-4	Aug-10	5.79	<0.00020	<0.00020	0.0104	<0.0010	<0.0010	<0.020	0.00208	135	0.00100	0.0248	1.93	6.85	0.00065	0.012	13.2	2.55	<0.000010	<0.00010	0.0146	<0.30
K-4	Jul-12	3.2	<0.00010	0.00015	0.0102	0.00026	<0.00050	<0.010	0.0011	61.5	0.00115	0.0143	1.33	12.7	0.000428	0.00676	7.04	1.27	<0.000010	0.000213	0.0131	<0.30
K-4	Aug-12	5.11	<0.00010	0.00016	0.00699	0.00039	<0.00050	<0.010	0.00184	104	0.00138	0.023	2.08	17.4	0.000571	0.012	11.8	2.29	<0.000010	0.000182	0.0163	<0.30
K-4	Sep-12	6.02	<0.00010	0.000195	0.00645	0.00044	<0.00050	<0.010	0.002245	136.5	0.001595	0.0275	2.52	27.95	0.000683	0.0147	15.05	2.97	<0.000010	0.0004595	0.0179	<0.30
K-4	Oct-12	5.05	<0.00010	0.00013	0.0185	0.00028	<0.00050	<0.010	0.00173	106	0.00084	0.0212	1.76	8.76	0.000657	0.0123	11.2	2.1	<0.000010	0.000053	0.0133	<0.30
K-5	Jun-10	4.69	<0.00020	<0.00020	0.0197	<0.0010	<0.0010	<0.020	0.00164	100	0.00078	0.0196	1.47	11.0	0.00064	<0.010	10.1	1.97	<0.000010	0.00031	0.0108	<0.30
K-5	Aug-10	8.11	<0.00050	0.00732	0.00492	<0.0025	<0.0025	<0.050	0.00324	199	0.0012	0.0381	3.27	78.0	0.00108	<0.025	19.5	3.91	<0.000010	0.00794	0.0194	<0.30
K-5	Jul-12	5.94	<0.00010	0.00052	0.00899	0.00046	<0.00050	<0.010	0.00233	123	0.00165	0.0271	2.5	35.7	0.00135	0.0144	12.9	2.53	<0.000010	0.000676	0.0178	<0.30
K-5	Aug-12	7.94	<0.00010	0.00027	0.0056	0.00056	<0.00050	<0.010	0.00286	162	0.00138	0.0353	3.37	42.7	0.00147	0.0192	18.7	3.49	<0.000010	0.000158	0.0197	<0.30
K-5	Sep-12	8.53	<0.00010	0.00023	0.00483	0.00064	<0.00050	<0.010	0.00303	187	0.00162	0.0382	3.95	61	0.0013	0.0211	20.9	4.02	<0.000010	0.000248	0.0216	<0.30
K-5	Oct-12	8.54	<0.00010	0.0002	0.00649	0.00056	<0.00050	<0.010	0.00277	167	0.00117	0.0359	3.69	18.7	0.0014	0.0199	18.7	3.41	<0.000010	0.000066	0.0219	<0.30
Sulphurets																						
S-1	Oct-09	0.0194	0.00049	0.00022	0.0347	<0.00050	<0.00050	<0.010	0.000041	33.3	<0.00050	<0.00010	0.00067	<0.030	<0.000050	<0.0050	1.89	0.00173	<0.000010	0.000921	<0.00050	<0.30
S-1	Oct-12	0.0075	0.00082	0.00094	0.025	<0.00010	<0.00050	<0.010	<0.000010	37.6	<0.00010	<0.00010	0.00489	<0.030	<0.000050	0.00102	2.07	0.000252	<0.000010	0.00213	<0.00050	<0.30
Mitchell																						
MN-A	Jul-09	0.0171	0.00018	0.00042	0.0158	<0.00050	<0.00050	<0.010	0.00209	49.9	<0.00050	0.00164	0.395	<0.030	0.000299	<0.0050	2.64	0.212	<0.000010	0.00145	0.0110	<0.30
MN-A	Aug-09																					
MN-A	Sep-09	0.531	0.00019	<0.00010	0.0161	<0.00050	<0.00050	<0.010	0.00356	95.1	<0.00050	0.00169	1.05	<0.030	0.000118	0.0066	5.45	0.296	<0.000010	0.00113	0.0189	<0.30
MN-A	Oct-09	1.13	0.00011	<0.00010	0.0130	<0.00050	<0.00050	<0.010	0.00476	71.7	<0.00050	0.00489	1.34	<0.030	0.00156	0.0062	5.05	0.724	<0.000010	0.000348	0.0276	<0.30
MN-A	Jun-10	0.845	0.00011	<0.00010	0.0114	<0.00050	<0.00050	<0.010	0.00451	61.4	<0.00020	0.00288	1.26	<0.030	0.00147	0.0051	3.74	0.444	<0.000010	0.000278	0.0219	<0.30
MN-A	Jul-10	0.908	0.00011	<0.00010	0.0128	<0.00050	<0.00050	<0.010	0.00465	62.1	<0.00020	0.00408	1.35	<0.030	0.00207	0.0072	4.55	0.561	<0.000010	0.000281	0.0248	<0.30
MN-A	Aug-10	0.378	0.00016	<0.00010	0.0135	<0.00050	<0.00050	<0.010	0.00459	69.6	<0.00050	0.00224	1.205	<0.030	0.000307	0.00565	4.03	0.370	<0.000010	0.000516	0.0217	<0.30
MN-A	Jul-12	0.0329	0.00019	<0.00010	0.0161	<0.00010	<0.00050	<0.010	0.00158	51.0	<0.00010	0.00156	0.257	<0.030	0.000225	0.00465	2.63	0.166	<0.000010	0.00118	0.00877	<0.30
MN-A	Aug-12	0.0381	0.00025	<0.00010	0.0171	<0.00010	<0.00050	<0.010	0.00135	51.6	<0.00010	0.00128	0.148	<0.030	0.000169	0.00354	2.97	0.125	<0.000010	0.00159	0.00743	<0.30
MN-A	Sep-12	0.0338	0.00025	<0.00010	0.0174	<0.00010	<0.00050	<0.010	0.00124	59.2	0.00015	0.00087	0.127	<0.030	0.0001955	0.00342	3.06	0.0852	<0.000010	0.001905	0.006705	<0.30
MN-A	Oct-12	0.0229	0.00016	<0.00010	0.0154	<0.00010	<0.00050	<0.010	0.00225	64.8	0.00012	0.00415	0.36	<0.030	0.000259	0.00467	4.31	0.432	<0.000010	0.00124	0.015	<0.30
MN-B	Jul-09	1.32	<0.0001	<0.0001	0.017	<0.0005	<0.0005	<0.01	0.00151	35.8	<0.0005	0.00052	0.574	<0.03	0.000368	<0.005	2.16	0.0335	<0.00001	0.000071	0.00964	<0.3
MN-B	Aug-10	0.856	0.000865	<0.00020	0.0263	<0.00050	<0.00050	<0.010	0.00562	32.7	<0.00050	0.00575	0.9805	<0.030	0.00329	<0.0050	1.72	0.260	<0.000010	<0.000050	0.00552	<0.30
MN-B	Aug-12	0.123	0.00137	0.00012	0.0293	<0.00010	<0.00050	<0.010	0.00407	26.1	<0.00010	0.00205	0.325	<0.030	0.000521	0.00107	1.08	0.111	<0.000010	0.0002	0.00315	<0.30
MN-B	Sep-12	0.0288	0.0012	<0.00010	0.0273	<0.00010	<0.00050	<0.010	0.00214	30.7	0.00012	0.00109	0.113	<0.030	0.000125	<0.00050	1.11	0.0397	<0.000010	0.000213	0.00181	<0.30
MN-B	Oct-12	0.0176	0.00094	<0.00010	0.022	<0.00010	<0.00050	<0.010	0.00244	25.4	<0.00010	0.00147	0.187	<0.030	0.000172	0.00054	0.96	0.0566	<0.000010	0.000211	0.00202	<0.30
MN-C	Aug-10	1.62	0.00	<0.00020	0.01	<0.0010	<0.0010	<0.020	0.01	90.9	<0.00040	0.01	2.21	<0.030	0.01	<0.010	6.21	0.703	<0.000010	0.000890	0.00626	<0.30
MN-C	Aug-12	0.0536	0.00065	0.00012	0.0215	<0.00010	<0.00050	<0.010	0.000645	77.7	<0.00010	0.00226	0.00708	<0.030	0.000248	0.00298	4.2	0.164	<0.000010	0.000228	0.00204	<0.30
MN-C	Sep-12	0.054	0.00035	<0.00010	0.0145	<0.00010	<0.00050	<0.010	0.000867	69.6	0.00011	0.00185	0.0248	<0.030	0.000056	0.00231	4.42	0.209	<0.000010	0.000505	0.00366	<0.30
MN-C	Oct-12	0.0296	0.00041	<0.00010	0.0126	<0.00010	<0.00050	<0.010	0.000552	77.3	<0.00010	0.00212	0.00762	<0.030	0.000258	0.00247	3.83	0.161	<0.000010	0.000185	0.0018	<0.30
MN-D	Aug-10	1.05	<0.00020	0.00023	0.0214	<0.0010	<0.0010	<0.020	0.000895	31.6	<0.00040	0.0121	0.0512	22.2	0.00027	<0.010	1.68	0.888	<0.000010	<0.00010	0.0039	<0.30

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Dissolved Metals (mg/L)																				
		Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus
Mitchell *(cont'd)*																						
MN-D	Aug-12	<0.0030	0.00057	0.00032	0.0731	<0.00010	<0.00050	<0.010	0.00001	31.1	<0.00010	<0.00010	0.00068	<0.030	<0.000050	<0.00050	0.515	0.000189	<0.000010	0.000052	<0.00050	<0.30
MN-D	Sep-12	0.0535	0.00035	<0.00010	0.0148	<0.00010	<0.00050	<0.010	0.000875	68.9	0.00011	0.00188	0.0254	<0.030	0.000052	0.00232	4.51	0.208	<0.000010	0.00048	0.0038	<0.30
MN-D	Oct-12	<0.0030	0.00028	0.00026	0.0451	<0.00010	<0.00050	<0.010	<0.000010	24.5	<0.00010	<0.00010	0.00059	<0.030	<0.000050	<0.00050	0.373	0.000256	<0.000010	0.000084	<0.00050	<0.30
MS-A	Aug-09	13.6	<0.00020	0.011	0.00733	0.0026	<0.0010	<0.020	0.0247	55.7	<0.0010	0.0421	5.82	62	0.0738	0.018	8.75	3.08	<0.000010	0.00566	0.0176	1.02
MS-A	Sep-09	13.8	0.00026	0.00882	0.00706	0.0039	<0.0010	<0.020	0.0306	70.2	<0.0010	0.0405	5.92	69.7	0.0613	0.021	11.8	4.47	<0.000010	0.00754	0.0187	0.580
MS-A	Oct-09	10.9	0.00025	0.00721	0.00675	0.0031	<0.0010	<0.020	0.0261	67.8	0.0012	0.0392	5.01	64.8	0.0525	0.022	10.1	3.40	<0.000010	0.00716	0.0175	0.46
MS-A	Jun-10	42.3	0.00070	0.113	0.0123	0.0075	<0.0025	<0.050	0.104	114	0.0056	0.169	15.4	399	0.279	<0.025	15.7	6.11	<0.000010	0.0736	0.0487	16.1
MS-A	Jul-10	28.5	<0.00050	0.0131	0.00765	0.0057	<0.0025	<0.050	0.0506	105	0.0019	0.0824	11.7	135	0.131	0.026	16.0	4.91	<0.000010	0.0157	0.0327	1.36
MS-A	Jul-12	37.7	0.00025	0.0442	0.00753	0.00821	<0.0010	<0.020	0.0772	87.7	0.00304	0.111	10.6	137	0.14	0.0457	21.4	10.3	<0.000010	0.0117	0.0381	1.95
MS-A	Aug-12	36.8	<0.00020	0.0286	0.00796	0.00859	<0.0010	<0.020	0.109	82.7	0.00296	0.105	11.2	198	0.106	0.0363	19.9	9.18	<0.000010	0.0073	0.0324	1.14
MS-A	Sep-12	38.4	<0.00020	0.0238	0.00712	0.0098	<0.0010	<0.020	0.116	86.3	0.00274	0.105	11.2	214	0.113	0.0372	22.5	10.2	<0.000010	0.00674	0.031	0.97
MS-A	Oct-12	60.9	<0.00050	0.256	0.0076	0.0149	<0.0025	<0.050	0.165	110	0.00641	0.194	14.7	419	0.181	0.0523	29.7	13.8	<0.000010	0.032	0.0525	10.7
MS-B	Jul-09	14.4	<0.00020	0.00214	0.00446	0.0016	<0.0010	<0.020	0.0163	55.3	0.0016	0.0280	6.52	51.9	0.00474	0.018	7.11	1.52	<0.000010	0.00882	0.0277	0.90
MS-B	Aug-09	11.2	<0.00020	0.00139	0.00452	0.0013	<0.0010	<0.020	0.0142	61.3	<0.0010	0.0208	4.91	40.2	0.00413	0.017	7.24	1.24	<0.000010	0.0069	0.0245	0.57
MS-B	Sep-09	18.0	<0.00020	0.00331	0.00528	0.0020	<0.0010	<0.020	0.0175	70.2	0.0016	0.0313	7.68	61.8	0.00487	0.020	9.98	1.72	<0.000010	0.0118	0.0264	1.16
MS-B	Oct-09	14.1	<0.00020	0.00280	0.00512	0.0016	<0.0010	<0.020	0.0175	60.0	0.0015	0.0320	6.35	62.9	0.00515	0.018	7.80	1.33	<0.000010	0.0113	0.0221	1.13
MS-B	Jun-10	30.6	<0.00050	0.0243	0.00512	0.0041	<0.0025	<0.050	0.0424	84.4	0.0036	0.0985	18.2	229	0.0123	0.025	13.7	2.66	<0.000010	0.0493	0.0461	10.4
MS-B	Jul-10	17.7	<0.00020	0.00401	0.00405	0.0019	<0.0010	<0.020	0.0236	74.1	0.00178	0.0378	9.10	77.5	0.00523	0.019	8.86	1.82	<0.000010	0.0131	0.0286	1.80
MS-B	Jul-12	24.4	<0.00020	0.00438	0.00362	0.00237	<0.0010	<0.020	0.027	75.9	0.0025	0.0537	10.7	84.6	0.00406	0.0248	10.4	2.67	<0.000010	0.0146	0.0462	1.79
MS-B	Aug-12	12.8	<0.00010	0.00159	0.00404	0.00139	<0.00050	<0.010	0.0166	63.5	0.00109	0.0235	5.4	40.8	0.00306	0.0233	7.93	1.8	<0.000010	0.00783	0.0352	0.6
MS-B	Sep-12	13.5	<0.00010	0.0018	0.00449	0.00134	<0.00050	<0.010	0.0167	60.8	0.00124	0.0247	5.87	46.2	0.00356	0.0203	8.18	1.77	<0.000010	0.00851	0.032	0.66
MS-B	Oct-12	23.5	<0.00020	0.00886	0.00407	0.00244	<0.0010	<0.020	0.025	62.4	0.00264	0.0496	10.4	118	0.00493	0.0251	10.8	2.25	<0.000010	0.0261	0.0332	3.36
MS-C1	Jul-09	7.94	<0.00050	<0.00050	0.00554	<0.0025	<0.0025	<0.050	0.0204	63.2	<0.0025	0.0266	12.5	14.1	0.00423	<0.025	6.68	1.38	<0.000010	0.00044	0.0132	<0.30
MS-C1	Jun-10	19.0	<0.0010	0.0055	0.00697	<0.0050	<0.0050	<0.10	0.0662	142	<0.0020	0.0780	28.6	80.3	0.0419	<0.050	18.1	3.83	<0.000010	0.00603	0.0282	0.44
MS-C1	Jul-10	4.97	0.00045	0.00102	0.00470	0.0010	<0.0010	<0.020	0.0198	73.3	<0.0010	0.0201	7.14	30.9	0.0117	0.011	7.80	1.40	<0.000010	0.00218	0.0108	<0.30
MS-C1	Aug-10	0.0795	0.00038	<0.00010	0.0125	<0.00050	<0.00050	<0.010	0.000806	63.6	<0.00050	0.00144	0.0271	<0.030	0.000167	<0.0050	4.02	0.168	<0.000010	0.000470	0.00299	<0.30
MS-C1-2	Jul-12	12.5	<0.00010	0.00055	0.0108	0.00276	<0.00050	<0.010	0.0212	75.9	0.00023	0.0373	2.86	23.3	0.0292	0.0174	12.1	3.85	<0.000010	<0.000050	0.0208	<0.30
MS-C1-2	Aug-12	10.6	<0.00010	0.00047	0.0102	0.0025	<0.00050	<0.010	0.025	70.7	0.00012	0.0327	2.26	24.8	0.0281	0.0155	12	3.45	<0.000010	<0.000050	0.017	<0.30
MS-C1-2	Sep-12	12.4	<0.00010	0.00164	0.0096	0.0025	<0.00050	<0.010	0.0189	62.5	0.0005	0.0345	2.72	38.3	0.0249	0.0146	10.7	3.68	<0.000010	0.000491	0.0169	<0.30
MS-C1-2	Oct-12	10.8	<0.00010	0.00039	0.00968	0.00247	<0.00050	<0.010	0.0211	78.1	<0.00010	0.0368	2.24	11.3	0.0288	0.0173	12.3	3.86	<0.000010	<0.000050	0.0196	<0.30
MS-C2	Jul-09	6.09	0.00050	0.00050	0.00697	0.0025	0.0025	0.05	0.0187	67.3	0.0025	0.0203	9.42	10.0	0.00913	0.025	6.74	1.26	0.000010	0.00025	0.0117	0.30
MS-C2	Jun-10	12.4	0.00073	0.00580	0.00654	<0.0025	<0.0025	<0.050	0.0455	118	<0.0010	0.0485	17.9	82.1	0.0338	<0.025	13.6	2.60	<0.000010	0.00622	0.0225	0.42
MS-C2	Jul-12	6.72	0.00026	0.00128	0.00608	0.00147	<0.0010	<0.020	0.0197	75.6	<0.00020	0.0234	9.9	23.2	0.00531	0.0111	7.43	1.57	<0.000010	0.00282	0.0151	<0.30
MS-C2	Aug-12	5.39	<0.00010	0.00025	0.00686	0.00139	<0.00050	<0.010	0.0164	64.6	0.00012	0.016	6.66	9.49	0.022	0.0101	6.52	1.06	<0.000010	0.000059	0.00995	<0.30
MS-C2	Sep-12	4.29	0.00019	0.0002	0.00686	0.00094	<0.00050	<0.010	0.0134	56.8	0.00018	0.0131	4.83	9.9	0.0182	0.00718	6.22	1.02	<0.000010	0.000317	0.00879	<0.30
MS-C2	Oct-12	6.78	<0.00010	0.00026	0.00574	0.00136	<0.00050	<0.010	0.022	70.3	0.00028	0.0248	7.88	5.75	0.0171	0.0148	9.05	1.43	<0.000010	<0.000050	0.0118	<0.30
MS-C2-2	Jul-12	0.27	<0.00020	<0.00020	0.00748	0.0012	<0.0010	<0.020	0.0246	116	<0.00020	0.0477	0.159	1.02	0.00015	0.0167	17.7	9.12	<0.000010	<0.00010	0.0161	<0.30
MS-C2-2	Aug-12	0.588	<0.00010	<0.00010	0.00701	0.00216	<0.00050	<0.010	0.0281	107	<0.00010	0.0504	0.517	2.68	0.000527	0.0194	17.4	9.09	<0.000010	<0.000050	0.0163	<0.30
MS-C2-2	Sep-12	1.2	<0.00020	0.00028	0.00723	0.00223	<0.0010	<0.020	0.0267	106	<0.00020	0.0502	1.06	16.1	0.0591	0.0181	18.4	10	<0.000010	0.00021	0.0157	<0.30
MS-C2-2	Oct-12	0.496	<0.00010	<0.00010	0.00651	0.00166	<0.00050	<0.010	0.0236	92.8	<0.00010	0.0428	0.392	0.613	0.000283	0.0168	15.7	8.64	<0.000010	<0.000050	0.0142	<0.30
MS-C3	Aug-09	2.8	0.00028	0.00091	0.00572	0.00059	<0.00050	<0.010	0.0115	55.7	<0.00050	0.0103	3.53	11.2	0.0106	0.0078	5.65	0.769	<0.000010	0.000936	0.00706	<0.30
MS-C3	Sep-09	4.67	<0.0010	<0.0010	0.00665	<0.0050	<0.0050	<0.10	0.0152	76.8	<0.0050	0.0141	5.31	10.3	0.0138	<0.050	8.83	1.22	<0.000010	0.000682	0.0104	<0.30
MS-C3	Oct-09	2.57	0.00025	0.00038	0.00574	<0.00050	<0.00050	<0.010	0.0114	67.0	<0.00050	0.0115	3.04	8.24	0.00914	0.0082	7.17	0.924	<0.000010	0.000706	0.00721	<0.30
MS-C3	Jun-10	2.12	0.00049	0.00036	0.00981	<0.0010	<0.0010	<0.020	0.0155	105	<0.00040	0.0175	3.38	11.8	0.00241	<0.010	9.87	1.72	<0.000010	0.00034	0.0130	<0.30
MS-C3	Jul-10	1.59	0.00037	0.00027	0.00739	<0.00050	<0.00050	<0.010	0.0110	72.8	<0.00050	0.0117	2.13	8.89	0.00386	0.0092	7.59	1.12	<0.000010	0.000129	0.00952	<0.30

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled		Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus
Mitchell *(cont'd)*																							
MS-C4	Jul-09		1.31	<0.00010	<0.00010	0.0141	<0.00050	<0.00050	<0.010	0.00611	39.6	<0.00050	0.0066	1.80	<0.030	0.00436	<0.0050	3.43	0.62	<0.000010	<0.000050	0.00588	<0.30
MS-C4	Aug-09		0.93	0.00035	<0.00010	0.01095	<0.00050	<0.00050	<0.010	0.00603	58.0	<0.00050	0.00527	1.30	<0.030	0.00307	0.0079	4.68	0.57	<0.000010	0.000847	0.0104	<0.30
MS-C4	Sep-09		1.24	0.00032	0.00026	0.00910	<0.00050	<0.00050	<0.010	0.00803	79.6	<0.00050	0.00954	1.76	2.00	0.00195	0.0119	9.10	1.26	<0.000010	0.000711	0.00767	<0.30
MS-C4	Oct-09		2.42	0.00031	0.00090	0.00814	0.00060	<0.00050	<0.010	0.0104	64.8	<0.00050	0.0126	1.91	8.20	0.0382	0.0091	6.78	1.10	<0.000010	0.000415	0.00836	<0.30
MS-D	Jul-12		2.62	0.0001	0.00012	0.00952	0.00051	<0.00050	<0.010	0.0131	79.2	<0.00010	0.015	3.35	5.91	0.0116	0.0102	7.67	1.33	<0.000010	<0.000050	0.0129	<0.30
MS-D	Aug-12		0.776	0.00061	<0.00010	0.00816	0.00022	<0.00050	<0.010	0.00696	65.7	<0.00010	0.00711	1.22	1.73	0.000165	0.00872	6.36	0.828	<0.000010	0.000995	0.00792	<0.30
MS-D	Sep-12		0.333	0.00054	<0.00010	0.00755	0.00017	<0.00050	<0.010	0.00599	66	0.00011	0.00672	0.721	<0.030	<0.000050	0.00737	6.44	0.89	<0.000010	0.00131	0.00739	<0.30
MS-D	Oct-12		2.16	<0.00010	0.0001	0.00693	0.00037	<0.00050	<0.010	0.00944	71.1	<0.00010	0.012	1.97	1.67	0.0117	0.00901	7.73	1.06	<0.000010	<0.000050	0.00949	<0.30
MS-D-2	Jul-12		8.38	<0.00010	0.00083	0.0112	0.00258	<0.00050	<0.010	0.0218	77.9	<0.00010	0.0357	2.86	19.5	0.082	0.0155	11.4	3.73	<0.000010	<0.000050	0.0182	<0.30
MS-D-2	Aug-12		6.73	0.00012	0.00081	0.0101	0.00243	<0.00050	<0.010	0.0228	65.2	<0.00010	0.0287	2.58	20.4	0.076	0.0142	10.3	3.15	<0.000010	0.000107	0.0145	<0.30
MS-D-2	Sep-12		6.65	0.00013	0.00077	0.00983	0.00231	<0.00050	<0.010	0.0206	70.7	0.00013	0.0269	2.25	21.6	0.0709	0.0143	10.5	3.15	<0.000010	0.000115	0.0136	<0.30
MS D-2	Oct-12		6.95	<0.00010	0.0005	0.00946	0.00246	<0.00050	<0.010	0.02	74.7	<0.00010	0.0305	2.27	3.73	0.0814	0.0155	10.2	3.29	<0.000010	<0.000050	0.0156	<0.30
MS-E	Jul-09		116	<0.0020	0.398	0.0482	<0.010	<0.010	<0.20	0.167	136	0.015	0.29	88.1	951	0.24	<0.10	36.0	8.99	<0.000010	0.512	0.0800	60.8
MS-E	Aug-09		81.7	<0.0010	0.105	0.0124	0.0104	<0.0050	<0.10	0.122	166	0.0097	0.211	34.8	551	0.0493	0.065	42.2	10.1	<0.000010	0.173	0.0596	17.3
MS-E	Jun-10		202	0.0021	1.30	0.0249	0.012	<0.010	<0.20	0.211	203	0.0412	0.580	79.2	2610	0.610	<0.10	79.6	16.5	0.000017	1.14	0.129	255
MS-E	Jul-10		44.8	<0.00050	0.0330	0.00298	0.0081	<0.0025	<0.050	0.0884	165	0.0027	0.152	11.8	393	0.0191	0.046	47.8	12.2	<0.000010	0.0405	0.0479	8.53
MS-E	Aug-10		48.5	<0.00050	0.0600	0.00275	0.0069	<0.0025	<0.050	0.0807	169	0.0043	0.178	12.8	446	0.0298	0.050	44.9	12.9	<0.000010	0.0531	0.0538	14.0
MS-E	Jul-12		106	<0.00050	0.0498	0.0134	0.0189	<0.0025	<0.050	0.132	190	0.00876	0.238	37.8	529	0.147	0.067	42.7	11.5	<0.000010	0.0951	0.0706	8.08
MS-E	Aug-12		61.5	<0.00050	0.0306	0.0105	0.012	<0.0025	<0.050	0.0747	147	0.00506	0.141	23.4	321	0.105	0.0509	31.5	8.7	<0.000010	0.0625	0.0485	4.82
MS-E	Sep-12		58.7	<0.00050	0.0639	0.00959	0.0104	<0.0025	<0.050	0.0662	130	0.00569	0.147	22.9	384	0.088	0.0571	33.5	8.97	<0.000010	0.132	0.047	10.4
MS-E	Oct-12		95.1	<0.00050	0.129	0.0153	0.0088	<0.0025	<0.050	0.067	152	0.0153	0.262	37.7	768	0.182	0.109	57.3	8.22	<0.000010	0.327	0.0701	26.5
MS-G	Sep-09		27.8	<0.00020	0.00094	0.00794	0.0087	<0.0010	<0.020	0.0797	88.1	0.00160	0.0739	7.84	97.6	0.123	0.030	20.6	10.8	<0.000010	0.00028	0.0252	<0.30
MS-G	Oct-09		23.3	<0.00020	0.0026	0.00743	0.0091	<0.0010	<0.020	0.0752	91.1	<0.0025	0.0787	6.23	109.2	0.101	0.035	21.3	10.4	<0.000010	0.00067	0.0236	<0.30
MS-G	Jun-10		121	<0.0010	0.3010	0.00745	0.0288	<0.0050	<0.10	0.245	196	0.0117	0.3685	24.15	787.5	0.330	0.052	62.8	33.5	<0.000010	0.0385	0.0991	27.90
MS-G	Jul-10		32.2	<0.00050	0.0136	0.00641	0.0092	<0.0025	<0.050	0.0755	90.9	<0.0010	0.0961	8.30	156.5	0.154	0.033	27.1	11.1	<0.000010	0.00385	0.0320	0.99
MS-G	Aug-10		18.7	0.00024	0.0103	0.00724	0.0042	<0.0010	<0.020	0.0411	62.9	0.00131	0.0612	5.43	81.4	0.118	0.022	14.7	6.88	<0.000010	0.00356	0.0238	0.97
MS-G	Jul-12		47.6	<0.00020	0.0125	0.00678	0.0142	<0.0010	<0.020	0.0800	123	0.00375	0.144	12.1	196	0.177	0.0420	37.0	15.5	<0.000010	0.00810	0.0480	1.6
MS-G	Aug-12		15.2	<0.00010	0.00057	0.00665	0.00489	<0.00050	<0.010	0.0331	61	0.00091	0.0528	5.05	64.1	0.103	0.0214	19.6	7.55	<0.000010	0.000143	0.0217	<0.30
MS-G	Sep-12		16.5	<0.00010	0.00089	0.00613	0.00536	<0.00050	<0.010	0.0417	74.5	0.00105	0.0548	5.17	80.1	0.0792	0.0261	21.3	8.14	<0.000010	0.000572	0.0208	<0.30
MS-G	Oct-12		40.5	<0.00050	0.0328	0.00722	0.00818	<0.0025	<0.050	0.0636	78.4	0.00419	0.158	10.5	294	0.133	0.031	51.6	20.7	<0.000010	0.0139	0.0476	5.52
MS-H	Jun-10		0.139	<0.00010	<0.00010	0.01135	<0.00050	<0.00050	<0.010	0.00184	51.9	<0.00020	0.00217	0.719	<0.030	<0.000050	<0.0050	6.35	0.117	<0.000010	0.00546	0.00421	<0.30
MS-H	Jul-10		0.206	<0.00010	<0.00010	0.0105	<0.00050	<0.00050	<0.010	0.00149	45.7	<0.00050	0.0011	0.782	<0.030	0.000118	<0.0050	5.83	0.0618	<0.000010	0.00500	0.00349	<0.30
MS-H	Jul-12		0.0175	<0.00010	<0.00010	0.0118	<0.00010	<0.00050	<0.010	0.00202	45.9	<0.00010	0.00165	0.354	<0.030	<0.000050	0.0043	5.84	0.101	<0.000010	0.00446	0.00523	<0.30
MS-H	Aug-12		0.013	<0.00010	<0.00010	0.0115	<0.00010	<0.00050	<0.010	0.00125	41.1	<0.00010	0.00062	0.361	<0.030	<0.000050	0.00346	5.59	0.0245	<0.000010	0.00549	0.00311	<0.30
MS-H	Sep-12		0.0181	<0.00010	<0.00010	0.0113	<0.00010	<0.00050	<0.010	0.000952	49.3	0.00013	0.00031	0.342	<0.030	<0.000050	0.00292	6.36	0.0103	<0.000010	0.00675	0.00251	<0.30
MS-H	Oct-12		0.024	<0.00010	<0.00010	0.0119	<0.00010	<0.00050	<0.010	0.00109	55	<0.00010	0.00084	0.32	<0.030	<0.000050	0.0029	7.16	0.045	<0.000010	0.00709	0.0031	<0.30
MS-I	Jun-10		1.44	<0.00020	<0.00020	0.00934	<0.0010	<0.0010	<0.020	0.00327	101	<0.0010	0.00748	1.66	<0.030	0.00061	<0.010	8.32	1.02	<0.000010	0.00012	0.0116	<0.30
MS-I	Jul-10		1.04	<0.00020	<0.00020	0.00956	<0.0010	<0.0010	<0.020	0.00308	112	<0.0010	0.0126	1.13	<0.030	0.00069	<0.010	9.16	1.57	<0.000010	<0.00010	0.0143	<0.30
MS-I	Jul-12		0.0473	<0.00020	0.00156	0.00851	<0.00020	<0.0010	<0.020	0.00042	304	<0.00020	0.00112	0.0978	<0.030	<0.00010	0.0065	10.6	0.345	<0.000010	0.0141	0.0018	<0.30
MS-I	Aug-12		0.043	<0.00020	0.00135	0.00877	<0.00020	<0.0010	<0.020	0.000472	302	<0.00020	0.00171	0.0872	<0.030	<0.00010	0.0052	10.2	0.427	<0.000010	0.0132	0.002	<0.30
MS-I	Sep-12		0.0268	<0.00020	0.00066	0.00801	<0.00020	<0.0010	<0.020	0.000708	263	<0.00020	0.00292	0.122	<0.030	<0.00010	0.0045	10.9	0.575	<0.000010	0.0104	0.0032	<0.30
MS-I	Oct-12		0.172	<0.00020	0.00114	0.0081	<0.00020	<0.0010	<0.020	0.00117	265	<0.00020	0.0069	0.27	0.164	0.00011	0.0062	10.4	0.81	<0.000010	0.0113	0.0058	<0.30
MS-J	Jun-10		0.356	<0.00020	0.00042	0.00991	<0.0010	<0.0010	<0.020	0.0143	103	<0.0010	0.0206	0.144	16.7	0.00301	0.015	11.0	2.58	<0.000010	0.00247	0.0080	<0.30
MS-J	Jul-10		0.365	<0.00020	0.00039	0.00877	<0.0010	<0.00050	<0.020	0.0134	84.2	<0.00050	0.0152	0.155	14.5	0.00372	0.013	8.76	2.00	<0.000010	0.00215	0.0060	<0.30
MS-J	Aug-10		0.221	0.00016	0.00026	0.00886	0.00051	<0.00050	<0.010	0.0120	84.3	<0.00050	0.0134	0.116	10.9	0.00133	0.0114	7.40	1.97	<0.000010	0.00222	0.00485	<0.30

Dissolved Metals (mg/L)

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Dissolved Metals (mg/L)	Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus
Mitchell *(cont'd)*																							
MS-J	Jul-12		0.514	<0.00010	0.00038	0.00911	0.00059	<0.00050	0.016	0.00699	84.2	<0.00010	0.0169	1.17	3.49	0.000286	0.0205	8.66	2.22	<0.000010	0.000257	0.00662	<0.30
MS-J	Aug-12		0.172	0.00011	0.00062	0.00905	0.00037	<0.00050	0.016	0.00462	68.9	<0.00010	0.0114	0.249	<0.030	0.00006	0.0194	7.48	1.86	<0.000010	0.000804	0.00482	<0.30
MS-J	Sep-12		0.126	0.00013	0.0007	0.0091	0.0003	<0.00050	0.019	0.00395	71.4	0.00016	0.0097	0.167	<0.030	0.000055	0.0194	7.29	1.90	<0.000010	0.00098	0.00426	<0.30
MS-J	Oct-12		0.0627	0.00012	0.00054	0.00849	0.00025	<0.00050	0.018	0.00394	73.7	<0.00010	0.0106	0.11	<0.030	<0.000050	0.0184	7.22	1.77	<0.000010	0.000909	0.00465	<0.30
MS-L	Jul-12		<0.0030	<0.00010	0.00272	0.00823	<0.00010	<0.00050	0.016	0.00007	134	0.00011	0.00297	<0.00050	<0.030	<0.000050	0.0134	8.6	1.71	<0.000010	0.00872	0.00099	<0.30
MS-L	Aug-12		<0.0030	<0.00010	0.00317	0.00858	<0.00010	<0.00050	0.017	0.000066	130	<0.00010	0.00287	<0.00050	<0.030	<0.000050	0.0144	9.01	1.67	<0.000010	0.00912	0.00093	<0.30
MS-L	Sep-12		<0.0030	<0.00010	0.00312	0.00832	<0.00010	<0.00050	0.018	0.000057	128	0.00013	0.00262	<0.00050	<0.030	<0.000050	0.0126	8.60	1.76	<0.000010	0.00882	0.0009	<0.30
MS-L	Oct-12		<0.0030	<0.00010	0.00233	0.00793	<0.00010	<0.00050	0.015	0.000049	126	<0.00010	0.00243	<0.00050	<0.030	<0.000050	0.0117	7.78	1.66	<0.000010	0.00864	0.00082	<0.30
MS-M	Jul-12		0.297	<0.00010	<0.00010	0.00728	0.00093	<0.00050	0.03	0.00859	94.9	<0.00010	0.0251	0.173	1.10	0.00015	0.0359	10.8	3.33	<0.000010	0.000131	0.00851	<0.30
MS-M	Aug-12		0.184	0.00015	0.00021	0.00714	0.00081	<0.00050	0.03	0.00658	80.6	<0.00010	0.0204	0.111	1.09	0.00138	0.0336	9.58	2.74	<0.000010	0.000315	0.00705	<0.30
MS-M	Sep-12		0.102	0.00015	<0.00010	0.00698	0.00062	<0.00050	0.03	0.00576	78.1	0.00016	0.0189	0.0493	0.062	<0.000050	0.0306	9.28	2.86	<0.000010	0.000404	0.00667	<0.30
MS-M	Oct-12		0.106	0.00014	<0.00010	0.00695	0.00065	<0.00050	0.031	0.00593	85.9	<0.00010	0.0197	0.0512	<0.030	<0.000050	0.0344	9.27	2.67	<0.000010	0.000349	0.00706	<0.30
MS-S	Jul-12		0.549	<0.00010	0.00024	0.00922	0.0006	<0.00050	0.017	0.00689	83.7	<0.00010	0.0169	1.08	2.10	0.000276	0.0204	8.64	2.24	<0.000010	0.000191	0.00652	<0.30
MS-T	Jul-12		0.0294	0.00018	<0.00010	0.0163	<0.00010	<0.00050	<0.010	0.00154	50.3	<0.00010	0.00155	0.248	<0.030	0.000221	0.00448	2.63	0.164	<0.000010	0.00116	0.00871	<0.30
MS-U	Jul-12		17.7	<0.00010	0.00155	0.00366	0.0014	<0.00050	<0.010	0.0214	63.7	0.00161	0.0356	6.68	45.2	0.00074	0.0221	9.50	2.18	<0.000010	0.00755	0.0417	0.49

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc
Kerr													
K-1	Oct-09	1.60	0.00053	12.4	<0.000050	<2.0	1.90	<0.00050	<0.00050	<0.010	0.000187	<0.0050	0.513
K-2	Oct-09	1.64	<0.00050	4.91	<0.000050	4.9	3.68	<0.00050	<0.00050	0.016	<0.000050	<0.0050	0.0435
K-3	Oct-09	0.88	<0.00020	2.96	<0.000020	6.6	4.19	<0.00020	<0.00020	<0.010	<0.000020	<0.0020	0.0100
K-3	Jul-12	0.482	0.00016	2.37	<0.000010	2.6	1.79	<0.000010	<0.00010	<0.010	<0.000010	<0.0010	0.0102
K-3	Aug-12	0.616	0.00031	3.24	<0.000010	3.8	2.63	<0.000010	<0.00010	0.013	<0.000010	<0.0010	0.0106
K-3	Sep-12	0.735	<0.00010	3.07	<0.000010	5.6	3.85	<0.000010	<0.00010	<0.010	<0.000010	<0.0010	0.0069
K-3	Oct-12	0.354	0.00038	2.29	<0.000010	<2.0	0.801	<0.000010	<0.00010	<0.010	<0.000010	<0.0010	0.0146
K-4	Jun-10	0.100	0.00040	0.777	<0.000010	<2.0	0.0298	<0.00010	<0.00010	<0.010	0.000068	<0.0010	0.0416
K-4	Jul-10	0.97	0.00046	7.22	0.000024	<2.0	1.31	<0.00020	<0.00020	<0.010	0.000164	<0.0020	0.378
K-4	Aug-10	0.95	0.00077	7.99	0.000025	<2.0	1.32	<0.00020	<0.00020	<0.010	0.000189	<0.0020	0.321
K-4	Jul-12	0.724	0.00019	4.48	0.000013	<2.0	0.667	0.00004	<0.00010	<0.010	0.000152	<0.0010	0.184
K-4	Aug-12	0.888	0.00022	6.64	0.000014	<2.0	1.08	0.000057	<0.00010	0.014	0.000194	<0.0010	0.317
K-4	Sep-12	1.035	0.00025	7.98	0.0000125	<2.0	1.405	0.0000645	<0.00010	<0.010	0.000215	<0.0010	0.39
K-4	Oct-12	0.894	0.00041	6.28	0.000024	<2.0	1.1	0.000059	<0.00010	<0.010	0.000132	<0.0010	0.269
K-5	Jun-10	0.82	0.00049	5.52	0.000029	<2.0	1.02	<0.00020	<0.00020	<0.010	0.000124	<0.0020	0.271
K-5	Aug-10	1.52	<0.0010	11.2	<0.000050	2.3	1.97	<0.00050	<0.00050	<0.010	0.000231	0.0071	0.495
K-5	Jul-12	1.22	0.00022	7.14	<0.000010	<2.0	1.26	0.000073	<0.00010	<0.010	0.000276	<0.0010	0.36
K-5	Aug-12	1.48	0.00019	10.1	<0.000010	<2.0	1.66	0.000084	<0.00010	0.017	0.000265	<0.0010	0.472
K-5	Sep-12	1.63	0.00019	11.1	<0.000010	<2.0	1.94	0.000089	<0.00010	<0.010	0.000282	<0.0010	0.520
K-5	Oct-12	1.51	0.00021	10.7	<0.000010	<2.0	1.77	0.000086	<0.00010	<0.010	0.000282	<0.0010	0.443
Sulphurets													
S-1	Oct-09	0.301	0.00045	1.18	<0.000010	<2.0	0.141	<0.00010	<0.00010	<0.010	<0.000010	<0.0010	<0.0010
S-1	Oct-12	0.223	0.00035	2.36	<0.000010	<2.0	0.165	<0.000010	<0.00010	<0.010	0.00011	<0.0010	<0.0030
Mitchell													
MN-A	Jul-09	1.24	0.00329	5.44	0.000021	<2.0	0.243	<0.00010	<0.00010	<0.010	0.000106	<0.0010	0.130
MN-A	Aug-09												
MN-A	Sep-09	2.02	0.00493	6.85	0.000012	<2.0	0.377	<0.00010	<0.00010	<0.010	0.00108	<0.0010	0.243
MN-A	Oct-09	1.73	0.00413	7.72	0.000032	<2.0	0.305	<0.00010	<0.00010	<0.010	0.00147	<0.0010	0.312
MN-A	Jun-10	1.47	0.00378	7.26	0.000027	<2.0	0.255	<0.00010	<0.00010	<0.010	0.00134	<0.0010	0.298
MN-A	Jul-10	1.77	0.00354	9.03	0.000052	<2.0	0.268	<0.00010	<0.00010	<0.010	0.00169	<0.0010	0.260
MN-A	Aug-10	1.69	0.00422	7.58	0.000021	<2.0	0.307	<0.00010	<0.00010	<0.010	0.000947	<0.0010	0.286
MN-A	Jul-12	1.30	0.00379	5.33	0.000022	<2.0	0.237	0.000026	<0.00010	<0.010	0.000562	<0.0010	0.0857
MN-A	Aug-12	1.34	0.00444	5.43	0.000021	<2.0	0.285	0.000026	<0.00010	<0.010	0.00093	<0.0010	0.061
MN-A	Sep-12	1.33	0.00475	5.095	<0.000010	<2.0	0.2985	0.000017	<0.00010	<0.010	0.00135	<0.0010	0.0635
MN-A	Oct-12	1.46	0.00423	6	0.000037	<2.0	0.292	0.000038	<0.00010	<0.010	0.000759	<0.0010	0.124
MN-B	Jul-09	2.09	0.00367	7.22	0.000055	<2.0	0.191	<0.0001	<0.0001	<0.010	0.000214	<0.001	0.106
MN-B	Aug-10	1.18	0.00076	5.765	<0.000020	<2.0	0.335	<0.00020	<0.00010	<0.010	0.000543	<0.0010	0.415
MN-B	Aug-12	1.07	0.00071	4.11	0.000025	<2.0	0.263	0.000081	<0.00010	<0.010	0.000239	<0.0010	0.251
MN-B	Sep-12	0.761	0.00066	2.96	<0.000010	<2.0	0.29	0.000031	<0.00010	<0.010	0.000064	<0.0010	0.14
MN-B	Oct-12	0.683	0.00056	2.82	0.000014	<2.0	0.231	0.000032	<0.00010	<0.010	0.000079	<0.0010	0.182
MN-C	Aug-10	0.699	0.00093	8.54	<0.000020	2.80	0.431	<0.00020	<0.00020	<0.010	0.00145	<0.0020	0.57
MN-C	Aug-12	0.616	0.00122	5.49	<0.000010	<2.0	0.343	0.000011	<0.00010	0.012	0.000109	<0.0010	0.0334
MN-C	Sep-12	0.528	0.0017	5.32	<0.000010	<2.0	0.302	<0.000010	<0.00010	<0.010	0.00007	<0.0010	0.0616
MN-C	Oct-12	0.441	0.00077	5.08	<0.000010	<2.0	0.259	<0.000010	<0.00010	<0.010	0.000073	<0.0010	0.0364
MN-D	Aug-10	0.34	0.00053	4.03	0.000038	<2.0	0.235	<0.00020	<0.00020	<0.010	0.000471	<0.0020	0.0578

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc
Mitchell *(cont'd)*													
MN-D	Aug-12	0.404	<0.00010	2.91	<0.000010	<2.0	0.173	<0.000010	<0.00010	<0.010	0.000013	<0.0010	<0.0030
MN-D	Sep-12	0.553	0.00176	5.27	<0.000010	<2.0	0.294	<0.000010	<0.00010	<0.010	0.000069	<0.0010	0.063
MN-D	Oct-12	0.327	<0.00010	2.51	<0.000010	<2.0	0.117	<0.000010	<0.00010	<0.010	<0.000010	<0.0010	<0.0030
MS-A	Aug-09	1.09	0.0069	11.8	0.000109	2.6	0.335	<0.00020	<0.00020	<0.010	0.00201	0.0085	1.5
MS-A	Sep-09	1.64	0.00668	12.8	0.000201	6.0	0.705	0.00023	<0.00020	<0.010	0.00157	0.0108	1.62
MS-A	Oct-09	1.64	0.00556	13.0	0.000187	5.9	0.631	0.00022	<0.00020	<0.010	0.00141	0.0097	1.39
MS-A	Jun-10	2.02	0.0387	17.3	0.000597	13.8	0.935	<0.00050	<0.00050	<0.010	0.0116	0.0479	5.27
MS-A	Jul-10	2.10	0.0094	16.6	0.000311	7.3	0.848	<0.00050	<0.00050	<0.010	0.00497	0.0255	3.25
MS-A	Jul-12	1.43	0.0108	16.7	0.000218	4.1	0.66	0.000391	<0.00020	<0.010	0.0095	0.0214	4.05
MS-A	Aug-12	1.58	0.00697	17	0.000137	3.6	0.64	0.000354	<0.00020	0.012	0.00686	0.0552	7.84
MS-A	Sep-12	1.84	0.00528	18.2	0.0001	4.5	0.775	0.000369	<0.00020	<0.010	0.00604	0.0539	8.46
MS-A	Oct-12	2.21	0.027	21.7	0.000242	5.4	0.882	0.00049	<0.00050	<0.010	0.0113	0.0829	12.3
MS-B	Jul-09	0.91	0.00490	18.9	0.000661	3.7	0.524	<0.00020	<0.00020	<0.010	0.00668	0.0026	1.29
MS-B	Aug-09	1.11	0.00428	17.7	0.000528	3.7	0.528	<0.00020	<0.00020	<0.010	0.00374	<0.0020	1.09
MS-B	Sep-09	1.26	0.00649	17.0	0.000681	3.5	0.644	<0.00020	<0.00020	<0.010	0.00454	0.0024	1.36
MS-B	Oct-09	1.03	0.00586	17.5	0.000603	3.5	0.555	<0.00020	<0.00020	<0.010	0.00512	<0.0020	1.23
MS-B	Jun-10	0.67	0.0156	23.7	0.00130	2.9	0.641	<0.00050	<0.00050	<0.010	0.0163	0.0099	3.33
MS-B	Jul-10	0.90	0.00629	20.5	0.000741	4.3	0.652	<0.00020	<0.00020	<0.010	0.00780	0.0028	1.66
MS-B	Jul-12	0.75	0.0053	21.4	0.000785	3.5	0.63	0.000107	<0.00020	<0.010	0.0105	0.0039	2.03
MS-B	Aug-12	1.02	0.00309	19.8	0.00061	3.8	0.607	0.000119	<0.00010	<0.010	0.00444	0.0021	1.23
MS-B	Sep-12	1	0.00379	19.3	0.000579	3.8	0.575	0.000116	<0.00010	<0.010	0.0046	0.0022	1.29
MS-B	Oct-12	0.97	0.0075	19.6	0.0008	3.2	0.555	0.000116	<0.00020	<0.010	0.00812	0.0053	1.72
MS-C1	Jul-09	0.65	0.00257	10.2	0.000107	<2.0	0.380	<0.00050	<0.00050	<0.010	0.0151	<0.0050	1.43
MS-C1	Jun-10	0.89	<0.0020	17.7	0.00019	3.1	0.937	<0.0010	<0.0010	<0.010	0.0194	<0.010	4.73
MS-C1	Jul-10	0.75	0.00089	11.6	0.000112	3.1	0.502	<0.00020	<0.00020	<0.010	0.00540	<0.0020	1.40
MS-C1	Aug-10	0.545	0.00157	5.63	<0.000010	<2.0	0.263	<0.00010	<0.00010	<0.010	0.000064	<0.0010	0.0513
MS-C1-2	Jul-12	1.26	0.00022	9.96	0.000014	6.6	0.713	0.000181	<0.00010	<0.010	0.00136	<0.0010	1.04
MS-C1-2	Aug-12	1.24	0.00019	9.94	0.00001	8.1	0.766	0.00018	<0.00010	0.01	0.00118	<0.0010	1.05
MS-C1-2	Sep-12	0.979	0.00065	11.3	0.000044	5.9	0.567	0.000157	<0.00010	<0.010	0.0018	<0.0010	0.905
MS-C1-2	Oct-12	1.27	0.00019	11.8	0.000015	7.9	0.767	0.000178	<0.00010	<0.010	0.00124	<0.0010	1.06
MS-C2	Jul-09	0.74	0.00196	9.50	0.000060	2.0	0.429	0.00050	0.00050	0.010	0.00886	0.0050	1.40
MS-C2	Jun-10	0.80	0.0013	14.9	0.000190	3.2	0.794	<0.00050	<0.00050	<0.010	0.0145	<0.0050	3.70
MS-C2	Jul-12	0.77	0.00082	10.7	0.000084	<2.0	0.491	0.000057	<0.00020	<0.010	0.00946	<0.0020	1.35
MS-C2	Aug-12	0.77	0.00044	9.14	0.000057	2.3	0.436	0.000057	<0.00010	<0.010	0.00621	<0.0010	0.904
MS-C2	Sep-12	0.756	0.00033	8.57	0.000041	2.5	0.413	0.000048	<0.00010	<0.010	0.00382	<0.0010	0.807
MS-C2	Oct-12	0.736	0.00046	10.7	0.000079	2.3	0.462	0.000063	<0.00010	<0.010	0.00568	<0.0010	1.32
MS-C2-2	Jul-12	1.49	<0.00020	7.92	<0.000020	2.9	0.587	0.000094	<0.00020	<0.010	0.000059	<0.0020	1.14
MS-C2-2	Aug-12	1.55	<0.00010	8.67	<0.000010	3	0.632	0.000096	<0.00010	0.014	0.000075	<0.0010	1.46
MS-C2-2	Sep-12	1.52	<0.00020	9.46	<0.000020	2.8	0.564	0.000088	<0.00020	<0.010	0.000655	<0.0020	1.43
MS-C2-2	Oct-12	1.46	<0.00010	8.05	<0.000010	2.8	0.508	0.000083	<0.00010	<0.010	0.000045	<0.0010	1.19
MS-C3	Aug-09	0.648	0.0006	8.09	0.000044	2.8	0.388	<0.00010	<0.00010	<0.010	0.00277	<0.0010	0.873
MS-C3	Sep-09	1.01	0.00095	8.44	<0.00010	3.4	0.512	<0.0010	<0.0010	<0.010	0.00298	<0.010	1.09
MS-C3	Oct-09	0.764	0.00052	8.62	0.000043	3.4	0.478	<0.00010	<0.00010	<0.010	0.00190	<0.0010	0.889
MS-C3	Jun-10	0.89	<0.00040	10.6	0.000020	6.6	0.824	<0.00020	<0.00020	<0.010	0.00262	<0.0020	1.36
MS-C3	Jul-10	0.800	0.00046	10.3	0.000026	7.3	0.609	<0.00010	<0.00010	<0.010	0.00204	<0.0010	1.05

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc
Mitchell *(cont'd)*													
MS-C4	Jul-09	0.50	0.00064	5.27	0.000023	<2.0	0.30	<0.00010	<0.00010	<0.010	0.00181	<0.0010	0.54
MS-C4	Aug-09	1.04	0.0013	7.32	<0.000010	<2.0	0.397	<0.00010	<0.00010	<0.010	0.00	<0.0010	0.50
MS-C4	Sep-09	1.05	<0.00010	7.52	0.000014	8.3	0.628	<0.00010	<0.00010	<0.010	0.00054	<0.0010	0.81
MS-C4	Oct-09	0.717	0.00035	9.08	0.000024	6.1	0.536	<0.00010	<0.00010	<0.010	0.00166	<0.0010	0.836
MS-D	Jul-12	0.931	0.00024	9.93	0.000024	3.8	0.622	0.00005	<0.00010	<0.010	0.00252	<0.0010	1.13
MS-D	Aug-12	0.857	<0.00010	8.07	<0.000010	5	0.544	0.00004	<0.00010	<0.010	0.000471	<0.0010	0.587
MS-D	Sep-12	0.833	<0.00010	7.55	<0.000010	5.6	0.543	0.000037	<0.00010	<0.010	0.000171	<0.0010	0.528
MS-D	Oct-12	0.785	0.00024	8.45	0.00003	4.6	0.559	0.000052	<0.00010	<0.010	0.00169	<0.0010	0.788
MS-D-2	Jul-12	1.24	0.00011	10.1	<0.000010	6.1	0.705	0.000153	<0.00010	<0.010	0.00185	<0.0010	1.07
MS-D-2	Aug-12	1.19	<0.00010	9.65	<0.000010	6.7	0.693	0.000141	<0.00010	<0.010	0.00146	<0.0010	0.948
MS-D-2	Sep-12	1.15	<0.00010	10.1	<0.000010	6.5	0.683	0.000136	<0.00010	<0.010	0.00133	<0.0010	0.945
MS D-2	Oct-12	1.19	<0.00010	10.7	<0.000010	6.2	0.688	0.000142	<0.00010	<0.010	0.0016	<0.0010	0.983
MS-E	Jul-09	2.5	0.106	29.9	0.00224	4.5	0.902	<0.0020	<0.0020	0.031	0.071	0.113	14.3
MS-E	Aug-09	2.65	0.0632	28.1	0.00157	10.4	0.98	<0.0010	<0.0010	0.018	0.0308	0.076	7.57
MS-E	Jun-10	3.2	0.259	46.2	0.00244	14.6	1.28	<0.0020	<0.0020	0.087	0.117	0.304	15.9
MS-E	Jul-10	0.88	0.0219	23.2	0.000758	26.3	1.28	<0.00050	<0.00050	0.020	0.00861	0.0157	4.74
MS-E	Aug-10	0.71	0.0324	21.0	0.000930	21.7	1.25	<0.00050	<0.00050	0.032	0.0104	0.0147	4.30
MS-E	Jul-12	4.38	0.0235	26.9	0.000387	16.4	1.66	0.000406	<0.00050	<0.010	0.0211	0.111	9.1
MS-E	Aug-12	3.54	0.0194	24.5	0.000301	14.2	1.24	0.000389	<0.00050	0.015	0.0116	0.0609	5.27
MS-E	Sep-12	3.2	0.0425	24.6	0.000511	13.3	1.13	0.000313	<0.00050	<0.010	0.0111	0.0699	4.63
MS-E	Oct-12	3.37	0.0595	28.8	0.000651	11.2	1.05	0.000353	<0.00050	<0.010	0.0243	0.146	5.12
MS-G	Sep-09	2.05	0.00223	15.1	0.000075	4.0	0.964	0.00036	<0.00020	<0.010	0.00470	<0.0020	5.97
MS-G	Oct-09	1.87	0.00255	16.6	0.000068	5.6	0.946	<0.00050	<0.00020	<0.010	0.00348	<0.0020	4.92
MS-G	Jun-10	2.45	0.03790	26.0	0.000815	10.2	1.635	<0.0010	<0.0010	<0.020	0.04230	0.1625	14.95
MS-G	Jul-10	1.75	0.00640	16.6	0.000153	5.7	0.753	<0.00050	<0.00050	<0.010	0.00796	0.0237	4.72
MS-G	Aug-10	1.19	0.00547	12.3	0.000109	4.1	0.561	0.00026	<0.00020	<0.010	0.00464	0.0095	2.18
MS-G	Jul-12	2.35	0.00722	17.2	0.000218	5.1	0.982	0.0003965	<0.00020	<0.010	0.01445	0.0348	4.45
MS-G	Aug-12	1.37	0.00147	11.9	0.000094	3.4	0.603	0.000228	<0.00010	<0.010	0.0031	<0.0010	1.84
MS-G	Sep-12	1.37	0.00167	12.4	0.000074	3.9	0.721	0.000223	<0.00010	<0.010	0.00272	0.0013	2.67
MS-G	Oct-12	1.49	0.0188	14.2	0.000333	4.5	0.678	0.00022	<0.00050	<0.010	0.00954	0.0082	4.01
MS-H	Jun-10	0.676	0.0036	4.44	0.000025	4.3	0.394	<0.00010	<0.00010	<0.010	0.000154	<0.0010	0.0881
MS-H	Jul-10	0.656	0.00415	4.3	0.000023	3.8	0.355	<0.00010	<0.00010	<0.010	0.000226	<0.0010	0.0682
MS-H	Jul-12	0.731	0.00341	4.35	0.000028	2.5	0.378	0.000016	<0.00010	<0.010	<0.000010	<0.0010	0.0855
MS-H	Aug-12	0.68	0.00404	3.79	0.000022	2.8	0.369	0.000012	<0.00010	<0.010	<0.000010	<0.0010	0.0495
MS-H	Sep-12	0.703	0.00415	3.64	0.000015	3.3	0.417	0.000014	<0.00010	<0.010	0.000039	<0.0010	0.0383
MS-H	Oct-12	0.742	0.00411	3.85	0.000016	3.5	0.453	0.000017	<0.00010	<0.010	0.000065	<0.0010	0.042
MS-I	Jun-10	0.80	0.00116	6.31	0.000044	2.1	0.810	<0.00020	<0.00020	<0.010	0.00324	<0.0020	0.138
MS-I	Jul-10	0.91	0.00187	6.81	0.000033	2.5	0.881	<0.00020	<0.00020	<0.010	0.00249	<0.0020	0.135
MS-I	Jul-12	0.73	<0.00020	6.02	<0.000020	4.7	3.2	<0.000020	<0.00020	<0.010	0.00148	<0.0020	0.0177
MS-I	Aug-12	0.71	0.00025	6.03	<0.000020	4.7	3.22	<0.000020	<0.00020	0.02	0.00139	<0.0020	0.0176
MS-I	Sep-12	0.69	0.00041	5.75	<0.000020	4.3	2.76	<0.000020	<0.00020	0.011	0.00126	<0.0020	0.0264
MS-I	Oct-12	0.82	0.00028	7.15	<0.000020	4.2	2.87	<0.000020	<0.00020	<0.010	0.00174	<0.0020	0.0522
MS-J	Jun-10	1.44	<0.00040	7.25	<0.000020	20.9	1.02	<0.00020	<0.00020	<0.010	0.000582	<0.0020	0.564
MS-J	Jul-10	1.42	<0.00020	7.46	<0.000010	18.1	0.833	<0.00010	<0.00010	<0.010	0.000538	<0.0010	0.496
MS-J	Aug-10	1.29	<0.00020	6.83	<0.000010	16.4	0.792	<0.00010	<0.00010	<0.010	0.000427	<0.0010	0.364

Appendix 8.1-1. Deposit Seep Water Quality Data

Location ID	Date Sampled	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc
Mitchell *(cont'd)*													
MS-J	Jul-12	1.46	<0.00010	7.17	<0.000010	18.1	0.837	0.000031	<0.00010	<0.010	0.000196	<0.0010	0.390
MS-J	Aug-12	1.32	<0.00010	6.38	<0.000010	17.7	0.718	0.000028	<0.00010	0.011	0.000136	<0.0010	0.258
MS-J	Sep-12	1.31	<0.00010	6.04	<0.000010	18.4	0.735	0.000026	<0.00010	<0.010	0.000179	<0.0010	0.224
MS-J	Oct-12	1.25	<0.00010	5.96	<0.000010	17.7	0.728	0.000027	<0.00010	<0.010	0.000117	<0.0010	0.221
MS-L	Jul-12	1.34	<0.00010	5.29	<0.000010	15.9	1.60	<0.000010	<0.00010	<0.010	0.00066	<0.0010	0.0255
MS-L	Aug-12	1.35	<0.00010	5.21	<0.000010	15.1	1.67	<0.000010	<0.00010	0.015	0.000597	<0.0010	0.0204
MS-L	Sep-12	1.30	<0.00010	5.20	<0.000010	14.6	1.65	<0.000010	<0.00010	<0.010	0.000599	<0.0010	0.0196
MS-L	Oct-12	1.28	<0.00010	4.78	<0.000010	13.5	1.55	<0.000010	<0.00010	<0.010	0.000624	<0.0010	0.0125
MS-M	Jul-12	2.04	<0.00010	7.07	<0.000010	38.6	1.02	0.000045	<0.00010	<0.010	0.00012	<0.0010	0.561
MS-M	Aug-12	1.91	<0.00010	7.14	<0.000010	34.6	0.878	0.000044	<0.00010	0.012	0.000139	<0.0010	0.455
MS-M	Sep-12	1.90	<0.00010	6.64	<0.000010	33.0	0.856	0.000036	<0.00010	<0.010	0.000109	<0.0010	0.413
MS-M	Oct-12	1.87	<0.00010	6.81	<0.000010	34.0	0.889	0.000042	<0.00010	<0.010	0.000091	<0.0010	0.429
MS-S	Jul-12	1.44	<0.00010	7.40	<0.000010	19.1	0.816	0.000034	<0.00010	<0.010	0.000208	<0.0010	0.389
MS-T	Jul-12	1.30	0.00383	5.39	0.000021	<2.0	0.234	0.000029	<0.00010	<0.010	0.000549	<0.0010	0.0857
MS-U	Jul-12	0.682	0.00260	22.1	0.000353	3.50	0.523	0.000082	<0.00010	<0.010	0.00961	0.0014	1.52

Appendix 8.1-2

McTagg and Ted Morris Valley Seep Water Quality Data

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Appendix 8.1-2. McTagg and Ted Morris Valley Seep Water Quality Data

Sample ID	Date Sampled	ALS Sample ID	Matrix	Field Measurements						Physical Tests							Anions and Nutrients (mg/L)				
				pH	Temperature (°C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	TDS (g/L)	Conductivity (uS/cm)	Hardness (as $CaCO_3$) (mg/L)	pH	Total Suspended Solids (mg/L)	Dissolved Solids (mg/L)	Turbidity (NTU)		Acidity (as $CaCO_3$)	Alkalinity, Total (as $CaCO_3$)	Ammonia as N	Bromide	Chloride
McTagg Valley																					
MCTAGG A-1	3-Oct-09	L827735-3	Water	--	--	--	--	--	--	469	230	7.70	<3.0	309	0.21		9.4	162	<0.005	<0.05	<0.5
MCTAGG A-1	4-Oct-09	L827735-5	Water	--	--	--	--	--	--	404	182	6.83	38.8	289	22.5		13.3	57.7	<0.005	<0.05	<0.5
MCTAGG A-1	10-Jun-10	L897476-36,37	Water	7.71	4.15	379	95.6%	81.6	0.409	221	8	8.40	316	3	3.45		153.5	<0.0050	<0.050	<0.50	0.06
MCTAGG A-1	9-Jul-10	L907299-39,40	Water	6.77	8.71	437.5	8.93	106	0.414	447	223	7.31	<3.0	317	0.92		13.75	116	<0.0050	<0.050	<0.50
MCTAGG A-1	18-Aug-12	L1196665-24	Water	7.42	6.20	470	10.92	--	--	437	223	8.32	<3.0	314	0.14		<1.0	-	<0.0050	<0.050	<0.50
MCTAGG A-1	1-Sep-12	L1204850-22	Water	5.25	6.28	--	22.58	--	--	451	232	8.30	<3.0	313	0.27		<1.0	-	<0.0050	<0.050	<0.50
MCTAGG A-1	2-Oct-12	L1220179-4	Water							436	225	8.40	<3.0	295	0.33		<1.0	149	<0.0050	<0.050	<0.50
MCTAGG B-1	3-Oct-09	L827735-4	Water	--	--	--	--	--		492	242	7.77	26.3	320	12.2		9.1	163	<0.005	<0.05	<0.5
MCTAGG B-1	9-Jul-10	L907299-41	Water	7.02	5.22	535	4.15	19.4	0.559	626	328	7.95	157	465	165		9.3	189	<0.0050	<0.050	<0.50
MCTAGG B-1	5-Jul-12	L1175734-26	Water	6.49	5.52	772	6.27	--	--	688	360	8.01	6.7	501	24.6		5.0	182	0.0066	<0.050	<0.50
MCTAGG B-1	18-Aug-12	L1196665-25	Water	7.15	5.70	670	10.58	--	--	603	313	7.79	<3.0	437	<0.10		8.7	194	<0.0050	<0.050	<0.50
MCTAGG B-1	1-Sep-12	L1204850-21	Water	6.86	5.13	379	11.69	277	0.397	690	370	7.94	37.7	506	85.1		8.2	188	0.0082	<0.050	<0.50
MCTAGG B-1	2-Oct-12	L1220179-5	Water	5.80	4.54	--	10.00	--	--	606	324	8.17	<3.0	422	0.37		3.5	200	<0.0050	<0.050	<0.50
Ted Morris Valley																					
TM-B	9-Jun-10	L897476-35	Water	6.71	3.20	1678	30.7%	66.2	1.866		921	7.60	49.8	1,490	104		20.2	216	0.0057	<0.50	<5.0
TM-B	8-Jul-10	L907299-37	Water	6.27	5.14	1466	8.29	64.5	1.53	1790	1,250	7.76	36.9	1,840	71.4		13.9	203	0.0086	<0.50	<5.0
TM-B	18-Aug-12	L1196665-26	Water	6.87	6.20	0R	9.19	--	--	2210	1,110	3.23	3.2	2,910	3.26		534	<2.0	0.0362	<1.0	<10
TM-B	1-Sep-12	L1204850-3	Water	6.77	3.57	463	13.08	182	--	1320	761	7.55	45	1,230	51		12.7	95.6	0.0062	<0.50	<5.0
TM-B	3-Oct-12	L1220179-12	Water	6.64	3.79	1104	11.40	69	0.833	2010	1,020	3.36	4.0	2,090	7.45		330	<2.0	0.0252	<1.0	12
TM-C	9-Jun-10	L897476-31	Water	7.72	7.02	2351	87.8%	-3.6	1.528		850	7.89	5.2	1,330	31.9		8.9	170	<0.0050	<0.50	<5.0
TM-C	8-Jul-10	L907299-34	Water	7.74	11.05	1830	9.54	7.74	1.621	1810	1,260	8.09	4.9	1,820	35.8		8.0	234	0.0057	3.20	<5.0
TM-C	18-Aug-12	L1196665-27	Water	--	--	--	--	--	--	2060	1,160	6.39	55.8	2,250	207		51.5	36.9	<0.0050	<1.0	<10
TM-C	1-Sep-12	L1204850-20	Water	--	--	--	--	--	--	739	386	7.95	<3.0	581	<0.10		7.1	129	<0.0050	<0.050	<0.50
TM-C	2-Oct-12	L1220179-2	Water	--	--	--	--	--	--	1920	1,210	7.42	28.4	1,880	123		18.4	86.2	<0.0050	<1.0	<10
TM-D	20-Oct-09	L833787-8	Water	7.25	2.87	1790	12.58	--	1.163	--	1,130	7.82	15.3	1,770	60.6		14.2	170	<0.005	<0.05	<5
TM-D	9-Jun-10	L897476-32	Water	7.50	5.54	2156	88.7%	17.2	1.614	--	823	8.00	<3.0	1,250	13.2		6.9	160	<0.0050	<0.50	<5.0
TM-D	8-Jul-10	L907299-33	Water	7.71	9.70	1842	9.96	7.7	1.690	1850	1,300	8.00	4.9	1,900	31.4		9.2	174	0.0054	<0.50	<5.0
TM-D	18-Aug-12	L1196665-28	Water	6.89	5.60	0R	8.74	--	--	1830	1,200	6.77	44.3	1,900	218		46.5	78.2	0.0055	<1.0	<10
TM-D	1-Sep-12	L1204850-1	Water	--	--	--	--	--	--	1630	1,040	7.70	4.3	1,570	21		13.4	145	<0.0050	<0.50	<5.0
TM-D	3-Oct-12	L1220179-11	Water	6.94	4.74	1089	12.88			1610	1,010	7.44	29.4	1,540	116		15.0	105	0.0054	<1.0	<10
TM-E	20-Oct-09		Water	6.90	3.35	2019	12.80	--	1.313	--	--	--	--	--	--		--	--	--	--	--
TM-E	9-Jun-10	L897476-28	Water	7.6	3.39	1513	90.4%	95.7	1.673		886	7.48	8.5	1,480	7.16		9.9	120	<0.0050	<0.50	<5.0
TM-E	8-Jul-10	L907299-29	Water	7.13	7.6	1920	10.09	35.70	1.869	2010	1,280	7.41	31.0	2,140	96.8		20.7	91.7	0.0069	<1.0	<10
TM-E	4-Jul-12	L1175734-27	Water	7.64	3.03	1812	11.9	--	--	1660	1,080	7.74	<3.0	1,580	12.7		11.6	158	-	<0.50	<5.0
TM-E	18-Aug-12	L1196665-29	Water	7.28	5.40	1830	10.55	--	--	1660	1,010	7.70	3.3	1,670	18.8		14.9	165	<0.0050	<1.0	<10
TM-E	1-Sep-12	L1204850-19	Water	6.27	3.31	740	8.38	143	--	1160	672	7.80	<3.0	985	0.65		11.3	181	<0.0050	<0.50	<5.0
TM-E	2-Oct-12	L1220179-3	Water	7.16	3.70	864	12.01	54	0.946	1460	882	7.99	4.2	1,320	11.8		7.9	158	<0.0050	<0.50	<5.0
TM-F	20-Oct-09	L833787-9	Water	7.30	1.33	236	13.56	--	0.154	--	114	8.09	<3.0	149	1.54		2.6	68.1	<0.005	<0.05	<0.5
TM-F	20-Oct-09	L833787-5	Water	6.19	2.8	1313	12.78	--	0.853	--	755	7.30	42.7	1,140	46.9		15.7	104	<0.02	<0.05	<5
TM-F	9-Jun-10	L897476-29	Water	7.62	0.64	1429	86.3	97.4	0.929	--	410	7.88	<3.0	709	0.39		6.7	119	<0.0050	<0.50	<5.0
TM-F	8-Jul-10	L907299-30	Water	7.65	2.53	229	12.31	70.0	0.266	1100	641	8.05	32.7	957	29.1		6.7	142	<0.0050	<0.50	<5.0
TM-F	4-Jul-12	L1175734-9	Water	7.23	3.15	2270	9.27	--	--	2080	1,320	7.06	43.3	2,210	84.0		21.2	161	0.0209	<1.0	<10
TM-F	18-Aug-12	L1196665-30	Water	6.73	5.50	1590	9.08	--	--	1350	864	7.37	56.3	1,320	56.8		24.5	63.9	0.0092	<0.50	<5.0
TM-F	1-Sep-12	L1204850-2	Water	6.01	5.76	2280	11.04	--	--	2110	1,400	7.16	43	2,230	198		32.3	42.6	<0.0050	<1.0	<10
TM-F	2-Oct-12	L1220179-1	Water	6.63	3.30	498	10.54	105	0.554	1280	796	7.58	37.1	1,140	44.7		10.1	113	0.0051	<0.50	5.2

Appendix 8.1-2. McTagg and Ted Morris Valley Seep Water Quality Data

Sample ID	Date Sampled	Fluoride	Nitrate as N	Nitrite as N	Total Nitrogen	Ortho Phosphate as P	Total Phosphate as P	Sulfate	Total Organic Carbon	Total Metals (mg/L)	Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron
McTagg Valley																							
MCTAGG A-1	3-Oct-09	0.063	0.571	<0.001	0.571	--	<0.002	92	<0.50		0.0055	0.00018	0.00052	0.0160	<0.00050	<0.0005	<0.01	0.000035	80.5	<0.0005	<0.0001	0.00016	<0.030
MCTAGG A-1	4-Oct-09	0.402	<0.005	<0.001	<0.05	--	0.0025	148	<0.50		0.0637	0.00014	<0.00010	0.0124	<0.00050	<0.0005	<0.01	0.00204	51.6	<0.0005	0.0156	0.00615	1.17
MCTAGG A-1	10-Jun-10	0.8695	0.005	1.115	0.0000		0.02	95.20	<0.50		0.723	0.00031	0.00365	0.027	<0.00050	<0.00050	<0.010	0.00015	80.8	0.0012	0.00127	0.00614	1.26
MCTAGG A-1	9-Jul-10	0.164	<0.0050	<0.0010	<0.050		<0.0020	124.50	<0.50		10.61385	<0.00020	0.0148	0.141	<0.0010	<0.0010	<0.020	0.01152	74.3	<0.0010	<0.00020	<0.00060	46.1
MCTAGG A-1	18-Aug-12	0.072	0.332	<0.0010	0.36	0.0013	<0.0020	93.3	<0.50		0.0137	0.0002	0.00071	0.0176	<0.00010	<0.00050	<0.010	0.000018	87.8	0.00013	<0.00010	0.001	<0.030
MCTAGG A-1	1-Sep-12	0.073	0.292	<0.0010	0.37	0.0012	<0.0020	92.6	<0.50		0.0418	0.00021	0.00075	0.0171	<0.00010	<0.00050	<0.010	0.000016	84.8	0.00017	<0.00010	<0.00050	0.077
MCTAGG A-1	2-Oct-12	0.076	0.55	<0.0010	0.66	<0.0010	<0.0020	88.3	0.51		0.0157	0.00021	0.0007	0.0173	<0.00010	<0.00050	<0.010	0.000027	84.3	0.00019	<0.00010	<0.00050	<0.030
MCTAGG B-1	3-Oct-09	0.058	0.541	<0.001	0.541	--	0.0296	95.6	<0.50		0.0216	0.00020	0.00083	0.0179	<0.00050	<0.0005	<0.01	0.000039	86.6	<0.0005	<0.0001	0.00035	0.049
MCTAGG B-1	9-Jul-10	0.204	0.0114	<0.0010	<0.050		0.0566	167	<0.50		0.170	0.00575	0.0230	0.0269	<0.0010	<0.0010	<0.020	0.00413	119	<0.0010	0.0126	0.00213	32.0
MCTAGG B-1	5-Jul-12	0.241	0.0476	<0.0010	<0.050	0.0064	<0.020	199	<0.50		<0.0030	0.00101	0.0028	0.0155	<0.00010	<0.00050	<0.010	0.000968	135	<0.00010	0.00299	<0.00050	3.63
MCTAGG B-1	18-Aug-12	0.115	0.389	<0.0010	0.45	0.0022	0.0043	147	0.62		0.0059	0.00025	0.00024	0.021	<0.00010	<0.00050	<0.010	0.000278	111	0.00011	<0.00010	0.001	<0.030
MCTAGG B-1	1-Sep-12	0.247	0.0139	<0.0010	<0.050	<0.0010	0.0329	196	<0.50		<0.0030	0.00101	0.00286	0.0155	<0.00010	<0.00050	<0.010	0.00113	139	0.00011	0.00356	<0.00050	3.09
MCTAGG B-1	2-Oct-12	0.116	0.284	<0.0010	0.36	0.0021	0.0028	142	<0.50		<0.0030	0.00026	0.00023	0.0207	<0.00010	<0.00050	<0.010	0.00027	116	0.00011	<0.00010	<0.00050	<0.030
Ted Morris Valley																							
TM-B	9-Jun-10	0.65	<0.050	<0.010	<0.050		0.0116	852	<0.50		1.15	<0.00050	<0.00050	0.0135	<0.0025	<0.0025	<0.050	0.0413	265	<0.0010	0.0686	0.0190	7.62
TM-B	8-Jul-10	0.96	<0.050	<0.010	<0.050		<0.0020	1,040	<0.50		3.56	0.00055	<0.00050	0.0162	<0.0025	<0.0025	<0.050	0.0594	339	<0.0025	0.100	0.0516	7.16
TM-B	18-Aug-12	4.79	<0.10	<0.020	<0.050	0.0037	<0.20	1,590	<0.50		67.8	<0.00020	0.00148	0.0105	0.00245	<0.0010	<0.020	0.124	271	0.0165	0.281	1.74	22.5
TM-B	1-Sep-12	1.04	<0.050	<0.010	<0.050	<0.0010	<0.020	724	<0.50		8.37	0.00029	0.00039	0.0104	0.0003	<0.0010	<0.020	0.0424	224	0.00097	0.0736	0.2	4.16
TM-B	3-Oct-12	3.25	<0.10	0.022	0.05	<0.0010	<0.0020	1,370	<0.50		40.9	<0.00020	0.00104	0.0106	0.00146	<0.0010	<0.020	0.0944	266	0.00538	0.231	0.814	14.3
TM-C	9-Jun-10	1.16	<0.050	<0.010	<0.050		<0.0020	754	<0.50		<0.0090	<0.00050	<0.00050	0.0111	<0.0025	<0.0025	<0.050	0.0187	259	<0.0010	0.0174	0.00063	2.77
TM-C	8-Jul-10	1.45	<0.050	<0.010	<0.050		<0.0020	1,040	<0.50		0.0083	<0.00050	<0.00050	0.0140	<0.0025	<0.0025	<0.050	0.0259	346	<0.0025	0.0203	0.00090	3.28
TM-C	18-Aug-12	3.03	<0.10	<0.020	<0.050	<0.0010	<0.20	1,470	<0.50		2.71	<0.00050	<0.00050	0.0167	<0.00050	<0.0025	<0.050	0.177	442	<0.00050	0.21	0.191	20.3
TM-C	1-Sep-12	0.278	0.0053	<0.0010	<0.050	0.0013	<0.0020	280	<0.50		0.005	0.00019	<0.00010	0.0101	<0.00010	<0.00050	<0.010	0.0026	125	<0.00010	<0.00010	0.00156	<0.030
TM-C	2-Oct-12	2.33	<0.10	0.034	<0.050	<0.0010	<0.20	1,250	<0.50		0.936	<0.00020	<0.00020	0.0117	<0.00020	<0.0010	<0.020	0.116	392	<0.00020	0.126	0.0599	11.3
TM-D	20-Oct-09	1.28	<0.05	<0.01	--	--	0.0038	1,030	<0.50		0.112	<0.0005	<0.0005	0.0114	<0.0025	<0.0025	<0.05	0.0403	355	<0.0025	0.041	0.00678	3.88
TM-D	9-Jun-10	1.11	<0.050	<0.010	<0.050		<0.0020	712	<0.50		0.0158	<0.00050	<0.00050	0.0119	<0.0025	<0.0025	<0.050	0.0157	247	<0.0010	0.0121	0.00053	1.55
TM-D	8-Jul-10	1.35	<0.050	<0.010	<0.050		<0.0020	1,130	<0.50		0.0577	<0.00050	<0.00050	0.0135	<0.0025	<0.0025	<0.050	0.0487	367	<0.0025	0.0563	0.00761	4.10
TM-D	18-Aug-12	2.39	<0.10	<0.020	<0.050	<0.0010	<0.20	1,190	<0.50		1.58	<0.00020	0.00025	0.0146	<0.00020	<0.0010	<0.020	0.126	384	<0.00020	0.166	0.122	20
TM-D	1-Sep-12	1.39	<0.050	<0.010	<0.050	<0.0010	<0.020	910	<0.50		0.101	<0.00020	<0.00020	0.0107	<0.00020	<0.0010	<0.020	0.0704	324	<0.00020	0.044	0.0104	2.45
TM-D	3-Oct-12	1.67	<0.10	0.022	<0.050	<0.0010	<0.20	991	<0.50		0.612	<0.00020	0.00022	0.0113	<0.00020	<0.0010	<0.020	0.0847	333	<0.00020	0.111	0.047	12.3
TM-E	20-Oct-09	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--
TM-E	9-Jun-10	1.05	<0.050	<0.010	<0.050		0.0059	896	<0.50		2.13	<0.00050	0.00082	0.0220	<0.0025	<0.0025	<0.050	0.0464	285	<0.0010	0.0471	0.164	15.3
TM-E	8-Jul-10	1.93	<0.10	<0.020	<0.050		<0.0020	1,360	<0.50		0.464	<0.00050	<0.00050	0.0128	<0.0025	<0.0025	<0.050	0.0914	368	<0.0025	0.139	0.0449	11.1
TM-E	4-Jul-12	1.11	0.099	<0.010	<0.050	<0.0010	0.04	943	<0.50		0.0285	<0.00020	<0.00020	0.014	<0.00020	<0.0010	<0.020	0.0612	335	<0.00020	0.0397	0.0046	1.23
TM-E	18-Aug-12	1.37	<0.10	<0.020	<0.050	<0.0010	<0.020	1,010	<0.50		0.0757	<0.00020	<0.00020	0.011	<0.00020	<0.0010	<0.020	0.0713	336	<0.00020	0.0371	0.0081	2.22
TM-E	1-Sep-12	0.29	<0.050	<0.010	<0.050	0.0012	<0.0020	527	<0.50		0.0128	0.00062	<0.00020	0.019	<0.00020	<0.0010	<0.020	0.00391	237	<0.00020	<0.00020	<0.0010	<0.030
TM-E	2-Oct-12	1.44	<0.050	0.011	<0.050	<0.0010	<0.0020	784	<0.50		0.0654	<0.00020	<0.00020	0.00915	<0.00020	<0.0010	<0.020	0.0499	295	<0.00020	0.0306	0.0063	1.53
TM-F	20-Oct-09	0.04	0.011	<0.001	--	--	<0.002	63	<0.50		0.0581	0.00094	0.00074	0.0259	<0.0005	<0.0005	<0.01	0.000113	37.7	<0.0005	<0.0001	0.00035	0.091
TM-F	20-Oct-09	0.73	<0.05	<0.01	--	--	<0.002	703	<0.50		6.47	<0.0005	<0.0005	0.0104	<0.0025	<0.0025	<0.05	0.0376	211	<0.0025	0.0667	0.126	4.79
TM-F	9-Jun-10	0.26	<0.050	<0.010	<0.050		<0.0020	378	<0.50		0.0125	0.00042	<0.00020	0.0111	<0.0010	<0.0010	<0.020	0.00276	155	<0.00040	<0.00020	0.00069	<0.030
TM-F	8-Jul-10	0.32	<0.050	<0.010	<0.050		0.0503	537	<0.50		1.50	0.00123	0.00137	0.0483	<0.0025	<0.0025	<0.050	0.00463	210	<0.0025	0.00082	0.0109	1.99
TM-F	4-Jul-12	0.99	0.17	<0.020	0.174	<0.0010	<0.020	1,330	<0.50		6.54	0.00056	0.00067	0.0149	0.00023	<0.0010	<0.020	0.0789	385	0.00061	0.135	0.126	10.2
TM-F	18-Aug-12	0.73	0.052	<0.010	<0.050	<0.0010	<0.020	844	<0.50		11.5	0.00027	0.00045	0.0115	0.0004	<0.0010	<0.020	0.0511	242	0.00187	0.092	0.296	4.79
TM-F	1-Sep-12	2.66	<0.10	<0.020	<0.050	<0.0010	<0.20	1,370	<0.50		1.76	<0.00050	<0.00050	0.0143	<0.00050	<0.0025	<0.050	0.164	445	<0.00050	0.18	0.128	19.1
TM-F	2-Oct-12	0.78	0.062	0.014	<0.050	<0.0010	<0.20	706	<0.50		7.52	0.00039	0.00034	0.01	0.00028	<0.0010	<0.020	0.04	214	0.00096	0.07	0.168	3.71

Appendix 8.1-2. McTagg and Ted Morris Valley Seep Water Quality Data

Sample ID	Date Sampled	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc
McTagg Valley																					
MCTAGG A-1	3-Oct-09	<0.00005	<0.005	4.85	0.000182	<0.00001	0.00207	<0.00050	<0.3	0.288	0.00706	4.66	<0.000010	2.4	0.315	<0.0001	<0.0001	<0.01	0.000142	<0.001	<0.001
MCTAGG A-1	4-Oct-09	<0.00005	0.0091	11.5	0.429	<0.00001	0.000097	0.117	<0.3	0.113	0.00021	6.10	<0.000010	<2.0	0.320	<0.0001	<0.0001	<0.01	0.000375	<0.0010	0.431
MCTAGG A-1	10-Jun-10	0.000436	<0.0050	5.35	0.0846	<0.000010	0.00227	0.00324	<0.30	0.346	0.0090	5.29	0.00005	2.3	0.347	<0.00010	<0.00010	0.03	0.000183	0.0	0.007
MCTAGG A-1	9-Jul-10	<0.00010	<0.010	13.3	2.62	<0.000010	0.00520	<0.0010	<0.30	0.575	0.00771	19.2	<0.000020	2.5	0.38	<0.00020	<0.00020	<0.010	0.0	<0.0020	<0.0020
MCTAGG A-1	18-Aug-12	<0.000050	0.00111	5.58	0.000621	<0.000010	0.00255	<0.00050	<0.30	0.315	0.00759	4.84	<0.000010	2.5	0.357	<0.000010	<0.00010	0.012	0.000157	<0.0010	<0.0030
MCTAGG A-1	1-Sep-12	<0.000050	0.00067	5.28	0.00274	<0.000010	0.00237	<0.00050	<0.30	0.302	0.00706	4.69	<0.000010	2.5	0.344	<0.000010	0.00016	<0.010	0.000146	<0.0010	<0.0030
MCTAGG A-1	2-Oct-12	<0.000050	0.00101	5.15	0.000795	<0.000010	0.00252	<0.00050	<0.30	0.342	0.00695	4.61	<0.000010	2.3	0.346	<0.000010	<0.00010	<0.010	0.000159	<0.0010	<0.0030
MCTAGG B-1	3-Oct-09	<0.00005	<0.005	5.79	0.00251	<0.00001	0.00202	<0.00050	<0.3	0.307	0.00798	4.56	<0.000010	2.4	0.351	<0.0001	<0.0001	<0.01	0.000164	<0.001	0.0010
MCTAGG B-1	9-Jul-10	0.00015	<0.010	6.78	0.794	<0.000010	0.00848	0.0915	<0.30	0.31	0.00060	6.80	0.000026	2.9	0.551	<0.00020	<0.00020	0.010	0.00161	<0.0020	0.893
MCTAGG B-1	5-Jul-12	<0.000050	0.00331	7.49	0.224	<0.000010	0.00458	0.0545	<0.30	0.346	0.00078	4.72	<0.000010	2.7	0.594	0.000011	<0.00010	<0.010	0.00134	<0.0010	0.321
MCTAGG B-1	18-Aug-12	<0.000050	0.00191	10.4	0.000493	<0.000010	0.00318	0.00296	<0.30	0.462	0.0131	4.85	<0.000010	3.1	0.473	<0.000010	<0.00010	0.015	0.000726	<0.0010	0.0227
MCTAGG B-1	1-Sep-12	<0.000050	0.00338	8.02	0.265	<0.000010	0.00471	0.0598	<0.30	0.345	0.00015	4.98	<0.000010	3	0.641	0.000012	<0.00010	<0.010	0.0014	<0.0010	0.352
MCTAGG B-1	2-Oct-12	<0.000050	0.00209	9.9	0.000351	<0.000010	0.00307	0.00296	<0.30	0.459	0.0108	4.64	<0.000010	2.9	0.49	<0.000010	<0.00010	<0.010	0.000754	<0.0010	0.0226
Ted Morris Valley																					
TM-B	9-Jun-10	<0.00025	<0.025	62.8	3.94	<0.000010	0.00146	0.491	<0.30	0.89	0.0013	3.87	<0.000050	2.5	1.41	<0.00050	<0.00050	<0.010	0.0122	<0.0050	2.70
TM-B	8-Jul-10	<0.00025	<0.025	97.4	5.18	<0.000010	0.00140	0.742	<0.30	1.25	0.0024	5.62	<0.000050	2.9	1.87	<0.00050	<0.00050	<0.010	0.0146	<0.0050	3.92
TM-B	18-Aug-12	0.00219	0.0529	113	9	<0.000010	<0.00010	1.61	<0.30	0.91	0.00314	19.9	0.000413	3.2	1.62	0.000662	<0.00020	0.023	0.0688	<0.0020	6.62
TM-B	1-Sep-12	0.00021	0.0157	56.1	3.45	<0.000010	0.00099	0.494	<0.30	0.98	0.00522	6.67	0.000069	2.4	1.34	0.00016	<0.00020	0.011	0.0109	<0.0020	2.53
TM-B	3-Oct-12	0.00178	0.0446	96.2	7.82	<0.000010	<0.00010	1.29	<0.30	0.98	0.00207	13.5	0.00031	2.8	1.59	0.000574	<0.00020	<0.010	0.0355	<0.0020	4.66
TM-C	9-Jun-10	<0.00025	<0.025	41.5	1.58	<0.000010	0.00111	0.209	<0.30	1.00	0.0131	3.00	<0.000050	<2.0	1.23	<0.00050	<0.00050	<0.010	0.00715	<0.0050	1.57
TM-C	8-Jul-10	<0.00025	<0.025	80.7	1.56	<0.000010	0.00116	0.285	<0.30	1.18	0.0043	3.61	<0.000050	2.4	1.75	<0.00050	<0.00050	<0.010	0.0122	<0.0050	2.21
TM-C	18-Aug-12	<0.00025	0.0427	75.2	11	<0.000010	0.00027	1.35	<0.30	1.02	0.00124	7.84	<0.000050	2.2	2.35	<0.000050	<0.00050	0.02	0.0136	<0.0050	10.4
TM-C	1-Sep-12	<0.000050	0.0024	24	0.00426	<0.000010	0.00231	0.0517	<0.30	1.29	0.00869	2.84	<0.000010	<2.0	0.801	0.000064	<0.00010	<0.010	0.000888	<0.0010	0.182
TM-C	2-Oct-12	<0.00010	0.0342	61.7	8.2	<0.000010	0.0003	0.952	<0.30	0.97	0.00087	5.77	<0.000020	<2.0	2.12	0.000039	<0.00020	<0.010	0.00579	<0.0020	5.67
TM-D	20-Oct-09	<0.00025	<0.025	65.1	3.07	<0.00001	0.00071	0.393	<0.3	1.19	0.00153	4.25	<0.00005	2.0	1.76	<0.0005	<0.0005	<0.01	0.00759	<0.005	2.91
TM-D	9-Jun-10	<0.00025	<0.025	39.6	1.11	<0.000010	0.00134	0.184	<0.30	1.16	0.0150	2.75	<0.000050	<2.0	1.20	<0.00050	<0.00050	<0.010	0.00631	<0.0050	1.32
TM-D	8-Jul-10	<0.00025	<0.025	70.9	3.92	<0.000010	0.00085	0.459	<0.30	1.12	0.0051	4.23	<0.000050	2.4	1.88	<0.00050	<0.00050	<0.010	0.00871	<0.0050	3.20
TM-D	18-Aug-12	<0.00010	0.0348	63.1	9.33	<0.000010	0.00033	0.982	<0.30	0.85	0.00101	6.91	<0.000020	2.1	2.12	0.000049	<0.00020	0.02	0.0109	<0.0020	7.39
TM-D	1-Sep-12	<0.00010	0.0219	56.1	3.11	<0.000010	0.0005	0.511	<0.30	0.63	0.00093	5.41	<0.000020	<2.0	1.61	0.000042	<0.00020	0.011	0.00609	<0.0020	4.69
TM-D	3-Oct-12	<0.00010	0.0281	55.3	8.04	<0.000010	0.00042	0.705	<0.30	0.83	0.00048	5.44	<0.000020	<2.0	1.82	0.000036	<0.00020	<0.010	0.00617	<0.0020	4.36
TM-E	20-Oct-09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TM-E	9-Jun-10	0.00090	<0.025	37.2	3.36	<0.000010	0.00172	0.301	<0.30	1.01	0.0093	5.64	<0.000050	<2.0	1.29	<0.00050	<0.00050	0.032	0.00880	<0.0050	2.23
TM-E	8-Jul-10	<0.00025	<0.025	72.1	8.92	<0.000010	0.00033	0.835	<0.30	0.87	0.0033	5.77	<0.000050	2.5	2.01	<0.00050	<0.00050	<0.010	0.00716	<0.0050	5.12
TM-E	4-Jul-12	<0.00010	0.0184	57.6	2.76	<0.000010	0.00085	0.499	<0.30	0.74	0.0139	4.8	<0.000020	<2.0	1.58	0.000024	<0.00020	<0.010	0.00724	<0.0020	3.98
TM-E	18-Aug-12	<0.00010	0.0224	62.6	2.4	<0.000010	0.00062	0.529	<0.30	0.69	0.00178	5.54	<0.000020	2.1	1.69	0.000035	<0.00020	0.02	0.00744	<0.0020	4.78
TM-E	1-Sep-12	<0.00010	0.006	29.7	0.00103	<0.000010	0.00353	0.116	<0.30	2.09	0.0109	2.22	<0.000020	<2.0	1.22	<0.000020	<0.00020	0.011	0.00532	<0.0020	0.523
TM-E	2-Oct-12	<0.00010	0.021	48.2	2.36	<0.000010	0.0006	0.38	<0.30	0.61	0.00202	4.91	<0.000020	<2.0	1.47	0.000046	<0.00020	<0.010	0.00582	<0.0020	3.24
TM-F	20-Oct-09	0.000095	<0.005	3.31	0.00272	<0.00001	0.00291	0.0026	<0.3	1.32	0.00327	1.86	<0.00001	<2.0	0.221	<0.0001	<0.0001	<0.01	0.000457	<0.001	0.0099
TM-F	20-Oct-09	<0.00025	<0.025	53.3	3.1	<0.00001	0.00116	0.462	<0.3	0.95	0.00521	5.81	<0.00005	2.3	1.23	<0.0001	<0.0001	<0.01	0.0101	<0.005	2.27
TM-F	9-Jun-10	<0.00010	<0.010	11.4	0.00100	<0.000010	0.00337	0.0509	<0.30	1.58	0.0125	1.66	<0.000020	<2.0	0.673	<0.00020	<0.00020	<0.010	0.00344	<0.0020	0.264
TM-F	8-Jul-10	0.00180	<0.025	25.2	0.0561	<0.000010	0.00344	0.0830	<0.30	2.01	0.0080	4.42	<0.000050	<2.0	0.993	<0.00050	<0.00050	0.052	0.00553	0.0065	0.513
TM-F	4-Jul-12	0.00014	0.0192	111	6.25	<0.000010	0.00146	0.985	<0.30	1.12	0.00151	6.32	0.000035	3	2.12	0.000116	<0.00020	0.011	0.0202	<0.0020	5.23
TM-F	18-Aug-12	0.00028	0.0179	67.4	3.97	<0.000010	0.00088	0.627	<0.30	1.13	0.00684	7.73	0.000076	2.5	1.39	0.000195	<0.00020	0.019	0.014	<0.0020	3.15
TM-F	1-Sep-12	<0.00025	0.0385	70.8	10.8	<0.000010	<0.00025	1.23	<0.30	0.9	0.00056	7.24	<0.000050	2.2	2.37	<0.000050	<0.00050	0.011	0.00913	<0.0050	9.5
TM-F	2-Oct-12	0.00028	0.0152	53.2	3.39	<0.000010	0.00117	0.478	<0.30	0.92	0.00244	6.17	0.000076	2.3	1.25	0.000157	<0.00020	<0.010	0.0117	<0.0020	2.45

Appendix 8.1-2. McTagg and Ted Morris Valley Seep Water Quality Data

Sample ID	Date Sampled		Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel
McTagg Valley																						
MCTAGG A-1	3-Oct-09		0.0005	0.00019	0.00053	0.0167	<0.00050	<0.00050	<0.010	0.000033	83.8	<0.00050	<0.00010	0.00014	<0.030	<0.000050	<0.0050	4.98	<0.000050	<0.000010	0.00218	<0.00050
MCTAGG A-1	4-Oct-09		0.00650	0.00014	<0.00010	0.0128	<0.00050	<0.00050	<0.010	0.00184	53.6	<0.00050	0.0161	0.00089	0.339	<0.000050	0.0096	11.6	0.454	<0.000010	0.000100	0.121
MCTAGG A-1	10-Jun-10		0.00385	0.00021	0.000730	0.0173	<0.00050	<0.00050	<0.010	0.000029	79.8	<0.00050	<0.00010	0.00029	<0.030	<0.000050	<0.0050	5.27	0.00117	<0.000010	0.00230	<0.00050
MCTAGG A-1	9-Jul-10		0.008	<0.00020	<0.00020	0.01475	<0.0010	<0.0010	<0.020	0.00056	74.2	<0.0010	<0.00020	0.00056	<0.030	<0.00010	<0.010	9.24	0.159	<0.000010	<0.00010	<0.0010
MCTAGG A-1	18-Aug-12		0.0034	0.00019	0.00063	0.0165	<0.00010	<0.00050	<0.010	0.000016	80.8	0.00012	<0.00010	<0.00050	<0.030	<0.000050	0.00083	5.17	0.000078	<0.000010	0.00236	<0.00050
MCTAGG A-1	1-Sep-12		<0.0030	0.00018	0.00059	0.017	<0.00010	<0.00050	<0.010	0.000012	84.0	0.00016	<0.00010	<0.00050	<0.030	<0.000050	0.00085	5.28	0.000163	<0.000010	0.00240	<0.00050
MCTAGG A-1	2-Oct-12		<0.0030	0.00019	0.00066	0.0165	<0.00010	<0.00050	<0.010	0.000014	82.0	0.00016	<0.00010	<0.00050	<0.030	<0.000050	0.00104	4.94	<0.000050	<0.000010	0.00242	<0.00050
MCTAGG B-1	3-Oct-09		0.0026	0.00019	0.00074	0.0173	<0.00050	<0.00050	<0.010	0.000029	87.5	<0.00050	<0.00010	0.00012	<0.030	<0.000050	<0.0050	5.66	<0.000050	<0.000010	0.00208	<0.00050
MCTAGG B-1	9-Jul-10		<0.0020	0.00059	0.00093	0.0139	<0.0010	<0.0010	<0.020	0.000556	120	<0.0010	0.00280	<0.00020	1.23	<0.00010	<0.010	6.90	0.204	<0.000010	0.00469	0.0455
MCTAGG B-1	5-Jul-12		<0.0030	0.00061	0.00037	0.0135	<0.00010	<0.00050	<0.010	0.000674	132	<0.00010	0.0026	<0.00050	<0.030	<0.000050	0.00317	7.22	0.203	<0.000010	0.00436	0.0498
MCTAGG B-1	18-Aug-12		<0.0030	0.00025	0.0002	0.0206	<0.00010	<0.00050	<0.010	0.000261	109	0.00011	<0.00010	<0.00050	<0.030	<0.000050	0.00179	10.1	0.00017	<0.000010	0.00305	0.00287
MCTAGG B-1	1-Sep-12		<0.0030	0.00066	0.00064	0.0148	<0.00010	<0.00050	<0.010	0.000792	135	0.00017	0.003	<0.00050	<0.030	<0.000050	0.00316	8.02	0.232	<0.000010	0.00436	0.0551
MCTAGG B-1	2-Oct-12		<0.0030	0.00025	0.0002	0.0204	<0.00010	<0.00050	<0.010	0.000267	114	0.00016	<0.00010	<0.00050	<0.030	<0.000050	0.00207	9.71	0.000153	<0.000010	0.00298	0.00294
Ted Morris Valley																						
TM-B	9-Jun-10		0.0513	<0.00050	<0.00050	0.0120	<0.0025	<0.0025	<0.050	0.0400	264	<0.0010	0.0658	0.00679	5.37	<0.00025	<0.025	63.6	3.78	<0.000010	0.00125	0.479
TM-B	8-Jul-10		0.169	<0.00050	<0.00050	0.0140	<0.0025	<0.0025	<0.050	0.0554	337	<0.0025	0.100	0.0294	4.40	<0.00025	<0.025	99.2	4.92	<0.000010	0.00111	0.744
TM-B	18-Aug-12		64.0	<0.00020	0.00148	0.00999	0.00232	<0.0010	<0.020	0.121	260	0.0148	0.279	1.66	18.0	0.00215	0.0495	111	8.58	<0.000010	<0.00010	1.57
TM-B	1-Sep-12		0.0321	<0.00020	<0.00020	0.0101	<0.00020	<0.0010	<0.020	0.0395	213	<0.00020	0.071	0.0248	<0.030	<0.00010	0.0149	55.6	3.44	<0.000010	0.00081	0.475
TM-B	3-Oct-12		39.3	<0.00020	0.00101	0.0102	0.00139	<0.0010	<0.020	0.0899	256	0.00432	0.224	0.784	5.28	0.00155	0.0424	92.8	7.54	<0.000010	<0.00010	1.24
TM-C	9-Jun-10		<0.0050	<0.00050	<0.00050	0.0114	<0.0025	<0.0025	<0.050	0.0191	269	<0.0010	0.0177	<0.00050	1.93	<0.00025	<0.025	43.4	1.64	<0.000010	0.00129	0.216
TM-C	8-Jul-10		<0.0050	<0.00050	<0.00050	0.0145	<0.0025	<0.0025	<0.050	0.0254	363	<0.0025	0.0217	<0.00050	1.10	<0.00025	<0.025	85.2	1.66	<0.000010	0.00112	0.305
TM-C	18-Aug-12		0.553	<0.00050	<0.00050	0.0126	<0.00050	<0.0025	<0.050	0.134	367	<0.00050	0.163	0.0238	0.916	<0.00025	0.0347	60.2	8.56	<0.000010	<0.00025	1.05
TM-C	1-Sep-12		<0.0030	0.00017	<0.00010	0.00947	<0.00010	<0.00050	<0.010	0.00243	118	0.00012	<0.00010	0.00111	<0.030	<0.000050	0.00216	22.3	0.00376	<0.000010	0.00213	0.0478
TM-C	2-Oct-12		0.0856	<0.00020	<0.00020	0.0109	<0.00020	<0.0010	<0.020	0.108	385	<0.00020	0.121	0.004	<0.030	<0.00010	0.0337	59.8	7.95	<0.000010	0.00026	0.910
TM-D	20-Oct-09		<0.005	<0.0005	<0.0005	0.0105	<0.0025	<0.0025	<0.05	0.0332	342	<0.0025	0.0308	<0.0005	<0.03	<0.00025	<0.025	65.8	2.24	<0.00001	0.00082	0.360
TM-D	9-Jun-10		<0.0050	<0.00050	<0.00050	0.0117	<0.0025	<0.0025	<0.050	0.0162	262	<0.0010	0.0140	<0.00050	0.901	<0.00025	<0.025	41.2	1.29	<0.000010	0.00123	0.192
TM-D	8-Jul-10		<0.0050	<0.00050	<0.00050	0.0140	<0.0025	<0.0025	<0.050	0.0497	394	<0.0025	0.0617	0.00144	1.87	<0.00025	<0.025	76.4	4.39	<0.000010	0.00093	0.497
TM-D	18-Aug-12		0.408	<0.00020	<0.00020	0.0147	<0.00020	<0.0010	<0.020	0.125	374	<0.00020	0.169	0.0165	0.891	<0.00010	0.0336	64.9	9.72	<0.000010	0.00013	0.996
TM-D	1-Sep-12		<0.0060	<0.00020	<0.00020	0.0105	<0.00020	<0.0010	<0.020	0.065	325	<0.00020	0.0437	0.0013	<0.030	<0.00010	0.0221	55.7	3.11	<0.000010	0.00050	0.502
TM-D	3-Oct-12		0.0083	<0.00020	<0.00020	0.0103	<0.00020	<0.0010	<0.020	0.0698	319	<0.00020	0.105	0.0014	<0.030	<0.00010	0.0271	52.9	7.74	<0.000010	0.00031	0.661
TM-E	20-Oct-09		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TM-E	9-Jun-10		0.0284	<0.00050	<0.00050	0.0110	<0.0025	<0.0025	<0.050	0.0305	292	<0.0010	0.0287	0.00624	<0.030	<0.00025	<0.025	38.2	2.77	<0.000010	0.00112	0.253
TM-E	8-Jul-10		0.0232	<0.00050	<0.00050	0.0133	<0.0025	<0.0025	<0.050	0.0928	388	<0.0025	0.148	0.00766	7.30	<0.00025	<0.025	75.9	9.33	<0.000010	0.00038	0.884
TM-E	4-Jul-12		<0.0060	<0.00020	<0.00020	0.0135	<0.00020	<0.0010	<0.020	0.0585	342	<0.00020	0.0389	<0.0010	<0.030	<0.00010	0.0187	55.8	2.7	<0.000010	0.00084	0.488
TM-E	18-Aug-12		<0.0060	<0.00020	<0.00020	0.0114	<0.00020	<0.0010	<0.020	0.0668	302	<0.00020	0.0361	0.001	<0.030	<0.00010	0.0197	62.5	2.34	<0.000010	0.00055	0.516
TM-E	1-Sep-12		<0.0060	0.00057	<0.00020	0.0184	<0.00020	<0.0010	<0.020	0.0036	223	<0.00020	<0.00020	<0.0010	<0.030	<0.00010	0.0056	27.8	0.00018	<0.000010	0.00315	0.110
TM-E	2-Oct-12		<0.0060	<0.00020	<0.00020	0.00866	<0.00020	<0.0010	<0.020	0.045	276	<0.00020	0.0295	<0.0010	<0.030	<0.00010	0.0193	46.5	2.34	<0.000010	0.0006	0.363
TM-F	20-Oct-09		0.005	0.00096	0.00074	0.0257	<0.0005	<0.0005	<0.01	0.000109	40.2	<0.0005	<0.00010	0.00021	<0.03	<0.00005	<0.005	3.41	0.000511	<0.00001	0.0032	0.00264
TM-F	20-Oct-09		0.0372	<0.0005	<0.0005	0.00994	<0.0025	<0.0025	<0.05	0.0344	213	<0.0025	0.0671	0.00815	<0.03	<0.00025	<0.025	54.0	3.14	<0.00001	0.00108	0.465
TM-F	9-Jun-10		<0.0020	0.00042	<0.00020	0.0103	<0.0010	<0.0010	<0.020	0.00277	147	<0.00040	<0.00020	0.00048	<0.030	<0.00010	<0.010	10.7	0.00042	<0.000010	0.00321	0.0479
TM-F	8-Jul-10		<0.0050	0.00067	<0.00050	0.0190	<0.0025	<0.0025	<0.050	0.00469	215	<0.0025	<0.00050	0.00353	<0.030	<0.00025	<0.025	25.1	0.00605	<0.000010	0.00315	0.0850
TM-F	4-Jul-12		0.0278	0.00033	<0.00020	0.0138	<0.00020	<0.0010	<0.020	0.0681	347	<0.00020	0.139	0.0088	<0.030	<0.00010	0.017	109	6.04	<0.000010	0.00112	0.952
TM-F	18-Aug-12		0.0802	<0.00020	<0.00020	0.011	<0.00020	<0.0010	<0.020	0.0485	242	<0.00020	0.0866	0.0651	0.036	<0.00010	0.0178	63.2	3.74	<0.000010	0.00066	0.586
TM-F	1-Sep-12		0.495	<0.00050	<0.00050	0.0138	<0.00050	<0.0025	<0.050	0.157	444	<0.00050	0.177	0.0158	0.988	<0.00025	0.0415	71.4	10.7	<0.000010	<0.00025	1.21
TM-F	2-Oct-12		0.0355	0.00032	<0.00020	0.0109	<0.00020	<0.0010	<0.020	0.0406	222	<0.00020	0.0767	0.0141	<0.030	<0.00010	0.0154	58.7	3.8	<0.000010	0.00114	0.514

Dissolved Metals (mg/L)

Appendix 8.1-2. McTagg and Ted Morris Valley Seep Water Quality Data

Sample ID	Date Sampled	Phosphorus	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc
McTagg Valley														
MCTAGG A-1	3-Oct-09	<0.30	0.294	0.00723	4.61	0.000014	2.5	0.318	<0.00010	<0.00010	0.005	0.000151	0.0005	0.0011
MCTAGG A-1	4-Oct-09	<0.30	0.128	0.00021	5.87	<0.000010	<2.0	0.330	<0.00010	<0.00010	0.005	0.000363	0.0005	0.395
MCTAGG A-1	10-Jun-10	<0.30	0.286	0.00972	4.49	<0.000010	2.4	0.348	<0.00010	<0.00010	<0.010	0.000155	<0.0010	<0.0010
MCTAGG A-1	9-Jul-10	<0.30	0.225	<0.00040	5.05	<0.000020	2.5	0.36	<0.00020	<0.00020	<0.010	0.000281	<0.0020	<0.0020
MCTAGG A-1	18-Aug-12	<0.30	0.298	0.00711	4.56	<0.000010	2.3	0.321	<0.000010	<0.00010	0.012	0.000151	<0.0010	<0.0030
MCTAGG A-1	1-Sep-12	<0.30	0.298	0.00656	4.50	<0.000010	2.4	0.351	<0.000010	<0.00010	<0.010	0.000145	<0.0010	<0.0030
MCTAGG A-1	2-Oct-12	<0.30	0.33	0.00665	4.47	<0.000010	2.2	0.330	<0.000010	<0.00010	<0.010	0.000152	<0.0010	<0.0030
MCTAGG B-1	3-Oct-09	<0.30	0.298	0.00827	4.52	<0.000010	2.5	0.348	<0.00010	<0.00010	0.005	0.000162	0.0005	0.0005
MCTAGG B-1	9-Jul-10	<0.30	0.30	<0.00040	4.78	<0.000020	3.1	0.547	<0.00020	<0.00020	<0.010	0.00132	<0.0020	0.268
MCTAGG B-1	5-Jul-12	<0.30	0.327	0.00071	4.44	<0.000010	2.7	0.587	<0.000010	<0.00010	<0.010	0.00129	<0.0010	0.254
MCTAGG B-1	18-Aug-12	<0.30	0.444	0.0127	4.74	<0.000010	3.0	0.462	<0.000010	<0.00010	0.013	0.000707	<0.0010	0.0218
MCTAGG B-1	1-Sep-12	<0.30	0.329	0.00011	4.61	<0.000010	2.8	0.619	0.000011	<0.00010	<0.010	0.00133	<0.0010	0.283
MCTAGG B-1	2-Oct-12	<0.30	0.459	0.0105	4.38	<0.000010	2.8	0.475	<0.000010	<0.00010	<0.010	0.000716	<0.0010	0.0215
Ted Morris Valley														
TM-B	9-Jun-10	<0.30	0.87	0.0018	3.77	<0.000050	2.6	1.38	<0.00050	<0.00050	<0.010	0.0102	<0.0050	2.64
TM-B	8-Jul-10	<0.30	1.34	0.0043	5.70	<0.000050	3.0	1.82	<0.00050	<0.00050	<0.010	0.00923	<0.0050	3.50
TM-B	18-Aug-12	<0.30	0.87	0.00297	19.1	0.000415	3.1	1.55	0.000481	<0.00020	0.021	0.0696	<0.0020	6.54
TM-B	1-Sep-12	<0.30	1.00	0.00515	5.59	0.000067	2.4	1.29	0.00016	<0.00020	0.01	0.00254	<0.0020	2.22
TM-B	3-Oct-12	<0.30	0.93	0.00197	13.2	0.000312	2.7	1.53	0.000323	<0.00020	<0.010	0.0341	<0.0020	4.49
TM-C	9-Jun-10	<0.30	1.05	0.0143	3.06	<0.000050	<2.0	1.28	<0.00050	<0.00050	<0.010	0.00741	<0.0050	1.65
TM-C	8-Jul-10	<0.30	1.24	0.0058	3.42	<0.000050	2.5	1.80	<0.00050	<0.00050	<0.010	0.0125	<0.0050	2.18
TM-C	18-Aug-12	<0.30	0.79	0.00089	6.64	<0.000050	2.1	1.94	<0.000050	<0.00050	0.02	0.00359	<0.0050	8.08
TM-C	1-Sep-12	<0.30	1.23	0.00818	2.72	<0.000010	<2.0	0.74	0.000061	<0.00010	<0.010	0.000844	<0.0010	0.168
TM-C	2-Oct-12	<0.30	0.94	0.00077	5.03	<0.000020	<2.0	2.09	0.000033	<0.00020	<0.010	0.00376	<0.0020	5.25
TM-D	20-Oct-09	<0.3	1.07	0.00192	4.01	<0.00005	2.2	1.67	<0.0005	<0.0005	0.015	0.00805	<0.005	2.44
TM-D	9-Jun-10	<0.30	1.16	0.0156	2.84	<0.000050	<2.0	1.25	<0.00050	<0.00050	<0.010	0.00670	<0.0050	1.40
TM-D	8-Jul-10	<0.30	1.25	0.0059	4.32	<0.000050	2.4	2.07	<0.00050	<0.00050	<0.010	0.00923	<0.0050	3.15
TM-D	18-Aug-12	<0.30	0.87	0.00091	6.01	<0.000020	2	2.01	0.000046	<0.00020	0.021	0.00479	<0.0020	7.6
TM-D	1-Sep-12	<0.30	0.65	0.00094	5.25	<0.000020	<2.0	1.64	0.000039	<0.00020	0.011	0.00611	<0.0020	4.18
TM-D	3-Oct-12	<0.30	0.80	0.00042	4.39	<0.000020	<2.0	1.74	0.000037	<0.00020	<0.010	0.00448	<0.0020	3.68
TM-E	20-Oct-09	--	--	--	--	--	--	--	--	--	--	--	--	--
TM-E	9-Jun-10	<0.30	0.96	0.0099	3.27	<0.000050	<2.0	1.31	<0.00050	<0.00050	<0.010	0.00505	<0.0050	1.37
TM-E	8-Jul-10	<0.30	0.98	0.0033	5.38	<0.000050	2.4	2.10	<0.00050	<0.00050	<0.010	0.00696	<0.0050	5.26
TM-E	4-Jul-12	<0.30	0.71	0.0131	4.50	<0.000020	<2.0	1.60	0.000025	<0.00020	<0.010	0.00725	<0.0020	3.74
TM-E	18-Aug-12	<0.30	0.70	0.00168	5.17	<0.000020	2	1.49	0.000032	<0.00020	0.02	0.00675	<0.0020	4.53
TM-E	1-Sep-12	<0.30	2.0	0.01	2.10	<0.000020	<2.0	1.10	<0.000020	<0.00020	<0.010	0.0049	<0.0020	0.493
TM-E	2-Oct-12	<0.30	0.60	0.00195	4.66	<0.000020	<2.0	1.35	0.000038	<0.00020	<0.010	0.00511	<0.0020	2.93
TM-F	20-Oct-09	<0.3	1.4	0.00338	1.71	<0.00001	<2.0	0.237	<0.0001	<0.0001	<0.01	0.000474	<0.001	0.0091
TM-F	20-Oct-09	<0.3	0.94	0.00427	4.60	<0.00005	2.3	1.24	<0.0001	<0.0001	<0.01	0.004	<0.005	1.85
TM-F	9-Jun-10	<0.30	1.51	0.0155	1.69	<0.000020	<2.0	0.636	<0.00020	<0.00020	<0.010	0.00312	<0.0020	0.286
TM-F	8-Jul-10	<0.30	1.77	0.0086	1.86	<0.000050	<2.0	1.01	<0.00050	<0.00050	<0.010	0.00554	<0.0050	0.531
TM-F	4-Jul-12	<0.30	1.13	0.00223	5.18	<0.000020	2.9	1.92	0.000116	<0.00020	0.011	0.0116	<0.0020	4.53
TM-F	18-Aug-12	<0.30	1.06	0.0064	6.25	0.000094	2.3	1.35	0.000191	<0.00020	0.019	0.00188	<0.0020	2.81
TM-F	1-Sep-12	<0.30	0.90	<0.00050	6.30	<0.000050	2.2	2.43	0.000065	<0.00050	0.011	0.00409	<0.0050	9.07
TM-F	2-Oct-12	<0.30	1.04	0.00221	4.61	0.00006	2.2	1.28	0.000145	<0.00020	<0.010	0.0041	<0.0020	2.11